

wetlands

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*"Over the long haul
of life,
it is the ecologists,
and not the book-keepers
of business,
who are the ultimate
accountants."*

Stewart Udell
US Representative



Taking Stock

Wetlands Special Edition Vol 10:1



EDITORIAL

From a nature park to a nature reserve, Sungei Buloh Wetland Reserve continues to enjoy popularity among Singaporeans. Its 2003 visitorship met the 100,000 target for the 2nd consecutive year despite SARS and economic woes. With the ardent support of its volunteers, the wetland reserve continues to engage the public in over 400 conservation and education programmes in the past year.

Apart from its local endorsement, SBWR was once again affirmed of its conservation status by being declared Singapore's first ASEAN Heritage Park on 18 Dec 2003 on top of being recognised as a site of international importance for migratory birds by Wetlands International.

In this special edition, we will walk you through the year 2003 and take stock of what happened over this incredible year.

Linda Goh

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Cover Photo by Steven Tor / Reflection of the Little Egret



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A Journey Through 2003

Linda Goh,
Senior Outreach Officer



The year 2002 started off on a high note for Sungei Buloh as it was gazetted as a nature reserve on 1 Jan 2002, the first along with Labrador Nature Reserve in post-independence Singapore. In April 2002, it underwent a name change from Sungei Buloh Nature Park to Sungei Buloh Wetland Reserve (SBWR) to better reflect its enhanced status. In June 2002, SBWR was recognized as a site of international importance for migratory shorebirds with its entry into the East Asian Australasian Shorebird Site Network.

The year 2003 was no less exciting as the staff geared up to celebrate Sungei Buloh's 10th anniversary. Dr Vivian Balakrishnan, MOS (MND), kick-started the year with the launch of the countdown to SBWR 10th anniversary with a myriad of conservation and education activities to engage the community and the public. The journal of the year begins here:



24 Jan 2003

SM's Visit to Sungei Buloh Wetland Reserve

SM and Mrs Lee visited Sungei Buloh Wetland Reserve on a sunny evening of 24 Jan. They were welcomed by the staff and volunteers and were brought for a guided walk that included bird watching. SM referred to SBWR as "a gem in NW Singapore" and encouraged NParks to "keep the maintenance up" when he signed the visitors' book at the end of the visit.

18-20 Feb 2003

6th International Shorebird Working Group Meeting in SBWR

In recognition of Sungei Buloh's membership, Wetlands International-Oceania held their 6th International Shorebird Working Group Meeting in the reserve from 18-20 Feb. Nineteen participants from eleven countries, namely Australia, China, Indonesia, Japan, Malaysia, Philippines, Russia, Singapore, South Korea, Thailand and the USA attended the meeting to review the 5-year Shorebird Action Plan 2001-2005, and draft a 3-year workplan for implementation.

1 April 2003

Implementation of Partial Charge System

SBWR embarked on a partial charge system to encourage visitors to visit the wetland reserve during off peak season. Entry is free for weekdays. The current charge system is applicable during peak season, Saturdays, Sundays, Public Holidays and School Holidays.

5 June 2003

Project Celebration for 'Birds in Wetland Reserves'

65 students from 13 schools celebrated the successful completion of the "Birds in Wetland Reserves" web project jointly organized by SBWR, British Council and MOE.

August 2003

Colour flagging of shorebirds in Singapore

2 SBWR staff were sent for training in Australia for colour flagging of shorebirds with partial funding from HSBC. This key conservation initiative commenced in Singapore in Aug.

20 September 2003

Launch of Kranji Nature Trail

Dr Vivian Balakrishnan launched the new trail that links SBWR to Kranji Reservoir Park on 20 Sept with Prof Leo Tan, Chairman of National Parks Board

and Mr Paul Lawrence, CEO of HSBC.

HSBC contributed \$50,000 towards the production of educational materials for the new trial.

6 Nov – 15 Nov 2003

Protected Area Wetland Management Course in Singapore

SBWR and Biodiversity Centre organised the first ASEAN Protected Area Wetland Management Course in partnership with the ASEAN Regional Centre for Biodiversity Conservation for 10 wetland staff from five ASEAN countries.


6 Dec 2003

SBWR 10th anniversary celebration

Minister Mah Bow Tan officiated the anniversary celebration and launched SBWR's commemorative book, "Sungei Buloh Wetland Reserve - A decade of wetland conservation." HSBC showed its continued support for the Reserve's education efforts with a donation of \$100,000.

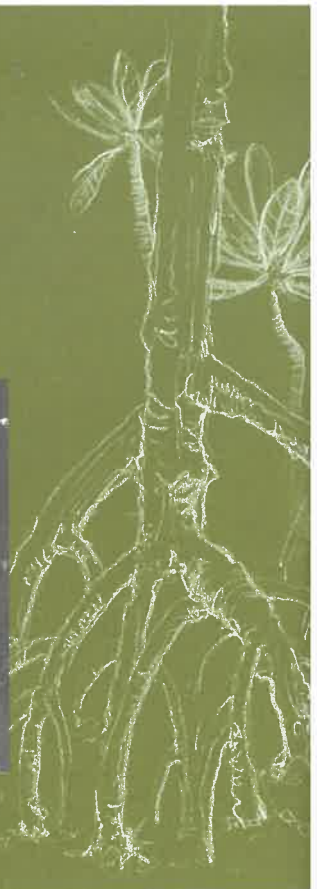
18 Dec 2003

Singapore's first ASEAN Heritage Park

SBWR was declared Singapore's 1st ASEAN Heritage Park on 18 Dec 2003. It is another conservation status attained and recognised region-wide. Find out more about the activities in the following pages. 



