

## A Park for All



On 6 December 1993, the Park was officially declared open by Prime Minister Goh Chok Tong. In his opening speech, he spoke of the government's commitment to nature conservation which is evident in the setting aside of 5% of land towards the cause. Viewed against the demanding needs of housing and economic development, this is indeed a luxury.

Sungei Buloh was originally zoned as part of an agro-technology park. However, in 1989, the Ministry of National Development designated it as a sanctuary for wild birds and as a nature park. Between 1989 and 1993, it was developed so that it would be more conducive for migratory shorebirds to roost and feed in. Hides and screens for observation of birds were also constructed for use by both birdwatching enthusiasts and the general public.

A large part of the Park used to be mangrove swamp. Much of this was cleared by early settlers who converted the mudflats into prawn and fish ponds.

In the course of development, small ponds were enlarged to form bigger irregularly-shaped ones which were more suitable for the roosting and feeding habits of shorebirds. Islands were also created in parts of the ponds. They served as safe feeding and resting areas when the tide enters the ponds.

During that period of development, fear and apprehension were expressed by some quarters. Some groups felt that it was detrimental to the visiting bird population and that the works frightened away the feathered visitors. Development works were done in phases so that birds were not devoid of feeding grounds. It has been four years since then and the Park is delighted to say that the number of species of birds sighted has not diminished. Instead, it has increased from 126 species in 1990 to the present 169.

Unlike man, most birds do not store food. If they are not sufficiently fed, they will not be able to fly the migratory route or withstand harsh conditions and will also easily fall prey to predators. As such, they seek safe feeding grounds. And they return to these places if they sense there is no threat there.

Whether or not birds will continue to visit the Park depends on how visitors treat them. If visitors disturb them and behave in a manner which causes them fear, these birds may choose to go somewhere else instead. And if other suitable habitats are destroyed, their survival would be threatened.



**The Visitor Centre**

It is the aim of the Park that conservation works hand in hand with education and recreation. It is hoped that Singaporeans and other visitors will appreciate the essence of the Park and share our sentiment that one of life's pleasure is in watching birds and other wildlife in their natural habitats. If these are achieved, the role of the Park would have been fulfilled and the setting aside of prime land as a nature park in land-scarce Singapore would have been worth the economic sacrifice.

### Editorial Committee

*Advisory Committee*  
Mr Choo Thiam Siew  
Dr Wong Hon Mun  
Mrs Daisy Ling

*Editors*  
Ms Gan Kim Choo  
Ms Ong Chui Leng  
Mr Jacques See  
Mr V Balakrishnan

*Honorary Photographer*  
Mr Michael Aw

*Design & Production*  
OCTOGRAM

*Printer*  
Octogram Press

*Publisher*  
Parks and Recreation  
Department

Copyright reserved



### Three stages in the life cycle of an Atlas Moth



Lime-green caterpillar



Silky pupa



Handsome adult

## Homes of their Own



Apart from fish, shellfish and crustaceans which breed in the waters in and around the Park, butterflies, dragonflies, damselflies, moths and resident birds also breed among the vegetation here.

The Atlas Moth (*Attacus atlas*) lays its eggs on the leaves of the Sea Poison Tree (*Barringtonia asiatica*). They hatch into lime green caterpillars which are about 8cm long and these feed on the leaves of the tree. From the pupa stage they turn into attractively-patterned adults. The caterpillars also feed on the leaves of rambutan, guava and citrus. As such, they can be considered a pest. However, they are naturally preyed upon by other insects and birds and form part of the food chain.

Three eggs of the White-breasted Waterhen (*Amaurornis phoenicurus*) were rescued after being found abandoned by the parents. The eggs were about to hatch and cracks were apparent on the shells.

They were artificially incubated and soon hatched into little black chicks with 'large feet'. The chicks were hand-fed until they could eat on their own. When they were about three months' old, they were banded and then released into the wild. Initially, they returned daily to seek food but with time, they made only occasional appearances. If you visit the Park and spot a White-breasted Waterhen with a bright blue band on its leg, you'll have seen one of our very own Park residents-born and bred here!



