

wetlands

december 2007 VOL. 14:2 sungei buloh wetland reserve wetlands is sponsored by HSBC



03

Did you know?

It took 40 pairs of hands and 11 weeks to complete the "Fabric of the Wetlands" patchwork. Find out whose idea it was and what we hoped to achieve through this project.

04-06

The Learning Place

National Parks Board launched the Wireless Learning Trail at Sungei Buloh Wetland Reserve. The first of its kind in the region, the wireless learning trail aims to reach out to the digital natives of today!

07

Special Feature

An ex-staff turned volunteer photographer shares her love for Sungei Buloh and photography. Hear how she motivates others to contribute to 'The Photo Spread' of this issue.

08-09

Centre spread

'The Photo Spread' — Feast your eyes on a galore of beautiful pictures.

10-11

Scientific Front

Concerted efforts have been made to reforest parts of Sungei Buloh with the community to ensure continued growth of the wetland reserve.

12-13

What Happened

Miss Earth (International) came by to celebrate Earth Day. Wetlands International launched the 'Results of the Asian Waterbird Census 2002-2004' on World Migratory Bird Day. HSBC celebrated World Environment Day with a group of 80 kids at Sungei Buloh Wetland Reserve.

14

Calendar of events

The Singapore Art Show is on and Sungei Buloh is part of it. Check out what are some of the other activities we have planned for you.

15

Nature Journal

A park visitor shares his poetic inspiration about what it means to visit Sungei Buloh Wetland Reserve.

COVER PICTURE BY:
amphibios creative

"As public servants, are we just to be custodians of what have been entrusted to us? Or more? We are to be more than custodians. We are to be stewards with the responsibility to protect, nurture and grow what have been entrusted to us."

MS LIM SOO HOON, PS, PSD/PMO

WETLANDS VOL. 14.2

Environmental Stewardship

**EDITORIAL**

Sungei Buloh Wetland Reserve is positioned to protect its rich biodiversity in a wetland setting with its gazettement as nature reserve. What roles then do we play as stewards of what have been entrusted to us?

Protecting, nurturing and growing the biophysical aspects of a wetland reserve are but one aspect of our role. It is also our responsibility to reach out, nurture and cultivate a sense of appreciation among our public using the resources that have been allocated. Let's put to good use what have been given to protect, nurture and grow our wetland.

Linda Goh



Care-for-Nature
PROTECTING OUR LIVING RESOURCES

'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 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.

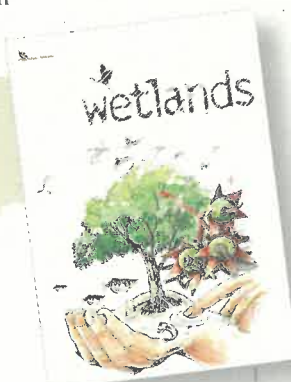
Please call 6530 1845 if you wish to know more about HSBC's Care-for-Nature Programme. Or write to us at:

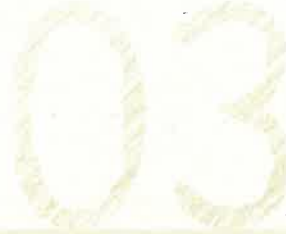
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contents





FABRIC OF THE WETLANDS

A project by the 'Nature Nurtures' Group

JEANNE TAN, SENIOR OUTREACH OFFICER

**WHAT DO YOU GET WHEN
YOU PUT TOGETHER THE
COLOURS OF NATURE AND
CREATIVE YOUNG MINDS?**

At the beginning of this year, when the "Nature Nurtures" programme was first introduced in Sungei Buloh Wetland Reserve, Iris Li, one of SBWR's volunteers, suggested that it would be lovely to

start a fabric project with volunteers and Chestnut Drive Secondary School (CDSS) as our partner school. This project would allow these students to adopt a project that incorporated values such as team work, perseverance, creativity, patience and respect, as well as learn a new art. Ultimately, our end objective was to let

these students from such a programme have a sense of achievement and ownership over what they have started. It was important that they know their achievements were acknowledged.

With logistics planned out by Iris and the outreach team at SBWR, this collage of fabrics and colours took place almost immediately. The fabric project was completed and showcased on World Environment Day, 5 June & 17 November 2007 during the students' graduation day.

