

# 50



STORIES OF **LABOUR** AND **LOVE**

© 2020 Lee Kong Chian Natural History Museum

All rights reserved. This book, or parts thereof, may not be reproduced in any form or by any means, electronic or mechanical, including photocopying, recording or any information storage and retrieval system now known or to be invented, without written permission from the Publisher.

Published by:  
Lee Kong Chian Natural History Museum  
Faculty of Science  
National University of Singapore  
2 Conservatory Drive  
Singapore 117377  
lkcnhm.nus.edu.sg

Editors: Jeanice Aw and Martyn E. Y. Low  
Design and layout: Bubbly Books Pte Ltd

ISBN: 978-981-14-7614-3

First edition

Printed and bound in Singapore by First Printers

This book uses environmentally friendly paper  
from an FSC certified source





**NUS**  
National University  
of Singapore

Lee Kong Chian  
Natural History Museum





## The ocean takes and the ocean gives

The helmet urchin (*Colobocentrotus atratus*) has one of the strongest suction forces of any species of sea urchin known, an adaptation that helps it hang on to life (literally) in the wave-swept environments that it lives in.

In order to collect specimens, museum staff had to brave the strong sea spray during a recent expedition to Christmas Island. Sadly, the head of the museum suffered a personal loss on the trip—his favourite hat was blown off his head and swept away!

SPECIMEN

02

## The last of her kind

In 1987, a museum curator witnessed an elderly female banded leaf monkey (*Presbytis femoralis*) descend a tree before being mauled to death by a pack of dogs. As the last remaining member of the only tribe in the Bukit Timah forest, her demise and suspected 'suicide by dogs' marked the end of her line. Today, she lives on in the hearts of many who remember her from the old public gallery at NUS Science Library building.





SPECIMEN

03

## Enlightened

John C. Moulton, an early director of the Raffles Museum, used to climb lamp-posts at night in search of moths. Thankfully, the open-minded police officers who checked on him did not consider such behaviour worrisome, and allowed the work to continue without a fuss. He remarked that it was “a truly enlightened age” because at least one well-known person was thought to be insane for collecting insects. It is unclear if Moulton collected this unidentified moth in 1922 from atop a lamp-post.

SPECIMEN  
04



## Star-crossed lovers

What a pair of ill-fated lovers! Found dead near each other on the Ayer Rajah Expressway in 2017, these adult male and female smooth-coated otters (*Lutrogale perspicillata*) might have been fatally struck by vehicles while attempting to cross the highway.

It is probable that the pair struck out on their own in their quest for new territory to start a family. Although these individuals were killed, the species, which was once believed to be locally extinct, now appears to be doing well as the large number of human followers on social media accounts featuring them attests to.







## Bright eyes

When Peter Davie from Queensland Museum and his collaborator from the museum saw the striking luminescent yellow eyes of this new crab species from Christmas Island, the first thing that came to their minds (at the same time) was the song 'Bright Eyes' sung by Art Garfunkel for the movie 'Watership Down'.

Despite the protestations of an editor who commented that naming a crab after Garfunkel was "frivolous", the scientists prevailed in naming it Garfunkel's Crab (*Chiromantes garfunkel*), arguing that it was both appropriate and fated. Who says scientists are stuffy and boring?!



## A suckling cockroach



Cockroaches often elicit feelings of repulsion in humans. Believe it or not, this rather 'un-cockroach'-looking specimen is that of a female pill cockroach. This specimen has not yet been definitively identified but it belongs to the genus *Perisphaerus*. Pill cockroaches get their name from the ability of females to roll up into a ball. *Perisphaerus* cockroaches also share a characteristic with us mammals: they suckle their young! Females of this species have small cavities

on their legs into which the mouthparts of their young can fit. The young cling to the mother cockroach and feed on fluids that exude from these cavities.



SPECIMEN

07

## A slice of history

During the move from our old building, this Currier's knife was found. It was thought to have been used for preparing mammal skins for taxidermy in the past. As the illustration shows, the knife is held by the handles on either side of the double-edged blade in order to scrape off the fat and flesh from the inside of the skin.

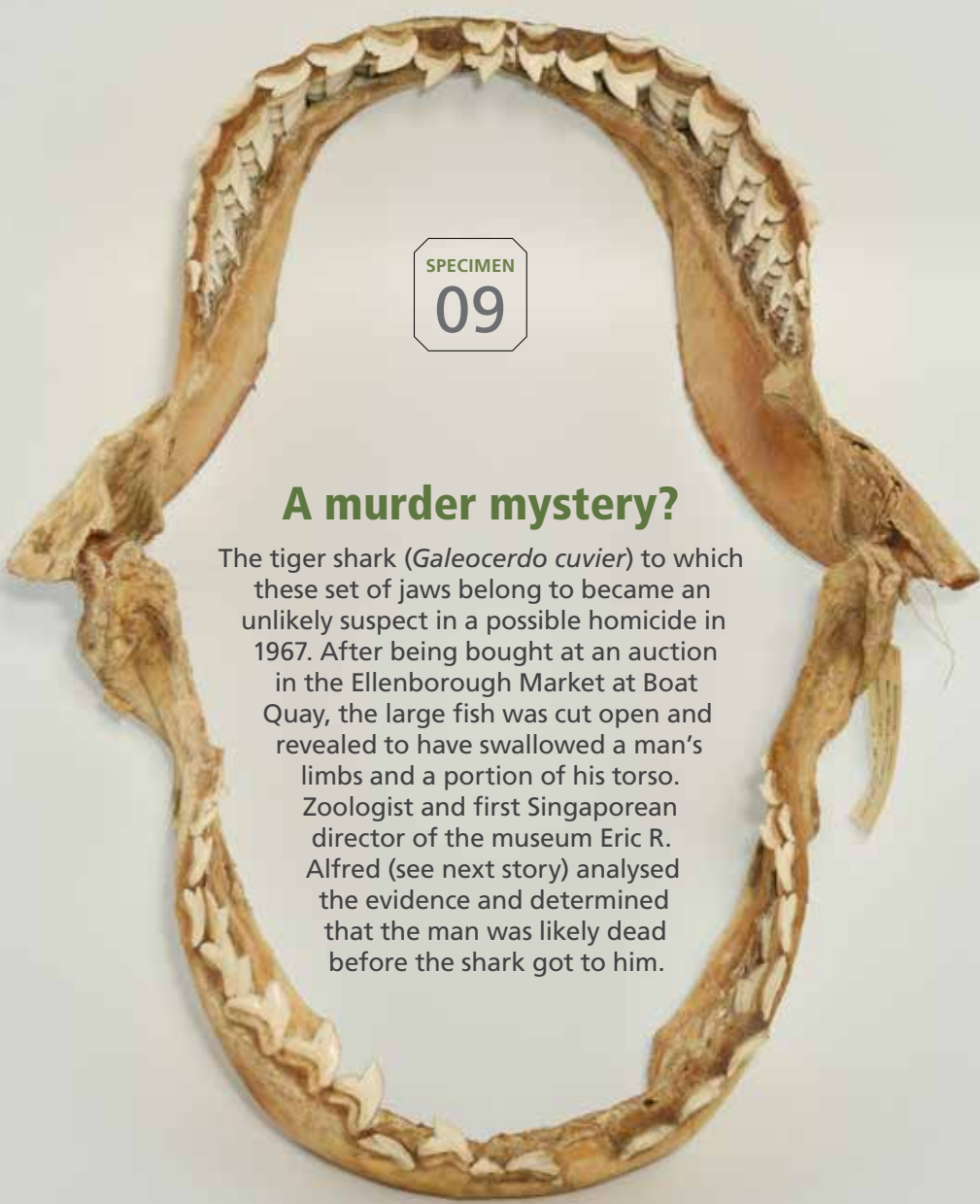
A researcher who visited the museum was struck with the idea to swab the knife for DNA to see what animal skins it might have been used to deflesh! Sadly, there were no definitive traces left on the knife and the trail went cold.

## An SG50 gift

Hoo Ah Kay (also known as Whampoa) was a Chinese businessman and community leader in Singapore. This narwhal (*Monodon monoceros*) tusk was given to Hoo when he served as consul to Russia in the 1860s and was safeguarded by the family for three generations.

In 2015, Hoo's great-granddaughters, Mdm Hoo Miew Oon and Mdm Hoo Mui Han donated the tusk to the museum on the occasion of SG50, in commemoration of five decades of Singapore's independence. The tusk is on permanent display in the museum's Mammal Zone.





SPECIMEN

09

## A murder mystery?

The tiger shark (*Galeocerdo cuvier*) to which these set of jaws belong to became an unlikely suspect in a possible homicide in 1967. After being bought at an auction in the Ellenborough Market at Boat Quay, the large fish was cut open and revealed to have swallowed a man's limbs and a portion of his torso. Zoologist and first Singaporean director of the museum Eric R. Alfred (see next story) analysed the evidence and determined that the man was likely dead before the shark got to him.

