

A  publication

WETlands

Sungei Buloh Nature Park, Vol.7 No. 3, December 2000. MITA(P) No. 022/01/2000



Sonneratia sp.

"A tree living for 50 years is worth an estimated \$196,250. It will generate \$31,250 worth of oxygen, provide \$62,000 worth of air pollution control, control soil erosion & increase soil fertility to the tune of \$31,250, recycle \$37,500 worth of water & provide a home for animals worth \$31,250. This figure does not include the value of the fruits, lumber or beauty derived from the tree".

Professor T.M. Das
University of Calcutta



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Fruits of *Sonneratia sp.*

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Sungei Buloh Nature Park

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EDITORIAL

The basis of each ecosystem begins with the primary producers. They are a source of food, shelter and home to many creatures and inevitably the green lungs of our living world. Plants, deeply rooted and entrenched in our lives, are the very essence required for life. It would be unthinkable to live in a world without them.

Let us muse on with the writers as they express botanical reveries and views on the significance of some of the quiet green beings which share our living space. 🌿

linda goh


Go back in time and find out about the traditional uses of mangroves with **Linda Goh, Senior Education Officer.**

Traditional Uses of Mangroves:

Rhizophora sp.

A view from the human dimension

Avicennia sp.



At the crack of dawn, the children from the mangrove village hurried along with a "marketing" list from their mothers. They were to collect a basket full of *Sonneratia* leaves and fruits that would be prepared as their vegetable dish for the day. *Rhizophora* leaves were also needed to cook with the fish to acidify the meat. As they went about harvesting from the surrounding mangrove forest, they jumped with delight when they chanced upon a fruiting *Nypa* Palm (*Nypa fruticans*). They knew for certain that would be the reward for the night. The *Nypa* fruit was a much-appreciated dessert in the daily meals of these mangrove dwellers. The children having accomplished their task

for the day ran home with their prize, eager to present it to their mothers.

Some women were sitting by the catwalks busy weaving the roofing for a new stilt house. The men had gathered many *Nypa* Palm fronds, which the women thread into shingle panels with a split rattan strip. This roof would be able to last them for 3 to 5 years

Some of the younger men were carving furniture out of *Lumnitzera* wood known for its durability. The older folks kept occupied by making toys for the younger ones with *Excoecaria* wood while keeping watch over them as they frolicked in the river.

As the diminishing light beckoned the family home, they brought out their small lanterns powered by the oil extracted from the *Xylocarpus* fruit. Dinner was cooked over a fire out of *Avicennia* wood. The elders sat with the family imparting the many secrets of the mangrove, explaining the

great healing powers of the mangrove forest. From applying scraped skin of *Bruguiera* seedling to stop bleeding to applying the extracts from the *Avicennia* bark to treat skin parasites to taking tea brewed from the *Acanthus* leaves to relieve pain. Much knowledge was passed on from generation to generation.

Such were the dependence of traditional mangrove settlement on the surroundings to provide for their daily needs, from food, construction wood, fuel wood to medicine... the sacred and intimate relationship of man with the mangroves.

The benefits of the mangrove are boundless. Though the traditional dependence of mangroves may no longer be relevant to a modern Singapore, it is still essential for us to continue protecting our mangroves and natural resources. With the push towards life sciences, the life-saving gene pool which, the mangroves potentially hold could be unveiled and put to good use. 🦋

Bruguiera sp.





Sense of Direction

by balilab abmad, education officer

Where are we?
What's that?
These are the 2 most frequently asked questions when we are in an unfamiliar place. Especially so when you are surrounded by trees and scrubs that may look the same as the other.

Like other parks, Sungei Buloh Nature Park is equipped with many signboards and signposts throughout its vicinity. From informative signs at the entrance and exit, to the directional, flora and fauna identification signs within the Park.

Before entering the Park, you will notice the do's and don't signs. These signs are created so that plants, animals and park features are cared for,

while allowing people to enjoy and experience the Park.

Do arm yourself with a brochure as you explore the Park. Look out for the directional signboards as they complement the brochure, guiding you through without losing direction.

For bird lovers, many coloured bird identification signs were installed in the hides as well as in the bird observation screens.

For plant lovers, signs with simple explanation of their uses or special features were installed along the routes. Do look out for them as all plants, though mostly green, have special unique qualities.

We see the importance of these signboards and have, over the years added more informative and educational signboards along the walking routes. Do pause and look at these beautifully crafted signboards when you are in the Park.

They will be able to guide you home safely and make your walk more enjoyable and educational. 🦋



**The Park has been under various developments of late.
James Gan, Senior Conservation Officer, brings you up to date.**

Up & coming

New Kids on the Block

Sungei Buloh Nature Park has improved upon yet another facility for the enjoyment of visitors. Two platform decks along route 1 were reconstructed over the waters of the Straits. They were completed in the first quarter of this year and were opened to visitors in the second quarter. During construction, much effort was made to ensure that the mature mangrove trees around the platform decks were retained. Reinforced concrete piles were used to prolong the life of the structure and to ensure structural safety. Natural timber, used in the construction of the deck and handrails, helped the structure to blend into the landscape. Seats were constructed and the canopy of adjacent trees retained for shade. The result is a lookout point that offers

visitors calm and serene views of the mangrove island of Pulau Buloh and the Straits. It is also a comfortable spot to look for otters, watch herons, kingfishers and other birds or just relax.