White-breasted Waterhen

Continued from page one

### The Objectives of the Park

#### Conservation

To function as an important site in the East Asian Migratory Flyway for waders and to maximise the carrying capacity of the reserve for birds and other wildlife.

#### Education

To provide education of the natural sciences, in the local context, through the natural and diverse interest within the reserve.

#### Recreation

To provide an alternative form of recreation to encourage appreciation of the beauty and diversity of wildlife.

#### Research

To contribute to ornithological and biological knowledge regionally and internationally.

### Your visit to the Park

Throughout the year, visitors can expect to see mangrove and resident birds like kingfishers, sunbirds, herons and bitterns. In addition, mangrove wildlife like crabs and shellfish can be seen crawling on the tree trunks or basking in the mudflats at low tide. From September to March, look out for migratory birds, in particular shorebirds or waders. November, December and January are the best months for watching them. Patience and silence are pre-requisites to catching a glimpse of some of these fascinating inhabitants of the wetlands.

In addition, we would like to advise visitors of a code of conduct that should be observed so that everyone can enjoy the day spent here.

As a nature park, the reserve is first and foremost a home to plants and animals and it is important that their needs are respected. For example, picking of leaves, flowers and fruits is forbidden

in the Park. Such actions damage plants. In addition, uncontrolled picking results in abuse. Uncommon species may become extinct locally.

Another rule relates to the control of noise within the Park. Shouting, singing and loud talking disturb wildlife as well as other visitors' enjoyment. When intimidated, wild-life goes into hiding. Nature enthusiasts who visit to experience the sights and sounds of the wild will therefore be sorely disappointed when they cannot see the occasional water monitor, bittern, or listen to the quarrel of two White-breasted Waterhens. It must be remembered that the Park is a refuge for 'wildlife'.

Pets are not allowed in the Park because they may create disturbance. For example, dogs may bark and chase after wildlife.

And do remember that 'poaching' is an offence punishable by law and poachers will be fined.





# Research



Research is carried out on the flora and fauna found here. The information collected increases understanding of the life living within it. This in turn contributes to sound management of the various habitats of the Park. Examples of such work done includes bird banding, bird census, water sampling and feeding ecology studies.

## Bird Banding

To find out more about the movement of migratory shorebirds which visit the Park, a shorebird banding programme was started in October 1990. The initial programme involved netting efforts on consecutive nights conducted once or twice during each migratory season. Banding sessions were conducted fortnightly throughout the migratory season.

A volunteer network involving Jurong BirdPark, the National University of Singapore, the Nature Society of Singapore, teachers and other nature enthusiasts was established. Volunteers are incorporated into the programme as part of the effort to educate the public on conservation and ornithology.



Mist-net set-up for capturing waders

During the last migratory season, from September 1993 to February 1994, 16 sessions of netting were conducted. A total of 253 birds of 19 species was caught and banded. The Common Redshank constituted 50% of the total birds banded. All birds captured in the last season were dyed (yellow) with picric acid. Different parts of the birds were dyed each time. That helped to indicate (in field sightings) the approximate amount of time a shorebird spent in the Park.

## Bird Census

The Park's Scientific Department regularly monitors bird species and bird population in the Park. In 1993, 135 species of birds were sighted here. This is about 41% of the total number sighted in Singapore (326 species).

Wader counts are conducted to monitor the population of these migratory birds which begin to arrive in Singapore as early as late June. The bulk of them come in October through to November. The reverse occurs in February through to May when they make their journey back to their breeding grounds. Common Greenshanks, Common Redshanks and Whimbrels are the earliest arrivals. In 1993, the highest population of waders in the Park was observed in November.

## Feeding Ecology Studies

Such studies involve observation of the behaviour of shorebirds, particularly their feeding habits. The birds are noted on how long they engage in activities such as feeding, preening and roosting / resting.

In a study of their feeding habits, the kind of prey items, the time taken to capture them and the handling techniques are recorded. Such field observations provide information on how and when different species of shorebirds make use of the ponds.

Apart from this, sampling of mud is also conducted. This involves the collection and identification of \*benthic organisms, especially at areas where the birds are observed to feed. These studies confirm the prey items taken

and estimate the \*\*carrying capacity of the ponds.



