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# NATURE WATCH



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**Crested Goshawk Nesting**  
**Singapore Birding in Pandemic Times**  
**Creating Asia's Greatest Wildlife Sanctuaries**



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# NSS Exco's Message

IT IS A GREAT PLEASURE and honour to write my first message as the new Vice President of Nature Society (Singapore). We had our first physical Annual General Meeting (AGM) since Covid-19 at the Hollandse Club on 13 May 2023. It was one of our most well-attended AGMs with 85 members present. This year also marked a major transition in leadership, with Dr Shawn Lum stepping down as President after 15 years at the helm, and Dr Yeo Seng Beng stepping into the role.

As Seng Beng mentioned in his last *Nature Watch* NSS Exco's address, we have completed our first strategic planning exercise with Binomial Consulting. This was heavily subsidised by a grant from the National Council of Social Service (NCSS). The funding has enabled NSS to chart our direction for the next five years. We will also have annual follow up meetings with Binomial to ensure that we put our plans into action. NSS now has a new vision and mission. We will have a new website, a cloud-based member and volunteer management system, and a new logo. These are all subsidised by NCSS grants.

These changes are long overdue. The two agencies that oversee NSS, namely the Registry of Societies and the Ministry of Culture, Community and Youth, have changed Singapore's society and charity regulations. Our updated strategic plans were crafted to comply with the new Codes of Governance. More importantly, the strategic plans aim to reinvigorate the Society through a set of common goals within the leadership and the wider membership.

You may have received a members' survey not long ago with questions about the future direction of NSS. This was part of the strategic planning process – to gather feedback from members in order to do better. We also wanted to demonstrate that your membership is valuable to us. Thank you for taking the time to do the survey and attend our various events.

We will continue our core work of advocacy and education, through engagements with government agencies and corporates, as well as through our flagship programmes. We look forward to your continued support as members, volunteers, and donors. I hope to see you at the next NSS event.

## VISION

To be Singapore's leading advocate of biodiversity and habitats.

## MISSION

With our evidence-based approach and partnerships with agencies, peers, and corporates, we lead habitat and biodiversity conservation in Singapore and with partners in the region. Through engagement, education, advocacy, and research, we inspire and enable people to take action towards a sustainable and biodiverse planet.

Sincerely Yours,



**Dr Ngo Kang Min**  
Vice President

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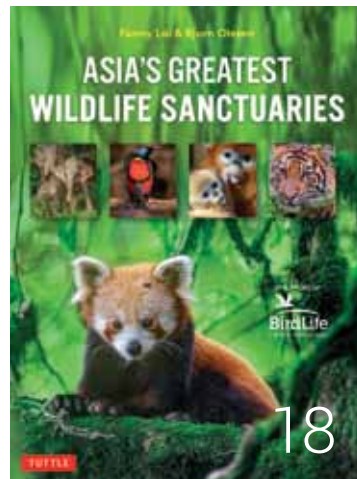
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A female Ant-mimic Crab Spider (*Amyciaea forticeps*) feasting on a Weaver Ant (*Oecophylla smaragdina*). Photo: Chris Ang

## NATURE WATCH

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A close-up view of the enormous posterior median pair of eyes of the Common Singapore Net-casting Spider (*Asianopis* sp.).  
Photo: Chris Ang.





COME TO THE BANQUET

# FEAST OF THE SPIDERS

In the first half of this two-part article, **David Court** presents the banquet that the Spiders of Singapore enjoy in an astonishing variety of ways.



Domestic Huntsman Spider  
(*Heteropoda venatoria*).  
Photo: Joseph Koh.



**IN SINGAPORE**, when we are seated at open-air restaurants, food courts, or even in our own homes, we are sometimes surprised by the small, blackish **Adanson's Jumping Spider** (*Hasarius adansoni*). If we make a sudden movement, this jumper will leap away from us. The male has feelers, more correctly known as palps, that appear as a smart white moustache. This spider is harmless to us but deadly for any small crawling insect or fly attracted to our food. Once a suitable prey has landed on the table, the Adanson's Jumping Spider will pounce upon it, aided by its excellent binocular, telephoto and wide-angled vision. This spider can also be observed checking out our windows or patrolling our balcony plants for any insects.

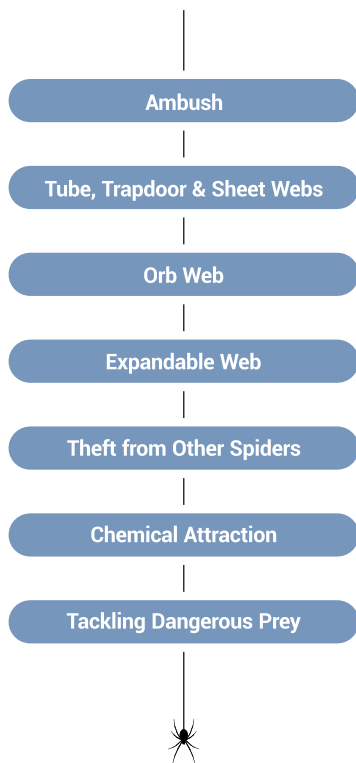
While some spiders may supplement their food sources by opportunistically sipping nectar or honeydew, all spiders are predators. They feed on insects, other spiders, arthropods, and even on small vertebrates such as fishes and lizards. Throughout Singapore's natural habitats and city precincts, there is a tropical buffet of insects and small animals for the taking. Spiders are one of many predators that come to the banquet. The feast has to be huge as the array of spiders found in Singapore is quite staggering. Over 900 species are recognised, even as many more have yet to be formally described.



**Adanson's Jumping Spider** (*Hasarius adansoni*). Photo: Chris Ang.

# DINNER IS SERVED

Spiders differ from humans as most of the digestive process takes place outside the mouth. A spider uses its legs and palps to manipulate and hold prey in place. It then injects venom via a pair of fangs to kill the victim. Digestive juices are exuded from its mouth to turn the insides of the prey into a liquid. This 'soup' is then sucked up through a filter plate of fine pores into its stomach. Some spiders carry out their prey capture with great vigour. Others are gentle and refined in comparison, particularly those with smaller fangs, relying more on a variety of web structures to do the job. Just as we have fingers, chopsticks, forks and spoons to tackle our food, spiders have a multiplicity of ways to obtain and deal with prey:



## Ambush

The **Domestic Huntsman Spider** (*Heteropoda venatoria*) can be found in tropical areas worldwide, prowling for prey on vegetation or inside buildings. Equipped with long legs to give it reach, this spider is also endowed with a lightning-quick scuttle to easily seize cockroaches that make up its 'fast food' menu. Singapore's excellent pest-control measures mean that there are few Domestic Huntsman Spiders living within urban or residential areas. They are more common in surrounding parklands and vacant areas where cockroaches are not fumigated.

The **Common Fishing Spider** (*Dolomedes* sp) is associated with quiet streams as well as water bodies in nature reserves and other well-vegetated areas. Even though insects and spiders are on its diet, it is most famous for catching tadpoles, fishes and prawns. To obtain an aquatic meal, the spider stretches its forelegs over the water surface while its hind legs are anchored on a swamp plant. Gently vibrating its tarsi (forelegs), it sends out water ripples to mimic an insect or animal struggling at the surface. When the prey swims up to investigate, the spider plunges down and seizes it with its fangs. It then hauls the prey on land or onto floating vegetation to externally digest and



**Common Fishing Spider (*Dolomedes* sp).**  
Photo: Leong Tze Ming.

consume it. The **Common Pond Flexi-legs** (*Hygropoda prognatha*) is a related but less robust spider that can also walk on water. It has been observed clinging below leaves growing over the water. However, its prey items have yet to be identified – a good student research project up for grabs!



**Common Pond Flexi-legs (*Hygropoda prognatha*).** Photo: Joseph Koh.



## Tube, Trapdoor & Sheet Webs

The **Singapore Brown Tarantula** (*Phlogiellus* sp) lurks in forests and other woody vegetation. At night, it sits inside its funnel-web entrance to await passing prey. Its tube web is spun of fine silk, usually lining a crevice. When an arthropod shows up, the tarantula pounces upon it, stabs it with strong curved fangs, and crushes it against its abrasive mouthparts. Digestive juices are then exuded onto the heavily-damaged victim. The juices are thoroughly mixed with the prey's mashed-up soft tissues. Later, pieces of the victim's indigestible chitinous exoskeleton are discarded, akin to us leaving behind crab shells.

The **Spotted Brush-footed Trapdoor Spider** (*Rhianodes atratus*) deals with its dinner in much the same way as the tarantula, except that it uses a double-door 'nest'. This trapdoor nest is constructed from fragments of dead plant material bound with silk. Come nightfall, when potential prey such as small forest cockroaches are roaming, the spider takes up position just inside one of the doors. The slightest disturbance made by the prey brushing past the fine silk strands extending from the trapdoor alerts the spider. The attacker simultaneously opens the trapdoor and lunges at its victim.

The **Singapore Lace Web Weaver** (*Psecchus singaporensis*) is a common forest species. It constructs a large sheet web extending from holes at the bases of trees or deep leaf litter. Rushing out to tackle prey from below, it can easily deal with a range of insects. These include small beetles having fallen into the web as well as moths and other flying insects attempting to fly through the web. Prey have difficulty breaking away from the lace-like silk. Although the silk does not have the moist 'glue' of orb weavers, it is fine and extremely sticky.



The silken inner surface of a trapdoor held partially open by a female Spotted Brush-footed Trapdoor Spider (*Rhianodes atratus*) in its burrow. Photo: Chris Ang.



