

## Ten-year-old boy helps paleontologists discover ancient fish species

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The newly discovered species, called Candelarhynchus padillai, inhabited the waters of what is now Colombia about 90 million years ago. Credit: Oksana Vernygora

Paleontologists from the University of Alberta have discovered a neverbefore-seen species of fish in Colombia, with help from a young and curious tourist.

The fossil, Candelarhynchus padillai, is about 90 million years old and



has no modern relatives, explained Oksana Vernygora, a Ph.D. student in the Department of Biological Sciences and lead author on the study.

"A kid was walking into the Monastery of La Candelaria during a tour when he noticed the shape of a <u>fish</u> in a flagstone on the ground," explained Javier Luque, a Ph.D. candidate and co-author on the study. "He took a photo and, a few days later, showed it to staff at the Centro de Investigaciones Paleontologicas, a local museum with whom we collaborate to protect and study fossil findings from the region."

Staff at the centre recognized the image as a fossil fish right away and shared the finding with their U of A colleagues. Alison Murray, professor of <u>biological sciences</u> and Vernygora's supervisor, joined her colleagues in the South American country to retrace the steps of the young tourist, who was 10 years old at the time, near the town of Ráquira Boyacá.

## **Rare discovery**

The team found a nearly perfect, intact fossil of an <u>ancient fish</u>. In fact, it was the first fossil "lizard fish" from the Cretaceous period ever found in Colombia and tropical South America.

"It's rare to find such a complete fossil of a fish from this moment in the Cretaceous period. Deepwater fish are difficult to recover, as well as those from environments with fast-flowing waters," said Vernygora. "But what surprises me the most is that, after two years of being on a walkway, it was still intact. It's amazing."

The discovery contributes to the growing and important body of literature on the fossil record in the tropics.

"The tropics worldwide are hotspots of diversity," explained Luque.



"Interestingly, we know a great deal about modern biodiversity in these areas, but the <u>fossil record</u> is poorly understood in comparison. This adds another piece to that puzzle."

And the importance of understanding <u>fossil fish</u>, Vernygora explained, is often underestimated.

"Often we think, 'We have fish now, we had fish then, we'll likely have fish in the future.' But the importance of fish is just that," she said. "We can see how fish have changed as their environments have changed throughout history. Studying fish diversity gives us amazing predicting power for the future—especially as we start to see the effects of climate change."

The paper, "A New Cretaceous Dercetid Fish (Neoteleostei: Aulopiformes) From the Turonian of Colombia," was published in the *Journal of Systematic Palaeontology*.

**More information:** Oksana Vernygora et al. A new Cretaceous dercetid fish (Neoteleostei: Aulopiformes) from the Turonian of Colombia, *Journal of Systematic Palaeontology* (2017). DOI: 10.1080/14772019.2017.1391884

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