Lovingly hand-made by students, teachers and volunteers under

NParks' 'Nature Nurtures' programme, this project was sponsored by Shell Eastern Petroleum Pte Ltd. All the fabric pieces were painstakingly stitched together by Iris herself. The fabric collage featured the diversity of wildlife and patterns of nature at the Wetland Reserve.

All in all, the fabric took 11 weeks and 40 pairs of hands to complete. A variation of felt pictures, appliques, and different types of beads, buttons, ribbons and fabric paints were used for the collage. In line with the theme of reduce, reuse and recycle, many pieces were created from old pieces of cloth. All designs were an inspiration made possible by an appreciation and understanding of this wetland reserve and our environment. It reminds us that there is precious biodiversity in our nature reserves and we hold the future of these species in our hands.



Wireless Learning Trail @ Sungei Buloh Wetland Reserve

04

First of its kind in Singapore and the region

BY LINDA GOH, SENIOR OUTREACH OFFICER, AND NG SOCK LING, ASSISTANT DIRECTOR

The wireless learning trail at Sungei Buloh Wetland Reserve was inspired by the desire to enhance learning experience for students at the reserve. It is a new way of reaching out and delivering educational programmes that will appeal to the young and technology-savvy Singaporeans.

WHAT IS IT?

Using webcams installed on Ultra Mobile PCs (UMPC), students are able to receive information by scanning the 2-D barcodes that are located strategically along the wireless learning trail. They can listen to birdcalls or observe behaviour of mudskippers. Students are also prompted with stimulating questions on what they can see along the trail and even participate in various educational activities provided on their UMPC.

There are 20 barcodes or stations along the Mangrove Boardwalk. It takes about 2 hours to finish the entire learning trail. After completion, students can include their thoughts and observations to build their own personal learning trail, and share the information with their classmates. This promotes learning in the 'outdoor classroom'.



HOW TO BOOK THE WIRELESS LEARNING TRAIL @ SUNGEI BULOH?

The Wireless Learning Trail at Sungei Buloh Wetland Reserve is currently open to students only. Schools that are interested to book the trail can contact iCELL Network Pte Ltd at Tel: 6309 4520 for general enquiries and bookings.

WHAT ARE THE CHARGES?

A nominal fee of \$3 is charged per student, payable to iCELL, which is managing the learning trail. This is to cover administrative charges and maintenance of the wireless network. Schools are advised to take good care of all equipment that is on loan to them.

HOW MANY STUDENTS CAN GO ON THE TRAIL?

As time is required to complete the activities at each station, students are advised to spread themselves out on the trail instead of concentrating on one location. This will also ensure that the UMPCs are operating at its most optimal level.

There are currently 40 Ultra Mobile PCs (UMPC) available for rental. Students can use them individually or in small groups.





Getting the most out of the Wireless Learning Trail @ Sungei Buloh

To enhance the learning experience for students, teachers can carry out the following activities:

BEFORE THE FIELD TRIP

A pre-trip checklist can be downloaded at the Sungei Buloh Wetland Reserve website at www.sbwr.org.

It includes a list of activities and tasks that students can do, and information on the reserve. Teachers can also inculcate in students important values and attitudes through understanding the importance of preserving our unique natural heritage.

ON THE TRAIL

Three different field activities have been integrated into the learning trail, namely field-recording observation, annotation and sketching activities. Students will be able to go through these activities at different locations along the trail.

Teachers can go through with students details on how to use the recording templates before embarking on the trail.

AFTER THE TRAIL

Students can share what they have experienced or learnt with their peers. Through these interactive activities, students can develop a better appreciation of the natural environment.



Wireless @ Sungei Buloh

WHAT IS WIRELESS @ SUNGEI BULOH?

From 25 August 2007, visitors can enjoy free wireless connectivity at Sungei Buloh Wetland Reserve when equipped with a Wi-Fi enabled device, such as a laptop, a web browser and a registered Wireless@SGaccount with iCELL Network Pte Ltd.

WHERE CAN I GO WIRELESS?

Free wireless broadband is accessible from the Visitor Centre and the Mangrove Boardwalk. By early next year, the service will be extended to other parts of the reserve, namely, the Main Hide, Aerie and Outdoor Classroom.

HOW DO I SIGN UP ?

