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UNDERWATER STUDIES: Researchers at the Rosenstiel campus discovered a new species of fish in a trap designed by staff member David Jones.

UM professor discovers new fish

By: Erica Landau // Of the staff

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When an oceanographer traveled to a coral reef atoll off of Mexico's Yucatan Peninsula in 2006 to study how the environment affects fish populations, he solved another scientist's 25-year-old mystery.

David Jones, a fisheries oceanographer at the Cooperative Institute for Marine and Atmospheric Studies at the Rosenstiel campus, tested a new light trap he designed to catch fish returning to the reef in their larval, or juvenile, form.

With the light trap he caught a type of goby - one of the largest families of fish - that was slightly different from any published description of goby fish.

"Gobies are really tough. There are more species of them than any other fish. They all look alike," Jones said. "But it didn't match."

So, Jones sent it to Benjamin Victor of the Ocean Science Foundation in California. Victor, an expert in goby identification, used a new technique called barcoding to see if the DNA of the larva that Jones had found matched an adult. The technique isolates a part of an organism's mitochondrial DNA and uses it for identification.

"Barcoding is the best way to identify and separate species," Jones said.

Victor matched the larva to an adult goby he had discovered in 1982 in Panama; but at the time he couldn't confirm it as a new species because of the lack of a second specimen.

The new species diverged from its closest goby relative by 25 percent, which is a huge difference considering that humans and chimpanzees only differ by one percent to two percent.

Named *Coryphopterus kuna*, the fish's description was published in July. It is the first vertebrate to have its DNA barcode included in its original species description. About 30,000 known species have been barcoded, according to the Smithsonian Tropical Research Institute.

Erica Landau may be contacted at e.landau@umiami.edu.

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