

A  publication

WETlands

Sungei Buloh Nature Park, Vol.7 No. 2, August 2000, MITA(P) No. 022/01/2000



C O N T E N T S

C O N T E N T S

*To see a world in a grain of sand
And a heaven in a wild flower
Hold infinity in the palm of your hand
And eternity in an hour.*

William Blake

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Cover photo by Khew Sin Khoon
Picture of a Common Palmfly pupae
(*Elymnias hypermnestra agina*)

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EDITORIAL

All things have a purpose in life. Be it a grass or a twig. If we can but just look at them from a different angle, we will soon realise their significance. From the grains of the grass, to the fluttering butterflies and the nesting birds of the Park, there is always time and place for everything.

Beauty is indeed in the eyes of the beholder. What we perceive will depend on what we understand. Take time to read the articles presented to you in this issue and we hope that a better understanding can be forged with all things small and beautiful surrounding us.

linda goh

JAMES GAN, Senior Conservation Officer,
shares with you some of the unnoticed virtues of
the Park's wild grasses.

The Truth about Grass

*A weed is a
plant whose
virtues have not
been discovered.*

Ralph Waldo Emerson

Sungei Buloh Nature Park is home to mangrove trees and plants. But do you know that there are many other plants not necessarily associated with the mangroves found in the Park? They grow in inconspicuous places such as the side of tracks and footpaths. Most people know them as grasses. Some of them are commonly called weeds. The grasses have been largely ignored perhaps because they are not attractive to many people. They are however ecologically important plants.

Grass flowers do not have petals. They are usually very small (no more than a

few millimetres) and arranged in a group to form spikelets, spikes and panicles. The fruits develop on these spikelets and are like grains of very small rice. Grass seeds are important to grain eating birds as a food source. The Scaly-breasted Munia (*Lonchura punctulata*) and the Javan Munia (*Lonchura leucogastroides*) are examples of birds that depend on the Guinea Grass (*Panicum maximum*) for their food. This grass is widespread throughout the Park and can also be found around the Visitor Centre. It is a tall grass growing up to 2m high. Once devoid of grass grains, the grass also serves as a lining material for the globular nests of these birds. The dense clumps of the grass are also

Guinea Grass

favourite nesting sites for birds like the Yellow-bellied Prinias (*Prinia flaviventris*).

Lallang (*Imperata cylindrica*) is another grass found in the Park. It is an important nesting material for birds such as the Baya Weaver (*Ploceus philippinus*). These birds make use of the long blades of grass to construct symmetrical hanging homes for which they are known. Birds such as the Olive-backed Sunbird (*Nectarinia jugularis*) also use the white long fine hairs of the fruits to line their nests. Lallang patches can also be nesting sites. Slaty-breasted Rails (*Rallus striatus*) are known to have nested among lallang.

Featured here are just two of the many grasses that are important to some of the birds in the Park. So the next time you see these grasses, remember, they have a reason for being here. 🐦

Lallang

Earth Day programmes

by linda gob, senior education officer

The world celebrates Earth Day every year on the 22nd of April. Started in the United States in 1970, it has gone global and has sent far-reaching ripples to millions whom 3 decades later are still celebrating this day faithfully.

Sungei Buloh Nature Park has been on the bandwagon for the last 4 years celebrating this day with various activities.

TIMELINE

1997
Teaming up with Timberland, the public was encouraged to make their contributions towards nature conservation by dropping their loose change into pledge boxes at Timberland stores during the month leading to Earth Day. Proceeds from the sale of the exclusive Timberland caps were also donated to the Sungei Buloh Nature Park. The funds collected from this event were channelled towards the Park's conservation education efforts.

A special programme was also planned for Earth Day to introduce the Park's flora and fauna to a group of children from various homes.

1998
A 3-week long Earth Day publicity programme was held in Ngee Ann City and Centrepoint Shopping Centre in collaboration with Timberland to reach out to the yet untapped group of shoppers to promote awareness for Sungei Buloh Nature Park.

A special educational programme, Mangrove Mania, was also planned and developed to promote the beauty of the mangroves to the visitors in celebration of this day.

1999
Staff and volunteers led groups of visitors for HeronWatch, a programme whereby participants were led through a journey of understanding and discovery of the Park's largest birds, the Purple and Grey Herons.

2000
This year, we celebrated the day with a group of students

and a special guest speaker, Mia N. Schmallenbach, who gave a talk on the 3 Rs, reduce, reuse and recycle.

Special Mention
Mia N. Schmallenbach was 14 when she started her crusade to save the world. Now 17, she has published a book, "101 Ideas to Save the World: Starting at Home", and journeyed around Singapore to campaign for a better world. Invited by National Geographic Channel Asia, she was in Singapore during the week long Earth Day Celebration to do a series of presentations and workshops to inspire young people to make a difference in this world. We were delighted to organise her talk at the Park on this special day as she shared her experiences and ideas with students as part of the Park's Earth Day Programme.

The Park will continue to celebrate this day and hope to instil the Earth Day, Every Day concept in everyone's mind. Look forward to next year's programme.

Khew Sin Kheon, a park volunteer, shares with us the list of butterfly species observed at Sungei Buloh Nature Park from 1999 to 2000.