To access the free wireless broadband network, visitors can log on to <http://www.icenetwork.com/registration.php> to sign up for an account.

They can also get their User ID and password on the spot by sending the below SMS to 963i-CELL (9634-2355)

NRIC number "space" Email address "space" Name

WI-FI IN OTHER PARKS

Besides Sungei Buloh Wetland Reserve, visitors can also enjoy free wireless broadband access at these parks and gardens in Singapore:

- Singapore Botanic Gardens
- Woodlands Town Garden Park
- Ang Mo Kio Town Garden East Park
- Toa Payoh Town Park
- Pasir Ris Park
- West Coast Park
- East Coast Park (from October 07 onwards)
- Fort Canning Park (from October 07 onwards)
- Admiralty Park (from October 07 onwards)



Flickr comes

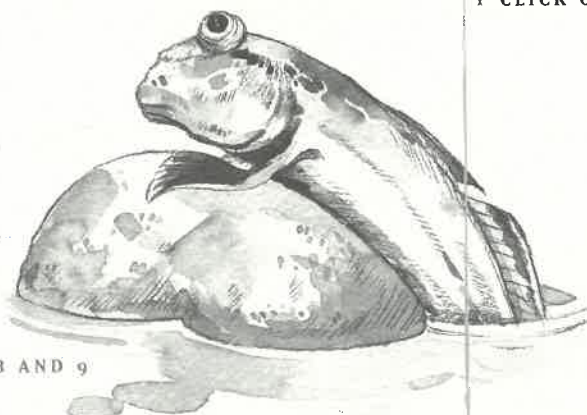
Group photo of the first
SBWR Flickr Outing by
Matthew Leong



I used to work in Sungei Buloh Wetland Reserve (SBWR) as an Education Officer and it did not take me long to fall in love with it. I may have left SBWR as an employee 10 years ago but my heart remains. I have since made countless visits back to SBWR.

"Just wanted to thank the organizer for this morning's tour. Enjoyed myself. It was my first time ever to SBWR. Will want to be back another time!"

I CLICK CLUCK I



CONTINUE ON PAGE 8 AND 9

[1] **The Stare** by Mendis Tan.
[2] **Fly's Eyes** by Francis Gementiza "As a macro shooter, I have always been fascinated by the compound eyes of insects."

to SBWR

COLLEEN GOH, SBWR VOLUNTEER PHOTOGRAPHER

"It was the most fun and rewarding outing. We were lucky that it was sunny and the lighting was great...overall it was a great outing and I would love to do it again!"

| LENKLINE |

[1]



"Although this is a photography gathering, I felt that the most interesting part was when the organizers shared their knowledge about the local flora and fauna." | FISHTAN |

"It was fun shooting at SBWR. Initially I thought I won't be able to get any good photos but I was wrong... I am going to fill the flickr site with all my SBWR photos soon!"

| WILSON LOW |

[2]



[3] Hoverfly by Lim Soo Ching "Hover

[4] An Aperitif in the Sunset by Lia Brand "I shot this when I was taking a visiti

[6] Killer Looks by Mendis Tan "I have always loved shooting damselfl

[7] My Aunt Mildred by Colleen Goh "Strange how insects remind us of people sometimes." [8] Sac Spider by Coll

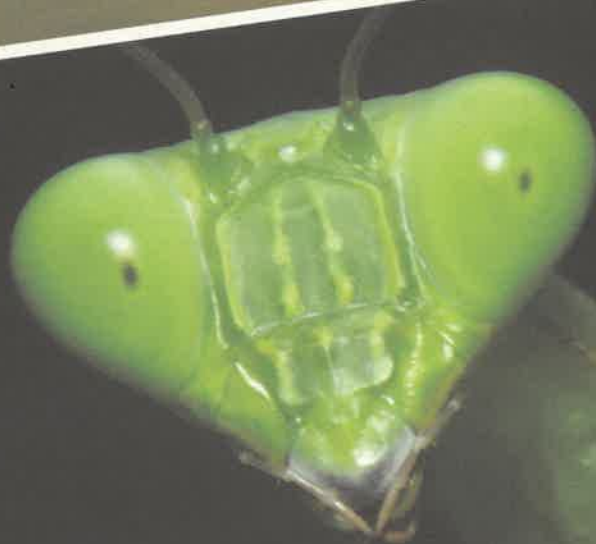
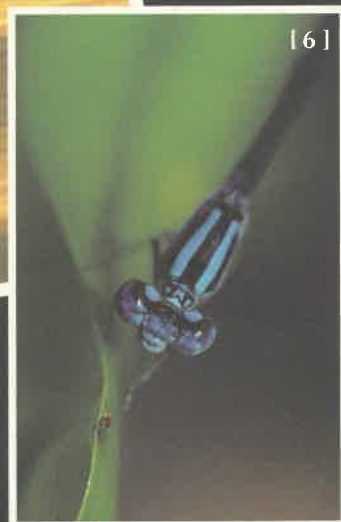
[9]