SPECIMEN

10



To my good friend,  
Eric Alfred —

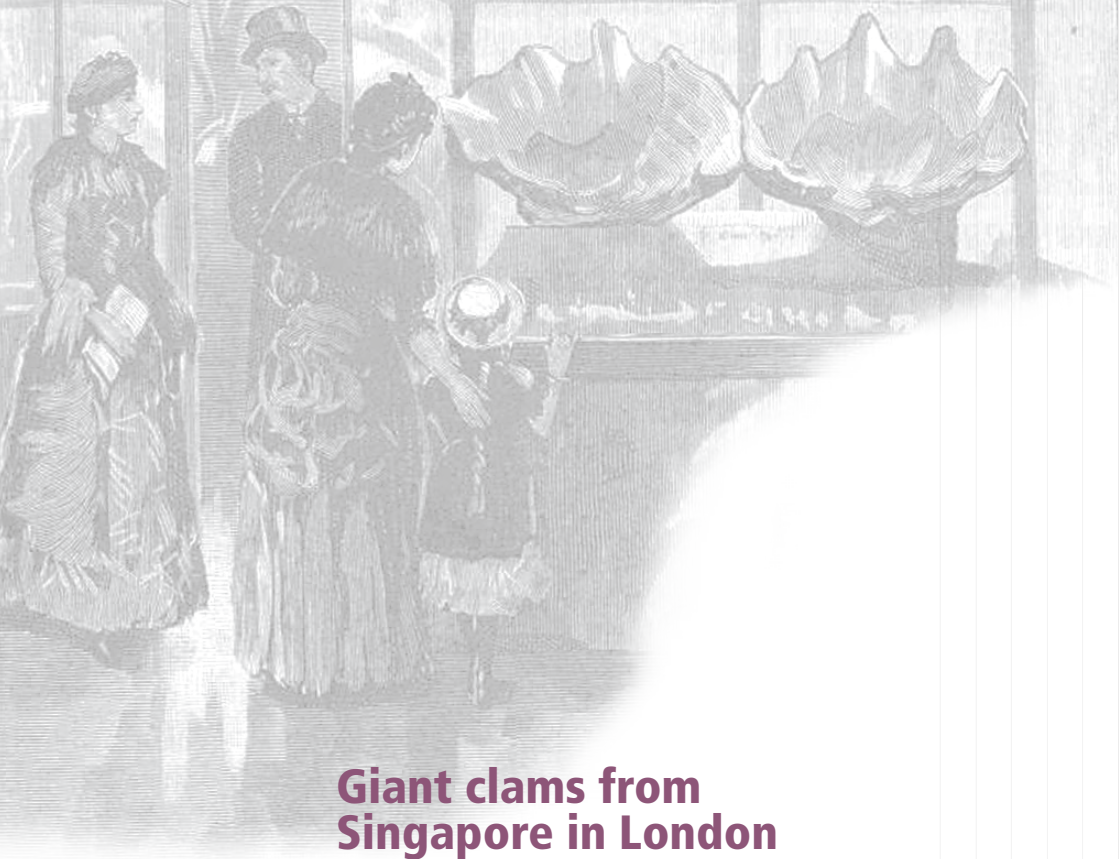
may this persuade  
you to work on  
my own favorites!

J. R. Hendrickson

## Frogs or fishes?

This inscription in a book on frogs in our library is from John R. Hendrickson to his then-student Eric R. Alfred, hoping that the latter would follow in his footsteps and study frogs. Alfred was sent to the Raffles Museum by Hendrickson to have specimens identified by museum staff. There, Alfred was enthralled by a particularly beautifully-illustrated work on fishes called the 'Atlas Ichthyologique' and eventually became a prominent ichthyologist.

Alfred also became the first Singaporean director of the museum. The specimen here is of one of the species of fish named by Alfred. Called Hendrickson's catfish (*Akysis hendricksoni*), it is named after Alfred's former lecturer.



## Giant clams from Singapore in London

Despite being a regular diner at Rules', today London's oldest restaurant, malacologist Lovell A. Reeve was unable to convince the owner to part with a pair of giant clam shells said to have come from Singapore. As the illustration shows, these shells were subsequently displayed at the International Fisheries Exhibition in 1883, under the title of "The Great Oyster from Singapore. (*Tridacna gigas*)".

Despite such anecdotal accounts, we are still uncertain if giant clams occurred naturally in Singapore. These two valves were found in Kallang at a construction site and may have been imported for food or decoration.

SPECIMEN

11



SPECIMEN

12



Singapore, S.  
Upper Peirce,  
21 Jul 2009, 10:40,  
PM Chan et al.

*Paracalia* sp.  
det S. N. Chan.



## Travelling through space-time

Studying specimens deposited outside of Singapore is a constant challenge, but as technologies advance and collaborations with other countries strengthen, local scientists gain new methods to uncover our natural history and data on past biodiversity.

When *Pyrocoelia fumigata* fireflies were found during an islandwide firefly biodiversity survey between 2009 and 2010 (the darker-coloured specimen), it was thought to be a new record for Singapore.



Only in 2017, when entomologists from the museum analysed images of specimens kept in Oxford University (the lighter-coloured specimen), was it realised that Alfred Russel Wallace had previously collected this firefly when he first came to Singapore in the middle of the nineteenth century (see next story).



SPECIMEN

13

## A bicentennial gift

There had not been local sightings of the wasp mimic hoverfly (*Milesia vesapoides*) since Alfred Russel Wallace first collected it between 1854 and 1856. Fast forward almost 200 years later in 2019 when by coincidence a conservation officer from the National Parks Board rediscovered this species on Pulau Ubin, a timely surprise for Singapore's Bicentennial! Donning the hallmark yellow-and-black jacket of a hornet, the wasp-mimic does not pack a sting—it simply borrows the appearance of the feared hornet to ward off potential predators.





## The importance of friends

It is exceedingly rare to find bird specimens collected by Alfred Russel Wallace for sale on the open market. The museum benefited from its close collaboration with George Beccaloni, an entomologist and Wallace scholar, who alerted the museum that this Wallace's standardwing (*Semioptera wallacii*) specimen from Wallace's own research collection was to be offered for sale. A new exhibit in the museum was launched on 30 August 2019 to showcase Wallace's various expeditions and this historically-important specimen (see next story).





## The moth effect

In 2009, Mr George Yeo visited the museum to view this preserved moth (*Macarostola* sp.) which he had previously found and sent for identification in 1992. During this visit, the idea of a statue to commemorate Alfred Russel Wallace's visit to Singapore and the region was raised. Wallace made important contributions to our natural history and was also the co-discoverer of the theory of evolution by natural selection with Charles Darwin. A decade later, the museum unveiled a statue of Wallace and his assistant Ali in front of our building. This is analogous to the butterfly effect, but instead involving a moth!

SPECIMEN

15





SPECIMEN  
16



## Taken away in a police van

On 23 November 1986, one of our curators received a call about a black marlin (*Makaira indica*) that had stranded at East Coast beach. Making his way down to the Old Joo Chiat Police Station, the curator got the police to agree to transport the fish to the museum in their van. A taxidermy company was engaged to skin the fish, make a cast of the body and to wrap the skin around the cast. Originally hung over a flight of the stairs leading to the collections in our old building, this large specimen may have caused more than one visiting researcher to have nervous thoughts as they walked under it.

## Train passengers without tickets

The changeable lizard (*Calotes versicolor*) in this jar was collected in Singapore but its ancestors are likely to have stolen into the country by train! When the first individuals of the species were found around the former Tanjong Pagar Railway Station in the early 1980s, herpetologists concluded that the lizards snuck onto trains among the agricultural produce coming from north of Peninsular Malaysia where the lizards are native. Now, they are a common sight in urban areas.





## Two “fish” with one hook

Aquarists are passionate people, but not all are responsible pet owners. The South American freshwater stingray (*Potamotrygon motoro*) was a popular pet because of its beautiful and ornate patterns. Unsubstantiated accounts circulated that some of these former pets had been released into local reservoirs.

In 2007, researchers from NUS and the museum were tasked by the Public Utilities Board (PUB) to determine if the rays were indeed in the waterways and if they were breeding. In late 2007, the team caught one ray that answered both questions. It was a very large and healthy ray which gave birth to a large brood of healthy babies shortly after it was caught!



## Sex to die for



SPECIMEN

19

Male trilobite beetles (*Falsocalochromus ruficollis*) look like typical winged beetles and measure one to two millimetres in length. Females grow up to 20 millimetres long, and retain their wingless larvae form into adulthood. Males die after mating, females after egg-laying. This makes it

near-impossible to be sure that two individuals are of the same species, unless they are caught in the act of mating! In the 1990s, a graduate student linked to the museum used laboratory-reared females to attract males. One of the males that was caught later escaped due to its collector's carelessness. By sheer blind luck, he found and recaptured it on a parked car several hundred metres away.

SPECIMEN

20

## Our very own Yoda

A whole generation of visitors and students who frequented the museum's previous premises at the NUS Science Library building might still fondly remember this Malayan flying fox (*Pteropus vampyrus*) specimen nicknamed 'Yoda'. The bat's peaceful and learned expression bears a close resemblance to the wise mentor in the 'Star Wars' franchise, and seemed to always encourage weary students with his famous phrase "do, or do not. There is no try".





