

Pristimantis urichi (Urich's Litter Frog) as Prey for the Killifish, *Rivulus hartii* (Jumping Guabine)

Experience in the Neotropics confirms that small frogs may be assumed to be prey for many predators, but direct observations of predation events are generally limited and in the present case, under night-time conditions, very rare. During an evening nature observation walk along the entrance roadway to the Asa Wright Nature Centre, 7.4 miles on the Arima-Blanchisseuse Road in the Arima Valley, Trinidad, West Indies (ca. 10 43'9.38"N 61 17'50.45"W), vocalizing males of the endangered frog *Pristimantis urichi* were abundant. These small "tink" frogs were found calling as they perched on leaves of plants growing on nearly vertical banks. They were occasionally seen moving across the road, otherwise they are known to move among the leaves on the forest floor or steep banks (Murphy, 1997).

During rainy periods, water typically pools or streams down gutters along the edges of the road. A common denizen of these pools is the killifish *Rivulus hartii*, which enters these ephemeral habitats from local streams. This fish is known to move overland on wet nights, regularly colonizing temporary pools and seepages. (Gibb *et al.*, 2011).

On 11 October 2017, at 20:30 hours, an adult *R. hartii* was observed in a water-filled, leaf-lined roadside gutter with an adult *P. urichi* in its mouth (Fig. 1). The frog's body was intact (Fig. 2), allowing easy identification and suggesting predation rather than scavenging; its legs were shredded and the animal appeared dead. The feeding behavior was observed for 10 minutes, when it was interrupted for identification and examination of the extent of the consumption (Fig. 2). A thorough survey of the roadside gutters yielded no further instances of frog predation by the fish.

Killifish can be abundant in the nearby headwater streams of the Arima River, inviting speculation as to their role in affecting or regulating populations of these and other stream-dwelling frogs, such as *Mannophryne*



Fig. 2. *P. urichi* after removal from the mouth of the *R. hartii*.

trinitatis (family Dendrobatidae), a species of similar size and habitat as *P. urichi*. Downie *et al.* (2001), have shown that males of *M. trinitatis* carry their tadpoles on their backs while searching for a pool in which to deposit them. The male will avoid pools containing *R. hartii*, a predator of tadpoles. Such inherited behaviour is fascinating and immediately raises the question of whether similar avoidance behaviours may also exist in *P. urichi*.

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Fig. 1. *Rivulus hartii* preying on a *Pristimantis urichi*.