[10] It's the Season to be Mating by Shawn Low Here, two flies were perched very still on a blade of grass, sharing a tender moment. They v

[11] Stork-billed Kingf



Flicker



is mimic wasps by having the same yellow and black colouration. They are, however, harmless and do not sting." "friend around the reserve." [5] **Lynx Spider by Lynn Khine** "This is one of the most elegant spiders around." because their gentle form and beautiful colouration contrast so sharply with their fierce, predatory behaviour." n **Goh** "Apparently, this spider delivers quite a nasty bite. If I had know earlier, I may not have gotten this shot!" **aching Out by Bernard Tan** "I was attracted to the stark contrast of the dark poles against the azure blue sky." e so engrossed in what they were doing that they did not even notice me when I moved in close to get this shot! er by **Mendis Tan** "I am constantly amazed by the beautiful colours on this, the largest kingfisher in Singapore."



comes to SBWR



Recently, I have taken up photography in a more serious vein, and have also joined flickr.com. For those not familiar with flickr, it is a photo sharing website and web services suite. It is an online community platform and is a popular website for users to share personal photographs, and is also widely used by bloggers as a photo repository.

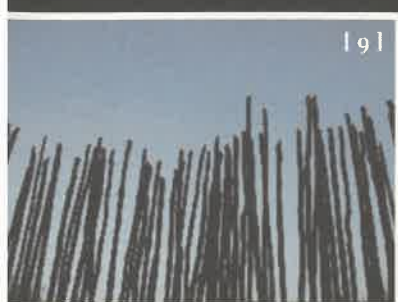
It struck me that flickr could be the medium to marry my love for SBWR and photography. So, together with my husband (who is also an avid photographer) and two other like-minded friends, we started the SBWR Group on flickr. This group can be readily accessed at <http://www.flickr.com/groups/sbwr/>.

Buloh. Photographers often have the knack of seeing things and capturing images in unique perspectives. So, who better than photographers to showcase SBWR in all of its glory? I am sure if you visit the site now, you will realise what I mean! Since I started this group about 4 months ago, I have had many enquiries from overseas flickr members marveling at the sheer diversity of wildlife captured by the photographers in this group. Many of them cannot wait to visit Singapore and SBWR is likely to be a first stop for them!

Due to overwhelming response, we will be conducting more of such tours. You can see photos of us having fun during those tours on the site and the fantastic pictures taken by the flickr members.

So what are you waiting for? Come visit the SWBR flickr site and spread the word around that SBWR is one fantastic place to visit and take great photos. Just take a look at the contributions to the photo spread in this issue of Wetlands.

Through this group, we have run three photographic tours of SBWR for its members — all of which have been warmly and enthusiastically received.



The primary purpose of this group is for people who have visited SBWR to share the photographs they have taken there. From this, I hope to generate interest amongst all nature lovers of the hidden secrets of Sungei



Nurturing the Sungei Buloh Forest and Mangroves

BY CHAN SU HOOI (CONSERVATION OFFICER),
RAMAKRISHNAN KOLANDAVELU (ASSISTANT CONSERVATION OFFICER) AND
JAMES GAN (SENIOR CONSERVATION OFFICER)



The largest block of mangroves in Singapore totalling more than 100 hectares can be found in Sungei Buloh. This site is under legal protection as Sungei Buloh was conserved for this habitat, a key indigenous ecosystem that the government has committed to safeguard for us and for future generations.





At Sungei Buloh, works is in progress to reforest parts of the wetland are. Over the past few years, forest tree planting and mangrove enrichment planting with species such as *Rhizophora mucronata*, *Avicennia alba* and *Sonneratia alba* have taken place in partnership with the community with good results.

