Scientists name new species of fish from the Orinoco region after singer Enya

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Credit: Oregon State University

In 1988, Irish singer and songwriter Enya released a lead single titled "Orinoco Flow" from her second studio album, which went on to become an international hit, earn a Grammy Award nomination, and help launch her wildly successful career.

Now a team of scientists have named a new species of fish from the Orinoco River drainage after her.

Leporinus enyae is a "beautiful little fish," said Michael Burns, a

doctoral candidate at Oregon State University and lead author on the paper describing the new species, as well another from the Xingu River of Brazil. It was published this week in the journal Neotropical Ichthyology by researchers from Oregon State and Brazil.

"Whenever we were in the lab at Oregon State working on the fishes, Ben Frable would always play 'Orinoco Flow," said Burns, referring to another graduate student in the lab.

"I heard the song so often in the lab it got stuck in my head," co-author Marcus Chatfield said. "Then I just started listening to it on purpose when I was taking measurements of the specimens. When the time came around for choosing names, it just felt right to name this new beautiful fish from the Orinoco after the artist who wrote that beautiful song."

"We're also big fans of her music," added co-author Brian Sidlauskas, the curator of fishes at Oregon State University as well as an amateur Celtic harper.

The second newly discovered fish has been named Leporinus villasboasorum, in honor of the pioneering efforts of brothers Orlando, Cláudio and Leonardo Villas-Bôas a half-century ago to protect the Xingu River's biodiversity and the rights of indigenous peoples there.

Leporinus is the largest and most diverse genus in the characiform family Anostomidae and includes roughly 90 species across most of South America. New species are described yearly and the genus includes many "poorly understood" species complexes, according to Sidlauskas.

"We thought it would be fairly straightforward to look at populations of similar fishes from the Orinoco River basin in Venezuela, the Essequibo River of Guyana, and several of the tributaries of the Amazon River in Brazil and see if they are taxonomically the same or different,"

Sidlauskas said. "It turns out that there are at least two new distinct species, and there may be more."

Both new species are comparatively small – about 8 to 10 inches long – although some members of their family can reach two feet in length. Smaller species are sold as aquarium fish, though in the wild, these omnivores prefer moving water – both for feeding and protection from predators.

The term Leporinus literally means "little hare," in reference to the large teeth that protrude from the mouth, much like those of a rabbit. The bottom teeth of the two new species are particularly long, and while no one is sure why, the researchers note that it may relate to their foraging on plants, worms and other invertebrates.

It isn't unusual to discover new fish species, especially in the tropical river basins of South America, the scientists say. The region is vast and the network of rivers and tributaries flows through many different types of terrain and microhabitats, leading to speciation on a fine scale.

To an outsider, the new fish species are not remarkably different from two previously established species, Leporinus desmotes and Leporinus jatuncochi. However, there are significant differences in body shape, coloration, scale counts and genetics, Burns said.

"The differences and divergence between the two new Leporinus species and the established ones may trace back several million years," Sidlauskas said.

"Preserving these different lineages may be very important because one species may have developed evolutionary traits that the others don't have," Burns added.

Sidlauskas said Brazil has recently built the Belo Monte Dam on the Xingu River inside the range of the newly discovered Leporinus villasboasorum. Belo Monte is the fourth-largest dam in the world and has the potential to significantly alter habitats on a huge scale. Such anthropogenic influences can threaten fish species that are geographically distinct and limited in range. The impact of the Belo Monte Dam on the recently named Leporinus villasboasorum has yet to be evaluated.

"There also is a lot of local influence on these major rivers and, in turn, the fish species," Sidlauskas said.

Provided by Oregon State University

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