

Colourless creatures, marine giant: Wild highlights of 2025

At least 24 species recorded for first time in S'pore, with more than half being molluscs

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The year 2025 was marked by discovery, odd-coloured animals and the grand return of a marine giant.

These are *The Straits Times'* highlights of the year as reported in the NUS Lee Kong Chian Natural History Museum's journal *Nature In Singapore*, which documents key biodiversity sightings in the Republic.

The year featured at least 24 species recorded for the first time in Singapore, of which more than half were molluscs – proof that even in a heavily urbanised city-state, there is still more to discover.

Records are usually published some time after the actual encounters, often because time is needed to establish species' identities or lower the risk of inviting poachers.

RETURN OF THE GIANT CLAM

Mr Loh Kok Sheng was combing the intertidal waters off Labrador Nature Reserve on Oct 10 when he came across a squiggle of blue and green that left him as happy as the clam he spotted in a sandy patch – a fluted giant clam (*Tridacna squamosa*), one of the world's largest bivalves and a species considered critically endangered in Singapore.

"I was very shocked and pleasantly surprised to see it because we have been surveying Labrador across the years and had not seen it before," said Mr Loh, a volunteer who was documenting Singapore's intertidal shores as part of routine surveys for marine enthusiast group WildSingapore.

Before the encounter, the giant clams he and his team found were largely restricted to the city-state's offshore islands, with the nearest being Sentosa, added the teacher, who has been helping out in such biodiversity surveys since 2006, when he was a biological sci-

ences student at the National University of Singapore (NUS).

The specimen, measuring about 35cm long, is the first giant clam seen off mainland Singapore since the 1990s, according to Dr Neo Mei Lin, a marine ecologist at NUS' Tropical Marine Science Institute who has studied the animals for nearly two decades.

The rediscovery at Labrador Nature Reserve suggests that the last mainland rocky shore habitat here remains a significant refuge for the species, wrote Dr Neo and Mr Loh in a biodiversity record published in November.

Giant clams are key sources of food and shelter for reef animals; even their faeces have been found to be highly nutritious for fish. Of the five species of giant clams once recorded in Singapore, only two remain. The other is the locally endangered boring giant clam (*Tridacna crocea*), named for its ability to bore into corals.

While these colourful clams once dotted the reserve, according to a book published in 1994, neither species was seen during surveys of the area between 2009 and 2020.

For Dr Neo, the finding shows that the busy coastline of Singapore can still serve as an important refuge for the clams.

"We know that the coastline of mainland Singapore will continue to face increasing development in the near future," she said, citing projects like the upcoming Long Island reclamation in the waters off East Coast Park.

"I hope that these findings can support ongoing environmental impact assessments and discussions with stakeholders to ensure protection of sensitive and threatened marine biodiversity, while managing development for the nation's progress."

CURIOUS COLOURLESS CREATURES

From creatures of the sky to those



A partially translucent pink-headed reed snake (right) that was spotted by nature enthusiasts in October. The 35cm-long native reptile demonstrated amelanism, a condition characterised by the lack of melanin, and its body was a pale shade of pink instead of the usual shade of black (left). PHOTOS: LAW BROTHERS, WONG KWANG IK



This fluted giant clam spotted in waters off Labrador Nature Reserve was the first giant clam seen off mainland Singapore since the 1990s. PHOTO: LOH KOK SHENG

on the ground, several pale animals surfaced across Singapore, securing them a spot in the museum's 2025 records.

Unlike others of their kind, these creatures lacked pigmentation, and their ghostly forms often make them easy targets for predators.

Their haunting appearance also gives such creatures a place in folklore as a good or bad omen.

In February, it was revealed that a member of the public had rescued an all-white Malayan greater bamboo bat (*Tylonycteris malayana*) from a shoe cabinet at an undisclosed housing estate in 2024. Such bats are known for their flattened skulls, which enable them to squeeze into the slits of bamboo stems.

While the male bat died despite the Mandai Wildlife Group's attempt to treat it, its body was preserved in the museum's Zoological Reference Collection.

