

The evolution of altruistic defense in enslaved ants

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New research looks at the evolution of an altruistic defense by enslaved *Temnothorax longispinosus* ant workers that rebel against their social parasite *Temnothorax americanus*, a slavemaking ant.

Ant slaves have been observed to kill their oppressors' offspring, a behavior from which the sterile slaves cannot profit directly. Investigators wondered how such a defense trait can evolve even if it does not directly benefit its carriers.

"As a theoretician, I usually aim to explain [biological systems](#) by the simplest possible mathematical model. But here, we found that simple explanations can be misleading as the details of the complex interactions between [ant nests](#) can really make a difference," said Dr. D. Metzler, lead author of the *Journal of Evolutionary Biology* article.

"We conjectured that slave rebellion can evolve because it is beneficial for the slaves' relatives living close to the slavemaker nest. Indeed we found that kin selection could be at work, but on a much larger geographical and temporal scale than we expected."

More information: Dirk Metzler et al. The influence of space and time on the evolution of altruistic defense: the case of ant slave rebellion, *Journal of Evolutionary Biology* (2016). [DOI: 10.1111/jeb.12846](#)

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