Butterfly Census

List of Butterfly Species Observed at Sungei Buloh Nature Park (1999-2000)

1. Common Mime - *Chilasa clytia clytia*
2. Tailed Green Jay - *Graphium agamemnon agamemnon*
3. Lime Butterfly - *Papilio demoleus malayanus*
4. Banded Swallowtail - *Papilio demolion demolion*
5. Common Mormon - *Papilio polytes romulus*
6. Striped Albatross - *Appias libythea olferna*
7. Mottled Emigrant - *Catopsilia pyranthe pyranthe*
8. Common Grass Yellow - *Eurema hecabe contubernalis*
9. Three Spot Grass Yellow - *Eurema blanda snelleni*
10. *Eurema simulatrix tecmessa*
11. Common Tiger - *Danaus genutia genutia*
12. Spotted Black Crow - *Euploea crameri bremeri*
13. Striped Blue Crow - *Euploea mulciber mulciber*
14. Blue Glassy Tiger - *Ideopsis vulgaris macrina*
15. Dark Glassy Tiger - *Parantica agleoides agleoides*
16. Common Palmfly - *Elymnias hypermnestra agina*
17. Common Evening Brown - *Melanitis leda leda*
18. Dark Brand Bush Brown - *Mycalesis mineus macromalayana*
19. *Mycalesis perseus cepheus*
20. Palm King - *Amathusia phidippus phidippus*
21. Baron - *Euthalia aconthea gorda*
22. Great Eggfly - *Hypolimnas bolina bolina*
23. Peacock Pansy - *Junonia almana javana*
24. Blue Pansy - *Junonia orithya wallacei*
25. Chocolate Pansy - *Junonia hedonia ida*
26. *Pantoporia paraka paraka*
27. Short Banded Sailor - *Phaedyma columella singa*
28. Blue Nawab - *Polyura schreiber tisamenus*
29. Sumatran Sunbeam - *Curetis saronis sumatrana*
30. Ciliate Blue - *Anthene emolus goberus*
31. Centaur Oak Blue - *Arhopala pseudocentaurus nakula*
32. Common Tit - *Hypolycaena erylus teatus*
33. Common Caerulean - *Jamides celeno aelianus*
34. Pea Blue - *Lampides boeticus*
35. Long Banded Silverline - *Spindasis lobita senama*
36. Lesser Grass Blue - *Zizina otis lampa*
37. *Rapala pberetima sequeira*
38. *Badamia exclamationis*
39. Common Awl - *Hasora badra badra*
40. Chestnut Bob - *Iambrix salsala*
41. *Stilpnus gremius gremius*

The total number of species found at Sungei Buloh Nature Park is not exhaustive. A longer continuous period of observation may yield other species not recorded so far. Some of the species noted have only been

observed once, and not seen again in the past year.

The changing vegetation in the adjacent farmlands may also attract species not earlier observed. However, it must be noted that on a "good" day, the

casual observer is likely to record about 25 species. A number of the fast flying butterflies from the Hesperidae and Lycaenidae families may also be difficult to identify with certainty in the field.

An Introduction to Butterfly-Plant Relationships at Sungei Buloh Nature Park

Lime Butterfly

by Khew Sin Khoo, park volunteer

The success of Sungei Buloh Nature Park's Butterfly Trail has brought our winged friends to the fore, as they are usually the first of nature's ambassadors to greet visitors to the Park. Located at the main boardwalk leading to the Visitor Centre, the Butterfly Trail's colourful flowers have attracted several species of the larger butterflies at Sungei Buloh to feed at the trail. These butterflies, particularly the Blue Glassy Tiger, Dark Glassy Tiger, Common Mormon and Common Palmfly, are frequently seen in the vicinity of the trail at most times of the day.

Sungei Buloh, usually associated with bird-watching and mangrove flora and fauna, is also home to about 40 species of butterflies. Whilst this is not a large number of species, it is quite important to note that the diversity of the butterfly species has a direct relationship to the number of species of plants found at the Park. The caterpillars of most species of butterflies feed on plants (with the exception of

certain Lycaenidae species that are "carnivorous" and feed on coccids and mealy bugs). The vegetation of Sungei Buloh cannot be compared with, for example, Bukit Timah Nature Reserve, or the Central Catchment Area where the majority of the 250-odd species of butterflies in Singapore can be found.

It is therefore important to understand the ecology of the butterflies, in particular, their dependence on the plant species at Sungei Buloh. Whilst most adult butterflies feed on flowering plants and damp patches on forest floors, their caterpillar stages are heavily dependant on the particular host plant of the species. For example, the often-encountered Blue Glassy Tiger (*Ideopsis vulgaris macrinea*) feed on a type of creeper-weed found commonly at Sungei Buloh.

It is believed that the Blue Glassy Tiger's lookalike, the Dark Glassy Tiger (*Parantica agleoides agleoides*) also shares the same host plant. The elegant Common Mormon, often found fluttering near the Lantana flowers, depends on its host plant, the Indian Curry Leaf Plant (*Murraya koenigii*), or in its absence, Citrus plants. The Common Palmfly feeds on the various palms found at the Park, and its favourite is the Yellow Cane Palm (*Chrysalido carpus lutescens*). The list goes on, and for many of the butterfly species, their host plants are still unknown, and only through close observation and a good dose of luck will the gaps in our knowledge be filled in.

Common Mormon

There are several species of Lycaenidae (these are small fast-flying butterflies) found at Sungei Buloh which occur in symbiotic relationship with the Kerengga ants. These are the Common Tit (*Hypolycaena erylus teatus*) and the Centaur Oak Blue (*Arhopala pseudocentaurus nakula*). Both species are known to feed on the leaves of *Eugenia* species. The caterpillars of these two species exude a kind of sweet secretion on which the ants feed, in return for protection from predators. With the fierce "fire-ants" protecting them, the caterpillars of these butterflies have a much higher chance of survival in the wild. It would take a very determined and thick-skinned predator to ignore the painful bites of the ants to get at the caterpillar. So the next time you get bitten by these "fire ants" at Sungei Buloh and secretly hope that these ants be exterminated, spare a thought for the survival of at least two of the butterfly species sharing the Park with us.