The Learning Place



Experience of a lifetime

by Keith Hillier,
a volunteer of the wetland reserve

Having had more than my fair share of excitement over the years, I was surprised to find myself quite elated at the prospect of having a one-on-one conversation with the Senior Minister and his wife. I had read both his books and really look up to him as one of the "greats". So, as I stood waiting at the base of the Aerie, excitement mounted as three police bodyguards drove up to check out the area. A quick glance at me and the surroundings and they seemed to be satisfied. We all stood chatting till a buggy drew up with the SM and party.

I introduced myself as "Keith" and that was what he called me thereafter. I had just been told that he would be turning 80 years old, but both he and Mrs Lee looked very fit and ready to outpace me going up the 80 or so steps of the observation tower. So, I mentioned that I had asthma and would not be able to climb as fast as him, and would he mind going slow for me. Fortunately, he agreed, and I had just enough breath to be able to talk on the way up.

Arriving at the top, I promptly set up my scope and trained it on the few egrets and golden plovers still on the mud flats down below. A short while earlier I had counted 82 little egrets, one great egret and 54 plovers, now most had gone. Both SM and his wife looked at them with interest and asked if there were any raptors around. I checked out the bare tree to the west where they often are, but none today. To my surprise, Mrs Lee then started to discuss differences between eagles, kites and falcons and in particular she was acquainted with the brahminy kites.

I then set the scope on the Straits of Johore. The sun was just setting and there was that last glow of the evening shining on the waters. SM commented that about 60 years ago, there was a certain Japanese general with a scope standing across the Straits and looking straight to where we now stood. The general's mind was fixed on best ways and whereabouts to land an invasion army, and he finally decided to do so through the mangroves right in front of us.

This encounter had taken only about 20 minutes and it was now time to go, but that was a 20 minutes I will not forget. 🦋



International Shorebirds Experts

Meet in Sungei Buloh Wetland Reserve

Following the dedication ceremony to mark Sungei Buloh Wetland Reserve's (SBWR) entry into the East Asian Australasian Shorebird Site Network on 7 December 2002, the Network, in conjunction with NParks, held the 6th Shorebird Working Group meeting at SBWR. The meeting, which saw 19 government and non-governmental participants from 11 countries, was held from 18 to 20 Feb 2003.


During the meeting, participants reviewed the 5-year Shorebird Action Plan 2001-2005 and drafted a 3-year workplan for 2003 to 2005 for implementation.

"Central to several South East Asian countries, Singapore is the ideal location to hold this meeting where the focus now includes encouraging Indonesia, Thailand and Malaysia to participate in the East Asian-Australasian Shorebird Flyway. SBWR joined the flyway in December last year and is uniquely placed to help link countries in the

region in this international framework", said Mr Warren Lee, Senior Programme Officer, Wetlands International (Oceania).

SBWR will also receive training in colour flagging techniques that will allow our staff and volunteers to colour flag birds at the wetland reserve or other sites in Singapore with distinctive colour tabs for scientific monitoring throughout the East Asian Australasian region.

Although important initiatives were worked out during the three-day programme, activities were not only confined to meeting rooms indoors. Participants also took part in activities such as bird ringing and tour of Sungei Buloh. Some of them took time to share their knowledge with the public through the public talks specially organised by the wetland reserve.

Over 100 people were attracted to hear these shorebird experts and to learn more about shorebirds, their study and conservation. 



Lua Hock Keong, a volunteer of the reserve, shares his thoughts:

"The shorebird conservation talks by the experts were really interesting! Most of the information we have is imparted by fellow volunteers during training sessions. The talks put the ecology, migratory behaviour and conservation of the shorebirds into perspective. Now, I know more about the conservation efforts (Ramsar Convention, East Asia Australasian Flyway, what and how conservation efforts were conducted along the flyway and the importance of keeping and maintaining sites, including SBWR) along the flyway. This is more than just knowing about the migratory waders while they were in Singapore for a 'snapshot' moment of their lives.

Other than Warren Lee Long who presented the importance of and conservation efforts along the flyway, I was impressed with Mark Barter and his work in the Yellow sea, training locals and imparting a sense of importance to their efforts. He also highlighted the need and urgency for conservation plans for threatened mudflats in Saemangeum, South Korea.

Bob Gill gave us an interesting view of what it was like working in the remote Alaskan regions and the pleasures of waking up everyday to absolutely beautiful scenery. Yuri's presentation gave me the assurance that Russia is giving their best efforts possible in the conservation of the migratory waders."

Past talks by experts

Mark Barter
(Australia Wader Study Group):
"Would you like to be a migratory shorebird?"

Warren Lee Long
(Wetlands International - Oceania):
The Shorebird Action Plan - What it means to you and I

Bob Gill
(US Geological Survey Office):
Shorebird breeding areas in Alaska, and links with Asian and US Flyways

Mark Barter
(Australia Wader Study Group):
"China's Yellow Sea and SE Asia's migratory shorebirds."

Yuri Gerasimov
(Russian Academy of Science):
Russian Far East breeding area surveys - Penzhina River

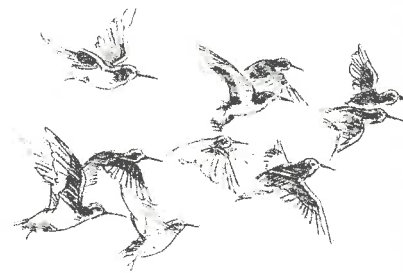
David Li
(Wetlands International):
Counting Asia's Waterbirds - The Asian Waterbird Counts

Bob Gill
(US Geological Survey Office):
PRISM: Program for Integrated Shorebird Monitoring



Bird Ringing in Sungei Buloh Wetland Reserve in 2002

James Gan,
Senior Conservation Officer



Of special mention, a Pacific Golden Plover was recaptured after an interval of 108 months (9 years).

This individual is believed to be the oldest ringed Pacific Golden Plover in the world!

