
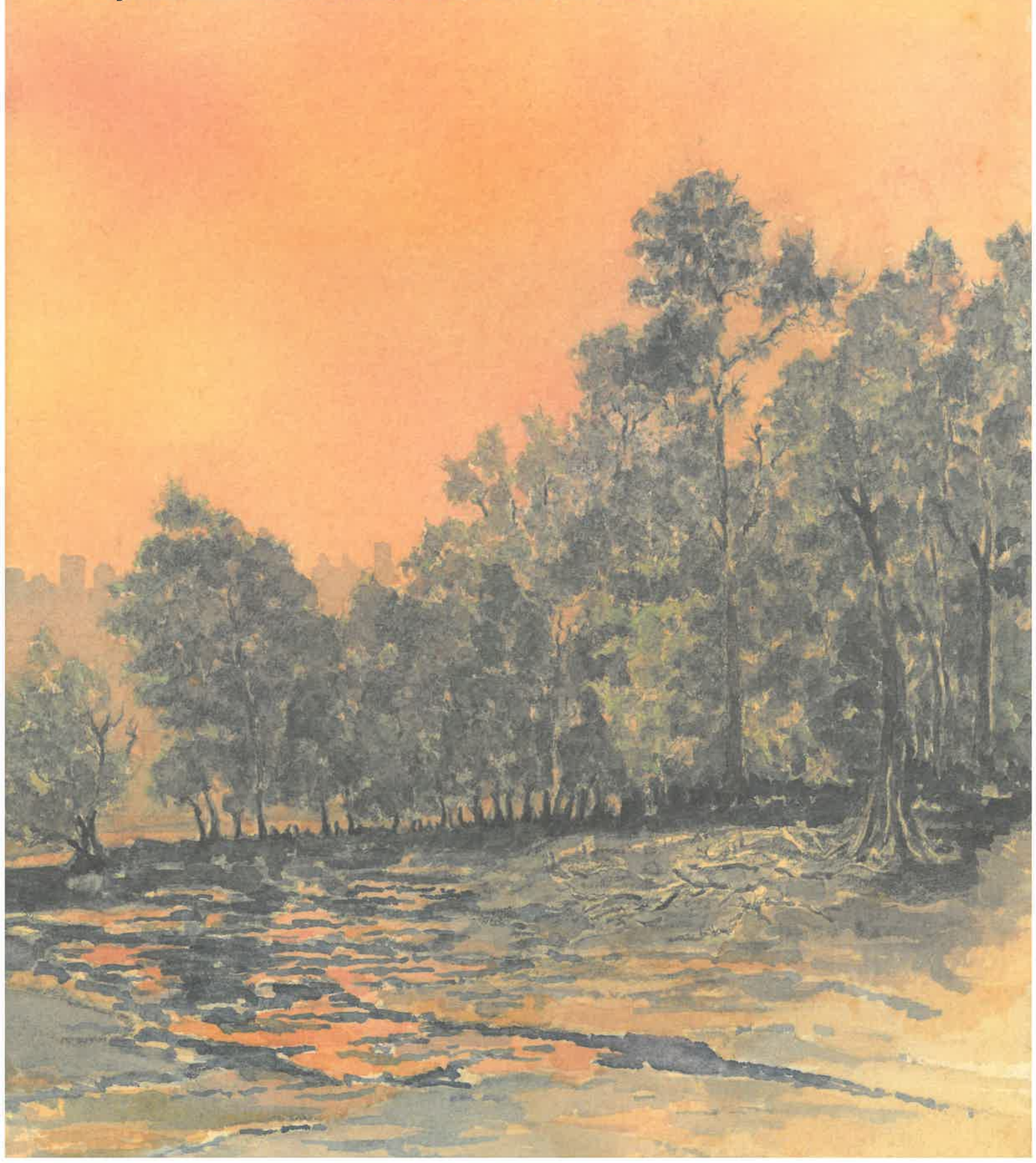


A  publication

wetlands



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"I am pleased to know that the Sungei Buloh Wetland Reserve will be recognised as a site of international importance for migratory birds. To mark this, Wetlands International will be presenting a certificate to NParks to acknowledge Sungei Buloh's entry into the East Asian Australasian Shorebird Site Network. Sungei Buloh will join the ranks of other internationally sites recognised for the conservation of shorebirds, such as Australia's Kakadu National Park, China's Yellow River Delta, Philippines' Olango Island and Japan's Yatsu Tidal Flats. It is heartening to know that Singapore, despite being a small and urbanised city-state, too has a nature reserve that is acknowledged as a site of international importance."

Dr Vivian Balakrishnan, Minister of State for National Development

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Cover drawing by Tham Pui San
Prismatic Wonder



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editorial Sungei Buloh Wetland Reserve was recently recognised as a site of international importance for migratory birds with its entry into the East Asian Australasian Shorebird Site Network. From the days of a nature park to a nature reserve, much has been achieved in the 9 years since its inception.

Come 2003, Sungei Buloh Wetland Reserve will be celebrating its 10th anniversary. Find out how you too can be a part of this living heritage. 

linda goh



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'Wetlands' is sponsored by HSBC under its Care-for-Nature programme.

HSBC's Care-for-Nature programme is dedicated to help conserve and protect our living resources in our natural environment and at the same time to generate awareness among the public to do likewise.

The sponsorship of 'Wetlands' is one such effort to help promote a better understanding and appreciation of wetland ecology such as Sungei Buloh and its importance to our natural landscape.

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water puppies

of the reserve



Many believe that the ecology of this reserve has improved with the arrival of the otters. They have started breeding and have increased from a single otter sighting back in 1994 to at least six otters sightings based on reported sightings by staff and visitors. As many have hoped for, it looks like they may have decided to stay and have a family in the reserve.