The fruit trees that can be found at Sungei Buloh are also known host plants to several species of butterflies found at the park. Amongst these are the Mango - host plant for the Baron (*Euthalia aconthea gorda*), Rambutan - host plant to Blue Nawab (*Polyura schreiber tisamensis*), Lime (various Citrus species) - host plant to Lime Butterfly (*Papilio demoleus malayanus*), Banded Swallowtail (*Papilio demolion demolion*) and Common Mormon (*Papilio polytes romulus*).

Even the humble grasses, lallang and "weeds" like the Common Asystasia support several species of butterflies. The Common Asystasia is the known host plant for the Great Eggfly (*Hypolimnastis bolina bolina*) and the sun-loving Blue Pansy (*Junonia orithya wallacei*). The latter can usually be found along the perimeter fence at the Park which is near the neighbouring farms. The pretty Common Tiger (*Danaus genutia genutia*), feeds on a creeper-vine which can be found

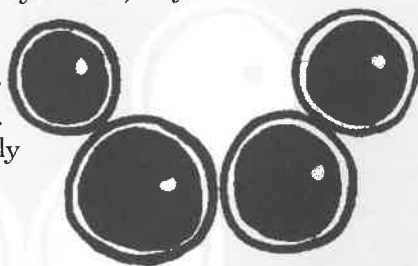
growing along the fence separating the park from one of the neighbouring farms.

The common Derris species, usually associated with Mangrove flora, is believed to support at least two species of butterflies. These are the Sumatran Sunbeam (*Curetis saronis sumatrana*) and the Common Awl (*Hasora badra badra*). The Sumatran Sunbeam is a fast-flying butterfly with bright orange black-bordered wings above, and a silvery white undersides. This species is one of the resident species at Sungei Buloh, and is usually found near coastal areas. This butterfly is not found in the other nature reserves in the Central Catchment area.

It is therefore extremely important to understand the butterflies' dependence on plants for survival. Without the existence of it particular host plant, the corresponding butterfly species will become extinct at the park. 🦋

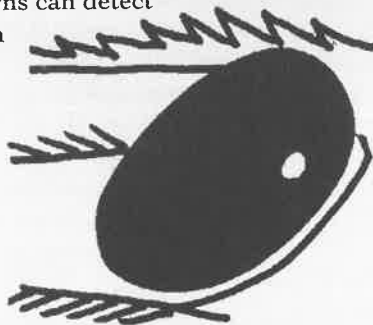
Spider

Spiders normally have eight eyes but some spiders have six, four or two eyes. One unusual species has only one eye, which is in fact a fusion of a pair of eyes. Ironically, the majority of spiders do not depend on their eyesight for finding and capturing prey. They have extremely poor eyesight.



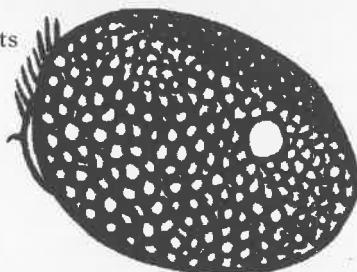
Prawn

Most crustaceans have compound eyes. A compound eye is made up of separate compartments and the animal's brain can put the images together to form a complete picture. Prawns can detect movements in the water using their 2 large eyes.



Dragonfly

The dragonfly has a pair of eyes that cover most of its head. There are up to 30,000 lenses in one single eye and these lenses can detect objects up to 20 meters away!



Vision

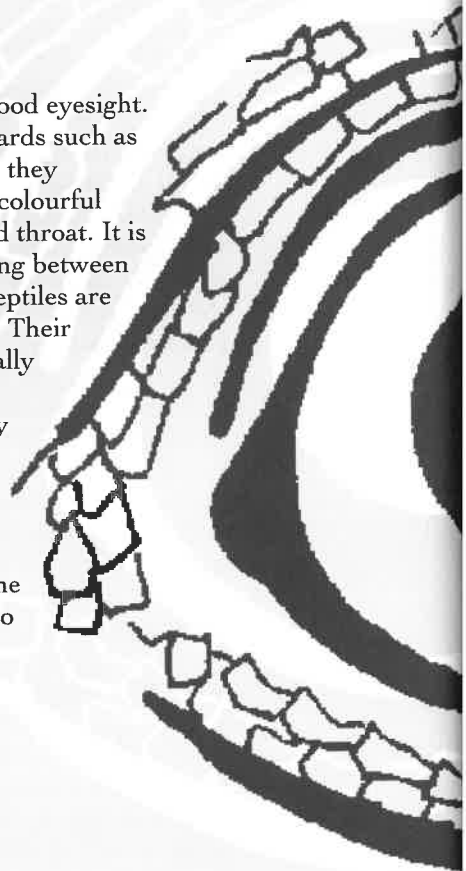
- to see that we are all part of the same world

Have you ever wondered how animals see us? Do they see us as we are actually observing you while you are doing exactly the same thing?

Being a creature with well-developed vision, our eyes can focus on another object right in front of us. In short, we can see messages and send them to the brain. Unlike some mammals,

Lizard

Lizards in general have good eyesight. Colour is important to lizards such as the Changeable Lizard as they communicate using their colourful head ornaments, crest and throat. It is also a way of distinguishing between sexes. The eyes of most reptiles are large and well developed. Their eyeballs and lens are usually round. Pupils range from round to elliptical, usually vertical and occasionally horizontal. The eyes are protected by transparent solid lens. They have moveable eyelids and some could close their eyelids to tiny peepholes!



