

An Attack on a Centipede Snake (Tantilla cf. schistosa) by Soldier Ants (Eciton burchellii) in Honduras

Alex M. Cubas-Rodriguez¹, Andrea Rodríguez², Astrid Martínez², and David Medina²

Soldier ants of the genus *Eciton* are among the most notorious insects in Neotropical forests (Pérez-Espona 2021), largely due to their extensive hunting forays (e.g., Andersen 1997; Pérez-Espona 2021), with some species, such as *E. burchellii*, known to attack and kill chicks, lizards, and snakes (e.g., Schneirla 1956; O'Donnell et al. 2005). Recently, Sazima (2015) documented predation on *Hemidactylus mabouia* and an unidentified snake and Sazima (2017) reported consumption of *Gymnophtalmus darwinii* in Brazil. Herein we describe a hunting foray by *E. burchellii* during which the ants attacked and possibly killed a snake in Honduras.

At 1307 h on 16 September 2023 at 1307 h in La Muralla Wildlife Refuge, Department of Olancho, Honduras (15.037235, -86.797315; 725 m asl), we encountered a large

number of soldier ants (*E. burchellii*) covering much of the street and observed consumption of a small insect (Fig. 1A). After a few minutes, we saw a Centipede Snake (probably a Red Earth Centipede Snake, *Tantilla schistosa*; Fig. 1B) emerge from the leaf litter followed by many ants. The ants tried to surround the snake but we intervened. Upon capturing the snake, we noticed that several ants were attached to its body. The ants were collected in plastic vials containing 80% ethanol and identified using Maes and Mackay (1993), before being deposited at the Museo de Entomología de la Universidad Nacional Autónoma de Honduras (CU-UNAH). The snake escaped from the ants.

Soldier ants of the Dorylinae subfamily are well known for being voracious predators, devouring a wide variety of



Figure 1. A) soldier ants (*E. burchellii*) feeding on an insect. B) *Tantilla* cf. schistosa moments after the movement of the soldier ant. Photographs by Alex M. Cubas-Rodriguez.

arthropods during their foraging raids. Currently, many representatives of this group, particularly from the genera *Dorylus* Fabricius 1793, *Cheliomyrmex* Mayr 1870, and *Eciton* (Schneirla 1956; O'Donnell et al. 2005; Sazima 2015, 2017) have been reported to feed on a variety of prey. Feeding on vertebrates is facilitated by the presence of toxins (group of peptides) loaded with protease, which is released in the process of stinging and subjugating prey (Gotwald 1995; Sazima 2015). Knowledge about these interactions is still scarce to date; only three events documented in Brazil by Sazima (2015, 2017) are recognized. More studies are needed to better understand predator-prey interactions between ants and snakes.

In summary, the observation reported here expands the list of possible predators of terrestrial snakes of the genus *Tantilla* in the Neotropical region, and supports the second officially published record that mentions attempted snake predation by *E. burchellii*.

Acknowledgements

The first author (AMCR) thanks Fabio G. Cupul-Magaña (Centro Universitario de la Costa, Universidad de Guadalajara, Mexico) for reviewing an early draft of this manuscript and providing suggestions that improved it. Thank you to Josiah H. Townsend (Department of Biology, Indiana University of Pennsylvania, USA) for confirming the identity of the snake. Kind thanks to the anonymous reviewers who helped enrich this work.

Literature Cited

- Andersen, A.N. 1997. Using ants as bioindicators: Multiscale issues in ant community ecology. *Ecology & Society* 1: 8. https://www.consecol.org/vol1/ iss1/art8/>
- Gotwald, W.H., Jr. 1995. Army Ants: The Biology of Social Predation. Cornell University Press, Ithaca, New York, USA.
- Maes, J.M and W.P. Mackay. 1993. Catálogo de las hormigas (Hymenoptera: Formicidae) de Nicaragua. *Revista Nicaragüense de Entomología* 23: 1–46.
- O'Donnell, S., M. Kaspari, and J. Lattke. 2005. Extraordinary predation by the Neotropical Army Ant *Cheliomyrmex andicola*: Implications for the evolution of the Army Ant Syndrome. *Biotropica: The Journal of Biology and Conservation* 37: 706–709. https://doi.org/10.1111/j.1744-7429.2005.00091.x.
- Pérez-Espona, S. 2021. *Eciton* army ants—umbrella species for conservation in neotropical forests. *Diversity* 13: 136. https://doi.org/10.3390/d13030136.
- Sazima, I. 2015. House geckos (Hemidactylus mabouia) and an unidentified snake killed and devoured by army ants (Eciton burchellii). Herpetology Notes 8: 527–529.
- Sazima, I. 2017. New World army ants Eciton burchellii kill and consume leaf litter inhabiting lizards in the Atlantic forest, Southeast Brazil. Tropical Natural History, 17: 119–122.
- Schneirla, T. 1955. The army ant. Annual Report of the Smithsonian Institution 2: 379–406