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Sarawak  
Biodiversity Centre

Document Traditional  
Knowledge, says Wilson

## Sarawak Tribune

THE FIRST EDITION ONLY

Taib: Systematic management of biodiversity vital



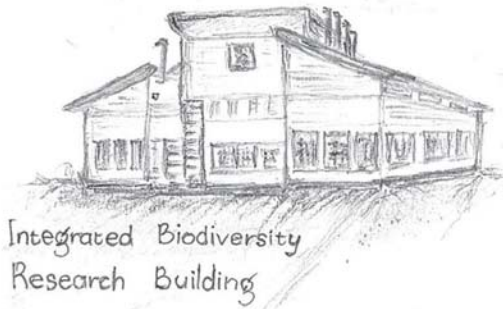
Amend  
to Sarawak  
Ordinance

Biodiversity Bill  
amended; widens  
SBC's scope of work

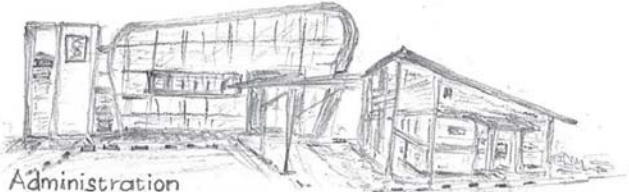
# **ACKNOWLEDGEMENTS**

**This booklet would not be possible  
without the coverage from the press and media.  
We are very grateful for their support and effort.**

**We also like to thank all the people  
who have contributed to SBC in various ways  
which made the Centre what it is today.**



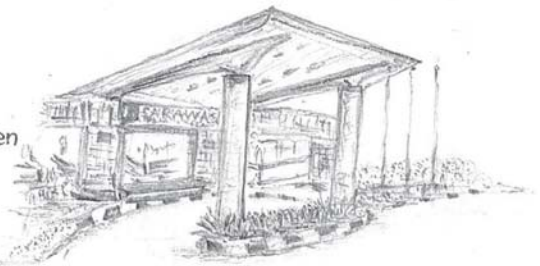
Integrated Biodiversity  
Research Building



Administration  
Building

Traditional Knowledge  
Building

Laila Taib  
Ethnobotanical Garden



Asset Management  
Building

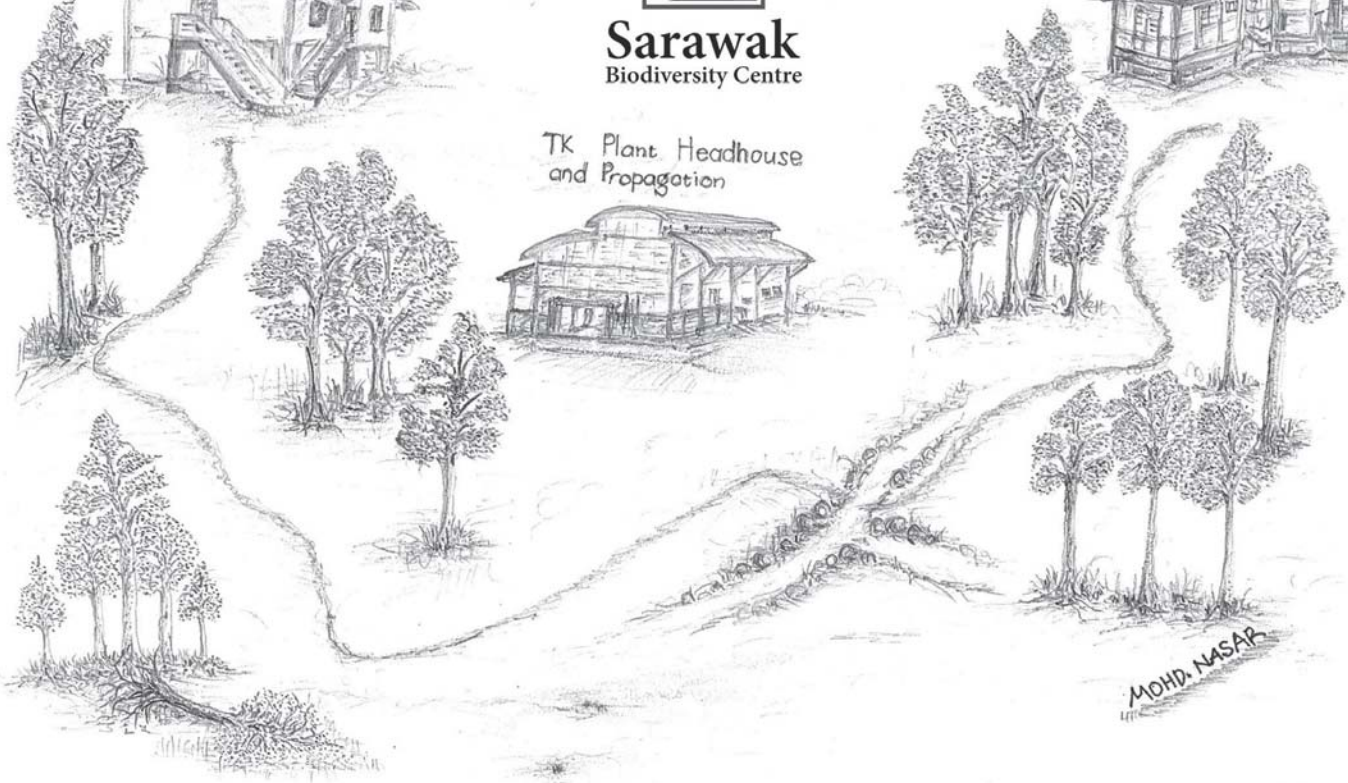


**Sarawak**  
Biodiversity Centre

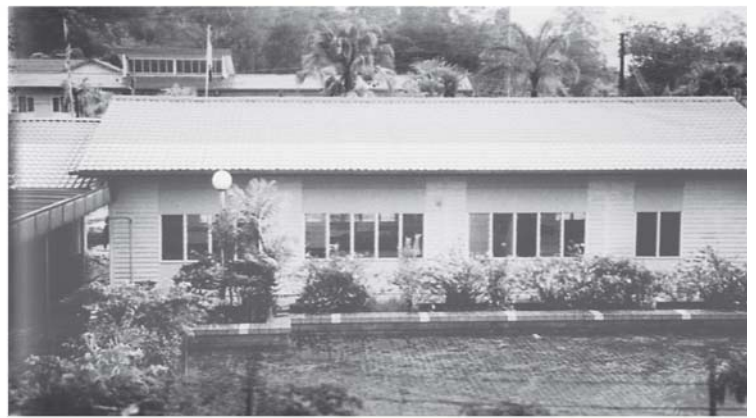


Researchers Chalet

TK Plant Headhouse  
and Propagation



MOHD. NASAR



*SBC News* 1997/1998

Sarawak Tribune - 18th November 1997

# Taib: Systematic management of biodiversity vital



DATUK PATINGGI TAIB... harnessing flora and fauna

By Tomam Mamora

KUCHING — The State Legislative Assembly

yesterday passed the Biodiversity Centre Bill, 1997 which aims to safeguard the biodiversity richness of the state and ensure the utilisation of its bio-genetic resources in a sustainable way.

He pointed-out that the entire magnitude of biodiversity in the state, as to date there is no systematic assessment of threat levels and rarity status of flora and fauna at the species level."

Earlier, in tabling the Bill, Chief Minister Datuk Patinggi Tan Sri Haji Abdul Taib Mahmud said: "We must both protect this valuable biological asset and harness its potential to propel the state past the industrial era and into the biotechnology age, the era of the future."

He told the Legislative Assembly that the idea of setting up a biodiversity centre was first mooted in 1994 and was prompted by the fact that Sarawak had the most diverse range of vegetation types and the richest lowland flora in the region.

Acknowledging that a large part of Sarawak had not been well studied, the Chief Minister

said: "It is quite difficult to realistically estimate

the entire magnitude of biodiversity in the state, as to date there is no systematic assessment of threat levels and rarity status of flora and fauna at the species level."

He pointed-out that one of the most promising areas of research, involving genetic variation, would be with plants for pharmaceutical purposes, adding that "Forests in Sarawak contribute 25 percent of the world's medicinal plants for medicines."

The Sarawak Biodiversity Centre, which will be developed into an internationally recognised resource centre for all aspects of biological diversity, has ten broad objectives:

- serve as a focal point for biodiversity in terms of inventory, monitoring, management, utilisation, education and commercialisation;
- develop and maintain a range of biodiversity databases, including linkages with local and



ENHANCING TIES... Speaker Datuk Seng Swee Guan presenting a gift to Enock Wan Hanbing, Vice-chairman of the Standing Committee of the National People's Congress of China, witnessed by Enock Lim Kian Hock, (left) Secretary of the Legislative Assembly and Enock Sim Kheng Hoi (right) Assistant Minister of Industrial Development. Enock Wan Hanbing, the leader of a visiting Chinese Parliamentary delegation also witnessed the proceedings of the DUN yesterday morning. PHOTOGRAPH: JOHN CHAN Story on Page 3

international research institutions;

- provide to State Government agencies, educational and research institutions, industry and general public accurate and relevant information on the magnitude, distribution, status, uses and value of the Sarawak's biodiversity;
- ensure that scientific collections and associated data are maintained for the purpose of inventory and the study of biodiversity of the state;
- Assist the State to identify priorities for research on biodiversity;

- create and maintain a systematic inventory of biodiversity in Sarawak;
- ensure that the conservation status of biodiversity at all levels, including trade in endangered species, is adequate monitored;
- identify new natural and biotechnological products that can bring socio-economic benefits to the people;
- facilitate international exchanges of personnel and information concerning biodiversity.

The Chief Minister said the centre, when fully established, would have five functional sections, namely, Policy section, Collection and Inventory section, Ecosystem section, Information Services section, and Technical Services and Education section.

The State Government, which will provide the core funding of start-up facilities and training, is expected to play a major role in the development of the centre, but

the participation of the private sector is encouraged. Funds will also be secured through financial grants or income generated through licensing, programmes and services provided by the centre.

The Bill also seeks to establish a Biodiversity Council which will be empowered to establish, manage and maintain the Biodiversity Centre.

Interim, the Council will be responsible to regulate the access, collection, study, research, export, protection and utilisation of the biodiversity of the state, including the removal of any biodiversity material from the state.

The Bill also provides that the Council will comprise a Chairman, a Deputy Chairman, a Secretary and not less than six and not more than ten other members, all of whom are to be appointed by the State Supreme Council.

Eleven State Assembly members, including Enock Wong Sing Nang (DAP, Pelawan) spoke in support of the Bill.

• Debate on the Bill on Page 2

Sarawak Tribune - 18th November 1997

# Bintangor cure for AIDS known next year

KUCHING — The early cure for the deadly HIV-related diseases may be known next year when the final stage of a clinical research currently conducted in the United States involving the local Bintangor plant (*Calophyllum lanigerum*) is completed.

A US-based company, which has entered into a joint-venture with the State Government, is undertaking a series of scientific tests to establish and develop the AIDS-curing properties in the Bintangor plant for medicinal consumption.

Chief Minister Datuk Patinggi Tan Sri Haji Abdul Taib Mahmud said this yes-

terday when winding up the debate on the Sarawak Biodiversity Centre Bill, 1997. He said he visited the Research laboratory in Chicago, USA recently and was pleased to observe that the tests had progressed to a very advanced stage.

Datuk Patinggi Taib, who was confident that the breakthrough would be achieved next year, said the Bintangor plant had been scientifically analysed and tested to contain the best properties to produce medicine for curing AIDS.

He also told the State Assembly that the medicinal properties in the Bintangor plant had been officially

confirmed by the US scientists as safe for human treatment.

Currently, he added the researchers were conducting clinical trials on human volunteers. The final stage would involve the certification of the medicinal product by the Food and Drug Administration Authority of USA before it could be produced on a commercial basis.

He also said that a local Lundu-born scientist had been sent for attachment with the American research laboratory to understand the series of clinical tests that were being conducted on the Bintangor plant.

Sarawak Tribune - 18th November 1997

# Sarawak Biodiversity Centre Bill 1997 timely, says DAP

## Amendment to Standing Orders

Continuation from Page 1 col 8

"the number of questions for oral reply that a member may raise during each sitting of the Dewan.

"the content of speeches

"the type and contents of supplementary questions that may be asked

"the content of the Standing Orders consequent upon the recent amendments of the State Constitution pertaining to the appointment of the Speaker, Deputy Speaker, Secretary and deputy Secretary of the Dewan.

"to enhance decorum and orderly conduct of proceedings in the Dewan and this involves

"the requirement that a member who has set down questions for oral reply should be personally present in the Dewan when his question is due to be answered, and another member may not adopt his question without leave of the Speaker.

"prohibiting members from making statements or the allegations which he is not prepared to substantiate.

"confining debates on a Bill to amend a Principal Ordinance to the proposed amendments only, and not to other (unamended) provisions of the Principal Ordinance.

"empowering the Speaker, to order any member, whose behavior or conduct is in contempt of the Dewan, to be removed from the House and in enforcing his order for removal, the Speaker can direct not only the Sergeant-At-Arms but also any police officer of the Dewan to do so.

"enabling the Speaker, rather than the Dewan, to give leave for a Select Committee of the Dewan to hold its meeting during a session of the Dewan.

KUCHING — Opposition member Enock Wong Sing Nang (DAP, Pelawan) yesterday supported the Sarawak Biodiversity Centre Bill 1997 introduced by the Chief Minister.

He said the introduction of the Bill was timely. He added that the Bill must be supported because it was aimed at improving the conservation of biological diversity and environmental licensing of plant and biological collections.

Enock Wong said an understanding of biodiversity was crucial to the management, utilisation and conservation of the biological resources.

He pointed out that the threat of losing species had driven many biologists to concentrate on biodiversity, especially when the rain forest was known to contain more species than any other habitat.

"Biological resources feed and clothe us and provide housing, medicine and spiritual nourishment," he said.

Meanwhile, a government backbencher hoped the heavy penalties imposed under Section 22 of the Sarawak Biodiversity Centre Bill 1997 would help to protect the biological resources.

Enock Frederick Bayoi Manggie (BN-Kedup) pointed out that Section 22 made non-compliance with Section 21 punishable with a fine up to RM20,000 or imprisonment up to three years.

Section 21 states that no person should, without a permit issued by the Sarawak Biodiversity Council, collect or take any plant or any part of a plant found on State Land, protected forest, forest reserve or communal forest or collect any biological resources as may be specified by the council by notification in *The Gazette*, for whatever purposes including scientific study, experiment and research.

"This proposed new law is important to us in Sarawak because we are rich in biological resources," said Enock Manggie.

He added that the Bill was also necessary for the setting up of a proper council to manage and maintain the Sarawak Biodiversity Centre.

Enock Manggie said the Sarawak Biodiversity Council would have committees, advisors and consultants to help the Chief Executive Officer



Enock Wong Sing Nang...the Bill must be supported.

and other officers in discharging their duties accordingly.

Dr Judson Tagal (BN-Ba Kelalan) called on the Government to tap into the expertise at Unimas's Institute of Biodiversity and Environmental Conservation. He was optimistic that the proposed centre would contribute towards developing the local pharmaceutical industry.

Dr Judson was also pleased to note that the Sarawak Biodiversity Council would formulate policies on the use of biological resources for pharmaceutical and scientific research - a task carried out previously by the Natural Resources and Environmental Board (NREB).

Enock Sylvester Enri Ak Muran (BN-Marudi) also supported the Bill. He said the introduction of the Bill showed that the Government was aware of the importance of conserving biodiversity to meet the needs of our growing population.

"This Bill affirms the Government's awareness of the intrinsic values of biological diversity - its ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values," he said.

He added that the introduction of the Bill was timely and appropriate "to avoid clear felling of jungle for plantation, logging activities and other economic development."

Enock Muran said that most of the state's potential genetic resources had not been fully studied and documented.

"Yes we know that there are plants with medicinal values known and used by our local people in their traditional ways of curing certain diseases or sickness," he added.

*SBC News* 1999

The Sun - 19th July 1999

# 'Help protect Sarawak's biodiversity'

**KUCHING, Sun:** Sarawak will lose out if its people do not fully co-operate in protecting its abundant biodiversity.

Chua Teck Kheng, chief operating officer of the Sarawak Biodiversity Centre (SBC), said the centre by itself cannot protect the biodiversity worth hundreds of millions of ringgit due to insufficient manpower and the vast area of the state.

"We depend on other enforcement agencies and the people to report to us if they find anyone smuggling flora and fauna out of Sarawak," he said here today.

Chua said since the SBC was set up in 1997 only one case involving four Japanese tourists was brought to court in May.

The four were accused of trying to smuggle out butterflies including the "Rajah Brooke", a protected species.

## People should co-operate or they will lose out: Centre

He said there may be cases of researchers entering Sarawak on tourist visas and then smuggling out plants and animals and earning millions after they had found chemical components with commercial value.

He said the centre has informed tour operators to ensure tourist guides do not allow tourists to take plants or animals out of the state.

Chua said operators were also told to tip off the centre of anything suspicious, adding SBC officers have powers to search premises.

He said tourists and locals who attempt to smuggle plants and animals out of Sarawak are committing an offence under the SBC Ordinance 1997

and could be fined up to RM20,000 or three years' imprisonment or both.

Chua said any party from abroad interested in researching Sarawak's biodiversity must submit a proposal to the SBC.

"Then they must sign an agreement with the state government to ensure that if they find any chemical that has medicinal or commercial value, the state will have a share of the profit."

He said so far the SBC had approved 10 applications mainly from foreigners to do research on the state's biodiversity such as frogs, snakes and of course the various types of plants and other animals. — Bernama

*SBC News* **2000**

The Borneo Post - 10th March 2000

# American scientists caught red handed collecting specimens

LIMBANG, Thurs.- The Sarawak Biodiversity Centre (SBC) confiscated biological specimens collected by a group of American scientists at Gunung Buda in Ulu Limbang yesterday.

In a press release issued by SBC in Limbang today, the specimens comprising various species of animals and plants were confiscated by SBC officers together with officers from the Limbang Resident's Office, the Forest Department and the Police.

The statement said the scientists were caught red handed. However, no arrest has been made.

The statement said the scientists were with a group of American caving enthusiasts who

had earlier arrived here on January 31, 2000 for "adventure caving" and the Buda 2000 expedition project led by United States National Park speleologist, Joel Despain.

The specimens were confiscated by SBC who went to the site of the expedition base camp located along the Medalam River at the foot of Buda Cave.

The statement added that although the scientists had applied for the permit to collect specimens and conduct a variety of biological research, their applications were still under active consideration at the time of confiscation.

It said applicants are only allowed to commence their research work after their applications have

been approved and they have signed a Research Agreement with SBC.

However, the issuance of the permits are not just a formality and not all applications are automatically approved as there are conditions which have to be met.

Following the confiscation, the scientists were reminded of their earlier acknowledgement that no collection is to be carried out or brought out from the area and Sarawak prior to their permits.

Despite these reminders and the assurance given, the scientists have nevertheless not kept to their words and collected biological specimens and breaking the law of the State.

It added that although Sarawak welcomed scientists who want to carry out genuine research in the State, they will have to abide by the laws of the State and all research should benefit both the State and the researchers themselves.

Under the Sarawak Biodiversity Centre Ordinance 1997, collection of any biological specimen without a Research Permit from the Sarawak Biodiversity Council is an offence which carries a penalty of RM20,000 fine and or a jail sentence of three years.

Buda Cave which was first discovered in 1993 is located on the north-west of the Mulu National Park host tremendous diversity of plants and animals. -BP

New Straits Times - 10th March 2000

# Bid to remove rare specimens foiled

## Sarawak authorities detain two US scientists

By Johannes Ridu

MIRI, Thurs. — An attempt by at least two American scientists to allegedly smuggle rare biological specimens — fish fry and insects — from Gunung Buda forest reserve in northern Sarawak was foiled by the State authorities yesterday.

They were "caught red-handed" by enforcement officers from the Sarawak Biodiversity Centre, the State Forestry Department, Limbang Resident's office and the police.

The scientists are believed to be members of an expedition, led by Dr Joel Despain of the National Speleological Society, who had been granted permission to conduct six weeks of map-

ping and surveying work in Gunung Buda.

Their identities are being withheld by the authorities until further investigation into the incident is completed.

According to Limbang Resident Ubaidillah Abdul Latip, the scientists had illegally collected more than 100 biological specimens from the forest reserve.

The specimens, he added, had been neatly preserved and packed when the enforcement officers seized them.

He said it was an offence under the Sarawak Biodiversity Ordinance 1997 to collect any biological specimen without a research permit from the Sarawak Biodiversity Council.

The penalty for such an offence is a maximum fine of RM20,000 or three

years jail or both.

"They did apply for permits to collect the specimens and to conduct biological research (in Gunung Buda), but their applications had yet to be approved at the time they were caught.

"They must first of all sign a Research Agreement with the Sarawak Biodiversity Council if they wish to do research on Sarawak's biodiversity."

The scientists, who arrived here on Jan 31, had promised the authorities that they would not be collecting any biological specimens from the forest reserve until permits are issued.

"However, they failed to keep their promise. They have obviously failed to keep their word despite their assurance not to do it," Ubaidillah said.

## Unlawful collection of biological specimens

# RM20,000 fine on scientists

By Frankie Lian Labang

**KUCHING** - The Sarawak Biodiversity Centre (SBC) yesterday fined a group of American scientists RM20,000 for unlawfully collecting 500 biological specimens from Gunung Buda.

SBC chief executive officer Encik Chua Teck Kheng told the *Tribune* the scientists had admitted their mistake in taking the specimens without the permission of the State government.

Under the Sarawak Biodiversity Ordinance 1997, collection of any biological specimens without a research permit from the

SBC is an offence which carries a penalty of RM20,000 fine or jail of three years or both. However, the scientists got off with a collective fine of RM20,000.

Encik Chua said the scientists had been warned not to repeat the offence. The confiscated specimens are now with the SBC for safekeeping.

Encik Chua said the scientists had completed their mapping and survey work and were on their way home when caught by the relevant government enforcement officers at Gunung Buda for unlawfully collecting the specimens.

The taskforce comprised officers from the SBC, the police, the Limbang Resident's Office and the Limbang's Forestry Department.

"The scientists are doing a good job in their line of work but by collecting the specimens illegally, they have marred their image as reputable men of science," he said.

The specimens were kept in more than 100 smaller bags when they were confiscated.

Encik Chua said the specimens had tourism significance. He would submit a report to the government.

The scientists were with a group of American caving enthusiasts led by Dr Joel Despain of National Speleological Society (NSS).

They arrived here on 31 January 31 to start six weeks of mapping and surveying work at Gunung Buda in accordance with the permit granted to NSS.

The caving enthusiasts had also put up an educational website on the Internet under Gunung Buda Project Expedition 2000. Information on Gunung Buda and the latest discovery made by the expedition can be found on the website.

## SBC clarifies detention report

**KUCHING** - A group of American scientists fined RM20,000 for removing biological specimens from Gunung Buda without a permit, are unable to leave Sarawak without first settling this compound imposed by the Sarawak Biodiversity Centre (SBC).

The scientists had promised SBC on Thursday that they would settle the compound by Friday evening at the latest. However, at press time, there was still no sign of any payment made to SBC.

SBC's chief executive officer Encik Chua Teck Kheng had earlier said he would make a report on this incident to the Immigration Department. When contacted, Immigration assured that it would assist SBC in whatever way it could.

However SBC wanted to correct an earlier report as the scientists were never detained at any point of time by the State authorities. They were free to go about doing research work in Sarawak if they wished to continue doing so, according to SBC.

Apparently, the scientists had not registered as guests at any of the leading hotels here.

The 500 confiscated biological specimens including fish fries and insects would continue to remain in the safekeeping of SBC, which has yet to decide on what to do with specimens that had died.

Though collectively compounded RM20,000, the scientists were actually free to leave the State without any fear of detention at the Kuching International Airport once the compound had been settled.

Worried officials from the American Embassy in Kuala Lumpur had earlier called a national newspaper to find out the latest development on the scientists following the exposure by *Tribune* that they had been caught red-handed by a taskforce comprising officers from SBC, Limbang Forestry Department, police and the Limbang Resident's Office.

The embassy made similar calls to SBC to check on the status of the scientists and was pleased that they were fine, and that claims of their detention had been wrongly reported.

The scientists were with a group of American caving enthusiasts led by Dr Joel Despain of National Speleological Society (NSS). They arrived here on 31 January for six weeks of mapping and surveying work at Gunung Buda in accordance with the permit granted by NSS.

The caving enthusiasts have set up an educational website on the Internet under "Gunung Buda Project Expedition 2000".

Hence, information on Gunung Buda and the latest discovery made by the expedition can be found on the website for those interested.

## Researchers welcomed, but get permit first: Masing

**LIMBANG, Sat.** - Tourism Minister, Dato' Dr. James Jemut Masing said the state government welcomes any group or individual to study or carry out research in the newly found Buda Cave in Ulu Limbang, but they must get written approval first from the government.

Masing was talking to reporters after officiating at Sarawak Dayak Iban Association of Limbang Branch's dinner last night.

The minister said the group of American scientists who tried to remove out 500 species of insect and fish would not have been apprehended if they had got the permit.

Action taken by the Sarawak Biodiversity Centre was only in accordance with the laws, he said.

He, however, thanked the American expedition team for their efforts in carrying out cave exploration and mapping Buda on behalf of the state government. He said presently there is no plan yet to develop the area into a national park because the priority is to promote Mulu as a tourists attraction.

- BP/bh

Sunday Tribune - 19th March 2000

# Research on state's biodiversity encouraged

By Clarence Ting

**LIAMBANG** - The state government welcomes scientists wanting to carry out research on the state's biodiversity, in Iliada Cave in particular, says Minister of Tourism Dato Dr James Jomati Masing.

"They must however comply with the state's rules and regulations if they were truly interested in carrying out their works here," he replied reporters' question on the two scientists caught by enforcement officers from the Sarawak Biodiversity Council with the assistance of officials from the forestry department, police and the Resident office, recently.

The scientists were caught collecting specimens from Iliada Cave without authorization.

The scientists were among scores of cave enthusiasts from the United States of America who were permitted to carry out mapping and surveying works in the caves.

The scientists were later fined a total sum of RM25,000 before being allowed to leave the state.

"We cannot let foreign-

ers come here and carry out works on their own whims and fancy without regards to our biodiversity law," he said.

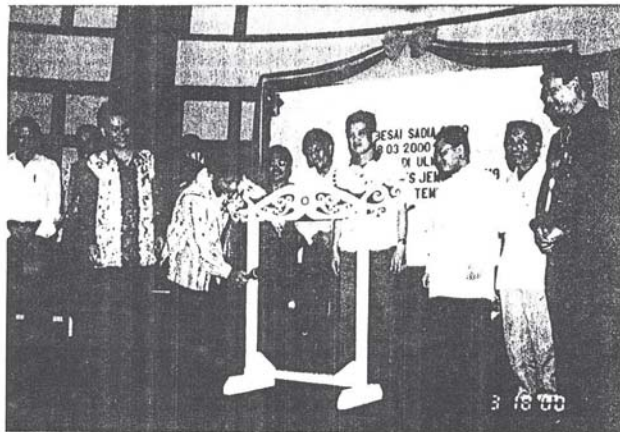
He said the government was grateful to those cave enthusiasts and scientists in the conservation and study of our national parks, but those who were found to have breached our laws must be dealt with accordingly.

To a question that those scientists had obtained permission from the Forestry department to collect specimens while their application was still under consideration by SBC, Dr Masing said that there was some miscommunication between the two bodies.

"Otherwise the SBC would not have fined them," he said.

On whether Iliada Cave could be open to the public to boost the tourism industry in Limbang, he said "the time is not ripe yet."

"We have to promote Mulu National Park first as our priority. After it is well-established and successful, will we promote the cave."



WITH THIS I LAUNCH ... Dato Dr James Masing, with Enik Cerisolong standing behind him, beating the gong to open the Sadia meeting.

Sarawak Tribune - 18th April 2000

## Judicious tapping of our biodiversity

The enactment by the Dewan Undangan Negeri late last year of the first-ever legislation - the *Sarawak Centre for Biodiversity Ordinance 1997* - in the country to protect and preserve our biodiversity has reinforced efforts by the State government to harness our biodiversity under supervised conditions to ensure the continued flourishing of our flora and fauna.

Efforts at regulating and managing its biodiversity resources have won the State the respect of the international community with many foreign researchers from as far as the United Kingdom, Japan and Colombia having applied to conduct researches on our rich biodiversity in post-graduate and PhD studies. Such efforts are complemented by the strong support from local tertiary institutions although in 1999, their researches were less than 50 percent of their foreign counterparts.

The discovery of the Bintiagor tree's potential to produce anti-HIV vaccine is an example of the hidden treasures of our forests. Here, the SBC's role is to ensure that researches do not negatively impact nor undermine the State's ecosystems. It is imperative to ensure that attempts to tap the abundant resources of our natural rainforests do not in anyway hinder the production of food many of the locals subsist on. It is even more crucial for researches to be conducted inside the boundaries of designated wildlife parks and sanctuaries. Under no circumstances should the SBC be subjected to outside resistance on

how the State's biodiversity should be managed. The recent incident involving foreign caves and researchers in Gunung Buda, Limbang should serve as an eye-opener.

The SBC has rightly guarded against attempts to smuggle our biological samples out of the country. Such action is necessary to prevent illegal tapping of our biodiversity, especially for commercial medicinal purposes which can generate millions in revenue. Given time, the SBC's role which is created to formulate and manage guidelines on biodiversity researches, will be better understood and recognised. The Centre should also strive to attract more bona fide scientists to do researches here. In this way, we can learn from the experts and may one day - through the transfer of knowledge - produce our own scientists in specialised fields.

The wealth of knowledge accumulated from studies on the State's biodiversity that can contribute positively to the ever-expanding pool of global sciences is indeed immense and to augment this, we should encourage more researches into our biodiversity through concerted efforts for mutual benefit. At the same time, the people too must be made aware of the functions, roles and activities of the SBC through education and public forums. In this way, they will learn to appreciate the importance of protecting and preserving the unique features of our biodiversity not only for commercial purposes but also for posterity.

Sarawak Tribune - 31st March 2000

## Traditional knowledge to be documented

By Nikki Lugun

**KUCHING** - Growing concern over the imminent loss of traditional knowledge and cultural practices in the country can be resolved through documentation.

This was highlighted by Dr Paul Quek from the International Plant Genetic Resources Institute at a workshop on Traditional Knowledge And The Researcher here yesterday.

Organised by the Sarawak Biodiversity Centre, the workshop was attended by scientists and researchers from institutions of higher learning, government agencies and concerned members of the public.

Dr Quek defined traditional knowledge as knowledge handed down from generation to generation, in ways that traditions were kept in a community and knowledge as what local people knew about the natural environment.

In contrast, scientific knowledge is information derived from research.

"In studying traditional knowledge researchers will need to document the knowledge for use by the research community," he said.

"People in both modern and traditional societies use diverse knowledge systems in different situations or even simultaneously."

An Indigenous Knowledge Journal concept can be implemented as a practical way of documenting the knowledge derived from farmers and researchers and protecting the farmers' rights by recognition of their knowledge.

"The concept of the Journal is compatible with all of the indigenous documentation methods and tools that have been developed to date," he said.

"It is a process that documents how knowledge changes over time and the recognition of the knowledge contributors. This approach captures the dynamic nature of indigenous knowledge as it adapts to



Dr Paul Quek

the environment and avoids the perception that changes in knowledge over time is knowledge loss."

Based on his research in Yunan, China, he said the journal concept had been successfully implemented.

"It helps researchers by reducing duplication of work especially in re-collecting the same information over and over again."

According to him, knowledge re-use provided for reinterpretation of the original knowledge with new development in sciences and therefore proved to be useful.

The workshop focused on four main themes: Documentation of Traditional Knowledge, Access to Traditional Knowledge, Roles of researchers in the conservation and utilisation of Traditional Knowledge and Roles of communities in the conservation and utilisation of Traditional Knowledge.

In line with this, the Sarawak Biodiversity Centre will be planning a hands-on training workshop in September on the documentation of traditional knowledge.

The Sarawak Biodiversity Centre will also coordinate discussions on these topics and address the issue of access to traditional knowledge.

The Centre is hopeful of public support and participation in similar workshops in future.

Sunday Tribune - 26th May 2000

## Plant being smuggled out for sale

**KUCHING**: Sarawak's endemic pitcher plant (*nepenthes* species) is being smuggled out of the state to be sold in greenhouse trade to collectors worldwide and the trend is worrying, says American botanist Chien Lee.

Lee, who presented a talk on the *nepenthes* of Sarawak organised by the Sarawak Biodiversity Centre recently, said that of the 90 identified species of *nepenthes*, at least 23 were found in Sarawak and of these, six were endemic to Sarawak.

*Nepenthes* are herbaceous plants and most grow as vines which climb over other vegetation by means of a curling tendril at the tip of the leaf.

Of late, Lee said that the collection of pitcher plants had become a popular hobby, especially in western countries, and as such, there was high demand for this unique carnivorous plant.

In Sarawak, the *nepenthes* are classified as protected plants and it is illegal to collect them from the

wild.

Another threat to the *nepenthes* is loss of habitat through land development and burning, said Lee.

"On several occasions, I have returned to sites where a particular species was recorded only to find the population completely destroyed - in most cases by fire," he said.

Lee, who has been in Sarawak since 1996, is currently involved in artificial propagation and culturing of the *nepenthes* for export.

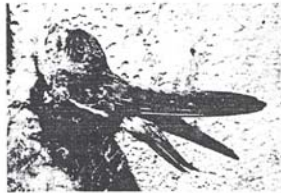
## Talk on edible nest swiftlets

KUCHING, Sun. - How much do you know about Sarawak's edible bird's nests, their chemical composition, the swiftlets that produce them and the conservation of these wonderful and intriguing birds?

The Sarawak Biodiversity Centre (SBC) at Jalan Borneo Heights, in Semengoh near here will be holding a talk on edible nest swiftlets on June 23 at 9.30 am at its premises.

The talk, to be delivered by Dr Lim Chan Koon, will include a general introduction of the three species of edible nest swiftlets in Sarawak, their declining population, counter measures to conserve their numbers, their breeding biology and chemical composition of the edible nests.

The talk will be delivered in English with



short summaries in Mandarin and will include slide presentations.

Dr Lim, a Sarawakian, and currently a Post-doctoral Research Fellow with the Wildlife Conservation Society, had conducted various studies and research on the swiftlets in the State and will be sharing his experience and findings during the talk.

He also presented such talks in interna-

tional seminars and workshops and has also published articles on the subject in journals and books.

The talk will be held at 9.30 am and members of the public can make their seat reservations for the talk by calling Melvin at Tel: 082-610610 or Fax: 082-611535 on or before June 16.

As there are limited seats, reservations will be on a come first, first served basis.



Young 'scientists' from SK Satria Jaya enthusiastically listening to a biodiversity talk during their visit to SBC

## Educational visit to SBC

KUCHING, Sun. - The Sarawak Biodiversity Centre (SBC) played host under its Biodiversity Education Programme to a group of about 80 students and their teachers from SK Satria Jaya recently.

The visit to SBC at KM 20 Jalan Borneo Heights, Semengoh, was part of the school's motivation programme for the students to achieve academic excellence in their studies.

Among the activities organised for the students were a talk on

biodiversity and jungle trekking. For the majority of the students, the jungle trekking was a unique experience as they have not done this before.

"I was surprised by the coolness inside the jungle as it was so hot just before we entered it. Now I have a better understanding of the importance of trees and forest in reducing temperature of the surrounding area," said Brian, a 12-year-old from Kuching.

"We learned a lot from listening

and talking to the trail leader who explained to us about the plants and their usefulness and also the role of insects such as ants in the ecology of the forest," he said.

The students were also given a brief talk on biodiversity and a programme booklet just before they went trekking. The booklet entitled 'An introduction to Tropical Rainforest' provided useful information for them to take back.

"I love the Biodiversity Poster as it was very colourful and informative, especially after listening to the talk," enthused Khairunissa.

"The jungle trekking was quite challenging, especially the climbing sections and the streams where we had to jump across," she added.

Another student, Khairul, was as enthusiastic. "Though we did not see any big animals, we managed to hear the birds and saw many insects like butterflies, bees and ants. We were also very noisy while inside which probably scared away the animals, as our guide said."

"I think this is a good learning experience for our city-kids as it exposes them to the jungle and its elements. It is not often that you get a chance to venture into the jungle and have guides to tell you about the plants, ecology and other interesting aspects," said Ms Rosline, one of the teachers who accompanied the students to the centre.

"Many of the parents I talked to felt that the programme is useful and good as it has both theory and practical aspects for the children," she continued. "I have learned much from the talk and the explanation during the trekking," said Mr Chin, another teacher.

"I believe that this trip will make the students more aware of their surroundings and learn to appreciate nature more."

The SBC Education Programme is aimed at creating better public awareness of our rich biodiversity and their conservation and is meant for schools, public and private institutions, voluntary organisations and also clubs.

Anyone interested to participate in the programme can contact Mr Melvin Goh at 082-610610 or fax 082-611535.

## Sarawak welcomes law-abiding scientists

MIRI, Sat. — Foreign researchers studying the rich biodiversity in Sarawak must adhere to the terms and conditions laid down by the State Government.

State Secretary Tan Sri Hamid Bugo said the Government was not against researchers but they must do so with the Government's full knowledge.

"We do not want (foreign scientists) to come here and then leave with (biological) specimens," he said.

The State has every right to protect its biodiversity from being exploited by outsiders, he said in response to foreign scientists' complaints about the strict biodiversity regulations.

Foreign scientists are said to be unhappy about the Sarawak Biodiversity Ordinance 1997 which

they claim is restricting research activities.

Hamid, however, said laws must be enforced to prevent biological specimens from being smuggled out of the State and patented elsewhere.

Strict enforcement of the law had resulted in two scientists from the United States of America being fined RM20,000 each in March for unlawfully collecting biological specimens from Gunung Buda near here.

The Sarawak Biodiversity Ordinance carries a maximum fine of RM20,000, three years' jail or both.

Sarawak's forest is rich with flora and fauna which have medicinal value, notably the Bintangor tree which is said to be potentially useful in the search for a HIV cure.

Sarawak Tribune - 3rd August 2000



All ears... the students paying attention to a discussion during the 'practical' session of the Education Programme.

## Students learn about biodiversity

KUCHING - The eight-two students from the environmental and Nature Club of Green Road Secondary School had a pleasant surprise when they visited the Sarawak Biodiversity Centre (SBC) recently. They had not expected the biodiversity education programmes that were lined up for them to be so interesting.

To start off, they were given a warm welcome by the officers and staff of the Centre followed by a brief talk on the work and career prospects of biologists. The students, who were selected based on their result in their science subjects, found the talk inspiring as it gave them more ideas about pursuing a career in the science stream.

One student, Hisham, remarked, "I've always thought of science students becoming doctors and engineers only but the talk has made me realize that there are many other possibilities".

The second talk was on the SBC Biodiversity Poster which gave the students more information on biodiversity, especially in relation to the rich biological resources of the State.

All of the students and teachers acknowledged that the poster was very informative, interesting and captivating with its wide range of animals, plants and habitats.

"It's the most colourful poster I've ever seen and it has so many plants and animals," said Esther, a student. "The talk on the poster has given me a better understanding of our biodiversity and made the poster more meaningful when I look at it," she continued.

"This poster will always serve as a reminder to the students of their visit to SBC and also of the rich diversity of life forms in Sarawak," said Gabriel, one of the eight teachers, who accompanied the students to the Centre.

The last classroom programme was a

brief talk on Tropical Rainforests, highlighting some of the interesting features such as the flora and fauna of these forests, the physical structures of the forests and their contributions and usefulness in the circle of life. The talk also served as a useful introduction for the next part of the programme which was the jungle trekking.

"For me, the jungle trekking part was the most interesting", volunteered Chai Min, a student. He said that he learned a lot from listening to his group leader who explained more about the different species of plants, the interactions between plants and animals and some of the features of the jungle which they explored. Another student, Vanessa Jane was quite surprised when informed that a *Menggrits* tree she encountered was more than a hundred and fifty years old!

"The tree was very striking as it was very tall and straight and its trunk was so huge that it would take three of us holding our arms together to encircle it," she said.

Mrs Belinda Ho, the teacher who organized the trip, was particularly pleased that the biodiversity education programme was tailored to the level of the students who were mostly in Form One. "This programme is a good introduction for the students, especially in appreciation of biodiversity. It allows the students to learn simultaneously the theoretical and practical aspects of biodiversity conservation which we at the school are not always able to do," she said.

"The SBC Education Programme is aimed at creating better awareness of our biodiversity, their conservation and is meant for schools, clubs, public and also private organizations," said Maxwell Sim, the Education Officer at SBC. Anyone interested to participate in the programme can contact Maxwell at telephone 082-610610 or fax at 082-611535.

The Star - 4th September 2000

## 'Share benefits from genetic resources'

KUCHING. The benefits derived from the use of genetic resources should be equitably shared between the developers and providers of these resources, said Sarawak Biodiversity Council chairman Tan Sri Dr Wong Soon Kai.

He said this benefit-sharing would provide incentives to countries and people, who are custodians of the world's valuable biodiversity, to protect, conserve and manage.

Dr Wong said as genetic resources had for a long time been treated as freely accessible goods, there were no incentives for countries that supplied these resources to conserve the biodiversity for the big corporations.

In recent years, he said, there was an emergence of big transnational corporations seeking new genetic materials from countries relatively rich in biodiversity for study or pharmaceutical and bio-product development.

"What this indicates is that as biotechnology is fast becoming a spin-off area in world trade, it will have profound effects on biodiversity conservation and management if the

prospect of financial windfalls will stay in the hands of these huge transnational corporations," he said in a paper.

The paper on *Managing Biodiversity in the Era of Globalisation* was presented at the Australian Universities Alumni Association's international convention here recently.

Some 1,000 Australian graduates from 20 countries attended the four-day event.

Dr Wong, who is also science advisor to the state government, said in the absence of better biodiversity policies, it was feared that well-organised trade policies were likely to expand the global economy in ways which would seriously undermine the conservation and sustainable utilisation of biodiversity.

He said the promotion of free trade as advocated by the World Trade Organisation and facilitated by the globalisation process would give highest priority to the making of profits and to the detriment of other equally, if not, more important considerations.

Dr Wong said the Sarawak government had passed a legislation to

provide for the administrative and regulatory mechanism to facilitate and authorise access to and promote sustainable utilisation of its rich biological resources.

"The biodiversity of Sarawak has long been recognised as distinctive and globally significant."

"It is estimated that among others, Sarawak has more than 3,000 species of flowering plants, 2,000 species of vertebrates, 10,000 species of invertebrates and over 600 species of ferns and 4,500 species of fungi," he added.

He said the recent Borneo Research Council's conference here discussed the possibility of developing a biodiversity economic model for the conservation of orang utans in Borneo.

He said education on the importance of conserving the orang utans had to be expanded and tailored to the needs of the people at the local level.

Emphasis, he added, should also be made on the follow-up and monitoring programme implementation in the field to get feedbacks and improve the programme.

New Straits Times - 16th September 2000

## Conference to discuss biodiversity issues

KUALA LUMPUR, Fri. — Some 20 foreign and local experts have confirmed their participation in a conference to discuss biodiversity issues in Kuching in November.

The three-day conference, beginning Nov 1, will cover the current status of biodiversity at the global, regional and local levels; implementation of the Convention on Biological Diversity (CBD); opportunities and challenges in biodiversity management (including case studies from different countries); and conservation as well as bioprospecting and biotechnology.

Among the speakers is Professor Andrew Beattie of the Commonwealth Key Centre for Biodiversity and Bioresources, Macquarie University, Australia.

His paper will be *Future Directions in Biodiversity Research*.

Beattie views biodiversity research as a concept which combines conservation and production.

Conservation calls for the protection of various species and their environment. Production refers to activities such as forestry, agriculture and fisheries, all of which depend upon the species and the

environment.

He holds that future biodiversity research will have to address issues of conservation and production.

Another speaker will be Prof Datuk Dr Zakri A. Hamid, the Deputy Vice Chancellor (Academic Affairs) of Universiti Kebangsaan Malaysia. He will present a paper on *Implementation of the Convention on Biological Diversity in Malaysia*.

The organisers said the conference would be of interest to policy makers in both the public and private sectors, scientists, students, academicians or administrators in research institutions or pharmaceutical companies.

The conference is one of the activities on the State millennium celebrations calendar.

It is jointly organised by the Ministry of Science, Technology & Environment (MOSTE), the Sarawak Biodiversity Centre (SBC) and the Sarawak Development Institute (SDI).

For more information, contact SBC at tel 082-610610 (fax 082-611535) or SDI at tel 082-411799 (fax 082-412799).

## Learning experience for teachers

It was a learning experience for a group of secondary teachers from the Kuching-Samarahan Division after attending a workshop on "Biodiversity Awareness and Capacity Building" organised by the Sarawak Biodiversity Centre (SBC) in Kuching recently.

The workshop, facilitated by professor Yong Hoi Sen from Academy of Sciences Malaysia, was to promote better awareness and appreciation of biodiversity among teachers and also as a forum for them to share their experience as well as promoting better networking among themselves.

In the first session, Professor Yong's talk on "Biodiversity Education" stressed on the need to make people, especially policy makers, community leaders and educators more aware of our biodiversity and to conserve it. He said that teachers are a vital link to the mass audience, their students and hence their pivotal role in promoting biodiversity is important and significant.

"Biodiversity is everyone's concern. It does not matter what you do, who you are or where you are - biodiversity affects all of us everyday," said Professor Yong.

"We should all explore new ways to create better awareness of biodiversity either through writing,

posters, CDs, newsletters, fact sheets, seminars workshops or activities," he added.

On the subject of conservation of biodiversity, Professor Yong pointed out that such actions need to be identified clearly before steps can be taken into account the sustainable use of biodiversity as we need to make use of biodiversity in our lives.

The second session "Training of Biodiversity Personnel" looked at the qualities needed for such people. According to Professor Yong, there is a need to have a pool of highly trained, skilled and strongly motivated people to chart the direction of biodiversity education in the State. These personnel need to be well versed in a number of disciplines such as biology, sociology and anthropology, economics, law, international affairs and information and communication technology so that they will be able to make independent, reliable and competent decisions.

They need to have critical, analytical, rational and resourceful minds to impart knowledge effectively and also to keep abreast of the latest cutting-edge practices.

It also calls for a paradigm shift in our approach towards these personnel as well as to give them due recognition and encouragement.



A participant, Ms Loo Siaw Choon from SMK Pedawan (right) receiving her certificate from Mr Chua Teck Kheng (left), the CEO of SBC at the end of the workshop. Looking on is Ms Eileen Yen, the Assistant CEO, SBC.

Ms Rasiah Ulis from SMK Tun Abang Haji Openg, believed that there is an urgent need to get students to be interested in biodiversity issues.

"The workshop provided the fundamental background, understanding and knowledge of biodiversity and is the first step towards better awareness," she said.

Her school has also started a herbal garden where students and teachers

are involved and is one way to get students to become interested in biodiversity.

Another teacher, Ms Hafsa Yaman from SMK Batu Lintang, expressed her view that teachers need to be better informed before they are able to impart their knowledge on biodiversity to their students.

"Besides the theoretical aspects, there is also a need for the practical part to

make biodiversity fun for teachers and students alike," she added.

Mr Noslum Apat from SM Teknik Sejingkat, who came to the workshop with very little knowledge on biodiversity, emerged from the workshop a better informed teacher. "I have learned new things from the workshop and it also was a useful experience for me," said the teacher of technical applications.

Ms Disin Nyaom of SM Teknik Matang, said that the workshop was a good opportunity for teachers to gain exposure and knowledge.

"However, the amount of information presented was quite overwhelming and it would be helpful if the workshop could focus on the practical aspects," she added.

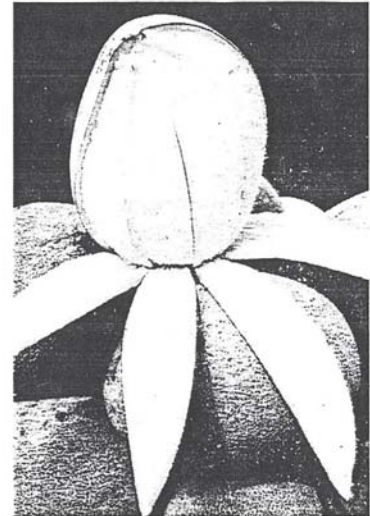
The one-day workshop was the third organised by SBC to promote better awareness, appreciation and conservation of our rich biodiversity and these workshops are aimed at various target audience of our society.

Beside these workshops, SBC also organised various biodiversity talks for the public, private and government agencies.



Ms Chiang Yu Lian (right) chairing the discussion during the group session of the workshop held at the SBC recently.

## Talk on Indigenous fruits of Sarawak



Embang fruit

KUCHING, Wed. - The Sarawak Biodiversity Centre (SBC) will be organising a talk on Indigenous Fruit Species of Sarawak and Their Potential for Commercial Exploitation on Oct 14 (Saturday) at 9.30 am at the centre.

The presenter will be Mr Voon Boon Hoe, Senior Research Officer, Agriculture Research Centre (ARC), Seremangoh.

He will talk on the rich species of indigenous fruits of Sarawak, at least 75 species at the last count, and their potential for commercial exploitation.

He will also talk on the collection of cultivars available at ARC and the use of indigenous plants for landscaping purposes as many of them have interesting and attractive fruits, flowers, foliage and tree structure.

The talk will be in English and include slide presentations.

Members of the public who wish to attend the talk are to contact Ms Sylvia at the centre for registration before Oct 9. Bookings will be on a first come, first served basis.

New Sunday Times - 8th October 2000

# Taib: Centre to spearhead R&D

## Research on local plant life and uses

By Raynore Mering

KUCHING, Sat. — The Sarawak Biodiversity Centre in Kota Samarahan will spearhead research and development of local plant life and its uses for man, Chief Minister Tan Sri Abdul Taib Mahmud said.

He said the centre, set up in 1997, would promote better understanding of the potential of the State's vast natural resources and how they could be exploited for the commercial market.

Apart from the *bintangor* tree which was touted for its potential to cure HIV, he said there were many other local plants that had been found to have medicinal value and which SBC would also study.

"Since we have established the biodiversity centre, we should let it concentrate on doing research," he said at the launching of the two-day Sarawak Pepperfest 2000 at the Kuching Waterfront here.

He said there had to be a good working relationship between the Forestry Department and the SBC to carry out systematic exploration and research of the State's resources.

Meanwhile, Taib called on pepper farmers in the State to keep abreast with the latest developments in the dynamic pepper industry and to adapt to the demands of the international market.

He said there were about 50,000 pepper farmers in Sarawak and some RM400 million worth of pepper was exported overseas each year.

"Now that we have better access to information technology, we should transform ourselves into knowledge-based farmers," said Taib, adding that pepper farmers in the State had been responsive to changes in the industry.

The two-day Pepperfest is the third in a series of biennial events

organised to promote orderly growth and development of the spice industry and trade.

This year, it attracted both local and foreign participants, most of whom are either users or buyers of the famed Sarawak pepper.

Some of the foreign participants are from Spain, Czech Republic, India, Indonesia, the United States of America and Saudi Arabia.

Events that will be held as part of the festival include a Food and Spices Fair for small- and medium-sized industries, a cooking demonstration by Chef Wan, food tasting, cultural shows and children's colouring competitions.

More than 20 companies participated in the Food and Spices Fair.

State Minister of Agriculture and Food Industries Datuk Adenan Saem will open the Seminar on Pepper and Other Spices and the Seminar on Traditional Herbs and Other Medicinal Plants tomorrow.

Sarawak Tribune - 12th October 2000

# SBC enforces Research Permit System

KUCHING — Sarawak Biodiversity Centre (SBC) has put in place the Research Permit System (RPS) to ensure the conservation of the State's biological resources as well as a fair and equitable benefit sharing from their usage.

SBC's chief executive officer, Chua Teck Kheng stated that the RPS would

encompass all elements of research to be conducted including penalty for non-compliance.

He said any researcher, local or foreign, would be eligible to apply but a foreigner needed a local sponsor to act as contact person for the applicant.

Chua was presenting a paper on Legal Aspects on

Bio-Prospecting on Herbs and Plants in Sarawak at a seminar on Traditional Herbs and Medicinal Plants in Sarawak here yesterday.

He added that Ethnobiological Research Permit was required if an applicant wanted to conduct research on the traditional use of biological resources

by the natives of Sarawak.

In 1997, the State government enacted the Sarawak Biodiversity Centre Ordinance 1997 (Ordinance) and the Sarawak Biodiversity (Access, Collection and Research) Regulations 1998 (Regulations) which came into effect on 1 Jan 1998 and 1 Jan 1999 respectively.

New Sunday Times - 8th October 2000

# Scientists urged to write more

"Malaysian scientists need to write more," said Professor Yong Hoi Sen. "It is not only that they are not contributing enough for the scientific community but have contributed even less to make the public aware of their work." Professor Yong said this when he facilitated a workshop "Scientific Research and Scientific Writing" at the Sarawak Biodiversity Centre (SBC) recently.

The workshop provided an opportunity for more than twenty research officers to tap on the vast experience of Professor Yong who has written and published more than 250 articles and 4 books over the last 25 years. Prof Yong, from the Academy of Sciences Malaysia, presented useful tips and answers to the participants from the Department of Agriculture and Department of Forest, the Natural Resource and Environmental Board (NREB) and also the State Planning Unit (SPU).

He advised the participants to make information derived from their research work available to as many interested people as possible, especially the public who need to be better informed of the types of work being carried out on the biodiversity of the State and country.

"Many researchers produce materials that only appeal to their peers and are of very little interest to the public because of the technical nature of their reports. They should make their work more easily understood by the public by writing in simple, easy to understand language and this will make their work more appealing and contribute more to the understanding of science by the public. It is important too that they should publish their work in as many journals, magazines and newsletters as possible within the country and this will contribute immensely to the pool of knowledge that is necessary to make Malaysia recognized in the world scientific community," Professor Yong added.

On the subject of research, he pointed out there is no secret recipe for success except hard work, dedication and sacrifice. Researchers must always be willing to learn from others, read more and be aware of their limitations so as not to undertake work that may be beyond their abilities.

When embarking on research work, there are bound to be failures and these should not deter the researchers as they can learn from their mistakes. Perseverance is the hallmark of great sci-



Professor Yong Hoi Sen: "Scientists have to write more so that more people will be aware of their work".

entists and given time, most researchers will be able to employ the right techniques in getting their work done successfully.

"I have benefited from the workshop as what he (Professor Yong) said has given me another way to view my research work," Margaret Abat, a research officer at the Agriculture Research Centre (ARC) in Semengoh, said after the workshop. She hoped that more workshops will be organized in future to include practical aspects of scientific work, especially writing for different audiences.

Another research officer, Mohizah Mohamad of Forest Research Centre (FRC), agreed that a hands-on approach to scientific writing would be ideal for the next workshop.

"I look forward to attending that workshop as it will greatly assist me in expressing myself better and also making my work known to a wider audience. I am also grateful that Professor Yong was able to answer a number of questions about my research work which will assist me in making better interpretation of my work," she added.

"The workshop is a learning experience for me," said Susan Musis of National Parks and Wildlife Division (NPWL). "As was mentioned by the other participants, I would really appreciate a workshop of a longer duration with practical sessions for the participants to gain more, especially in their writing skills," she said.

The one-day workshop was the second workshop organised by SBC as part of its capacity building programme.

## Potential of indigenous fruits for commercial purposes

There are many indigenous fruits which have potential to be exploited for commercial purposes, either as plantation crop or for landscaping. This was expressed by Mr Voon Boon Hoe, a Senior Research Officer of the Agriculture Department during a talk on *Indigenous Fruit Species of Sarawak and Their Potential for Commercial Exploitation* held at the Sarawak Biodiversity Centre (SBC) recently.

"Many of our indigenous fruit species have potential to be commercially viable," said the man with more than twenty years of research experience. He said that the climatic conditions here are very conducive for plants to grow but unlike other countries, there is no distinct dry season which may explain why some of our indigenous fruits do not bear fruits every year. "Most seasonal fruits start bearing flowers and fruits after a dry period but this is not the case here," he said.

Some of these fruits have been cloned and currently are available from the department, especially fruits like the nyekak (*Durio kuteiensis*), durian kuning (*Durio graveolens*), isau (*Dimocarpus longan var malesianus*) dabal (*Canarium odontopyllum*) and embang (*Mangifera pajang*)," he added. He also mentioned that there are at least 75 species that produce notable fruits with the genera *Artocarpus*, *Mangifera*, *Baccaurea*, *Nephelium* and *Durio* very well represented and in fact, making the State the centre of diversity for these genera. He also cautioned would-be buyers of fruit trees to buy only quality seedlings and also to plant those that are not commonly available. This is to ensure that there will be a market for the fruits when it is bearing as commonly available fruits fetch low prices.

He also disclosed that tissue culture of our indigenous fruits have yet to reach the scale of commercial viability and traditional methods of grafting are still preferred. As for taste, he urged the participants to try out these fruits, especially the ones which are rare and hard to come by. "These fruits are usually only available in the smaller towns and some have very distinct taste," he said.

However, the nutritional value of some of our indigenous fruits are high and some are more fibrous when compared with common fruits or imported ones. To a question on stimulating trees to bear fruits, he said that the application of certain chemicals have been used and also that of cutting rings around the branches of trees. However, these methods have yet to be tried on our indigenous fruits.

On the use of indigenous plants for landscaping, Voon presented a list of trees suited for ornamental purposes. "For some of these trees, they will bear beautiful coloured leaves, flow-



Voon showing the participants one of the indigenous fruit species of Sarawak. "We should look into the commercial potential of using them of these fruits," he said during the talk.



BELOW: Kenneth asking the speaker a question.

ers and fruits and are suited for gardens. Not all fruit trees will grow very tall unlike in the jungle where there is intense competition for light," he said. In response to a question on the suitability of some of the highland plants to a lowland area like Kuching, Voon said that these plants have grown quite well in the research station at Layar.

He also encouraged people to visit the station to have a better look at the indigenous fruits planted there and when in season, some have very beautiful flowers and fruits. His presentation, which included slides of the indigenous fruits trees, drew much admiration and compliments.

"It is amazing to see such varieties of fruits found in Sarawak," said Margaret Yong from Pelangi Landscaping after the talk. "We will look into the possibility of using them for gardens and to advise our clients accordingly," she added.

"The talk was very interesting and the photos were excellent," said Kenneth Abey, a member of the Public Service Commission. He also mentioned that the speaker was knowledgeable and what he presented was easy for the audience to understand.

Another participant, Annie Spencer from United Spice Plantation, said that the talk was very interesting and informative. "At present we have not started indigenous fruits as the materials are hard to come by," she said in reply to whether United has started experimenting on indigenous plants. She said that the time taken for the indigenous species to bear fruits is one of the factors to be considered in plantation planning.

Chi'en Lee, an American Botanist attached to Malesiana Tropics, said that the talk was interesting and informative. "There is a possibility that we will look into the propagation of these plants using tissue culture in future. It is more difficult to do that with trees unlike other smaller plants," he said.

"We are pleased that the participants enjoyed the talk and become better informed of the subject," said Melvin Goh, Information Officer of SBC. He said that the series of talks organized by SBC have been well attended and will continue to be conducted in future. For more information on future talks, members of the public can call Melvin at 082-610610.

## Bioprospecting for novel drugs



Dr. Michael Flavin, Biodiversity 2000 conference speaker (right), Dr. Tuah Jenta (second right) and Dr. Thomas Flavin of Sarawak MediChem Pharmaceuticals, Inc. having a discussion with Mr. Chua Teck Kheng (left), CEO of the Sarawak Biodiversity Centre, while on a familiarisation visit to the Centre.

The forthcoming Biodiversity 2000 International Conference in Kuching from 1-3 November 2000 will feature 21 international and local speakers who will discuss different aspects of biodiversity management. Among the papers to be presented are those which will discuss the potential value of chemical diversity found in the biological diversity of tropical rainforest species with natural molecules that could form the base of pharmaceutical drugs.

Of special interest to Sarawak is the Sarawak bintangor tree whose calanolides derived from the tree's molecules have the potential for therapeutic application. Dr. Michael Flavin of the Sarawak MediChem Pharmaceuticals Incorporated, will present a paper at the conference on "Bioprospecting and International Collaboration - The Case of the Calanolides".

The derivatives from the bintangor tree are currently being tested for its anti-HIV agent, Calanolid A. According to Dr. Michael Flavin, the President and CEO of Sarawak MediChem Pharmaceuticals Inc., a joint venture between the Sarawak government and MediChem Research Inc. in the U.S.A., the Calanolid A from the bintangor tree "has already demonstrated an

antiviral effect in Phase IB studies involving HIV-infected patients".

In his paper, Dr. Flavin will outline how the example of Sarawak MediChem is illustrative of how bioprospecting may be approached to mutually benefit a resource-rich state and a technologically strong international partner.

There are two other papers that will discuss how drugs derived from natural products have the therapeutic potential for treating diseases. Dr. Robert Lee of the Harvard University-Massachusetts Institute of Technology will discuss a paper on: Therapeutic Leads from Microorganisms, Fungi and Plants in Medical Research: Treatment Discoveries for Alzheimer's Disease".

Professor Ho Coy Choek of University Malaysia Sabah will speak on "Microbial Biodiversity in Malaysia and the Screening for Novel Drugs".

The Biodiversity 2000 International Conference is organised by the Sarawak Biodiversity Centre, Ministry of Science, Technology and Environment and the Sarawak Development Institute. Those wishing to register for the Conference can contact the Sarawak Development Institute at (082) 411799.

## Exploitation of Banana Biodiversity

Dr Mak Chai of the Institute of Biological Sciences of the University of Malaya will be presenting a poster session on the exploitation of banana biodiversity at next week's Biodiversity 2000 International Conference in Kuching from 1-3 November, 2000.

Bananas are one of the most important fruit crops in the world with an annual production of 80 million tonnes, and in Malaysia, bananas feature prominently in our daily diet.

According to Dr Chai, the banana is very versatile crop. The fruit can be consumed fresh or processed into beverages, vinegar, confectionery, jelly, crackers, crisps, jams, baby food, chips, flour, sauce, figs, dehydrated banana and fruit rolls. Other parts of the plant are usable too, with the stem as animal feed, handicraft, rope and paper; the leaves as food wrapper and linings of containers; the male bud as vegetable, banana peel as cosmetics and green manure, and the stem sap as dye and medicine. The banana plants are used as well for ornamental and landscaping purposes, and for religious reasons, are placed in front of the entrances to Hindu

temples.

Dr Chai has identified 60 distinct banana species in Malaysia but only a few are cultivated commercially. The important ones include the dessert cultivars such as Pisang Mas, Berangan, Rastali, Lemak Manis and the Cavendish types while the important cooking types are Tanduk, Nangka, Abu, Raja and Awak.

In Dr Chai's opinion, "a systematic approach is needed to collect and characterize the existing diversity to facilitate the exploitation of cultivars suitable for a particular usage."

Malaysia is one of the centers of banana diversity but the exploitation of such genetic diversity for cross breeding for the improvement of cultivated bananas is extremely difficult due to the sterility barrier, polyploid genome and the preference of parthenocarpic fruits. A solution could be biotechnology which can provide an alternative for the improvement of asexually propagated bananas. - For more information concerning the Biodiversity 2000 Conference, contact the Sarawak Development Institute at (082) 411799.

The Borneo Post - 2nd November 2000

# Cooperation in biodiversity prospecting vital

KUCHING, Wed. - Rapid economic development and the ever growing population may pose a great threat to the state's biodiversity resources and as such, it is critical for developing countries like Malaysia to be partners in, and to benefit mutually from bioprospecting, in collaboration with technologically advanced countries and institutions.

State Secretary Datuk Abdul Aziz Husain said this when opening the international Biodiversity 2000 Kuching Conference here this morning.

"It is important to emphasise education and research along with appropriate management concepts to efficiently

manage Sarawak's biodiversity," he said.

He also said stronger support should be given to colleges, institutes and companies to encourage biodiversity conservation and research.

Abdul Aziz said one way to promote activities in biodiversity conservation was by advertising in publications and the Internet focusing on the value, importance, and necessity of biodiversity conservation.

"Biodiversity, as the sum of the total profusion of different life forms on earth, is generally recognised in three inter-connected levels: genetic, species, and ecosystems. Thus,

biodiversity has an array of values, providing us with food, medicine, and even as ornamental plants and breeding stocks. Biodiversity is critical in meeting our human needs which helped to maintain our ecosystems crucial for our survival and sustenance," he said.

According to him, the state government has taken a comprehensive approach towards biodiversity conservation, management, and research through its various policies such as Totally Protected Areas (TPAs) for in situ conservation, education and research, and ordinances such as the Sarawak Biodiversity Centre Ordinance 1997 and the

Sarawak Biodiversity Regulations 1998.

The Ordinance and the Regulations provide for the administrative and regulatory mechanisms to facilitate and authorise access to and promote sustainable utilisation of the State's biological resources, as well as to ensure that the State receives the appropriate benefits after giving access to its biological resources.

He added that there is still a lot to be done to help ensure efficient management of resources as well as its sustainable use.

The conference scheduled from Nov 1-3 provides a platform to facilitate the exchange



Abdul Aziz striking the gong to officiate the conference.

of ideas among experts and also as a means to disseminate information to the public.

It is jointly organised by the Sarawak Development Institute (SDI), the Sarawak Biodiversity Centre (SBC), and the Ministry of Science, Technology and Environment.

Various papers and talks covering topics such as current issues, opportunities, and challenges in biodiversity management, the role of resource centres as facilitators for access to genetic resources, microbial biodiversity and the

screening for novel drugs, e-conservation, taxonomic issues, attitudes on knowledge, and future directions in biodiversity research would be presented at the conference.

Participants numbering over 150 come not only from Malaysia and neighbouring countries but also from Canada, Ghana, Finland, Belgium, the United Kingdom, the United States, and Costa Rica.

Abdul Aziz thanked the private sector for its strong support and participation in the conference. - BP

# Biodiversity conservation should be encouraged: SS

By Elizabeth Serai

KUCHING - It is critical for developing countries like Malaysia to be partners in and benefit mutually from bio-prospecting, in collaboration with technologically advanced countries and institutions that are rich in technology and R&D research and development, said State Secretary Datuk Haji Abdul Aziz Husain.

Aziz was speaking at the opening ceremony for 'Biodiversity 2000 Kuching: An International Conference: Prudent Biodiversity Management & Sustainable Development' at a hotel here yesterday.

He added that biodiversity had an array of values that provided people with food, sources of medicinal discovery and a host of other uses, including as ornamental plants and breeding stock.

Meanwhile, the Sarawak government took a comprehensive approach in biodiversity conservation, management and research as fast-paced economic development and the pressures of a growing population posed a threat to the survival of biodiversity resources.

Aziz revealed that among the relevant policy instruments were totally protected areas for in-situ conservation, education and research, Sarawak Biodiversity Centre Ordinance 1997 and the Sarawak Biodiversity Regulations 1998.

The Sarawak Biodiversity Centre was set up in July 1999 to help the State regulate access to, research and utilisation of biodiversity in Sarawak.

Aziz believed that for biodiversity to be efficiently managed, the State had to strengthen education and research alongside the setting up of appropriate management concepts. "It is also important to strengthen support for colleges, institutes and companies so as to encourage biodiversity conservation and research."

He said social circumstances must be created to increase the activities of experts in biodiversity conservation. Advertising through publications and the Internet on the value, importance and necessity of biodiversity conservation had been suggested.

"Biodiversity is critical in meeting human needs and directly benefiting us. In addition, it maintains the ecosystem, which is crucial for overall survival and sustenance," he added. Much had to be done to ensure efficient management of the biological diversity resources and their sustainable use.

"This conference is one platform not only to encourage the exchange of ideas between experts but also as a means to disseminate information to the



COMPREHENSIVE APPROACH ... Aziz striking a gong to launch the opening ceremony while Chua (second left), Nasaruddin (third left) and Dr Daniel look on.

general public," he noted.

The conference is organised by Sarawak Biodiversity Centre (SBC) and Sarawak Development Institute (SDI) in collaboration with the Ministry of Science, Technology and Environment Malaysia (MOSTE), with financial support from

a number of local companies in Sarawak.

Participants at the conference included those from countries like the United Kingdom, Japan, Canada, Costa Rica, the United States of America, Singapore, New Zealand, Australia, Belgium, Sabah

and Peninsula Malaysia.

Also present were Deputy State Secretary, Planning and Development Datu Wilson Baya Dandot, Conservation and Environmental Management Division, Ministry of Science, Technology and Environment Malaysia director

Nasaruddin, Sarawak Biodiversity Council deputy chairman, Tan Sri Dato' Amar Haji Hamid Bago, Sarawak Biodiversity Centre CEO Chua Teck Reng and Sarawak Development Institute (SDI) senior research fellow, Dr Daniel Chew.

Sarawak Tribune - 2nd November 2000

## Foreign scientists urged to respect our biodiversity laws

KUCHING, Wed. - Foreign scientists doing research in Sarawak must respect its laws on biodiversity, State Secretary Datuk Abdul Aziz Husain said today.

"We never turn down scientists interested to do research here but they should not violate the laws that protect the state's biodiversity," he told reporters after opening the Biodiversity 2000 International Conference on prudent biodiversity management and sustainable development, here.

"We do not want people to

run away with the discoveries and benefit alone from the findings," he said, adding that there were laws such as the Sarawak Biodiversity Centre (SBC) Ordinance 1997 and Sarawak Biodiversity Regulations 1998 to ensure that all such findings were shared.

Abdul Aziz said Malaysia, and not just Sarawak, had benefited from the findings on rare specimens.

He also said that Sarawak needed people to do research, otherwise plants with medicinal value would remain untapped.

Early this year, three American scientists were compounded a total of RM30,000 for trying to smuggle rare specimens out of Sarawak.

The specimens were collected in Gunung Buda in Limbang division.

Meanwhile, Harvard University Division of Health Sciences and Technology brain scientist Dr Robert Lee did not rule out the possibility of discovering plants with medicinal value from Sarawak's rich biodiversity as an alternative to drugs in treating human diseases, particularly

Alzheimer's disease.

He said he was still working on finding the right active bio-ingredient which was safe to treat human diseases.

Academy of Sciences Malaysia professor Dr Yong Hoi Sen said Malaysia must have the right legislative framework and dedicated personnel to implement the laws on biodiversity.

"We need an integrated approach to not only protect but also to make the best use of the materials without harming the biodiversity resources," he said. — BERNAMA

## Native rights to rich biodiversity should be safeguarded: Assoc Prof

KUCHING - The rights of the natives on the rich biodiversity in the State should be protected and safeguarded.

Sarawak has one of the richest and most unique bio-diversities in the world and it should be treasured, said manager of International Centre for Nature Conservation, Lincoln University, New Zealand, Associate Professor Dr David R Given.

"Maybe there should be a kind of regulation or protection for the people in Sarawak, especially the natives in terms of their right. The traditional use and ownership of any species of plants in Sarawak is actually very important," Given said.

Dr Given cited the example of New Zealand where he said the Maori natives were free to grow a species of plant for medicinal use.

In an interview here yesterday, he noticed that Sarawak has a lot of plants' species to offer for traditional use.

He said recently a European company found out about the importance of this plant and they successfully used it to manufacture a kind of perfume.

"The company now claims it has the rights to the plant," said Dr Given, one of the consultants involved in the drawing up of the Sarawak Biodiversity Centre Ordinance 1997.

"The worst thing is that they prevent the Maori peo-

ple from planting that particular species or even to pluck it for medicinal use. Now, the Maoris do not have the rights to the plant anymore," he said.

"Therefore, it is important to ensure that traditional use plants are well-protected and would be available at many places in Sarawak as a biodiversity balancing," he said.

Dr Given added that although this is a difficult task, he is confident that with the setting up of the Sarawak Biodiversity Centre (SBC), the bio-diversity in Sarawak would be as unique and rich as it should be.

Dr Given is in Sarawak to attend the Biodiversity 2000 Kuching - an interna-



**Dr GIVEN ... traditional use of plants should be protected.**

tional conference themed *Prudent Biodiversity Management & Sustainable Development* at a hotel in Kuching, which ends tomorrow.

The Borneo Post - 3rd November 2000

Environmental, economic considerations in biodiversity management

# It's a matter of survival: CM

KUCHING, Thurs. - In a world of increasing globalisation and environmental degradation, the prudent management of biodiversity is one of the most important and critical challenges facing us today, Chief Minister Danuk Patinggi Tan Sri Hj Abdul Taib Mahmud said.

Speaking last night during his keynote speech at a welcome dinner in conjunction with the Biodiversity 2000 Kuching conference, the Chief Minister stressed that biodiversity must be conserved and effectively managed not just as a matter of principle, but also as a matter of survival and long-term economic benefit.

The term biodiversity (biological diversity) was first coined as a scientific concept to encompass the diversity of life includ-

ing plants, animals, and micro-organisms. It refers to genes, species, and ecosystems, and describes more precisely what most of us would call "nature".

Biodiversity has now widened its scope to embrace a political role to deal with the interface between the ecological, social, and economic processes.

This extended definition of biodiversity is addressed in the three principal objectives of the Convention on Biological Diversity (CBD).

This global convention stresses the conservation of earth's finite biological resources and its ecosystems, the economic and sustainable use of the components of this ecosystem, as well as a fair and equitable distribution of benefits from the use of these resources.

So far, no one knows exactly how many species there are on this planet, and estimates range from as few as 3 million to as many as 100 million species.

This is largely due to the fact that there are still places on earth where biodiversity exists but where men has yet to explore.

According to the most recent estimates, only 1.75 million of the estimated number of species have so far been identified.

Yet, the accelerating rate at which our biological resources are being depleted could seriously reduce the genetic base required for the continued improvement and maintenance of currently utilised species and could deprive us of the potential use of the many species which are being lost.

"Since there is so much yet to

be discovered, there seems to be an assumption that the world possesses limitless biological resources. But there is increasing evidence that this is not so, and the world is losing its biological resources at an unprecedented rate. This loss brings about serious consequences which have great impact on our well-being," said Taib.

"Firstly, the loss of biological resources will result in the loss of tangible resources of immediate value to mankind. Secondly, their loss will impair ecological processes, and thirdly, permanent loss of biological resources will lead to the loss of biological diversity that might have great potential benefits to mankind in future," he stressed.

Historically, Taib said, wild species and the genetic variation



Taib (left) receiving a souvenir from SBC's Chief Executive Officer Chua Teck Kheng, during Wednesday night's event.

quality of life and compromise the ability of our future generations to meet their needs," said Taib.

He added that more recently, advances in biotechnology research and development have offered new possibilities for increasing the production of food, medicines, energy, and other raw materials and for improving environmental management.

He also pointed out that because of the interdependence in the world environment and the increasing linkages of the global economy, the loss of biodiversity in one region will have an impact throughout the world. For instance, the loss of the rain forest in tropical regions and its effect on the environment will be felt in other parts of the world.

Fortunately, said Taib, recent years have seen more and more countries and institutions showing a keen interest in addressing biodiversity issues, at both local and global levels. This seems to stem from two fundamental considerations.

"The first consideration is based on the concern for our survival and this places upon all of us a moral obligation to pre-

vent further loss and degradation of biodiversity. This concern for survival arises from the fact that the destruction of biodiversity will certainly threaten the long-term survival of mankind by destroying our ecological balance and health," he said.

"The second consideration is economic returns. This is due to the emergence of the new cutting-edge technology in the field of biotechnology, which can unlock the potential of biological resources in the forms of highly profitable products," he continued.

Bioprospecting and research and development programmes to conduct natural product screening are driven primarily by the prospect of financial windfalls should discoveries be made in the form of new bio-products with good medical and commercial value.

The economic stakes in the bio-trade are high; the sale of pharmaceuticals based on traditional medicines alone is estimated at about US\$32 billion annually.

Taib said that technological changes are also increasing the

economic value of genetic resources as a whole as the potential uses have increased greatly.

However, the cost of working with genetic materials and the commercial value of a sample extract are expected to fall. This is because the same technology that increases the demand for genetic materials has also enabled the mass production of these materials.

"The corollary of all these developments is that developing countries - the main suppliers of genetic materials - should focus less on up-front payment and focus more on the benefits of long-term technological cooperation programmes and on developing their own biotechnology," said Taib.

He said that three basic issues have to be addressed if bioprospecting is to contribute to sustainable development of the source country; and the long-term survival of its biodiversity.

He said that firstly, access to biodiversity has to be properly supervised as unregulated bioprospecting and drug development can be very detrimental.

For instance, a misad-

venture for an anti-cancer compound resulted in the decimation of the entire adult population of a particular species of plant, thereby causing irreparable damage to the biological resources of the country from which the plant was harvested.

Secondly, said Taib, developing countries must benefit from the bioprospecting activities and access to their biological resources, otherwise it would make no sense for them to want to conserve their rich biodiversity.

Lastly, Taib said that the returns from bioprospecting activities must contribute to sustainable development of rural areas to enable local rural communities to maintain and conserve the natural habitats where they live.

He was confident that the conference, which is jointly organised by the Sarawak Development Institute (SDI), the State Government, and the Sarawak Biodiversity Council (SBC), will be fruitful and that many useful recommendations may be made from the various talks and discussions. -B1

within these species have made substantial contributions to the development of agriculture, medicine, and the industry.

Many species have provided us with food, fuel, and fibre. Others have contributed to the stabilisation of the climate, the protection of watersheds, and the protection of soil, nurseries, and breeding grounds. Still others provide us with the opportunity for research, recreation and eco-tourism.

"Any loss or degradation of biodiversity, therefore, will undermine all these social-economic and environmental benefits, and in the long run will diminish our

# 'SBC can be a top biodiversity centre'

By Fraser Barul

KUCHING - Chief Minister Datuk Patinggi Tan Sri (Dr) Haji Abdul Taib Mahmud envisions the Sarawak Biodiversity Centre (SBC) will be a focal point and a world-class resource centre for biodiversity information and related activities in the state.

Speaking at a dinner held in conjunction with the Biodiversity 2000 International Conference here on Monday, Taib noted that much of the State's biological resources were still not well researched.

"Despite the incomplete biodiversity information, there is no dispute that Sarawak is a centre of mega biodiversity. The question is how do we safeguard our rich biodiversity and utilize it in a sustainable way to benefit the State, Malaysia as a whole and the rest of the world?" he asked.

He said for SBC to achieve the vision of becoming a focus for biodiversity inventory, monitoring, research, education, utilisation, management and conservation, it would have to:

- Develop, maintain and operate biodiversity databases and establish linkages with appropriate government agencies, local and overseas institutions as well as NGOs in the field;
- Provide bio-diversity education and disseminate accurate and relevant information on the magnitude, distribution, status, use and value of the State's biodiversity to the government agencies, educational and research institutions, the industries and the people;
- Ensure that scientific collections and associated data were maintained for the purposes of inventory and study of the biodiversity of Sarawak including collection, acquisition, and development of a collection network and associated standards for reference collections;
- Assist the State to identify priorities for research on biodiversity as part of the State planning process and promote research on Sarawak's biodiversity in order to enhance understanding, conservation and sustainable utilization of biodiversity, including its traditional use;

• Ensure that conservation status of biodiversity at all levels including of endangered species was adequately monitored and regulated, and recommend the remedial measures needed to the State government, other agencies and institutions;

• Identify new natural and biotechnological products (bio-prospecting) that could bring socio-economic benefits to the people, and in this area to act on behalf of the State government to license the uses of biodiversity-based materials or products that may have developed outside the State;

• Facilitate international exchanges of personnel and information concerning biodiversity, including workshops and conferences, and educational and research opportunities for the people of Sarawak.

SBC had the responsibility of regulating access, collection and research on Sarawak's biological resources through the implementation of a Research Permit System (RPS) to ensure conservation of the State's biodiversity, its sustainable utilisation, and ensuring a fair and equitable benefit sharing from its usage.

RPS provides four types of permits - the Research Permit, Export Permit, Sales Permit for protected Species and the Ethnobiological Research Permit.

# Learning about biodiversity through experience

KUCHING, Sun. - While most students were busy making plans for their holidays after their final term exams, the forty-one students and their five teachers from SMK DPHAG Stampin were busy learning about biodiversity.

The group made a visit to the Sarawak Biodiversity Centre recently to experience for themselves the reports they have read about other students' visit to the Centre and their brush with biodiversity education.

"We have read the various reports about such educational visits to the Centre and so we decided to try for ourselves," said Mr Lim the teacher-in-charge.

"It was also an opportune time as the students have just completed their exams and the trip was a refreshing change for them," he added.

The first item on the visit was a talk on biodiversity based on the SBC Biodiversity Poster which explained the importance and necessity of biodiversity for our existence.

It was easy for the students to understand the significance of the talk as the examples were taken from the local elements incorporated into the poster.

"I have never seen such a colourful poster before and also I could recognize most of the items in the poster without having to refer to an encyclopedia!" remarked Ms Wong, a teacher.

"I am sure that it will inculcate in them a better understanding of biodiversity and to appreciate our living wealth," she said.

"We have been 'assigned' to be our school's representatives to inform other students about biodiversity since we have received the talk during the visit," said Sujairah, a Form 4 student.

"Our class is indeed lucky to be able to come on this trip as it has been interesting and exciting, especially the talks and the jungle trekking," she enthused.

Another interesting and educational talk was that of sampling and mounting insect specimens which was presented by the Zoology Division of SBC.

Starting with how to catch insects to what to do with them after that, the students were informed that proper identification and mounting were important for the study of the insects as well as for documentation purposes.

The students were also informed that insects were probably the largest group of animals yet to be properly identified and studied in details unlike most large animals and plants.

"I enjoyed the talk, especially the practical aspect on the mounting of the insects," Veronica replied when asked about the talk.

"I used to think of insects as being a nuisance and then better. However, I still don't want to handle them yet!" she added.

"I have always thought of zoologist as dealing with large animals but this talk has shown me that insects too need to be studied in order to understand the web of life," Roy, a student with ambition to be an accountant, said.

"Some of my classmates have mentioned that they want to be doctors and the talk also mentioned about veterinarians which I think some of them may be interested," he opined.

After explaining the role and importance of herbariums, the botanists informed the students of the proper methods of preserving plants specimens for research and documentation of our plants.

While crowding around the botanists during the practical demonstration, the students learned 'hands-on' the steps under the watchful eyes of the botanists.

Zinnirah, an aspiring computer engineer, said that the talk was informative as she has also an interest to preserve some of the unusual leaves and plants which she had seen during visits to her grandparents' kampung.

She was also surprised to learn that some of the plants found have not been identified and that many plants have not been studied for their potential use in the medicinal field.

Ma Chen, a teacher, said that many schools, including Stampin, have been making use of plants to landscape their compounds and to make the school a beautiful place for everyone.

The last item on their visit was that of jungle trekking which consisted of talk on plants and animals interactions and importance of the forest.

Prior to the trekking the students were informed of the proper way to conduct themselves in the jungle so as not to injure themselves and also the plants and other living thing found inside it.

Everyone in the group enjoyed the trekking part even though some came back mud up their knees while others had insect bites and scratches on their hands and legs.

"It was interesting and refreshing as the trekking brought me back to my younger days when I used to frequent the jungle not far from our house," said Mr Lim, the teacher-in-charge.

"I am glad the students enjoyed it as much as the teachers as this is one activity which involves the teachers and students which we can't do in the school," he added.

"I didn't like the muddy part but I can understand now some of the difficulties in doing practical field work," said Veronica.

"I was quite afraid of snakes, especially when walking in the jungle, but after this trip, I am now more confident," she said.

"Even though this was my first trip inside a jungle, I didn't find it too tough," Alma remarked.

"I have learned quite a lot about things inside the jungle and hopefully, I will be able to go for another trip in future," he continued.

Hu Ting Huey, the students' representative was full of praise for the visit and thanked the staff of SBC for their efforts in her farewell speech delivered after the trekking exercise.

The visit is part of SBC's Education Programme which is aimed at creating better awareness of our rich biodiversity among students and the public. For more information on the programme, please call SBC at 082-610610.



The students taking a closer look at the plant specimens after a talk on preparing herbarium specimens during their visit to the Sarawak Biodiversity Centre

Sarawak Tribune - 23rd November 2000

# Learning about biodiversity

**W**hile most students were busy making plans for their holidays after their final term exams, the forty-one students and their five teachers from SMK DPHAG Stampin were busy learning about biodiversity. The group made a visit to the Sarawak Biodiversity Centre recently to experience for themselves the reports they have read about other students' visit to the Centre and their brush with biodiversity education.

"We have read the various reports about such educational visits to the Centre and so we decided to try out for ourselves," said Mr Lim the teacher-in-charge. "It was also an opportune time as the students have just completed their exams and the trip was a refreshing change for them," he added.

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"I have never seen such a colourful poster before and also I could recognize most of the items in the poster without having to refer to an encyclopedia!" remarked Ms Wong, a teacher. "I am sure that it will attract our students' attention when we put up the poster in the school and hopefully that will inculcate in them a better understanding of biodiversity and to appreciate our living wealth," she said.

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The next item for the group after the zoologist talk was on the preparation of herbarium specimens by SBC's botanist. After explaining the role and importance of



**SHOWING KEEN INTEREST...** The students together with their teachers, examine the butterfly specimens after listening to a talk on mounting insect specimens during their visit to the Sarawak Biodiversity Centre.

herbariums, the botanist informed the students of the proper methods of preserving plants specimens during the practical demonstration, the students learned "hands-on" the steps under the watchful eyes of the botanists.

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*SBC News* **2001**

New Straits Times - 23rd May 2001

# Plant offers cancer cure

## Wild find in Sarawak put through further research

By Sulok Tawie  
sulok@nstp.com.my

KUCHING, Tues. — A wild plant in Ba'Kelalan in the interior of Miri Division has been discovered to have the potential to cure prostate cancer, Chief Minister Tan Sri Abdul Taib Mahmud said today.

He said the Sarawak Biodiversity Centre and an Australian pharmaceutical company were conducting further research on the plant's properties.

The plant, previously unknown outside Ba'Kelalan, was discovered by a team of scientists from SBC recently, he told reporters after launching a book entitled *Biodiversity 2000* at the State Assembly Building here.

Taib, however, was unable to give further details on the plant or whether it was widely used by the local natives in Ba'Kelalan in traditional medicine.

Launching the book earlier, Taib

said the State Government wanted to protect and develop Sarawak's rich biodiversity resources for the benefit of the State and country.

He said the State would need foreign expertise to help develop the biodiversity resources.

Sarawak Biodiversity Council chairman Tan Sri Dr Wong Soon Kai said the book, containing research papers presented at last year's international biodiversity conference held here, would be a useful reference to policy makers, planners, researchers and implementers in biodiversity management, research and development.

The book was compiled by SBC's chief executive officer Chua Teck Kheng and scientist Eileen Yen Ee Lee.

Meanwhile, at a dinner last night to mark his 65th birthday, Taib launched a pictorial book, entitled *Development in Sarawak: An Aerial Perspective*, produced by the State Planning Unit.



PROGRESS ... Taib (centre) listening to his deputy Tan Sri Alfred Jabu explaining about an aerial photograph after the launch of the book 'Development in Sarawak'. At right is Deputy Chief Minister Tan Sri Dr George Chan.

The Malaysian Today - 23rd May 2001



Chief Minister, Datuk Patinggi Tan Sri Haji Abdul Taib Mahmud being mobbed by newsmen for an interview after the launching of the "Biodiversity 2000" book at the State Legislative Assembly.

By Kadam Saal  
KUCHING: Sarawak has discovered a wild plant which is said to contain properties that may help in the treatment of prostate cancer.

Chief Minister Datuk Patinggi Tan Sri Haji Abdul Taib Mahmud disclosed the new discovery yesterday.

The medicinal potential of the plant was first discovered by a group of scientists from the Sarawak Biodiversity Centre (SBC).

"It (the plant) was discovered in Ba'Kelalan (in Bako, Miri division)," announced Taib when launching a book entitled "Biodiversity 2000 Kuching" at the State Legislative Assembly building, Petra Jaya here.

He said, with the discovery, SBC has now entered into a joint research with an Australian company on the plant before conducting clinical tests.

In the late 1980s, cancer researchers from the US discovered the *Bintangor* tree.

The tree contained the molecule Calanolid A which could be used in the treatment of HIV and AIDS.

The state in January 1997 entered into a joint venture agreement with a US research firm, MedChem Research, to research the potential of leaves from

## Sarawak one of world's biodiversity centres

From Page 1

the *Bintangor* tree. Sarawak will fund the research and MedChem would pay Sarawak royalties on future sales.

The firm has conducted clinical trials on 12 patients with HIV in the US, Canada and here in Malaysia in early 1997 and the clinical trials were announced at the 7th Conference on Reproductive and Opponentia Infections in San Francisco on Feb 1 of this year.

Meanwhile, SBC chairman, Datuk Patinggi Tan Sri Datuk Anwar Dr Wong Soon Kai said, "Sarawak is one of the 12 mega centres of biodiversity in the world."

Therefore, the state was very conscious of the bio-wealth, he added.

It said it was the responsibility of SBC and the people to continually strive towards ensuring a prudent management and sustainable utilization of the state's bio-wealth.

He said biodiversity - which refers to the diversity of plants, animals and micro-organisms - is a major resource for the development of agriculture, forestry, fishery, medicine and industry.

It is also crucial in the maintenance of a conducive environment for all living creatures, he added.

Dr Wong said the loss of biodiversity would mean the loss of a very important resource of immediate value to mankind and also an impairment of biological processes rendering the earth less habitable.

He noted that the importance of biodiversity and the alarming rate at which it was being lost were now recognized worldwide.

The "Biodiversity 2000 Kuching" 234-page compilation of the New I-3, 2000 proceedings of the International Conference on Biodiversity Management and Sustainable Development.

Chua Teck Kheng, the Chief Executive Officer of SBC and his assistant Eileen Yen Ee Lee undertook the compilation.

The Star - 23rd May 2001

# Plant that can fight prostate cancer found

By JACK WONG

KUCHING: Local scientists have found a plant in Ba'kelalan — a highland in northern Sarawak — that contains properties to fight prostate cancer, said Chief Minister Tan Sri Abdul Taib Mahmud.

Without naming the plant, he said an Australian-based pharmaceutical firm was carrying out tests to determine the plant's potential.

Taib said this after launching a 234-page book entitled *Biodiversity 2000 Kuching* at the State Assembly building in Petra Jaya yesterday.

The book contains the working papers and views ex-

pressed during an international biodiversity conference, which the state hosted last year. It was compiled by Sarawak Biodiversity Centre Chief Executive Officer Chua Teck Kheng and Eileen Yen Ee Lee.

Taib urged local experts to work closely with foreign scientists in biodiversity research and development activities as such expertise was lacking in the state.

He said it was not easy to set up the Sarawak biodiversity centre to control the exploitation of natural resources.

Earlier, the Sarawak Biodiversity Centre's chairman Tan Sri Dr Wong Soon Kai said the launching of the book on In-

ternational Biodiversity Day was the state's contribution to remind people of the importance to conserve biodiversity for sustainable use.

He said the importance of biodiversity and the alarming rate at which it was being lost were now recognised worldwide.

"More than 150 countries signed the Convention on Biological Diversity in 1992, which was later ratified by about 180 nations.

"Sarawak is one of the 12 mega centres of biodiversity in the world. We are very conscious of this bio-wealth and our responsibility to ensure its prudent management and sus-

tainable utilisation," he added.

Dr Wong, also the state science adviser, said the state government enacted the Sarawak Biodiversity Centre Ordinance in 1997, which provided for the setting up of a Sarawak biodiversity council.

"The ordinance is the first of its kind in the region. The council has the powers to regulate access, collection, study and research, experiment, protection and utilisation of biodiversity in the state.

"The book could be a useful reference for policy makers, planners, researchers and implementers in biodiversity management, research and development," he added.

## 33 students on field trip to SBC

KUCHING, Tues. - For 33 members of the Sekolah Menengah Kerajaan Tunku Abdul Rahman (STAR) Environment Club, and two accompanying teachers, a visit to the Sarawak Biodiversity Centre (SBC) on Saturday, was definitely a memorable event.



The students listening intently as zoologist, Margarita Naming (right) explains the different species of butterflies found in the state.

The students, participating in SBC's Biodiversity Education Programme entitled 'An Introduction to Biodiversity', were first introduced to what biodiversity is all about, with the aid of the colorful Biodiversity Poster.

The Environment Club was then presented with a Biodiversity Poster.

Cikgu Dayang Rahman Othman, who found the poster eye-catching and informative, later said, "... the poster can be used as a teaching aid and in science quizzes!"

Following that, they were given a talk on 'Pitcher Plants Diversity

as well as a talk on how to collect and mount insect specimens.

The students found the talks fascinating and were very responsive throughout the talk, as well as, during the question and answer sessions at the end of each talk.

The highlight of the visit to SBC was when the students were taken on a jungle trek, to see and experience for themselves some of the natural wonders of Sarawak.

14 years old Mohd. Syafiq Afifi, found the visit, particularly, the trek, a lot of fun and intriguing.

"I found it very interesting because I could see plants, as well

as animals like squirrels and strange spiders that I've never seen before."

Mohd. Syafiq and his friends were also lucky enough to have witnessed how these 'strange spiders' were collected as specimens.

Fifth former and aspiring lawyer, Nurbaizura bt. Sharkawi echoed his enthusiasm.

"I saw many things foreign to me on the trail like the Kacip Fatimah which I have never seen before!"

She added, "The entire visit was enlightening and it helped me understand why we need to conserve biodiversity, and the need for laws and regulations for this. They would prove helpful to me later, as my ambition is to become a lawyer."

For teacher-in-charge, Ng Jueh Hiang, the trip to SBC was an eye-opener, for the students and herself.

"I was both amazed and amused at what I saw along the trail, like the Antplant, and many of the students did not know what a real rattan plant looked like, until now. The programme is very enlightening, because the students can see for themselves, some of the natural wonders that the state holds."

At the end of the visit, each student was given a certificate to show that they had participated in the SBC Biodiversity Education Programme.

SBC's ongoing Biodiversity Education Programme, is aimed at creating awareness, appreciation and the need for conservation of Sarawak's abundance of biodiversity.

The programme is designed for schools, institutions of higher learning, clubs, and voluntary organizations, as well as the public and private sectors.

Those interested in participating in the programme can contact the Sarawak Biodiversity Centre, at 082-610610, or fax 082-611535. They can also check out SBC's website at <http://www.sbc.org.my>

## Getting to know Biodiversity

KUCHING, Thurs. - Biodiversity was an unfamiliar word to the 29 students from the Intensive English Programme of CADAS Business School (CBS) Kuching until their visit to the Sarawak Biodiversity Centre (SBC) last Friday. Accompanied by five instructors, the students participated in SBC's biodiversity education programme entitled An Introduction to Biodiversity.

The programme kicked off with a 20-minute talk on the SBC Biodiversity Poster, where they were introduced to the many types of ecosystems in the state and their characteristics and also the value of biodiversity. The students then listened to a talk on freshwater fish.

The highlight of the visit was a one-hour trek along the SBC trails.

Wong Kian Tsen, 21, of Miri found the visit an eye opener. "It helped me understand what biodiversity is all about, and its importance to mankind," commented Wong.

For Chang Mei Chieng, the talks on biodiversity and freshwater fish were as interesting as the trek. "I have seen many of the plants before as my house is near the forest but through this visit I learnt their names and their uses... the jungle trek was also challenging and refreshing as I could enjoy the fresh air and the natural environment," said the 24 years old lass from Landeh.

A CBS English instructor, Ms. Christina Wee, was enthusiastic about using biodiversity as a topic

for discussion in the teaching of English. "Articles on issues related to biodiversity can be used in the classroom as reading and comprehension material, to help students to learn English better. I would like to come

back to SBC for another visit and bring another batch of students... The programme was very educational and enlightening."

At the end of the programme, the students received a cer-

tificate of participation from the centre.

Those who are interested to find out more about the SBC Biodiversity Education Programme can call the Centre at 082-610610 or send fax to 082-611535.



ALL EARS: A section of the participation listening intently to talks on biodiversity.

The Borneo Post - 22nd September 2001

## SMK Green Road students visit SBC

**KUCHING:** The Sarawak Biodiversity Centre (SBC) recently hosted members of SMK Green Road Geography Club who took part in the centre's biodiversity education programme.

The 31 students were first given a broad overview of the significance of biodiversity, followed by a brief explanation on Sarawak's biodiversity.

They were also given an explanation and demonstration on preparing and mounting herbarium specimens before they were shown around SBC's ethnobotanical plot, and brought on a jungle trek through the centre's biodiversity appreciation trail.

Daniel Foong a fourth former was overheard saying: "I will be doing a project on this later, where I'll do a simple write up on some of these plants and what they are used for locally."

Their teacher, Magdalene Dago aptly summed up the purpose of the trip when she said, "Knowledge on biodiversity applies to everyone and not just science students. Even in geography you learn of biodiversity, conservation and the importance and value of the forests to mankind."

SBC's biodiversity education programme is open to secondary, institutions of higher learning students, as well as clubs, governmental and non-governmental organisations.

Those who wish to find out more about the centre and its programmes can call 082-610610 (or fax 082-611535).



FIELD TRIP... Some of the students taking notes when plodding through the jungle trail.

Sarawak Tribune - 11th October 2001

## All round biodiversity education

**T**he Sarawak Biodiversity Centre (SBC) recently played host to members of the Geography Club SMK Green Road when they participated in SBC's Biodiversity Education Programme.

Accompanied by teachers-in-charge Madam Jessica Wong, Madam Pauline Liew and Puan Magdalene Dago, the 31 students were first given an overview of Biodiversity, followed by a brief explanation on Sarawak's biodiversity with the help of the Biodiversity poster.

They were then given a talk on Pitcher Plant Diversity where they got to see a presentation of the various pitcher plant species found in the state. The students were also given an explanation and demonstration on preparing and mounting herbarium specimens before they were shown around SBC's ethnobotanical plot and brought on a jungle trek through SBC's Biodiversity Appreciation Trail. For some of the city kids this was the first time that they had gone on a jungle trek and it proved to be quite an experience.

According to sixth former and President of the Geography Club, Natalie Rangen the visit was aimed at increasing the students' knowledge on biodiversity. She added the visit proved to be an eye opener as they could see for themselves what they have been learning in the classroom all this while.

Fourth former, Daniel Foong was particularly interested in the ethnobotanical plot and the uses of various plants for medicinal purposes. "I will be doing a project on this



later, where I'll do a simple write up on some of these plants and what they are used for locally." Daniel managed to spend some extra time after the entire programme to take photographs of the plants and make notes of their uses.

Teacher-in-charge Puan Magdalene Dago was equally enthusiastic about the visit and even suggested that the students come back to SBC for fieldwork.

She said "Knowledge on biodiversity applies to everyone and not just science students. Even in geography you learn of biodiversity, conservation and the importance and value of the forests to mankind." SBC's Biodiversity Education programme is open to school students, students of institution of higher learning, as well as clubs governmental and non-governmental organisations.

## Young views on biodiversity conservation

**KUCHING:** Fifteen-year-old Liyanna binti Kiffepeli feels that being alert of one's surroundings is an important factor in conserving the state's biodiversity while Mohd. Faizal bin Mahlet also 15, feels that advising his peers, relatives and neighbours brings about better awareness on the need to take care of the biodiversity around them.

According to the Form 3 students of SMK Gedong, there is an urgent need for more people to be aware of the importance of biodiversity.

They were among 75 students and six teachers from SMK Gedong who participated in the Sarawak Biodiversity Centre's (SBC) Biodiversity Education Programme recently.

"I understand what biodiversity is about now that I've taken part in this education programme. While I am not an expert I can basically explain to my friends and family what biodiversity is all about and why it is important in maintaining a balance in our eco-system," said Liyanna.

She added: "We have to be alert of what is happening around us. If we see anyone doing harm to our biodiversity or natural resources, it is only right that we try to advise them against doing so or bring the matter to the relevant authorities".

Liyanna was also enthusiastic about new discoveries.

"It would be good to exhibit and tell people about new species of flora and fauna found in our jungles as this would help heighten their awareness towards the richness of our forests," she added.

Her schoolmate, Mohd. Faizal felt that it is also important to help conservation efforts by planting vegetables and indigenous fruit trees.

Mohd. Faizal pointed out: "A lot of what we eat comes from the jungle near my kampung like sayur paku, and buah durian. These are also part of biodiversity. On my part, I feel that I can advise my friends, family and neighbours to help in conservation efforts by using only what we need from the

jungle and growing and breeding the rest of our food sources in our kebun and ladang."

According to their teacher, Mazlan Mohamed it was important to first understand what biodiversity is about before the students could understand the need for conservation.

"They have to know what biodiversity is before they can talk about it. This visit to the SBC has opened their eyes to biodiversity and its importance. While they are from a rural area and have been exposed to biodiversity all their lives, it is through this visit they gain knowledge on the importance of the flora and fauna " which they have been living with," he said. SBC's Biodiversity Education Programme is open to the public, school students, as well as members of government departments, non-governmental organisations and the private sector. Those who wish to find out more about the Centre and the programme can call 082- 610610 or fax 082-611535.



The students getting hints for answers to questions on biodiversity from trail leader, Ms Ng (right).

## SBC to collaborate in coral reef research, documentation

THE Sarawak Biodiversity Centre (SBC) is now in the process of finalising a research agreement to collaborate with the Coral Reef Research Foundation (CRRF).

This agreement will be to conduct a five-year coastal water research to document the marine biodiversity of the state.

Assistant Minister for Environment and Public Health, Dr. Soon Choon Teck told the DUN that SBC was also negotiating an equitable bio-prospecting agreement with the National Cancer Institute (NCI) of USA to secure long term benefits for the state resulting from the exploration of the its marine biodiversity for commercially valuable genetic and biochemical resources.

"Findings from the progressive reports on the research conducted on the marine life will provide

valuable inputs for the state to develop our masterplan and strategies to both conserve, realise and develop the commercial potentials of our marine biodiversity including those found in the coral reefs offshore Miri," he said.

Dr. Soon said the government, through SBC, was also fully concerned about the need to document and protect the traditional knowledge of the local community in the use of local plants and animals for medicinal purposes.

The Traditional Knowledge Documentation, he cited, would be one of the five SBC projects under the Eighth Malaysia Plan.

He said the traditional knowledge to be documented would be specifically those related to ethnobiology - knowledge on how a community has been using the flora and fauna in their lives.

"It is intended that this knowledge will be documented by the community themselves and to be documented first in their own languages so that there will be minimal chance for misinterpretation in the process of translating."

"The SBC or other interested and approved parties could work on the translation of this documentation at a later stage."

Dr. Soon said a training workshop would be organised to brief intending participants on the importance and significance of documenting their respective traditional knowledge before it is lost.

The workshop, he added, would also provide the participants with the methodology to proceed with the documentation and to work out action plans for the duration of the Eighth Malaysia Plan.

# Amendment Bill to enhance sustainable forest management

By Harun Jau

THE Forests (Amendment) Bill, 2001 was unanimously passed by the State Legislative Assembly here yesterday.

Three members who took part in debating the Bill, tabled by Agriculture and Food Industries Minister Dato Haji Adenan Saem, were Encik Lee Kim Shin (BN-Senadin), Encik Chiew Chiu Sing (DAP-Kidurong) and Encik Vincent Goh Chung Siong (BN-Palawan).

The amended Bill is aimed at reducing or minimising accidents in the logging industry, and enhancing sustainable and planted forest management.

With the new provisions, timber licensees, contractors and sub-contractors are required to hire only properly trained workers for their logging operations or activities pertaining to sustainable forestry development.

The Bill also seeks to prevent abuse of the rights conferred by the existing statutory provisions for natives to take timber from State land and communal forests for 'domestic use'. Under the amended provisions, 'domestic use' would be restricted to usage as firewood, the construction, repair or extension of a dwelling house, and the making of any boat, furniture or other household items for personal use. Additionally, the timber must be felled by the user or a member of his family.

The third objective of the Bill is to strengthen provisions in the Ordinance to deter persons from blocking roads built



ADENAN

to facilitate the establishment, maintenance or management of planted forests or plantation estates and to make some serious offences 'seizable', that is where offenders can be arrested without warrant.