Fish

Unlike human, sight is not as important to fish as most can navigate, detect obstacles and locate food in murky water through vibrations received from their lateral line system. The lateral line system is made up of tiny perforations in a single row of scales and runs horizontally along the length of the fish. They are adapted to these conditions and in fact see most clearly in dim light! Archer Fish is an exception and has better eyesight than most fishes. They need to look through and above water for insects that they feed on. Most fishes have clear layer of skin protecting their eyes, as they do not have any eyelids.



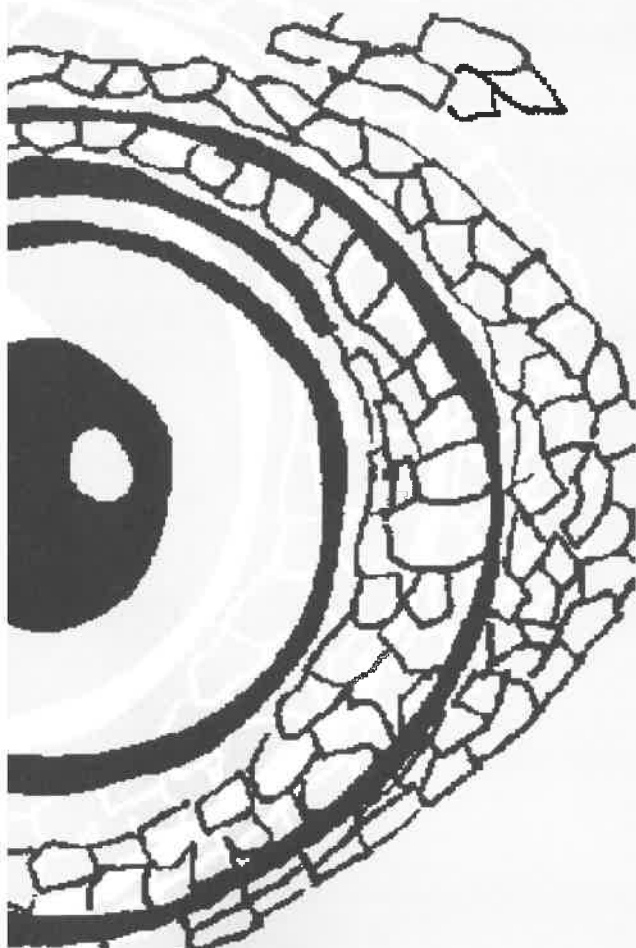
n

t of nature's web of life

text and drawing by halilab abmad, education officer

the same form and colour as we do? Do you know that they are different to them?

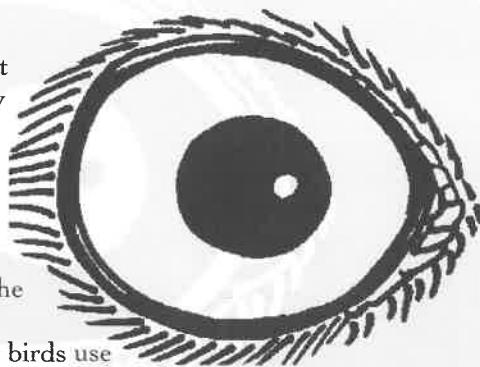
Focus on an object at distant and switch within seconds to see images as our eyes collect light, convert it into electrical signals and we can see in detail and colour.



Bird

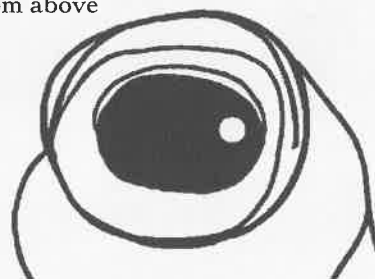
Most birds have keen eyesight and their eyes can be as heavy as their brain. Birds are sensitive to visible and polarised or filtered light. Although filtered light is undetectable, sunlight reflected from some parts of the sky is partially polarised.

Experiments have shown that birds use this polarised light to navigate after sunset, before the stars shine brightly.



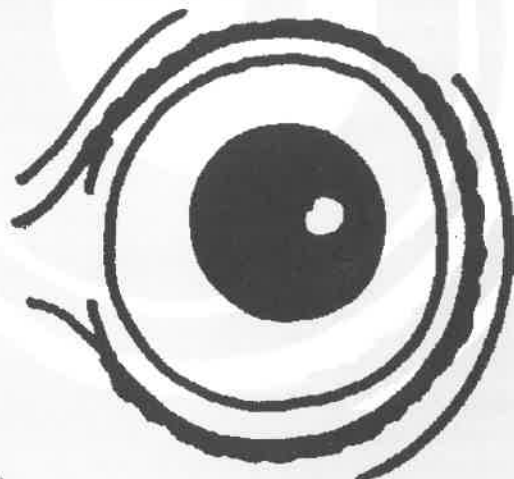
Mudskipper

Unlike other fishes, the mudskipper has a pair of closely located, bulging eyes above its head. It can see above and below water at the same time when it swims, just like a periscope of a submarine. Being a fish spending much of its time above water, seeing "double" is essential for its survival. They can spot predators from above and under water simultaneously.



Bat

"Blind as a bat" is a wrong term to use as there are no known species of blind bats! Some species have better eyesight than others do, some have bigger or smaller eye size and some can or cannot see colours. In general, a bat takes full advantage of available light by increasing the light density, using a reflective structure call "tapetum lucidum" located behind the retina.