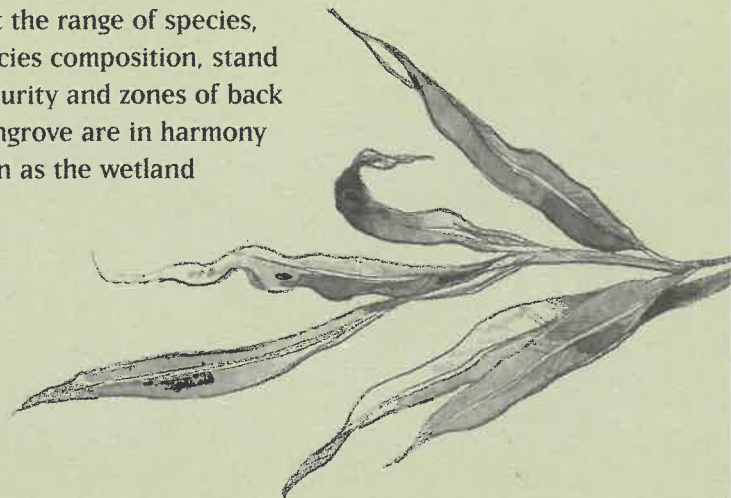
The epiphytes and climbers have not been forgotten. As they add value to the structure of a forest, epiphytes such as orchids (Family: Orchidaceae) and hoya (Family: Asclepiadaceae) are being sourced and we continue to add them in Sungei Buloh to enrich the existing populations. They include the *Cymbidium bicolor* which has been

tissue cultured and propagated from seeds collected from existing plants in the wetland forest. Some epiphytes have been brought in for planting such as the *Cymbidium finlaysonianum*, *Bulbophyllum apodum* and *Vanilla griffithii*. Efforts to increase the quantity and species of hoya at Sungei Buloh are also in progress. Sungei Buloh is now home to a clump of *Hoya diversifolia* that had been salvaged from a nature lover. It is through this network of cooperative and dedicated nature lovers that the Hoya from various parts of Singapore have now converged to find a place at Sungei Buloh. *Hoya verticillata*, *Hoya coronaria*

and *Hoya latifolia* could all find refuge and thrive peacefully on trees in the wetland one day. Apart from these plants, a ginger *Alpinia aquatica*, a climber *Adenia macrophylla*, a shrub *Gmelina elliptica* and *Abutilon indicum*, a shrub from the Hibiscus family that can naturally be found in the back mangrove areas are some of the plants that have been planted within the wetland.

With much positive human intervention, and in another decade or two, the mangrove ecosystem at Sungei Buloh could one day closely resemble a pristine ecosystem that was once common in ages past. The challenge lies for all of us as a community of nature lovers to manage, nurture and grow the existing mangrove so that the range of species, species composition, stand maturity and zones of back mangrove are in harmony even as the wetland

management continues to provide recreational and educational opportunities for visitors. This year the Straw-headed Bulbul (*Pycnonotus zeylanicus*) has, for the first time, made its presence felt daily in the wetland with its exquisite warble of bird song that can uplift the spirits of urban people like us. We certainly look forward to further nurture and grow Sungei Buloh to be a wetland where more of these plants and animals can thrive. When stenotopic species such as the Mangrove Blue Flycatcher (*Cyornis rufigaster*) and Mangrove Pitta (*Pitta megarhynchos*) take up residence in Sungei Buloh, we would know that our efforts have been realised. Let's work together and make this happen!