Have you seen them? Yes, we are talking about the smooth otters (*Lutra perspicillata*), which have been sighted in Sungei Buloh Wetland Reserve from 1994 to 2002. If you have not seen them, what are you waiting for? Just make a trip down to the Reserve to catch a glimpse of these rare mammals, which are adapted to life in water and on land, and whose playful nature would delight almost everyone. They are skillful swimmers and catching fish is child's play to them. They are usually sighted while swimming and foraging for fish during low tide, when it is easier for them to trap fish in the swallow waters.

My first encounter with the otters was way back in early 1997 when I first saw an otter at a distance in a low tidal pond. In November 1998, I sighted a pair swimming and catching fish at Sungei Buloh Besar. Since then, it seems the family has expanded with the arrival of their first pup in 1999 and their second pup by 2000. The latest sighting of 6 otters was in February 2002, and this has posed other questions as to how many otters there are now in the reserve.

On 11th November 2002, I sighted the otters again at Route 3 Fresh Water Pond. This time there were two adults with two pups. The pups were busy chasing fish but were unsuccessful in catching any. The next thing that struck me was seeing the adults catching fish and leaving them on the grass bund for the pups. By then the pups had given up the chase and came to the bund to help themselves to the fish left by the adults. The adults were busy catching and feeding on fish themselves. Sensing my presence, they started to move back into the undergrowth. When I went to check on the area where they had been feeding, I found remains of half eaten fish. There were Green Chromide, Common Tilapia, whose tail

parts were left uneaten. A few Estuarine Catfish were also found with parts of their head uneaten but still alive. On 12th November 2002, at a bund separating a pond at the opposite side of the first sighting, I found the otters' sprint site (a place where an otter leaves his droppings to advertise their presence to potential mates or competitors). The sprint looked dry, and on the next day I saw fresh sprint at the same site. This could be their potential resting and feeding place, so do go look for them at the Fresh Water Pond Area, but always remember to be quiet, and keep your distance so you do not frighten them. 🐾

Areas where otters were sighted:

- Sungei Buloh Besar
- Sungei Buloh Kechil
- Pulau Buloh
- Mangrove Arboretum
- Fresh Water Pond
- Hide 2E
- Hide 2A
- Hide 1A



for where your *treasure* is,
there your *heart* will be also...

To the staff and teachers of Hillgrove Secondary School, 16 November 2002 was significant as this day marked the launch of the school's official adoption of the freshwater pond in Sungei Buloh Wetland Reserve. From the moment the idea was mooted in April 2002, Mrs Susan Tham, a teacher of Hillgrove Secondary, rose to the

challenge of leading a group of 20 students from 2E1, 2E2 and 2E3 (year 2002), on an 8-month "mission" of discovering the principles of ownership through an "Adopt-A-Park" scheme that the School had undertaken with Sungei Buloh Wetland Reserve.

"In a highly urbanised country like Singapore, SBWR is one of the few remaining natural areas where pupils can learn through first-hand observation, the inter-relationship between wildlife and the natural environment. They can see tangible manifestations of the abstract environmental concepts such as food webs, food chains and ecosystems, which they learn in Science and Geography. We hope that by adopting a part of the reserve, via the freshwater pond, and by involving pupils in its maintenance, they will develop a deeper sense of understanding of the inter-connectedness of flora, fauna, man and the environment. In the process, pupils will also appreciate the impact that man's daily actions can have on the natural environment. Greater understanding will hopefully engender a love for nature and our natural heritage and instil a sense of ownership for the conservation of nature. Besides the freshwater pond, we hope this project will also open up

A moving speech delivered by their Principal, Mdm Thoo Mei Lan, served to accentuate the school's support of this 5-year partnership with the Reserve. She is clearly proud of the efforts that the staff and students have put in preparing for this launch. We will not be surprised, for as we read this excerpt from Mdm Thoo's speech, one will be able to fathom her sentiments.

opportunities for the reserve to be used as an "outdoor classroom" and as a venue for various enrichment activities for pupils, thereby extending awareness of the importance of conservation to the wider school population.

I would like to thank our HOD Mr. Thiru for spearheading the project. I am grateful to our Art teacher, Ms. Neo for her enthusiasm in guiding pupils to complete a whole series of painted tiles depicting the life that can be found in the freshwater pond. That certainly fired the interest and imagination of the pupils. I would also like to thank Ms. Jeanne Tan, the Senior Education Officer of SBWR for patiently teaching the pupils about the flora and fauna of the freshwater pond. She has successfully kindled their sparks of interest into a burning desire to further their knowledge through reading and research.

I am proud of our pioneer Hillgrovians for their passionate involvement in the project. Most of all I would like to thank Mrs. Susan Tham for her dedication. She has put her heart and soul into it. Without her, the project would not have come to fruition. She has made many trips to the reserve and has spent many hours to enthuse and guide the pupils.

Today officially marks the beginning of what I hope would be a long and fruitful partnership with SBWR. Although it is a 5-year partnership, I certainly hope it would grow into a long-term one. Mrs. Yeow Lee Lin, who would be taking over as Principal of HSS with effect from 16 December 2002, is herself an adorer of nature. I have no doubt that she would continue to endorse and support the project and keep the flame burning. I also hope that the pupils' love for nature and interest in conservation would extend beyond their school life into adulthood. I hope they would become lifelong ambassadors for nature and spread the conservation message to their family, friends and everyone they come into contact with.

The Journey begins for those who take the first step...