The mural, Vision, was unveiled by Mr Koo Tsai Kee on the Park's 5th anniversary. It is a composite picture of pieces of terracotta tiles handmade individually by students from La Salle - SIA College of the Arts. This mural can be found next to the ticketing counter.

Pink-necked Pigeon

NESTING BEHAVIOUR OF BIRDS IN SUNGEI BULOH

by adeline chia, scientific officer

Baya Weaver's Nest

The annual nesting season for resident birds in Sungei Buloh stretches from January to June. Based on observations carried out from 1996, we have identified some general nesting behaviour of some bird species found at the Park. Interesting aspects of these birds' nesting behaviour are highlighted here.

Nesting Season

Sunbirds and Tailorbirds kick off the breeding season in January. Courting rituals can be seen amongst the Sunbirds whereby males

display bright yellow tufts beneath the wings to attract a willing female. The female usually builds the nest and the male escorts her during the collection of nesting materials. Both parents of the Copper-throated Sunbird (*Nectarinia calcostetha*) are observed to feed the young.

The nest of the Common Tailorbird (*Orthotomus sutorius*) is usually built using the leaves on the lower branches of the Simpoh Ayer (*Dillenia suffruticosa*). Likewise, the female builds the nest and both parents feed the young. The nest building and feeding activities can be easily observed during the peak nesting period in February and March for both the Sunbirds and Tailorbirds.

The Munias start the breeding season in late February to early March. They seem to like building

their nests in potted ferns. The Javan Munia (*Lonchura leucogastroides*) in particular likes to build its nest on these 'suspended nesting sites'! The Javan Munia lays 4-5 eggs and it is common to see the families staying near the nests for some time after the young had fledged.

The Pink-necked Pigeon (*Trenon vernans*) starts breeding in late March and the likelihood of spotting its nest increases in April. The parents take turns to incubate the eggs and feed itself.



Yellow-vented Bulbul's Nest c3 Eggs

Grey Heron

Table 1: Nesting Period for Sunbirds, Tailorbirds, Munias and Pink-necked Pigeon.

SPECIES / MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL
Pink-necked Pigeon							
Sunbirds							
Tailorbirds							
Munias							

Nesting Materials

A wide variety of materials are used for nest building. The birds are usually quite resourceful, and would not hesitate to use materials that are man-made. String and raffia have found their way into the Copper-throated Sunbird's nest.

The Pink-necked Pigeon builds a sparse platform of twigs which looks scarcely able to support the eggs and young! Small pieces of bark are also incorporated into the Sunbird's nest.

The Pied Fantail (*Rhipidura javanica*) conceals its nest in the mangrove vegetation and its nest is made up of composites of long grasses and small leaves.

Occasionally, one may be rewarded with the sight of a Tailorbird or Sunbird picking out bits of spider silk, which plays an important part in nest-building.

The Purple and Grey Herons construct their platform nests with twigs while Munias and Prinias use grasses as their main nesting material.

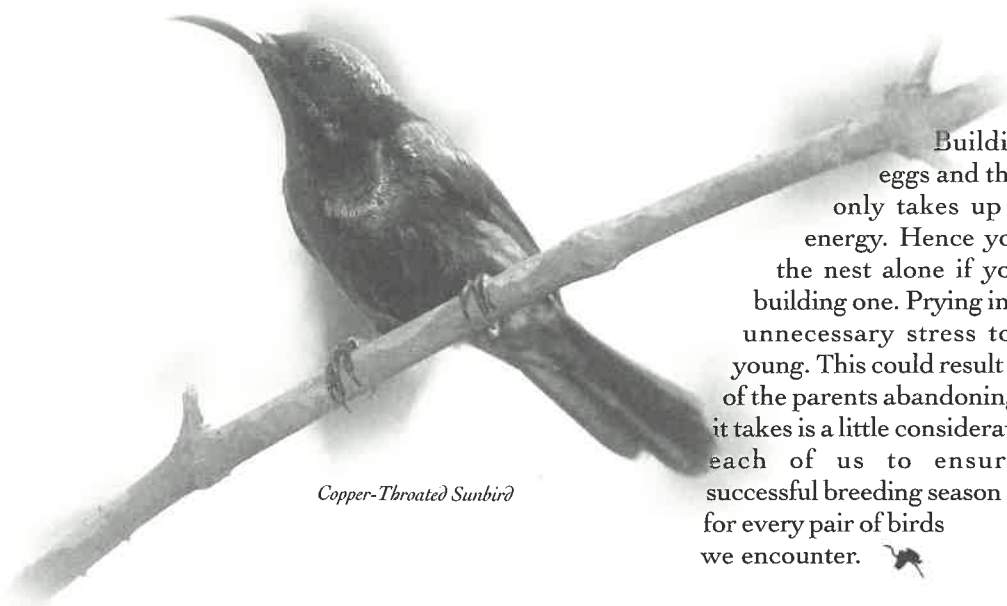
Nests are usually lined with fluffy seeds of plants such as Cattail and Lallang to provide insulation. Earth is used in some species to bind the nest together, hence strengthening it.

The collection and collation of these records help us to better understand the nesting habits of the birds in the Park and allow us to be more attuned to the requirements needed to protect them and their environment. You too can do your part. 

