

Digitising S'pore's natural history key to fostering conservation: Don

Five-year undertaking aims to document 10,000 specimens collected over the past 200 years

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The truth of the matter is that you cannot conserve what you do not know, said National University of Singapore (NUS) professor Peter Ng. But in order to gain that knowledge, he added, you need to return to conservation's source of knowledge – the past.

And in the case of the project that Prof Ng is leading at the Lee Kong Chian Natural History Museum at NUS, the pursuit of this past stretches more than 200 years.

Last Wednesday, the museum and the Natural History Museum (NHM) in London launched Project Signify – a digital archive of Singapore's historical biodiversity.

The five-year undertaking aims to document and make available online 10,000 historically and biologically important natural history specimens collected over the past two centuries. These specimens are in museums worldwide now.

Of the project, Prof Ng said: "This is what people call natural his-

tory, and sometimes people compare it to collecting antiques, but really, what we are collecting is proof of a natural world that used to be very different."

These specimens are important, he added, because they would allow scientists to compare creatures found in Singapore today with what used to exist.

The principal investigator of the project said: "It allows us to decide what animals to focus on conserving and find out what kinds of animals we could possibly bring back."

While most of Singapore's important specimens, such as the first animals given scientific names here, are housed in the NHM due to the country's colonial legacy, the task of digitising these specimens is not as simple as just visiting the museum in London, taking pictures and putting them up on the Internet, said Mr Martyn Low, research associate at the natural history museum here and project manager of Signify.

"During the British colonial period, Singapore was a major trading port and people from all around the planet were passing through the island," he noted.

During this time, specimens were often simply procured here but could have come from beyond Singapore's shores, Mr Low said.

"In the end, the act of searching



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PROFESSOR PETER NG (above), who is leading Project Signify, on documenting historically and biologically important natural history specimens.

for Singapore specimens all over the world requires intensive detective work – it requires digging through papers and other materials to find out more about their collectors," he said.

But from this research, some stories about prominent naturalists who worked in Singapore emerge.

For instance, looking into Singapore fossils in the NHM, the team at the natural history museum here discovered the story of Ms Elizabeth Alexander, the island's first female geologist.

During her years in Singapore before World War II, she was involved in studying the effects of tropical weather patterns on erosion. After the war in the 1950s, she was employed by the Government to study the use of Singaporean granite in the post-war reconstruction.

She found that the island had more than ample supplies of granite outside of Bukit Timah and the central forest reserve, and quarrying at these sites could therefore be limited, allowing them to mostly be preserved.

Mr Low said: "As you connect the dots between different specimens and collectors, you become acquainted with how these lives are woven together in this scientific endeavour... the stories you can tell about how people of the

past were bound together by specimens."

But the pursuit of Singapore's history, besides being equal parts necessary, interesting and tedious, is also partly selfish, said Prof Ng, who teaches at the Department of Biological Sciences in NUS.

Referring to a specimen of the crab *Favus granulatus*, which roughly translates to coral grain, he said: "You know, in my years of dedicated study, it's incredible that Singapore is the only place where I can reliably collect these crabs... Out of everywhere in the world, this little crab chose Singapore to be its home."

He said: "As a Singaporean, of course, I want to know my heritage... I want to know what is here today and what was here before."

And of the coral grain crab, he added: "And I am proud that these animals make Singapore their home... because this land is as much theirs as it is ours."

Opened in 2015, the museum in NUS is Singapore's first and only natural history museum that exhibits around 2,000 artefacts. It is best known for housing three full-scale fossils of dinosaurs and nurturing public interest in biodiversity and associated environmental issues.

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