In a concise, power-packed style, the students led the guests and audience through a presentation covering a series of different topics related to aquatic life. The following covers a short synopsis on the presentations from each of the four groups:

The students from "Greentooth Tech" presented on the yellow bittern. Covering interesting aspects of its physical features, its hunting style, habitat, before giving an interesting conclusion of all this tied in with their topic called "Survival of the Fittest". The "Pond Adventurers" truly amazed us with similar interesting aspects of some of the fish, plants, amphibians, snails and arachnids that inhabited the freshwater pond, with emphasis on the ecological functions of these plants and animals.

A group of students from 2E2 and 2E3 who called themselves "Fish Mania" enthralled the audience by providing an insight into the world of fish in the freshwater pond. They too did a marvellous job, giving an excellent and informative introduction and presentation on the Arowana, Snakehead and Common Tilapia, while focusing on aspects that dealt with ecology, history, biology and medicinal functions.

Lastly, but definitely not the least, four students from 2E1, took us into another world by introducing the adaptations of animals in the freshwater habitats and animals living in the mangroves. This group focused on the interaction between the different communities of organisms and why conservation of these habitats are crucial.


Discovering the principles of ownership

In retrospect, ownership has always been a core component of the "Adopt-A-Park" scheme. By 'adopting' the freshwater pond, Hillgrove Secondary School has taken ownership of the pond. On a personal note, I would like to highlight that ownership is more than just keeping something that belongs to you. Ownership is maximising to its fullest potential, what is given to you or to your charge. Ownership is all about "giving", encouraged out of a sense of responsibility and duty knowing that you can make a difference. Privilege and joy come to those who claim that ownership, as we see with the staff and students of HSS on 16 November.

I truly believe that every participating Hillgrovian and staff had been infused, not only with a sense of knowledge and achievement, but they have also

interjected a lasting impression for their school. Ownership is not a personal show. To the Hillgrovians, it is public, it is about community. In the past few months, they have vested an interest in nature, which I do believe, somewhere along the way, had changed some of their perspective about the importance of what we have left of our natural heritage as well.

"For where your treasure is, there will your heart be also". I would like to leave this with you, that where one puts his or her vested interest in, the heart will follow. This is what ownership is all about. To each and every one of the students, keep up the good work of your contribution to your natural heritage, and believe for an impact to be passed on to the next few generations to come. 🌿



by Calvin WL Ho,
a lawyer by
training and also a
volunteer of the
wetland reserve

singapore's first wetland reserve: *what does this mean?*

The natural environment of Singapore is part of the rainforest of Malesia, together with Brunei, Indochina, Indonesia, Malaysia, Papua New Guinea and the Philippines. The indelible mark of a rainforest is the immense diversity of life that it sustains, and for the land that it covers, this abundance of life is the wealth of that land. Singapore has been a land of such wealth. Perhaps no one has better articulated this than Alfred Wallace in *The Malay Archipelago* when describing the biodiversity in Singapore between 1854 to 1862: "The vegetation was most luxuriant, comprising enormous forest trees, as well as a variety of ferns, caladiums, and other undergrowth... Insects were exceedingly abundant and very interesting, and every day furnished scores of new and curious forms. In about two months I obtained no less than 700 species of beetles... Almost all these were collected in one patch of jungle, not more than one square mile in extent, and in all my subsequent travels in the East I rarely if ever met with so productive a spot."

The landscape of 21st century Singapore has vastly changed. In the year 2000, the Nature Society of Singapore reported that 97 (39%) of all native coastal plants (251) are extinct and only 4% of mangroves remain. And of all seed plants, 26% are extinct and 65% threatened. As for mammals and birds, 25% of 91 mammals are extinct and 58% of the remaining 53 mammals are at risk, while 34% of birds are extinct and 38% of the resident bird species are at risk. Fortunately, these losses have not gone unnoticed. In recent years, positive actions have been taken to remedy the situation.

On 10th of November 2001, the Minister of National Development, Mr Mah Bow Tan, announced the designation of

Sungei Buloh Nature Park as a nature reserve under the National Parks Act. Officially opened on 6th of December 1993, this 87-hectare of mangrove, fresh water ponds and secondary forest had been designated a forest reserve from as early as 17th April 1890. The fresh water and secondary forest habitats may have been subsequently introduced by early settlers in the Sungei Buloh (which means Bamboo River in the Malay language) area since the Straits Settlement Government Gazette Reports of the Botanic Gardens described the area as consisting entirely of mangrove swamp in 1890. To reflect its new status as Singapore's first wetland nature reserve, Sungei Buloh Nature Park has been re-named Sungei Buloh Wetland Reserve.

The importance of this designation lies in the official recognition of the need to carefully manage what little remains of Singapore's natural wealth. Before this, there was concern that after 2008, the natural environment of the Sungei Buloh area would be cleared for urban development. With its designation as a nature reserve, however, Sungei Buloh Wetland Reserve has been legally set aside and reserved for

- 1 the propagation, protection and preservation of the plants and animals in the nature reserve,
- 2 the study, research and preservation of objects and places of aesthetic, historical or scientific interest;
- 3 the study, research and dissemination of knowledge in botany, horticulture, biotechnology, and natural and local history; and
- 4 recreational and educational use by the public.

Seventeen years preceding his seminal classic *An Inquiry into the Nature and Causes of the Wealth of Nations*, Adam Smith argued in *The Theory of Moral Sentiments* that the proper operation of a capitalist system depended on a broader system of social values. One of the social values discussed may be interpreted as social responsibility; that is, the responsibility towards one another and the responsibility towards the environment that we live in.



In other words, the residence that harbours the richly diverse community at Sungei Buloh, which includes up to 42% of all bird species recorded in Singapore, will now receive greater protection against human intervention and interference. In addition, the residents are themselves conferred a full range of legal protection, including freedom from disturbance, harassment and entrapment. To this effect, it is an offence to destroy, damage or deface any object of zoological, botanical, geological, ethnological, scientific or aesthetic interest.