Scaly-breasted Munia

Table 2: The use of nesting materials by different species of birds

Species	Types of Nesting Material						
	Twigs	Spider silk	Bark	Grasses	Leaves	Fluffy seeds	Others e.g strings, bark, earth
Pink-necked Pigeon	X					X	X
Sunbirds		X	X	X	X		X
Pied Fantail				X	X		X
Baya Weaver				X			
Herons	X						X
Yellow-vented bulbul				X	X	X	X
Common Tailorbird		X		X		X	X



Copper-Throated Sunbird

GREEN TIP

Building a nest, laying of eggs and the rearing of young not only takes up time, it also requires energy. Hence you can help by leaving the nest alone if you spot one or a bird building one. Prying into a bird's nest causes unnecessary stress to the parents and young. This could result in the possibility of the parents abandoning the nest. All it takes is a little consideration from each of us to ensure a successful breeding season for every pair of birds we encounter. 

A Walk With A Volunteer Guide

by chan su hooi, education officer



He was the Chairman of the volunteer committee in 1998. Passing on the reins to new blood, he took on the role as the Honorary Secretary in 1999 and 2000. He plans the guiding schedule for volunteers, trains and develops new volunteers to take on the challenge. Meet Keith Hillier, aged 71, a Park volunteer since 1997.

His reasons for becoming a volunteer at the Park...

"I have spent a lot of time in the rain forest and park land, but not in the mangroves. I thought it is an interestingly different ecology. And I wanted to learn something about it and be able to share it with the others."

His experience as one...

"I was a teacher for a couple of years a long time ago, teaching dry old Maths and Chemistry, which are equivalent to dead subjects. Guiding visitors around the Park is like teaching a live

interactive subject, which gives much more pleasure!"

"And I really enjoy it! There is always something new to pick up and it is great when visitors tell you that they have learnt a lot from you and never knew there is such an interesting place as Sungei Buloh Nature Park".

His thoughts and wishes for the Park...

"On the good side, I think the staff have improved. The present staff are very dedicated and really have the interests of the Park at heart. But the closed

boardwalks are really missed. They are perhaps the most interesting feature of the Park and the sooner it is restored, the better."

His advice to other volunteers...

"I'm sure most of the other regular volunteers share the same sentiments as me. It feels great when we are able to infect others with the same desire to know more about nature with our enthusiasm. Like David Teo, a fellow volunteer always says, "Do it with a smile." I believe the best way is to actually enjoy it and let the passion in us do the talking." 🐦

Viewpoint

Julian Wong, a nature lover and a volunteer of the Park, started nature photography in 1997. He hopes that through his images, people can come to appreciate the boundless beauty of Nature. In his free time, he likes to pen down his thoughts and observations on nature conservation and photography.

Photography by itself, is an art form that requires a lot of patience, determination and dedication from the photographer. Attention to details and careful approach to the subject is especially true for those who are pursuing an interest in nature photography. Yet how many of these photographers actually understand the true

Nature Photographer with a Mission

by julian wong, park volunteer

essence of nature photography?

I heard from a friend who had seen on a location shoot, a small group of photographers cutting away branches and leaves of a particular bush, so as to enable them to take pictures of a pigeon nesting within. Being a self-professed naturalist; he chided the photographers for not being "nature-friendly". Although he managed to stop this one incident, it set me thinking. How many of such incidents can be stopped in time? What the photographers did not realise was that by cutting away the branches and leaves, they were actually exposing the bird and its

chicks or eggs to predators. This pigeon had used the bush as an effective camouflage, only to be destroyed by the thoughtless act of the discerning human. Nature photographers should respect the subject they photograph and not cause unnecessary stress or inconvenience to them.

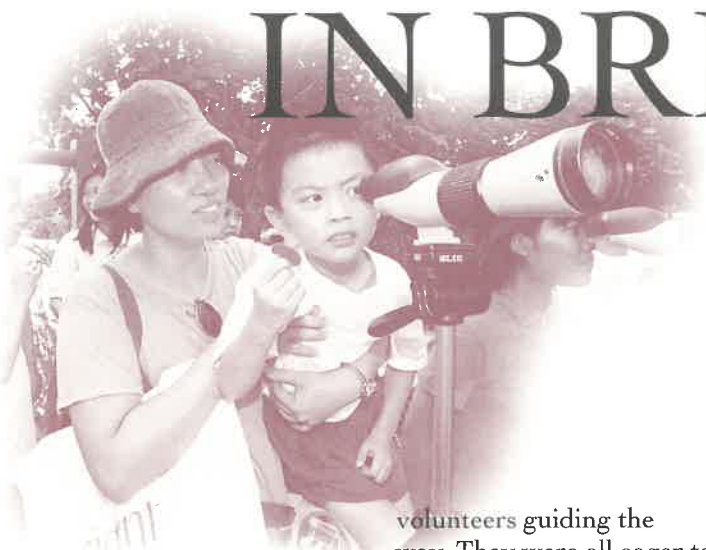
To the self-professed nature photographer, it is imperative that he observes the ecological balance of Mother Nature and abides by the natural law that is guarding our atmosphere. Photographers are often seen in public and any wilful or discriminating act will certainly instil a "monkey-see-monkey-do" concept to the passer-by.

Photographers can be good ambassadors to the general public if only they can understand the subject that they want to photograph and not proceed beyond certain limits just to get that ultimate shot. Images can paint a thousand words and using the right images could just enlighten someone out there to care more about our fragile environment.

So the next time you pick up a camera and come in contact with Mother Nature, think about the mission that you would be embarking. It is only through awareness and genuine love for nature, that you will truly "blossom" into a better, "natural" photographer. 🐦

IN BRIEF

by linda gob, senior education officer



Heron Watch 2000

A few came alone; some with friends, others with toddlers and prams in hand.

