

New species of tree-living crab found in Kerala

NUS professor helps to classify species named after the forest tribe who first spotted the creature



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MOST crabs are found in the oceans, while many also live in fresh water and on land, particularly in tropical regions.

But biologists in Singapore and India have identified a new species of crab, which live exclusively in trees in Kerala.

The first study to describe the Indian crab was conducted by a team that included the professor and head of the Department of Aquatic Biology and Fisheries at the University of Kerala, Dr A. Biju Kumar, and the head of the Lee Kong Chian Natural History Museum, Professor Peter Ng, at the National University of Singapore (NUS).

A chance conversation

Researchers from the University of Kerala had been carrying out a two-year study on freshwater crabs in the Western Ghats in Kerala and were always guided by the forest tribes during their journey into the protected areas in the forest.

During one such trip, members of the Kanikkaran (also known as Kani) tribe told them that they had seen long-legged crabs which live in trees.

Dr Kumar, 49, told *tabla!*: “Some of the tribes showed us a few crabs on the trees, which were primarily freshwater species. However, it was two members of the tribe Mr Rajan Kani and Mr Mathan Kani who told us that there is a specific variety, which they call maranjandu (tree crab in Malayalam, the language of Kerala). Then we together started an exploration to find out about them.”

Said Prof Ng, who helped to classify and describe the species: “Dr Kumar had told me he had found some strange crabs in the mountains.

“As I was invited to his university to help teach an international workshop of decapod crustaceans late last year, he asked me if I would spare time to also work on the crab with him.”

The NUS professor has worked on freshwater crabs for more than 30 years and is very familiar with



the fauna of Asia.

“From the photographs, I knew it was an interesting animal. I was right when I finally examined the specimens in Kerala — they were strange — not only a new species but a new genus to boot,” said Prof Ng.

Initial attempts to capture the elusive crabs were unsuccessful, and it was not till September last year that researchers from the University of Kerala, with assistance from the Kani tribe, were able to obtain specimens for the scientists to examine.

“Since the number of tree crabs is not that high and they live only in water-filled tree holes, the searches in the initial period failed. It is also not easy to climb the trees

if they are large and the holes are too high.

“After continuous journeys we now know the stretches of forests where they are present and where to look for these crabs,” said Dr Kumar, adding that the crabs have been spotted in hollows both close to the ground as well as up to 10m up in the trees.

He added that during some occasions, the team walked for several days in the forest yet the search was futile. “It is a difficult terrain and these crabs shift the holes when the water is less in one hole. Locating these rare animals in forests is always chance and a matter of luck.”

Dr Kumar explained that the creature might have been a freshwater

A rare find... (Left) Kanikkaran tribesmen with the Kani Maranjandu crab. (Above) a close-up of the crab. (Below, left) Dr Biju Kumar and (below, right) Professor Peter Ng. PHOTOS: DR BIJU KUMAR

crab that climbed trees and settled on the water-filled tree holes as a better habitat to avoid competition.

Named in honour of the tribe that found them

The new species of the crabs has been named Kani maranjandu, in honour of the Kani tribesmen who spotted them.

The crabs bear several distinguishing characteristics, such as a broad, partially swollen upper shell that allows them to store water in gill chambers, and long slender legs making them very effective climbers.

Prof Ng said the tree crab illustrates crab evolution.

“These crabs are very adaptable and have evolved to use specialised habitats to enhance their survival — in this case — tree holes and climbing,” he said.

According to Dr Kumar, who has been working on aquatic biodiversity in Kerala for years, the Kani maranjandu is a separate genus and species and is not found elsewhere.

“The other fully arboreal crabs, which are its close kin are found in Borneo, and Southeast and East Asia. All these species live in forests and on trees, but they also come to land occasionally,” he said.

The maximum size of the male and female crab recorded is 42.6mm and 40.6mm in carapace width respectively.

In most cases there was only one crab in a tree hole, but the researchers also obtained seven crabs from a large tree hole filled with about 10 litres of water.

Said Dr Kumar on the finding: “It is the first fully arboreal tree crab from India, and received considerable attention round the world. Most importantly it is an ecological indicator of healthy forests as water in the tree holes (and the presence of larger trees) decide their survival.”

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