Bird ringing has been conducted at Sungei Buloh Wetland Reserve (SBWR) since 1990. This article serves to give an overview of some of the results of the bird ringing efforts at SBWR over the past year. In 2002, a total of 595 birds from 59 species were ringed. The ringing field work was carried out on scheduled days and nights throughout the year. A summary of the number of birds ringed in 2002 (and the previous two years) is provided in Table 1.

The most commonly ringed bird species were (numbers ringed in brackets) : Common Redshank (72), Javan Munia (60), Pacific Golden Plover (52) and Marsh Sandpiper (48). Compared to the previous year's (2001) results, the number of birds ringed has decreased markedly. It is not clear why this is so although the decrease may be partly attributed to fewer productive hours of mist netting. Large percentage decreases for birds ringed over the previous years were noted for Curlew Sandpiper, Common Sandpiper, Whimbrel and Mongolian Plover.

Regular bird counts in SBWR have revealed no significant changes in shorebird numbers except for the Mongolian Plover. Counts of Mongolian Plover in SBWR in 2002 peaked at 361 (786 in 2001) during the northward migration and 274 (675 in 2001) during the southward migration. An explanation for the apparent decrease in Mongolian Plover numbers is offered. Shorebird counts in the West Johore Straits during high tide have revealed large flocks (600 on 3 Jan 03) of Mongolian Plovers and much smaller numbers of Pacific Golden Plovers roosting on the pontoons of off-shore floating fish farms. This phenomenon is apparently new. Why these plovers have chosen to roost on the floating pontoons over the mudflats at SBWR in 2002 is a possible subject for investigation. The counts, however, do not suggest cause for alarm with regards to shorebird numbers for the area. Ringing and shorebird census efforts over the next few years will help to establish if this phenomenon should be of concern. In general, though, the retrap/ringing percentages for those shorebird species have remained steady.

While the absolute number of birds ringed has decreased, 2002 saw some spectacular species ringed and recorded for the first time in SBWR. They are the Blue-eared Kingfisher, Brown-chested Jungle-Flycatcher, Streaked Bulbul and White-rumped Shama. The checklist (of records dating back to 1987) of wild bird species for SBWR now stands at 210 species (as at Dec 31, 2002). With the mist netting of the Blue-eared Kingfisher, SBWR is the only site in Singapore with records of all eight species of native kingfishers over the past 5 years. All eight species have been ringed at SBWR. The other new records are also notable. The Streaked Bulbul is the second record for Singapore and the Brown-chested Jungle-Flycatcher is a globally threatened species that is at risk of global extinction. The White-rumped Shama is of uncertain status. Likely an escapee, it could also be a wild bird from forest areas near SBWR. Its uncertain status means that it has not been included in the checklist at this point in time.

A bird species ringed for the first time (it had been recorded visually previously) in SBWR is the Striped Tit-Babbler. Three individuals were ringed. Other interesting birds ringed in 2002 were the Asian Paradise Flycatcher, Forest Wagtail, Red-necked Stint and the Siberian Blue Robin.

The mist netting effort has continued to bear fruit with an increase in the retrap rate over the previous two years. The retrap rate has increased steadily from 4.5% in 2000

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Table 1

Summary of individual birds ringed (recaptures or recoveries for birds ringed before 2002 in brackets) at Sungei Buloh Wetland Reserve in 2002