It also aims to reconcile or harmonise the provisions of the Forests Ordinance with those of the Sarawak Biodiversity Centre Ordinance. This amendment removes the current overlapping jurisdiction of the Forests Department and the Sarawak Biodiversity Centre in the area of research on protected plants for medicinal or pharmaceutical development.

The amendment also strengthens the provisions for arrest of suspected offenders and investigations into forest offences, so that the laws and regulations could be more effectively enforced. The amendment also caters for powers of arrest by authorised forest officers and police personnel, and empowers authorised investigating officers to record statements from those acquainted with the case and enables any statement taken to be used as



evidence in prosecuting the offender.

"The government is concerned with the statistics showing that the rate of accident in the logging industry is unacceptably high. It is necessary to promote and enforce occupational safety in this important industry otherwise not only would the tragic loss of lives continue, but also the industry would be deprived of many able workers and many families would continue to lose their breadwinners," said Adenan when tabling the Bill yesterday.

He said with the passage of the Bill, the government hoped that tragic accidents in the logging industry could be avoided by making it compulsory for timber licensees, their contractors and sub-contractors to hire only properly trained and skilled workers especially for jobs which were deemed to be of high-risk.

He said the government believed that by upgrading the skills and level of occupational safety consciousness, many accidents could be avoided. "Besides, the government also believes that by having properly trained workers, their productivity could be increased, and this would make the industry, which is facing increasingly strong global competition, more efficient and competitive."

With these amendments, he said, the government would be able to better regulate the taking of forest produce from State land forest for purportedly domestic purposes. He added that it was necessary to put an end to the abuses of this privilege and to avoid loss of revenue to the State, as timber taken for domestic use would not attract royalty.

Adenan said the amendment was intended to deter those who were inclined to flout the laws.

## Traditional knowledge main topic of workshop

KUCHING, Sun. — The role of 'traditional knowledge' in the research into Sarawak's biodiversity will be the main topic of a day-long workshop here on Tuesday.

Participants will discuss the need to document what the traditional communities have established as systems of knowledge, innovations and practices relating to use and management of flora and fauna, on the land they live.

The workshop is being organised by the Sarawak Biodiversity Centre (SBC) in collaboration with the Sarawak Customary Council.

SBC information officer Asha Devi Kaushal said experts such as Professor Dai Luyan of China and Mumo Mutio of Kenya would share their experience in documenting the traditional knowledge of their communities.

Dr Paul Quek from the International Plant Genetic Resources Institute will demonstrate the methodology and conduct practical sessions on documenting traditional knowledge.

The first SBC programme was on biodiversity inventory which aims to fill the data gaps and create baseline information on the State's biodiversity.

The inventory project started in September and is ongoing.

The third programme will deal with ecosystems mapping and data validation which would geographically locate the distribution of biological resources.

The SBC Ordinance, 1997, and the Sarawak Biodiversity Regulation, 1998, provide for the administrative and regulatory mechanisms to facilitate and authorise access and promote sustainable utilisation of the biological resources.

## Govt welcomes move by SBC and MAIS

KUCHING — The State government welcomes the proposed Sarawak Biodiversity Register of Traditional Knowledge which will be initiated by the Sarawak Biodiversity Centre (SBC) and the Sarawak Council for Customs and Tradition (MAIS).

Assistant Minister of Planning and Resource Management Encik Alfred Yap said the register, when in place, would provide a common platform for traditional communities and relevant agencies to share their knowledge.

This is in line with the government's recognition that adequate information on the distribution and status of the State's biological resources is needed to effectively identify opportunities to explore their potential, he said.

He was delivering the keynote address at the

Traditional Knowledge Documentation Workshop organised by SBC in collaboration with MAIS and the International Plant Genetic Resources Institute (IPGRI).

Yap also said the documentation of traditional knowledge will lead to better appropriation of benefits such as participating in scientific research and sharing in the results of research and development.

He further pointed out that the 36 ethnic communities in the State hold a wealth of knowledge on plants and their uses.

"How these communities conserve and manage their biodiversity should be systematically documented and studied," he said, adding that information and communication technology tools should be utilised in documenting traditional knowledge.

## SBC to help ethnic communities document traditional knowledge

By Sharon Ling

KUCHING — The Sarawak Biodiversity Centre (SBC) will help ethnic communities in the State to document their traditional knowledge in forms that can be conserved.

Its chief operating officer Eileen Yen said the centre will facilitate the documentation among communities interested in doing so by identifying relevant tools and equipping them with the necessary skills.

She stressed that the

centre does not specify any particular community for the project, which will be implemented under the Eighth Malaysia Plan, but welcomes contributions and suggestions from all ethnic groups.

"For example, the Bidayuh community has come forward to say they would like to start documenting their traditional knowledge so we said, why not. But if other communities want to do it we'll facilitate that too.

"The most important thing is that they themselves want to do it. When the commitment is there, the success is more assured," she told journalists at the Traditional Knowledge Documentation Workshop here yesterday.

The two-day workshop was organised by SBC in collaboration with the International Plant Genetic Resources Institute (IPGRI) and the Sarawak Council for Customs and Tradition (MAIS) with the purpose of

sensitising participants on the importance of documenting their traditional knowledge.

According to Yen, the traditional knowledge of communities will initially be documented on cassette tapes which will be digitised and stored by SBC.

She added that SBC also proposes to set up community resource centres where copies of the documented knowledge can be kept for reference among community members.

Eventually SBC plans to set up a register of traditional knowledge as a platform whereby the documented knowledge can be collected and shared.

"The most important thing now is to get communities to start documenting their traditional knowledge. When the register is set up, the knowledge that has been documented can be lodged with it," Yen said.

In the meantime, the 80 workshop participants from throughout the State will

be taught the methodology of documenting traditional knowledge in order the jump-start the project. They will also be involved in discussions to plan out proposals and action plans to be implemented next year.

The Borneo Post - 21st November 2001

# Bidayuh first to step forward

Sarawak Biodiversity Centre implements project to document community's traditional knowledge

**KUCHING:** The Bidayuh are the first to step forward to document their traditional knowledge. They are the first to be involved in the "Traditional Knowledge Documentation Project", initiated by the Sarawak Biodiversity Centre (SBC). SBC chief operating officer Eileen Yen Ee Lee yesterday said SBC is willing to facilitate the participation of any community if they are interested. "Any community can come forward as well. What is important is that they want to have their traditional knowledge documented," she told reporters after attending the opening of the two-day "Traditional Knowledge Documentation Workshop" here. The workshop aims to sensitise participants on the importance and significance to document their respective traditional knowledge. A total of 90 participants from as far as Mukah, Tinjar, Lawas and Belaga attended the workshop. Yen said success is assured if a community is committed to docu-

ment their traditional knowledge. She added that the final product of the documentation might be years away but it would start with getting them on tapes and digitising them later. "We will like to set up a community resource centre to allow any interested parties to lodge their traditional knowledge. We want to make it in such a way that it is non-obligatory. They can lodge it at a time that they think is right". Traditional knowledge can be described as practical common sense based on teachings and experience passed on from generation to generation. It is holistic and cannot be compartmentalised and separated from the people who hold it. It is a way of life. Yen also said there is now widespread concern that the natural resources or biodiversity are rapidly being lost. "Also, the knowledge that people have accumulated for conserving and sustainably utilising these resources over generations has not been given attention".



GATHERING KNOWLEDGE ... Yap receives copies of the workshop materials from SBC chief operating officer Eileen Yen Ee Lee while Council for Customs and Tradition, Sarawak president Datuk Tra Zender looks on.

## Kitete a fading Kenyan tradition

**KUCHING:** A case study has shown that loss of the bottle gourd in a district in Kenya will lead to loss of indigenous knowledge (IK) and culture. Known by its local name "Kitete", the gourd symbolises a way of traditional life for the community in that area. The study findings were presented by Kyenika Adult Women Group (KAWG) coordinator James Mumo at the "Traditional Knowledge Documentation Workshop" here yesterday. KAWG was formed in 1989 and specialises in tree planting and food production. The Kitus District of Kenya is a region that combines ideal growing conditions for the Kitete with rich cultural knowledge of the varied uses and types for the gourd. For the Kamba people of Kitus, the Kitete is a key item of their material culture and is endowed with much symbolic and cultural value. The Kitete is grown to produce a great variety of containers and is also grown as food. He said recent changes in culture and marketing of plastic containers has caused the erosion of knowledge treating the loss of the Kitete diversity. "Therefore, there is great need for IK on the Kitete diversity. Its uses need to be maintained within local communities, especially among the younger generation, for enhanced conservation of the traditional values and multiple uses of the Kitete," Mumo pointed out. He added that the species need to be maintained in the communities where diversity in uses is still great. Due to its numerous uses as a container, the Kitete is of great

social, economic and cultural significance. Mumo said Kamba culture is intricately intertwined with the Kitete species and therefore, loss of its knowledge and species would mean loss of key items of the Kamba culture. For one, loss of the Kitete will encourage use of plastic, tin and glass containers which litter the environment as they are not biodegradable. The Kitete is also a good cover crop and is particularly useful for soil erosion control during the rainy seasons. The young generation is losing the knowledge and value of the crop and the exchange and transfer of IK to the less knowledgeable members of the community would go a long way in reviving this valuable and profitable knowledge in the community". Conclusively, Mumo also presented several ways to conserve the diversity of the Kitete and its associated IK. Among them are awareness creation, increased cultivation, documentation and dissemination of IK. Another method is through collecting, preserving and documenting fruits and seeds of all known varieties and associated IK in Kitui. He also talked of the need to understand on-farm conservation of gourds' diversity in the community in a holistic manner. "Additionally, we can create awareness of the cultural and economic values of the Kitete diversity and uses through community action research, workshops, publications, exchange visits, folklore and exhibitions".

## Register of Traditional Knowledge set up for common platform

**KUCHING:** Communities and agencies in the State holding certain biodiversity data now have a common platform to come together and share the information. Setting up of the "Sarawak Biodiversity Register of Traditional Knowledge" is also to recognise the knowledge, innovations and practices of the indigenous and local communities embodying traditional lifestyles. Biodiversity has been defined to include the variety of living things such as plants, animals and micro-organisms. Assistant Minister in the Chief Minister's Office Alfred Yap yesterday said the register is to allow the traditional communities to better document and protect their ethnobiology-related knowledge, innovation and practices.

He said it would ultimately enable all concerned to look at appropriating equitable benefits back to the communities. "This is in line with the State government's recognition that we need adequate information about the distribution and status of our biological resources as well as the knowledge of the traditional use of these resources," Yap said. He was speaking at the opening of the "Traditional Knowledge Documentation" Workshop organised by the Sarawak Biodiversity Centre (SBC) in collaboration with International Plant Genetic Resources Institute and Council for Customs and Tradition, Sarawak. In exploring potential uses, Yap said the documentation of traditional knowledge would lead to

better appropriation of the benefits. He said these benefits include participation in scientific research based on genetic resources supplied, fair and equitable sharing of research and developments and patents. "The other benefits of this project is that it will also help to raise awareness among members in the respective communities to appreciate the value of their traditional knowledge". Yap also said that society has inevitably benefited greatly from traditional knowledge. He cited an example of most plant-derived drugs used in modern medicine which are discovered from their use in traditional societies rather than through random screening.

"We can understand the importance of traditional knowledge by the fact that 80 percent of the people in under-developed countries still rely on traditional medicine for their primary health care. These medicines are based largely on species of plants". Some 120 chemicals extracted in pure form from about 90 species are used in medicines throughout the world and many of these medicines cannot be manufactured synthetically. Sale of these plant-based drugs in the global market amounted to some US\$4.5 billion in 1980 and an estimated US\$15.5 billion in 1990. Yap said with the 36 ethnic communities in the State, it was assured that the wealth of knowledge on plants and their uses are great.



Alfred Yap (second left) admires a gift presented by Dr Paul Quek and SBC chief operating officer Eileen Yen. On the right is Asha Devi, SBC's information officer.

## Many still depend on traditional medicine

**KUCHING:** Eighty per cent of the people in underdeveloped countries still rely on traditional medicine based largely on plant species for their primary health care, Resource Management and Planning Assistant Minister Alfred Yap said.

Besides that, sales of plant-based drugs in the global market amounted to some US\$4.5 (RM17.1) billion in 1980 and an estimated US\$15.5 (RM58.9) billion in 1990, he said when opening a two-day workshop on "Traditional Knowledge Documentation" here yesterday.

He said it had also been reported that 25 per cent of prescriptions are filled with drugs whose active ingredients are extracted or derived

from plants.

Some 120 chemicals extracted in pure form from about 90 species are used in medicines throughout the world as many could not be manufactured synthetically, he added.

Yap stressed all these highlighted that biodiversity conservation not only covered plants and animals, but also the knowledge of the traditional communities.

According to him, Sarawak's 36 ethnic communities' rich biodiversity sustaining knowledge was at risk of erosion because of the younger generation's modern pursuits.

"We can't let this knowledge leave us once the older generation died. Availability of ICT tools nowa-

days allows us to record their oral knowledge for proper documentation as references for future research," he stressed.

About 80 participants comprising community leaders from Serian, Bau and faraway places such as Baram and Mukah are attending the workshop.

Those who spoke at the workshop are Secretary for the Council for Customs and Traditions, Jayl Langub and three scientists from the International Plants Genetic Resource Institute, Dr Paul Quek from its regional office in Serdang, Selangor, Prof Dai Luyuan from China and Prof Gestus Mumo Muto from Kenya.

# Bidayuhs, the first to document traditional knowledge

By Samuel Aubrey

**KUCHING:** The Bidayuh community will be the first ethnic group in Sarawak to document their ethnobiology-related knowledge and practices under the proposed Sarawak Biodiversity Register of Traditional Knowledge.

"Because of their accessibility and commitment, the Bidayuh in the Penrissen area have been chosen by the SBC for this pilot project," SBC chief operating

officer Eileen Yen told reporters after the opening of the "Traditional Knowledge Documentation" workshop here.

She however did not indicate when the project undertaken in collaboration with the Sarawak Council for Customs and Traditions and the Rome-based International Plants Genetic Resource Institute, would start.

To facilitate the project, she said SBC would provide the relevant communication technology tools needed for recording information from the older generations in the villages.

Eileen added that SBC, a statutory body under the Resource Management and Planning Ministry, would also spread the project scope to include the Bidayuh in other areas.

"We will also work with the other communities in the state," she said, adding that SBC welcomes applications by the other ethnic communities for this project.

She said the success of the project, earmarked under the Eighth Malaysian Plan (8MP), would depend on the participating communities themselves.

She added that the proposed Sarawak Biodiversity Register of Traditional Knowledge would be the first step in establishing a common platform for collaboration and information sharing between the various communities and the agencies in sustaining and managing the state's biodiversity.

"That is why the term 'traditional knowledge' is used, and not 'indigenous knowledge', she said, adding that the wider scope enables participation from the state's diverse ethnic communities for a more effective conservation of Sarawak's flora and fauna.

The Borneo Post - 23rd November 2001

## Positive response to traditional knowledge documentation

**KUCHING:** A recent workshop on traditional knowledge documentation held here has sparked off a very positive chain reaction from the various ethnic communities in the State.

After receiving guidance and given the common platform on how to document traditional knowledge (TK), more and more of the participants are saying they will not stow away what they have learnt to gather dust.

For one, the Lun Bawang community which is part of the Orang Ulu organisation, is likely to have its own and first ever TK study committee by the middle of next year. Lun Bawang Association Sarawak President William Ghani Bina talked excitedly about what's over the horizon for TK development in the State.

"The Orang Ulu group is different from other communities. Orang Ulu is actually a regional organisation," he told the Borneo Post here yesterday.

"Unlike other communities, there is no Orang Ulu culture or language. We can have Kenyah or Lun Bawang culture (as there are at least 20 ethnic groups within the Orang Ulu organisation) but not Orang Ulu culture".

For the Orang Ulu group to document their TK, Ghani said it required the various associations of the different communities to spearhead the research and development.

During the workshop, a regional committee represented by eight communities including the Lun Bawang, Kelabit, Bisaya, Kenyah, Kayan, Penan, Kajang and Berawan was formed.

"I hope that these people, through their associations will spearhead TK studies for the respective ethnic groups".

Ghani also said the committee proposed to look into, among others, developing TK on farming (divided into hill padi and wet padi).

Other aspects would be in traditional medicine and non-timber forest resources like rattan, bamboo,

palms and even leaves.

"Also, we will try to make sure the TK on salt springs (where salt is made) and salt spring for wild animals (as source of mineral water) is not lost.

There are many more areas where we can focus on," Ghani pointed out. Additionally, he said centres had been identified to form committees to focus on these studies.

They will be in Belaga, Baram, Bario, Lawas, Tubau, Limbang, Tatau, Ba'kelalan and Long Semadoh.

Ghani said these areas were where there was a greater concentration of Orang Ulu communities.

"We need to identify the TK experts as well. These are mostly old people who have good knowledge of their respective cultures and customs".

He said TK documentation could be made more accurate and easier with their help.

"They can work in collaboration with the committee, Sarawak Biodiversity Centre (SBC) and Council of Customs and Tradition Sarawak for the benefit of all.

"SBC can compile the reports. I hope in good time, every community will take this up with their own association".

Ghani also suggested that the SBC set up a TK journal editorial to publish whatever had been recorded.

"I hope when we go into it, all communities will be receptive.

These records of TK will be good and important reference as well as enrichment of our culture and knowledge".

It would help each community to recognise its own culture more he said, adding that this could become a main attraction for the State's tourism industry.

"I do not want to see people from outside coming here and producing inaccurate or distorted accounts of our delicate traditional culture and knowledge.

"So, if we do not develop our traditional knowledge now, it will disappear with time".

The Malaysian Today - 23rd November 2001

## Panel to document traditional knowledge formed

**KUCHING:** A Project Steering Committee (PSC) has been formed to look after the proper documentation of traditional knowledge in Sarawak.

The committee was formed at a meeting after the workshop on the Documentation of Traditional Knowledge here on Wednesday.

The workshop was organised by the Sarawak Biodiversity Centre (SBC), International Plant Genetic Resources Institute (IPGRI) and Council for Customs and Traditions-Majlis Adat Istiadat.

SBC Information Chief, Asha Devi Kaushal said the PSC would be the main body to look after the documentation.

As part of its activities to educate the public on the importance of traditional knowledge documentation, Asha Devi said PSC would be coming up with an awareness programme during the first quarter of next year.

Training programmes for the committee members would also be organised, she said when contacted by The Malaysian Today.

She added that a sub-committee under the guidance of the PSC would also be formed.

The committee, she said, would comprise representatives from ethnic organisations such as the Dayak Bidayuh National Association (DBNA), Orang Ulu National Association (OUNA), Sarawak Dayak Iban Association (SADIA) and the Sarawak Melanau Association.

"These associations will help identify the priority areas of their own ethnic groups and submit their proposals to the PSC for consideration," she said.

The project, Asha Devi added, would be a community-based project.

She also said the workshop, which was officiated by the Assistant Minister in the Chief Minister's Office, Alfred Yap, was a tremendous success.

More than 50 people representing the various ethnic groups attended the workshop.

*SBC News* 2002

The Borneo Post - 27th January 2002



CURIOUS ... Sebastian holds a semi conscious starling (resident bird) which flies into a glass wall to some curious students from SMK Sri Aman.

## 68,607 barn swallows recorded at counting sites

**SRI AMAN:** At one count, there were 68,607 barn swallows recorded at several counting sites here.

This was during the field study on Friday conducted by the Sarawak Biodiversity Centre (SBC) at a monitoring and training workshop for the Barn Swallow Monitoring Project.

Seventy one students and teachers

from SMK St Luke, SMK Melugu, SMK Sri Aman and SMK Simanggang attended the workshop that was held at the library here.

SBC facilitated the project in collaboration with the Education Department and the Malaysian Nature Society (MNS) Kuching Branch.

MNS' Kuching Branch chairman

Anthony Sebastian gave participants a thorough explanation on the migratory birds, the counting methodology and how to observe and record them. The barn swallows (*Hirundo rustica*) are migratory birds and do not breed in Sarawak.

They arrive from August to October and their numbers peak from October to February.

The Borneo Post - 6th February 2002



FOR CONSERVATION ... Aziz clicks on the mouse to launch the CPCP website at SMK St Teresa as Yee (left) as others look on

## State Secretary speaks up for local conservation efforts

**KUCHING:** Rare and wild species of edible fruit species in the State are important as they can serve as plant genetic resources, food and environment stability provider and economic booster.

These plants were usually unknown and sometimes forgotten by the people, said State Secretary Datuk Amar Abdul Aziz Husain.

He pointed out there were at least 370 edible fruit species throughout the country, but only 16 species were cultivated either in mixed orchard or in large estates like the papaya, banana, water melon, pineapple, starfruit, nangka, oranges, dukung and durian.

"In addition to these very common and commercialised fruit species, a survey shows that only 65 other species have been domesticated, that is they are planted but usually on a small-scale basis and mainly in the villages," he said.

He was speaking at the launching of SMK St Teresa's Cyber Plant Conservation Project (CPCP) website held at the school's hall yesterday.

Aziz was glad to note that the Sarawak Biodiversity Centre (SBC)

and several other agencies involved had initiated the project which was aimed at planting and conserving indigenous trees, particularly those that were threatened with extinction.

The project not only taught the young generation on the importance of conserving and preserving the natural heritage, he said, but gave them the opportunity to optimise the facilities and potential of ICT (Information communication technology).

It would expose students on ICT as a powerful tool for rapid communication and information sharing to promote conservation of our rich biodiversity, he added.

He said, "The students will also be trained to create webpages for each of the trees they plant. It is planned that as they monitor and compile information on the growth of their trees and on other related issues, they will be able to share their new found knowledge by posting such information on the tree webpage with their peers who may be from far and near."

He told the 42 students, who would be custodians of the trees, that they

had been assigned a very important task to promote the conservation of our indigenous plant resources and promote the love of our natural heritage.

Aziz hoped that others in the society would also support the worthy cause by encouraging the young generation and to support them in their quest to conserve the rich heritage of biodiversity for posterity.

SBC chief operating officer Eileen Yen said, the CPCP was open to schools. She hoped that more schools would be interested to adopt the project.

It was a project that complemented the government's effort in encouraging the people to be more environment conscious, and also encourage students be innovative in using and adapting ICT and multimedia technologies.

Among present were Education Director Mohamad Sabil, Kuching Samarahan education officer Dr Julaihi Bujang, SMK St Teresa principal Christopher Tan and Professor Emeritus Chin Hoon Fong of the International Plant Genetic Resources Institute (IPGRI).

## Six Japanese tourists held over theft of rare orchids

MIRI, Tues. — Six Japanese tourists were arrested here on Sunday for stealing rare orchids from the world natural heritage site of Mulu National Park, about 150km southeast of here.

Divisional Forestry Department head Elbson Marajan said the tourists, all male aged between 50 and 60 years old, would be charged in court this week.

Stealing rare orchid is an offence under the State Wildlife Ordinance and offenders are liable to up to one year's jail as well as RM10,000 fine.

Marajan said the Japanese were nabbed at the Miri Airport after they alighted from a flight from Mulu at 2.50pm on Sunday.

State Wildlife officers confiscated 31 rare species of orchid which they intended to smuggle out of Sarawak.

"They were detained for questioning on Sunday but were later released on police bail. We will produce them in court in the next two or three days," Marajan said.

He said the Japanese tourists went to Mulu on Friday.

This is the second time rare orchids were stolen from the world renowned national park.

Last Wednesday a local woman was detained and questioned for stealing more than 15 species of rare orchids from the national park.

The plants, weighing 10kg, were confiscated from the woman at the Miri Airport by State Wildlife officers. The case is still under investigation.

On the same day, Wildlife officers also confiscated more than 100kg of bird's nests from seven men aged between 30 and 40 years old at the

Miri Airport.

The bird's nests, packed in several boxes, were collected illegally from the limestone mountain caves in the Mulu National Park. The case is also still under investigation.

The State laws prohibit the smuggling of bird's nests, plants and biological specimens from the State.

In March, 2000, a group of American scientists was arrested and fined RM20,000 for unlawful collection of biological specimens from Gunung Buda in Mulu.

The group had collected more than 600 biological specimens, including fish fry, from the protected forest without permit from the Sarawak Biodiversity Council.

Several Japanese scientists had also been fined for similar offences in the past years.

## Biodiversity Centre holds seminar on herbal industry

KUCHING: The first ever seminar for Sarawak to unveil the potentials and opportunities in the herbal industry was held here yesterday.

Entitled "The Herbal Industry: Prospects and Opportunities in Sarawak" the one-day seminar was organised by the Sarawak Biodiversity Centre in collaboration with MARDITECH Corporation Sdn Bhd and the Malaysian Herbal Corporation (MHC).

It is aimed at creating greater awareness on the prospects of the herbal industry among aspiring entrepreneurs, investors, investment bankers, management consultants, practitioners of traditional and herbal medicine, researchers, government officers, policy makers and interested members of the public.

Seven papers were presented.

State Secretary Datuk Amar Abdul Aziz Husain presented a paper entitled "Sarawak Natural Resources for the Herbal Industry" which gave an overview of resources such as biodiversity, land, human resources, financial capability and entrepreneurship available within Sarawak. The papers presented covered issues ranging from commercial potentials of herbal plants to quality and standardisation for herbal products, marketing and trade issues as well as technologies for the production of herbal products.

More than 200 people from both the private and public sector attended this seminar. As a follow-up to the seminar, a strategic forum, entitled "Critical Issues and Future Directions Towards Building the Competitiveness of the National Herbal Industry" is to be held today to provide a platform for stakeholders in the local herbal industry to discuss critical issues for further development in the industry.

This seven-round table discussion consists of a selection of representatives from government agencies, manufacturers, traditional medicine practitioners, researchers and scientists.

## Singapore link in biodiversity projects

KUCHING: A team of experts from Singapore is helping the Sarawak Biodiversity Centre (SBC) to raise interest among the locals in biodiversity, particularly the state's rich freshwater resources.

The team from the Raffles Museum of Biodiversity Research, National University of Singapore (NUS), hoped that the smart partnership with SBC would go a long way in efforts to conserve the freshwater stock in Sarawak.

The team leader, research officer Dr. Darren Yeo Chong Jinn, said yesterday that unlike Sarawak, Singapore only had

small fishes in small forest areas.

"Sarawak is unique and we have much to learn, exchange ideas and help develop your freshwater fish inventory," he told *Bernama* in an interview here.

The other three members of the team are researcher Leong Tsi Ming, scientific and chief curator Yong Chang Man and Kelvin Lim, an expert on freshwater fish, amphibians and reptiles.

SBC chief operating officer Eileen Yen said the team from Singapore had been conducting workshops on aquatic resources (collection, curation and identification) to train researchers from the Forestry Department Research

Centre, Inland Fisheries, Marine Fisheries Department and International Tropical Timber Organisation (ITTO) and SBC scientists.

She said it was a collaborative effort for technology transfer to enhance SBC's competency to do further work on the state's biodiversity.

She was grateful to the NUS for the assistance and hoped that Sarawak would become a centre for excellence on biodiversity in the region.

"But the government also wants locals to appreciate what the government is doing and help in the conservation effort," she added.

New Straits Times - 27th April 2002

## Sarawak aims to be major player in herbal industry

KUCHING, Fri. — Sarawak, with over 8,000 species of flowering plants including herbs in its tropical rainforests and secondary jungles, aims to be a major player in the national herbal industry.

State Secretary Datuk Amar Abdul Aziz Husain said Sarawak's strengths were its biodiversity and land availability for the cultivation of the required herbs.

"In addition, Sarawak offers good investment opportunities and supportive agriculture and industrial policies," he said.

He said this in his paper "Sarawak's natural resources for the herbal industry" presented at a seminar on the herbal industry, prospects and opportunities in Sarawak here today.

With the possibility of more herbs in Sarawak's forests waiting to be discovered, he said such herbs could have the potential to be developed into raw materials for new herbal products.

He said researchers at the Sarawak Biodiversity Centre, the Agriculture Research Centre, Forest Research Centre and Universiti Malaysia Sarawak were working on

projects to identify potential herbs for the herbal industry.

Abdul Aziz said the Agriculture Research Centres in Bintulu and Semengok here had also initiated research into agronomic and processing aspects of potential local herbs and medicinal plants.

The centres could contribute technical support to private companies interested in venturing into production and processing of selected herbs, he added.

He said among the herbs with potential for commercial cultivation in Sarawak were *hempedu bumi*, *misai kucing*, *ekor anjing*, *aloe vera* and *kacip fatimah*.

Abdul Aziz said *hempedu bumi*, which had been used for centuries in China, India and Java, had now been considered a new promising herb for the treatment of many diseases including AIDS and other auto-immune disorders.

"In Malaysia, the *hempedu* leaves is taken orally to cure diabetes and high blood pressure and a leaf poultice is applied to relieve skin itchiness and insect bites.

"In India, it is used to treat dysentery."

## Call to catalogue state's biological diversity



The Earl of Cranbrook stressing his point during the public talk.

KUCHING: Appropriate measures must be taken to prepare an inventory of the biological diversity (biodiversity) of resources in the state.

"For the authorities and institutions holding the collections, however, the preparation of a total inventory presents huge insurmountable problems," said the Earl of Cranbrook in a public talk at the State Library Auditorium here yesterday.

At the moment, scientists have only found a handful of species gathered and identified worldwide, however it is believed that there are about 30 million species existing in the world, he said.

"The State has been evolving throughout the years and it is high time for us to take inventory of the remaining species before they are lost forever," he said.

"There are archaeological evidences showing that modern humans have been present in Sarawak at least for the past 42,000 years, and findings from the Niah cave and others including the Madai cave in Sabah, have identified losses from the original mammal biodiversity over the past millennia," he added.

In the past, the land and sea boundaries and the environmental characteristics had been affected by the cycle of the global Ice Age.

During the interglacial period there had been several intermittent episodes at about 10-20,000 years ago, when Borneo was isolated.

In the glacial period, the land

forming Sarawak was connected to continental Asia, and the most recent land link to the west was severed by rising seas less than 11,000 years ago.

"Comparative measurements have also demonstrated evolutionary changes among some of the species during this period," he added.

According to The Earl, the introduction of rice farming in the state at least 3,500 years ago, might have contributed to the evolution.

"On a local scale, the clearings for traditional shifting cultivation will have provided habitat for new forms of invading biota like weeds and pests," he added.

"Past ladangs can be recognised botanically for at least 150 years. Since 1963, the vastly increasing pace of development has self-evidently had a huge consequence for biodiversity in the State."

The Earl of Cranbrook, first came to work at the Sarawak Museum filling in the unofficial post of technical assistant to the Curator, the late Tom Harisson, in 1956.

Lord Cranbrook, founded the Ulu Gombak Field Research Station. He is also the author of several books on South East Asia, mainly on the subject of mammals.

The Earl has also been assisting the Sarawak Biodiversity Centre with the Barn Swallow Monitoring Project, which is currently being run by four schools namely SMK Sri Aman, SMK Simanggang, SMK Melugu and SMK St. Luke in Sri Aman.

Sarawak Tribune - 26th June 2002

## Yap: Need to manage State rich biodiversity

By Peter Sibon

KUCHING — Sarawak is one of 12 mega centres of biological diversity in the world that together account for some 60-70 percent of the world's biodiversity, said Assistant Minister of Planning and Resource Management, Alfred Yap yesterday.

"So naturally, there is keen interest and concern that our biodiversity is to be managed and utilised sustainably," he added at the launching of BioMalaysia seminar here yesterday.

According to him, the State rich biodiversity and its multi-ethnic communities living within and utilising the environment had resulted in the accumulation of a huge store of knowledge on its flora and fauna.

"This form of ethno-botanical knowledge is unique for Sarawak and offers promising opportunities for drug discoveries. Among the many efforts on drug discoveries in Sarawak is the 'Bintangor' experience," said Yap, adding that the active anti-HIV agent from the Bintangor tree was undergoing clinical trials in the United States of America.

He said the Bintangor experience offered opportunities for drug discovery and enabled the State to enter into strategic alliances and smart partnership with a US world-renowned institution - the National Cancer Institute (NCI) - with considerable expertise and resources for research on the medicinal values or properties of biological resources, especially from the rainforests.

This experience, he noted, would enable the State to stand a better chance of developing its own research capabilities based on its biological resources.

"It also provides our people with the appreciation of the importance of benefit-sharing arising from potential financial gains accrued from our genetic resources."

Yap pointed out that Sarawak was the first State in the country to legislate laws to protect its biodiversity and regulate its use in research or for pharmaceutical development.

"These laws are consistent with our obligations and responsibilities under the Convention on Biological Diversity (CBD), 1992. The Sarawak Biodiversity Centre (SBC) was set up in 1997 to ensure the sustainable utilisation of our genetic resources and have a strong

database for our biological research," he said.

The Assistant Minister explained that proper stewardship and governance from the SBC would ensure that our genetic resources were not depleted, and our native people and their ethno-botanical knowledge not exploited.

Thus, for a successful drug discovery programme to be implemented, it is imperative that we also have adequate number of scientists with the requisite talents and motivation," he stressed, adding that institutions of higher learning like Unimas have important role to play in providing training and research facilities for those doing R&D in medicinal, health or herbal products from our own biological resources.

He admitted that the State has yet to fully utilise these rich natural bio-resources. "It's therefore timely that such convention as BioMalaysia 2002 be held to enable participation from the scientific community, local and international business industry to exchange ideas on the latest developments in biotechnology and bio-informatics so that they may gain deeper insights into this rapidly developing and seemingly lucrative biotech industry."

Yap urged those interested or are already involved in the biotech field to participate in the upcoming international convention as it would provide an excellent opportunity for them to find out how best Sarawak could strategise itself in the biotech industry.

He said: "The BioMalaysia 2002 is the first biotechnology convention to be held in Malaysia which aims to provide an opportunity for everyone involved or interested in the biotechnology industry to present innovative ideas and establish strategic partnerships," adding that business alliances could be forged to use biotechnology for drug discovery as well as to improve the efficiency of agricultural production.

General manager of BioMalaysia 2002 secretariat, Datuk Yahya Baba, also spoke at the function.

Some 120 participants from government agencies and the private sector involved in various biotechnological fields are attending the seminar.

# Biodiversity awareness for plantation executives



Members of the entourage from the Sarawak Plantation Services took time out to study and photograph some seedlings in SBC's nursery.

The exchange of knowledge plays an important role towards a better understanding of biodiversity conservation. This was the mutual agreement by 23 managers and executives from Sarawak Plantation Services Sdn Bhd, Miri who paid a visit to the Sarawak Biodiversity Centre (SBC) recently.

The entourage who were on their way back to Miri after attending a planters conference in Kuching arranged to visit the centre at Semenggoh to learn more about its activities.

Headed by Encik Ismail bin Haji Mustafa, the entourage were given a briefing on SBC's function and activities before they were introduced to some local

herbs and their uses. They were also taken on a guided tour of SBC's Nursery and Ethnoplant where the estate managers said that in many cases they had to clear herbs and plants which were considered weeds in the plantations without knowing their potential and uses. Some even agreed that the next time they had to clear the plantations of such 'weeds' they would transplant some of these plants to their own gardens at home.

Subistwo Estate Manager, Encik Ugak Sanggau, was enthusiastic about biodiversity awareness programmes and stressed that activities promoting awareness are important and should also be held in the villages and plantations to promote conservation of valuable plants.

## Biodiversity education for students

KUCHING: A group of 41 students from SMK Lundu took part in the Sarawak Biodiversity Centre's (SBC) biodiversity education programme recently.

Teacher Zuraida Tuah, who led the group, said the visit to the centre was to introduce the basics of biodiversity, taxonomy and ecosystems at an early age.

The students were given an introductory talk on biodiversity and 'moths of Sarawak'. They were also taken on a tour to SBC's zoological collection room where they could see how zoological specimens were prepared and kept.

Later, they were taken on a jungle trail along SBC's biodiversity appreciation trail where they were shown the many processes in which flora and fauna interacted with one another in the eco-system.

They were also shown and taught the names of different useful plants found in the jungle.

To date, some 1,300 participants from schools, institutions of higher learning and organisations took part in the SBC education programme since its inception in 2000.

The programme is open to schools, higher learning institutions, government agencies, non-governmental organisations, the corporate sector and interested members of the public.

To find out more about the programme and SBC's activities, please call 082-610610 or fax 082-611535.

The Borneo Post - 28th July 2002

## Biodiversity Centre implements traditional knowledge documentation project

**KUCHING:** Sarawak's many indigenous communities are known to possess a huge diversity of ethnobotanical knowledge accumulated over the years.

Though the knowledge of using plants has been handed down through generations, there is yet to be a complete accumulation of data.

The Sarawak Biodiversity Centre (SBC), in collaboration with the International Plant Genetic Resources Institute (IPGRI) and Majlis Adat Istiadat Sarawak (MAIS), implemented the traditional knowledge documentation project where the local communities actively participate in gathering and documenting the knowledge that exists within

their communities.

In efforts to enhance the project, SBC will organise a workshop on 'Ethnobotanical methodology in the field' on Aug 6.

The one-day workshop will be conducted by renowned ethnobotanist Dr Hanne Christensen of the Institute of Botany, Department of Botany, University of Aarhus in Denmark.

Dr Hanne has written a book entitled 'Ethnobotany of the Iban and the Kelabit' which was published last year and is currently in Sarawak undertaking research on botanical knowledge and resources in Sarawak. The workshop is aimed at introducing participants to the basics of collecting and processing plant specimens for documentation of traditional knowledge.

It will include a lecture and practical sessions to collect, sort and process plant specimens, and a question and answer session.

The workshop is targeted at representatives of the various ethnic communities in Sarawak, interested in field documentation of traditional knowledge within their community, as well as members of the public.

Details of the workshop are obtainable from Sylvia at 082-610610 or 082-611535 (fax) before Aug 4.

Participation is free. Six seats have been allocated to members of the public.

The Borneo Post - 30th July 2002

## Shoulder responsibility of preserving fast depleting biodiversity, students told

**KUCHING:** Students must play a role in the biodiversity conservation in the State, and to understand the importance in conserving the diverse gene pool or biodiversity.

They should also shoulder the responsibility of preserving the fast depleting biodiversity due to development, said State Secretary Datuk Amar Abdul Aziz Husain yesterday.

He said today's biodiversity could not be safeguarded only by officials and in protected areas, such as the national parks and wildlife sanctuaries.

"The biodiversity conservation in the State had to be a common effort, and thus school students were not exempted, he said.

Abdul Aziz said biodiversity was a valuable asset to human development and was irreplaceable.

"They could be threatened by extinction unless immediate steps were taken to protect them, he said.

"It is equally important for us to recognise that the task of conserving our biodiversity should not be left in the hands of conservation officers and scientists alone.

"We, therefore, have to appreciate that it is our shared responsibility to make sure that our valuable and irreplaceable biological assets are conserved and

managed as a gene-pool for the benefit of the human welfare," Aziz explained.

He was speaking at the launching of Cyber Plant Conservation Project (CPCP) at SMK St Thomas here.

The CPCP is introduced by Sarawak Biodiversity Centre (SBC) as part of the integrated environment education and awareness programme.

SMK St Thomas is the third school to take part in the CPCP after SMK Green Road and SMK St Teresa.

In this project, 54 students from 16 clubs in SMK St Thomas have been commissioned as custodian of five different indigenous fruit trees. A total of 24 trees were planted at the school.

These students will nurture the trees and monitor their growth until they hand over custodianship of the trees to a new group of students who are ready to carry on the responsibility in conserving Sarawak's rich indigenous tree species.

Stressing that the CPCP was not just another tree planting event, Aziz said it was an important task to promote conservation of the State's indigenous plant resources and the love for natural heritage through the use of information and communications technology tools.

He was glad to note that more schools and school children were now taking a

keen interest to understand what biodiversity was, and to play an active role in biodiversity conservation programme.

He urged parents and teachers to continue encouraging the younger generation, and supporting them in their quest to learn, to understand and to appreciate the urgent need for conserving our biodiversity.

A memorandum of understanding (MoU) was also signed between SBC and International Plant Genetic Resources Institute (IPGRI) to carry out collaborative initiatives in regards to biodiversity conservation, research, education, awareness, sustainable management and utilisation.

Aziz, who is also the chairman of SBC, signed the MoU for SBC while Percy Sajise, regional director of IPGRI (Asia, Pacific and Oceania) signed for IPGRI.

Among those present were Deputy State Secretary for Planning and Development Datu Wilson Baya Dandot, Deputy State Secretary for Administration and Human Resource Management Datu Salleh Sulaiman, Permanent Secretary of Ministry of Planning and Resource Management Datu Hamzah Drahman, deputy director of Education School Board of Trustees Mohamad Abdul Rahman, SBC chief operating officer Eileen Yen.



**PROTECTING ENVIRONMENT** ... State Secretary Datuk Amar Abdul Aziz Husain planting an indigenous fruit tree called engkelli at the launching of the Cyber Plant Conservation Project while SMK St Thomas principal Peter Foo (left) and students look on. Abdul Aziz at the launching yesterday called on students to play a role in conserving biodiversity. • See Story Page 3



GREEN PROJECT ... Abdul Aziz planting an indigenous fruit during the campaign.

## More students roped in to conserve trees

By JACK WONG

KUCHING: More schoolchildren here have joined a conservation programme of Sarawak's rare indigenous trees.

The latest group taking part in a cyber plant conservation project was SMK St Thomas and it comprises 54 students drawn from 18 clubs.

Under the project, 24 indigenous fruit trees were planted in the school compound, which already boasts a herbal garden.

The students will nurture the trees and monitor their growth.

Two other schools - SMK Green Road and SMK St Teresa - have hosted a similar project.

Other partners in the project are Sarawak Biodiversity Centre, the Education Department, Natural

Resource and Environment Board, Agriculture Department, City North Commission, City South Council, Padawan Municipal Council, Sains (state government's IT arm) and the International Plant Genetic Resources Institute.

The institute was the first partner with Sarawak Biodiversity Centre in conceptualising the conservation project.

In launching the SMK St Thomas' project on Monday evening, State Secretary Datuk Amar Abdul Aziz Husain said indigenous trees which were rare or being threatened with extinction were planted under the conservation programme.

He said it was vital to conserve the rare wild species to maintain the richest possible pool of genetic materials

that could save the agro-biodiversity for the survival of mankind.

He said as the students would have hands-on experience to nurture and monitor the growth and health of the trees with the use of information and communication tools, they would better understand the importance of state's natural heritage.

They will regularly document information about the trees under their care and post it on webpages to be shared with others around the world.

"This will help to promote the love for our natural heritage and the concern to conserve these valuable genetic resources," he added.

Aziz said the younger generation should be encouraged to learn and appreciate the urgent need to conserve the biodiversity.

## Partnership formed to conserve biodiversity

KUCHING: The Sarawak Biodiversity Centre and International Plant Genetic Resources Institute have forged a partnership in biodiversity conservation and related programmes.

Under a memorandum of understanding (MOU), the two parties will co-operate in genetic diversity conservation, biodiversity documentation, socio-economics and ethnobotanical studies, traditional knowledge docu-

mentation, intellectual property rights issues as well as community-based research and international networking.

Other fields of collaboration are in human resource development and public awareness programmes.

The signatories of the MOU were the centre's chairman Datuk Abdul Aziz Husain and the institute's regional director for Asia, Pacific and Oceania Percy Sajise.

The institute's primary mission is to facilitate and promote the conservation and utilisation of biodiversity by helping to build capacities of national programmes.

Sajise said the collaborative efforts would be a big challenge of generating frameworks that would allow different partners and stakeholders to link biodiversity conservation to its effective use for sustainable development.

"A big challenge is not only in trying to conserve but how to use these genetic materials to improve the lives of people," he said.

He said the institute planned to upscale the methodology and experiences of the cyber plant conservation project implemented in schools here at the regional level through the efforts of the South-East Asian Ministers of Education Organisation.

New Sunday Times - 22nd September 2002

## New species of pitcher plants found in Bau

BAU, Sat. — Two species of pitcher plants found among the limestones here by a team from the Sarawak Biodiversity Centre could be new to science, Sarawak Assistant Minister of Resource and Management Planning Datuk Alfred Yap said.

He said the team of scientists and researchers working on the SBC's Bau Limestone Inventory Project also found a crab species that was last collected some 100 years ago.

"But we shall wait until the end of the project in March 2004 to see a complete list of the unique and

valuable biodiversity of the Bau limestone areas," he said when launching the inventory project here yesterday.

Yap said the research team had identified many plants that could be useful as herbal remedies and as ornamental plants for the landscape industry.

He expected the team to discover new and interesting things in the forests, streams and caves of the Bau limestone inventory areas.

SBC chief operating officer Eileen Yen Ee Lee said that the research team had, in a year of fieldwork, collected 4,002 flora

voucher specimens, 339 living flora specimens and 7,168 fauna specimens.

"Some of these have been identified while many have not," she said.

The research team will continue with its fieldwork for another 12 months, until September 2003, she added.

The six months that follows (October 2003 to March 2004) will be spent conducting workshops to discuss the findings, writing reports for publication and submitting the final report on the inventory project.

The Malaysian Today - 27th September 2002



Steve Ng and his family, (from right) Bianca, Angelo and Anriza are captivated by the diversity of insects found in Sarawak during their visit to the SBC.

## S'wak stands out in biodiversity, says visitor to SBC

KUCHING: Sarawak has a lot to offer in terms of biodiversity as compared with Canada, said Steve Ng.

Ng, who grew up here, but migrated to Canada 20 years ago, was on holiday here recently with his family - his wife Anriza and their three children, Tony, Bianca and Angelo.

He brought them for a visit to the Sarawak Biodiversity Centre (SBC) as part of their awareness education on Sarawak's vast biodiversity.

"I'd like them to learn about and see some of Sarawak's different plants and animals.

"They think that there are so many different types of flora and fauna in Canada, but having grown up in Sarawak, I know for a fact that this state has so much more to offer. I want my children to be aware of that," Ng said.

Anriza also wanted the children to have the chance to see some of the plants which are used in medicines by the local communities, such as the Seven Needles, Hempedu Bumi, Pegaga, Kacang Ma, Ulam Raja, Ketumbar and Misai Kuching which are planted at

SBC's Ethnoplant.

"In Canada, you get medicines in their final form without any knowledge from which plants the medicines come.

"Until now, a plant has always been just a plant to children. The visit provides valuable first-hand information on some of the plants used for medicines and observed here at SBC," she added.

Even at a tender age, 12-year-old Tony who aims to take marine biology as a potential career in the future spoke on behalf of his younger siblings.

"The diversity of Sarawak's plants and animals is just great.

"We find it interesting that there are just so many species of plants and insects here.

"Back home in Canada we do not get to see all these insects and plants," he said.

They hope to return for another visit in the near future.

Meanwhile, Ng learnt about SBC from Datuk John Bell, the former Canadian High Commissioner to Malaysia who visited it in January this year.

**T H A T ' S L I F E . . . f e a t u r e**

# Documenting TK Behind The Nyok

AS weathered hands deftly twist and turn, loose palm fiber begin to take shape as a long sturdy rope.

No weaving machines and no synthetic materials - just skills and knowledge that have been developed and handed down over time within the Bidayuh community from the Biya area in Padawan. The hands of Bisau anak Engges, the Village head for Kampung Kames, are busy.

They have been accustomed to entwining fiber from the Nyok or Nyok tree (the Nyok is from the palm family) as far back as he can remember.

"We learnt the art of making rope from the Nyok fiber by watching our elders in the village", he explains.

"No, they never really sat us down to teach us the skill. Everyone in the village learns by observing and casually asking tips from the more experienced elders. It is not a must, but we are expected to learn and know."

The younger ones will then learn by observing us" he further explained when asked if it was a must for individuals in the community to learn such skills.

Bisau was one of the 65 participants from the Biya area who took part in the Demonstration Workshop on the Nyok, held at the St. Philips Parish Centre in Padawan recently.

Many of these villagers had come from miles around the area to show and share, with pride, their knowledge on utilizing the Nyok tree, for the first time.

The demonstration workshop was part of the Traditional Knowledge Documentation Project, which is jointly facilitated by the Sarawak Biodiversity Centre (SBC).

International Plant Genetic Resources Institute (IPGRI), and the Majlis Adat Istiadat Sarawak (MAIS). The Bidayuh community from Biya, under the auspices of the Dayak Bidayuh National Association (DBNA) is the first ethnic community in Sarawak to embark on the project to document traditional knowledge in their community.

**What exactly does documenting Traditional Knowledge involve?**

Perhaps it would be best to first understand the concept of Traditional Knowledge.

**What is Traditional Knowledge?**

Traditional Knowledge (TK) or also known as Indigenous Knowledge is shared knowledge that has developed over time within a community, based on experience, culture and surrounding environments as well as decades or even centuries of testing.

Such knowledge involves general information shared by that particular community, beliefs, practices and technologies, use of biological resources, materials and human resources, as well as modes of communication and education.

As described by Bisau, TK is often transmitted through informal forms of education, i.e., by word of mouth, experience and observation.

Due to this, such knowledge is susceptible to extinction, particularly when it is not recorded permanently in some form of documentation.

**Why is it important to document TK?**

The fact that many people do not view TK as something spectacular as compared to modern knowledge and technologies results in many traditional practices and beliefs, (particularly that of utilizing biological resources) being overlooked and forgotten.

Such knowledge has been proven to be effective for many communities over centuries and is being phased out by modern development.

More often than not, TK practices are effective and cheaper alternatives to modern practices. "We're proud of our Nyok tree and the many uses it has for our community" says Mejus anak Nimbun. He proudly declares that in his village of Kiding, "no one uses wires or nails to build houses - most of the materials used are parts of the Nyok tree".

Such utilisation has over time, proven economical and yet effective for the community. But what would happen if such knowledge became extinct?

"We chose to document the uses of the Nyok for a start because it is such a significant plant for our community. It is utilised in so many ways," explains Gad anak Sogod, Chairman of the community's working committee, for this project. "It is important that this knowledge is documented and promoted as we do not want what we know and have practiced for generations to just disappear. What's more, many of our younger generation are born in towns and cities with modern amenities - they are quite unaware of what has been practiced for generations in the villages."

Besides, by documenting the knowledge that surrounds the utilisation of the tree, we can encourage conservation and sustainable utilisation of the tree", he sums up.

Indeed, if such knowledge about the tree became extinct, the tree itself may face the same fate.

**Documenting the uses of the Nyok**

The decision for the Bidayuh community to embark on the TK documentation project was made public in Nov. 2001, during the TK Documentation Workshop organised by SBC, IPGRI and MAIS in Kuching. The workshop was attended by

80 participants from four major communities - Iban, Bidayuh, Melanau and Orang Ulu. The other communities are expected to follow suit by submitting proposals to document their TK.

In Jan this year, the Bidayuh community from the Biya area, headed by Gad, met and formed a sub-committee and working committee for the project. They submitted a proposal to document the Nyok to SBC right after the first meeting. The committee then held meetings with village heads from the Biya area to explain the need to document TK and the uses of the Nyok tree. The project was greeted with much enthusiasm from the village heads. By March, the committee had already identified resource persons from the Biya area and were in the process of planning the Demonstration Workshop on the Nyok.

The project is carried out by members of the community itself where selected and trained individuals interview, record and document the TK involved using various modes of documentation (tape recorders, video cameras, pen and paper) while SBC, IPGRI and MAIS facilitate the project.

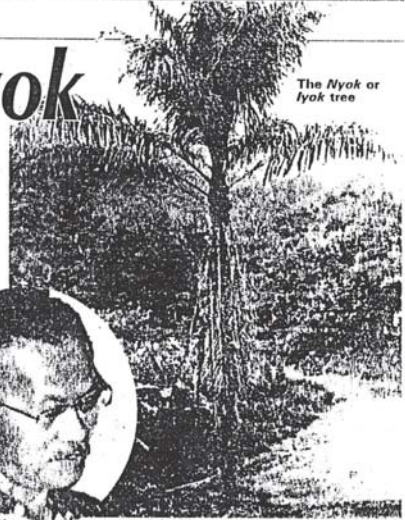
Some may ask, why document the uses of the Nyok when there are many more biological resources which are used by the community?

Temenggong Datu Stephen Jussem Dundon, advisor to the project's sub-committee explained during the demonstration workshop, "There are many plant resources used by the Bidayuh, but we have chosen the Nyok because of its significance to our people. Since the early days our ancestors have been utilising every part of the tree - its fruits, leaves, trunk, branches, roots, fiber - every part that you could possibly think of and it plays so many important roles in our daily lives. In addition to that, the characteristics of the tree which are strong and enduring represents the Bidayuh community in Sarawak."

The Nyok has many uses. Its fruits are used to produce sweet juice, and when left over time, is drunk as fermented wine (similar to the famous *Thak* or rice wine of Sarawak). Its trunk and bark are used to make farming and hunting tools, building materials, handicraft, and musical instruments while the sweet young shoots can be eaten raw or cooked as a vegetable dish.

The fiber which grow between its branches are twisted into ropes which are as strong as industrial-manufactured ropes, if not stronger.

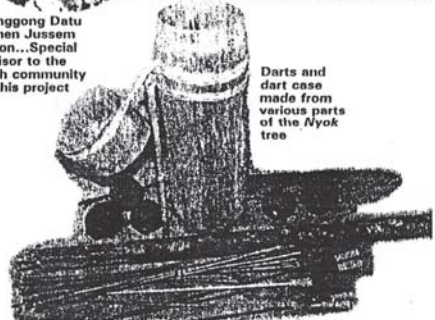
The people of the Biya area are proud of their



The Nyok or Nyok tree



Temenggong Datu Stephen Jussem Dundon...Special advisor to the Bidayuh community for this project



Darts and dart case made from various parts of the Nyok tree

Nyok heritage and are more than willing to share knowledge of its uses.

"The Nyok plays such an important role in our lives and this project to document what we know of its uses will help us retain the heritage" says Bisau. "In fact, it also has potential to become a tourist attraction. We would like to set up a centre or a station in our area where people from outside can come and see how we use the Nyok", he adds.

Bekas anak Danau a member of the working committee, supports the project wholeheartedly. "Not only will the other communities learn about the way we use the Nyok, but it would also be good to share our TK with other Bidayuh

communities from other parts of the state". Plans are currently underway to set up a field station in Kampung Kiding where Nyok products and TK documentation on it will be exhibited. The ground breaking ceremony for the centre was carried out on Aug 17 by Deputy State Secretary and Sarawak Biodiversity Council Member, Datu' Wilson Baya Dandot. Kampung Kiding is approximately an hour's drive from Kuching city and two hours walk from the foothills of Padawan.

The above article is courtesy of Sarawak Biodiversity Centre



Bisau anak Engges (right) spins rope from fibre

The Borneo Post - 5th November 2002

Stories by Joseph Wong, Raynore Mering, Zora Chan, Jeffrey Teo and Doreena Naeg



HOLD THAT SMILE ... Assistant Ministers in the Chief Minister's Department Datuk Alfred Yap (left) and Datuk Awang Tengah Ali Hassan displaying their pearly whites.

## Sarawak to set up lab for screening of plants bioactive compounds

THE traditional knowledge of the local communities in Sarawak in indigenous and unique plants will be applied in screening for new and useful compounds in the State's rich biodiversity.

In order to achieve this, the State government will put in place an extraction laboratory and recruit highly dedicated scientists to meet the challenge, said Assistant Minister in the Chief Minister's Department Datuk Awang Tengah Ali Hassan yesterday.

"There may not be many of such candidates locally, but by collaborating with reputable international research institutions, we should be able to take steps to systematically conduct bio-prospecting activities on our biodiversity."

Similarly, he said in his winding up speech for the Planning and Resource Management Ministry that the Sarawak Biodiversity Council (SBC) was currently working on a strategic plan.

Awang Tengah explained that the plan would include the screening for bioactive compounds from the State's indigenous plants and such compounds that could be developed into useful products.

A molecular biology laboratory, he said, was also being planned to investigate and characterise genes and its protein products to determine the function and potential usefulness.

"With these facilities, the State will be equipped to study a wide spectrum of molecules, from a chemical perspective as well as genetic, to provide the necessary support for our bio-prospecting efforts," said Awang Tengah.

He added that the State would work towards collaborating with established institutions that would not only provide the State with training and technology transfer, but also the necessary exposure in the forms of scientific interactions and exchange.

Earlier, he pointed out that the bio-prospecting activities would be

in, among others, pharmaceuticals, nutraceuticals, botanical personal care products and agricultural products as there was a large and growing market for these products.

Awang Tengah also said the State government recognised that to optimise the utilisation of Sarawak's biodiversity, it was necessary to put in place the requisite infrastructure and technologies including state-of-the-art laboratories.

And these, he said, were especially required if the State intended to compete in the global biotechnology industry.

He added that State needed to enhance its scientific knowledge base through strategic alliances with established biotech companies for technology transfer and capacity building to develop its own local expertise in the long run.

At the same time, the State must promote private sector participation in both research and development (R&D) and product development, said Awang Tengah.

The Borneo Post - 13th November 2002

## Talk on wild bananas of Sarawak at Biodiversity Centre

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will hold a talk on the wild bananas of Sarawak this Friday.

It is part of an ongoing public awareness programme aimed at creating greater awareness on the State's rich biodiversity heritage.

SBC information officer Asha Devi Kaushal said yesterday that a research fellow at the Helsinki University in Finland, Markku Hakkinen, would give the talk.

He has studied wild bananas for two years and made seven expeditions to the Southeast Asian region.

Hakkinen, who has published over 10 scientific papers, is currently in Sarawak studying its wild bananas

and intends to monograph the Borneo wild species of which 12 have been recorded to date, 11 of them endemic.

Kaushal said that in addition to the 12 recorded species, there were five species discovered in Borneo which had yet to be described, including numerous sub-species and varieties which needed to be studied further to classify their status.

While other plants such as the nepenthes and palms had received much attention from botanists around the world, there was still a lot to be learned about bananas, she said.

Those interested in the talk can contact Sylvia at the SBC at 082-610610.- Bernama

*SBC News* 2003

The Malaysian Today - 24th January 2003

# Theft of wild orchids from Mulu

SBC to probe attempt by visitors

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will investigate an attempt by certain visitors to remove wild orchids from the Mt Mulu National Park.

SBC's Chief Operating Officer Datin Eileen Yen told *Bernama* that its officers would not leave any stone unturned to nab the culprits

and prevent any such future attempt at the world heritage site.

"We have caught and fined people including foreign scientists several years ago for attempting to smuggle specimens out of Mulu," she said when responding to the call by the State's Berawan Community living near the park to tighten security.

One of the suggestions was to place permanent park security or enforcement officers in Mulu.

Besides being home to the Penans, the 52,864 ha national park has 17 vegetation zones with some 3,500 species of plants.

The park has 67 species of animals, 262 bird species, 74 types of frogs, 47 fish species,

281 types of butterfly and 458 ant species.

The awesome Mt Mulu (2,377m) is believed to be the most cavernous mountain in the world with at least 295km of unexplored cave tunnels.

It is also the site of the largest known cave chamber in the world, the Sarawak Chamber, 600m long, 415m wide and 80m high.

The Borneo Post - 15th March 2003

# Vital to protect our rich fish biodiversity

By Zora Chan

**KUCHING:** Large-scale land development needs to be properly managed or this can destroy habitat causing danger to all kinds of fish species.

Sarawak, therefore, had to ensure sustainability in managing land development which was seen as the main cause of biodiversity destruction, said animal biologist Associate Professor Dr Peter Ng.

He said the State had not reached the stage of any freshwater fish species facing extinction due to land development, but cautioned that the problem could crop up if there was no sustained management.

"Large scale land development such as land clearing for agriculture and housing is the main threat to freshwater fish as it causes habitat loss, which is happening in many areas in the South East Asia," he said at a public talk on "The Lure Of

Sarawak - Exploring The Animal Wonders Of Borneo" here yesterday.

Quoting an example, he said, one of the threatened places in the region was Ayer Itam in Johor where rivers were drained out for land development.

Ng, who is the director of Raffles Museum of Biodiversity Research, National University Singapore was invited by Sarawak Biodiversity Centre (SBC) to deliver the educational talk.

He also called for proper management of the fish aquarium trade (non-protected species).

Sarawak, being one of the major exporters in the fish aquarium trade in the country should ensure that no fish species were over harvested, he said.

He said, "If there is no proper management control like in the aquarium fish trade, there is the danger that certain fish species would be over collected for their commercial value.

"Europeans feel aquarium fish trade is bad. But it should be allowed because it fetches income for the locals.

"But the problem with the commercial world is that when people start to pay RM10,000 for a fish. This will make the locals going out to catch the fish to the point of extinction."

He cited two cases in Kalimantan, Indonesia and Thailand where this had happened.

Ng has been working on crabs and fish species in the South East Asian region for the past 20 years, and has carried out some of his research in Sarawak.

He has authored and co-authored numerous scientific papers published in journals such as the "Raffles Bulletin of Zoology, Freshwaters and Hydrobiologia."

He also works closely with SBC as a project committee member of the Asean Regional Centre for Biodiversity Conservation (ARCBC) Bau Limestone Inventory Project.

Sunday Star - 16th March 2003

# Crab expert envies Sarawak's biodiversity

**KUCHING:** A Singaporean, who started his research on crabs in Sarawak 20 years ago, is envious of the state's rich biodiversity resources.

National University Singapore Raffles Museum of Biodiversity Research director Dr Peter Ng said researchers were still finding all kinds of strange animals in Sarawak and it would take time to identify some of the new species.

"You have a heritage that I am envious of," he said at a talk on "The Lure of Sarawak - exploring the ani-

mal wonders of Borneo" at the state library on Friday. Dr Ng suggested that local native names be added to the scientific names of interesting animals and plants in the state.

He said large-scale land clearing had seriously destroyed the natural habitat and killed the fishes.

"Because the habitat is disappearing, fish has become rare," he said.

Dr Ng said Sarawak had a special place in natural history as it was here that Alfred Wallace developed the breakthrough ideas on how evolution worked.

## 200 students biodiversity talk

KUCHING: About 200 students from various secondary schools here attended a one and half hour career talk on biodiversity at the State Library Auditorium yesterday.

The talk organised by Sarawak Biodiversity Centre is aimed at informing the students that biotechnology has an extremely bright future especially with the development of Bio valley, a cluster for biotechnology development in the country.

According to the presenter See Yee Ai, who is currently a consultant for the International Service for the Acquisition of Agribiotech Applications (ISAAA), biotechnology is defined as the technologies that make use of living

things or parts of living things to create useful products.

The talk focussed on what biotechnologies do, and the qualifications required to enter the field.

Generally, biotechnology delves into the fermentation process used to make cheese, bread and wine or tissue culture and modern technology ranging from genetic engineering, cloning, vaccine and drug development to host other high-technology applications.

"Today, biotechnology is used in virtually all aspects of our lives from food production to cleaning up the environment," said See.

Also present at the talk was the organising chairperson Datin Eileen Yen.

## SBC seminar on sharks, rays May. 12

KUCHING: The Sarawak Biodiversity Centre (SBC) is organising a talk entitled: *A Survey of Sharks and Rays and their Metazoan Parasites of Malaysia-Borneo* at SBC Seminar Room at 2.30pm on May 12.

The talk will be delivered by Professor Janine Cairra, who is currently attached to the Department of Ecology and Evolutionary Biology, University of Connecticut, but currently in Malaysia with a team of researchers to carry out a survey of elasmobranchs (sharks and rays) and their metazoan parasites (including tapeworms and marine leeches of the inshore and freshwater habitats in East Malaysia).

Very little is still known about sharks, rays and their metazoan parasites in East Malaysia, and the survey that is carried out by Prof. Cairra and her team aims at providing essential baseline taxonomic data and fill the gap in the knowledge of these sharks and rays and their parasites.

Those interested in attending the talk, which is part of SBC's Biodiversity Appreciation and Public Awareness Programme can register with Asha or Ha-Min at 082-610610 or via email at [hiosar@sbc.org.my](mailto:hiosar@sbc.org.my) by May 10.



UNIQUE PLANTS ... Ch'ien C. Lee giving his talk on Nepenthes of Sarawak at the Sarawak Biodiversity Centre (SBC) yesterday.

## Illegal plant collectors threatening our 'monkey cups'

KUCHING: Many wild species of Nepenthes (monkey cup) are endangered because of illegal plant collecting and habitat loss, an officer from Malaysian Tropicals Sdn Bhd Ch'ien C. Lee said.

Because of that, he said most conservation efforts for the plant to date were aimed at protecting the plants from wild collection.

This, he said, was despite the reduced demand for wild collected plants since the advent of widespread artificial propagation programmes.

Lee said this at a talk on Nepenthes of Sarawak held at Sarawak Biodiversity Centre (SBC) here yesterday.

The talk was organised by SBC to create awareness on biodiversity appreciation among the public.

Lee stressed that habitat loss through development and fire remains the prime threat to wild nepenthes, and many local species that are very restricted in distribution are particularly at risk.

Further research was required to adequately assess the status and conservation requirements of many nepenthes species," he pointed out.

He also said that tropical pitcher plants of the genus Nepenthes are unique and feature a characteristic of the Malaysian flora.

To date nearly 90 species are recognised, ranging from west to Madagascar, east to New Guinea, and north to India.

In Sarawak Nepenthes reach its pinnacle of diversity with 23 described species of which six are endemic to the state.

He also said that two new species had been described from collections made in the highlands of central and northern part of the state.

Most can be found within the network of national parks, and Mulu with 14 species, is one of the richest parks of such plants in the world.

According to Lee, Nepenthes are found in a great range of habitats, from coastal scrubs to mountain forests, and in Sarawak, they can be found from sea-level to 2,400 metres elevation.

He added that because of the plant's ability to digest insects, they could survive in nutrient-poor soils.

A few species grow exclusively as epiphytes in trees or as lithophytes on limestone cliffs, he said.

Many highland species are very restricted in distribution, sometimes occurring only on a single mountain, while others, particularly lowland species, are common plants and are often abundant.

He also said that in some localities, as many as eight species have been recorded growing together.

Nepenthes are herbaceous plants and most grow as vines, which climb other vegetation by means of the curling tendril at the tip of the leaf.

The characteristic pitchers, which form at the tips of the tendrils, are actually specially modified leaves to lure, trap and digest insect prey, he said, and explained that nectar is secreted beneath the pitcher lid and along the inner rim of the peristome.

Despite the fact that pitcher plants prey on insects, a number of animals such as spiders, flies and frogs live within the pitcher and depend upon it as a source of food and shelter.

# Move to preserve herbal lore of Penans

BY JACK WONG

TRADITIONAL knowledge on natural resources of the Penans in Sarawak is being documented for preservation.

The Penan community in Long Iman and Batu Bungan, Mulu in northern Sarawak were helping the Sarawak Biodiversity Centre in the project, according to state Assistant Minister for Planning and Resource Management Datuk Awang Tengah

Ali Hasan.

Sarawak has some 10,000 Penans, including 430 nomads who still roam the jungle in the northern region.

He said similar projects for the Bidayuh community were being carried out in several areas in Kuching Division.

"The centre is currently setting up a sample extract laboratory in line with this documentation project to study the potentials of the

natural resources in terms of their pharmacological significance and other applications," he said on Monday.

Awang Tengah said the communities concerned had voluntarily grouped together to help in the documentation work.

Under the project, he said, interpretive centres and herbal gardens would be developed within those communities to become resource sites for researchers and tourists to

learn about the uses of the natural resources throughout the centuries.

These proposed centres and gardens are expected to be self-sustaining through the sale of planting materials, herbal products, food and cosmetics derived from the plants used by the community, as well as the sale of hard copies of selected documentaries on plants and herbs, and souvenir items.

Sarawak Tribune - 17th June 2003

■ SBC, Unimas and private sector to undertake joint-research

# Lab on medicinal plants to be set up

by Violet Tay

**KUCHING** – The Sarawak Biodiversity Centre (SBC) will be setting up a sample extract laboratory to harness local natural resources that have medicinal values.

"The laboratory will function in tandem with the traditional knowledge documentation project to study the potential of natural resources in terms of their pharmaceutical significance and other useful applications," said Chief Minister Datuk Patinggi Tan Sri Dr Haji Abdul Taib Mahmud.

Stressing on the importance of biodiversity, Taib said the government had established SBC with the vision of making it a focal point and world class resource centre for Sarawak biodiversity inventory, monitoring, management, research, utilisation and education.

The Chief Minister also stressed that many natural resources were viewed as useful as they had medicinal values that could contribute tremendously to health care.

"An estimated 30% of the people in less developed countries rely on traditional medicine for primary health care. Some 120 chemicals extracted in pure form from about 90 species are used in medicines throughout the world though many cannot be manufactured synthetically," said Taib.

His speech was read by Assistant Minister in Chief Minister's Office, Daruk Alfred Yap Chin Loi.

CONTINUE PAGE 2



TOKEN OF APPRECIATION... Yap (centre) receiving a memento from Tiens Health Managing Director William Li while Tiens Health Chairman Dr Salihin Ramli (left) looks on. PHOTOGRAPH: JOHN CHAN

• See also story on page 5

FROM PAGE 1

## Harnessing plants with medicinal values in forests of Sarawak

However, he said, the uses of many plants in the State were still unknown or only known to the indigenous people in various parts of Malaysia.

As such, he hoped that Tiens Health Development (M) Sdn Bhd would undertake research and development projects with SBC, Unimas and local businessmen to harness the untapped resources found in the State.

Taib pointed out that Sarawak had a substantial share in the coun-

try's multi-level marketing or direct sales. Malaysia, he said, used to have some 600 direct sales companies. Since then, however, the country had imposed stringent regulations to regulate these companies for the benefit of the public.

The Chief Minister advised multi-level marketing business companies to sell products that would distinguish them from other competitors besides adhering to the needs of customers.

"When you combine high quality

products with genuine and exceptional service, you add intangible value for your customers that is hard to beat," said Taib.

At a press conference later, Yap said the sample extract laboratory, which would engage consultants from Germany, was expected to be completed by the end of this year.

He said the main purpose of the laboratory was to screen plants that had potential medicinal values.

"There are currently about 20,000 species of plants in the State's forest

and some still have not been recovered from the jungle, so we cannot identify their medical values without initial screening," said Yap.

He added that there would also be joint co-operation between varieties in China and SBC to conduct research on medicinal plants.

Yap also welcomed the setting up of the Universiti Tunku Abdul Rahman (Utar) branch campus here, adding that it would offer more education opportunities for Sarawakians, particularly those who graduated from Chinese independent schools.

# State's 'sample extract lab' operational soon

The Malaysian Today -  
17th June 2003

**KUCHING:** The Sarawak Biodiversity Centre (SBC) sample extract laboratory is expected to be operational by the end of this year, Assistant Minister in the Chief Minister's Office Datuk Alfred Yap said.

Speaking to reporters after opening Tiens Health Development (M) Sdn Bhd branch office here yesterday, he said a German-based consultant had been hired to assist in the setting of the laboratory.

Once completed, Yap said the laboratory would conduct research on the potential of the natural resources in forms of their pharmaceutical use and other suitable applications.

"In Sarawak we have nearly 20,000 species whose commercial potential has yet to be realised," he said.

Yap, who is also Planning and Resource Management Assistant Minister invited more private firms to jointly venture into research and development with the SBC.

In another development, Yap who is the Sarawak United People's Party (SUPP) Publicity and Information Secre-



**READY FOR BUSINESS ...** Alfred Yap (centre) flanked by William Li (left) and Dr. Sathin cuts the ribbon to officiate the opening of Tiens Malaysia branch in Kuching yesterday.

tary said the proposed setting up of Universiti Tunku Abdul Rahman (Utar) Sarawak branch campus was a plus factor for the people in the state. "It is an additional option for the people in

the state to pursue further studies locally," Yap said when asked to comment on reports that Utar Chairman Datuk Seri Dr. Ling Liong Sik, who is MCA former president, was in the state last week to dis-

uss the setting up of the branch campus.

He said the site for the campus had not been identified yet.

"It is up to the state government to decide whether it will be here,

Sibu, Bintulu or anywhere in the state," he said.

On the role of the SUPP in the setting up of the campus, Yap said the party could help in raising funds or in the management of the university.

The Borneo Post - 17th June 2003

# Sample extract laboratory to be ready this year

By Joseph Wong

**KUCHING:** The Sarawak Biodiversity Centre (SBC) sample extract laboratory is expected to be fully operational by the end of this year.

Planning and Resource Management Assistant Minister Datuk Alfred Yap yesterday said a German-based consultant had been hired to assist in the setting of the laboratory.

"Once completed, the laboratory would conduct research on the potential of the natural resources," he told a press conference after the official opening of the Tiens Health Development (M) Sdn Bhd Kuching branch here.

He said the laboratory would function in tandem with the traditional knowledge documentation project to study the potential of the natural resources in terms of their pharmaceutical

significance and other applications.

Yap, who represented Chief Minister Datuk Patinggi Tan Sri Abdul Taib Mahmud at the official opening, said the State government was also keen to set up collaboration projects and joint ventures with international universities and research institutions.

"In Sarawak, we have about 20,000 species whose commercial potential has yet to be realised," he said, adding that more private firms should have joint ventures into research and development, particularly, with SBC.

Earlier, he read the Chief Minister's text of speech, pointing out that an estimated 80 percent of people in less developed nations relied on traditional medicine for primary health care.

"Some 120 chemical extracted in pure form from about 90 species are used in medicine throughout the world and many of these medicines cannot be manufactured

synthetically," he said.

There were many uses for plants that were still unknown or only known to indigenous people in various parts of Malaysia, he added. "This knowledge of medicines are handed down from generation to generation orally and cease to exist after a few generations."

Taib also pointed out that many of Malaysia's herbal products from spices like cinnamon and pepper to critical medication such as aspirin and quinine were from the nation's natural resources.

That was why there was a need for collaboration and joint ventures with local and international businessmen to unravel and market the nation's herbal products.

And since Sarawak was considered as one of the 12 world mega-biodiversity regions, the potential for the State to produce herbal and natural pharmaceutical products were nearly unlimited, he said.

Sarawak Tribune - 6th August 2003

## Talk on Stone Oaks of Southeast Asia at SBC

KUCHING – Dr. Chuck Cannon, an associate professor from the Texan Tech University will be delivering a talk entitled "The Stone Oaks of Southeast Asia: Revealing the History of the Rainforest" at the Sarawak Biodiversity Centre (SBC) at Semongkok here on 14 August at 2.30 pm.

Dr Cannon, who has been studying the evolution and ecology of rainforest trees in Indonesia and Malaysia since 1987, is no stranger to Sarawak.

Having worked as a research fellow with UNIMAS in 1997, he is currently carrying out a research with several Malaysian biologists to develop DNA fingerprinting techniques for tropical timber certification.

During his talk, Dr Cannon will touch on the species of stone oaks in the Kelabit Highlands, including several rare species which have just been identified and how these species of trees can reveal the history of the rainforest in the State.

The general public, particularly those in the timber, environment and tourism sector, are encouraged to attend.

Those interested in attending the talk, which is part of the Centre's Biodiversity Awareness and Appreciation Programme, can contact Asha or Hamim at SBC through 082-610610 (tel), 082-611535 (fax) or HYPERLINK mailto:biosar@sbcc.org.my biosar@sbcc.org.my (email) to register or to obtain more information. The talk is free.

The Borneo Post - 19th August 2003

## State welcomes top-notch experts

They can explore our rich bio-diversity resources: Taib

By Philip Kiew

MIRI: Sarawak welcomes experts for bioprospecting in the land dubbed as one of the twelfth world hotspots in biodiversity resources.

This is to explore and tap into the rich vein of bio-diversity resources with expertise from abroad to benefit the State, and also mankind through prudent management of this new field that also goes hand-in-hand with biotourism.

Chief Minister Datuk Patinggi Tan Sri Abdul Taib Mahmud said the Sarawak Biodiversity Council (BDC) must play its role more effectively to attract top-notch experts from abroad, and to safeguard State rights.

The State passed a law in 1997 to establish the Sarawak Biodiversity Council to manage Sarawak's rich biodiversity in a prudent way. "In the past, there was over enthusiasm in controlling, but I have told them that is not the way as we need everyone's brains to go with the materials."

"Timber is logged on a sustainable basis on an average of seven logs per hectare and the cutting is within the cycle of 25 years... these are for preserving biodiversity," he said when delivering his keynote address at a two-day International Conference on Biotourism 2003 themed, "The Treasures of Sarawak Rainforests — a Perfect Product for Biotourism".

Experts and tourism players are attending the two-day conference, the first of its kind in the world. The experts are from the United States, Mexico, New Zealand, Japan and other countries. Taib also pointed to the potential of discovery of items with medicinal values through bioprospecting by experts from abroad and local institutions with the



LAUNCHED ... Taib clicking on the plant-camouflaged computer to declare open the first international conference on biotourism in Miri.

approval of the regulatory body of BDC. Conceding that the State needed researchers to unearth discoveries, he stressed that Sarawak had been regarded as a world heritage as the wealth of bio-diversity knowledge gained through research was property of the world to benefit mankind. The State is blessed with biodiversity resources, including a caudron of 185 species of mammals, 530 birds, 106 snakes, 113 amphibians, 700 marine fishes, 250 fresh water fishes, 10,000 insects, 500 marine invertebrates.

There are also over 8,000 species of flowering plants, including 2,000 plants, 4,000 of fungi and many others in the State.

The council is also working with the Penan, Orang Ulu, Iban and other communities to record their knowledge of the jungle, particularly plants which have medicinal value for clues into future research.

Taib also called for the protection of and further research on local medicines passed on through generations of the Iban, Bidayuh, Orang Ulu and the Penan people. As for the Penan, he said quite a few had obtained university education and the nomadic ones should not be kept roaming the jungles forever as they also had the right to share in the State's prosperity.

The international seminar, the first to be held in the world, boasts an

impressive line up of speakers.

They are Arg Hector Gebballos-Lascruan, an international Mexican consultant in ecotourism, regional planning and environmental architecture who first coined the term ecotourism; Prof Esmerius Dr Donald Hawkins of George Washington University who was awarded gold medal by World Tourism Organisation for his contributions in research and education; Dr Brian P. White, director of the World Travel and Tourism Council Centre for Tourism Leadership in Canada and Professor Dr Koh Chong Lek, an award-winning genetics expert from Universiti Malaya who has represented Malaysia in Unesco.

# Taib: Experts welcome to help develop bio-tourism

By Christopher K. Knight

**MIRI:** Sarawak is opening its doors to 'brains' from abroad to help develop its rich biodiversity as an important step towards creating a viable bio-tourism product, Chief Minister Datuk Patinggi Tan Sri Haji Abdul Taib Mahmud said.

He said the experts, scientists and professors in related fields, who have a keen interest to assist in developing the bio tourism potential of Sarawak are very much welcome.

"We will work closely

promote research and development in the field, said Taib, who pointed out that this was the main purpose of the state government in organising this first-ever conference.

The conference brought together participants from the four corners of the world for the specific purpose of discussing the bio-tourism industry.

The Tourism Ministry is expected to compile the findings of the conference at the end of the session at

## 'Sarawak cannot escape from biodiversity.'

and cooperate with these people," he said when opening the International Bio Tourism Conference 2003 at Rihga Royal Hotel here yesterday.

The three-day international conference, attended by experts in biodiversity, and professors from abroad, was to identify current issues, development and challenges in bio-tourism.

Aside from that, the conference was also to provide information on pitfalls, benefits and the potential of bio-tourism as well as

4.30pm today.

"Bio materials abound in this land, and what we have to do now is to bring in the brains to formulate some ways on how we can utilise our resources," said Taib.

He also suggested that people in the tourism industry be knowledgeable with regard to some specific bio-items which would become the attractions of the bio-tourism product for tourists.

He added that the tourism industry should work with the Sarawak



Taib (right) receiving a souvenir from Abang Johari after the opening of the International Bio-tourism Conference 2003 as Professor Datuk Seri Dr. Ibrahim Abu Shah looks on.

Biodiversity Centre (SBC) in Kuching to learn more about biodiversity.

"Sarawak cannot escape from biodiversity," said Taib, adding that the State has a long history of biodiversity.

He said that for a long time, researchers from abroad had actually been

coming to Sarawak to study the flora and fauna found here.

According to the Chief Minister, Sarawak had 164 species of lizards, over 10,000 species of insects and 955 types of orchids, and that the primates and reptiles found here attracted foreigners.

"Sarawak really has something to offer," he said.

He went on to say that Sarawak now only had to adjust its approach in handling bio-tourism and this could be done by studying the subject.

Earlier, Tourism Minister Datuk Sri Abang Johari

Tun Openg said the fact that the conference was a forum to gather some views and experiences from the experts would be of great benefit to Sarawak.

"There have been a lot of changes in tourism development worldwide and your views will certainly enlighten our perspective on the changing scenario of global tourism," he said.

The changes were changes in technology in climatic conditions arising from global warming and changes in perception with regard to policies on globalisation, he added.

When asked on the changes during a press conference later, Abang Johari said tourism was a sensitive industry.

"We can't predict the climatic condition. People (tourists) will go somewhere else when the weather is not suitable for them," he explained.

The minister also believed that all changes that were happening in the world were in fact giving the edge to Sarawak in the tourism field.

"We are the 12th country worldwide with a bio-tourism feature. Yes, we have the advantage in this respect," said Abang Johari.

The Borneo Post - 24th September 2003

# Flowering plant named after Laila

Begonia Laila to honour CM's wife for passion in environmental conservation

By Zora Chan

**KUCHING:** A new species of begonia discovered in the Bau limestone area in 2001 has been named after the Chief Minister's wife, Datuk Amar Puan Sri Laila Taib yesterday.

The honour is in recognition of her passion for environmental conservation.

*Begonia Lailana* sp. nov. or its common name *Riang Laila* or *Begonia Laila* is a striking begonia with reddish or greenish brown stems that grows at the base of limestone hills in light shade, and is found to be endemic to Bau. Female flowers are reddish green while male flowers are deep pink or pale cream.

This species belongs to the cane-begonia group as it has a bamboo-like stem. It grows up to a metre tall and its young leaves are especially pretty as they have silver spots. Begonias are notoriously polymorphic for colour and patterning and holds great potential as an ornamental plant.

Begonias are sensitive to habitat disturbance, which poses a threat to their conservation, and thus they are listed as a protected species in Sarawak.

*Begonia Lailana* was discovered during the Sarawak Biodiversity Centre - Ascan Regional Centre for Biodiversity Conservation (SBC-ARCBC) Bau Limestone Inventory Project aimed at obtaining baseline data on the biodiversity of the limestone areas, generate information on the potential of the areas to the local community and the State, and to recommend areas as Totally Protected Areas.

The project was carried out over 30 months which began in September 2001. During the inventory project, 3,310 fauna



**ESPECIALLY FOR YOU ...** Yen and Aziz present a pot of *Begonia Lailana* to Laila (right) to thank her for the dedication in conservation efforts.

specimens and 11,923 flora specimens were collected, where to date, 665 fauna species and 1,279 flora species have been identified.

In a ceremony to dedicate the flowering plant to Laila at her residence here yesterday, she urged the people, particularly the younger generation to work together in conserving and studying the rich biodiversity of Sarawak, and to use them prudently.

This was because biodiversity today had reached point of being threatened from expanding human population and increased human consumption of natural resources, she asserted.

"Together we can work toward sustainability by creating a vision of where we want to go and how we want our life to be for us and for our children and their children too - not just in the next few years but many years down the road.

"I encourage each one of us to examine our mostly deeply held values in order to decide what the best way is for all of us to prosper and to share a finite Mother Earth," she added.

Threat of extinction on plant and animal species should inspire the people to save them and to conserve those that still remained, said Laila. Commending the team of

researchers and individuals who had assisted SBC's first inventory project at the Bau limestone areas, she said their commitment had contributed a wealth of knowledge in the biodiversity research and conservation of Sarawak.

State Secretary Datuk Amar Abdul Aziz Husain, who is also the Sarawak Biodiversity Council and SBC acting chief executive officer Datin Eileen Yen also spoke at the occasion.

Among those present were Deputy Chief Minister's wife Dato Sri Empiang Jabu and Dato Jamilah Ann, wife of Minister of Agriculture and Food Industries, Dato Sri Adenan Satem.

Metro - 24th September 2003

There are signs that our biodiversity is threatened and the most pressing threats are from expanding human populations - Datuk Amar Laila Taib

WEDNESDAY 24 September 2003

# New begonia named after Sarawak CM's wife

BY SHARON LING

**A** NEW species of begonia recently discovered in Sarawak has been named after Datuk Amar Laila Taib, the Chief Minister's wife, in recognition of her "passion" for nature. *Begonia Lailana*, also known by its common name *Riang Laila*, was discovered in 2001 during a limestone inventory project of the Bau district carried out by the Sarawak Biodiversity Centre (SBC) and the Ascan Regional Centre for Biodiversity Conservation.

The new begonia, which was found to be endemic to Bau, belongs to the cane-begonia group as it has a bamboo-like stem and grows to about 1m.

It grows at the foothills of several limestone areas in Bau, including Gunung Asp, Gunung Lanyang, Gunung Pidan, Gunung Puing and Gunung Tabal.

SBC acting chief executive and project leader Datin Eileen Yen is Lee described the new species as an elegant begonia with sprays of flowers ranging in colour from pale cream to deep pink, while its young leaves are especially pretty with silver spots.

As such, this attractive species has potential as an ornamental plant.

Apart from the discovery, the inventory project also documented a crab species (*Terrabebelus kuchingensis*) last recorded over 100 years ago, a total of 125 bird species and a number of orchids endemic to Sarawak.

Under the project, which began in Sept 2001, over 3,000 fauna and 12,000 flora specimens were collected, of which 665 fauna and 1,279 flora species were identified.



**FLORAL ATTRACTION:** Laila unveiling a painting of the *Begonia Lailana* at the dedication ceremony in Demak Jaya, Kuching, on Monday while (from left) Abdul Aziz, Empiang and Yen look on.

Speaking at the dedication ceremony in Demak Jaya, Kuching, on Monday, Laila called for greater efforts from all to conserve the state's rich biodiversity.

"There are signs that our biodiversity is threatened and the most pressing threats are from expanding human populations and increased human consumption of natural resources.

"We have come to a point where biodiversity

must be treated more seriously," she said, stressing that it had to be "invented, studied, conserved and used prudently."

She added that the extinction of various plant and animal species should serve as a motivation to save and conserve those that remain.

Among those present were Puan Sri Empiang Jabu, wife of Deputy Chief Minister Tan Sri Alfred Jabu, and State Secretary Datuk Abdul Aziz Husain.

## Seminar on Limestone Biodiversity Oct 21-23

**KUCHING:** The Sarawak Biodiversity Centre (SBC) in collaboration with Universiti Malaysia Sarawak (Unimas) will organise a three-day seminar entitled Seminar on Limestone Biodiversity from Oct 21 to 23 at Unimas.

The seminar is organised with the support of the Asean Regional Centre for Diversity Conservation (ARCBC) and will allow researchers who have been working on the 30-month SBC-ARCBC Inventory Project in Bau, to present their findings and make appropriate recommendations, and as well as allow researchers in Malaysia and Asean to network and share information and experiences.

During the project, 19 limestone hills were identified for comprehensive inventory of both flora and fauna.

The limestone areas are often scientifically unique as they have a relatively high proportion of endemic flora and fauna.

The economic potentials of the limestone areas include quarrying, bird nest production, eco-tourism and forest produce for the local communities.

The primary objective of the project was to obtain baseline data on the biodiversity and economic activities of the Bau limestone hills. Besides contributing to the database on the Biodiversity of Sarawak and its utilisation, the information compiled would also form the basis for recommending some of the hills to be considered as Totally Protected Areas (TPAs).

Among the speakers who will be presenting at the seminar are Assoc Prof Dr Peter from National

University of Singapore; Dr Yong Hoi Sen and Dr Francis Ng from the Academy of Sciences, Malaysia; Assoc Prof Dr Fatimah Abang, Director of the Institute for Diversity Conservation, Unimas; Dr Aida Lapis from ARCBC; Dr Ruth Kiew from Singapore Botanic Garden, as well as officers from SBC, Mineral and Geoscience Department, Department of Forestry and Unimas.

Those who are interested in attending the seminar can obtain the registration forms from The Secretariat, Seminar on Limestone Biodiversity, Sarawak Biodiversity Centre by calling 082-610610 (Attn Ms Junai) or emailing biosar@sbc.org.my by 4pm Oct 6, 2003 (Monday).

Participation in the seminar is free of charge.

## Sarawak compiling biodiversity extracts

**KUCHING:** The Sarawak Biodiversity Centre (SBC) is compiling a natural products library with unique extracts from the State's diverse biodiversity following the recent commissioning of its research and development (R&D) laboratory.

SBC acting chief executive officer Datin Eileen Yen said yesterday the extracts were derived from the flora and fauna, particularly those that had been traditionally used by local

communities in Sarawak.

"To date, the state's diverse biodiversity remains largely uncharacterised in its chemical complexities and potential therapeutic properties and the SBC laboratory is set to explore these potential," she said in a statement here.

The laboratory performs solvent extraction and biochemical screening besides conducting

researches on cloning and genes analysis.

She said SBC's future R&D programmes would include extracts from microbes as well as from marine organisms.

As part of its conservation efforts of indigenous trees, she said SBC's ex-situ indigenous species conservation plot has been planted with 10 indigenous fruit species and two timber species so far. - Bernama

# State compiling biodiversity extracts

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The Borneo Post - 23rd November 2003



**HANDS-ON EXPERIENCE**

Students from Singapore National Junior College helping in the construction of village's kindergarten

## Singaporeans get a taste of kampung life

By Kinston Albert

PEN-RISSEN, Kuching - A group of 22 students from Singapore National Junior College led by two teachers are presently experiencing village life in Kampung Semadang, a Bidayuh village 34 miles from the City.

The 17-day Youth Expectation

Project (YEP) is organised by the college, Sarawak Biodiversity Centre and Singapore International Foundation (SIF). One of the teachers, Steven Wong Meng Wai, said the students, all 17, were the first batch in the project introduced by SIF. If successful, the project would be continued.

"Each student is required to come up with a report of his or her experi-

ence at the village," he said, adding that such documentation was important considering that certain Bidayuh traditions could become obsolete and lost in future.

The group arrived on November 14 and will leave on December 2 after a two-day tour of Kuching City.

Steven said the students would also help the villagers build a kindergarten.

New Straits Times -  
6th December 2003

## 10-fold increase in penalty for catching protected wildlife

**KUCHING, Fri.** — The penalty for those convicted of collecting, taking away any protected biological resources from their habitat and out of Sarawak will be increased 10-fold under proposed amendments to the Sarawak Bio-diversity Centre (Amendments) Bill, 2003.

If convicted, an individual can be jailed for up to three years.

The proposed amendments will be tabled at the State Assembly sitting next week.

The maximum fine for such offences is RM5,000 and a year's imprisonment.

The bill also seeks to empower the centre to maintain a library of extracts of biological resources collected for research, study or screening for bioactive compounds or their pharmaceutical, medicinal, therapeutic or nutritional properties or for agricultural purposes and for maintaining records of and database for biological resources found in the State.

The Wild Animals Protection Ordinance will also be amended to allow wild animals in Sarawak to be shot or killed if they caused immediate danger to human life.

Some of these animals have become not only a nuisance, but a menace to humans and properties. Accordingly, it is deemed necessary to amend the Ordinance to allow for the killing, capture or destruction of dangerous wild animals to safeguard humans and properties.

## Six Bills to be tabled at DUN sitting

KUCHING – A total of six government Bills will be introduced during the third Meeting of the second Session of the 15th State Legislative Assembly from December 8-16.

The six Bills are the Supply 2004 Bill 2003, Electricity (Amendment) Bill 2003, Sarawak Rivers (Amendment) Bill 2003, Public Parks and Greens (Amendment) Bill 2003, Sarawak Biodiversity Centre (Amendment) Bill 2003

and Wild Life Protection (Amendment) Bill 2003.

State Legislative Assembly Speaker Dato' Sri Mohd Awang Asfia Awang Nasar said a total of 153 questions had been submitted, with the Agriculture and Food Industry Ministry receiving a total of 27 questions, the highest among the ministries.

He said four days (December 9, 10, 11 and 12)

will be allocated for questions and oral replies and one hour will be allocated on each day for the purpose.

Deputy Chief Minister and Finance and Public Utilities Minister Tan Sri Datuk Amar Dr George Chan will unveil the Budget on the afternoon of the first day of sitting.

It will take a break on Saturday and Sunday (December 13 and 14).

# Safeguarding biodiversity

### Bill passed clearly defines roles of SBC and other agencies to protect biological resources

By Tiong Sue Yii

KUCHING: A Bill to define more clearly the roles of the Sarawak Biodiversity Council (SBC) and other related agencies in safeguarding the state's biological resources and promoting research has been passed yesterday.

Agriculture and Food Industries Minister Dato Sri Adenan Satem said the Sarawak Biodiversity Centre (Amendment) Bill 2003 would reaffirm SBC's role in spearheading ethnobotany research or research into traditional usage of plants for medicinal purposes as well as educating and raising the level of public awareness of the potential uses and value of the biodiversity.

"The amendments will reassert the principal role of SBC to conduct studies or research into the rich biodiversity for pharmaceutical, nutritional, agricultural and other specific uses of our biodiversity.

"They will clarify the core functions and responsibilities of the Biodiversity Centre," he said when introducing the Bill at the State Legislative Assembly sitting.

Adenan said in pursuit of its own research



and for the purposes of discharging its functions, the centre could undertake the collection of biological resources.

He said the centre's core functions were "management and sustainable utilisation of the biodiversity of the State, and to determine policies and guidelines for scientific research and experiment relating

to the use of biological resources for pharmaceutical, medicinal and other specific purposes.

"In accordance with the United Nations Convention on Biodiversity, the State has sovereign rights over its biological resources, and the authority to regulate the use thereof for pharmaceutical or medicinal development and to share in the benefits derived from their commercial exploitation.

"The State government has intended that the centre will be the agency to safeguard the rights of the State over its rich biodiversity, and to promote the sustainable management thereof for use in scientific and pharmaceutical research," he said.

Adenan reiterated that the government had no intention to be overzealous in the protection of its biological resources.

"The State and our people will never be able to benefit fully unless our rich biodiversity's potential are fully investigated or studied by researchers and scientists, and their properties could become the source of medicinal and nutritional products to be used for the benefit of mankind," he said.

Adenan also pointed out that the centre would only have the duty to control and regulate research on those biological resources with known or potential properties which could lead to the development and commercialisation of pharmaceutical, medicinal or health food products.

"Not all biological resources would come within the ambit of the centre's supervision or control...only those which require protection because of their medicinal or pharmaceutical or nutritional properties or scientific values would come under its supervision or control," he said.

Adenan said other agencies like Controller of National Parks and Nature Reserves and Controller of Wild Life will have the duty or responsibilities to protect biological resources found in the national parks, nature reserves and wild life sanctuary.

"Those in protected forests, forest reserves and State land forests will be under the control of the Director of Forests.

"This arrangement would allow for better enforcement of laws and regulations relating to the protection of such resources, as the SBC could concentrate on its core or principal functions," he said.

The Malaysian Today - 9th December 2003

# Biodiversity Bill amended; widens SBC's scope of work

**KUCHING:** The Sarawak Biodiversity Centre (Amendment) Bill 2003 was passed unanimously yesterday.

Agriculture and Food Industries Minister Datuk Sri Adenan Satem, when tabling his second reading for the Bill, said the Bill would give the Sarawak Biodiversity Centre (SBC) a more focused role to implement and sustain the state's rich biodiversity resources more efficiently.

He said the initial intention for the agency was to safeguard the rights of the state over its rich biodiversity, but at the same time must be able to exploit its best potentials through scientific and pharmaceutical researches.

"The state and our people will never be able to benefit fully from our rich biodiversity unless their potentials are fully investigated or studied by researchers and other scientists. Their properties could become the source of medicinal and nutritional products to be used for the benefit of mankind," he told the Dewan.

He said the amended Bill would further reassert and reaffirm SBC's core functions and responsibilities.

The centre, which is managed by Sarawak Biodiversity Council, would be given wider rights to safeguard the biological resources gazetted by the Council.

"This means not all biological resources would come within the ambit



of the centre's supervision or control, but only those which require protection because of their medicinal, pharmaceutical or nutritional properties or scientific values," he said.

Meanwhile, he said other agencies such as the Controller of National Parks and Nature Reserves and Control of Wildlife, would be duty bound to protect biological resources found in national parks, nature reserves and wild life sanctuaries.

And those in protected forests, forest reserves and state land forests, would be put under the control of the Director of Forests, Adenan explained.

"This arrangement will allow for better enforcement of the laws and regulations relating to the protection of such resources, as the Sarawak Biodiversity Centre could concentrate on its core functions," he said.

Hence, this would enable the centre to only have the duty to control and regulate research on those potential biological resources, that could be developed and commercialised, he said.

He added that under the new law, the council and other related government agencies would cooperate to realise the government's objective to protect the state's rich resources.

He said while the centre would still spearhead researches in biodiversity potentials, it would also continue to educate the public and raise awareness of the issues.

He added: "Educating (the public) and raising public awareness of the potential uses and values of our rich biodiversity will continue to be enhanced, so that all communities in Sarawak will learn to appreciate it".

"At the same time, knowledge of the traditional usages of plants for medicinal purposes will be documented".

Apart from the Sarawak Biodiversity Centre (Amendment) Bill 2003 which was passed later, the assembly also approved the Sarawak Rivers (Amendment) Bill 2003 tabled by Infrastructure Development and Communication Minister Datuk Sri Wong Soon Koh.

The amendment allowed the state government to safeguard its right to antiquities or treasure troves found in the rivers and foreshores of the state. - Bernama

The Borneo Post -  
9th December 2003

## Amendment should be made flexible /

THE amendment of Clause 6 in Sarawak Biodiversity Centre (Amendment) Bill 2003 should be made flexible.

Clause 6 of the amendment on the protection of biological resources says a permit shall be issued by the council for the collection and taking away any protected resources from their natural habitat or place where they are found or grown. Chiew Chin Sing (DAP-Kidurong) taking part in the debate, felt that it was too general to be able to serve efficiently. He cited an example of a native who cut timber in his own Native Customary Right (NCR) land for building materials. The law, he said, would not allow the native to saw timber without a permit and if caught, he would face a serious penalty.

"To the person sawing the timber, he is just sawing a few pieces for his own use and after all, it is from his own land, and this has been practised for generations," he said.

Chiew said Clause 6 should be made flexible when practised in emergency cases and in times of sickness when there would not be enough time to get a permit, especially those staying in rural areas.

"I suggest a notification by the person himself or his relatives to the appropriate SAO or the District officer within a week or a reasonable period so that the person involved would not have to face the penalty."

On the undertaking of studies, research and documentation of the traditional uses of biological resources by the natives in the State as stated in Clause 3, (b) (f), Chiew said recognition should be given to the contributions by the indigenous people to universal knowledge.

He said a significant part of the intellectual base of innovation in certain fields of technology came from the informal and traditional knowledge developed, elaborated and maintained by the indigenous societies which had been an important resource in technology based upon manipulation, adaptation or use of biological resources.

The opposition member then posed two questions: "What kind of incentive is there for enhancing their (indigenous people) efforts in the conservation of traditional knowledge system and associated biodiversity and (2) what kind of equitable sharing of benefits between the users of traditional knowledge and those who have created and maintained it."

Positive incentives could create and perpetuate the traditional practice to maintain the high level of biodiversity for all the generations, he said.

The Borneo Post -  
9th December 2003

## Studies can result in recovery of useful bioactive compounds

THE Sarawak Biodiversity Centre should continue to play its role at the forefront in the Sarawak's diverse ethnobotanical exploration, said Dr Jerip Susel (SUPP-Bengoh).

When debating the Sarawak Biodiversity Centre (Amendment) Bill 2003 yesterday, he said the products from studies and analysis would result in the recovery of useful bioactive compounds that had therapeutic pharmaceutical and nutritional values. This, he added, could become a lucrative economic endeavour. Dr Jerip also proposed that the government alienate a piece of land for the villagers in Kampung Semandang to further develop the herbal garden interpretation centre which was started by SBC in the area.

"The direct involvement of the communal folks in the research for ethnobotany and ethnobiology give them a sense of environmental responsibility to preserve some of these plant species from extinction," he said. He also envisioned the herbal garden, if done in a more organised and larger scale, could become a tourist attraction.

New Straits Times - 9th December 2003

## Biodiversity centre's core function redefined

THE core function of the Sarawak Biodiversity Centre has been redefined. It now has to safeguard and protect biodiversity resources that can be developed and commercialised for pharmaceutical, medicinal or health food products.

Previously, SBC's role was only to safeguard the rights of the State over its rich biodiversity and to promote their sustainable management as well as to gazette certain biological resources as protected resources.

This redefinition of SBC's core function came about with the approval of the amendment to the Sarawak Biodiversity Ordinance, 1997, by the State Assembly yesterday. The amendment was tabled by Agriculture and Food Industry Minister Datuk Seri Adenan Satem.

With the amendment, it has the right to supervise or control biodiversity resources that require protection because of their medicinal, pharmaceutical, nutritional properties and scientific values.

The amendment was introduced to ensure that it could concentrate on its core or principal functions. However, it is still entrusted with spearheading

ethnobotany research into the traditional use of plants. It will continue playing a role in educating and creating awareness about the potential uses and value of biodiversity.

Adenan told the House that other agencies such as the National Parks and Nature Reserves and Wildlife would be responsible for protecting the biological resources within their purview. "This arrangement would allow for better enforcement of laws and regulations on the protection of the resources."

He said anyone conducting scientific study on biological resources in the State would have to deliver a copy of his final report to the SBC.

Earlier Lee Kim Shin (BN-Senadin), during the debate on the Bill, said the amendment would enable the SBC to be more focused in discharging its duty and responsibility.

Sole opposition member Chiew Chin Sing (DAP-Kidurong) reminded the SBC not to lose track of its endeavour to protect and conduct research on biodiversity resources by neglecting genetic diversity, which could lead to extinction of certain resources.

New Straits Times - 10th December 2003

## SBC sets up plant extraction, biochemistry lab

THE Sarawak Biodiversity Centre (SBC) has set up a plant extraction and biochemistry laboratory for the bio-prospecting research and development programme.

Replying to a question from Lee Kim Shin (BN-Senadin), Deputy

Chief Minister Tan Sri Dr George Chan said the programme was to explore the value and property of the biological resources in the State.

Lee had asked the Government what steps had been taken to promote and develop the biotechnology

industry in Sarawak.

He said the laboratory was set up to carry out biotechnology techniques like bioactive compound screening, development of bioassays, cloning and expression of genes and proteins and tissue culture.

The Borneo Post - 10th December 2003

# State to promote biotechnology sector: Dr Chan

By Alexius Barieng

**KUCHING:** Biotechnology incubator facilities will be established in Sarawak in the near future to ensure that the prospective results of research activities will proceed on to the industry stage.

This initiative will support the national Biotechnology Programme that would be implemented through the BioValley concept, under which the State will be one of the nation's BioValley Satellites, said Deputy Chief Minister Tan Sri Datuk Amar Dr George Chan.

He told the State Legislative Assembly yesterday that for the long-term plan to promote the development of the Biotechnology Industry, the State would put in place a Biotechnology Strategy that would provide the framework for R&D and biotechnology industrial

development designed for economic, environmental and community activities.

"Planned partnerships with private biotech companies and research institutions, both local and foreign, will position SBC not only as a research centre for biotechnology in Sarawak, but also as a centre to spearhead the development of biotechnology in the State," he added. Replying to a question from Lee Kim Shin (SUPP-Senadin), Dr Chan pointed out that it took more than just the State's raw biological or genetic resources to spearhead the biotechnology industry.

"A lot of time, capital and scientific know-how were needed to develop these resources into useful products to be commercialised.

"In addition to the State's diverse biological resources, we need up-to-date scientific know-how, platform technologies, and human

ingenuity, which implies a whole range of scientists, entrepreneurs, and professionals including intellectual property lawyers."

He added that the biotechnology industry was about commercialising biology and utilising biological processes for industrial purposes.

"Therefore, biotechnology is a business proposition, which involved investment in capital intensive research and development and taking the discoveries made by scientists in the laboratory into an industrial setting and ultimately the marketplace," he explained.

He said the Sarawak Biodiversity Centre (SBC) had been entrusted to carry out bio-prospecting research and development (R&D) programmes.

"Besides SBC, the Research Division of the Department of Agriculture has also gone into biotechnology," he added.