## An \$84,000 tree

It was thought that the chengal pasir tree (*Hopea sangal*) was extinct in Singapore, until the exciting rediscovery of a lone specimen in Changi in late 2002. But all hope for the species' conservation turned into despair when an unfortunate turn of events saw the tree's demise just months after. The property developer which accidentally felled the heritage tree was made to pay a fine of \$84,035 in compensation to the state.

A slice of its trunk is now displayed in the museum, serving a reminder of what could have been and what has been lost. It might be that this very species gave Changi its name (from "chengal", to "chengai", and eventually to "changi") through a drawn-out version of Chinese whispers.

SPECIMEN  
22





## A tiny misunderstanding

The *Paedocypris progenetica* fish holds the record as the world's smallest fish, and it can be a mere 7.9 millimetres at maturity! The fish experts in the Natural History Museum in London and the museum here aptly bestowed the genus name *Paedocypris* for its characteristic retention of juvenile characteristics. It used to be that when ichthyologists attempted a web search for literature on the name *Paedocypris*, just the first five letters of this new genus returned some rather undesirable results. Since then, the usage of the genus name has become so much more common and this unfortunate misunderstanding, thankfully, no longer happens.

## A sizeable record

Sitting in the Museum gallery are these two skulls of the estuarine crocodile (*Crocodylus porosus*) which came from the collections of the Raffles Museum. An exciting revelation was made two years ago by a crocodile researcher who found them to be among five of the largest known skulls of the species. Touted to be the largest living crocodile species, the males usually reach a staggering length of six metres. It is estimated that these two crocodiles reached about 6.7 metres in length when they died!



SPECIMEN

23



# Question

Write answers on this side of the paper, only.

Do not write on either margin.

The Island Club Hamadryad brought to the museum alive on Monday 10 July having been caught by three greenmen. One of whom commenced by seizing it by the tail. We kept it in the box in which we received it, although it thrashed until Wed. morning, when it was killed with chloroform followed by injection into the oesophagus of potassium cyanide dissolved in alcohol. It measured 15 feet 7 inches <sup>tail 36 inches</sup> & weighed  $26 \frac{1}{2}$  lbs. [c.f. Dillman, Snakes of the World p. 150 a 15 foot specimen weighed 16 lbs]. (The spring balance was used & afterwards corrected against a certified scale in the Singapore Cold Storage Co.).

After cutting it was decapitated & the head preserved, & then skinned. It is a female but the gonads are not active. It was very fat, lumps of fat in the muscular & abdominal cavity. The alimentary canal contained nothing solid, so its weight was not due to a large recent meal, but it voided a lot of excrement on Tuesday & its lethargic behaviour was probably due to a meal - which was fully assimilated before it was killed.

Subcaudals: anal + 4 + 5 pairs  
+ 3 + 46 pairs.

SPECIMEN

24

## "King Cobra meets a swift death"

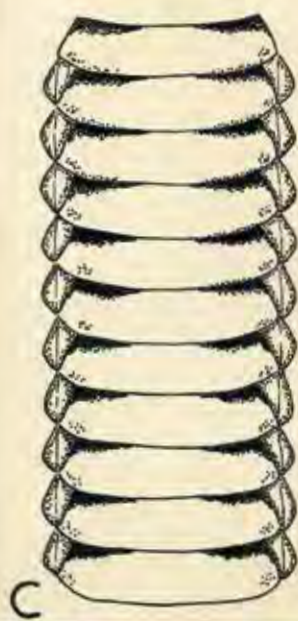
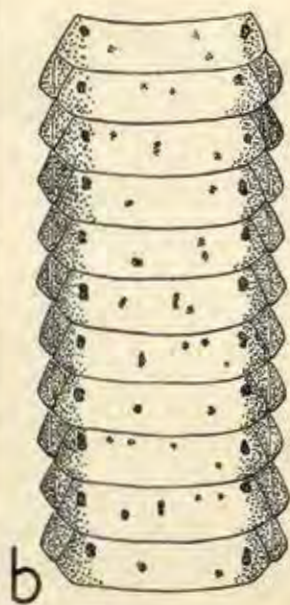
This was the title of an article that appeared in the 'Straits Times' of a snake that was brought alive to the Raffles Museum on 10 July 1950 from the Island Golf Club. It had been caught by three men working at the club. The museum also has this handwritten note of observations made of the king cobra (*Ophiophagus hannah*) and may have been written by Michael W. F. Tweedie (see next story). The snake was euthanised and a papier mâché cast was made. Sadly, the cast and the snake's head are now missing, with only the skin still in our collections.



## Tweedie and his snake book

These drawings and glass slides were made by Michael W. F. Tweedie to illustrate his book 'The Snakes of Malaya' which was published almost 70 years ago. Tweedie was a curator at Raffles Museum until the onset of World War II. On his release from a prisoner-of-war camp, he walked past the camp's gates and started identifying the butterflies he saw. It was with this indomitable spirit that he returned to Singapore to become director of the Raffles Museum. Tweedie also believed that natural history was for everyone and the large number of books written for the non-scientific audience is testament to this.



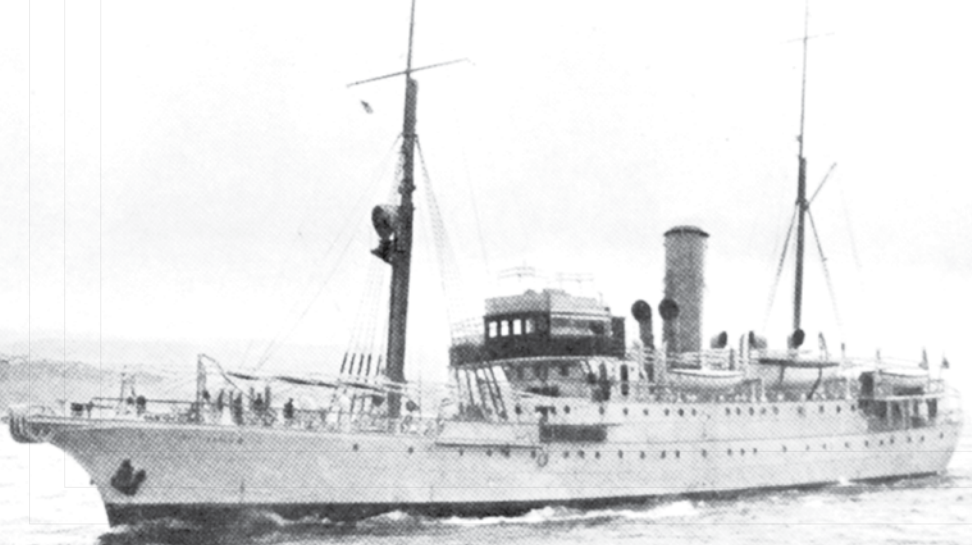


Lat.  $3^{\circ} 28' 10''$  N  
Long  $100^{\circ} 14' 50''$  E *Cypraea lamarkii* Gray  
43 fath. 21/10/33



## Under the sea

To repair and maintain the thousands of miles of undersea telegraph cables (see next story), telegraph companies deployed cable ships such as 'The Cable' (pictured here) which would haul up the cables as part of their work. This presented a great opportunity to collect specimens of marine organisms encrusted on the cables. Michael W. F. Tweedie (see previous story) joined 'The Cable' on several occasions in the 1930s to do just that. Pictured here are two species of cowries that were collected during two such trips. The lighter-coloured specimen is that of a pear-shaped cowrie (*Erronea pyriformis*) and the darker-coloured specimen that of a Lamarck's cowrie (*Naria lamarckii*).



# CHART

of the

## SUBMARINE ATLANTIC TELEGRAPH

Compiled from the Journal of CYRUS W. FIELD Esq.

### ALPHABET

Transatlantic Submarine Telegraph.

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| <u>A</u> | <u>B</u> | <u>C</u> | <u>D</u> | <u>E</u> |
| <u>F</u> | <u>G</u> | <u>H</u> | <u>I</u> | <u>J</u> |
| <u>K</u> | <u>L</u> | <u>M</u> | <u>N</u> | <u>O</u> |
| <u>P</u> | <u>Q</u> | <u>R</u> | <u>S</u> | <u>T</u> |
| <u>U</u> | <u>V</u> | <u>W</u> | <u>X</u> | <u>Y</u> |





SPECIMEN

27

## The latex that helped connect the world

William Montgomerie was a doctor who treated both Raffles and Farquhar during their time in Singapore. He sent samples of a latex called gutta percha from Singapore to England in the 1840s. The latex, from the *Palaquium gutta* tree, was found to be the perfect insulator for telegraph cables. For the trees, this was bad news as large numbers were felled to obtain the latex.

This section of telegraph cable is from the unused stock of the cable that was laid under the Atlantic Ocean in 1858. By the 1900s, the latex was replaced with synthetic materials and the trees gained a reprieve.



End view of Cable.



