

## *S'pore joins in deep sea exploration to shed light on marine biodiversity*

As countries around the world venture into the unknown of the deep sea, Singapore scientists too are embarking on similar expeditions to better understand South-east Asian waters.

In 2018, researchers from Singapore and Indonesia embarked on a pioneering expedition to Indonesia's seas off West Java, where they uncovered some 800 species from more than 200 families of sponges, jellyfish, molluscs, starfish, urchins, worms, crabs, prawns and fish, accounting for more than 12,000

individual animals.

Of these, at least 27 species were found to be new to science. One creature, in particular, captivated the world's attention – a giant “deep sea cockroach”, the Darth Vader isopod, so called for its resemblance to the Star Wars villain.

At more than 30cm long and with 14 legs, the *Bathynomus raksasa* is closely related to marine species like crabs and shrimps and lives on the ocean bed, scavenging the remains of dead marine animals. The

expedition found a male specimen and a female one at depths of between 900m and 1,200m.

Over the course of two weeks, the team of 31 researchers from both countries sailed from Jakarta to the Sunda Strait, and from there, to waters off the Indonesian port of Cilacap, in the south-western part of Java.

Since the expedition in 2018, the researchers from the National University of Singapore's (NUS) Lee Kong Chian Natural History Museum and the Indonesian

Institute of Sciences' Research Centre for Oceanography have been combing through the collected specimens and publishing numerous research papers detailing their findings.

This endeavour could take years, owing to difficulties in finding scientists with the right expertise to closely examine these organisms, *The Straits Times* reported.

Plans are under way for another expedition for the NUS researchers to increase their understanding of deep sea

ecosystems in the region and beyond.

Meanwhile, another research vessel, owned by OceanX, will begin its South-east Asian expedition in May, starting with North and West Sumatra in Indonesia. OceanX is a deep sea exploration initiative founded by American billionaire Ray Dalio and his son Mark.

The 87m-long OceanXplorer is capable of studying waters up to 6,000m in depth, and is currently docked at Keppel Bay in Singapore to conduct scientific

and outreach programmes.

The voyage in Indonesia will focus on quantifying the number of fish species in the ocean. This can help create a more accurate picture of the region's fisheries, which serve as a major source of food and livelihood for millions of people, said Mr Mark Dalio, OceanX's co-chief executive.

The researchers also hope to create a high-resolution map of the region's active sea floor to better understand future tectonic plate events.

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