The broad scope of protection provided under the National Parks Act and Rules is important because of its implicit recognition that it is inadequate to merely protect a wild animal or bird alone without regard for the environment that supports it. Accordingly, the broader protection supplements that provided under the Wild Animals and Birds Act, which safeguards all wildlife in Singapore, except for 6 birds (namely, the house crow, feral pigeon, white-vented mynah, purple-backed starling, Philippine glossy starling and common mynah). This legislation makes it an offence to kill, take and keep any wild animal or bird without a license from the Agri-food and Veterinary Authority. In addition, it also prohibits the setting up of traps


for the capture of a wild animal or bird and the selling of any wild animal or bird, alive or dead.

To ensure the effectiveness of the intended protection, the National Parks Act and Rules also confer on duly authorised employees and agents at the nature reserve certain powers, including the power to require evidence of identity, power to order persons to leave the nature reserve and power of search and arrest, each of which may be exercised under specified circumstances.

Apart from these, marine life that dwells on the foreshore of Sungei Buloh Wetland Reserve is also protected from abuse by the Fisheries Act and Rules, which prohibit the trapping of fish through the use of explosives and poison. In addition, the use of trawl nets is prohibited within three miles from the Singapore coast, measured from the low water mark.

It is important to remember that the effectiveness of legal protection is ultimately dependent on every Singaporean's recognition of his or her responsibility towards our common natural heritage and environment. At the most basic level, we must appreciate the intrinsic value of each species; that on careful examination, even the most simple of species can offer limitless knowledge and aesthetic pleasure. The affirmative act

of conserving the Sungei Buloh area is an excellent manifestation of this. However, it is only the beginning of a fresh endeavour towards the restoration of some of the biological richness that has graced Singapore in its not too distant past. We now understand some of the problems that have arisen and others that will arise. By combining this understanding with technology, a workable strategy can be developed to supply the necessities and some of the comforts of life and still leave room enough for all the other species.

It is befitting to conclude with the words of Professor Edward Wilson, who observed that responsibility towards our natural environment should arise, not as a consequence of some special political interest lobby, but from an acknowledgement that "Earth, unlike the other solar planets, is not in physical equilibrium. It depends on its living shell to create the special conditions on which life is sustainable. The soil, water and atmosphere of its surface have evolved over hundreds of millions of years to their present condition by the activity of the biosphere, a stupendously complex layer of living creatures whose activities are locked together in precise but tenuous global cycles of energy and transformed organic matter. The biosphere creates our special world anew every day, every minute, and holds it in a unique, shimmering physical disequilibrium. On that disequilibrium the human species is in total thrall. When we alter the biosphere in any direction, we move the environment away from the delicate dance of biology. When we destroy ecosystems and extinguish species, we degrade the greatest heritage this planet has to offer and thereby threaten our own existence." 

(Illustrations by Tay Soon Lian)



A few more native trees are added to our increasing list of **native flora** in Sungei Buloh Wetland Reserve!



by Joseph Lai,
Conservation Officer

conservation with community

We had the honour of inviting the Minister of State, Dr. Vivian Balakrishnan, Chairman of National Parks Board, Prof. Leo Tan, and CEO of Hong Kong and Shanghai Bank, Mr. Eric Gill, to plant *Litsea myristicaefolia*, *Xylocarpus rumphii* and *Cynometra ramiflora* respectively near the entrance to the Mangrove Boardwalk on the 7 Dec 2002 to mark the launch of the Countdown to SBWR's 10th anniversary.

The introduction of these rare and endangered trees is indeed a reflection of our staff's active and resourceful approach to conservation. Besides increasing the genetic-resource of the plants found in Sungei Buloh by our own plant propagation programme, we are also actively and effectively sourcing ecologically compatible plants from conservation-minded individuals, organisations and tertiary institutions in the community. Without these positive partnerships, our conservation motto, **Conservation with Community**, will not materialise in Sungei Buloh.

Fellow stakeholders of our natural heritage, THANK YOU.

litsea fruit



nutmeg laurel

Litsea myristicaefolia
(Family: Lauraceae)

Medium-sized tree reaching 27m tall found in lowland forest, including back mangrove. The leaves, light green above but whitish on the underside, are very sweet smelling when bruised. The species epithet, *myristicaefolia*, means leaves (*folia*) resembling that of nutmeg (*Myristica*).

Once considered extinct, a few mature trees were found in Loyang Swamp recently. Saplings were collected by Derek Yap, Assistant Arboriculture Manager (Changi) and successfully raised by staff of Pasir Panjang Nursery.



xylocarpus fruit

xylocarpus seed



nyireh

Xylocarpus rumphii
(Family: Meliaceae)

Small tree which occurs naturally in rocky headlands and seashore. There are only a few left in Singapore today - two mature trees and a treelet in St John Island and another treelet recently discovered rooting on one of the bunds in Sungei Buloh Wetland Reserve by conservation staff.

The tree often produces multiple trunks near the base and do not exceed 12m tall. Seeds were collected from St John Island by Assistant Professor Jean Yong from the Natural Sciences, National Institute of Education, who has successfully raised them and kindly donated them to us for our conservation-planting programme.



Cynometra fruit

katong laut

Cynometra ramiflora
(Family: Leguminosae)


A moderate-sized tree reaching 25m tall, with one or two pairs of leaflets which are conspicuously limp and pendulous, white or reddish when young. It bears small white flowers at the leaf-axils and on the twigs behind the leaves. The non-edible brown pod is potato-shaped, knobbly and scurfy.

