

# Eleven new species of rain frogs discovered in the tropical Andes

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The Rain frogs comprise a unique group lacking a tadpole stage of development. Their eggs are laid on land and hatch as tiny froglets. Credit: BIOWEB-PUCE

Eleven new to science species of rain frogs are described by two scientists from the Museum of Zoology of the Pontifical Catholic University of Ecuador in the open-access journal *ZooKeys*. Discovered in the Ecuadorian Andes, the species are characterized in detail on the basis of genetic, morphological, bioacoustic, and ecological features.

On the one hand, the publication is remarkable because of the large number of new species of frogs. Regarding [vertebrate animals](#), most studies only list between one and five new to science species, because of the difficulty of their collection and the copious amount of work involved in the description of each. To put it into perspective, the last time a single article dealt with a similar number of newly discovered frogs from the [western hemisphere](#) was in 2007, when Spanish scientist Ignacio de la Riva [described](#) twelve species from Bolivia.

On the other hand, the new paper by Nadia Paez and Dr. Santiago Ron is astounding due to the fact that it comes as part of the undergraduate thesis of Nadia Paez, a former Biology student at the Pontifical Catholic University, where she was supervised by Professor Santiago Ron. Normally, such a publication would be the result of the efforts of a large team of senior scientists. Currently, Nadia Paez is a Ph.D. student in the Department of Zoology at the University of British Columbia in Canada.



One of the new species is *Pristimantis chomskyi*. Its name honors Noam Chomsky, a renowned linguist from ASU. Credit: David Velalcázar, BIOWEB-PUCE

Unfortunately, amongst the findings of concern is that most of the newly described [frog species](#) are listed as either Data Deficient or Threatened with extinction, according to the criteria of the [International Union for Conservation of Nature](#) (IUCN). All of the studied amphibians appear to have very restricted geographic ranges, spanning less than 2,500 km<sup>2</sup>. To make matters worse, their habitats are being destroyed by human activities, especially cattle raising, agriculture, and mining.

Amongst the newly described species, there is the peculiar Multicolored Rain Frog, where the name refers to its outstanding color variation. Individuals vary from bright yellow to dark brown. Initially, the studied specimens were assumed to belong to at least two separate species.

However, [genetic data](#) demonstrated that they represented a single, even if highly variable, [species](#).



This new species is the Multicolored Rain Frog. Its name makes reference to the outstanding color variations of this species. Credit: BIOWEB-PUCE

The rest of the previously unknown frogs were either named after scientists, who have made significant contributions in their fields, or given the names of the places they were discovered, in order to highlight places of conservation priority.

**More information:** Nadia B. Páez et al, Systematics of

Huicundomantis, a new subgenus of *Pristimantis* (Anura, Strabomantidae) with extraordinary cryptic diversity and eleven new species, *ZooKeys* (2019). [DOI: 10.3897/zookeys.868.26766](https://doi.org/10.3897/zookeys.868.26766)

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