JAN to DEC 2002

S/N	Species	Ringed 2000	Recapture pre-2000	Ringed 2001	Recapture pre-2001	Ringed 2002	Recapture pre-2002	S/N	Species	Ringed 2000	Recapture pre-2000	Ringed 2001	Recapture pre-2001	Ringed 2002	Recapture pre-2002
1	Abbott's Babbler	2		2	1	3		51	Little Bronze Cuckoo	1		1		0	
2	Arctic Warbler	3		2		0		52	Marsh Sandpiper	25		58	5	48	3
3	Ashy Tailorbird	20	1	18	2	19	4	53	Mongolian Plover	61	2	95	4	10	1
4	Asian Brown Flycatcher	2		0		0		54	Olive-backed Sunbird	1		16	1	4	
5	Asian Dowitcher	1		0		0		55	Olive-winged Bulbul	7		9	4	6	1
6	Asian Glossy Starling	53	1	18		23	1	56	Oriental Magpie Robin	12	1	7	3	9	2
7	Asian Koel	2		1		0		57	Oriental Reed Warbler	2		2		1	1
8	Asian Paradise Flycatcher	0		1		1		58	Oriental Scops Owl	1		0		0	
9	Baya Weaver	60		22	3	23		59	Pacific Golden Plover	27	1	85	2	52	8
10	Black Bittern	5		3	1	4	1	60	Pacific Swallow	7		3		0	
11	Black-browed Reed Warbler	1		0		0		61	Pallas' Grasshopper Warbler	0		2		0	
12	Black-capped Kingfisher	6		3	1	4	1	62	Pied Fantail	10	1	9	2	6	2
13	Black-naped Oriole	5		2		2		63	Pied Triller	1		1		0	
14	Black-tailed Godwit	1		0		0		64	Pink-necked Pigeon	8		3		2	
15	Blue Magpie	1		0		0		65	Pintail Snipe	0		1		0	
16	Blue-eared Kingfisher	0		0		1		66	Plain-throated Sunbird	73	4	47	14	36	3
17	Blue-tailed Bee-eater	3		1		0		67	Red-legged Crake	1		0		0	
18	Blue-throated Bee-eater	6		2		6		68	Red-necked Stint	0		0		1	
19	Brown Shrike	4		7		1	1	69	Ruddy Kingfisher	1		1		0	
20	Brown-chested Jungle-Flycatcher	0		0		1		70	Ruddy Turnstone	0		1		0	
21	Chestnut Munia	2		0		0		71	Rufous Woodpecker	0		2		0	
22	Chestnut-winged Cuckoo	4		2		0		72	Rufous-tailed Tailorbird	15		10	3	8	1
23	Cinnamon Bittern	5		0		2		73	Rusty-breasted Cuckoo	1		0		2	
24	Cinnamon-headed Pigeon	1		0		0		74	Scaly-breasted Munia	45		49		23	
25	Collared Kingfisher	43	8	48	12	32	16	75	Scarlet-backed Flowerpecker	1		2		0	
26	Collared Scops Owl	5	1	5	2	3	4	76	Siberian Blue Robin	3		0		1	
27	Common Flameback	1	1	2		3	3	77	Slaty-breasted Rail	1		0		0	
28	Common Greenshank	0		2		1		78	Spotted Dove	3		1		1	
29	Common Iora	6		5	1	4		79	Stork-billed Kingfisher	9		6	4	6	2
30	Common Kingfisher	15		13		4	2	80	Streaked Bulbul	0		0		1	
31	Common Redshank	263	24	117	21	72	13	81	Striated Heron	9		6	4	3	
32	Common Sandpiper	9	1	17	3	5	3	82	Striped Tit Babbler	0		0		3	
33	Common Tailorbird	15		14	1	16	3	83	Terek Sandpiper	16	1	2		0	
34	Copper-throated Sunbird	0		1		9	1	84	Tiger Shrike	16		8		4	
35	Crow-billed Drongo	1		0		0		85	Watercock	1		0		0	
36	Curlew Sandpiper	26		34		9		86	Whimbrel	13		27		6	
37	Dark-necked Tailorbird	3		1		0		87	White-breasted Waterhen	5	1	11	1	0	
38	Drongo Cuckoo	1		0		0		88	White-browed Crake	1		2		0	
39	Emerald Dove	13	1	3	6	2	1	89	White-chested Babbler	0	1	0		0	
40	Eurasian Curlew	1		0		0		90	White-headed Munia	0		1		0	
41	Forest Wagtail	0		1		1		91	White-rumped Shama	0		0		1	
42	Greater Sand Plover	1		0		0		92	White-throated Kingfisher	10		10	1	5	1
43	Grey Heron	0		0		1		93	Yellow Bittern	17		10	3	5	1
44	Grey-tailed Tattler	0		1		0		94	Yellow-bellied Prinia	3	1	3	2	5	4
45	Indian Cuckoo	0		1		0		95	Yellow-rumped Flycatcher	5		2		4	
46	Japanese Sparrowhawk	2		1		0		96	Yellow-vented Bulbul	60	3	22	11	20	8
47	Javan Munia	80		124	3	60	2	97	Zebra Dove	6		6		3	
48	Laced Woodpecker	4		3	2	3	2								
49	Large-tailed Nightjar	1		4	1	4	3								
50	Lesser Coucal	1		1		0									
TOTAL		1156	54	1003	124	595	99								

Note: Several names of birds have been updated in this report: Emerald Dove replaces Green-winged Pigeon; Striated Heron replaces Little Heron; Oriental Magpie Robin replaces Magpie Robin; Zebra Dove replaces Peaceful Dove; Plain-throated Sunbird replaces Brown-throated sunbird; Asian Koel replaces Common Koel; Pallas' Grasshopper Warbler replaces Pallas' Warbler; Red-necked Stint replaces Rufous-necked Stint

Corrections to Bird Ringing in SBWR in 2001 Report: The total number of birds ringed should be 1003 and not 1007. 1 Pintail Snipe was ringed in 2001, no Pintail Snipe were recaptured pre-2000.



With the mist netting of the Blue-eared Kingfisher, SBWR is the only site in Singapore where all 8 species of native kingfishers have occurred in the past 5 years.

This article is possible because of the field studies supported by NParks. Thanks to fellow ringers Ramakrishnan, Linda Goh, Charles Lim, Patricia Phua, Ray Knock, Mustaffa Bin Hajar, Abdul Khalid and Chan Su Hooi for contributing to the ringing work. Ray, in particular, shared his extensive experience in ringing which we benefitted. Many others assisted with the ringing activities including staff, volunteers and friends especially Halilah Ahmad and Ong Hai Chwee. Joseph Lai helped to key in some of the records. In addition I am grateful for the voluntary help from Nick Baker, Richard O'Keefe, Debby Ng, Lua Wai Heng and Adeline Chia. Kenneth Kee, and R. Subaraj who gave expert advice and contributed some sighting and observation records.

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Table 2

Longevity Records (Selected species)
At least 6 months for resident birds or 1 season for migrants

Species	Date Ringed	Date Recaptured	Interval (mths)
Ashy Tailorbird	23 Aug 00	20 Mar 02	19
Black Bittern	19 Dec 00	8 Jan 02	13
Black-capped Kingfisher	22 Mar 00	9 Jan 02	22
Brown Shrike	19 Apr 01	16 Apr 02	12
Collared Scops Owl	23 Aug 96	9 Jan 02	64
Common Kingfisher	11 Sep 01	14 Nov 02	14
Common Tailorbird	22 Mar 00	19 Jun 02	27
Copper-throated Sunbird	24 Apr 97	24 May 02	61
Laced Woodpecker	21 Jul 00	20 Jun 02	23
Large-tailed Nightjar	24 May 00	20 Mar 02	22
Olive-winged Bulbul	24 Aug 00	7 Aug 02	24
Oriental Magpie Robin	3 Jul 96	23 May 02	71
Oriental Reed Warbler	18 Apr 01	17 Apr 02	12
Pacific Golden Plover	29 Oct 93	9 Oct 02	108
Stork-billed Kingfisher	20 Apr 00	24 May 02	25
Yellow Bittern	21 Nov 00	16 Oct 02	23
Yellow-bellied Prinia	27 Jul 95	16 Apr 02	81
Yellow-vented Bulbul	4 Dec 96	6 Aug 02	68