Singapore Brown Tarantula (*Phlogiellus* sp). Photo: Chris Ang.



Singapore Lace Web Weaver (*Psecchus singaporensis*). Photo: Chris Ang.



## Orb Web

Many of us are familiar with the **Giant Golden Orb Weaver** (*Nephila pilipes*) and its relative the **Batik Golden Orb Weaver** (*Trichonephila antipodiana*). Both spiders are great architects. People who encounter them for the first time are always surprised at the massive size of the females. Both species spin orb webs of golden silk up to one metre in diameter. Spider silk is a special fibrous protein produced in the abdominal silk gland. Silk is emitted from the spider's spinnerets, which are finger-like extensions at the rear of the body. Both spiders have limited vision. Their navigation during web construction and prey capture are by sensing the direction of light and gravity, as well as by sensing the tensions and vibrations in web silk. With their giant webs, they can snag insects such as beetles, butterflies, cicadas and dragonflies. Occasionally, small birds, young lizards and even snakes stumble in. Experiments have shown that Golden



**Giant Golden Orb Weaver** (*Nephila pilipes*). Photo: Chris Ang.

Orb Weavers are sensitive to chemicals. Distasteful day-flying moths and other bugs may become ensnared. They are not part of the spiders' diet and are summarily cut out and dropped from the web.

## Expandable Web

Found in the undergrowth, the **Common Singapore Net-casting Spider** (*Asianopis* sp) looks like dried sticks during the day. At night it becomes active, constructing a highly flexible net of entangling silk. Amongst its eight eyes, the enormous posterior median pair have retinæ 2,000 times more sensitive to light than human eyes, thus equipping the spider with powerful night-vision goggles. They scan the ground and vegetation for any movement. The moment an insect is within range, the spider flings its web at it, much like how a fisherman casts his net. The entangled prey is then pulled in, wrapped in silk, and swiftly dispatched.

## Theft from Other Spiders

The **Split-faced Silver Food Stealer** (*Argyrodes fissifrons*) establishes itself as a permanent resident at the periphery of webs built by Golden Orb Weavers and other large spiders. The Food Stealer goes for the smaller insects caught by the web that are less easily handled by the big host spider. It consumes even prey fluids after the host has already fed on it. This behavior is termed kleptoparasitism, similar to skuas stealing fish from seabirds or crows grabbing a choice piece from our barbecues.



**Split-faced Silver Food Stealer** (*Argyrodes fissifrons*). Photo: Chris Ang.



**Common Singapore Net-casting Spider** (*Asianopis* sp). A close-up of its enormous eyes appears on page 2. Photo: Chris Ang.

## Chemical Attraction

### The Horned Bird Dropping Spider

(*Phrynarachne tuberosa*) operates during daylight hours. Parking itself on a leaf top or ground plant, it looks remarkably like bird dung or a portion of an insect. Dung-feeding insects such as flies and beetles are attracted to the spider's special odour smelling of poop. When prey shows up, the deceptive predator gently orients itself to face the victim. The spider then extends its first two pairs of legs and seizes its breakfast with a strong and deadly embrace.

Another strange looking spider is the **Six-spined Bolas Spider** (*Ordgarius sexspinosus*). On a quiet night when the weather is dry, this spider moves down a short distance from its hiding position on a leaf. It then constructs a sticky silk ball (i.e. 'bola') suspended at the end of a hunting thread. At the same time, it releases a volatile chemical mimicking the sex pheromone of certain female moths. Keen young male moths spiral in towards the fake girl, but instead receive a direct hit from the spider's bola. This ball is twirled rapidly, like a lasso wielded by a rancher. The victim attempts to escape, but is unlikely to overcome the super-sticky bola. The spider then moves in to grasp, bite and finally consume the entangled moth. A new bola has to be made to catch the next meal.



Horned Bird Dropping Spider (*Phrynarachne tuberosa*). Photo: Mok Youn Fai.

## Tackling Dangerous Prey

Merge with the ant crowd and grab, that is the strategy of the **Ant-mimic Crab Spider** (*Amyciaea forticeps*). Even though Weaver Ants (*Oecophylla smaragdina*) are dangerous items to have on the menu given their formidable mandibles, this spider is up to the task. It has a remarkably Weaver Ant-like colouration and body build. Its front legs even mimic the ant's antennae movements. With this disguise, the spider takes up station on a leaf or stem at the margin



Ant-mimic Crab Spider (*Amyciaea forticeps*). Photo: Chris Ang.



Six-spined Bolas Spider (*Ordgarius sexspinosus*). Photo: Melvyn Yeo.

of an ant colony without being attacked. When an ant comes close, the spider leaps with its forelegs outstretched, seizing the ant's 'neck' with its fangs. It often drops down on a silk thread bungee-style, whilst holding on to the ant. This move ensures that the prey cannot pull itself away. Just as importantly, it prevents the ant's nest mates from coming to the rescue. The spider remains suspended in mid-air for some time, savouring its well-earned meal.

The spider-hunting **Chocolate Chips Boomerang Spider** (*Rhomphaea* sp), a kind of comb-footed spider, engages in the sneak-trick-and-snare strategy. At nightfall, many smaller spider species busy themselves by extending silk threads from branch to branch to set up their webs for catching supper. But danger lurks. The Boomerang Spider and its close relatives are also roaming the same patch of vegetation, in the hope of coming into contact with the silk threads of their spider prey. A male spider searching for a mate often moves onto a single line with a female. When this occurs on the Boomerang Spider's thread, it detects

the disturbance and proceeds with its deception. By gently tweaking the line, the Boomerang Spider pretends to be the small spider's potential mate, luring it closer and closer. When the prey comes within range, the deceiver strikes by flinging sticky silk with the combs on its fourth pairs of legs. The food is then securely wrapped, bitten and consumed.

**Pirate Spiders** (*Mimetes* sp) employ the tactic of sneak, trick and bite to hunt other spiders. Similar to Boomerang Spiders, they roam at night in search of prey. They are skilled at locating and entering the permanent webs of comb-footed spiders without getting stuck. The Pirate Spider manoeuvres towards the host spider at an almost imperceptible rate, eventually getting close enough to lunge and bite the prey on the front femur. Its venom is extraordinarily effective, killing the victim almost immediately. Comb-footed spiders are its favourite food, but it will also feed on other web-building spiders.

The **Hairy Moustached Portia** (*Portia labiata*) is a solitary assassin and a jumping spider in the same family as the





Chocolate Chips Boomerang Spider (*Rhomphaea* sp.). Photo: Joseph Koh.



Pirate Spider (*Mimetus* sp.). Photo: David Court.



Hairy Moustached Portia (*Portia labiata*). Photo: Chris Ang.

Adanson's Jumping Spider. It is a stalker-hunter, using the actions of sneak, trick, out-manoeuve and bite. Spiders in the genus *Portia* are amongst the most incredible with many hunting tactics. They range from Africa to South Asia, Southeast Asia and northern Australia. From the front view, they barely look like spiders. They are non-descript or blotchy brown, resembling dead leaves or bark when they tuck in their legs and remain still for long periods. When they move, they do so in a strange, jerky way, atypical for spiders.

*Portia* spiders have excellent vision like the Adanson's Jumping Spider. Unusual for jumping spiders, they construct dense lattice webs adjacent to the webs of other spider species. These webs appear to func-

tion as semi-permanent staging posts from which *Portia* species would launch their attacks. The spider takes its time, even over several days, to reduce risk to itself and maximise its hunting success by executing direct or indirect routes of attack. One method involves stalking a web-building spider by entering its web unnoticed and slowly clipping away the sticky strands with minimal vibrations, often for many hours. The *Portia* finishes off by leaping at the victim through the thread-free space, striking it at its own hub. Prey species like orb weavers suddenly find themselves stabbed by *Portia*'s fangs. *Portia* spiders also consume spiders that do not build webs, including other jumpers, as well as insects. 🌿



Learn more about Singapore spiders with the book *A Photographic Guide to Singapore Spiders* authored by Joseph Koh, David Court, Chris Ang and Paul Ng, featuring 790 species. Buy it online @ <https://botanicgardensshop.sg/collections/books>.



Originally from New Zealand, **David J Court** is a retired biology teacher who taught at Raffles Institution from 1991 to 2006. He is now an Honorary Research

Affiliate at the Lee Kong Chian Natural History Museum in the National University of Singapore, where he joins other spider research enthusiasts in biodiversity surveys coordinated by NParks.





This and facing page: Two handsome juvenile Crested Goshawks at their nest in Toa Payoh. Photo: Ho Hua Chew.



# Crested Goshawk Nesting in a Housing Estate

BY DR HO HUA CHEW

The Crested Goshawk is a nationally uncommon resident raptor. The bird appears to be adapting well to Singapore's urbanisation, even nesting successfully in built-up areas. **Dr Ho Hua Chew** delves into this trend.

**T**he Crested Goshawk (*Accipiter trivirgatus*) is a nationally uncommon bird that has been recently assessed as near threatened by local experts. This raptor is usually seen in secondary forest and wooded areas. It has adapted well to Singapore's urbanisation. In recent years, the bird has been increasingly sighted in urbanised settings such as in HDB (Housing Development Board) estates at Hougang and Toa Payoh. One goshawk even perched on an open window of an HDB flat in Toa Payoh, causing a shock to the resident.

Botanic Gardens, Pasir Ris Park, West Coast Park, Central Catchment Forest, Bedok North and Toa Payoh. Its nests were typically built in public parks, gardens and even urban areas like HDB estates, a trend well established in Peninsular Malaysia and Taiwan as well.