*SBC News* 2004

The Malaysian Today - 14th January 2004



Several longhouse folks being briefed on the project. Also seen is Larry Sng (seated third right on floor).

## SBC picks Rumah Lulut for documentation project

KAPIT: The Sarawak Biodiversity Centre (SBC) has selected Rumah Lulut in Sungai Tisa as the first Iban longhouse to be included in the Traditional Knowledge Documentation Project.

SBC chief executive officer Datin Eileen Yen

who chaired the first meeting with community representatives at Rumah Lulut recently said to date, seven such projects have been initiated in the state. Also present were Pelagus state assemblyman Larry Sng and senior researchers from

SBC.

She said the meeting was explained and discuss with the community representatives on the role of SBC and the objectives of the project.

The project is very important. The aim is to provides us with information

on the ecological chain of the environment and at the same time, create a better awareness and conservation of our biodiversity," she said.

A Project Working Committee will be set up to work on the programme, she added.

The Borneo Post - 20th February 2004

## Biodiversity Centre to hold public lecture on genetic resources

KUCHING: The Sarawak Biodiversity Centre (SBC) will be holding a public lecture on genetic resources, good policies and fair partnerships at its Seminar Room at Jalan Borneo Heights today starting at 9.30am.

The lecture by Kerry ten Kate will describe markets for genetic resources and the kind of policies and agreements that can help countries, communities, scientists and companies to devise beneficial partnerships, SBC said in a statement.

Kerry ten Kate hails from the United Kingdom and has been actively involved in conducting research and assisting in policy matters for governments, industries and the United Nation on issues ranging from the Convention on Biological Diversity, conservation and sustainable development strategies to trade and environment policies.

She has also authored and co-authored extensively on biodiversity and bio prospecting.

Sarawak Tribune - 22nd April 2004

## SBC to hold workshop for media fraternity

KUCHING - The Sarawak Biodiversity Centre (SBC) will hold a workshop entitled 'A Better Understanding Towards Biodiversity and Biotechnology' for the media on 30 April.

The event, aimed at media representatives, journalists, writers and communicators, will be held in conjunction with the launching of Sarawak Museum Journal, Special Issue No. 6 entitled 'Sarawak Bau Limestone Biodiversity'.

The one-day workshop, which will also coincide with SBC's 'Meet The Customers Day', is organised with the cooperation of the Malay-

sian Biotechnology Information Centre (MABIC).

It will involve a hands-on lab session on plant sample extraction for the participants.

The organisers believe that the workshop will assist media representatives and journalists as well as writers in the State to have a better understanding of the development of BioD-BioTech in Sarawak. The event will also act as an avenue for the participants to meet and share experiences with representatives from the Biotech industry, namely, Dr Koshy Philip of Mineway (M) Sdn Bhd and the executive director of MABIC, Kelvin Keh.

The Borneo Post - 22nd April 2004

## Traditional Knowledge Documentation Workshop a success

KAPIT: Sarawak Biodiversity Centre (SBC) successfully organised its Traditional Knowledge Documentation Workshop last weekend.

The two-day workshop at Rh Lulut had Dr Paul Quek of International Plant Genetic Resources Institute and SBC's Datin Eileen Yen, Margarita Naming and Connie as speakers.

In launching the workshop on Saturday, Pelagus state assemblyman Larry Sng said the main objective of the workshop was to create better awareness on the need to conserve biodiversity.

He said at the rate modern development was progressing, there was a greater need now to

conserve the natural equilibrium of the natural environment where many useful living things, particularly plants, were available for further research to be carried out on them.

Such research, he said would be useful to mankind because it would ensure that plants with medicinal value would continue to grow and to be readily available.

He said local people who were wise to the efficacy of some plants must be consulted and their knowledge documented so that further research could be carried out based on their experiences. The workshop also taught the longhouse folk on how to collect herbarium and living specimens and how to process and propagate them.

# State bio-diversity centre to have four more labs

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will have four new laboratories soon.

They would be used for Molecular Biology, Micro Biology, Analytical Chemistry and Bio-Informatics, State Secretary Datuk Amar Abdul Aziz Husain said yesterday.

A sum of RM10 million had been set aside for the purpose, he added.

He said the development would include a data centre to be located within the SBC's premises at Semenggoh, about 20km from here, along Jalan Puncak Borneo.

Speaking to reporters after launching SBC Customers Day and the book Sarawak Batu Limestone Biodiversity: A Special Issue of the Sarawak Museum Journal at the centre here, Aziz said RM4 million of the allocation would be for the construction of the building to house the laboratories and the rest for equipment.

"The proposed project is scheduled for completion in the first quarter of next year," Aziz, who is also SBC chairman, added.

He said the centre would have at least 20 scientists, most

ly Australian-trained.

In his speech, Aziz said Sarawak was rich with flora and fauna, a high proportion of them unique to the state.

However, he noted, the exploration of the state's biodiversity was still at an infant stage.

Aziz said he was pleased with the success of the Bau Limestone Biodiversity project, the first comprehensive study carried out in the state and which took about 24 months to be completed.

Scientists in the project discovered a new species of begonia, which has been named *begonia lailana* in honour of Datuk Amar Laila Taib, the Chief Minister's wife. They also discovered three new species of crabs, two new species of fish, one new species of wild banana and one new species of a natural hybrid of nepenthes.

Also present at the ceremony were Bengoh State Assemblyman Dr Jerip Susil; Padawan Municipal Council chairman Lawrence Ting; SBC's Acting CEO, Datin Eileen Yen Ee Lee, Temenggong Datuk Stephen Jussem and heads of government departments.



Abdul Aziz (left) browsing through The Sarawak Museum Journal on Sarawak Bau Limestone Biodiversity after its launching as Eileen Yen (right) look on.



IT'S OFFICIAL NOW ... Aziz signing a book during the launching while Acting Chief Executive Officer of SBC Datin Eileen Yen (right) looks on.

## SBC to build five R&D laboratories

by Harun Jau

**KUCHING** — Sarawak Biodiversity Centre (SBC) is planning to build five research and development laboratories.

State Secretary Datuk Amar Haji Abdul Aziz Husain, who is also SBC chairman, said the laboratories, costing a total RM4 million, were for plant tissues culture, molecular biology, bio-informatic database, analytical-chemistry and microbiology.

"The laboratories will be built

later this year and all are scheduled for completion by the first quarter of 2005," he told reporters after launching a special issue of the Sarawak Museum Journal "Sarawak Bau Limestone Biodiversity" at SBC

at KM22 Jalan Borneo Heights here.

Aziz also said an additional RM6 million would be used to buy all the necessary equipment for the new laboratories.

"With the new laboratories, SBC will be able to conduct more research," he said, adding that a database centre would also be set up.

According to Aziz, SBC was also planning to recruit another 20 scientists, including those trained overseas, to strengthen the present pool.

He said in its first five years, from 1998 to 2003, SBC's roles were focused in implementing the Research Permit System, in conducting general Biodiversity Inventory as well as in carrying out Biodiversity Education.

"SBC will now focus its roles to implement R&D or bioprospecting programme for various audience including students and the general public," he said.

The Malaysian Today - 13th May 2004

# SBC safeguards biodiversity

By Rom Kulich

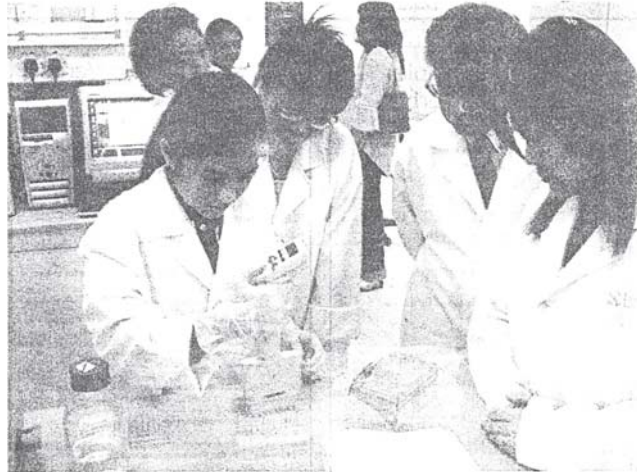
SARAWAK is recognized internationally for a remarkably large number of species and a very high proportion of species found nowhere else in the world. Yet the exploration of this rich resource is still in its infancy.

Realizing its biodiversity's tremendous commercial and pharmaceutical potentials, the State government formed the Sarawak Biodiversity Centre (SBC) in 1998, with the responsibility to spearhead the exploration and identification of the indigenous flora and fauna.

The SBC's vision statement aptly reads, "To be the focal point for Sarawak biodiversity inventory, monitoring, research, education, utilization, management and conservation".

Since its inception five years ago, SBC has achieved many milestones but it is not resting on its laurels. As of 2004 it is refocusing its roles and forging ahead with concerted action plans towards achieving its noble vision.

"Four new laboratories will be built at SBC to exploit the state's bio-diversity," said State Secretary, Datuk Amar Abdul Aziz Husain, who is also SBC chairman. Aziz was launching 'Sarawak Bau Limestone Biodiversity' - A special issue of the Sarawak Museum Journal,



SBC Research Officer, Belinda Ng (left) shows how controlled experiment on cancer cells are done.



Dr. Koshy Philip during Q & A time.

and SBC Customers' Day at SBC, Semengoh, about 20 km from Kuching.

"RM4 million and RM6 million will be allocated for the building and equipment, respectively," cited Aziz.

Expected to be complete in the first quarter of next year, the new laboratories will be used specially for molecular biology, microbiology, analytical chemistry and bio-informatics.

"The completion of the laboratories will enable more research to be conducted, as well as intensify the state's vast bio-diversity potential," pointed out Aziz.

SBC will require at least 20 scientists, mostly Australian-trained, and also recruit additional supporting staff for expansion programmes.

Aziz attributed the success of the Bau Limestone

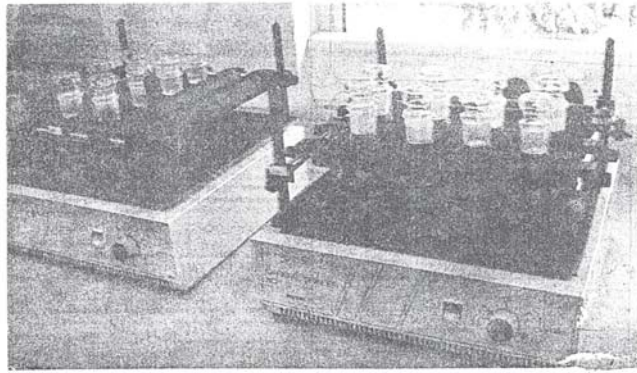
Biodiversity project to the working culture and dedication of SBC staff, researchers and contributors from society at large.

"The inventory project only took about 24 months, and has discovered one new species of Begonia - Begonia lailana, named after Datuk Amar Laila Taib, three new species of crabs, two new species of fish, one new species of wild banana and one new species of a natural hybrid of Nepenthes," acknowledged Aziz.

A renowned expert on biodiversity, Dr. Koshy Philip, presented a talk on 'Biotechnology, Industry Application and Commercialization'. "Compared to other research centres in Malaysia, Sarawak is really privileged to have all these advanced equipment at SBC for exploring the state's biodiversity potentials", Dr. Philip said.



SBC diagram chart shows flow process.



Automatic orbital shaker.

The Malaysian Today - 17th June 2004

# 1 million hectares set aside for reforestation

THE government has set aside one million hectares for reforestation over the next 15 to 20 years, the Assistant Minister of Planning and Resource Management, Datuk Alfred Yap Chin Loi, told the State Assembly yesterday.

Replying to Larry Sng Wei Shien (BN-Pelagus), Yap, who is also Assistant Minister in the Chief Min-

ister's Office, said that under the reforestation programme, the government would issue 60-year licences for planted forests and charge annual land rent of only RM5 per hectare.

He said timber production was targeted to double from its current level through the programme. Repeating to Lee Kim

Shin (BN-Senadin), Yap said a site had been earmarked at Samarahan for the development of a BioValley Satellite.

He said other sites like Miri could be considered once the site at Samarahan was developed.

Yap said the government recognised the "great economic opportunities" provided by the rich biodiver-



sity heritage of the state and was making plans to develop and promote the biotechnology industry. The setting up of the Sarawak Biodiversity Council (SBC) was part of this, he added.

The Borneo Post - 22nd June 2004

# Foreign firms told to credit local knowledge

KUCHING: The State government will ensure that foreign biotech and pharmaceutical companies give due recognition to the knowledge rendered by the traditional communities.

These companies should regard such sharing of knowledge as a professional service, said Assistant Minister in the Chief Minister's Office Datuk Awang Tengah Ali Hasan yesterday in his winding up speech.

He was touching on the foreign biotech and pharmaceutical companies exploring on the indigenous knowledge of traditional communities.

"Profit-making companies should share with the local communities any benefits that accrue from their contribution in terms of traditional knowledge," he said on behalf of the Chief Minister Pehin Sri Abdul Taib Mahmud for the Chief Minister's



Department and Planning and Resource Management Ministry.

However, Awang Tengah admitted that the State did not have a legal framework to protect the intellectual property of traditional knowledge.

Nonetheless, currently the World Intellectual Property Organisation (WIPO) was compiling information on traditional knowledge and case studies on the contribution of traditional knowledge in bioprospecting programme, he said.

"WIPO has been commission by the Convention on Biological

Diversity (CBD) to come up with recommendations to address this issue.

"We will study the recommendations of WIPO and adopt or adapt such provisions as appropriate to formulate a legal framework to protect our traditional knowledge," he asserted.

He also urged state assemblymen to take the initiative in documenting traditional knowledge among the elders of their constituents in collaboration with the Sarawak Biodiversity Centre (SBC) before such knowledge disappeared forever.

Awang Tengah revealed that forestry and timber would continue to be an important sector to the State and it was expected that it would contribute RM1,086 million or 5.4 percent to the State's Gross Domestic Product (GDP) and providing jobs for about 100,000 people.

The Malaysian Today - 23rd June 2004

# Samarahan, Miri sites nominated as BioValley Satellites

TWO sites - one in Samarahan and one in Miri - had been nominated to the federal government to be accorded the status of BioValley Satellites in Sarawak.

BioValley Satellite Samarahan and Miri will function like BioValley Malaysia in the Multimedia Super Corridor, that is a dedicated zone for biotechnology industries and the nucleus for Research and Development (R&D) in biotech, Deputy Chief Minister Tan Sri Dr. George Chan said.

"In its conceptual form, the strengths of the BioValley Satellites in Sarawak will lie in the potential for the biotech companies to conduct R&D and utilise our rich diversity of bio resources.

The other major pull factor for any biotech companies to relocate to Sarawak would be the commitment of our pro-business government and our political stability," he said in his winding up speech yesterday.

Dr. Chan, who is also Industrial Development Minister, said biotechnology indeed has the potential to contribute to the economic development of the state and hence, it was an exciting time to discuss biodiversity prospecting and applications of it.

He said the commercial success of most biotech projects would be preceded by a significant investment in time and R&D.

"Taking cognizance of this, we are therefore, building more laboratory facilities for R&D activities at the Sarawak Biodiversity Centre (SBC)," he said. He said the R&D activities at SBC would initially focus on making discoveries from the state indigenous bio resources, which includes discovering novel bio-compounds for the pharmaceutical and biotech industry and verifying therapeutic claims of traditional herbal remedies developed and used by the local communities.

In due time, the state is also looking forward to be able to bring to market new botanical healthcare and industrial products, he added.

In addition to putting up more lab facilities, Dr. Chan said the state was in the process of assembling a pool of competent and dedicated researchers and scientists to jump-start the R&D activities at the SBC and to simultaneously train the next generation of home-trained scientists.

However, the scientist alone will not ensure success in these biotech ventures. In addition to human capital and talents, we need to acquire technology know-how and technical expertise that are essential to jump-start the biotech industry.

The Star - 26th June 2004

# Sarawak plans to jumpstart biotech R&D

BY JACK WONG

SARAWAK is recruiting a pool of competent scientists to jumpstart research and development (R&D) activities in biotechnology.

Deputy Chief Minister Tan Sri Dr. George Chan Hong Nam said their work at the Sarawak Biodiversity Centre would initially focus on discoveries from the state's indigenous bio resources.

This, he added, included discovering novel bio-compounds for the pharmaceutical and biotech industry and verifying therapeutic claims of traditional herbal remedies used by local communities.

He said the centre would have five new laboratories ready early next year for R&D activities.

Dr. Chan said the state government had recommended a site each in Samarahan and Miri to the federal

government to be accorded with the status of BioValley Satellite.

BioValley Satellite Samarahan and Miri will function like BioValley Malaysia in the Multimedia Super Corridor as a dedicated zone for biotechnology industries and the nucleus for biotech R&D.

The strength of these satellites will lie in the potential for the biotech companies to conduct R&D and utilise our rich diversity of bio

resources," he told the state assembly in Kuching on Wednesday (June 23).

Dr. Chan said Sarawak's pro-business government and political stability would be the other major pull factors for foreign biotech companies to relocate their operations to the state.

He suggested that Curtin University in Miri should consider setting up a Biotechnology Faculty and carry out R&D work on the state's enormous bio resources.

The Borneo Post - 19th October 2004



JOINT VENTURE ... Aziz (left) and Nimura exchanging the signed documents in the presence of (from second left) Fong, SCB acting chief executive officer Datin Eileen Yen and Kiyota.

## Joint venture with Japanese firm to conduct microbial research in S'wak

**KUCHING:** The Sarawak Biodiversity Centre (SBC) yesterday signed a Memorandum of Agreement (MoA) with Nimura Genetic Solutions (M) Sdn Bhd (NGS), a Japanese bio-prospecting venture company to conduct microbial research in Sarawak.

State Secretary and SBC chairman Datuk Amar Abdul Aziz Husain inked the MoA for SBC, and NGS (J) chairman and managing director Satoshi Nimura for NGS (M).

The signing was witnessed by State Attorney General Datuk Fong Joo Chung and NGS president Keiichi Kiyota.

The MoA, among others, requires NGS to send its experts to train SBC research staff in microbial research in return for preferential rights to carry out research on microbial extracts.

NGS (M) will be allowed to

negotiate on market products derived from this venture in partnership with Sarawak.

Among those present at the signing ceremony were Deputy State Secretary Datu Wilson Baya Dandot, State Agriculture director Datu Sapuan Anu, Sarawak Forestry Corporation managing director Datu Chong Ek Choon and Natural Resources and Environmental Board controller Chong Ted Tsiung, NGS senior director of R&D Dr Keiichi Numata and senior research associate Dr Noriyuki Okujo.

Since 2000, NGS (M) has been actively conducting researches on biological resources in its laboratory in Kuala Lumpur.

Its parent company is Nimura Genetic Solutions Co. Ltd (NGS [J]) based in Kanagawa, Japan.

Its mission is to explore new

compounds that may lead to drug discovery, while the company's policy is to establish research laboratories in resource countries to enable technology transfer.

Meanwhile, SBC's current R&D programme focuses on compiling a unique library of natural product extracts from useful indigenous plants, particularly those that are used by the local communities as traditional remedies for various ailments and diseases.

SBC currently has two laboratories — an extraction laboratory and a biochemistry laboratory under its R&D programme.

SBC will set up five more laboratories next year to extend its R&D activities and these include a microbiology lab, a molecular biology lab, a plant tissue culture lab, an analytical chemistry lab and a bioinformatics lab.

The Malaysian Today- 19th October 2004

## SBC, Nimura Genetic Solutions ink MOA for microbial research

**KUCHING:** The Sarawak Biodiversity Centre (SBC) yesterday signed a Memorandum of Agreement (MoA) with Nimura Genetic Solutions (M) Sdn Bhd (NGS) to conduct microbial research in the state.

SBC acting chief executive officer (CEO) Datuk Amar Abdul Aziz Husain, who is also the State Secretary and representing NGS was its chairman, Keiichi Kiyota.

The signing was witnessed by State Attorney General, Datuk Fong Joo Chung, and NGS president, Keiichi Kiyota.

Also present was SBC Acting Chief Executive Officer, Datin Eileen Yen.

The MoA, among others, requires NGS to send its experts to train research staff in microbial research.

In return, NGS would have preferential rights to carry out further research on microbial extracts as well as to negotiate and market its useful products derived from the partnership.

NGS is a bio-prospecting venture company and has its parent company, Nimura Genetic Solutions Co. Ltd, based in Kanagawa, Japan.

Since 2000, NGS (M) has been actively con-

ducting research on biological resources in its laboratory in Kuala Lumpur.

The mission is to explore new compounds that may lead to drug discovery and the company's policy is to establish re-

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ful indigenous plants, particularly those used by the local communities as traditional remedies for various ailments and diseases.

The centre currently has two laboratories: an extraction laboratory and

biochemistry under its R&D programme.

SBC plans to set up another five labs: microbiology, molecular biology, tissue culture, analytical chemistry and bioinformatics lab, to extend its R&D activities.



Abdul Aziz Husain (left) shaking hand with Satoshi Nimura while exchanging the MOA document during the signing ceremony yesterday.

## S'wak Biodiversity Centre organises lecture

**KUCHING:** The public are invited to attend a lecture on 'Good practices of community participation in on-farm management of agricultural biodiversity' on Oct 25 at 1.30pm at the seminar room of the Sarawak Biodiversity Centre (SBC) near here.

SBC is organising the lecture as part of its ongoing Public Awareness Programme which is aimed at creating awareness on Sarawak's rich biodiversity heritage

and its wise-use.

A scientist with the International Plant Genetic Resource Institute (IPGRI), Dr Bhuwon Sthapit, will deliver the lecture which focuses on the need to understand the value of agro-biodiversity and activities involving community participation that can provide social, economic and environmental benefits to rural folk.

Presently posted in Nepal, Dr Sthapit has had more than 20 years

of experience in the field of plant biology and crop production.

During the talk, he will share his experience and lessons learnt in agro-biodiversity projects that involve community participation in Nepal.

Those interested in attending the lecture can contact Asha Kaushal or Hamim Marzuki at 082-610610 or fax, 082-611535 or via email at biosar@sbc.org.my before 4pm on Oct 22.

## Traditional knowledge documentation important for future generations

**KUCHING:** Like many young Iban at Rumah Lulut in Kapit Division, Erang Guyu wants a job in the town or city as he feels farming gives smaller returns.

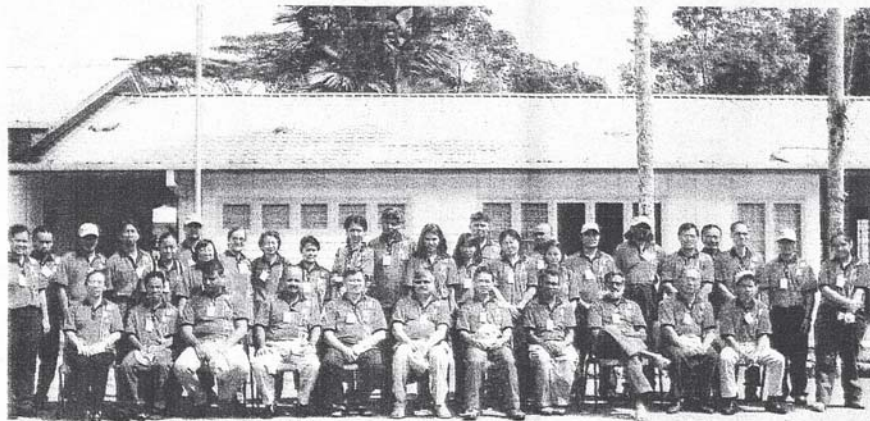
However, the 23-year-old's plan took a turn last year when his uncle asked him to stay back at the village to help out in a traditional knowledge documentation project, a project initiated by the Sarawak Biodiversity Centre (SBC) to ink down traditional knowledge which has been passed down for generations from word of mouth.

Now a year in the project, Erang said yesterday he was glad that his uncle had asked him to take part in the project, saying that it was important to record his forefather's knowledge for the benefit of posterity of the Iban community.

"We've always used plants collected in the forest or planted around the longhouse our food source and remedy to cure sicknesses, but all this knowledge is not recorded. All these are in the heads of our elders and forefathers who pass down to us orally," he explained.

Citing examples, he said the Iban community in Kapit used paji tree as fuel and heal cuts and wounds, while flowers from the ilam plant were used to remove unpleasant smell.

However, over the years, some of such knowledge was lost as some elders died before they could pass on the heritage to the young ones, and many youngsters were no longer interested to know about



ONE FOR THE ALBUM ... workshop participants and facilitators pose for a group photograph at SBC premises.

traditional knowledge these days, Erang pointed out.

"My community didn't realise the importance of this knowledge and thus, it has never crossed our minds to write and keep a proper record of it. But with SBC's traditional knowledge documentation project, we're more aware on the importance to record our traditional knowledge so that we will not lose any more of it," he said.

He hoped his community's traditional knowledge would continue to persist in the future and learn new traditional knowledge from other indigenous communities in the country and overseas.

Erang is one of the participants who is taking part in the Regional Workshop on Traditional Knowledge, organised by SBC, Global Environment Facility/Small Grants Programme (GEF/SGP) and

the International Plant Genetic Resources Institute (IPGRI).

The six-day (Oct 25 to 30) workshop is aimed at introducing and subsequently training community trainers on methods used to document traditional knowledge.

It will be facilitated by SBC, GEF/SGP and the Kyanika Adult Women Group of Kenya. (KWAG)

The facilitators are Datin Eileen Yen of SBC, Dr Paul Quek and Dr Bhuwon Sthapit of IPGRI for Asia, the Pacific and Oceania, Dr Martin Abraham of UNDP-GEF/SGP and Rahael Wamae of KWAG.

Some 40 locals and foreigners from Sri Lanka, Mongolia, Nepal, Vietnam, Iran, Pakistan, India, Thailand, Indonesia and the Philippines will converge at Rumah Lulut in Kapit today to learn from

each other how traditional knowledge is documented in their respective communities.

A Thai participant, Usa Klinhom who hails from the northeast of the kingdom said his area was rich in traditional knowledge.

"However, it's sad to know students at schools and universities in Thailand are taught about plants and their benefits from books written by Westerners and none from our own people."

In 1996, a foundation to document and study traditional knowledge was set up, and one of the earliest and on-going projects covered an area inhabited by the Laos, Cambodians and Thais, she said.

Like many traditional knowledge of the indigenous communities, she added these people also did not record their forefathers' knowledge passed down by word of mouth.

Binay Jha representing the Integrated Rural Development Centre, Nepal hoped to learn more about traditional knowledge documentation during his stay at Rumah Lulut so that he could bring and share what he had learned with his people.

The Nepalese were also facing the same problem of losing their wealth in traditional knowledge which could bring much benefit to the people and country, he added.

Looking forward to learn from other participants' experiences, he also hoped to establish a networking with people of the same concerns and goals of preserving traditional knowledge for the posterity.

The Malaysian Today - 27th October 2004

# SS: Document traditional knowledge or lose it

**KUCHING:** The need to document traditional knowledge is critical as it bears the risk of being lost forever, State Secretary Datuk Amar Aziz Husain said.

He pointed out that the need was further driven by the fact that traditional knowledge has contributed quite significantly to modern agriculture and industries.

According to him, many of the products being used in the market were produced based on information derived from traditional knowledge.

Aziz, who is also the chairman of the Sarawak Biodiversity Centre (SBC), said this at a visit to the traditional knowledge documentation project at Kampung Semadang, about 38 km in Jalan Puncak Borneo, in conjunction with a regional workshop on traditional knowledge.

The five-day workshop from Oct. 26 was being held in Rumah Lulut, Kapit.

Aziz also said that the information derived from traditional knowledge should be properly acknowledged and not to be misinterpreted, and that it should be within the respective communities.

"We must always ensure that the community's concerns are heard and these concerns are addressed when we facilitate the documentation process and capacity building exercise," he added.

He also commended the involvement of women in the workshop, as they were known to be fervent in being involved in preserving the heritage of traditional knowledge.

Both the elders and the youth must be also involved in the project, to provide comparative information as well as to ensure that

they especially the youths, understand the value of such knowledge, ensuring the posterity of the traditional knowledge.

He also thanked SBC for taking the lead in initiating the traditional knowledge documentation in the state, and for organising the workshop.

He also hoped that the villagers could co-operate to make the project a success. Eventually this will place the village in the eco-tourism map of the state and the world.

During the visit, Aziz was accompanied by Assistant Minister of Industrial Development (Planning), Larry Sng, who is also Assistant Minister in the Chief Minister's Office (Economic Planning), Bengoh state assemblyman Dr. Jerip Susil, SBC Acting Chief Executive Officer and Datin Eileen Yen Ee Lee.

Earlier Dr. Jerip, said that Kam-

pung Semadang was chosen for the project due to its close proximity to the city.

Another attraction, he said was due to the untouched natural surrounding - its flora and fauna - and the attitude of the villagers who are willing to co-operate to ensure the success of the project.

He also said that documenting traditional knowledge was important given its commercial potential, adding that such a project would help to promote the village as a tourist attraction.

About 40 participants from 11 countries - Mongolia, Nepal, Pakistan, India, Indonesia, the Philippines, Sri Lanka, Thailand, Vietnam, Peninsula Malaysia and Sabah - were also present.

Representatives from the four ethnic communities from the state - Bidayuh, Iban, Malay and Kelabit - also attended the gathering.

*SBC News* **2005**

The Borneo Post - 6th February 2005

## Talk on challenges in pharmaceutical industry

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will hold a talk entitled "Productivity Challenges in the Pharmaceutical Industry" on Feb 15.

The talk, by Prof Dr Lorenz Ng, is in line with SBC's research and development (R&D) programme, which aims to establish a focused R&D programme opportunities to discover and develop novel and useful products from the State's biodiversity.

It is directed at government agencies and departments, the private sector, students from institutions of higher learning, and also the general public.

Dr Ng will discuss current and emerging business models for R&D, the challenges and opportunities of the models, as well as justifying costs of R&D and ensuring returns.

He will also discuss the region's role in R&D in the pharmaceutical industry.

Dr Ng, who recently spoke at the Asia Biotech Forum 2005 in

Kuala Lumpur, is the vice-president of Eli Lilly (China and Asia Pacific).

Eli Lilly is an international pharmaceutical company based in the United States, known for introducing treatment drugs such as Prozac, Cialis and Symbyx to the international market.

Prior to his appointment at Eli Lilly in 1998, Dr Ng was the director of the Washington Pain Centre, and medical director of the Chronic Pain Programme at the National Rehabilitation Hospital in Washington.

Those interested in attending the talk, which will be held at the main conference room on the second floor of Wisma Bapa Malaysia, can contact Asha or Ha-mim at 082-610610 or 082-617050; fax 082-611535; or E-mail to biosar@sbc.org.my, to obtain a registration slip.

Entry is free, but those who wish to attend are advised to confirm their attendance with SBC by 12pm, on Feb 14.

The Borneo Post - 16th February 2005

# Partnership the way forward

## State's pharmaceutical industry urged to seek cooperation with foreign firms

By Alexius Barieng

**KUCHING:** Sarawak's pharmaceutical industry could be given a "jumpstart" by partnering with large pharmaceutical companies, said Eli Lilly Asia Inc vice president Dr Lorenz Ng.

He said such a partnership was useful in sharing the risk of developing new products, accessing a wider scientific platform, and also to gain entry to larger markets.

"It is very important for Sarawak to find a partner as part of the 'open innovation concept', because (the State) is quite isolated and is still at a relatively low level of developing expertise.

"There are experts out there who can work with you, and help

jumpstart things that you want to try and do," he told reporters after delivering his talk, "From Global to Metanational: A Model for Sarawak" at Wisma Bapa Malaysia here yesterday.

Dr Ng added Sarawak's partner in developing its biodiversity for the pharmaceutical industries need not be company from the Western countries as the State could also seek cooperation from companies in this region.

He also advised the authorities and private sector to find a product that would stand out in the international market, instead of trying to be everything to everybody.

"Try to find out where you can pool your resources and maximise success in one particular area first;

demonstrate success in that particular area, and then build on that."

Earlier, during the question and answer session, Dr Ng explained Sarawak must identify what it wanted to do to compete, where the niche was, and what the best way was to leverage its expertise and strengths, specifically its biodiversity.

He also emphasised on the need to identify the viability of the business that will support the science, rather than just focusing on the science aspect.

"If you just want to develop the science, I don't think it's going to be very viable because even countries that have spent more money than you for many years still have difficulty attracting

scientists.

"So you really need to think about the business model," he said, while stressing on the importance of the research work done in the State so far.

"I am not trying to downplay the work that has been done because it is, still one of the important ingredients in starting an industry. But now you need to look at how to develop the rest of the model."

During his talk, Dr Ng discussed current and emerging business models for research and development (R&D), the challenges and opportunities of the models as well as justifying costs of R&D and ensuring returns.

He also spoke on the region's role in R&D in the pharmaceutical industry.

Prior to his appointment at Eli Lilly in 1998, Dr Ng was the director of the Washington Pain Centre, and medical director of the Chronic Pain Programme at the National Rehabilitation Hospital in Washington.

Eli Lilly is an international pharmaceutical company based in the United States, known for introducing treatment drugs such as Prozac, Cialis, and Symbyx to the international market.

Among those present were Assistant Minister in the Chief Minister's Department Larry Sing, Agriculture Department director Datu Sepuan Anu, Angkatan Zaman Mansang (AZAM) chief executive officer (CEO) Datu Aloysius Dris and SBC acting CEO Datin Eileen Yen.



**EXPERT ...** Dr Ng believes partners to help the State develop its pharmaceutical industry need not be from the West.

## 50 Bisaya leaders attend SBC meeting

by Adeng Hj Idrus

LIMBANG - Fifty Bisaya community leaders, village development and security committee and association leaders attended a meeting organised by Sarawak Biodiversity Centre (SBC) at the Resident's office here, yesterday.

At the meeting SBC's Chief Executive Officer, Datin Eileen Yen Ee Lee enlightened the participants on the roles played by SBC and the traditional knowledge documentation project being undertaken by SBC.

The meeting also tried to explore aspects of traditional knowledge documentation that could be carried out by the Bisaya community.

Yen pointed out that the main objective of the traditional knowledge documentation project was to help the indigenous communities in the State preserve their knowledge on traditional medicine through proper recording and documentation techniques.

Such efforts are carried through capacity building workshops

which provided the local communities with the necessary skills, such as documentation techniques, propagation and management of useful indigenous plants.

The project also encourages the indigenous communities to cultivate useful indigenous plants for their own use, as landscape for their surroundings and for awareness and appreciation purposes.

Sarawak has over 36 different ethnic groups and each has inherited a rich array of knowledge on traditional medicine from their ancestors, much of which has not been documented.

The documentation of knowledge on traditional medicine can also contribute to the economic development of a community in the long run if it is properly utilised.

For example, the setting up medicinal plant garden in villages can become a new tourism attraction.

Among those present were SAO Racha Balang, Temenggong Enjan ak Orang Kaya Yassau and Pemanca Wilfred Yussin.



GOOD PROSPECT ... Yen explaining the concept to Racha as Temenggong Enjan (second from left) looks on.

The Borneo Post - 7th March 2005

## Sabah, Sarawak to hold more talks on biodiversity collaboration

**KUCHING:** More discussions should be held between the governments of Sabah and Sarawak to explore areas for collaboration in database management and sharing of information, particularly in the area of biodiversity.

The Science and Technology Unit director of the Sabah Chief Minister's Department, Moktar Yassin Ajam, who said this, felt that it was important to avoid duplication of work and to maximise expertise.

On the research on and development of bioactive compounds and essential oils, Moktar said he was fascinated by the work that the Sarawak Biodiversity Centre (SBC) had done on the State's indigenous plants that could be developed in the future into pharmaceutical and health products.

Moktar, who headed a group of directors and officers from various departments under the Sabah Chief

Minister's Department during a visit to SBC recently, said that they had learnt a lot.

The group was given a briefing by SBC acting CEO Datin Eileen Yen on the centre's functions and programmes.

Also in the group were Datin Norlidah Jasni, wife of the Speaker of the Sabah State Legislative Assembly and Datin Hilda Yusof.

"We believe that SBC is on the right direction based on the initial work that it has carried out under its programmes and its future plans," said Moktar.

They also visited SBC's Sample Extraction and Biochemistry laboratories where they were briefed on the processes involved in plant extraction for SBC's Natural Products Library and screening for anti-cancer compounds from the library and shown a variety of essential oils that have been extracted from Sarawak's indigenous plants.

The Star - 10th March 2005

## Biodiversity centre to set up global link

**MIRI:** The Sarawak Biodiversity Centre will link up with international pharmaceutical and herbal producers via the Internet to establish a knowledge-sharing network to help develop new medicinal products in the state, said its acting chief executive officer Datin Eileen Yen Ee Lee.

"The bio-industry in Sarawak is only about to be born. We are aware that in order to venture intensively in this industry, the process would be very expensive and the risk of failure is as high as the potential for success.

"We must collaborate with established international players in the industry and those who have already acquired licensed technologies in such fields in order to jumpstart this industry in Sarawak.

"Sarawak has the assets in terms of resources and traditional knowledge. What we need most is to establish a scientific base to tap the full potential of our ready assets," she said yesterday.

Tabling her working paper at the International Biotechnology Sym-

posium organised by the centre, the state government and Curtin University of Technology Sarawak, Yen said the state must be able to convince established global herbal and pharmaceutical manufacturers to come to the state.

"Sarawak has a wide variety of traditional medicine used by the natives for centuries. This traditional expertise could be the catalyst for development of new and novel biopharmaceutical products.

"We have the basic ingredients, what we need is the scientific expertise to convert these into products that can be marketed worldwide," she said.

Prof Lance Twomey, vice-chancellor of Curtin Australia, said the university and the Sarawak government have formed a great partnership not only in the academic fields, but also in the fields of research and invention.

Some 100 biotech experts from Europe, China, Australia and Malaysia attended the two-day symposium which ended yesterday.

Sarawak Tribune - 7th March 2005



## Sabah can Collaborate with Sarawak on R&D

**M**ORE discussions should be held between the governments of Sabah and Sarawak to explore areas for collaboration in database management and sharing of information. Director of the Science and Technology Unit of the Sabah Chief

Minister's Department, Moktar Yassin Ajam said that this is important to avoid duplication of work and to maximize expertise. Speaking in the context of research and development on bioactive compounds and essential oils, Moktar was fascinated by the work that the Sarawak



Moktar Yassin Ajam, Director of the Science and Technology Unit, Sabah presenting a souvenir to Datin Eileen Yen. Looking on is Awang Damit HJ Awang Anak, the Head of the ICT Development Unit of Sabah.



Moktar Yassin Ajam (centre) seeks clarification on the process of extracting essential oils. Also seen are Datin Norlidah Jasin (right) and Saadilah Abdillah (in coat and tie), the Director of the Sabah State Public Sector Training Institute

Biodiversity Centre (SBC) has done for bioactive compounds from the State's

indigenous plants that could be developed in the future into pharmaceutical and health products.

Moktar, who headed a group comprising heads of departments, directors and officers from various departments under the Sabah's Chief Minister's Office during a visit to SBC recently, said that they learnt a lot during the visit where Acting CEO of SBC, Datin Eileen Yen gave a briefing on the Centre's functions and programmes.

Also in the group were Datin Norlidah Jasin, wife of the Speaker of the Sabah State Legislative Assembly and Datin Ikhla Yusof.

"We believe that SBC is on the right direction based on the initial work that it has carried out under its programmes and its future plans," he said.

They also visited SBC's Sample Extraction and Biochemistry laboratories where they were briefed on the processes involved in plant extraction for SBC's Natural Products Library and screening for anti-cancer compounds from the library and shown a variety of essential oils that have been extracted from Sarawak's indigenous plants.

# Biotech industry a goldmine

## Short-term and long-term goals planned in exploiting Sarawak's potential in the business: Dr Chan

By Lucas Jalong Bato

**MIRI:** Deputy Chief Minister Tan Sri Datuk Amar Dr George Chan said there is a goldmine in the biotechnology industry in the State.

For the brave and adventurous investor, the monetary reward could be "limitless", he told a press conference after the official closing ceremony of the Sarawak Bio-Symposium at Curtin Sarawak Campus yesterday.

But in spite of its huge potential as a money spinner for Sarawak, the State government would not be over-ambitious he said, adding, "We will start small, go into simple things...find an anchor guy in the industry."

Dr Chan said there would be short-term and long-term goals in the pursuit of exploiting Sarawak's potential for biotechnology business.

According to him, among the short-term goals would be getting the planning right in identifying Sarawak's priority in the industry.

On the other hand, he said, the long-term goals would include offering biotechnology courses in order to get the basic skills needed to move into this area.

On the symposium, Dr Chan said he was extremely pleased to see a good mix of local and foreign experts participating.

"I am amazed at the enthusiasm shown by the participants during the symposium, the extraordinary goodwill shown and most are captivated by the challenges they saw, and I am confident that many will come back again to participate in the future," he said.

Dr Chan also said Miri Biovalley would be up in two or three months.

He said it would be like a Knowledge Village where the best brains in this field would get intellectual stimulation from each other as they rub shoulders and mix around with one another in a conducive environment.



ONE FOR THE ALBUM ... Dr Chan (front centre) with the participants of the bio-symposium.

The Chancellor of Curtin University of Technology, Dr Eric Tan who also spoke, said: "We shall see results in the near future, and of course we will experience a few hiccups along the way, but with the government's strong support and the mentality of the people which is very positive toward this field, I am confident of the success of biotechnology industry in the State."

Among those present at the press conference were vice chancellor Professor Lance Twomey, the pro vice chancellor Professor Graham Lodwick, Assistant Minister of Infrastructure Development and Communication Lee Kim Shin and acting CEO of Sarawak Biodiversity Centre Datin Eileen Yen Ee Lee.

## Documentation of herbs will propel modernisation of agro sector

**KUCHING:** The documentation of traditional knowledge of herbs and plants by the Sarawak Biodiversity Centre (SBC) is set to propel the development of biotechnology in the State's modern agriculture sector.

Second Planning and Resource Management Minister Datuk Awang Tengah Ali Hassan yesterday said that with the ongoing documentation, the medicinal and commercial properties of plants in Sarawak could all be identified.

He believed that Sarawak's rich biodiversity offered many natural properties that could be used in the pharmaceutical industry, nutraceuticals, cosmetics, herbal therapy, and even in bio-pesticides and commercial dyes.

"Once we know what certain plants offer, we can encourage our farmers to plant them maybe through contract farming as a way to facilitate the modernisation of the State's agriculture sector," he told reporters after visiting the centre at Padawan.

He also suggested that some farmers could be licensed to conduct further research on certain plants to further boost the development of biotechnology in the State.

SBC's project to document traditional knowledge was launched in 2001.

Awang Tengah said SBC aimed at documenting the traditional knowledge of all the ethnic groups in Sarawak.

"This is very important to ensure that the knowledge pass down from generation to generation will not be lost," he said.

He pointed out that SBC was this year targeting 18,000 extracts from



MEDICINAL PROPERTIES ... Awang Tengah goes through some information about the plants laid out before him with (from second left) Aziz, Yen and Marguerita Naming, who is the SBC research officer in-charge of traditional knowledge documentation.

250,000 species of plants for analysis.

He conceded that SBC presently had no limitations but he was confident that once its new laboratory was completed by September this year, the centre would be better able to realise its goals.

Awang Tengah was yesterday briefed on the plans for the new laboratory by SBC's acting CEO Datin Eileen Yen.

The new facility, which costs RM5 million, will be equipped with modern scientific equipment worth up

to RM7 million.

SBC had last year signed a memorandum of understanding with Nimura Genetic Solutions, a Japanese company, for the development of a microbial lab and training of scientists.

Awang Tengah also believed that with the new laboratory, SBC would be able to more effectively identify natural compounds in local plants in order to provide better focus in the development of health care products.

"Sarawak has all the potential and

the government hopes to strengthen SBC so that it can become the lead agency in the State if not the country, in the development of biotechnology," he said.

SBC presently has 32 personnel and by next year, it aims to have at least 50 more. Besides Nimura, the centres also working together with local higher learning institutions like Universiti Malaysia Sarawak.

Also present yesterday was State Secretary Datuk Amar Abdul Aziz Husain, who is also the chairman of the Sarawak Biodiversity Council.

The Star - 24th March 2005

## Biodiversity centre to carry out tests on animals

**KUCHING:** The Sarawak Biodiversity Centre will be able to carry out pre-clinical experiments on animals when its RM12mil laboratory project at Jalan Puncak Borneo near here is ready in September.

State Second Minister for Planning and Resource Management Datuk Awang Tengah Ali Hasan said five laboratories would be set up to carry out further research on extracts from a big number of plant species.

These are the biochemistry, molecular biology, plant tissue culture, microbiology and bio-informative laboratories which will be equipped with some RM7mil worth of equipment.

"The centre has researched

278 plant species and obtained some 8,000 extracts from them.

"Now we only know that these extracts contain bioactive compounds," he said after attending a briefing by the centre's chief executive officer Datin Eileen Yen yesterday.

Awang Tengah said that with the operation of the laboratories, these bioactive compounds would be further studied, characterised and isolated.

The centre has obtained some preliminary results proving that certain plant extracts have shown bioactivity in killing cancer cells.

He said the centre was expected to increase plant extracts to 18,000 by the end of the year.

Awang Tengah said the centre, which carried out the research activities in collaboration with a Japanese firm, Nimura Genetic Solutions, needed more scientists.

It would try to accommodate Sarawakian scientists now working abroad and are interested to return to serve the state, he added.

"The centre has made tremendous progress in the documentation of traditional knowledge from several communities, including Iban, Penan, Bisaya, Bidayuh, Kelabit and Kayan.

"This documentation is very important to pass down the knowledge to future generations, otherwise it will be lost," he said.

Metro - 24th March 2005

*Our forests, national parks, highlands and natural bio resources are still in a pristine state - Tan Sri Dr George Chan Hong Nam*

**News 5**

MONDAY 14 March 2005

# Tapping Bintangor's potential

BY STEPHEN THEN

**S**ARAWAK had to reach deep into its coffers and invest heavily in local and overseas research into the Bintangor tree to find a potential cure for AIDS, said Deputy Chief Minister Tan Sri Dr George Chan Hong Nam.

"The investments we put in is like making a long journey, and we are still in the process of getting there (finding the AIDS cure). This sort of heavy investment that we are pre-

pared to allocate is an indication of how serious we are in trying to find useful products from our natural resources.

"Sarawak wants to share its natural resources with others. We want our bio resources to be able to benefit mankind and we hope that by coming up with new types of medicine or herbs that can cure diseases or ailments, we can contribute towards the well being of society and the world.

"The competitive edge that Sarawak possesses is the huge

variety of natural resources with potential medicinal properties that are available in the state's forests.

"We used to be very protective of our assets because we were worried that they would be exploited by outsiders.

"However, we realise that we have to open ourselves to technology-oriented industries if we want to make full use of our natural resources to find new herbal products and medicine," he said when interviewed after opening an inter-

national biotechnology symposium in Miri recently.

The two-day symposium, attended by some 100 biotechnology experts from Europe, China, Australia and Malaysia, was organised by the state government, Curtin University of Technology Sarawak and the Sarawak Biodiversity Centre.

Dr Chan, who is State Industrial Development Minister and State Agriculture Modernisation Minister, said the state did not have the cap-

ital to invest too heavily into such biotech compared with the private sector.

"The real driver in these research projects would have to be from the private sector because they have the financial muscles and human capital in terms of skilled manpower and knowledge.

"Only the private sector players have the capital and manpower needed to venture deep into such high-risk industry. However, the risks they take may end up with

very high rewards."

Dr Chan said the biotech roadmap that Sarawak would be drawing up within the next few years would chart a proper course for the government in terms of research, manufacturing and marketing of new types of herbal products and pharmaceutical items that could be derived from plants found in forests here.

The government hopes to attract foreign scientists to use Curtin Sarawak as the base to kick-start their research.

## SBC wants all communities involved

By Harun Jau

KUCHING – Sarawak Biodiversity Centre (SBC) at Jalan Puncak Borneo here wants to get every community in the state to be involved in documenting traditional knowledge on biodiversity, its acting chief executive officer, Datin Eileen Yen Ee Lee said yesterday.

"We are very much involved in the traditional knowledge documentation and we are looking at the communities and so far, we have been working with the Bidayuh, the Ibans and the Malays. We are also working with the Selakaus, the Kelabits, the Bisayas, the Kedayans and the Orang Ulu groups," she told reporters in an interview after a visit by the President of Singapore S. R Nathan to SBC at Jalan Puncak Borneo here.

Yen said the documenting of traditional knowledge was an on-going process and SBC was in the process of making sure that every community would have its own team of experts.

"What SBC plans to do now is to build a centre of excellence or model village first so that the experts will be a catalyst for their own communities. Our plan is to involve every community in Sarawak," she said.

Yen added: "When we go to the longhouse, we always start with a consultative meeting.

We explain to the local people what we are going to do and what people are globally doing and how they can make contribution and be a stakeholder in the whole big picture of biotechnology.

"Once they agree to be a stakeholder,

we will do capacity building.

We will show them how plants are categorised scientifically and we collect living collections. We also help them to start their own herbal gardens," she said.

"These are for conservation purposes so that the plants won't get extinct and to provide raw materials for laboratories which require a lot of raw materials."

Because of limited researcher officers, SBC, Yen said, was looking for collaborative partners as well as outsourcing for people.

She said SBC had set up a library of plant extractions and had the capacity to do some screening on cancer at the moment.

"SBC will have five new laboratories soon. They are expected to be completed in September this year," Yen added.

## Singapore President and entourage visit SBC

KUCHING – Singapore President S R Nathan and his wife Urmila Nandey visited the Sarawak Biodiversity Centre (SBC) at Jalan Puncak Borneo, about 20km from the city, here yesterday.

The entourage were received on arrival by Deputy Chief Minister and Minister of Modernisation of Agriculture Tan Sri Datuk Amar Dr George Chan and SBC's acting chief executive officer Datin Eileen Yen Ee Lee.

They attended a briefing on SBC's facilities, functions, activities and programmes before being taken to visit the laboratories to see the various collections available.

Before departing, and to mark his visit to SBC, Nathan was invited to plant a wild durian tree within the compound.

Earlier, the Singapore President and his entourage also visited the Wildlife Rehabilitation Centre at Semenggoh where they spent some time witnessing the feeding of the orangutans.

They were briefed on the Semenggoh Wildlife Centre by Sarawak Forestry's Protected Areas & Biodiversity Conservation's general manager Wilfred Landong.

Also present were Federal Minister of



**FOR REMEMBRANCE ...** Nathan (right) receiving a souvenir from Dr. Chan during a visit to SBC. Looking on (from left) are Dr Rais and Eileen. PHOTOGRAPH: TH LU

Culture, Arts and Heritage Dato' Seri Utama Dr Rais Yatim, Public Health Minister Datuk Michael

Manyin, Assistant Minister of Agriculture (Research and Co-ordination) Dublin Unting and Assis-

tant Minister of Environment Dr Abang Haji Abdul Rauf Abang Haji Zen.

Sarawak Tribune - 15th June 2005

## SBC's five new R&D labs operational by year's end

By Peter Sibon

KUCHING - Works on the new building that will house five new research and development laboratories at the Sarawak Biodiversity Centre (SBC) is now 60 percent completed, said SBC's acting chief executive officer Datin Eileen Yen yesterday.

"Works are expected to be completed in September this year and the five new laboratories will be fully operational by the end of the year," she told Tribune at the sideline of the State Legislative Assembly Sitting here.

She was optimistic that with the additional number of laboratories, SBC would be able to conduct pre-clinical test on animals through its findings by the end of the year.

To achieve its objective, she said, SBC would collaborate with local and foreign scientists.

"In the long run, we are hoping to recruit more local scientists who are working overseas. The number of scientists and research officers at SBC would be increased with the availability of job opportunities."

Yen disclosed that the number of SBC staff would be increased from 32 presently to 82 by the end of the year.

"We hope that with the procurement of new (scientific and technological) equipment, we will be able to achieve our objective and set out priorities right. The centre will be fully functioning by 2010 with a total strength of 190 staff."

On the achievement of SBC so far, Yen said she was happy that it had been able to collect some 8,000 extracts from over 200 species of flora and fauna.

"Even though it has limited fund, equipment and manpower, so far, it has done a very good job. And I have been informed that it will be able to collect some 18,000 extracts by the end of this year," he added.

Yen stressed that SBC's R&D programme is focused on making discoveries from biological resources that would lead to development of nutraceuticals, cosmeceuticals and herbal therapies for healthcare, pharmaceutical drugs and other products including essential oils, bio-pesticides and commercial dyes.

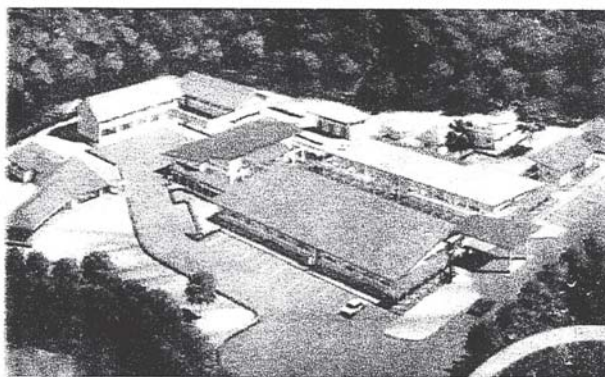
Among the activities carried out at SBC are: compilation of a

library of natural products from indigenous plants and microbes found in Sarawak, screening for anti-cancer, anti-fungal, anti-bacterial, anti-protease and anti-inflammatory compounds, immunomodulatory proteins and lipase activities and isolation and sequencing of genes from usual organisms that have medicinal and industrial applications.

She said the programme was supported by well-equipped and specialised laboratories: Extraction, Biochemistry, Microbiology, Modular Biology, Plant Tissue Culture, Analytical Chemistry and bioinformatics.

"SBC is continuously identifying and forming strategic collaborations with research institutions and biotech companies for discovery and development of products with commercial potential," she said.

The completion of the five laboratories at SBC by the end of the year was mentioned by the Yang di-Pertua Negeri Tun Datuk Patinggi Abang Haji Mohammad Salahuddin in his opening address at the current sitting on Monday.



NEARING COMPLETION ... Artist impression of SBC's R & D laboratories and facilities.

The Borneo Post - 16th June 2005

## SBC has about 9,000 plant extracts

THE State Legislative Assembly was told that the Sarawak Biodiversity Centre (SBC) has built up a collection of about 9,000 plant extracts in its Natural Product Library.

Second Minister of Planning and Resource Management Datuk Awang Tengah Ali Hassan said the Bioprospecting Programme at SBC started 16 months ago when the first two laboratories were commissioned in November 2003.

"These two laboratories are equipped to carry out extraction of plant samples and early stage screening of bioactive compounds," he said. He was replying to Vincent Goh (SUPP-Pelawan) who wanted to know the SBC's latest development. He said extracts were made from over 600 plant species collected by the local communities who participated in SBC's Traditional Knowledge Documentation Programme.

It was participated by the Bidayuh community at Kampung Kiding, Kampung Semadang and Kawasan Serin, the Penan community at Batu Bungan and Long Iman in Mulu, the Iban community at Rumah Lulut in Kapit, the Malay community at Kampung Moyan Laut in Asajaya, the Kelabit community in Pa'Ukat and Pa'Lungan, the Lun Bawang at Long Telingan and Long Semado and the Kayan community at Long Bedian.

Awang Tengah said the SBC had conducted consultative meetings with the community leaders of the following communities who were expected to participate in contributing their useful plants to SBC Bioprospecting Programme within the next few months.

They are the Bisaya in Limbang, the Melanau from Belawai to Balingian, the Kayan-Kenyah in Sungai Asap and the Iban in Selangau and Betong areas.

"The facilities currently available at SBC are only sufficient for research officers to conduct preliminary screenings for potential anti-cancer compounds from the plants contributed by the local communities," said Awang Tengah.

Currently five new laboratories are being built at the centre which are scheduled for completion in September. When ready, he said, these laboratories would enhance SBC's capabilities in the chemical analysis of plants for the development of various therapies, in microbial prospecting for potential antibiotics and industrial enzymes, in DNA sequencing of organisms, in plant tissue culture and bioinformatics.

"We need to build up a critical mass of scientific expertise, access to research funding, conducive research facilities and good partners for collaborative research to jump start our biotech initiative," said Awang Tengah.

## SBC and foundation to carry out cancer research

**KUCHING:** The Sarawak Biodiversity Centre (SBC) has signed a memorandum of agreement (MOA) with the Cancer Research Initiatives Foundation (CARIF) to carry out research activities related to plant compounds that have photodynamic properties.

The research, known as 'Screening of Sarawak's biological Resources for Photodynamic Properties', will include identifying, characterising and developing these photodynamic compounds from plants for Photodynamic therapy (PDT) used in cancer treatment.

Under the collaboration, SBC and

CARIF expect to uncover compounds that are more potent and have fewer side effects, using a biological screen or assay. The goal is to isolate pure amounts of these compounds for further laboratory testing including solving the compounds' chemical and molecular structure.

The signatory of the MOA for SBC was its chairman, Datuk Amar Abdul Aziz Husain, who is also the State Secretary, while CARIF was represented by Abdul Hamid Ibrahim, who is a member of its Board of Trustees.

The signing ceremony, which took place at SBC, was witnessed by State Attorney

General and Member of the Sarawak Biodiversity Council, Datuk Fong Joo Chung, and CARIF chief executive officer Datuk Syed Tamin Ansari Syed Mohamad.

Also present were Sarawak Biodiversity Council deputy chairman Dato Wan Alwi Dato Seri Wan Hashim and council members Datu Ahmad Tarmizi Sulaiman, Datu Sepuan Anu, Datu Wilson Baya Dañdot, Dato Cheong Ek Choon and Chong Ted Tsiung, and SBC acting CEO Datin Eileen Yen.

• See Page 6, Col. 2

• From Page 1

## Treatment to specifically target tumour cells

PDT is a relatively new cancer treatment that uses the combined effects of light and light-activated toxic drugs (photosensitisers) to specifically target tumour cells.

Unlike conventional drugs, photosensitisers accumulate in malignant tissue in greater amounts than in normal tissue.

When the tumour is irradiated by light, the photosensitisers initiate a series of reactions that lead to the death of tumour cells without damaging surrounding tissue.

CARIF, located at the Subang Jaya Medical Centre in Selangor was officially launched by the former Prime Minister Tun Dr Mahathir Mohamad in October 2002.

CARIF conducts research in three broad areas: the identification of

molecular 'signatures' of cancer cells, characterisation of genetic risk factors in inherited predisposition to cancers, and development of novel cancer therapies derived from local flora.

Meanwhile, SBC's R&D programme focuses on compiling a unique library of natural extracts from indigenous plants, particularly those used by the local communities as traditional remedies for ailments and diseases.

SBC currently has two laboratories — an extraction laboratory and biochemistry laboratory.

It will soon extend its R&D capabilities with the completion of five new laboratories — microbiology, molecular biology, plant tissue culture, analytical chemistry and bioinformatics — at

the end of this year.

Besides carrying out scientific research on the State's indigenous biodiversity, SBC also facilitates the documentation of traditional knowledge among the indigenous communities on the management and utilisation of biodiversity.

It carries out propagation of Sarawak's indigenous plants for conservation and appreciation, maintains biodiversity related database and conducts biodiversity-biotechnology awareness and appreciation programmes.

It also regulates biodiversity related research with commercial potential in the State through the Research Permit System.

SBC also networks with organisations with similar interests in carrying out its programmes.

The Borneo Post - 5th October 2005



SIGNED .... Aziz (2nd left) exchanging the memorandum with Abdul Hamid while (from left) Fong, Syed Tamin and Eileen Yen look on.

SBC-carif ink MOA to screen for photodynamic compounds

KUCHING - The Sarawak Biodiversity Centre (SBC) has signed a memorandum of agreement (MOA) with the Cancer Research Initiatives Foundation (CARIF) to carry out research activities related to plant compounds that have photodynamic properties. The research, known as 'Screening of Sarawak biological Resources for Photodynamic Properties' will include identify-

ing, characterizing and developing these photodynamic compounds from plants for Photodynamic therapy (PDT) used in cancer treatment. Signing on behalf of SBC was its Chairman, Datuk Amar Haji Abdul Aziz Haji Husain,

while representing CARIF was member of its Board of Trustees, Abdul Hamid Ibrahim.

The signing which took place at SBC was witnessed by State Attorney General and Member of the Sarawak Biodiversity Council, Datuk Fong Joo Chung and CEO of CARIF, Datuk Syed Tamin Ansari Syed Mohamad.

Also present were Sarawak Biodiversity Council Deputy Chairman Dato Wan Alwi Dato Seri Wan Hashim and Council Members Dato Ahmad Tarmizi Haji Sulaiman, Dato Haji Sepuan Anu, Dato Wilson Baya Dandot, Dato Cheong Ek Choon and Chong Ted Tsung.

PDT is a relatively new cancer treatment that uses the combined effects of light and light-activated toxic drugs (photosensitisers) to specifically target tumour cells. Unlike conventional drugs, photosensitisers accumulate in malignant tissue in greater amounts than in normal tissue. When the tumour is irradiated by light, the photosensitisers initiate a series of reactions that lead to the death of tumour cells without damaging surrounding tissue.

Under the collaboration, SBC and CARIF expect to uncover compounds that are more potent and have fewer side effects, using a biological screen or assay. The goal is to isolate pure amounts of these compounds for further laboratory testing including solving the compounds' chemical and molecular structure.

CARIF, located at the Subang Jaya Medical Centre in Selangor was officially launched by the former Prime Minister, Tun Dr Mahathir bin Mohamad in October 2002. CARIF conducts research in three broad areas: the identification of molecular signatures of cancer cells, characterisation of genetic risk factors in inherited predisposition to cancers, and development of novel cancer therapies derived from local flora.

Meanwhile, SBC R&D programme focuses on compiling a unique library of natural extracts from indigenous plants, particularly those used by the local communities as traditional remedies for ailments and diseases. SBC currently has two laboratories - an extraction laboratory and biochemistry laboratory.

It will soon extend its R&D capabilities with the completion of five new laboratories in microbiology, molecular biology, plant tissue culture, analytical chemistry and bioinformatics - at the end of this year.

Besides carrying out scientific research on the State's indigenous biodiversity, SBC also facilitates the documentation of Traditional Knowledge among the indigenous communities on the management and utilization of biodiversity, carries out propagation of Sarawak's indigenous plants for conservation and appreciation, maintains biodiversity related database, conducts biodiversity-biotechnology awareness and appreciation programmes, and regulates biodiversity related research with commercial potential in the State through the Research Permit System. SBC also networks with organizations with similar interests in carrying out its programmes.

Sarawak Tribune - 30th November 2005

# EU Parliamentarians visit Biodiversity Centre

THE delegation of European Parliamentarians who were in Kuching for a two-day visit to Sarawak dropped in on for a brisk-walk tour of the Sarawak Biodiversity Centre at Semengoh. At the Centre, the European policy makers were met by SBC Acting CEO, Datin Eileen Yen who brought them on a guided tour of the centre's Traditional Knowledge Documentation Programme and Research & Development activities.

The parliamentarians had the opportunity to observe the preparation of useful Sarawak indigenous plants for extraction of useful compounds. They were also given a demonstration of the extraction and screening processes in SBC's Sample Extract and Biochemistry Laboratories.

The delegation was also the first group of visitors to

the centre since the completion of the construction of SBC's new R&D laboratories and facilities. Construction works to build five new laboratories (Microbiology, Molecular Biology, Plant Tissue Culture, Analytical Chemistry and Bioinformatics), a herbal garden, lecture theatre and researchers chalets began early this year. The buildings are currently being fitted with necessary furnishings and equipment that will be used for the Centre's R&D programme on Sarawak's indigenous biodiversity.

His Excellency, Thierry Rommel, the Ambassador of European Union for Malaysia and Wilfred Landong, General Manager of the Sarawak Forestry Corporation's Protected Areas and Biodiversity Conservation Unit accompanied the delegation during their visit to the centre.



SBC Research Officer, Margarita Naming (left) shows dried parts of useful plants that were recently collected together with the Selako community of Kpg Pueh.



Datin Eileen Yen (left) explains the tedious work of taxonomic identification of plant species to the EU policy makers.

RIGHT: SBC Research Officer Michele Mejin explains the distillation process that is used to extract essential oils from indigenous plants.



ONE FOR THE ALBUM... Members of the EU Parliament Delegation take a minute to record their visit to SBC with Datin Eileen.

## Seminar on IP management

KUCHING - A seminar on Intellectual Property Management (IP) in Traditional Knowledge, Genetic Resources and Biotechnology to be held here from Dec 12-13 will be a platform for participants to discuss and address various issues related to the three topics.

Organised by the Sarawak Biodiversity Centre (SBC), the seminar will bring together the legal fraternity, policy makers, industries and indigenous communities to discuss scientific, legal and business aspects of genetics based research and also present efforts undertaken in Malaysia to integrate IP in the three areas mentioned.

According to a SBC's press release yesterday,

a total of 12 papers will be presented during the two-day seminar. Among the titles are The Interface between Intellectual Property and Traditional Knowledge, Trade Secrets: A Route to Success and Survival in a Biotech Enterprise, Presents efforts in Malaysia to Integrate Intellectual Property Rights in Traditional Knowledge and Genetic Resources and Biotechnology - The Academics.

The seminar is still open for registration and those interested can contact SBC for further information at 082-610610 or via email at biosar@sbcc.org.my before Dec 8. A participation fee of RM30 will be charged for each participant. - Bernama

## Two-day seminar on intellectual property management Dec 12

KUCHING: A seminar on intellectual property (IP) management of traditional knowledge, genetic resources and biotechnology will be held here on Dec 12 and 13.

The two-day seminar is to enable the legal fraternity, policy makers, industries and indigenous communities to be sensitised on such issues and address topics such as the concerns in IP, traditional knowledge and bio-prospecting.

It is also aimed at integrating scientific, legal and business aspects in genetic based research as well as discussions on present efforts undertaken in Malaysia to integrate IP in the three areas mentioned. The seminar will present a session where invited speakers and participants can share and describe their experiences in IP management.

It is organised by the Sarawak Biodiversity Centre (SBC) in collaboration with the Intellectual Property Training Centre of the Institute of Public Administration Malaysia (IPTC: INTAN) and Intellectual Property Corporation of Malaysia Inc (MyIPO).

The seminar will also feature notable speakers from Shearn Deloamore & Co, Allen & Gledhill, Advanz Fidelis, Bustaman & Co, SIRIM, International Plant Genetic Resources Institute, MyIPO, UiTM, M'sian Biotech Corp, Rumbia Biotech Sdn Bhd and officers from SBC and community members who facilitate the documentation of traditional knowledge in Sarawak.

State Secretary and chairman of the Sarawak Biodiversity Council Datuk Amar Abdul Aziz Husain is expected to speak at the closing of the seminar. A fee of RM30 will be charged for each participant.

For further information, call 082-610610, or fax to 082-611535, or email at biosar@sbcc.org.my before 4 pm today.

## Five new SBC labs completed

FIVE new laboratories at the Sarawak Biodiversity Centre (SBC) have been completed.

Second Minister of Planning and Resource Management Datuk Haji Awang Tengah Ali Hassan said the construction of the laboratories started in January this year.

"These new facilities will enable SBC to enhance its R & D activities in the field of molecular biology, microbiology and analytical chemistry," he said.

"In addition, we will have related facilities to support the research such as the plant tissue culture and bio-informatics lab," he said.

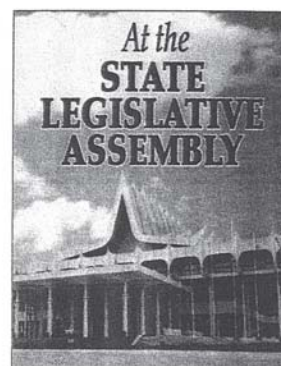
Awang Tengah also revealed that since the commissioning of the Extraction and Biochemistry laboratories at the SBS in November 2003, the State had made significant progress in the quest.

"We have been able to jumpstart R & D activities to tap on the State's rich natural resources that are still unmatched in their genetic and chemical diversity.

"Furthermore, SBC has set up a natural products library of extracts derived from medicinal plants," said Awang Tengah, adding that the local traditional communities had contributed the plants.

To date, SBC are working with 25 villages from 12 ethnic communities and has collected over a thousand types of useful plants belonging to 73 families of plants.

About 150 species have been screened for potential anti-cancer compounds.



**REPORTERS: Peter Sibon, Samuel Aubrey, Rozana Rony, Azam Zawawie, Harun Jau, Bede Hong**

**PHOTOGRAPHERS: RAMIDI SUBARI AND JOHN CHAN**

Awang Tengah also said that SBC had signed two Memorandum of Agreement for collaborative research, with Nimura Genetic Solutions (NGS) in October 2004 and with the Cancer Research Initiative Foundation (CARIF) in October 2005.

"The collaboration between CARIF and SBC will train our research officers, in photo-dynamic therapy for the treatment of cancer," he said.

"However, it will take several years before we can determine whether we will be successful in discovering any new or novel compounds from our bio-diversity for use in medicines, food and other bio-tech related industries," he added.

The Borneo Post - 28th December 2005

## Lihan wants Penan to get involved in herbal industry

**MIRI:** Telang Usan assemblyman Lihan Jok wants to see the semi-nomadic Penans in his constituency being actively involved in the lucrative herbal industry.

His constituency of Telang Usan is probably rich in herbs and medicinal plants due to the presence of vast thick jungles. These plants may prove beneficial to man if proper research is done.

Lihan observed that the Penans who spend their life roaming the jungle might hold the secret to the properties of many traditional herbs and plants.

"They regularly use these herbs and plants to treat all kinds of sicknesses including poisonous snake bites, and as poisons for their blowpipes. Therefore, they are the right people to be consulted for knowledge of these herbs and plants from the jungle," Lihan said during his visit to Long Iman, a Penan settlement near Mulu.

He was accompanied by political secretary to the Chief Minister Robert Laing Anyie, Long Iman headman Wan Lawing and Long Terawan headman Edmund Abang.

A three-hectare area of natural habitat at Long Iman has been earmarked for the planting of herbs. Lihan was satisfied with the progress of the project carried out by the Sarawak Biodiversity Centre (SBC). SBC had built an office and an exhibition hall for the project.

"I will talk with the Centre to invite more scientists to conduct research and study, especially relating to our rich biodiversity," assured Lihan.

"This is a golden opportunity to contribute something beneficial to mankind from our jungles, which may hold many remedies to today's sicknesses and diseases that result from modern living. It is high time we exploit this great potential to enrich everyone, especially the local community," he added.

During his visit to Long Iman, which has a population of some 300, Lihan promised to provide them with cement for the construction of monsoon drains.



**HERBAL BUSINESS:** Lihan (in dark shirt and cap) with several Penans at the building for the herb project.

Sarawak Tribune -  
30th December 2005



**SBC COUNCIL (2004-2006)** ... (Standing left to right) Mr Chong Ted Tsiung, Datu Wan Alwi Bin datu Sri Wau Hashim, Datu Ahmad Tarmizi Bin haji Subliman Datuk Fong Joo Chung, Datuk Amar haji Abdul Aziz Bin Haji Husain, Datu Wilson Baya Dandot Datu Cheong Ek Choon, Datin Eileen Yen Ei Lee, Datu haji Mohd Sepuan

*SBC News* 2006

The Borneo Post - 17th January 2006



INTERESTING RESEARCH: SBC senior research officer Dr Yeo Tiong Chia (right) briefing (from left) Muhyiddin, Dr Chan, Fatimah, Jerip and Harden on bacteria isolation.

### Federal govt keen to work with biodiversity centre

**KUCHING:** The Federal government is interested in supporting the Sarawak Biodiversity Centre (SBC) through collaborative efforts between its agencies and institutions and the centre.

Agriculture and Agro-Based Industries Minister Tan Sri Muhyiddin Yassin said the agencies likely to be involved were Malaysian Agriculture and Research Development Institute (MARDI) and Universiti Putra Malaysia (UPM).

"MARDI and UPM have been listed as prospective centres for the country's agri-bio-technology by the Prime Minister (Datuk Seri Abdullah Ahmad Badawi)," he told reporters during a visit to SBC here yesterday.

By being in touch with one another, both federal and state governments could also ensure that there would be no overlapping of research works, he said.

He said the Prime Minister would be holding a meeting of the National Agri-Biotechnology Council soon on the country's biotechnology and suggested the state government highlight the works of SBC at the meeting.

He hoped that through collaborative efforts, SBC would become a world class centre in biotechnology in the near future.

Muhyiddin commended SBC for its efforts especially in trying to record and preserve traditional knowledge of the people in Sarawak.

He said that community leaders should treat the centre as their own and as a place where they could preserve their communities' knowledge.

It was crucial that this heritage did not disappear with time or it would be a great loss to the younger generation, he pointed out.

Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan, who was also present, highlighted the need for intellectual property rights to safeguard traditional knowledge or research findings at the centre.

He said currently the centre was setting up a library for its findings and was confident that it would be ready soon.

Dr Chan also expressed the need to get local scientists involved in SBC's activities as they could help the centre achieve its goals.

Meanwhile, Muhyiddin extended his condolences to Chief Minister Pehin Sri Abdul Taib Mahmud over his mother's recent demise and wished him a fast recovery.

Also present were Agriculture and Agro-Based Industries Ministry Parliamentary Secretary Datuk Rohani Karim, Assistant Minister of Agriculture Datin Fatimah Abdullah, Assistant Minister of Modernisation of Agriculture Datuk Peter Nyarok, Land Development Assistant Minister Francis Harden and Bengoh assemblyman Dr Jerip Susil.

Sarawak Tribune - 17th January 2006

## Muhyiddin: SBC operating in right direction

By Harun Jau

**KUCHING** - Minister of Agriculture and Agro-based Industries Tan Sri Dato' Haji Muhyiddin bin Mohd Yassin, who was apparently impressed with what he saw at the Sarawak Biodiversity Centre (SBC) at Jalan Puncak Borneo here, yesterday congratulated the State Government for taking the bold step in setting up the centre, which is in line with the national policy on bio-technology.

"I welcome all the efforts taken by SBC, particularly in the collection of information on traditional knowledge among the various

communities in the state, in regards to traditional herbal medicine based on its flora and fauna.

"Malaysia is among a few countries in the world which is very rich in biodiversity and the steps taken by the Sarawak Government are most appropriate because we want to ensure that the knowledge of traditional medicine will not get extinct," Muhyiddin said at a press conference after a visit to the SBC yesterday.

Muhyiddin said with the development in the field of modern medicine and agro bio-technology sector, the steps taken by

Sarawak were indeed vital in helping to ensure that our rich national heritage could be translated in forms that would benefit the country and its people.

Muhyiddin also said that several important issues had been discussed between the State government, through SBC, and the Federal government through a number of its agencies such as MARDI and several universities such as Universiti Putra Malaysia.

Both these two institutions, he said, had been announced by the Prime Minister as the national agro-biotechnology centre of excellence.

"And since the Prime Minister would be calling for a meeting of the National Biotechnology Council soon, Muhyiddin suggested that the Sarawak Government should forward its request on how the SBC could be assisted in the biotechnology field.

"The Ministry of Science Technology and Innovation is definitely very much interested in what SBC is doing.

"It is encouraging to note that the response from local communities towards the efforts of SBC is very positive," he said.

CONTINUE ON PAGE 2

FROM PAGE 1

## Muhyiddin impressed with what SBC is doing

Among those accompanying Muhyiddin during the visit were Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan, Parliamentary Secretary to the Ministry of Agriculture and Agro-based Industries Datuk Hajah Rohani Binte Abdul Karim, Assistant Minister of Agriculture

(Home Economics and Training) Datin Hajah Fatimah Abdullah, Assistant Minister of Agriculture (Farmers Organisation and Co-operative) Datuk Peter Nyarok and Assistant Minister of Land Development Francis Harden Hollis and Bengoh assemblyman Dr. Jerip Susil.



INTERESTING STUFF THIS ONE - Muhyiddin (2nd right) with Dr Chan (2nd left), Dr Jerip (right) and Hajah Rohani (left) having a close-up look at one of the herbal plants during a visit to the SBC yesterday.

# Move to curb overlap in biotech research

**KUCHING:** The Agriculture and Agro-based Industries Ministry will look into the possibility of formalising collaborative agreements between agencies involved in biotechnology research and development to prevent an overlapping of roles.

These agencies include Mardi and Universiti Putra Malaysia (UPM), which have been declared centres of excellence for agricultural biotechnology, as well as the Sarawak Biodiversity Centre (SBC).

"My ministry has the responsibility of ensuring there is no overlap in terms of roles and the types of work undertaken by these agencies.

## STARBITES Biotech research pacts

**What?** Formalising collaborative agreements between agencies

**Why?** To ensure there is no overlap in roles of the agencies

"Perhaps, we will have to come up with formal agreements of co-operation to determine the roles and areas of responsibility for each agency and how they can work together on issues such as intellectual property rights," Agriculture

and Agro-based Industries Minister Tan Sri Muhyiddin Yassin said.

He complimented SBC on its work in documenting the traditional knowledge of local communities on medicinal uses of plants and animal products.

"This is important firstly to ensure that such knowledge does not become lost and secondly so that our wealth of biodiversity can be translated into forms that will benefit our people and our country," he said.

The centre is currently documenting traditional knowledge of 12 ethnic communities in over 20 villages throughout the state.

Muhyiddin also suggested that SBC could attend the forthcoming National Biotechnology Council meeting to present its work to the Federal Government so that specific assistance could be given to the centre.

"We are willing to assist SBC so that it can help develop the field of biotechnology in our country," he added.

Muhyiddin was visiting the centre in Jalan Puncak Borneo here on the final day of his three-day working trip to Sarawak.

He was briefed on the centre's work by senior research officer Dr Yeo Tiong Chia.

# Pahang impressed with biodiversity centre's R&D programme

**KUCHING:** The Sarawak Biodiversity Centre (SBC) in Padawan has found admirers from the Pahang government for its focused initiative in a biotechnology-based research on the State's biodiversity.

Pahang's Information and Communications Executive Committee chairman Datuk Mohd Sharif Shamsudin is impressed with SBC's research and development programme on the development of bioactive compounds from the State's indigenous biodiversity.

This, he said in a press statement from SBC yesterday, was because it did not replicate other R&D work on biodiversity that had been carried out by other states or institutions.

Sharif explained that such non-replication would enhance R&D efforts in the country where different states and institutions would be able to concentrate on their niche areas instead of spending time and resources on research work that had already been undertaken by others.

He also emphasised the need for commitment and drive from state leaders and noted that Sarawak was not lacking in this area as it had strong backing and understanding from its leaders for the R&D initiatives carried out by SBC.

Sharif also expressed his hope that Pahang and Sarawak would one day be able to work together in areas of R&D by complementing one another's efforts through their niche areas and sharing of information.

Meanwhile, Pahang Deputy State Secretary Datuk Sharifah Fatimah Syed Omar was impressed with the

centre's prudent financial management and expressed confidence that the Centre would do well in its endeavor.

Sharifah was particularly interested in SBC's Traditional Knowledge (TK) Documentation Programme.

Sharif and Sharifah were in a delegation of 24 officers from the Pahang State Secretary's Offices on a visit to SBC Tuesday. The delegation was given a briefing on the centre's functions and activities by its acting chief executive officer Datin Eileen Yen.

Under the programme, SBC conducts awareness and capacity building activities with the indigenous communities in Sarawak to enable them to carry out documentation of their traditional knowledge on the utilisation and management of biological resources, particularly those related to useful plants.

She noted that the centre's staff had put in an enormous amount of dedication in reaching out to communities in the remote areas of Sarawak in facilitating their documentation of TK.

The delegation was also taken on a tour of SBC's new R&D building, which comprises five laboratories, and their supporting infrastructure which was completed in December 2005.

The centre's extraction and biochemistry laboratories were set up in November 2003.

SBC's R&D Programme is focused on discoveries from the State's biological resources that would lead to the development of pharmaceuticals, nutraceuticals, cosmeceuticals, essential oils and other products such as commercial dyes and bio-pesticides.

# Biodiversity Centre to hold talks

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will hold two free events featuring renowned author Dr Ronald Orenstein on consecutive days starting on May 23.

The first event, a briefing on the 'Convention on International Trade in Wild Species (CITES) of Fauna and Flora' will take place at SBC Lecture Theatre in Semengoh at 2.30 pm on May 23.

The briefing offers a comprehensive look at the history and operational structure of CITES, and an overview of several major issues CITES has addressed in recent years.

The second event will be a public lecture entitled 'Survivors in Armor (A Turtle Tale)' at Azam's function room at Jalan Crookshank at 7.30 pm on the following day.

For this public lecture, Dr Orenstein will give an illustrated overview regarding the diversity of turtles, and the threats turtles faced. Dr Orenstein is an author of six books including 'New Animal Discoveries' and 'Survivors in Armor' with this latest book on songbirds of the world now being edited for publication.

For details, call Asha Kaushal or Hamim Marzuki at 082-616610, or email biosar@sbc.org.my.

# Public talks by famed zoologist

**KUCHING:** A well-known author and zoologist Dr Ronald Orenstein will conduct a briefing session and give a public lecture here on May 23 and 24.

Organised by Sarawak Biodiversity Centre (SBC), the briefing session will be held at the SBC's Lecture Centre at Semengoh at 2.30pm on May 23.

The public lecture on the other hand will be held at the function room of Angkatan Zaman Mansang (AZAM) at Jalan Crookshank here at 7.30pm on May 24.

The public lecture, jointly organised by SBC, Malaysian Nature Society (MNS Kuching) and

AZAM, is entitled "Survivors in Armor (A Turtle Tale)".

Dr Orenstein who holds Ph.D in Zoology from University of Michigan and LL.B from University of Toronto is also the author of six books on science and nature. His works include "New Animal Discoveries" and "Survivors in Armor".

Those interested in attending the briefing and public lecture can contact the Sarawak Biodiversity Centre (Asha Kaushal or Hamim Marzuki) at 082-616610 or email biosar@sbc.org.my for more information.

Eastern Times - 12th June 2006

### Talk on new animal discoveries June 16

KUCHING: The Sarawak Biodiversity Centre (SBC) and the State Library will jointly hold a public talk on 'New Animal Discoveries' by Dr Ronald Orenstein at the State Library Auditorium at 3 pm on June 16.

Dr Orenstein, who holds a PhD in Zoology and LLB and has authored several books on science and nature including 'New Animal Discoveries' and 'Survivors in Armour', will share recent discoveries of animal species and the importance of cataloguing new discoveries in the scientific process.

Dr Orenstein, who recently delivered talks on the Convention on International Trade in Wild Species of Flora and Fauna (CITES) and on turtles in Kuching, is a recognised expert on CITES.

He is also the Project Director for the International Wildlife Coalition.

Those interested to attend his talk can contact Asha Kaushal or Hamim Marzuki at SBC (082-610610). - ET

Eastern Times - 1st August 2006



### Screening for anti cancer compound

THE Sarawak Biodiversity Centre (SBC) laboratories under the screening of anti cancer compound have carried out a total of 9,000 bioassays on 224 plant samples.

This was disclosed by Second Minister of Planning and Resource Management Datuk Haji Awang Tengah Ali Hassan.

"Out of the total, 79 plants have shown significant activity in anti cancer screen," he said in his winding-up speech at the State Assembly sitting here yesterday.

He said these plants would be checked further for known phytochemicals and previous publications on anti cancer activity.

"We should bear in mind that the prospect will take more than five years to establish the research work itself and the development of the product itself will take even longer," he said.

However, with the new five laboratories and the research capabilities the State were in a position to collaborate with established biotech and pharmaceutical companies who are willing to invest in research and development of products, Tengah said.

"SBC is also collaborating with Nimura Genetic Solutions on the bioprospection of microbes for novel antibiotics and enzymes," he said.

On July 23 this year, SBC received a delegation from Novartis, a world leader in the pharmaceutical industry on drug discovery and development and also from the Malaysia Biotech Corporation (MBC).

"The visit was intended to explore possibilities of collaboration and research development," he said.

Earlier, Tengah said that SBC on November 2003 had approved a proof of concept laboratory for Natural Product Research, its main role was to set up a Natural Product Library from useful

plants documented through SBC Traditional Knowledge (TK) Documentation Programme.

"As of July this year a total of 12 communities from 27 locations have participated in SBC Traditional Knowledge (TK) Documentation Programme and this year SBC will continue to facilitate the program and providing capacity building within the community" Tengah told the August House.

To date, SBC has collected 1,579 plants samples, of these, 117 plant samples have been identified to species level, the centre has also increased its efforts in propagation of useful plants to 2,000 polythene bags a month.

"These plants are used as raw materials for the centre Research and Development (R&D) programme and also to promote ex-situ conservation, appreciation and awareness toward the state natural resources," he said.

Since 2005, a total of five new laboratories have been set up to enhance research on biological resources, with the additional five laboratories SBC is now able to train more Sarawakian in the field of biotechnology, chemistry and microbiology, Tengah said.

"The centre has to date train 25 research officers from May to July 2006, the centre laboratories also took in 11 industrial trainees from institutions such as University Putra Malaysia (UPM), University Teknologi Malaysia (UTM), Universiti Kebangsaan Malaysia (UKM), and Uhimas," he said, adding that the centre had made progress in increasing the number of physical extracts in the library to 25,000 from 1,600 plants samples.

The centre has also isolated bioactive compound from plants that were identified to be potentially interesting from screening in the laboratories. - ET

Eastern Times - 28th June 2006

## Plenty of living species to be discovered

KUCHING: THE younger generation needs to realise that there is still plenty of living species for them to discover when they grow up.

At a talk on 'New Animal Discoveries' organised jointly by the Sarawak Biodiversity Centre and the State Library in Kuching, Dr Ronald Orenstein encouraged school students to take up careers in the field of biological science.

According to Dr Orenstein, contrary to what many believe - that much of the world's wildlife is on the brink of extinction - there are still many species out there that scientists do not know about, including miniscule microbes and elusive marine animals.

Dr Orenstein, who has authored several books, including *New Animal Discoveries* and *Survivors in Armour*, holds a Ph.D. in Zoology from the University of Michigan and an LL.B. from the University of Toronto. He is also a recognised expert on the Convention on International Trade in Wild Species of Fauna and Flora (CITES) and an avid nature photographer.

He also discussed issues relating to animal endangerment and habitat survival - factors that make discovery

of new species even more important.

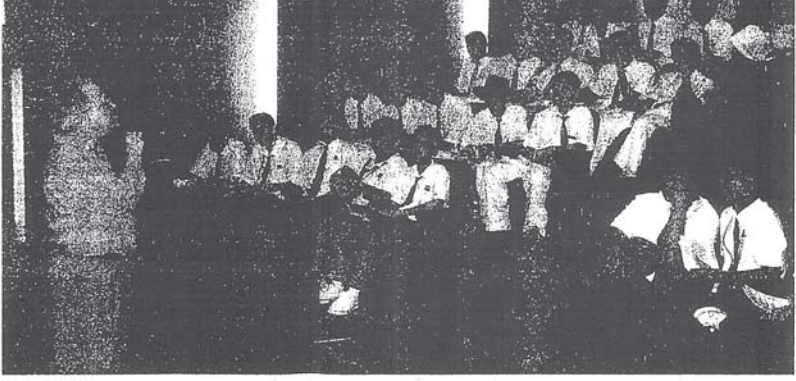
He pointed out that Sarawak was extremely wealthy with many species and had a lot more species to be discovered. He cited the *Begonia laliana* for example, a new species of begonia flower discovered during an intensive 40-month inventory of the Bau Limestones carried out by SBC in 2004.

Dr Orenstein later presented two copies of his book *New Animal Discoveries* to the State Library.

Meanwhile, 160 people, comprising students from seven secondary schools in Kuching, officers from the Sarawak Forestry Corporation, members of the Wildlife Conservation Society and the Malaysian Nature Society, and members of the press attended the talk. - ET



NEW DISCOVERY ... Dr Orenstein and the CEO of Sarawak Biodiversity Centre, Datin Eileen Yen, talking to students from SMC St Joseph, Kuching.



WELL ATTENDED ... Dr Orenstein delivering his talk on 'New Animal Discoveries'.



LET'S SEE: Awang Tengah (centre) looks on with interest at a document as Assistant Minister Naroden Majais (left) and Saribas assemblyman Dr Wahbi Junaidi look on.

## 79 local plants have anti-cancer properties

SEVENTY-NINE out of the 224 local plants tested by the Sarawak Biodiversity Centre (SBC) have shown significant activity in anti-cancer screen.

SBC has also made progress in increasing the number of physical extracts in the library to 25,000 from 1,600 plant samples.

"More importantly, SBC has isolated bioactive compounds from plants that have identified to be potentially interesting from the screening in the laboratory," said Second Planning and Resource Management Minister Datuk Awang Tengah Ali Hassan in his winding-up speech yesterday.

He added that under the screening for anti-cancer compounds, SBC's laboratories had carried out 9,000 bioassays on 224 plant samples.

Awang Tengah said these plants would be checked for known phytochemicals, and previous publications on anti-cancer activity.

"We should all bear in mind that the prospect will take more than five years to establish while the research work and the development of the products itself will take much longer," he said.

Awang Tengah believed that with the five new laboratories and research capabilities, SBC was in a position to collaborate with

established biotech and pharmaceutical companies willing to invest in research and development of products.

Awang Tengah said SBC was collaborating with Cancer Research Initiatives Foundation (CARIF) on photodynamic therapy of cancer, and with Nimura Genetic Solutions on the bioprospecting of microbes for novel antibiotics and enzymes.

On July 23, SBC also received a delegation from Novartis, a world leader in the pharmaceutical industry on drug discovery and development, and the Malaysian Biotech Corporation (MBC).

## CM to open new research, development laboratories

**KUCHING:** The Sarawak Biodiversity Centre's (SBC) new research and development laboratories will be officially opened by Chief Minister Pehin Sri Abdul Taib Mahmud tomorrow, which is also its Open Day.

The new buildings comprise laboratories for molecular biology, microbiology, plant tissue culture, analytical chemistry and bioinformatics. They started operations in March this year.

SBC, located at KM20 Jalan Borneo Heights in Semengoh, is holding the Open Day to give the public the opportunity to familiarise themselves with it, including its research and development activities.

At 2.30 pm on the same afternoon, SBC will be hosting a public lecture by Uppsala University Sweden's head of Pharmacognosy, Dr Lars Olof Bjork, entitled, "Production of Essential Oils".

Essential oils are distilled oils extracted from plants that usually have a distinct aroma.

These aromatic substances produced by plants are made up of different chemical compounds such as alcohol, hydrocarbons, esters and ketones that occur naturally in these plants.

In the wild, the aroma that a plant produces attracts or repels insects and also acts as anti-bacterial agents. Today, essential oils produced from plants are used in the preparation of fragrances for soaps, perfumes and other products.

In order to get the best quality and quantity of essential oils, extraction procedure seems to be the key controlling step. Factors such as types of plants, chemical make-up of oil, and location of oil within the plant and extraction methods all need to be given serious thought before the extraction process.

Dr Bjork graduated with a Master of Science in chemical engineering, biochemistry and food chemistry from the Royal Institute of Technology, Stockholm.

In 1990, he obtained a doctorate in Pharmaceutical Sciences (Pharmacognosy) Uppsala University. Since then, he has held many appointments in Sweden and at international levels.

These include his appointment as the Swedish representative of the European Federation of Biotechnology, member of the Swedish Scientific Council for Biological Diversity and as a university lecturer in ethnobotany and pharmacognosy.

Dr Bjork also published many scientific papers on chemistry, pharmacognosy and recently, a paper entitled, "Access and Benefit Sharing and Intellectual Property Rights".

The public are invited to visit SBC during the open day.

Those interested in attending the public lecture are advised to call the centre at 082-610610 (Asha or Hamih) to reserve seats which are limited.

They can also email biosar@sbc.org.my.

The Borneo Post - 30th August 2006

# Brewing the right mixture

Sarawak has potential to develop its traditional medicine into an industry, says Chief Minister

By Rintos Mail

**KUCHING:** Sarawak is serious in transforming its unique and diverse biological resources into products that have potential commercial value, and to benefit mankind, said Chief Minister Pehin Sri Abdul Taib Mahmud.

Taib assures that funding would not be a problem as the State government is serious in its undertaking. He believed that the setting up of five research laboratories costing a total of RM5 million at the Sarawak Biodiversity Centre (SBC) will assist the State in gathering data on medicinal plants.

"The question is how fast and how far we can go after this. So it is very important that you get the right kind of people so that you can grow."

"You must find people who are enthusiastic about their job, people who have very wide knowledge and experience in research, and people who have good network with experts from other countries," he said at the official opening of the five new laboratories at Sarawak Biodiversity Centre (SBC) here yesterday.

He said the cooperation between foreign experts and the local community was crucial for the SBC to function effectively and become a potential research centre of medicinal plants in the region.

Taib believed that support from local and international research institutes were also needed for the SBC to become a storehouse of knowledge in the field.

So far, the SBC has succeeded in producing some 25,000 extracts from local flora resources, most of which were found in the State's highlands.

The SBC, since it was established in 2003, has identified a total of 200 tree species that have been used by locals for medicinal purposes.

Taib called on the Sarawak Biodiversity Centre (SBC) to get the right kind of people with suitable qualifications closely related to the same field to help the SBC on the



**THIS IS INTERESTING:** Taib (second right) takes a closer look at a product from the research works at SBC laboratory while Abdul Aziz and Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan look on.

right track to achieve its goals.

The Chief Minister said whoever headed SBC must be a person able to think and find the right kind of people to recruit.

The persons recruited must be able to work with experts in other countries like the United States, Australia, India and China which were among the leading players in the industry, he said.

"We must realise that our brain power is still limited and we are still too small to compete with other players, and it is my hope to see that the people we have at SBC are able to transform the organisation into a

centre of biodiversity research in the region," he added.

The Chief Minister admitted that going into research and development business was a big investment, and slow in terms of return.

Research works required a lot of time as it had to go through many processes including testing, and to see the end results it might take about 20 years, he said.

However, he believed that such an investment would bring handsome return in the long run given that the State was rich in flora and fauna.

Earlier, in a brief introduction,

SBC chairman Datuk Amar Abdul Aziz Husain said the new task entrusted on SBC following the amendment of the Sarawak Biodiversity Centre Ordinance in December 2003 required SBC to set up its own Research and Development laboratories to carry out scientific discovery work.

He said it took them almost 12 months to construct the buildings and related infrastructure, and another four months to equip the five laboratories.

All the five laboratories were fully equipped by last April. The whole project cost about RM5 million.

Abdul Aziz, who is also State Secretary, said the amendment of the Ordinance also enabled SBC to implement the Traditional Knowledge Documentation Project as one of their core functions.

Since the completion of the laboratories, he said they had conducted successful trial runs, and had trained a team of young research officers.

SBC, he said, had also initiated the documented project among 12 ethnic communities in 27 villages.

With the contribution of the villagers, the Ethnobotanic Garden is created at the centre.

Eastern Times - 30th August 2006

# 5 labs to gather medicinal plants

**KUCHING:** THE setting up of five research laboratories costing a total of RM5 million at the Sarawak Biodiversity Centre (SBC) will assist the State in gathering data on

flora-based medicinal plants, said Chief Minister Pehin Sri Haji Abdul Taib Mahmud.

He said that the use of flora-based traditional medicine was inherited through word-of-mouth from one generation to the other but the information had never been recorded.

"Similar to the Chinese and Indian communities, traditional medicine is widely used in modern medicine, and Sarawak which is rich in biodiversity has the potential to develop it into a medicinal industry," he said at the opening of the SBC's new laboratories here yesterday.

Taib said the use of traditional medicine by locals had caught the attention of local and foreign experts who were keen to prove that such

a method could be effective in curing chronic illnesses such as cancer.

He said the co-operation between these experts and the local community was crucial for the SBC to function effectively and become a potential research centre of flora-based medicinal plants in the region.

Taib also said that support from local and international research institutes was also needed for the SBC to become a storehouse of knowledge in the field.

So far, the SBC has succeeded in producing some 25,000 extracts from local flora resources, most of which were found in the State's highlands.

The SBC, since it was established in 2003, has identified a total of 200 tree species that have been used by locals for medicinal purposes. - Bernama



Dr Chan witnessing Laila planting the Nilam tree to mark her acceptance of the garden named after her.



Aziz delivering his speech at the function.

# Going commercial with bio resources

**KUCHING:** THE State Government is serious in transforming the State's unique and diverse biological resources into potential commercial products that will benefit mankind.

This was disclosed by Chief Minister Pehin Sri Haji Abdul Taib Mahmud at the opening of the Sarawak Biodiversity Centre (SBC)'s new laboratories here on Tuesday.

"The funding to get the right kind of people who are enthusiastic in their jobs, have a wide experience in research and good network with experts from other countries will not be a problem," Taib said.

The co-operation between foreign experts and the local community was crucial for SBC to function effectively and become a potential research centre of medicinal plants in the region, he said, adding that the RM5 million new laboratories at the SBC

here would assist the State in gathering data on medicinal plants.

He said whoever headed SBC must be able to think and find the right people to recruit and must be able to work with experts in other countries like the United States, Australia, India and China who were among the leading players in the industry.

SBC had succeeded in producing 25,000 extracts from local flora resources which were found in the State's highlands and identified 200 tree species for medicinal purposes, Taib said.

He added that going into research and development business was a big investment and slow in returns as it required a lot of research work, time, testing.

However, it would bring handsome return in a long run given that

Sarawak was rich in flora and fauna, he said.

Earlier, SBC Chairman Datuk Amar Abdul Aziz Husain said it took SBC almost 12 months to construct the five buildings and related infrastructure and another four months to equip them.

"Since the completion of the laboratories, we have conducted successful trials and have trained a team of young research officers. We have also initiated the documentation of projects among 12 ethnic communities in 27 villages," he said.

With the contribution of the villagers, a Ethnobotanic garden is created at the centre named after "Laila".

According to Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan, the Ethnobotanic Garden was named after Datuk Amar

Laila Taib because of her passion for natural, organic and herbal things and her concern for environmental conservation.

"This garden is a living library of the plants inherited by the local communities from their ancestors and now handed over to be shared with the community for the appreciation, education and enjoyment.

"With the growing popularity of natural products and botanical dietary supplements, the garden will be a source for scientific inquiries and education for younger generations in many years to come," Dr Chan said.

The garden has more than 200 plants that had been used by the local communities for medicinal, personal care and aromatic purposes. - ET



Dr Chan, Taib and Laila listening to a speech given by Aziz.



Dr Chan and Laila taking a closer look at one of the plants on display at the centre.

The Borneo Post - 30th August 2006



AN HONOUR: Laila plants the nilam to mark her acceptance of the garden to be named after her.

## Ethnobotanic Garden named after Laila

**KUCHING:** The Ethnobotanic Garden at Sarawak Biodiversity Centre (SBC) at Jalan Puncak Borneo here has been named the 'Laila Taib Ethnobotanic Garden'.

Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan made the announcement yesterday.

"Knowing how passionate our First Lady is with things that are natural, organic and herbal, how greatly concerned she is about environmental conservation and how dearly she appreciates knowledge, it is only fitting that we name this beautiful Ethnobotanic Garden in honour of Datuk Amar Puan Sri Laila in recognition of her continuing dedication in preserving the botanical heritage of the State and its people.

"This Garden is a living library of the plants inherited by the local communities from their ancestors, and now handed over to be shared with the wider community for appreciation, education and enjoyment," he said during the naming of the garden yesterday.

He hoped with growing popularity of natural products and botanical dietary supplements, the garden would be the source of much inspiration for scientific inquiries, and the education of the young minds for many years to come.

The garden has more than 200 plants used over the

centuries by the local communities for medicinal, personal care and aromatic purposes.

They are selected as representatives from over 1600 valuable plants which the various local communities from throughout the State have contributed to SBC research and development programme through the Traditional Knowledge Documentation Project (TKDP) launched three years ago.

The goal of the TKDP is to build an infrastructure that fosters the preservation of traditional knowledge on the uses of biological resources, sustainable utilisation of these resources in the pursuit to discover new bio-compounds for medical and other purposes, ex situ conservation of rare plants and ensuring that local people benefit economically and socially from discoveries that may be made out of these resources.

Among other uses, some of the plants represented in the garden have always been the natural resources for botanical drugs, flavour and fragrances for the pharmaceutical, nutraceutical and aroma industries, and they offer opportunities for entrepreneurship such as through contract farming which the local communities could participate in for economic gains.

# Traditional knowledge

THE Sarawak Biodiversity Centre (SBC) government initiative came into being in 1998, following the enactment of the SBC Ordinance the year before.

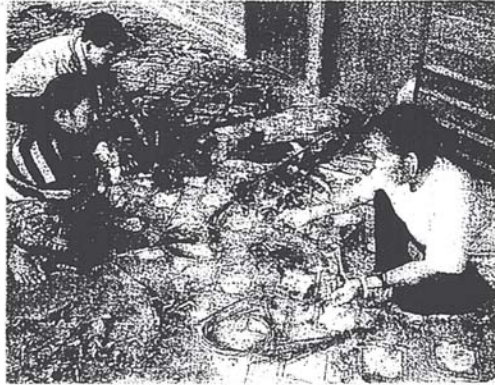
The Ordinance, developed following Sarawak Chief Minister Tan Sri Abdul Taib Mahmud's visit to the 1992 Rio Earth Summit in Brazil, was enacted to initiate programmes for the conservation, utilisation, protection and sustainable development of biodiversity in the state through the SBC.

Of the SBC's five missions, one success story stands out: their efforts to facilitate the documentation of traditional knowledge of beneficial plants at the grass-roots level in the villages under the leadership of SBC Director Datin Eileen Yen Ee Lee.

The project, which prompted the United Nations Development Programme Global Environment Fund to nominate the SBC as a Centre of Excellence for Traditional Knowledge Documentation for the Asia Pacific Region, began in 2001 with meetings with leaders and representatives from local communities.

Says Lee: "We brought them together and asked them what they thought - did they still have traditional knowledge? Do they know who has it? It was interesting because there were people who said yes, people who said no, and people who didn't know. They told us all the more we have to do something because there was no consensus. Based on that two-day workshop it was decided unanimously that we would implement the project."

Through the project, the SBC guides local communities on proper recording and documenting techniques, which they then use to preserve their traditional knowledge in two forms - first in their native



more than 1,500 plants from a dozen ethnic communities in 27 villages. Of the 200-plus plants they have performed bioassays on, more than 35% have shown good activity against cancer cell lines when tested according to protocols taken from the National Cancer Institute in the United States.

"When our potential German partners came in two weeks ago, they were shocked that the percentage is so high. If we went into the forests and collected hundreds and thousands of plants, you might

get just 10% if you are very lucky."

Lee stresses that the hit rate is high not because our forests are home to uber-plants, but because their selection has been guided by the people living in them.

"We're saving a lot of time screening plants that may not be that relevant. That's the reason why we need to assign the rights back to them. The next stage for us now is to find a panel of lawyers who can assist Sarawak to negotiate this," she says.

Penan villagers from Batu Bungan sorting out plant specimens intended for the Sarawak Biodiversity Centre. The plants represent their true gift to the centre and to future generations: traditional knowledge.

tongue, then in Malay.

"The word is 'facilitate' - we are not doing the recording because it's not our knowledge. 'Our' here meaning the government department. It belongs to the people," says Lee.

"When we asked them what incentive they're looking for, the people who contributed the most in the Penan community said they want to *hadiah*, it's a gift to the future generations. This is something that touched me a lot because it's so different from what we do in the city - when we talk about benefit-sharing, it means money. Money is important, but it's not the most important thing to these people.

"Why document the knowledge? Firstly, it's our heritage for future generations. Secondly, it's sharing of knowledge for mutual gain. In my lab, almost 90% of what we do is guided by traditional knowledge."

To date, the SBC has collected

## Protecting intellectual property

Organisations dedicated to the development, improvement and protection of intellectual property include:

- World Intellectual Property Office (WIPO)
- United Nations agency, est. 1967, based in Switzerland
- 183 member states, including Malaysia

Find out more at [www.wipo.int](http://www.wipo.int)

• International Association for the Protection of Intellectual Property (AIPPI)

- Politically neutral non-profit organisation, est. in 1883, also based in Switzerland
- Over 8,000 members in 100 countries

Find out more, including meeting reports and current issues under discussion, visit [www.aippi.org](http://www.aippi.org).