Coming your way next year is the much anticipated reconstruction of the boardwalks and a new lookout tower. Backed by popular demand, the Park is currently rebuilding the boardwalks that had undergone wear and tear over the years. The new boardwalks will incorporate a number of improvements over the existing. Some examples are: laybys and rain shelters at well placed intervals, distance markers and an improved deck. As was practiced with the two platform decks constructed earlier this year, we will conserve

the existing trees around the boardwalks during construction.

The lookout tower will also have many interesting new features. Sited at a strategic position along route 1, the tower will offer visitors a panoramic view of the waders on the mudflats. In addition, the tower will have a stable deck suitable for placing tripods and mounting cameras and telescopes for viewing the wildlife.

Construction work has commenced for the boardwalks and lookout tower. It will not be long before you can take a walk along the newly improved boardwalks or up to the deck of the lookout tower. Stay tuned. 🌿



Tree-Climbing Crab

Reflections of a *Rhizophora* Seedling

This morning, I was jolted awake by a loud splash nearby. I looked, just in time to see a flash of turquoise disappearing into the treetops. It was Mr Collared Kingfisher, who had just grabbed breakfast on the wing. I yawned and quivered in my mother's hold.

I live on the fringes between the land and the sea. Where I live, fresh and sea water mingle, and salinity rises and ebbs with the tide. The soft mud makes for a slippery foothold, and its low oxygen content a barrier to many who try to establish themselves here. It was in this inhospitable habitat that the first of my kind set forth their roots. I live in the special habitat called the mangroves.

My mother tells me that the Great Mangroves once covered almost the whole of Singapore's coastline. These forests were tasked by Mother Nature to reclaim land

from the sea, as mangrove trees have special roots to hold down shifting mud. When tropical thunderstorms lashed their fury on the island, the Great Mangroves soaked up the rainfall like sponges, and kept the island from flooding. In this rich ecosystem, early settlers hunted for fish, crabs, mussels and collected medicinal plants. Later, as the city of Singapore grew, the mangroves provided much of the charcoal and firewood needed for fuel, and timber for building. Sadly for these great forests, their very usefulness proved to be their downfall. By the time Man extended his protection to the Great Mangroves in the late 1800's, most of our habitat were already degraded by overexploitation.

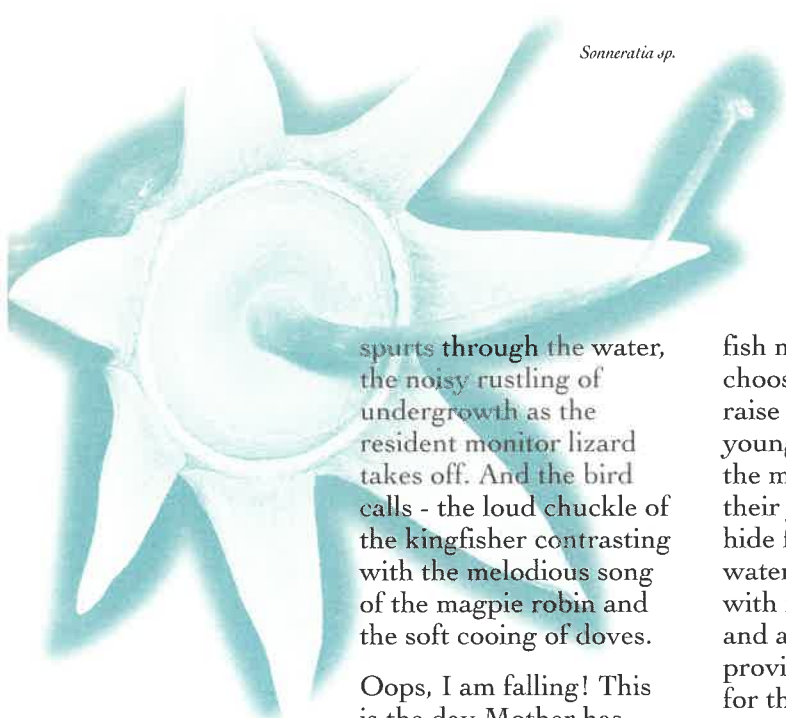
I am lucky to be among the very few survivors of this very special type of forest. My mother stands among others of my kind

along the banks of Sungei Buloh Besar. We are *Rhizophoras*, recognisable by our stilt roots. Our old neighbours, the *Avicennias* and *Brugueiras* stand alongside us, with their pencil roots and kneed roots. Together, we provide food and shelter to numerous mangrove creatures: crabs and shellfish, spiders and insects, reptiles and birds, local and foreign. You are not likely to spot our tenants though, unless you know what to look out for! For our tenants are very shy creatures that blend into the landscape, a very necessary feature if they want to avoid being someone else's dinner. But they always leave some tell tale signs behind: tracks in the mud, some speckled egg shells, a discarded pupa case nearly split down the back... And open your ears - for even if you can't see them, you can hear them: the drone of the cicadas in the trees, the splash of a sea bass as it



Rhizophora sp.