During the recent 3 sessions of HeronWatch on 22 April, 20 May and 17 June 2000, over 150 people ventured near the Heronry, home of the herons, with staff and

volunteers guiding the way. They were all eager to meet one of Singapore's largest birds, the Grey and Purple Herons. An hour's journey brought them to the nesting site where they witnessed for themselves the magnificent stature of these birds congregating on top of the mangrove trees in the little island.

To find out more about these birds, do visit us at www.sbnp.org/Heronwatch.

Prawn Watch 2000

Many visitors were seen flocking to the Park on 27 May, 9 June and 24 June 2000 to enjoy a rare treat that was "dished out". Nets were set and targets well within sight. Within minutes when the nets were hoisted up, the visitors had seafood galore for the eyes and mind. Thrilled by the sight and stories recounted by Park staff, all the visitors went home well satisfied even though the "dishes" of prawns, crabs and fish were returned to where they belong, the Sea.

Natural Wonders of Sungei Buloh

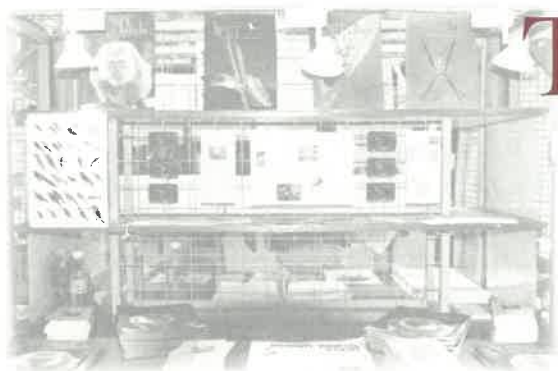
Every Saturday at 9.15am, staff of the Park don new hats and become Nest Builders and Wetland Craftsmen introducing families with kids to the fine art of nest building and mask making. The kids had the rare chance to mimic the Tailorbird and Kingfisher as they created their own nests and masks.

To get an update of Park programmes, go to www.sbnp.org.



NATURE IN THE CITY

by halilah abmad, education officer



Over the long Labour Day weekend, a large number of nature lovers gathered at Bugis Junction, surprising many shoppers.

The Nature Society of Singapore was in full force organising the event 'Nature in the City' in conjunction with Nature Day. The objective was to create nature awareness in

this highly urbanised environment. The Sungei Buloh Nature Park; along with the Society for the Prevention of Cruelty to Animals, the Singapore Environment Council, SAVE Club of the Singapore American School, were invited to participate in this event.

Sungei Buloh's "The Living Classroom" theme attracted many shoppers

and nature lovers alike. You could see our volunteers tirelessly reaching out to people with brochures introducing our flora and fauna. Many freebies, such as issues of the "Wetlands" newsletter, brochures, posters, bookmarks and calendars, were handed out. Interesting upcoming activities were also highlighted.

Thanks to the Nature Society of Singapore for their invitation and Sungei Buloh volunteers who had contributed selflessly for this cause. Through this event, we managed to reach out to many city dwellers who would otherwise not know about the Park.



Calendar of Events

compiled by chan su hooi, education officer



My First Nature Hunt

On going

Wanted: Active kids with inquisitive minds. A challenge awaits you to complete "My First Nature Hunt". Learn more about the Park and bring home with you a certificate of achievement. The forms can be obtained at the Ticketing Counter.

Migratory Season

Sep 2000 - Mar 2001

Our friends from the northern region will be making their annual journey down south to escape from the winter again. Don't miss the chance of seeing the migratory birds roosting and feeding at the Park. Hear them whiz pass as they fly in and out of the Park.



Millennium Souvenir for every 2000th visitor

1 Dec '99 to 31 Dec 2000

Goodies! Yes, we are still counting. We have given out many souvenirs since 1 Dec '99. You too, can be one of the 2000th visitors to the Park. Bring home with you the goodies we have specially prepared for you. We take this opportunity to thank you for your support in nature conservation!



Talks

August, September, October & November 2000

Moving nature around Singapore! This is possible by bringing the flora and fauna of the Park to schools through our regular slide talks. Through this, we hope to sow the "seeds" of nature appreciation in young minds.

International Coastal Cleanup

16 Sep 2000

International effort runs locally to clean shoreline of marine trash. Besides collection, the data are categorised and collated to develop a profile in trends of marine refuse locally, regionally and internationally. Please call 794 1401 to register for the activity.

Free Guided Tours

Every Saturday

Free guided tour every Saturday at 9am, 10am, 3pm & 4pm (except for public holidays).

If you are keen, nature will never fail to amaze you. Here is the opportunity for you to discover the mysteries of nature. Join us as we lead you through the mangroves to discover the unique flora and fauna of the wetland.

Guiding service may be replaced with other thematic programs that coincide with guiding time slots.

Waders Trail

Sep 2000 - Aug 2000

"T.T." is back to do his rounds! Join him on his migratory trip around Route One. Be sure to arm yourself with the booklet "Endless Summer - The Story of a Seasoned Traveller". Find out from the booklet your mission to be achieved. It is not a "mission impossible"!

National Geographic Channel Nature Programmes

Every Sunday at 3.15pm

National Geographic Channel has travelled to Sungei Buloh Nature Park sharing the magnificent shots captured in videography. Spend your afternoon with us to witness the beauty of our Mother Nature. Tune to our website for details.

Wetlands Wildlife Stamp Launch August 2000

The launch of the 10th series of HongKong and Shanghai Bank's Care For Nature stamp issue "Wetlands Wildlife" features 4 species of fauna found at Sungei Buloh Nature Park. They are Archer Fish, Smooth Otter, Collared Kingfisher and Orange Fiddler Crab. The launch will be at Bugis Junction.