## CONVENTION ON BIOLOGICAL DIVERSITY

The Convention on Biological Diversity:

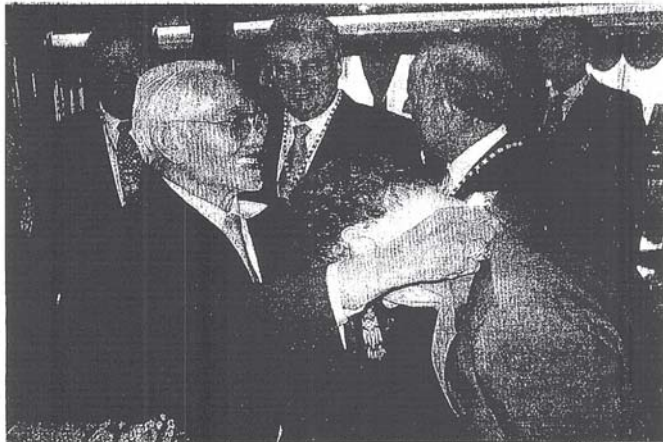
- is dedicated to promoting sustainable development
- was one of the key agreements adopted by 150 government leaders at the 1992 Rio Earth Summit
- acknowledges the fact that traditional knowledge has helped to preserve biodiversity and enhance the lives of people who practise such

knowledge, i.e. "that biological diversity is about more than plants, animals and micro-organisms and their ecosystems - it is about people and our need for food security, medicines, fresh air and water, shelter, and a clean and healthy environment in which to live".

Find out more at [www.biodiv.org](http://www.biodiv.org)

The Borneo Post - 17th November 2006

## Chief Minister hosts luncheon for EU envoys



**WELCOME TO SARAWAK:** Taib garlands one of the visiting dignitaries with a traditional bead necklace as a welcoming gesture, as some of the other ambassadors look on.

**KUCHING:** Chief Minister Pehin Sri Abdul Taib Mahmud yesterday hosted a luncheon for the Ambassadors of European Union (EU) member countries on a three-day visit to the State.

Taib's wife, Puan Sri Datuk Amar Laila, was also present to receive them at the function held at the Chief Minister's residence, Demak Jaya.

The delegation, headed by Lauri Korpinen, the Ambassador of Finland, included Tamas Toth (Hungary), Milan Lajciak (Slovakia), Eugeniusz Sawicki (Poland), German Bejarano Garcia (Spain), Frank Van de Craen (Belgium), Herbert Jess (Germany), Eugene Hutchinson (Ireland), Donatus Koeck (Austria), Helena Sangeland (Sweden), Alain du Boispean (France) and Petru Petra (Romania), and their spouses.

The Finnish Embassy's Deputy Head of Mission, Dr Jaakko Lehtovirta and British Deputy

High Commissioner Patrick Moody, were also part of the 14-member group.

The delegation visited the Sarawak Biodiversity Centre and the Semengoh Wildlife Centre yesterday.

After lunch, they proceeded to Sarawak Cultural Village, and last night attended a dinner hosted by 1st Silicon (M) Sdn Bhd at a local hotel.

Today, the delegation is expected to visit the State Legislative Assembly, and pay a courtesy call on State Secretary Datuk Amar Abdul Aziz Husain at his office in Wisma Bapa Malaysia here.

Also present at the luncheon were Deputy Chief Minister Datuk Patinggi Tan Sri Alfred Jabu, Minister of Urban Development and Tourism Dato Sri Wong Soon Koh, State Legislative Assembly Speaker Dato Sri Mohd Asfia Awang Nassar and State Attorney-General Datuk JC Fong.

Eastern Times - 20th November 2006

## THE WEEK THAT WAS

By Harun Jau

**Friday, November 17**

**How can we learn from State**

**EUROPEAN** countries can learn from Sarawak's experience in initiating programmes for bio-diversity research; sustainable management and utilisation of biological resources via strategic collaborations. Finnish Ambassador to Malaysia, Lauri Korpinen said the Sarawak Bio-diversity Centre, which also conducts research and development programmes for pharmaceutical and commercial prospects was a good model for other countries, especially the European Union (EU) to emulate. The centre is doing important work to document and preserve all kinds of indigeonus plants in Sarawak.

# Finnish 'aye' to State's biodiversity initiatives

## EU countries can learn from Sarawak's experience: Ambassador

**KUCHING:** European countries can learn from Sarawak's experience in initiating programmes for biodiversity research, sustainable management and utilisation of biological resources via strategic collaborations.

Finland Ambassador to Malaysia Lauri Korpinen said the Sarawak Biodiversity Centre, which also conducts research and development programmes for pharmaceutical and commercial prospects, was a good model for other countries, especially the European Union

(EU), to emulate.

"The centre is doing important work to document and preserve all kinds of indigenous plants in Sarawak. Some of them, I learnt are very useful for medicinal purposes," he told reporters after visiting the centre at Jalan Borneo Heights.

Korpinen is leading a 14-member delegation, comprising EU member countries' ambassadors, who are here for a three-day visit to look into the tourism and development aspects of the State. Although Finland had similar facilities as part of its universities' research and

development activities, the work done by the Sarawak Biodiversity Centre was interesting and unique.

Korpinen said he enjoyed his diplomatic stint in Malaysia since taking up his appointment in Kuala Lumpur two years ago.

On the possibilities of future cooperation with EU member states, he said there were already many such collaborations, particularly in industrial and tourism sectors.

"A lot of European tourists are coming here and enjoying the beauty of Sarawak and its scenic nature," he said.

The Finnish envoy said the delegation was looking forward to an interesting itinerary in Sarawak, including visits to the Semenggoh Wildlife Centre, Sarawak Cultural Village, Sarawak Craft Centre and Cats' Museum.

They are also scheduled to meet Chief Minister Pehin Sri Abdul Taib Mahmud, State Legislative Assembly Speaker Datuk Seri Mohd Asfia Awang Nassar, State Urbanisation and Tourism Minister Datuk Seri Wong Soon Koh, and attend a briefing at the State Planning Unit on the State's development.

## Centre identifies plants with anti-cancer agents

■ By Sulok Tawie  
news@nst.com.my

RESEARCH into the development of Sarawak's biological resources for pharmaceutical and nutraceutical uses have established that the compounds from plants have anti-HIV agents, and properties that could be used for treatment of leukemia.

**SARAWAK  
STATE  
ASSEMBLY**

The research was undertaken by the Sarawak Biodiversity Centre in collaboration with local and foreign institutions, State Second Minister of Planning and Resource Management Datuk Awang Tengah Ali Hasan said yesterday.

"The SBC is also screening plant extracts for anti-cancer compounds as well as extracting aromatic and medicinal oils from the indigenous plants for potential commercialisation," he said when replying to points concerning his ministry

which were raised during the 2007 State Budget.

He added SBC had over 29,000 plant extracts from 1,800 plant samples in its Natural Product Library.

Out of 1,800 plants, 90 have been identified for further research and analyse for anti-cancer agents, he said.

Awang Tengah said SBC was working with the Japan-based Nimura Genetic Solutions to conduct research on Sarawak's biodiversity for antibiotics for commercial production.

The Borneo Post - 28th November 2006

# 90 plant samples have anti-cancer properties

## SBC working with CARIF to identify these plants: Awang Tengah

**KUCHING:** Sarawak Biodiversity Centre (SBC) has more than 29,000 extracts from 1,800 plant samples in its Natural Product Library, and out of these more than 90 samples have been identified as "significant" in furthering bioassay analysis for anti-cancer.

"SBC is now working closely with Cancer Research Initiative Foundation (CARIF) to identify which of these plants can be used effectively in the photodynamic therapy for treating cancer," said Second Minister of Resource Planning and Management and Minister for Public Utilities Dato Sri Awang Tengah Ali Hassan in his winding up speech on the sixth day of DUN sitting yesterday.

He said that under the Traditional

Knowledge Documentation Programme (TKDP), SBC had successfully gathered and documented 1,985 samples of plants used by the native communities in their traditional medicine and for food.

"The SBC has identified 180 of the species as good for health," he said.

He said that among other fruitful activities of SBC were 'National Conference on Agro-Biodiversity and Sustainable Utilisation' and working together with Nimura Genetic Solutions in R&D on novel antibiotic and enzymes through the segregation of microbes in soil, in which they have collected about 2,400 actinomycetes and 415 kinds of fungus.

"SBC has earned the praises of ambassadors from the European Union (EU) to Malaysia, who visited the centre recently," Awang Tengah said.



**TAKING A BREAK:** Batu Kawah assemblyman Tan Joo Phoi, who is also Padawan Municipal Council chairman (left) together with Pujut assemblyman Andy Chia during a half-hour break in the morning session.

*SBC News* **2007**

Eastern Times - 15th January 2007

## SBC, MBC jointly hold Biotechnology Info Tour

By Wilfred Pilo

**KUCHING:** MALAYSIAN Biotech Corporation (MBC) and Sarawak Biodiversity Centre (SBC) jointly held the Biotechnology Info Tour (BIT) 2007 Sarawak Session at the Lecture Theatre of Sarawak Biodiversity Centre in Semenggoh near here yesterday.

The aim of the one-day event was to inform research institutes, universities and biotech companies or organisations on the funds and services offered by Malaysia Biotech Corporation (MBC), Ministry of Science, Technology and Innovation's (MOSTI's), Malaysian Technology Development Corporation (MTDC), SME Bank and Cradle Investment programmes for biotech activities or ventures.

The objectives are to enhance the awareness among life sciences research community and companies in Malaysia and other stakeholders on the progress made in implementing the National Biotechnology Policy (NBP).

Secondly, to enhance the awareness of the stakeholders on the types of assistance the relevant organisations can offer for the development of biotechnology industry.

Since the launching of the National Biotechnology Policy (NBP) by the Prime Minister in 2005, Malaysian Biotech Corporation was created as government agency to carry out the four main roles to create a conducive environment for the development of biotechnology in Malaysia, to be a one-stop centre providing advisory services and facilitating the growth of

biotechnology in Malaysia, to increase foreign direct investment in the country and to nurture local biotechnology companies.

At the event, the Senior Vice President of Malaysian Biotechnology, Professor Dr Norazami Mohd Nor, spoke briefly to highlight the National Biotechnology Policy and the industry supporting organisations and their roles.

Besides the participants and guests, also present were the Chief Operating Officer of Sarawak Biodiversity Centre, Dr. Rita Manurung and other invited speakers, namely Dr. Asiah Ahmad, Principal Assistant Director (1) of the National Biotechnology Division, Shahril Anas Hasan Aziz, Vice President (Investment) and Tan Joon Sheong, Assistant Vice President (GITS) from MTDC.



Some of the guests at the Biotech Info Tour Sarawak session 2007 held at Sarawak Biodiversity Centre in Semenggoh.



USEFUL TALK: Dr Norazmi delivering his talk.

## Biotech Corp ends tour at SBC

**KUCHING:** The Malaysian Biotechnology Corporation (Biotech Corp) ended its nationwide Biotech Info Tour, with the last leg at Sarawak Biodiversity Centre (SBC) yesterday.

The tour was mainly to explain the role of Biotech Corp and share information on its activities in implementing the national biotechnology policy (NBP).

At yesterday's event, there were talks presented by Biotech Corp, National Biotechnology Division (NBD), Malaysian Technology Development Corporation (MTDC), and SME Bank. There were some 78 participants from Curtin University, Swinburne University and Universiti Teknologi Mara (UiTM).

Representatives from government departments and agencies - Department of Agriculture, Sarawak Forestry Corporation, SIRIM, State Planning Unit, and private companies that deal with biodiversity also attended the talks.

Biotech Corp senior vice president Prof Dr Norazmi Mohd Nor in his talk said the tour was also to enhance awareness of the stakeholders on the types of assistance the relevant organisations could offer for the development of the biotechnology industry in the country.

He also said that biotechnology was a knowledge-based industry, which posed a great challenge to the stakeholders.

# Ten for postgrad studies

By Yeo Eng Peng

**KUCHING:** TEN State government officers will be sent to the University of Adelaide in Australia to do their postgraduate studies.

This first batch of officers, from various agencies like Agriculture Department and Sarawak Biodiversity Centre (SBC), will be away for a duration of between two and four years depending on their fields of studies.

State Secretary, Datu Wilson Baya, in a simple ceremony held at his office at Wisma Bapa Malaysia here on yesterday afternoon, said the second batch of six officers would be sent for the same purpose in July.

He urged these officers to make full use of the opportunity to learn more knowledge and skills so that they could serve the State better upon their graduation.

He said the collaboration between the State and the university was an idea of the Chief Minister, Pehin Sri Haji Abdul Taib Mahmud, whom he described as a visionary leader.

The objectives of the memo-



Wilson Baya posing with some of the officers, who will be furthering their studies.

randum of understanding (MoU) between the State government and University of Adelaide are to develop scientific and educational ties and to facilitate studies at the

university for students sponsored by the State government.

The MoU also encourages collaboration in research between the State government and the uni-

versity in specific fields of mutual interest.

The areas of special interest include, but not limited to, agricultural, biotechnology, aquaculture,

environmental biology, functional genomics, marketing of food products, pest management, plant fertility and nutrition, soil science and water resource management.

Eastern Times - 31st January 2007



ADELAIDE HERE WE COME... (From left to right) Hii Mei Mei, Belinda Ng and Michele Mejin.

## Officers pursue further studies in Adelaide

By Yeo Eng Peng

**KUCHING:** HAPPINESS is the only feature one could describe over her face as she is one of the first batch of 10 State sponsored officers who will pursue post graduate studies at University of Adelaide in Australia.

Belinda Ng, 25 who will be doing her Master's degree in drug design and discovery at the reputable university said it was a great honour to be one of the government officers selected to do post graduate studies at the university.

She said it never crossed her mind that she could one day pursue her Master's degree overseas and the opportunity was something she did not even dare to dream of in the past.

Ng is a former student of SMK Bandar Kuching No.1 and Universiti Teknologi Malaysia (UTM) where she obtained her Bachelor of Science degree in industrial biology.

She has been working with the Sarawak Biodiversity Centre (SBC) for the past three and a half years and said she only had the State government to thank, for without the financial assistance she would never had a chance to do her Master's degree overseas.

"I also have my parents to thank as they have put all their life for me and my sibling to have the best education," she said, adding that her area of study would involve screening for novel compounds from natural products which could be used for medical purposes.

Her father, Ng Pheng Seng is a senior health inspector with the Kuching City South Council (MBKS) while her mother, Chu Ah Kium is a pharmacy assistant at a government polyclinic.

Her colleague, Michele Mejin, 26, who will be doing a Master's degree in natural product chemistry said it was a happy occasion for her.

Michele, a former student of SMK Green

Road and University of Malaya where she obtained her Bachelor of Science in bio-health science said she would be studying real hard for her master's degree and serving the state upon completing her study.

She was appreciative of her parents, Philip Mejin and Aileen Sim, both civil pensioners, for their encouragement and motivation all this while in her education pursuit.

Another colleague, Hii Mei Mei, 27, was elated knowing that she could further her study in her area of interest.

Hii, a former student of SMK St Thomas and Universiti Sains Malaysia (USM) where she obtained her Bachelor of Science in biotechnology said she would look forward to going to Australia and taking the opportunity to both acquiring knowledge and broadening her life experience.

She was confident that her father, Hii Toh Yeo, a businessman and mother, Chong Nyuk Joon, an accountant would be proud of her achievement.

The Borneo Post - 20th March 2007

## Public talk to focus on Conservation Biology

**KUCHING:** Members of the public are invited to attend a talk on 'Why Science...in Particular, Why Conservation Biology?' at the auditorium of Pustaka Negeri here tomorrow, starting 2.30 pm.

Dr Ronald Orenstein will deliver the talk, which is jointly organised by Sarawak Biodiversity Centre and Pustaka Negeri.

Orenstein, who holds a PhD in Zoology from the University of Michigan and an LLB from the University of Toronto, is the author of seven books on science and natural history of the world's turtles, tortoises and terrapins.

During the talk, Orenstein will give an overview of the amazing world of science and then proceed to explain the branch of Conservation Biology.

The talk is ideal for everybody especially senior secondary school students and also those who have just received their Sijil Penilaian Malaysia (SPM) and Sijil Tinggi Penilaian Malaysia (STPM) results.

Please contact Sarawak Biodiversity Centre (Asha or Hamim) at 082-610610 for registration. Admission is free.

The Borneo Post - 21st April 2007

## Talk on latest devt in intellectual property

**KUCHING:** A talk organised by Sarawak Biodiversity Centre (SBC) was held here yesterday specifically to update those in the research field about the latest development in intellectual property.

The speaker was Ong Chui Koon, a principal consultant of SIRIM Berhad's intellectual property services section. He is also an agent of registered patent, trade mark and industrial design and a Commissioner for Oath in the High Court of Malaya.

The talk 'Intellectual Property: Requirements for Obtaining Patents and filing patent applications' - focused on the filing of a national patent application.

Ong also talked about patent eligibility, requirements and

examination and the right conferred by a patent.

He explained that the territorial nature of patents, national and international filing of patents as well as matters that should be taken into account when making a decision to file patents either nationally or through Patent Convention Treaty (PCT).

"Patent protection is valid in the country where a patent has been filed and granted and there is no such thing as worldwide patents."

Ong also deliberated on The Malaysian Patent Act, 1983, saying that not all inventions were 'patentable'.

"Discoveries, scientific theories and mathematical methods are not patentable under the law," he explained.

Eastern Times - 2nd May 2007

# Ba'Kelalan compound interests US scientists

**KUCHING:** Sarawak with its 25 biological hotspots had in 2004 patented a compound known as silvestrol that was isolated from aglaia found in Ba'Kelalan. The compound has potential in the treatment of several types of cancer including prostate and leukemia and has now attracted the interest of researchers from the United States.

The compound was found in a joint collaboration between the State Government with scientists from Australia.

The completion of the research and development (R&D) facility at the Sarawak Biodiversity Centre (SBC) in December 2005 has increased the capability of researchers in the State in carrying out screening of bioactive compounds

from plants in the State's rich forests.

Second Minister for Planning and Resource Management Dato Sri Awang Tengah Ali Hassan told the august House that researchers from the United States who were interested in carrying out further research into the compound as cancer therapy had applied for legal permission from the State Government.

"The State Government is fine tuning the application made by the researchers and is looking into the terms and conditions of the joint collaboration including the cost for the R&D payment for licence and royalty.

"This is to ensure that the State will have good return and ben-

efit fully from the collaboration if the international institutions are allowed to carry out further research into the compound," he said.

He pointed out that in a joint venture with Nimura Genetics Solution, a biotechnology firm from Japan, SBC has carried out early screening on 4,740 microbe extracts.

"One of the active extracts from a type of mushroom has been found to react positively toward enzymes from the Alzheimer's disease. Various other types of extracts are also found to have anti-microbes with great potential of being developed into antibiotics.

"The R&D programme carried out at SBC has attracted the interest of international pharmaceutical

companies. This shows that the R&D has created international attention.

"Although the laboratory in SBC has only been set up recently, it has a high capability.

"In the development of human resource, three young scientists from the State in February this year were given a scholarship under the Chief Minister's Department each to further their studies at the Masters level at the University of Adelaide, Australia in an area closely related to the R&D programme in SBC.

"Until April 2007, SBC has collected and documented a total of 2,000 samples of plants which can be used for medical purposes from 12 native communities in 27 locations in the State. A total of 700 plants were replanted at SBC," he added.

The Borneo Post - 15th August 2007

## Sarawak Biodiversity Centre reps attend BIO conference

**KUCHING:** BIO International Convention (BIO 2007) was recently held in Boston, USA and Sarawak Biodiversity Centre (SBC) was part of the Malaysian delegation to it.

The convention is the world's largest annual biotechnology gathering dedicated to the growth of the biotechnology industry.

Sarawak delegation to the convention was represented by Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan as well as Dr Rita Manurung and Dr Yeo Tiong Chia, the chief operating officer and senior research officer of SBC.

During the convention, Sarawak delegation explored potential collaboration with Boston University and Ohio State University where issues regarding research and development of drugs for cancer therapy was discussed.

"The team from Ohio State University Medical Centre and College of Pharmacy showed interest to work with SBC on drug discovery to identify promising compounds for certain cancers such as leukaemia and prostate cancer.

Eastern Times - 16th August 2007

# Traditional knowledge should be protected

By Connie Chieng

to cure colds and flu.

**KUCHING:** Traditional knowledge, which is of value to the owner or holder, should be protected and patented with the recognised legal bodies, both national and international, but it must be defined and listed first.

Commenting on the traditional knowledge at the round table meeting on August 10, Secretary General of Dayak Cultural Foundation, Dato' Peter Minos, pointed out that to the indigenous people in Sarawak, it was part and parcel of their lives and an integral part of their culture to use herbs or ferns for curing purposes.

He cited examples of traditional antidotes for snake and insect bites, and also leaves and plants which could be consumed

"The Ibans, Bidayus, Melanau, Kayans, Kenyahs, Kelabits, Bisayas, Lun Bawang, Punans, Penans, Beravans and other native minority groups in the State do value their traditional knowledge and wish to have it protected," he said.

Minos said it was understandable that the indigenous people wanted that knowledge to be recognised.

"Should that traditional knowledge be lost, it would be a loss to the world," he added.

Thanking Datin Eileen Yen Ee Lee, who was concerned about traditional knowledge, Minos, who was the organiser of the meeting, said as Dayaks, they should be direct 'custodians' of their own people, traditional knowledge and cultures.

Eastern Times - 15th August 2007

# SBC looks for collaborators on cancer drugs



Sarawak delegates meet Ohio State University's team. (From left) Henry Y. Zheng, David M. Lucas, Dr Rita, Dr Chan, Caroline Witacre, Robert W. Brueggemeir and Dr Yeo.

**KUCHING:** The Sarawak Biodiversity Centre (SBC) was recently part of the Malaysian delegation to BIO International Convention (BIO 2007) in Boston, the world's largest annual biotechnology gathering organised by the Biotechnology Industry Organisation (BIO).

The annual event has gained recognition as the world's most important event dedicated to the growth of the biotechnology industry.

BIO 2007 represented 1,100 biotech-

nology companies, academic institutions, state biotechnology centers and related organisations in all the US states and 31 other nations involved in areas of healthcare, agricultural, industrial and environmental biotechnology products.

The Malaysian delegation to BIO 2007 was led by the Deputy Prime Minister, Datuk Seri Najib Tun Razak and included several ministers, chiefs minister and menteri besar, members of the parliament, research agencies and univer-

sities, and senior executives of local biotechnology companies. Sarawak, meanwhile, was represented by Deputy Chief Minister, Datuk Patinggi Tan Sri Dr. George Chan Hong Nam, who is also cum Minister of Industrial Development & Minister of Modernisation of Agriculture, as well as Dr. Rita Manurung and Dr. Yeo Tiong Chia, the Chief Operating Officer and Senior Research Officer of SBC respectively.

On the sidelines of BIO 2007, the

Sarawak delegation explored potential collaboration with Boston University and Ohio State University where issues in regards to the research and development of drugs for cancer therapy was discussed.

The team from Ohio State University Medical Centre and the College of Pharmacy are interested in working with SBC on drug discovery to identify promising compounds for certain cancers such as leukemia and prostate cancer.

# SBC plays vital role in conservation

By Peter Sibon

**KUCHING:** The Sarawak Biodiversity Centre (SBC) was established in 1997 after the State Government enacted the Sarawak Biodiversity Centre Ordinance in 1996 and set up the centre the following year to initiate programmes for the conservation, utilisation, protection and sustainable development of biodiversity in the State.

Back then, the centre's role was primarily inventory and regulatory, often known as the gatekeeper to Sarawak's rich biodiversity to those who wanted access to and collection of biological resources in the State for research or commercial purposes.

During the initial stages of the centre set-up between 1996 and 2003, the State took cognizance of yet another potential in its rich biological resources - the potential for intensive biotechnology-based research and product development from this vault of diverse biological resources.

In December 2003, the State Legislative Assembly then passed the SBC (Amendment) Ordinance 2003. The amendment relieved the centre of its role of conducting general biodiversity inventory and regulating general biodiversity research.

Instead, the Centre was now entrusted to initiate intensive biotech-based research and development on the State's biological resources - particularly those that have been utilised by indigenous communities and to facilitate the documentation of the fast disappearing traditional knowledge of indigenous communities on the utilisation of biological resources.

Taking on this new role head-on, the centre established its first two laboratories - Sample Extraction and Bio-Chemistry - within six weeks in 2003 and intensified its Traditional Knowledge Documentation Programme which had already taken root since 2001.

Between June and September 2003, SBC saw two of its "inherited" bus sheds at its premises (the former Forest Training School at Padawan) transformed into functional laboratories, equipped with modern scientific equipment.

In November 2003, the two laboratories were commissioned and in 2004, plans were underway for SBC's R&D programme and facilities. In February 2005, the construction works of five new laboratories (analytical chemistry, microbiology, molecular biology, plant tissue culture and bioinformatics) and supporting facilities began.

The new laboratories were completed

and handed over to SBC in December 2005. The immediate output from SBC's R&D programme was a unique library of natural products derived from mainly Sarawak's indigenous plants.

It was a key resource that offered the chemical diversity for bioactive compound screening activities and subsequently, the development of the early stages of bioactive compounds analysis. The new laboratories were equipped with modern equipment to provide a vibrant environment for research activities as well as biotechnology innovations in the State.

Under its Traditional Knowledge Documentation Programme, the Centre had reached out to 12 communities in 27 locations throughout Sarawak by the end of Year 2006.

Sixteen villages had started documenting their traditional knowledge and the communities have expressed their support in becoming partners in the development of useful products from the State's biological resources. SBC will continue its efforts in creating awareness among more communities throughout Sarawak on the importance of documenting this priceless heritage.

The Centre facilitates the programme within communities throughout Sarawak on the basis of *Respect, Recognition and Reward*. The communities that carry out the programme do it on a voluntary basis, and for the simple reason that they are keen to preserve Traditional Knowledge as part of their unique heritage.

The Centre in turn provides relevant training in terms of documentation methods and assists in providing basic materials for the documentation process and setting up of

community gardens of useful plants. Besides focusing on building a library of natural products from the State's useful plants and their extracts and working with the communities to document Traditional Knowledge, the centre and its new R&D facilities also function as a training ground for the next generation of biotech researchers and scientists.

SBC has implemented a unique training programme where fresh university graduates are given the opportunity to train up till a year under the centre's R&D Programme. Getting on board the training programme is not easy. One must have excellent academic and records and a minimum Cumulative Grade Point Average (CGPA) of 3.0 points.

These graduates are given a monthly allowance and are evaluated every 4th, 6th, 8th and 10th month of their training on their work progress, job performance and overall work attitudes. Trainees who excel are offered permanent Research Officers' posts under the centre's human resources allocation of vacancies.

August 29, 2006 was a landmark date for the SBC as it was the day that Chief Minister of Sarawak, Pehin Sri Haji Abdul Taib Mahmud officially opened SBC's R&D Laboratories in a simple but yet meaningful event by first signing a commemorative plaque in the SBC's Herbal Garden.

The Chief Minister was also taken on a tour of the garden, led by the indigenous communities who were participating in SBC's Traditional Knowledge Documentation Programme and the laboratories by Sarawak Biodiversity Council Chairman, Dato' Amar Hj Abdul Aziz Dato Haji Husain. Impressed, the Chief Minister congratulated

the good work undertaken by the centre. He commented on how the centre had remained focused in its undertakings and prudently managed its funds to become what it is today.

He also commended on the passion and enthusiasm that the staff of the centre had poured into their work. While admitting that the research and development carried out by the centre required substantial investments and would be slow in terms of returns, Taib expressed his hope that the staff at SBC would be able to transform the centre into the hub of biodiversity research for the region.

He also stressed on the recruitment of the right people with the right skills and attitude at SBC to undertake such awe-inspiring research. Earlier, a dedication ceremony was held at the Centre's Herbal Garden.

Deputy Chief Minister, Dato' Patinggi Tan Sri Dr George Chan led the ceremony where the garden was dedicated to the first Lady of Sarawak, Dato' Amar Puan Sri Hajah Laila Taib and fittingly named "Laila Taib Ethnobotanic Garden". In recognition of her concern and dedication towards preserving the State's botanical heritage and the knowledge of the people of Sarawak.

The Laila Taib Ethnobotanic Garden showcases 200 types of plants that have been used over the centuries by the local communities for medicinal, personal care, cosmetic and aromatic purposes.

These plants represent the numerous valuable plants which these communities have contributed to SBC for research through the Centre's Traditional Knowledge Documentation Programme.

# Swinburne inks agreement with Sarawak Biodiversity Council

By Gerald Chung

**KUCHING:** The signing of the Memorandum of Agreement (MOA) for academic and research programme between Sarawak Biodiversity Council (SBC) and Swinburne University of Technology / Environmental and Biotechnology Centre yesterday marked another step forward for the state to nurture its human capital in the field of biotechnology research and development.

The MOA between SBC and Swinburne, according to State Secretary who is also the Chairman of Sarawak Biodiversity Council, Dato' Amar Wilson Bawa Daudet when signing the agreement yesterday, will be beneficial to both parties in the long run.

He said that for Swinburne University of Technology, the agreement will provide a local partner with relevant facilities that will enable Swinburne to expand and offer academic programmes (MSc and PhD) in Biotechnology as well as to develop a research relationship between institutions in Sarawak and Swinburne Australia.

"For SBC, that has state-of-the-art research facilities for natural products and research and development, the agreement will provide an opportunity to develop its human resources through the academic programmes offered by Swinburne", he said.

Speaking prior to the signing of the agreement yesterday afternoon at Wisma Senco at Petra Jaya, Wilson said that the agreement would provide an incentive to an excellent future and both establishments would make the most of this opportunity to work together and bring about benefits for both parties.

The agreement covers a recruitment and enrolment of SBC staff in Master of Science and PhD coursework and research degrees offered by Swinburne Sarawak / Environmental and Biotechnology Centre (EBC) and the establishment of research collaboration between SBC and EBC.

EBC is located at Swinburne University of Technology Hawthorn campus in Melbourne and promotes the development of both applied and industrial research in both environmental science and biotechnology.

Providing research facilities at SBC and EBC to support postgraduates research work, the agreement will also involve the selection of appropriate academic staff and curriculum to implement an undergraduate Bachelor of Science (Biotechnology) course at Swinburne Sarawak campus and there will also be an academic and scientific exchange of relevant staff from each institution for training, research and teaching work.

Currently, a biotechnology research centre is being built at Swinburne Sarawak campus.

The signing ceremony was carried out by Wilson as the chairman of SBC, witnessed by State Attorney General for Sarawak Dato' K. Pong while Swinburne was represented by the chairman of Swinburne Sarawak Sdn Bhd which owns Swinburne Sarawak University of Technology Sarawak campus, Tan Sri Dato' Amar Haji Abdul Aziz Dato Haji Husain and witnessed by the Chief Executive Officer who is also the pro vice chancellor of Swinburne Sarawak campus Professor Helmut Loeckenhäuser.

Wilson said that Sarawak Biodiversity Centre was established in 1998 following the enactment of the Sarawak Biodiversity Centre (SBC) Ordinance 1997, the first of such ordinance in Malaysia set up with the purpose of initiating programme for the conservation, utilization, protection and sustainable development of biodiversity in Sarawak.

In 2003, the state took cognizance of yet another potential in its rich biological resources, the potential for intensive biotechnology-based research and product development from this vault of diverse biological resources.

SBC has been a actively pursuing natural products research since 2003 Sarawak's own local biodiversity. This research effort is enhanced by incorporating the traditional knowledge of Sarawak indigenous communities on their utilization of local biodiversity via SBC traditional knowledge documentation programme.

In August 2006, according to Wilson, SBC officially launched its research and development programme, namely, its natural products research on bioactive compounds in conjunction with the opening of its new research and development facility and supporting infrastructure by Chief Minister Pehin Sri Haji Abdul Taib Mahmud.

"These facilities include five well-equipped laboratories, namely, the Molecular Biology, Microbiology, Analytical Chemistry, Plant Tissue Culture and Bioinformatics," he said.

The purpose of the establishment of these facilities at SBC is to encourage research on the state's rich biodiversity and subsequently to enable the state to through SBC to enhance its research capabilities and intensify its focus on natural product research.

The research and development programme at SBC provides an avenue to develop relevant research personnel in the state and it serves as a platform for the state to initiate research collaboration with other institutions and foster academic and scientific exchange and contribute towards the state's efforts in the development of the biotech industry.

SBC, according to the State Secretary, also offered industrial training for biotechnology and science undergraduates who are interested to gain experience and exposure in a research environment.

Since 2001, a total of 62 industrial trainees from public and private institutions of learning in Malaysia had the opportunity to experience laboratory and research work at SBC. Out of these, 25 students have carried out their industrial training at SBC this year.

# 'Traditional Knowledge Documentation' seminar to be held December 11 & 12



Dr Rita showing a new banana species called 'Pisang Lokok' in Kelabit, which originated from Pa' Lungan, Bario Highlands, at SBC.

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will be organising a seminar on "Traditional Knowledge Documentation" on December 11 and 12.

According to the centre's Chief Operating Officer, Dr Rita Manuring, the main objective of the seminar is to provide a forum for the exchange of views and information on issues, challenges and opportunities in documenting traditional knowledge.

The seminar is expected to discuss issues raised by communities, and a follow-up action plan will be developed, with networking connections among the seminar participants and

communities in Sarawak. Some 40 participants representing various organisations, including participants from 12 communities will attend the seminar," said Dr Rita to *Eastern Times* at her office at SBC yesterday.

She said four speakers, two from West Malaysia and another two from Sarawak, have confirmed giving their talk at the seminar.

The 12 communities represented at the seminar are Iban, Malay, Bidayuh, Melanau, Lun Bawang, Kayan, Kenyah, Penan, Biayah, Selako, Berawan and Kelabit. Four papers will be presented

Flowers of the 'Begonia Lalana' named after the wife of Chief Minister Dato' Amar Puan Sri Dr Hajah Laila Taib. PHOTO: PETER SIBON

at the seminar. These are, "Regional TK Status and Way Forward", "Medicinal Plants", "Propagation" and "Landscape and Maintaining a Garden/Community Garden".

On a separate issue, Dr Rita hoped that some of the RM236 million allocated for biodiversity development under the 2008 Budget as announced by Prime Minister would be channelled to SBC to procure more equipment for its research and development facilities.

"SBC was established to realise the commercial potential of biodiversity but at the same time, we have progressed ahead of most states. And a compound that

has been found to be promising in the development for cancer therapy has been assigned to the State Government. So maybe we can have a share of the allocation for the purpose," she said.

She also hoped that more funds could be channelled by the Federal Government to SBC in future.

Dr Rita was appointed as Chief Operating Officer of SBC effective January, for a two year contract.

She had been a research officer for 32 years at the Agriculture Research Centre at Semenggoh, Kuching. As she was trained in botany, she found her present job very appropriate and suitable.

The Borneo Post - 5th December 2007

## Documented traditional natural cures for discussion

**KUCHING:** Sarawak Biodiversity Centre (SBC) is organising a seminar for indigenous communities who have embarked on documenting their traditional knowledge (TK) next Tuesday and Wednesday.

A statement from SBC said the seminar should be an appropriate forum for these communities to exchange views and information on issues, challenges and opportunities in documenting the TK, which looks at the uses of the various natural resources.

The two-day seminar will include a site visit to Kampung Semadang in Penrissen.

Four speakers who are renowned in their respective fields will be delivering their papers.

Participants can expect to know more

about such topics as the medicinal plants of Sarawak, plant propagation and landscape and maintaining a community garden.

The speakers are Dr Paul Chin (project leader/consultant for International Tropical Timber Organisation), Dr Paul Quek (documentation scientist, Biodiversity International), Voon Boon Hoe (former researcher, Agriculture Research Centre) and Sinsoon Jabu (deputy dean of Agriculture and Food Sciences Faculty, UPM Bintulu).

Group sessions facilitated by the speakers and SBC officers will get the communities to discuss issues and challenges they faced in the documenting process, and the next recommended steps for better result.

According to the statement, the participating communities will be the

Bidayuh, Iban, Kelabit, Lun Bawang, Kayan, Kenyah and Selako.

Participants will be coming from Kampung Semadang, Kampung Kiding, Serian, and Kampung Pueh (Kuching), Rumah Skatap (Betong), Batu Bungan, Long Iman, Long Terawan (Mulu), Pa'Lungan, Pa'Ukat (Bario) Long Kerabangan, Long Teringan (Lawas), Rumah Nyambong, Sungai Asap and Batu Danau.

State Secretary Datuk Amar Wilson Baya Dandot is expected to officiate at the seminar.

Those interested to know more about the seminar can call Asha Kaushal or Margarita Naming at SBC, telephone number 082-610610.

Eastern Times - 6th December 2007

## Sharing experience in documenting traditional knowledge

**KUCHING:** Traditional Knowledge (TK), in the context of Natural Products Discovery, is commonly referred to as the rich array of knowledge that has been passed down through generations by a particular community on how it utilises the diversity of biological resources around them for medicinal, cosmetic and general well-being purposes.

Sarawak has over 30 different indigenous groups that have inherited the rich heritage of TK from their ancestors, much of which have not been documented.

While many from the older generation in these communities still retain TK, there is genuine concern about the loss of knowledge as a result of changing lifestyles, priorities, availability of modern amenities and the diminishing dependence of indigenous communities on natural resources. This has made it increasingly important for TK to be documented by the respective indigenous communities so that it will not be lost.

As the saying goes, "When an elder dies, a whole library is lost." TK is a legacy that needs to be handed down through from generation to generation.

The documentation of TK will in the long run contribute to the economic development of a community if it is properly utilised. For example, the setting up of informative and interpretative centres and gardens of useful medicinal plants within the villages of the indigenous communities can become tourism attractions.

With the rush in development for natural products and bio-prospecting from the world's natural resources, it has become even more important to document TK to ensure that the indigenous communities who have practiced such knowledge over the centuries are duly acknowledged, should their knowledge be still relevant or be blended with modern science.

The main objective of the Traditional Knowledge Documentation Programme (TKDP) carried out by the Sarawak Biodiversity Centre (SBC) is to facilitate the local indigenous communities in the State in preserving their TK through proper recording or documenting techniques.

One such effort under the programme facilitated by SBC is to bring together the different indigenous communities to share their experiences in the documentation of TK. SBC will hold the Traditional Knowledge Documentation Seminar from December 11 to December 12 at its premises in Semengoh.

During the seminar, participating communities throughout Sarawak will get together and exchange notes on experiences in documenting TK.

Community representatives from Kampung Semadang, Kampung Kiding, Kawasan Serin, Kampung Pueh (Kuching), Rumah Skatap (Betong), Batu Bungan,

Long Iman, Long Terawan (Mulu), Pa'Lungan, Pa'Ukat (Bario), Long Kerabangan, Long Telingan (Lawas), Rumah Nyambong, Sungai Asap and Batu Danau will participate in this seminar next week.

It will also feature speakers from local and international institutions who will share their expertise with the indigenous communities to enable them to add value to their on-going TKDP.

Those interested in finding out more about the seminar can contact Asha Kaushal or Margarita Naming of SBC at 082-610610 or email biosar@sbcc.org.my.

SBC is located at KM 20, Jalan Borneo Heights, Semengoh. The two-day seminar will be on between 8am and 5pm daily.

# Document Traditional Knowledge, says Wilson



Wilson (front row, sixth right) posing with speakers and participants of the seminar at Sarawak Biodiversity Centre.

By Hazel Sujatha

**KUCHING:** Traditional knowledge can bring much benefit to the community and the country including through tourism when it is used by modern industries and R&D activities.

State Secretary and Sarawak Biodiversity Chairman, Datuk Amar Wilson Baya Dandot said this when launching the Traditional Knowledge Documentation Seminar at the Sarawak Biodiversity Centre near here, yesterday.

He pointed out that Sarawak was truly unique as it is located in one of the 12 mega diverse regions in the world and is blessed with some of the most unique, magnificent and rare plants and animals not found anywhere else.

"It is estimated that there are more than 8,000 species of flowering plants, 2,000 species of vertebrates, 10,000 species of invertebrates, 615 species of ferns and 4,500 species of fungi in the state. Currently, 1,500 plant species have been documented as medicinal plants. This shows that there is a huge potential among these species to be developed as herbal/medicinal plants," Wilson said.

"With more than 30 indigenous communities in Sarawak, we have right in our doorstep, an abundance of Traditional Knowledge on how our communities have utilised all these plants for medicinal, cosmetics and general well being for generations," he pointed out.

Traditional knowledge, he said had contributed to the development of modern agriculture, natural products and drug development as many of the products found in the market today were based on information derived

from traditional knowledge.

The local indigenous communities have for generations learnt and handed down their knowledge on what varieties of crops to plant, when to sow and weed, which plants are poisonous and which can be used as medicine, how to cure diseases and at the same time, manage the environment in a sustainable and balanced manner.

Such traditional knowledge is often passed down from generation to generation orally and rarely in any form of formal documentation.

He said that traditional knowledge that had been retained by the indigenous communities was slowly disappearing.

Wilson also noted that many communities had started to document their respective traditional knowledge particularly to safeguard the valuable heritage and to ensure that their knowledge was rightly acknowledged if used in some way or another to produce a commercial or medical product.

He said that the first workshop on Traditional Knowledge Documentation which was jointly organised by SBC, Majlis Adat Istiadat and Biodiversity was held in November 2001. One of the outputs of the workshop was to appoint a Bidayuh community village to pioneer the pilot project and for on-site training.

Due to the success of these pilot projects and acceptance by the communities, the State Government amended the Sarawak Biodiversity Centre Ordinance in 2003 to include additional function for SBC.

With the amendment, SBC is to facilitate the documentation of the traditional uses of the State's rich

biodiversity by the local indigenous communities.

To date, Wilson said that SBC had started the Traditional Knowledge Documentation project among 12 indigenous communities in 28 locations throughout the State.

"From these 28 locations, they have documented over 2,000 plants with various uses such as to cure ailments and used for handicrafts," he said.

He stressed that these knowledge must be documented before it was lost with the older people within the community.

He pointed out that currently, SBC was conducting R&D on selected plants that have been documented from the indigenous communities. They have identified essential oil plants which have anti-microbial properties. These plants could be developed as the active ingredient for healthcare products such as in hand wash, body shampoos and soaps.

He revealed that SBC was looking into collaboration with SIRIM and other organisations to conduct further R&D and to develop healthcare products from these essential oils.

With these potentials, our communities can have an immediate economic benefit through carrying out contract farming on plants which have been identified to have potential for further R&D work or products development, he said.

At the National level, Malaysian Intellectual Property Organization (MYIPO) is looking into protecting the country's traditional knowledge.

He said that MYIPO has set up a committee to look into the drafting of the National Legislation to protect Traditional Knowledge. They are also looking into developing a Traditional

Knowledge Digital Library.

MYIPO will organise a National Seminar on Traditional Knowledge in January 2008 to discuss matters pertaining to the development of the National Legislation and Traditional Knowledge Digital Library.

This seminar will be supported by the World Intellectual Property Organisation. As a member of the committee, SBC has strongly requested that opinions and suggestions of the indigenous communities be included when drafting the National Legislation.

SBC also requests assistance from MYIPO to fund a few representatives from the ethnic communities to participate in the National Seminar, he further added.

The objective of this seminar, he said was to learn how best to document the rich heritage of the indigenous communities to ensure that it is handed down to future generations.

He hoped that representatives from each community would take the initiative to start documenting traditional knowledge by using the systems which SBC had implemented within the communities.

This reinforces the urgent need for awareness and full participation from everyone within the communities to document their respective traditional knowledge as their heritage so that it will not be lost.

The workshop speakers included Dr Paul Quek from Biodiversity International, Universiti Sarawak Malaysia (Unimas) Head of the Plant science and Environmental Ecology Department, Associate Professor Dr Cheksum Tawan, Universiti Putra Malaysia lecturer, Sinsoon Jabu and a researcher Voon Boon Hoe.

The Borneo Post - 12th December 2007

# Knowledge taken to the grave

State Secretary wants traditional knowledge of plants recorded quickly before too many elders pass on

By Jacob Achoi

**KUCHING:** State Secretary Datuk Amar Wilson Baya Dandot wants the indigenous people's traditional knowledge (TK) of plants in the State to be documented quickly.

He pointed out that as the passing down of such knowledge to the young was diminishing, there was a need for authorities like the Sarawak Biodiversity Centre (SBC) to act fast to record it.

Quoting a saying which goes, "When an elder dies, a library burns down", Wilson said such a situation must not happen in the State.

"Traditional knowledge retained by our indigenous communities is slowly disappearing, so we need to accelerate, intensify and improve our research and documentation," said Baya yesterday when he officiated at a traditional knowledge documentation seminar at SBC,

Km21, Jalan Puncak Borneo. Wilson, who is also SBC chairman, suggested that SBC officers go to several villages to meet elderly people and record their knowledge of various plants.

Such knowledge passed down orally from generation to generation, was almost never formally documented, he said.

He urged all indigenous communities to document their respective traditional knowledge which he called an important heritage that must not be allowed to disappear.

Although he was pleased to note that about 1,500 medicinal plants had been documented, he wanted more to be done.

"With more than 30 indigenous ethnic groups in the State, we have right at our doorsteps an abundance of traditional knowledge of how our people have utilised plants for medicinal, cosmetic and general purposes for generations," he said.



**KNOWLEDGE SEEKERS:** Wilson (centre, front row) and Dr Rita (third left, front row) with the seminar speakers and participants.

"We need to come down to earth when it comes to bio-diversity. We need to find out other uses of the plants, and we need to discover their commercial usefulness and start working on it."

He pointed out that after four similar seminars (the last one in

2002), it was necessary for SBC to "compare notes" and take stock of what it had achieved so far.

Wilson also said it was about time SBC came up with a documentation book which could come in volumes.

He explained that the book could

just hold general knowledge of individuals and ethnic groups and not necessarily scientific content.

The two-day seminar facilitated the exchange of views and information on issues, challenges, and opportunities in documenting traditional knowledge.

The participants are from the Bidayuh, Iban, Penan, Kelabit, Lun Bawang, Kayan, Kenyah, Selako, Bisaya and Malay communities.

The four speakers, who are renowned in their respective fields, shall delve into subjects like beyond documenting traditional knowledge, medicinal plants of Sarawak, plant propagation and landscape, and maintaining a community garden.

The speakers are Dr Paul Chin (project leader/ consultant for International Tropical Timber Organisation), Dr Paul Quek (documentation scientist, Biodiversity International), Voon Boon Hoe (former researcher, Agriculture Research Centre) and Sinsoon Jabu (Deputy Dean of Agriculture and Food Sciences Faculty, UPM Bintulu).

SBC chief operating officer Dr Rita Manarung was also present at the function.

The Borneo Post - 13th December 2007

# Over 2,000 plants documented

Of these 1,500 are medicinal plants, which shows State's herbal potential, seminar told

**KUCHING:** Biodiversity-rich Sarawak has documented over 2,000 plants used by the local indigenous communities for various purposes such as medicinal use and crafts-making, State Secretary Datuk Amar Wilson Baya Dandot said Tuesday.

The Sarawak Biodiversity Centre (SBC) facilitated the documentation works of traditional knowledge together with the local community, using proper documenting techniques in a project launched in 2002, he said.

"To date we have documented 1,500 species of medicinal plants. This goes to show the huge potential of these species to be developed as herbal and medicinal plants," he said when opening the Traditional Knowledge Documentation Seminar 2007, here.

About 50 representatives from the State and Federal departments and agencies and various ethnic associations attended the two-day seminar aimed at exchanging views and information on the issues, challenges and opportunities in documenting traditional knowledge.

Wilson, who is the SBC chairman, urged the local communities to speed up the documentation of their respective traditional knowledge to safeguard the valuable heritage and to ensure that they were rightly acknowledged if the knowledge was used to produce commercial or medicinal products.

He said traditional knowledge, often passed down through generations orally and seldom in any form of formal documentation, was slowly disappearing as the older generations passed away and the younger ones became less dependent on their elders' indigenous knowledge.

"The old folk are like a living library. There is a saying that when an elder dies, a library burns down. It clearly illustrates the importance of documenting traditional knowledge ... and we must do it fast," he said, urging the SBC to publish books on indigenous plants in the state.

Meanwhile, SBC's chief operating officer Dr Rita Manarung said the traditional knowledge documentation programme was vital to ensure that the indigenous communities which practised such knowledge over the centuries were duly acknowledged as the source of such knowledge.

She said that traditional knowledge could contribute to the economic well-being of a community in the long run if it was properly utilised.

To properly document their knowledge, the local communities have been provided with necessary skills on the collection, documentation techniques, propagation, and management of useful indigenous plants, she added. — Bernama

*SBC News* **2008**

The Borneo Post - 19th January 2008

## Law on traditional knowledge protection to be ready by year-end

**KUCHING:** The drafting of a specific law to protect traditional knowledge in the country is now in progress and is expected to be ready by end of this year.

SBC traditional knowledge research officer Margarita Naming said in Malaysia, there were no laws on traditional knowledge protection, thus there was a need to have such law.

"This is to ensure that the rights of the knowledge holders or local communities will be recognised and a mechanism to ensure equal benefit sharing with the local communities is created," she told reporters at a traditional knowledge seminar held here yesterday.

SBC is part of Malaysian Intellectual Property Organisation (MIPO) and recently in Kuala Lumpur she attended a seminar on traditional knowledge.

"In that seminar we actively gave inputs to the draft and we really hope that the draft would be ready by end 2008," she said.

According to her, SBC has been carrying out projects to document traditional knowledge in Sarawak since 2001 and has made several valuable and interesting findings.

"We can see that a lot of valuable plants came from communities located far away from towns and these plants collected are commonly used as medicine and antidotes. They were also encouraged to document other usage of plants," she said.

She said from the Penan community alone between 300 and 400 plants were documented and categorised as traditional knowledge.

According to her, documenting traditional knowledge from various communities had its own set of challenges including trying to retrieve near-lost or lost knowledge following the death of older members of a community.

"So now we are trying to work as fast as we can and hope that whatever useful knowledge available to us will be passed down to future generations," she said.

Naming also said it is harder to get young people to learn about traditional cures nowadays all because of the ready availability of modern medicine.

"With drugs like Panadol available, less and less people bother to walk into the jungle for traditional cure," she said.

Naming said the documentation project will continue through the Ninth Malaysia Plan and that this year documentaries will concentrate on the Melanau and Kenyah," she said.

She said SBC hoped that the project would be able to produce some short term and long term products that would benefit the stakeholders.

At community level, SBC had already started to help the local communities to set up their herbarium and community garden which have eco-tourism potential.

"And if long term potential plants are identified, we can contract the mass production of the plant to the community and these plants can be bought by SBC or other companies interested to work the plants."

The seminar was jointly organised by SBC and Sarawak Development Institute and the speaker was SBC chief operating officer Dr Rita Manuring.



Participants listening attentively to Dr Rita.

## SBC mulls law to protect traditional knowledge

By Hazel Sujatha

**KUCHING:** The Sarawak Biodiversity Council hopes to prepare a draft law by the end of this year to protect traditional knowledge (TK) in the State.

SBC is part of the Malaysian Intellectual Property Organisation (MyIPO) and is actively giving input through this project. MyIPO targets to come up with a protection and a specific law for TK," she said.

On traditional documentation, she said only 12 out of 36 ethnic groups were involved so far, with the Penans being the most active in plant documentation and their uses.

Margarita later explained that 2,563 plants had been documented by SBC so far but she could not specify on the target this year as it is community-based.

She added that SBC would concentrate more to the Melanau, Iban and the communities in Bario and Lun Bawang this year.

Kampung Semadang and Kampung Kiding are some of the more active villages as the older generations there are still very active.

"The problem with the older folks is that they find it hard to walk back to the forest, so we are trying to work as fast as we can to document their knowledge," said Margarita.

SBC, she said, was keen to help villagers and communities understand the importance of traditional documentation as it defined heritage of a certain community or ethnic group.

Certain plants were also known to have healing properties and used as antidotes to animal poisoning, she said.

The Sarawak Development Institute (SDI) also encourages the documentation of other uses of such plants, whether for food, crafts, products or house building.

Margarita said that SBC was looking at the heritage which passed on to the next generation once a certain plant is documented at the community level while



Dr Rita speaking on traditional knowledge at Wisma Bapa Malaysia.

ecotourism and contract farming is another short term benefit.

"Potential plants that have been identified for lotion or body shampoo can be contracted out to the community for mass propagation of the plants and for communities to do contract farming," she said, adding that these plants could be bought by SBC or any other companies that were interested in the specific plants as raw material.

She lamented that "Excess Benefit Sharing System (ERSS)" is not in place yet, so the benefits, when developed, whether through a trust fund, medicine or a community, are still uncertain, she said.

Earlier Chief Operating Officer of Sarawak Biodiversity Centre, Dr Rita Manuring highlighted the importance of documenting traditional

knowledge in her talk "Traditional Knowledge Documentation".

She explained that the main objective of the documentation was to facilitate the indigenous communities in the State to preserve their traditional knowledge through proper recording or documentation techniques.

Such efforts are carried out through capacity building workshops that provide the local community with necessary skills on documentation techniques, propagation and management of useful plants.

Three short videos 'Documentation of Traditional Knowledge by Local Communities' (training video), 'Conservation of Traditional Knowledge' (tools and methods) and 'Preservation of Plant Specimens' were shown during the talk.

# Jelaing urges SBC to share data with MyIPO

By Peter Sibon

**KUCHING:** The Sarawak Biodiversity Centre (SBC) has been urged to share its data on its traditional knowledge with the Intellectual Property Corporation of Malaysia (MyIPO) to prevent them from being monopolised by unscrupulous people, said Deputy Minister of Domestic Trade and Consumers' Affairs, Jelaing Mersat.

He said MyIPO could assist SBC by registering them under property rights.

"As such I would like SBC and MyIPO to collaborate on this matter especially on the usage of the renowned Bintangor tree which has been proven to have valuable properties for the cure of HIV/AIDS.

"We also have other traditional knowledge which we should preserve so that they will not be extinct as we have more than 30 ethnic groups in Sarawak," said Jelaing when officiating at the State-level Intellectual Property Rights Seminar 2008 at a leading hotel here yesterday.

He added that the genetic resources in the State needed to be exploited for the benefit of the people.

"Another important component of the Intellectual Property which is equally important is the Geographical Indication (GI) which has not been fully exploited as we have many products which are yet to be registered," he pointed out.

Jelaing said only five GI had been

registered since 2003 to April 30 this year.

"The five GI are Sarawak Pepper, Sabah Tea, Borneo Virgin Coconut Oil, Sabah Seaweed and Tenom Coffee. But efforts are made to register many more GI from Sarawak such as the 'pua kumbu' (Iban community), 'tebaloi' and 'uma' (Melanau), rattan mat (Bidayuh), Bario rice (Kelabit), 'sape' and hats (Orang Ulu)," he said.

Meanwhile, Director-General of MyIPO, Kamel Mohamad said even though MyIPO was rather a new agency, it was ready to provide the necessary service for the people through awareness programmes, seminars and other approaches.

"Our agency may be new as it was only set up on March 3, 2003, but we are made up of young and enthusiastic workforce which is ever ready to provide the necessary service for the people," he said.

He also urged individuals to patent their creations to prevent disputes in the future.

"We have set up Intellectual Property Courts to settle disputes throughout the country including one High Court each in Sabah and Sarawak to look into this issue," he said.

Some 250 participants took part in the one-day seminar which was jointly organised by the Sarawak Government and MyIPO.

Seven topics were presented at the seminar.



Jelaing (centre) accompanied by Kamel (right) and Assoc. Prof. Rohazzar Wati Zualalcobley (left) arriving for the opening of the seminar. Also present are Datu Ghafur Shariff and William Nyigor. PHOTOS: RAMIDI SUBARI



A section of the participants of the seminar.

The Borneo Post - 2nd July 2008

## Chance to make your flower bloom all year round

**KUCHING:** Horticulturists and garden enthusiasts are invited to attend a talk to be organised by Sarawak Biodiversity Centre (SBC) on July 18 at its Lecture Theatre located at Km20 Jalan Borneo Heights in Semenggoh.

The talk called 'Spring Time All the Time: The Ever Flowering Tropical Garden', will start at 9.30am and will be conducted by renowned botanist Dr Francis Ng, a senior fellow of the Academy of Sciences Malaysia.

Among subjects expected to be covered are challenges

in tropical flower gardening and tips on how to get plants to flower all-year round.

Dr Ng is SBC botanical advisor and is responsible in helping to set up its Laila Taib Ethnobotanical Garden as well as the Rainforest Garden at the One Utama Shopping Centre in Bandar Utama.

He is also the author of the internationally acclaimed book 'Tropical Horticulture and Gardening' which was rated as 'the best and most complete treatment on tropical gardening in Southeast Asia ever written' in the Flora Malesiana Bulletin.

Admission is free, but due to limited seats, members of the public are advised to register as soon as possible by contacting Asha or Hamim at 082-610610 or by email at biosar@sbc.org.my.

The Borneo Post - 10th July 2008

## Centre to hold biodiversity talks

**KUCHING:** Sarawak Biodiversity Centre (SBC) in collaboration with Malaysian Biotechnology Information Centre (MABIC) is organising a one-day seminar entitled 'The Convergence of Biotechnology and Biodiversity in Wealth Creation' on July 29 at SBC's premises in Semenggoh.

SBC in a press statement yesterday, said the seminar would be held from 8.30am until 4.30pm where a qualified panel of speakers will discuss ways to add value to the state's biodiversity by utilising technological advancements.

A renowned scientist from Pakistan, Professor Dr Muhammad Iqbal Chaudhary, will speak on utilising

biodiversity towards molecular treatment of diseases.

The Furley Group of Companies managing director Stuart Soo will share his experience with the audience on the ways of translating biodiversity into wealth.

MABIC executive director Mahaletchumy Arujanan will deliver a paper on 'Biotechnology and Biodiversity-Friends or Foes?' which will be aimed at dispelling the myths of biotechnology.

The programme will also include an overview of SBC's roles and activities.

Admission is free but due to limited seats, the public is encouraged to register early. Lunch and refreshments will be provided.

Those interested to join the seminar are advised to contact Asha or Hamim at 082-610610 or via email at biosar@sbc.org.my.

The Borneo Post - 22nd July 2008

## Bio International Convention meeting point for innovators in biotechnology sciences



**COLLABORATIVE MEETING:** (From left) Dr Rita Manurung, Ismawi Ismuni, Dr Roger Wyse and Baya at Bio International 2008.

**KUCHING:** The Bio International Convention 2008, held in San Diego this year, attracted more than 20,000 participants from 70 countries.

The convention also featured 2,200 leading biotechnology companies from around the world.

The annual convention is a meeting point for innovators in biotechnology sciences from around the world to connect with investors, executives, policymakers, journalists and government leaders.

Sarawak, part of the Malaysian delegation to convention, was represented by State Secretary Datuk Amar Wilson Baya Dandot, State Planning Unit director Ismawi Ismuni and Sarawak Biodiversity Centre (SBC) chief operating officer Dr Rita Manurung and Senior Research officer Dr Charlie Yeo.

Science, Technology and Innovation Minister Datuk Dr Maximus Ongkili led the 82-member Malaysian delegation to the world's largest annual biotechnology event organised by the Biotechnology Industry Organisation (BIO) in the USA.

The state delegation also held several meetings with potential partners in biotech development. They met with Burrill and Co. managing director Dr Roger Wyse, who is also the co-chairman of the

Malaysian Life Sciences Capital Fund. Discussions between Wyse and the Sarawak delegates revolved around investment interests in Sarawak's biotech potential.

During the trip to the United States, the Sarawak delegation also took the opportunity to meet with key players of Ohio State University Medical Centre (Osumc), working on the potential anti-cancer compound, silvestrol.

The Sarawak government has patented the compound and the meeting discussed how Sarawak could collaborate with Osumc so that scientific interactions could be established.

Matters on how research on silvestrol and other potential anti-cancer compounds isolated by SBC could be developed for human therapeutic use were also brought up during the discussion.

The state delegation was also updated on the latest research findings by Osumc researchers working on silvestrol.

Likewise, Osumc was informed of the current work done at SBC on the compound.

SBC is currently looking into the isolation and extraction of silvestrol from *Aglaia* species found in Sarawak, to play an active part in this multi-disciplinary silvestrol

research group.

The Osumc research team is interested in bringing the compound through pre-clinical trials to cancer patients for treatment of acute and chronic lymphocytic leukemia.

The Osumc research team comprises Dr A Douglas Kinghorn (Jack L. Beal Professor and Chair of the Division of Medicinal Chemistry and Pharmacognosy), Dr Michael Grever (Professor and Chair of Department of Internal Medicine) and Prof David Lucas (Division of Hematology-Oncology).

The meeting also involved Dr David J Newman, the chief of Natural Products Branch, National Cancer Institute (NCI). NCI is the US government's principle agency for cancer research.

The agency is funding the pre-clinical research on silvestrol for treatment of chronic lymphocytic leukemia.

While at Osumc, the Sarawak delegates also met with Dr Daniel D Sedmak, the executive vice-dean and senior associate vice-president for Health Sciences, and Pamela Potter of Pamela Potter Associate Director, Office of Global Health Education on fostering relationships and improving global health issues through academic and research collaboration.

# Sarawak catches up with potential biotech partners

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Science, Technology & Innovation Minister, Datuk Dr Maximus J Ongkili led Malaysia's 82-member delegation to the world's largest annual biotechnology event organised by the Biotechnology Industry Organisation (BIO) in USA.

Besides taking part in the convention activities, the State delegation also held several meetings with potential partners in biotech development. Among them was a meeting with Dr Roger Wyse, Managing Director of Burrill and Co. Wyse is also the co-chairman of the Malaysian Life Sciences Capital Fund. Discussions between Wyse and the State's team revolved around investment interest in Sarawak's biotech potential.

During the trip, the Sarawak delegation also took the opportunity to meet with the key players of Ohio State University Medical Centre (OSUMC)

working on the potential anti cancer compound, silvestrol. The compound has been patented by the Sarawak Government.

#### Collaboration discussed

The meeting discussed how Sarawak could collaborate with OSUMC so that scientific interactions could be established. Matters on how research on silvestrol and other potential anti-cancer compounds isolated by SBC could be developed for human therapeutic use were also brought up during this discussion.

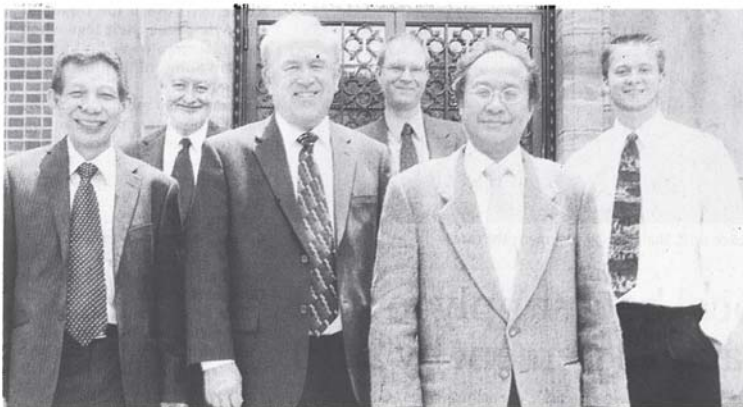
The State delegation was also updated on the latest research findings by OSUMC researchers who are working on silvestrol. Likewise, OSUMC was informed of the current work done at SBC on the compound. SBC is currently looking into the isolation and extraction of silvestrol from *Aglaia* species found in Sarawak to play an active part in this multi-disciplinary silvestrol research group.

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From left, Dr Rita Manurung, Encik Ismawi Ismuni, Dr Roger Wyse and Datuk Amar Wilson Baya Dandot at Bio International 2008.



From left, Encik Ismawi Ismuni, Dr A. Douglas Kinghorn, Dr Michael Grever, Dr David Lucas, Datuk Amar Wilson Baya and Mr Ryan Edwards.

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delegation also met with Dr. Daniel D. Sedmak, the Executive Vice Dean and Senior Associate Vice President for Health Sciences and Pamela Potter, Pamela Potter Associate

Director, Office of Global Health Education on fostering relationships and improving global health issues through academic and research collaboration.

The Sunday Post - 14th September 2008

# Soap-making suitable for cottage industry



POTENTIAL: Hand-made soaps have good potential for cottage industry.

In recent years, cottage industry in the country has gained popularity. Some do part time while others make it their main source of income.

This industry is normally carried out on a small scale at home. Materials for manufacturing products are easy to obtain locally — and cheap as well.

According to Subhanis Najidines, a research officer from the Chemical Engineering Dept (FPM of Universiti Teknologi Malaysia, the popular type of cottage industry in the country were based on agriculture, wood, fabric, handicraft and food.

However, he pointed out that in time to come, hand-made soap could also become a viable product.

"With the various potential herbs, and essential oils available in the region, these shouldn't see shortage of raw materials to produce good grade local soaps," said Subhanis, who recently facilitated a hand-made soap workshop with his colleague Moid Farid Mohamed.

The workshop was organised by the Sarawak Biodiversity Centre under its Traditional Knowledge Documentation Programme and attended by about 20 people.

He added that it was important for hand-made soaps to have their own "distinctive characteristics" to be marketable.

"An anti-bacterial fragrance used, for instance, will do better than the ordinary body soap," he said.

According to him, there are many potential herbs and plants with anti-bacterial properties in Malaysia — among them clove vera and eucalyptus — while good local essential oils come from 'labdan' sandalwood, lemon grass and many more.

Apart from the process of soap-making is not complicated — and can be mastered with some training.

However, Farid stressed that soap is not a simple product. "Any products used to clean, change, repair, beautify the skin or prevent body odor on a person are categorized as cosmetic products."

"And in the case of hair and bearded body soaps, they fall into this category. For safety purposes, there are generally five cosmetic product quality controls in Malaysia," he added.

Farid explained that all cosmetic products in the country come under the Poison Act 1952 (amended 1989) and the Control of Drug and Cosmetic Regulations 1984.

To manufacture hand-made soap, sodium hydroxide (source of alkaline) is an important chemical.

Under Section Eight of the Poison Act 1952, to import, store and use sodium hydroxide, a license is needed.

From 2002 till last year, all cosmetics products must be registered before they could be marketed.

Details of the products had to be handed over to the National Pharmaceutical Control Bureau (NCPB).

But starting this year, Farid



CLARIFYING ISSUES: Farid briefing participants on hand-made soaps.

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APPEALING: A beautiful hand-made soap.

## How to produce hand-made soaps

**NOW** did people in the past clean themselves? Did they use soap like we do now? In fact, origins of personal cleanliness date back to prehistoric times when water was discovered to be essential for life.

People find new water and have about its cleaning properties — they knew it could at least wash away mud from their skin.

During the excavation of ancient Babylon, a soap-like material was recovered in a clay cylinder, suggesting that soap use was introduced as early as 2000 BC.

Later on, the cylinder revealed that fats were added with ashes to make soaps. However, they did not indicate the purpose of soap.

Egyptian records of the Ebers Papyrus, a medical document from about 1500 BC, on the other hand, described cardamom and vegetable oils with alkaline salts to produce soap-like materials used to treat skin diseases and for washing.

According to an ancient Roman legend, soap got its name from Mount Sapo where animals were sacrificed, and rain washed a mixture of melted animal fats and wood ashes down to the city and along the Tiber River.

Women at that time found the clay mixture made their washing easier — with much less effort.

The history of how humans discovered soap went on until the 19th century when the Europeans established the soap-making craft and did some modifications to make soap more appealing. They added fragrances to the fat and alkaline mixture.

Ingredients used then have given rise to many types of soap — to clean, shampoo, bathe and do the laundry.

Soap is defined as a substance used to reduce water surface tension during cleaning. Most soaps are made of chemical compounds containing sulfates.

Combined with water during bathing or washing, they help to clean people and things by reducing the ability of fat and oil to hang onto the skin and the laundry.

Making soaps is not as difficult as one may imagine. Hand-made soaps — given the right ingredients — can be produced at home without the help of machines.

Before we see some guidelines on making soap at home selected from the recent handbook soap workshop held at Sarawak Biodiversity Centre.

### THE IDEAL SOAP FOR THE HAND WASH

Materials	Measurements
Distilled water	70g
10% Sodium lauryl ether sulphate	10g
Potassium sorbate	0.2g
Sodium benzoate	0.2g
Glycerin	1g
Coconutnonyl betaine	1g
EDC (Ethanol diethoxysulfate)	1g
Cholic Acid	0.15g
Water-soluble cellulose	0.05g
Sea Salt essential oil	0.5g
Sea Salt	1.4g

- METHOD**
1. Heat the distilled water in a beaker until it reaches the temperature of 50°C Celsius.
  2. Add the gel the 10% into the water and stir the mixture until it is fully but completely dissolved.
  3. After that, add potassium sorbate and sodium benzoate into the mixture and stir gently.
  4. Add cholic acid to the mixture to assist the mixture's pH to be around 5.5 to 6 before adding water based coloring.
  5. Add the essential oil and gel the mixture a good stir.
  6. Add salt to thicken the mixture.
  7. Place the liquid soap in airtight containers and it's ready for use.

### DIY HAND GROOMING THERAPY SOAP BAR

Ingredients	Measurements
Distilled water	34.0g
Sodium hydroxide	60.7g
Palm oil	47.2g
Coconut oil	20.41g
Oil-based coloring	0.02g
Essential oil	1g

- METHOD**
1. Heat both the palm oil and coconut oil in a beaker (A) to a temperature of 35 to 40°C Celsius.
  2. In another separate beaker (B), pour sodium hydroxide into distilled water to dilute the chemical.
  3. Once the sodium hydroxide is poured into the water, white colored vapors will be released and the beaker will turn warm due to chemical reactions. Avoid inhaling the vapors.
  4. Ensure the temperatures of the diluted sodium hydroxide also reaches 35 to 40°C Celsius.
  5. Pour the content of beaker B into beaker A and stir the mixture using a glass rod until everything has melted and thinned.
  6. Add preferred essential oil and coloring to the mixture and continue to stir.
  7. Once the mixture is slightly sticky, pour it into small plastic moulds or soap trays with air.
  8. Leave the final moulds for two days to allow saponification.
  9. Remove the soap bars from the moulds and leave them in a dry place for four weeks to allow the aging process.
  10. After four weeks, the finished soap is ready for use.

Hand-made soaps are not only easy to produce but also commonly used. The market is always there. What is needed is just some creativity to make it appealing.

With proper education, the soap will only give one a satisfying shower but also make good soaps, gifts and decorations for various occasions.

The Borneo Post - 23rd September 2008

## Centre to hold orchid family talk Oct 3

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will be holding a talk on Phylogenies of Hypoxicoideae and Phaeognopsis related to orchids at its premises in Semenggoh at 10am on Oct 30.

The talk will be delivered by Dr Alexander Kocyan, researcher and lecturer at the Swiss Federal Technical Institute of Technology, Zurich.

According to SBC press release issued here

yesterday, phylogenies refers to the science of representing patterns of relationships between organisms. These patterns are those that have resulted through evolution.

In his talk, Dr Kocyan will present information on recently produced molecular phylogenies of the monocot family Hypoxicoideae and the orchid subtribe Aeridinae.

In the second part of his talk, Dr Kocyan will touch on the subtribe Aeridinae of Orchidaceae which belongs

to the largest orchid subfamily-Epidendroideae.

The talk is targeted at researchers, horticulturists, students of institutes of higher learning and interested members of the public.

Intending participants are to contact Asha Kaushal at 082-610610 or email to biosar@sbc.org.my to register. Admission is free but as seats are limited, registration for the talk will be on first-come-first-serve basis.

Eastern Times - 23rd September 2008

## SBC organises talk on Phylogenies

**KUCHING:** The Sarawak Biodiversity Centre (SBC) is organising a talk on Phylogenies of Hypoxicoideae and Phaeognopsis related Orchids at 10am on October 3 at its premises in Semenggoh.

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ily-Epidendroideae.

The talk is targeted at research officers, horticulturists, students of institutes of higher learning and interested members of the public.

Those who are interested in attending the talk, can contact Asha at SBC by calling 082-610610 or through email biosar@sbc.org.my to register. Admission is free. However, as seats are limited, registration for the talk will be on first-come-first-serve basis.

Eastern Times - 24th September 2008

## Public talk at SBC on Oct 15

**KUCHING:** The Sarawak Biodiversity Centre (SBC) is organising another public talk on October 15 at its premises in Semenggoh at Mile 12, Borneo Heights Road.

The one-hour talk will be delivered by Dr. Lars Olof Bjork an associate professor in Ethnobotany and Pharmacognosy.

Dr Bjork is currently supervisor to PHD Laos, Bolivia University of Lund and Uppsala University in Sweden.

He is also an advisor to compa-

nies producing herbal medicines and essential oils. He has published numerous scientific papers relating to biochemistry, pharmacognosy and more recently Access and Benefit Sharing (ABS) and Intellectual Property Rights (IPR).

During the talk on October 15, Dr. Bjork will describe barcoding of genetic resources and cite several examples of gene banks and research institutions that use barcodes for genetic resources.

He will also discuss how barcodes of genetic resources can be used as a tool for Access and Benefit Sharing in areas of the utilization of these genetic resources.

Besides interested members of the public, the talk is also aimed at government officers, the legal fraternity, researchers, students of institutions of higher learning.

Those interested to attend the talk can contact Asha Kaushal at SBC at 082-610610.

# Documenting traditional knowledge

## SBC working with communities to facilitate documentation on how they use biological resources in biodiversity

By Ting Tieng Hee

**KUCHING:** The documentation of traditional knowledge is important not only to preserve the heritage of the respective indigenous communities but also to find out the potential development in herbs and pharmaceuticals.

"It is a heritage that is depleting and it would be lost in five or ten years' time if we don't do the documentation now," said Sarawak Biodiversity Centre (SBC) research officer (traditional knowledge) Margarita Naming.

She said the knowledge that the older people possessed was 100 per cent intact, but when handed down to the next generation, it could be reduced to 20 per



Margarita Naming

cent as it was passed down through words of mouth and not through documentation. "When we visit some of these communities, we can see that the older people are not practising traditional knowledge. The knowledge

is not actually being handed down to the younger people in written form," she said.

Margarita explained that traditional knowledge was the utilisation and management of natural resources by the indigenous people, and perfected over a period of time. This knowledge included practice used for centuries to grow food and to survive in their natural environment.

"Under our Traditional Knowledge Documentation Programme, we work with the local communities to

facilitate documentation on how they use the biological resources in biodiversity especially plants for useful purposes such as medicine, food, handicraft or flavouring," Margarita told reporters after attending a talk conducted by researcher and lecturer from Swiss Federal Technical Institute of Technology in Zurich, Switzerland, Dr Alexander Kocyan on 'Phylogenies of Hypoxidaceae and Phalaenopsis related Orchids' at the centre here yesterday.

SBC chief operating officer Dr Rita Manurung was among the more than 50 people who attended the talk.

"What we usually try to do is to link the old and young generations where the younger ones will learn from the older ones, and do the documentation," she added.

She said the communities involved in the programme were trained on techniques of collecting plants from the forest and documenting the knowledge in written form or in cassette form.

"The Traditional Knowledge Documentation Programme began in 2001 where we had the first workshop for Sarawak, after which two pilot projects were set up with the Bidayuh community and two more with the Penan community.

"After that we proceeded to expand the programme to other communities like Iban and Orang Ulu such as Kelabit, Lun Bawang, Kenyah and Kayan," said Margarita.

As SBC is now in the discovery phase, Margarita said they were also looking at the potentials of the plants, long-term discovery of their pharmaceutical uses and short term discovery of herbal products.

"If we discover something new from these plants, like a cancer drug, it would be a bonus for Sarawak, and the world as well."

She said out of the more than 2,005 species collected by the centre thus far, only 350 species had actually been identified and documented.

"The identification and documentation process is a bit strenuous and we are

working very closely with specialists from Forest Department's research centre because they are more established in their herbarium setup, and our specimens are actually referred to them," she said.

"We do get assistance from experts and researchers on vacation in Sarawak like Dr Kocyan to help us identify the plants," she added.

She said SBC had so far covered 32 locations, and 12 ethnic communities under the programme.

"For plants that we are documenting, we are keeping two sets of records - one for our herbarium for further identification work, and the other is kept at community level because they would need to know what are the plants that have been contributed to SBC," added Margarita.

## Biodiversity-biotechnology symposium Nov 19-21

**KUCHING:** Participants in an upcoming symposium on biodiversity-biotechnology will be able to identify networks and opportunities for research collaboration, partnerships and business ventures, and contribute to the growth of the country's biodiversity-biotechnology sector.

The symposium, jointly organised by the Sarawak Biodiversity Centre and Biotech Corp, Malaysia, and supported by the state government will provide the ideal platform for the expansion of networks among the participants.

Themed 'Biodiversity-Biotechnology: Gateway to Discoveries, Sustainable Utilisation and Wealth Creation', the symposium is also expected to update the participants on existing

policies and laws on biodiversity, traditional knowledge, access and benefit sharing, intellectual property and genetic resources.

To be held from Nov 19 - 21 in Kuching, the symposium also welcomes daily walk-in participants who need to pay RM150 each.

Students who bring along their identification cards can walk in for RM100 per person, while a full three-day package costs RM550 per person.

An exhibition will also be held in connection with the symposium and will feature demonstrations by indigenous communities on Traditional Knowledge Documentation, activities of the Sarawak Biodiversity Centre as well as displays put up by the Sarawak Ministry of Industrial Development,

Malaysian Intellectual Property Organisation, Malaysian Genomics Research Centre, and laboratory instrumentation suppliers.

The exhibition will also feature a series of Bornean wildlife photography by notable botanist and photographer, Chi'en C Lee, as well as scientific poster presentations by some of the delegates to the conference.

Entry to the exhibition is free and more information on the symposium can be acquired by contacting 082-610610 or 016-8936991.

The Borneo Post - 20th November 2008

## What Sarawak Biodiversity Centre has done is fantastic: CEO

**KUCHING:** The Sarawak Biodiversity Centre (SBC) is still a long way off from having the capabilities to develop drugs but its work now is no less vital for mankind.

Malaysian Biotechnology Corporation Sdn Bhd chief executive officer Datuk Iskandar Mizal Mahmood yesterday described the work done by SBC as "fantastic".

He said developing biodiversity for drugs, for instance, required plenty of money and time and the way things had been done in the industry was through collaborations between various parties.

"Looking at it at a global scale you will not be able to see one particular party going all the way to the end, this is a world wide model.

"What SBC is doing here is fantastic because we have a certain molecule that is wanted all over the world and we are collaborating," he said referring to the CBL316 compound found in Sarawak for cancer therapy.

Iskandar said this at a press conference after the opening of the Biodiversity and Biotechnology Symposium 2008. A

reporter had asked when SBC could start developing its own drugs.

At the opening ceremony, Chief Minister Pehin Sri Abdul Taib Mahmud, who was represented by Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan, said the state owned the patent for CBL316.

Emphasising the need for collaboration, Iskandar

said the technology used by drug companies might have also been developed through collaborations around the world.

He said there was no such thing as one particular company doing everything or one particular country doing everything.

"What is more important here is that we can see SBC doing good work in terms of

trying to commercialise a certain compound out to the market. So in this particular case, looking at it from the national perspective, I do commend what SBC is doing," Iskandar said.

"Let's try to understand that it is just not about SBC taking it through all the way to the end, a lot of collaboration has to happen," he stressed.

New Straits Times - 20th November 2008

## Biodiversity board to advise state govt

**KUCHING:** An international advisory board will be set up to advise the state government on biodiversity and research and development.

Deputy Chief Minister Tan Sri Dr George Chan, who announced this yesterday, said they were in the process of forming the panel, whose members would consist of experts in various fields.

"The board will be formed as soon as we have selected its members," he said after launching the three-day "Symposium on Biodiversity and Biotechnology: Gateway to Discoveries, Sustainable Utilisation and Wealth Creation" here.

He added that the board's chairman would be Chief Minister Tan Sri Abdul Taib Mahmud.

"We have a few names in mind as potential members of the board, but they have yet to be vetted," he added.

On whether the Sarawak Biodiversity Centre (SBC) has the capacity to develop drugs, Dr Chan said it had neither the financial means nor the expertise at this stage.

"But we hope to tell the world what SBC has done, including carrying out inventories on biodiversity," he said.

Malaysian Biotechnology Corporation Berhad chief executive officer Datuk Iskandar Mizal Mahmood described what SBC had done as "fantastic", as it had discovered a substance that has world-wide demand.

He added SBC should collaborate with big pharmaceutical companies and universities to develop drugs.

"As we can see, there is no such thing as one particular company or one particular country doing everything.

"Even the US cannot do all the things it wants to do.

"There must be collaboration."

Earlier in his speech, Dr Chan said Sarawak had plenty of biodiversity and therefore natural products available to study.

The state government, working with Australian scientists, had in 2004 filed a patent on a compound called CBL316 for cancer therapy, he said.

"What is interesting about this compound is that it is very potent in killing major types of cancer cells, including lung, breast, prostate, leukaemia and brain tumours.

"This test was done at the National Cancer Institute in the US, and currently, the Ohio State University Medical Centre is seeking our collaboration to develop the compound for treating chronic lymphocytic leukaemia."

Dr Chan said he was informed that the compound was originally derived from a local tree found in the highlands of Ba'Kelalan.

The other natural product that SBC was developing was calanolide, which was first isolated from the Bintangor tree.

"Calanolide has been shown to be effective against HIV and it is now being tested in clinical trials," he said.

SBC chairman Datuk Amar Wilson Baya Dandot said SBC was looking at plants used by the indigenous people for medicine, food and flavouring.

"Microbes or microorganisms, being part of our biodiversity, are also an integral part of our research programme.

"We hope to be able to discover useful organisms for antibiotics and industries.

"Who knows we might even discover algae or bacteria that produce hydrocarbons in an efficient manner that could be used as a renewable energy source," he said.

The Borneo Post - 20th November 2008

## Biodiversity advisory board once we have right people: Dr Chan

**KUCHING:** The state government will set up an International Advisory Board (IAB) to enhance the state's exploration, development and commercialisation of its biodiversity.

Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan yesterday said the board would be set up as soon as the government could find the right people to be its members.

"We want it to be international and we want to get people who are experts to sit on the board. We have got a few names but it (list) has not yet gone through the state cabinet," he said at a press conference after opening the Biodiversity and Biotechnology Symposium 2008 on Chief Minister Pehin Sri Abdul Taib Mahmud's behalf.

Dr Chan hoped that the board would be chaired by Taib himself.

Earlier, when he delivered Taib's speech, Dr Chan said: "To ensure that we have the best advice with regards to biodiversity and research and development, we will be setting up the IAB which is made of a panel of expertise from different fields in flora and fauna, natural products, drug discoveries and commercialisation. This is to help us put our best foot forward as we begin to charter an exciting approach to better utilise our biological resources."

Taib said the state was looking forward to working together with international scientists to explore the long-term prospect of the state's unique natural resources.

He said, in biodiversity-based development, it was imperative that the state sought the involvement of the research community and the private sector along with other stakeholders, such as local community organisations, to

sustainably utilise the state's biodiversity.

He also said in the excitement of searching for new discoveries, the issues of rights and benefits for communities who had agreed to share their traditional knowledge must be addressed.

This, he said, should be done through mechanisms to protect their intellectual property and share any benefit that might come along.

The three-day symposium was organised by the state government, Sarawak Biodiversity Centre and the Malaysian Biotechnology Corporation Sdn Bhd (MBC).

Themed, 'Biodiversity-biotechnology: Gateway to discoveries, sustainable utilisation and wealth creation', it was attended by about 200 participants from more than 10 countries.

MBC chief executive officer Datuk Iskandar Mizal Mahmood said the symposium was held at a challenging and exciting time.

"Challenging because of the scale and gravity of the food, fuel, financial crisis; exciting because these challenges have led to alternative thinking and approaches," he explained.

He said the RM7 billion federal stimulus package announced recently provided not only relief for the people through creating extra disposal income, housing and micro credit facilities but more importantly, it also continued focus on biotechnology as part of the national economic agenda.

Similarly, he said biotechnology was identified as a key strategy in strengthening the nation's resilience under the National Budget 2009.

He said the government recognised biotechnology as

providing significant growth opportunities despite the expected moderation in global economies.

"Malaysia is further seen as having demonstrated competitiveness in biotechnology, underpinned by the strength of our professionals in this sector, domestically and globally," he said.

Additionally, Iskandar said the RM13.8 billion allocation in Budget 2009 to enhance healthcare, including increasing the supply of medicines, intensifying research and enforcement activities, further strengthened the growth of healthcare biotechnology in Malaysia.

Equally significant, he said, was the RM50 million allocation to implement conservation programmes to enhance biodiversity in plantations; the commitment to formulate a comprehensive national energy plan by developing viable alternative energy sources including biofuels; and the commitment to obtain Roundtable for Sustainable Palm Oil certification for Malaysian oil palm plantations.

# Ray of hope from Ba Kelalan tree

## Aglaia tree may hold key to treatment of leukaemia and other forms of cancer

By Raynore Mering

**KUCHING:** The Aglaia tree, which grows in Ba Kelalan and is said to be from the 'langsai' family, may hold the key to the treatment of leukaemia and other forms of cancer.

Chief Minister Pehin Sri Abdul Taib Mahmud said yesterday the state government, working with Australian scientists, had patented in 2004 a compound called CBL316 for cancer therapy, found in the tree.

"What is interesting about this compound is that it is very potent against major types of cancer cells including lung, breast, prostate, leukaemia and brain tumours."

"These tests were done at the National Cancer Institute in USA and currently, the Ohio State University Medical Centre is seeking our collaboration to develop the compound for Chronic Lymphocytic Leukaemia (CLL)," he said.

Taib said this in a speech delivered by Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan at the opening of the Biodiversity and Biotechnology Symposium 2008.

The Chief Minister commended the Sarawak Biodiversity Centre for carrying out an inventory of trees in Ba Kelalan to identify those that produced the compound, and figure out

What is interesting about this compound (CBL316 found in the tree) is that it is very potent against major types of cancer cells including lung, breast, prostate, leukaemia and brain tumours.

Pehin Sri Abdul Taib Mahmud, Chief Minister

ways it could be produced on a larger scale.

He said that total synthesis of the compound had been achieved but it was still in the early stages of development.

When asked about Ohio State University's request for collaboration at a press conference later, Dr Chan said the state could send the university more raw materials because it owned the patent for the compound.

Asked how long it would take to develop the drug for CLL, Dr Chan replied: "It takes billions of dollars and a time frame of about 10 years. It takes a long time."

Prof Dr Gary A Strobel, an expert in biotechnology with Montana State University, USA, told the press conference that the cheapest part of the whole process was discovery.



**BIODIVERSITY DISCOVERIES:** Dr Chan (second right) scrutinises the molecular model of a compound found in a plant after opening the Biodiversity and Biotechnology Symposium 2008. From left are State Secretary Datuk Amar Wilson Baya Dandot, SBC senior research officer Dr Charles Yeo and Deputy Chief Minister Datuk Patinggi Tan Sri Alfred Jabu Numpang.

"Once you make the discovery the most important thing to do is to acquire intellectual property (rights) and that might be a bit expensive if you do it in a global sense. When that is done it is yours; whether it is

a plant, a microbe, an animal or an insect, it is yours," he said.

He pointed out that developing a single drug could require as much as half a billion US dollars.

Having said that, he

stressed that what developed countries lacked was biodiversity though they might have the resources and the expertise, and this was where Sarawak was very fortunate.

"You have diversity. You

need to protect diversity. You need to manage diversity. You need to do everything you can, not only for yourself but also for the whole world," he said.

In his opinion, Strobel felt that more effort should be

placed on discovering microorganisms because Borneo is the centre of microbial diversity.

"It needs to be studied. It needs to be inventoried. It needs to be essayed. It needs to be managed," he said.

**Biodiversity advisory board once we have right people: Dr Chan**

### HOME 4

Meanwhile, Taib said that another natural compound that Sarawak was developing was calanolide which was first isolated from the Bintangor tree.

Calanolide, he said, was shown to be effective against HIV and was now undergoing clinical trials.

In this respect, he said prospecting for biological resources for drug development was a major part in the state's initiative in biodiversity-based development.

"I believe that natural products have gained popularity due to the unique way that only nature knows how to synthesise them and come up with these complex molecules.

"The roles that these molecules play in nature for some reasons turn out to be useful to us as medicines," he said.

Eastern Times - 20th November 2008

# Board to advise state on biological resources

By Peter Sibon

**KUCHING:** An International Advisory Board (IAB) will be set up soon to advise Sarawak on how to better utilise its biological resources.

"We have already identified a few names for the board," Deputy Chief Minister, Datuk Patinggi Tan Sri Dr George Chan Hong Nam, told a press conference after launching the Biodiversity-Biotechnology Symposium 2008 at a hotel here yesterday.

He said the IAB would ensure that the state receive the best advice on biodiversity, research and development (R&D).

"The IAB will be made of a panel of expertise from different fields (in flora and fauna, natural products, drug discoveries and commercialisation) to help us "put our best foot forward" so to speak as we begin to charter an exciting approach to better utilise our biological resources," he added.

Chan pointed out that the pertinent issues in biotechnology development were the lack of funds and lack of expertise.

State Secretary and SBC chairman, Datuk Amar Wilson Baya Dandot and BiotechCorp's chief executive officer, Dato' Iskandar Mizal Mahmood also spoke at the function.

Among those present were Deputy Chief Minister, Datuk Patinggi Tan Sri Alfred Jabu, State Science Advisor, Datuk Patinggi Tan Sri Dr Wong Soon Khai and SBC's Chief Operating Officer, Dr Rita Manurung.

A total of 82 scientific posters and 24 oral papers from both local and foreign researchers and companies were presented during the three-day symposium, which was attended by 190 delegates from Malaysia and 10 foreign countries.

"The lack of money and expertise are the reasons why we are slow in developing our biotechnology sector," he said.

However, on a more positive aspect, Dr Chan added that the state would continue to collaborate with those who were willing to tap the vast potentials of the sector.

"For instance, to develop a drug, we need at least half a billion US dollars. The drug will normally take ten years to develop. And that will also depend on whether we will develop the right kind of drug," he said.



Chan (2nd right) takes a close look at a souvenir presented to him by Wilson (second left) in the presence of Wong (left), Jabu (centre) and Iskandar (right) after launching the Biodiversity-Biotechnology Symposium 2008 at a hotel in Kuching yesterday. *OTO: TM U*

Chan, who was representing Chief Minister, Pehin Sri Haji Abdul Taib Mahmud, revealed that there had been some breakthroughs in the sector, such as the filing of a patent on a compound called CBL316 for cancer therapy and the continued research on calanoliide, a compound derived from the bintangor tree, which had proven to be effective against HIV and was being tested in clinical trials.

**Very potent at killing major types of cancer cells**

"What is interesting about the CBL316 compound is that it is very potent at killing the

major types of cancer cells in the lungs, breasts, prostates, blood and brains.

"The test was done at the National Cancer Institute in USA and currently, the Ohio State University Medical Centre is seeking our collaboration to develop the compound for Chronic Lymphocytic Leukemia (CLL)," said Chan.

He said the compound was originally derived from a local tree found in Ba' Kelalan known scientifically as the "Aglala" or langsat tree.

"However, not all the species produce the bioactive compound and if they do, it is produced in a very minute amount," he said,

adding that Sarawak Biodiversity Centre (SBC) had been instrumental in carrying out the inventory of the trees in the area to identify which ones produced the compound and to figure out how it could be produced on a larger scale.

Chan said the prospecting of the state's biological resources for drug development was a major part in the state's initiative for biodiversity-based development efforts.

"Therefore, we look forward, working together with international scientists, to explore the long-term future prospects of our unique natural resources.

"An imperative part of our biodiversity-based development is to involve the research community and the private sector with other stakeholders, such as the local community organisations to sustainably utilise our biodiversity," he said.

The Borneo Post - 21st November 2008

## Awareness talk on biotech

**KUCHING:** The Sarawak Biodiversity Centre (SBC) is organising a free public awareness talk on "Understanding Biotech" at the Sarawak State Library's Auditorium at 2.30pm on Nov 24.

A teaching staff at Biotech Primer Inc. USA, Dr Karin Lucas, will deliver a two-hour briefing to explain biotechnology's different industry sectors, how research drives biotechnology, structure and types of biotech companies, careers in biotechnology and pharmaceutical discoveries.

This briefing is ideal for businesses, students in schools, colleges and universities, members of the media, and general public who wish to find out more about this new 'in' thing concerning modern science and technology.

BioTech Primer is a US company based in Maryland committed to providing quality products and services that help educate both the non-science professionals in the basics of biotechnology and the researcher in basic laboratory techniques and troubleshooting.

Dr Lucas is also a scientist at Biogen Idec where she develops protein pharmaceuticals for the treatment of cancer and multiple sclerosis. She is an active community volunteer and has served as the PR chair and later Vice President of the San Diego chapter of AWIS (Association for Women in Science). Those interested can call Asha or Ha-mim at 082-610610, 016-8939661 or email at biosar@sbc.org.my.

The briefing is free and seat reservations will be on first-come-first-serve basis.

# Centre to nurture homegrown scientists

By Lim How Pim

**KUCHING:** Sarawak Biodiversity Centre (SBC) will nurture homegrown scientists so more exciting discoveries could be made in the coming years.

Its chief operating officer Dr Rita Manurung said the centre was devoted to Malaysian research and development (R&D) in the past 10 years.

"The next few years will be very exciting as SBC looks forward to nurturing homegrown scientists, producing more exciting discoveries, getting results from collaborations and hopefully seeing products developed by entrepreneurs," Dr Rita said.

She was speaking at a dinner to celebrate the 10th anniversary of SBC at a leading hotel here on Thursday.

Dr Rita said the centre would continue to review its database for interesting plants which could be screened for new uses or products.

"We will seek entrepreneurs keen to develop products from



10 YEARS OLD: (From left) Dr Soon, Dr Rita, Dr Chan and Wilson at the cake-cutting ceremony to mark SBC's 10th anniversary. — Photo by Jude Lee

Sarawak's biodiversity besides working with both local and foreign NGOs so that our discoveries and products can reach local and overseas markets."

SBC plans to establish workshop facilities for participants of traditional knowledge documentation programme next year, she disclosed.

"We will include rooms for visiting scientists, trainers and entrepreneurs who want to experiment with product development from our R&D discoveries," she added.

She said SBC would continue to focus on R&D in biodiversity that could lead to the development of herbal therapies, nutraceuticals,

cosmeceuticals, pharmaceuticals and other products.

Among the special guests present were Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan, State Secretary Datuk Amar Wilson Baya Dandot and Assistant Minister of Public Health and Housing Datuk Dr Soon Choon Teck.

# SBC looks forward to 'very exciting years' ahead

By Ng Kiang Chiew

**KUCHING:** Sarawak Biodiversity Centre (SBC)'s plan next year is to establish workshop facilities for participants of the Traditional Knowledge Documentation programme.

There will also be rooms for visiting scientists, trainers and entrepreneurs who want to experiment on product development from its Research and Development (R & D) discoveries.

This was disclosed by SBC's chief operating officer, Dr Rita Manurung at SBC's 10th Anniversary And Biodiversity - Biotechnology Symposium 2008 Gala Dinner held at Hilton Kuching hotel on Thursday night.

She pointed out much of the 10 years had been devoted to getting the centre off the ground and establishing its place in the Malaysian R & D community.

"The next few years will be very exciting as SBC looks forward to maturing home-grown scientists producing more exciting discoveries, getting results from successful collaborations and hopefully, seeing products being developed by entrepreneurs.

"We will continue to review our database for interesting plants that we can screen for new uses or products.

"We will also seek entrepreneurs who are keen to develop products from Sarawak's biodiversity. We will work with both local and foreign organisations so that our discoveries and products can reach local and overseas markets," she said.

SBC was established following the enactment of the Sarawak Biodiversity Ordinance in 1997. With the amendment of the Ordinance in 2003, its roles and functions are now mainly focused on R & D of biodiversity that could lead to the development of herbal therapies, nutraceuticals,



Deputy Chief Minister, Datuk Patinggi Tan Sri Dr George Chan (centre), Assistant Minister of Housing, Datuk Dr Soon Choon Teck (second left), Dr Rita Manurung (third left), State Secretary, Datuk Amar Wilson Baya Dandot (second right), Prof Dr Alan Harvey (right) of Scotland's Strathclyde University and Prof Gary A. Strobel (left) of Montana State University, USA, jointly cutting SBC's 10th anniversary cake. PHOTO: JOHN CHAN.

cosmeceuticals, pharmaceuticals and other products.

## Earliest office

Its earliest office was at Wisma Sumber Alam, and in 1998, it was given its own premises at the Forest School.

"It is presently located on a 50-acre plot, about 20 kms from Kuching along Jalan Borneo Heights with facilities the state could be proud of," said Manurung in her introduction of SBC to the audience.

"In addition to five new and well

equipped laboratories for R & D, we have a herbarium of plants collected under the Traditional Knowledge Documentation programme, an ethnobotanic garden named after the honourable Chief Minister's wife, Datuk Amar Puan Sri Dr Hajjah Laila Taib, a lecture theatre and four chalets for visiting scientists.

"In progress now is the renovation of our administrative building," added Manurung, who also thanked all for the support given to SBC all these years.

In a later dinner talk on 'Taxonomy, Taxonomist & Biodiversity', Professor

Dr Susan Lim Lee Hong of the Institute of Biological Sciences, University of Malaya, Kuala Lumpur, said Malaysia was a mega biodiversity centre, but the number of taxonomists was small and fast dwindling.

In Malaysia, there was no initiatives to train taxonomists but they were needed to identify organisms for biodiversity, ecological, medical and economic reasons, for future food security and bioprospecting and for proper understanding of ecosystems.

As long as man was dependent on biological resources for food and

other essential products and still under threat from pathogens, taxonomy would remain relevant, Lim pointed out.

Other activities of the night included the cutting of SBC's 10th anniversary cake and the traditional cultural performances of three ethnic groups, namely, the Iban, Bidayuh and Orang Ulu.

Among those present were Deputy Chief Minister, Datuk Patinggi Tan Sri Dr George Chan Hong Nam and State Secretary, Datuk Amar Wilson Baya Dandot, who is also Sarawak Biodiversity Council chairman.

*SBC News* **2009**

# SBC NEWS

Eastern Times - 22nd January 2009

## SBC holds motivational get-away for staff

**KUCHING:** Sarawak Biodiversity Centre recently held an overnight motivational get-away for its staff. The outing was aimed at motivating and enhancing a sense of belonging within the organisation, particularly among the new staff. The get-away to Santubong over a weekend was information-packed and fun-filled. Speakers were invited from various organisations to impart their knowledge to the young staff. In order to promote a better understanding of working in the state Civil Service, SBC Management invited none other than the Director of the Human Resource Management Unit of the Chief Minister's Department,

Haji Sarudu Haji Hoklai to present a motivational talk. Incidentally, he was also running a team-building programme for his own staff at the same venue. During his talk, Sarudu emphasised how lucky his audience were to work for SBC. He said it was a state agency with a difference - one that had attained international recognition and was carrying out research work which was very important to mankind. The SBC Management also wanted the staff to hear of the importance of biodiversity from the perspective of a voluntary non-governmental organisation.

Rebecca D'Cruz from the Malaysian Nature Society spoke on what biodiversity meant to her. To ensure that the SBC staff understood what integrity was, a senior enforcement officer from the Malaysian Anti Corruption Commission, Roslan Ramli spoke on corruption, integrity management and accountability in carrying out their tasks and responsibilities. The Chief Operating Officer of SBC said the get-away also enabled the staff to interact better among themselves. The event also featured several team-building games for the staff and SBC's annual staff dinner.



Sarudu shares his experience with SBC's staff.

Eastern Times - 4th February 2009

## Dr Ng is 11th recipient of Fairchild Medal

**KUCHING:** Dr Francis P Ng, an accomplished botanist, researcher and conservationist in Sarawak Biodiversity Centre (SBC), has been awarded the 2008 recipient of the esteemed David Fairchild Medal for Plant Exploration. This was announced by the National Tropical Botanic Garden (NTBG) in Kailash, Hawaii, USA. As a recipient of the 11th Fairchild Medal, Dr Ng is recognized for his contributions to tropical botany and conservation and his over four decades of exploring the forests of Sarawak. The award will be presented by NTBG Director and CEO, Charles "Chagge" Welton, at a Medal Dinner at NTBG's Florida gardens, The Fairchild Center, on 10th February, 2009. Dr Ng explored the tropical rainforests of Peninsular Malaysia, including Malacca for the "Three Trees of Malay" project. He edited and published "Sarawak's Trees" in 2001, a book which contains an Inquest, Malacca and Sarawak's trees for the New Project. He had also extensively explored the forests of Sarawak, Sabah, Brunei and Kalimantan Borneo. He has been an active member Sarawak Biodiversity Centre since 2002. While exploring the forests of Sarawak, Ng discovered new species of medicinal plants, which later were documented in the Traditional Knowledge Documentation Programme. The extensive study on medicinal plants was published as two volumes in his Manual of Forest Plants, Trees and Seedlings. The study included the description and sending morphologies of about 1,000 medicinal plants. He was also instrumental in the conservation efforts to save the rare Malaysian orchid, *Mastigophora malayana*, the only species of its genus, which until recently, known only from two herbaceous specimens collected a century ago. From spearheading the development of the information on the Forest Research Institute Malaya and serving as Kuala Lumpur's first Conservation Officer (Planting) since the end of an earlier stinting in 1970, Ng has been in the forefront of



Ng and SBC's Research Officers look at a herbarium collection for plant identification.



Ng (with a herbarium) at work at Kemuning Semadang Community Nursery. Looking on is Minny Sata who oversees the Traditional Knowledge Documentation Programme in Kemuning Semadang.

concentration, research, and exploration of the tropical rainforests. In the 1970s and 1980s, he served as a research officer and later, National Herbarium Director. During his tenure, he played a crucial role in the development of the National Tropical Botanic Garden for Conservation. He was also involved in campaigns to save natural parks from logging and other threats. **Still active** Today, Ng continues to be active in his conservation as a researcher. From 1980 to 2008, he published more than 140 papers, books and CDs on tropical flora, including The Tropical Garden City of Kuching and Medicinal and Tropical Botanical Garden City of Kuching. Since 2009, he has been the co-ordinator of the Sarawak Biodiversity Centre, Sarawak Biodiversity Centre, Sarawak Forest Department, Sarawak State University, and Forest Research Institute Malaya. He is the lead consultant for the planning and development of the Sarawak Biodiversity Centre as well as the co-ordinator for the Sarawak Biodiversity Centre. He has been awarded each year to a scientist for distinguished service to humanity by receiving the Fairchild's legacy of exploring remote areas of the world, using innovative research techniques to discover new plant species or cultivars, bringing in cultivation new and important plants that hold significant promise for the conservation of biodiversity, and playing a vital role in the conservation of endangered plant species. **Dr David Fairchild**, one of the greatest plant collectors in the United States, discovered 22 species of his life to plant exploration and searching for medicinal plants available for introduction into the United States. Fairchild's work with Maria Bell, purchased property in South Florida in 1914 and established the Fairchild Foundation for plant species based on his expedition. He named the property "The Kemuning," which would be village. The Kemuning today operates as part of the Sarawak Biodiversity Centre.

The Sunday Post - 8th February 2009

# Educational visit to S'wak Biodiversity Centre

By Chikrina Iman

AT the end of last year, some MNS Kuching branch members visited the Sarawak Biodiversity Centre (SBC), located at KM20, Jalan Borneo Heights, Semengok. Upon arrival, we were given a briefing by SBC communications officer Asha Devi Kausal. She explained to us the vision and mission of SBC, its functions and the programmes it undertakes to achieve them.

**SBC Vision** — To be the focal point for Sarawak biodiversity research, utilisation, inventory, monitoring, education, management and conservation.

**SBC Mission**

- To identify, set priorities and initiate programmes for research and sustainable management and utilisation of biological resources in Sarawak, including bio-prospecting and product development.
- To facilitate documentation on the traditional uses of biological resources by the local communities in Sarawak.
- To promote awareness of and appreciation for Sarawak's rich biodiversity among all sectors of society.
- To obtain and disseminate accurate and up-to-date information on the biodiversity of Sarawak.
- To establish linkages with local and foreign institutions with similar interests.