It occurs naturally on sandy coasts, tidal rivers and back mangroves, and was once found in Kranji but has long since disappeared. This re-introduction is thus a significant conservation effort for Sungei Buloh Wetland Reserve which is located in Kranji. Another locality, Katong, is believed to have got its name from this tree. 🐞


Among the many resident bird species that inhabit the Sungei Buloh Wetland Reserve (SBWR), the sunbirds possess one of the most brilliantly coloured plumage

by James Gan
Senior Conservation Officer

some interesting notes on the sunbirds



The bright colours are found only on the adult males with the females and young males clad mainly in varying hues of olive, green and yellow. Belonging to the family Nectariniidae, sunbirds are distributed from Africa to Asia and Australia. In Singapore, six species of sunbirds occur, of which four have been recorded at SBWR. That is about 4% of the total sunbird species worldwide.



Of the four species, the most abundant at SBWR is the Brown-throated, also known as the Plain-throated Sunbird (*Anthreptes malacensis*). The Olive-backed Sunbird (*Nectarinia jugularis*) is the next most numerous followed by the Copper-throated Sunbird (*Nectarinia calcostetha*) and the Crimson Sunbird (*Aethopyga siparaja*).

Sunbirds are essentially nectar feeders, but they have been known to take small insects. Superficially resembling the well-known hummingbirds of Central and South America, sunbirds however have strong feet and legs and have short rounded wings. These birds have relatively long, slender decurved bills that enable them to probe into suitable flowers for nectar.



Their nests are unusual. Generally pear-shaped, globular or oval and composed of grass, fibres and cobwebs, they are usually suspended from the ends of terminal twigs. Clutches of two eggs are typical.

The survival of sunbirds has been monitored at SBWR through ringing studies. Although very small and active, sunbirds are known to have long lives in the wild. For example, the Brown-throated Sunbird, has been known to live for at least 61 months (5 years) in SBWR while studies in other localities have revealed lives exceeding 12 years! For the other species, SBWR has recorded (between ringing and subsequent capture) durations of 60 months (5 years) for the Olive-backed Sunbird and 61 months (5 years) for the Copper-throated Sunbird.

The Copper-throated Sunbird (*Nectarinia calcostetha*) is one of the more interesting species. Found only in South-east Asia, they live within the mangrove forest and are one of the few bird species that are global mangrove specialists. Nesting on mangrove trees like *Avicennia alba* they feed from the flowers of mangroves like the *Bruguiera gymnorhiza*. Males have iridescent coppery red throats with iridescent green on the crown, shoulder and uppertail. Females have white throats and are mostly decorated in grey and yellow. They are sexually dimorphic

with adult males being about 10% longer and 20% heavier than adult females. Nests have been seen in the reserve between April and August and it has been known to nest from January to September in other localities.

Perhaps the most abundant sunbird at the wetland, the Brown-throated Sunbird, can be seen in all areas of SBWR. It is also the largest sunbird species in SBWR (and Singapore). Weighing in at a maximum of 14.0g, males are generally larger than females especially in terms of body length. Possessing reddish eyes (iris) when they are adults (the other three species have dark brown eyes), they have olive brown eyes as juveniles.

What about the smallest sunbird species in SBWR? Either the Crimson Sunbird or the Olive-backed Sunbird qualifies. These two species also share a common characteristic that is the exhibition of an eclipse plumage in the males. This is essentially a short-term post-breeding plumage. Whatever the plumage type, the adult male Crimson Sunbird appears like a tiny red dot amongst the vegetation. It weighs about 7.0g (about the weight of a 50 cent coin) with females being slightly lighter. The

females have the dubious honour of having perhaps the dullest plumage of any sunbird in the region with only dull olive and yellow to adorn herself.

The Olive-backed Sunbird is more abundant than the Crimson Sunbird. Many of them can be seen flitting among the flowering trees at the Visitor Centre complex especially on sunny days.

There is no doubt that the sunbirds as a group add life, colour and vibrancy to the green vegetation in SBWR and Singapore in general. Generally, to attract and encourage sunbird populations to increase, it is important to cater to their feeding and nesting requirements. Suitable free flowering trees and plants provide abundant nectar as food. Many types of trees may also be used as nest sites while grass patches serve to provide building material for the nest. SBWR has taken these measures and the population of sunbirds at the site serve as an indicator of the success of these measures. More studies await those interested in understanding especially the population dynamics, species interactions and carrying capacities of these sunbirds at SBWR. 🌿

At a Glance

(data based on ornithological field studies undertaken by SBWR)

Species	Total Body Length (mm)	Wing Length (mm)	Weight (g)
Brown-throated Sunbird			
Adult Male (n=13)	130 - 139	60 - 69	10.0 - 14.0
Adult Female (n=14)	122 - 130	58 - 67	9.0 - 12.0
Copper-throated Sunbird			
Adult Male (n=5)	133 - 139	58 - 60	8.0 - 10.0
Adult Female (n=4)	123 - 128	54 - 57	7.0 - 8.0
Olive-backed Sunbird			
Adult Male (n=6)	110 - 118	50 - 55	7.0 - 10.0
Adult Female (n=5)	105 - 115	50 - 53	7.0 - 10.0
Crimson Sunbird			
Adult Male (n=2)	115 - 117	51	7.0
Adult Female (n=1)	104	47	6.0



Mawai Eco Camp is situated by the Sedili river of Mawai Lama and north of Kota Tinggi. Mr Tay Kheng Soon, a Singaporean architect and a former Singapore Scouts Commissioner, designed it. The camp was built over a freshwater swamp by the Orang Asli who are aborigines from Endau, Johore. Materials used were from the nearby forest and the camp was completed in late 1998.

by Halilah Ahmad,
Education Officer

volunteer training at mawai eco camp

Sungei Buloh Wetland Reserve has been organizing volunteer training for all confirmed volunteers as part of their incentive since 1998. Apart from SBWR volunteers, staff also join in these outings to build rapport between volunteers and staff working in common nature areas of Singapore. In total, 30 people signed up for this year's trip to Mawai Eco Camp on the 12th and 13th Oct 2002.