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to 11.0% in 2001 and 14.3% in 2002. In 2002, 694 individual birds were caught of which 99 were retraps of birds from 31 species for birds that were ringed before 2002. This compares favourably to 1127 individual birds caught of which 124 were retraps from 31 species in 2001. The leader for the past two years, the Common Redshank with 13 retraps in 2002, has relinquished its lead. The Collared Kingfisher has wrested the pole position with 16 retraps. The species in third and fourth position are the Pacific Golden Plover and the Yellow-vented Bulbul with eight recaptures each. One use for the data obtained from retrapped birds is the enabling of longevity records and the survival of bird species to be determined. These records are provided in Table 2. Of special mention, a Pacific Golden Plover was recaptured after an interval of 108 months (9 years). **This individual is believed to be the oldest ringed Pacific Golden Plover in the world!**

One Black-capped Kingfisher exhibited high site fidelity. The individual that was reported mist netted at the same net after an absence of one season in the bird ringing report for 2000 was mist netted on 9 Jan 02.

A Black Bittern was recaptured in January at the same wintering area 13 months after it was ringed at the freshwater ponds. Similarly, a Yellow Bittern was recaptured in October, 23 months after it was first ringed. These recaptures suggest that the wetland reserve is a wintering area for these species.

Other interesting recaptures include the Common Kingfisher, Brown Shrike and Oriental Reed Warbler. This is the first time that SBWR has recorded the return of these migrants back to their ringing site.

Some movements of birds were noted within the wetland. Notably, a Collared Scops Owl that was ringed at the western end was netted in the Visitor Centre area at the eastern end. Similar movements were also noted for a Stork-billed Kingfisher.

In summary, bird ringing in 2002 has continued to reveal surprises in the presence of bird species, their movements, abundance and survival. The data collected are invaluable for the long-term conservation management of the wetland reserve.

Sungei Buloh Wetland Reserve in collaboration with MOE and British Council launched the "Birds in Wetland Reserves" project for 65 students from 13 local schools in 2003. Through this project, the primary and secondary students learned about the diversity of birds that live in our wetland reserve. They also participated in bird-watching trips to observe the abundant bird life, study the birds' habitats and behaviour and record their findings in an electronic nature journal. In addition, they also participated in forum discussions with each other through the Internet on a specially set-up portal.

On 5 July 2003, a celebration to commemorate the successful completion of this project was held in the wetland reserve. The students created a colourful display of posters and drawings and prepared interesting computer-based interactive quizzes that helped raise the public's interest in our biodiversity and engaged them through their active participation. A second batch of students has now embarked on the second phase of the project.



Birds in the Wetland Reserves

"NParks will continue to form fruitful partnerships to promote awareness and appreciation of the natural environment. We hope that projects such as this will serve as a springboard to increase the students' interest and knowledge of our shared biodiversity and natural heritage. Equipped with a deeper understanding, they will be able to better appreciate the values of wetlands and its biodiversity. As these students assume leadership positions in the years to come, I have no doubt that informed decisions made by them with regards to the environment will augur

well for the management and conservation of nature and biodiversity in Singapore. Our hope for a sustainable natural environment lies in the education of our youths, who are the leaders of tomorrow."

*Excerpts of the welcome address by
Dr Leong Chee Chiew,
Chief Operating Officer, NParks*

"I must congratulate the collaborative effort of the National Parks Board, British Council and the Ministry of Education for coming up with this "Birds in Wetland Reserves Project". It is

through projects and endeavours like these that our students are exposed to the natural wonders of nature and be able to appreciate the delicate environment we all live in. I sincerely hope that these students will continue their good work and to become volunteers of Sungei Buloh. They would then have taken that very first step to ensure that this wetland reserve continues to receive its deserved protection and conservation."

*Mr Kenneth Kee,
Volunteer of SBWR and keynote speaker
for the launch of the "Birds in Wetland
Reserves" Project Celebration 5 July 2003*

Excerpts from the Students involved in "Birds in the Wetland Reserve"

Nature Photography Talk

"To get good photographs, Mr David Tan, a volunteer of SBWR advised us to go before high tide because as the tide rushes in, the birds would fly in to the higher grounds found at the reserve. This would be the ideal time to snap them in action. We were also encouraged to read all types of magazines and books on photography to get new ideas and to improve our knowledge. Mr Tan proved to be extremely knowledgeable on the subject and his enthusiasm definitely rubbed off on us. So watch out birds,

we shall be capturing you with a vengeance on film!"

*Balaganesha Balasubramaniam,
Chongfu Primary School*

Bird Census

"I found out that if we wished to attract the birds to a particular place, the environment must be made suitable so that they like it and there will be a bigger population of them present. We also learnt that counting must be done fast, we have to estimate the number spotted in the binoculars before the birds fly away

or change positions."

*Neo Yu Chun,
Xingnan Primary School*

Birdwatching

"We proceeded to Screen 1.8. At first, we did not notice any birds at all except for the lone ranger, a Little Egret. As we looked harder into the picture in front of us, we noticed that a large number of birds were actually cleverly camouflaged to the surrounding. We were really caught by surprise."

*Lam Pui Yeng,
Kent Ridge Secondary School*



An Uncensored Census at Sungei Buloh

Candy Took shares her experience in being a part of the 'Birds in Wetland Reserves' project.



It was a wet and gloomy day as we set off for the Sungei Buloh Wetland Reserve. After a restless 30 minutes, we reached our destination.


Mr Krishnan, an Assistant Conservation Officer, was there to accompany us for the bird census. We kept quiet during the trip as the noise would frighten the birds away. We were led to a wooden hut where we saw many metal plates with information on the various species of birds on the walls of the hide. We had a good view of the birds feeding on the mudflats with the aid of telescopes and binoculars.