Avicennia sp.



Sonneratia sp.

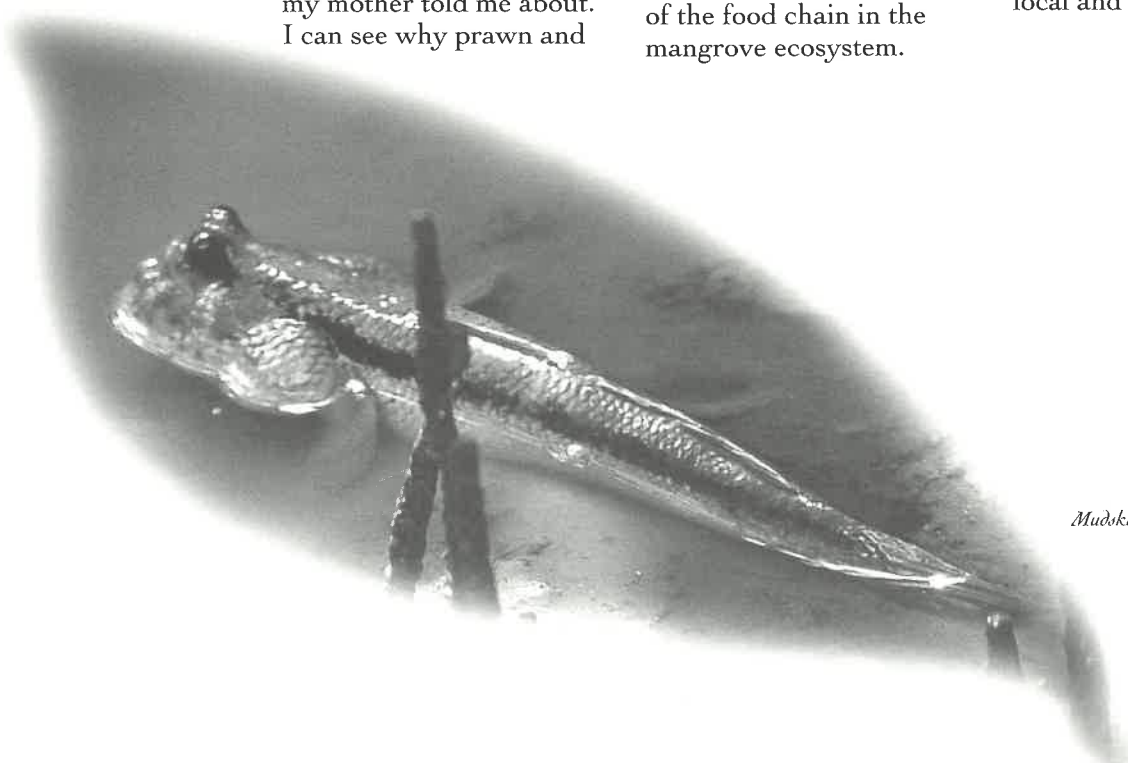
spurts through the water, the noisy rustling of undergrowth as the resident monitor lizard takes off. And the bird calls - the loud chuckle of the kingfisher contrasting with the melodious song of the magpie robin and the soft cooing of doves.

Oops, I am falling! This is the day Mother has prepared me for - the day when I will begin my own journey of discovery. 'Good-bye, Mother!' I call out as I fall through the air and land with a little splash in the waters below. As I bob upright in the water, I am amazed to see tiny fish and prawn fry flitting all about me. This must be the nursery my mother told me about. I can see why prawn and

fish mothers would choose the mangroves to raise their precious young, for here among the mangrove tree roots, their young can easily hide from predators. The waters here are teeming with microscopic plant and animal life, which provide abundant food for the juveniles. It must have been this richness of fish and prawn fry that attracted man to the Sungei Buloh mangroves. For here are several prawn and fish ponds that used to supply man with quality protein for his diet. The ponds are now part of Sungei Buloh Nature Park, and the fish and prawns have also naturally become a part of the food chain in the mangrove ecosystem.

As I bob along, I think about how great a loss it would be, if all the mangroves disappeared. For along with us would go the buffering effect on our climate, the rich diversity of life and the many secrets still locked within us.

Fortunately for me, I have Sungei Buloh Nature Park, a place conserved for me and my fellow inhabitants of this unique habitat. Here, I can grow to be as sturdy and majestic as my mother is, and harbour among my roots and branches, the next generation of crabs and shellfish, spiders and insects, reptiles and birds, local and foreign. 🐸



Mudskipper

Botanical Rev

1. Always stay away from the politics of *Macaranga*.

Giant Mahang (Macaranga gigantea) has bigger leaves than any other Malayan tree. *Macarangas* can colonise and dominate a secondary forest. We see them as opportunist in the ecology of the survival of the fittest.

This is to be taken in the spirit of musing day-dreaming. Our pace of life is already so hectic. Why not give yourself a botanical tonic! Pick up a few botanical tips and learn some of the common names given to plants, although they may not have been their original meaning in the first place.