This is most likely the first published record of albinism in the species and in bamboo bats, according to the record's authors Marcus Chua and Charlene Yeong. In mammals, albinism is an inherited condition that hinders the production of melanin, resulting in white fur and pink or red eyes.

It is not known why the bat, which had a forearm length of 26.6mm, sought refuge in the shoe

PROTECTING BIODIVERSITY

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DR NEO MEI LIN, a marine ecologist at NUS' Tropical Marine Science Institute, on the rediscovery of the fluted giant clam at Labrador Nature Reserve. The species is considered critically endangered in Singapore.

cabinet, other than a lack or disturbance of suitable roosting sites, wrote Dr Chua, the museum's mammal curator, and Dr Yeong, a veterinarian at Mandai Wildlife Group.

In November, another whitish

creature was documented – a banded bullfrog (*Kaloula pulchra*) that was found in a garden in 2024.

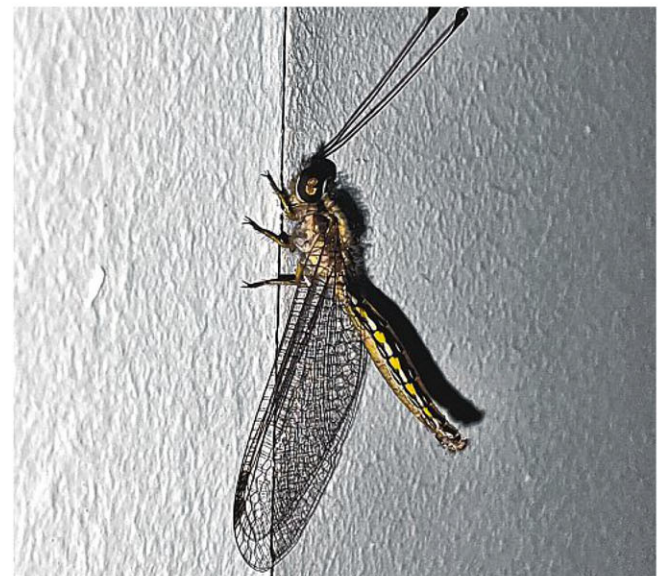
The palm-sized amphibian was determined to be leucistic, rather than albino, as its eyes were normally pigmented. Leucism refers to defects in pigment cells that result in a loss of colour, which can also arise from non-genetic factors.

While the leucistic frog could have been naturally spawned in the wild, it could have been an escaped or intentionally released pet, as those in leucistic form are sold in the pet industry, said the museum's senior collection manager of fishes Tan Heok Hui, who co-authored the record.

On Oct 13, a partially translucent pink-headed reed snake (*Calamaria schlegelii*) was found by nature enthusiasts as it was slithering through leaf litter in a forest.

The 35cm-long native reptile demonstrated amelanism, a condition characterised by the lack of melanin. Unlike mammals, reptiles, birds and amphibians can still display other colours in the absence of melanin as they possess other pigments.

Mr Wong Kwang Ik, who was among the group of nature enthusiasts who observed the adult snake, theorised that it had eluded predators, which include owls, owing to its tendency to live under-



An *Ascalaphus placidus* owlfly seen in Yishun on July 31. It appears to be the first formal record of the species in Singapore. PHOTO: SIMON CHAN

ground.

"It was surprising because of how rare the mutation is, and how it often affects survival in other species," said Mr Wong, a naval officer.

NEW CRITTERS ON THE BLOCK

Species found in other countries continue to be uncovered in the Republic.

These include a June record of a stick insect previously known only from the forests of Borneo and Sumatra. The *Sadyattes annulatus* stick insect, measuring about 21cm long, resembles a broken twig.

It was discovered in 2024 at Bukit Timah Nature Reserve.

The area around Yishun Community Hospital and Khoo Teck Puat Hospital also proved to be a hangout for owlflies, with two records of the insects documented there in 2025 by Mr Simon Chan, a landscape manager who oversees the hospitals' gardens.

One sighting was of the *Ascalaphus placidus* owlfly, which appears to be the first formal record of the species in Singapore. Owlflies are fast-flying aerial predators that resemble dragonflies and rank among the country's most understudied insect species.

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