

MEDIA FACTSHEET

New Guided Walks at Sungei Buloh Wetland Reserve

SBWR currently offers only one free guided walk which is about the habitat of the mangrove forest. With the opening of the new visitor centre, six new guided walks will be introduced for members of the public on a rotational basis on Saturdays from 6 December 2014, two of which are developed specially for children under 12 years old. Each of these guided walks will take visitors on a 1.5 hour journey through parts of the Reserve, and will focus on different themes. Conducted by volunteers, these guided walks are designed to cater to visitors of all ages. Visitors can participate in a total of seven free guided walks at the Reserve.

While the existing guided walk focuses on the habitat of the mangrove forest, the new walks will educate participants on other habitats found at Sungei Buloh (such as the sky, mud and water). In addition, two walks are specially targeted at visitors below the age of 12, and will give them a closer look at the estuarine mudflats and the many species which can be found at the reserve.

Students from Regent Secondary School have been trained to volunteer as station guides for the new guided walks.

Guided Walks at the Reserve

At SBWR extension:

1. What's in my mud?
2. What's in my mangrove?
3. What's in my water?
4. Muddy and friends (specially for children)
5. Muddy and his home (specially for children)

At SBWR Wetland Centre:

6. What's in my sky?
7. Mangrove boardwalk (existing)

How to sign up

The guided walks are made available to everyone free-of-charge. From 7 Dec 2014, members of the public may sign up online at <http://bit.ly/1mxnc17> to register for guided walks. The guided walks are available on a first-come, first served basis.

1. What's in my mud?



Mud is a common element that can be found almost everywhere, but its importance is often overlooked. At SBWR, mud provides wildlife with the necessary habitat and food to thrive. It also serves as a buffer zone between the sea and coastline, thereby slowing down coastal erosion. This tour will bring visitors on a mud trail where they will get to see, smell and touch mud in its different forms.

Animals that live in or on the mud are called benthic organisms or benthos. The benthic zone refers to the region at the lowest level of water body. At SBWR where mangroves predominate, the benthic zone refers to the mud.

The benthic organisms in SBWR can be classified into four main groups: Worms, Crabs, Shellfish & Snails and Others.

Worms

Worms can be categorised into those which are segmented (consisting of multiple segments or sections) and unsegmented (having cylindrical bodies, often narrowing at each end). An example of worms that can be found at the Reserve are the Solitary Tube Worm and Ribbon Worm.



(Photo from www.opalesurfcasting.net)

Solitary Tube Worm
(*Diopatra neapolitana*)

This segmented worm lives within a thick, tube-like structure which protrudes from the mud. The structure is made up of debris such as bits of crustacean shells, algae and mud, which are glued together using the mucus the worm secretes. The tube is used as a hiding place for the worm to catch unsuspecting prey.



(Photo by Ria Tan)

Ribbon Worm
(*Nemertea*)

The body of this unsegmented worm is long and flat, giving it the appearance of a ribbon. Its bright colour serves as a form of defence against predators, as colourful organisms are often associated with being toxic. It feeds by firing its proboscis (tubular mouthpart used for feeding) out from its mouth forcefully and quickly to grab its prey. The proboscis can also be used to create burrows or for moving.

Crabs

Mangrove crabs are ecologically significant in many ways. They serve as food for fish, and their burrows introduce air into the sediment. To protect themselves, they burrow into the ground. Some crabs, like the Tree Climbing Crab, can even climb trees to get away from predators.



Tree Climbing Crab
(*Episesarma* spp.)

The tree climbing crab is most easily seen during high tide. When the water level rises, it climbs up a tree and stays there until the tide subsides. This is to prevent itself from being eaten by predators in the water. However, it also has to be aware of its predators above water, such as the birds. To avoid detection, it stays stationary.

Shellfish & Snails

Molluscs are a group of invertebrates, meaning they do not have backbones. Common molluscs in SBWR are bivalves (shellfish) and gastropods (snails and slugs). Bivalves are organisms with two shells of mirror image connected by a hinge. Each shell is called a 'valve' and 'bi' means two, hence its name.



Green Mussel
(*Perna viridis*)

A very common bivalve in SBWR, green mussels often group together in clusters where they secrete byssus threads. This causes them to attach to one another and to a hard substrate. These mussel can also be eaten for food.