In Singapore, the diet of this raptor includes squirrels, rats, grasshoppers, mynas, Common Palm Civets (*Paradoxurus musangus*), White-breasted Waterhens (*Amaurornis phoenicurus*), and Changeable Lizards (*Calotes versicolor*). One reason for the goshawk's adaptability to urban areas could be because it is not fussy about nesting in built-up places. This characteristic is unlike local raptors like the Grey-headed Fish Eagle (*Ichthyophaga ichthyaetus*), White-bellied Sea Eagle (*Haliaeetus leucogaster*) and Changeable Hawk-eagle (*Nisaetus cirrhatus*). These birds mostly nest in tall trees found in forests and woodlands.

The Crested Goshawk has a wide range of tree preferences for its nesting site. Nesting trees include the Rain Tree (*Samanea saman*) in Pasir Ris Park and NUS Bukit Timah Campus, Yellow Flame (*Peltophorum pterocarpum*) at Toa Payoh, Sea Fig (*Ficus superba*) at Sentosa, Sea Apple (*Syzygium grande*) at Bedok North, Mahogany (*Khaya senegalensis*) at Pasir Ris and Sin Min carpark and Casuarina (*Casuarina equisetifolia*) at West Coast Park. Its choice of nesting tree differs from the three resident raptors mentioned above. They strongly prefer the Albizia (*Falcataria moluccana*). If this tree is not available, the Grey-headed Fish Eagle and Changeable Hawk-eagle are known to nest in Casuarina trees. For the White-bellied Sea Eagle, there have been instances of it nesting on the transmission tower platform at the BBC Relay Station in Kranji and the transmission tower at Fort Canning (now taken down).

To date, the Crested Goshawk has just two nesting records in the HDB heartlands. The first was in Bedok North, while the second record was in Toa Payoh, contributed by Sandy Chua. Sandy was fortunate to observe three separate nestings of the Crested Goshawk over a period of nearly two years from the window of her Toa Payoh flat. Her seventh-floor unit is surrounded by other high-rise flats. Sandy discovered the first nest in March 2018, built on a small Yellow Flame tree just five metres from her window. The mid-canopy nest was well-



The first record of its nest building was at the Singapore Botanic Gardens in July 1987, but we had no confirmation of any breeding success then. Subsequently, we had records of the Crested Goshawk nesting in various parts of Singapore including Bishan Park, Kent Ridge Park, Mount Faber, Henderson Waves, Sentosa, Singapore



hidden from the ground level. A parent goshawk would occasionally fly over and perch on top of her open window and even look into her apartment. Originally, the tree held a House Crow's nest, but the nest site was commandeered by the goshawks and the crows were chased off. For the third nesting, Dr Ho Hua Chew and Jimmy Chew visited Sandy's house several times to observe and photograph it. The following are brief notes that Sandy made on the three Crested Goshawk nestings observed from her window.

**1<sup>st</sup> Nesting: April – July 2018**

**2<sup>nd</sup> Nesting: April – July 2019**

- Mama goshawk incubated two eggs for about a week. Papa goshawk would hunt and bring back food.
- There were two nestlings. When it rained heavily, mama goshawk would shelter her babies by spreading her wings over them.
- Nestling feeding times occurred around 8-9 am, 12 pm and 5-6 pm. Due to the darkness at nightfall, Sandy could not be sure if any feeding took place then. Occasionally during feeds, there would be four birds at the nest for just a few seconds before papa goshawk flew off.

**3<sup>rd</sup> Nesting: September – December 2019**

- The parent goshawks appeared in late July 2019 to rebuild the nest, which became bigger and deeper, creating some difficulty in observing the nestlings.
- 10 November 2019: The two nestlings were approximately one to two weeks old, covered in fluffy white down. When they reached two to three weeks old, they became more active and popped their heads out of the nest frequently.
- 14 Dec 2019: The two juvenile goshawks were around eight weeks old and had not taken their first flight. They practiced hopping from branch to branch, staying within a few metres of the nest. Every two to three days, Sandy would observe progress as the young birds increasingly widened the distance between their ventures and the nest. When they started flying, the pattern was the same, with the juveniles flying a short distance away before winging back to the nest.
- 26 Dec 2019: Unfortunately, one of the juveniles fell from the tree and died. The parents appeared to cry for days. Two weeks later, the remaining juvenile who was about 10 to 12-weeks old finally fledged. The family then left the nest for good. Interestingly, Sandy observed that the nest appeared smaller one day and by the next day had disappeared completely.



**Above and top: Nest of Crested Goshawk built on a Yellow Flame tree as seen from Sandy Chua's flat in Toa Payoh.** Photos: Ho Hua Chew.

To date, the Crested Goshawk has just two nesting records in the HDB heartlands. The first was in Bedok North, while the second record was in Toa Payoh.



**Adult Crested Goshawk scanning for prey.** Photo: Jimmy Chew.



**Parent Crested Goshawk perching at close range from Sandy's window.** Photo: Ho Hua Chew.





Adult Crested Goshawk feeding its young. Photo: Ho Hua Chew.

Sandy reported that the same pair of goshawks made an appearance in 2021 but did not attempt to nest in the same tree again. She speculated that they had probably found a better nesting site.

According to Sandy, in the third nesting, the nest had become smaller with less sticks, and the next day it had simply vanished. Unfortunately, she did not witness any creature removing the sticks. But she is sure that it was not the deed of the crows as these birds were not in the vicinity then. However, not long after, the crows did return to roost in the tree at about 7 pm each evening.

Our resident raptors likely recycle nesting materials when they move their nest sites, but this phenomenon is not well observed or studied. Such recycling could be due to the scarcity of dry sticks or that it is simply easier to recycle than to search for and accumulate suitable loose sticks from all over the woods. I have observed something similar at Khatib Bongsu. This was at the nest of the Grey-headed Fish Eagle on an Albizia tree where I photographed the adults and young.

**Our resident raptors likely recycle nesting materials when they move their nest sites, but this phenomenon is not well-observed or studied.**

When I revisited the tree not long after, the nest had disappeared completely. There were no loose sticks up on the nest site. I searched the ground directly below but did not find any fallen sticks either. Of course, it was possible that another competing raptor, perhaps a pair of Changeable Hawk-eagles or White-bellied Sea Eagles breeding in the area, might have opportunistically taken the sticks for its own nest. I prefer to leave the issue open for further observational confirmation. 🌿



Egg incubation. Photo: Jimmy Chew.

#### ACKNOWLEDGEMENTS

Sandy and I would like to thank Alan Owyong for providing information and suggestions. Deepest appreciation to Sandy and her family for their hospitality and assistance in accommodating our visits to their flat.



**Dr Ho Hua Chew** is currently the Vice Chairperson of the Conservation Committee. He has assisted in providing feedback on behalf of NSS to various govern-

ment projects including Tengah, Bukit Brown, Kranji Marshes, Dover Forest and more. He served as the coordinator and co-editor of two of the Society's publications: *The Green Rail Corridor: A Biodiversity & Ecological Overview* and *Alexandra Woodland: Haven Along the Rail Corridor*.



# SINGAPORE BIRDING

TEXT AND PHOTOS BY GEOFF LIM

The global pandemic compelled prominent Singapore birders to go local. They made surprising discoveries while patch birding, traversed the country to score lifers, found solace in common garden birds, and even forged scientific collaborations via Zoom meetings. **Geoff Lim** shares the stories.

**L**ong-time Bird Group volunteer Marcel Finlay was taking a walk at MacRitchie Reservoir near his house on 7 May 2020. At that time, the Covid-19 control order only allowed a person to leave his home for recreational activity, alone or with a household member. Complying with legislation, Marcel left his birding paraphernalia at home so as to exercise unencumbered. At 6.30 pm, he saw a flock of birds skimming low over the green reservoir water. They turned out to be the mega rare Pheasant-tailed Jacana (*Hydrophasianus chirurgus*), a total of 17 birds in various shades of ecliptic plumage. Marcel was hugely disappointed that his DSLR camera was not with him. Nevertheless, the imagery of these jacanas

was seared in his mind. This was one of the most memorable birding moments, not just for himself, but for those of us who saw his post on the eBird online platform. That same evening after sunset, Marcel noticed a Brown Hawk Owl (*Ninox scutulata*) perched on a branch. The owl launched off every few seconds to obtain mouthfuls of flying ants pouring out from the ground like a geyser. Marcel had never seen anything like this in all his years of observing wildlife.

Around that time, I was ensconced in a meeting at my Chinatown office to flesh out our Covid-19 contingency plans. It was then that I saw some 45 Asian Openbills (*Anastomus oscitans*) floating high over my office tower. They appeared to be headed south toward the Riau islands. My bosses wondered out loud if this sighting was an ominous sign of the times. The flock was





**Facing page:**  
In his 40-day bird survey done from his flat and neighbourhood walks, Lim Kim Seng was surprised that the Brown-throated Sunbird proved to be more common for him than the ubiquitous Olive-backed Sunbird.

**This page:**  
Dr Yong Ding Li encountered six Green-backed Flycatchers at the Rail Corridor during the pandemic. This bird is rarely seen and even then, only in ones or twos.

# IN PANDEMIC TIMES

likely part of the hundreds of openbills that had fled the Mekong delta in December 2019. The mighty river had dried up, forcing the birds away from their customary home toward Peninsular Malaysia, Singapore and Indonesia.

