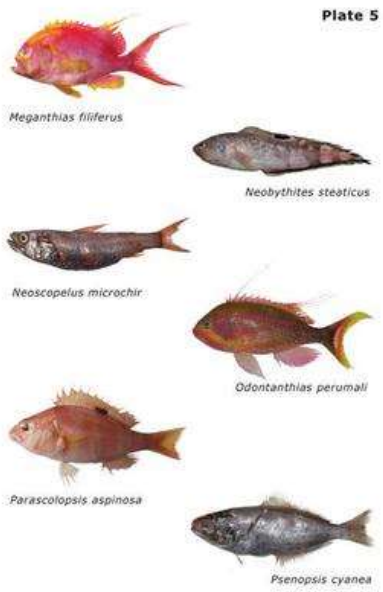
THE HINDU

July 23, 2016

Genetic secrets of 88 bony fishes revealed



The DNA bar coding of these species may also bring changes in the nomenclature of a few species.

The researchers had earlier prepared the genetic database of 32 species, especially elasmobranchs or cartilaginous fishes

Now, more is known to science about the life of fishes that thrive in the ocean depths as a group of marine researchers have prepared the genetic fingerprints of 88 species of fishes.

The researchers had earlier prepared the genetic database of 32 species, especially elasmobranchs or cartilaginous fishes which included sharks, rays and sakes.

This time, the researchers from the National Bureau of Fish Genetic Resources, Kochi centre and the Central Marine Fisheries Research Institute (CMFRI), Kochi, focused more on bony fishes thus taking the total number of deep-sea fishes whose genetic characters have been decoded to 120 species.

"The deep-sea fishes are the ones that live at ocean depths of more than 200 metres. There is astonishing diversity of marine life at these depths. The species also exhibit diverse adaptation techniques in the deep-sea habitat. The DNA bar coding would open the doors for the scientists to understand the secrets of life," explained K.K. Bineesh, one of the lead researchers of the project. Mr. Bineesh is also a member of the IUCN Shark Specialist Group. According to him, despite the rich diversity and opening of new fishing grounds for targeted resources, little has been done in the fish taxonomy front. Precise identification of the species is vital for sustainable management of fishery resources, said Mr. Bineesh explaining the socio-economic relevance of the DNA bar coding.

The research team, led by A. Gopalakrishnan, Director, CMFRI, had N. G. K. Pillai, E. M. Abdussamad, and K.V Akhilesh of the CMFRI and V.S Basheer and K.K. Bineesh of the Bureau as its members.

As a result of DNA fingerprinting, scientists discovered 10 new marine deep-sea fish species from the depths of the Arabian Sea. The new species that were identified belong to families such as Synodontidae, Notacanthidae, Polymixiidae, Chaunacidae, Argentinidae and Myctophidae.

The DNA bar coding of these species may also bring changes in the nomenclature of a few species known to the science for long. The names of deep-sea fishes will have to be changed and many synonymised species will be getting their names back in the process.

A new species of *Chaunax multilepis* was described on the basis of 13 specimens. The species was given the name multilepis considering the many type of scales found on its body.

The first Chaunax species (*Chaunax pictus*) was recorded in India more than a century ago. However, the species was later believed to be restricted to the Atlantic waters. In 1909, a second species, *Chaunax apus*, was collected from the Bay of Bengal. The latest discovery of Chaunax species was in 2013, when six species were collected from the Indian Ocean, noted the researchers.