We were informed that the purpose of having a bird census was to see if the various species of birds had increased or decreased over a period of time and if there were new species to spot. We were told not to move around unnecessarily when counting the birds as the telescope stand would vibrate and go out of focus. It was much easier to count the birds at the mudflats because when the tide was high, the birds could not feed in their usual feeding grounds, as they would be flooded. These birds would likely fly to the mudflats at the reserve because water levels were controlled here. The staff had to count very quickly so that they would not double count the birds. These birds might fly off while they were counting and land on another site that the staff have already accounted for. That would make the census inaccurate.

While 2 of them were counting, the other was busy writing down the numbers of birds seen and the different species spotted. The birds that we identified and counted at Observation Hide 1 included the following:

Mongolian Plover	200 - 250	Striated heron	1
Marsh Sandpiper	7	Wintbrel	39
Common Greenshank	5	Curlew Sandpiper	8
Common Redshank	120	Pacific Golden Plover	208

The census was done at various hides around the Sungei Buloh Wetland Reserve. To do a proper count, we counted from left to right or vice versa. We also had to count in "patches" so as to be systematic in our counting.

Although our eyes were strained from searching and counting the birds, we felt that it was a highly interesting and educational trip. For most of us, it was an eye opener and a memorable one. 

Candy Took Shi Qin,
Chongfu Primary School

Set in a wilderness environ, Kranji Nature Trail is the green corridor that links two wetlands, the Sungei Buloh Wetland Reserve and Kranji Reservoir Park. As part of SBWR 10th anniversary celebration, this new trail was launched in September 2003 to the delight of many visitors.

Kranji Nature Trail... A Green Corridor

Tay Soon Lian,
Conservation Officer



When I heard of plans to create a green corridor linking SBWR to the Kranji Reservoir Park, it was almost a dream come true. Kranji Nature Trail's (KNT) creation was indeed the sweetest dream come true for many regular visitors who come to SBWR by public transport. The pleasant walk through the trail is a respite from the nightmarish walk along Neo Tiew Crescent to SBWR.

If you ever get tired of walking in your regular park, come to KNT. It is designed for people of all ages with its relatively flat terrain. The wilderness setting of this nature trail is unique in its own way. The feeling you get when you walk through the nature trail is like a roller coaster ride, every twist and turn gives you different excitement and surprises. You may be walking through the wide open space of the grassland, being soothed by the lingering smell of eucalyptus in the air, getting enchanted by the massive blooming of the Brown-heart's flowers and the handsome clumps of Indian Rubber Tree in the distant. The vegetation closes in creating a tunnel that leads you to a belukar patch. The bowing *Leea indica* with its red berries greet you as the ever presence of Simpoh Air with its bright yellow flowers surround you. The chirping and chattering of the Tailorbird and Yellow-vented Bulbul filter down as you enter the cool and still air of the secondary forest. Emerging from the forest, sunshine stream through willowy swaying branches of the majestic Rhu (Casuarina). Even though it is not a true pine, its needle-like modified twigs and pine-shape fruits carpet this stretch of the trail. Looking ahead, one cannot help but notice the presence of the rail Khaya and Sea Apple Trees swaying in the gentle sea breeze. Unmistakably the salty smell of the sea brings us to the coastline that hugs the most part of the trail. From here you can experience one of the most intriguing nature walk with the mudflat on one side and mangroves on the other. Most of the commonly found mangrove flora can be seen here together with interesting flora like the *Dolichandrone spathacea* and Pandan. On a clear day, look across the Johor Straits to view the state's CBD with the picturesque Kelong in the foreground and if you are lucky, catch an unforgettable sight of the king of the sky soaring high up in the sky, swooping down to catch a fish.

When you get to the "therapy bridge" which span the straits, stand on it and have all your worries washed away with the ebbing tide. On many occasions, you can witness the Cormorants doing a fly pass while the Bee-eaters glide in the sky catching their prey and a dollarbird high up in the tree. Beyond the bridge, walk among the giants of the mangrove without getting your feet wet. Huge Api Api, Bakau and Nireh with their special growth form reach out at you with a special 3D effect. An abandoned prawn pond which had seen many passing tides, holds stories of yesteryears. The winding trail finally leads you to SBWR.

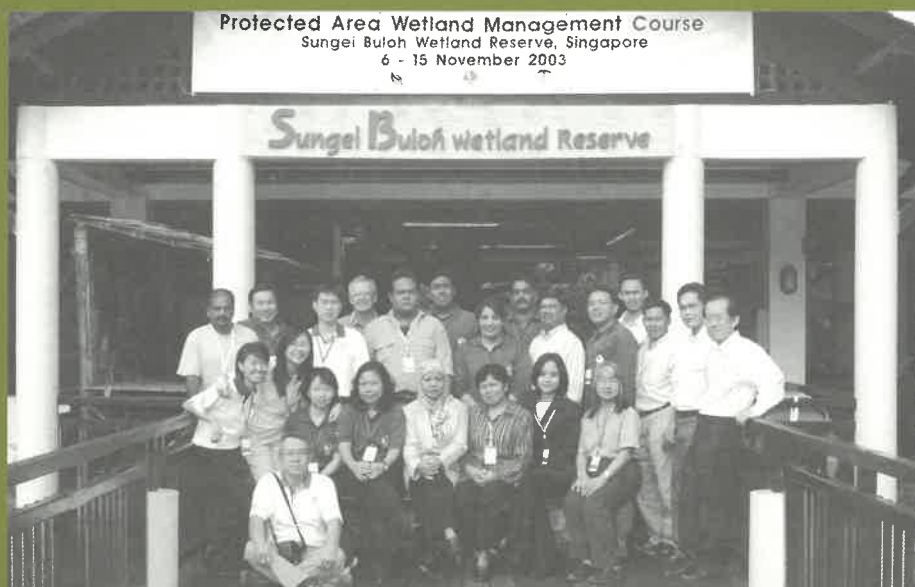
The official opening of KNT on 20 September 2003 opened up an opportunity for many nature lovers to experience and learn about the many diverse ecosystem that abound outside. KNT is no SSS, Sun, Sand and Sea, it is MMM, Mud, Mangrove and Madness. Madness? Wait till you see what the tide brings in!!!

