



Predation on a Milky Treefrog (*Trachycephalus “vermiculatus”*) by a Fasciated Tiger Heron (*Tigrisoma fasciatum*) in Rio San Pedrillo, Corcovado National Park, Puntarenas, Costa Rica

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The heron family Ardeidae is represented in Costa Rica by 20 species, three of which are tiger herons in the genus *Tigrisoma* (Alvarado Quesada 2021). The Fasciated Tiger Heron (*T. fasciatum*), the smallest of the three (58–64 cm in length) (Ridgely and Gwynne 1989), ranges from Honduras south into South America at elevations from sea level to 2,400 m asl (BirdLife International 2017). It is encountered most frequently along rocky, quickly moving streams in the foothills (Henderson 2010), where it hunts fish and invertebrates (Heckman 1998; Hilty 2003).

The Milky Treefrog (*Trachycephalus “vermiculatus”*) has a convoluted taxonomic history (see Frost 2021). The species is distributed from tropical Mexico south into northern South America (Frost 2021). It is a large treefrog (standard length in males to 101 mm, females to 114 mm) capable of producing



Fig. 1. An adult Fasciated Tiger Heron (*Tigrisoma fasciatum*) at the San Pedrillo River in Corcovado National Park, Puntarenas, Costa Rica. Photograph by Raby Nuñez Escalante.



Fig. 2. A juvenile Fasciated Tiger Heron (*Tigrisoma fasciatum*) capturing a Milky Treefrog (*Trachycephalus “vermiculatus”*) (left), beating it against a rock (center), and ingesting its prey (right) at the San Pedrillo River in Corcovado National Park, Puntarenas, Costa Rica. Notice the white secretions on the heron’s beak. Photographs by Raby Nuñez Escalante.

copious amounts of noxious or even toxic skin secretions that appear to deter predators and might also serve to reduce the skin's permeability and limit dehydration during dry periods (Savage 2002).

At 1445 h on 12 July 2021, IPA observed an adult Fasciated Tiger Heron on a rock next to the San Pedrillo River, Corcovado National Park, Puntarenas, Costa Rica (Fig. 1), and a juvenile roughly 150 m downstream with a large prey item. When we approached more closely, we identified the prey as a Milky Treefrog. The heron repeatedly stabbed the frog and beat it against a rock (Fig. 2). The bird's beak was covered with sticky white secretions produced by the frog but did not seem affected in any way. From the time of the initial observation, the heron took approximately 8 min to ingest the frog.

To the best of our knowledge, this is the first report of a Fasciated Tiger Heron feeding on a Milky Treefrog and represents a new prey record for the heron and a new predator record for the frog.

Literature Cited

- Alvarado Quesada, G. 2021. *Garzas*. Museo Nacional de Costa Rica, San José, Costa Rica. <<https://www.museocostarica.go.cr/nuestro-trabajo/investigaciones/historia-natural/garzas/>>.
- BirdLife International. 2017. *Tigrisoma fasciatum* (amended version of 2017 assessment). *The IUCN Red List of Threatened Species* 2017: eT22697264A118863107. <https://doi.org/10.2305/IUCN.UK.2017-3.RLTS.T22697264A118863107.en>.
- Frost, D.R. 2021. *Amphibian Species of the World: An Online Reference*. Version 6.1. American Museum of Natural History, New York, New York, USA. <<https://amphibiansoftheworld.amnh.org/Amphibia/Anura/Hylidae/Lophohylineae/Trachycephalus/Trachycephalus-vermiculatus>>. <https://doi.org/10.5531/db.vz.0001>.
- Heckman, C.W. 1998. *The Pantanal of Poconé: Biota and Ecology in the Northern Section of the World's Largest Pristine Wetland*. Kluwer Academic Publishers, Dordrecht, The Netherlands. ISBN 978-0-7923-4863-4.
- Henderson, C.L. 2010. *Birds of Costa Rica: A Field Guide*. University of Texas Press, Austin, Texas, USA. ISBN 978-0-292-71965-1.
- Hilty, S. 2003. *Birds of Venezuela*. Princeton University Press, Princeton, New Jersey, USA. ISBN 978-0-691-09250-8.
- Ridgely, R.S. and J.A. Gwynne, Jr. 1989. *A Guide to the Birds of Panama, with Costa Rica, Nicaragua, and Honduras*. Princeton University Press, Princeton, New Jersey, USA. ISBN 978-0-691-08529-6.
- Savage, J.M. 2002. *The Amphibians and Reptiles of Costa Rica. A Herpetofauna between Two Continents, between Two Seas*. University of Chicago Press, Chicago, Illinois, USA. ISBN 0-226-73537-0.