2. Never have anything to do with a *Quisqualis* if you value both your health and moral.

Drunken Sailor (Quisqualis indica), no reference is made to its other common name, *Rangoon Creeper*. The fruit kernel is used as an anthelmintic for roundworm. The root is effective in treating rheumatism. A decoction of crushed fruit is used as a gargle for toothache. This must be a paradox of value!

3. The *Mimosa* wishes of a lady may have hidden meanings but should nevertheless be respected.

Touch-Me-Not (Mimosa pudica) is also known as the *Sensitive Plant* or 'Puteri malu' (the modest princess). Decoction of the roots is traditionally taken orally to relieve asthma and diarrhoea.

'Tualang' [almost Hokkien sounding] (*Koompassia excelsa*) is the tallest and loftiest tree in the SE Asian forest soaring prominently above the other forest emergents.

4. Enthusiasm will probably burn like a *Delonix* if fanned by the ambition of a *Koompassia*.

In need of an infusion to perk up, find out what **Ali Ibrahim, Conservation Officer**, has brewed for us

Series . . .

As a personification, Cempedak (Artocarpus integer) will fall off the tree upon ripening like the connotation of falling in love.



6. Sometimes in love we are like an Artocarpus that will never quite forget the Durio memories which linger for a lifetime.

Whether you love or dislike Durian (Durio zibethinus), something about it is quite "unforgettable" as the singer, Nat King Cole, would put it

5. If you have tears, go to the Maniltoa.

Handkerchief Tree (Maniltoa brownoides) is an unofficial common name. The tassel of juvenile leaves hanging down limp reminds one of the famous concert soprano, Pavarotti, who knots a handkerchief in one of his last fingers so as to wipe away his perspiration and dribble tears found at the corner of his eyes.

*Not all these trees & plants can be found in Sungei Buloh Nature Park.

7. In decision making, it is best to leave out the Brunfelsia of the mind.

Yesterday, Today & Tomorrow (Brunfelsia calycina). A highly scented flower which changes its colour from violet to shades of purple and then to white. Like indecisive people, they are, however, not without their charming mannerisms and queer ways to go along with it.

8. Hope for the best and allow Eugenia to grant this!

'Jambu air laut' (Eugenia grandis). A majestic roadside tree which looks splendid when covered with scented, creamy white flowers during full bloom. Just wishful thinking...

Flame of the Forest (Delonix regia) when in full bloom is totally leafless in the drier monsoonal countries. With such a flamboyant sight to behold, one's passion can most certainly be stirred to heights of elation.



Cymbly



Great!

by joseph lai, conservation officer

Anyone interested in mangrove plants?

Well, we have *Cymbly* (simply) great news for you. I have recently discovered a beautiful orchid, *Cymbidium bicolor* ssp. pubescens, in Sungei Buloh! Listed as an extinct orchid in the Red Data Book, it was last collected in Sungei Buloh in 1891 by Mr. H.N. Ridley. That's almost a hundred and ten years ago, and this species has miraculously survived much habitat loss. Let us all hope it is the same happy-ending story for the rest of the twenty-six

species of orchids (of which 24 are extinct) that were recorded for Sungei Buloh.

Significance

The discovery of the orchid obviously adds one more species to our current record of plants found in Sungei Buloh. It suggests a richer plant-diversity than once thought of. However, the significance of the discovery lies much deeper.

Firstly, the orchid is a living thing. Secondly, it is a dynamic member of the mangrove system and intricately interdependent with a host of other life forms. Through the millennia, it has evolved with other natural living things to form the highly complex and specialised life system of the mangrove that we have today.

For example, bees and other insects are attracted to the orchid flowers, pollinating them while

taking nourishment from nectar and pollen. These are the same insects that help to pollinate other plants in the mangrove too, such as the buta buta (*Excoecaria agallocha*) tree, on which the orchid is dependent for support. Of course, this is a rather over-simplified example of species-interdependency.

New discovery — of plants, insects, or animals, etc. — is not just a statistic, but a significant indication of the vitality of the mangrove's biological system. It shows that the mangroves are much healthier and in better shape than we thought. While only one clump of the orchid has been found so far, we have not given up hope of finding others. In the meantime, we need to increase the number through selective propagation. The clump will be monitored regularly so as to obtain the next batch of fruiting capsules. A direct consequence of new discoveries also provides us with new material for research and educational purposes. 🌿

FACT FILE

Cymbidium bicolor Lindl. ssp. pubescens (Lindl.)
Du Puy & P.J.Cribb

Family: Orchidaceae

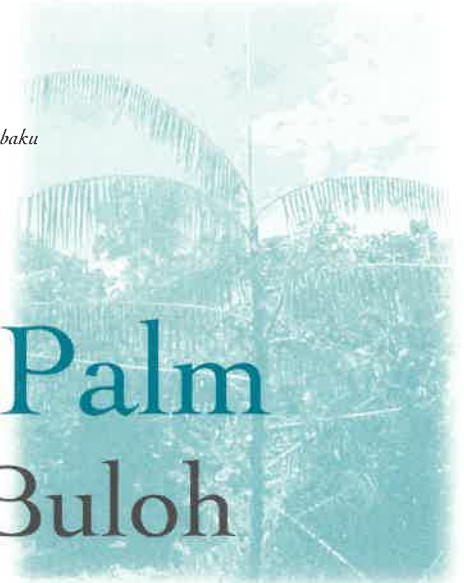
Habit: Epiphytic

Habitat: On trees in exposed places near the sea

Description: Leaves about 45cm long, 1.5cm wide, wide arching, not drooping in habit, leaf bases persistent, enclosing pseudobulbs within; raceme pendulous, to 25cm long; sepals and petals with broad dark purple central band, edges pale green, less than 2cm long, 0.5cm wide; lip yellowish with purple-brown spots; column dark purple, tip pale yellow with purple spots.