The weekend trip - Day One

We set off for Mawai from Newton Hawker Centre carpark early at 8 am and arrived at the famous Corner's Jetty at approximately 11 am. A boat, with a seating capacity of 12 took us in batches to the campsite.

The programme started off with a safety briefing followed by a sumptuous lunch.

2 local cooks were engaged to prepare food and drinking water for the whole group throughout our stay. We were told that the main source of water in the camp is collected from rainwater that went through a natural soil filtration system. Therefore, drinking water had to be boiled before consumption. We made our beds after lunch.

Mawai Eco Camp is designed for the outdoor enthusiasts and one of its objectives is to teach campcraft within the jungle atmosphere. The sleeping quarters consists of army / commando beds on a raised platform. The sleeping quarters can accommodate up to 80 people, 40 at each side separated by a partitioned walkway where informative posters and books are placed for reference. Interestingly, the camp is also equipped with some traditional musical instruments for the campers to entertain themselves with.

We were divided into 3 groups for the day's boat ride up Sedili River. Sutari,

our guide, explained some of the common flora and fauna that thrived along the river. Riverine crocodiles are said to be present too. We saw fishermen doing recreational fishing for the freshwater river prawns and spotted a few birds of prey in flight. A lone Dollarbird was seen standing proudly on a branch above us.

Meanwhile, the more energetic ones had fun getting wet while maneuvering their way through the obstacle course back at the camp!

For the next activity, we were 'treated' to a rather muddy walk across a nearby freshwater swamp forest. We were introduced to many typical freshwater swamp plants and sampled a few edible fruit and shoots.

Later, the group was again divided into 3 groups for a boat trip to see fireflies. Unfortunately, the tide was receding and the boat could not go further up the river. However, we still managed to see a healthy population of fireflies.

To end an exciting day's event, we had a barbecued dinner followed by a campfire where some of us sang through the night.

The weekend trip - Day Two

The day was rather free and easy. Most of us chose to go bird watching with Sunny. Some stayed behind to laze, enjoying social interaction within the jungle ambience of the camp.

We had a late breakfast when we returned to camp. After that, we were treated to a 'show-and-tell' session on how the Orang Asli set traps for animals for food.


While waiting for lunch, some of us tried our hand at sketching under Pui San's guidance.

We concluded our camping activities at about 1330 hrs and headed for the Hutan Lipur Panti (Panti Forest Reserve), which was about a 15 minutes bus ride away. Joseph gave us interesting insights on the lives of trees and plants living in the forest.

We headed home soon after and reached Singapore at approximately 5pm.

Post trip

All participants said they enjoyed the 2-day trip and some thought that it would be better if the trip were extended for one more day. Some pesky ticks and bugs bit most of us though most of us did not mind them "saying hello". Overall, we met our objectives of learning new things in an unfamiliar environment. Rapport among all participants was very good and many new friendships were formed.

Overall, everyone enjoyed themselves and it was a fruitful trip for all! 

by Jeanne Tan,
Senior Education Officer

channel of commitment

This launch was held to acknowledge some of the students of Commonwealth Secondary School for all the hard work they have put in to the partnership between Sungei Buloh Wetland Reserve and the school. Three students from the "Green Guides" CCA group, had the privilege of receiving an award for their outstanding contribution to the community and Sungei Buloh Wetland Reserve. The awards went to Rudy Herianto, Quek Weiliang and Duncan Lin. Each of them received "The Most Committed Guide" award.

"Commitment" to these young guides came in a whole significant and inspiring list of reasons, definitions, convictions and examples. As circumstances would permit, I could only meet up with two of the boys for an interview, which they gladly obliged. The boys were asked about what "commitment" meant to them, and how they felt about being a student nature guide for Sungei Buloh Wetland

On 30 November 2002, in conjunction with "Clean and Green Week", and on the invitation of Commonwealth Secondary School (CSS), Linda and I had the opportunity to grace an interesting event held at the school.

Reserve. I was astounded and impressed by their response and focus through it all, for as young as they may seem to be, their answers came with much probity.

To Quek Weiliang, 14, from Sec 3/2, being 'committed' meant being loyal and pledging a degree of support to a particular responsibility that one undertakes, and putting in effort to complete it. "It has been a good experience for me to be a student guide for SBWR. I get a variety of interesting experiences guiding kids and adults alike. I have the chance to get in touch with nature, literally! This is very much a totally different experience from what we learnt in our textbooks. I'm happy being a nature guide, as this is an opportunity for me to help spread environment awareness. The knowledge we gain from guiding is not what one can learn everyday from textbooks. And what I've experienced too is that guiding for a big group of adults can be quite 'scary', but I'm beginning to see all of this as a learning process, which builds us up along the way!"

Rudy Herianto, 16 added that "being committed comes with a sense of happiness in carrying out my responsibilities as a student nature guide. Nature guiding is like imparting knowledge to the people we guide. It is a fulfilling experience as there's always a two-way communication. Sometimes, I receive from the adults some 'life skills'....I'm surprised with getting this award. I did most of my guiding without thinking about getting any rewards in return, and I was chosen as one of the three to get this award. It was a pleasant surprise."

