

# 4 new species of Zombie ant fungi discovered in Brazilian rainforest

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Four new Brazilian species in the genus *Ophiocordyceps* have been published in the online journal *PLoS ONE*. The fungi, named by Dr. Harry Evans and Dr. David Hughes, belong to a group of "zombifying" fungi that infect ants and then manipulate their behavior, eventually killing the ants after securing a prime location for spore dispersal.

These results appear in a paper by Evans et al. entitled Hidden Diversity Behind the Zombie-Ant Fungus *Ophiocordyceps unilateralis*: Four New Species Described from Carpenter Ants in Minas Gerais, Brazil. This paper is the first to validly publish new fungal names in an online-only journal while still complying with the rules and recommendations of the International Code of Botanical Nomenclature (ICBN).

Beyond this important milestone, the paper is noteworthy for the attention it draws to undiscovered, complex, biological interactions in threatened habitats. The four new species all come from the Atlantic Rainforest of Brazil which is the most heavily degraded biodiversity hotspot on the planet. Ninety-two percent of its original coverage is gone.

The effect of biodiversity loss on community structure is well known. What researchers don't know is how parasites, such as these zombie-inducing [fungi](#), cope with fragmentation. Here the authors show that each of the four species is highly specialized on one [ant species](#) and has a suite of adaptations and spore types to ensure infection. The life-cycle of these fungi that infect, manipulate and kill [ants](#) before growing spore

producing stalks from their heads is remarkably complicated. The present work establishes the identification tools to move forward and ask how [forest fragmentation](#) affects such disease dynamics.

**More information:** Evans HC, Elliot SL, Hughes DP (2011) Hidden Diversity Behind the Zombie-Ant Fungus *Ophiocordyceps unilateralis*: Four New Species Described from Carpenter Ants in Minas Gerais, Brazil. PLoS ONE 6(3): e17024. [doi:10.1371/journal.pone.0017024](https://doi.org/10.1371/journal.pone.0017024)

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