**SBC Core Functions**

- Implementing bio-prospecting programmes on the state's indigenous biodiversity.
- Facilitating the documentation of traditional knowledge on communities' management and utilisation of biodiversity.
- Propagating Sarawak's indigenous plants for conservation and appreciation.
- Maintaining biodiversity related databases.
- Conducting biodiversity-biotechnology awareness and appreciation programmes.
- Regulating biodiversity related research with



RESEARCH MATERIAL: Samples from the Bau Limestone are kept in bottles of alcohol solution.

commercial potential in Sarawak through the Research Permit System.

- Networking with organisations with similar interests.

To implement these functions, SBC is carrying out the following programmes:

- Traditional Knowledge Documentation Programme
- Research and Development (Bio-prospecting) Programme
- Bioinformatics Programme
- Biodiversity Garden Programme
- Awareness and Appreciation Programme

In carrying out these programmes, SBC hopes to:

- Contribute towards the state's efforts in the development of the biotech industry via a combination of various disciplines such as chemistry, molecular biology and biochemistry.
- Provide the local indigenous communities with capacity building and to empower them to document their traditional knowledge on the management and utilisation of biological resources.
- Establish a bioinformatics data centre for biodiversity, research and development, a natural product library and inventory system, and traditional knowledge databases on the uses of indigenous plants by the communities in the state.
- Contribute towards improving knowledge of and providing accurate information on biodiversity and

interesting, as the traditional knowledge of Sarawak's many communities pertaining to the uses of indigenous plants and herbs are documented in order to preserve it. This is done by the communities themselves, with SBC assisting by providing training in skills such as documentation techniques, propagation and management of indigenous plants, as well as equipment such as notebooks and cameras. SBC encourages the local communities to document the traditional knowledge in their mother tongue, so that as much information as possible can be retained. The active participation of communities is a positive sign of their commitment and hopefully it will continue with the generations to come so as to ensure that knowledge about the medicinal properties and other uses of indigenous plants are not lost. It is also important to document this traditional

biotechnology initiatives of the state and consequently contribute to the management and sustainable utilisation of the state's rich biodiversity. After the briefing, we got a chance to see how SBC prepares specimens of plants that have been collected. Also kept there are specimens of butterflies, insects and mammals collected from SBC's previous research in the Bau limestone area.



INTERESTING: Members tour the Ethno Botanic Garden.

SBC is not collecting animal specimens for research at the moment as they are currently focusing on useful indigenous plants found in Sarawak. We went past the research and development (R&D) labs, and got a chance to see the distilling lab where essential oils are distilled from the plants. We could see some samples of soap made from these plants such as lemon grass, jasmine and another plant that smells like lemon grass. The Traditional Knowledge Documentation Programme is particularly

**The Malaysian Nature Society**  
Established in the 1940s, the Malaysian Nature Society is the oldest scientific and non-governmental organisation in Malaysia. Our mission is to promote the study, appreciation, conservation and protection of Malaysia's natural heritage. Our 5,000-strong membership, spread across 12 branches nationwide, come from all walks of life, bound by a common interest in nature. For further information on membership and our activities, please email [monkuching@gmail.com](mailto:monkuching@gmail.com) or call Rebecca at 082 428004 or visit our website at [www.mns.org.my](http://www.mns.org.my)

The Sunday Post - 8th February 2009

# Tapping potential of E-oil from jungle plants

By Sarawak Biodiversity Centre

**SARAWAK** is a biodiversity treasure trove that is both unique and useful.

A good example is its vast wealth of flora with curable properties that have been harnessed by the indigenous communities for centuries.

Whether for food, cosmetics, medicines, overall well-being or spiritual rites, the plants in our jungles are treated with utmost respect and care by tribal groups who have, over the centuries, relied on and perfected the application of their traditional knowledge to the utilisation of the natural biodiversity around them.

Recognising the uniqueness and value of such traditional knowledge, the state of Sarawak - through the Sarawak Biodiversity Centre (Amendment) Ordinance, 2003 - has entrusted the Sarawak Biodiversity Centre (SBC) with facilitating the documentation of such traditional knowledge by the indigenous communities.

The SBC carries out this mandate based on Article 8(J) of the Convention on Biological Diversity (to Malaysia is a party) which calls for equitable benefit-sharing among the indigenous communities vis-à-vis their traditional knowledge.

To facilitate documentation of the traditional knowledge, the SBC carries out awareness and capacity-building programmes among the indigenous communities state-wide. To date, 12 communities in 26 locations have started the process.

The SBC - through a material transfer agreement with the communities - is also carrying out extraction and screening of jungle plants at its R&D facilities in Senemeng. This has resulted in some interesting and exciting finds, among which are some unique scents, flavours and bio-activities in essential oils derived from the plants.

Essential oils - a revival Nowadays, essential oils from plants and seeds are increasingly being sought after as natural fragrances in



**DISTILLING PROCESS:** The Lun Bawang of Long Kerebangan try their hands at distillation of essential oil.

toiletries and cosmetics, as well as flavouring in foods and beverages.

This interest in essential oils was recently revived with the popularity of aromatherapy - a term referring to claims that specific aromas produced by essential oils have curative or therapeutic effects.

Essential oils are generally extracted by distillation. Other processes include expression or solvent extraction. They are used in perfumes, cosmetics and bath products as well as for flavouring food and drink, and scenting incense and household cleaning products.

An additional benefit of essential oils is that some of them contain anti-microbial agents that also act to enhance shelf-life and translate into a health advantage when used.

Medical applications proposed by sellers of medicinal oils range from skin treatments to remedies for cancer, and are often based on historical use of these oils for such purposes. In most countries, such

claims are also subject to regulations to ensure that these oils are properly tested for their properties and toxicology to ensure consumer safety.

**Prototypes from Sarawak's biodiversity**

The traditional knowledge of the Bidayah of Kampung Kiding (Penritsen) and the Orang Ulu and Kelabit communities recently led to the documentation of a unique essential oil from a tree found in the highlands of Sarawak.

The Bidayah of Kampung Kiding call the tree 'pahak' while among the Lun Bawang and Kelabit communities, it is known as 'tenon'.

The communities cook the aromatic fruits with meat and also eat the dried fruits to treat stomach ailments. Further research under the SBC's Essential Oils Programme on the plant reveals that communities in Indonesia also use parts of the plant as medicine.

According to the findings of the SBC, 'pahak' makes a promising essential oil crop with potential to be

developed as a cheap source of citral for industrial use, and also as therapeutic oil for aromatherapy and sootieries.

To ensure the communities that share their traditional knowledge on the plant are duly acknowledged, the SBC has set up field distillation units in Kampung Kiding and Long Kerebangan in Lawas so that the communities themselves can carry out crude distillation of the oil on site. They will then be paid for the collection and distillation.

The field distillation units also reduce the cost of the essential oil as it eliminates the need for the communities to send bulks of plant parts to the SBC for extraction. They are now able to send the distilled oil instead of large and heavy loads of plant parts. The refined distillation process takes place at the SBC for research or is carried out by companies interested in developing products that utilise the essential oil.

Several companies have already expressed interest in

developing the oil and submitted prototype products to the SBC for consideration. Among the products are massage oils, body shampoo, hand wash, soaps, floor cleaners and a disinfectant spray which were first exhibited at the Biodiversity-Biotechnology Symposium, jointly organised by the SBC and Biotech Corp Malaysia in November 2008.

Besides utilising the essential oil of 'pahak', these companies have also come up with prototype samples of these products, using essential oils derived from other plants collected by the SBC. For example, a sample pet shampoo was developed using the 'bunga ta'ang' long used by the indigenous communities as a lincifestation.

The SBC is currently looking at possible collaborations with some of these companies to market the products. At the same time, it is constantly trying to provide the communities with training such as in soap making, plant propagation and landscaping so that they too will be able to utilise some of these plants in a sustainable manner for their own cottage industries.

The SBC's Essential Oils Programme, meanwhile, aims to set up an inventory of Sarawak's indigenous plant species that produce medicinal and aromatic oils. This repository of essential oils along with their usage and chemical information will be used for further research and development and eventually commercialisation of the products for food, flavours and fragrances as well as other industrial applications.

According to SBC chief operating officer, Dr Rita Manurung, centre will continue documenting the traditional uses of plants, conduct research and make recommendations from discoveries.

"However, until and unless the recommendations are taken up and turned into useful products, the knowledge will remain as Nature's best kept secrets. Considering the rich biodiversity in our forests, there must be thousands of secrets waiting to be discovered," she said.

The Borneo Post - 1st April 2009

# Head of State visits Biodiversity Centre

**KUCHING:** Head of State Tun Datuk Patinggi Abang Muhammad Salahuddin and his wife Toh Puan Datuk Patinggi Norkiah yesterday visited

Sarawak Biodiversity Centre at Km20 Jalan Puncak Borneo. SBC chief operating officer Dr Rita Manurung was on hand to brief the couple on the overview of the centre.

After the tree-planting, the couple viewed the traditional knowledge (TK) documentation exhibit, and toured Laila Taib Ethnobotanical Garden, and the centre's research and development facilities.

In her briefing, Manurung said SBC would be the centre for Sarawak's biodiversity research, utilisation, inventory, monitoring, education, management and conservation.

The centre was also carrying out programmes such as TK documentation, biodiversity garden, biodiversity-biotechnology awareness and appreciation



**PRESERVING THE ENVIRONMENT:** Salahuddin plants a tree at the centre. Looking on from right are Norkiah, Morshidi and Baya (holding the tree).

programme. "TK documentation programme involves 12 communities and 33 locations throughout Sarawak," she said, adding that 2,122 plants, a collection from eight communities and 20 active locations, had been

documented. Meanwhile, the centre hopes to increase public awareness and understanding of Sarawak's rich biodiversity, potentials, biotechnology and its applications. To achieve their goal, SBC

organises visits, seminars, lectures, dialogue sessions and conference.

State Secretary Datuk Amar Wilson Baya Dandot, who is also SBC chairman, and deputy State Secretary Datuk Mohd Morshidi Abdul Ghani were also present.

Eastern Times - 1st April 2009



Salahuddin (second left) and Norkiah viewing the Traditional Knowledge Documentation Exhibit during their visit to SBC yesterday. PHOTO: TM, LU

# Salahuddin visits SBC

By Johnson Kadam

**KUCHING:** The Head of State, Tun Datuk Patinggi Abang Haji Muhammad Salahuddin and his wife, Toh Puan Datuk Patinggi Hajah Norkiah, yesterday visited the Sarawak Biodiversity Centre (SBC) at Mile 12, Jalan Puncak Borneo near here to get first-hand information on the progress of the centre. On hand to receive them

upon their arrival at the centre at 10.00 am were State Secretary and Sarawak Biodiversity Council Chairman, Datuk Amar Wilson Baya Dandot, Deputy State Secretary (Administration, Security and Corporate Affairs), Datuk Haji Mohd Morshidi Abdul Ghani and SBC Chief Operating Officer (CEO), Dr Rita Manurung.

The special visitors were briefed on the centre before they

viewed the Traditional Knowledge Documentation Exhibit.

After that, the Head of State and his wife were led to a tree planting ceremony. They later toured the Laila Taib Ethnobotanical Garden and were shown the centre's R&D facilities.

Before concluding the trip, Salahuddin and Norkiah joined the other visitors and SBC staff for lunch.

Eastern Times - 14th May 2009

## Over 2,800 plants used by ethnic groups documented

THE Sarawak Biodiversity Centre (SBC) has so far collected and documented over 2,800 plants used by the various ethnic groups in the State.

Of these plants, about 500 species had been identified and the identification work was still on-going with the assistance of Sarawak Forest Department and both local and foreign taxonomic experts, revealed Assistant Minister of Planning and Resource Management, Haji Mohd Naroden Majais, yesterday.

In reply to a question from Vincent Goh Chung Siong (BN-Pelawan) during the question and answer session at the State Legislative Assembly sitting yesterday, Naroden explained that SBC had conducted Traditional Knowledge Documentation Programme with 12 ethnic groups, namely the Bidayuh, Selako, Iban, Malay, Melanau, Penan, Berawan, Lun Bawang, Kayan, Kelabit, Bisaya and Kenyah in 38 locations in the state.

"The objectives of the programme are to ensure that the traditional knowledge (TK) of our indigenous communities are properly documented for future generations, to prevent misappropriation of their knowledge by other parties and to contribute to SBC's Natural Product Discovery efforts through provision of raw materials for extraction and

screening," he said.

He pointed out that plants collected and documented under the programme played important role in providing raw materials for the centre's research and development (R&D) programme and also promoted ex-situ conservation, appreciation and awareness towards the State's natural resources.

He said SBC had identified several plants with potential for development and was currently identifying entrepreneurs who had the capabilities to commercialise this potential.

"SBC is also working out systems whereby the communities that contributed their TK will be involved in contract farming (cultivation of plants for bulk raw material," he disclosed.

Naroden told the august House that there were approximately 27,500 extracts (diversity set) that had been deposited with SBC's Natural Product Library and these extracts were derived from 17,000 plants, 8,000 actinomycetes (microorganisms found in the soil) and 2,500 fungi.

He said the extracts and TK database at the library were components of SBC's research which attracted the interest of multi-national companies, pharmacies and research institutions and became the basis of the collaborations.

He said among the

achievements of SBC to date was the patenting of anti-cancer compound from *Aglaia* sp.

"SBC is conducting a survey of the *Aglaia* trees, in collaboration with the Forest Department and Agriculture Research Centre, to identify, isolate and purify the compound to be used in pre-clinical research with National Cancer Institute (NCI) and Ohio State University Medical Centre (OSUMC) for chronic lymphocytic leukemia.

"SBC also has an on-going collaboration with CARIF (Cancer Research Initiatives Foundation, KL) to screen, isolate and develop photodynamic agents from plants that could be activated by light to treat cancers," revealed Naroden.

Other achievements, he said, included the potential new compound for neurodegenerative disease, essential oil, collaboration on anti-malaria and anti-tuberculosis with Texas A&M University (TAMU), USA, collaboration in flavours and fragrance with Givaudan Flavours Corporation (GFC), Switzerland and collaboration with multi-national companies (MNCs) on drug discovery and healthcare.

SBC had also been discussing with one potential collaborator, Novartis AG, Switzerland for a mutual research interest in natural products.

New Straits Times - 14th May 2009

## Aglaia tree compound patented for cancer study

THE state government has patented the Silvestrol/CBI 316, a compound extracted from a species of *Aglaia* mahogany trees, which is now in pre-clinical research stage for anti-cancer treatment.

The compound was discovered by the Sarawak Biodiversity Centre (SBC).

Assistant Minister of Planning and Resource Management Naroden Majais said SBC was identifying, isolating and purifying the compound to be used in pre-clinical research with the National Cancer Institute and the Ohio State University Medical Centre for chronic lymphocytic leukaemia.

It was doing this in collaboration with the State Forest Department and the State

Agriculture Research Centre, he told Vincent Goh (BN-Pelawan).

Naroden said SBC was also collaborating with the National Cancer Research Initiatives Foundation to screen, isolate and develop photodynamic agents from plants such as entemu, kacanggama, sembong and langkuas, which could be activated by light to treat cancers. These plants could have the potential for the development of cancer therapy.

SBC, he said, had also discovered a compound from fungi which could be used to treat Alzheimer's disease.

It was working with the Nimura Genetic Solutions, a Japanese biotech company, on the potential of the compound.

The Borneo Post - 14th May 2009

## S'wak Biodiversity Centre continuing documentation efforts, says Naroden

SARAWAK Biodiversity Centre (SBC) has to date collected over 2,800 plants used by the various communities in the state.

Of these, 500 species of plants have been identified and identification work is on-going with collaboration from State Forest Department and both local and foreign taxonomic experts.

Assistant Minister of Land Development Mohd Naroden Majais said this in a reply to Vincent Goh (BN-Pelawan) who asked about the latest development concerning SBC at the Dewan Undangan Negeri (DUN) yesterday.

"The plants documented and collected under this programme play an important role in providing raw materials for the centre's research and development programme and also in promoting ex-situ conservation, appreciation and awareness towards the state's natural resources," Naroden explained.

He said SBC had carried out the Traditional Knowledge Documentation

Programme with 12 ethnic communities namely the Bidayuh, Selako, Iban, Malay, Melanau, Penan, Berawan, Lun Bawang, Kayan, Kelabit, Bisaya and Kenyah in 38 locations in the state.

He added that the programme was to ensure that the traditional knowledge (TK) of indigenous communities would be properly documented for future generations.

It was also to safeguard the communities against misappropriation of their knowledge by other parties and to contribute to SBC's natural product discovery efforts through provision of raw materials for extraction and screening, he said.

"SBC is also working out systems where the communities who have contributed their TK will be involved in the contract farming (cultivation) of plants for bulk raw material," he pointed out.

He said SBC had identified several plants with potential for development and is currently identifying

entrepreneurs who have the capabilities to commercialise these potentials.

On SBC Natural Product Library (Research and Development Programme), Naroden said it is currently estimated that 27,500 extracts (diversity set) have been deposited in SBC's Natural Product Library.

He said these were derived from 17,000 plants, 8,000 actinomycetes (microorganisms found in the soil) and 2,500 fungi.

"The library of extracts and the TK database are components of SBC's research which are of interest to multinational companies, pharma and research institutions and the basis of our collaborations," he explained.

He then talked of SBC's achievements that included collaboration with Cancer Research Initiatives Foundation Kuala Lumpur (CARIF); working on new compound for neurodegenerative disease (Alzheimer); and collaboration on anti-malaria and anti-tuberculosis.

## Chan: SBC achieves some successes in research

ZAINON TALIP

**MIRI:** The Sarawak Biodiversity Centre (SBC) in collaboration with several local and international research institutes and universities is achieving some successes in their researches for commercial development of pharmaceutical products for the treatment of cancer and AIDS.

Deputy Chief Minister, Datuk Patinggi Tan Sri Dr George Chan, said for the anti-cancer drugs for leukemia patients, researches are still at the preliminary levels.

"Two of our local scientists had been sent to the National Cancer Institute in the United States of America, to conduct further researches on the products," Chan told

reporters after launching the 10th BRC conference's official website and publicity campaign here, yesterday.

He added that for AIDS cure using medicinal properties from Bintangor (*Calophyllum lanigerum*) tree it is already at the clinical stage.

Chan also disclosed that apart from these two types of major researches, the Sarawak Biodiversity Centre

is also undertaking researches on 60,000 extracts from traditional medicinal plants, for potential to be commercially developed as pharmaceutical products.

He said the great interest shown by pharmaceutical companies on these researches especially anti-cancer and AIDS signified a major milestone in the researches.



CHAN (right) at the media conference. Also in the picture are Miri Mayor, Lawrence Lai (left), Assistant Minister of Infrastructure and Communications, Datuk Lee Kim Shin (2nd left) and Organising Chairman of the 10th Borneo Research Council Conference, Bibi Aminah Abdul Ghani (2nd right).



ROYAL VISIT: The Raja Permaisuri Agong (second left) being briefed on some herbs at the Laila Taib Ethnobotanical Garden.

## Queen visits Laila Taib Ethnobotanical Garden

**KUCHING:** Raja Permaisuri Agong Tuanku Nur Zahirah yesterday visited the Laila Taib Ethnobotanical Garden which features plants that have traditionally been used by Sarawak's indigenous

communities for food, medicine and materials at the Sarawak Biodiversity Centre (SBC) near here. Accompanied by the wife of the Yang Dipertua Negeri Sarawak, Toh Puan Norkiah, the rulers'

consorts and wives of mentories besar and chief ministers, she spent about 30 minutes at the garden which features about 500 species of plants.

• Turn to Page 6, Col 5

## Queen briefed on many uses of plants

♦ From Page 3

The visit is in conjunction with the 218th Rulers Conference here yesterday. Representatives from indigenous communities who have been documenting their traditional knowledge (TK) were on hand to explain the many uses of the plants to the royal dignitaries and entourage.

The garden was named after the late Datuk Amar Puan Sri Laila Taib, wife of Sarawak Chief Minister Pehin Sri Abdul Taib Mahmud, in recognition of

her dedication in preserving the botanical heritage of the state and its people in August 2006.

The Laila Taib Ethnobotanical Garden comprises useful and ornamental plants collected from the Traditional Knowledge Documentation Programme.

Earlier, the royal dignitaries and entourage were given a warm welcome by State Secretary Datuk Amar Wilson Baya Dandot, who is also SBC chairman, and the centre's staff, before being treated

to a video on SBC's role and activities.

A specially-designed, hand-painted silk seledang featuring the Riang Laila flower motif, was presented to the royal visitors to commemorate their visit.

The Riang Laila is a begonia species that was found during the SBC's Bau Limestone Biodiversity Inventory project between 2002 and 2004.

The newly-discovered species which is endemic to the limestone area was named after the late Laila. Bernama

## Curtin S'wak to collaborate with SBC for BioValley project

**MIRI:** Curtin University of Technology Sarawak Malaysia (Curtin Sarawak) is looking forward to collaborating with the Sarawak Biodiversity Centre (SBC) in the development of the university's BioValley Park.

Curtin Sarawak deputy pro vice-chancellor Dr Joan Gribble said the RM15 million BioValley Park was currently being developed on a four hectare site at the campus here.

"As we will be managing the BioValley Park, any assistance or advice the

Sarawak Biodiversity Centre can provide towards its establishment and management would be most beneficial," she said in a statement to Bernama yesterday.

The statement came following a visit by SBC chief executive officer Dr Rita Manarung and senior research officer Dr Yeo Tiong Chia to the university recently.

Dr Gribble, along with Curtin Sarawak's chief operating officer, James Ng, dean of research and development Dr Kaniraj

Jeyachandran and dean of engineering and science Dr Yudi Samyudia, led some 30 academics to welcome the SBC representatives.

She said the SBC could offer great assistance in the university's Borneo Studies programme which is being developed at its campus here.

"I think there is great opportunity for collaboration, such as research in biodiversity, the environment and preservation of cultures," she added.

The BioValley Park

project was launched by Sarawak Chief Minister Tan Sri Abdul Taib Mahmud during the university's 10th anniversary celebration in April.

The site works for the first phase is currently underway and it is expected to boost research and development and knowledge accumulation in meeting the state's technological needs, particularly for the Sarawak Corridor of Renewable Energy (Score).

Meanwhile, Dr Manarung said the SBC was involved in implementing

bioprospecting programmes in Sarawak's indigenous biodiversity, documentation of traditional knowledge on communities' use of biodiversity and regulating biodiversity research with commercial potentials.

She added that the SBC was also into propagating indigenous plants for conservation and appreciation, developing Sarawak biodiversity databases and networking with organisations who share similar interests. — Bernama

## SBC NEWS

The Borneo Post - 30th September 2009

### Kpg Kiding pioneer in traditional knowledge documentation under SBC programme

**KUCHING:** Many city dwellers in and around here may not have heard of Kampung Kiding, a little Bidayuh village nestled in the far reaches of the Padawan range.

Located about 40 km south of here, one needs to drive right up "to the end" of Borneo Heights road. From there, the average person would take approximately two hours to hike uphill to the village at a relaxed pace.

Many who have been up to the village have said going up to Kampung Kiding is "no kidding!"

Those who attempt to head up to the village should be relatively fit and should have build up stamina before attempting the hike.

The Bidayuh community of Kampung Kiding was the pioneer in traditional knowledge documentation under the Sarawak Biodiversity Centre's (SBC) Traditional Knowledge Documentation Programme.

Back in 2002, the community started documenting the traditional uses of the Nyok (Arenasp.) palm tree.

Since then, the community has moved on to document uses of other plants that they use. This includes the unique Pahkak tree which SBC has found to produce essential oil with anti-microbial properties.

The Bidayuhs of Kampung Kiding are now among the two communities in Sarawak that had started to distill essential oil from the tree for research purpose at SBC.

The other community that has also started distillation of oil from the same species is the Lun Bawang community of Long Kerebangan, Lawas.

The Kelabit and Lun Bawang communities call the tree which is found in the highlands of Sarawak, Temun.

Come Oct 11, a total of 20 representatives from the United Nations Environment Programme (Unep) and the Global



**DISTILLING:** The Bidayuhs of Kampung Kiding distilling Pahkak oil which is sent to SBC for research.

Environment Fund (GEF) project on 'Conservation and Sustainable Use of Cultivated and Wild Tropical Fruit Diversity: Promoting Sustainable Livelihoods, Food Security, and Ecosystem Services' from Malaysia, Indonesia, India and Thailand will trek up to the village to share experiences with the local community there, as well as with other indigenous communities from throughout Sarawak, on documenting Traditional Knowledge (TK).

The experience sharing programme is part of the 'Regional Workshop on Good Practices Related to Traditional Knowledge Documentation, Community Biodiversity Register and Farmer's Descriptors', organised by SBC in collaboration with Bioversity International, Unep and GEF.

The workshop will be held here on Oct 8 and 9 while the hands-on experience sharing session in Kampung Kiding will take place from Oct 11 to 13.

Among other activities, the Kampung Kiding TK Documentation Committee will demonstrate the distillation of essential oil from Pahkak during the

hands-on sessions.

Indigenous communities in Sarawak that have been documenting their TK under SBC's TK Documentation Programme will also be participating in this workshop.

Among the communities which will be sharing their experiences in the workshop are the Bidayuhs of Kampung Semadang in Penrissen, Kampung Kiding and Kampung Semban in Padawan; the Ibans of Rumah Skatap in Betong, Rumah Nyambong in Selangau, Rumah Changgai in Song and Rumah Emak in Kapit; the Lun Bawang from Long Kerebangan and Long Telingan in Lawas; the Kelabits from Pa Lungan and Pa Ukut in Bario; the Kavyans and Kenyahs from Long Bedian and Long Pelutan-Julan in Baram; the Penans from Long Iman and Batu Bungan in Muhi; and the Melanau from Kampung Jebungan in Mukah.

The objectives of the workshop include exposing community trainers from agencies in Malaysia, Thailand, Indonesia and India to the documentation of TK through the TK Journal Methodology, allowing community

representatives under SBC's TK Documentation Programme to present their efforts in documentation and enabling them to share ideas and experiences with other participants from within the country and the region. The workshops also expected to train community trainers from within the Region in the TK Journal Methodology and to provide a follow-up action plan for community representatives under SBC's TK Documentation Programme.

State secretary and chairman of Sarawak Biodiversity Council Datuk Morshidi Abdul Ghani is expected to officiate at the workshop on Oct 8 here.

Speakers for the workshop comprise TK documentation and Access and Benefit Sharing experts from Bioversity International and Forest Research Institute Malaysia.

Local entrepreneurs Cassandra Havelock and Leo Mamba, who are involved in making handmade soaps and the cultivation of 'kacang ma' will also be sharing their experiences in value-adding to biodiversity during the workshop.

The Star - 1st October 2009

### Sharing knowledge of traditional herbs

**KUCHING:** Sarawak's indigenous communities will share experiences in documenting their knowledge of traditional medicine at a workshop here next week.

Organised by the Sarawak Biodiversity Council (SBC), the workshop on Oct 8 to 9 will see the Bidayuh, Iban, Lun Bawang, Kelabit, Kayan, Penan and Melanau communities recording the traditional use of various plants. Local and international representatives from

the United Nations Environment Programme and the Global Environment Fund will also participate in the workshop.

Other participants include local entrepreneurs involved in producing handmade soap and cultivating the *kacang-ma* herb.

The workshop will be followed by a visit to Kampung Kiding in Padawan near here for a hands-on session to document the villagers' knowledge of the medicinal use of plants.

The Borneo Post - 9th October 2009

## Centre documents over 2,400 plants

By Lee Ya Yun

**KUCHING:** Sarawak Biodiversity Centre (SBC) has documented over 2,400 plants used by 12 indigenous communities in 40 locations throughout the state.

Its chairman Datuk Mohamad Morshidi Abdul Ghani yesterday said the plants were documented since SBC embarked on its pilot traditional knowledge (TK) documentation project in 2002.

Mohamad Morshidi, who is also State Secretary, said from these plants, SBC has identified essential oils with anti-microbial properties to be developed as ingredients for healthcare products such as handwash, body shampoos and soaps.

"With this potential, our communities can have immediate economic benefits through carrying out contract farming on plants identified to have potential for further research and development (R&D) work or product development," he said.

He called for further TK documentation to preserve knowledge handed down over generations of indigenous communities.

"If we do not document such knowledge, we risk losing it forever," he said at the opening of Regional Workshop on Good Practices Related to Traditional Knowledge Documentation, Community Biodiversity Register and Farmer's Descriptors at a hotel here yesterday.

His text speech was read by Deputy State Secretary Datu Abdul Ghafur Shariff.



**HERBAL SOUVENIR:** Ghafur (left) receives a basket of plants from Rita. - Photo by Hil Kheng Joung

The workshop was jointly organised by SBC, Biodiversity International, United Nations Environment Programme (Unep) and Global Environment Fund (GEF).

Morshidi said the voice and needs of local communities must be heard and their role acknowledged in facilitating the documentation of TK.

"We have to acknowledge that our womenfolk are, in their own rights, keepers and practitioners of significant aspects of TK. Involvement of youth and the older generation is also essential. It is our fervent hope that elders can provide valuable information, and youth understand the value of such knowledge," he said.

SBC chief operating officer Dr Rita Manurung said the workshop provided a platform for the stakeholders to discuss their problem and challenges and share their experience in relation to TK documentation.

"Documenting TK is not only Sarawak's thing, it is an international thing. Documenting TK has an impact on our everyday life," she said.

She pointed out that through the workshop, the research methods of SBC could be examined with international standard for further improvement.

The workshop would help participants widen their networking as well, she added. The workshop will be held in two phases: at Telang Usan Hotel on Oct 8 to 9; and hands-on session in Kampung Kiding, Padawan from Oct 11 to 13.

It was SBC's second regional workshop on TK documentation; the first in 2004. Participants of the workshop included representatives from the UNEP-GEF project from Malaysia, Indonesia, India, Thailand and indigenous communities in Sarawak including Bidayuh, Iban, Lun Bawang, Kelabit, Kenyah, Penan and Melanau.

Eastern Times - 9th October 2009



GHAFUR (middle row, centre) poses with the participants and staff of SBC. PHOTO: ANAS JENS

## Traditional knowledge documentation vital

ANAS JENS

**KUCHING:** Deputy State Secretary (Human Resources) Datu Abdul Ghafur Shariff yesterday stressed the need for proper documentation of traditional knowledge of plants or biological resources.

He was representing the Chairman of the Sarawak Biodiversity Centre (SBC) Datuk Morsihid Abdul Ghani, who is also the Sarawak State

Secretary, at the launching of the seven-day Regional Workshop on Good Practices Related to Traditional Knowledge Documentation, Community Biodiversity Register and Farmers' Descriptors organised by SBC at a hotel here yesterday. Ghafur said proper documentation of traditional knowledge was vital because it had contributed significantly to modern agricultural practices as well as the personal

care, medicine, nutraceutical and cosmetic industries. "Traditional knowledge here refers to the knowledge that has been practised and handed down over generations within the indigenous communities on the varieties of plants which can be used for personal care or as medicine to cure diseases and as nutrients. "It also includes the manner in which these plants or biological resources are man-

aged in their environment in a sustainable and balanced way." Ghafur pointed out that traditional knowledge which was not properly documented could be lost forever. "Many products sold in the market that you and I use today are produced based on the traditional knowledge. The value of such knowledge is immense especially when scientific validation shows that it is useful," Ghafur

added. He stressed that the traditional knowledge could bring much benefit to the community and country through tourism and equitable access and benefit sharing when such knowledge was used by modern industries and in research and development activities. "At some point of your life, you may have been touched by some form of traditional knowledge or TK as it is popu-

larly known. "May be it's your grandmother's herbal soup to help relieve a cold or a mixed poultice for cuts and bruises," said Ghafur. This is the second time SBC is organising a Regional Workshop with Biodiversity International. Forty-one participants from 12 countries including Malaysia, India, Indonesia, Iran, Kenya, Mongolia, Pakistan, Philippines, Nepal,

Sri Lanka, Thailand and Vietnam are taking part in the workshop. The Sarawak participants come from five ethnic communities, namely, Bidayuh, Iban, Penan, Kelabit and Malyu. The first Regional Workshop on traditional knowledge was held in the state in 2004. Present at the launching of the workshop was SBC Chief Operating Officer Dr Rita Manuring.

## Move to document traditional plant uses

By Sulok Tawie  
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**KUCHING:** More than 2,400 plants with various uses — from medicinal to craft — have been identified under the traditional knowledge (TK) programme introduced in 2002. The Sarawak Biodiversity Centre (SBC) is conducting research and development on these plants used by the indigenous communities.

"We have identified essential oil plants that have antimicrobial properties, for example," said state secretary Datuk Morsihid Ghani.

"These could be developed into ingredients for healthcare products such as hand wash, body shampoo and soap."

His deputy, Datuk Abdul Ghaffur Shariff, read his speech at the opening of the regional workshop on good practices related to traditional knowledge documentation, community register and farmers' descriptors on Thursday. "Though there are overlaps in the uses of these plants among the various communities, we must continue to document such plants before the knowledge is lost," SBC Chief Operating Officer Dr Rita Manuring said.

He said TK had contributed significantly to modern agricultural practices, and many products are based on information derived from it. "The value of such knowledge is immense, especially when scientific validation shows that it is useful," he said, adding that TK could bring much benefit through tourism and when such knowledge was used by modern industries and R & D.

Participants from India, Indonesia, Iran, Kenya, Mongolia, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand, Vietnam and Malaysia are attending the workshop to be held until Wednesday. Among the communities taking part are the Penan, Bidayuh, Iban, Kayan, Kelabit, Koryak and Melanau.

The Borneo Post - 14th November 2009

## SBC to sign MOU with Swiss Pharma Giant

**KUCHING:** The Sarawak Biodiversity Centre is set to sign a Memorandum of Understanding (MoU) with Novartis International AG (Novartis) and Biotechnology Corporation of Malaysia (Biotech Corp). The MoU with the Switzerland based multinational pharmaceutical giant, known for ranking number one in revenues in 2008 amounting to over US\$53 billion and number three in sales in 2008, which accounted for US\$36.172 billion, manufactures drugs such as Clozaril, Voltaren and Ritalin.

The objective of the MoU is to strengthen the partnership between SBC and Novartis as well as to

create an effective win-win platform for both. The MoU will encompass developing joint activities with regards to identifying novel bioactive compounds and to identify possible sources of funding for the scientific or technical alliances and projects that may be undertaken by and between SBC and Novartis.

Novartis will be assisting in developing capabilities within SBC and explore novel bioactive compounds from natural sources collected in Sarawak.

As for Biotech Corp, in its capacity as a development and facilitation agency, will identify and facilitate funding requirements in connection with the

cooperation between SBC and Novartis. The State Secretary and Sarawak Biodiversity Council chairman, Datuk Amar Mohamad Morsihid for SBC, Alexander Jeter, a board member of Novartis and chief executive officer of Biotech Corp, Dato Iskandar Mizal Mahmood, will represent the signing of the MoU respectively.

The signing will take place on November 17, the day Malaysia's premier biotechnology event, BioMalaysia 2009 Conference and Exhibition opens in Kuala Lumpur.

The MoU will formalise a scientific relationship between SBC and Novartis to explore bioactive compounds from natural resources collected in Sarawak. Biotech Corp, meanwhile, will identify and facilitate funding requirements to move the cooperation between SBC and Novartis.

Second Planning and Resource Management Minister Datuk Amar Awang Tengah Ali Hassan said in his winding-up speech yesterday that the signing of the MoU meant that SBC could look forward

The Borneo Post - 17th November 2009

## Biotech research to go full swing with MoU

SARAWAK Biodiversity Centre (SBC) will go into full swing in the development of biotechnology and research with its alliance with Switzerland-based pharmaceutical company, Novartis.

SBC is to sign a memorandum of understanding (MoU) with Novartis and Malaysian Biotechnology Corporation (Biotech Corp) at the coming BioMalaysia Conference and Exhibition in Kuala Lumpur.

The MoU will formalise a scientific relationship between SBC and Novartis to explore bioactive compounds from natural resources collected in Sarawak. Biotech Corp, meanwhile, will identify and facilitate funding requirements to move the cooperation between SBC and Novartis.

Second Planning and Resource Management Minister Datuk Amar Awang Tengah Ali Hassan said in his winding-up speech yesterday that the signing of the MoU meant that SBC could look forward



The Integrated Biodiscovery Project will also expand its R&D into discovering chemicals and enzymes, health-care and biofuels. From the R&D undertaken thus far, SBC hopes to generate valuable intellectual property outputs for Sarawak.

Datuk Amar Awang Tengah Ali Hassan, Second Planning and Resource Management Minister

Sarawak remained the only state in Malaysia with an organised programme to document, manage and utilise biodiversity linked to traditional knowledge, for research and development and commercialisation.

He said with a properly planned strategy and platform now in place for biodiversity research, well-equipped, operational laboratories, dedicated staff, as well as experience in intellectual property management, SBC would be ready to launch more effective biodiversity efforts during the 10MP.

Under the 10MP, he said, SBC's research and development project would be called the Integrated

Biodiscovery Project, to reflect its evolution from the basic scientific ideas implemented during the Ninth Malaysia Plan.

According to him, SBC is targeting to have its existing natural product library expanded to include the collection of natural products from other biological sources such as marine, insects and other organisms.

"The Integrated Biodiscovery Project will also expand its R&D into discovering chemicals and enzymes, health-care and biofuels. From the R&D undertaken thus far, SBC hopes to generate valuable intellectual property outputs for Sarawak," said Tengah.

Eastern Times - 17th November 2009



DEPUTY Chief Minister Datuk Patinggi Tan Sri Alfred Jibu Numpang flanked by Minister of Planning & Resource Management Datuk Amar Tengah Ali Hassan (right) and Minister of Land Development Datu Sri Dr James Jemar Masling (left) at the DGR complex, yesterday.

## State to expand natural product library: Tengah

FRASER PEGU

**KUCHING:** Sarawak is in the right footing to expand its existing natural product library to include the collection of natural products from other biological resources such as marine, insects and other organisms.

Discussing this in his winding up speech at the State Legislative Assembly here yesterday, Second Planning and Resource Management Minister Datuk Amar Awang Tengah Ali Hassan said Sarawak remained the only state in Malaysia with an organised programme to document,

manage and utilise biodiversity linked to traditional knowledge for R&D (Research and Development) and commercialisation.

Tengah was confident that the state, through the Sarawak Biodiversity Centre, would be ready to launch more effective biodiversity efforts during the 10th Malaysia Plan (10MP).

"Under the 10MP, SBC's R&D project will be called Integrated Biodiscovery Project to reflect its evolution from the basic scientific ideas implemented during the 9MP," he said.

He said that the integrated

biodiscovery project would expand its R&D into discovering chemicals and enzymes from the state's biological resources that could be used for a broad range of industrial applications such as microbial enzymes, health-care and biotiffs.

"From the R&D undertaken thus far, SBC hopes to generate valuable intellectual property outputs for Sarawak," Tengah said.

He informed the august House that SBC was taking another milestone today (Nov 17) with the signing of a MOU (Memorandum of Understanding) between

Switzerland based pharmaceutical company Novartis and Malaysian Biotechnology Corporation (BiotechCorp).

The signing, according to him, would be held at annual BioMalaysia Conference and Exhibition in Kuala Lumpur.

He said: "The MOU is the beginning of formalising a scientific relationship between SBC and Novartis to explore bioactive compounds from natural resources collected in Sarawak."

"Meanwhile, BiotechCorp will identify and facilitate funding requirements to move the cooperation between SBC and Novartis," he said.

Tengah noted that the MOU with an international pharmaceutical giant such as Novartis augurs well with SBC's prospects for the 10MP and its projection for biodiversity from the state's own forests - for the benefit of the state.

"This also will generate more interests in SBC's library of natural product by other biotech companies," he said.

SBC was commissioned in 2006 and since then had steadily improved and strengthened its four main programmes - Traditional Knowledge and Documentation, Biodiversity Garden, R&D and Awareness and Appreciation.

The Star - 18th November 2009

## Novartis, SBC sign pact on biotech venture

Tie-up aimed at developing novel bioactive compounds in S'wak

**KUALA LUMPUR:** Global drug company Novartis AG and the Sarawak Biodiversity Council (SBC) have sealed a formal pact to jointly develop novel bioactive compounds found in the state, while a local company plans to export its own developed dental implant.

Malaysia's biotechnology sector is still in the nascent stage, but the growing number of participants at the BioMalaysia Conference & Exhibition 2009 is testament to its rising importance.

Prime Minister Datuk Seri Najib Tun Razak, in his opening speech at the three-day event yesterday, said a complete ecosystem was needed to nurture the biotech industry, and the Government knew that developing such industry took time.

"It needs strong collaborative partnerships traversing public and private sectors, academicians and business people, conglomerates and entrepreneurs as well as inter-ministries and agencies," he said.

Novartis and SBC yesterday signed a memorandum of understanding (MOU) with the eventual aim of commercialising potential new findings.

Malaysian Biotechnology Corp (BiotechCorp) is also involved in the project, which has been billed "the first of its kind public-private partnership initiative in the area of drug discovery."



Azman Jufri... "We estimate the local demand for dental implant is around 8,000 a year."

BiotechCorp will facilitate funding requirements for SBC and Novartis.

Meanwhile, a local medical firm Delphax Sdn Bhd is ready to market its own developed product overseas.

"Novella Ultima, a one-piece dental implant, is

100% developed by Malaysians," Delphax managing director Azman Jufri told reporters at the launching ceremony yesterday.

The dental implant was developed by Delphax jointly with dental surgeon Dr Firdaus Hanapih and supported by Universiti Teknologi Mara.

Azman said the innovative product was relatively cheaper compared to the current imports in the local market.

"We estimate the local demand for dental implant is around 6,000 a year," he said.

Azman said the product was on the last stage of clinical trials after two years of development. It would be available in the market early next year. Delphax expects the new product to help triple revenue from the current RM6mil a year, boosted by a projected higher sales overseas.

Azman said the group was close to securing the necessary approvals to market the product in Europe and the Middle East.

The dental implant is the second biomedical product developed by Delphax, after a spinal implant product that is already being exported to Indonesia, Thailand and Sri Lanka.

Delphax was established in 1994 as a distributor of medical products. In 2004, it started developing its own medical products after receiving grants from the Government.

See also B5

The Borneo Post - 18th November 2009

## Novartis teams up with Malaysia in bioactive compounds research

**KUALA LUMPUR:** Swiss-based pharmaceutical company Novartis has signed an agreement with Sarawak Biodiversity Centre (SBC) and Malaysian Biotech Corporation (BiotechCorp) to explore bioactive compounds from natural resources.

Novartis International AG's director Alexander F Jetzer-Chung said the memorandum of understanding (MOU) gave the company a chance to

leverage on Malaysia's biodiversity for the development of novel medical opportunities.

"This is bound to be a very effective partnership, especially with the strong support of the Sarawak state government and BiotechCorp," he told reporters after the signing ceremony between Novartis, SBC and BiotechCorp here yesterday.

The signing was witnessed by Prime

Minister Datuk Seri Najib Tun Razak in conjunction with the BioMalaysia 2009 event.

Under the agreement, Novartis will offer internship for SBC scientists, including microbiologists and natural products chemists, for them to work at the Novartis Institute for Biomedical Research in Basel, Switzerland.

Novartis will also provide support to develop mutually agreed

bioprospecting activity and capacity building to identify novel bioactive compounds sourced from the forests of Sarawak.

According to the company, these bioactive compounds could have medicinal effects which may be developed into medicines in the future.

Headquartered in Basel, Novartis offers healthcare products to protect health, cure diseases and improve well-being. Bernama

# State's biodiversity in good hands: Dr Chan

By Rintos Mail

**KUCHING:** Deputy Chief Minister Datuk Patinggi Tan Sri Dr George Chan assured yesterday that Sarawak will take care of its biodiversity not only because of rising interest and concern for the environment but also because of the many plant species that have already been identified as useful to the herbal industry.

While acknowledging that indiscriminate and destructive exploitation practices had exterminated many rare plant species with several more on the verge of extinction, Dr Chan said the state had put in place measures to not only put a stop to all these but also ensure that usage of medicinal plants were on sustainable basis.

Dr Chan, who is also Industrial Development Minister, said Sarawak had,

In this regard, I wish to take this opportunity to mention here that Sarawak has tremendous potential for herbal farming, industry and research.

Datuk Patinggi Tan Sri Dr George Chan, Deputy Chief Minister

over the years, protected its biodiversity of flora and fauna and ecosystems.

He said towards this end the Sarawak Biodiversity Ordinance was passed in 1997 while the Sarawak Biodiversity Centre (SBC) was set up in 1998.

He said among the programmes on biodiversity was a project to gather an inventory of the indigenous medicinal and aromatic plants from Sarawak's biodiversity to explore their applications as flavours and scents for potential commercialisation in the healthcare industry.

"The centre works closely with the indigenous communities through their

traditional knowledge documentation programme, and from there, it hopes to be able to document some unique plants with interesting properties to develop," he told the delegates at the opening of the 4th Global Summit on Medicinal and Aromatic Plants (Gosmap-4) here yesterday.

◆ Another story on Page 14

He said the goal essentially was to create a value chain from the communities all the way to the market and see that benefits flow back to the communities which contributed knowledge on the plants.

According to Dr Chan,

currently SBC has 20,000 indigenous plant extracts.

He said the centre had used some of the extracts to conduct screening on human cancer cells and had discovered some promising cytotoxic activity.

He said the centre had also extracted 150 indigenous aromatic extracts that have anti-microbial and anti-fungal properties.

"These obviously will have commercial values in perfumes, soap and detergents," Dr Chan said.

Dr Chan, who is also Tourism and Heritage Minister, also stressed the need to create a database of traditional medicinal plants for specific bioactivity that may lead to the development of new drugs.

"In this regard, I wish to take this opportunity to mention here that Sarawak has tremendous potential for herbal farming, industry and research," he said.



THE SUMMIT BEGINS: Dr Chan officiating at the opening of the 4th Gosmap-4 while (from left) UITM Sarawak Campus director Professor Madya Dr Jamil Hamali, Environment Assistant Minister Datuk Peter Nansian Ngusie, Gosmap-4 president Dr V Sivaram and Gosmap-4 secretary Dr Anita Menon look on.

# Indigenous plant extracts hold great promise: DCM

BY LIH CHENG

**KUCHING:** Sarawak Biodiversity Centre (SBC) has some 20,000 indigenous plant extracts in its collection, many of which have been applied on human cancer cells, from which promising cytotoxic activities have been discovered, says Deputy Chief Minister Datuk Patinggi Tan Sri George Chan.

"We have also 150 indigenous aromatic extracts which have anti-microbial and anti-fungal properties, and which obviously have commercial values in perfumes, soaps and detergents," he said when opening the 4-day Fourth Global Summit on Medicinal and Aromatic Plants here yesterday.

He said it had been a project of the SBC to gather an inventory of indigenous medicinal and aromatic plants from Sarawak's biodiversity to explore their applications as flavours and scents for potential commercialisation in the health care industry.

"The centre works closely with the indigenous communities through its traditional knowledge documentation programme, and from there, it hopes to be able to document some unique plants with interesting properties."



Dr Chan declares open the summit while (from left) Director of UITM Sarawak Campus Director Professor Madya Dr Jamil Hamali, Assistant Minister of Environment and Public Health Datuk Peter Nansian Ngusie, President of 4th Global Summit on Medicinal and Aromatic Plants Dr V Sivaram, and Chairperson of Century Foundation Dr Anita Menon look on. PHOTO: IHTU

"The goal is essentially to create a value chain from the communities all the way to the market and to see that the benefits flow back to the communities," he said.

Chan, who is also Minister of Tourism and Heritage, said that medicinal plants offered enormous scope for drugs development.

"Since ancient times, plants have been widely used as drugs, cosmetics and food. We need to create a database of traditional medicinal plants for specific bio-activity."

"I wish therefore to take this opportunity to mention here that Sarawak has tremendous potential for herbal farming, industry and research," Chan added.

medicines were slowly being integrated into modern medicine in the form of dietary and nutritional supplements.

"There is a big demand for organic medicinal plants in the international market, which creates the need for standardisation of organic production technologies," the Deputy Chief Minister said.

He warned against indiscriminate and destructive exploitation of many rare plant species, many of which are on the verge of extinction.

"There is a need to emphasise non-destructive harvesting practices by the active involvement of the local people for sustainable development and conservation of medicinal plants."

Chan held the view that although modern medicine might be available in many countries, traditional medicines have maintained their popularity for historical and cultural reasons.

The potential of traditional medicine and natural therapies could not be over-emphasised as they have been used to alleviate conditions associated with HIV and AIDS, diabetes, malaria and many other serious health conditions.

## Involving local communities in biodiversity conservation

**KUCHING:** A seminar on sustainable community and biodiversity conservation involving stakeholders in Sarawak will be held tomorrow at Hotel Telang Usan here.

Themed 'Biodiversity conservation for sustainable tomorrow', the seminar will be the first ever to be held here to address 'Community Approach in Biodiversity and Natural Resources Management'.

Assistant Minister of Environment Datuk Peter Nansian is expected to officiate at the seminar which is being organised by Institut Pribumi Malaysia Sarawak (Ipimas) in collaboration with Malaysian Environmental NGOs (Mengo) and Danish International Development Assistance (Danida).

Speaking at a press conference yesterday, Ipimas conservation programme manager Mariam Aloysius Dom said the seminar would explore areas like community good practices in conservation and sustainable resource uses through the community-based natural resource management projects implemented by different stakeholders in Sarawak.

"This year's seminar focuses on community involvement in the conservation of biodiversity and natural resources management for sustainable livelihood in Sarawak," she said.

The involvement of indigenous people and local community in biodiversity conservation is important to the achievement of sustainable development in Malaysia, particularly Sarawak, she said.

However, she said this is still perceived as peripheral to economic development planning and decision making.



Mariam Aloysius Dom

"Apart from the indigenous community, a large section of the Malaysian society has to take the initiative in conserving biodiversity and nature, no matter where we are if we choose to live environmentally sustainable lifestyles," she said.

Mariam said the Malaysian government's commitment to the United Nations' Convention on Biodiversity (CBD) should be translated into local action by involving the people who depend on these natural resources.

"It's timely for the federal and state governments to provide support for conservation initiatives in the country by the indigenous communities," she said.

She said Ipimas had started the community-based natural resource management project with two indigenous communities, namely the Kenyah-Badeng of Kampung Mudung Abun in Belaga and the Iban of Krangan Tekalong in Balai Ringin, Serian.

Mariam said: "The project is part of the Biodiversity Component of the Environment Cooperation Programme between the government of Malaysia and Denmark."

It aims to enhance the capacity of Malaysian Civil Society Organisations (CSOs) and Community-Based

Organisations (CBOs) in influencing sustainable development policies and practices related to natural resource management and biodiversity conservation, recognising the importance of indigenous people and gender equity, she said.

Among others, she said the project showed that the indigenous communities are capable of sustaining their livelihood through conservation projects that strengthen links between socio-economic, biodiversity, sustainable forest use and management by adapting indigenous knowledge systems and practices.

"With this experience, Ipimas believes that effective and meaningful involvement of indigenous and local communities in community conservation initiative is the most effective approach to address the problems of environmental degradation and biodiversity loss," she added.

She said Ipimas hoped that the output from the seminar would help to devise conservation approach appropriate in the community context in terms of implementation of natural resource management and conservation.

The seminar will feature presentations from Ipimas, Universiti Malaysia Sarawak, Ministry of Tourism and Heritage, Sarawak Biodiversity Centre, State Planning Unit, Research and Development Movement of Singgai and Village Development and Security Committee of Krokong, Bau.

A two-day public exhibition on community-based natural resource management project activities and community art and handicraft will be held today and tomorrow starting at 9am. Admission to the exhibition is free.

*SBC News* 2010



DILIGENT: Ng checking on her research of fungus culture in a 10-litre scale bioreactor.

## Biotechnology an engine of growth

By Marilyn Ten  
tutaraa19@gmail.com

SWINBURNE University of Technology Sarawak Campus (SUTS) and the Sarawak Biodiversity Centre (SBC) are collaborating in biotechnology under a Memorandum of Understanding (MoU), to develop discoveries with potential commercial value from Sarawak's rich biodiversity.

Sarawak is located in one of the world's mega-biodiversity regions. So it comes as no surprise that the diverse biological resources in the state are being researched in a modern and technologically advanced manner.

Biotechnology makes use of knowledge of the biological system to generate useful bi-products and applications for everyday life such as medicines, food and the environment.

The Sarawak Campus of Swinburne University began biotechnology operations in 2008 with the establishment of dedicated modern lab facilities for undergraduate teaching and research.

According to SUTS pro vice chancellor and chief executive Professor Helmut Lueckenhausen,

Swinburne sees the biotechnology collaboration between the university and SBC as a first, and hopes others will follow.

"Swinburne University of Technology in Melbourne, one of the newer technology universities in Australia, is pursuing significant research of various kinds. When we opened the campus here, what seemed attractive to the university were opportunities in biotechnology," he said.

"Swinburne Sarawak believes it has the capacity to make a significant contribution to industrial sustainability in Sarawak and elsewhere as it has the research expertise and the technology for endeavors of this kind."

"This project is also in line with our goal to extend Swinburne Melbourne's status as a research-intensive university to our Sarawak campus," he added.

The collaboration between Swinburne Sarawak and SBC is a timely development in the university's plan to expand its activities into science and technology and grow its research profile, especially in collaboration with the local industry.

● Turn to Page 13, Col 3



SWINBURNE UNIVERSITY OF TECHNOLOGY SARAWAK CAMPUS (SUTS) AND THE SARAWAK BIODIVERSITY CENTRE (SBC) ARE COLLABORATING IN BIOTECHNOLOGY UNDER A MEMORANDUM OF UNDERSTANDING (MOU).

## Substance(s) from fungus can be developed to treat Alzheimer's Disease

● From Page 1

Bio-prospecting of the biodiversity to discover potential and useful applications in healthcare, agriculture and industries very much depends on implementing a highly-robust research and development (R&D) programme, involving various scientific tools, including biotechnology earmarked as an engine of growth for the state and country.

Since the Sarawak government set up SBC in 1997, the centre has initiated programmes for the conservation, utilisation, protection and sustainable development of biodiversity in the state.

Its R&D programme focuses on making discoveries in biological resources that would lead to the development of herbal therapies, nutraceuticals, pharmaceuticals for healthcare and pharmaceutical drugs for countering diseases such as cancer and infectious agents.

The programme also aims to discover chemicals and enzymes from biological resources that would be useful over a broad range of applications as industrial related products such as essential oils, bio-pesticides and commercial dyes.

One of its R&D programmes focuses on making discoveries in biological resources that might lead to the development of pharmaceutical drugs. Towards this end, SBC screens plants and soils for microbial compounds that may have industrial potential.

SBC chief executive officer Dr Rita Manurung told the Sunday Post as biodiversity could contribute much to the various industries, the centre's research officers needed constant training to further develop their expertise.

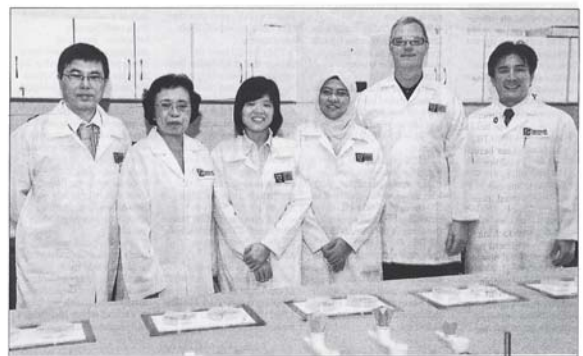
"Most of our scientists are new and very young — they, therefore, need a lot of training and guidance. We believe this is the perfect opportunity to team up with Swinburne so that our officers will benefit from the training they've achieved at the university."

"We work together to achieve what we plan to do at SBC," she said.

Manurung pointed out that under the SBC-SUTS MoU signed in 2007, SUTS would provide research training relevant to the state for SBC research officers.

According to her, the collaboration has also brought much advantage to both parties.

"Prior to this, the SBC has been sending research officers for overseas postgraduate studies. In fact, three officers just came back last year from Adelaide, Australia, and are now working full time at SBC," Manurung said, adding "we, however,



GREAT TEAM: Ng (third left) and Noreha (third right) flanked by their supervisors Kuek (left) and Yeo (right). With them are Lueckenhausen (second right) and Manurung.

As biodiversity could contribute much to the various industries, the centre's research officers needed constant training to further develop their research expertise.

— Dr Rita Manurung, chief executive officer of SBC

cannot afford to send too many of our staff at any one time."

"Currently we have two research officers — Ng Lee Tee and Noreha Mahidi — who are doing their in-service training as full time PhD candidates at SUTS. This is made possible by the Chief Minister's Department that provides us grants to support the operational costs," she added.

In 2007, SBC, in collaboration with Nimura Genetic Solutions (NGS), a company based in KL, specialising in bio-resource exploration, discovered a fungus near Kuching which, from preliminary tests, was shown to produce substance(s) with high inhibitory activity against the enzyme prolyl oligopeptidase (POP), believed to be involved in the development of Alzheimer's Disease.

This fungus is a good candidate for further studies. It has the potential for deeper research and development. Substance(s) it produces could be developed into a drug for treating Alzheimer's Disease — if all the right properties are present.

Such substances are of obvious interest to the pharmaceutical world. So the SBC needs to conduct more studies on this micro-organism so that the physiology of the synthesis of the compound, POP-inhibitor, can be elucidated.

In light of this, SBC has entrusted SUTS, under Associate Professor Chen Kuek and the university's biotechnology programme, to help SBC take the next

step in investigating this fungus.

Working under the PhD supervision of Kuek and SBC senior research officer Dr Charlie Yeo, Ng Lee Tee will utilise fermentation approaches to understand the physiology of the optimal synthesis of the enzyme inhibitor(s).

"The study will encompass determining the physico-chemical/cultural conditions for fungal biomass and its desired metabolites in submerged aerobic culture firstly in shake flasks, then in a bioreactor," Ng said of her project which is the first step in developing the commercial potential of the fungus.

The fungus that can produce this compound was discovered in the SBC's R&D programme in collaboration with Nimura Genetic Solutions, to

isolate useful micro-organisms from Sarawak's biodiversity. "Early results are extremely promising and processing via repeat batch culture with immobilised biomass of the fungus has been shown to be possible," Ng explained.

The other PhD project, under the SUTS-SBC MoU and also supervised by Noreha, is also supervised by Noreha.

Its main objective is to search Sarawak's biodiversity for microorganisms that can produce antimicrobial volatile organic compounds (VOC).

"The VOC mixture includes alcohols and esters, and can kill pathogens like fungi and bacteria such as listeria and salmonella and many plant pathogens," Noreha said.

"This work is largely inspired by the discovery of Dr Gary Strobel at Montana State University, USA, of a novel endophytic fungus Muscodor albus that produces volatile antimicrobial compounds VOCs and has since been developed in various applications for the control of fungal problems in

horticulture and agriculture.

"The idea is that the micro-organisms we may find from Sarawak's biodiversity can also be developed as biological control agents in the amelioration of diseases that afflict agriculture and horticulture, or in the extension of the shelf-life of packaged fruits and vegetables," she added.

Using the Muscodor albus gifted by Dr Strobel, Noreha will screen fungi she will isolate from Sarawak's flora in targeted jungle locations.

"Those fungi that are able to grow in the presence of the VOCs, produced by Muscodor albus, will likely possess an equivalent ability to produce VOCs."

"The fungi will then be subjected to further tests and developed into applications for Sarawak's agriculture, using oil palm and pepper diseases as the models."

"The Muscodor albus has the ability to produce a mixture of volatile compounds, including alcohols and esters, that can kill pathogens like molds and bacteria such as listeria and salmonella and many plant pathogens," Noreha said, adding that the fungus also acts as an insecticide.

According to Lueckenhausen, the PhD programmes undertaken by Ng and Noreha are examples of what the university offers — an opportunity to develop human resources through post graduate programmes run by Swinburne.

The projects are a positive step towards the university's biotechnology programme that also includes bachelor of science in biotechnology.

The new biotechnology programme in teaching and research is the seed from which a school of science offering other science degrees will sprout to take its place with the other established schools on campus.



PROGRESSIVE: Noreha explaining to Manurung (left) and Lueckenhausen her research on a plant-dwelling fungus called Muscodor albus.

# SBC protects role of local communities

BY PATRICK JOSEPH

**KUCHING:** The Sarawak Biodiversity Centre (SBC) was established to ensure that the development of the state's biological resources will not diminish the role of the local communities as an important stakeholder.

"The State government is very much aware of the importance of cataloguing Sarawak biodiversity for medical, scientific and economic purposes," said Second Minister of Planning and Resource Management Datuk Amar Haji Awang Tengah Ali Hassan.

He said the common effort in the conservation and sustainable management of biological resources, the importance of collaboration with research bodies internationally or locally, and enhanced cooperation among researchers all over the world, were crucial for ensuring the ability to explore the richness of the Sarawak forest's hidden treasures.

Speaking at the opening of a three-day Sarawak Biological Resources Forum with the theme 'Highlighting Sarawak as a Global Mega Biodiversity' organised by the State Forest Department at the Pullman Hotel here yesterday, Tengah said the state had collaborated with various organisations such as International

Tropical Timber Organisation (ITTO), the Alterra Group from the Netherlands, Kyoto and other Japanese universities, as well as local universities like UNIMAS, UPM, USM in biodiversity development.

"Recently, the State government through the Forest Department had collaborated with the Carnegie Airborne Observatory (CAO) Stanford, USA, UNIMAS and UPM in the development of spectral database of Mixed Dipterocarp Forests (MDF) in Lambir National Park.

"Such collaborations have helped Sarawak to further enhance its capacity in biological resources agenda. Experts from these organisations have come to share their technology, knowledge and experiences to benefit Sarawak immensely," he said.

He pointed out that the State government established more institutions of higher learning to develop the relevant human resource in the context of research. Apart from that, research related agencies had also been set up to accommodate the needs for research on the State's rich flora and fauna.

According to Tengah, research programmes need to be consolidated as a step towards developing a more intensive, technology-based

and commercially-orientated research programme.

"To ensure the development of biotech in the state, research is also made in areas of natural resource management," he said, adding that research in herbs and biodiversity resources could give rise to early development of food, pharmaceutical products and environment management.

He admitted that it was a difficult task to strike a balance between the need to protect the environment and the necessity to attain sustainable development.

He said a lot of efforts had been made by the government to conserve and protect forest areas in the state and this could be seen from the extensive network of Permanent Forest Estates (PFE) and the Totally Protected Areas (TPA) to meet the need of the people now and in the future.

"The state has designated six million hectares as PFE and one million hectares as TFA," Tengah said, adding that the state had to date gazetted some 31 areas as TPA.

Among those present at the opening ceremony were the director of Sarawak Forest Department Datu Haji Len Talif Salleh and the organizing chairman Haji Sapuan Haji Ahmad.

# Afternoon event for bird lovers

THE Sarawak Biodiversity Centre (SBC) in collaboration with the Malaysian Nature Society (MNS) Kuching branch birding group will hold an afternoon programme entitled *My Garden Birdwatch* on May 10 at the DBKU Auditorium in Bukit Siol, Kuching.

The programme from 2pm to 4.30pm will comprise an awareness talk on birding by Dr Ronald Orenstein and a workshop on birdwatching by facilitators from the birding group.

Dr Orenstein is a zoologist, lawyer, wildlife conservationist and project director of International Wildlife Coalition.

He is the editor of *Elephants: The Deciding Decade* and author of the *How on Earth* series, *Songbirds: Celebrating Nature's Voices*, *New Animal Discoveries* and *Survivors in Armour: Turtles, Tortoises and Terrapins*. He lives in Mississauga in Ontario, Canada.

The talk will encompass the basics of birdwatching and Orenstein's own birding adventures in Sarawak.

The workshop will teach participants on what to look out for in discerning birds and highlight common birds found in and around Kuching.

Targeted at students and the general public, programme's objectives are to create awareness on Sarawak's biodiversity with emphasis on birds that can be spotted in our surroundings, including gardens.

It is also aimed at creating an interest in bird-watching as a hobby and encouraging the general public to be aware of the biodiversity of their surroundings.

Those interested can contact SBC at 082-610 610 or send email to biosar@sbc.org.my or hamim@sbc.org.my to register. Admission is free.

# 'My Garden Birdwatch' talk May 10

**KUCHING:** Diehard bird watchers claim that bird watching is a lifetime ticket to nature's theatre.

Non-bird watchers on the other hand think that birders are a bunch of bumbling crazies who go around with their necks perpetually craned upwards and eyes scouring the trees around them, hoping to catch the flutter of that little obscure bird.

What is it exactly that birders (nickname for bird watching enthusiasts) are fixated on?

Why is it that this special breed of people can spot interesting looking birds almost anywhere, when the rest of us cannot? Would you like to be able to have this special knack for spotting interesting birds in your own backyard?

The opportunity to learn and be part of an exciting activity called the 'My Garden Birdwatch' will be available come May 10, 2010 here in Kuching.

Jointly organised by the

Sarawak Biodiversity Centre (SBC) and the Birding Group of the Malaysian Nature Society (MNS) Kuching Branch, this public awareness event will take place at the DBKU Auditorium in Petra Jaya at 2.00pm.

The event will consist of a talk on birding by Dr Ronald Orenstein and a session on the My Garden Birdwatch programme by Mr Anthony Wong from MNS' Birding Group.

Dr Ronald Orenstein is an avid birder and has traversed the world in the course of his work and hobby. He holds a PhD in Zoology from the University of Michigan and an LLB from the University of Toronto.

A recognised expert on the Convention on International Trade in Wild Species of Fauna and Flora (CITES), Dr Orenstein is the author of six books on science and nature.

His books include *New Animal Discoveries* (Key

Porter/Millbrook Press 2001), winner of the Canadian Science in Society Journalism Award for best children's book published in 2001, and *Survivors in Armour*, a natural history of the world's turtles, tortoises and terrapins.

During his talk he will show why birding is exciting and interesting, especially in Borneo and how to identify some of the common birds you can see here in Kuching.

The objectives of this programme are to create awareness and encourage the public to know more about birds, their status and habitats here, as well as to promote appreciation for our local biodiversity.

Those interested in attending this exciting event can call Hamim at 082-610610 by 4pm on May 7, 2010 to register.

No participation fees will be charged and registration is based on a first come, first serve basis.

# Birdwatching programme at DBKU Auditorium

**KUCHING:** The Sarawak Biodiversity Centre (SBC) in collaboration with the Malaysian Nature Society (MNS) Kuching Branch's Birding Group will hold the 'My Garden Birdwatch' programme on May 10 at the DBKU Auditorium Bukit Siol Petra Jaya.

SBC, in a press release issued yesterday, said the free programme will run from 2pm to 4.30pm.

Dr Ronald Orenstein will give an awareness talk on birding and facilitators from the MNS birding group will hold a short workshop on birdwatching.

Orenstein is a zoologist, lawyer, wildlife conservationist and project director of the International Wildlife Coalition from Ontario, Canada.

He is the editor of 'Elephants: The deciding decade' and author of the 'How on Earth' series.

The talk will encompass the basics of birdwatching as well as some of his own birding adventure in Sarawak, while the workshop will teach participants on what to look out for in discerning birds and highlight some common birds found in and around Kuching city.

The objectives of the programme are to create awareness on Sarawak's natural biodiversity with emphasis on birds that can be spotted in our daily surroundings including in our very own gardens.

It also aims to create interest in birdwatching as a hobby as well as encouraging students and the public to be more aware of biodiversity. Those interested to attend can contact Hamim, Selwynn or Asha on 082-610610 or via email at biosar@sbc.org.my or hamim@sbc.org.my.

Metro - 15th May 2010

# Dinosaurs in your garden

Zoologist: Variety of birds we see today are surviving dinosaurs



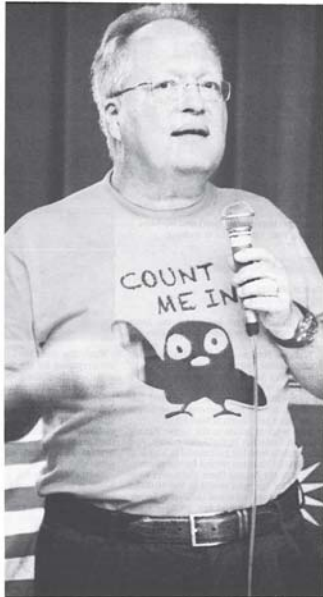
**Amused:** A section of the school children at the birding talk on Monday, where they learn that birds are in fact descendants of dinosaurs.

Story and photos by YU JI

HERE are dinosaurs in your garden. In fact, there are dinosaurs everywhere, flying around, making nests and laying eggs. Dinosaurs never became completely extinct despite what Hollywood blockbusters may have you think. And no, scientists did not recently revive some long-dead, dried up specimens. According to latest scientific journal, it's more-or-less confirmed that birds are dinosaurs. Zoologist Dr Ronald Orenstein told a roomful of students here on Monday. "Although scientists have long speculated that birds are descendants or related to extinct dinosaurs, but new archaeological unearthing have been startling. "We have found remains of feathered dinosaurs in China, which prove that the variety of birds we see today are surviving dinosaurs, even though most other dinosaurs became extinct 65 million years ago." Dr. Orenstein, from Michigan University, is the winner of the Canadian Science Society Journalism Award. He has written six books, including ones meant for children, on subjects like this. During a talk organised by the Sarawak Biodiversity Centre and the

Malaysian Nature Society recently, Dr Orenstein spoke on why children should take up bird watching. "You guys are so lucky to be living in Kuching because there are so many birds to see. Avid bird watchers like us travel half way round the globe just to see what you can see in your own backyard," he said. He introduced the Indian Cuckoo, a musical bird unique to Asia. "The Indian Cuckoo gives a quick four-note call, like the opening notes of German composer Beethoven's Fifth Symphony. You know that piece of music kids, it goes, 'Oom, oom, oom, OOM!'" And with that introduction, the hundred-over students in the hall were hooked. They learnt that some birds were easier to identify, not by sight, but by their behaviour and by the sounds they make. "I have never seen the Indian Cuckoo bird my entire life, but I hear them every day," Dr Orenstein said. "They hide in the upper parts of trees. The sound they make is so distinctive that it cannot be any other kind of bird, but I still haven't seen one!" Knowing how a variety of bird sounds is key to good bird watching. Here are some other examples the zoologist gave. The Pacific Swallow, known locally as the *loyang loyang* (Puffik), it makes a high-pitched "twit". The Collared

Kingfisher, *Pterko bokuk*, makes a shrill "kaak-kaak". The Brown Throated Sunbird, *Kelicap Moyang Kelicap*, calls out a sharp "too-wit", while the Pink Nodded Green Pigeon, *Punal Gading*, sounds like what Dr Orenstein described as "a bubbling 'oo'". Dr Orenstein's talk was part of the "My Garden Birdwatch" initiative. It is the first bird survey of its kind in Malaysia. It involves looking at birds that inhabit local neighbourhoods, and over time, detecting changes in their numbers and distribution. Organisers say it is a chance for children and their family members to become budding scientists and conservationists. "You can contribute important data that will help to protect garden birds and their environment," said a Malaysian Nature Society Birding Group statement. "Natural events like earthquakes and diseases, combined with human activities such as the spread of urbanisation, all have major impact on the population and distribution of birds." "Data derived from surveys such as this will provide useful clues and answers to many of our questions. Statistics also form the basis of conservation priorities." More than that, Dr Orenstein's talk pointed to a greater understand-



**Dr Orenstein:** Birding is a fun way for children to learn science.

ing of scientific knowledge among students. His explanation of birds being dinosaurs, for instance, firmly establishes evolution as a fact - dismissing pseudo-science mambo jumbo so prevalent these days. Activities such as this also helps to train students to think critically, based on facts and observations. Dr Orenstein said to the kids: "Repetition is valuable when you're learning things." Meanwhile, birding as a hobby is cheap. It does not require expensive

equipment to start off with, except effort, and perhaps later, a pair of binoculars. "Everyone can get involved immediately. You don't need expensive equipment, just take a stroll and pay attention to your surroundings. Whether you pick up birding as a hobby or not, it doesn't matter. That's up to you. Just give it a try," Dr Orenstein said. For more information, visit [www.mns.my](http://www.mns.my), [www.ploefontail.com](http://www.ploefontail.com) or [mns.kuching.blogspot.com](http://mns.kuching.blogspot.com)

The Borneo Post - 11th May 2010



**ALL ABOUT BIRDS:** Dr Orenstein talking to students at the DBKU auditorium.

## Birding a rewarding activity, students told

**KUCHING:** An international winner of journalism award and author of six books on science and nature, Dr Ronald Orenstein, opened local students' eyes when he urged them to look for and learn about birds of East Malaysia. Birding is a rewarding hobby that can last a life time, he said. Before proceeding to show why birding is exciting and interesting especially in any part of the island of Borneo. Dr Orenstein was speaking to secondary students at the Sarawak Biodiversity Centre and Malaysian Nature Society (MNS) 'My Garden Birdwatch' public awareness talk and workshop held at Kuching

North City Commission (DBKU) auditorium here yesterday. He said students must be guided on how to identify some of the common birds seen here like Eurasian Tree Sparrow, Oriental Magpie Robin, Zebra Dove, Javan Myna, Spotted Dove, Rock Pigeon, Collared Kingfisher, White-breasted Waterhen, Olive-backed Sunbird. Dr Orenstein from the University of Michigan and University of Toronto is a recognised expert on the Convention on International Trade in Wild Species of Fauna and Flora (CITES). While, 'My Garden Birdwatch' programme is the first bird survey of its kind in

Malaysia which looks at birds that inhabit here and over time detect any changes in their numbers and distribution. It is to create awareness and encourage people to know more about birds, their status and habitats in Malaysia. Natural events like predation, earthquakes, diseases, climate change and certain human activities have major impact on the population and distribution of species of birds. This non-profit project is by Malaysian Nature Society Selangor Branch Bird Group in association with MNS Kuching Branch Bird Group with the an initiation fund from Wild Asia Seed Grant.

The Borneo Post - 9th June 2010

## Biodiversity centre to hold talk on gardens, landscapes

**KUCHING:** Sarawak Biodiversity Centre (SBC) will be holding a public awareness talk for the benefit of garden and landscape enthusiasts at SBC lecture theatre at Jalan Puncak Borneo near here at 3pm on June 18. The talk will be delivered by a speaker who is renowned for putting together ideas for gardens and landscapes through Asia's premier gardening magazine called 'Garden Asia'. SBC said in a press release issued yesterday. The editor of the 'Garden Asia', Professor Dr Halijah

Ibrahim, and its editor-in-chief Datin Nik Radiah Nik Hassan will be in the city to feature SBC's own Laila Taib Ethnobotanical garden in the magazine. Halijah will take the opportunity during the trip to inform garden enthusiasts about using gingers and herbs for landscape and also to provide other garden and landscape tips. Halijah, who is from the Institute of Biological Sciences of Universiti Malaysia, will talk on the topic for about an hour and those who

attend the talk will also have the opportunity to view photographs of several local gingers and herbs that could be used for landscape purposes and SBC's garden for ideas. Those intending to attend the talk are advised to contact Asha or Ha-Mim at SBC on 082-610610, 016-893 6991 or email address [biosar@sbc.org.my](mailto:biosar@sbc.org.my). "Entrance is free. However, as seats are limited, confirmation of reservation will be on a first come first serve basis," SBC said.

## How to landscape your garden with herbs

**KUCHING:** If you are thinking of remodelling your backyard or just interested in decorating your lawn with local herbs and plants, you should not miss the talk at the Sarawak Biodiversity Centre (SBC) will be organising.

The talk, aimed at garden and landscape enthusiasts will begin at 3.00pm on June 18 at the SBC premises in Semengoh. It will be delivered by a speaker from Asia's premier gardening magazine, Garden Asia.

The speaker, Professor Dr Halijah Ibrahim, editor of Garden Asia and the Editor-in-Chief of

the magazine, Datin Nik Radiah Nik Hassan will be in Kuching to feature the SBC's Laila Taib Ethno-botanical garden in the magazine.

Professor Halijah who is also from the Institute of Biological Sciences, University of Malaya will talk about using ginger and herbs for landscaping. Other garden and landscape tips will be provided. The audience will also have the opportunity to view SBC's garden and photos of several local ginger and herbs that can be used for landscape purposes.

If you like your own medicinal

and edible garden in your backyard, or for teachers who want to utilise herbs to landscape and beautify the school's compound, this is the chance to hear about using ginger and herbs for landscape purposes from the expert.

No entrance fees will be charged for the talk and reservations will be accepted on first come first serve basis as the seats are limited.

Those interested to join the talk can contact Asha or Ha-Mim at the Sarawak Biodiversity Centre at 082-610610, 016-8936991 or e-mail to biosarc@sbc.org.my for early reservations.

## 'Kayu Bebi' for oral care

Plant traditionally used as toothbrush and mouthwash on display at booth



Ancient: A closer look at the traditional toothbrush.

Story and photos by PAULINE HO sarawakstar@the-star.com.my

**A** PLANT which is traditionally used by the Bidayuh community as a toothbrush and mouthwash in the old days was among the unique items displayed at the recent state-level Sejawa Simada programme at SK Perbandaran No. 3 in Sibau.

"Kayu Bebi" was traditionally used by the Bidayuh in Kpg Semadang in Peninsular for oral care, said Asha D Kaulial, communications officer of the Sarawak Biodiversity Centre (SBC).

She said apart from using it as a toothbrush, the Bidayuh actually boiled the plant for mouthwash as well.

"It is said to be slightly bitter," she when met at the SBC booth. Asha said the jungles in Sarawak

were very rich with various species of plants good for personal care and medicinal purposes. Due to changing priorities however, the people at large generally do not rely so much on the jungle any more, especially when medicine is easily available in town.

She said SBC has been entrusted with initiating intensive biotech-based research and development on the state's biological resources, particularly those that have been utilised by indigenous communities.

At the same time, the centre is facilitating the documentation of the fast disappearing traditional knowledge of indigenous communities on how they utilise plants.

"We are hoping the local entrepreneurs can go into commercial development of products from our jungle plants and ultimately share the benefits with the communities who have shared their knowledge



Try this: Asha and SBC events officer Hamim Marzuki attending to visitors at the booth.

with us," she said.

At the moment, the centre is working through its Traditional Knowledge Programme (TKP) with communities in the highlands of Sarawak to extract oil from a plant called Pahlak and screen the oil for its bioactivity.

Because of its anti-microbial properties, Pahlak, found in Bario, Lawas, and Kpg Kiding in Padawan, has potential to be developed into household products like disinfectants, handsoaps or even incorporated

into soap, she said.

"The people in these communities use Pahlak basically for cooking and for gas in the stomach," said Asha, pointing out that the core objective of TKP is that the knowledge the communities have will not be lost, to ensure proper documentation and to make sure any commercialisation of products as a result of the sharing of the communities will rightly come back to them in the form of benefit sharing.

"So far the basic form of benefit

sharing is with Kpg Kiding in Padawan and Long Kerabangan in Lawas. The communities are taught to distil oil from Pahlak using field distillation unit," she said.

She added that SBC paid the village folk for the oil which was then used for screening in the lab for product development.

Other forms of benefit sharing include contract farming, plant collection and setting up trust funds for the communities, she said.



LEE (centre) and the trainee teachers posing for a photograph at the centre.

## Learning about biodiversity



THE trainees taking a closer look at the medicinal plants at the centre.

**KUCHING:** A group of 18 trainee teachers of the FISMIP course January 2009 intake conducted a field trip at the Sarawak Biodiversity Centre at Mile 13, Borneo Heights Road near here recently.

The main aim of the field trip was to get the trainees familiar with the work of the centre especially in its effort to preserve and protect the state's biodiversity.

One of the highlights was the opportunity to observe the rich diversity of medicinal plants planted at the Laila Taib Ethnobotanical Garden in the compound of the centre.

The trainees were impressed by the work and efforts undertaken by the traditional knowledge section. It is hoped that the trainees will be able to play a part as future science teachers in the remote areas of the state where they help identify medicinal plants used by the local community.

This field study was part of the biodiversity practical work under the SCE 3107 Ecosystems and Biodiversity course.

The trainees were accompanied by their science lecturer, Lee Gim Keit.

The Star - 18th August 2010

## Centre sees tourism potential of Penan herb garden

By ZORA CHAN  
zora@thestar.com.my

**KUCHING:** The first Penan herb garden in Sarawak in Long Iman — a settlement located in Mulu — is a potential tourist destination.

Long Iman is about 30 minutes via long boat from the Mulu National Park and has a population of about 100 people.

The herbarium is one of the results of the Sarawak Biodiversity Centre's traditional knowledge documenta-

tion programme.

The centre's chief operating officer, Dr Rita Manuring, said the garden covered about an acre and featured about 200 plants which the community used for food and medicine.

She said the centre planned to help the Long Iman folk to improve and promote the garden so that it would be a tourism attraction.

"Long Iman is one of the Penan communities that the centre has worked with on traditional knowl-

edge documentation over the years. It is one of our success stories working with local communities," she said.

"We hope to promote the garden as a tourist attraction because where else in the world can you find a Penan herb garden?" she told *The Star* yesterday.

Dr Rita said tourists to the Mulu National Park normally visited another Penan longhouse, Batu Bungan, which was accessible by road.

Villagers at Batu Bungan were also keen to establish a herbarium but the area was prone to floods, she said.

The centre hoped that through the herb garden more people would also visit Long Iman so that they would have a sustainable source of income from the tourism sector.

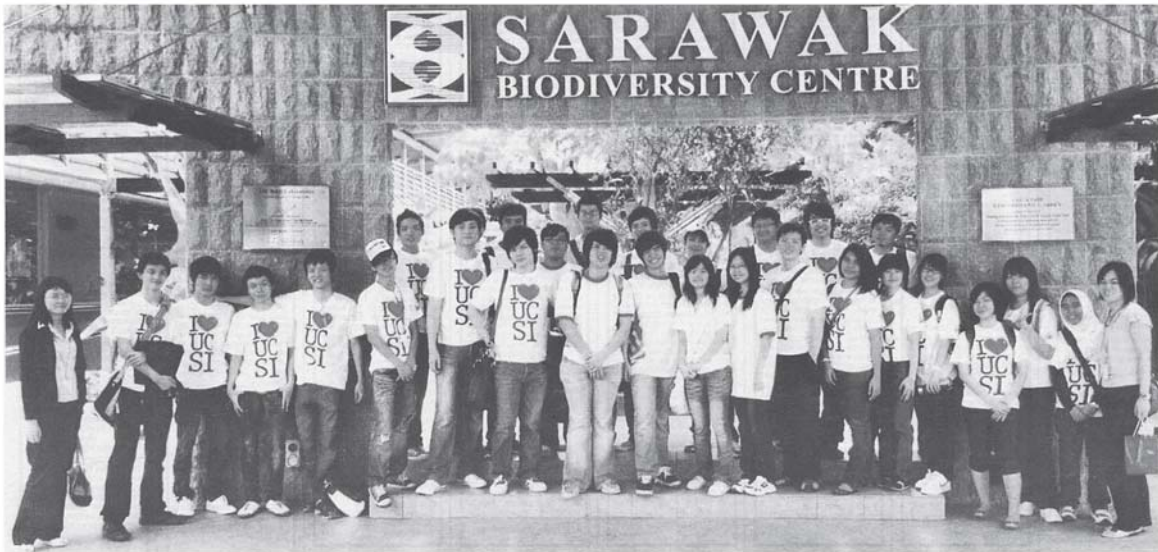
The centre's traditional knowledge documentation programme, which started in 2001, also encourages local indigenous communities to cultivate useful indigenous plants

for their own uses, as landscaping and for awareness.

To date, the centre in collaboration with the people have documented 3,000 plants from 700 species used by the Iban, Bidayuh, Kayan, Kenyah, Penan, Selako, Melanau, Malay, Bisaya, Lun Bawang and Kelabit communities.

Dr Rita said most plants came from the Penans because the community still depended much on the forest and were very generous with their knowledge.

Metro - 19th August 2010



**Gaining knowledge:** The UCSI students posing at Sarawak Biodiversity Centre.

## Real-life learning for UCSI students at S'wak Biodiversity Centre

A GROUP of GCE A-Level and Foundation in Science students of UCSI University Sarawak Campus recently went on an excursion to Sarawak Biodiversity Centre (SBC) to learn more on their current study areas in Spectrometry (Chemistry) and Botany (Biology).

During the half-day trip, the students were given lectures on the functions of a spectrometer and a tour of SBC's Laila Taib Ethnobotanical Garden.

"Gaining knowledge on spectrometry is fun, especially when the learning is done outside the class-

room with actual research samples," said UCSI A-Level student Leong Shay Hwa.

His course mate Chai Boon Ping said the excursion gave them added value to their classroom lessons.

"Class lessons and lab experiments are never enough to give the

whole picture. You need to see real-life experiments being conducted to know the actual depth of the research and its results," he added.

At the ethnobotanical garden, the students learned the genus and species names of several plants.

UCSI lecturer Irene Foo described

the outing as beneficial as the students could apply what they learnt in a real-life scenario.

The students previously visited the Sarawak Forestry Department and Batu Kintang Water Treatment Plant as part of their experiential learning process.

# S'wak products for the world

## Biodiversity centre takes big leaps in documenting traditional knowledge



**Valuable:** Herbal plants used by the indigenous communities planted at the Sarawak Biodiversity Centre's herbarium.



**Prototypes:** Some potential household products with pahkah as the main ingredient.

Story and photos by **ZORA CHAN**  
zora@thestar.com.my

**S**ARAWAK Biodiversity Centre's (SBC) traditional knowledge documentation programme has come a long way from plant sample collection and recording to bio-prospecting for the production of household items, including drugs and antibiotics.

While the production of drugs, essential oils and household needs from herbs in Sarawak is at its infancy, initial research is showing positive results.

SBC senior research officer Dr Yeo Tiong Chia said that one promising compound was silvestrol, which had good anti-cancer properties as shown in animal studies.

"Lately, there has been interest from Ohio State University and National Cancer Institute of the United States to test this compound against leukaemia," he said.

It had moved from lab tests to animal studies and then to pre-clinical and clinical processes, he told StarMetro recently.

Dr Yeo said that SBC, in collaboration with an Australian biotech company, discovered and patented the compound in 2004, and the state government was managing the patent through the centre.

"The compound comes from the rukang tree found in Ba'Kelalan in the northern highlands of Sarawak," he said.

He said the Lun Bawang community in Ba'Kelalan claimed the bark of the tree could cure stomach pain.

SBC chief operating officer Dr Rita Manurung said the production of household items from plants was a short-term result of bio-prospecting and the development of drugs and antibiotics was a long-term goal.



**Useful items:** Soaps made from local rice and essential oils.

It often took more than 10 years before any medicine could be put on the shelf, she said.

The centre's traditional knowledge documentation programme was the starting point for research and development in herbs and product development, she added.

The programme started in 2001 to conserve the traditional knowledge of indigenous groups in Sarawak and encourage the communities to cultivate useful indigenous plants for their own use and later for commercial purposes, she said.

"The centre, in collaboration with the people, has documented 3,000 plants of 700 species used by 12 communities in the state. All these plants are planted in our herbarium," she said.

The programme was formulated to ensure the communities that shared their knowledge would benefit socio-economically, she said.

Citing an example, she said that SBC had helped set up a herbarium for the Penan community in Long Iman, Muhi.

This first Penan herb garden in the

world was a potential tourist draw to help the community earn tourism ringgit as sustainable income, she added.

"We hope to promote the garden as a tourist attraction because where else in the world could you find a Penan herb garden," she said.

Dr Rita said that SBC's bio-prospecting work came up with many other uses for the plants.

"One plant called pahkah in Bidayuh and tenom in Lun Bawang and Kelabit is used for the relief of backache by these communities," she said.

Through SBC's aromatic oil programme, the centre discovered that the plant's roots and leaves produced a composition of oil that was anti-microbial and equivalent to tea tree oil, she said.

This made pahkah oil a potential ingredient of household and cosmetic products, she said, adding that R&D by the centre and a private firm had come up with products like floor cleaner, disinfectant, soap, insect repellent and shampoo.

"Oil from the engkabang fruit can



**Silvestrol source:** Dr Manurung showing a rukang tree planted at the centre's herbarium. Silvestrol from the tree contains properties that could fight leukemia.

also be made into soap, lip balm and chocolate," she said.

She said the local rice species was high in anti-oxidant properties and could be an ingredient in healthcare or cosmetic products.

Dr Rita hoped that local entrepreneurs would be interested in developing and commercialising these prototype products.

"Sarawak is very rich in biodiversity and there is much potential in

just the plants alone," she said.

The centre was pleased that its programme had become a model for others in Asia and a source of excellence in documenting traditional knowledge in the region, she said.

People from as far as Bhutan, Nepal, Pakistan and India had taken part in SBC workshops to learn the documentation methods, she added.

# Biodiversity centres to hold colouring contest

**KUCHING:** The Sarawak Biodiversity Centre will be holding an open day on Nov 26 and 27.

In conjunction with the event, the centre is organising a colouring contest for school children at the centre on Nov 26, with the objective of creating awareness of the biodiversity around them.

The contest is open to children between five and 12 years old and will be divided into three categories: 5 to 7 years, 7 to 9 years, and 10 to 12 years.

To enter the contest, participants must fill the entry form obtainable from SBC's website, [www.sbc.org.my](http://www.sbc.org.my). The rules and regulations are also available for download.

The completed forms must be returned to the centre by Oct 26 Oct. Each category is limited to 50 participants, and will be based on a first come first served basis.

Participants must bring their own pencils and crayons for the contest.

The winners of each category will receive hampers and cash vouchers for purchases at MPH Bookstore.

For more information on the contest, contact Aloysius Sim by calling 082-610610 or via email at [aloysius@sbcc.org.my](mailto:aloysius@sbcc.org.my).

New Sarawak Tribune - 6th November 2010

## SBC has collected, documented over 3,900 medicinal plants

ASSISTANT Minister of Entrepreneur Development, Planning and Resource Management, Haji Mohd Naroden Majais revealed that Malaysia became a party to the Convention on Biological Diversity or CBD in 1994 which led to the establishment of the National Biodiversity Policy in 1997.

Sarawak was the first state in the country which enacted a biodiversity ordinance in 1997 which was subsequently amended in 2003.

Naroden said this in reply to questions from Pelawan assemblyman, Vincent Goh Chung Siong on Malaysia's performance in her own SBC, the achievement in developing health products from our own rainforest, the achievement in indigenous communities preserving their traditional knowledge through proper recording or documenting techniques, the location for the research work in our forest to be carried out and to consider the setting up of research in Bukit Lima Reserve in Sibuh which is rich in wetland biodiversity.

Naroden said that 32,000 extracts (diversity set) that have been deposited in Sarawak Biodiversity Centre's (SBC) Natural Product Library which are derived



HAJI MOHD NARODEN MAJ AIS

from 4,475 plant samples and 12,000 strains of micro-organisms.

He also said that SBC had developed preliminary collaborative efforts for drug discoveries with Texas A&M University of USA for anti-malaria and anti-tuberculosis agents.

"SBC has had a very productive collaboration with a biotech company, Nimura Genetic Solutions, for the past five years and the collaboration has yielded a microbial library and new species of microbes for drug discovery," he said.

He added that the develop-

ment of health products from our biodiversity is currently being undertaken and this effort will take time involving identification of the potential applications from the biodiversity and to verify the use of the biodiversity using scientific methods.

Naroden also said that thus far a number of essential oils such as Pahkak from Kampung Kiding and Bunga Ta'ang from Kampung Semadang which have potential for a variety of health care applications have been identified.

"SBC, has to date carried out the Traditional Knowledge Documentation Programme with 12 ethnic communities in 50 locations in Sarawak and has collected and documented over 3,978 plants which are used by various communities in Sarawak," Naroden said.

He added that out of the number 760 species of plants have been identified in collaboration with the Sarawak Forest Department and both local and foreign taxonomic experts.

At present, SBC does not anticipate carrying out general inventory or random collection of plant materials for research and development within the Bukit Lima Forest Reserve, he said.

New Sarawak Tribune - 27th November 2010

## Biodiversity centre to hold Open Day

**KUCHING:** Members of the public will get the chance to find out more about the Research and Development (R&D) activities carried out by the Sarawak Biodiversity Centre (SBC) on December 12 and 13, when the centre holds its open day (or "Karnival Biodiversity") at its premises at KM20, Jalan Borneo Heights, Semengoh, near here.

Held in conjunction with International Year of Biodiversity 2010, the aim of the carnival is to promote awareness and appreciation of Sarawak's indigenous biodiversity and its potentials in the pharmaceutical, healthcare and herbal industries.

It is also aimed at providing an avenue for members of the public to familiarise themselves with the work carried out by SBC. Among the activities that have been specially prepared for visitors to the event are games and quizzes for both children and adults, scientific demonstrations as well as talks on the state's biodiversity.

The centre will be open to visitors from 9.00 am to 5.30pm on both days.

Among the scientific demonstrations that will take place on December 12, starting at 10.00 am, are those on DNA extraction, essential oil extraction, natural pH indicators, silica column and 3D-DNA Molecule.

A 'Biodiversity Talk for Children and School Students' will be presented by Prof Yong Hoi Sen at 9.00 am that same

day, followed by talks on 'Uses of Indigenous Plants of Sarawak' by Runi Sylvester at 2.00 pm and 'Basic Gardening Techniques for Budding and Potting' by Voon Boon Hoe at 3.30 pm.

On December 13, the public talks that will take place are on 'Begonia of Sarawak' by Dr Ruth Kiew and Julia Sang at 2.00 pm, 'Venturing into Herbal Industry - Prospects and Challenges' by Prof Zhari Ismail at 3.00 pm and 'Basic Gardening Techniques on Compost Preparation' by Desmond Leo at 4.00 pm.

Those interested in attending one or more of these talks are advised to call in for reservations as seats are based on a 'first come first serve' basis.

A mini cultural village will also be set up on both days to feature crafts and local dishes by indigenous communities in Sarawak which utilise local biodiversity.

Local entrepreneur, Cassandra Havelock will carry out soap making demonstrations on both days at 2.00 pm.

Also on December 13, the Chief Minister Pehin Sri Haji Abdul Taib Mahmud is expected to officiate SBC's new administration building in the morning.

Members of the public and school students are invited to take this opportunity to get to know the Sarawak Biodiversity Centre better, and those interested in visiting or attending one or more of the public talks can call 082-610610 (Ms Asha) for more information.

Metro - 27th November 2010

## SBC to hold two-day Karnival Biodiversity

SARAWAK Biodiversity Centre (SBC) will hold its Open Day or "Karnival Biodiversity" in conjunction with the International Year of Biodiversity 2010 at its premises at KM20, Jalan Borneo Heights near Kuching on Dec 12 and 13.

The event, among others, aims at promoting awareness and appreciation towards Sarawak's indigenous biodiversity and its potentials in the pharmaceutical, healthcare and herbal industries.

It also aims to provide an avenue for the general public to familiarise with the works carried out by SBC.

A press statement issued by SBC yesterday said activities lined up for the two-day event had been specially prepared for visitors of all ages by the staff of SBC.

They included games and quizzes for children and adults



**Indigenous herbs:** Some of the herbs used by indigenous communities are planted at Sarawak Biodiversity Centre's herbarium under the its Traditional Knowledge Documentation Programme.

alike, scientific demonstrations, and public awareness talks, it added.

The Centre will be open to visitors

from 9am to 5.30pm on both days.

Among the scientific demonstrations that will take place on Dec

12, starting from 10am are DNA extraction, essential oil extraction, natural pH indicator, silica column and 3D-DNA Molecule.

The public talks that will take place on the same day are Biodiversity Talk for Children and School Students by Prof. Yong Hoi Sen at 9am; Uses of Indigenous Plants of Sarawak by Runi Sylvester at 2pm and Basic Gardening Techniques for Budding and Potting by Voon Boon Hoe at 3.30pm.

The next day they will be talk on Begonia of Sarawak by Dr Ruth Kiew and Julia Sang at 2pm; venturing into Herbal Industry - Prospects and Challenges by Prof Zhari Ismail at 3 pm and Basic Gardening Techniques on Compost Preparation by Desmond Leo at 4 pm.

Those interested in attending one or more of these talks are to call in

for reservations as seats are based on first-come-first-served basis.

A mini cultural village will also be set up on both days to feature the crafts and local cooking by indigenous communities in Sarawak that utilises local biodiversity.

Local entrepreneur Cassandra Havelock will carry out soap making demonstrations on both days at 2 pm.

Chief Minister Tan Sri Abdul Taib Mahmud is expected to officiate at event and declare open the Centre's new administration building on Dec 13.

Members of the public and school students are invited to take this opportunity to get to know the SBC better during Open Day and those interested in visiting or attending one or more of the public talks can call 082-610610 (Ms Asha) for more information.

## Find out more about local biodiversity at SBC's carnival from Dec 12-13

**KUCHING:** Are you interested in finding out about some of the uses of local plants found in Sarawak? Or perhaps interested in venturing into the herbal industry or just want your children to be more aware of the local biodiversity in Malaysia? Then come to the Sarawak Biodiversity Centre's

Biodiversity Carnival 2011 which will be held on Dec 12 to 13 at Mile 13, Jalan Borneo Heights. On Dec 12, renowned Zoologist Professor Yong Hoi Sen will give a presentation on biodiversity for school students at SBC's Lecture Theatre. The talk will begin at 9am and feature amazing wildlife

found locally. Prof Yong himself is an avid photographer and the presentation will feature some of the photos taken in the Sarawak's rainforests. On the same day, enthusiasts of local herbs are welcome to attend a talk by Runi Sylvester from Sarawak Forest Department on the uses of some

indigenous plants in Sarawak. It will be followed by a talk at 2pm and a presentation as well as demonstration on Basic Gardening Techniques for Budding and Potting by agriculturist Voon Boon Hoe. On Dec 13, the carnival will continue with more fun games and three more public

talks. Dr Ruth Kiew who has published many papers on begonias and also Julia Sang of the Sarawak Forestry Corporation will deliver the talks. At 3pm on Dec 13, industry players and those interested in venturing into the herbal industry can come and get tips and

pointers from Professor Zhari Ismail when he delivers a talk entitled "Venturing into Herbal Industry: Challenges and Prospects". Following the talk on the herbal industry, Desmond Leo and his team from Dewan Bandaraya Kuching Utara (DBKU) will hold a briefing and demonstration

on methods for preparing compost. Those interested can contact Asha or Ha Mim at 082-610610 or email biosar@sbc.org.my or hamim@sbc.org.my to make reservations to attend the talks. SBC invites the general public to take part in its open day programme.

## Biodiversity Carnival at SBC starts tomorrow

**KUCHING:** The Sarawak Biodiversity Centre (SBC) at Mile 13, Borneo Heights Road is celebrating International Year of Biodiversity 2010 by holding a Biodiversity Carnival on 12 and 13 December, 2010.

Themed "Ju Berambah! Biodiversity is life, biodiversity is our life" the carnival will feature a Mini Cultural Village, scientific demonstrations, fun and games, as well as public awareness talks.

The carnival is open to the public and no entrance fees will be charged.

The Mini Cultural Village will feature ethnic cooking demonstrations by the Iban, Melanau, Penan, Lun Bawang, Kenyah, Kelabit and Bidayuh communities. These communities who have been documenting their traditional knowledge on how they utilise biodiversity will also feature handicrafts that are unique to each of the community.

The young and old alike can also take part in the fun activities and games that the staff of the Centre have lined up, and stand to win attractive prizes.

Visitors who stay long enough and take part in the activities will stand a chance to win some lucky draw prizes.

Those interested in DNA extraction, essential oils extraction, soap making can also head down to the Centre on Sunday morning as these demonstrations will be held for visitors under the event's Science in Action exhibition.

Besides these activities, the carnival will also feature talks

by prominent experts in their respective fields of research.

To kick off the talks, renowned zoologist Professor Emeritus Yong Hoi Sen will be giving a talk on biodiversity at 9.00 am on Sunday, 12 December which will be followed by talks on Uses of Indigenous Plants of Sarawak by Runi Sylvester of the Sarawak Forest Department and Basic Gardening Techniques on Budding and Potting by Voon Boon Hoe at 2.00 pm and 3.00 pm respectively. On Monday, in conjunction with the celebrations, SBC's new administration building will be officially opened by the Chief Minister Pehin Sri Haji Abdul Taib Mahmud.

This will be followed by more fun and games, as well as three more talks in the afternoon.

Begonia expert, Dr Ruth Kiew and Sarawak Forestry Corporation research officer Julia Sang will present a talk on Begonias of Sarawak at 2.00pm.

It will be followed by a talk on "Venturing into the Herbal Industry" by Prof Zhari Ismail of Universiti Sains Malaysia at 3.00pm and a presentation by Desmond Leo of Dewan Bandaraya Kuching Utara on Composting Methods at 4.00pm.

Members of the public are invited to get to know SBC's staff and activities during the two days and to take part in the activities and talks which will be held.

For more information on the carnival, contact Asha or Hamim at 082-610610 or via email at biosar@sbc.org.my

## Hope for new cancer drug

### Leukaemia inhibitor from tree extract undergoes pre-clinical tests

By YU JI  
yuj@thestar.com.my

**KUCHING:** A compound from the Aglaia foveolata tree, found in Sarawak's highlands, has entered pre-clinical trials, showing positive results in inhibiting the growth of some forms of cancer like leukaemia.

According to scientists at the Sarawak Biodiversity Centre (SBC), which owns the intellectual property rights to the plant, experiments found an extracted compound called Silvestrol offered benefits not found in other cancer-fighting drugs.

"First, it seems to inhibit leukaemia growth compared to controlled tests performed on mice. Second, the tests show that it seems to bypass drug resistance," said Dr Yeo Tiong Chia, senior research officer at the centre.

Dr Yeo, a graduate of the Washington University in immunology, said he was confident of the compound's potential. He added that if tests continued to be positive, then the next step would be to conduct clinical trials on humans.

However, as with all experiments, he added, outcomes were hard to predict and could go either way.

Dr Yeo was speaking to *The Star* during SBC's annual open day at its headquarters near Padawan, here.

Meanwhile, SBC chief executive Dr Rita Manurung said the centre needed funds to speed up research.

She said the centre had submitted a development proposal of RM5mil to both state and federal governments.

The development included expanding of its chemistry labs and better facilities to attract more visiting scientists.

Dr Rita explained the urgent need for the funds. "Intellectual property rights are not forever. At SBC, we hold just one right, which is for the Aglaia plant.

"We acquired that right in 2004, but such rights usually expire after 15 to 20 years. As such, all research must be speeded up."

Another important role of the centre is documenting indigenous vegetation, with focus on those that have medical qualities not yet known to the scientific community.



**Medical marvel:** Dr Rita with a model of the molecular structure of Silvestrol, the compound extracted from the Aglaia foveolata trees, at the SBC's open day yesterday. In the background are the trees, which are found in Sarawak's highlands.

Star  
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Go to Page N8

The programme has been ongoing for almost a decade, with about 3,000 plants documented.

SBC's open day ends today. The centre is located at Km20, Jalan Borneo Heights, Semengoh.

The Star - 14th December 2010

# All set to plant 'anti-HIV' trees

## Land identified in Bau for cultivation if drug from latex proves successful

By SHARON LING  
sharonling@the-star.com.my

**KUCHING:** The state government has identified a site in Bau for the cultivation of Bintangor trees should clinical trials for an anti-HIV drug from its latex prove successful. Chief Minister Tan Sri Abdul Taib Mahmud said trials on an active compound from the tree to treat HIV had been going on for more than 10 years.

» This is part of our heritage «

TAN SRI ABDUL TAIB MAHMUD



**Green gift:** State Secretary Datuk Amar Morshidi Abdul Ghani (centre) presenting a plant known as 'segara' in Iban or 'kolaburo' to the Orang Ulu community to Taib at the SBC yesterday. The plant has the potential to be developed as an anti-cancer agent. Looking on is SBC chief executive Dr Rita Manuring.

"We are now awaiting the final stages of the clinical trials. Some land in Bau have been identified for the trees in order to produce enough compound for the HIV cure if it is successful," he said when opening the Sarawak Biodiversity Centre's (SBC) new administration building and carnival here yesterday.

However, he declined to reveal the location of the land. Taib also said the state government would give RM10mil to SBC

for the next two years to carry out research and development, and other works.

He called on SBC scientists to work closely with local communities, especially the older generation, to learn about their traditional uses of

plants and herbs for medicinal purposes.

"There are a lot of useful information in our folklore which can aid research in this area. If we can obtain the traditional knowledge of our local communities and integrate it

with modern science, we can come up with new drugs or treatments.