What happened?

by James Gao
Senior Conservation Officer

Protected Area Wetland Management Course

6 – 15 November 2003



If you were at Sungei Buloh Wetland Reserve (SBWR) between 6 to 15 November 2003, you would have noticed a banner over the Visitor Centre entrance. This banner was partly to inform visitors that SBWR had been transformed into a training centre for an inaugural 10-day Protected Area Wetland Management Course (PAWMC) for regional participants. The course was jointly organised and conducted by the Biodiversity Centre Branch and Sungei Buloh Wetland Reserve.

The overall purpose of the PAWMC was to provide participants with some of the knowledge and skills required in drafting a practical management plan for any protected area wetland site in ASEAN. More specifically, the course was designed so as to facilitate and provide opportunities for course participants to increase their knowledge of wetlands, their processes, importance and the why and how in drafting practical management plans for wetland sites. Funding for the course was provided by the ASEAN Regional Centre for Biodiversity Conservation (ARCBC). Ten participants involved in the management of protected wetlands from five ASEAN countries attended the course. The course was launched by NParks COO, Dr Leong Chee Chiew at the opening ceremony. Over the ten days, course participants who came from Brunei, Cambodia, Indonesia, Philippines and Singapore attended a series of lectures and workshops and went on field trips conducted mainly by staff from NParks including the Singapore Botanic Gardens (Herbarium). There were also contributions from partners like the ARCBC, Nanyang Technological University - National Institute of Education (NTU-NIE), National University of Singapore - Department of Biological Sciences (NUS-DBS), the Raffles Museum of Biodiversity Research (RMBR) and the volunteer group of SBWR.

On 15 Nov 03, the first cohort of participants enthusiastically received their certificates from Deputy Chairman NParks, Mr Khoo Chin Hean. Mr Khoo, guests and volunteers of SBWR were treated to a poster presentation. Each participant had prepared a poster of their respective wetland site and incorporated a key idea they had found useful which they had learnt from the course. The presentations were very interesting and Mr Khoo and guests took the opportunity to get to know the participants and their



wetlands. The course was well received by the participants and was successfully concluded in a rousing farewell dinner graced by Director (Conservation), Mr Wong Tuan Wah who also handed to each of the participants a souvenir Video Compact Disc of video footage of the course and an accompanying group photograph.

So, were the course objectives achieved? We believe so. And was it worthwhile to conduct? A comment by one of the participants in the feedback form says it all: "Appreciate support of the staff – always available and accommodating- Good work!!!"



The course fulfilled the expectations of the participants, the staff of NParks and, particularly, Sungei Buloh gained valuable experience in managing and coordinating a regional course of this magnitude and complexity. The course brought us closer together not only in Sungei Buloh, but also within the Conservation Division, NParks and with our national partner organisations of NTU-NIE, NUS-DBS and RMBR in Singapore with the regional ARCBC. It also gave us the opportunity to know and understand our counterparts in ASEAN

Should an opportunity arise to conduct a second PAWMC in the future, we will be in a better position to take up the challenge and contribute to our region.

The countdown to Sungei Buloh Wetland Reserve 10th Anniversary began in December 2002 and culminated with a celebration on 6 December 2003. The celebration marked a decade of Sungei Buloh's history, from a nature park that almost never was to a nature reserve and Singapore's first ASEAN Heritage Park.

Mr Mah Bow Tan, Minister for National Development, was the guest of honour who graced the occasion. Also present



Sungei Buloh Wetland Reserve 10th Anniversary Celebration

Halilah Ahmad, Outreach Officer

were Prof Leo Tan, Chairman of NParks, and Mr Goh Kong Aik, Vice President, Group Public Affairs of HSBC and Dr Tan Wee Kiat, CEO, NParks. In this event, Minister Mah launched the commemorative book, **"Sungei Buloh Wetland Reserve — A Decade of Wetland Conservation"** which captured the past ten years of wetland conservation education in SBWR. This book was sponsored by HSBC and is dedicated to the volunteers, friends and partners of SBWR, for their labour of love and passion that helped mould what Sungei Buloh is today. HSBC - a long-standing corporate partner — also donated S\$100,000 to the Sungei Buloh Education Fund. This is to support the Reserve's conservation and education projects. The results of the year-long photography and nature journal competitions were also announced and the winners recognised.

To mark this historical event, ten representatives were invited on stage to piece together the final pieces of a sundial. They are Minister Mah, Prof Leo Tan, Dr Tan, Mr Goh, Dr Shawn Lum, Mr Keith Hillier, Ms Halilah Ahmad and three students from the three schools that adopted SBWR.

At the end of the ceremony, SBWR volunteers put up a lively, sing along show featuring three songs written and arranged by Ms Linda Fang Mei Ling. A lecturer by profession, she has been an active volunteer in the reserve for the past three years.



Students from Commonwealth Secondary, Hillgrove Secondary and Woodlands Secondary School were also present to act as station guides along the mangrove boardwalk, freshwater pond at the nature gallery and butterfly trail respectively. Visitors and guests had the opportunity to learn more about the mangroves, freshwater pond and butterflies through the students' interpretation.

Minister Mah witnessed the planting of the *Bruguiera hainesii*. The introduction of these plants signifies Singapore's commitment in restoring mangroves including the back mangroves.