Mud Sampling

\*'Benthic organisms' refers to life-forms inhabiting the bottom of the sea.

\*\*'Carrying capacity' refers to the number of birds the ponds can support based on the food available.

## Update - Insectivorous Bats Study



No insectivorous bat had made use of the boxes in the Park since they were put up in December 1992. However, traces of use were found in boxes put up at NUS and NTU. The first traces of use of a box was recorded in Sembawang Park in June 1993. The box was used as a maternity roost and at the time of check, two baby bats were present.

Information courtesy of Ms Shirley Pottie, NUS, Department of Zoology.

## Education



Thus far, the Park has conducted guided walks for school groups and for institutional groups. First-timers to the Park were introduced to the roles played by the Park and the varied and unique flora and fauna within it.

In addition, pond sampling sessions are conducted for primary school groups. This encourages them to explore life in hidden depths. It also enables them to view in real life the abundant insects inhabiting these places. Water spiders, dragonflies, damselfly nymphs and diving beetles are but some of the few 'creepy crawlies' which they encounter. These

little creatures are released into the very pond from which they are collected after they have been identified and observed. They are a part of life in a community.

Apart from walks, birdwatching and pond sampling, students are allowed into the Education Workroom where flora and fauna specimens which had been collected are temporarily displayed. There are moulted skins of snakes, footprints of waders preserved in clay, nests and eggs of birds, dried fruits and seeds of



Looking for 'creepy-crawlies'

mangroves and a small collection of insects.

Guided walks for school should be booked at least a month in advance and sampling activities are available for small groups of 20-30. For guided walks, a class of 40-45 can be accommodated.

Call the Education Department for any further enquiries. Tel: 6690632.

## Volunteer Network News

Calling all nature lovers and enthusiasts over 18 years of age! Share your passion for nature with others. Be a volunteer guide! We are looking for dedicated nature lovers to guide visitors around the Park. You must believe in conservation education and be keen to impart your understanding, knowledge and appreciation of the Park to others. More importantly, you must be willing to volunteer guiding services regularly. Call, fax or write to us today: The Education Officer, Sungei Buloh Nature Park, Neo Tiew Crescent, Singapore 2471, Tel: 6690377. Fax: 6690371

## Sponsorship Towards Nature Conservation and Education

### Corporate Sponsors

Mitsubishi Corporation contributed to environmental education in the Park through the sponsorship of brochures, visitor guide handbooks, posters, bird identification charts and information kit(s). This sponsorship amounted to \$51,669. In addition, the Corporation donated 5 units of Nikon EDII Fieldscopes and 5 sets of 'Slik' fluid-head tripods.

Under its Care-for-Nature Programme, Hongkong Bank sponsored 3 location maps and 20 educational and informative signages in the Park. The sponsorship amounted to \$25,400.

We wish to thank these organisations for their generous donations and concern for conservation.



Dr Chua Sian Eng (right) Commissioner, Parks & Recreation Department, receiving the letter of sponsorship from Mr Hirata, General Manager of Mitsubishi Corporation

*If we love our children, we must love the earth with tender care and pass it on, diverse and beautiful, so that on a warm spring day 10,000 years hence they can feel peace in a sea of grass, can watch a bee visit a flower, can hear a sandpiper call in the sky, and can find joy in being alive.*

Hugh H. Iltis

### Park Information

#### Opening hours

- 7.30 am to 7.00 pm on weekdays
- 7.00 am to 7.00 pm on weekends and public holidays

#### Admission

- \$1.00 adults
- \$0.50 students, children and senior citizens

#### AV Show

Monday to Saturday:  
9.00 am, 11.00 am, 1.00 pm,  
3.00 pm and 5.00 pm  
Sunday and Public Holidays:  
Hourly from 9.00 am – 5.00 pm

#### How to get to the Park:

Bus 925 to Kranji Dam on  
Monday to Saturday  
and Park entrance on  
Sunday and Public holidays.

Sungei Buloh Nature Park  
Neo Tiew Crescent  
Singapore 2471  
Tel: 6990377  
Fax: 6690371

♻️ Printed on recycled paper