"I hope the older folk will share their knowledge and experience with our scientists," he said.

Taib added that such traditional knowledge should be properly doc-

umented and preserved so that it would not be lost.

"This is part of our heritage. I must thank the local communities who have contributed to SBC's library of traditional knowledge," he said.

SBC's new two-storey administration building, designed to resemble a plant cell, was completed in December last year. It houses the administrative staff and public awareness team as well as a resource centre with references on biodiversity and biotechnology.

Two other buildings have been proposed by SBC for development under the 10th Malaysia Plan. The Integrated Biodiversity Research Building will integrate traditional knowledge research, a Library of Natural Products and analytical laboratory under one roof. It is expected to cost RM5.5mil.

The proposed RM970,000 Garden Head House and Propagation Nursery is expected to accommodate a controlled environment for experiments on plant specimens.



New Straits Times -  
15th December 2010

# Trials to find cure for HIV in final stage

By Sulok Tawie

sharonling@the-star.com.my

**KUCHING:** Sarawak and American scientists are in the final stage of conducting clinical trials on a compound from the Bintangor tree for the treatment of HIV. Chief Minister Tan Sri Abdul Taib Mahmud said yesterday.

The scientists have been conducting trials over the last 10 years in Seattle in the United States in a bid to find a medication for HIV/AIDS.

They believe that the Calanoid compound could be the answer for the treatment of HIV, for which there is no cure yet.

The compound was extracted at the Sarawak Biodiversity Centre (SBC) by the local scientists and sent for clinical trials in Seattle. "The compound, if proven effective in curing HIV, will be a major discovery from Sarawak," Taib said at the opening of the centre's new administrative building at Ken40, Jalan Puteh, near here.

He, however, could not say when the compound could be finally distributed and commercially marketed worldwide.

Taib announced that the state government had set aside a piece of land in Bau district for the planting of Bintangor tree, and that RM10 million had been allocated to the centre for research purposes.

Any scientist from the centre who made discoveries on plant compounds that could cure illnesses would be given a share in the centre. The others who would be given the shares are research institutions that conduct clinical trials on the compounds and pharmaceutical companies which manufacture the compounds into medicines.

Taib also praised the centre for its Library of Natural Products, consisting of plants and microbes which had become the basis of

screening for active compounds.

"Today, this library, which is supported by the state's legal and systematic approach to collaborative research work, has become the main attraction or draw for researchers and institutions to collaborate with SBC to screen for bioactive compounds."

With the setting up of the library, he added, the state had taken the initiative to enhance its own knowledge on indigenous biodiversity and its potentials, and to transform the discoveries into products by establishing partnerships with research institutions, biotech companies and local entrepreneurs.

Deputy Chief Minister Tan Sri Dr George Chai, meanwhile, said the centre was conducting research on a plant found in Ba Kelalan that had the potential to be developed as an anti-cancer agent.

The plant, known as "asepm" in the Iban and "kolaburo" in the Orang Ulu, contains a potent compound called silvestrol which has been patented worldwide by the Sarawak government, covering 16 countries.

"Silvestrol has drawn intense attention from a number of high-profile international research groups. For example, the National Cancer Institute in the United States, a leading agency in cancer research and clinical trials, has teamed up with the prestigious Ohio State University to work with SBC in conducting pre-clinical and clinical trials on silvestrol."

"Furthermore, there are several renowned universities and commercial companies enquiring on the availability of this compound," Dr Chai said at the event yesterday.

He added that the state government was reviewing future agreements, and once these collaborations take off, the biodiversity centre would be the main agency to coordinate the supply of this drug candidate.

The Star - 14th December 2010

# SBC hoping to tap essential oil from plant

**KUCHING:** The Sarawak Biodiversity Centre (SBC) is conducting research on an essential oil from a local plant for its potential commercial value, says Deputy Chief Minister Tan Sri Dr George Chan.

He said the plant was known as "pahkak" by the Bidayuh community of Kampung Kiding in Padawan and "tenom" by the Orang Ulu community in the highlands.

"The oil from this plant is now being formulated and tested to determine if it can be used in personal-care products for the European market."

"If successful, SBC should ensure that the commercial value chain starts from the community to the market, with benefits flowing back to the community for having shared their knowledge of the plant," he said at the opening of SBC's new administration building by Chief Minister Tan Sri Abdul Taib Mahmud yesterday.

Dr Chan called on SBC to carry out further research and development on aromatic oils from jungle plants which could be used in

consumer products such as soaps, shampoos and insect repellents as well as the perfume industry.

He added that other villages in Sarawak should follow suit by contributing their knowledge on biodiversity so that research and development could be carried out for the benefit of the communities.

He also said communities which participated in SBC's traditional knowledge documentation programme were encouraged to set up their own gardens of useful plants for conservation and tourism purposes.

For instance, he said, the Penan community of Long Iman near Mulu National Park had established a herbal garden and charged a minimal fee of RM1 for a guided tour. The proceeds are used to maintain the garden.

"Another potential tourism draw is the establishment of a garden for useful plants and the distillation of aromatic essential oils by the Bidayuh community of Kampung Kiding in Padawan," Dr Chan added.

*SBC News* **2011**

The Star - 28th February 2011

## Unique hair-raising solution

Centre unveils 'ulat mulong'-based products to promote growth

By ZORA CHAN  
zora@thestar.com.my

**KUCHING:** The Sarawak Biodiversity Centre (SBC) has come up with prototypes of sago worm-based products that help in hair growth.

These prototypes ranging from hair shampoo and conditioner to massage oil were put on public display for the first time at a herb expo at the Sarawak Foundation here over the weekend.

SBC information officer Asha Kaushal said the centre's lab researchers started collecting sago worms for oil extraction last November.

"To extract the oil, the folk stir fry the worms in a wok until the oil comes out," said Asha.

"The oil is then poured into bottles to be sold at the market in Mukah. People buy the oil to enhance hair growth," she explained.

The expo was jointly held by the Sarawak Foundation and Sarawak Federation of Women's Institute (SFWI) in conjunction with the Red-crested's seminar on creativity and innovation.

Sago worms (ulat mulong) or *Rhyncophorus schach* are eaten

»People buy the oil to enhance hair growth«  
ASHA KAUSHAL

either raw or cooked as a delicacy among the Melanau.

The Melanau called the worms 'ur' and they used its oil to promote hair growth.

"To extract the oil, the folk stir fry the worms in a wok until the oil comes out," said Asha.

The expo was jointly held by the Sarawak Foundation and Sarawak Federation of Women's Institute (SFWI) in conjunction with the Red-crested's seminar on creativity and innovation.



New products: Sarawak Biodiversity Centre's first prototypes for sago worm (ulat mulong) oil-based products.

New Sarawak Tribune - 22nd March 2011

## SBC to hold talk on R&D

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will be holding a talk entitled "The components of Research and Development in R&D" on Thursday, 31 March, 2011.

The one-hour public awareness talk will take place at SBC's Lecture Theatre at KM20 Jalan Borneo Heights 't 3.30 pm.

The talk will be delivered by Dato Dr Yeang Hoong Yee, former Head of Biotechnology and Strategic Research, Rubber Research Institute of Malaysia (RRIM).

At the Rubber Research Institute of Malaysia, Dato Dr Yeang headed research in the areas of plant physiology, biochemistry, anatomy and morphology, molecular biology and tissue culture related to the rubber tree, *Hevea brasiliensis*.

He has also authored and co-authored over 200 research publications, including 80 peer-reviewed papers in international scientific journals. Many of these publications have been well cited among the scientific community.

Dato Dr Yeang is currently a Fellow with the Academy of Sciences Malaysia.

The talk will focus on the components of Research and Development in R&D. It is ideal for scientific researchers in universities, research institutes and post-graduate students.

The talk is free, however as seats are only limited to 30 participants, registration will be done on first-come-first-serve basis.

Those who are keen to attend this talk are to register with Asha or Constance by calling them at 082-610610 or email them at [biosar@sbc.org.my](mailto:biosar@sbc.org.my) / [constance@sbc.org.my](mailto:constance@sbc.org.my).

The closing date for registration is 28 March, 2011.

The Borneo Post - 1st March 2011



IN AGREEMENT: (Seated from left) Onn, Rita, Abd Latif, Len and Soraya sign the MoU at Yayasan Sarawak Auditorium, witnessed by Fatimah (standing, second left) and Nancy (standing, third left). — Photo by Jeffery Mosisapa

## FRIM signs MoU with state agencies on forest conservation, research and devt

**KUCHING:** Forest Research Institute of Malaysia (FRIM) will work closely with state agencies on forest conservation and research and development (R&D) activities through a memorandum of understanding (MoU) with four state agencies yesterday.

The MoU signed by FRIM and Commission of the City of Kuching North (DBKU), Sarawak Forestry Corporation Sdn Bhd (SFC), Sarawak Biodiversity Corporation (SBC) and Borneo Biogahru will focus on improving sustainable management and forest product development.

According to a press release to the media yesterday, these areas of interest include improving the traditional knowledge documentation process, R&D of biodiversity conservation and documentation, and research in herbal product development.

The signing ceremony was held after the opening of Sarawak Federation of Women's Institute (PPWS) Seminar at Yayasan Sarawak Auditorium by Minister in the Chief Minister's Department, Datin Fatimah Abdullah.

PPWS chairperson Nancy Shukri, who also heads FRIM's Malaysian Forestry Research and Development Board (MFRDB), urged the institute to establish more smart partnerships in the state to ensure greater efficiency through joint R&D activities, knowledge exchange, technology transfer and capacity building programmes.

"Under the MoU between FRIM and DBKU, the two parties will conduct joint R&D programmes covering activities such as inventorying heritage trees in DBKU area, addressing issues related to tree health maintenance and assessments, and developing interpretive

trails to conserve natural heritage," according to the press release.

It also said the collaboration is expected to enhance through improved practices the management of ecotourism, urban forests and heritage trees in DBKU.

Meanwhile, the MoU between FRIM and SBC will focus on biodiversity development and bio-prospecting.

The scope of the MoU covers research and documentation of biodiversity, traditional knowledge documentation, research in herbal products, capacity building and technology transfer.

On the other hand, their MoU with Borneo Biogahru will focus on R&D in gaharu oil extraction, setting up of Karas plantation, inoculation of Karas trees and product development.

Under this agreement, FRIM will provide consultancy and technical support services on gaharu oil extraction, R&D of gaharu based products and management of Karas plantation.

The MoU between SFC and FRIM was signed to address research challenges in tropical forestry, especially on improved sustainable forest management and forest product development.

FRIM was represented by director-general Datuk Dr Abd Latif Mohmed; DBKU by director Onn Abdullah; SBC, Dr Rita Manuring; SFC, Dato Len 'Alif Salleh; and Borneo Biogahru Sdn Bhd, executive director Soraya Abdullah.

The signing ceremony was witnessed by Minister in the Chief Minister's Department Datin Fatimah Abdullah who also launched the seminar.

The Borneo Post - 9th June 2011

# SBC boasts huge collection of plant extracts

By Wilfred Pita  
wipita@borneopost.com

**KUCHING:** Sarawak Biodiversity Centre (SBC) has a collection of 19,975 extracts from plants and 12,392 microbes in their Natural Product Library (NPL) and their target for 2011 is to reach 25,000 and 14,185 respectively.

SBC chief operating officer Dr Rita Marumang disclosed these to The Borneo Post yesterday that their NPL serves as unique scientific platform for SBC's R&D programme and research collaboration.

"The library has extracts from plants and microbes which are systematically collected and screened in-house or provided to collaborators to be screened for various kinds of bioactivities including cytotoxicity activity, anti-microbial properties and chemical ingredients that are useful for cosmetic and nutritional products, she added.

Dr Rita further explained that the library which has many collections in the last five years is one of their focal platforms to gain more major collaborations locally and internationally with various industries who are interested in their collections for further development that can benefit mankind.

She is confident of bringing various parties



FUTURE EXPANSION: Dr Rita pointing to the graphic picture of the new site for expansion.

The library has extracts from plants and microbes which are systematically collected and screened in-house or provided to collaborators to be screened for various kinds of bioactivities including cytotoxicity activity, anti-microbial properties and chemical ingredients that are useful for cosmetic and nutritional products.

Dr Rita Marumang, SBC chief operating officer

to SBC because it has the Biodiversity Ordinance which made them more viable and more approachable for any collaborator.

"In other words, it has been a key instrument for us

in forging our collaborations and people are more interested in us now that we have the law and the research facility to carry out the work," she continued.

She also explained that

SBC will try to balance their contributions with the collaborators which are to share the benefits of research and insist on capacity building and or technology transfer as one of their terms.

On the other hand, Dr Rita said that they should not create unreasonable demands or additional burden or uncertainty for their potential collaborators as the biodiversity law must be clear.

She said that the law must be clear as companies like pharmaceutical companies may take a lot of risks and heavy investments to develop



PROTOTYPE PRODUCTS: SBC personal care products that could be available in the market in 2012.

any candidate drugs through development whereas SBC is only involved in the discovery work.

"So in partnership, we (SBC) should share benefits in accordance to the proportion of investment made, she added.

Dr Rita also revealed that SBC has also come up with a prototype personal care products that could be out in the local market by the end of 2012.

Meanwhile, she said that SBC would continue to systematically aim to cover all aspect of applications that can be derived from biodiversity.

"In broad terms, we continue to look at traditional knowledge which offers leads to discoveries and to work on pharmaceutical discovery and development in partnership with industries," she explained.

Dr Rita also disclosed

their research centre would also continue to help the state in its reputation as it gets a lot of interest from industry players on cosmetic ingredients, personal and health care products and food and flavour.

The fully backed biodiversity centre by state funding has currently around 84 staff members and almost half are research officers and it is continuing to expand its facilities.

The Borneo Post - 28th June 2011

# Mitsubishi energy collaborates with SBC to explore biofuel alternatives

**KUCHING:** Mitsubishi Corp Energy Business Group (Mitsubishi Energy), which is involved in the oil and gas industry in Bintulu, will collaborate with the Sarawak Biodiversity Centre (SBC) to explore the algal biodiversity in Sarawak for biofuels as a source of renewable energy.

State Planning and Resource Management Minister H. Datuk Amar Awang Tengah Ali Hasan said such interest from renowned research institutions and pharmaceutical companies could be attributed to the state government's efforts to ensure proper legislation under the Sarawak Biodiversity Centre Ordinance and Regulations, processes and facilities for research and development were in place.

"Because of this, research organisations feel secure to explore and harness the potential of biodiversity in Sarawak through partnership with SBC," he said in his winding up speech at the State Legislative Assembly here yesterday.

Recommendations by SBC's contacts had resulted in collaborations with prominent organisations such as Novartis, National Cancer Institute of the US, world class universities and multinational companies, he said.

Over the past six years, he said, SBC's research had picked up momentum and its scope of work had also expanded from its initial focus



RENEWABLE ENERGY: Mitsubishi Energy will collaborate with SBC to explore the algal biodiversity in Sarawak for biofuels as a source of renewable energy.

on pharmaceuticals, which were long-term projects, to short-term applications in healthcare, flavours and fragrances as well as biotechnology industry.

SBC, which accepted 20 industrial trainees from local and foreign higher institutions of learning each year, also hosted training attachments from foreign universities, including Yale and other foreign agencies such as the Bhutan Biodiversity Centre, he said.

"The attachments serve as a platform for knowledge sharing and capacity building of our own researchers as well."

"Four research officers

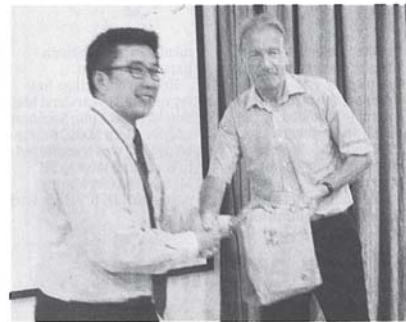
had returned from their post-graduate studies in Scotland and South Australia," he said.

Two more are registered with researchers at the Swinburne University of Technology, Sarawak campus here for doctor of philosophy programme, he said.

He said SBC had also received recognition for its traditional knowledge documentation programme by becoming a model for other countries in Asia

while government and non-governmental organisations from as far as Bhutan, Nepal, Pakistan and India had visited and took part in its workshops. — Bernama

The Borneo Post - 23rd July 2011



TOKEN OF APPRECIATION: SBC senior research officer Dr Yeo Tiong Chia (left) presenting a token of appreciation to Bibb.

# Expert speaks on natural product biosynthesis

**KUCHING:** Developments in DNA sequencing are able to deliver new fundamental insights into natural product biosynthesis as well as provide opportunities for new drug discoveries, said Professor Mervyn Bibb.

The John Innes Centre's Molecular Microbiology department head pointed out that there is a global need for new antibiotics.

"The increasing emergence of antibiotic-resistant pathogens had led to an urgent need for new therapeutic compounds. Our research aims to increase the levels of natural product biosynthesis, as natural product screening delivers the most clinically useful antibiotics," he said yesterday during the talk 'Genomic Approaches in Antibiotics Discovery' at the Sarawak Biodiversity Centre (SBC).

Bibb described how genome sequencing and genome mining can be

used to fully exploit the potential of certain bacteria through the isolation and manipulation of biosynthetic gene clusters for antibiotics.

His research focuses on the antibiotic biosynthesis in actinomycetes, Gram-positive terrestrial and marine bacteria which produce about two-thirds of all known antibiotics of microbial origin, many of which are used clinically.

With over 150 papers published and presented under the work of his group and 70 international conferences, Bibb is also a recipient of numerous prestigious awards.

He currently sits in the Scientific Advisory Board of Biotechnology and Biological Sciences Research Council's new Genome Analysis Centre.

Some 50 people — mostly university students, academicians and researchers — attended the talk.

## SBC NEWS

The Star - 26th July 2011



A memento: Dr Rita (right) presenting a souvenir to Dr Colwell.

### US envoy pays visit to biodiversity centre

**KUCHING:** Sarawak Biodiversity Centre (SBC) has played host to a courtesy call by US special envoy for science to South-East Asia, Dr Rita Colwell.

During her visit last Saturday, Dr Colwell was given an overview of SBC's activities by its chief operating officer Dr Rita Manurung.

Dr Colwell also toured the centre's laboratories and facilities.

The purpose of the visit was to enhance bilateral ties in science and research and development between the US and Malaysia.

Dr Colwell was accompanied by US state department officer Christine Kjelland and US embassy environment, science and technology officer Jingping Lai.

The Star - 14th September 2011

### Renowned botanist to talk on state's pitcher plants

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will hold a talk entitled *Nepenthes of Sarawak* covering the state's pitcher plants on Sept 30.

Renowned botanist Ch'ien Lee, who has spent over 17 years studying the plants, will conduct the talk at SBC's Lecture Theatre in KM20, Jalan Borneo Heights, Semengoh, near here.

Ch'ien is a graduate of the University of California in Santa Cruz.

He is also a reputed wildlife photographer who believes that photography is an excellent method to convey ideas and share experiences.

Ch'ien has co-authored several books including *A Pocket Guide to Pitcher Plants of Sarawak* and *Pitcher Plants of Borneo (2nd Edition)* and contributed to other books as well.

He has also published works on several new *Nepenthes* species, their biodiversity, ecological relationships, conservation and artificial propagation.

Ch'ien's talk will focus on the diversity of the state's pitcher plants or *Nepenthes* and feature his interesting photography of these carnivorous plants.

To date, 25 species of *Nepenthes* have been described in Sarawak, of which seven are endemic to the state.

SBC communications officer Asha Devi Kaushal, in a press statement issued yesterday, said that four new species had been described in recent years from collections made in the highlands of the state's central and northern regions.

She said that more information about Ch'ien was available on his website at [www.wildborneo.com.my](http://www.wildborneo.com.my).

The public are invited to attend the talk which promises to be interesting and informative.

It is aimed at creating awareness of the value of Sarawak's biodiversity.

Admission to the talk is free.

However, seats are limited.

Individuals keen on attending the talk are advised to call Sarawak Biodiversity Centre by 2pm on Sept 23 for registration.

The centre's awareness officers Asha, Constance, Ha-Mim or Selwynn can be reached at 082-610 610.

The public can also send emails to [biosar@sbc.org.my](mailto:biosar@sbc.org.my).

The Borneo Post - 20th August 2011

### Talk on 'Local Plants and Their Potential for Medicine and Health Supplements' Sept 5

**KUCHING:** Sarawak Biodiversity Centre (SBC) will be organising a talk on 'Local Plants and Their Potential for Medicine and Health Supplements'.

The talk which will be delivered by Dr Paul Chai will take place on Sept 5 at 3pm at Sarawak Biodiversity Centre's Lecture Theatre, Km20, Jalan Borneo Height, Semengoh.

Dr Chai began his career with the Forest Department in 1970 as Sarawak's first local botanist.

In 1993, he became the consultant and project manager for the International Tropical Timber Organisation (Itto) and has since led

Itto-supported projects in biodiversity conservation in Sarawak, such as in the Pulong Tao National Park.

His interest in medicinal plants developed during his earlier expeditions into the interior of Sarawak and he has since become known for his expertise in these plants.

Dr Chai's book 'Medical Plants of Sarawak' will also be on sale during the talk at RM90 per copy. Admission is free of charge.

Those interested to attend are to call SBC latest by 2pm on Sept 1 to register.

SBC's awareness officers can be reached at 082-610610 or via email at [biosar@sbc.org.my](mailto:biosar@sbc.org.my).

The Borneo Post - 10th September 2011



MEDIA ATTENTION: Nansian speaking to reporters after officiating at the Second World Biodiversity Congress. Next to him is Dr Sivaram and Dr Jamil Hamall. - Photo by Chien Yip.

### Sarawak, India collaborate on biodiversity research centre

**KUCHING:** The state government and Bangalore government of India are ready to initiate the establishment of the most sophisticated Asia-Pacific biodiversity research centre to be based in Kuching.

Environment Assistant Minister Datuk Peter Nansian said that negotiations between both governments were in the final stage.

According to him, two universities - Universiti Teknologi Mara (UTM) and University of Bangalore - would be among the founding members of the institute.

Nansian said the institute would be equipped with state-of-the-art facility and be a venue for collaboration of research and management of biodiversity.

"Sarawak is one of the important states in the world and its significance is huge to contribute the richness of its flora and fauna for the purpose of comprehensive exploration and in-depth research of numerous types of herbs and unidentified species."

He said this after officiating at the Second World Biodiversity Congress being held at a hotel here from Sept 9-12. It was organised by UTM.

About 300 delegates from 32 countries are attending the congress with India sending the most number of delegates (80) followed by Iran (30).

The theme for this year's congress is sustainable utilisation of biological biodiversity.

The first world congress was held in November 2008 in Chiangmai (Thailand).

Nansian said the institute would be seeking international funds to set up and run the programmes.

The Asia-Pacific biodiversity research centre would be working closely with Sarawak Biodiversity Centre (SBC) at Jalan Puncak Borneo.

"It is an interesting collaboration between UTM and the Century Foundation of the University of Bangalore India, representing the Indian government, to set up the institute at large," he added.

The University of Bangalore India was represented by the co-organiser of the congress, Associate Professor Dr

Sivaram while UTM by its rector, Professor Dr Jamil Hamall.

Nansian said the state government was serious on the sustainability of biotechnology development and applied preventive measures on environmental degradation from development activities, instead of the conventional approach.

Being the only state in Malaysia that had enacted the Sarawak Biodiversity Centre Ordinance in 1997, the setting up of SBC under the enactment showed Sarawak was going for massive development and sustainable development of biodiversity.

"The state government has also enacted the Sarawak Biodiversity Regulation in 1998 to show how serious we are in protecting the environment. It is also in line with the National Policy on Environment and the National Conservation strategy consisting of two important framework documents that support the drive to sustainable development," Co-Task Force assemblyman said.

The Borneo Post - 27th September 2011

### SBC to conduct free talk on crocodile-human co-existence

**KUCHING:** The Sarawak Biodiversity Centre (SBC) is organising a talk titled "Crocodile Conservation: Human-Crocodile Co-existence" on Oct 14 (3pm) at the Sarawak Biodiversity Centre's Lecture Theatre at Jalan Borneo Heights in Semenggoh.

Oswald Braken Tisen, Senior Manager in the Biodiversity Conservation Department, Protected Areas and Biodiversity Conservation Unit of Sarawak Forestry Corporation will deliver the talk. Braken is no stranger to the crocodiles in Sarawak, being responsible for conducting training on handling human crocodile conflict and crocodile survey techniques for staff of SBC and selected local communities.

He is also responsible for drawing up strategies for conservation, protection and management of wildlife and their habitats, the management and recovery of endangered and threatened wildlife species and instilling public awareness on importance of conservation through interpretation and education programmes. The talk will examine the complex and diverse relationships that exist between people and crocodiles as well as to provide better understanding of these creatures.

New Sarawak Tribune - 21st October 2011



Datuk Amar Haji Mohamad Morshidi (3rd right) exchanging the MoA documents with PEPSI CO's Senior Vice President of Long Term Research Dr Gregory Yep while others look on.

New Sarawak Tribune - 18th October 2011

### Biodiversity Centre (SBC) organising talk on seasonal flowering on 27 Oct

**KUCHING:** Many plant flowers synchronously to increase their chances of successful pollination and fruiting.

This is especially the case for plants that grow in temperate regions and in the tropics.

Seasonal flowering in many temperate plants is controlled by what are known as photoreceptor proteins in these plants.

These proteins sense seasonal changes in night length, or photoperiod, which they take as signals to flower.

To better understand seasonal flowering and induction of flowering in seasonal plants in the tropics, the Sarawak Biodiversity Centre (SBC) is organizing a talk entitled "Induction of seasonal flowering in temperate and tropical plants" by Dr Yeang Hoong Yeat, a Fellow with the Academy of Sciences, Malaysia.

Dr Yeang was also the former Head of Biotechnology and Strategic Research, Rubber Research Institute of Malaysia where he headed research in the areas of plant physiology, biochemistry, anatomy, molecular biology and tissue culture related to the rubber tree. He was active in the research

on genetic transformation of the rubber tree and led the RRM team that successfully developed the first genetically modified (transgenic) rubber tree in the world.

During the talk, Dr Yeang will explain how seasonal flowering in temperate regions is controlled by a single mechanism that explains flower induction in both long-day and short-day plants equally well.

Dr Yeang will also share his views on how flowering in the tropics is induced in the absence of significant day-length differences year round.

The talk will take place on 27 Oct, 2011 at 3.30pm at the Sarawak Biodiversity Centre's lecture theatre at KM20, Jalan Borneo Heights in Semenggoh.

Members of the public are invited to attend this talk which promise to be interesting and informative.

There are no entry charges for the talk. However, those interested in attending will have to call SBC latest by 2.00pm on 25 Oct, 2011 to register or call SBC's Awareness Officers (Asha, Constance, Hanim or Selwynn) at (082)-610-610 or via [bfosar@sbc.org.my](mailto:bfosar@sbc.org.my) (email).

## SBC and PepsiCo ink MoA

**KUCHING:** The Sarawak Biodiversity Centre and PepsiCo signed a Memorandum of Agreement (MOA) to search for new natural ingredients for food and beverages.

The two organisations will research plants used by the indigenous communities and leverage SBC's Library of Natural Products.

SBC is a Sarawak State statutory agency established under the Sarawak Biodiversity Centre Ordinance. The Centre is committed to the documentation of tradi-

tional knowledge among the indigenous communities of Sarawak, and carrying out Research and Development programmes to discover novel

therapeutic or useful compounds from Sarawak's unique biodiversity for potential pharmaceutical, health and personal care, cosmetic, flavours and fragrances product development.

SBC's Library of Natural Products is made up of plant and microbial extracts collected through its work with the indigenous communities and target

specific collection from unique environments in Sarawak.

PepsiCo is one of the world's largest food and beverage companies. Its main businesses - Quaker, Tropicana, Gatorade, Frito-Lay, and Pepsi Cola - also make hundreds of other enjoyable products that are respected household names throughout the world. Providing more food and beverage choices made with wholesome ingredients that contribute to healthier eating and drinking is one PepsiCo's top priorities.

The signing ceremony was held

at the State Secretary's Office here yesterday.

Dr Gregory Yep, Senior Vice-President of Long Term Research, signed the MOA on behalf of PepsiCo while the State Secretary and Chairman of Sarawak Biodiversity Council Datuk Amar Haji Mohamad Morshidi bin Abdul Ghani signed for the Council.

The signing was witnessed by the Acting Chief Executive Officer of SBC, Dr Rita Manurung. Also present was Dr Thomas Lee, the R&D Director for Long Term Research, PepsiCo.

The Star - 21st October 2011

## Here's to healthy goodness

### SBC, PepsiCo to research natural ingredients for food and beverages

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The agreement signing took place at the State Secretary's office in Kuching yesterday. Senior vice-president of Long



End result: Rita and Yep showing Morshidi (right) some of the products from PepsiCo.

Term Research, Dr Gregory Yep, signed the agreement on behalf of PepsiCo while State Secretary and Sarawak Biodiversity Council chairman Datuk Amar Mohamad Morshidi bin Abdul Ghani, signed for the council.

The signing was witnessed by the acting chief executive officer of SBC, Dr Rita Manurung. PepsiCo's R&D director of long-term research, Dr Thomas Lee, was also present during the signing ceremony.



Getting details: A SBC research officer carrying out a lab test.

The Borneo Post - 24th November 2011

## 'Traditional Knowledge Documentation Seminar 2011' from Nov 24-25

**KUCHING:** Sarawak Biodiversity Centre is organising a 'Traditional Knowledge Documentation Seminar 2011' on Nov 24 and 25 at Harbourview Hotel.

It is targeted at Sarawak's indigenous communities who have been documenting their traditional knowledge with regards to their use of bio life for medicinal, health care and other daily purposes.

Participants are also invited from relevant agencies, departments, and ethnic/

indigenous community associations from throughout the state.

The seminar aims to enhance the community's knowledge on the socio-economic importance of medicinal plants in Sarawak, propagation and conservation of herbal plants for the landscape industry and on the Malaysian intellectual property protection system.

It also enables representatives of communities that have been documenting their traditional knowledge to share it, as well update the status of their

documentation project.

Speakers at the seminar include Ong Chui Koon of Sirim, who will explain the various types of intellectual property; Dr Garbell Tonga Noweg of Unimas who will speak on the socio-economic importance of herbal plants and Mohd Afendi Hussin who will speak on propagation of herbal plants.

The seminar will be launched today by State Secretary and Sarawak Biodiversity Council chairman Datuk Amar Mohd Morshidi Abdul Ghani.

The Borneo Post - 25th November 2011

## Community gardens can be tourist pull – Ose

By Lee Ya Yun  
reporters@theborneopost.com

**KUCHING:** Community gardens advocated by Sarawak Biodiversity Centre (SBC) have the potential to be tourist attractions apart from accomplishing SBC's mission of preserving traditional knowledge of plants among the indigenous people.

Deputy State Secretary Datu Ose Murang yesterday said India's success story where a similar concept had been well applied could be the role model for the state's community gardens.

He believed that making the gardens into tourism spots would also benefit the communities involved economically.

"The Bio Valley in India is a tourist attraction. Many tourists are attracted by the rich and diverse plants there. It can be an example for the communities here to emulate," he said at the opening of the Traditional Knowledge Documentation

The Bio Valley in India is a tourist attraction. Many tourists are attracted by the rich and diverse plants there. It can be an example for the communities here to emulate.

Datu Ose Murang, Deputy State Secretary

Seminar 2011 at a hotel here.

Ose was representing State Secretary Datuk Amar Mohd Morshidi Abd Ghani.

Some 27 villages from seven communities namely Bidayuh, Iban, Penan, Kelabit, Lun Bawang, Kayan, Kenyah and Melanau participated in the programme organised by SBC.

Ose acknowledged SBC's effort in setting up the community gardens as a way to better record traditional knowledge which had played and would continue to play a vital role in the socio-economic development of the state.

As such, he said the effort must be continued, adding that all related data should be consolidated for greater usage such as for the pharmaceutical

industry.

"Besides, such documentation effort will help to empower a community. Once they are empowered, it would enhance their sense of ownership. This is important as it will help to sustain our endeavour in conserving and preserving our nature," he reasoned.

Forty participants are taking part in the two-day seminar which ends today.

SBC acting chief executive officer Dr Rita Manurung said the objective of the seminar was to improve the knowledge of participants especially those who manage the gardens.

She said the seminar would also help the communities involved to review the status of the gardens and find ways to improve them



SYMBOLIC: Ose hits the gong to mark the opening of the Traditional Knowledge Documentation Seminar as Dr Rita (right) and other guests look on.

apart from strengthening networking among themselves. Participants will be taken on a

site visit to G1-Biotech, a gaharu nursery and farm and Ceria Group Farm in Bau on Nov 26 to

expose them to various efforts that have been taken for large scale farming of herbal plants.

# Conservation of forests everybody's responsibility

By Philip Kiew  
reporters@theborneopost.com

**LAWAS:** Honorary wildlife rangers and members of the public have been urged to help the government keep an eye on the state's flora and fauna to ensure that ongoing conservation and preservation efforts are not thwarted.

Second Minister of Resource Planning and Environment Datuk Amar Awang Tengah Ali Hassan said the people should not simply let Sarawak Forestry Corporation (SFC) shoulder this task as their enforcement strength was limited.

"We have to protect and conserve our hornbills, which is our state emblem, and our trees, which may hold the answer to a cure for AIDS and cancer and other uses in the pharmaceutical

and beauty industries.

"Hence, report illegal logging and other activities which could destroy our biodiversity as SFC personnel cannot be everywhere. Information from the ground is important to ensure our treasures are not looted, especially with better accessibility to the highlands now," he said at the official appointment of 57 new honorary wildlife rangers here yesterday.

With the new appointments, there are now 561 honorary wildlife rangers in the state.

Awang Tengah pointed out that the state's rich flora and fauna heritage had vast economic potential, and many of its pharmaceutical possibilities and traditional medicinal properties had been catalogued by Sarawak Biodiversity Centre (SBC).

"For instance, the biodiversity in Lawas is unrivalled, with its rich marine life and plants now undergoing test as a possible cure for AIDS.

"A type of tree known as 'Segara' by the Iban community, 'Lugang' to the Lun Bawang, and 'Kalapuno' to the Kelabit, has been identified as having the potential to cure cancer. These trees can be found in Ba'Kelalan and Bario."

Awang Tengah told those present that the state government had a comprehensive road map for conservation purposes and land use.

This includes setting up six million hectares of its forest areas as Permanent Forest Estate and one million hectares as Totally Protected Areas (TPA) in national parks and wildlife

sanctuaries.

He stressed that conservation was vital for the state for economic, social and heritage reasons.

The state, he added, was also aware of the current unpredictable weather patterns due to global climate change which had affected countries stretching from the United States to Australia. The recent massive flooding of Thailand is a clear reminder of the importance of forests and environmental conservation.

"Sarawak has adopted detailed programmes and policies which focus on striking a balance between progress and conservation. At present, 85 per cent of the state is still under forest cover, a feat which not many countries could attain."

The Star - 9th December 2006



**Informative:** Song explaining the uses of some of the farm machinery.



**How it's done:** Song showing rolls of padi seedlings that are ready to be transplanted.

## Valuable traditional knowledge

Healing secrets of natives good for big time commercialisation if documented properly

By ASHA DEVI KAUSHAL  
sarawakstar@thestar.com.my

**KUCHING:** They are traditional farmers whose plots are in the majority small-scale and for self-sustenance. They came from all over the state from villages like Kampung Kiding (Padawan), Kampung Duyoh Jagoi (Bau), Kampung Lanchang Sabai (Serian), Pa'Langgan (Bario), Pa' Ukat (Bario) and Long Inan (Mulu), as participants of the recent Traditional Knowledge Documentation Seminar.

Organised by the Sarawak Biodiversity Centre (SBC), the seminar was aimed at providing a platform for the representatives of communities that have been documenting their traditional knowledge to share their experience and the status of their respective documentation projects.

The seminar was also organised to enhance the communities' knowledge on the Malaysian intellectual property protection system, socio-economic importance of medicinal plants in the state, and propagation and conservation of herbal plants for the landscape industry.

Part of the seminar required them to visit two modern farmers on the city's outskirts.

The participants were first brought to GI-Biotech Gaharu plantation in Bau. Here, they were exposed to the various methods used for propagating gaharu (agarwood) trees and inoculating the trees to produce the much sought-after gaharu scent.

The tour at GI-Biotech was led by Make Jiwari, whose family runs the plantation.

Gaharu is not the only thing that the Jiwari family dabbles in. They also grow edible mushrooms and the participants had a bonus learning experience when Make showed them how mushrooms are grown.

After gaharu and mushrooms, the participants headed off to the Ceria Group's farm where director and general manager of Ceria Agricultural Services, Patrick Gordon Song himself took the participants on a tour of his fully mechanised rice field and maize farm, located on a 180-acre farm land in Bau.

Ceria Group is an agricultural infrastructure development contrac-



**Curious:** Nyaru, a Penan from Batu Bungan (in white) examines a piece of agarwood (gaharu).



**Educational:** Make explaining the finer points of mushroom farming to the participants of the seminar.



**Inoculating agarwood:** Maker of GI-Biotech shows how it is done.

tor recognised by the Ministry of Modernisation of Agriculture.

During the visit, Song provided tips and advice on how to acquire funding as well as affordable and easy-to-maintain machinery for agriculture.

The participants found the visit an eye-opener and informative.

For newcomer to the Traditional Knowledge Documentation Project, Junaidi Rakawi of Kampung Jemoreng, Matu, the seminar and the site visit gave him a better idea of why it is important to document such knowledge and the potential activities that the community of Kampung Jemoreng could carry out.

The community has also been successful in setting up a community garden of useful plants where tour-

ists and visitors are charged a gate-fee and given a guided tour.

During the seminar, Resen Yu, the chairman of the project for Long Inan explained that the fees collected goes into a community fund which is used for the maintenance of the interpretative centre and garden, as well as for emergency fund for the community.

Another success story was told by Boniface Nyosor of Kampung Kiding. The community has successfully established collection and distillation of essential oil from the Pahkak tree which has shown promise for product development.

Jok Eng Jok, the chairman of the project in Long Bedian, feels strongly that a similar effort could be carried out by his community as Long Bedian is also becoming a tourist hotspot.

"It is important that we document how our people have been using these useful plants because we are losing practitioners and experts on such uses within the community," he said.

SBC facilitates the documentation of traditional knowledge on how indigenous communities of Sarawak utilise their biological resources.

The documentation of such knowledge is vital as it has always only been handed down through generations in oral form and through observations of practices.

The changing lifestyles and reduced reliance on the forests among the communities have hastened to loss of such knowledge.

With large pharmaceutical and multi-national companies looking towards discoveries of compounds from nature, such knowledge is seen as valuable as it provides leads towards these discoveries.

Since year 2001, 12 indigenous communities from 53 locations throughout the state have been exposed to the importance of documenting traditional knowledge. Of these, 27 locations are now carrying out documentation work and activities to conserve the plants that they use.

For more information on the Traditional Knowledge Documentation Programme, SBC officers Margarita Nanning and Asha Kaushal can be contacted at 082-610610 or via email at biosar@sbc.org.my.

*SBC News* **2012**

The Sunday Post - 1st January 2012

## Sarawak Biodiversity Centre to hold health run on Jan 7

**KUCHING:** Sarawak Biodiversity Centre (SBC) and Sarawak Government Services Welfare and Recreation Council (Maksak) will hold a health run on Jan 7.

Participants will literally be 'running with nature' as the run will take them on a scenic route through Semengoh Wildlife Rehabilitation Centre and back to SBC.

The health run, a monthly event for Maksak, is aimed at encouraging members of the

civil service to take up healthy activities.

Supported by Sarawak Forestry Corporation (SFC), the run will begin at SBC's premises at Km20, Jalan Borneo Heights, at 7am.

Participation is open to all members of the civil service (federal and state ministries, departments and agencies) and their families.

There are six categories: Men's Open, Women's Open, Men's Veteran (45 years and above), Women's Veteran (45 years and

above), Men's VIP and Women's VIP.

State Secretary and Maksak chairperson Datuk Amar Mohamad Morshidi Abdul Ghani is expected to flag off and join the run.

Attractive prizes await the winners. Participants will receive door gifts and stand a chance to win lucky draws.

Those interested to participate in the run can contact Sarawak Biodiversity Centre (Asha) at 082-610610.

New Sarawak Tribune - 11th January 2012

## SBC to hold talk on British naturalist, Alfred Russel Wallace

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will be holding a talk on British naturalist, explorer biologist and anthropologist, Alfred Russel Wallace who lived between 1823 and 1913.

The talk, entitled "Following the footprints of the Great Naturalist, Alfred Russel Wallace in Sarawak (1854-1856)," will be delivered by Rambli Ahmad of the Sarawak Forestry Corporation (SFC); it will take place on 20 January at 3.00pm at the SBC's lecture theatre, at Km20, Jalan Borneo Heights, Semengoh.

Members of the public are invited to attend the talk which promises to be interesting and informative and is aimed at creating awareness towards the value of Sarawak's local biodiversity.

There are no entry charges or fees for the talk.

However, those interested in attending will have to call the SBC latest by 2.00pm on 17 January for registration.

The SBC's awareness officer, Asha, Constance, Ha-Mim and Selwynn can be reached at 082-610610 or via [biosar@sbcc.org.my](mailto:biosar@sbcc.org.my).

Meanwhile, Wallace was best known for proposing the theory of evolution based on natural selec-

tion that subsequently prompted Charles Darwin to publish his own theory of evolution.

It was right here, during his stay in Sarawak, when Wallace wrote his astounding paper on evolution entitled "On the Law Which has Regulated the Introduction of Species" which was subsequently published in the *Annals and Magazine of Natural History*.

Wallace's conclusion that "every species has come into existence coincident both in space and time with a closely allied species" has come to be known as the "Sarawak Law".

During his stay in Sarawak, Wallace also spent some time collecting species which were later sent to the British Natural History Museum for taxonomic identification.

Wallace was also an author who wrote on both scientific and sociological issues which he encountered during his explorations.

"The Malay Archipelago" is one of Wallace's most powerful and influential scientific publications.

To better understand the time that Wallace spent in Sarawak and the work that he had carried out here, this is the best opportunity for the public to attend.

The Borneo Post - 13th January 2012

## SBC to hold talk about a great naturalist

**KUCHING:** Sarawak Biodiversity Centre (SBC) will be organising a public awareness talk entitled "Following the footprints of the Great Naturalist, Alfred Russel Wallace in Sarawak (1854-56)".

Alfred Russel Wallace was a British naturalist, explorer, biologist and anthropologist who lived between 1823 and 1913.

The aim of the talk is to better understand the time that Wallace spent in Sarawak and the work that he had carried out here with regards to the state's local biodiversity.

The talk will be delivered by Rambli Ahmad of the Sarawak Forestry Corporation, and will take place on Jan 20 (Friday) at 3pm at Sarawak Biodiversity Centre's Lecture Theatre, Km20, Jalan Borneo Heights, Semengoh, Kuching.

Members of the public are invited to attend this talk which promises to be interesting and informative, and is aimed at creating awareness of the value of Sarawak's local biodiversity.

There are no entry charges/fees for the talk.

However, those interested in attending will have to call the SBC latest by 2pm on Jan 17 to register.

SBC's Awareness Officers (Asha, Constance, Ha-Mim or Selwynn) can be reached at 082-610610 or via [biosar@sbcc.org.my](mailto:biosar@sbcc.org.my).

At the Bio-Borneo 2012 > Reports by RINTOS MAIL, Photo by ANDRE OLIVEIRO

# Turning bioresources into wealth

More Federal funds needed for research and development to realise sector's full potential

**KUCHING:** Sarawak has called for robust investment from the Federal Government in bioresearch and development (bio-R&D) in the state. Chief Minister Tan Sri Abdul Taib Mahmud said like in any other sector, robust investment in bio-R&D was critical as building blocks of an innovative economy.

He said just as what it had done to develop and commercialise the agriculture sector in Peninsular Malaysia, the Federal Government should also do the same to the biodiversity sector in Sarawak and Sabah.

He noted that while Sarawak was rich in bioresources, scientific researches needed to be carried out to turn that resources into wealth.

"We have tried to take full advantage of what we have and for a start, we have zoomed in on the resources that we think can benefit the people.

"However, we still need a lot of studies to identify more potentials in our bioresources.

"This is where we need the Federal Government to allocate some budget mainly for the bio-R&D in Sarawak," he said at the opening ceremony of the Bio-Borneo here yesterday.

Taib believed that investment in bio-R&D would help drive long-term growth, noting that wise investments would pay off in the form of

**We have tried to take full advantage of what we have and for a start, we have zoomed in on the resources that we think can benefit the people.**

— TAN SRI ABDUL TAIB MAHMUD

various new products and pharmaceutical services.

He said as far as the state government was concerned, it was committed to develop and commercialise Sarawak's bioresources into superior natural health products.

He said the state would welcome expert teams from foreign and local universities who are keen to work with the government in doing the bio-R&D, including clinical research, commercial extraction, manufacturing and marketing of high-value natural health products for both local and international markets.

"Although it's a 'nightmare' to deal with those giant international pharmaceutical groups, we will try to manoeuvre our way to getting them to help us in terms of commercialisation and marketing," he said.



**A new chapter:** Taib uncovering a replica book as Science, Technology and Innovation Deputy Minister Datuk Fadillah Yusof (right) looks on during the opening ceremony of the Bio-Borneo at the Pullman Hotel in Kuching yesterday.

## MyIPO approves registration of Litsara and Litsea as trademarks

THE Malaysian Intellectual Property Organisation (MyIPO) has approved the registration of Litsara as trademark in class five and for Sarawak, and Litsea as geographical indication last year.

Both registrations were approved for a period of 10 years from Jan 28 last year to Jan 28, 2021, and are made to the Sarawak government. Applications to register these two properties were made by

Sarawak Biodiversity Centre (SBC) in January last year.

The Intellectual Property Certificates were presented to Chief Minister Tan Sri Abdul Taib Mahmud by MyIPO chairman Datuk Abdul Manan Ismail during the opening ceremony of Bio-Borneo 2012 here yesterday.

Litsea is a plant species, *litsea cubeba*, growing wild in the highlands of Sarawak. It is traditionally used as food flavouring and medication for

stomach ailments by the Bidayus and Orang Ulu. Essential oil extracted from the leaves and fruits is aromatic and has strong anti-microbial properties.

The SBC's analysis of this oil has identified a different chemical composition compared to litsea oil from other regions such as China, which is the main producer of the oil.

The Chinese litsea oil has high citral content and consumers with perfume

allergy' have been warned to avoid using products containing citral.

The uniqueness of Sarawak litsea oil has potentially put it as an alternative source in the world market.

The chemical composition of Sarawak litsea has been confirmed by the Forest Research Institute of Malaysia (FRIM) and Sirim Environmental Technology Research Centre.

Aside from the registration of Sarawak litsea, pharmaceutical and

personal care products which utilise the essential oil will also carry the trademark litsara.

Sarawak litsea is among the 20 geographical indications currently registered in Malaysia. Other Sarawak geographical indications that have been registered are Sarawak *Dabai*, Bario rice, Sarawak pepper, Sarawak *Beras Biris*, Sarawak *Beras Bajong*, Sarawak Sour Eggplant and Sarawak Layered Cake (*Kek Lapis Sarawak*).

## Visitors and exhibitors crowd first-ever Bio-Borneo exhibition at Pullman

THE inaugural Bio-Borneo 2012 exhibition here has received an overwhelming response from exhibitors, comprising mostly bioindustry players from all over the country.

More than 40 booths, exhibiting products of biotech research and development from both the govern-

ment and private sectors, were erected at the Pullman Hotel.

The three-day exhibition, which lasts until today, is a good opportunity for visitors to witness the latest technology and research advances in the biotechnology industry as well as participate in business matching sessions.

Jointly organised by the Science, Technology and Innovation Ministry (Mosti) and Sarawak Biodiversity Centre (SBC), the Bio-Borneo aims to increase public awareness and understanding about biotechnology.

"Bio-Borneo is part of the Bioeconomy Initiatives that specifically focuses on driving the biotech-

nology innovation agenda forward in Borneo," said Science, Technology and Innovation Deputy Minister Datuk Fadillah Yusof.

He said the Bio-Borneo would be made an annual event, with Sabah hosting one next year.

Apart from the bioindustry exhibition, the event here also includes a

biotechnology seminar and business matching session.

Bio-Borneo also has activities to create awareness on science and technology through an interactive school programme MyBio@School at the venue, and MyBio Carnival held concurrently at the Hills shopping mall.

The Star -  
8th May 2012

### SBC to promote biodiversity via colouring and pottery painting contests

**KUCHING:** Sarawak Biodiversity Centre (SBC) will hold a colouring contest and pottery painting in conjunction with Biodiversity Day on May 25.

To be held at SBC along Jalan Borneo Heights, the contest is open to children aged seven to nine years old.

The pottery painting is targeting school children aged 10, 11 and 12 years old.

Centred around the theme "Biodiversity", the contests are to promote awareness of and appreciation for Sarawak's local biodiversity.

Winners will receive cash vouchers from selected bookstores.

First place will receive RM100 cash voucher, second place (RM70), third place (RM50) and fourth till 10th place (RM30).

All participants will receive a certificate of participation from SBC.

The contests are limited to 50 contestants and acceptance is on a first-come-first-served basis.

All entries are subject to verification by SBC and accompanying adults can only provide verbal assistance.

Only crayons and colour pencils may be used.

Participants are to bring their own colouring materials.

The entries will be judged based on creativity, originality and neatness.

Intending participants need to fill up an entry form which can be obtained from SBC's office or from the centre's website at [www.sbc.org.my](http://www.sbc.org.my).

Photocopied entry forms are also accepted and successful participants will be notified by May 11.

The prize giving will be done by SBC chairman and state secretary Datuk Amar Mohamad Morshidi Abdul Ghani.

SBC's Biodiversity Day is held to celebrate International Day of Biological Diversity declared by the United Nations and this is observed on May 22 annually.

Other programmes to be held include a public awareness talk on Irrawaddy Dolphins in Sarawak by Sarawak Forestry Corporation officer James Bali and a talk on Corals of Sarawak by Unimas Associate Professor Dr Lee Nyanti.

The talks are open to upper secondary school students and the public.

The Borneo Post - 9th March 2012



**HAPPYANNIVERSARY:** Rohani (centre) with deputy director of MyIPO Mohd Shahrul Osman (second from left) and State MyIPO branch head Atek Sanggeng (right) and others cutting the cake to mark the ninth anniversary of the incorporation of MyIPO.

## S'wak's essential oil among products for trademark registration

**KUCHING:** Essential oil from litsea cubeba, a wild plant species which can only be found in the state's highland area, Puncak Borneo, here was among 23 products filed for trademark registrations in the state up until March 7 this year.

Deputy Domestic Trade, Cooperatives and Consumerism Minister Datuk Rohani Abdul Karim said the Sarawak litsea oil, used by the locals as a stomach ache remedy, can become a new alternative in the essential oil market.

The product has been registered with the Intellectual Property Corporation of Malaysia (MyIPO) under the Geographical Indication Act.

"The registration of products from a specific geographical location such as the Bario rice, has a direct impact on the area where the product is found, particularly in terms of agrotourism," she said at MyIPO's 9th anniversary in

The registration of products from a specific geographical location such as the Bario rice, has a direct impact on the area where the product is found, particularly in terms of agrotourism.

Datuk Rohani Abdul Karim, Deputy Domestic Trade, Cooperatives and Consumerism Minister

Sarawak, here yesterday. MyIPO has also identified several more local products which have high commercial value and can be registered as geographical indicator products such as the salted 'terubuk' fish, bamboo craft, 'bemban' mat, Betong batik, 'pua kumbu' fabric and beads, she said.

She hoped that bodies representing the local community could discuss with MyIPO to register all of the state's heritage as intellectual properties.

Among Sarawak's popular geographical indication products are Sarawak black pepper, Bario rice, Biris rice and Bajong rice.

She added that Sarawak MyIPO's "knock door policy" in attracting trademark registrations particularly among small-and-medium enterprises has heightened awareness among the people on the importance of protecting their intellectual properties.

Altogether MyIPO recorded 3,789 trademark applications until February this year, which represents a 20 per cent increase from the same period last year.

There were also 933 patent applications or a 3.43 per cent increase, and 234 application for industrial design (a 68.6 per cent increase), she said. — Bernama

New Sarawak Tribune -  
25th May 2012

### Biodiversity Day talks at SBC

**KUCHING:** The Sarawak Biodiversity Centre will hold public awareness talks this afternoon at its premises at KM20, Jalan Borneo Heights, Semengoh.

The three talks lined up will feature an overview of biodiversity from the national perspective, the Irrawaddy dolphins and corals.

K. Nagulendran from the Ministry of Natural Resources and Environment, Malaysia will kick off the talks at 2.30pm, by presenting a short talk and video entitled "Malaysia's Biodiversity - Our Life, Our Future".

Nagulendran is the Deputy Under-Secretary at the Ministry's Biodiversity and Forest Management Division.

The following talk will be on the Irrawaddy dolphins found in Sarawak. The speaker, James Bali, a researcher with the Sarawak Forestry Corporation, has contributed to research and conservation of marine biodiversity in the state over the years.

The final talk will be on the little known corals that are found within the marine boundaries of Sarawak by Dr Lee Nyanti from University Malaysia Sarawak (UNIMAS).

The talks are held in conjunction with the Centre's Biodiversity Day celebration on 25 May 2012.

SBC's Biodiversity Day is targeted at creating awareness of Sarawak's rich biological diversity, particularly among the younger generation.

In the morning, two activities have been arranged especially for primary school children. A colouring contest and a pottery painting contest will introduce the concept of biodiversity among young children.

A mini exhibition of zoological specimens and walk-about tour of SBC's R&D facilities and its Laila Taib Ethnobotanical Garden will also be held between 9.00am and 11.45am, and 2.30pm and 5.00pm.



DR Rita (right) taking a look at the painted pots by the pupils in the Biodiversity Pottery Painting Contest at the exhibition yesterday.

## 10 pct protected marine area target by 2020

BY NORNASHEILA ZAIDI

**PUNCAK BORNEO:** Awareness of the importance to preserve the marine biodiversity needs to be increased as the nation is targeting to have 10 per cent of protected marine area in the year 2020.

So far, only one per cent of the marine area in Malaysia is protected, said the Deputy Under Secretary for the Ministry of Natural Resources and Environment Malaysia Nagulendran Kangayatkarsu.

"The 10 per cent target may be a small number but when we look at the nation's current percentage, namely at only one percent, the 10 percent seems to be a huge task for all of us," said Nagulendran.

He said this yesterday in his speech at the Biodiversity Day 2012 of the Sarawak Biodiversity Centre (SBC) in conjunction with the International Day for Biological Diversity.

According to Nagulendran also, biodiversity is very important as most of the antidote was found in the ocean area.

"For example the contents in the anti cancer drugs was found in marine biodiversity, and there are many more medicine treasure that can be found in the marine area," he pointed out.

In the celebration yesterday, many fun and informative activities were held in conjunction with the SBC Biodiversity Day 2012.



NAGULENDRAN (left) handing over the prize to a winner for Biodiversity Essay Writing Contest.

These included items such Pottery Painting Contest, Colouring Contest and also the Essay Writing Contest for the lower secondary students.

Apart from that the mini exhibition on Zoological and Botanical Specimens was also held for the whole day at the centre.

The public awareness talk was entitled Malaysia's Biodiversity - Our Life, Our Future by

Nagulendran. There were other talks such as Irrawaddy Dolphins in Sarawak by the officer of Sarawak Forestry Corporation James Bali and the talk on Corals of Sarawak by Universiti Malaysia Sarawak (UNIMAS) Associate Professor Dr Lee Nyanti.

Also present at the opening ceremony of the celebration yesterday was SBC Chief Executive Officer Dr Rita Manurang.

## A 'slithery' presentation at Sarawak Biodiversity Centre this Friday

**KUCHING:** Sarawak Biodiversity Centre (SBC) is organising a public presentation "The Beauty of Snakes" this Friday at 3pm at its premises in Semenggoh.

The 90-minute presentation, to be delivered by Hans Breuer, will feature snakes in a different light.

In the first part of the presentation, Breuer will hold a general discussion with the audience on what snakes mean to them and the people in general.

He will also address issues such as fear and prejudice against snakes, as well as why the reptiles are important to the environment.

In the second part, the speaker will engage the audience on what to do if they meet a wild snake, with reference to any of the various species found in Borneo.

He will also give a brief overview on why snakes are interesting animals as well as a "show and tell", where he will show beautiful photos of the animal and allow the audience to get a feel of snake skins - perhaps even on a live one.

German-born Breuer recently moved to Kuching. He studied Sinology (Chinese Studies) at Ruhr-University Bochum and worked in Taiwan for 22 years.

Breuer is also a nature photography enthusiast with special interest in snakes and tropical pitcher plants.

He began giving free educational talks about snakes in 2008, to elementary and middle school students around Taiwan.

The presentation is open to members of the public and is free of charge.

Those interested in attending can call SBC's Selwynn Jaoui Edward, Ha-Mim Marzuki or Asha Devi Kaushal at 082-610 610, or email to biosar@sbc.org.my to register.

## TV3 to Feature Penan Traditional Knowledge Project

**KUCHING:** Majalah Tiga produced by TV3 will be featuring the Penans of Long Iman and their garden in a segment entitled "Penawar dari Belantara", which will be aired on 9 June 2012 (Saturday) at 9.00pm.

The Penans of Long Iman, Mulu have a community garden on useful plants as well as an interpretative centre where traditions and knowledge of useful plants among the Penans are preserved and handed down by the knowledgeable elders to the younger generations within the community.

The garden features plants which are used by the community while the interpretative centre provides useful information on the lives and customs of the Penans.

The community garden and interpretative centre are established under the community's Traditional Knowledge Documentation Project which is facilitated by the Sarawak Biodiversity Centre.

Do watch Majalah Tiga to learn more about the Penans and how they preserve their traditional knowledge on TV3.

## SBC hosts talk on deadly chikungunya virus

**KUCHING:** Recent breakthroughs in research on the chikungunya virus will be presented in a talk at the Sarawak Biodiversity Centre (SBC) on July 13.

Speaker Dr Lisa Ng will talk about how the chikungunya fever has re-emerged as a human infection and how it is transmitted.

She will highlight integrated approaches aimed at gathering knowledge on immune responses against the infection to develop new preventive and treatment strategies.

The principal investigator at the Singapore Immunology Network, Dr Ng's research interest is on the immune responses of arboviruses that are epidemic or highly endemic to the tropical

region.

Dr Ng and her team have discovered a way for early and accurate prognosis of patients who have a higher risk of the more severe form of chikungunya fever.

The discovery means that doctors can now identify patients at risk quickly and accurately, and facilitate focused treatment and clinical care at the onset of the disease.

Chikungunya fever, which is caused by the chikungunya virus, is a mosquito-borne, infectious disease endemic to South-East Asia and Africa.

Those interested to attend the talk can email biosar@sbc.org.my or call Asha Devi Kaushal, Selwynn Edward or Ha-Mim Marzuki at 082-610 610 to register. Entry is free.

## Talk on orangutans by Sarawak Biodiversity on Sept 28

**KUCHING:** The Sarawak Biodiversity Centre at Jalan Puncak Borneo is holding a public awareness and appreciation talk on orangutans at 2.30pm on Sept 28.

The talk is open to members of the public of all ages and is free of charge. It will enlighten the public about some characteristics that are unique

to the primate.

For example, orangutans are the only primates that make nests out of broken twigs and small branches woven together up in trees, and unlike other apes, adult male orangutans usually lead mostly solitary existence.

The talk will be presented by

Sundai Silang, a biologist whose area of expertise is primates found in Sarawak.

During the talk, Sundai will present the biology, diet, behaviour and other interesting facts about orangutans.

The talk will also cover the current distribution of the species and

orangutan conservation.

Those who wish to attend the talk can call 082-610 610 and speak to Asha Kaushal, Ha-Mim Marzuki or Selwynn Edward.

Registration closes on Sept 26 and can also be done by sending email complete with names and contact numbers, to biosar@sbc.org.my.

New Sarawak Tribune - 11th October 2012



STEVEN Petersen showing the honeycomb.

## SBC to hold awareness talk on Bees of South East Asia

**KUCHING:** Mention "bees" and a person will most likely conjure up a range of images in his or her mind, from sweet, golden honey to a more horrifying image of painful stings.

It has been said that one third of the human food supply chain depends on pollination accomplished by bees. Still, many of us do not realise the extent of the importance of bees in our daily lives.

To create awareness on the different bees species found in South East Asia and how they play a role in our daily lives, the Sarawak Biodiversity Centre (SBC) will be organising a talk entitled "Who are these bees" by Stephen Petersen.

Petersen, an apiculturist from Alaska has just arrived in Sarawak after giving several presentations at the recent 11<sup>th</sup> Asian Apiculture Association Conference in Terengganu.

He has kept bees for the past 16 years and worked in the Middle East, Africa, India and each country of South East Asia.

During his presentation at SBC, Petersen will guide the audience through the different species of bees found in South East Asia, how they are utilised, and ways to protect and sustainably manage these important busy bees.

The talk will be held at 2.30pm on 25 October 2012, Thursday at the Sarawak Biodiversity Centre. It is open to members of the public of all ages and is free of charge.

Those who wish to attend the talk can call 082-610610 and speak to Constance Vanessa Victor or Ha-Mim Marzuki to register, by 22 October 2012.

Interested members of the public can also register by sending an email to biosar@sb.org.my with their names and contact number.

New Sarawak Tribune -  
26th October 2012

## SBC to organise public awareness presentation on Bornean Amphibians

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will be organising a public awareness presentation on Bornean Amphibians on 9 November, 2012 at its premises along Jalan Borneo Height in Semengoh.

The presentation will consist of a talk delivered by Pui Yong Mei, a member of UNIMAS' Herpetofauna Research Group, as well as a mini display.

The presentation itself will consist three parts. The first part is to introduce the audience to Bornean Amphibians, while the second is to feature Gunung Mulu National Park known for its high species diversity of frogs.

In the final part of the talk, the speaker will present possible future directions in conserving Bornean Amphibians.

Meanwhile, the mini display will feature amphibians related materials such as frog t-shirts, books, stamps from around the world that depict frogs and even some live frogs.

The speaker is a local Sarawak lad whose research interests include natural history of amphibians and reptiles, their bioacoustics and the biogeography of highland herpetofauna.

He has just completed his M.Sc. and is embarking on his PhD at UNIMAS which focuses on the phylogeny and taxonomy of the Bornean Philautus.

The talk falls on Friday, 9 Nov. 2012 and will begin at 2.30pm at the centre. It is open to members of the public of all ages and is free of charge.

Those who wish to attend the talk can call 082-610610 and speak to Asha Devi Kaushal, Constance Vanessa Victor or Ha-Mim Marzuki to register by 5 November 2012.

Interested members of the public can also register by sending an email to biosar@sb.org.my containing their names and contact number.

## Scientists closer to commercialising anti-cancer agent

**KUCHING:** The Ohio State University has signed an agreement with the Sarawak Biodiversity Centre to collaborate on the further development and commercialisation of a promising anticancer agent derived from a tropical tree that grows on Borneo.

Researchers with Ohio State's College of Pharmacy and Ohio State's Comprehensive Cancer Center - Arthur G. James Cancer Hospital and Richard J. Solove Research Institute - have worked together on silvestrol since 2004.

The team's early studies indicated that the agent might help treat acute and chronic leukemia, as well as mantle cell lymphoma and other currently incurable malignancies.

Silvestrol kills cancer cells - in an unusual way - by directly blocking the initial step in the process cells used to make proteins.

Ohio State's new Office of Technology Commercialisation and Knowledge Transfer (TCO) brokered the agreement with the Sarawak Biodiversity Centre (SBC), the Malaysian state-run entity responsible for research on biological resources in the state of Sarawak.

Under the agreement with SBC, Ohio State University plans to develop and commercialise silvestrol as an anticancer agent. SBC has agreed to carry out the survey and inventory of the resources to provide the raw plant materials to Ohio State University.

"Representatives from SBC travelled for 10 hours to meet in Columbus this past March," said David Mess, a TCO technology licensing associate, in a press release yesterday.

"The meeting at TCO led to an agreement that makes sense for the Ohio State research team, SBC and patients afflicted with cancers of the blood," he added.

The SBC was established in 1998 to initiate programmes for the research, use, protection and sustainable development of biodiversity in Sarawak.

"The centre's mission is to discover



The source: Manurung showing an Aglaia plant.

and harness Sarawak's biodiversity through research and development for the benefit of Sarawak and mankind. The natural product, silvestrol, is one of the most promising candidates that came through," explained Dr. Rita Manurung, SBC's chief executive officer.

During this project, the SBC will oversee the collection and processing of plant material from the Aglaia tree, which grows in Sarawak and from which silvestrol is derived. They are also investigating other leads to maximise silvestrol yields and to identify potential new agents that might be useful for semi-synthetic production of silvestrol.

"At Ohio State, we will isolate and purify the agent and conduct the laboratory and animal studies needed to demonstrate its safety and effectiveness," said Dr. Michael Grever, professor and chair of the Department of Internal Medicine, Charles Austin Doan Chair of Medicine and co-leader of the OSUCCC - Experimental Therapeutics Programme.

"If all goes well, we then hope to

**The centre's mission is to discover and harness Sarawak's biodiversity through research and development for the benefit of Sarawak and mankind.**

Dr. Rita Manurung.

plant-derived agent silvestrol toward the clinic through this agreement as a very positive step," Kinghorn said.

"Not only is silvestrol a very good lead compound for the potential treatment of B-cell malignancies, but if its preclinical development is successful, it may stimulate additional federal grant funding for future natural products investigators at Ohio State and elsewhere," he added.

The Ohio State University Comprehensive Cancer Center - Arthur G. James Cancer Hospital and Richard J. Solove Research Institute strives to create a cancer-free world by integrating scientific research with excellence in education and patient-centered care, a strategy that leads to better methods of prevention, detection and treatment.

Ohio State is one of only 41 National Cancer Institute (NCI)-designated Comprehensive Cancer Centres, and one of only seven centres funded by the NCI to conduct both phase I and phase II clinical trials.

The NCI recently rated Ohio State's cancer programme as "exceptional", the highest rating given by NCI survey teams.

As the cancer programme's 210-bed adult patient care component, The James is a "Top Hospital" as named by the Leapfrog Group and one of the top 25 cancer hospitals in the nation as ranked by U.S. News & World Report.

## Silvestrol clinical trial as potential anti cancer agent

**KUCHING:** In the next three to four years, the Ohio State University in the United States, in collaboration with Sarawak Biodiversity Centre (SBC), is expected to begin a clinical trial with silvestrol as a potential anti-cancer agent.

SBC chief executive officer Dr Rita Manurung said, the joint project on the further development and commercialisation of silvestrol, derived from the Aglaia tree which grows in Sarawak, followed an agreement between the American institute and SBC.

"This agreement will help control costs and expedite further development of silvestrol for potential use in multiple types of cancer," she said in a statement here yesterday.

SBC, which is responsible for research on biological resources in the state, will carry out the survey and inventory of the resources to provide raw plant materials to Ohio State University.

Dr Manurung said they were also investigating other leads to maximise silvestrol yields and identify potential new agents that

might be useful for semi-synthetic production of silvestrol.

Since 2004, researchers with Ohio State's College of Pharmacy and Ohio State's Comprehensive Cancer Center - Arthur G. James Cancer Hospital and Richard J. Solove Research Institute - have worked together on silvestrol.

The team's early studies indicated that the agent might help treat acute and chronic leukemia, as

well as mantle cell lymphoma and other currently incurable malignancies.

Silvestrol kills cancer cells in an unusual way, by directly blocking the initial step in the process of cells use to make proteins. Findings published in the Journal Clinical Cancer Research, also suggest that silvestrol might be effective for treating mantle cell lymphoma. - Bernama



SBC Chief Executive Officer Dr Rita Manurung (picture) explains the joint project on the further development and commercialisation of silvestrol, derived from the Aglaia tree which grows in Sarawak, following an agreement between the American Institute and SBC.

## Mitsubishi funds bioenergy research in Sarawak algae

**KUALA LUMPUR:** Mitsubishi Corp has signed a research collaboration agreement with the Sarawak Biodiversity Council to explore the state's diverse algal biodiversity as a potential source of renewable energy.

Over the next two years, it will invest RM2.2mil to fund the research and provide the technical know-how, while the council will also provide researchers and its facilities in Sempang, Sarawak.

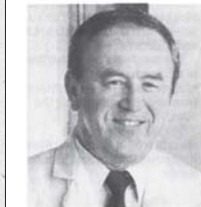
Mitsubishi Corp said in a statement that joint scientific expeditions through the Sarawak Biodiversity Centre, a research institute established by the council, will be organised to explore the unique ecosystems in the waters of Sarawak and collect, isolate and study microalgae species.

It said that the research aimed to identify useful microalgae biological characteristics as biomass or feedstock for biofuels and "co-products" that may have applications as food and health supplements.

The exchange of documents between Mitsubishi Corp and the council was witnessed by Deputy Prime Minister Tan Sri Muhyiddin Yassin, who officiated at the opening of BioMalaysia 2012 Conference and Exhibition at the Kuala Lumpur Convention Centre.

The three-day BioMalaysia 2012, which began yesterday, is organised by the Ministry of Science, Technology and Innovation, BiotechCorp, Biotechnology International Organisation, and Protemp Exhibitions.

## Ohio State University, SBC to work together to develop silvestrol



Dr Michael Grever



Dr David Lucas

**KUCHING:** Ohio State University has signed an agreement with Sarawak Biodiversity Centre (SBC) to collaborate on further development and commercialisation of a promising anticancer agent derived from a tropical tree that grows in Borneo.

Researchers with Ohio State's College of Pharmacy and Ohio State's Comprehensive Cancer Center, Arthur G. James Cancer Hospital and Richard J. Solove Research Institute have worked together on silvestrol since 2004.

According to a press release from SBC yesterday, the team's early studies indicated that the agent might help treat acute and chronic leukemia, as well as mantle cell lymphoma and other currently incurable malignancies.

"Silvestrol kills cancer cells in an unusual way, by directly

blocking the initial step in the process cells used to make proteins," SBC said.

Ohio State's new Office of Technology Commercialisation and Knowledge Transfer (TCO) signed the agreement with the Sarawak Biodiversity Centre (SBC), the entity responsible for research on biological resources in Sarawak.

Under the agreement with SBC, Ohio State University plans to develop and commercialise silvestrol as an anticancer agent.

SBC has agreed to carry out the survey and inventory of resources to provide the raw plant materials to Ohio State University.

"Representatives from SBC travelled for 36 hours to meet in Columbus last March," said David Mess, a TCO technology licensing associate.

The meeting at TCO led to an agreement which makes sense for the Ohio State research

team, SBC and patients afflicted with cancers of the blood," he added.

The SBC was established in 1998 to initiate programmes for the research, use, protection and sustainable development of biodiversity in Sarawak.

The centre's mission is to discover and harness Sarawak's biodiversity through research and development for the benefit of the state and mankind.

The natural product silvestrol, is one of the most promising candidates we came through," explains SBC CEO Dr Rita Manurung.

During this project, the SBC will oversee the collection and processing of plant material from the Aglaia tree, which grows in Sarawak and from which silvestrol is derived.

They are also investigating other leads to maximise silvestrol yields and to identify potential new agents

that might be useful for semi-synthetic production of silvestrol.

"At Ohio State, we will isolate and purify the agent and conduct laboratory and animal studies needed to demonstrate its safety and effectiveness," said Dr Michael Grever, professor and chair of the Department of Internal Medicine, Charles Austin Doan Chair of Medicine and co-leader of the OSUCCC Experimental Therapeutics Programme.

"If all goes well, we then hope to begin a clinical trial with silvestrol in three to four years," Grever said.

Dr David Lucas, a researcher in Grever's laboratory, led recent laboratory studies suggesting that silvestrol might be effective for treating mantle cell lymphoma.

The findings were published in the Journal Clinical Cancer Research.

The Borneo Post - 6th November 2012

## Mitsubishi Corporation inks research collaboration agreement with SBC

**KUCHING:** Mitsubishi Corporation (MC) together with the Sarawak Biodiversity Centre (SBC) signed a research collaboration agreement to explore the diverse algal biodiversity of Sarawak as a potential source of renewable energy.

The signing ceremony was inked during the launch of the BioMalaysia Exhibition 2012 at the Kuala Lumpur Convention Centre yesterday and was witnessed by Deputy Prime Minister Tan Sri Muhiyiddin Yassin.

Deputy State Secretary Datu Misnu Taha represented SBC while chief executive officer Koichi Wada represented Mitsubishi Corporation Malaysia, according to a press release issued in Kuala Lumpur.

During the next two years, the parties will hold joint scientific expeditions through the Sarawak Biodiversity Centre, a research institute established by the related council, to explore the unique ecosystems in the waters of Sarawak and collect, isolate and study microalgae species.

The isolated microalgae will be identified using molecular techniques, cultured for detailed



SEALING THE DEAL: Misnu (left) exchanges the MOU with Koichi as Muhiyiddin (centre) and Fadillah (second right) look on.

research and analysed to generate a database as well as an algae library.

The parties plan to test the cultures to identify its useful biological characteristics as biomass or feedstock for biofuels and 'co-products' that may have applications as food and health supplements.

To carry out this project, MC funds the research and provides the technical knowhow whereas the council, through the centre,

provides the researchers and its facilities in Semengoh Sarawak, Malaysia.

Interest in developing next-generation biofuels produced from non-food feedstock, such as microalgae, has been gaining momentum over the years. In recognising the promising potential of microalgae for biofuels and various kinds of commercialisable co-products, many companies and universities focus their research into

developing algae.

Sarawak is known to have one of the richest and most diverse natural resources in the region and because of its biodiversity and the establishment of an excellent centre with good facilities for research; it is an attractive investment for MC to hold the joint research project in Sarawak.

Among those present was Deputy Minister of Science, Technology and Innovation Datuk Fadillah Yusuf.

*SBC News* 2013

# SBC NEWS

The Borneo Post - 29th January 2013

## SBC to host talk on HIV this Thursday

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will be hosting a talk entitled HIV prevention, treatment and eradication using animal models' this Thursday.

The talk will be held in SBC's premises at KM20, Jalan Borneo Heights, Semengoh at 2.30pm. It will be presented by Dr Zandrea Ambrose, who is an Assistant Professor with the Division of Infectious Diseases, School of Medicine at the University of Pittsburgh.

Dr Ambrose also heads the Ambrose Lab, one of seven productive research laboratories under the division.

A statement here said Dr Ambrose's areas of specialisation include understanding the evolution of HIV drug resistance



Dr Zandrea Ambrose

will share with the audience her research team's experience in determining how virus persists in cells and how these cells are distributed in tissues throughout the body, using animal models.

These types of study will guide researchers in hopefully discovering an HIV cure.

Dr Ambrose's extensive portfolio in research on HIV has made her a research affiliate with the Washington National Primate Research Centre and the co-director of Imaging Core at Pittsburg Centre for HIV Proteins Interactions.

Those interested in attending this talk can register by calling 082-610610 to speak to Asha Kaushal or Ha-Mim Marzuki or by sending an email to biosar@sbc.org.my containing their names and contact number.

and, identification and eradication of HIV reservoirs.

Although there is no cure at the moment for HIV, recent studies have given hope for new treatments to eliminate HIV-infected cells from individuals.

During this talk, Dr Ambrose

The Borneo Post - 29th January 2013

## Centre to hold Biodiversity Day on May 18, 19

**KUCHING:** Science experiments, soap making, traditional ethnic games and food, face painting, biodiversity origami and public awareness talks are just some of the activities lined up for the Sarawak Biodiversity Centre's (SBC) Biodiversity Day on May 18 and 19.

The event which takes place at SBC's premises at KM20, Jalan Borneo Heights, Semengoh, is open to the public and school students. It aims to create awareness on the many uses of biodiversity to mankind.

Visitors to SBC on these two days will also get a chance to try their hands at making bebarutian specimens and also taste local delicacies of the many ethnic communities in Sarawak.

Visitors to the event will even get an opportunity to do a free basic health screening and get entertained by a talented clown who will make animal balloons for children.

A colouring contest for primary one, two and three pupils and a pottery painting



**BIODIVERSITY DAY:** A file photo shows college students looking at the DNA structure during a previous SBC Open Day.

contest for primary four, five and six pupils will also be held. Updates on the upcoming event as well as details and forms

for the colouring and pottery painting contests can also be viewed on the centre's website, www.sbc.org.my.

Members of the public may also call Constance Vanessa Victor at 082-610610 for more information on the contests and activities.

The Sunday Post - 5th May 2013

## SBC Biodiversity Day coming soon

**KUCHING:** Sarawak Biodiversity Centre (SBC) is inviting the public to join them at its fun-filled educational Biodiversity Day 2013 to be held on May 18 and 19.

The Biodiversity Day is held in conjunction with International Day for Biological Diversity which falls on May 22 every year. Many activities have been lined up for the event including contests, games, talks, demonstrations and health screening.

There will be colouring and pottery painting contests for primary school students as well as face painting, fun eco-uares and ladders game and paper art and original activities to take part in.

A series of public awareness talks have been scheduled on the afternoon of both days covering topics ranging from plants in Sarawak, to edible mushrooms, orchids as well as rivers and biodiversity and wildlife conservation in Sarawak.

Participants can also take the opportunity to mingle with representatives from various indigenous communities throughout Sarawak who have been actively documenting their traditional knowledge.



**GREEN DAY:** A promotional poster of SBC Biodiversity Day 2013 to be held on May 18 and 19.

The public can also learn about how the indigenous communities have sustainably utilised plants and biodiversity throughout the centuries while sampling some of their wares and taking part in traditional games.

Organisers will also feature R&D demonstrations and mini exhibitions on soaps and candles making as well as on beads and



**INTERESTING:** College students looking at DNA structures at a past SBC Open Day.

scents among others.

SBC has even thrown in an element of 'fear factor' at one of the booths.

A clown will also be making his rounds shaping animal balloons for children of all ages during the two days.

Furthermore, Sarawak Medical Department will also be conducting free health screening

at the event.

For more information on the contests for children, contact Constance Vanessa Victor at 082-610610 or email to constance@sbc.org.my.

Those who wish to listen to talks can email to biosar@sbc.org.my for more information and to register.

The talks are free of charge.



**DO-IT-YOURSELF:** Visitors taking a closer look on how soaps are made at the previous SBC Biodiversity Day.



**HANDS-ON:** Visitors to a past SBC Open Day taking part in a simple scientific experiment.

The Borneo Post - 9th May 2013

## Awareness talks mark Biodiversity Day in Sarawak

**KUCHING:** Sarawak Biodiversity Centre (SBC) has lined up interesting public awareness talks on biodiversity on Biodiversity Day on May 18 and 19.

On Saturday (May 18), three known experts in their respective fields will be talking about flowering plant species, fungi and orchids, SBC said in a press statement yesterday.

The talks will kick off at SBC premises at Semengoh at 1pm

with Peter Boyce talking about flowering plant species found in Sarawak.

Boyce arrived in Sarawak in year 2002 after spending 15 years working at Kew Gardens. He has since spent the last 12 years in Malaysia and Thailand.

Boyce's talk will be followed by a talk on 'Diversity of Macro-Fungi in Sarawak' by Prof Dr Sepiah Muid of Universiti Malaysia Sarawak (Unimas) who

specialises in plant pathology and mycology.

Sepiah will talk about the macro-fungi, otherwise known as mushrooms, in Sarawak.

The series of talks will conclude with a presentation on orchids by Prof Dr Maziah Mahmood of University Putra Malaysia.

Prof Dr Maziah's field of expertise encompass plant biochemistry, plant biotechnology and plant tissue culture.

After 10 years of research on orchids, she has made a career of learning about them and working on fragrant orchids.

Maziah is a co-founder of Orchid Life, a BioNexus status company that produces horticultural products and services internationally.

On Sunday, public talks will kick off at 2pm with Oswald Braken Tisen, deputy general manager of Sarawak Forestry Corporation talking on Wildlife

Conservation in Sarawak.

His presentation will be followed by an awareness talk on 'Our Rivers and Biodiversity' by Sarawak Rivers Board.

Each talk is estimated to be an hour long and those interested in attending are advised to register with Sarawak Biodiversity Centre by sending an email to biosar@sbc.org.my or call 082-610610 as seats are limited.

# Biodiversity Day talks at SBC on 18 and 19 May

**KUCHING:** Sarawak Biodiversity Centre has lined up some interesting public awareness talks related to biodiversity for its Biodiversity Day on 18 and 19 May, 2013.

On Saturday, 18 May, 2013, three known experts in their respective fields will be talking about flowering plant species, fungi and also orchids.

The talks will kick off at 1.00pm at SBC's premises at Semengoh with Peter Boyce who will talk about flowering plants species found in Sarawak.

Boyce arrived in Sarawak in 2002 after spending 15 years working at

Kew Gardens. He has since spent the last 12 years in Malaysia and Thailand.

Boyce's talk will be followed by a talk entitled "Diversity of Macro-Fungi in Sarawak" by Prof Dr Sepiah Muid of UNIMAS whose areas of specialisation is plant pathology and mycology.

Here, Prof Sepiah will talk about the macro-fungi, otherwise also known as mushrooms found in Sarawak.

The series of talks for the day will conclude with a presentation by Prof Dr Maziah Mahmood of University Putra Malaysia on

orchids.

Maziah's field of expertise encompasses plant biochemistry, plant biotechnology and plant tissue culture.

She also loves orchids which she finds mesmerizing. After 10 years of research on the plants she has made a career out learning about them and working on fragrant orchids.

Maziah is also a co-founder of Orchid Life, a BioNexus status company that produces horticultural products and services internationally.

On Sunday, 19 May, 2013, public

talks will kick off at 2.00pm with a talk on Wildlife Conservation in Sarawak, by Oswald Braken Tisen, the Deputy General Manager of Sarawak Forestry Corporation.

His presentation will be followed by an awareness talk entitled "Our Rivers and Biodiversity" by the Sarawak Rivers Board.

Each talk is estimated to be an hour long and those interested in attending either series of talks are advised to register with the Sarawak Biodiversity Centre by sending an email to [biosar@sbcc.org.my](mailto:biosar@sbcc.org.my) or by calling 082-610610, as seats are limited.

## Challenge not in treating monkey malaria but detecting it

**KUCHING:** Until 2004, monkey malaria or naturally acquired infections of *Plasmodium knowlesi* in humans was almost unheard of until a large number of infections were reported in Kapit Division.

"Previously only four species of *Plasmodium* causing malaria in humans were recognised. While cases caused by the fifth species of malaria (*P. knowlesi*) were considered extremely rare and often reported as *P. malariae*," said Professor Balbir Singh.

He was met by reporters during a public awareness talk on malaria recently in conjunction with World Malaria Day. It was not until the development of molecular detection assays, which could differentiate between *Plasmodium knowlesi* and the morphologically similar human malaria parasite *Plasmodium malariae* that the matter was brought to light, he added.

"Concurrently, there has been an increase of reported cases in South-East Asian countries and in Malaysia; most cases in Sarawak and Sabah."

*Plasmodium knowlesi* is a monkey malaria parasite commonly found in South-East Asia. It causes infection in long tailed and pig tailed macaques but can also infect humans; naturally by mosquito bite or artificially by blood injection.

"In 1965, an American who had returned after working in the jungle in Pahang, Peninsular Malaysia, was confirmed to have naturally been infected by *P. knowlesi*."



**Fellow scientists:** Sarawak Biodiversity Centre (SBC) chief executive officer Dr Rita Manuring congratulating Balbir after he delivered a talk on malaria at the SBC recently.

"This was only confirmed by injecting infected blood to inoculate Rhesus monkeys," said Balbir on the first-ever reported case of a human getting *P. knowlesi* malaria by mosquito bites.

Balbir's team works at the Malaria Research Centre, Universiti Malaysia Sarawak (Unimas) and has been significant in redefining the many infections in rural areas and in the way human malaria is perceived.

His team, in collaboration with other scientists, has done meticulous work

on the study of *P. knowlesi* cases that involves studying the area where cases are reported, sequencing *P. knowlesi* genes, catching monkeys and even catching and dissecting mosquitoes.

"According to our molecular studies done on monkey and human samples, we have shown that *P. knowlesi* is an ancient parasite that was present more than 100 years ago."

*P. knowlesi* is transmitted by the *Anopheles leucopygus* group of mosquitoes, which are typically found in

forest areas of South-East Asia and feed at night.

Balbir said there were two possible modes of transmission to humans by mosquitoes – either from an infected monkey to a human or from an infected human to another human.

However, the current evidence points to monkey-to-human transmission by mosquitoes.

Symptoms are usually prominent after nine days of getting bitten by the mosquito when the parasites can be seen inside the red blood cells.

"It replicates every 24 hours causing the red blood cells to burst and this creates a high density of parasites in a short period of time, which makes *P. knowlesi* more dangerous than *P. malariae*, which replicates only every 72 hours."

However, merely diagnosing a patient by symptoms is difficult as the symptoms are very non-specific; fever, chills and rigour being the most common, followed by others such as headache, tiredness, muscle pain and even vomiting and diarrhoea. Someone with the flu or a bacterial infection will also have similar symptoms.

He said the challenge was often not in treating the infection but detecting it at an early stage as the parasites multiplied rapidly.

"*P. knowlesi* could only be correctly diagnosed by using molecular detection assay as it looks similar to *P. malariae* under the microscope," stressed Balbir on the importance of a

correct diagnosis.

"In the number of monkey malaria cases in humans published so far in journals, Sarawak leads with 881 cases reported, Sabah had 664 while there were 56 cases reported in the peninsula. However, the actual number of cases occurring every year are much higher and ongoing studies indicate that human cases of monkey malaria in Malaysia are on the rise."

There have been deaths reported in Sabah and Sarawak due to *P. knowlesi* but Balbir said that there was no need to panic since monkey malaria was easily treatable and no resistance to anti-malarial drugs had been described.

"Dengue is more common than malaria in the urban areas and *knowlesi* malaria really is restricted to the rural areas where the natural hosts (monkeys) and the mosquitoes dwell so there is no reason to panic."

He further added that the chances of someone getting monkey malaria by venturing into the forest at night, when the malaria-transmitting mosquitoes feed, were extremely low compared with acquiring dengue in South-East Asia.

However, those who often go out to the jungles and remote areas are advised to take precautions such as taking anti-malaria pills, sleeping in mosquito nets and applying mosquito repellent. Balbir joined Unimas in 1999 and currently heads the Malaria Research Centre.

The Borneo Post - 5th May 2013

# International Day for Biological Diversity to be a fun-filled day

**KUCHING:** The Sarawak Biodiversity Centre (SBC) has lined up a range of fun-filled learning activities and public awareness talks to mark International Day for Biological Diversity.

According to a press statement from SBC, the event will be held at its premises at KM26, Jalan Borneo Heights at Semengoh from May 18 to 19.

Colouring and pottery painting contests for primary school students are among the activities in store.

Representatives of indigenous communities from throughout the state who have been documenting their traditional knowledge will also feature their wares and traditional games.

Visitors will have the opportunity to mingle with these communities and learn about how they have sustainably utilised plants and biodiversity throughout the centuries.

SBC will also feature R&D demonstration, face painting, eco-snakes and ladders, paper art and origami activities.

The organisers have even thrown in an element of 'fear factor' at one of the booths.

Those who want to try their hands at making scented beads and candles will have a chance to do so on May 18 at 10am and 2pm, while those who would like to have a go at making handmade

soaps will have the opportunity to do so the following day at the same times.

A clown will also be making his rounds shaping animal balloons for children during the two days.

A free health screening will also be conducted by a team from the Sarawak Medical Department while officers from the Forest Agriculture Research Station will feature a tankful of live local freshwater fish.

Meanwhile, a series of public awareness talks have been scheduled on the afternoon of both days with topics ranging from plants in the state to edible mushrooms, orchids, our rivers and biodiversity and wildlife conservation in the state.

Also on May 18, three known experts in their respective fields will be talking about flowering plant species, fungi and also orchids.

The talks will start at 1pm at SBC's Lecture Theatre with Peter Boyce to speak about flowering plant species found in the state.

Boyce who arrived in the state in 2002 after spending 15 years working at Royal Gardens has been spending his last 12 years in Malaysia and Thailand.

Boyce's talk will be followed by a talk entitled 'Diversity of Macro-Fungi (mushrooms) in Sarawak' by Prof Dr Sepiah

Muid of Unimas whose areas of specialisation is plant pathology and mycology. The series of talks for the day will conclude with a presentation by Prof Dr Mariah Mahmood of University Putra Malaysia on orchids.

Prof Dr Maziah's field of expertise encompasses plant biochemistry, plant biotechnology and plant tissue culture. She also loves orchids which she finds mesmerising.

After 10 years of research on the plants, she has made a career from learning about them and working on fragrant orchids. She is also a co-founder of Orchid Life, a BioNexus status company that produces horticultural products and services internationally.

On May 19, public talks will start at 2pm with a talk on Wildlife Conservation in Sarawak by the Sarawak Forestry Corporation deputy general manager Oswald Braken Tisen.

His presentation will be followed by an awareness talk entitled 'Our Rivers and Biodiversity' by the Sarawak Rivers Board.

Each talk is estimated to be an hour long and those interested in attending either series of talks are advised to register with SBC by sending an email to biosar@sbc.org.my or by calling 082-619630 as seats are limited.

New Sunday Tribune - 19th May 2013

# Call to involve children in preservation, conservation of biodiversity

BY DOREEN LING

**KUCHING:** It is important for parents to encourage their children to be actively involved in the preservation and conservation of biodiversity, said State Secretary, Tan Sri Datuk Amar Haji Mohamad Meehilli Abdul Ghani.

"In our pursuit to make new discoveries through scientific research and development, we often forget a segment of society that also plays a very important role in sustainable management and utilisation of biodiversity and they are our children.

"It is our children who are inevitably going to inherit this land that holds so much potential for their future," he said.

Meehilli was speaking yesterday at the opening ceremony of the Sarawak Biodiversity Centre (SBC) Day 2013 at SBC here.

Meehilli, who is also the Sarawak Biodiversity Centre's Chairman, said that only through involvement in awareness activities could the younger generation and children gain realisation and knowledge which would inspire them towards their own journey of sustainable management and utilisation of biodiversity.

"More often than not we as parents are usually intent on



**MORSHIDI** (right) with SBC CEO, Dr Rita Manjung (left) and the winners of the colouring contest.

ensuring that our children get good grades in their school subjects that we forget how sustainable management and utilisation of biodiversity is also an integral part of our children's future.

"Therefore, I would like to encourage the departments and agencies here that be embroiled on that very journey to create awareness on biodiversity among our children to ensure there is continuity in learning and sharing of experiences and knowledge among all levels of society," he said.

Meehilli also presented prizes to the winners of the children's colouring contest.

SBC Day is a two-day event which ends today.

The Star - 23rd May 2013



# Melanau art of palm leaf folding

It's an old tradition passed down through the generations

**A**t a fleeting glance, it seemed as if there was a large grasshopper sitting on a plant stalk, leaves folded into the shape of the insect.

The art of folding leaves into different shapes may not be well-known, but it is very much alive among the Melanau in Sarawak.

It was indeed a privilege for many visitors to the recent Biodiversity Day in Kuching organised by the Sarawak Biodiversity Centre (SBC) to meet Laina Edwan, whose deft fingers shaped coconut-leaf grasshoppers and flowers in her booth.

Laina, whose popular traditional Melanau cakes and delicacies were sold out by the end of the first day of the event, came up with an alternative attraction by placing a coconut-leaf grasshopper in front of her booth.

The pepper quickly gained some fans and impromptu classes on the art of folding coconut leaves began. Members of other indigenous communities from throughout

Sarawak were also attracted and took part in the spontaneous classes with Laina.

Laina, who is a member of a village committee in Kampung Jambang, Malak said she learned the art from her mother.

According to her, it was a traditional activity of the Melanau-Likar to use folded leaves as decorations during celebrations such as Pesta Kaul in Malak.

"Leaf folding is not restricted to coconut leaves. You can also use other palm leaves such as dami (pong from nipah palm) and dami (from oil palm) to make shapes of various things - peacocks, birds, fish, flowers and so on," said Laina.

The art of leaf folding, like that of Japanese origami, was a pagan tradition of the Melanau which has been handed down through generations.

It takes up to 15 minutes for Laina to complete folding an elaborate shape such as a grasshopper. A simple flower takes less time.

Unlike the traditional 'origami' which has been well-documented



**LIFE SIZE:** A coconut leaf grasshopper made by Laina.



**ART OF THE SEASIDE:** The art of leaf folding is a traditional activity of the Melanau-Likar to use folded leaves as decorations during celebrations such as Pesta Kaul in Malak.

The Borneo Post - 1st June 2013

## Talk on sustainable indigenous communities on June 14

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will be hosting a talk on developing of sustainable indigenous communities on June 14.

The talk, which falls on a Friday, will be held at SBC's premises at Km20, Jalan Borneo Heights, Semengoh at 2.30pm.

The speaker Dr Michael Ceballos is an Assistant Professor of Biology at The University of Minnesota (Morris campus) in the US.

He founded the Native American Research Labs, which provide advanced "hands-on" training to Indigenous American scholars interested in pursuing

careers in the natural sciences. Dr Ceballos first established a research laboratory in 2005 at Salish Kootenai College, a small tribal college in western Montana.

In 2007, he founded a larger Native American Research Lab at The University of Montana in Missoula, Montana.

Dr Ceballos' initiatives provide advanced research opportunities in the biological, chemical, and biomedical sciences for Native American students and other students, particularly those from economically underserved backgrounds.

As part of his research,

teaching, and service efforts, Dr Ceballos (with support from Nasa and the US National Science Foundation) has initiated a multi-national collaborative to conduct research in areas of importance to indigenous communities in the countries of Mexico, India, and Malaysia.

In 2012, SBC hosted three indigenous American students through Internship under its BioDiscovery and Traditional Knowledge Documentation programmes.

Dr Ceballos is currently on his third trip to Sarawak and with the second cohort of

students that he has brought here to conduct research in collaboration with SBC and also Universiti Teknologi MARA, Samarahan Campus.

During his talk at SBC, Dr Ceballos will be speaking about his international work with focus on the project he maintains in collaboration with institutions here.

Those interested in attending this talk can register by calling Asha Kaushal or Ha-Mim Marzuki at 082-610610.

They can also register by sending an email to biosar@sbc.org.my with their name and contact number.

The Borneo Post - 11th June 2013

## SBC to hold talk on indigenous communities June 14

**KUCHING:** Sarawak Biodiversity Centre (SBC) will be hosting a talk on developing sustainable indigenous communities at 2.30pm this Friday.

According to a press release, the talk will be held at SBC's premises at Km20, Jalan Borneo Heights, Semengoh.

The speaker Dr Michael Ceballos, is an assistant professor of Biology at The University of Minnesota (Morris campus) in the USA.

He founded the Native American Research Labs, which provide advanced "hands-on" training to Indigenous American scholars interested in pursuing careers in the natural sciences.

Dr Ceballos first established a research laboratory in 2005 at Salish Kootenai College, a small tribal college in western

Montana. In 2007, he founded a larger Native American Research Lab at The University of Montana in Missoula, Montana.

His initiatives provide advanced research opportunities in the biological, chemical, and biomedical sciences for Native American students and other students, particularly those from economically underserved backgrounds.

As part of his research, teaching, and service efforts, Dr Ceballos (with support from Nasa and the U.S. National Science Foundation) has initiated a multinational collaborative to conduct research in areas of importance to indigenous communities in Mexico, India, and Malaysia.

In year 2012, SBC hosted three indigenous American students through Internship under its

BioDiscovery and Traditional Knowledge Documentation programmes.

Dr Ceballos is currently on his third trip to Sarawak and with the second cohort of students he has brought here to conduct research in collaboration with SBC and Universiti Teknologi Mara Samarahan Campus.

During his talk at SBC, Dr Ceballos will be speaking about his international work with focus on the project he maintains in collaboration with institutions here.

Those interested in attending this talk can register by calling 082-610610 to speak to Asha Kaushal or Ha-Mim Marzuki.

Interested members of the public can also register by sending an email to biosar@sbc.org.my with their names and contact number.

The Borneo Post -  
22nd June 2013

## SBC to host talk on Niah fossils

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will host a talk on the study of fossil animals found in the Niah Great Cave on July 5.

Dr Christopher Stimpson of the University of Cambridge's McDonald Institute for Archaeological Research will present evidence of birds and mammals (bats) bones recovered during archaeological excavations of the Great Cave that date from 50,000 years ago.

Stimpson will also discuss long-term perspectives and recommendations from his findings for the biodiversity conservation in the Niah Caves. His principal research areas are palaeoecology and the use of Quaternary-age palaeozoological data sets to inform on the conservation of extant populations of animals and birds.

He originally trained as a zoologist (BSc University of Leeds) before specialising in palaeozoology (MSc University of York). Stimpson completed his PhD research on bird and bat bones recovered from the Great Cave of Niah at the University of Cambridge.

He is also a fellow of the Royal Geographical Society. The talk is organised in collaboration with the Protected Areas and Biodiversity Conservation (PABC) unit of the Sarawak Forestry Corporation.

It will be held at SBC's Lecture Theatre at Km20, Jalan Borneo Heights, Semengoh starting 2.30pm.

To register call Asha Kaushal or Ha-Mim Marzuki on 082-610610 or email names and contact numbers to biosar@sbc.org.my.

The Sunday Post -  
16th June 2013

## Talk on developing sustainable indigenous communities at SBC

**KUCHING:** The European's colonisation of indigenous lands in the Americas, Africa and Asia has a dramatic impact on the traditional lives of the native (aboriginal) people in the world.

Assistant Professor of Biology at The University of Minnesota (Morris Campus) USA, Dr Michael Ceballos said the beginning with the onset of the industrial revolution of the mid-1700s through to the information age of the mid-1900s, indigenous communities have found themselves in a constant state of rapid changes.

"Extensive global transportation and large-scale modern development have resulted in intercultural mixing and an efflux of inhabitants from traditional home lands into the cities," he said in his talk on "Developing Sustainable Indigenous Communities: Indigenous America to Indigenous Borneo at Sarawak Bio-Diversity Centre (SBC) Friday."

"Indeed, there appears to be common struggle within indigenous communities worldwide to balance the modern influences with traditional ways," he added.

On top of that, Ceballos pointed out that the other impact faced by many native communities were migration, occupations and settling of Indigenous homelands by outsiders, military actions, the establishment of political/state structures and modern development, western scientific and educational activities.

He further elaborated that to cope with and survive the impacts of the modern world and to have better understands the interface between modern society and traditional life; many indigenous people



DR MICHAEL CEBALLOS

are seeking western-style education.

According to Ceballos, whose grandparents are US indigenous natives, said advancing through modern higher education systems is not always easy for indigenous scholars. In fact, in many parts of the world, it has been particularly difficult for indigenous scholars to manoeuvre through educational systems and achieve advanced degree in the sciences.

With the support of Nasa and the US National Science Foundation, he initiated a multinational collaborative to conduct research in areas of importance to the indigenous communities in the countries of Mexico, India and here in Malaysia.

In general, the concept behind his collaboration is to address topics of importance to developing sustainable indigenous communities.

This is his third trip to Sarawak and the second cohort of students that he has brought to Malaysia to conduct research in collaboration with Sarawak Bio-Diversity Centre and the Universiti Teknologi MARA (UiTM).

New Sunday Tribune - 28th June 2013

## Talk on swiftlets, bird bones held

BY DARYLL LAW

**KUCHING:** A heritage talk was held at Dewan Tun Abdul Razak by the State Museum Department here yesterday.

The heritage talk was about swiftlets and 'bird bones', which was presented by Dr Christopher M. Stimpson who was trained as a zoologist (Bsc University of Leeds) before specialising in palaeozoology (Msc University of York). He then completed his PhD research on birds and bat bones recovered from the Great Cave of Niah (University of Cambridge).

In 2012 the United Kingdom (UK) funded Stimpson to carry his research for two months on his principal research areas which were palaeoecology and the use of Quaternary-age palaeozoological data sets to check on the effective management and conservation of extant populations of animals and birds, where he chose Sarawak as his destination.

Stimpson had also worked extensively as a field archaeologist in North Africa, Southeast Asia and central and Eastern Europe and is a member of the Royal Geographical Society.

"Since late 19th century, the Great Cave of Niah in Sarawak has been one of the most intensively studied archaeological sites in Southeast Asia. However, the bird bone assemblages that were recovered from the site have received limited attention," he said.

He evaluated and described the taxonomic and taphonomic chal-



DR Stimpson delivering his talk.

lenges faced by a dedicated study of Niah bird bones and the insights that these bone assemblages provide into the landscapes, people and avian biodiversity of the Niah area in the past and at present.

He added that he was amazed with Niah historically, biologically and archaeologically. Eppiggan Birds and Troglomenes the bone specimens which were found in Niah. The three swiftlet species found as evidence were White Belly, Black Nest and Mossy Nest.

"Tom Harrison discovered evidence more than 50 years ago, and with his research analysis, which brought people like me to carry on the research in refining the evidence due to the change of time.

"For the past years the forest has seen changes in its area due to

the development around it and this may raise the concern towards the habitats of the animals. The birds in Sarawak are very dependent on the forest, where they need space to navigate the surroundings," he said.

With his six thesis studies Stimpson would like to publish his own book in future. The theses that he had produced are 48,000 Year Record of Swiftlets (2013), Raptor and Owl bone from Niah (2009), Lake Quaternary Environment and Human Impact in Northwestern Borneo: The Evidence from the Bird (Aves) and Bat (Cniropkesa) Faunas from the Archeology of the Great Cave of Niah (2010).

Also present were Mohd Sherman Sauffi Assistant Curator, Mohd Zakaria Hattar Curator PR.

The Borneo Post - 29th June 2013

## Talk on Niah Caves fossil animals next Friday

**KUCHING:** Sarawak Biodiversity Centre (SBC) will be holding a talk by Dr Christopher Stimpson of the McDonald Institute for Archeological Research, University of Cambridge, on fossil animals found in the great Niah Caves.

To be held at SBC's lecture theatre at KM20, Jalan Borneo Heights, Semenggoh on July 5, the talk will start at 2.30pm.

Dr Stimpson will present evidence recovered from archeological excavations of the Niah Cave to show that birds and mammals (bats) could be found in the cave from 50,000 years before.

Dr Stimpson who is a fellow of the Royal Geographical Society is also trained as a zoologist from the University of Leeds before specialising in palaeozoology from the University of York.

Dr Stimpson completed his PhD research on bird and bat bones recovered from the Great

Cave of Niah at the University of Cambridge.

Dr Stimpson's principal research areas are palaeoecology and the use of Quaternary-age palaeozoological data sets to inform on the conservation of extinct populations of animals and birds.

During the talk, Dr Stimpson will also discuss long term perspectives and recommendations for his findings for biodiversity conservation in the Niah Caves.

This talk is organised in collaboration with the Protected Areas and Biodiversity Conservation (PABC) unit of the Sarawak Forestry Corporation.

Those interested to attend this talk can register by calling Asha Kaushal or Mr Ha-Mim Marzuki at 082-610610.

Interested members of the public can also register by sending an email to biosar@sbc.org.my with their names and contact number.

New Sarawak Tribune -  
29th June 2013

## Talk on fossils in Niah Caves

**KUCHING:** Have you ever wondered what kind of animals could be found in the Niah Cave some 50,000 years ago?

Wonder no more as the Sarawak Biodiversity Centre (SBC) will be hosting a talk on 5 July on the study of fossils found in the great Niah Caves.

The talk will be held at SBC's Lecture Theatre at KM20, Jalan Borneo Heights, Semenggoh at 2.30pm.

The speaker, Dr Christopher Stimpson of the McDonald Institute for Archeological Research, University of Cambridge, will present evidence recovered from archeological excavations of the Niah Cave to show that birds and mammals (bats) could be found in the cave from 50,000 years before.

Dr Stimpson originally trained as a zoologist (BSc University of Leeds) before he specialized in palaeozoology (MSc University of York).

Dr Stimpson completed his PhD research on bird and bat bones recovered from the Great Cave of Niah at the University of Cambridge.

Dr Stimpson's principal research areas are palaeoecology and the use of Quaternary-age palaeozoological data sets to inform on the conservation of extant populations of animals and birds.