Indeed 2020 was an unprecedented year. The birding community began the year fairly innocently. We were gripped by the news of 12 Himalayan Griffons (*Gyps Himalayas*) seen on 9 January 2020. Four vultures were observed in the Shenton Way area. I was amongst the fortunate few to encounter one at the roof of Orchid Hotel opposite my office. My colleague remarked that its hooked bill looked menacing. In the same week, birders delighted in the presence of an uncommon Slaty-legged Crake (*Rallina eurizonoides*) at a Punggol HDB carpark. Many of us were happy to tick off this nemesis bird (an

elusive bird seen for the first time, despite many attempts to see it).

As the insidious coronavirus slipped past borders and wreaked its havoc in the ensuing months, many struggled to cope physically, emotionally and psychologically. Country after country went into lockdown. Singapore's first Circuit Breaker stretched from 7 April 2020 to 1 June 2020. Everyone was ordered to work or study from home. Only those providing essential services were allowed to leave home for work. Once busy streets turned deserted. Manicured grass grew wild and stayed untrimmed. The enforced confinement led some of us to engage in patch watching near our homes. We bore witness to nature reasserting itself. There was a proliferation of vegetation and blooming flowers, leading to a population boom in bees, butterflies and other arthropods. This in turn

brought about increased bird visitations hitherto rarely observed.

While working from home, I started hearing the sibilant songs of the Oriental Magpie Robin (*Copyschus saularis*) in my neighbourhood. This songster seldom showed itself in the past, due to regular fogging to keep mosquitoes at bay. With the cessation of fogging, the insect population recovered enough for the birds to recolonise the area. I suspected that a pair even managed to raise a brood nearby. I saw and heard both sexes daily until fogging resumed.

For Lim Kim Seng, a bird researcher and author of local bird books, the Circuit Breaker confined him to his HDB heartland home. The circumstances did not dampen his enthusiasm for all things avian. He stuck to patch watching, keeping a list of birds he saw and heard during the period.



**Lim Kim Seng recorded a Crested Goshawk disturbing the peace in his neighbourhood.**

On Day 3, Kim Seng had listed 20 species from his window. Day 4 added seven more birds to his tally. By Day 14, his list had grown to 30 species.

Kim Seng recorded an average of 14 species a day, with up to 20 species on good days and just 10 species on poor days. Of the garden birds that became his companions, five showed up daily – the Asian Glossy Starling (*Aplonis panayensis*), Brown-throated Sunbird (*Antheptes malacensis*), Feral Pigeon (*Columba livia domestica*), Javan Myna (*Acridotheres javanicus*), and Swinhoe's White-eye (*Zosterops simplex*). By Day 67, Lim Seng had recorded 38 species. Highlights included a Crested Goshawk (*Accipiter trivirgatus*) that disturbed the peace in the neighbourhood on Day 40, a Grey Heron (*Ardea cinerea*) on Day 50, and a Long-tailed Shrike (*Lanius schach*) on Day 63.

Ever the citizen scientist, Kim Seng published his observations in an article *Birds Species Detectability in a HDB Heartland* in the Bird Group's blog. Paraphrasing Kim Seng, "To find out which were the most common birds, I recorded the presence of bird species seen or heard outside my balcony and study windows. I also added species encountered on my trips to the wet market and supermarket. The exercise lasted from 4 April to 16 May, a total of 40 days. I tried to keep watch for an hour a day with my binoculars and zoom camera."

Unsurprisingly, the top three species were the starling, myna and pigeon. Kim Seng was surprised that his empirical survey showed that the fourth most common bird was not the ubiquitous Olive-backed Sunbird (*Cinnyris jugularis*), but its larger cousin, the Brown-throated Sunbird. He attributed this finding to the fact that a pair would visit a nearby tree almost every day to call loudly. Its repeated "whee-chew, whee-chew" vocalisation was hard to miss. Another surprise was the Swinhoe's White-eye being his fifth most common bird. Again, Kim Seng thought that the white-eye's highly noticeable call was the likely reason.

Birding veteran Alan Owyong, a self-confessed *jiak hong* birder (Hokkien for 'travelling birder' as he has birded extensively around Asia), had several memorable sightings during the pan-



Singapore's first Circuit Breaker stretched from 7 April 2020 to 1 June 2020. Everyone was ordered to work or study from home. The enforced confinement led some of us to engage in patch watching near our homes.



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dem. Despite having to give up his Big Year goal to see as many birds as possible in Singapore within the year, Alan persevered through the dry Circuit Breaker season. He emerged with 208 species at the end of 2020. The year began fairly well for him. He reeled in the Slaty-legged Crake in January like everybody else, followed by the White-cheeked Starling (*Spodiopsar cineraceus*), Red-throated Pipit (*Anthus cervinus*), and Orange-headed Thrush (*Geokichla citrina*). Lady Luck continued to smile on him in subsequent months. He encountered the Brahminy Starling (*Sturnia pagodarum*), an extremely rare Chinese Blue Flycatcher (*Cyornis glaucicomans*), Taiga Flycatcher (*Ficedula albicilla*) – Singapore's second record, and a rare Watercock (*Gallinula cinerea*).

The Circuit Breaker in April 2020 coincided with the dry season as migrant birds left our shores to return to their northerly homes. It was only in September 2020 that birders started crawling out of hibernation to pursue various avian quarries. A Barred Buttonquail (*Turnix suscitator*) at Jurong Lake Gardens kick started the new migratory season. The raptor migration window opened in November 2020. It gave Alan a wry neck from peering into the skies above Henderson Waves to search for soaring predators. A rare Rufous-bellied Eagle (*Lophotriorchis Kienerii*) appeared at Dairy Farm Nature Park which he managed to photograph. This bout of raptor watching took place in the pre-vaccine era when safe distancing and mask wearing were first introduced. The government rolled out public vaccination only in May 2021.

December 2020 saw heavy rains that flooded the fields at Marina East Drive. To Alan's delight, he added several rare birds to his list including the Pheasant-tailed Jacana, Grey-headed Lapwing (*Vanellus cinereus*), and Baillon's Crake (*Zapornia pusilla*). He visited the fields around Neo Tiew for rarities like the Sand Martin (*Riparia riparia*) and Asian House Martin (*Delichon dasypus*). Alan even met his nemesis bird, the Narcissus Flycatcher (*Ficedula narcissina*) at Dairy Farm and Singapore Botanic Gardens. His last lifer (bird seen for the first time ever) wrapping the year was the Chestnut-cheeked Starling (*Agropsar philippen-*



**Alan Owyong traversed the country whenever there was a rare bird alert, scooping up an Orange-headed Thrush on one occasion.**





**A nemesis bird for many, this Slaty-legged Crane at a Punggol HDB carpark was a satisfying sighting to combat the Covid-19 blues.**

sis). Together with fellow birding stalwarts, Alfred Chia and Dr Ho Hua Chew, the trio searched through flocks of Daurian Starlings (*Agropsar sturninus*) to find the proverbial needle in the haystack – the Chestnut-cheeked Starling looks like the common Daurian Starling except for a flush of chestnut across its cheeks.

Dr Yong Ding Li, our former boy-wonder and now prominent ornithologist was present when Alan, Alfred and Hua Chew clinched the starling. As a globe-trotting conservationist, Ding Li was reduced to being locally bound when travel was abruptly curtailed. Seeing the starling was amongst his best adrenaline-filled moments during the pandemic as it was also his nemesis bird. Armed with binoculars and audio recording equipment, Ding Li spent time rambling sedately through various spots in Singapore that he would otherwise have bypassed. He discovered pockets of bird-rich spaces while exercising. At that time, exercising was the only legal and socially-sanctioned activity for one to venture beyond the confines of one's home.

Ding Li made some surprising discoveries. At a nook along the Rail Corridor, he counted six Green-backed Flycatchers (*Ficedula elisae*), a hitherto rarely encountered gem from Eastern China that overwinters in our warm climes. He vividly remembered seeing 15 Lesser

Adjutants (*Leptoptilos javanicus*) soaring above the northern end of the Rail Corridor during one of his many peregrinations.

That period also saw an abundance of scientific creativity for him. Ding Li reached out to fellow regional scientists in similar straits. Many could not conduct their field surveys or research activities. Instead, they turned to the trove of data they had previously amassed and began discussing possible findings virtually. Numerous online meetings and conferences also helped in cross-fertilising each other's minds. The result was the publication of several key scientific papers. One paper examined the state of migratory land birds in the East

Dr Yong Ding Li reached out to fellow regional scientists. They turned to the trove of data they had previously amassed and began discussing possible findings virtually. The result was the publication of several key scientific papers.

Asian Flyway. Another discussed the discovery of the Spoon-billed Sandpiper (*Calidris pygmaea*) in Vietnam. The launch of the book *Birds of Malaysia and Singapore* also happened during the pandemic, a labour of love by Ding Li, Kim Seng and his brother Kim Chuah. In addition, Ding Li facilitated the paper announcing the re-discovery of the Black-browed Babbler (*Malacocincla perspicillatum*) in Kalimantan, a bird lost to science for 180 years.

I pondered about the ways we kept ourselves occupied and distracted from the pandemic. Kim Seng's patch birding demonstrated how common garden birds could become a source of pleasure. While they did not provide the adrenaline rush from twitching a rarity, these ordinary species were akin to familiar friends. They anchored us to familiar settings even as tectonic changes were taking place, thereby providing a sense of security. They took our minds away from the troubling news that bombarded us daily.

Despite restrictions imposed by the dire circumstances, Alan's indomitable spirit to continue pursuing his birdwatching activities showed that the human spirit was able to rise above adversity. For him, the Covid years highlighted the importance of nature reserves and parks in helping to preserve our mental well-being. Many of us found solace and escape in nature, driving home the point that we should cherish and conserve our green spaces.