To these students, all I want to say is, you have put in the effort, now you see the fruit. There's a time for sowing and reaping. You have sowed commitment and responsibility, and in turn you reaped more than an award. You have reaped knowledge and a growing experience! Commitment is engraved in the serving hearts of these young ones, who have given a little more to the community, to SBWR and to their school through being a student nature guide. 🌱

countdown to sungei buloh wetland reserve's 10th anniversary dec 1993 - dec 2003

Sungei Buloh Nature Journal Competition

(7 Dec '02 - 30 Sept '03)



Based on the theme 'Nature & Me', compose a poem or a short write-up about your experience in Sungei Buloh Wetland Reserve in this nature journal competition. Up to 10 best entries in each category will be picked each month to win a \$50 book voucher each. These entries will then qualify for the Grand Finals in Dec '03.

	Primary School Category	Secondary School Category
1st prize	\$1000 worth of prizes	\$1000 worth of prizes
2nd prize	\$500 worth of prizes	\$500 worth of prizes
3rd prize	\$300 worth of prizes	\$300 worth of prizes
Merit prizes	20 x \$100 book voucher	20 x \$100 book voucher



Sungei Buloh Photography Competition

(7 Dec '02 - 30 Sept '03)

Based on the themes below, take a picture in the Reserve and include a brief factual description. Up to 10 best entries in each category will be picked every month to win a \$100 voucher for the Open Category and \$50 book voucher for the School Category. These entries will qualify for the Grand Finals in Dec '03.



Themes		Open Category	School Category (for students below 16 years old)
Dec '02 to Mar '03	Wildlife in Action	1st prize \$3000 worth of prizes	\$1000 worth of prizes
Apr to Jun	People in Nature	2nd prize \$1500	\$500 worth of prizes
Jul to Sep	Flora & Landscape	3rd prize \$1000	\$300 worth of prizes
		Merit prizes 20 x \$200 voucher	20 x \$100 book voucher

Entry forms for the competitions can be obtained from the ticketing counter at a minimal charge.

All selected entries will be considered for publication in the Sungei Buloh Wetland Reserve's 10th Anniversary book to be launched in December 2003.



Monthly Conservation Education Programmes

Make a date with your neighbourhood library to learn about Sungei Buloh's success story; from a Nature Park to a Nature Reserve; and sign up for the monthly mangrove planting programme in our wetland reserve.

Please check with the ticketing counter for further information.

By Joseph Lai
Conservation Officer

home on high

"The simplest questions are the most profound. Where were you born? Where is your home? Where are you going? What are you doing? Think about these once in a while, and watch your answers change."

Richard Bach, in *Illusions*, 1977 (author of *Jonathon Livingston Seagull*)

Have you ever asked yourself these questions? I personally think about them a lot, and I am sure many of you do too. It is only natural. I am happy with the answers I have got through the years though they may be incomplete or illusive at best. What is important is that I never stop asking these questions. They make my life a meaningful journey. Each partially answered question is like a candle lighting the way. When one is exhausted, another is lit and another question asked. Though the answers are illusive, the questions are illuminating.

Today, I asked myself yet again — Where is home? This time, my question was spurred on by the dedication with a jolly bunch of fifty-odd volunteers has for this place they obviously call home. Come rain or shine, they will be here for us in Sungei Buloh - to guide visitors or to help facilitate events within the reserve. What stands out most, like a feather in the cap, is their happiness. Surely that is *the* mark of a home - for home is where the heart is. And the heart is where terms of endearment and happiness prevail.

Why then Sungei Buloh? If not here, where?

I sincerely believe that they will be excellent volunteers wherever they chose to be. Their motivation stems from a great love for Nature and the world is their oyster as such. I liken their perception of a home as that of the migratory birds, and their vision, high amongst the clouds — that of a world — a better world, not just a better Sungei Buloh.

Perhaps at this moment in time, my question has brought home to me a new insight that we cannot just dream dreams of a better world, without first making a concrete choice and commitment to serve a small dot on the global map. In reverse, nature volunteers cannot hope to do volunteer works right without first having a vision of a better world from a *Home on high*.

And perhaps, for want of a better word, our true home is the *realm of our being*, where we can be up there yet down here. That home, though it is not a place or space in truth, is where we want to *be* — to live to the fullest of our joy just like the indomitable and free-spirited Jonathon Livingston Seagull who said, 'I just want to know what I can do in the air and what I can't, that's all. I just want to know.'

For the joy of *flying*, and questioning, I think I know a little better now. Don't you? 

walking routes



reserve information

Opening Hours
Mondays to Saturdays
7.30am to 7.00pm







E-mail:
sbwr@pacific.net.sg

Sundays & Public Holidays
7.00am to 7.00pm

Website:
<http://www.sbwr.org.sg>

Admission
\$1.00 per adult
\$0.50 per child/
student/senior citizen

Visitor Centre Facilities

-  Theatrette
-  Cafeteria
-  Nature Gallery
-  Information
-  Toilet
-  Butterfly Trail

Audio-visual Show
Mondays to Saturdays
9.00am, 11.00am, 1.00pm,
3.00pm, 5.00pm.
Sundays and
Public Holidays
Hourly from
9.00am to 5.00pm

Park Facilities

-  Boardwalk
-  Route 1
-  Route 2
-  Route 3
-  Aerie
-  Tower Hide
-  Screen
-  Bird Observation Hide
-  Outdoor Classroom
-  Platform
-  Shelter
-  Binoculars
-  Emergenc Walkie-talkie

Getting There
Mondays to Saturdays:
Board service TIBS 925 from
Kranji MRT Station.

Alight at Kranji Reservoir
carpark for a 15 min walk
to the Park.

Sundays and
Public Holidays:
TIBS 925 will stop at the
Park entrance.

