

First Documented Attempt of Predation on a Hispaniolan Green Treefrog (Boana heilprini) by a Freshwater Crab (Epilobocera haytensis) in the Dominican Republic

Elí M. Bobadilla-Peñaló¹, Cristian F. Marte-Pimentel², and Enmanuel Romero-Disla¹

¹Pueblo Viejo Dominicana Jersey 2 Limited (PVJ2), Sánchez Ramírez, República Dominicana (e.bobadillapenalo@barrick.com [corresponding author])

²Museo Nacional de Historia Natural Prof. Eugenio de Jesús Marcano, Santo Domingo, República Dominicana (c.marte@mnhn.gov.do)

1

Freshwater crabs are typically omnivorous or detritivorous, but they are increasingly recognized as opportunistic predators of amphibians, including hylid frogs, in Neotropical ecosystems (Pyke et al. 2013). We herein report the first documented case of a predation attempt by a freshwater crab *Epilobocera haytensis* on a Hispaniolan Green Treefrog (*Boana heilprini*), both of which are Hispaniolan endemics.

At 2148 h on 13 February 2025, we observed predation by a Jaiba de Río (*Epilobocera haytensis*, Pseudothelphusidae) on a Hispaniolan Green Treefrog (Boana heilprini, Hylidae) (Fig. 1) in a stream in lowland moist broadleaf forest (Häger and Zanoni 1993; MMARN 2012) adjacent to an openpit mining concession in Cotuí, Sánchez Ramírez Province, Dominican Republic (18.96960, -70.19653; elev. 387 m asl). Habitat consisted of a shaded stream with a muddy substrate flowing through an area with abundant leaf litter and dense understory vegetation (Fig. 2). In a flooded area along the streambank with a considerable accumulation of leaf litter, an adult *E. haytensis* had grasped an adult *B. heilprini* with its chelae. The frog was not attempting to escape while the crab manipulated it in an effort to ingest it until we intervened and released it. Although one hindleg was injured, the frog was alive when released and immediately moved away on its own. To that point, the predation attempt had lasted about three minutes.

Although rare, predation of hylid frogs by freshwater crabs has been documented in Neotropical ecosystems (Table 1). However, to the best of our knowledge, this is the first record of a freshwater crab preying on a hylid frog in the Greater Caribbean. These cases suggest that freshwater crabs are opportunistic predators of hylid frogs in the Neotropics. Given the fragmented distribution of *B. heilprini* and the ongoing loss and degradation of habitats for both preda-



Figure 1. A Jaiba de Río (*Epilobocera haytensis*) preying on a Hispaniolan Green Treefrog (*Boana heilprini*) in a stream in lowland moist broadleaf forest adjacent to an open-pit mining concession in Cotuí, Sánchez Ramírez Province, Dominican Republic. Photograph by Enmanuel Romero Disla.



Figure 2. Shaded stream habitat with a muddy substrate, abundant leaf litter, and dense understory vegetation where a Jaiba de Río (*Epilobocera haytensis*) was attempting to ingest a Hispaniolan Green Treefrog (*Boana heilprini*). Photograph by Enmanuel Romero Disla.

tor and prey (Cumberlidge 2008; IUCN SSC Amphibian Specialist Group 2022), documenting such interactions is of critical importance to better understand the nature of Hispaniolan food webs and aspects of the natural history of these vulnerable species.

Literature Cited

- MMARN (Ministerio de Medio Ambiente y Recursos Naturales de la República Dominicana). 2012. Atlas de Biodiversidad y Recursos Naturales de la República Dominicana. Segunda Edición. Ministerio de Medio Ambiente y Recursos Naturales de la República Dominicana, Santo Domingo, República Dominicana. 122 pp.
- Cumberlidge, N. 2008. Epilobocera haytensis. The IUCN Red List of Threatened Species 2008: e.T135104A4057221. https://doi.org/10.2305/IUCN. UK.2008.RLTS.T135104A4057221.en.
- Häger, J. and T.A. Zanoni. 1993. La vegetación natural de la República Dominicana: una nueva clasificación. *Moscosoa* 7: 39–81.
- IUCN SSC Amphibian Specialist Group. 2022. Boana heilprini. The IUCN Red List of Threatened Species 2022: e.T55502A172794212. https://doi.org/10.2305/ IUCN.UK.2022-1.RLTS.T55502A172794212.en.
- Nogueira-Costa, P., P. Almeida-Santos, J.L. Segadilha, and C.F.D. Rocha. 2016. Predation on egg clutch of *Bokermannohyla circumdata* (Anura: Hylidae) by the crab *Trichodactylus fluviatilis* (Crustacea: Trichodactylidae). *Herpetology Notes* 9: 323–324.
- Pyke, G.H., S.T. Ahyong, A. Fuessel, and S. Callaghan. 2013. Marine crabs eating freshwater frogs: Why are such observations so rare? *Herpetology Notes* 6: 195–199.
- Segadilha, J. and T. Silva-Soares. 2015. Necrophagy on *Rhinella ornata* (Anura: Bufonidae) by the crab *Trichodactylus fluviatilis* (Crustacea: Trichodactylidae) in Atlantic Rainforest mountains of state of Rio de Janeiro, southeastern Brazil. *Herpetology Notes* 8: 429–431.
- Sichieri, G., B. Lopes, P.H.A.G. Moura, F.J. Faciole, F.R. Costa, and I. Nunes. 2021. Predation on leptodactylid and hylid frogs by the freshwater crab Dilocarcinus pagei Stimpson, 1861 (Decapoda, Trichodactylidae) in the Brazilian Pantanal. Herpetology Notes 14: 1133–1136.
- Wehrtmann, I.S., D. Hernández-Díaz, and N. Cumberlidge. 2019. Freshwater crabs as predators and prey: the case of *Ptychophallus uncinatus* Campos & Lemaitre, 1999 (Brachyura, Pseudothelphusidae) from Costa Rica, Central America. *Revista Latin American Journal of Aquatic Research* 47: 18–26. http://doi.org/10.3856/vol47-issue1-fulltext-3.

Table 1. Freshwater crab predation on hylid frogs in the Neotropics. The asterisk (*) indicates necrophagy and the double-asterisk (**) denotes predation on egg clutches.

Crab Predator (Family)	Hylid Prey	Country	Reference
Epilobocera haytensis (Pseudothelphusidae)	Boana heilprini	Dominican Republic	This paper
<i>Dilocarcinus pagei</i> (Trichodactylidae)	Boana raniceps Scinax acuminatus	Brazil Brazil	Sichieri et al. 2021 Sichieri et al. 2021
Ptychophallus uncinatus (Pseudothelphusidae)	Cruziohyla calcarifer	Costa Rica	Wehrtmann et al. 2019
Trichodactylus fluviatilis (Trichodactylidae)	Bokermannohyla circumdata	Brazil	Segadilha and Silva-Soares 2015* Nogueira-Costa et al. 2016**