Side view of Atlantic Cable, with the covering laid bare. Natural size. 1. Coating of 16 wires 7 strands each. 2. Rope & yarn soaked in Tar. 3. Gutta Percha. 4. Telegraph wire Tin number.

Upper Line

Lower Line

AFRICA



## The tapirs on tour

Speckled with white stripes and spots, this juvenile Malayan tapir (*Tapirus indicus*) was on the cusp of growing its adult colours (almost half-black, half-white) when it was collected in 1913 and displayed in the Raffles Museum. Its cute and cuddly disposition as well as its resemblance to a watermelon caused it to receive a lot of attention from the public during its excursion to the Asian Civilisation Museum in 2019. It was also selected as one of the 60 objects that tell the Singapore story. Another juvenile tapir specimen collected by an animal trader in 1905 was also on display in the National Museum of Singapore's recent exhibition, 'An Old New World'.



SPECIMEN

28



## A rare oddity

The watering pot shell (*Verpa penis*) is a peculiar animal. It is a bivalve (clam-like mollusc) that forms an adventitious tube and has one end perforated end from whence it gets its common name. All that is retained of its bivalve heritage are the tiny oval shapes valves at the broader end of the tube! Putting all the risqué comments on its scientific name aside, much of what we know about this strange mollusc is thanks to the world-renowned mollusc expert Richard D. Purchon, who studied the biology of this species during his decade-long stay in NUS.



## A dinosaur in an x-ray machine

When the museum's dinosaurs began to arrive in Singapore in 2012, it was suggested that some of the fossils should be studied using a computed tomography (CT) scanner to learn as much as possible about the fossils. This technique combines virtual slices of the bone using multiple x-rays taken from multiple angles to produce a three-dimensional scan. One of the fossilised bones was scanned and this CT radiograph is the result. All three dinosaurs are on permanent display in the museum's Dinosaur Zone.



SPECIMEN

30



L: 50 STORIES OF LABOUR AND LOVE



## Confusing scientists

These two stick insects, *Necrosia affinis* (the green specimen) and *Necrosia confusa* (the brown specimen), share much similarity in morphology and colouration. They were thought to be the same species that was named twice by two different scientists, which was plausible given how the world was less connected in the past. It was only a century later in 2017 that they were found to be two distinct species by one of our museum associates! This goes to show that sometimes it is not just the animals that exasperate scientists; other scientists can do that too!

SPECIMEN

31





## A crab called “Ouch”

Not all discoveries are made in the great outdoors. It also happens in restaurants. In the mid-1990s, seafood restaurants in Singapore began importing a large crab covered with sharp spines from Australia which was touted as a delicacy! Initially thought to be a known species, a graduate student linked to the museum painstakingly tracked the source of the crabs to Western Australia, and it proved to be a new species.

The name “*Hypothalasia ouch*” (for obvious reasons) was suggested but this was advised against by Australian collaborators and fishery officials who were worried the name might not be taken seriously. A more staid name, *Hypothalasia acerba* (Latin for spine), was eventually adopted.

SPECIMEN

33

## If the shoe sticks

On Valentine's Day 1989, while on an ecological survey of a forest stream, a student was surprised to find a "little black worm" stuck to her muddied shoe. It was just six centimetres long! A closer look revealed that this was no worm as it had a pair of eyes, nostrils, and a wide mouth! It was a juvenile yellow-banded caecilian (*Ichthyophis glutinosus*), one of the rarest amphibians in Singapore. What a find! Thankfully she did not simply dismiss it out of hand, or rather, shoe.





## In the dark

The Tioman cave loach (*Speonectes tiomanensis*) is arguably one of the rarest fishes in the world. The endemic species was apparently restricted to a granite cave system around 980 m above sea level on one side of the Pulau Tioman's tallest peak, Gunung Kajang. By pure luck a museum staff met a local guide on the island who knew where to find the fish. The staff was understandably giddy with excitement. Given the absolute darkness in their habitat, the loaches have become unresponsive to light despite having rudimentary eyes, and were thus unperturbed by the light beams that were shone on them.



SPECIMEN

35

## Singapore got 燕窝 (bird nest) meh?

Yes, and here is the proof: a nest collected in an abandoned old military bunker on Sentosa Island in the 1980s. It belonged to the edible-nest swiftlets (*Aerodramus fuciphagus*), which can be commonly seen in Singapore swooping about in the sky and hunting for insects. The species is one of several which build nests that are collected to make the famed traditional Chinese delicacy, bird's nest soup. Perhaps some of the delicacy's allure is diminished when one learns that the nests are constructed from the birds' saliva!

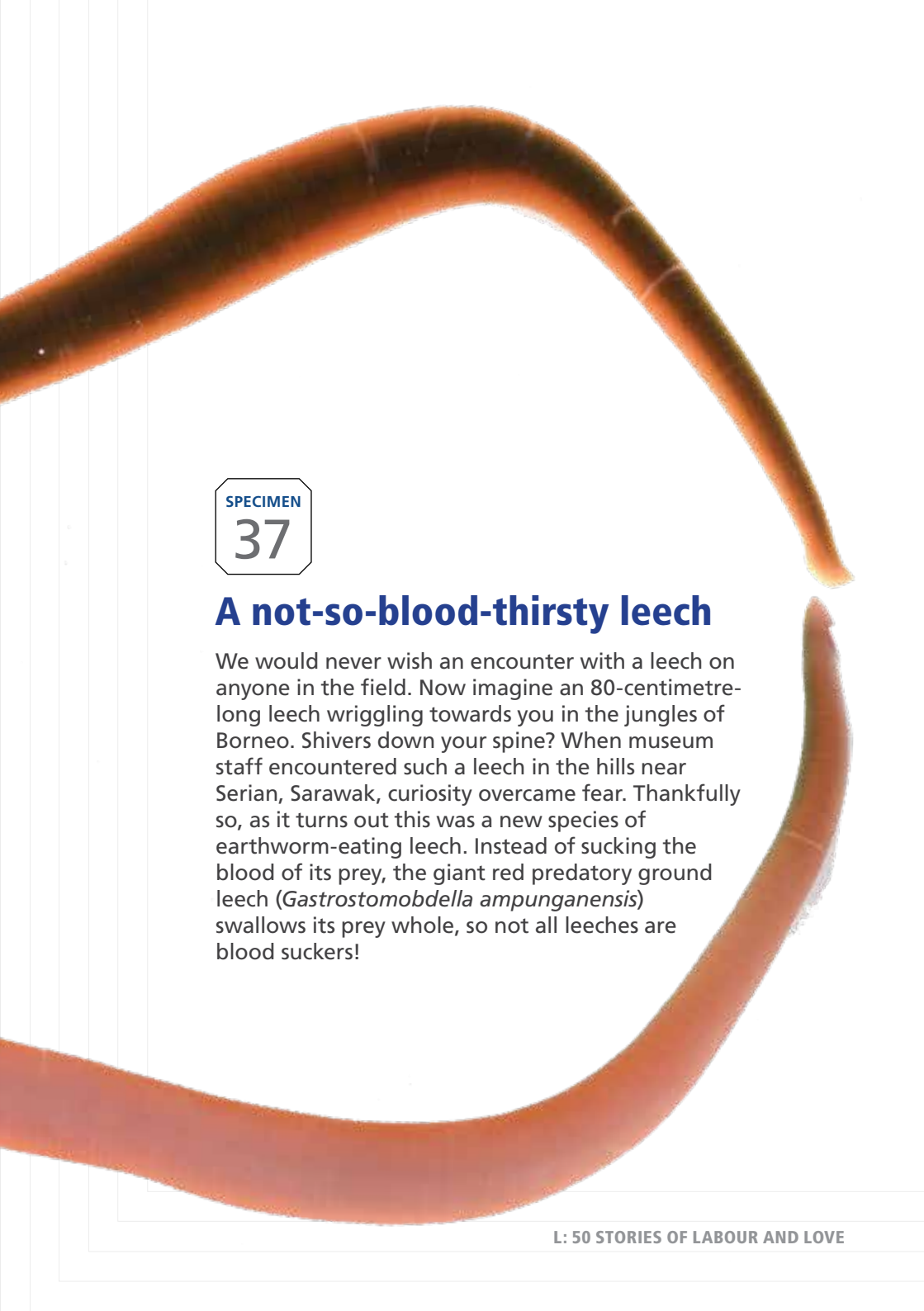




## A tough one to collect

It took our museum associate and her 'Anemone Army' many hours during dawn and dusk to collect the brown peachia anemone (*Synpeachia temasek*), which was first discovered in Singapore. Emerging from its burrow from deep within the intertidal substrate during low tides, the anemone rapidly retracts its extendable body from the surface when disturbed. The volunteers had to carefully dig around the anemones, sometimes as deep as a metre, in order to collect the specimens.





SPECIMEN

37

## A not-so-blood-thirsty leech

We would never wish an encounter with a leech on anyone in the field. Now imagine an 80-centimetre-long leech wriggling towards you in the jungles of Borneo. Shivers down your spine? When museum staff encountered such a leech in the hills near Serian, Sarawak, curiosity overcame fear. Thankfully so, as it turns out this was a new species of earthworm-eating leech. Instead of sucking the blood of its prey, the giant red predatory ground leech (*Gastrostomobdella ampunganensis*) swallows its prey whole, so not all leeches are blood suckers!