(Photo by Ria Tan,
www.wildsingapore.com)



Common Nerite
(*Nerita lineata*)

The Nerite has a thick rounded shell, making it look like a grey marble from afar. When threatened, it hides in its hard shell and rolls away, just like a marble! It often remains motionless above water level to avoid aquatic predators, and its shell is also tough and strong enough to deter other predators.

Other organisms

One of the more recognisable animals in SBWR is the mudskipper, which can be spotted easily during low tide. Mudskippers are fishes, but they also have the ability to survive outside of water because they can hold water in their enlarged gill chambers, keeping their gills moist. They can also breathe through their skin when it is moist.

The fins of the mudskipper are also well adapted for them to move on land by skipping and hopping. Their eyes are found on top of their head instead of on either side like most fishes, and this enables them to see all around – in water and above water.



Giant mudskipper
(*Periophthalmodon schlosseri*)

The giant mudskipper is the largest mudskipper in Singapore. It can easily be recognised by its black stripe from its head to its tail. It also has metallic blue spots on its cheek.

2. What's in my mangrove?



Mangroves are located at the border of freshwater (river) and salt water (sea). Singapore used to have large areas of mangroves, but lost most of them to coastal development. Few mangroves are left in Singapore, one of which is at SBWR.

The plants at mangroves had to find ways to adapt in order to survive. For example, the soil at mangroves is often waterlogged, meaning there is little to no air found inside. Thus, some species adapted by exposing their roots to the air for at least part of the day, allowing them to breathe.



Mangrove Flora

Mangrove Apple (*Sonneratia*)

Named after the French botanist Pierre Sonnerat, it has a characteristic fissured bark and conical roots, which have been recorded to be more than 2m. Its fruits and nectar are edible, and are believed to help expel stomach parasites.

Nipah palm (*Nypa*)

This palm has large, bumpy round fruit, and its sap is used to make toddy (alcohol), vinegar or sugar (gula melaka). The young seed is edible and is used in the popular dessert ice kacang (attap chee). Young palm leaves are used as cigarette paper, while mature leaves are used as thatching for roofs.

Lumnitzera (*Teruntum*)

The Lumnitzera Walk at SBWR extension is named after this rare tree. Its brown bark is fissured and its wood is used for firewood and timber. The red flowers are eye-catching and have ornamental value.

3. What's in my water?



“What’s in my water?” will explore the various types of water bodies at SBWR, what they contain, the importance of water, and how participants can play a part in keeping our water bodies clean and healthy.

Freshwater Pond



Consisting of ground water supplemented by rain, the freshwater pond at SBWR is designed to collect surface runoff from the visitor centre and carpark. Dragonflies, damselflies, freshwater native fishes, frogs, waterbirds and red-eared sliders (terrapins) are some of the fauna which can be found here.

Bioswale – landscape elements designed to remove silt and pollution from surface runoff – consist of gently sloped sides and are occupied with vegetation. This slows down the water flow, which aids in trapping pollutants and silt. Water plants like Sedge, Cattail (*Typha*) and Water Lilies act as biopurifiers, storing pollutants and contaminants found in the water.

Fauna at the freshwater pond

Dragonfly (*Anisoptera*)

The adults are excellent fliers and can fly forward, backwards and hover, which help them to hunt for prey. Some dragonflies even hunt and eat other dragonflies. The nymphs are also aggressive and feed on tadpoles and small fishes.

Three spot goramy (*Trichogaster trichopterus*)

This omnivorous, air-breathing fish can be seen breaking the water's surface to take a gulp of air. It gets its name from the two spots along each side of its body, which are in line with the eye (considered the third spot).

Chorus frog (*Pseudacris*)

This species is tiny (smaller than a person's thumbnail) and is so called because they tend to sing in unison in the late hours of the night, sounding like a choir singing the chorus of a song.

White-breasted waterhen (*Amauornis phoenicurus*)

Called "Burung Wak-wak" in Malay because of its distinctive call (which sounds like "wak-wak-wak-wak")– this species is commonly seen near water bodies. It is not meant for eating as its meat is very tough.

4. (Specially for children) Muddy and friends



Muddy the Mudskipper lives in a very delicate ecosystem alongside its neighbours, and they depend on one another to survive in the mangroves. Developed specially for children below the age of 12, this walk touches on species like the Mudskippers, Forest Birds, Spiders and Otters which can be found at SBWR. Some of Muddy's friends include the Oriental Magpie Robin and the Smooth-coated Otter.