Sungei Buloh
Wetland Reserve
301 Neo Tiew Crescent
Singapore 718925
Tel: 6794 1401
Fax: 6793 7271



THEY'RE STILL GOING STRONG
AFTER ALL THESE YEARS.
AND SO ARE WE.



The Tembusu, Flame of the Forest, Kapok, and Rain Tree you see on this page have a combined age of more than 300 years. Against all odds, they have not only survived decades of urban development but have also flourished, providing us with much needed relief from our tropical climate and urban lifestyle.

Indeed, Singapore's reputation today as a verdant Garden City is testament to the ecological and historical impact these magnificent trees have had on Singapore. These monuments of our natural landscape must be treasured and protected, not taken for granted.

Let's preserve our roots by saving theirs

As HSBC celebrates its own 125th year in Singapore, we want to help Singapore conserve and perpetuate its natural heritage. That is why HSBC is working closely



with the National Parks Board (NParks) on the Heritage Trees Scheme to safeguard and protect our heritage trees and to educate the public on their ecological and historical significance.

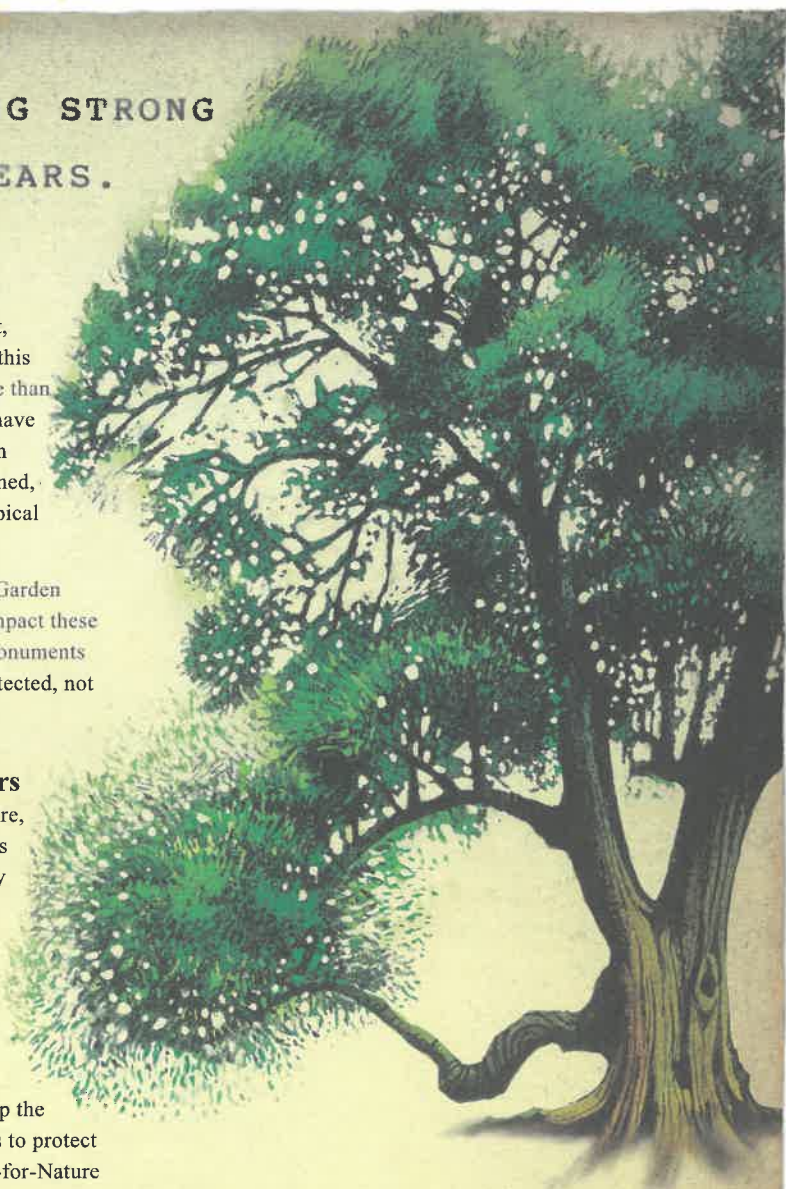
It is with this purpose in mind that HSBC has set up the Heritage Trees Fund with NParks to fund measures to protect our heritage trees, and is devoting this year's Care-for-Nature stamp series to these long-lived friends.

Four of them are featured on this year's stamp series, each one wonderfully rendered by artist Eng Siak Loy.

Commemorating our 125th Anniversary

2002 is the 125th year since HSBC first planted a branch office in Singapore. And like the Heritage Trees, we've been growing from strength to strength.

To commemorate our 125th anniversary milestone meaningfully, we are committed to a year-long programme to raise S\$1.25 million for the Community Chest to help the less fortunate. In line with this commitment, all proceeds from the sale of the covers and stamp prints for the Heritage Trees stamp series will be donated to the 'HSBC125 Fund for ComChest'. Also, HSBC will match the proceeds dollar for dollar.



This Tembusu Tree is a native of Singapore and one of the 35 trees conserved under the Heritage Trees Scheme. Two of Singapore's centenarian specimens are located in the Singapore Botanic Gardens.

Be a part of this good cause

You can own a piece of Singapore's Heritage Trees today by buying any of the Heritage Trees stamp prints or collector's covers and help our worthy cause. The collector's cover is yours for only \$9.90. For \$88, you can own a limited edition collector's stamp print, one of only 300 in the world.



From 25th September 2002, the Care-for-Nature collector's covers and limited stamp print collection are available at Public Affairs & Advertising Department (HSBC Building, #14-01, Tel: 6530 5100), all HSBC branches in Singapore, Singapore Post main branches and Nature Niche at Singapore Botanic Gardens.

HSBC 
The world's local bank