

NOTAS DE CAMPO/FIELD NOTES

Records of snake and frog predation by the Bare-throated Tiger-Heron *Tigrisoma mexicanum* (Ardeidae) in Costa RicaVíctor J. Acosta-Chaves^{1,*}, Paula C. Acosta-Chaves², Adriana P. Acosta-Chaves³¹Sede el Atlántico, Universidad de Costa Rica, Paraíso de Cartago, Costa Rica.²Recinto de Grecia, Sede de Occidente, Universidad de Costa Rica, Tacaes de Grecia, Costa Rica.³San Pedro de Poás, Alajuela, Costa Rica.

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Bare-throated Tiger-Heron *Tigrisoma mexicanum* is a widespread aquatic species that occurs in lowlands from northern Mexico to northern Colombia (Birdlife International, 2021). Its habitats include beaches and intertidal zone, coastal freshwater streams, lagoon and rivers, riparian forest, marshes, wet meadows, swamps, roadsides swales and mangroves (Stiles & Skutch, 1989; Winker *et al.*, 1992; Kushlan & Angehr, 2007). This heron is considered as a least concern species according to the Red list of threatened birds (Birdlife International, 2021). Despite being common across its Neotropical range, published knowledge about its natural history is scarce (Kushlan & Angehr, 2007).

Like other herons, *T. mexicanum* is an opportunistic ambush predator that feeds mainly on fish, crabs, and amphibians (Stiles & Skutch, 1989; Kushlan & Angehr, 2007). A relative species, Rufescent Tiger-Heron *T. lineatum*, has been recorded eating freshwater eels (*Synbranchius marmoratus*), small mammals (*Cavia aperea*), an aquatic snake (*Helicops* sp.), a lizard (*Salvator* sp.), cicadas, eggs, and the frogs *Pseudis platensis*, *Leptodactylus chaquensis*, and *L. podicipinus* (Prado, 2003; Briso *et al.*, 2014; Langref Filho *et al.*, 2018; Sovrano *et al.*, 2020). For Costa Rica, there is a recent report of *T. mexicanum* preying actively on the arboreal frog *Agalychnis spurrelli* during an explosive breeding of this frog species in the Osa Peninsula (Güell *et al.*, 2019). Yet, few details about prey taken by *T. mexicanum* are available, since items are not recognized to species level in most manuscripts (Kushlan & Angehr, 2007). Here we report two separate incidental observations of predation on a snake and a frog from two reserves on the Nicoya Peninsula, northwestern Costa Rica.

The first report occurred on 17 July 2017, at c. 07h00, in a building on the shore of Mal País Beach, next to Cabo Blanco Absolute Reserve, Cóbano, Puntarenas, Costa Rica (9.597241, -85.14256). An adult *T. mexicanum* captured a juvenile Neotropical rat snake (*Senticolis triaspis*; Colubridae) from the grassland. After capturing it with its beak, the tiger-heron flew away to a nearby building where it consumed it (Fig. 1). The snake was recognized to species level and age due to its size and rufous color pattern on a bronze background (Savage, 2002).

A second observation occurred on 24 January 2021, at 10h45, next to a stream in the Ceiba Trail of Curú Wildlife Refuge, Paquera, Puntarenas, Costa Rica (9.784906, -84.928832; 2 m a.s.l.). We detected first an adult *T. mexicanum* hitting something against the water. Then, we noticed that the tiger-heron had a large anuran on its beak (Fig. 2). After a couple of minutes repeatedly hitting the prey against the water, we were able to identify the frog as an adult Smoky jungle frog (*Leptodactylus savagei*; Leptodactylidae). Anuran identification was not easy because the frog had part of its limbs detached, but we noticed a spotted belly, fleshy thighs, smooth textured skin and size of *L. savagei* (Fig. 2). Northern cane toad (*Rhinella horribilis*) was excluded because this

species would have large parotid glands, cornified skin and shorter legs (Savage, 2002). Besides *R. horribilis*, *L. savagei* is the only large-sized anuran occurring in the area (Savage, 2002). Even though *L. savagei* is known to produce an irritant toxic skin secretion (Savage, 2002), it was apparently not a problem for the tiger-heron because it swallowed the entire frog after less than 2 min. Our two reports not only increase the list of vertebrate prey items taken by this species, but also contributes to knowledge about the natural history of Nicoya Peninsula, an Important Bird Area in Costa Rica (Sandoval & Sánchez, 2011).

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Figure 1: Bare-throated Tiger-Heron *Tigrisoma mexicanum* eating a *Senticolis triaspis* in Mal País Beach, Nicoya Peninsula, 17 July 2017 (V. Acosta-Chaves).



Figure 2: Bare-throated Tiger-Heron *Tigrisoma mexicanum* ingesting a *Leptodactylus savagei* in Curú Wildlife Reserve, Nicoya Peninsula, 24 January 2021 (V. Acosta-Chaves).