



Mr Lim Swee Cheng from the National University of Singapore's Tropical Marine Science Institute wants people to come forward with their stories of collecting or using sea sponges here, as part of his research into the economic, historical and cultural aspect of sea sponges in this region, for a book chapter.  
ST PHOTO: ALPHONSUS CHERN

People

# Marine biologist soaks up info on sea sponges like a sponge

## Use of natural sponges from Singapore's waters gives insight about the sea creatures – and island's heritage

**Audrey Tan**  
Environment Correspondent

Mr Lim Swee Cheng wants to speak to people about their bathing habits – their use of bathing sponges, to be precise.

And it would be good if grandpa or grandpa are the ones responding, as he is interested in the use of natural sponges sourced from Singapore's waters.

Speaking to *The Straits Times* from his laboratory on offshore St John's Island last Thursday, the 40-year-old marine biologist said: "I came across this 1939 paper in a science journal that said that people in Singapore used sea sponges in the past, but it seems that these stories have been forgotten over the generations."

Mr Lim, who is from the National University of Singapore's Tropical Marine Science Institute, wants people to come forward with their stories of collecting or using sea sponges here, as part of his research into the economic, historical and cultural aspect of sea sponges in this region, for a book chapter.

Natural bath sponges refer to the dried skeletons of sea sponges, marine creatures often mistaken by scuba divers as being hard corals, as they are mostly sessile and cannot move. But sea sponges are entirely different creatures. A key difference between them lies in the composition of their skeletons. Corals have skeletons made of calcium carbonate. Most sponges, on the other hand, have glass skeletons.

Mr Lim said these primitive creatures, which have no organs like eyes or stomachs, have the unique ability to extract dissolved silica in sea water to form glass skeletons.

But the sea sponges used as bath sponges are even more peculiar.

Bath sponges are a small group of sponges that have evolved and replaced glass skeletons with collagen. Said Mr Lim: "Instead of glass, their skeletons are made of collagen, a type of protein."

"This makes them less brittle compared to sea sponges with glass skeletons, whose spicules may cause abrasions and allergies if used on human skin."

There are about 250 species of sponges that can be found in Singapore's waters. Of these, only two species are suitable to be used as bath sponges – *Spongia ceylonensis* and *Hippospongia sp.* Mr Lim found specimens of both sponges about a decade ago, at a lagoon on St John's Island.

Internationally, only about 15 of the more than 8,800 species of sponges worldwide are fished for use as bath sponges, according to the Food and Agriculture Organisation of the United Nations (FAO), all of them found in the Mediterranean and Caribbean.

Sponge industries involving fishermen collecting sponges for sale

used to flourish in these areas in the 1900s and the 1980s, but crashed when the trade became unsustainable due to overharvesting, and when sponges there died of disease, said Mr Lim.

Today, good-quality natural bath sponges from these areas can fetch prices of about US\$1 (S\$1.32) per gram of sea sponge. The hefty price tag is not surprising, considering that most sponges are slow-growing animals.

A palm-sized specimen of the *Spongia ceylonensis* in Mr Lim's research collection, for example, likely took almost a decade to reach that size, he said.

Mr Lim, who married to urban planner Esther Chai, 36, and has a two-year-old boy and a seven-month-old girl, said he had, for the fun of it, tested the Singapore bath sponges on his children before. He said: "We have excellent quality bath sponges comparable to the best in the world – they hold water well, and are soft to the touch."

He hopes historical accounts from those who have used the sponges in the past can confirm this.

Singapore also had a budding sponge industry, although it was nowhere as big as in the Mediterranean or Caribbean, according to the 1939 research paper by Stanley Willmott published in the *Journal*

of the Malayan Branch of the Royal Asiatic Society.

The paper noted that Malay fishermen used to collect the sponges from coral reefs and islands adjacent to mainland Singapore, such as Pulau Ubin. They would clean them before selling them to merchants. "(The) cleaned and bleached Malay sponges, cut into small pieces and packed in cellophane, can be seen exposed for sale in a number of Chinese shops in Singapore," it said.

A 1948 *Straits Times* article also said that Singapore's sponge industry was seeing a revival after the Japanese Occupation, which gave the animal time to increase in numbers.

Mr Lim, the only scientist in Singapore studying sponges, hopes that his project, which aims to collect accounts of sponges in the past, can help with his research. He said: "From the 1939 paper, we know that sea sponges existed in Singapore almost a century ago."

"Today, they are still present in our waters. Some species may have disappeared, but some are still around, despite urbanisation."

Heritage blogger Jerome Lim said his mother, 77, remembers some people among the Eurasian community, and Italian nuns at the St Anthony's Convent, harvesting sea sponges for personal use. He said: "Oral history accounts offer valuable insights into various aspects of our history, such as everyday life, social practices and events, that would otherwise be unrecorded."

Marine biologist Toh Tai Chong, a lecturer at the College of Alice and Peter Tan in NUS said: "We have a rich history that dates back to 700 years. It's a treasure trove yet to be uncovered. There is much to learn about our islands and inhabitants."

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• Those who have personal stories of fishing or using sea sponges from Singapore can contact Mr Lim at [sponging@gmail.com](mailto:sponging@gmail.com).

**Singapore's sponges**



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