Dr Stimpson is also a fellow of the Royal Geographical Society.

During the talk, he will also discuss long term perspectives and recommendations from his findings for biodiversity conservation in the Niah Caves.

This talk is organised in collaboration with the Protected Areas and Biodiversity Conservation (PABC) unit of the Sarawak Forestry Corporation

Those interested in attending this talk can register by calling 082-610610 to speak to Asha Kaushal or Ha-Mim Marzuki.

Interested members of the public can also register by sending an email to biosar@sbc.org.my with their names and contact numbers.

New Sunday Tribune - 7th July 2013

## Researcher presents talk on bat and swiftlet bones in Niah

**KUCHING:** Dr Christopher Stimpson, a research associate at the University of Cambridge, spent approximately eight weeks researching on bat and swiftlet bones recovered from the Great Cave of Niah in archaeological sequences dating from 50,000 years before the present time to 350 years before the present time.

The insights that his data provide into the ecology of the cave and wider landscape in the Niah area was presented in a talk was held at the Sarawak Biodiversity Centre (SBC) here on Friday.

After the talk, Stimpson said in an interview that the research started in 2004 when a professor in the university asked him if he was interested in studying the bones of bats and swiftlets in South East Asia.

"Without thinking, I said yes and since then I have been knocked out by the cave as it is a fantastic place and I feel lucky that I was able to conduct a research there," he said.



STIMPSON presenting the talk.

Stimpson also suggested that researchers take on the challenge of carrying out further studies on the bats and swiftlets.

"Future research can be about the diet of swiftlets, such as what are they eating.

"The carrying capacity of the

Niah National Park through surveys of arthropod abundance and diversity within and without the boundary of the park is another thing that researchers can touch on," he said.

He also urged the government to come up with more conservation plans for the area.

The Borneo Post -  
23rd August 2013

## Talk on flora of Paya Maga on Sept 6

**KUCHING:** Sarawak Forestry Corporation (SFC) environmental executive Ling Chea Yiing will only talk on the flora of Paya Maga at Sarawak Biodiversity Centre (SBC) on Sept 6.

A press release by SBC yesterday clarified that Ling will not be talking on Temurang Karst Areas and wildlife monitoring and rescue projects as mentioned in yesterday's news reports.

SBC said Ling will not be talking on the other subjects although Ling, who has a special interest in orchids, had been involved in other studies involving the Temurang Karst as well as wildlife monitoring and rescue projects in Sarawak.

The talk to be held at SBC premises in Semenggoh starting 2.30pm on Sept 6 is aimed at creating awareness among the public of the diversity of flora species found in Paya Maga which is highlands located in Ulu Trusan in Lawas.

Paya Maga is described as a steep hilly terrain raising from an elevation of 300 metres to 1,860 metres at the summit of Gunung Metallan. In 2010, a scientific expedition was carried out under the Heart of Borneo programme to record the biodiversity of the pristine forest of Paya Maga.

Recordings made by botanists during the expedition showed that orchids were most abundant in Paya Maga while rare species such as Balanophoraceae and Burmanniaceae were also noted. Based on this expedition, the flora in Paya Maga appears very interesting and rich in species.

The Borneo Post - 31st August 2013

## Talk on unique flora of Paya Maga next Friday

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will be hosting a talk on the flora of Paya Maga at its premises in Semenggoh here on Sept 6 at 2.30pm.

The Paya Maga area is made up of four types of vegetation - hill dipterocarp, submontane, peat and mossy forests.

With a steep hilly terrain from 300 metres to 1,860 metres at the summit of Gunung Metallan, Paya Maga is rich in different flora species, including orchids, and rare species such as Balanophoraceae and Burmanniaceae.

In 2010, a scientific expedition was carried out under the Heart of Borneo programme to record the biodiversity of the pristine forest of Paya Maga.

The upcoming talk will feature photographs of beautiful, unique

and rare flora species encountered by members of the scientific expedition as well as glimpses into the researchers' journey and experiences to record Sarawak's rich biodiversity.

The talk will be presented by Ling Chea Yiing from the Sarawak Forestry Corporation (SFC) who was involved in the recording of the diverse flora species in Paya Maga during the expedition.

This talk is aimed at creating awareness among members of the public on the diversity of flora species found in Paya Maga.

Those interested in attending can register by calling Asha Kaushal or Ha-Mim Marzuki at 082-610610. Alternatively, send an email to biosar@sbc.org.my with your names and contact number.



BEAUTIFUL: A picturesque waterfall near the highland plateau of Paya Maga.



USEFUL FOR RESEARCHERS: Dawos (centre) and BioSafety Department director-general Letchumanan Ramantha (right) launch the Malaysian Biosafety Handbook. — Bernama photo

## 'Our achievement in biosafety significant'

**KUALA LUMPUR:** Malaysia has played an active role and achieved significant progress in the area of biosafety through a comprehensive legal framework that is already in place, Deputy Natural Resources and Environment Minister Datuk Dr James Dawos Mamit said yesterday.

To mark the achievement, he launched the Malaysian Biosafety Handbook during the opening of a three-day workshop on Biotechnology Commercialisation and Trade in Asia-Pacific Economic Cooperation (Apec) Economies - Biosafety Regulatory Perspective, here.

Speaking at the launch, Dawos said he hoped that the book would be useful for researchers involved in research on Living Modified Organisms (LMO).

"The book covers six topics, which are User's Guide to the Biosafety Act and Regulations; Guidelines for Institutional Biosafety Committees; Contained Use Activity of LMO.

"Confined Field Trial of Living Modified Plants in Malaysia; Risk Assessment of Genetically Modified Microorganisms and Environmental Risk Assessment of Genetically Modified Plants in Malaysia," he added.

Dawos said Malaysia's own experts must be given continuous

Confined Field Trial of Living Modified Plants in Malaysia; Risk Assessment of Genetically Modified Microorganisms and Environmental Risk Assessment of Genetically Modified Plants in Malaysia.

Datuk Dr James Dawos Mamit, Deputy Natural Resources and Environment Minister

training as well as exposure to interdisciplinary requirements if the country wanted a proper biosafety to be in place.

"Thus, I encourage researchers involved in modern biotechnology to also factor in biosafety components in your request for funding. This is important because, ultimately if you want to commercialise an LMO, this biosafety data including risk assessment would be very vital," he added.

Dawos said that above all information exchange was a key area to bring all stakeholders to the level playing field as well as to empower them to take these technologies to greater heights.

"This workshop, along with the topics selected for in-depth deliberations, will also serve to address the concerns of many stakeholders, be it the government, non-governmental organisations, academia, regulators, and the industry through deliberations and discussions on the latest scientific

findings and experiences in the Apec economies," he added.

The workshop, attended by more than 70 experts from China, Russia, Singapore, Australia and Thailand, served as a platform for international biosafety experts and regulators from Apec economies to share knowledge and experiences with regard to regulatory challenges in the commercialisation of modern biotechnology.

Malaysia formed its Biosafety Department in 2010 to be an excellent agency in biosafety regulatory aspects towards promoting safe use of modern biotechnology application.

The department's mission is to implement the Biosafety Act 2007 by regulating the release, importation, exportation and contained use of any LMO and products of such organisms with the objective of protecting human, plant and animal health, the environment and biological diversity. — Bernama

## Paya Maga rich in wild orchids, Ling discovers on expedition

**KUCHING:** There are still more floral species to be discovered in the pristine forest of Paya Maga in Lawas.

Environmental executive with the Botanical Research Centre in Semengoh Ling Chea Ying told The Borneo Post that the forest is very diverse and rich with plant species new to science.

"The site and the forest in the area definitely needs to be protected and there is much more to what we identified and recorded during our nine days of expedition high up in the mountain area in the Lawas District," said Ling after she finished her talk on 'Flora of Paya Maga' at Sarawak Biodiversity Centre yesterday.

The forest has many rare plants and parasites but it is a heavenly paradise of orchids as the area contains a lot of mosses which trigger the plant to thrive. She disclosed that there are many rare species of orchid and unfortunately the place is too far for orchid lovers to reach whereas on hindsight, the orchids thriving there are protected from being commercialised.

During the expedition, they discovered more than 25 species of orchid which have yet to be recorded aside from some 100 species that were well-studied and named around Gunung Murud.

Ling, who is currently documenting flowering orchids at the research centre, said that mathematically and statistically speaking, the forest of Paya Maga is home to a high density of orchid plants.

She pointed most of the orchids are abundant and known but the problem is that in Sarawak, we have no expert in identifying correctly the species of orchids we have in the wild.

"Many species of orchids had been found by orchid researchers but we don't know what species they found and sometimes they change the name which is no longer in use and there are constantly new species coming up."

Ling pointed out that the orchid plants might look alike but genetically, the DNA may lead to new findings.

She said there were also many new records of orchid, meaning that they have not been found in Sarawak before but found elsewhere and recorded here for the first time, she reiterated.

In September to October 2010, Ling followed the expedition which was organised by Heart of Borneo Programme to document and collect flora from the forest of Paya Maga.

They collected specimens at Gunung Tuvo and near the waterfall at Gunoong Metallian where a total of 279 plant specimens were collected comprising 233 species in 131 genera and 60 families of various life forms and habitat.

Orchidaceae is the most abundant and diverse family with 44 species from 21 genera documented.

Being less known botanically, the flora collected from Paya Maga appears rich in species and the expedition confirms its contribution to the biodiversity of Sarawak.

Paya Maga is located at Ulu Trusan, Lawas at an altitude of 1,500 to 1,800 metres. The site can be accessed via Kampang Long Tuvo by four-wheel drive followed by a trek of around 5-6 hours.

The Borneo Post - 3rd November 2013

# The jungle is a pharmacy



By Sidi Munan

WHEN the Penans or other Natives of Sarawak erect a barricade across a road used by a timber extractor or a dam builder, they are sending an SOS message to the government that their livelihood is being threatened.

They fear that they will lose their sources of food and medicine. Perceiving, rightly or wrongly, no protection is forthcoming when they most need it, they will fend for themselves the best they can: the blockades, as the last resort.

For instance, the present blockades being erected by the Penans and other Natives from several river systems in northern Sarawak. These have something to do with a power supplier's proposal to build a hydroelectric dam. The dam will flood the land and rainforest in which the Natives have been living for so long.

If the people affected must be moved out elsewhere at all, they need an adequate compensation for loss of life's essentials in the form of money and new land area. A fair request, I think. Indeed, it is within their rights to demand for a fair deal for themselves as they face an uncertain future. And the authorities should take cognisance of this basic fact.

Article 10 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), 2007, endorsed by Malaysia, states: "Indigenous peoples shall not be forcibly removed from their lands or territories. No relocation shall take place without the free, prior and informed consent of the indigenous peoples concerned and after agreement on just and fair

compensation and where possible, with the option of return."

## Loss of traditional knowledge

Like many concerned citizens, I am concerned about the possible loss of traditional knowledge in the flora and fauna possessed by the Natives, Penans included, whenever the land and forests are inundated.

As jungle dwellers, the forest around them is their source of food, medicine and recreation. It's their supermarket, pharmacy, and clinic; and the rivers are their swimming pools.

They know the jungle like they know the palm of their hands.

So when the Penans object to their backyards being trampled upon by the bulldozers and the hillsides being cut away to make way for roads for the logging trucks, one should be looking at all these things from their perspective as well as. The noise made by the machines scares away the animals that they need for their breakfast, lunch or dinner. The trees being felled destroy the sago clumps from which they extract carbohydrates that they require to sustain life in the jungle.

We hear about the skill of the Penans with the blow pipe with which they kill animals or birds as a source of protein. But they do not tell us where to look for the plant from which comes the poison (*ipoh*) for the darts of their blow pipes. They keep that useful little bit of knowledge to themselves!

The finest rattan baskets that one can find anywhere are made by the Penans. Cut the timber and you destroy the rattan, too.

We learn how they harvest sago



NATURAL PHARMACY: Potential billion ringgit industry

in a sustainable manner so that their supply of carbohydrates can last as long as possible – a sensible food security policy.

We also learn that they do not poison fish because they want to eat them fresh, if and whenever they like. They have no refrigeration facility.

So when these people object to their areas being encroached upon by outsiders, one should be able to look at things from their perspective as well rather than purely from that of the timber contractors who see there's money growing on the trees, or from that of the dam owners who make money out of the water from the rivers. The interests of the Natives and those of the investors must be fairly balanced.

Of course, Penans are not the only Natives in Sarawak from whom we learn about the flora and fauna. Other Natives have also in their possession some knowledge of the products of the rainforest. But this knowledge, being oral, is disappearing as fast as the forests around them, except for the National Parks and the 'permanent' Forest Reserves.

**Biodiversity centre**  
Here lies the vital role of the Biodiversity Centre in Sarawak which was created by the Sarawak Biodiversity Centre Ordinance in 1997, "to be the focal point and a world-class resource centre for Sarawak biodiversity inventory, monitoring, research, education, utilisation, management and

conservation". The ordinance was reinforced by the Regulations of 1998 (Access, Collection and Research).

Its creation by the state government was a wise move. We must give credit where credit is due.

I was invited to attend its first seminar on Nov 20-21, 2001, and have been attending all talks or workshops ever since, whenever invited.

A fortnight ago, at the workshop on 'Prior Informed Consent Protocol', I saw on display some of the results of the research efforts of the SBC staff – essential oils from local plants. For example, from a humble plant known to the Bidayuh as *Kiding* as *Pahkak*, to the Malays as *medang ayer* or *melukuk*, to the Kedayans as *medang payas*, or to the Kelabit and the Lun Bawang as *tenem*, an essential oil has been extracted. It has several uses as liquid hand soap, body shampoo, massage oil, insect repellent and toothpick.

Toothpick? Yes, good against bacteria responsible for tooth decay.

To date, SBC, cooperating with the local stakeholders, has collected and analysed more than 100 different types of oils and, exploring partnership with multinational companies, will evaluate these oils for healthcare, fragrances and food flavours.

One sensible thing that the staff of the Biodiversity Centre have done is to consult Native

community associations before it carries out the programme of traditional knowledge documentation on certain plants.

This consultative exercise fully complies with Article 31 of UNDRIP which declares: "Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of flora and fauna, oral traditions, sports and games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions."

**Another step forward**  
Moving one step forward, the recent workshop on 'Free, Prior and Informed Consent' protocol drew up the text of the procedure in respect of consent by the stakeholders, the communities where the useful plants are found. Consultations with three communities of Kiding, Semadang and Ba'kaialan have been held. With others, later.

The ultimate aim is to have some of the products patented. But that's some way to go. That's when money will be made by the patent holders and the Natives have been promised due benefits

therefrom.

**Pusat biodiversiti**  
As the participants of the workshop were hammering out text of the protocol under the guidance of Professor Gurdial Nijar of the University of Malaya, the Deputy Prime Minister, Tan Sri Muhyiddin Yassin, chaired a meeting in KL of the National Diversity Council (Majlis Biodiversiti Nasional) the next day. It was reported later that the government would be revamping legislations governing biodiversity management and working on the modalities of a centre (Pusat Biodiversiti) somewhere in Malaysia.

That speaks well for the vital role of biodiversity in the national economy and the importance of conserving it for the nation.

Talking about the *pusat*, I hasten to suggest, if I may, that there is no better place for this *pusat* than at the place already in existence in the beautiful setting at Semenggoh. After all, the idea of having a biodiversity centre came originally from Sarawak and in Sarawak the *pusat* must be centred. I wish I had my way in this matter.

The basic facilities for research and development are already in place at the SBC. Perhaps, what is required is more funding for the training of more staff or recruitment of more experts needed to man the outfit and the purchase of sophisticated equipment.

The importance of biodiversity to the economy of the country cannot be overemphasised and the blockades erected by the Natives on land and forests 'storing' these sources of food, medicines and perfumes should now be appreciated rather than dismissed as a nuisance.

Next time you guys go to a pharmacy in town for tablets to relieve your colic, think of the *Pahkak* made in Kiding, but consult your doctor as well.

Comments can reach the writer via columnists@theborneopost.com.

*SBC News* 2014

## SBC NEWS

The Borneo Post - 5th February 2014

### US ambassador and wife visit SBC

**KUCHING:** US Ambassador to Malaysia Joseph Y Yun visited Sarawak Biodiversity Centre (SBC) at KM 20 Jalan Puncak Borneo near here yesterday.

He was accompanied by his wife Melanie Billing-Yun and environment, science, technology and health officer of the US embassy in Kuala Lumpur, Brock Fox.

Upon arrival at SBC, they were welcomed by SBC senior scientist Dr Charlie Yeo Tiong Chia and senior research officer for traditional knowledge documentation, Margarita Naming.

The ambassador and his entourage were later taken on a tour of the species of plants under research and study at SBC.

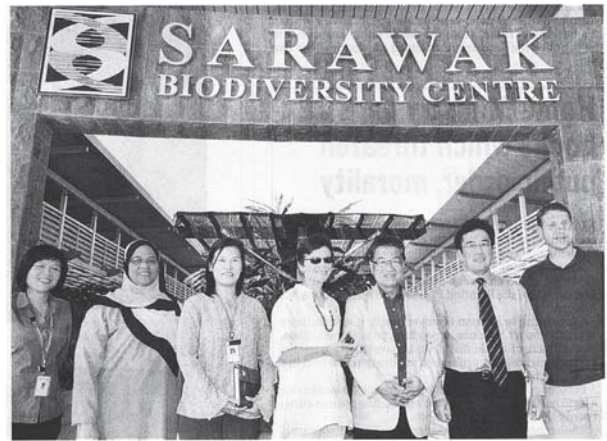
After that, they were brought to the Traditional Knowledge Documentation building and



Joseph (second left) and his wife Melanie (right) being shown local plant species by Margarita (left). Fox is behind them. — Photos by Jeffery Mostapa

shown how plant species were preserved for documentation and storage for future reference.

They later had a closed door meeting and briefing by SBC staff on SBC's activities.



Joseph (third right) and wife Melanie (centre) in a group photo with Dr Yeo (second right), Margarita (third left) and Fox (right).

New Sarawak Tribune - 26th March 2014

## SBC and MNS to host biodiversity talk

**KUCHING:** Renowned biologist, Professor Emeritus Dr. Yong Hoi Sen will be presenting a talk entitled "Biodiversity Malaysia" at the UCSI University Campus here on 9 April, 2014 at 7.30pm.

Jointly organised by the Sarawak Biodiversity Centre and the Malaysian Nature Society, Kuching Branch, the talk will include an overview on the meaning of biodiversity, potential utilisation of genetic resources for the benefit of humankind, conservation, management and a pictorial presentation of Malaysia's biodiversity heritage.

A recipient of the presti-

gious Merdeka Award in year 2010, Yong holds the position of Professor Emeritus in Genetics and Zoology at the Institute of Biological Sciences, University of Malaya.

He has also had received numerous other awards and was the first recipient of Science and Technology Award from Malaysia Toray Science Foundation in 1994.

Yong is a Senior Fellow of the Academy of Sciences Malaysia and has published over 300 scientific papers and authored several books, as well as edited several journals, academic books,

encyclopedia and proceedings.

An animated speaker and avid photographer, Yong is also known to have a beautiful collection of photos on flora and fauna of Malaysia which he will feature in this upcoming presentation.

Those interested in attending the talk can contact Ha-Mim Marzuki or Asha Kaushal at the Sarawak Biodiversity Centre (phone: 082-610610 or email biosar@sbc.org.my).

Biodiversity may be defined, among others, as the "variety and variability among living organisms and the ecological complexes in which they occur", or

the "totality of genes, species and ecosystems in a region".

In general, it covers ecosystem diversity, species/taxon diversity, and genetic diversity. The ecosystem consists of natural ecosystem (marine/open sea, coastal and inland) and man-made ecosystem (urban and agricultural).

Each ecosystem houses and supports an array of characteristic animal and plant life. Genetic diversity refers to both the vast numbers of different species (species/taxon diversity) as well as the diversity within a species (chromosome/karyotype diver-

sity, and allele/gene diversity). It is said that the greater the genetic diversity within a species, the greater that species' chances of long-term survival.

The genetic diversity may be studied at various levels: nucleotides, genes, chromosomes, or whole genomes. The diversity of plant life is represented by ferns and allies, mosses, gymnosperms, angiosperms (monocots and dicots), carnivorous plants, aquatic plants, epiphytes, weeds, pathogens and parasites.

The diversity of animal life is represented by invertebrates and vertebrates, aquatic and ter-

restrial forms. Some are harmful (parasites, pests) while others are beneficial (pollinators, litter decomposers). Biodiversity may have intrinsic and utilitarian values.

There is tremendous potential in utilizing genetic resources for the benefit of humankind: human use, animal and plant breeding, biotechnology, control of pests and diseases.

The conservation and management of biodiversity involve habitat preservation, species protection, and research and education (values of biodiversity, sustainable use of biodiversity).

The Borneo Post - 19th April 2014

## Bio Borneo 2014 to highlight community involvement in bioeconomy

**KUCHING:** The upcoming Bio Borneo 2014 Conference and Exhibition on May 5 to 7 will highlight discussions on community involvement in bioeconomy.

Themed "Sustaining the Bioeconomy Community", the conference will feature five sessions revolving around the topics of bringing community

on board, treasuring intellectual property, demand driving strategies, premium value add products and strategies for sustainability.

Experts in the areas of bioeconomy related activities, intellectual property as well as research and development of bioproducts have been invited to share their experiences in

working with communities in bioeconomies.

The speakers featured are from the corporate and government sectors, as well as non-governmental organisations, universities and research institutions from Sarawak, Sabah, Peninsular Malaysia and Indonesia.

Bio Borneo is organised annually to provide a platform

for sharing high-impact innovation and technology that can drive the bio-based economy in the region.

Spearheaded by the Ministry of Science, Technology and Innovation (Mosti), the event is jointly organised between Sarawak Biodiversity Centre (SBC), Universiti Malaysia Sarawak (Unimas) and Biotech-

Corp, with support from the Ministry of Modernisation of Agriculture and Department of Agriculture, Sarawak.

The conference will be held over two days at Dewan DeTAR Putra, Unimas.

A technical visit or Bio-Exploration will be organised on the third day for those interested in learning more

about bioeconomic centric activities in Sarawak.

Those interested in participating in the conference can register online via <http://www.frst.unimas.my/bioborneo.html>.

More information on the conference and exhibition can also be obtained by calling Asha Devi Kaushal at SBC (082-610610) or email biosar@sbc.org.my.

# State to develop bioeconomy through SBC

By Marilyn Tan  
reporters@theborneopost.com

**KOTA SAMARAHAN:** The state government is dedicated to developing skills and infrastructure through various initiatives to ensure that the state's bioeconomy is sustainably developed and beneficial to local communities.

Chief Minister Tan Sri Datuk Amar Adenan Satem said that one of these initiatives was establishing the Sarawak Biodiversity Centre (SBC) to facilitate traditional knowledge documentation among the ethnic communities knowing that it had wide potential for discovering new applications.

"Traditional knowledge (TK) is a lead for scientific discovery and sometimes, it is considered a shortcut for pharmaceutical research. It is not only useful for medicinal purposes as it also leads the way to the discovery of new food source, nutrition, health promoting plants," he said in his text-of-speech read by Deputy Chief Minister Datuk Patinggi Tan Sri Alfred Jabu Numpang at the opening ceremony of BioBorneo 2014 Conference and Exhibition (BioBorneo) held at Universiti Malaysia Sarawak yesterday.

"SBC works closely with the

Traditional knowledge is a lead for scientific discovery and sometimes, it is considered a shortcut for pharmaceutical research.

Tan Sri Datuk Amar Adenan Satem, Chief Minister

indigenous communities through its Traditional Knowledge Documentation Programme to identify plants of potential and also to ensure that the communities receive equitable sharing of benefits should their knowledge on these plants lead to commercialisation.

With the state also focused on continued research, development and application of its natural resources for pharmaceuticals and industrial applications, Adenan said that SBC had set up a library of natural products of plants and microbes for screening of potential uses.

"Plants, as we know hold the key to many new and novel biochemical compounds that can potentially be developed into pharmaceuticals, therapeutics, cosmetics, food, flavours and even fragrances." Adenan also pointed out that in the state's efforts to get the community on board bioeconomy activities, SBC would be amending its ordinance to define access to genetic

resources and benefit sharing for communities whose knowledge leads to commercial or product development.

On the conference, he said that it was very fitting that major players such as Unimas, Ministry of Science, Technology and Innovation (MOSTI), Malaysian Biotechnology Corporation (BiotechCorp) and SBC were involved in research or enablers of biotechnology development are present at the two-day conference and exhibition to project the future of the bioeconomy in Sarawak and Borneo.

"Bioeconomy encapsulates Sarawak's vision towards sustainable agriculture, new crops and fisheries and sustainable use of biological resources for various applications such as food, pharmaceuticals, nutraceuticals and industrial applications such as biofuels and natural chemicals, through innovation and the use of technologies.

"I believe that this gathering of great minds from various sectors including the government,



Jabu (second left) taking a closer look at an experiment involving plants at one of the booths at BioBorneo while (from left) Abu Bakar Hanie, Malaysian Nuclear Agency (Agrotechnology & Biosciences Division) director Khairuddin Abdul Rulim, research officer Dr Sobri Haseeb and principal research officer Dr Ashar Mohamad look on. — Photo by Muhammad Razi Sarani

economic strategists, researchers, industry players, non-governmental organisations and intellectual property experts at BioBorneo will allow us to share ideas, innovations and

experiences to drive us towards a sustainable bioeconomy and at the same time, market what Sarawak has to offer," said Adenan. Among those present at the

ceremony were Deputy Minister of Science, Technology and Innovation Datuk Dr Abu Bakar Mohamad Diah and BiotechCorp chief executive officer Dato Dr Mohd Nasree Kamal.

# Important to preserve traditional knowledge

BY NORNASHIELA ZAIDI

**KOTA SAMARAHAN:** The state government is dedicated to develop skills and infrastructure that are necessary through various initiatives to ensure that we develop our bioeconomy in a way which is truly sustainable and beneficial to our local communities.

Chief Minister Tan Sri Datuk Amar Haji Adenan Satem said that the Sarawak Corridor Of Renewable Energy (SCORE) was included in one of the initiatives where SCORE will play a vital role in ensuring that the state not only retains but also grows in terms of manpower and scientific excellence in our bioeconomy.

"Sarawak, is rich in diversity in terms of its ethnic communities and biological resources and each of these communities have for centuries relied on traditional knowledge handed down through generations to utilise the resources sustainably and manage the resources around them.

"Therefore, it is important to preserve traditional knowledge and ensure that it is given a high level of recognition in its possible contribution as a starting point in developing a bioeconomy," said Adenan.

Adenan said this in his text speech which was read by Deputy Chief Minister Datuk Patinggi Tan Sri Alfred Jabu Numpang during the opening ceremony of Bio Borneo 2014 Conference and Exhibition with the theme 'Sustaining the Bioeconomy Community' held at DeTAR Putra of Universiti Malaysia Sarawak (UNIMAS) near here yesterday.

According to Adenan, it was also important to document, research and protect the Intellectual Property (IP) arising from this pathway.

He also pointed out that the importance of traditional knowledge of ethnic communities and its connection to intellectual property has been highlighted at the international level.

As early as 2010, the state had directed Sarawak Biodiversity Centre or SBC, to facilitate traditional



DATUK Patinggi Tan Sri Alfred Jabu (2nd left) visiting one of the exhibition booths after declaring open the Bio Borneo 2014 Conference and Exhibition on behalf of the Chief Minister at DeTAR Putra of Universiti Malaysia Sarawak (UNIMAS), yesterday. PHOTO: NORRINI MO DIAH

knowledge documentation among our ethnic communities knowing that it has wide potential for discovering new applications, Adenan said.

He added that the knowledge in the communities was declining in terms of preservation and practice.

"Traditional Knowledge or TK is a lead for scientific discovery and sometimes it is considered a shortcut for pharmaceutical research. TK is not only useful for

medicinal purpose but it also leads the way to the discovery of new food source, nutrition and health promoting plants.

"SBC also works closely with the indigenous communities through its Traditional Knowledge Documentation Programme to identify plants of potential and also to ensure that the communities receive equitable sharing of benefits should their knowledge on these plants lead to commercialisation," Adenan said.

In an effort to get the community on board bioeconomy activities, SBC will be amending its ordinance to define access to genetic resources and benefit sharing for the communities whose knowledge provide leads to commercial or product development.

Also present at the ceremony yesterday was the Deputy Minister of Science, Technology and Innovation Dato Dr Abu Bakar Mohamad Diah.



Azizan (front left) exchanging the MoU with Koplil witnessed by Jabu (fourth right), Abu Bakar (fourth left) and others at the BioBorneo opening ceremony.

# BioBorneo 2014 Conference and Exhibition focuses on community development

**KOTA SAMARAHAN:** Community development through a bioeconomy agenda was the focus of the BioBorneo 2014 Conference and Exhibition (BioBorneo) which was officiated by Deputy Chief Minister Datuk Patinggi Tan Sri Alfred Jabu on behalf of Chief Minister Tan Sri Datuk Amar Adenan Satem at Universiti Malaysia Sarawak (Unimas) yesterday.

The first exchange was a Collaboration Proposal between Malaysian Biotechnology Corporation's (BiotechCorp) Technology Management Office and Koperasi Pembangunan Desa (KPD) for the development of high quality ginger utilizing fertigation method and the supply of dried processed ginger.

This collaboration sought to identify and prepare the necessary infrastructure and operational requirements relating to farming of high quality ginger and combining the biotechnological applications and technologies at BiotechCorp's Supercritical Fluid Extraction (SFE) Facility situated in Universiti Putra Malaysia and KPD's subcritical HFO Gas Extraction Facility situated at Lok Kawi, Sabah for production of validated and certified high

quality ginger extract. The second exchange was a Memorandum of Understanding (MoU) on promoting the diffusion of knowledge on intellectual property between Unimas and Intellectual Property Corporation of Malaysia (MyIPO).

Witnessed by Jabu and Abu Bakar, the MoU was exchanged between MyIPO director general Dato Azizan Mohamad Sidin and Unimas deputy vice chancellor (research and innovation) Prof Dr Koplil Bojang in an understanding that both MyIPO and Unimas will be committed to work together closely towards the continuous efforts in promoting the diffusion of knowledge on Intellectual Property (IP).

Jointly organised by Ministry of Science, Technology and Innovation (MOSTI), Sarawak Biodiversity Centre (SBC), Unimas and BiotechCorp, with support from the Ministry of Modernisation of Agriculture and Department of Agriculture, BioBorneo also featured an exhibition comprising more than 30 exhibitors from various sectors including the government agencies, corporate agencies, research institutions, higher learning institutions as well as those from relevant industries.

New Sarawak Tribune - 7th May 2014

SBC (Amendment) Bill 2014 moves for second reading

THE Sarawak Biodiversity Centre (Amendment) Bill 2014 passed yesterday proposed that under Section 2, the definition of "biological resources" is amended to provide a wider meaning to the term biological resources and there are insertions of new definitions for "derivatives", "genetic resources" and "research and development".

The phrase "research and development" is defined in order to provide for consistency of usage of the phrase throughout the Principal Ordinance.

The amendment to Section 6 provides powers to the Council to ensure that Prior Informed Consent (PIC) is obtained from the natives where traditional knowledge associated with a biological resource is accessed and an agreement that includes benefit sharing based upon mutually agreed terms is entered into.

The new section 15A empowers the Council to invest moneys not immediately required by the Council while Section 16 is substituted with a new section to provide for wider purposes for the application of the Fund.

Section 22 and 31 are substituted to increase the penalties and to provide for penalty for an offence committed by a body corporate under the Ordinance.

The amendment to Section 35 is to provide MMKN with powers to make regulations providing for the imposition of a higher penalty and to provide for penalties where the offender is a body corporate.

These were disclosed by Second Minister of Resource Planning and Environment Datuk Amar Haji Awang Tengah Ali Hassan in a statement on moving the amendment bill to be read a second time at the DUN sitting yesterday.

Tengah said the whole intention of the amendment is to safeguard the interest of the State while ensuring that the provisions of the Ordinance are aligned and consistent with the Convention on Biological Diversity.

"The SBC Bill has provision for Prior Informed Consent and it will extend the Council's authority to ensure benefits are shared with the ethnic communities of Sarawak through mutual-

ly agreed terms if benefits are derived from the utilisation of biological resources associated with traditional knowledge.

"The alignment of the Ordinance to the Convention on Biological Diversity will reinforce the State's law and maintain better management and conservation of traditional knowledge and biodiversity resources," Tengah pointed out.

The Sarawak Biodiversity Centre Ordinance 1997 provides for the establishment of the Sarawak Biodiversity Centre (SBC), which was set up in 1998. SBC was to carry out general inventory of Sarawak's biological resources and to regulate all researches on biological resources in Sarawak.

The Ordinance was amended in 2003 to streamline SBC's core functions towards implementing bioprospecting research for sustainable utilisation of Sarawak's biodiversity, facilitate documentation of traditional knowledge among Sarawak's natives and regulate biodiversity research to determine their potential properties.

The Borneo Post - 9th May 2014

# Govt committed to preserving state's biodiversity — Jamilah

By Saiful Bahari  
reporters@theborneopost.com

**KUCHING:** The setting up of the Sarawak Biodiversity Centre (SBC) is a statement of the state government's commitment to preserving thousands of flora and fauna species through smart management.

In pointing this out, Chief Minister's wife Puan Sri Datuk Jamilah Anu said through such effort, research on the species available in Sarawak could be done in a much easier way as the species were protected.

"In fact, the biodiversity act was amended yesterday during the State Legislative Assembly (DUN) sitting to improve and protect our biodiversity," said Jamilah.

She was speaking at the Arbour Day celebration at Jalan Bako here yesterday.

On a related matter, Jamilah said the theory on natural selection by renowned scientist Charles Darwin was made with references to Sarawak through the writings of his friend Alfred Wallace Russel who was in the state in the 1850s.

"Russel, who collected thousands of specimens had sent his findings to Charles as a source of reference to his natural selection theory," said Jamilah.

On the event yesterday, Jamilah said other city councils should emulate the effort by Kuching North City Commission (DBKU) to inculcate the importance of green as an identity for their jurisdiction.

Earlier on, Kuching North



Jamilah (third right), flanked by Sabati members, waters the newly planted Rain Tree.

In fact, the biodiversity act was amended yesterday during the State Legislative Assembly (DUN) sitting to improve and protect our biodiversity.

Puan Sri Datuk Jamilah Anu, Chief Minister's wife

Datuk Bandar Datuk Abang Abdul Wahap Julai said the aim of Arbour Day was to develop quality and good town landscaping and to inculcate the culture of tree planting in the community.

"In my opinion, the effort to preserve the environment must include the participation of the younger generation to ensure

continuity of what has been done today," said Abdul Wahap.

A total of 333 Samanea Saman (Rain Tree) were planted along Jalan Bako yesterday with the participation of over 1,000 officers from various government and private agencies. Also present was DBKU director Dr Saadiah Samad.

## S'wak enacted biodiversity law in 1997, first in country to do so

Sarawak Biodiversity Centre has documented a total of 4,815 plants with various uses including medicinal, food and health care involving 13 communities all over Sarawak since 2001. The documentation is an on-going exercise, which can be considered as an important lead to the goal of fully utilizing the resources for pharmaceutical and therapeutic applications based on traditional knowledge.

Generally, a research exercise takes a long time especially with regard to pharmaceutical and medicinal development. The process includes collections of material, screening for bio-activity, pre-clinical and clinical trial. And there is no guarantee that a drug will reach the market.

The Second Minister of Resource Planning and Environment, Datuk Amar Haji Awang Tengah Ali Hassan, in winding the debate on Sarawak Biodiversity Centre Amendment Bill 2014 on the second day of sitting of the State Legislative Assembly, says the amendment bill is to put in place rules and procedures on assess and benefit sharing as well as guidelines on prior informed consent. In fact, SBC has been practicing a form of prior informed consent through its traditional knowledge documentation programme.

Besides, the amendment Bill is to set up biological resources and further develop them through Research and Development so that they can become more beneficial to the State, the affected communities in particular. Basically, SBC was established to carry out research and development on Sarawak biodiversity for potential commercialisation.

Since 2003 SBC has, through research and development, registered two patents, one of which is geographical indication and the other, Trade Mark. For example, the Litsea Cubeba, which is known as Pakkak by the Bidayuh and Tenem by Kelabit and Lun

Bawang was documented and registered under the traditional knowledge documentation program.

Datuk Amar Haji Awang Tengah says with the existence of Sarawak Biodiversity Centre Ordinance 1997, provides a legal and institutional framework and place for international and local companies to collaborate with SBC in developing medical products from the local biodiversity.

However, research and development is a dynamic process. That is why the amendment to the Ordinance has to be made to address the current and future needs and situation. Actually, there are already provisions for the SBC fund under existing Section 15 and 16. The intention of this amendment is to enhance financial governance.

Datuk Amar Haji Awang Tengah says Sarawak took the initiative to enact Sarawak Biodiversity Centre Ordinance in 1997 as Malaysia had not established any specific law relating to biodiversity at the time. This was to support the country's commitment to the Convention on Biological Diversity (CBD) and address the rising concerns for the protection of the State's biodiversity. This made Sarawak the first state in Malaysia to enact a biodiversity law.

Basically, SBC is to carry out general inventory of Sarawak's biological resources and regulate all research on biological resources in the state. The Ordinance was amended in 2003 to streamline SBC's core functions towards implementing bio prospecting research for sustainable utilization of Sarawak's biodiversity, facilitate documentation of traditional knowledge among the natives and regulate biodiversity research to determine their potential properties.

In 2010, the Conference of parties to the convention on biological diversity adopted a supplementary agreement, the Nagoya Protocol on Access to

Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity (The Nagoya Protocol on ABS).

This was to further advance the implementation of the Convention's third objective to ensure fair and equitable sharing of benefits arising from utilization of genetic resources, thereby contributing to the conservation of biological diversity and sustainable use of its components.

The Nagoya Protocol on Access and Benefit Sharing (ABS) also specified that countries enact appropriate legislation and take policy measures on Prior Informed Consent (PIC) involving indigenous and local communities. Hence, mutually agreed terms must also be established where traditional knowledge associated with genetic resources are utilized.

In response to the growing recognition that biological diversity is a global asset for economic and social development, the UN Convention on Biological Diversity (CBD), held in Rio de Janeiro, Brazil in 1992, came into force on 29 December, 1993.

The objectives of the Convention are: the conservation of biological diversity; sustainable use of components; and equitable sharing of benefits arising out of the utilization of genetic resources.

Under this Convention, countries have authority to determine access to genetic resources and provide for the preservation of traditional knowledge while ensuring benefit sharing. Malaysia signed and ratified the Convention in 1994 and has developed the National Biodiversity Policy in 1998 as a guide to conserve and manage the biological diversity in the country.

Datuk Amar Haji Awang Tengah says the State government acknowledges that logging, construction of dams, planta-

tions and other forms of development, will definitely have impact towards our biodiversity.

However, this is being addressed through the existing land use policy which balances the needs for development, economic growth and the environment. The Government is determined to allocate One million hectares or 8% of totally protected areas by the year 2020. Besides, the State government allocates six million hectares or 32% of the land surface for permanent forest estate and Four million hectares for agriculture.

He assures, in areas where dams are constructed, a programme on Wildlife Monitoring and Rescue (WIMOR) must be carried out. For example, a total of 1,552 wild animals consisting of 1,419 mammals, 47 birds and 86 reptiles were rescued in Bakun Hydro Electric Dam.

Besides, a total of 33,000 plants were collected and replanted at suitable locations to enhance water edge habitats and for the protections of the genetic resources of rare species. A similar WIMOR programme is currently conducted in Murum Hydro Electric Dam. Those affected by Bakun hydro dam have been properly resettled in new areas.

Generally, it is acknowledged that research and development will take a long time especially with regard to pharmaceutical and medicinal development. The process includes collections of material, screening for bio-activity, pre-clinical and clinical trial. And there is no guarantee that a drug will reach the market. The process may take between 12 and 15 years that requires huge investments in the region of USD1 billion from pharmaceutical companies.

Datuk Amar Haji Awang Tengah says the Bintangor tree has been registered with US food and drugs administration (FDA) as Investigator New drug. The lengthy and strictly regulated

## Perspective By Anak Sarawak

Research and Development process for the drug has been managed entirely by Craun Research Sdn Bhd, which is a wholly owned company by the State Government since 2006.

He says 16 patents relating to use and manufacture of Bintangor tree are currently owned by the State government and additional patents application has been filed by Craun Research in year 2010, which provides market protections to the year 2030.

He says one clinical trial was conducted in healthy volunteers in 2012 and 2013. The trials, conducted in Penang, successfully demonstrated the safety of new clinical formulations of Bintangor tree, which will be further tested in two phase of clinical trials this year.

The trial will be conducted in Sarawak General Hospital to study the effectiveness of the new formulation in reducing viral load in HIV patients. The development of this drug still requires several more clinical phases over a number of years, prior to approval as drug.

State Assemblyman for Telang Uas, Dennis Ngau, speaking in support of the Amendment Bill, on behalf of the rural communities, said Sarawak Biodiversity Centre (Amendment) Bill, 2014 was timely primarily to protect rights of the affected rural communities.

For example, adequate assurance has already been given that enforcement of the Ordinance will benefit the rural communities, who reside in areas, which are considered as potential research areas. Obviously, the amendment is to provide better protecting coverage on the interests of the local communities over what they

have owned and practiced since years back.

The Sarawak Biodiversity Centre (Amendment) Bill, 2014 also cover matters to safeguard the interest of the State, which is very rich in biological resources and traditional knowledge, which will come with huge business potential in the world, which is increasing sophisticated in the demand for drug.

Our forest may not have a certain plant which produces super effective curing value. But the jungles have great potential as a source of treatment to cure illness as a supplement to modern medicines or drugs. Besides, products from forests and jungles can become sources of income for people such as controlled timber extracting or logging.

The Assemblyman suggests that concrete steps must be taken to put certain law in place primarily to protect traditional knowledge on plants, which may have medical values in order to safeguard local plants from companies, which may try to befrend natives to give relevant information on them, without realising it.

He suggested SBC hold activities among the rural communities to educate them on the new amendment. He also welcomes the Government's plan to develop a biodiversity trust fund, which will be made available, upon requests by participating communities in the development of their villages or longhouses.

He believes Malaysia including Sarawak is more well-known now with activities being carried out by the Ministry of Tourism, both at the Federal and State levels, to attract visitors to the State and country.

# SBC to celebrate Biodiversity Day

**KUCHING:** The general public is invited to celebrate Biodiversity Day with the Sarawak Biodiversity Centre (SBC) on 24 and 25 May, 2014.

The celebration, which will see a host of activities, will be held at SBC's premises from 9.00am until 5.00pm on both days.

Among the activities lined up for both days are science based hands-on activities, demonstration of traditional uses of plants,

a garden tour, sale of plant seedlings, display of fragrances and horticultural plants, tour of SBC's new plant headhouse and awareness talks.

State Secretary, Tan Sri Datuk Amar Haji Mohamad Morshidi bin Abdul Ghani is expected to officiate the celebrations on the morning of 24 May, 2014.

Among the public talks lined up are "The Music of Nature" by Marc Anderson, "Augury Birds

and Local Beliefs" by Victor Luna Amin, "My BioD, My Life, My Heritage, My Future" by K. Nagulendran, "Marine Turtles Conservation" by Tony Ganyai, "Marine Protected Areas" by James Bali, "Progress of Orang Utan Conservation" by Dr Melvin Gumal and "The Realm of Darkness (Caves)" by Rambli Ahmad.

Information on the timing of the talks is available on SBC's

website, [www.sbc.org.my](http://www.sbc.org.my). The talks are open to all, free of charge.

SBC's Biodiversity Day celebration is organised in conjunction with the International Day for Biological Diversity which is celebrated on 22 May annually. This year's international theme is "Island Biodiversity".

SBC's Biodiversity Day is organised with the support of the Sarawak Forestry Corporation

(SFC) and will also feature exhibits by SBC and SFC which highlight the uniqueness of biodiversity found on Borneo Island.

This is the fourth time that SBC has held such a celebration which allows members of the public to come to the centre to find out more about its research activities, and at the same time, provide a science based learning platform for students of all ages.

School teachers are also

encouraged to bring along their students to participate in hands-on plant propagation, science activities and games as well as to learn from the awareness talks and specially invited speakers.

Those interested to find out more about the Biodiversity Day celebration and activities can contact Constance Vanessa Victor or Ha-Mim Marzuki at telephone number 082-610610, or through email at [biosar@sbcc.org.my](mailto:biosar@sbcc.org.my).

The Sunday Post - 25th May 2014

# 'SBC plant to propagate S'wak flora'

By **Antonia Chiam**  
reporters@theborneopost.com

**KUCHING:** The new TK Headhouse and Propagation building at Sarawak Biodiversity Centre (SBC) will ensure that our floral resources are properly protected, says State Secretary Tan Sri Mohd Morshidi Ghani.

"We need to protect our resources to ensure a continuous supply is available for research. Therefore, we have to make sure the knowledge about our plants is kept within us by properly documenting them.

"If we don't do that, anyone from anywhere in the world can come and exploit our resources," he told reporters after officiating the building's launch during the SBC Open Day yesterday.

Morshidi also pointed out the importance of getting local villagers' involvement in the documentation process.

"There are 16 local villages helping to provide knowledge of our plants. These are the group of people who know the plants well, as they are using them for

**We need to protect our resources to ensure a continuous supply is available for research. Therefore, we have to make sure the knowledge about our plants is kept within us by properly documenting them. If we don't do that, anyone from anywhere in the world can come and exploit our resources.**

— Tan Sri Mohd Morshidi Ghani, State Secretary

medicine or food.

"By setting up such a facility, we will be able to propagate the plants and thus ensuring that the knowledge about them is well protected," he said.

SBC acting chief executive officer Dr Yeo Tiong Chia said the TK Headhouse and Propagation building took 14 months to complete and is expected to deliver various functions.

"There are specific rooms where we conduct different activities in propagating the plants. With the involvement of our local ethnic groups, we are able to identify the useful plants and document the traditional

knowledge associated with them," he said.

There are three main rooms in the TK Headhouse and Propagation building.

The Propagation Room is for plants to be acclimatised to the surrounding humidity and temperature.

The Mist Room is used for plant cuttings to promote rooting and also for experimental purposes as the humidity and temperature are controlled.

The Fog Room has a controlled environment for plants that require low temperature and high humidity and plants that are usually succulent and difficult to



Morshidi taking a look at some plants accompanied by Yeo (left) and others during his tour of the newly officiated facility at Sarawak Biodiversity Centre.

propagate.  
The two-day SBC Open Day has a host of activities for the

public including fun and games, science activities, exhibition and awareness talks.

New Sarawak Tribune - 25th May 2014

## SS: SBC documents, researches on useful plants

BY DARYLL LAW AND CHRISTOPHER LUDOM

**KUCHING:** The newly established TK Headhouse and Propagation building at Sarawak Biodiversity Centre (SBC) will house the research of all plants in Sarawak, which works as an incubator in the context of entrepreneurial development.

State Secretary Tan Sri Datuk Amar Haji Mohamad Morshidi Abdul Ghani said that SBC is developing its research on all those plants and propagating the plants as well, to ensure sufficient supply of the plants for continuous research.

"The main purpose of this centre is to protect our flora and fauna, and any research done will be documented and protected in creating an Intellectual Property (IP) for it," he said, adding that this was the whole idea and objective of SBC in preserving the knowledge to ourselves, especially the traditional knowledge on the indigenous plants.

He told this to reporters when officiating at the new TK Headhouse and Propagation building in conjunction with the Sarawak Biodiversity Day held at Sarawak Biodiversity Centre near here yesterday.

"We have an ordinance in Sarawak to protect our resources, otherwise anybody from anywhere in the world can come and claim it as theirs and reproduce them. The villagers are one who is providing SBC the knowledge because they are the ones who know the plant properties which they traditionally use for medicine and food. While the villagers have the knowledge, our part is to preserve the knowledge that they have," he pointed out.

Meanwhile, Acting Chief Executive Officer (CEO) of Sarawak Biodiversity Centre Dr Yeo Tiong Chia said that the new building was a great team effort.

"The structure of the building was design to mimic the feature of the forest environment with its roof imitating the canopies of



MORSHIDI (3rd right) cutting a ribbon to officiate the new Sarawak Biodiversity TK Headhouse Propagation Building during the Sarawak Biodiversity Day while Datu Abdul Razak (4th left), Datu Laura (2nd left), Dr Yeo (left) and others look on.

trees in the rainforest. The building is also equipped with rooms specialising in propagation where important research works are also conducted.

"It will also house unique plants with fragrances which perhaps one day can be used in perfumes," Dr Yeo said.

He also acknowledged that the ethnic communities who had con-

tributed their traditional knowledge are very supportive of the project. A seminar was conducted with eight communities and participants from 16 villages. During the seminar the participants discussed the progress of the documentation of the plants they used from the forest.

He added that the villagers had shared their experience with each other and very interestingly each community revealed the three most important plants which they considered to be the most useful.

"This gave us at SBC the lead to focus on our research work," he said.

The SBC Day themed 'Island Biodiversity' offers not only exhibition relating to science to cultivate interest on biodiversity among youngsters but also awareness talks and fun-filled activities.

*SBC News* 2015



Natural product: Margarita with the 'Pahkak' fruits and samples of soaps produced from the oil.



Quality: Yeo says the amount produced right now is very limited.

By YU JI  
yuj@thestar.com.my  
Photos by ZULAZHAR SHEBLEE



# Promising 'Pahkak'

Oil derived from plant being marketed internationally for its properties

**KUCHING:** Sarawak Biodiversity Centre (SBC) is well on its way to commercialise LitSara, the trademarked name of an essential oil derived from a plant known to the Bidayuh community as "Pahkak".

It is one of the first products being marketed internationally by SBC from its traditional knowledge documentation programme.

Among uses for LitSara is personal care products such as antibacterial wet wipes, natural insect repellent, soaps and even as an anti-tooth decay agent that can be incorporated into toothpicks.

Scientists call the plant *Litsea cubeba*, a small tree belonging to the Lauraceae family. It was "discovered" in 2005.

But its many uses have been known to locals for generations. The Kelabit and Lun Bawang call it "tenem".

The Bidayuh and Orang Ulu communities have long used the plant for its culinary and healing properties. It can be found nearby at Kampung Kiding in Padawan or far away at the mountain tops of the Orang Ulu homeland in northern Sarawak.

Because of the composition of the essential oil derived from the leaves and fruits are unique to the plant found growing in Sarawak, the species *Litsea cubeba* has also been

granted Geographical Indication and the trees in Sarawak are known as Sarawak *Litsea*.

For a decade, SBC has been conducting research and development on the plant, extracting its citrusy smelling oil from pea-sized fruits. The key to the project has been interviews with villagers for its uses.

SBC communications officer Asha Devi Kaushal said its participation has been invaluable since the start.

"A lot of the information originates from the indigenous communities. They share with us their information and resources and we see how we can try to move the plant or knowledge up the value chain through research and development," Asha told Sarawak Metro recently.

So far researchers have found about half a dozen commercial potentials for LitSara. Samples of the anti-bacterial wet wipes have been made and distributed under trial programmes and also as SBC's corporate gifts and goodie bags.

The extracted oil is also undergoing tests as a natural insect repellent.

Researcher Margarita Naming said SBC's aim was to channel the fruits of commercialisation back



Vast potential: Researchers at SBC have found about half a dozen commercial uses for LitSara.

to the communities. For instance, locals could supply the raw materials or they could learn to make products like soap and shampoo themselves.

"We are training the community to do the distillation on site at their villagers. The tree is 'selective' in terms of where it grows. It won't be easy to mass produce it," Margarita said.

A kg of the "Pahkak" fruit would yield just 5ml of oil, while a kg of the leaves would yield even less at

just 3ml, she explained.

SBC acting chief executive Charlie Yeo said the scarcity was good.

"The amount produced right now is very limited. We are getting about eight to 10 litres a year. All the harvesting is from wild sources. It is good to be limited because it is fetching a premium price - as long as you can find commercial uses for it that interests the big producers," Yeo said.

Since 2001, SBC has been working with 15 indigenous commu-

nities at 72 locations across the state. Of these, 47 locations are now carrying out documentation work and activities to conserve the plants locals use.

Some 5,000 plants have been documented to date and more than 1,200 species identified.

Yeo said "Pahkak" was just the beginning, selected to be trademarked because it showed the most potential.

For more information, visit [sbc.org.my](http://sbc.org.my).



Damrel is in Sarawak as a visiting Fulbright scholar attached to Sarawak Biodiversity Centre.

### Sarawak Biodiversity Centre to hold talk on desert plants

**KUCHING:** The Sarawak Biodiversity Centre will hold its first public talk for the year entitled 'Desert Plants of the Southwestern USA' on March 12.

The talk, starting at 7.30pm at the USCI Sarawak Campus, will be presented by Dixie Damrel, the curator of the Clemson University Herbarium in South Carolina, USA.

Desert plants and flora are hardy species adapted to extreme conditions through a variety of naturally ingenious physical and behavioural mechanisms, said the centre's press statement yesterday.

Through her talk, Damrel will take the audience through a pictorial of interesting southwestern desert plants and discuss some of the more remarkable species as well as their adaptation to the unique environment.

Damrel is currently in Sarawak as a visiting Fulbright scholar, attached to Sarawak Biodiversity

Centre as a professional botanist to share and exchange ideas about herbarium management and techniques.

To document her experience here in Malaysia, she has set up a blog at <http://malaysianbotanical.blogspot.com/>.

As curator of the Clemson University Herbarium, Damrel oversees a collection of over 100,000 plant specimens.

She also has many years of experience as a field botanist, collecting and identifying extraordinary flora of the American Desert Southwest. More information on the Sarawak Biodiversity Centre and Damrel can be obtained from [www.sbc.org.my](http://www.sbc.org.my).

Those interested in attending the talk can register their names and contact number with Constance Vanessa or Ha-mim Marzuki by calling them at 082-610610 or email [biosar@sb.org.my](mailto:biosar@sb.org.my) by 9 March 2015.

The talk is open to members of the public free of charge.

# US Fulbright scholar to give educational talk on desert flora

**KUCHING:** The Sarawak Biodiversity Centre will be organising a talk entitled 'Desert Plants of the Southwestern USA' on March 12 at USCI Sarawak Campus.

The talk, according to a press release yesterday, will start at 7.30pm and will be presented by the Curator of the Clemson University Herbarium in South Carolina, Dixie Damrel.

Deserts are often seen as extremely dry places and many believe flora and fauna do not thrive in such conditions.

On the contrary, there are a variety of flora, small organisms and animals that make every desert distinct from one another.

Desert flora are known as hardy species which adapt to the extreme conditions that they are found in through a variety of naturally ingenious physical and behavioral mechanisms.

During the talk, Damrel will guide the audience through a pictorial of interesting southwestern desert plants and discuss some of the more remarkable species as well as their adaptation to the unique environment.

Damrel is currently in Sarawak as a visiting Fulbright scholar. She is attached to the Sarawak Biodiversity Centre as a professional botanist to share and exchange ideas about herbarium management and techniques.

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She also has many years of experience as a field botanist, collecting and identifying extraordinary flora of the American Southwest Desert.



Damrel is currently in Sarawak as a visiting Fulbright scholar and is attached to the Sarawak Biodiversity Centre.



An example of the fascinating flora of the American Southwest Desert that will be featured during the talk.

More information on the Sarawak Biodiversity Centre and Damrel can be obtained from [www.sbc.org.my](http://www.sbc.org.my).

Those interested to attend the talk can register their names and

contact number with Constance Vanessa or Ha-mim Marzuki at 082-610610 or by emailing [biosar@sb.org.my](mailto:biosar@sb.org.my) by March 9. The talk is open to members of the public and is free of charge.

## 15 Sakura members get rewarding experience on educational visit to SBC

**KUCHING:** Fifteen students from SM Sains Kuching Utara (Sakura) Nature Society had a rewarding and well-learned experience in their inaugural educational visit to Sarawak Biodiversity Centre (SBC) recently.

Led by teacher-in-charge Lubong Mat, the group visited SBC's herbarium centre and the plant library where they had close encounters with traditional herbs and plants of Sarawak.

The centre's officers Hamim Hamid and Asha Devi Kaushal briefed the students on ethno-herbal plants and informed them that the centre have about 5,000 species of ethno-herbal plants leaves from as far as Ba Kelalan which were preserved at the plant library.

They were also told that

SBC's herbarium centre had a collection of animals mostly from the limestone regions of Bau.

The learning experience continued when they saw how herbal plants were planted in cement plots according to the ethnic rituals in Sarawak.

Lubong said they were surprised to learn that these poisonous plants were used by locals to gather food and hunt animals in the past.

At the SBC nursery, they also experienced how herbal plants were propagated for research and tapped for their full usage potential.

Lubong said the educational trip to SBC was fruitful and enhanced the students' knowledge of plants and herbs grown locally and used by Sarawak natives.

The Borneo Post - 14th March 2015

## SBC's talk on desert plants thrills participants

**KUCHING:** Participants of the Sarawak Biodiversity Centre's (SBC) talk on 'Desert plants of South Western USA' were thrilled to learn about the diversity of plants in the desert.

Despite the desert being a very hot and dry place where plants do not seem to grow and are lifeless, they are actually dormant, waiting for the rain, said Clemson University Herbarium curator Dixie Darrel.

"For example, the Star Cloak Fern looks brown and brittle year round but comes alive with just some humidity and springs back to life the next day. It becomes a very pretty star shaped leaf once it unfurls," she said.

Another example is the Wavy Cloak Fern which still lives even after losing 70 per cent of its water. Other plants die if they lose even just 10 per cent of water. It looks brown and dried up but revives and turns green after the rain.

The participants were surprised with the fact that cactus or cacti can live up to 250 years old and weigh several tonnes.

She also introduced the desert ironwood which lives a whopping 1,500 years.

"The extreme conditions of El Nino are a gift to the desert because its excessive winter rain brings fantastic and beautiful spring annuals. These plants



Dixie presents the talk.

complete an entire life-cycle in one season and half of the Sonoran Desert is annuals. These plants live for years under the ground waiting for El Nino."

"This happens only once a decade and changes the entire colour of the desert. The California Poppy makes the desert look yellow, while the Owl Clover makes it purple."

The hour-long talk held at UCSI Sarawak campus on Thursday night was a real eye-opener as



The Star Cloak Fern looks amazing after absorbing moisture in the air.

the desert is usually equated with nothing but cactus.

The Borneo Post - 28th April 2015

## Real spice for SBC Biodiversity Day – Indigenous plants, life of a plastic bag

**KUCHING:** The upcoming Biodiversity Day next month will include an enlightening tour of the Laila Taib Ethnobotanical Garden to view plants used by indigenous communities in daily living – notwithstanding the notion of setting up a herbal garden.

As in past years, the Sarawak Biodiversity Centre (SBC) will again hold its annual Biodiversity Day celebrations in conjunction with the International Day for Biological Diversity, which falls on May 22 annually.

This year's international theme is 'Biodiversity for Sustainable Development' and SBC is committed to partake and take initiatives to organise Biodiversity Day with even more interesting

activities and public talks. The SBC Biodiversity Day 2015 will take place from 9am to 5pm, on May 23-24, at SBC's premises at KM20, Jalan Borneo Heights in Semengoh.

The event will feature new science-based games, interactive hands-on demonstrations and exhibitions for both young and old alike, as well as a photo opportunity to dress up as scientists for the album.

Visitors to Biodiversity Day will also be able to tour SBC's Laila Taib Ethnobotanical Garden which features plants used by indigenous communities in their daily lives, buy plants which include commonly used herbs and spices, and view exhibitions and demonstrations by indigenous

communities on how they utilise biodiversity. Another gripping segment includes the 'Journey of a Plastic Bag', among the topics to be featured in public talks taking place in the afternoon of both days. This year, SBC has invited speakers who will present other exciting topics on begonias, orchids and how biodiversity ties in with sustainable development.

Primary school children can also have fun taking part in SBC's pottery painting and recycled art contests. For more information, visit SBC's website [www.sbc.org.my](http://www.sbc.org.my) or 'like' SBC's Facebook page at [www.facebook.com/sarawak.biodiversitycentre](http://www.facebook.com/sarawak.biodiversitycentre) for updates on Biodiversity Day and other activities organised by the centre.



Collage of colourful activities from 2014 Biodiversity Day, organised by the SBC.

New Sarawak Tribune - 3rd April 2015

## SBC to hold public talk on 10 April

**KUCHING:** Sarawak Biodiversity Centre (SBC) at KM20, Jalan Puncak Borneo near here will hold a public talk on "Resistance to Antibacterials and Search for Anti-Infectives from Bacteria" on 10 April at 3.30pm.

The talk will be conducted by Dr Jean-Jacques Sanglier, an Executive Director of Applied Microbiology and Biotechnology Consulting base in Saint-Louis, France.

Resistance to antibacterials constitutes a huge health and economical problem. To address these problems, scientists involved in developing pharmaceutical products need to study resistance and devise strategies to discover new bioactive compounds from bacterial origin.

The talk is aimed at letting

the public get an insight on how scientists work to address resistance to antibacterials and their search for new sources of bioactive compounds.

Dr Sanglier will present the various mechanisms of resistance and the ways of acquisition of such resistance.

He will also cover strategies to find bioactive compounds from novel sources of bacteria and to develop these compounds effectively.

Those interested may register their names and contact number with Ms Asha Devi Kaushal or Mr Ha-mim Marzuki by calling them at tel: 082-610610 or sending them an email to [biosar@sb.org.my](mailto:biosar@sb.org.my) by 7 April.

The talk is open to members of the public and is free of charge.

The Borneo Post - 3rd April 2015

## Talk to focus on resistance to antibacterials

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will hold a public talk entitled "Resistance to Antibacterials and Search for Anti-Infectives from Bacteria" at its lecture theatre at Jalan Borneo Heights, Semengoh on April 10.

The talk at 3.30pm will be delivered by Dr Jean-Jacques Sanglier, executive director of Applied Microbiology and Biotechnology Consulting, based in Saint-Louis, France.

Dr Sanglier will present the various mechanisms of resistance and the ways of acquisition of such resistances.

He will also cover strategies to find bioactive compounds from novel sources of bacteria and to develop these compounds effectively.

The talk is open to the public for free. Register with Asha Devi Kaushal or Ha-mim Marzuki on 082-610610 or email [biosar@sb.org.my](mailto:biosar@sb.org.my) by April 7.

The Borneo Post - 9th May 2015

## SBC lines up talks, demos and exhibitions for Biodiversity Day

**KUCHING:** The Sarawak Biodiversity Centre (SBC) has lined up a series of interesting and exciting talks for the public at its premises in Semengoh near here during its Biodiversity Day this May 23 and 24.

On May 23 at 2pm, Malaysian Nature Society Kuching Chapter chairman Anthony Sebastian will present a talk on 'Biodiversity for Sustainable Development' which will highlight how biodiversity plays a crucial and synergistic role in sustainable development.

This will be followed by a dazzling display on 'Begonias of Borneo' presented by Dr Ruth Kiew and Julia Sang based on their recently released book of the same title.

There will be three talks on May 24, starting with 'The Amazing Journey of a Plastic Bag', followed by 'Magnificent Flora and Fauna of Malaysia' and 'Orchids, Beautiful Gems of the Forest'.

Members of the public interested to attend the talks are advised to register with SBC by emailing their names and contact numbers to biosar@sbg.org.my, or contact Ha-Mim Marzuki via 082-610610 during office hours.

Besides the talks, SBC will also feature science-based games, interactive hands-on demonstrations and exhibitions that are suitable for the young and old as well as an opportunity to dress up and take photographs as scientists on both days.

Visitors will also be able to tour SBC's Laila Taib Ethnobotanical Garden which features plants used by indigenous communities in their daily lives and buy plants including commonly used herbs and spices as well as view exhibitions and demonstrations by members of the indigenous communities on how they utilise biodiversity.

Primary school children will have the opportunity to take part in SBC's pottery painting and recycled art contests.

SBC's Biodiversity Day, in conjunction with the International Day for Biological Diversity which falls on May 22 annually, will be held from 9am to 5pm on both days.

New Sunday Tribune - 10th May 2015

# SBC lines up series of public talks on 23, 24 May

**KUCHING:** Sarawak Biodiversity Centre (SBC) has lined up a series of interesting and exciting talks for the public during its Biodiversity Day celebrations come 23 and 24 May at its premises in Semengoh near here.

On 23 May, the public talks will kick off at 2.00pm with 'Biodiversity for Sustainable Development' by Anthony Sebastian, Chairman of the Malaysian Nature Society, Kuching Branch.

The talk will highlight how biodiversity plays a crucial and synergistic role in sustainable development.

This will be followed by a dazzling display on 'Begonias of Borneo' by Dr Ruth Kiew and Julia Sang. Their presentation will be based on their recently released book of the same title.

Dr Kiew is a known expert on Begonia species and is attached

to the Forest Research Institute, Malaysia (FRIM) while Julia is with the Sarawak Forestry Corporation.

On 24 May, SBC will feature three talks, starting with 'The Amazing Journey of a Plastic Bag' by Ian Carter of Go-Go-Green at 1.30pm.

This will be followed by a talk on 'Magnificent Flora and Fauna of Malaysia' by Prof Emeritus Yong Hoi Sen of the Academy of Sciences, Malaysia.

To end the series of talks, SBC has arranged for Ong Poh Teck, also of FRIM, who will present a talk on 'Orchids, Beautiful Gems of the Forest'.

Those interested in attending these talks are advised to register with SBC by sending their names and contact numbers via email to biosar@sbc.org.my or by calling Ha-Mim Marzuki at 082-610610

during office hours.

Other than these public talks, SBC will also feature science based games, interactive hands-on demonstrations and exhibitions for both the young and old alike, and opportunities to dress up and take photographs as scientists on both days.

Visitors to Biodiversity Day will also be able to tour SBC's Laila Taib Ethnobotanical Garden which features plants used by indigenous communities in their daily lives, buy plants which include commonly used herbs and spices, and view exhibitions and demonstrations by indigenous communities on how they utilise biodiversity.

Primary school children will also have the opportunity to take part in SBC's pottery painting and recycled art contests.

SBC's Biodiversity Day is

held in conjunction with the International Day for Biological Diversity which falls on 22 May annually.

This year's international theme is Biodiversity for Sustainable Development and SBC is committed to partake and take initiatives to organise the Biodiversity Day with even more interesting activities and public talks.

The events will take place from 9.00am until 5.00pm on 23 and 24 May, 2015 (Saturday and Sunday) at SBC's premises at KM20, Jalan Borneo Heights, Semengoh here.

For more information, visit SBC's website [www.sbc.org.my](http://www.sbc.org.my) or "LIKE" SBC's Facebook page at <https://www.facebook.com/sarawak.biodiversitycentre> for updates on Biodiversity Day and other activities organised by the centre.

The Borneo Post - 20th May 2015

## SBC Biodiversity Day beckons the public to its celebration

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will celebrate a Biodiversity Day at its premise at Km20, Jalan Borneo Heights, Semengoh near here on May 23 and 24.

Themed 'Biodiversity for Sustainable Development', the two-day event will be held in conjunction with the International Day of Biological Diversity which is observed on May 22 annually.

The event is also to promote awareness and appreciation

of Sarawak's biodiversity among all sectors of society as well as to let the public know that there is sustainable research to develop biodiversity in Sarawak.

SBC, in a statement, said a line-up of exciting and interesting activities for the public will be held during the event which will include exhibitions on biodiversity and research carried out on biodiversity, traditional and indigenous uses of

biodiversity, pottery painting and recycled art contests for children, public lectures, science games, demonstrations and hands-on session on the uses of biodiversity and science.

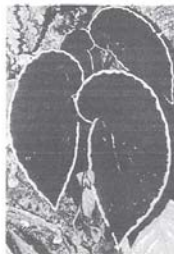
The public, particularly students and children of all ages, are welcomed to join SBC in celebrating the event.

For further enquiries, call SBC at 082-610610. Alternatively, email biosar@sbc.org.my, or logon its website at [www.sbc.org.my](http://www.sbc.org.my).

The Star - 26th May 2015

# The dark side of Vader begonia

### Mystery plant wields star power as forces go to war over it



**Mysterious:** One of the few pictures available of the Begonia in the wild. Picture courtesy of A Guide to Begonias of Borneo authors.

By YU JI  
[yuj@thestar.com.my](mailto:yuj@thestar.com.my)

**KUCHING:** It is called the Begonia "Darth Vader" but despite the powerful Star Wars character it is named after, the plant species, endemic to Sarawak, is helpless against smugglers who take it out of the state.

The *Begonia darthvaderiana* is a hit online, at US\$50 (RM200) for a small plant, it is one of the most expensive begonias.

Named as such because of its all-black leaves, the species was "discovered" last year by foreign researchers hiking near the Batang Al dam bordering West Kalimantan. Authorities in Sarawak only became aware of the plant and the high price tag it carried when a

Facebook post landed in the inbox of a Sarawak Forestry Corporation employee.

All begonias are protected under the Wildlife Protection Ordinance 1998.

Local begonia experts said they had never seen the plant and the few photos available were unlikely to have been taken by locals.

In the scientific paper that first published the discovery, a trio of Taiwanese researchers said they found the plant growing along "deeply shaded soil slopes" near the dam, which is about a five-hour drive from here.

"The epithet refers to the resemblance of the dark appearance of this new begonia to that of Darth Vader, the fictional warrior in the *Star Wars* movies," wrote Che-Wei

Lin, Shih-Wen Chung and Ching-I Peng of the Taiwan Forestry Research Institute and Taiwan Biodiversity Research Centre.

In the same paper, they also named another new species, *Begonia amidalae*, after Padmé Amidala, the love interest of Darth Vader and mother to protagonist Luke Skywalker and Princess Leia.

Julia Sang, who co-wrote the book *A Guide to Begonias of Borneo*, has been in contact with the Taiwanese researchers. "I have never seen the plant," Sang said. "We had to get the foreign researchers' permission to use the photo of the *Begonia darthvaderiana* in the book," Sang told *The Star* after presenting a talk at the Sarawak Biodiversity Centre (SBC) here last weekend.

She said no one was sure how the plant ended up on sale online.

"I'm not saying that people cannot grow begonias - all of them are protected - but it would be a problem if people just take it from the wild and destroy the population, just for easy money."

The book's co-writer Dr Ruth Kiew, who believed Sarawak had the most begonia species in the world, said commercialisation should be done with the permission of local authorities.

The authors estimated that only about half of Sarawak's begonias had been discovered.

An official at SBC, a state government body, said the matter, including commercialisation, would be brought up at the next council meeting.

The Borneo Post - 28th May 2015

# Wild orchid population faces three threats

By Patricia Hulsi  
seeds@theborneopost.com

**KUCHING:** Habitat destruction, illegal collection and illegal trade - these are the threats orchids face, according to Ong Poh Teck, an orchid researcher from Forest Research Institute Malaysia (FRIM).

Of these, habitat destruction posed the biggest threat, Ong said in his talk 'Orchids of Peninsular Malaysia, Gems in the Forest' during SBC Biodiversity Day on May 24.

"This is largely caused by human activities such as farming, logging and mining," he said.

Building new settlements in town, dams, roads are also detrimental to orchid habitats.

Although our country is rich in natural resources, Malaysians should be careful in managing them for fear of losing all precious flora and fauna in future, he cautioned.

Ong, the lead author of 'Wild Orchids of Peninsular Malaysia' said orchid poaching and illegal trading pose a threat to orchid populations in many other countries besides Malaysia.

"You may still find people selling collected wild orchids in the market, with many people trading plants through social media like Facebook," said the researcher.

Ong, who has published multiple articles on orchid taxonomy and orchid pollination in national and international journals and magazines, said the problem was

This is largely caused by human activities such as farming, logging and mining.

Ong Poh Teck, Forest Research Institute Malaysia orchid researcher

basically of supply and demand. Orchids known for their ornamental flowers are prone to illegal trade and are in high demand; the middleman complying to market demand, earning substantial money in the process.

Ong described illegal collection of orchids as 'stealing', highlighting an unfortunate case where the orchid *Dendrobium roslii* was completely wiped out by illegal collectors.

"It had disappeared from the wild even before it could be formally described."

To make matters worse, this species was not easy to cultivate so most illegally-exported plants that had been collected from the wild died.

He said as responsible individuals, we can do our part to prevent further pressure on wild orchid populations.

Orchid lovers need to know how to differentiate between collected wild orchids and artificially propagated ones, and opt for the latter.

"Collected wild orchids are usually irregular sizes compared to artificially propagated ones which are uniformly-sized."

Furthermore, collected wild



Ong giving a talk during SBC Biodiversity Day on May 24.

plants usually show signs of stress whereas artificially propagated ones look healthy if the nurserymen takes good care of them.

Another tip he gave was to look at the roots. Roots spreading in all directions are often broken in collected wild orchids compared to those artificially propagated.

As a solution, he said nurserymen need to be shown how to make the shift to artificial propagation instead of collecting from the wild.

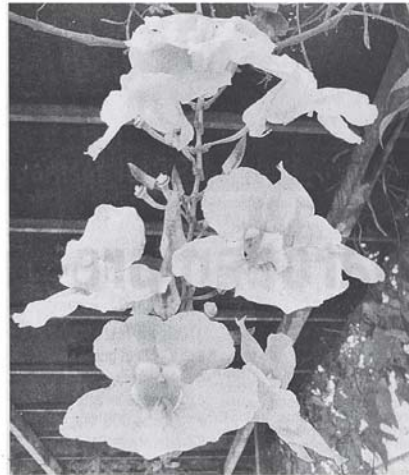
"The government alone cannot solely conserve orchids. It also depends on responsible

individuals such as ourselves to make it a success."

He said there are similarities in orchid species between the Peninsula and Borneo Island. The peninsula has about 1,000 species for its size, so Sarawak could have double or triple that number although there is a lack of studies and orchid taxonomists in Sarawak.

According to World Wildlife Fund (WWF) website, Borneo has approximately 3,000 species of orchids, more than anywhere else in the world.

Under the Wildlife Protection Ordinance 1998, all orchids are



All orchids are protected under the Wildlife Protection Ordinance 1998, which prohibits collecting or cultivating them by those without special permit.

listed as 'protected plants' in Sarawak.

According to the law: "Any person who collects, cultivates, cuts, trims, removes, burns, poisons, in any way injures, sells, offers for sale, imports, exports or is in possession of any protected

plant or any recognizable part or derivative thereof, except under and in accordance with the terms and conditions of a licence issued under this Ordinance, shall be guilty of an offence. Penalty, imprisonment for one year and a fine of RM10,000."

The Borneo Post - 22nd May 2015



Delegation from Bhutan touring the Information Gallery at Wisma Bapa Malaysia. — Photos by Chimon Upon



Dorjee Tshering

## Delegation from Bhutan comes to share and learn utilisation of biodiversity

**KUCHING:** A 12-member delegation from Bhutan visited the Information Gallery at Wisma Bapa Malaysia here yesterday. The group was hosted by Sarawak Biodiversity Centre.

Led by Dorjee Tshering from the Department of Traditional Medicine Services, they came to

learn and share experience on the implementation of Access and Benefit-Sharing for the utilisation of biodiversity. Dorjee said their four-day trip had been an enjoyable and educational event.

"We have met many local people including those from government agencies and they were all very

friendly and helpful to us. That's why we feel this visit has been an extremely successful one," he told reporters yesterday.

He said Sarawak and Bhutan shared quite similar views and practice on the usage and the promotion of traditional medicines. Conceding that the

importance of modern medicine cannot be denied, he said traditional medicine also has its important complementary role," Dorjee said. Earlier in the week, the delegation had visited Kampang Kiling where they had also learned something from the local community there.



Delegation from Bhutan pose for group photo after their tour of Information Gallery at Wisma Bapa Malaysia.

# 100 begonia species yet to be identified — Researcher

**Danielle Sendou Ringgit**  
reporters@theborneopost.com

**KUCHING:** It is estimated that some 100 species of begonia in Sarawak have yet to be identified and named.

Sarawak Forestry Corporation (SFC) researcher Julia Sang said there are about 200 begonia species in Sarawak, with over 90 per cent found only in the state.

"Same goes for Sabah, most of their species can only be found in Sabah and you cannot find them here," she said during a talk on begonias during Sarawak Biodiversity Centre (SBC)'s 'Biodiversity Day' recently.

Non-horticulturists might find it difficult to identify begonias as they come in many shapes and are known to mimic other plants — leading them to be mistaken for orchids or lilies.

"When we try to classify begonias, not only do we greatly depend on the shape of the leaves, but also the characteristics of the inflorescence," said researcher Dr Ruth Kiew from Forest Research Institute Malaysia (FRIM).

"You can actually identify a begonia from the leaves, where one side is bigger and wider while the other is narrower," she added.

Borneo is a hotspot for begonias, with over 90 species native to Sarawak named and identified.

Variations here include the Begonia piring (named after the saucer-like leaves) and Begonia roseopunctata, which has pink spots on its leaves.

All begonias are protected under the Wildlife Protection Ordinance (1998) and cannot be plucked or taken away from the wild.

Under the law, "any person who collects, cultivate, cuts, trims, removes, burns, poisons,



DR RUTH KIEW



JULIA SANG

When we try to classify begonias, not only do we greatly depend on the shape of the leaves, but also the characteristics of the inflorescence. You can actually identify a begonia from the leaves, where one side is bigger and wider while the other is narrower.

— Dr Ruth Kiew, Forest Research Institute Malaysia (FRIM) researcher.

in any way injures, sells, offers for sale, imports, exports or is in possession of any protected plants or any recognisable parts or derivative thereof, except under and in accordance with the terms and conditions of a license issued under the Ordinance, shall be guilty of an offence".

The penalty is a jail term of one year and RM10,000 fine.

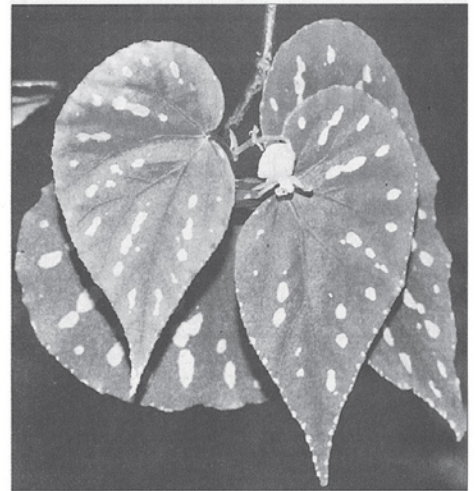
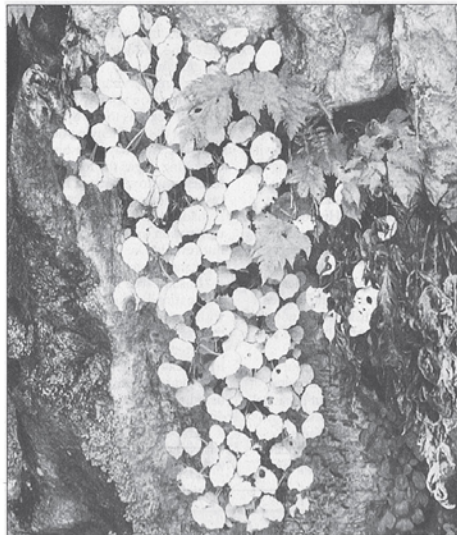
Currently less than 50 per cent of begonia species are contained within Totally Protected Areas (TPAs), leaving the rest susceptible to damage or human contact.

The Mulu National Park is a TPA with 14 identified begonia species.

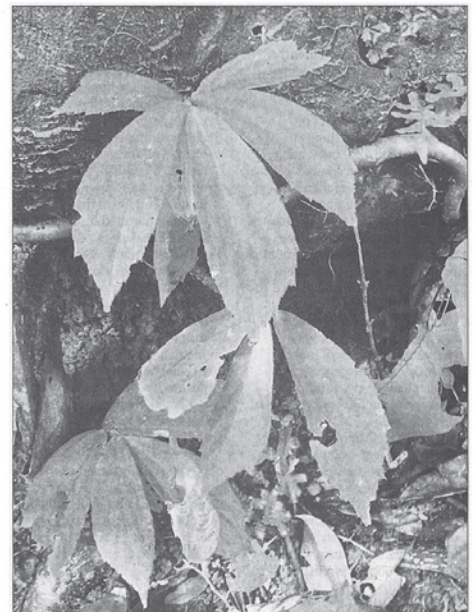
One of the most protected begonias is the Begonia hulletti, which can only be found on one particular hill — kept secret from the public in order to protect it.

To learn more go to [www.sarawakforestry.com](http://www.sarawakforestry.com).

**The Begonia piring has saucer-like leaves.**



The Begonia roseopunctata has pink spots on its leaves.



The Begonia hulletti is one of the most protected species.

The Borneo Post - 6th June 2015



Suzuki (second left) exchanging collaboration documents with Morshidi, witnessed by (from left) Ota and Dr Yeo, Deputy State Secretary Datu Misnu Taha, as well as Sarawak Biodiversity Council members Lau Cheng Yuon who represented the state Agriculture Department director, Datu Laura Lee from State Financial Secretary's Office and state Forest Department director Sapuan Ahmad.

## SBC continues tie-up on microalgae research with Mitsubishi Corp

**KUCHING:** Sarawak Biodiversity Centre (SBC) and Mitsubishi Corporation will move into the next phase of a strategic collaboration on microalgae research and industrial biotechnology, established in 2012.

The SBC-Mitsubishi partnership will continue for another two years in which research work will be undertaken at SBC laboratories.

It will leverage a diversity-based algae research platform to discover local species that could be developed for renewable fuels, as well as proteins and carotenoids for animal feed and nutritional supplements.

It also aims to identify new algae resources that will accelerate its commercialisation; therefore contributing to the state's bio-economy.

In a press statement released yesterday, the target of the earlier collaboration had established a collection of unique microalgae strains from various locations

including rivers and lakes, as well as brackish and coastal waters across Sarawak.

"The coverage extends from Kuching to Bako, Mukah, Loagan Bunut, Tanjung Dato, Similajau, Long Iman and Mulu.

"The rationale for the collection in different environment and ecology systems is important to obtain a high diversity of strains. Sarawak is an ideal place for microalgae to grow due to its ecological factors such as tropical climate and water resources that are rich in nutrients," it said.

At present, SBC living library collection consists of 500 species.

"The library is important as it facilitates research as a centralised depository. More importantly, the library offers a gateway to biotechnology companies that are interested to embark on their research promptly without having to invest in initial search and collection," the statement said.

Under the next phase of the

MC-SBC collaboration, the target focus would be on four applications of microalgae - fuel, food, feed and functional material (Polyunsaturated fatty acids, or Pufa).

Following the preliminary research at SBC, several groups of microalgae that produce precursors for biofuel and Pufa have been identified and are being developed.

The signing of the MC-SBC partnership was held at the State Secretary's Office here yesterday, involving Mitsubishi Corp general manager of new business development Korin Suzuki on behalf of MC and State Secretary Tan Sri Datuk Amar Mohamad Morshidi Abdul Ghani, who is also Sarawak Biodiversity Council chairman.

The inking of the documents was witnessed by Mitsubishi Malaysia chief executive Kenji Ota and his acting counterpart at SBC, Dr Yeo Tiong Chia.

## Making a good impression in your new job

LANDING a new job often brings an enormous sense of relief. Navigating your way through the job application and interview process can be quite daunting, so being offered the role should bring a great sense of satisfaction.

Getting that big break, however, doesn't mean you can relax. Now the hard work really begins and you need to make a good impression. Fast.

Making sure you do the right things to keep your new boss happy doesn't have to be something that scares you.

There are some fairly simple rules to think about that should guide you through your first few months and set you on the right path to success.

### 1. Have a positive attitude.

We all know that a good education and professional experience are important factors in your success. However, there's another critical component that people often forget about: attitude. Coming into a job with the right frame of mind already puts you at an advantage. So make sure you show plenty of enthusiasm, work towards being efficient in carrying out your responsibilities, and push yourself to constantly learn and improve. People with a positive attitude will view tasks given to them by their manager as a challenge or good learning opportunity rather than a burden.

### 2. Ask questions.

When you start a new job, there are always a lot of new things to learn. But don't sit back and wait for your new colleagues to bring you up to speed on everything. Make sure you ask plenty of questions. This will not only demonstrate that you are ready to learn and become an integral part of the team, but also are interested in the actual job.

### 3. Take initiative.

Make yourself not only a more valued employee, but also someone who wants to advance their career. Rather than wait for tasks to be assigned to



you, take the initiative. If you have already completed your work, ask your boss if there is something else you can work on, or a project you can help your colleagues with. Make it clear that you're a team player and not just an employee by doing more than expected. And don't forget to share any ideas you have that may help with the success of a project, or the company.

### 4. Come in early, leave a little later.

Now that you've finally landed the job you have been chasing, you need to show that you're committed. If you arrive at work just on time and leave as soon as your official hours are finished for the day, you won't exactly be giving off very positive signals to your manager. It may be construed by some that you're just there to do the minimum work possible and collect your salary each month. Instead, come in early and get a good head start on your work, and make sure you're not the first to leave at the end of the day.

### 5. Listen.

While you need to show initiative in your new job, one of the most important things you also need to do is listen. Listen, observe, and learn. During the early days of your new job, it's important that you are focused and absorb as much information as possible so that you can make a valuable contribution later on.

### 6. Be flexible.

Your job description may outline your roles and responsibilities, but that doesn't mean you should not be open to change. If you're a manager ask if you can work on a different project or help the team in another area, be willing to jump straight into the task. This not only makes it clear you're a team player but also ready to learn new skills.

*This is a weekly column by SarawakYES! - an initiative driven by Faradale Media-M Sdn Bhd and supported by Angkatan Zaman Mansang (Azam) Sarawak - to provide advice and stories on the topics of education and careers to support Sarawakians seeking to achieve their dreams. Join us on Facebook, Twitter, Instagram and YouTube.*

## Indigenous plant may hold potential in cancer cure — Researcher

KUCHING: A plant native to Borneo may hold the key to treating nasopharyngeal cancer, according to research carried out at Swinburne University of Technology Sarawak Campus here.

The Aglaia plant — known as 'Kelabuno' among the Orang Ulu and 'Segera' among the Ibans — has been discovered to contain a highly potent anti-cancer compound called 'silvestrol', which is capable of killing cancer cells by preventing rogue cells from making proteins that they need to survive.

In the laboratory, silvestrol has proven to be just as effective in destroying cancer cells as most common chemotherapies.

The research, headed by Dr

Paul Neilsen, is investigating if the compound is also effective in killing nasopharyngeal — or nose cancer — cells.

"So far, initial results are promising, suggesting that silvestrol may be a good candidate for the treatment of this type of cancer in the future," he said.

According to Neilsen, nasopharyngeal is difficult to detect and inoperable as the tumour occurs deep within the nasal cavity at the base of the brain in a location called the nasopharynx. His research is to identify an alternative approach to treatment.

"About 75 per cent of patients are only diagnosed when the cancer is in its advanced stages

and has spread to other parts of the body," said the Australian, adding that since surgery was not an option, patients would typically have chemotherapy and radiotherapy as treatments.

Nasal cancer, which has a 60 per cent mortality rate, is endemic among rural communities and is the most common cancer found among men in Sarawak.

It appears that while several

ethnic groups indigenous to Sarawak have a high risk of developing the cancer, the Bidayus face the highest risk in the world.

"To put this in a local context, the Bidayus are over 30 times more likely to develop this cancer than the Indians in Malaysia," Neilsen said.

His research came following a recent signing of research agreements between Swinburne Sarawak and

Sarawak Biodiversity Council.

A worldwide patent for the rights to develop silvestrol against various types of cancer belongs to the Sarawak government. The patent is maintained and overseen by Sarawak Biodiversity Centre (SBC).

The roles of the collaborators are clearly defined, with SBC having a programme on the collection and identification of the Aglaia plant for extraction and purification of the bioactive compounds.

These compounds are chemically characterised and provided to Swinburne Sarawak for cancer research work.

SBC, through its own research and development (R&D), will also

look at approaches to synthesise and/or semi-synthesise the compounds for clinical trials, should the pre-clinical tests be successful.

Swinburne Sarawak, in accelerating the pre-clinical research, is in collaboration with the Institute of Medical Research in Kuala Lumpur to look into the ability of silvestrol to work together with existing cancer therapies in killing cancer cells more effectively.

"Ultimately, we hope that the outcome from the research collaboration with the SBC, along with further funding, would lead to a Phase One clinical trial on silvestrol in Sarawak," said Neilsen.



Dr Paul Neilsen

The Star - 25th October 2015



Hundreds of riders participated to raise conservation awareness in Kuching. — Photos courtesy of Wildlife Conservation Society



Dr Gumsal giving a talk at Swinburne University of Technology, Sarawak Campus.



A short talk on conservation challenges at Swinburne University of Technology, Sarawak Campus.

# Riding to protect wildlife

Cyclists cover 40km to raise awareness on dwindling orang utan population

story by YU JI

yuji@thestar.com.my

**KUCHING:** A diverse group of cyclists comprising private sector employees, members of charities and civil servants travelled from here to Bako to raise awareness on conservation.

"Ride For The Wild Malaysia" is the second mass sporting event this year by the Wildlife Conservation Society (WCS), following a run in April.

Hundreds joined the cycling event which took participants on a 40km loop between Swinburne University of Technology, Sarawak Campus and the national park.

At Tanjong Bako, participants crossed the river via boats provided by local villagers.

Originally scheduled for last month, the ride was postponed due to the haze.

But judging by the good turnout, not to mention the number who stayed behind for conservation talks after lunch, enthusiasm for the event was not dampened.

WCS Malaysia director Dr Melvin Gumsal focused on orang utan distribution over the last century in his talk, specifically on the dwindling population.

"In the 1930s, along the areas we rode past, there would have been

orang utan. They are not there anymore. The orang utan numbers are a fraction of the population in the 1930s," Gumsal said.

Malaysia and Indonesia are the only countries in the world with an orang utan population. In Sarawak, their numbers are estimated at 2,000.

"Had we ridden back in the 1930s, we would have seen orang utan up on the trees."

"This morning we were the only 'orang utan' there," Melvin said. Major threats to wildlife include hunting and conversion of rural land for plantations.

"Orang utan are almost like humans."

"They are pregnant for up to nine months and they have one young every eight years."

"They reach sexual maturity, much like our teenagers, at around 15 years, and they have a life expectancy of 30 to 35 years in the wild."

"This means a mum would probably be able to give birth to three or four young."

Dr Gumsal said it was important to expand existing conservation areas and highlighted proposed extensions in Batang Ai and Lanjak Entimau.

The event was supported by the police, Permai Rainforest Resort, Swinburne University, Eunoia IT Solutions, Sarawak Energy Bhd and Sarawak Biodiversity Centre.

For more information, visit ride-for-the-wild-malaysia.com or facebook.com/WCS.Malaysia.



The flag off from Swinburne University of Technology.



At Tanjong Bako, participants crossed the river via boat rides provided by local villagers.



Age did not stop this senior citizen from participating in the Ride for The Wild Malaysia event.



An ambulance following the riders during the Ride for the Wild Malaysia event.

*SBC News* **2016**

The Borneo Post - 23rd June 2016



John Cumbers

## Synthetic biology talk by SBC on June 29

**KUCHING:** Sarawak Biodiversity Centre (SBC) will be hosting an evening talk on synthetic biology and how it presents as a new tool for industries on June 29 at the China House Café located at the Old Courthouse Complex opposite Kuching Waterfront starting at 7.30pm.

The speaker, John Cumbers, has been in the field of synthetic biology for over 10 years, working in academia, government, startups and industry.

Cumbers is the founder of SynBioBeta, a global activity hub and community of entrepreneurs, thought leaders and investors for the synthetic biology industry.

Prior to setting up SynBioBeta, Cumbers worked with the National Space Agency, USA (NASA) for seven years on resource utilisation and sustainable technologies.

He was instrumental in starting NASA's programme in synthetic biology. He has also been involved in multiple startups producing food for space and using microbes to extract lunar and Martian resources.

Cumbers has received multiple awards and grants from NASA and the National Academy of Sciences

During his talk in Kuching, Cumbers will review the field of synthetic biology, starting from an academic outreach pursuit to what is now a fledgling industry.

He will also touch on the latest wave of investment in the field, specifically in markets ranging from pharmaceuticals, biomaterials, chemicals, fuel and food which will allow for the replacing of fossil fuels with sustainable feedstocks.

The UK Royal Society describes synthetic biology as "an emerging area of research that can broadly be described as the design and construction of novel artificial biological pathways, organisms or devices, or the redesign of existing natural biological systems."

Since the popularisation of the term "synthetic biology" over a decade ago, a new community of biological engineers has emerged and thousands of practitioners, students and entrepreneurs alike have joined this movement to "make biology easier to engineer".

This talk is targeted at industry players, particularly those in green technology and biofuels, as well as policy makers, researchers, university students and interested members of the public.

Seats are limited. Those interested in attending the talk can register by sending an email to biosar@sbc.org.my or calling 082-610610 to speak to Ha-Mim Marzuki or Asha Kaushal, before June 28.

Those attending the talk are advised to park their vehicles at Plaza Merdeka's parking bays.

New Sarawak Tribune - 9th July 2016



DR THOMAS E. LOVEJOY

## Godfather of Biodiversity' to deliver public talk on 20 July

**KUCHING:** The US Embassy and the Sarawak Biodiversity Centre (SBC), supported by Swinburne University of Technology Sarawak (SUTS) and the Wildlife Conservation Society (WCS Malaysia Programme), will be hosting a public talk by the 'Godfather of Biodiversity' himself, Dr Thomas E. Lovejoy on 20 July 2016.

The talk titled "A Wild Solution for Climate Change" will take place at the SUTS Lecture Theatre, located at Jalan Uplands in Kuching at 7.30pm.

Lovejoy is a Senior Fellow at the United Nations Foundation and University Professor in the Environmental Science and Policy Department at George Mason University.

He is known as the "Godfather of Biodiversity", having coined the term "biological diversity" or "biodiversity" in 1980. An innovative and accomplished conservation biologist, Lovejoy brought international attention to the world's tropical rain forests, and in particular the Brazilian Amazon, where he has worked since 1965.

In 2010, he was elected professor in the Department of Environmental Science and Policy at George Mason University. He had also served as president of the Heinz Center from 2002 to 2008 and held the Biodiversity Chair until the center closed at the end of 2013.

Before assuming this position, Lovejoy was the World Bank's chief biodiversity advisor and lead specialist for environment for Latin America and the Caribbean. He had served on science and environmental councils under the Reagan, Bush and Clinton administrations.

Lovejoy also developed the universal "debt-for-nature" swap programmes and founded the series "Nature", the popular long-running television programme.

He has received numerous accolades, including the BBVA Foundation Frontiers of Knowledge Award in the Ecology and Conservation Biology Category in 2009, and the Blue Planet Prize in 2012.

During his talk, Lovejoy will describe current impacts on

emissions are curbed rapidly and dramatically.

He will also highlight how restoration of ecosystems such as forests, grasslands, agro-ecosystems and coastal wetlands contribute to a healthier environment by sequestering some of the current CO2 in the atmosphere.

The talk is free and open to members of the public.

Parking spaces will be made available at Swinburne's multi-storey carpark and student volunteers will be stationed to guide attendees to the Lecture Hall.

Those interested to listen to Lovejoy's talk and meet him in person, can register with SBC by emailing names and contact numbers to biosar@sbc.org.my.

Further information on the talk can also be obtained through enquiries sent to the email address or by calling Ms Asha Kaushal or Mr Ha-Mim Marzuki at 082-610610.

The Borneo Post - 13th July 2016

## Renowned US biologist to deliver talk on climate change

**KUCHING:** Innovative and accomplished conservation biologist Dr Thomas E. Lovejoy from the US will be conducting a public talk on climate change at Swinburne University of Technology Sarawak Campus on July 20 at 7.30pm.

Lovejoy, who is from the United Nations Foundation in Washington DC, will speak on physical and biological nature and its projected impact on the ecosystem once it starts falling in the one-hour talk entitled 'Wild solutions to climate change'.

He has worked on the interaction between climate change and biodiversity since the mid-1980s. He brought international attention to the world's tropical rainforests, and in particular the Brazilian Amazon, where he has worked since 1965.

Lovejoy also developed the now ubiquitous 'debt-for-nature' swap programmes and led the Minimum Critical Size of Ecosystems project. He founded the series Nature, a popular long-running wildlife television programme.

Among others, he was the World Bank's chief biodiversity advisor and lead specialist for the environment for Latin America and the Caribbean.

Spanning the political spectrum, Lovejoy has served on science and environmental councils under former US presidents Ronald Reagan, George Bush and Bill Clinton.

Lovejoy is in Malaysia courtesy of the US Embassy in Kuala Lumpur. His talk is part of the US State Department's climate change initiative where its science envoys travel the world to speak on various issues relating to science and conservation.

Members of the public who are interested to attend are advised to reserve a seat by July 15.

Kindly can contact Asha Kaushal on 082-610610 or email her at biosar@sbc.org.my.

Refreshments will be served after the talk, which is jointly organised by the Sarawak Biodiversity Centre, Swinburne University of Technology Sarawak Campus, and the Wildlife Conservation Society Malaysia.



Dr Thomas E. Lovejoy

# 'Work with SBC to develop forest treasures'

By Georgette Tan  
reporters@borneopost.com

**KUCHING:** Local communities have been asked to work with the Sarawak Biodiversity Centre (SBC) in developing their traditional knowledge and providing leads to more discoveries from the state's forests.

Chief Minister Datuk Patinggi Tan Sri Adenan Satem said the dedication of the five highland communities behind the new LitSara essential oil is something to be emulated.

"I applaud the five communities who have been keen and steadfast in their journey with SBC to develop this essential oil," he said during the launch of LitSara yesterday.

"Because of its unique oil composition, LitSara will be able to carve out its own niche as a high value and unique essential oil which invigorates, rejuvenates and refreshes."

He added the ultimate aim of this project and many more to come from SBC is to channel benefits to the state and more importantly to the indigenous communities from the use of local biodiversity and traditional knowledge.

The communities involved in the research and development of LitSara are the Kelabit of Pa Ukut and Pa Lungan in Bario, the Lun Bawang of Long Telangan and Long Kerebangan in Lawas, and the Bidayuh of Kampung Kiding.

SBC CEO Dr Yeo Tiong Chia said the centre has identified three more plants to develop under the model used for LitSara.

"Because it can be done, we have put in our efforts in research and we have shortlisted at least three more plants to develop - Bunga Taang (*Adenosma nelsonioides*) or the Diesel plant, Sarang Bejit (*Torenia* sp) or Camphor, and Sekiu (*Madhuca motleyana*) from the Melanau community in Kampung Jemoreng, Matu," he



(From left) Roslind John, Jena Libang and Dora Sarah from Bario show LitSara essential oil products derived from the fruits and leaves of the *Litsea cubeba* tree. — BERNAMA photos



Jena Libang from Bario shows LitSara essential oil body wash and fresh *Litsea cubeba* leaves.

I applaud the five communities who have been keen and steadfast in their journey with SBC to develop this essential oil. Because of its unique oil composition, LitSara will be able to carve out its own niche as a high value and unique essential oil which invigorates, rejuvenates and refreshes.

Datuk Patinggi Tan Sri Adenan Satem, Chief Minister

said. SBC is also eyeing long-term research goals.

"This are of course more complex and involve developing compounds for the treatment of diseases such as cancers, antivirals and bacterial infections. We have to manage our expectations because there are many factors which may make or break a compound during its development," he said, adding that it is also an extremely expensive process.

LitSara essential oil is distilled

from the *Litsea cubeba* tree, which grows in the hilly forests of Sarawak.

Laboratory tests have shown it has both anti-microbial and repellency properties, besides having a pleasantly revitalising scent.

It is a suitable ingredient for personal care products such as natural handmade soaps, scented multipurpose spray and even in wet wipes to repel insects.

Sarawak *Litsea* is registered as a Geographical Indicator (GI),



Roslind John (left) and Jena Libang from Bario show LitSara essential oil products derived from the fruits and leaves of the *Litsea cubeba* tree.

while the essential oil LitSara is trademarked.

It was developed under SBC's Traditional Knowledge

Documentation programme.

The tree has been utilised for generations by the Bidayuh, Kelabit and Lun Bawang communities for

healing and culinary purposes.

LitSara is a pilot project which utilises the acquisition of Prior Informed Consent (PIC) from participating communities, who are actively involved in implementing Access and Benefit Sharing (ABS).

Provisions for ABS and PIC are stipulated in the Sarawak Biodiversity Centre Ordinance (Amendment) 2014.

The ultimate aim is to ensure that indigenous communities' traditional knowledge is valued by those who use it to develop a range of products and that the benefits are shared equitably.

This is to ensure that the indigenous communities play a pivotal role in adding value to their traditional knowledge and local biodiversity, and are also duly acknowledged through recognition and equitable sharing of benefits arising from product commercialisation.

## Wealth of secrets in trees

A newly launched laboratory at the Sarawak Biodiversity Centre will research the knowledge from local communities on flora around them. >3



All natural products: Indigenous women from Bario (from left) Roslind John, Jena Libang and Dora Sarah looking at LitSara products during the launch. — ZULKHAR SHEBEE / THE STAR



**SBC FLAGSHIP ABS PRODUCT ...** Three Kelabit women from Bario, (from left) Roslind John, 40, Jena Libang, 27, and Dora Sarah, 45, showing off the LitSara essential oil products derived from the fruits and leaves of 'Litsea cubeba' tree during the launch of the product at the Sarawak Biodiversity Centre (SBC) near Kuching. *Litsea cubeba* tree or locally called 'Tenun' by the Kelabit and Lun Bawang communities, is a wild growing tree that gives out strong citrus, citrus-lemmony scent. SBC is partnering with the indigenous communities to study and develop innovative products from biodiversity. PHOTO: BERNAMA

The Borneo Post - 14th July 2016



Adenan planting a tree to commemorate the launching SBC's Integrated Biodiversity Research Building. Seen from left are Len Talif, Yeo, former deputy chief minister Datuk Patinggi Tan Sri Alfred Jabu Nunpang and Morshidi (right).



Adenan cuts a ribbon to mark the launching of SBC's Integrated Biodiversity Research Building.

## Research building equipped with RM2 mln facility

◆ From Page 1

Also present were SBC chief executive officer Dr Yeo Tiong Chia, Assistant Minister for Environment Datu Len Talif Salleh and State Secretary Tan Sri Datuk Amar Mohamad Morshidi Ghani.

Yeo, in his speech earlier, described the new integrated research building as the final

phase of the physical development of SBC's laboratories.

The centre is equipped with a RM2 million facility that could help researchers tell the exact mass of compound to the fourth decimal place.

"The main reason for the construction of this building is because we need to expand our chemistry lab to be proficient in understanding chemical

structure; we wanted to expand our plant tissue culture programme because we think that it will play a critical role in the next five years in our propagation needs.

"Also, we need bigger space for the research officers to work and to house our natural product library which now has reach 20,000 extracts for plants and another 20,000 more for microbes," he said.

The Star - 14th July 2016

# New lab for biodiversity research

CM: There is untold amounts of resources waiting to be discovered from Borneo's flora and fauna



story by  
YU JI

yuji@thestar.com.my

**KUCHING:** A new laboratory for plant tissue cultures and chemical structure studies has been opened at the Sarawak Biodiversity Centre near here.

Its chief executive Dr Yeo Tiong Chia said the lab includes a RM2ml instrument that "can tell us to the exact mass of a compound to the fourth decimal place".

The machine, he added, marked a milestone for the 18-year-old research body, which began operating out of wooden buildings and barracks at the old Forestry Training School.

"Technically, this is where we want to be and we will begin to use our full spectrum of technologies to discover new natural compounds," Dr Yeo added.

Presently, the centre has about 30 collaborations with local and foreign institutions and companies.

Dr Yeo said research was underway with PepsiCo, the soft drinks manufacturer, to look for "sweeteners from the jungle", and Mitsubishi on algae for biofuels.

"These are a combination of long and

short term goals. We are also developing three more plants (for commercialisation)."

During the lab opening yesterday, Chief Minister Tan Sri Adenan Satem launched "LitSara", named after the plant *Litsea cubeba* and this state.

LitSara, an essential oil, is from leaves and fruits, and has antimicrobial properties that makes it suitable as an active ingredient in personal care products.