Oriental Magpie Robin
(*Copsychus saularis*)

A commonly sighted bird until the 1970s, the species declined in number due to a combination of poaching, habitat destruction and competition for food sources with other birds. It has black and white feathers and a long tail.



Smooth-coated Otter
(*Lutrogale perspicillata*)

Otters associate mainly in pairs or small families, and are active during the day and night. Its brown fur is short, smooth and sleek, while its throat and sides of its neck are creamy in colour. Its tail is flattened and measures about 50 cm in length, which propels it forward in the water to catch fish more efficiently. Otters have been recently spotted at Bishan-Ang Mo Kio Park, Gardens by the Bay, and Singapore Botanic Gardens.

5. (Specially for Children) Muddy and his home



Another guided walk specially for young visitors to the Reserve, “Muddy and his home”, introduces participants to the estuarine mudflats, where mudskippers hunt for food or laze in the sun during low tide. When high tide is approaching, they can be spotted climbing up and sticking onto tree roots or branches.

Participants step on a floating platform during low tide at the Mud Experience — a dedicated area to get up close with creatures living in the mud. It consists of an interactive mud discovery pulley and a balancing bridge which lowers visitors down to a platform near the bottom of the mudflats. Interpretive panels showcase information on the mudflat habitat.



6. What's in my sky?



“What’s in my sky?” will introduce participants to bird watching and the importance of SBWR as a site for migratory birds, being a stopover point along the East Asian-Australasian Flyaway. Guides will demonstrate how to identify shorebirds (long-legged wading birds like plovers and sandpipers) and passerines (perching birds such as sunbirds and bulbuls), and also introduce other types of birds that can be spotted at the vicinity of the Reserve, including waterbirds and raptors. This guided walk will take place at the Migratory Bird Trail situated near the Wetland Centre.

Shorebirds

Waders or shorebirds, as their names suggest, wade in shallow water in search of food. The shorebirds in SBWR have different bill lengths and feeding habits, and are thus able to tap on different food sources found in the mudflats. This enables them to co-exist in the same habitat. An example of a shorebird commonly seen at the Reserve during migratory season is the Common Redshank.



Common Redshank
(*Tringa tetanus*)

Common Redshanks are identified by their distinctive red legs. They patrol rocky, muddy or sandy shores at a fast pace, regularly pecking at the surface. During the breeding season, they hunt insects, spiders and worms. The rest of the time, they also eat molluscs, crustaceans, small fishes and tadpoles

Waterbirds

Waterbirds are able to live in or around water due to special adaptations such as their webbed feet, and bills which are able to catch prey in water. An example of a common waterbird is the Grey Heron.



Grey Heron
(*Ardea cinerea*)

The Grey and Purple Heron are among the largest birds in Singapore, and are commonly found feeding at the ponds in the reserve. They adopt a stalk and stab technique to hunt for fish and crustaceans. Typically, the male will search for sticks to present to the female for the construction of their nest.

Passerines

A passerine is any bird belonging to the order Passeriformes, which includes more than half of all bird species. A distinctive feature is the arrangement of their toes (three pointing forward and one back) which allows them to perch. They are sometimes known as perching birds or, less accurately, as songbirds. An example of a common passerine is the Olive-backed Sunbird.



Olive-backed Sunbird
(*Cinnyris jugularis*)

The Olive-backed Sunbird is the most common sunbird in the Reserve and is often observed flying from branch to branch or feeding on the nectar of flowers. The male and female of this species have different plumage.

Near Passerines

These tree-dwelling birds are believed to be related to passerines, and share ecological similarities with them. Two examples of near passerines are Kingfishers and Hornbills.



Collared Kingfisher
(*Todiramphus chloris*)

A resident bird of Singapore, the White-collared Kingfisher can often be spotted flying amidst mangrove trees. Watch this bird dive for fish from its favourite perch on mangrove branches along Sungei Buloh Besar.

Raptors

These birds of prey have strong grasping feet equipped with sharp talons, a hooked upper beak, and excellent binocular vision. . An example of a common raptor is the White-bellied Sea Eagle.



(Photo by Thimindu Goonatillake)

White-bellied Sea Eagle
(*Haliaeetus leucogaster*)

The White-bellied Sea Eagle is the largest raptor in Singapore with a wingspan of 50cm and body length of 70cm. They are more commonly seen on warm, early mornings, flying with their wings held in a V-shape (other raptors hold them horizontally).

They mainly hunt prey found near the water's surface, such as sea snakes and fish.