For Ding Li, pivoting to increased collaborations with his circle of conservation biologists led to significant findings and publications. Amidst the backdrop of biodiversity loss, rising encroachment into nature areas and zoonotic pathogens, their



Kim Seng's patch birding demonstrated how common garden birds could become a source of pleasure. While they did not provide the adrenaline rush from twitching a rarity, these ordinary species were akin to familiar friends.

work shed light on issues such as the terrifying rate of species-rich habitats being affected by human activities. They also identified important conservation areas and priorities.

Like my three friends featured, I weathered the uncertainties with a mix of patch watching and birding while exercising. A poignant memory was seeing a police car circling my estate with strobe lights flashing red and blue as I searched for the Lanceolated Warbler (*Locustella lanceolata*) I had seen a few days before in a field overgrown with sedges and marshy grass. The police were probably on deterrence patrol to enforce the Covid-19 rules. They were a reminder of the sacrifice made by public servants and essential workers, who had to set aside their virus fears to keep the country going.

Watching birds brings to mind the Bible verse 'if our heavenly Father feeds the birds of the air, even though they neither sow nor reap nor gather into barns, how much more will He take care of you'. Birding helps me find solace in spirituality and connects me to nature, easing my daily stresses. Indeed, seeing a new generation of resident and migratory birds each season reminds me that hope is renewed at every turn. 🌱

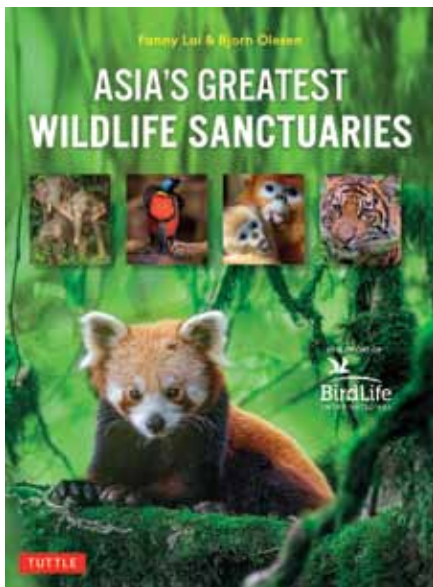


**Geoff Lim** started birding at 10 years old and continues to be a rabid birder. He read zoology in NUS, and has been a civil servant for close to 30 years. Possibly due to his influence, his wife now looks out for birds, while his daughter had two picture books about birds published when she was a child.

# Insights into Creating Asia's Greatest Wildlife Sanctuaries

BY GLORIA SEOW

This gorgeous 320-page book by authors Fanny Lai and Bjorn Olesen presents a cornucopia of images captured in 27 iconic wildlife sanctuaries across Asia. Edited by renowned conservation biologist Dr Yong Ding Li, the tome is also packed with on-the-ground information that will prove invaluable to the discerning nature traveller. **Gloria Seow** chats with Bjorn to gain insights into the book's creation.



*Asia's Greatest Wildlife Sanctuaries* will be released in June 2023 in major bookstores and online platforms. Nature Society (Singapore) will also carry copies for sale. Bjorn will be giving a book talk on 16 July 2023 at the NSS office. Kindly see page 21 of this issue of *Nature Watch* for details.

■ **As an award-winning lensman, how did you start out in nature photography?**

I started nature photography back in 2007 when I retired from corporate life. My humble beginning was as a pro bono photographer recording all the endangered species of the Singapore Zoo and Jurong Bird Park, where my wife Fanny Lai was Group CEO then. Gradually, I began to travel to wildlife hotspots in Asia, and write articles about my experiences. In fact, my first ever cover photo was published in *Nature Watch* Oct-Dec 2008 issue! I did a six-page feature about Borneo's wildlife. Over the years, it has been a great motivator for me to contribute to nature conservation through photography.

■ **Your photos are available free of charge to conservation non-government organisations (NGOs). This is magnanimous of you. Can you share your philosophy behind this move?**

As a wildlife and conservation photographer, I want to connect people emotionally to wildlife. My goal is to show that animals have interesting behaviours, personalities and feelings. Through my images, I wish to inspire others and share the knowledge and wonders of the natural world. If people have little understanding of the marvels of nature, how can we expect them to care and support nature conservation? Every day when I am out photographing wildlife, I have a new favourite animal. To me, it is not only the species that counts, but also the story an image can tell. My photos can be viewed in my four books published to date, as well as at <https://www.facebook.com/bjornolesenwildlife-photography/>.

■ **Fanny and yourself published your first coffee-table book *A Visual Celebration of Giant Pandas* in 2012 and have since gone on to produce three more books on Asian wildlife. How have these books helped nature conservation?**

Our first book *A Visual Celebration of Giant Pandas* in support of WWF (World Wide Fund for Nature), was done at a time when two Giant Pandas were loaned to Singapore Zoo. This created a great deal of interest in these adorable creatures. The book sold out in 16 months. Our second



**Cat Tien National Park in Vietnam is possibly the best place to observe the endangered Red-cheeked Gibbon.**

publication *A Visual Celebration of Borneo's Wildlife* in support of Fauna and Flora International was a much more ambitious project. At over 450 pages, it was probably the most comprehensive photographic record of Borneo's wildlife. Our third tome was entitled *Asia's Wildlife: A Journey to the Forests of Hope*. 'Forests of Hope' is a BirdLife International conservation programme that successfully links forest conservation on the ground to policy work and donors internationally. Royalties for the three publications have been donated to the respective conservation NGOs mentioned. Our books have also highlighted and raised awareness of many excellent conservation initiatives in Asia.

■ **Who are your readers? What are the improvements made between your earlier books and the latest one?**

Our first book about Giant Pandas was aimed at the whole family, but it was particularly popular among the younger generation. Our subsequent books have been supported by nature lovers, visitors to Asia as well as armchair explorers. In our experience, one of the most effective



ways to encourage indigenous people to preserve the wildlife at their doorsteps is to turn the wildlife into valuable assets through eco-tourism. As this strategy works well, we have placed emphasis on sharing knowledge on responsible eco-tourism and related conservation projects. We have also learned to have a more disciplined approach to controlling the sizes of images and the amount of text. Importantly, we continue to include captivating little-known facts into our books, about wildlife that travellers may encounter during their visits to this enchanting part of the world.

■ **What is the concept behind your latest publication *Asia's Greatest Wildlife***

“One of the book’s objectives is to encourage responsible eco-tourism that supports local communities... we also want to convey that not everything in Asia is doom and gloom. We feel that showcasing success stories can make a more impactful contribution to wildlife conservation.”

**Sanctuaries? Please share with us your experience in creating it.**

Most nature books today are field guides, but there are few in-depth publications like ours that describe where you can observe the many wildlife wonders of the natural world. One of *Asia's Greatest Wildlife Sanctuaries'* objectives is to encourage responsible eco-tourism that supports local communities. With the constant stream of bad news surrounding nature conservation (e.g. habitat loss, poaching and numerous other threats), we also want to convey that not everything in Asia is doom and gloom. We feel that showcasing success stories can make a more impactful contribution to wildlife conservation.

Selecting just 27 wildlife sanctuaries to feature was a massive challenge. It was never meant to be exhaustive but rather to inspire people to visit the wonderful nature sites showcased. The sanctuaries that made it into the book all have unique features and species. Some are easy to visit, others are not. We have endeavoured to cover Asia by choosing the great favourites from our own rewarding journeys going back more than 20 years.

Asia is the largest of all the earth's continents. It stretches from below the equator to beyond the Arctic circle. It is a continent of superlatives; home to the highest mountains, some of the hottest deserts and oldest rainforests. As one of the most biodiverse regions on the planet, Asia is the perfect starting point for exploring the natural world. This book is a photographic odyssey across 14 Asian countries. More than 300 animal species, including some 210 bird species are illustrated. The book is made in support of BirdLife International, who will receive all royalties from sales of copies.



Displaying Lesser Bird-of-Paradise at its lek in Indonesia's Raja Ampat archipelago.



The 1.5 m tall flightless Northern Cassowary is vaguely reminiscent of an extinct giant bird.



The rare Helmeted Hornbill at its nest hole in Belum-Temengor Forest Complex.



It goes without saying that a comprehensive project like this is the result of teamwork. In our case, it has been over the past five years. Tuttle Publishing has given us tremendous hands-on support through the years. Our latest book is no exception. Without their decades-long publishing experience in Asia, this publication as we see it would not have been possible. As one of Asia's leading ornithologists, Ding Li has been an irreplaceable contributor and inspiration as editor-in-chief for this book, as well as for our two previous publications. Our design and technical consultant Zinnira Bani has been instrumental in handling and coordinating the technical aspects of all four publications, often with inhuman deadlines.

■ **Please share the interesting stories behind your favourite shots in Asia's Greatest Wildlife Sanctuaries.**

Western Siem Pang Wildlife Sanctuary is nestled in the remote north-eastern corner of Cambodia bordering Laos, home to the critically endangered Giant Ibis. This majestic bird is mostly confined to the northern and eastern parts of Cambodia. The global population is estimated at less than 200 mature individuals. The dry season is the best period to observe them, when small forest pools provide a vital source of water for wildlife. With the help of local guides, we decided on the best locations to erect five hides. Our daily routine consisted of getting up at 3.45 am and arriving on site at 5 am. We had to walk the last kilometre or so to the hide, reaching at 5.45 am when all was still dark. During the course of a week, we alternated between the five hides. Only once did we manage to capture some images of the one-meter tall Giant Ibis.