4. SIBERUT - Native in leaf-hat



1. SIBERUT ?





SPECIMEN

38

## The Smedley Collection

The photograph shown here is of Norman Smedley, who joined the Raffles Museum as an assistant curator in 1924. The photograph was taken on Pulau Aur, off the Malaysian state of Johor. Smedley had a reputation for being an efficient organiser and it was probably for this reason that he was involved in several collecting expeditions, including one of the earliest large-scale trips to the Mentawai Islands in Indonesia. The glass slides reproduced here show that expedition. These and other items were donated to the museum by Smedley's son, Derek, in 2017.



## Almost real

This round whip ray (*Maculabatis pastinacoides*) is not a taxidermised specimen; it is made out of papier-mâché. It is hard to believe until one takes a closer look at its underside, and the pieces of newspaper used for its construction are so clearly visible that you can read off them! This well-made replica is likely the work of Valentine Knight and Percy M. de Fontaine, who were taxidermists at the Raffles Museum. It was said that Knight's model of a Malay man decked in festive garments was so life-like many visitors were convinced it was a stuffed human, a fine testimony to his skills.



SPECIMEN

39



**WATERPROOF**

ample Card Sent Free  
 10d. per inch over 100  
 (low) Best 2d. Length 4  
 eding: (front) 4d. Guest  
 above: prices are for more  
 post, A.R.B. 1/6, 1/6, 1/6  
 large extra: 2/10 0  
 Ladies: 2/10 0  
**PRICES**



**WEDNESDAY**  
 KENT SENIOR  
 10d. per inch over 100  
 (low) Best 2d. Length 4  
 eding: (front) 4d. Guest  
 above: prices are for more  
 post, A.R.B. 1/6, 1/6, 1/6  
 large extra: 2/10 0  
 Ladies: 2/10 0  
**PRICES**

**Take care of your Cor**



Our hand  
 bear from  
 the the  
 Wo  
 co  
 and  
 tai  
 the  
 it

**BEETHAM'S**  
**La-r**

to your skin might and  
 prove to be the surest  
 discomfort. Its regular  
 in perfect condition of  
 ing and removing  
 tation, Tan, Chaps  
 chemist local.  
 Sold by the chemist

**M. BEETHAM**

are incom-  
 are made in the  
 loss of royalties  
 and that permanent  
 as the re-  
 of the courts.

**THE PUBLIC.**  
 valuation machinery for  
 three of these taxes was  
 George at £1,393,000  
 1912-13, and at £650,000  
 is up to the end of 1912-13  
 stood thus:

£1,393,000  
 223,237

the nation. £1,169,763.  
 for British Income de-  
 in the Dominions.  
 between 1905-6 and  
 administration of the  
 that income has ad-  
 21,000 to £103,894,000,  
 £20,000,000. If we  
 £1 of income is repre-  
 capital there has been an  
 to the extent of  
 years. No such  
 ever before occurred.

the nation. £1,169,763.  
 for British Income de-  
 in the Dominions.  
 between 1905-6 and  
 administration of the  
 that income has ad-  
 21,000 to £103,894,000,  
 £20,000,000. If we  
 £1 of income is repre-  
 capital there has been an  
 to the extent of  
 years. No such  
 ever before occurred.



## News from the inside of a tortoise

In August 1907, Richard Hanitsch encountered this Asian brown tortoise (*Manouria emys*) near the resthouse at The Gap that leads up to the Malaysian hill resort of Fraser's Hill. At this time, Hanitsch was director of the Raffles Museum. In 2014, the specimen was opened up for re-conservation and the museum's conservator and her collaborators found several dozen sheets from British and Singapore newspapers dating from 1905 and 1907. The most recent newspaper was dated 2 September 1907, and the process of preserving the tortoise may have taken only a matter of weeks. The specimen is on display in the museum's Reptile Zone.



SPECIMEN  
40



SPECIMEN

41

## More than meets the eye

The Bornean flat-headed frog (*Barbouroula kalimantanensis*) was known to science for 31 years before scientists realised something astonishing. The species had adapted to the cool, fast-flowing forest streams of Kalimantan, Indonesia by losing its lungs entirely, the first known among frogs and toads! Its lunglessness was only discovered in 2008 when a team including scientists linked with the museum discovered two new populations of the elusive and endangered frog. To add to the euphoria, dissection of specimens in the field revealed it had no lungs! Prior to this, only some salamanders and a caecilian were known to lack lungs.



## On and off on the news

There have been several non-fatal encounters with box jellyfishes by unfortunate beachgoers in recent years, but awareness of its presence and diversity in Singapore's waters remains low. When found stranded on the sand at Siloso Beach on Sentosa Island, this unidentified box jellyfish (*Morbakka* sp.) was handed over to our museum staff by a lifeguard with his bare hands!

Thankfully for the lifeguard, the jellyfish had lost all of its tentacles! Some species are known to deliver a potent venom through nematocysts on the tentacles that can result in debilitating symptoms similar to the Irukandji Syndrome.



SPECIMEN  
43



## Telok Ayer Market baby dugong

This baby dugong (*Dugong dugon*) specimen was donated to the museum by Ho Yang Peng in 1908. Ho had obtained it from the Telok Ayer Market, and it is possible that during this time dugongs were still being captured for food. Raffles remarked on how good dugong meat tasted when one was captured during a collecting trip in 1819.

Ho's father owned the Telok Ayer market and also had a monopoly on other markets in Singapore. The younger Ho (who donated the dugong) was found dead in the manager's office at the Telok Ayer Market in 1932. The cause of his death remains unresolved.

## A slow rise to fame

The roughnose wedgefish (*Rhynchobatus cooki*) was first collected in 1934 under another name, and it remained unnoticed until the late 1990s. A team of researchers, including a shark expert who was consultant to the 1975 movie 'Jaws', were in Singapore to collect specimens and study the museum's collections. Accompanied by museum staff, they discovered the species during a visit to the Jurong Fish Market. But scientists don't always work fast, and it took almost another two decades before the species was formally named. Although several specimens have been collected in fish markets in Indonesia and Singapore, the exact location where it lives is still unknown.



SPECIMEN  
45



## Spider stowaways?

In 1861, zoologist Eduard von Martens found spiders running about on an exposed reef on what is today Sentosa Island. The initial suspicion was that they had stowed away on his clothing. Careful pre-departure searches on subsequent trips and the discovery of a web inside a shell led to the conclusion that the spider really truly was a marine species and it was named *Desis martensi* in recognition of its discoverer. A century and half later, this specimen was collected in Singapore waters during the Comprehensive Marine Biodiversity Survey which the LKCNHM participated in.



SPECIMEN

46



## The prodigal son returns

A 42-foot skeleton of an Indian fin whale (*Baleaenoptera indica*) used to dominate the gallery of the Raffles Museum, and remain a household name for decades. When it was taken down in 1974 and gifted to the Muzium Negara (National Museum) in Kuala Lumpur, the nation mourned and pined for their lost whale.

As it so happens, Singapore found itself another whale during its golden jubilee in 2015 when a dead sperm whale (*Physeter catodon*) was spotted off Jurong Island. The skeleton of the whale, nicknamed Jubi Lee, was prepared by the museum staff and eventually put up on display in 2016.



## The way to science is through its stomach

When the sperm whale (see previous story) was dissected, museum staff were most keen to get to its gut, where the answers to its life history and diet lay. There, they learnt from the thousands of squid beaks left undigested that the whale (like others of its kind) enjoyed snacking on squids.

To study this material they invited none other than giant squid specialist Professor Tsunemi Kubodera, who spent much of his research career attempting to photograph and film a giant squid (*Architeuthis dux*) alive in its natural habitat, and eventually becoming the first to do so just before his retirement!





SPECIMEN

48

## Our nocturnal visitor

While the museum mostly contains specimens of the once-living, a cryptic visitor frequents the outside of our premises, foraging in the night. The nocturnal Sumatran palm civet (*Paradoxurus musangus*) has an elusive lifestyle, living among human habitation but is rarely seen due to its shy nature and arboreal habits. An eagle-eyed staff spotted a footprint that the cat-sized mammal left on the surface of the soil amongst the plants in our garden, and this cast was made from the impression.

SPECIMEN

49





## Of giant significance

The crew of SJADES 2018 were delighted when two highly-anticipated giant deep-sea isopods were hauled up from the cold ocean depths of between 950 and 1,260 metres. They were the subject of much “oohing” and “aahing”. Some members of the expedition even attempted to adopt one of the isopods, affectionately nicknamed “Darth Vader” for its resemblance to the ‘Star Wars’ character. Fortunately for science, the specimen is now part of our collections and was recently named *Bathynomus raksasa*, with “raksasa” meaning giant in Indonesian. This new species also made its rounds in international headlines, simultaneously making the museum and its collaborators famous overnight.