Earth Day Celebration

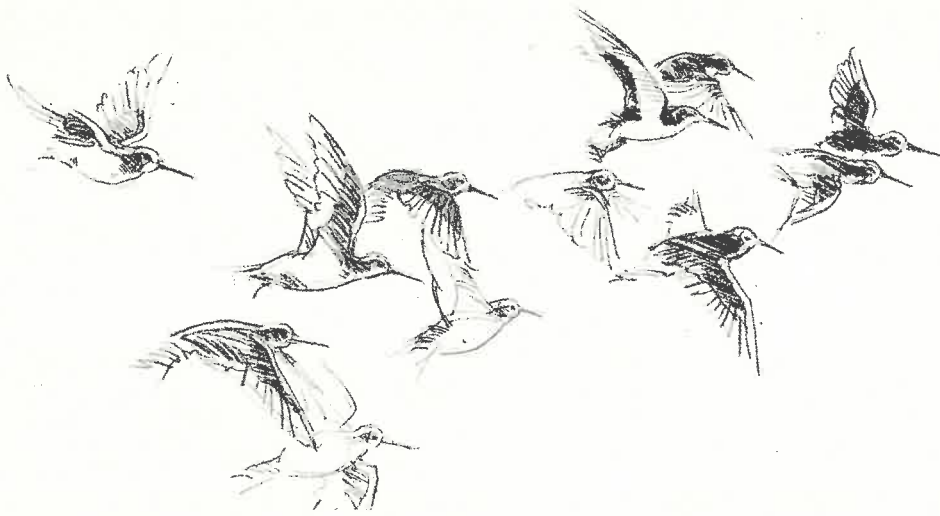
On 21 Apr 2007, Miss Earth, 2006, Miss Hill Hernandez joined hands with 70 students and teachers from Zhonghua Secondary School to salvage young mangrove saplings from Sungei Buloh's mudflats. This effort will keep the mudflats available for this season's migratory shorebirds to feed from, while the mangrove saplings are transplanted elsewhere to enrich the mangrove habitat.



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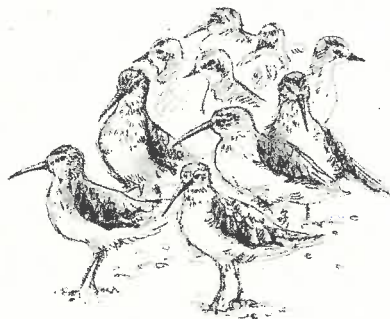
Giordano staff and customers also replanted mangroves at Kranji Nature Trail on 22 Apr 2007, as part of Giordano's Earth Day effort. This is the first time that Giordano has come on board as a Garden City Fund (GCF) sponsor, having raised at least \$20,000 for GCF through its Earth Day campaign.



World Migratory Bird Day Celebrations @ SBWR

Sungei Buloh celebrated World Migratory Bird Day (WMBD) on 12 and 13 May 2007. The activities started with the simultaneous international launch, (in Bangladesh, Philippines and Singapore) of the publication for Wetlands International's book "Numbers and distribution of waterbirds and wetlands in the Asia-Pacific region - Results of the Asian Waterbird Census 2002-2004" by David Li and Taej Mundkur at the wetland's theatre. A public talk by the author, David Li, on the results of the book and on migratory waterbirds followed. Forty people attended the talk.

Other highlights of the 2 days celebration included a photo exhibition, a display of seven full colour posters featuring shorebirds at the wetland and the release of the wetland's latest newsletter issue highlighting migratory bird count data and trend analysis as well as three public talks. On the internet, the bird ecology blog (BESGroup@yahoo.com) carried an article on migratory birds from the wetland's newsletter. More than 800 people experienced the WMBD celebrations at the wetland..



Mr David Li representing a copy of the book to Mr Ramakrishnan Kolandavelu

In celebration of World Environment Day, a group of Hillgrove Secondary School students organized a fundraising sale at Sungei Buloh Wetland Reserve on 2 June 2007 in support of the wetland's conservation efforts. They sold terrariums, painted stones and batik bookmarks. They managed to raise \$300 for the wetland's Conservation Fund.

On 5 June 2007, HSBC organized a half-day programme for some 80 staff children as part of World Environment Day celebration. The children went on a guided walk led by a team of HSBC Green Volunteers. This were followed by a tree planting activity. The children planted some 30 *Calophyllum inophyllum*, *Dolichandrone spathacea* and *Melastoma malabathricum* around the wetland reserve.

World Environment Day

Free Guided Walks

Every Saturday except public holiday (9.30am and 3.30pm)
Come discover the wetland's unique flora and fauna as the guide leads you through the mangrove habitat. These walks are weather permitting. Please check our website for specific time slots for marine fish guiding.

For pre-booked guided walks for school groups and organizations, please call 6794 1401 to make a booking.