Here are the details of my encounter: *We had no action for days already. It was around 7.30 am one morning when I suddenly saw some movement to the left. Not a sound was made. I almost stopped breathing as I manoeuvred my (too big) 600 mm lens in the right direction. Two adults and one juvenile bird appeared at extreme close range, less than 10 m away. I had no way of fitting even two birds in one frame. My camera shutter seemed very loud at that time when I snapped my shots, but the ibises took no notice. After 10 minutes, they disappeared just as suddenly. I did not see them again. Years after, I can still remember that morning as if it were yesterday.*

In the remote west of Nepal, the wilderness of Bardia National Park is one of the country's many hidden jewels. Our trip was some years back. The day before a supermoon, we witnessed three herds of Asian Elephants numbering around 40 individuals. They were congregated at a secluded river crossing. According to our guides, this was the first time so many elephants had been observed in one location



**We spent an entire week staking out the Giant Ibis to take this precious shot.**



**It was exhilarating to see nearly 50% of Bardia's National Park's elephant population in one locale, and capture the experience with this photo .**

– almost 50% of Bardia's total elephant population! This national park extends close to 1,000 square km. It was an amazing experience to see and photograph so many pachyderms of all ages in one locale.

A couple of weeks before our visit to Belum-Temengor Forest Complex in the far north of Peninsular Malaysia, volunteers from a local Orang Asli tribe had discovered the nesting site of the critically endangered Helmeted Hornbill. It was the only known nest site in Malaysia then. This gave us ample time to plan the right equipment. Our hide was placed at a respectful distance, so as not to disturb the nesting. We used the equivalent of a 1,275 mm lens. The only approach to the nest was by boat before dawn. We stayed there the whole day, leaving only in the early evening. Once, we had to abandon our hide as a male elephant had wandered too close. The next day, we were forced to give up because a macaque troop had settled down in the nesting tree. In the end, it took us four days before we were happy

with the photos taken. We came away with some unique images of perhaps the most spectacular bird in Southeast Asia.

■ **Can you provide some insider tips for wildlife photographers?**

There are not many shortcuts to wildlife photography. You need to have time and patience. Most important of all, you need to know the habits and behaviour of your target species in advance. It is always good to study trip reports and hire a local guide. 🌿



**Gloria Seow** is a professional copywriter, editor, and nature guide leading walks and workshops for schools, corporates and private groups, see <https://lorisowl.wordpress.com/>. She chaired the NSS Education Committee from 2008 to 2016, and is its current Vice Chairperson. She is the Editor for *Nature Watch* and was the Copy Editor for *Asia's Greatest Wildlife Sanctuaries*.





# UPCOMING ACTIVITIES



## Applicable for all NSS Events

Participants have to be well on the day of the event, and must wear a mask if they are coughing or sneezing. NSS reserves the right to turn away participants who are unwell.

16 June 2023, Friday

### Pesta Ubin: Enjoy Butterflies at Pulau Ubin

*Open to the Public, Registration Needed*



Butterfly Hill on Pulau Ubin lives up to its name. On good days, the hill is alive with various Tiger butterflies including the Blue Glassy Tiger, Dark Glassy Tiger, Plain Tiger and even the rare Yellow Glassy Tiger. Other captivating butterflies here include the Common Rose (crowned unofficially as Singapore's National Butterfly) and the rare Dwarf Crow that was presumed extinct but was rediscovered in 2002. We may also explore the Sensory Trail if time permits. Time: 8.30 am to 12 pm. Trip Leader: Amy Tsang and Simon Chan. Boat ride to Ubin costs \$4 per direction. Maximum: 10 participants. Please register at <https://tinyurl.com/nssbutterflywalk> by 9 June.

17 June 2023, Saturday

### Pesta Ubin: Birdwatching at Pulau Ubin

*Open to the Public, Registration Needed*



Experienced birdwatchers will guide these two walks at Pulau Ubin, starting from the Nature Gallery to Sensory Trail and Pekan Quarry. We will look for island specialties including the Oriental Pied Hornbill, Red Junglefowl, White-rumped Shama and the critically endangered Straw-headed Bulbul. Time: 7.30 am to 10.30 am. Participants are to factor in travel time by bumboat to arrive before 7.30 am. Boat ride to Ubin costs \$4 per direction. Maximum: 15 participants. Please register at <https://tinyurl.com/NSSBGbirdwatching3> by 2 June. Contact Lee Ee Ling at [ellee1584@gmail.com](mailto:ellee1584@gmail.com) or HP: 9693 5870 for enquiries.

8 July 2023, Saturday

### Ramble to Historical Landmark Hill

*Members Only, Registration Needed*



Join Pandian Parthasarathy in this ramble to explore a historical landmark hill. Terrain ranges from easy to difficult. Participants must be medically fit. The walk is not suitable for children below 14 years old. Time: 7.30 am to 12 pm. Maximum: 25 participants. Please register at <https://tinyurl.com/nssramble> by 30 June.

8 July 2023, Saturday

### Plant Walk at Woodlands

*Members Only, Registration Needed*



Join the Plant Group for a discovery walk beginning with a visit to the greenhouse at Republic Polytechnic, followed by a stroll to explore Admiralty Park and Woodlands Waterfront Park. Trip Leaders: Dr Sng Bee Bee, Gu Keyu and Sia Sin Wei. Time: 9 am to 12 pm. Maximum: 16 participants. Please register at <https://tinyurl.com/NSSPlantWalk2> by 30 June. Contact Kerry at [kerry@nss.org.sg](mailto:kerry@nss.org.sg) for enquiries.

16 July 2023, Sunday

### Talk: An Incredible Photographic Odyssey – 'Asia's Greatest Wildlife Sanctuaries'

*Open to the Public, Registration Needed*



In this insightful talk, author and award-winning wildlife photographer Bjorn Olesen will share with us the story behind his latest 320-page book *Asia's Greatest Wildlife Sanctuaries*. Published in support of BirdLife International, the book features over 300 iconic animal species including some 210 scintillating birds, with on-the-ground information that will prove invaluable to the discerning nature traveller. This sumptuous tome was created together with his wife Fanny Lai and editor Dr Yong Ding Li. Join Bjorn as he recounts his incredible photographic odyssey through 27 wildlife sanctuaries across 14 Asian countries over a period of 20 years. At the same time, Bjorn will celebrate the key conservation successes of these precious sanctuaries. The book will be available for sale with all proceeds donated to NSS to advance nature conservation. Time: 3 pm to 4.30 pm. Venue: NSS Office @ The Sunflower. Hosts: Gloria Seow and Dr Yong Ding Li. Please register at: <https://tinyurl.com/eventnss> by 9 July. Contact Gloria at [gloria\\_seow@yahoo.com](mailto:gloria_seow@yahoo.com) for enquiries.

Alternatively, Bjorn will also speak at the Nature Photographic Society Singapore on 22 July, 2 pm to 4.30 pm, register at: <https://forms.gle/x3RjrUt-W3Qxj9moA7>.

5 August 2023, Saturday

### National Day Rail Corridor Ramble



Celebrate National Day by joining Pandian Parthasarathy for a morning ramble to explore the Rail Corridor. Participants must be medically fit. The walk is not suitable for children below 14 years old. Please wear proper walking shoes and bring along water, insect repellent, rain gear, hat and binoculars. Time: 7.30 am to 1.30 pm. Maximum: 20 participants. Please register at: <https://tinyurl.com/nssramble3> by 28 July.

16 September 2023, Saturday

### Butterfly Walk at Windsor Nature Park

*Members Only, Registration Needed*



Join Mohammad Jusri on a butterfly walk at Windsor Nature Park. This beautiful area is host to a great variety of forest butterflies. We will watch and video them. Possible sightings include the Common Birdwing, Common Mormon and Branded Imperial. Please wear proper walking shoes and bring along water, insect repellent, rain gear, hat and binoculars. Time: 9 am to 11 am. Maximum: 15 participants. Please register at: <https://tinyurl.com/nssbutterflywalk2> by 8 September. Contact Jusri at [jusri@nss.org.sg](mailto:jusri@nss.org.sg) for enquiries.

15 May 2023 to 13 Jul 2023

### Flying Jewels: Cherishing the Butterflies of Singapore

*Open to the Public*



This photography exhibition provides a glimpse into the ethereal world of six native butterfly families in Singapore and highlights the importance of conserving their forest habitat. Admired for their gossamer beauty, butterflies play a vital role in environmental biodiversity. The exhibition is co-organised by NSS and Singapore Botanic Gardens and supported by ExxonMobil. View the exhibits at three locations in the Singapore Botanic Gardens – Nassim Gate Visitor Centre, Tanglin Gate and Bukit Timah Gate.

10 & 24 June, 8 & 22 July &

5 August 2023, Saturday

### NSS Rewilding Project

*Open to the Public, Registration Needed*



Join the NSS Rewilding Project to make the Rail Corridor a greener place. We are involved every step of the way, including the manual processing of grass, weed clearance, and planting of native trees. The project aims to restore a continuous canopy cover to the Rail Corridor to serve as a better conduit for plants and wildlife. Participants need to be physically fit, including being able to lift at least 10 kg of weight and withstand the hot sun. Time: 9 am to 12 pm. Venue: Rail Corridor opposite Jalan Bumbong. Please register at: <https://forms.gle/KRqDWSnCDrsBCh1YA> for any of the dates offered. Contact Sylvia at HP: 9190 4849 for enquiries.