## Lost and found

In June 1819, on one of Stamford Raffles' collecting trips around Singapore, a strange goblet-shaped sponge was encountered. This Neptune's cup sponge (*Cliona patera*) became the first animal to be described and named scientifically from Singapore. Overcollecting led to it being presumed to be extinct for over a century until its rediscovery in Australia two decades ago.

Just when we thought all hope was lost for the sponge in Singapore, an amazing discovery was made by our museum associates in 2011, who found not one, but two individuals a mere 50 metres apart along the Singapore Strait!

## Coda: The Ages of a Museum

In Roman times, the symbol L denoted the number 50. As the Lee Kong Chian Natural History Museum commemorates one-tenth that span in years (it has been 5 years since it was officially launched), the natural history collections under its care cross a momentous 50-year threshold. It has been half a century since the natural history collections that trace their origins back to the Raffles Library and Museum left Stamford Road, and joined what is today the National University of Singapore. Parts of the collection itself, however, are over a century old – two L's.

The letter L also symbolises what has made the museum what it is today. Its history is a story of labour and love by many generations of people who put in sweat and tears to keep it intact, building and studying the collections and making it come alive. 50 years ... and two generations of curators have helmed this museum to make it what it is today.

The fifty stories in this book are centred on specimens, objects and artefacts that have withstood the vagaries of time, depredations of conflict, inevitability of decay and constant assault of pests, both human and animal. They reflect the many ages of the museum – through good and bad times. When many of the specimens were collected, they were simply seen as a means of bringing nature indoors to be preserved and studied. The world was simpler then and the practice of science a more innocent practice. The colours of fur and feathers were noted, the number of spines counted and the lengths of legs measured. The advent of DNA sequencing and other techniques applied to many of these specimens have provided new insights at the genetic level. The metadata, the information associated with specimens,

is also becoming important. As the next decade unfolds, big data and new technologies will play ever more important roles in today's research questions. And even more in the decades to come. Knowing the past so we can chart our future.

As Singapore matures as a country, it will grapple with its global place and role. A more subtle but equally important emotion also comes to the forefront. Nostalgia and a sense of our own history. Science after all, is conducted by people. Flesh and blood. The people and how they did what they did matter as much as what they found: stories about the collected and the collectors. This historical perspective has gained further momentum as humankind grapples with the massive environmental changes that our species has wrought. The past is and will always be prologue.

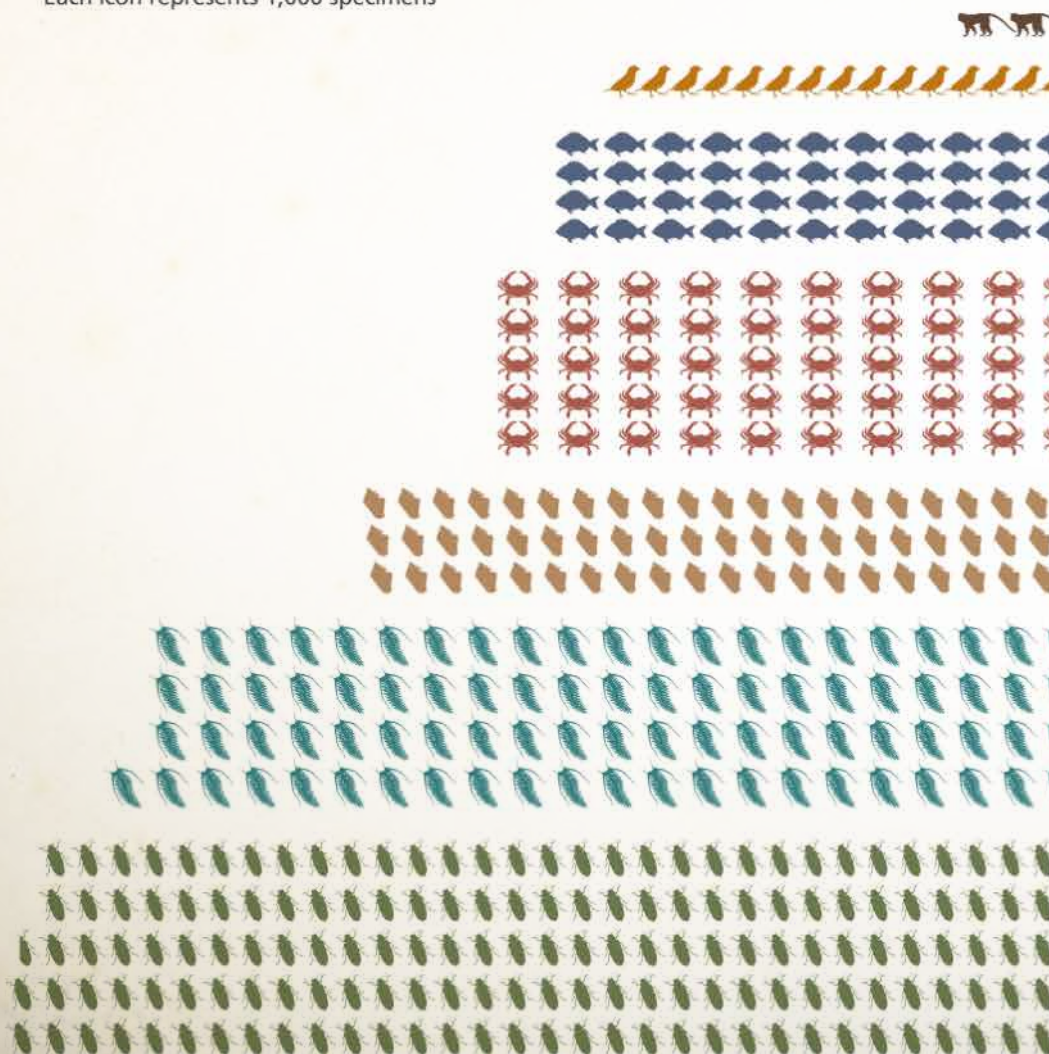
A museum and the science it does is about its people and the things they have done. Past and present find consilience in perfect symmetry. The accomplishments of one generation is the net outcome of endeavours years past. There is no present without a past. The collections it holds are a testament to the sense of curiosity and purpose of discovery that transcends human mortality. The spirit endures. And will persist as a fourth generation of leaders take over.

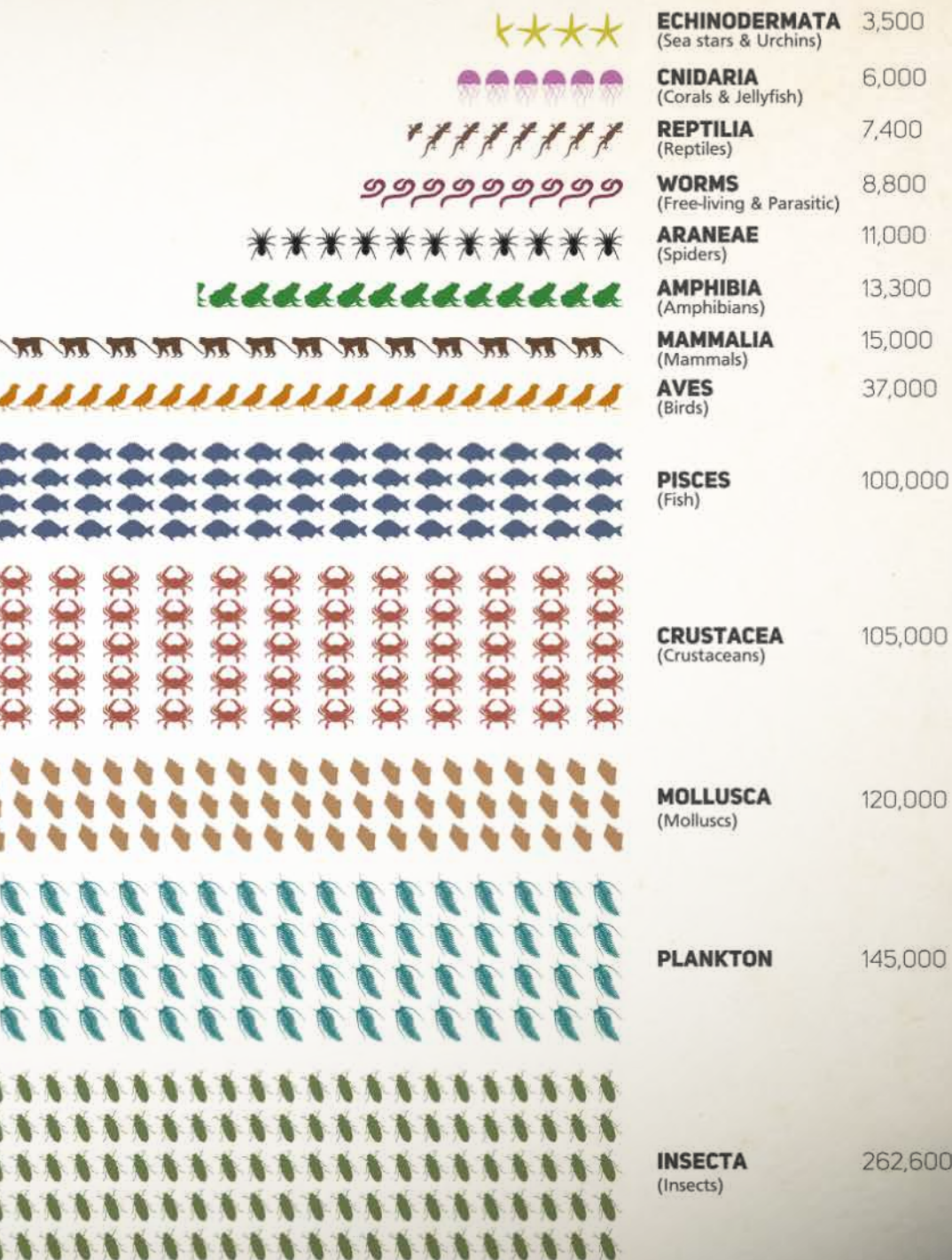
**Peter K. L. Ng**  
**Head**  
**Lee Kong Chian Natural History Museum**

# 834,600

This is the current estimated number of specimens in the museum's collections. As new material is continuously being added from expeditions and other sources, this number continues to grow on a daily basis.