Distribution: Malay Peninsula, Singapore, Sumatra, Java and Borneo

Rotan baku



Rediscovered Palm from Sungei Buloh Nature Park

Nipah

Sungei Buloh Nature Park is home to a few species of palms (Family: Palmae) typically associated with the mangroves. They are the Nipah (*Nypa fruticans*), Rotan bakau (*Calamus erinaceus*) as well as the recently rediscovered Nibong (*Oncosperma tigillarum*).

by James Gan, senior conservation officer

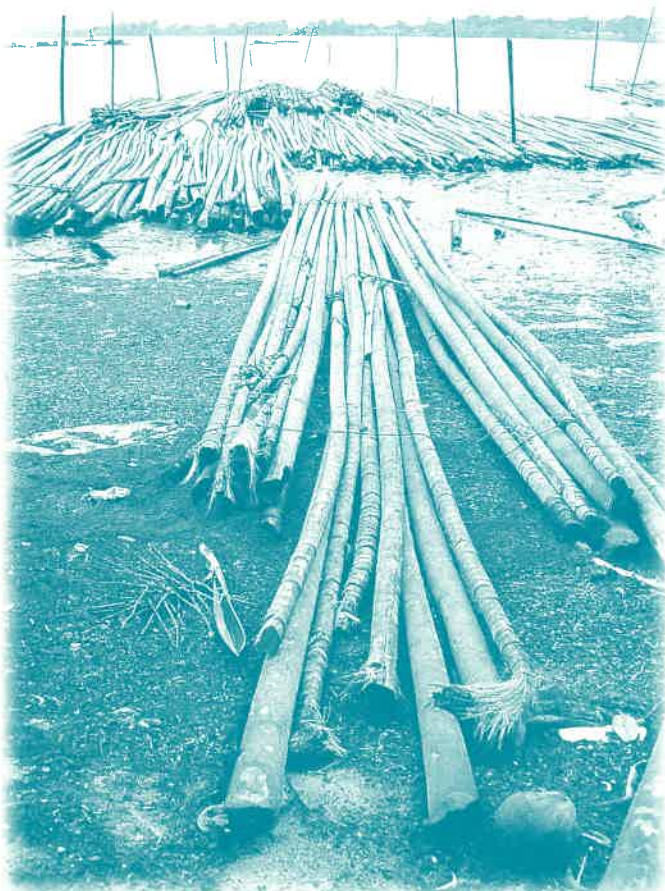
The Nipah is considered rare in Singapore. It has economic value in the region and the yields can be sustained. For example, the young endosperm (from the fruit) is collected for food. We commonly know it as "attap chee" when used as a key ingredient in our local dish ice kacang. In addition, various parts of the palm can be used. For example, the construction of thatch roofs (using the leaves) and tapping of sugar and fermenting it to obtain alcohol (tapping the inflorescence). The Nipah can now be viewed easily along route 1 and there are clumps behind and in front of hide 1C.

the Park. Care will need to be exercised when approaching this palm because of the numerous spines on the leaves and stems. You can view this palm most easily along route 1 between the Outdoor Classroom and Hide 1E.

A third palm species found in Sungei Buloh is the Nibong. It is a rare palm and was last collected by Mr. J.S. Goodenough on 29 Nov 1889 and in 1890 from the Sungei Buloh area. It was only re-discovered this year. It is a tall slender palm, and the clump I found in the Park has a height of 12m to which it can grow up to 25m. Stems once stripped of the black spines are used in the region as building material including posts for fishing stakes and in kelong construction.

We may not be aware of this but palms found in the mangroves do have their economic uses even in today's context.

The Rotan bakau is listed as vulnerable in the Singapore red data book of threatened plants and animals. It is a climber and can grow up to 15m in length. The inner part of the stem is harvested in the region as raw materials for use in basketry and furniture. There are a number of thickets of this rattan in



Nibong

Currently, holding the post of Chairperson of the Volunteer Committee, **Debra Yeo**, shares with us her Natural Therapy.



Her occupation...

Visitors are nearly always surprised to find out that I have a 'normal' weekday job which is not even remotely related to biology or any of the sciences. Some are even more surprised that I do it for free during 'valuable' weekend time. You see, on weekdays I am an airfreight planner in an international logistics company; on weekends, I turn volunteer nature guide at Sungei Buloh.

When it all started

I have been a volunteer guide at Sungei Buloh Nature Park since it was first opened in December 1993. The park has pleasantly

metamorphosed from disused fish farming land to a nature park of cultivated wilderness. There has been little change since those early days but I hardly tire of the place after all this time.