Teachers' Workshop

5 & 6 Sep 2000

A half-day workshop conducted for school teachers to know the Park and its inhabitants and to get inspired to use the Park as a living classroom.

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

Journal of a Nature Warden: Nesting Little Herons of Sungei Buloh

(*Butorides striatus*)

by ramakrishnan r.k, senior ranger

The Little Heron belongs to the same family as the more familiar Purple and Grey Herons. Unlike its gregarious relatives, the Little Heron leads a typically solitary life, often flying just above water or diving sharply into the tree canopy when alarmed. It adopts a stand-and-wait hunting technique, staying motionless at a spot for seemingly a long period of time before moving with lighting speed to snatch its prey from the water. The fast rising tide does not deter this heron as its size allows it to perch precariously from low hanging branches close to the water edge. At times you could even see it running madly with its raised long black nape plumes after spotting its prey.

On 29 February 2000, while I was on my nest-checking routine, one of the Park's contractors informed me that he had spotted a nest. Upon checking the site, I located a small platform of twigs on a mangrove tree, *Excoecaria agallocha*, 5m above the ground. My first impression was that it could be a Dove's nest but when I climbed up to take a closer look, I was pleasantly surprised. Two young Little Heron covered with yellow down feathers stared back at me. This is the first recorded sighting of the Little Heron's nest in the Park. Two weeks after the discovery, the young juveniles were moving

around the tree in their newly attained plumage of dull brown upperparts, streakier and less mottled lower parts. A check on 17 March 2000 at the opposite side of the island revealed another nest built on the same species of mangrove tree and at about the same height. A pair of pale greenish blue eggs greeted me this time. The canopy of the *Excoecaria* sp. seems to provide this heron with good cover and shade for nesting.

Hopefully we will see this species flourish in Sungei Buloh Nature Park just like the Grey and Purple Herons.

Description for Little Heron (*Butorides striatus*)

Status: Resident and winter visitor.

Description: Small heavily plumaged heron, dark blue-grey or green-grey with a nearly black crown; pale face markings, streaks on breast and narrow buff edges to wing feathers. Juveniles brown, stockier, streakier and less mottled.

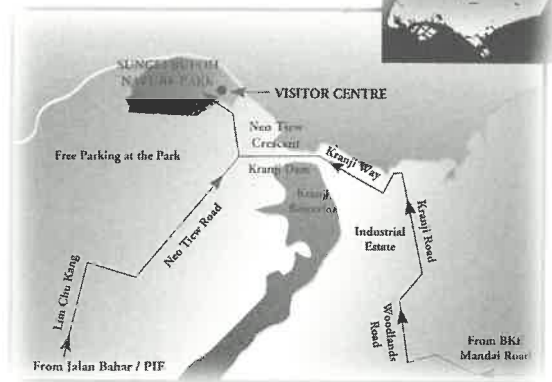
Call: A distinctive short harsh skeow, k-yow or k-yek when flushed, and a high-pitched, raspy kitch-itch when alarmed.

Habitat: Found close to streams, ponds, marshes, mangroves and offshore islands

Diet: Fish, crustaceans, and frogs

PARK INFORMATION

Map to the Park



Opening Hours

7.30am to 7.00pm
on weekdays

7.00am to 7.00pm
on weekends

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>

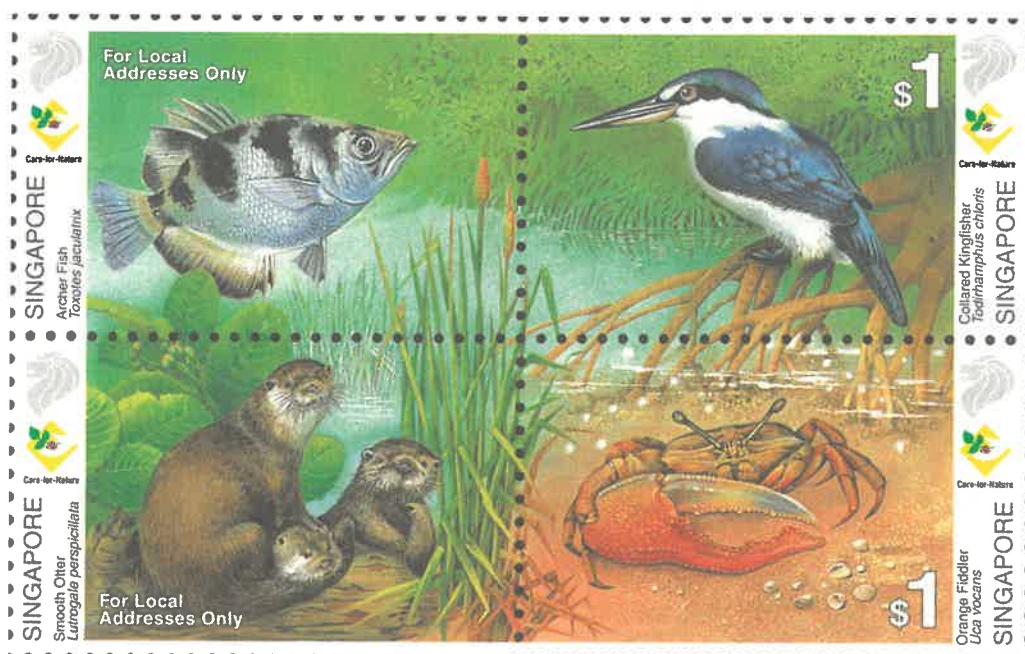
Visitor Centre Facilities

- 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.

HSBC

YOUR WORLD OF FINANCIAL SERVICES