The centre developed the plant's commercialisation potential with traditional knowledge from Bidayuh, Kelabit and Lun Bawang communities.

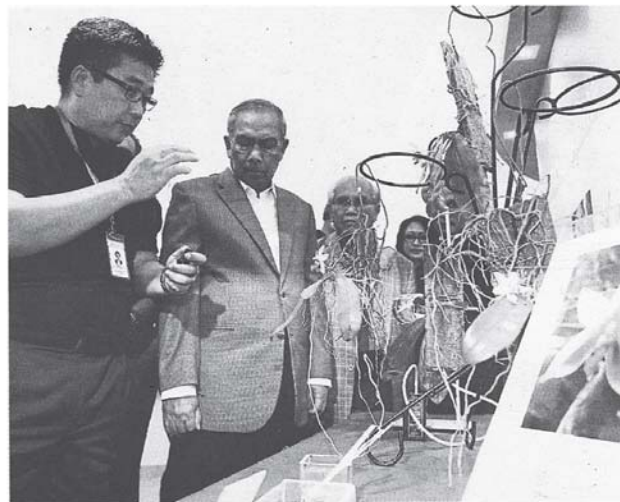
Adenan said it was practically unknown how much more wealth could be found from Borneo's flora and fauna - or how much has been lost because of environmental degradation and extinction.

"Sometimes, we do not appreciate the wealth that already surrounds us. If you look and care to see, if you hear and care to listen, you will discover so much more potential from what we have.

"This is the main reason why we have this biodiversity centre to research and develop," Adenan said.

The Chief Minister said his administration's policy on forests was to look upon nature "as naturalists and scientists would", rather than how "timber merchants" viewed trees as dollar signs.

He reiterated calls for conservation as the first step in innovation.



Adenan (second from left) hearing out Dr Charlie Yeo before launching the research facility and LitSara products at the Sarawak Biodiversity Centre. — ZULAZHAR SHEBLEE / THE STAR

# BIOPROSPECTING

## Sarawak must be a significant partner in research collaborations



CHIEF Minister Datuk Patinggi Tan Sri Adenan Satem pens his signature on the plaque to mark the official opening of Sarawak Biodiversity Centre's (SBC) Integrated Biodiversity Research Building, witnessed by Dr Yeo Tiong Chia (right), Datu Len Talif (second left) and Tan Sri Datuk Amar Mohd Morshidi (third left). PHOTO: RAMADI SUBARI

BY CHRISTOPHER LIDOM

**KUCHING:** Sarawak must be a significant partner in research collaborations and cannot remain as supplier of raw materials for others to benefit from the discoveries made.

Chief Minister Datuk Patinggi Tan Sri Haji Adenan Satem said Sarawak should ideally carry out as much of the critical works in its research agencies from the discoveries made through research of the natural products found in the state.

"Sarawak used to send out species of plants and animals for research, but now, we have to be involved and be a partner in the discoveries made," he said when officiating at the opening of the Integrated Biodiversity Research Building at the Sarawak Biodiversity Centre (SBC) at Jalan Puncak Borneo near here, yesterday.

The Chief Minister said Sarawak biodiversity, as one of the oldest rainforests in the world, must be preserved as it had a lot to offer, especially to the medicinal sector and the state's economy.

"Borneo is a place where many discoveries had been made, whether by naturalists who discovered new species or by chemists who discovered new compounds for the treatment of cancers," he said.

He said over the years, the interest in natural products had increased because of the many benefits of natural products which were made from natural evolution and selection of the fittest.

Adenan said because of this, natural products were important in research and majority of prescribed drugs like antibiotics and anti-cancer compounds were derived from natural products.

"We need to value add to this wealth of biodiversity, first by conserving it, improving our research capacity and collecting as much data as possible with the intention to generate invention and innovation," he said.

He pointed out that bioprospecting referred to a systematic search for biochemical information and novel compounds from natural resources such as plants, microbes and other living things.

Hence, bioprospecting, he said, was a way to discover valuable applications and should be done sustainably because biotechnology and chemistry nowadays had the capability to make measurement on a micro scale.

"Bioprospecting must be properly regulated and carried out in a manner that will generate benefits for mankind, for Sarawak and its people, such as medicines, new industries, economic returns, conservation of biodiversity, preservation of the indigenous knowledge, and rewarding the traditional knowledge communities," he said.

Adenan said Sarawak was the first in Malaysia to establish laws and regulated bioprospecting activities and Access and Benefit Sharing (ABS) protocol, including acquiring Prior Informed Consent (PIC) from the local communities with regards to the use of their traditional knowledge.

"These are all in line with the international Convention on Biological Diversity (CBD) and its Nagoya Protocols on ABS, which Malaysia is party to. Sarawak is the first in the region to have set up a comprehensive library of natural products for research."

"Plant extracts, compounds, strains of microbes and even flora scents in this library were derived from Sarawak's very own biodiversity," he

said. There are 23,000 plant extracts and similar number of microbial extracts at SBC.

The Chief Minister also launched LiSiara, an SBC's flagship ABS product which is a trademark name for an essential oil extracted from a *Litsea cubeba* that grows on hilly forest.

This wild growing plant has been used over generations by the Bidayuh, Kelabit and Lun Bawang communities for both healing and culinary purposes.

Five communities have been keen and steadfast in their journey with SBC to develop this essential oil and they are the Bidayuh of Kampung Kiding in Padawan, the Kelabits of Pa'Ukat and Pa'Luangan in Bario and the Lun Bawang of Long Kerebang and Long Teligan in Lawas.

Also present were former Deputy Chief Minister Datuk Patinggi Tan Sri Alfred Jabu Numpang, State Secretary Tan Sri Datuk Amar Mohamad Morshidi Abdul Ghani, Assistant Minister of Environment Datu Haji Len Talif Salleh, Assistant Minister of Science Research and Biotechnology Dr Annuar Rapaee and SBC chief executive officer Dr Yeo Tiong Chia.

# Opportunities in state's biodiversity

Adenan says his fight against illegal logging is to protect forests as source of new medicine, natural products



Adenan smelling an orchid during his visit to the new research building. He is accompanied by Yeo (left). — Photos by Kong Jun Liang

By Geri Ogby Rusekh  
ogryr@theborneopost.com

**KUCHING:** The state's forest is a rich source for naturalists to discover a new species and chemists to find a new compound for new medicine and as such must be protected from unlicensed logging to preserve its rich biodiversity.

Chief Minister Datuk Patinggi Tan Sri Adenan Satem in pointing this out said that was the reason for his fight against illegal logging and freeze on issuing licences for new timber concessions.

"Don't look at the rainforest as a dollar sign because it is our permanent treasure. Look at it from the view of naturalist and scientist," he said when launching the Integrated Biodiversity Research Building of Sarawak Biodiversity Centre (SBC) near here yesterday.

He added that the state could generate new economic opportunities while promoting conservation through bioprospecting because of its rich biodiversity.

"Bioprospecting refers to a systematic search for biochemical information and novel compounds from natural resources such as plants, microbes and other living things including fungus."

"It is a way to discover valuable applications and it can be done sustainably because biotechnology and chemistry nowadays have the

Don't look at the rainforest as a dollar sign because it is our permanent treasure. Look at it from the view of naturalist and scientist.

Datu Patinggi Tan Sri Adenan Satem, Chief Minister

capability to make measurements on a micro scale. These are the things that we will pursue," the chief minister explained.

He said the state must tap into its rich biodiversity by conserving it and improving on its research capacity to collect data to generate invention and innovation.

Adenan noted that through the establishment of Sarawak Biodiversity Centre (SBC) Sarawak can conduct its own scientific research and with the existing legislation covering bioprospecting, he believed the state could greatly benefit from the increasing global interest in natural products research.

"Sarawak used to send out species of plants and animals for research. We cannot simply remain as a supplier of raw material for others to benefit from the discoveries made. We must be a significant partner in research collaboration and ideally carry out critical work in our research agencies," he said.

■ Tun Page 4, Col 4

# Sarawak Biodiversity Centre, Swinburne exploring secrets of indigenous plants

**KUCHING:** 'Pamadang Kumang', 'Bintangor Bukit' and 'War Pungeh' may sound alien to most people, even Sarawakians.

These are among the local plants with medicinal value, and soon many may benefit from their anti-flu by-products or derivatives.

Pamadang Kumang (as known by the Iban community) is *Mussaenda elmeri* to the scientific

world, while Bintangor Bukit (also in Iban) is *Calophyllum lanigerum* and 'War Pungeh' (in Orang Ulu language) is *Albizia corniculata*.

The first two are found in Betong while War Pungeh is found in Long Kerebang in the Lawas District interior.

The Sarawak Biodiversity Centre (SBC) and Australia's Swinburne University of Technology are

still doing further research on the wider applications of such plants.

State Second Minister of Resource Planning and Environment, Datuk Amar Awang Tengah Ali Hasan said while the preliminary research on their medicinal potential had been published in 'Advances in Microbiology 2014', advanced

research was on-going. The SBC, he said, had been active in carrying out studies on the state's rich biodiversity, with some 30 research collaborations with international as well as local organisations.

"Such research is important to attract scientists and naturalists to the state national parks where biodiversity is not only conserved

as a natural heritage but also as an abundant resource for scientists to unlock its valuable applications," he said.

The SBC has to date identified more than 23,000 plant extracts and the figure is increasing yearly. Some of the plant species are rare and endemic to the state and the island of Borneo. It also has in its collection more

than 18,000 types of microbes. Awang Tengah said SBC was developing a framework for traditional medicinal knowledge documentation programmes and projects under its Prior Informed Consent (PIC) and Access and Benefit Sharing (ABS), under the United Nations Development Programme (UNDP) funding.

— Bernama

New Sarawak Tribune - 16th July 2016

# Sarawak exploring secrets of its plants

BY EDWARD SUBENG STEPHEN

**KUCHING:** "Pamadang Kumang", "Bintangor Bukit" and "War Pungeh" may sound alien to most people, even Sarawakians.

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Tengah said SBC was developing a framework for traditional medicinal knowledge documentation programmes and projects under its Prior Informed Consent (PIC) and Access and Benefit Sharing (ABS), under the United Nations Development Programme (UNDP) funding.

"The PIC is to get the consent to further develop and use traditional medicinal knowledge and sources from the commu-

nity where they originate while the ABS is to ensure that any commercial benefits from their utilisation will be ploughed back to them."

Under them, he said, SBC was now focusing on the development of "LitSara", an essential oil from a plant (*Litsea cubeba*) linked to the traditional knowledge of three ethnic communities, namely the Bidayuh, Lun Bawang and Kelabit.

To the Bidayuh, the tree is known as 'Pahkak' while the Orang Ulu know it as 'Tenun'.

"This sweet scented oil is being incorporated into popular products such as handmade soaps made with natural ingredients.

"The indigenous communities stand to gain if the product is successfully commercialised," said Tengah. - Bernama

# Lovejoy: Lead the change

Environmental issues and protection need to be part of school curriculums

story by  
YU JI

yuji@thestar.com.my



**KUCHING:** Environmental protection will require a difficult combination of top-down policies and long-term grassroots-led initiatives.

This is the opinion of Dr Thomas Lovejoy, also known as the "godfather of biodiversity."

Lovejoy, who introduced the phrase "biological diversity" in 1980, said climate-change mitigation needed to be at the forefront of better governance. He was speaking at Swinburne University of Technology, Sarawak Campus, here.

He advocated carbon tax and emphasised on climate-change mitigation as part of school curriculums.

"Once you have a carbon tax, you can decide what you want to spend the revenues on. The government can readjust the whole tax system and use the money for anything. It can be used for ecosystem restoration," said the environmentalist.

Such policies required political will, he reiterated, noting that long-term issues "are always hard for political systems to deal with."

"But we are quite capable of moments of change: When suddenly the problem is perceived, action can take place.

"It is a matter of stating the case clearly, so that gaining adherence is not threatening. Solutions can then be inviting," he added.

The talk was co-organised by state governmental bodies such as Sarawak Biodiversity Centre, with input from non-governmental organisations such as Wildlife Conservation Society.

Hundreds attended, including

members of World Wide Fund for Nature (WWF), Malaysian Nature Society and even former deputy chief minister Tan Sri Alfred Jabu Numpang.

Lovejoy said environmental issues concerned youths.

"Climate-change mitigation and advocacy against climate change need to be in curriculums everywhere in the world. We all need to be engaged in it.

"It is the biggest challenge humanity has ever faced.

"The more youths are engaged, the better off we will be," he said.

"Young people can change the world, more than adults."

Lovejoy is a Senior Fellow at the United Nations Foundation and professor of environmental science and policy at George Mason University.

He was also the first Biodiversity Chair of the H John Heinz III Center for Science, Economics and the Environment. He currently is Chair of the Scientific Technical Advisory Panel for the Global Environment Facility, the multibillion-dollar funding mechanism for developing countries in support of their obligations under international environmental conventions.

Since the start of this year, he has been a Science Envoy for the United States State Department.

His talk last week was not Lovejoy's first visit to Sarawak. Over 25 years ago, he came to Sarawak and explored the flora and fauna.

"Since then, times have changed. The pressures on biology is much greater," he said.

"Signals from nature" include thinner ice, rising sea levels, more extreme weather events, droughts, earlier melt of snow, plants changing their cycles, birds that have stopped migrating and high-species animals moving higher up "but they'll eventually have no more higher ground to move up to".

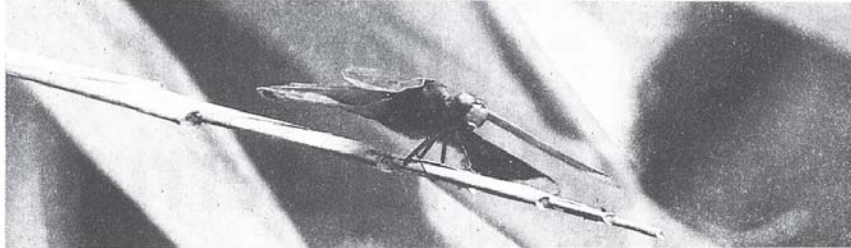


Lovejoy (wearing red) with Sarawak Biodiversity Centre chief executive Dr Yeo Tiong Chia (right) and staff at the research centre.



Lovejoy presenting a talk at Swinburne University of Technology, Sarawak Campus, in Kuching.

The Borneo Post - 8th August 2016



Borneo is home to a wide range of dragonfly and damselfly species – many of them found nowhere else.

## Public talk and practical session on watching dragonflies

**KUCHING:** The Sarawak Biodiversity Centre (SBC) and Malaysian Nature Society Kuching Branch (MNSKB) are jointly organising a dragonfly watching programme from Aug 27-28.

The two-day programme will kick off with a public talk on 'Dragonfly and Damselfly Watching: A New Way to Enjoy Nature in Sarawak' by ornithologist and wildlife conservationist Dr Ronald Orenstein on Aug 27 starting at 3pm at Telang Usan Hotel here.

This will be followed by a dragonfly watching session the next day (Aug 28) at 9am at the Sama Jaya Nature Reserve which will be coordinated by MNSKB.

Both sessions are free for members of public and nature enthusiasts to attend, and are part of the organisers' outreach to create awareness and appreciation towards biodiversity in Sarawak.

According to Orenstein, birders around the world are now taking up dragonfly-watching which is also known as oding – after Odonata, the group of insects to which dragonflies and damselflies (the odes) belong.

"Odes have been called the 'birder's insect'.

"There are relatively few species to learn, they are often easy to see and identify, and are ideal subjects for the nature photographer," he



Dr Ronald Orenstein

Odes have been called the 'birder's insect'.

Dr Ronald Orenstein, ornithologist and wildlife conservationist

nature, including on elephants and butterflies.

As a member of the board of the Species Survival Network – a coalition of over 80 environmental and animal welfare groups worldwide – he works to protect wildlife in trade through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

For the past ten years, he has been a part-time resident of Sarawak and a member of MNSKB where he has assisted the Ministry of Tourism, Arts and Culture in training sessions for birding guides.

Those interested in registering for the talk on Aug 27 can register with SBC by sending an email with names and contact details to biosar@sb.org.my.

They can also obtain more information by calling the centre at 082-610610 to speak to Ha-Mim Marzuki or Nurulliza Murtada.

Attendees for the talk are also encouraged to participate in the dragonfly watching session coordinated by MNSKB on Aug 28.

This can be indicated when registering for the public talk.

said in a statement.

An avid birder himself, Orenstein has also become passionate about dragonflies and is eager to share his enthusiasm.

During the talk, he will introduce the audience to dragonflies and damselflies and their life cycles, provide tips on how to identify them, and give a brief insight into species that can be found in and around Kuching.

"Borneo is home to a wide range of odes – many found nowhere else. There is still a lot to learn about Sarawak's dragonflies and damselflies. New species are being discovered and described, even close to Kuching," he said.

Orenstein, who holds degrees in both zoology and law, has also authored ten books on science and

*SBC News* **2017**

The Borneo Post - 10th February 2017

## Kuching to host 10th International meeting of ASCM in October

**KUCHING:** The 10th International Meeting of the Asian Society of Conservation Medicine (ASCM) will be held at the Damai Beach Resort in Kuching from Oct 20 to 23.

With the tagline 'One Health in Asia Pacific', ASCM aims to establish an Asian Pacific network for conservation medicine, including zoonotic and wildlife diseases surveillance as well as ecosystem health.

The annual conference was last held in Taipei, Taiwan, and this year is the first time it will be held in Sarawak.

Chairman of ASCM 2017 Dr Reuben Sunil Kumar Sharma hoped that the conference will attract more participants from the region especially Korea, Taiwan and so forth.

"We have about 300 participants both international and local annually but we are hoping more people will come this year," he told a press conference held at Grand Margherita Hotel here yesterday.

Present were Assistant Minister for Science Research and Biotechnology Dr Annuar Rapsee, ASCM secretary Dr Alice Lau Ching Ching, Universiti Malaysia Sarawak (Unimas) Head of Department of Zoology Associate Prof Dr Mohd Azlan J. Azad and Damai Beach Resort general

manager Manshor Yusup.

Dr Annuar noted that Sarawak, with its rich biodiversity, makes it an ideal location to converge specialists, experts and professionals in different fields of study to zoom into conservation medicine and beyond.

"The rich biodiversity allows us to see and study the pattern of diseases as changes in the environment will definitely affect not only animals but human beings as well," he said.

"The research into development of animal diseases are equally important as it is an area that is not easy to tackle. For example, leptospirosis that originated from mice, diagnosing and treating the disease is not easy," he explained.

In bringing together ecologists, zoologists, veterinarians, medical practitioners, environmental experts and specialists in other fields, Dr Annuar pointed out that the conference was a crucial platform to further study on ways to tackle various diseases and related problems not only in Asia but around the world.

The movement of the human population is fast nowadays and we have to face and address some of the important issues urgently including zoonological diseases," he said.

"With Unimas on board in



Dr Annuar (second right) together with (from left) Dr Lau, Dr Reuben, Dr Azlan and Manshor in a group photo after revealing the poster of the 10th International Meeting of the Asian Society of Conservation Medicine (ASCM).

organising this conference, we hope to do some research collaboration because there are enormous potential in our biodiversity," he added.

Elaborating further, Dr Annuar revealed that the Sarawak Biodiversity Centre (SBC) has been tasked to create an inventory on substances which can be used for health.

"We have identified more than

20,000 substances which can be used in the future," he said.

One of the important plants involved are the Bintangor species which he said can be used to fight against HIV (human immunodeficiency virus).

"The first phase in its study and research has been completed and we are about to embark on phase two soon. Budget to conduct research and trial are huge and

we are still looking for partners," he said.

"The result obtained thus far has been very encouraging in terms of fighting HIV," he added.

In light of the discovery, he thus stressed the importance of conservation and protection of the state's biodiversity and ecosystem for human wellbeing and health as well as economy.

Meanwhile, Dr Azlan pointed

out that the conference is vital to send a strong message that Sarawak is concerned and aware of the importance of animal welfare and wildlife conservation to the international community.

Registration to the conference will be open on March 1, with a special early bird price of US\$150 for all registrations made between March 1 and May 31.

The normal rate thereafter is USD180 per person and a special price of US\$60 for students up to the last day of registration on Sept 20.

The conference includes pre-congress educational workshops on Oct 20.

In line with the event, ASCM is also calling for submission of original papers.

The categories for paper submission are basic science, infectious diseases, marine mammal, primate, bear, elephant, avian medicine, clinical medicine, reptile and amphibian, parasitology, pathology, wildlife management and conservation, rehabilitation medicine and networking.

Registrations can be made through ASCM website at [www.ascm2017.com](http://www.ascm2017.com).

For more information on the event, email [editor@ascm.org](mailto:editor@ascm.org) (A11c) or [fifi@placeborneo.com](mailto:fifi@placeborneo.com) (F15) or call 082-555189.

The Borneo Post - 7th April 2017

## Mitsubishi Corp, SBC in 3rd phase of microalgae research

**KUCHING:** Mitsubishi Corporation (MC) and Sarawak Biodiversity Centre (SBC) yesterday moved into Phase III of their research collaboration to implement an outdoor facility to demonstrate and validate commercially viable microalgal biomass production technologies with the technical assistance of Japanese biotechnology organization, the CHITOSE Group.

The collaboration will devise new designs in cultivation technology on a long term semi-continuous basis and generate knowhow to upscale production of indigenous algal strains to reach market size and is extended until next year.

Chief Minister Datuk Amar Abang Johari Tun Openg witnessed the official exchange of agreement documents at SBC between deputy general manager of New Business Development Office, Energy Business Group CEO Office Tokyo, Nunji Nakanishi on behalf of MC and SBC chairman who is also State Secretary Tan Sri Datuk Amar Mohamad Morshidi Abdul Ghani.

The collaboration between MC and SBC is a joint effort towards the commercialisation of microalgae research that combines industrial biotechnology and the unique bio-resources from the state to provide an answer to global demand for sustainable feedstock from renewable sources.

The collaboration specifically aims to develop a large scale outdoor microalgae cultivation system which consists of 1,000 m2 closed photobioreactors to inform the engineering and construction of a larger commercial facility in the state.

Microalgae are the sustainable feedstock for aquaculture and important high value biochemicals and anti-oxidants.

It is vital as food to not only fish species, but also to shellfish, abalone and crustaceans, and the high value bio-chemicals contained in various algae strains can be harnessed to supply growing demands for health supplements.

The collaboration between MC and SBC, which started since 2012, in the previous phases established a collection of 500 microalgae strains isolated locally from various locations in the state, including rivers, lake, brackish and coastal waters.

Laboratory research at SBC in Semenggoh identified several strains of microalgae, which are robust and have desired bio-chemical contents suitable as supplements.

The Borneo Post - 30th March 2017

## SBC chief leads state award recipients

**KUCHING:** Sarawak Biodiversity Centre (SBC) CEO and Sarawak Biodiversity Council secretary Dr Yeo Tiong Chia led the list of 141 individuals to receive state awards yesterday.

Head of State Tun Pehin Sri Abdul Taib Mahmud presented the awards at Astana Negri.

Yeo was among the 11 recipients for the Darjah Utama Yang Amat Mulia Bintang Koryal Sarawak - Pegawai Bintang Koryal Sarawak (PBK). Bernama reported that the other recipients were Jun Silah, Laing Jok, Michael Chin Apau, Marsili Bakar, Hahuyah Awi, Ng Peng Seng, Osaha Suhaili, Rahim Unsang, Sulaiman Saikh Abdul Kadir and Yusoff Bujang.

There were 19 recipients for the Pingat Pentadbiran Awam Pingat

Perkhidmatan Bakti (PPB) and nine recipients for the Darjah Yang Amat Mulia Bintang Sarawak Ahli Bintang Sarawak (ABS).

For the Darjah Utama Yang Amat Mulia Bintang Kenyalang Sarawak - Ahli Bintang Kenyalang (ABK) there were 39 recipients, 19 recipients for the Pingat Pentadbiran Awam Pingat Perkhidmatan Terpuji (PPT), and 47 recipients for the Darjah Yang Amat Mulia Bintang Sarawak - Bentara Bintang Sarawak (BBS).

Among those present at the ceremony were Taib's wife Toh Puan Datuk Patinggi Pangsia Kurdi Taib, Deputy Chief Minister Tan Sri Datuk Amar Dr James Jemut Masing, and State Legislative Assembly Speaker Datuk Amar Mohamad Asfia Awan Nassar.



Taib presents the PPB medal to Marzuki Ismail.



Yeo shakes hands with Taib after receiving his medal.



Abang Johari (second right) signing the official plaque of the Nature Trails, witnessed by (from left) Len, Morshidi, Ik and Yeo.



Abang Johari (third right) taking a closer look at the orchid which is grown for its essential oil. — Photos by Chimon Upon and Kong JI.

## Abg Johari urges SBC to commercialise research findings

**KUCHING:** Sarawak Biodiversity Centre (SBC) should broaden its scope by converting their research findings into commercial uses, said Chief Minister Datuk Amar Abang Johari Tun Openg.

He pointed out that while Sarawak is rich in biodiversity and natural resources, it lacks practical and commercial applications that can bring not only real solutions to the world but contribute to the state's economic and knowledge growth.

"There is a lot of hidden wealth in SBC, thus it's important that they further their activities not only by focusing on research and development but in product development, marketing and

commercialisation of their research findings," he said.

"All these stress further the importance of why we need to preserve and protect our environment," he highlighted after a briefing on SBC and its key activities by the centre's chief executive officer (CEO) Dr Yeo Tiong Chia on Wednesday.

Abang Johari had earlier launched SBC's Nature Trails and witnessed the exchange of documents on collaboration between Mitsubishi Corporation and SBC at the centre along Jalan Borneo Heights in Semenggoh here.

With a library of research findings, which are useful and

commercially viable, Abang Johari believes that the centre can attract both domestic and foreign investors including small and medium entrepreneurs based on their needs and interests.

"We will discuss with the Cabinet on this matter especially the need to set up a central council or an investment arm to tap into the commercial aspects as obviously there is huge impact on our economy," he said.

Abang Johari later pledged to help SBC develop this missing commercial link and exploit the benefits of its intellectual property.

"We will get the venture capital from the state government and

work with SBC as well as other interested parties to develop the business aspect here because there's definitely a great potential," he added.

Earlier, he urged SBC to focus on mass production of the *Litsara* plant that produces essential oil from its leaves and fruits for commercial uses, especially in the cosmetics industry.

"We can create a plantation if this plant has the potential to generate higher value per hectare like the oil palm. Saberkas (Sarawak United National Youths Organisation) has a 600-acre land in Samarahan where you can plant to supply for the cosmetics industry," he suggested.

"So, I'll give you (SBC) now until October to come up with a proposal to develop this *Litsara* plant for the commercial market. The future is very bright for this sector and we will back you up," he added.

On the Nature Trails, SBC now offers an interesting trekking experience along its two nature trails which consist of Ecology and Discovery trails.

The Ecology trail passes through two distinct ecosystems in the alluvial forest and old lowland secondary forest, while the Discovery trail passes through a lowland rainforest which has been disturbed around the 1940s.

These two trails are open to

visitors via reservations or pre-arranged appointments. Each trail is limited to a maximum of 15 persons at any one time.

The guided trekking activity for each trail takes about an hour. The main objective is to promote environmental education and conservation as well as providing a unique rainforest experience to learn about plants and scents to visitors.

State Secretary Tan Sri Datuk Amar Mohamad Morshidi Abdul Ghani, Assistant Environment Minister Datu Len Talif Salleh and permanent secretary to the Tourism, Arts and Culture Ministry Datu Ik Pahon were among those present.

New Sarawak Tribune - 20th April 2017

# SBC, Interhill Group ink agreement to promote LitSara products

BY DOREEN LING

**KUCHING:** Collaboration with Interhill Group marks the first-ever corporate partnership for the introduction of Sarawak Biodiversity Centre's (SBC) LitSara products.

Interhill Group which owns both Pullman Kuching and Pullman Miri Waterfront Hotel, took it as the group's corporate social responsibility (CSR) initiative to give back to the indigenous community.

According to State Secretary, Tan Sri Datuk Amar Mohamad Morshidi Abdul Ghani, the collaboration will create a more positive impact as it will not only promote the hotels and products, but also give back to the community.

"I am pleased that the hotels involved stepped up to create a positive impact by being the first hotel to pick up this benefit-sharing project.

"We also wish to see more of this kind of support for local products developed by researchers," he said during the launching of the CSR collaboration and exchange of documents between Interhill Group and SBC at Pullman Hotel here, yesterday.

Morshidi, who is also chairman of Sarawak Biodiversity Council, said that this will help to promote the state's own research products to enter the global market.

"Sarawak is rich with flora and fauna and there's so many traditional knowledge that is still



**STATE** Secretary Tan Sri Datuk Amar Mohamad Morshidi Abdul Ghani (8th right) who is also chairman of Sarawak Biodiversity Council and Interhill Group executive director, Albert Hu (6th left) exchanging the signed agreement documents.

untapped, so we would like to see this being promoted as well," he said.

The signed agreement documents were exchanged between Morshidi and Interhill Group executive director, Albert Hu, witnessed by SBC CEO, Dr Yeo Tiong Chia.

Under the agreement, LitSara products will be displayed for sale

at both Pullman hotels in Kuching and Miri.

LitSara products consist mainly of an essential oil extracted from a tree known as 'Litsea Cubeba' which grows in abundance in the highlands of Sarawak.

For many years, it has been used by members of the indigenous communities for both its medicinal and culinary values.



**STATE** Secretary Tan Sri Datuk Amar Mohamad Morshidi Abdul Ghani who is also chairman of Sarawak Biodiversity Council at LitSara souvenir booth set up at Pullman Hotel Kuching. PHOTOS: DOREEN LING



Morihidi (right) shakes hands with his after exchanging an agreement for the collaboration on the sale of LitSara products.



Morihidi points to LitSara essential items after the product launch.

## Group, SBC ink deal on sale of LitSara products

By Jonathan Chia  
jonathan@borneopost.com

**KUCHING:** Intersihill Group, the company that owns Pullman Kuching and Pullman Miri Waterfront Hotel, entered into an agreement with Sarawak Biodiversity Centre (SBC) for collaboration on the sale of LitSara products during the product launching ceremony at Pullman Kuching yesterday.

LitSara is the trade name for an essential oil extracted from a tree known as Litsea sebala. The tree grows widely in the highlands of Sarawak, and has been used over generations by the indigenous communities for both healing and culinary purposes.

This agreement between SBC, Intersihill Group, Pullman Kuching and Pullman Miri Waterfront marked the first ever corporate partnership for the LitSara products. The collaboration is part of Intersihill's and its hotels'

corporate social responsibility (CSR) initiative in giving back to the indigenous community.

Intersihill Group executive director Albert Ho signed the agreement on behalf of Intersihill Group. Intersihill Group's hospitality division chief operating officer Eric Tan signed on behalf of Pullman Kuching and Pullman Miri Waterfront while SBC was represented by its chairman Tan Sri Datuk Amar Mohamad

Morihidi Abdul Ghani and chief executive officer Dr Yeo Tieng Chia.

In his address, Morihidi said he was pleased that Pullman Hotel and Intersihill Group of Companies had stepped up to create a positive social impact by being the first hotel chain in Sarawak to pick up on a benefit sharing project, through the sale of LitSara essential oils.

Morihidi said this was the start to more sustainable biodiversity based products to come from the state's forest, based on the knowledge of the local people

and the increasing research capabilities of the researchers.

"This is why, I ask you to promote this well, with your corporate clients and in-house guests, and play on the strengths of how Sarawak has become first in Malaysia to put in place benefit sharing for its indigenous communities through the sustainable use of their biodiversity."

He said the state government had worked long and hard to put in place access and benefit sharing provisions in the Sarawak Biodiversity Centre Ordinance to facilitate and enable a conducive research environment in Sarawak, and at the same time endorsing that the communities are recognised for their traditional knowledge and efforts in conservation and sustainable use of biodiversity.

"In the long run, we are targeting for such efforts to become new areas for wealth generation or alternative socio-economic

activities that communities in the rural areas can be involved in. This is also consistent with our plans for rural development in Sarawak."

Meanwhile, he said throughout the years, Intersihill Group had been looking at various ways to reach out to the local community, either through partnership or collaboration with selected partners.

He added that when the opportunity of LitSara project came about, their initial response was "what could be more amazing than working together with SBC in creating a platform not only in helping the indigenous community but also in creating a stronger awareness in showcasing the capability of our biodiversity entry."

The thought that came through our mind was how can we at Intersihill contribute a great value to this collaboration, to the people of Sarawak and the

economy of Sarawak, after all it is undeniable that SBC has spent a great amount of time, energy, research and development for this world class LitSara project."

For a start, he said Intersihill Group, through its hospitality division, will contribute in promoting and selling LitSara products, whereby all the products will be available at Pullman Kuching and Pullman Miri Waterfront Hotel lobby.

Furthermore, a specially designed booth dedicated for LitSara products will also be built and all the profits from the products will then be allocated to the indigenous community who are involved in the production of LitSara products.

The communities that have made the LitSara project possible are the Bidayuh of Kpg Kating in Palawan, the Kelabit of Pa'Ulat and Pa'Langgan in Baris and the Lan' Bawang of Long Karamangan and Long Telangan in Lawas.

## Educational activities featured at Biodiversity Day event

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will hold the annual Biodiversity Day event on 20 May at its premises at Jalan Borneo Heights in Semengoh.

SBC's Biodiversity Day is held annually in conjunction with the International Day for Biological Diversity. The international event is observed every 22 May.

Various exciting and interesting activities which revolve around experiential learning await members of the public during the one-day event.

These include exhibitions, demonstrations and sales of work by indigenous communities, government agencies, hands-on science based activities, nature trail treks and sales of plant seedlings.

School children between the ages 10 and 12 will also have the opportunity to participate in a contest to create pieces of art, using recyclable materials.

Those interested in participating in the contest can obtain the entry form from SBC or download it from [www.sbc.org.my](http://www.sbc.org.my).

The deadline for contest entries is 17 May and attractive prizes await the creative talents and all participants will also receive certificates of participation from the Centre.

SBC's Biodiversity Day aims to create awareness on Sarawak's local biodiversity, the abundance

of related traditional knowledge amongst its indigenous communities, the potential biodiversity holds in leading towards new discoveries, as well as research and development undertaken by the State.

The activities are specially designed to create a learning experience, and are recommended for students of all ages, and families with children.

The event also aims to inculcate an interest in the fields of science and technology among school children.

Visitors to SBC on 20 May are advised to adhere to directional signs to park their vehicles at parking spaces allocated at the nearby Agriculture Research Centre and Rajah Charles Brooke Memorial Hospital. Shuttle services will be provided at these locations, to and fro SBC.

Admission to this event is free. Those who wish to find out more about the activities can contact Ms Nurulizza Murtadza or Ms Constance Vanessa Victor via telephone (082-610610) or email [nurulizza@sbcc.org.my](mailto:nurulizza@sbcc.org.my) / [constance@sbcc.org.my](mailto:constance@sbcc.org.my).

Information on the event can also be viewed at SBC's website ([www.sbc.org.my](http://www.sbc.org.my)).

Social media users are encouraged to "like" SBC's Facebook page ([www.facebook.com/sarawak.biodiversitycentre](http://www.facebook.com/sarawak.biodiversitycentre)) for updates.

## Public talk to explain how 'Everything is Chemistry!'

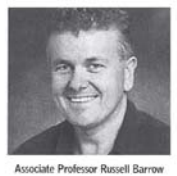
**KUCHING:** The Sarawak Biodiversity Centre will hold a public talk entitled 'Everything is Chemistry!' at 3pm on May 27 at Chinahouse, Old Courthouse in Kuching.

Associate Professor Russell Barrow from the Research School of Chemistry at Australian National University will present the wonders of chemistry and the many ways it impacts people's lives.

Barrow's areas of research include naturally-occurring chemicals, reactions they produce in organisms, bioprospecting of these natural chemicals, and their organic synthesis.

Those interested to attend the talk can email their names and contact details to [biosar@sbcc.org.my](mailto:biosar@sbcc.org.my).

Alternatively, call Constance Nurulizza on 082-610610.



Associate Professor Russell Barrow

# Biodiversity Centre's public talks on 26 and 27 May

**KUCHING:** The Sarawak Biodiversity Centre will hold two public awareness talks on 26 and 27 May at Chinahouse, Old Courthouse here.

The first talk on 26 May is entitled "Marine Biodiversity as a Starting Point for Drug Discovery and Development", and will be presented by Dr Hendrik Luesch.

The talk will begin at 7.30pm.

Dr Luesch is the Director of the Center of Natural Products, Drug Discovery and Development at the University of Florida, and co-founder and CSO of Oceanyx Pharmaceuticals, Inc.

During his talk Dr Luesch will present an overview of natural products from marine biodiver-

sity, and interesting experiences he has encountered through his pursuit from discoveries from marine biodiversity. He will also provide an insight into his team's research findings.

The second talk on 27 May will start at 3.00pm and will be delivered by Dr Russell Barrow.

Dr Barrow is an Associate

Professor with the Research School of Chemistry, Australian National University.

Titled "Everything is Chemistry", Dr Barrow's talk will demonstrate how chemistry plays a large role in our daily lives - from the recipes that we cook to the shampoo that we use to wash our hair.

Both talks are open to mem-

bers of the public, and are free of charge.

Those interested in attending these talks can register by providing their names and contact details via email to [biosar@sbcc.org.my](mailto:biosar@sbcc.org.my) or by calling Mr Ha-Mim or Ms Nurulizza at 082-610610.

Encl: photos of Dr Hendrik Luesch and Dr Russell Barrow

The Borneo Post - 20th May 2017

## Sarawak Research Council to be set up to coordinate R&D activities

SARAWAK Research Council will be set up to coordinate and support actions for all research and development (R&D) activities in the state.

Minister of Education, Science and Technological Research Dato Sri Michael Manyin said the lack of coordination was hampering the progress towards a high income economy by 2030.

"Many organisations are doing researches now but there is no coordinator. With a proper structure, the council will coordinate researches so they don't have to work in silo," he said in his winding-up speech yesterday.

"Research, development and innovation are keys to Sarawak's economic growth and to position Sarawak as a competent global player.

"We have over the years continually funded our research organisations so that we can

harness our research and development activities towards improving productivity, quality of life and subsequently a high income economy."

To achieve a high-income economy status, Manyin said Sarawak must leapfrog through research, development and commercialisation.

"It is a known fact that innovation drives economic growth. At the heart of innovation is research and development that produces new knowledge, techniques and technologies through findings."

With Sarawak being rich in biodiversity and natural resources, Manyin said it was time to bring out its value through R&D to find solutions to various human problems.

"Our pursuit for scientific and technological knowledge begins with applied research, be it from a conservation point

of interests or from which findings can be commercialised or translated into solutions to address the needs in various sectors of industries," he added.

The industries include biomedical, bio-industry, bio-engineering, forestry and environment.

He also disclosed there were several research agencies in Sarawak - CRAUN Research, Agriculture Research Centre (ARC), University Malaysia Sarawak (Unimas), Sarawak Tropical Peat Research Institute (Tropi) and Sarawak Biodiversity Centre (SBC) doing R&D on nipa, marine and other resources.

To a question from Wilson Nyabong (BN-Pelagus), Manyin said there was no immediate plans to set up a biodiversity research centre in Kapit. Research on biodiversity is currently being carried out by the relevant agencies such as SBC.

The Borneo Post - 17th August 2017

## Research council framework to be tabled

KUCHING: The legal framework for the state's first research council is ready and will be tabled during the state cabinet meeting next month.

Minister of Education, Science and Technology Research Dato Sri Michael Manyin Jawong said the next step would be to table the framework during the State Legislative Assembly (DUN) sitting in November.

"My ministry, together with SAG (State Attorney General) and several other agencies, have already come up with the legal framework for the council," he told a press conference after representing Chief Minister Datuk Amar Abang Johari Tun Openg at the opening of the International Conference on Development, Environment and Society (ICDES 2017) yesterday.

He added that the Sarawak Research Council is expected to start work on Jan 1.

Stressing the importance of the research council, he explained there were a number of agencies or organisations conducting research in Sarawak but in isolation or independently.

"They include Sarawak Tropical Peat Research Institute (Tropi), Sarawak Biodiversity Centre (SBC), Craun Research Sdn Bhd as well as forestry and others," he said.

"At the moment, there is no coordination or collaboration between these organisations. They are doing research 'in silos' so we do not know what they are doing or the results or how to commercialise the results."

Manyin pointed out the need to look into the results, impact and commercial value of research conducted outside universities.

He added all agencies would be invited to be members of the research council.

Chief Minister Datuk Amar Abang Johari Tun Openg announced last month that the state was in the process of setting up the research council to coordinate and support actions for all research and development.

Abang Johari said the proposed council would be given regulatory power in research.

The Borneo Post - 10th November 2017

## R&D bodies will soon be able to claim percentage of IP rights

RESEARCH bodies in the state will soon be able to claim a percentage of the intellectual property (IP) rights arising from their research and development (R&D) findings with the establishment of Sarawak Research and Development Council.

Minister of Education, Science and Technological Research Dato Sri Michael Manyin said this would serve as an incentive for the researchers, and strengthen their R&D.

"Currently, a few research institutions here are conducting researches but each one is doing the research in silo. The government is providing them with funds but there is no coordination, collaboration and not much monitoring of the R&D.

"With this council, there is a body to work together with them, strengthen their R&D and even help them apply for funds. Through such collaboration, we will be able to get the results of the findings and work with them on ways to commercialise their findings," he told a press conference at the sidelines of the



Manyin (centre), flanked by Dr Anuar (left) and Sutarsono, fields questions from the press.

State Legislative Assembly (DUN) sitting yesterday.

He said researchers in other countries would be given a certain

percentage for the IP which can be as high as 30 per cent.

"But we have yet to decide on the percentage to be given

to researchers here. However, without sharing, nobody will initiate the research so (IP percentage) is an incentive for

them. "Rather than to curtail their work, it will strengthen their work."

Asked why there were no incentives given to research organisations here, Manyin said this was due to non-commercialisation of the R&D findings.

"So as a result, they (research bodies) don't get anything." Manyin, who has just returned from Cambridge in the UK, said he and delegation had a two-day discussion with Trinity College professors at Cambridge Academy of Therapeutic Sciences (CATS) on research.

"We had a discussion with a few professors together with the vice-chancellor and we found out that they have already started this IP initiative many years ago, and it is now very well established," he said, adding that R&D at the college was self-funded and did not receive a single cent from the government.

"This is all from the results of their research because it's taken by multi-national companies who are paying for the R&D."

Manyin said he has also invited Prof Christopher Lowe who heads CATS to visit Kuching early next month and while here, he would be dropping by Sarawak Biodiversity Centre (SBC) to look at other areas for the state to collaborate with the college.

He hoped that in the long run, research bodies in the state would be self-financing much like CATS.

In response to Chong Chieng Jen's question on the amount allocated to R&D in the state, Manyin said: "All in all, we have spent RM103.3 million for R&D under the 11th Malaysia Plan and this is about 0.08 per cent of the state's gross domestic product (GDP).

"The amount (RM103.3 million) is total funding the state government has allocated to various agencies in Sarawak."

Assistant Minister of Education and Technological Research Dr Annuar Rapa'ee and permanent secretary to the Ministry of Education, Science and Technological Research Datu Sudarsono Osman were also present at the press conference.

*SBC News* **2018**

The Sunday Post - 22nd April 2018

# Sarawak Biodiversity Council to commercialise its products

**KUCHING:** The Sarawak Biodiversity Council (SBC) has set its sights on commercialising products developed from its research and collaborations over the last two decades.

In a press statement issued yesterday in conjunction with its recent 49th council meeting, SBC explained this new focus on the commercialisation of its research findings would mean charting a new direction that will involve greater participation from the private sector.

This new direction would also involve specific development projects, such as a proposed Integrated Bio-Industrial Park for investors to establish their operations.

To date, SBC has received firm investment interest from Australia, Japan and China, among others.

In the long run, a Bio-Process Commercial Centre would also be considered, to enable SBC to commercialise market-ready products.

Currently, SBC is reviewing its list of selected collaborative partners as one of its first steps in its push forward towards greater commercialisation.

This new direction for SBC coincided with new leadership in the council, with Tan Sri Datuk Amar Wilson Baya Dandot appointed as its new chairman with effect from March 1 this



Wilson (left) with members of SDC and representatives.

year.

Wilson was appointed as a member of the council during the establishment of SBC in 1998.

This would be his second term as SBC chairman, as he previously served in the same capacity almost a decade ago in 2007 to 2009, during his tenure as state secretary.

Other new additions to the council this year include its deputy chairman Datu Sudarsono Osman, who is the Ministry of Education, Science and Technological Research permanent secretary.

The list of new council members also include Deputy State Secretary Datu Mohamad

Abu Bakar Marzuki, acting director of agriculture Dr Alvin Chai, and acting director of forests/controller of wildlife Hamden Mohammad.

During the meeting, the council members were briefed by SBC secretary Dr Yeo Tiong Chia, who is Sarawak Biodiversity Centre chief executive officer.

## Exciting activities lined up for Biodiversity Day 2018

**KUCHING:** A series of exciting Public Talks and hands-on science activities will be featured during the Biodiversity Day 2018 celebrations on May 12 2018, from 9am until 5pm at the fifth floor of the Imperial Hotel here.

Held for the very first time outside the Sarawak Biodiversity Centre's (SBC) own premises, the event is organised at a central location in efforts to make the celebration and activities more accessible to the general public.

SBC organises the Biodiversity Day celebrations annually in conjunction with the International Day for Biological Diversity (IBD) which is observed on May 22 each year.

This year, the IBD's theme of "Celebrating 25 Years of Action for Biodiversity" marks the 25th anniversary of the Convention on Biological Diversity (CBD) and highlights the achievements made by Parties to the Convention, at the local level.

Malaysia was the 64th country to ratify the CBD in June 1994 following the 1992 Rio Earth Summit, and Sarawak subsequently enacted

its Biodiversity Centre Ordinance in 1997 to sustainably manage and develop its biological resources; the first in Malaysia.

In line with the international theme of the IBD, the series of talks will kick off with a keynote address at 9.00am entitled Biodiversity, Ecosystem Changes and Conservation and Conservation in Malaysia by Prof. Emeritus Dato Dr. Abdul Latiff Mohamad who is a Research Fellow in Botany Conservation Biology at Universiti Kebangsaan Malaysia.

This will be followed with an intriguing talk on Green Intelligence by Veera Sekaran of Greenology, Singapore. Veera, founder and Managing Director of Greenology who coined the term "green intelligence" will talk about the application of smart solutions for urban greening which are integrated with science and technology.

Equally fascinating is the work carried out by the Institute of Biodiversity and Environmental Conservation (IBEC), UNIMAS, which was specifically established following the Rio Summit to address biodiversity

conservation research in Sarawak. Today, IBEC is known for its immense contribution to the field biodiversity conservation for Sarawak. During Biodiversity Day 2018, Prof Dr Andrew Alek Tuen, a research fellow at IBEC will talk about the research and interesting outreach activities that IBEC carries out.

For lovers of marine biology, and who want to more about the mysterious sea cow, or dugong, the organisers of Biodiversity Day 2018 have especially arranged for James Ball to speak about these increasingly threatened sea mammal. James, known as an avenger for marine life to many in the field of marine conservation is a researcher with the Sarawak Forestry Corporation.

Also lined in the series of talk on the day is a talk where traditional ecological knowledge is interwoven into interpretive communication the context of tourism. This will be presented Sarawak Forestry Corporation's Victor Luna Amin who is known for his intriguing talks on traditional knowledge and augury myths in biodiversity conservation.

Wildlife photography plays an influencing role in the success of Biodiversity conservation outreach. To talk about the challenges and how the work of a wildlife photographer can have an impact on conservation, will be Ch'ien Lee, a biologist turned photographer.

No stranger to the Bornean rainforest, Ch'ien's captivating wildlife photography have been used by international publishers including National Geographic, the Smithsonian and the BBC. All talks and activities featured during the Biodiversity Day 2018 are free and open to members of the public, and of all ages.

However, those who wish to attend these talks can contact the Sarawak Biodiversity Centre by calling 082-610610 to speak to Nurulliza Murtadza or Constance Vanessa Victor for an itinerary and to secure their seats at these talks.

They can also send an email to biosar@sbc.org.my to sign up for these talks, or alternatively leave a message on SBC's official Facebook page, [www.facebook.com/sarawak.biodiversitycentre](http://www.facebook.com/sarawak.biodiversitycentre)

CELEBRATING 25 YEARS OF ACTION FOR BIODIVERSITY

Mainstreaming Sustaining Safeguarding Enhancing Managing

Act 25 Biodiversity Targets <http://www.cbd.int/act25/>

**BIODIVERSITY DAY**  
in conjunction with the  
**INTERNATIONAL DAY FOR BIOLOGICAL DIVERSITY**  
2018

12 May 2018, Saturday  
9.00am - 5.00pm  
Level 5, Imperial Hotel, Kuching

[www.sbc.org.my](http://www.sbc.org.my) [biosar@sbc.org.my](http://biosar@sbc.org.my)

## Biodiversity Day 2018 promises exciting activities for visitors of all ages

**KUCHING:** A series of exciting public talks and hands-on science activities will be featured during Biodiversity Day 2018 this May 12, taking place on fifth floor of Imperial Hotel here from 9am to 5pm.

Held for the very first time outside Sarawak Biodiversity Centre (SBC)'s own premises, the annual event is held in conjunction with International Day for Biological Diversity (IBD) on May 22.

IBD'S theme for this year 'Celebrating 25 Years of Action for Biodiversity' marks the 25th anniversary of the Convention on Biological Diversity (CBD), and highlights the achievements made by parties to the convention on the local level.

The series of talks will kick off with a keynote address on 'Biodiversity, Ecosystem Changes and Conservation and Conservation in Malaysia' by

Universiti Kebangsaan Malaysia research fellow in botany and conservation biology Prof Emeritus Dato Dr Abdul Latiff Mohamad.

This will be followed by a talk on 'Green Intelligence' by Veera Sekaran - founder and managing director of Greenology, Singapore - that discusses smart applications on urban greening.

Prof Dr Andrew Alek Tuen, a research fellow at Institute of Biodiversity and Environmental Conservation (IBEC) in Universiti Malaysia Sarawak (Unimas), will talk about the institute's research and outreach activities to address biodiversity conservation in Sarawak.

James Ball, a researcher with Sarawak Forestry Corporation (SFC), will speak about the increasingly threatened sea mammal, the dugong.

Victor Luna Amin, also from SFC, will talk about traditional

knowledge and augury myths in biodiversity conservation.

Ch'ien Lee, a biologist-turned-photographer will share about the challenges and how the work of a wildlife photographer can have impact on conservation.

Ch'ien's captivating works on wildlife photography have been used by international publishers including National Geographic, the Smithsonian Institution and the BBC.

Entry to all talks and activities featured during Biodiversity Day 2018 is free to all members of the public.

Contact SBC at 082-610610 to speak to Nurulliza Murtadza or Constance Vanessa Victor for the itinerary and also to secure seats for the sessions.

Alternatively, email to biosar@sbc.org.my, or leave a message on SBC's official Facebook page via [www.facebook.com/sarawak.biodiversitycentre](http://www.facebook.com/sarawak.biodiversitycentre).

The Borneo Post - 8th May 2018

## SBC to hold Biodiversity Day on May 12

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will be holding Biodiversity Day at Imperial Hotel here on May 12 from 9am to 5pm.

The annual event aims to show students the potential the state's biodiversity holds, from a range of applications, pharmaceuticals to daily use items.

This year's celebration will feature interactive hands-on science based activities to enhance awareness about how science is incorporated into our daily lives during the one-day event, said SBC in a statement recently.

These activities will be categorised under themes - Scents of Life; World of Molecular Biology; Plant Culture for a Greener World; Chemistry of Life; Microbes Around Us; and the World of Biodiversity in Algae.

Visitors both children and adults will get the chance to experience a variety of science based games and activities.

The Biodiversity Day is held in conjunction with the International Day for Biological Diversity (IBD) which is observed on May 22 each year.

This year, the IBD's theme of 'Celebrating 25 Years of Action for Biodiversity' marks the 25th anniversary of the Convention on Biological Diversity (CBD) and highlights the achievements made by Parties to the Convention, at the local level.

In line with this international theme, a series of talks will be held at the same venue, beginning with a keynote address by Prof. Emeritus Dato' Dr Abdul Latiff

Mohamad who is a Research Fellow in Botany and Conservation Biology at Universiti Kebangsaan Malaysia.

This will be followed by a talk on Green Intelligence by Veera Sekaran of Greenology, Singapore, and another talk on the contributions of the Institute of Biodiversity and Environmental Conservation (IBEC), Universiti Malaysia Sarawak (Unimas) by Prof Dr Andrew Alek Tuen of Unimas.

The series of talks will continue with topics on dugong conservation, wildlife photography and incorporating traditional ecological knowledge in the context of tourism by James Bali (Sarawak Forestry Corporation), Ch'ien Lee (wildlife photographer) and Victor Luna Amin (Sarawak Forestry Corporation), respectively, before concluding with a talk by Dr Melvin Gumal on field research data and conservation interventions from orang-utan, elephant, tiger and marine work carried out in by the Wildlife Conservation Society in Malaysia

All talks and activities featured during the Biodiversity Day 2018 are free and open to members of the public.

Those who wish to attend the talks are required to register by calling SBC at 082-610610 (Nurulliza Murtadza or Constance Vanessa Victor).

Alternatively, an email to biosar@sbc.org.my to sign up or leave a message on SBC's official Facebook page, [www.facebook.com/sarawak.biodiversitycentre](http://www.facebook.com/sarawak.biodiversitycentre)



Students try out their hands at the 3D molecule activity at last year's SBC Biodiversity Day in this file photo.

# Sarawak Biodiversity Centre holds Biodiversity Day

**KUCHING:** The single factor that can mitigate ecosystem degradation, species loss and genetic erosion is good governance.

"The federal, state and local governments have the power but there are limits to what they can do," said Prof Emeritus Dato Dr Abdul Latiff Mohamad, Research Fellow, Botany and Conservation Biology, Universiti Kebangsaan Malaysia (UKM).

He gave a keynote address yesterday entitled 'Biodiversity, Ecosystem Changes and Conservation in Malaysia' during Sarawak Biodiversity Centre's Biodiversity Day, held in conjunction with the International Day for Biological Diversity 2018.

Responding to a question from the floor about what could be done about minimising climate change in Malaysia, he pointed out that each state had the power to change.

"Your state government has the power to do anything they want if they have the people, the resources, the vision for Sarawak," he said adding that some states might lack manpower or funds.

However other agents of change include non-governmental organisations (NGOs) as well as non-governmental individuals (NGIs).

"People like you and me. You can go to your leaders or to your assemblymen and ask them not to deforest an area, gazette an area as a national park, not to de-gazette a forest or destroy a heritage. You can do that. And being leaders, they just have to care more."

Environmental awareness within the country is still below

expectations, he said adding that people get away with a lot of environmental offences here that would get them fined in other countries.

Also present was Natural Resources and Environment Board Controller Peter Sawal.

Other public talks during the one-day celebration included Veera Sekaran of Greenology Singapore who talked about Green Intelligence (GI), a term that he coined for the application of smart solutions on urban greening integrated with science and technology.

Prof Dr Andrew Alek Tuen of Unimas spoke about his university's contribution to biodiversity conservation under the Institute of Biodiversity and Environmental Conservation (IBEC).

Sarawak Forestry Corporation's Victor Luna Amin next talked about 'Enhancing Biodiversity Conservation: Weaving Traditional Ecological Knowledge into Interpretive Communication in the Context of Tourism'.

Photographer Ch'ien C Lee spoke on wildlife photography and its role in biodiversity conservation, while James Bali from Sarawak Forestry Corporation talked about conservation of dugongs, a totally protected animal under the Wildlife Protection Ordinance 1998.

Rounding off the series of public talks was Dr Melvin T Gumal from Wildlife Conservation Society (WCS) with his talk on 'Conservation by Numbers: 58, 21, 11 and 8 - field Research Data and Conservation Interventions from Orang-utans, Elephants, Tiger and Marine



Students learn about water transportation process in plants.

Work in Malaysia'.

Meanwhile, both SBC and NGOs such as WWF and WCS had booths to promote conservation, showcase plants, and show the science of how plants work.

School students, who arrived by the bus-loads, milled around activity centres to learn about various facets of biology, earning little gifts for their participation.



Peter Sawal (left) presents Abdul Latiff with a token of appreciation after his talk.

The Borneo Post - 17th November 2018

## ICAAS delegates on 5-day Agri-Fam tour

**KUCHING:** The 5-day inaugural Agriculture Familiarisation Trip (Agri-Fam) 2018 from Oct 21 to 25, organised in conjunction with the International Conference on Agriculture and Agro-based Industry Sarawak (ICAAS) 2018 is a huge success.

The trip orchestrated the meeting of like-minded minds; experts in their respective agricultural specialisations which included researchers, academicians and invited national and international media.

With the theme, 'Transforming the Agriculture Sector Through Smart Farming', ICAAS 2018 showcased the leap taken into the future of agriculture in Sarawak to over 1,500 delegates.

In his opening speech, the Deputy Chief Minister and Minister of Modernisation of Agriculture, Native Land and Regional Development, Datuk Amar Douglas Uggah, said that the various notable agricultural transformation programmes which included the rapid adoption of digital technology was geared towards realising the chief minister's goal to make Sarawak as a net exporter of food by 2030 and thus, achieving his vision to make Sarawak as a developed and high-income State by 2030.

Highlights include best practices in smart or precision farming, public-private sector partnership, farmers' organisations and 'agropreneurs' in commercialising the agriculture sector.

A key component of the Conference was the introduction of the very first 'Sarawak Agrofest' - spanning over a total of nine days and featuring 210 booths offering a plethora of local products, ideas and innovations.

The event which was open to the public, featured a special Sarawak Smart Farming Pavilion; its insightful display was the advent of the latest modern technology.

The ministry's permanent secretary and deputy chairman of the State-level organising committee of Sarawak Agrofest 2018, Datu Ik Pahon Joyik, emphasised on the expansion



Delegates are being briefed by the SBC on various plants that they have.

of the ICAAS 2018 by reiterating the importance of theory and practical applications within the industry - a different approach to the very first edition of ICAAS that leaned towards academic orientation.

"This year's edition of ICAAS has been tailored to include a more practical approach and we have enlisted the involvement of pertinent organisations such as the Sarawak Farmers' Organisation, amongst many others to be involved and to share their in-depth experience and knowledge.

"We are optimistic that in the future, an expansion to include the participation of BIMP-EAGA and Asean nations to further increase collaborative learning will lead to joint breakthroughs for the region," he said.

The introduction of the inaugural Agri-Fam 2018 was a strong indicator of the committed partnership between Sarawak Convention Bureau (SCB) with the ministry since the launch of SCB's BESarawak Alliance (BESA) - the dedicated associate platform for government ministries and agencies to further Sarawak's economic transformation, which was launched two months ago.

As the state recognises the strength of a concerted approach towards the future of Business Events, the impact of this collaboration is manifold; with a highlight on Sarawak's unique biodiversity evident through the site visits encapsulated within

the programme of the Agri-Fam 2018.

Among the series of visits included one to the Sarawak Biodiversity Centre (SBC); a first of its kind in Malaysia to enact a biodiversity law in line with the Convention on Biological Diversity and the Nagoya Protocol (Access and Benefit Sharing).

Notably, with its unique 'Traditional Knowledge Documentation' programme, SBC has built an impressive inventory of biodiversity and a 'Library of Natural Products' with over 6,000 species that have been identified.

In addition, Agri-Fam 2018 participants caught a glimpse of a sustainably-rooted corporate initiative as showcased by Hornbill Agriculture whose hope is to create an awareness of 'Food Safety while increasing its productivity'.

Its practices include the utilisation of plant-based compost derived from organic waste that has been cultivated by probiotics.

Spanning over 135 acres to date as it continues to expand its production, the company currently focuses on sweet corn, papayas and 'terung Dayak' production.

Immediately after, a demonstration by social enterprise, WarmingUp; a waste management consultancy that utilises its own technology to ultimately reduce food waste efficiently took place.

*SBC News* 2019

The Borneo Post - 21st March 2019

## SBC seals benefit-sharing deal with native communities on sustainable biodiversity

**KUCHING:** Sarawak Biodiversity Centre (SBC) yesterday officially sealed a Benefit Sharing Agreement (BSA) with five indigenous communities under the SBC Ordinance 1997.

The five participating communities are the Bidayuh of Kampung Kiding in Padawan, Lun Bawang of Long Telingan and Long Kerebangan in Lawas, and the Kelabit of Pa'Ukat and Pa'Langun in Bario.

The BSA breaks new ground for Sarawak in becoming the first in the country to implement the Nagoya Protocol on access and benefit sharing, a major landmark for governance of genetic resources and traditional knowledge (TK) with benefit-sharing for its indigenous communities through the sustainable use of their biodiversity.

Present at the ceremony were SBC chairman Tan Sri Datuk Amar Wilson Baya Dandot, SBC chief executive officer Dr Yeo Tiong Chia and representatives from the indigenous communities.

The best practice adopted in the BSA presents three-fold benefits to the participating indigenous communities – recognition and respect of the communities' right to their biological resources and associated TK; ensure fair and equitable sharing of monetary and non-monetary benefits arising from the utilisation of biological

resources and associated TK, as well as promote the importance of biodiversity conservation.

Baya said the Sarawak government has worked steadfastly to put in place access and benefit-sharing provisions in the SBC Ordinance.

"The official signing of BSA presents new avenues for wealth generation through alternative socio-economic activities for the participating indigenous communities," he pointed out.

In addition, the agreement aligns with Sarawak government vision to move beyond traditional industries and explore alternative economic growth resource through science that fully taps into the state's rich biological landscape, he added.

Dr Yeo, meanwhile, said the strong association between TK and ethnobotanical research offers new opportunities.

"This is evident especially with the rapid growth of global wellness industry worth US\$3.7 trillion which is now three times larger than the pharmaceutical industry, making a strong business case for Sarawak to protect its rich biological resources," he said.

He added that SBC flagship programme on documentation of TK aims at empowering the indigenous communities through greater recognition of their rights and access to their knowledge.



Baya (fifth left) with Dr Yeo (third left) and Peter Sawal (fourth left) representing the Ministry of Urban Development and Natural Resources, and village chiefs from the five communities in a photo call after the signing of the BSA.

New Sarawak Tribune - 21st March 2019

## SBC collaboration market boost for LitSara products

**KUCHING:** LitSara has Sarawak Biodiversity Centre (SBC) to thank for in introducing and promoting its products to the public here.

It was after collaborating with SBC that its products, that use extracts from a tree known as Litsea Cubeba to produce essential oils, freshener and soap.

During the event of signing the Benefit Sharing Agreement (BSA) at SBC here yesterday, SBC Council chairman Tan Sri Datuk Amar Wilson Baya Dandot said, he believed under the LitSara Project, Sarawak could go many steps further in producing products that use natural resources.

"As for now we have successfully produced soap, essential oils, and shampoo by using extracts from a tree known as Litsea cubeba, and I believe that we could go further than this with placing five more products to be added such as perfume," he said.

According to a spokesperson involved in producing the product, she said they had found the tree and plant since 2016 before they could really start their project



A Sarawak Biodiversity Centre staff showing the seeds of Pahkak tree (Litsea Cubeba) and the product based from this tree next to her. Photo: Mohd Afif Noni

in producing items such as essential oil, soap and shampoo.

"It takes time for us to really breakdown all these plants for us to come up with the products, and we also add small amount of other items such as coconut oil to make it smell fresher," she said.

"We are actively involved in booths to sell the products that we have for us to reach to community on the plant that we use and also to remind them that there are still

natural resources that are useful to be used."

LitSara products are also sold at the SBC there for visitors and all the collected profits from the products will be allocated to the indigenous community who are involved in the production of LitSara products.

LitSara is also a project that involves the indigenous communities such as Kelabit, Lun Bawang and Bidayuh.

The Borneo Post - 27th April 2019

## SBC to hold annual 'Biodiversity Day' on May 4

**KUCHING:** The Sarawak Biodiversity Centre (SBC) will hold its annual 'Biodiversity Day' this May 4.

The public event will run from 9am to 5pm daily at SBC premises in Semenggoh along Jalan Borneo Heights. The Biodiversity Day is held in conjunction with the International Day for Biological Diversity (IBD), which is observed every May 22.

Various exciting and interesting science-based activities revolving around experiential-learning await members of the public during the one-day event.

These activities are categorised into themes – 'Microalgae', 'Breakthrough to Excellence', 'The Chemistry of Biodiversity', 'Scent and Wellness', 'Science in Your Everyday Life', 'Microbes Around Us', 'Together We Culture for a Greener World', 'Learning Plant's Structures', 'Wisdom of Traditional Knowledge' and 'Experience Native Wellness'.

Each theme is specially designed to create a fun-filled learning experience,

and all of them are recommended for students of all ages, and families with children. School-children between the ages seven and nine will also have the opportunity to take part in a colouring contest. Entry forms can be downloaded via [www.sbc.org.my](http://www.sbc.org.my).

The event aims to create awareness of Sarawak's local biodiversity, the abundance of related traditional knowledge amongst its indigenous communities, the potential biodiversity holds in leading towards new discoveries, as well as research and development undertaken by Sarawak.

SBC's 'Biodiversity Day' also aims to inculcate in school-children the interest in the fields of science and technology.

Visitors to SBC on May 4 are advised to adhere to directional signage, and park their vehicles at spaces allocated at the nearby Agriculture Research Centre. Shuttle services will be provided at this location, to and from SBC.

Admission to this event is free. To know more, contact Nurulliza Murtadza or Constance Vanessa Victor via 082-610610, or send emails to [biosar@sb.org.my](mailto:biosar@sb.org.my).

Social media users are encouraged to 'Like' SBC's Facebook page [www.facebook.com/sarawak.biodiversitycentre](http://www.facebook.com/sarawak.biodiversitycentre), where updates are also available.

# SBC celebrates Biodiversity Day

BY NAZMI SUHAIMI

**KUCHING:** Sarawak Biodiversity Centre (SBC) yesterday celebrated its annual Biodiversity Day at its building at Borneo Heights, Semengoh here.

"The theme for this year is Biodiversity, Food and Health. This is a part of our outreach programme to the public, especially the young children to encourage them to be interested in biodiversity, science and research," SBC chief executive officer Yeo Tiong Chia told reporters during the programme.

"One of the highlights is our work with the indigenous communities on traditional knowledge.

"We conduct research on their knowledge to see whether we can find an application for use in the wellness industry, herbal drug or even the pharmaceutical industry," he explained.

Yeo pointed out that the indigenous communities had taught SBC how plants were used for various purpose.

He said the centre had laboratories that enabled the staff to carry out research work with the full funding of the state



ARTWORKS on display at one of the booths.

government and collaborations from other partners.

On the targeted number of visitors for this year's Biodiversity Day, he said, "We did not target the specific number, but each year, we would have 1,000 to 1,500

visitors. But as of 9am today, we have received 500 visitors.

"We mostly target students.

Our work has a big impact on the kids, making them realise the importance of biodiversity



FRUITS and plants on display.

and science."

According to Yeo, what members of the public find amazing are the different products from plants that can be adopted for everyday life.

"The urban people can learn a lot from the indigenous plants used," he added.

Yeo hoped this year, more visitors would visit the centre and participate in the activities.

In conjunction with the SBC

Biodiversity Day, 33 booths were opened, offering various activities including a children's colouring contest and an exhibition.

On hand to promote their services and products were the Forest Department Sarawak, Wildlife Conservation Society, Sarawak Forestry Corporation and indigenous groups comprising the Ibans, Bagatan, Bidayuh, Salako, Lun Bawang and Tagal.



YEO explains how essential oils are made from flowers.



MEMBERS of the public visit the booths.

New Sunday Tribune - 7th July 2019

ALGAE CULTIVATION

## SBC to launch largest outdoor facility in Semenggoh

**KUCHING:** The Sarawak Biodiversity Centre (SBC), in collaboration with Mitsubishi Corporation (MC) will be setting another milestone for Southeast Asia with the launch of one of the largest outdoor algae cultivation facilities at Semenggoh here in August.

The algae facility which can yield up to 60 tonnes per hectare per year of dried algal biomass, is an optimised outdoor photo-bioreactor system that maximises yield and minimises cost by growing indigenous micro-algal strains.

The micro-algal strain is adapted to Sarawak's tropical environment in 24-m long, recyclable and economical thin plastic film and flat panel bags.

SBC chief executive officer Dr Yeo Tiong Chia said that Sarawak's tropical climate is an ideal environment for microalgae outdoor cultivation.

"Sarawak, with its abundance of sunlight and freshwater and a stable temperature throughout the year, has long been considered an ideal environment for maximising outdoor cultivation of microalgae for commercial products such as cosmetics, fine chemicals, pharmaceuticals and nutraceuticals, biofuels, fertilizers, food and feedstocks," he said.

"The high yields and cost efficiencies provided by our new facility represent a unique competitive advantage."

"The SBC-Mitsubishi research team together with the consultative support from Chitose Group successfully designed and developed the algae cultivation facility with a photo-bio reactor (PBR) system using recyclable and economically thin plastic film bag.

"It enables outdoor cultivation to harness the maximum sun light at an economical cost. Secondly, Sarawak's

indigenous microalgae strains can be quite robust despite temperamental climate changes because it is adapted to the local climate.

"The combined cost efficiency and high yield traits give our facility a competitive advantage with optimised production," he said.

The SBC-MC algae cultivation facility represents the culmination of a collaboration between the two organisations initiated in 2012 with the aim to identify useful microalgae indigenous to Sarawak for biomass, feedstock, biofuel, food, or health supplement production.

The facility, which was designed in collaboration with Japan-based Chitose Group and built at a cost of RM1.5 million (approx. US\$360,000), was completed in November 2018.

"With the renewable energy thrust for algae as a source of biofuels continuing to gain traction globally, the high lipid and carotenoid yields observed in Sarawak's indigenous microalgae strains represent a great potential," said Dr Yeo.

Meanwhile, MC general manager of Kuala Lumpur Branch, Genichi Ichikawa said that the effort to form the facility would be a boost to Sarawak.

"It is a great pleasure that our efforts in the collaboration research bear fruit in the form of new ground-breaking facility. Hoping it will contribute to the creation of bio-industry in Sarawak state," said Ichikawa.

Chief Minister Datuk Patinggi Abang Johari Tun Openg will officiate at the launch of the facility which will be attended by senior officials from Mitsubishi Corporation, Chitose Group and other corporate guests.

There will also be an exhibition on microalgae featuring compelling displays, commercial applications and future aspirations.

The Sunday Post - 7th July 2019

## SBC, Mitsubishi forge tie-up in mega algae cultivation project

**KUCHING:** Sarawak Biodiversity Centre (SBC) in collaboration with Mitsubishi Corporation (MC) is set to mark another milestone for Southeast Asia with the launch of one of the region's largest outdoor algae cultivation facilities, at Sarawak research valley in the Semenggoh area near here next month.

According to a statement, the SBC-MC algae cultivation facility is an optimised outdoor photo-bio-reactor (PBR) system that maximises yield and minimises costs by growing indigenous microalgal strains adapted to Sarawak's tropical environment, in 24m long, recyclable and economical thin plastic film, flat panel bags.

The facility is also expected to yield up to 60 tonnes per hectare per year equivalent of dried algal biomass.

The high surface area to volume ratio, optimal gas-liquid transfer, easy operation and minimal contamination risk afforded by the flat panel bags will result in an improved photosynthetic activity, high biomass productivity, and lower production cost.

According to SBC chief executive officer Dr Yeo Tiong Chia, Sarawak has an ideal environment for maximising outdoor cultivation of microalgae for the production of various commercial products, which include cosmetics, fine chemicals, pharmaceuticals and nutraceuticals, biofuels, fertilizers, food and feedstock.

"The high yields and cost efficiencies provided by our new facility represent a unique competitive advantage. The SBC-Mitsubishi research team

The SBC-Mitsubishi research team together with the consultative support from Chitose Group successfully designed and developed the algae cultivation facility with a PBR system using recyclable and economic thin plastic film bags that enable outdoor cultivation to harness maximum sunlight at an economical cost.

— Dr Yeo Tiong Chia, SBC chief executive officer

together with the consultative support from Chitose Group successfully designed and developed the algae cultivation facility with a PBR system using recyclable and economic thin plastic film bags that enable outdoor cultivation to harness maximum sunlight at an economical cost.

"In addition, Sarawak's indigenous microalgae strains can be quite robust despite climate changes because it is adapted to the local climate. The combined cost efficiency and high yield traits give our facility a competitive advantage with optimised production," Yeo added.

It is said that the facility is the culmination of the collaboration between the two organisations that was initiated in 2012 – aimed at identifying useful microalgae indigenous to Sarawak for biomass, feedstock, biofuel, food, or health supplement production.

The facility, which was designed in collaboration with Japan-based Chitose Group and built at a cost of RM1.5 million, was completed in November last year.

"With the renewable energy thrust for algae as a source of biofuels continuing to gain traction globally, the high lipid

and carotenoid yields observed in Sarawak's indigenous microalgae strains represent a great potential," said Yeo.

Meanwhile, Mitsubishi Corporation Kuala Lumpur general manager Genichi Ichikawa said it was a great pleasure that their efforts in the collaboration research had borne fruit in the form of the new, ground-breaking facility; he hoped that it would contribute to the creation of bio-industry in Sarawak.

The SBC-MC algae cultivation facility will be launched by Chief Minister Datuk Patinggi Abang Johari Tun Openg during an event that would also be attended by senior officials from the Malaysian government, Mitsubishi Corporation and Chitose Group, as well as representatives of several corporate players.

An exhibition on microalgae featuring compelling displays, commercial applications and future aspirations, would be run in conjunction with the event.

For further information on the algae cultivation facility's launch and corporate partner interest, contact Hii Mei Mei or Constance Vanessa Victor via 082-610 610, or send emails to biosar@sbc.gov.my.

## SBC booth showcases traditional natural products at RWMF2019

**KUCHING:** There is still time to visit Sarawak Biodiversity Centre's (SBC) booth at Rainforest World Music Festival (RWMF2019) in Sarawak Cultural Village today to experience the traditional wisdom of Sarawak's indigenous people.

SBC's booth with the theme 'Wild Scents of Borneo' is showcasing a new touch of wild scents and brand-new natural care products that are unique to Borneo.

For just RM15, visitors can take home any one 30ml natural body care and

one Do-It-Yourself (DIY) Aromatherapy Oil or DIY Natural Wild Potpourri sachet.

All proceeds from sales at SBC booth will be equitably shared with the indigenous communities of Sarawak through their Access & Benefit Sharing Project, in line with Nagoya Protocol (Convention for Biological Diversity).

Follow Sarawak Biodiversity Centre official Facebook page at <https://www.facebook.com/sarawak.biodiversity.centre> to get more information about their activities.

The Borneo Post - 15th August 2019



Hamden (third right) gives the thumbs up together with Len Talif (third left), Wan Lizozman (second right), Razaili (second left) and others as they pose at a photo-op spot at the carnival. — Photo by Muhammad Rais Sanusi

## 'Intensify research, product devt of NTFP to ensure quality, commercial value'

**KUCHING:** Research and product development on non-timber forest products (NTFP) should be intensified and expanded to ensure that NTFP in Sarawak possess high quality and commercial value to meet the needs and demands in the local and international markets.

This was stated by Sarawak Forest Department (SFD) director Hamden Mohammad, who said these efforts can only be successfully implemented through the support of and collaboration with multiple stakeholders to ensure sustainable development for a better future of NTFP in Sarawak.

"SFD is also actively implementing various activities for the NTFP Development Programme such as workshops, technical training, courses and study tours to enhance knowledge and skills of the community in NTFP-making, as well as to expose them to new ideas, creativity and diversity in the production of NTFP," he said at the opening ceremony of the NTFP Carnival Sarawak 2019 at Kuching Waterfront yesterday.

He shared that workshops and training sessions on making handicrafts from NTFPs such as rattan, bemban, pinang puteri or laka, herbs and spices such as cinnamon, cardamom, star anise and others were carried out by the department since 2009 in

collaboration with various agencies such as the Attitude Planet Art from Selangor and Malaysian Handicraft Development Corporation.

It also carried training on 'gaharu' inoculation with engagement of local communities in Ulu Mujok, Sarikei in collaboration with the International Tropical Timber Organisation, Indonesia. On the NTFP Carnival, Hamden said it has become an annual event of SFD since its inception in 2016 with the aim of promoting market and expanding business networks for NTFP produced by the local communities.

"Compared to the last three years, this year's carnival is organised on a larger scale and longer duration, which is seven days compared to five days previously.

"The carnival has brought together more local and international agencies including Sarawak Biodiversity Centre, Sarawak Craft Council, Sarawak Timber Industry Development Corporation, Malaysian Handicraft Development Corporation Sarawak branch, Pertubuhan Peladang, Harwood Timber Sdn Bhd, Craun Research Sdn Bhd, Sarawak Craft Council, Association of Research Development & Movement of Singai Sarawak, Sarawak Pay, Jaringan Orang Asli SeMalaysia as well as participation from forestry partners, Sabah Forestry Department and Forestry Department

of Peninsular Malaysia."

He said the participation from international agencies such as Ministry of Environment and Forestry Republic of Indonesia, NTFP-Exchange Programme Indonesia, The Centre for People and Forests Nepal, Laos Disable Women's Development Centre, Reakossa Arts, Cambodia and the Philippines can also serve as one of the best ways in advancing partnership and expanding networks in order to introduce, promote and widen the markets of the state's NTFP.

"The carnival has also opened up the opportunity for the local communities to share knowledge and experiences as well as to gain some fresh, new ideas on NTFP-making from other participants to ensure the sustainability of NTFP," he added.

Themed 'Advancing Partnership for Sustainability', this year's NTFP Carnival is held in conjunction with SFD's centenary celebration.

The carnival was officiated by Assistant Minister of Urban Planning, Land Administration and Environment Datu Len Talif Salleh who represented Chief Minister Datuk Patinggi Abang Johari Tun Openg. Also present were Ministry of Urban Development and Natural Resources permanent secretary Wan Lizozman Wan Omar and Beting Maro assemblyman Razaili Gapor.



Abang Johari (front, second left) listens to a briefing on ACF by SBC research officer Mohd Fadeli.

## Huge allocation slated for R&D in Sarawak under 12MP — CM

Jacob Achol

**KUCHING:** A substantial amount of funding will be allocated for research and development (R&D) in Sarawak under the 12th Malaysia Plan (12MP).

According to Chief Minister Datuk Patinggi Abang Johari Tun Openg, the huge allocation will also cover Sarawak Biodiversity Centre (SBC) for the scientific R&D of various plants, including algae.

He regards R&D as crucial, in view of Sarawak propelling towards digital economy, where artificial intelligence (AI) will play a more prominent role than it is now.

"At the same time, we are

also upgrading our digital infrastructure that will enable us to become successful in the era of digital economy," he said in launching the Algae Cultivation Facility (ACF) in SBC at KM20 of Jalan Borneo Heights near here yesterday.

Abang Johari said Sarawak was taking the necessary preparations to face digital economy - having set up Ministry of Education and Technological Research, emphasising on Science, Technology, Engineering and Mathematic (STEM) education, and accepting English as a key medium of communication.

The chief minister also said Sarawak would welcome foreign companies to participate in the

100-acre bio-industrial plant in Samarahan.

In this regard, he said it would further enhance the biodiversity industry in Sarawak towards commercial usage and also for the overseas market.

He pointed out that the plant would work closely with the SBC, with respect to R&D.

Apart from SBC, Abang Johari also said the government was willing to help the Bio-Valley in Miri to carry out scientific researches.

Deputy Chief Minister Datuk Amar Douglas Uggah Embas and SBC chairman Tan Sri Datuk Amar Wilson Baya Dandot were also present at the SBC yesterday.

New Sarawak Tribune - 28th August 2019

BY NAZMI SUHAIMI

**KUCHING:** Japan has thanked Sarawak for its significant role in the Japanese economy.

Mitsubishi Corporation senior vice president Kenji Ota lauded the state's role of making up about 20 percent of Japan's liquefied natural gas (LNG) import through Malaysia LNG Sdn Bhd.

"Our joint venture with Sarawak for more than 35 years along with Petronas enabled us to pull through good times and bad," he said at the launch of Algae Cultivation Programme at Sarawak Biodiversity Centre (SBC) here yesterday.

Kenji admitted that global market environment has become increasingly competitive and expressed his gratitude to the state for the cooperation.

"We look forward to serving Sarawak for many more years to

# Arigatou

## Mitsubishi chief thanks S'wak for being a boon to Japanese economy — through good times and bad

come," he said.

He also highlighted Mitsubishi's involvement in regeneration of Sarawak's tropical rainforests for nearly three decades.

"We have planted a total of 900,000 trees in Bintulu and Apeng since 1990 in partnership with Universiti Pertanian Malaysia (UPM)."

Kenji revealed that six years

ago, his corporation embarked on a joint study with the SBC to assist in the formation of an ecofriendly industry through microalgae.

"Naturally, working together with Mother Nature takes time but we have been able to overcome the time-consuming and often painstaking process of trial and error."

He opined that the completion

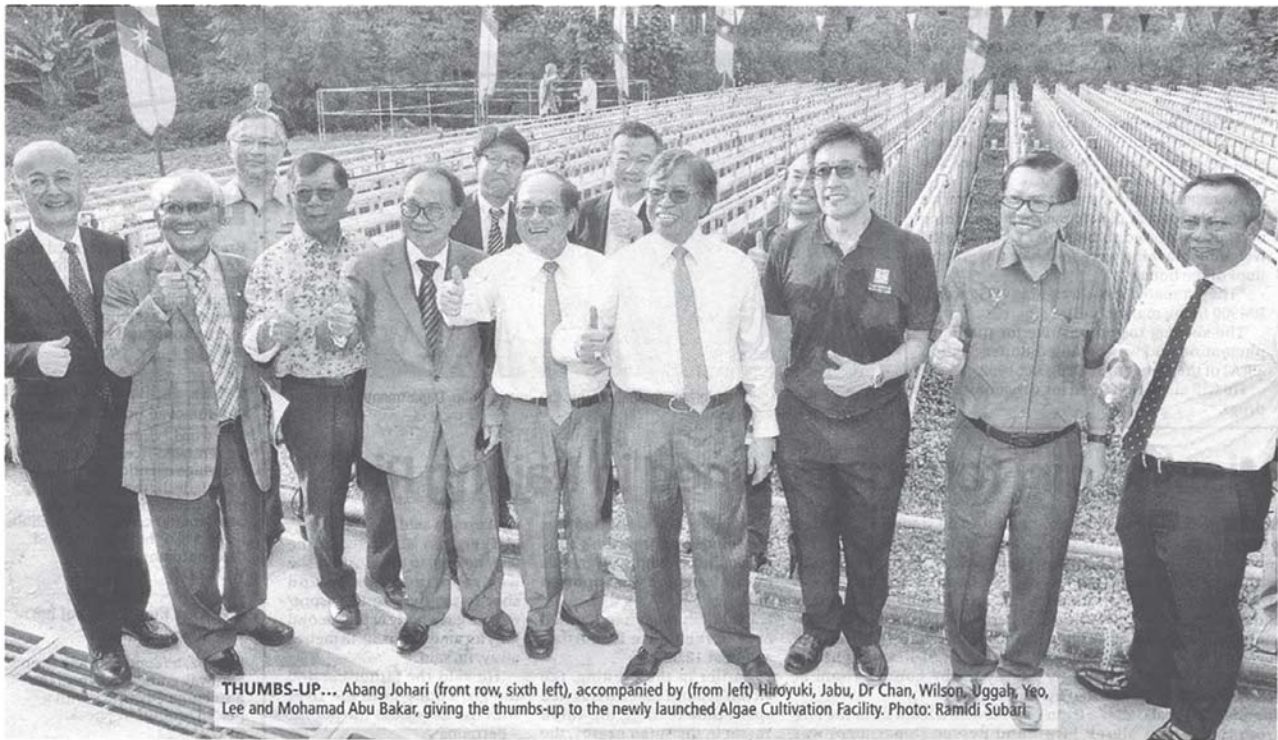
of the Algae Cultivation Facility gives light to a wide spectrum of potential businesses.

"It is a significant step towards the creation of an industry with countless potential applications ranging from the production of bio jet fuels, cosmetics, aqua feed and so forth," he explained.

Among those present were

Chief Minister Datuk Patinggi Abang Johari Tun Openg, Deputy Chief Minister Datuk Amar Douglas Uggah Embas, Deputy State Secretary Datuk Mohamad Abu Bakar Marzuki, Transport Minister Datuk Lee Kim Shin, Batu Kitang assemblyman Lo Khere Chiang, SBC chairman Tan Sri Datuk Amar Wilson Baya Dandot, Sarawak Science Research Advisor Tan Sri Datuk Patinggi Alfred Jabu Numpang, Sarawak Information Systems (SAINS) chairman Tan Sri Datuk Patinggi Dr George Chan Hong Nam, Petroleum Sarawak Berhad (Petros) chairman Tan Sri Datuk Amar Hamid Bugo, SBC chief executive officer Yeo Tiong Chia, and Japanese Embassy deputy chief of mission Hiroyuki Orikasa.

• See also story on page 3



**THUMBS-UP...** Abang Johari (front row, sixth left), accompanied by (from left) Hiroyuki, Jabu, Dr Chan, Wilson, Uggah, Yeo, Lee and Mohamad Abu Bakar, giving the thumbs-up to the newly launched Algae Cultivation Facility. Photo: Ramidi Subari

# Key to state's digital pursuits

## CM outlines nanotech, biotech and AI as important components

BY NAZMI SUHAIMI

**KUCHING:** Nanotechnology, biotechnology and artificial intelligence (AI) will be key fields to propel Sarawak's economic development in the digital era.

Chief Minister Datuk Patinggi Abang Johari Tun Openg highlighted this during the Algae Cultivation Programme launch at Sarawak Biodiversity Centre (SBC) here yesterday.

"Through our research, we will be able to position ourselves as a producer of green products," he said.

Abang Johari pointed out that Sarawak is rich in its algae resources and believed that through digitalisation, SBC can come up with more breakthroughs.

"Algae is 'lumut' in our local dialect, and with its cultivation, we can turn it into money. We hope it can produce a product for downstream activities."

He believes that SBC can be a strategic partner to the state government in their economic development.

"The state government will continue their support for SBC and their efforts. We allocated a huge sum towards research and



ABANG Johari launching the Sarawak Biodiversity Centre (SBC) Algae Cultivation Facility as (from left) Jabu, Wilson, Uggah, Kenji, Hiroyuki, and Yeo look on.

development activities in the 12th Malaysia Plan."

He noted that it is important to commercialise research and development findings

and revealed that the state is committed in this cause.

"It is high time that we work with investors to commercialise whatever findings from SBC.

This is by establishing a 100-acre bioindustrial plant in Kota Samarahan."

The chief minister noted that the state government has their own target in terms of developing the economy.

"We have our resources and investing in data analytic. Through that, we want to commercialise the resources that we have.

"I hope in the next 20 years, we will be able to produce products from our own R&D. That is why we have put a lot of emphasis on science," he explained.

On the subject of education, Abang Johari also revealed that Sarawak is always ready to adopt English as its main language in education.

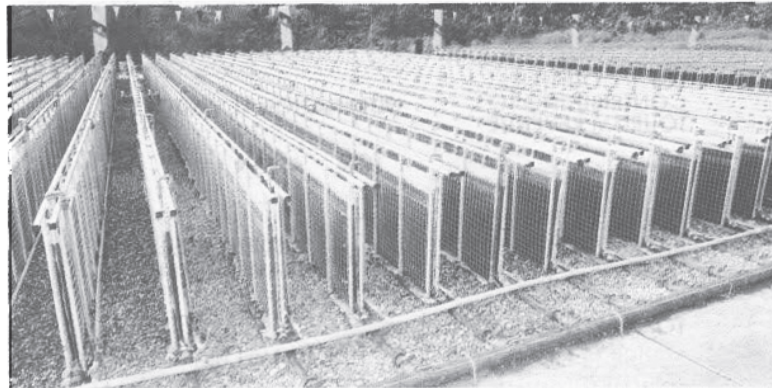
"That is why when Education Minister Dr Maszlee Malik floated the suggestion for us to adopt English, we agreed to it (the proposal).

"We don't care about the other

side (Peninsular Malaysia), if they want to quarrel (about the adoption of English), then let them be.

"The state is focused on our target, which is to transition into the digital era," he added.

Among those present were Deputy Chief Minister Datuk Amar Douglas Uggah Embas, Transport Minister Datuk Lee Kim Shin, Batu Kitang assemblyman Lo Khere Chiang, SBC chairman Tan Sri Datuk Amar Wilson Baya Dandot, Sarawak Science Research advisor Tan Sri Datuk Patinggi Alfred Jabu Numpang, Petroleum Sarawak Berhad chairman Tan Sri Datuk Amar Hamid Bugo, SBC chief executive officer Yeo Tiong Chia, Mitsubishi Corporation senior vice president and Natural Gas Group CEO Office general manager Kenji Ota and Japanese Embassy deputy chief of mission Hiroyuki Orikasa.



THE newly launched Sarawak Biodiversity Centre (SBC) Algae Cultivation Facility. Photos: Ramidi Subari

Forbes Online - 17th September 2019

3,362 views | Sep 12, 2019, 09:30am

## There Is More Money In The Borneo Rainforest's Biodiversity Than In Its Deforestation



**John Cumbers** Contributor @ Manufacturing  
Synthetic biology networker, founder & investor, space biogeographer.



Taman Nasional Tanjung Puting, Waringin Barat, Tik, Pulai, Kumal, Kabupaten Kotawaringin Barat, Kalimantan Tengah 74181, Indonesia. PHOTO BY JOSEF FRASCA/SHUTTERSTOCK

Some of the last remaining primary forests of Southeast Asia are found in Borneo, a biodiversity hotspot where you can still walk through ancient forests and prehistoric caves. The heavy wing beats of helmeted hornbills brings you a little closer to what may have been like when pterodactyls dominated the skies. Even today, countless new and exotic species remain to be discovered on the island.

9/17/2019

There is More Money in The Borneo Rainforest's Biodiversity Than in Its Deforestation

### Biodiversity: a cornerstone of modern antibiotics

Many of the antibiotics we use these days are so-called natural products. As the name implies, natural products are substances found in and produced by nature, and that have evolved desirable properties like activity against infectious microbes. Vancomycin — an antibiotic which has saved countless lives — is a perfect example of a natural product, discovered from a soil sample collected in Borneo.

Today, vancomycin is made via fermentation by specially engineered microbes that have the vancomycin chemical pathway pasted into their genomes. Over time, though, microbes evolve in response to the widespread use of drugs antibiotics. This gives rise to antibiotic resistance, and the need for newer, better drugs produced by nature.

### Leveraging Borneo's biodiversity to make the world a better place

That's where the SBC's work is focused. It has established a natural resource library consisting of over 25,000 extracts from plants and 29,000 from microbes. This library allows scientists to access the genetic richness of the rainforest without having to ferret off venomous snakes or endure arduous jungle treks to collect materials. The extract are shared with partners from industry and academia in a joint effort to bioprospect Sarawak's biodiversity and advance SBC's research.

But population growth and industrial development are inevitably contributing to an increasing loss of biodiversity: only 50% of forest cover remains today and 25% of forest cover been lost since the 1980, much of that due to converting virgin forest into oil palm plantations.

However, the incredible richness of Borneo's forests offers the opportunity for a sustainable future for both the wildlife and people of Borneo. Nestled amidst the giant trees and lushness of the rainforest, a biotech center in Malaysian Borneo is working to establish a new bioeconomy based on knowledge rather than resource usage.

Today in: Business

Initially charged with inventorying the species richness in the rainforest, the Sarawak Biodiversity Center (SBC) has quickly transformed into an active steward of Borneo's biodiversity. At the helm of SBC is Dr. Yeo Tiong Chia, a Borneo native who returned to Sarawak after obtaining his PhD in the U.S. As a boy, he saw the forests burned and replaced with oil palm. As a scientist, he now works incessantly to expand the center's activities to help unlock the biotechnological potential of Borneo's biodiversity before more of it is lost.



From left to right, Roddimer Anak Sabod from the Bidayuh tribe, one of the 27 ethnic groups in Sarawak, Dr. Yeo Tiong Chia and Prince Charles. DR. YEO TIONG CHIA

<https://www.forbes.com/sites/johncumbers/2019/09/12/there-is-more-money-in-the-borneo-rainforests-biodiversity-than-in-the-deforestation-of-09...> 2/5

9/17/2019

There is More Money in The Borneo Rainforest's Biodiversity Than in Its Deforestation



Biodiversity is not only important for also economically for global. The algae tree produces chemical, an anticancer and antiviral compound (patented for medicinal purposes).

One example is silvestrol, an anti-cancer and antiviral compound produced by Borneo's Aporosa trees. Protected by a patent owned by Sarawak, silvestrol exhibits anticancer activity comparable to existing chemotherapeutic agents but based on a unique mechanism of action. With cancer drugs being worth up to \$6.4B, with a growing market there is much to gain if the drug proves promising. More recently, silvestrol has also been reported to inhibit Ebola, Chikungunya, Zika and Hepatitis E in the lab. Research on the compound is being accelerated in collaborative projects in the USA, Germany, and other countries.

Bio-renewables are another area of opportunity for biodiversity regions, and microalgae are a particular topic of interest in Borneo. Microalgae are sun-powered, single-celled organisms that can be used as animal feed but are also capable of producing sugars and oils in sufficient quantities that they could be used as fuels and industrial chemicals. The search for new metabolites includes DNA studies of rare species, e.g. whole genome sequencing of novel microbes.

In a collaboration with Mitsubishi Corporation and CHITOSE Group, SBC helped make possible the launch one of the largest microalgae cultivation facility of its kind in Southeast Asia. Through the partnership, SBC has established a pipeline from

<https://www.forbes.com/sites/johncumbers/2019/09/12/there-is-more-money-in-the-borneo-rainforests-biodiversity-than-in-the-deforestation-of-09...> 3/5

9/17/2019

There is More Money in The Borneo Rainforest's Biodiversity Than in Its Deforestation

curation of local algal species to commercialization of products derived from those water algae.

These collaborations illustrate how public companies in the emerging bioeconomy can play a key role by supporting research, education, and the development of local expertise.

### Integrating local communities in the discovery process

On another front, SBC is also pioneering new ways of integrating local communities in the process of discovering new uses of Sarawak's biodiversity. Many of the plants analyzed have been identified from the traditional knowledge of local ethnic groups gathered under access and benefits sharing agreements.

In March of this year, SBC became the first institution in Malaysia to sign and implement the Nagoya Protocol on Access and Benefit Sharing with its local indigenous communities. In working towards governance of genetic resources and traditional knowledge that is fair and equitable, the SBC is a leader in the region on how a country protects and shares the benefits of its biological resources.

In the last two decades, building on the traditional knowledge of its indigenous communities, science research in Borneo has revealed value of its biodiversity at a molecular level. Preserving existing forests is essential to finding unique species that not only have great economic value but also incredible impact on human health and well-being.

SBC is Sarawak is a leading example of building a biodiversity-based regional bioeconomy. It's a story

of development that we need to hear more of not just in Southeast Asia, but around the globe.

Follow me on LinkedIn. Check out my website.



**John Cumbers**

I am the founder and CEO of SynBioHub, the leading community of innovators, investors, engineers, and thinkers who share a passion for using synthetic biology to build. [Read More](#)

<https://www.forbes.com/sites/johncumbers/2019/09/12/there-is-more-money-in-the-borneo-rainforests-biodiversity-than-in-the-deforestation-of-09...> 5/5

# close up

気になるニュース・技術・人物をピックアップ

**藻類バイオマス**  
への注目が再び高まっている。藻類バイオマスは、水質浄化やバイオ燃料、飼料などの用途が期待されている。また、藻類バイオマスは、CO2削減にも貢献できる。日本発の大量培養技術を活用した藻類バイオマス産業が本格化しようとしている。藻類バイオマスは、トウモロコシ、大豆などのバイオマス資源より単位面積の収穫量が桁違いに高く、効率的な一次生産が可能。藻類バイオマスは、世界で研究が進む。とくに赤道土壌に位置する国々は、季節間から藻類の大量生産に適しており「藻類メジャー」を目指す企業が輩出を伺う。化石燃料の代替としても期待される藻類の産業化に向けた動向や、植物由来の代表格であるバーム油産業が抱える課題を覗いた。



**ちとせ研究所**  
藻類活用本部長 **星野 孝仁**

## 「藻類メジャー」目指す

藻類バイオマスは、水質浄化やバイオ燃料、飼料などの用途が期待されている。また、藻類バイオマスは、CO2削減にも貢献できる。日本発の大量培養技術を活用した藻類バイオマス産業が本格化しようとしている。藻類バイオマスは、トウモロコシ、大豆などのバイオマス資源より単位面積の収穫量が桁違いに高く、効率的な一次生産が可能。藻類バイオマスは、世界で研究が進む。とくに赤道土壌に位置する国々は、季節間から藻類の大量生産に適しており「藻類メジャー」を目指す企業が輩出を伺う。化石燃料の代替としても期待される藻類の産業化に向けた動向や、植物由来の代表格であるバーム油産業が抱える課題を覗いた。

## 藻類バイオマス 立ち上がる緑の市場



培養した藻をエビ養殖を手がけるシーホーク社に飼料や水質調整剤として提供している

藻類バイオマスは、水質浄化やバイオ燃料、飼料などの用途が期待されている。また、藻類バイオマスは、CO2削減にも貢献できる。日本発の大量培養技術を活用した藻類バイオマス産業が本格化しようとしている。藻類バイオマスは、トウモロコシ、大豆などのバイオマス資源より単位面積の収穫量が桁違いに高く、効率的な一次生産が可能。藻類バイオマスは、世界で研究が進む。とくに赤道土壌に位置する国々は、季節間から藻類の大量生産に適しており「藻類メジャー」を目指す企業が輩出を伺う。化石燃料の代替としても期待される藻類の産業化に向けた動向や、植物由来の代表格であるバーム油産業が抱える課題を覗いた。

## バーム油凌ぐ環境優位性

バーム油は、植物由来の代表格である。しかし、環境優位性という点では、藻類バイオマスに劣る。藻類バイオマスは、CO2削減にも貢献できる。日本発の大量培養技術を活用した藻類バイオマス産業が本格化しようとしている。藻類バイオマスは、トウモロコシ、大豆などのバイオマス資源より単位面積の収穫量が桁違いに高く、効率的な一次生産が可能。藻類バイオマスは、世界で研究が進む。とくに赤道土壌に位置する国々は、季節間から藻類の大量生産に適しており「藻類メジャー」を目指す企業が輩出を伺う。化石燃料の代替としても期待される藻類の産業化に向けた動向や、植物由来の代表格であるバーム油産業が抱える課題を覗いた。

## 高いポテンシャルに注目

高いポテンシャルに注目。藻類バイオマスは、水質浄化やバイオ燃料、飼料などの用途が期待されている。また、藻類バイオマスは、CO2削減にも貢献できる。日本発の大量培養技術を活用した藻類バイオマス産業が本格化しようとしている。藻類バイオマスは、トウモロコシ、大豆などのバイオマス資源より単位面積の収穫量が桁違いに高く、効率的な一次生産が可能。藻類バイオマスは、世界で研究が進む。とくに赤道土壌に位置する国々は、季節間から藻類の大量生産に適しており「藻類メジャー」を目指す企業が輩出を伺う。化石燃料の代替としても期待される藻類の産業化に向けた動向や、植物由来の代表格であるバーム油産業が抱える課題を覗いた。



マレーシアの藻類バイオマス産業の発展を促す



バーム油原料アラシを刈取る労働者

Going Places - November 2019

EXPLORE | Sarawak Litsea

# Scents of the Rainforest

Commercialising essential oils harvested from the Sarawak rainforest to empower indigenous communities.

Words Carolyn Hong | Photography courtesy of Sarawak Biodiversity Centre

The sun was low in the sky and the rainforest was growing dark as Margarita Naring and her team from the Sarawak Biodiversity Centre (SBC) trudged back to the village. Suddenly, a zesty scent filled the air.

To many Malaysians, a sudden sultry scent in the jungle is a signal to hurry away without looking back. But to Margarita's team, it was cause to stop to take a closer look – their exhaustion immediately forgotten, their senses awakened and their curiosity piqued.

The invigorating scent, reminiscent of citronella or lemongrass, was emanating from tiny berry-like fruits being picked by their forest guide and local medicinal plant expert, the late Taie Puret, from a small tree. According to Taie, several ethnic groups in Sarawak such as the Lun Bawang and Bidayuh have, for generations, used these berries as a spicy condiment to eat with rice as well as a natural remedy to ease stomach and back aches. Taie was from the Lun Bawang community.

Excited, the team took several cuttings from the tree, known as temen to the Lun Bawang and pohkok to the Bidayuh, and brought them back to SBC's headquarters in Kuching, the capital of Sarawak, for further analysis.

This scent-filled jungle walk had taken place in 2005 as part of SBC's effort to document the use of the indigenous plant with a scientific name of *Litsea cubeba* by the different ethnic groups in Sarawak and to preserve this traditional knowledge.

Margarita's team had visited the mountains of east Sarawak to document the traditional plant use of the Lun Bawang community, a small ethnic group of Sarawak. The Lun Bawang are mountain-dwellers with deep knowledge of the highland rainforests where they have lived for generations.

On that trek guided by Taie and his son Ulong Taie, the team mapped out the indigenous plants commonly used in the villages of Long Telangan and Long Kerangan, both located over three hours' away by road from the nearest town. Margarita remembered clamouring up and down muddy slopes, walking for hours to search for plants used locally as medicines, food and other purposes. "We kept asking 'are we there yet?'," she recalled, laughing.

Back in their labs in Kuching, the team set out to analyse the chemistry of the *Litsea cubeba* berries and other cuttings. To their excitement, they found its oil composition to be markedly different from similar *Litsea* plants found in the highlands of China and Taiwan, where they are also used for medicinal purposes. This allowed SBC to register the local tree, Sarawak *Litsea*, as unique to Sarawak for Intellectual Property protection.

The team also found the Sarawak *Litsea* oil to have anti-microbial properties as effective as tea tree oil, while emitting a revitalising, fresh and vibrant scent. These discoveries started them off on a long journey of research and development, which took over 10 years until the Sarawak *Litsea* oil was turned into delightfully-scented personal care products.

Marketed under the brand-name LitSara®, a combination of *Litsea* and Sarawak, the range includes soaps, body wash, shampoo, handwash, aromatherapy oil, sniff jar and air freshener. *Litsea* oil is also available as pure essential oils for diffusers, and soon, *Litsea*-based insect repellent sprays and biodegradable wipes will also be on the shelves.

This essential oil's journey from jungle to market has been remarkable because SBC strove to ensure that all benefits are shared equitably with the local communities. This is in keeping with the global standards set by the 1992 Rio



1, 8 & 9. The LitSara products range from soaps to air fresheners, and soon insect repellent sprays and biodegradable wipes.

2-4. Local villagers picking the *Litsea* berries and posing with their harvest; the tiny fruits.



“According to Taie, several ethnic groups in Sarawak such as the Lun Bawang and Bidayuh have, for generations, used these berries as a spicy condiment to eat with rice as well as a natural remedy to ease stomach and back aches.”

In the case of the *Litsea* essential oils, SBC holds regular workshops to share new information on cultivating and nurturing the *Litsea* trees. It also holds classes on extracting essential oils from the fruits and leaves, and soap-making sessions to enable the locals to make their own products from the oils.

Monetary benefits come into play once the products are commercialised. For the *Litsea* products, the SBC buys the essential oils produced by the locals at a fair price, and subsequently returns a percentage of the product sales to the community.

Today, seven villages are involved in sustainably producing the *Litsea* essential oil, with a

production target of 100 litres a year. Besides the original Lun Bawang villages, the SBC has started working with the Kelabit, Iban and Bidayuh communities once it was established that they also use the plant.

The unsuspecting *Litsea cubeba* tree – and its heavenly-scented tiny fruits – has earned a place of pride in the ranks of essential oils, having come a long way from that first whiff of its zesty scent in a dank rainforest.

Malyria Airlines operates 37 times weekly flights from Kuala Lumpur (KUL) to Kuching (KUC), Sarawak.

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goingplacesmagazine.com | 49 | November 2019

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First Published 2019  
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