The reason why she became a volunteer

What excited me about the volunteer programme was that here at last was an avenue for the public to be shown the interesting aspects of their non-human neighbours. A chance for me to do my small bit to conserve whatever remaining natural habitat left in an increasingly crowded Singapore. It matters little that there is no monetary reward. So long as one visitor has learnt a new nature fact, I am satisfied; it is after all, a small step towards nature appreciation by the whole.

The satisfaction...

I love the quiet of the park and its varied inhabitants delight me. It is quite another world from tall concrete buildings, busy roads and modern life. It is not always easy to

communicate the value of the complex ecological mangrove system to all visitors yet it is reward enough to know that they bring home good thoughts of the serenity and rustic beauty of the mangroves.

Contact with visitors

Many visitors are just curious, having heard much or nothing of the park. Others show a mild interest; yet others savour the relaxed peace. Seldom are there visitors who remain totally oblivious to the wild beauty although modern life does appear to have taken its toll on many of

the younger visitors. This saddens me but the process of education and awareness is ongoing and I know that I can contribute to the process. I enjoy the process of educating, of bringing awareness because I love the balance that nature gives to the craziness of life today.

Her determination...

My contribution may be a small step but at least it is a right step towards building a better understanding of wildlife next door. Life could get crazier but as long as Sungei Buloh remains untouched, I will still continue as a volunteer nature guide - for the birds and the mangroves, if for nothing else. And I think these are more than reason enough.

Page 12 Volunteer Corner

The Value of Trees

by julian w., park volunteer

Trees are just like poems that were written upon the surface of the Earth, we cut them down and turn them into paper so as to record our emptiness.

Author Unknown.

My friends have asked if I knew the value of trees. Though most people will say that trees provide the much-needed shade and the beautification of our surroundings, in my opinion, trees contribute a lot more in many other ways.

Perhaps the most important factor is that trees give off oxygen as a by-product of photosynthesis.

Photosynthesis is the process, which plants lock away carbon dioxide (a major global warming suspect) to produce food. Imagine if we were to cut down all the world's remaining trees gradually, what do you think will happen to the level of carbon dioxide in the atmosphere?

We have already heard about the "growing" desert problems in China, experienced the rise in global temperature, encountered numerous landslides & learnt about the melting ice glaciers in the North and South Pole regions, which had already caused numerous flooding around the world. All these calamities resulted because trees are being cut down rapidly in our remaining forests.

As we know, about 50%

of the medicine we use today comes from the rainforest, there might be the possibility that some of those trees which were chopped down contain medicinal values which could help us fight dreadful diseases like cancer and Aids. If we do not do anything right now to conserve or even reverse this situation, the resulting consequences would be most grievous and unimaginable.

Other than being life generators, trees also make effective sound barriers & windbreaks. If planted at strategic positions in a neighbourhood or around your house, they can abate noise from busy roads, highways or even airports up to about 40%. During windy and cold seasons, trees act as windbreaks. A windbreak can lower home heating bills up to 30%. A reduction in wind can also reduce the drying effect on other

vegetation behind the windbreak.

Trees also play an important part in keeping the air clean. They help to cleanse the air by intercepting airborne particles, reducing heat, and absorbing pollutants. Trees help to remove this air pollution by lowering air temperature, through respiration, and by retaining the particulate. Other major advantages include, fighting soil erosion, conserving rainwater, reducing the effect of water runoff and sediment deposit after storms and of course, providing home and shelter for a wide variety of wildlife.

I hope that after reading this article, you will realise that the continual survival of these fragile giants would also mean Man's continual survival on this planet. Remember that saving these trees would also mean saving ourselves.

Smile...

by nick baker, park volunteer

You're on Candid Camera



Being a volunteer at Sungei Buloh Nature Park certainly has its rewards - clean air, friendly staff and waived entrance fees! During August and September this year I was most handsomely rewarded for my time spent assisting Mr. S.M.A. Rashid, postgraduate student of Natural Sciences (Biology) NTU, working for his Ph.D on the "Population ecology and management of water monitors at Sungei Buloh".

My reward was an encounter with the Smooth Otters which now seem to love Sungei Buloh so much. Let me recount the story...

It was just after 8.30 a.m. on Tuesday 22nd August. Rashid was taking his morning coffee and preparing for the day's activities. So I strolled onto the Main Bridge hoping to see, perhaps, some kingfishers or snakes or something unusual. Now normally when I see a dark shape swimming across the ponds or inlets of Sungei Buloh I would immediately assume it to be one of Rashid's scaly friends on the look out for dead things to eat. Imagine my surprise to see not one, but four shapes moving swiftly downstream from the headwaters of Sungei Buloh Besar.

I attempted to conceal myself on the bridge, but the otters were well aware of my presence and seemed quite comfortable with me. To my delight I saw the entire family climb out onto the mudbank near the Visitor

Centre, and then proceed to grub around in the mud looking, I assume, for crustaceans or shellfish. I was able to take a few photos before they re-entered the water, and then, fully submerged swam right under the bridge. It was quite a sight to see their effortless swimming take them quickly downstream.

