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Scientists worry about 'Darth Vader' isopod sold as seafood in Vietnam

Mr Muhammad Dzaki Safaruan, a specialist associate (collections) at the Lee Kong Chian Natural History Museum, with a specimen of the *Bathynomus vaderi* (*B. vaderi*), so named because its head resembles the helmet of Darth Vader, the antagonist in the Star Wars film franchise.
ST PHOTO: SHINTARO TAY

Below: Professor Peter Ng, one of the researchers studying the *B. vaderi,* examining giant isopods on sale at a seafood market in Hanoi in October 2024.
PHOTO: COURTESY OF NGUYEN THANH SON

Newly discovered giant species could become extinct, disrupting the marine food chain

Chin Hui Shan

A newly discovered species of aquatic supergiant isopod is being widely sold at food stalls and restaurants in Vietnam, causing scientists to worry that such isopods could be overfished and lead to the species' extinction.

This could disrupt the marine food chain, affecting the health of the sea creatures that humans consume.

Giant and supergiant isopods, which are a type of crustacean, play an important role in the health of the deep-sea food chain as they are part of the clean-up crew feeding on decomposing organic material and helping to recycle nutrients.

The *Bathynomus vaderi* (*B. vaderi*) – so named because its head resembles the helmet of Darth Vader, the antagonist in the Star Wars film franchise – was formally described in a study published on Jan 14 in ZooKeys, a peer-reviewed scientific journal.

This supergiant isopod can grow to 32.5cm in length and weigh more than 1kg, according to the study. In contrast, isopods are tiny creatures, typically measuring under 2.5cm in length.

Supergiant isopods have reportedly grown up to 50cm in length, and giant isopods usually reach about 15cm in length.

B. vaderi was discovered when scientists bought crustaceans from fishermen and eateries in Vietnam for research purposes. The supergiant isopod was caught by fishermen who were deep-sea trawling some 90km off the coast of Quy Nhon, a city in central Vietnam.

Professor Peter Ng, one of the researchers behind the study and an adviser at the National University of Singapore's Lee Kong Chian Natural History Museum, said giant and supergiant isopods have been fished as food in Vietnam since 2017.

But it was only with the discovery of *B. vaderi* in 2022 that it dawned on researchers that these isopods were being sold in large quantities.

"It's almost like a seafood commodity, (and) has never been discussed or reported before," said Prof Ng, an expert in marine biology and carcinology.

Noting that these large isopods are sold by the thousand at seafood stalls and restaurants, Prof Ng said: "What was starting to worry us was that if they carried on catching (the isopods) at this rate, how could this be sustainable?

"If the market goes on for many years, there will come a point that these animals will be overfished."

While little is known about giant and supergiant isopods, such as their biology and their lifespan, Prof Ng believes that like most deep-sea creatures, they take time to grow large.

"The deep sea is a world where things grow slowly. Most deep-sea animals have a long lifespan, and they have a slow pace of life... This means that they are very easy to overfish and destroy," he said.

"If a key scavenger like this is lost, it is going to disrupt the food chain down in the sea. This will probably affect the population and health of the fish and prawn we eat," he added.

Dr Conni Sidabalok, a researcher at Indonesia's National Research and Innovation Agency, said *B. vaderi*'s large size might give it an edge over other scavengers in the deep-sea environment. She was also involved in the study.

Prof Ng observed in Vietnam that the giant isopods, which are also known as sea bugs or sea beetles, were sold at live seafood markets and restaurants. They are usually either the *B. vaderi* or *Bathynomus jamesi* (*B. jamesi*), which is one of the largest giant isopods and can grow up to about 42cm in length and weigh up to 2.6kg.

An average giant isopod that spans about 30cm in length can cost about $47 per kg and larger ones, which can grow up to about 40cm, can cost about $87 per kg.

The giant isopod is served as food after being steamed, grilled, stir-fried or cooked with fried rice.

Dr Nguyen Thanh Son, from VNU University of Science, Hanoi, and one of the study's researchers, said: "This new species is poorly known... We need proper fishery studies so that the government can decide how to manage the sale of these animals."

Prof Ng said: "The discovery of such a large new species (as the *B. vaderi*) from the deep waters in the South China Sea just reminds us how little we know about life in our part of the world... It's an exciting yet sombre feeling that we have still so much to learn, even as we do so many bad things to the sea."

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