

In the belly of the Devil: New rare ant species found in the stomach of a poison frog

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A worker of the new ant species *Lenomyrmex hoelldobleri* in full-face. Credit: Dr Christian Rabeling

While new ant species are usually discovered in surveys involving researchers searching through leaf litter, it turns out that sifting through the stomach contents of insect-eating frogs might prove no less effective, especially when it comes to rare species. Such is the case of a new species of rarely collected long-toothed ant, discovered in the belly of a Little Devil poison frog in Ecuador.

The international team of Drs Christian Rabeling and Jeffrey Sosa-Calvo, both affiliated with University of Rochester, USA, Lauren A. O'Connell, Harvard University, USA, Luis A. Coloma, Fundación Otonga and Universidad Regional Amazónica Ikiam, Ecuador, and Fernando Fernández, Universidad Nacional de Colombia, have their study published in the open access journal *ZooKeys*.

The new ant species, named *Lenomyrmex*

hoelldobleri after renowned myrmecologist Bert Hölldobler on the occasion of his 80th birthday, was described based on a single individual - a female worker, recovered from a Little Devil poison [frog](#). It is the seventh known species in this rarely collected Neotropical genus.

Similarly to its relatives within the group, this ant amazes with its slender and elongate mouthpart, yet it is larger than all of them. The remarkable jaws speak of specialised predatory habits, however, so far, nothing is known about these ants' feeding behavior.

The amphibian, whose diet majorly consists of ants, was collected from the Ecuadorian region Choco, which, unfortunately, despite being one of the most biologically diverse areas in the world with exceptionally high levels of endemism, is also one of Earth's most threatened areas.



A worker of the new ant species *Lenomyrmex hoelldobleri* in profile. Credit: Dr Christian Rabeling

In conclusion, the authors point out that "studying vertebrate stomach contents is not only a way of

studying the trophic ecology" (meaning the feeding relationships between organisms), "but also an interesting source of cryptic and new arthropod species, including ants."

Furthermore, the scientists note that nowadays there is no need to kill a frog, in order to study its stomach. "Stomach flushing methods have been developed and successfully applied in numerous studies, which avoids killing individuals."

More information: Christian Rabeling et al, *Lenomyrmex hoelldobleri*: a new ant species discovered in the stomach of the dendrobatid poison frog, *Oophaga sylvatica* (Funkhouser), *ZooKeys* (2016). [DOI: 10.3897/zookeys.618.9692](https://doi.org/10.3897/zookeys.618.9692)

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