



Dr Huang Danwei (left), 33, a former student of Professor Chou Loke Ming (right), is the new head of the Reef Ecology Lab at NUS. Prof Chou, the lab's former head, is now an adjunct research professor at NUS' Tropical Marine Science Institute and biological sciences department. He will continue to oversee the projects he took on before retirement. ST PHOTO: CHEW SENG KIM

NUS reef research lab regains life under new chief

Facility nearly had to shut when head retired, but his ex-student takes up mantle

By AUDREY TAN

THE Reef Ecology Lab at the National University of Singapore (NUS), which for more than 30 years was helmed by coral expert Chou Loke Ming, has a new head.

One of Professor Chou's former students, Dr Huang Danwei, 33, will continue its legacy.

The lab almost had to shut last October, when Prof Chou, 68, decided to retire. Dr Huang, who will be one of two principal investigators, the other being Prof Chou, will ensure the lab's continuity.

The lure of the ocean drew Prof Chou out of full retirement. He is now an adjunct research professor at the NUS Tropical Marine Science Institute and the university's biological sciences department. He will continue to oversee the regional coastal management projects he took on before his retirement.

"Prof Chou has built up the lab over 30 years, so

we are not starting from scratch. I am inspired to continue his work," said Dr Huang, who in 2012 got his doctorate in marine biology from the Scripps Institution of Oceanography in the United States on an NUS scholarship. He spent two years as a post-doctoral researcher at the University of Iowa and returned to Singapore last year. Dr Huang will be appointed Assistant Professor at NUS' Department of Biological Sciences on July 1.

The Reef Ecology Lab studies coral reefs, the marine life that these habitats sustain, and the interactions between them. It aims to apply its research to coral reef restoration and coastal management efforts – an important area, considering Singapore's increasingly urban waterways.

Since the mid-1960s, the Republic has lost more than 60 per cent of its reef cover because of land reclamation work. Singapore's waters, once home to 255 species of reef-building hard coral, have seen this number dwindling. Since 2005, Prof Chou and Dr Huang have recorded only 170 species.

The lab's priority is to study the sources and variations of marine biodiversity here. This may help researchers determine the areas to prioritise for conservation.

In general, coral reef populations spawn from the area they are found growing in, or in an area further away. They

are differentiated through next-generation DNA sequencing, which can rapidly decode a large amount of biological data.

"By knowing where the sources of coral larvae are, we can prioritise these regions – since they are the sources of many species," said Dr Huang.

Earlier research by Dr Tay Ywee Chieh, another of Prof Chou's former students, showed that coral reefs in Singapore are self-seeding, meaning their larvae come from a local source. But some of the reefs here, like those growing in Sisters' Islands Marine Park, are contributing more as a source compared with others.

On the future of the lab, Prof Chou said: "Danwei was interested to keep the lab going, so I will leave him to build it up further... I don't think I can find anyone else as qualified."

Ms Ria Tan, who runs local wildlife website WildSingapore, said the continuation of the lab will help Singapore contribute to research being done on coral reefs in the region, especially in the nearby Coral Triangle, an area considered to be the world's richest treasure trove of marine life.

"Prof Chou is a titan, not just in Singapore, but also in the region, and his work has laid the foundation for a great deal of studies on coral reefs," she said.

✉ audreyt@sph.com.sg

LEGACY

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– Ms Ria Tan, who runs local wildlife website WildSingapore, on coral expert Chou Loke Ming