# 69<sup>th</sup> NSS Annual General Meeting

BY MORTEN STRANGE, FORMER ASSISTANT HONORARY SECRETARY

KALEIDOSCOPE

NEWS AND HAPPENINGS AT NATURE SOCIETY (SINGAPORE)

THE NSS ANNUAL GENERAL MEETING (AGM) was held at the Hollandse Club on 13 May 2023, in accordance with the NSS Constitution which stipulates that the AGM be held every year before the end of May. Our office at The Sunflower on Geylang Road was not large enough for the occasion. We are grateful to the Hollandse Club for charging us a token sum for the use of the main event hall and adjacent room.

Members were treated to a complimentary lunch before the AGM. The meeting started promptly at 2 pm as 68 members with voting rights and eight outgoing Executive Committee (Exco) members were present. This met the voting quorum of 60 members. The final attendance came up to 85 members, which included five members without voting rights (two student members and three family members) as well as four members who arrived after 2 pm. Outgoing President Dr Shawn Lum chaired the meeting, while Honorary Secretary Natasha Raina and her team of staff and volunteer helpers took care of the practical arrangements.

This year's agenda was similar to past AGMs. On behalf of the Exco, Shawn presented the President's Report for the calendar year 1 January to 31 December 2022. This was followed by the report from the Honorary Treasurer as well as brief presentations by the chairs of the Special Interest Groups and Committees. All these reports have been made available on our website as part of the NSS Annual Report 2022. Please have a read as there is a lot of valuable and important information there.

A new item on the agenda this year was the unveiling of the NSS Strategic Plan for 2023 to 2028. This was presented by Tay Kae Fong from Binomial Consulting, the appointed agency that had been working with the NSS Exco and Council on this matter. The AGM official minutes will be prepared and circulated later by Natasha.

The Society belongs to its members. At the heart of NSS is the nine-member Exco. The Exco ensures that the Society functions according to our Constitution, bye-laws and regulations. Exco members also make all the important decisions throughout the year. This year is special, partly because we have a change of President. After 15 years as NSS President, Shawn has handed the baton over to Dr Yeo Seng Beng. Prior to becoming President in 2008, he was Vice President under Dr Geh Min (2000-2008). In all, Shawn has served continuously for 23 years in either the President or Vice President capacity.

Also of interest this year was a contest for the position of Vice President between Dr Ngo Kang Min and Kua Kay Yaw. The election was won by Kang Min who secured 69 of 91 ballots cast, 16 of which were proxy votes received prior to the AGM. Kay Yaw had 21 votes. One slip was blank and invalidated. I was amongst those who helped tally the votes. The election, as well as the rest of the AGM, were conducted in good spirit. It actually had a fun, party-like atmosphere with everyone enjoying themselves, the way it should be.

The new Exco tasked with running the Society for the next year includes five new faces. Two of them have served in past Excos: Peter Connell as former Honorary Secretary and Bhagyesh Chaubey



**Three former and current NSS Presidents, from left: Dr Yeo Seng Beng (2023-2024), Dr Geh Min (2000-2008) and Dr Shawn Lum (2008-2023).** Photo: Mohammad Jusri.



**Newly-elected Exco members (May 2023 to May 2024), from left: Albert Liu, Joel Leong, Peter Connell, Bhagyesh Chaubey, Dr Yeo Seng Beng, Dr Ngo Kang Min, Natasha Raina, Huang Ningxin and Tan Gim Cheong.** Photo: Mohammad Jusri.



**The AGM 2023 was well attended with 85 members present.**

as former Honorary Treasurer. With a brand-new President and Vice President, the Society will look different going forward. The incoming Exco will decide on which members to co-opt into the Council, as well as find a role for our Immediate Past President. Please refer to the inside front cover of this issue of *Nature Watch* for the updated list of office holders.

I was one of five outgoing Exco members. I served four years as Honorary Secretary between 2019 and 2022 and Assistant Honorary Secretary from 2022 to 2023. The first thing I did when I joined in 2019 was to spearhead the renovation of The Sunflower office to make it more conducive for our activities. In spite of Covid-19 slowing us down in 2020, we completed the renovation within a year as reported in *Nature Watch*.

I also found a new editorial team for *Nature Watch* and was instrumental in vastly improving the bye-laws of the Society. The new Operating Principles and Guidelines were drafted by Natasha and myself. This was approved by Exco in September 2022 and can be viewed on our website.

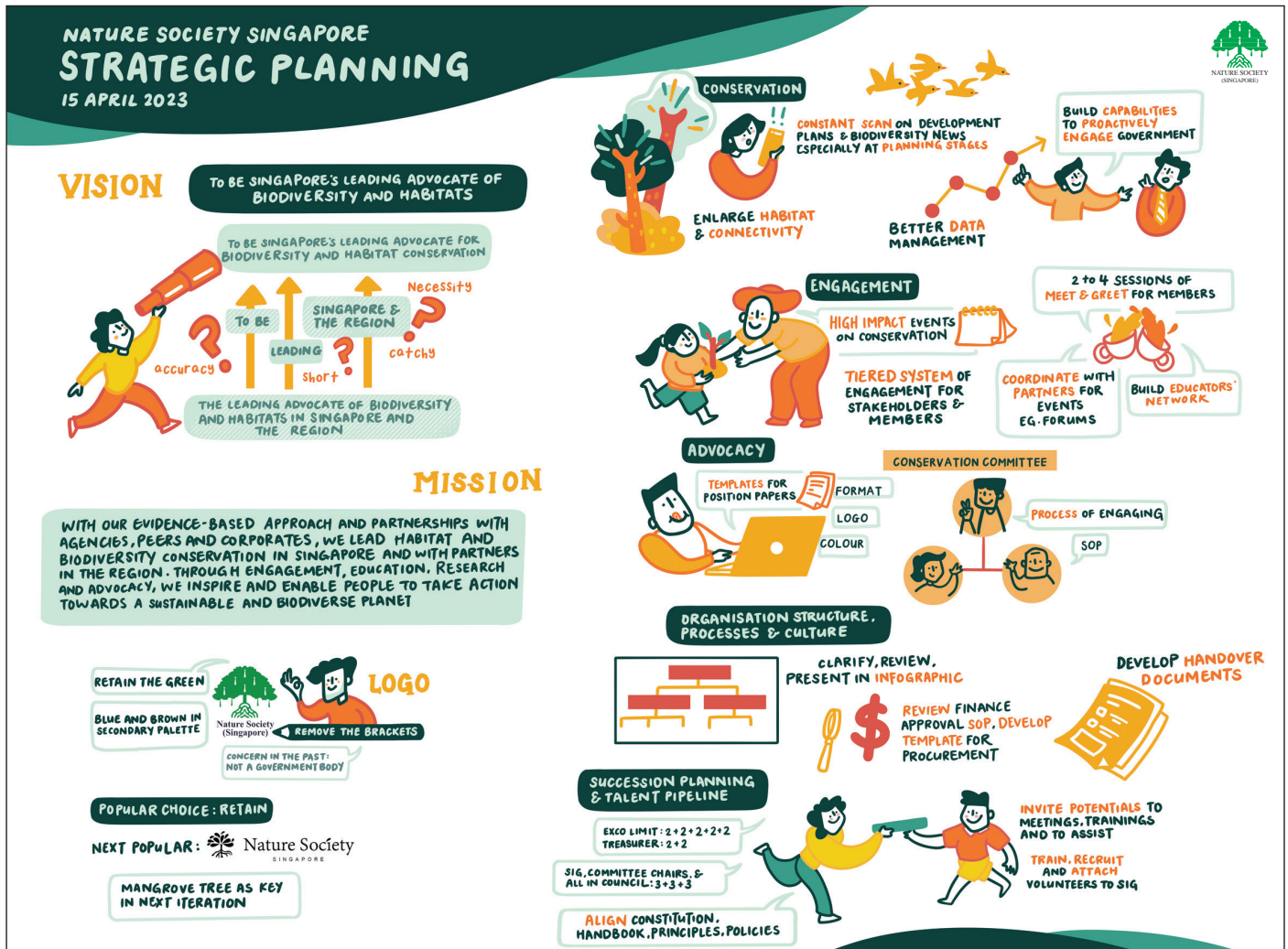
During my watch, it was satisfying for me to see our current assets grow from \$765,399 in 31 December 2018 to \$1,784,151 four years later (31 December 2022). This growth was achieved in spite of an increased staff head count from three to five over the same period. NSS has never been in a better financial position. Best of all, I identified, encouraged and groomed my successor Natasha as Honorary Secretary. She went on to find other new leaders, creating a snowball effect of renewal in the Society.

There are still lots of work to be done in NSS and in nature conservation. To be a part of this exciting venture, do join us at the next AGM and engage yourself with the management team.



# Unveiling of NSS Five-Year Strategic Plan

BY NATASHA RAINA, HONORARY SECRETARY



THE NSS STRATEGIC PLANNING initiative saw the NSS Executive Committee (Exco) and other core members coming together over three workshops to discuss our key priority focus areas for the next five years. We also held a members' survey to align our direction.

Based on this feedback as well as extensive discussions at all three planning sessions, the following areas have been highlighted as priority initiatives for the coming five years:

- Strengthen evidence-based conservation programmes
- Increase engagement of community, corporates, and peers
- Strengthen advocacy with new strategy and position paper(s)
- Optimise organisation structure, processes, and culture for effectiveness and collaboration
- Create succession programme and build talent pipeline



The new five-year Strategic Plan was unveiled at the NSS Annual General Meeting on 13 May 2023. Take a look at the graphic recording for a summary of what transpired at the final planning session on 15 April 2023, our new vision and mission, and the final outcomes to align our direction for 2023 to 2028.

