

# Scientists discover a new velvet worm species in Ecuador

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Adult female Tiputini velvet worm (*Oroperipatus tiputini*) with her offspring. Credit: Pedro Peñaherrera-R., Archive Universidad San Francisco de Quito USFQ. CC-BY4.0

Scientists have described the first new species of Ecuadorian velvet worm in more than 100 years. Named the Tiputini velvet worm (*Oroperipatus tiputini*), it was discovered in the lowland forests of the northern Amazon.

Published as a new species in the open-access journal [Zoosystematics and Evolution](#), the velvet worm is generally nocturnal and exhibits [parental care](#), meaning the mother takes care of her young after they are born. These animals are hunters that use a sticky substance secreted from a pair of anterior glands to trap their prey.

The new species can be distinguished from other known velvet worm species by its skin texture, coloration, and leg structure. The Tiputini velvet worm inhabits old-growth terra firma forests with a closed canopy, where it searches for prey on leaves and stems of small herbs less than 70 cm above the ground, in leaf litter, and on tree roots.

Velvet worms, also known as onychophorans or peripatus, are rare and unique invertebrates often referred to as "living fossils" because they evolved more than 500 million years ago, long before the appearance of dinosaurs. Currently, only about 240 species are known, inhabiting [tropical regions](#) in the Americas, southern Chile, Africa, Southeast Asia, Oceania, and New Zealand. The last time Ecuador's velvet [worms](#) were studied was more than 100 years ago, in 1905.

A research team led by Jorge Montalvo from the USFQ Museum of Zoology named the new species in honor of the Tiputini Biodiversity Station (TBS), part of the Yasuní Biosphere Reserve, recognizing the hard work of the station's management, research, and field team in protecting biodiversity. So far, the species is known only from this location.

The description of the Tiputini Velvet Worm raises the total number of described velvet worm species in Ecuador to seven. This species is the first from the Ecuadorian Amazon lowlands and the third in the western Amazon. Most velvet worm species in Ecuador are known from only one locality, and in some cases, their taxonomy is unclear and requires further revision.

"The research on this new species took several decades. I discovered the first individual of this [new species](#) in 2001, and we finally managed to describe it as part of Jorge Montalvo's graduation thesis, who is now my colleague at the Museum of Zoology at USFQ.

"To complete the description, we used not only macromorphological descriptions but also high-magnification images obtained with a [scanning electron microscope](#)," said Diego F. Cisneros-Heredia, one of the authors of the scientific article and director of the Museum of Zoology at Universidad San Francisco de Quito USFQ, Ecuador.

**More information:** Jorge L. Montalvo-Salazar et al, A new species of velvet worm of the genus *Oroperipatus* (Onychophora, Peripatidae) from western Amazonia, *Zoosystematics and Evolution* (2024). [DOI: 10.3897/zse.100.117952](#)

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