Adding to the colourful and exciting day, guests enjoyed themselves drawing and painting alongside our volunteers cum artists, Ms Deborah Tay and Mr K S Wong. This free and easy 'Art in Wetland' drawing session at the main bridge attracted many appreciative eyes. They also got to see migratory birds close-up through telescopes set up by HSBC and SBWR volunteers at the Main Hide.

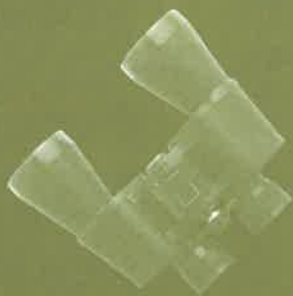
The community in Sungei Buloh had added liveliness to the wetland reserve and created the carnival-like celebration by setting up tables selling craft materials, conducting henna hand painting sessions, conducting art workshops, setting up exhibitions, cartoon screenings and games at the Theatrette.

Without the support of all levels in the community, Sungei Buloh Wetland Reserve would not be what it is today, the ecological jewel of an urbanised Singapore.



Calendar of Events

compiled by halilah ahmad



Free Guided Tour

Every Sat except public holiday 9am, 10am, 3pm & 4pm

Get to know the inhabitants of the mangroves through our volunteer guides. Meet at the visitor centre at the specified time.



Art in the Wetlands Exhibition

Aug to Oct 2004

Tham Pui Shan, a volunteer of SBWR, is an avid artist who expresses his passion for nature through his artwork. From April to August 04, he is showcasing some 20 pieces of work he has completed for the wetland reserve. Public interested in his artwork can purchase replicas cards. Proceeds go to the SBWR's Conservation Fund.



Prawn Watch

29 May & 19 June 2004 at 9am to 11am

Come join us for a traditional prawn harvesting demonstration and find out where some of your seafood come from. (The catch of the day goes back to the sea though.)



Young Naturalist Programme

Keen to be a Young Naturalist? To be part of this group, you will need to register at Sungei Buloh Wetland Reserve and obtain a passport to begin your journey. Complete the following programmes and get your passport stamped to earn your Young Naturalists badges.



Young Naturalists Badges:

Complete the following set of activities to earn your badges:

1. Nature Ramble
2. Nature Activity and Write Stuff
3. Thematic Trail and Natural Artist
4. Special Mission

If you complete all the programmes listed on your passport within 3 years, you will be awarded a certificate of achievement.

Interested in taking part in other nature-related activities, visit NParks website at www.nparks.gov.sg

Nature and me

*Down at Sungei Buloh Wetland Reserve
I looked lost like a wandering child
Trees so tall and skies so blue
Towered over me like
Giants of nature*

*Swamps of mud and worms
And mudskippers
Lay beneath my feet like a great ocean
Birds like herons stroll in swamps*

*And hunt for food energetically
While kingfishers lay in trees so high
Chirping out their cries of joy*

*All these are nature
Pure nature
A painting of green and blue
The plants and skies
How I like to enjoy them
Using binoculars and a keen pair of eyes
And with a heart so true
So pure
So great
To appreciate Sungei Buloh Wetland Reserve
Place of nature and wildlife*

*By Pang Chew Fei
Age: 11*





URGENT VIA AIR MAIL

**Let's show the world
how the grass is greener
in the Garden City.**

Our Care-for-Nature programme for the environment: global concerns, local action.

While the world is now more aware of caring for the environment, it was in as early as 1963 that Singapore chose to go green. During its rapid rise to a first world economy within some 40 years, it has kept to the vision of being a Garden City. Today, it continues to safeguard much of its natural heritage.

With a philosophy of global success on a local level, HSBC developed the Care-for-Nature programme in Singapore to support this cause. An integral element of this programme is the Care-for-Nature stamp series. Aptly named the Garden City series, this year's stamp series is dedicated to raising funds for research into how our greenery can continue to benefit us.



Support this cause. It could support your life in future.

HSBC in partnership with the National Parks Board will use the proceeds from the sale of these stamps to fund a research project on Singapore's 'urban forests'. Not only will the research determine the environmental value of Singapore's greenery, it will also study how they improve and contribute to our quality of life.

We already know that concrete buildings and roads in cities act as heat traps, raising the temperature by a few degrees. And that in Singapore, the temperatures in forested areas are cooler than in built-up ones. This research goes further: to explore how much of the pollution caused by the city's factories, offices, homes and 600,000 motor vehicles is removed by our urban forests. The findings will help guide our policies and practices to help us realize the potential of these areas in enhancing our environment. And they could be useful for other environmental projects, beyond Singapore.



It's more than a nature stamp. It's a stamp you'll leave on nature.

This year's HSBC Care-for-Nature stamp series enables you to directly support research aimed at growing our Garden City. The specially commissioned collection features four major parks of great significance to our Garden City: Singapore Botanic Gardens, Fort Canning Park, Marina City Park and Sungei Buloh Wetland Reserve.



The Garden City stamp series is a limited edition comprising four stamps, wonderfully rendered by artist Lee Huei Hoon. You can purchase the HSBC Care-for-Nature Collector's Cover at \$9.90 each. And the 4-in-1 and Set of 4 stamp prints, at \$88 and \$198 respectively. Proceeds will go toward research of our greenery. So with your purchase, you can help perpetuate Singapore's success in nurturing a world-renowned Garden City.



Grow more than your collection. Grow our Garden City.
Do your part to preserve our natural heritage. Get the HSBC Care-for-Nature Collector's Covers and Limited Stamp Print Collection from HSBC Group Public Affairs (HSBC Building, #14-01, Tel: 6530 5100), all HSBC branches in Singapore and Singapore Post main branches.



Care-for-Nature
PROTECTING OUR LIVING RESOURCES

HSBC 
The world's local bank