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Museum of Nature Hamburg

New spider species in the Amazon mimics parasitic fungus

An international research team, including the Leibniz Institute for the Analysis of Biodiversity Change (LIB), has described a new species of spider from the Ecuadorian Amazon: *Taczanowskia waska*. The species is characterised by an extraordinary form of mimicry: It represents the first documented case in which a spider mimics the appearance of a parasitic fungus. The findings were published in the journal *Zootaxa*.

The discovery was made in the Llanganates–Sangay Corridor, one of the most biodiverse regions on Earth. During a night-time expedition, the animal was initially mistaken for a mushroom – a clear indication of the new species' remarkable camouflage strategy.

Disguise through form and behaviour

Taczanowskia waska mimics the fruiting body of a fungus of the genus *Gibellula*, which grows on spiders. It is characterised by elongated structures on its abdomen and a pale, fungus-like surface. Furthermore, the spider remains motionless on the underside of leaves – exactly where this fungus is typically found.

This combination of physical appearance and behaviour suggests a high degree of adaptation. The researchers believe that this mimicry serves both to protect the spider from predators and to aid in hunting: by appearing to be an uninteresting object, the spider is less likely to be spotted and can more easily take its prey by surprise.

A completely unique case

According to the study, this is the first documented case of a spider mimicking a parasitic fungus that infects its own kind. The discovery therefore provides new insights into the evolution of mimicry and the ecological role of such adaptations.

The genus *Taczanowskia* is considered rare and little studied. Many aspects of its ecology remain largely unknown – partly because members of this group are rarely observed in the wild.

Nadine Dupérré from the Museum of Nature Hamburg at the LIB was involved in the study. She examined reference specimens from scientific collections and contributed to the taxonomic classification of the new species.

Citizen science as starting point

The discovery began with an observation on the *iNaturalist* platform. Users identified what was thought to be a mushroom as a spider, and it was subsequently examined scientifically. The discovery underscores the importance of citizen science for biodiversity research.

‘Finds like these demonstrate the value of scientific collections. They enable us to classify new species and compare them with historical specimens. Combined with international collaboration and citizen science, this opens up new opportunities for researching biodiversity,’ explains Nadine Dupérré.

The discovery highlights the rich biodiversity of tropical regions, much of which remains unexplored. At the same time, it demonstrates the importance of international cooperation and new data sources for understanding global biodiversity.

Publication

Díaz-Guevara, David R., Alexander G. Bentley & Nadine Dupérré. 2026. “The Cordyceps spider”: *Taczanowskia waska* sp. nov. (Araneae: Araneidae), a new spider species and a novel case of mimicry of an araneopathogenic fungus (Cordycipitaceae: *Gibellula*). *Zootaxa* 5760(5): 563–576.

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About the LIB

The LIB is dedicated to researching biodiversity and its changes, the results of which are disseminated to the wider society in an educational manner. In order to better understand the current mass extinction of flora and fauna, researchers are looking for connections and causes of – often – man-made changes. The goal is to develop solutions for the preservation of ecosystems and species in order to maintain the basis of current life.

About the Leibniz-Association

The Leibniz Association combines 96 independent research institutes. Their focus ranges from the natural, engineering, and environmental sciences to the humanities and the business, space, and social sciences. The Leibniz institutes

focus on relevant social, economic, and ecological issues. They perform knowledge-oriented and applied research (also among the cross-disciplinary Leibniz research alliances), are or support scientific infrastructures, and offer research-based services.



Caption: *Taczanowskia waska* sp. nov. (Araneae: Araneidae)

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Caption: *Taczanowskia waska* with an ovisac

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