Each icon represents 1,000 specimens





# Image Credits

- 01 Helmet urchin**  
*Colobocentrotus atratus*  
(Linnaeus, 1758)  
Specimen photographed by  
Tan Heok Hui / LKCNHM
- 02 Banded leaf monkey**  
*Presbytis femoralis* (Martin, 1838)  
Specimen in bottle photographed by  
Ruzaini Bin Ghazali / LKCNHM  
  
Black-and-white photograph  
Source: LKCNHM
- 03 Moth collected by John C. Moulton**  
Specimen photographed by  
Ruzaini Bin Ghazali / LKCNHM
- 04 Smooth-coated otters**  
*Lutrogale perspicillata*  
(Geoffroy Saint-Hilaire, 1826)  
Specimens photographed by Tan  
Heok Hui / LKCNHM
- 05 Garfunkel's crab**  
*Chiromantes garfunkel*  
Davie & Ng, 2013  
Specimens photographed by  
Tan Heok Hui / LKCNHM
- 06 Perisphaerus sp.**  
Specimen photographed by  
Foo Maosheng / LKCNHM
- 07 Currier's knife**  
Object photographed by  
Tan Heok Hui / LKCNHM  
  
Currier's knife in use  
Source: 'Recueil de planches, sur les  
sciences, les arts libéraux, et les arts  
mécaniques' (D. Diderot, 1763) /  
Internet Archive
- 08 Narwhal**  
*Monodon monoceros* Linnaeus, 1758  
Specimen photographed by  
Tan Heok Hui / LKCNHM
- 09 Tiger shark**  
*Galeocerdo cuvier*  
(Péron & Lesueur, 1822)  
Specimen photographed by  
Tan Heok Hui / LKCNHM
- 10 Hendrickson's catfish**  
*Akysis hendricksoni* Alfred, 1966  
Specimen photographed by  
Tan Heok Hui / LKCNHM  
  
Inscription by John R. Hendrickson  
Source: LKCNHM
- 11 Giant clam**  
*Tridacna gigas* (Linnaeus, 1758)  
Specimen photographed by  
Tan Heok Hui / LKCNHM  
  
"The great oyster from  
Singapore" illustration  
Source: 'Fisheries of the World'  
(F. Whymper, 1884)
- 12 Pyrocoelia fumigata  
Gorham, 1880**  
A. R. Wallace's (lighter-coloured)  
specimen photographed by  
Ang Yuchen / LKCNHM  
Darker-coloured specimen collected  
in 2009 photographed by  
Wan F. A. Jusoh / LKCNHM
- 13 Wasp-mimic hoverfly**  
*Milesia vespoides* Walker, 1857  
Specimen photographed by  
Joseph Lin / National Parks Board
- 14 Wallace's standardwing**  
*Semioptera wallacii* Gray, 1859  
Specimen photographed by  
Ruzaini Bin Ghazali / LKCNHM  
  
Map of Wallace's travels  
Source: 'The Malay Archipelago'  
(A. R. Wallace, 1869) / Biodiversity  
Heritage Library

- 15 Moth presented by Mr George Yeo**  
*Macarostola* sp.  
 Source: LKCNHM
- Wallace & Ali statue  
 Courtesy of PM Lee Hsien Loong
- 16 Black marlin**  
*Makaira indica* (Cuvier, 1832)  
 Courtesy of Yeo Keng Loo / LKCNHM
- 17 Changeable lizard**  
*Calotes versicolor* (Daudin, 1802)  
 Specimen photographed by  
 Tan Heok Hui / LKCNHM
- 18 South American freshwater stingray**  
*Potamotrygon motoro*  
 (Müller & Henle, 1841)  
 Specimen photographed by  
 Tan Heok Hui / LKCNHM
- 19 Trilobite beetle**  
*Platerodrilus wongi* Masek & Bocak,  
 2014  
 Source: LKCNHM
- 20 Malayan flying fox**  
*Pteropus vampyrus* (Linnaeus, 1758)  
 Specimen photographed by  
 Tan Heok Hui / LKCNHM
- 21 Chengal pasir**  
*Hopea sangal* Korth.  
 Slice of the tree photographed by  
 Jeremy W. L. Yeo / LKCNHM
- 22 *Paedocypris progenetica* Kottelat, Britz, Tan & Witte, 2006**  
 Live specimen photographed by  
 Tan Heok Hui / LKCNHM
- 23 Saltwater crocodile**  
*Crocodylus porosus* Schneider, 1801  
 Skulls of 'Edgar' (lateral view) and  
 'Giryu' (dorsal view) photographed  
 by Tan Heok Hui / LKCNHM
- 24 King cobra**  
*Ophiophagus hannah* (Cantor, 1836)  
 Preserved skin photographed by  
 Ruzaini Bin Ghazali / LKCNHM
- 'The Island Club Hamadryad' note  
 Source: LKCNHM
- 25 Snakes drawings and glass slides by Michael W. F. Tweedie**  
 Source: LKCNHM
- 26 Pear-shaped cowrie**  
*Erronea pyriformis* (Gray, 1824)
- Lamarck's cowrie**  
*Naria lamarckii* (Gray, 1825)  
 Specimens photographed by  
 Tan Heok Hui / LKCNHM
- 27 Transatlantic cable**  
 Object photographed by  
 Tan Heok Hui / LKCNHM
- Map of Atlantic cable**  
 Source: 'Chart of the Submarine  
 Atlantic Telegraph' (Barker, 1858) /  
 Library of Congress
- 28 Malayan tapir**  
*Tapirus indicus* Desmarest, 1819  
 Specimen and name plate  
 photographed by Tan Heok Hui /  
 LKCNHM
- 29 Watering pot shell**  
*Verpa penis* (Linnaeus, 1758)  
 Specimen photographed by Tan Heok  
 Hui / LKCNHM
- 30 LKCNHM sauropod dinosaur exhibit**  
 Photograph by Teo Zi Tong
- CT scan of sauropod  
 dinosaur fossilised bone  
 Source: LKCNHM

- 31 *Necrosia affinis* (Gray, 1835)**  
(green specimen)  
***Necrosia confusa* (Redtenbacher, 1908)** (brown specimen)  
Live specimens photographed by Francis Seow-Choen
- 32 *Champagne crab***  
*Hypothalasia acerba* Koh & Ng, 2000  
Source: LKCNHM
- 33 *Yellow-banded caecilian***  
*Ichthyophis paucisulcus* Taylor, 1960  
Specimen photographed by Tan Heok Hui / LKCNHM
- 34 *Tioman cave loach***  
*Speonectes tiomanensis* (Kottelat, 1990)  
Specimen photographed by Tan Heok Hui / LKCNHM
- 35 *Edible-nest swiftlet***  
*Aerodramus fuciphagus* (Thunberg, 1812)  
Bird nest photographed by Tan Heok Hui / LKCNHM
- 36 *Brown peachia anemone***  
*Synpeachia temasek* Yap, Fautin, Ramos & Tan, 2014  
Live specimen photographed by Ria Tan
- 37 *Giant red predatory ground leech***  
*Gastrostomobdella ampunganensis* Nakano, 2018  
Specimen photographed by Tan Heok Hui / LKCNHM
- 38 *Glass slides of Mentawai Expedition and photograph of Norman Smedley from the Smedley Collection***  
  
Slides photographed by Ruzaini Bin Ghazali / LKCNHM
- 39 *Round whipray***  
*Maculabatis pastinacoides* (Bleeker, 1852)  
Papier-mâché cast photographed by Tan Heok Hui / LKCNHM
- 40 *Asian brown tortoise***  
*Manouria emys* (Schlegel & Müller, 1844)  
Specimen and newspaper stuffing photographed by Tan Heok Hui / LKCNHM
- 41 *Bornean flat-headed frog***  
*Barbourula kalimantanensis* Iskandar, 1978  
Live specimen photographed by Tan Heok Hui / LKCNHM
- 42 *Box jellyfish***  
*Morbakka* sp.  
Specimen photographed by Iffah Iesa
- 43 *Dugong***  
*Dugong dugon* (Müller, 1776)  
Courtesy of the National Museum of Singapore
- 44 *Roughnose wedgefish***  
*Rhynchobatus cooki* Last, Kyne & Compagno, 2016  
Specimen photographed by Kelvin K. P. Lim
- 45 *Marine spider***  
*Desis martensi* Koch, 1872  
Specimen photographed by Rene Ong / LKCNHM  
Live specimen photographed by Ria Tan