I gathered my camera and bag, and hastily made my way to the small boardwalk at the mouth of Sungei Buloh Besar, totally forgetting about Rashid and his lizards! From there I watched as the family caught fish, large and small; they were most adept at this - at one point all four were chewing on fish heads simultaneously. I then made my way to the platform that looks out to Pulau Buloh. There I bumped into Charles, a Park Ranger, doing his rounds. We spent some

convivial moments watching the otters as they moved up past the boardwalk.

Charles went about his duties, but I proceeded further, concealing myself behind a tree a short distance upstream. At this point the otters appeared full up, and were now exploring tree roots and diving into pools. As they moved past me one of the parents could smell my presence (do I really smell that much!), but could not see me. As the parent stopped to investigate, I was able to take the closest photos ever of these most treasured inhabitants of the park.

So that was my reward. I shall always remember that morning; crouching in the mangroves and being treated to such a special encounter with four charming, handsome otters. 🦦

In Brief

Wetland Wildlife Stamp Launch

The 10th series of HongKong and Shanghai Banking Corporation's Care for Nature stamp issue was launched by Associate Professor Ho Peng Kee, Minister of State for Home Affairs and Law on 11 August 2000 at Bugis Junction. The stamp issue depicts "Wetland Wildlife" featuring 4 species of fauna found at Sungei

Buluh Nature Park. They are Archer Fish, Smooth Otter, Collared Kingfisher and Orange Fiddler Crab.

International Coastal Cleanup

This year's mangrove cleanup saw over 60 students from St Andrew Junior College working in the mangroves of the Park on 16 September 2000. A total of 35 bags of waterborne rubbish was collected over an hour.

Calendar of compiled by chan su hooi, education officer Events

Waders Trail

Sept 2000 - Mar 2001

"T.T." is back to do his rounds! Be sure to arm yourself with the booklet "Endless Summer - the story of a seasoned traveller" and begin your adventure together with him on his migratory trip around Route One. Find out from the booklet your mission to be achieved. It is not a "mission impossible"!

Free Guided Tours

Every Saturday at 9am, 10am, 3pm & 4pm (except public holidays).



This is a good opportunity for you to discover the little wonders of nature that you might have totally missed out. Come and be amazed by these wonders while the guide leads you on the journey through the mangroves.

(Guiding service may be replaced with other interesting programmes that coincide with guiding time slots.)

Talks

January, February, March 2000

Bringing nature to your doorstep! This is achieved through the regular travelling slide talks on the flora and fauna of the Park brought to the schools. Here is a chance whereby the young minds can enjoy our existing natural heritage.



Migratory Season

September 2000 to April 2001

Our feathered friends from the northern region have already arrived from their annual journey down south to escape from the northern winter. Make a trip down to the Park fast before they are gone. Take this opportunity to see these migratory birds roosting and feeding at the Park. Tips: The best time to see them is during high tide as other coastal areas will be flooded while some ponds at Sungei Buloh will be kept low with exposed mudflats which allow them to roost and to feed.

Teachers' Workshop

13 March 2001

A half-day workshop conducted for school teachers to enable them to learn about the flora and fauna of the Park and further share the knowledge gained with their students. They will also bring back with them some ideas on how to use the Park as a living classroom.

Natural Wonders of Sungei Buloh

Every Saturday of the Month at 9.15am

Nature never fails to amaze us. This is a rare chance to find out more about the different inhabitants of Sungei Buloh. We will be showcasing a series of interesting but often ignored creatures.



Heron Watch


10 March 2001

Want to see one of the largest birds in the Park? Join us on a guided walk to take a good look at the herons nesting and roosting at the top of the mangrove trees on an island called the Heronry. This magnificent sight should definitely not be missed.

Millennium Souvenir for every 2000th visitor

1 Dec 99 to 31 Dec 2000 Goodies! Come on down to the Park before they are gone. The millennium celebration will be ending soon. We have given out many souvenirs since the 1 Dec '99. You still stand a chance to be one of the 2000th visitors to the Park and receive a gift that we have specially prepared for you. Bring home with you the joy of the celebration. We take this opportunity to thank you for your support in nature conservation!

For more details check our website at www.sbnp.org



by ramakrishnan r.k, senior ranger

Journal of a Nature Warden: Pink-necked Green Pigeon

(*Treron vernans*)

The domesticated feral pigeon commonly found in Singapore has a close cousin that many would miss due to its well-camouflaged body. The wild Pink-necked Pigeon is a common bird in the forest, mangroves and parkland.

I was first drawn to this bird by its frequent visit to the Indian Cherry Tree. This green pigeon moves acrobatically on the thinnest of branches foraging for fruits. Moving in small flocks or in pairs, they frequent fruiting trees or scrubs for food. Their green plumage blends well into leaf foliage and provides a good camouflage. The male, which is separated from the female by the pinkish-purple upper breast, shows aggression during feeding by vocalizing, chasing and vigorously bobbing tail in defense of foraging patch.

These pigeons are good seed dispersers for trees like the Figs, Indian Cherry and Wild Cinnamon and scrubs like the Singapore Rhododendron. Unlike the Emerald-winged Pigeon, the Pink-necked hardly descends to ground and is often spotted on canopies of treetop during early morning and late afternoon.

