

# Protecting endangered wildlife in S'pore

Fund set up by Wildlife Reserves Singapore has been aiding local conservation and research causes for a decade. *The Straits Times* looks at a few key species that the fund has protected.

Jacklin Kwan

Chances are that you have spotted donation boxes shaped like pangolins around Singapore.

All the money collected goes towards the Wildlife Reserves Singapore Conservation Fund (WRSCF), an offshoot of Wildlife Reserves Singapore, which manages the Singapore Zoo, Night Safari, Jurong Bird Park and River Safari.

The conservation fund, which celebrated its 10th anniversary in July, was founded with the primary purpose of conserving Singapore's endangered wildlife.

In its short history, it has dedicated upwards of \$2 million to biodiversity research and conservation programmes, supporting more than 40 researchers to continue understanding Singapore's rich wildlife.

WRSCF emphasises actionable change, with much of the research that it funds helping to spearhead conservation programmes and public education.

The researchers funded by WRSCF have worked with governmental and non-governmental organisations to restore the habitats of native species in nature parks, work towards eliminating threats such as trafficking and poaching, and rehabilitate and release any rescues.

To commemorate a decade of research and conservation, *The Straits Times* looks at notable programmes that WRSCF has funded.

## MONKEY BUSINESS

The Raffles' banded langur is a dark-coated primate with an impish face and a white-furred belly, found only in the forests of Singapore.

In the 1990s, it was on the verge of extinction, as habitat destruction had decimated its numbers here. Only 15 to 20 were thought to remain in the Central Catchment Nature Reserve.

Today, due to extensive field research and conservation efforts, the Raffles' banded langur population is up to 60.

Dr Andie Ang, a WRSCF research scientist and chairman of the Raffles' Banded Langur Working Group, has worked to safeguard the future of this shy primate.

Her work has spurred public engagement and increased scientific understanding of langurs.

The Raffles' banded langur is actually a sub-species of the banded leaf monkey. There are three recognised sub-species, which are found in different parts of South-east Asia.

Dr Ang said: "In the past, we had very little information about langurs. We didn't know what they did, what their numbers were and what they ate."

But, with a WRSCF grant, Dr Ang's team organised efforts to track the Raffles' banded langur populations in Singapore.

A working group – one spanning multiple institutions, including the National Parks Board (NParks), the National University of Singapore (NUS) and the Jane Goodall Institute – has discovered exquisite insights into the covert lives of these monkeys and helped to protect what numbers of them remain.

Faecal samples revealed that the langurs selectively eat specific plant parts of both native and non-native species, such as rambutan seeds and rubber tree leaves.

Armed with this information, NParks reforested degraded habitats with plentiful supplies of langur food.

It was also able to establish "green corridors" between different nature parks, giving the langurs a bigger area to forage for food without being threatened by passing cars.

More than 230 volunteers were asked to keep their eyes open for



Above: Researcher Fung Tze Kwan (centre) attaching a tracking collar to a common palm civet with the assistance of veterinarians during a project on Pulau Ubin. She says the role of civets in maintaining forest regeneration is important, especially with the extinction of larger wild herbivores in Singapore such as elephants and tapirs.  
Below: Ms Fung inspecting a camera trap on Pulau Ubin. PHOTOS: LEE CHUEN LING, HAZELINA YEO



the langurs during nature walks, with the aim of keeping population estimates updated.

Dr Ang said her project has helped to connect people with nature. "While they're trying to find langurs, they see birds, wild boars, butterflies and mouse deer in the reserves. They grow an appreciation not only for langurs, but also for all other species they may see."

## FINDING FAMILIAR FLOCKS

Wild white-rumped shamas, the males of which are beautiful black birds with long tails, chestnut crests and white feathers on their rump, were considered extinct in Singapore during the 1970s.

But recent observations suggest they are back, sparking speculation that those in the wild may have been smuggled in but, for some reason, were released.

This caught the attention of Ms Elize Ng, a research assistant at NUS who specialises in environmental biology.

## WIDER APPRECIATION

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**DR ANDIE ANG**, a research scientist at Wildlife Reserves Singapore Conservation Fund and chairman of the Raffles' Banded Langur Working Group, on how her project has helped people to connect with nature.

