



Predatory Behavior of the Yellow-spotted Keelback (*Chironius flavopictus*) in the Golfito Wildlife Reserve, Costa Rica

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The Yellow-spotted Keelback (*Chironius flavopictus*) is distributed from western Ecuador and Colombia to both slopes of southern Costa Rica, inhabiting rainforests and mangrove fringes from sea level to 450 m asl (Köhler 2003; Leenders 2019). The current data are insufficient to determine its conservation status, but populations are known to be declining (Acosta Chaves et al. 2022). In addition to this infor-

mation gap, few data address the feeding behavior of this rare species (Leenders 2019). Herein we describe a Yellow-spotted Keelback preying on a Masked Treefrog (*Smilisca phaeota*).

At 1300 h on June 29 2022, while monitoring damselfly breeding behavior as part of a research project at the Golfito Wildlife Refuge, Costa Rica (8.643768°N, -83.196701°W; elev. 0 m asl), we encountered an adult Yellow-spotted



Fig. 1. Predation of a Masked Treefrog (*Smilisca phaeota*) by a Yellow-spotted Keelback (*Chironius flavopictus*). Photographs by Raquel Gil-Carrasco.

Keelback preying on a Masked Treefrog on the northern bank of the Quebrada Corozal. At the time of the observation, the snake had already attacked the frog, which presumably had been sleeping on a dry Cigar Plant (*Calathea lutea*) leaf about 2 m above the ground. The snake made the attack from a Heliconia (*Heliconia latispatha*) adjacent to where the frog had been perched, biting it on the head and causing it to expand its body to avoid being swallowed. The attack apparently caused the bursting of a lung and deflation of the frog. The frog clung to the leaf with its hindlimbs, pushing in opposition to the snake's pull. The snake eventually managed to free the frog from the leaf to which it was clinging, but the frog continued to cling to a nearby vine with a front leg. During the whole event the snake remained coiled around the petiole of the Heliconia leaf while jerking repeatedly on its prey. Complete ingestion took 55 minutes, during which the snake secreted copious amounts of saliva. When finished, movements of the snake's jaw and body appeared to accommodate the prey internally; once comfortably adjusted, it moved away.

Predation of *Smilisca phaeota* by *Chironius flavopictus* has been documented (Joventino and Ramos 2020) but prey

handling and ingestion had not been described. The entire process can be observed via YouTube (https://youtu.be/_YxbtQDqOo0).

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