Breeding pairs have also been recorded in the park. Nesting has been observed from late March to late July. Pairs nest

alone and not in masses. The nest often found at heights at about five to eight feet and sites range from low scrub to trees, commonly next to open ground and often on the Lesser Desmodium creepers. 🌿

Description:

Male: combination of Grey head and throat, pinkish purple upper breast and neck, and orange lower breast diagnostic. Mantle and wing covert apple green; under tail covert chestnut. **Female:** uniform green plumage with yellow tinge on belly; thighs mixed dark green and yellow; under tail covert pale cinnamon.

Voice: A series of rapidly repeated loud gurgling whistling notes.

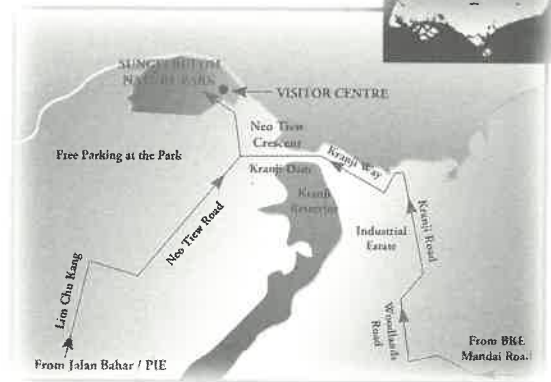
Status: Very common resident in Singapore.

Habitat: Forest, mangrove, orchards, gardens, parks.

Breeding: Late March to late July. Male collects twig and passes to the female as she sits in the developing nest. Both sexes incubate and feed. A minimal platform of thin twigs, sparse enough for eggs to be seen from below, and facing pond side. Eggs are plain white and elliptical. Fledgling found near nesting site for up to one week.

Diet: Fruits from Macaranga, Indian Cherry (*Muntingia sp.*), Small banyan figs (*Ficus benjamina*).

Map to the Park



Opening Hours

Mondays to Saturdays
7.30am to 7.00pm

Sundays & Public Holidays
7.00am to 7.00pm

Admission

\$1.00 per adult

\$0.50 per child/
student/senior citizen

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

Getting There

Mondays to Saturdays:

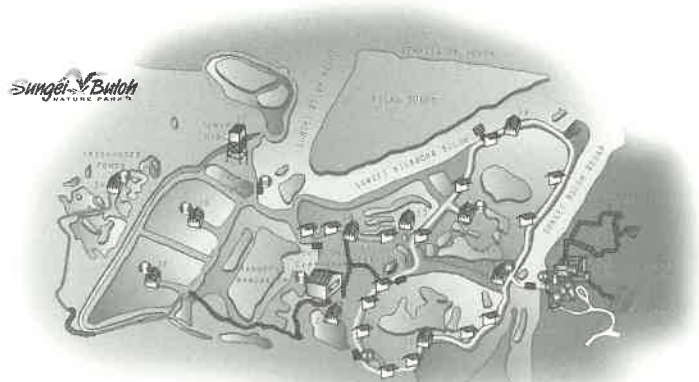
Board service
TIBS 925 from
Kranji MRT Station.

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.

Map of the Park



Sungei Buloh Nature Park
301 Neo Tiew Crescent
Singapore 718925

Tel: 794 1401
Fax: 793 7271

E-mail:

sbnp@pacific.net.sg

Website:

<http://www.sbnp.org>

Visitor Centre Facilities

- Theatre
- Cafeteria
- Nature Gallery
- Nature Cove
- Toilet

Park Facilities

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

Help us make these stamps rare,
so these animals don't have to be.



Year 2000 marks the 10th anniversary of the Care-for-Nature stamp series. HSBC Singapore has dedicated this year's issue to help promote awareness on the wetlands and the importance of conserving it. This year's issue is thus aptly named the Wetland Wildlife Series.

Wetlands are ecological jewels that support a myriad of flora and fauna. They are living classrooms where we can enjoy the unique opportunity to see nature at work, first-hand, and realise their ecological richness and educational value to our existence.

Habitats like the wetlands function best when left alone, and the stamps convey this message strongly in the artist's rendition of harmony found among the wetland's inhabitants.

Gracing our 10th year Care-for-Nature collector's cover are the water spouting Archer Fish, the elusive and shy Smooth Otter, the loud but magnificent Collared Kingfisher and the courtship-savvy Orange Fiddler Crab. These friendly but shy

wetlanders are making their debut in support of their habitat.

You can help them secure their home simply by buying the wetland covers and prints. Proceeds from the sales are used to fund education and conservation projects, including environmental initiatives to support conservation of habitats such as Singapore's very own Sungei Buloh Nature Park.

The Wetland Wildlife Series

- For as little as \$9.90, you can help us help these animals thrive.
- Care-for-Nature Collectors' Cover (\$9.90)
- Special 4-in-1 print edition (\$68)
- Set of 4 Limited Stamp Print Collection (\$338 with frames), (\$198 without frames)

From 11th August 2000, the Care-for-Nature Collectors' Covers are available at all HSBC branches, Public Affairs and Advertising Department (HSBC Building #14-01, Tel: 530 5100) and Singapore Post main branches.



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