Forest ... an Art Exhibit

Forest is an attempt to record the changing landscape caused by human invention. As both a memorial and marker of time and space, a simulacrum of a forest is installed within a reserve, and the dimensions it occupies corresponding to habitat destruction in the world. The installation however, while evoking the memory of its namesake through mimicry, remains inanimate and thus becomes a prescient warning of an apocalyptic future. This work, is an ongoing project by Brendan Goh, and is presented as part of a collaborative initiative between the National Parks Board and the LASALLE College of the Arts.

World Wetlands Day

2 Feb 2008

Join us in this "Celebrate World Wetlands Day"

Workshop, to find out more about our wetlands and why they are important to us.

Date : 2 Feb 2008

Time : 9 - 11am

Cost : \$5 per person

By registration only

(log on to www.sbwr.org.sg)



Young Naturalists Camp

May 2008

Limited to 40 children between the ages of 6-10 years old, this one-day camp encompasses a series of fun-filled and educational indoor and outdoor learning of the wetlands. Children will get to explore the mangroves and learn about some of the interesting wildlife that inhabit in the Wetland Reserve! They will also come to understand nature conservation issues through worksheets, exciting nature walks and hands-on activities such as mangrove planting! Check our website for updates.





Not Merely an Entrance to a Nature Park

LIM SWEE KENG, VISITOR TO SBWR SMINITL MBAGLAWJAN
ENGINEER, AN INVENTOR

What you are about to
enter you are yet to see the
entrance

What you are seeing
you are yet to fully discover

People, who just left the
bustling city
Shut you eyes and discern

Take a deep breath and feel
even it is not blossom
season, without the
fragrance of flowers, you
feel freshness

Rest a step and hear
even if it is not a theatre
constructed by man,
harmonized by conductor
you hear music and songs
shuffling of leaves, songs of
birds, yearnings of animals,
weaved together by the
wind

What you see, you need not
open your eyes
What you have, nature
nurture for you for free

You are here
not because of human
might, raw strength
human raw strength can
step this place barren in
moments

Few wise who labored to
preserve the raw beauty of
nature
many who will soon
discover more
intricate order of nature
in the steps you are setting
from here
that diversity bring vibrancy
that natural order is orderly
that harmony exist among
different species
that this will inspire you
even nature, plants, animals
can bring you inspiration,
wisdom
then fellow human, even
different from us shall
bring us more, strength,
inspiration, wisdom and joy

What you will be entering is
not a park
but an entrance to
appreciate, comprehend the
vast order of nature
that will make you leave
richer, wiser, joyful
may you bring this new
sight back to the bustling
city, conflicting world
and soon you will sow
seeds, if not seeing the
blossom of harmony among
man, man-made and nature

One guards,
the other
cleans.

Their perfect
harmony
also means terrible
vulnerability.



Singapore Goby (*Cryptocentrus leptocephalus*)
and Blind Shrimp (*Alpheus* sp.)

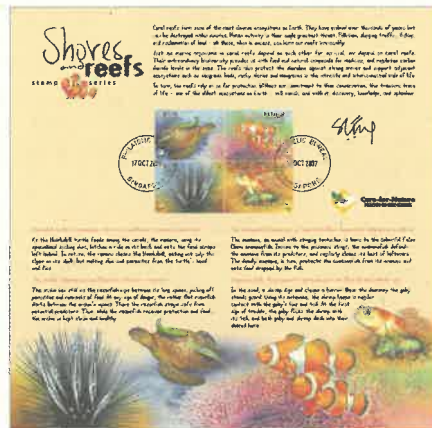
Coral reefs are home to diverse species living and working together in harmony. Symbiosis helps them survive and thrive, but their interdependence also makes them vulnerable. If one is lost, the other follows suit.

Pollution, shipping traffic, fishing, reclamation of land, all these when in excess, can harm our reefs irrevocably.

Without our commitment to their conservation, one of the oldest ecosystems on Earth will vanish, and with it, life, knowledge, and splendour.



This year's Care-for-Nature stamp series features native inhabitants of our coral reefs. Proceeds from the sale of the Shores and Reefs Collector's Covers and Stamp Prints will be donated by HSBC to the Care-for-Nature Trust Fund, which in turn funds nature conservation and education initiatives that preserve and protect our environment. The series is available at all HSBC branches and online at www.hsbc.com.sg



4-in-1 Stamp Print Collection
(24.5cm x 24.5cm) S\$88.00



Care-for-Nature Collector's Cover
(11cm x 22cm) S\$9.90