- |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>46 Sperm whale</b><br/> <i>Physeter catodon</i> Linnaeus, 1758<br/>         Sperm whale off Jurong Island<br/>         photographed by Iffah Iesa / LKCNHM</p> <p>Exhibit photographed by<br/>         Jeremy W. L. Yeo / LKCNHM</p> <p>Defleshed bones, photographed by<br/>         Sofina C. Q. Ng / LKCNHM</p> | <p><b>Opening spread</b>      Biodiversity gallery<br/>         Photograph by Teo Zi Tong</p> <p><b>Back cover</b>      Heritage gallery<br/>         Photograph by Teo Zi Tong</p> <p><b>Coda</b>      Raffles Museum building<br/>         Source: LKCNHM</p> <p><b>Infographic</b>      Specimen infographic<br/>         Source: LKCNHM</p> |
| <p><b>47 Squid beaks</b><br/>         Specimens photographed by<br/>         Tan Heok Hui / LKCNHM</p>                                                                                                                                                                                                                   | <p>Animal graphics by<br/>         Macrovector / FreePik,<br/>         Vecteezy and FreePik</p>                                                                                                                                                                                                                                                 |
| <p><b>48 Sumatran palm civet</b><br/> <i>Paradoxurus musangus</i> (Raffles, 1821)<br/>         Cast of paw print photographed by<br/>         Tan Heok Hui / LKCNHM</p>                                                                                                                                                  | <p><b>Expedition photo</b>      Sarawak expedition<br/>         Photograph by Chan Kin Onn</p>                                                                                                                                                                                                                                                  |
| <p><b>49 Bathynomus raksasa</b><br/> <b>Sidabalok, Wong &amp; Ng, 2020</b><br/>         Source: SJADES 2018 / LKCNHM</p>                                                                                                                                                                                                 | <p>Images that are denoted LKCNHM are in the<br/>         collections of the Lee Kong Chian Natural<br/>         History Museum or are the work of the<br/>         museum's staff.</p>                                                                                                                                                         |
| <p><b>50 Neptune's cup sponge</b><br/> <i>Cliona patera</i> (Hardwicke, 1820)<br/>         Specimen photographed by<br/>         Tan Heok Hui / LKCNHM</p>                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                 |

---

## Acknowledgements

The museum would like to acknowledge the assistance of Daniel Tham and Jonathan Ho. The editors also thank the following museum staff for their contributions: Peter K. L. Ng, Belinda Teo, Kelvin K. P. Lim, Ang Yuchen, Dzaki Bin Safaruan, Foo Maosheng, Iffah Iesa, Kate Pocklington, Ruzaini Bin Ghazali, Tan Heok Hui, Tan Siong Kiat and Wan F. A. Jusoh.

# Index

The numbers refer to the stories contained in the book.

## A

Alfred, Eric R., 9, 10  
Amphibia (amphibians), 10, 33, 41  
Annelida (worms), 37  
Arachnida (arachnids), 45  
Asian brown tortoise (*Manouria emys*), 40  
Aves (birds), 14, 35

## B

Banded leaf monkey (*Presbytis femoralis*), 2  
*Bathynomus raksasa*, 49  
Black marlin (*Makaira indica*), 16  
Bornean flat-headed Frog  
(*Barbourula kalimantanensis*), 41  
Box jellyfish (*Morbakka* sp.), 42  
Brown peachia anemone (*Synpeachia temasek*), 36

## C

Champagne crab (*Hypothalasia acerba*), 32  
Changeable lizard (*Calotes versicolor*), 17  
Chengal pasir (*Hopea odorata*), 21  
Cnidaria (jellyfish, sea urchins), 36, 42  
Crustacea (crustaceans), 5, 32, 49  
Currier's knife, 7

## D

Dinosaurs, 30  
Dugong (*Dugong dugon*), 43

## E

Echinodermata (echinoderms), 1  
Edible-nest swiftlet (*Aerodramus fuciphagus*), 35

## F

Fontaine, Percy M. de, 39

## G

Garfunkel's crab (*Chiromantes garfunkel*), 5  
Giant clam (*Tridacna gigas*), 11  
Giant red predatory ground leech  
(*Gastrostomobdella ampunganensis*), 37

## H

Hanitsch, Karl R., 40  
Helmet urchin (*Colobocentrotus atratus*), 1  
Hendrickson, John R., 10  
Hendrickson's catfish (*Akysis hendricksoni*), 10  
Hoo Ah Kay, 8

## I

Insecta (insects), 3, 6, 12, 13, 15, 17, 19, 31

## K

King cobra (*Ophiophagus hannah*), 24

## L

Lamarck's cowrie (*Naria lamarckii*), 26

## M

Malayan flying fox (*Pteropus vampyrus*), 20  
Malayan tapir (*Tapirus indicus*), 28  
Mammalia (mammals), 2, 4, 8, 20, 28, 46, 48  
Marine spider (*Desis martensi*), 45  
Montgomerie, William, 27  
Mollusca (molluscs), 26, 29, 47  
Moulton, John C., 3

## N

Narwhal (*Monodon monoceros*), 8  
Neptune's cup sponge (*Cliona patera*), 50

## P

Pear-shaped cowrie (*Erronea pyriformis*), 26  
Pill cockroach (*Perisphaerus* sp.), 6  
Pisces (fish), 9, 10, 16, 18, 22, 34, 39, 44  
Porifera (sponges), 50  
*Pyrocoelia fumigata*, 12

## R

Raffles Museum, 3, 10, 23, 24, 25, 28, 38, 39, 40, 46  
Reptilia (reptiles), 17, 23, 24, 40  
Roughnose wedgefish (*Rhynchobatus cooki*), 44  
Round whiplay (*Maculabatis pastinacoides*), 39

## S

Saltwater crocodile (*Crocodylus porosus*), 23  
Smedley, Norman, 38  
Squid, 47  
Smooth-coated otter (*Lutrogale perspicillata*), 4  
South American freshwater stingray  
(*Potamotrygon motoro*), 18  
Sperm whale (*Physeter catodon*), 46  
Stick insects, 31  
Sumatran palm civet (*Paradoxurus musangus*), 48

## T

Telegraph cable, 26, 27  
Tiger shark (*Galeocerdo cuvier*), 9  
Trilobite beetle (*Platerodrilus wongi*), 19  
Tweedie, Michael W. F., 24, 25, 26

## W

Wallace, Alfred Russel, 12, 13, 14, 15  
Wallace's standardwing (*Semioptera wallacii*), 14  
Wasp-mimic hoverfly (*Milesia vespoides*), 13  
Watering pot shell (*Verpa penis*), 29

## Y

Yellow-banded caecilian (*Ichthyophis paucisulcus*), 33

A group of people are in a green canoe on a river in a forest. The canoe is green and has a yellow bucket on it. The people are wearing blue and black clothing. They are using long poles to navigate the river. The river is surrounded by dense green forest. The water is brown and reflects the surrounding trees. The scene is captured from a high angle, looking down at the canoe as it moves down the river.

# The Museum heading into new waters.

Expedition at Nanga Ju, Sarawak, Malaysia in October 2019 with partners from the Sarawak Forestry Corporation.

In Roman times, the symbol L denoted the number 50. The collections in the Lee Kong Chian Natural History Museum have crossed a momentous 50-year threshold – it has been half a century since the collections that originated with the Raffles Library and Museum left Stamford Road, and became an integral part of the National University of Singapore.

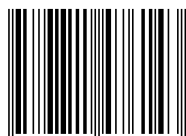
With the passage of this time, the collection has grown in size, value and importance. L is a testimonial to the labour and love put in by many generations of curators who studied, built and safeguarded this collection. In this book, we showcase 50 interesting stories, based on the many specimens and objects from our vaults.

# Moving into the University (1970s–present)

In the early 1970s, the zoological collection was removed from the National Museum. Over the next 15 years, the University of Singapore (later NUS after it merged with Nanyang University) housed the collection, albeit in less than ideal conditions.

In 1988, the Zoological Reference Collection, as it became to be known, moved to a purpose-built home in a purpose-built facility at NUS's Department of Zoology (now known as the Department of Biological Sciences). Prior to the university taking over the collections in 1972, a number of specimens were lost, given away or lost but even so, the material received still stood as an impressive 160,000 lots in the late 1970s. Important additions were subsequently made by zoologists at NUS and Nanyang University, particularly of marine fauna.

Since then, the Zoological Reference Collection has continued to grow, in tandem with biodiversity research by NUS faculty and students. In 2015, the collection of in excess of one million specimens moved to the new Lee Kong Chian Natural History Museum building.



9 789811 476143 >