

Three new fishing snake species fished out of the Andean slopes in South America

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A live individual of *Synophis insulomontanus*, one of the three new species of fishing snakes discovered in the Andes of Ecuador and Peru. Credit: Germán Chávez

Commonly known as fishing snakes, the *Synophis* genus has been expanded with as many as three new species following a research in the Andean cloud forests of Amazonian Ecuador and Peru. Not only is the discovery remarkable due to the rarity of new snake species being

discovered, but also because this is the first time this mysterious and already eight-member genus is recorded from Peru. The study is published in the open-access journal *ZooKeys*.

The three [new species](#) have been identified as a result of both field and laboratory work, undertaken by Dr. Omar Torres-Carvajal, Museo de Zoología QCAZ, Ecuador, in collaboration with herpetologists from Peru (CORBIDI) and the United States (Francis Marion University). The new [species](#) differ from their closest relatives in scale features, male sexual organs and DNA. The unusual discoveries took place in areas within the 1,542,644 km² of the Tropical Andes hotspot, western South America.

Although they are commonly known as fishing snakes, these reptiles most likely do not eat fish. Their diet and behavior are poorly known. So far, it has only been reported that one species feeds on lizards.

The fishing snakes have long been known to live in [cloud forests](#) on both sides of the Andes of Colombia and Ecuador. Yet, it seems they have waited all along to make an appearance. The new species described herein, along with a recent description of one species from southwestern Ecuador also published in [Zookeys](#), has duplicated the number of species of fishing snakes from four to eight over the span of several months.



A live male of *Synophis zamora*, one of the three new species of fishing snakes discovered in the Andes of Ecuador and Peru. Credit: Omar Torres-Carvajal

During their recent expeditions to several localities along the Andes of Ecuador and Peru the authors collected several individuals of fishing snakes, which they suspected to be previously unknown. After comparing their specimens with those deposited in a number of natural history museums, the authors' suspicions only became stronger.

Consequently, the scientists examined the male snakes' sexual organs (hemipenes) and DNA evidence. The results left no doubts that the specimens belonged to three undescribed fishing snake species.

"We started working with fishing snakes a year ago as new specimens were collected in poorly explored areas of the Amazonian slopes of the Andes in Ecuador and Peru," explains lead author Dr. Omar Torres-

Carvajal. "At that time only four species of fishing snakes had been described, and they were recognized in the literature as one of the most rare and secretive groups of snakes in South America."



A live individual of *Synophis bogerti*, one of the three new species of fishing snakes discovered in the Andes of Ecuador and Peru. Credit: Omar Torres-Carvajal

"In less than a year, we and other herpetologists doubled the number of known species of fishing snakes, showing that their diversity had been greatly underestimated," he points out.

"This story is similar to the story of the woodlizards (*Enyalioides*), a group of dragon-like lizards with more than half of its species discovered in recent years in the tropical Andes," the scientist

reminisces.

"This tells us that this hotspot is more diverse than we thought, so it is very important that basic biodiversity research is properly funded," Dr. Torres-Carvajal concludes. "Otherwise, we might never know what other scaly creatures are crawling around us."

More information: Omar Torres-Carvajal et al. Description and phylogeny of three new species of *Synophis* (Colubridae, Dipsadinae) from the tropical Andes in Ecuador and Peru, *ZooKeys* (2015). [DOI: 10.3897/zookeys.546.6533](https://doi.org/10.3897/zookeys.546.6533)

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