The strategic planning exercise was facilitated by Binomial Consulting. It was funded by a consultancy grant of \$80,000 awarded by the National Council of Social Service. Such grants help charities like ours hire consultants to review and revise their strategic plans.

NSS Exco and other core members had extensive discussions over three strategic planning workshops.





# Snapshots of Past Events

BY GLORIA SEOW

See Page 21 for Upcoming Activities



KALEIDOSCOPE

NEWS AND HAPPENINGS AT NATURE SOCIETY (SINGAPORE)



**1 Butterfly Walk at Thomson Nature Park, 12 March 2023.** This sunny forest walk led by Simon Chan offered more than the 27 butterflies seen. The walk's 15 participants also encountered the Banded Krait (*Bungarus fasciatus*), Wagler's Pit Viper (*Tropidolaemus wagleri*) and Four-lined Tree Frog (*Polypedates leucomystax*). Even the car park yielded the beautiful Five Bar Swordtail (*Graphium antiphates*) and Blue Jay (*Graphium evemon*). Photo: Loh Jing Jing.

**2 Butterfly Walk at Lornie Corridor, 8 April 2023.** Some 18 participants observed a stunning 51 butterfly and moth species in this fruitful morning walk led by Dr Ngo Kang Min and Mohammad Jusri. Interesting sightings included the Common Birdwing (*Troides helena*) with its claspers open, as well as the uncommon Dubious Flutter (*Quedara monteithi*) and Lance Sergeant (*Athyma pravara*). Photo: Mohammad Jusri.

**3 Fun with Coastal Wildlife at Berlayer Creek, 15 April 2023.** Led by Education Committee Vice Chairperson Gloria Seow, this fun walk up and down the mangrove-lined Berlayer Creek produced sightings like mudskippers, Pied Fantails (*Rhipidura javanica*) and Oriental Pied Hornbills (*Anthracoceros albirostris*). Highlights for the 20 participants included a cicada at close range and a Four-lined Tree Frog (*Polypedates leucomystax*) up a tree. Photo: Gloria Seow.

**4 Ramble at Springleaf Nature Park, 15 April 2023.** This morning ramble drew 19 participants guided by Pandian Parthasarathy. The green patch at Springleaf held a mix of insects, birds, mammals and reptiles. Wildlife highlights included the Clouded Monitor (*Varanus nebulosus*), Straw-headed Bulbul (*Pycnonotus zeylanicus*) and Orange-bellied Flowerpecker (*Dicaeum trigonostigma*).

**5 Birdwatching at Sungei Buloh, 16 April 2023.** The wetlands of Sungei Buloh never fails to deliver. Guided by Betty Shaw, Steve Shields and Lee Ee Ling, the walk had a good combination of migrant and resident birds. Migrant highlights included three species of egrets, the Common Redshank (*Tringa totanus*) and Arctic Warbler (*Phylloscopus borealis*). The 16 participants also spotted residents birds such as the White-bellied Sea Eagle (*Haliaeetus leucogaster*) with two nestlings in the nest, Copper-throated Sunbird (*Leptocoma calcostetha*) and Great-billed Heron (*Ardea sumatrana*).

**6 Plant Walk at Sungei Buloh Wetland Reserve, 22 April 2023.** This plant walk focused on the importance of lush mangroves in mitigating water pollution, serving as a nursery for fishes and other marine life, absorbing carbon from the atmosphere, and protecting the coastline during storms and tsunamis. Led by Dr Sng Bee Bee, Sia Sin Wei, Gu Keyu and Dr Lee Lay Tin, the 14 participants also saw the Great-billed Heron (*Ardea sumatrana*) and other birds. Photo: Dr Sng Bee Bee.

**7 Butterfly Walk at Dairy Farm Nature Park, 6 May 2023.** Despite the clouds, this leisurely forest walk produced 20 butterfly species including the Tailed Jay (*Graphium agamemnon*), Malay Viscout (*Tanaecia pelea*) and Commander (*Moduza procris*). Led by Chairperson of the Butterfly and Insect Group Abiel Neo, the 12 participants also delighted in the presence of a mother-and-baby Colugo (*Galeopterus variegatus*) pair, Wagler's Pit Viper (*Tropidolaemus wagleri*) and Green Crested Lizard (*Bronchocela cristatella*). Photo: Om Prakash.



# NATURE SOCIETY (SINGAPORE)

*Watching The Wild, Watching Over The Wild*



**VISION** To be Singapore's leading advocate of biodiversity and habitats.

**MISSION** With our evidence-based approach and partnerships with agencies, peers, and corporates, we lead habitat and biodiversity conservation in Singapore and with partners in the region. Through engagement, education, advocacy, and research, we inspire and enable people to take action towards a sustainable and biodiverse planet.

## Why Join NSS?

Nature Society (Singapore) or NSS is dedicated to the study, conservation and enjoyment of the biodiversity and natural heritage of Singapore, our neighbouring countries and the wider world. The Society is a non-profit, non-government organisation. Our members work with commitment and altruism to conserve Singapore's remaining nature areas such as forests, mangroves, wetlands and reefs.

NSS was formerly known as the Singapore Branch of the Malayan Nature Society (MNS), formed in 1954. In 1991, we became independent as Nature Society (Singapore). Both NSS and MNS continue to maintain strong links with each other.

NSS organises guided nature walks, horseshoe crab rescues, nature surveys, clean-ups, talks, exhibitions, and overseas nature trips. Going on an NSS outing allows you to meet people from all walks of life with a common passion!

## Join NSS Today & Receive *Nature Watch* for Free!

The values that NSS upholds are a bulwark against the excesses of an ultra-materialistic society. If you too feel that protecting our biodiversity and natural heritage are important, join NSS today and support the Society in our work. Members will receive four issues of *Nature Watch* (NSS quarterly magazine) and a regular e-newsletter for free. Members also get to participate in fascinating nature-based activities and events which enable one to forge friendships with fellow nature lovers.

### Nature Society (Singapore) Membership Categories

#### ANNUAL SUBSCRIPTION

S\$40	<b>Ordinary Member</b> Age 18 and above
S\$75	<b>Family Member</b> Husband, Wife & Children under Age 18
S\$18	<b>Junior &amp; Student Members</b> Age 12-18 & Full-time Students Age 18-35 enrolled in a Singapore-based institution
S\$1,000	<b>Life Member</b> Applicable to Ordinary Members who have joined for 10 years or more
S\$200	<b>Affiliate Member</b> Non-Profit Organisations & Schools
S\$4,000	<b>Corporate Member</b> Nominal Fee of S\$200 + Annual Tax-Exempt Donation of S\$3,800

### *Nature Watch* Subscription Only

#### ANNUAL SUBSCRIPTION

*Annual subscription (four issues) is inclusive of postage*

S\$24	Singapore
S\$28	Malaysia & Brunei
S\$38	Countries in Asia
S\$45	Rest of the world (include Australia, New Zealand, Japan, America, Europe & Middle East)

### How to Join NSS or Subscribe to *Nature Watch*

- To join as a NSS member, please fill in this form <http://tinyurl.com/NSSmembershipform>. It allows you to settle the membership fees within the link. Once your membership is approved by the Executive Committee, you will receive *Nature Watch* and the e-newsletter for free, as well as be able to attend all member-only events.
- To subscribe to *Nature Watch* only, kindly email [contact@nss.org.sg](mailto:contact@nss.org.sg).

### How to Join NSS as a Volunteer or Intern

- To join as a NSS volunteer, please fill in this form <http://tinyurl.com/NSSvolunteerform>.
- To apply for internship, please fill in this form <https://tinyurl.com/NSSinternshipform>.

### Payment for Subscriptions & Donations

- Payment for donations and magazine subscriptions can be made by PayNow or PayLah! by scanning the QR code or doing a PayNow transfer to Nature Society (Singapore)'s **Unique Entity Number (UEN) S61SS0142H**. Please enter your name, contact number or email address in the UEN/Bill Reference Number.
- Fund transfers can also be made to Nature Society (Singapore)'s **DBS Bank Current Account Number 0339023574**.
- For other modes of payment, please get in touch with us via email: [contact@nss.org.sg](mailto:contact@nss.org.sg).
- We also welcome individual and corporate donations to the Society. Please inform us via email ([contact@nss.org.sg](mailto:contact@nss.org.sg)) of the amount you wish to donate, along with your name, title or organisation. Donations may be made by the payment methods mentioned above. Your generosity is much appreciated. Donations are tax exempt.







# Let Singapore's Abundant Biodiversity Be Your Legacy

Have you loved nature all your life? Please consider helping our conservation work with a gift to Nature Society (Singapore) in your will.

## How to make a gift to the Society in your will

You can choose to inform us if you have considered us in your will, but it is not strictly necessary. Please ensure that your solicitor writes in the full name of the Society. We suggest below suitable forms of words that can appear in your will:

*I give to Nature Society (Singapore) (hereinafter called NSS), **Unique Entity Number S61SS0142H**, \_\_\_\_\_ % of the residue of my estate*

OR

*a specific gift of \_\_\_\_\_*

*and I direct that (i) the proceeds may be used for the general purposes of NSS and (ii) a receipt signed by a person for the time being authorised by the Executive Committee of NSS shall be a good and sufficient discharge to my executors.*



NSS works to protect future habitats for animals in Singapore, such as the critically endangered Raffles' Banded Langur (*Presbytis femoralis*). Only 60-70 individuals remain here.  
Photo: Andie Ang.