With funding from WRSCF and state-of-the-art genome-mapping technology, she was able to discover that the shamas sighted in Singapore were once caged birds.

"We found genetic markers unique to shamas that came from specific regions. From this, we discovered that Singapore's shamas were very similar to the ones found in Malaysia," she said.

Her work has helped to pave the way for the fight against the caged-bird trade in South-east Asia. The trade has threatened rare species such as the ruby-throated bulbul and the white-crowned hornbill.

By identifying the origins of these birds, Ms Ng said, regional governments can bar bird trade from specific countries if they are found to be trafficking protected species.

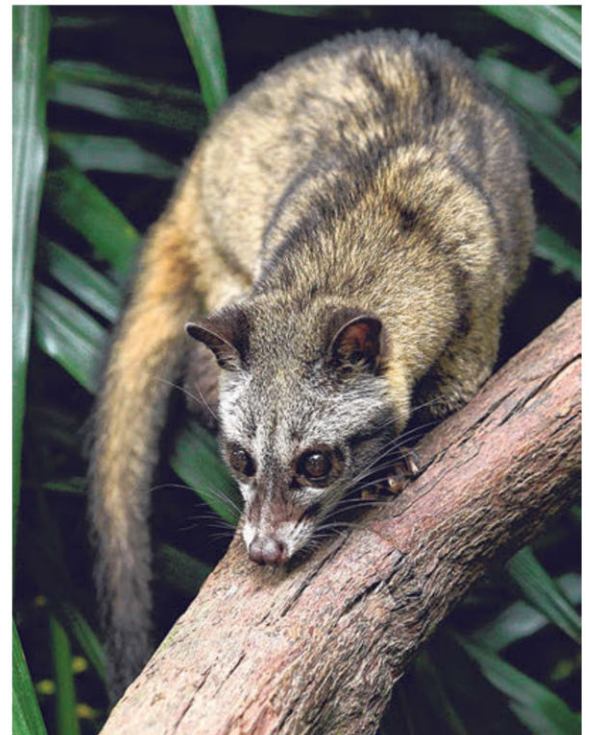
She said the birds play an important ecological role. They disperse seeds and are part of their local food chains. Keeping them in their countries sustains the bird populations and helps their native ecosystems.



The Raffles' banded langur, found only in the forests of Singapore, was on the verge of extinction in the 1990s. Today, due to extensive field research and conservation efforts, its population is up to 60. PHOTO: ANDIE ANG



The white-rumped shama was deemed extinct here during the 1970s. But recent observations suggest the bird is back, sparking speculation that those in the wild may have been smuggled in but released. PHOTO: WILDLIFE RESERVES SINGAPORE



Common palm civets, with their endearing appearances, are typically captured as part of the illegal pet trade or poached from the wild to harvest kopi luwak – coffee beans retrieved from their faeces. PHOTO: WILDLIFE RESERVES SINGAPORE

## NO COFFEE, NO CRUELTY

Common palm civets are small cat-like mammals with mottled grey fur and large, round eyes.

Because of their endearing appearances, they are captured as part of the illegal pet trade or poached from the wild to harvest kopi luwak – coffee beans retrieved from their faeces.

Ms Fung Tze Kwan was a researcher at NUS when she received funding from WRSCF to study local civets and share her findings with experts and the public.

Now a researcher at the Singapore-ETH Centre, she said many people were surprised to learn that civets are common in Singapore, as well as of the threats they face.

"I had teachers who approached me to say they never knew about the cruelty involved in the kopi luwak trade, where civets are kept in battery farms," she said.

Her team reached out to food establishments to inform them about the possible harmful nature of the

coffee beans, which has led to some businesses taking kopi luwak off their menus.

In her research on civets, which utilised geolocation, Ms Fung discovered that the animals are an incredibly mobile urban adaptor.

The animals are able to spread seeds up to a distance of 1km, with their faeces successfully germinating 98 per cent of the seeds ingested.

Ms Fung said the role of civets in maintaining forest regeneration is important, especially with the extinction of larger wild herbivores in Singapore such as elephants and tapirs.

Dr Sonja Luz, director of conservation, research and veterinary services at Wildlife Reserves Singapore, shared a quote by naturalist Gerald Durrell: "Many people think conservation is just about saving fluffy animals – what they don't realise is that we are trying to prevent the human race from committing suicide."

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