

An Updated Distribution of the Frog *Adenomera cf hylaedactyla* (Anura: Leptodactylidae) on Trinidad, West Indies

Murphy and Downie (2012) noted that there is a growing list of cryptic species being discovered in Trinidad and Tobago. The genus *Adenomera* consists of dull-coloured, small-sized frogs that typically display characteristics of a group rich in cryptic species (Angulo *et al.* 2003). Indeed, the systematics of frogs of the genus *Adenomera* have puzzled amphibian systematists for decades (Heyer 1973; Duellman 2005). New *Adenomera* species have recently been described (Carvalho and Giaretta 2013), and there are a number of other species awaiting formal description across South America (Foquet *et al.* 2014).

In Trinidad, *Adenomera hylaedactyla* was previously only known from the southwestern peninsular (Murphy 1997), and a thriving population was observed during a recent trip in 2017 by the author. However, during the period of 2014 to 2017, the author and others (J. Murphy, R. Downie and R. Deo) have observed *Adenomera cf hylaedactyla* to be far more widespread. Records span from Port of Spain in the north-west, Aripo Savannas (Auguste *et al.* 2015) and Arena Forest in north-central Trinidad, Matura in the north-east, Nariva Swamp and near Trinity Hills in the south-east; and at Freeport, west central Trinidad. It is not known whether populations are well established at each of these localities as only single individuals were visually observed. However, there is no reason to doubt that the species has become established. Given the new found locally widespread distribution in Trinidad and the current taxonomic uncertainty of the genus as a whole, it is worth future investigation of the various populations in Trinidad to determine precisely which and how many species are present.

Adenomera hylaedactyla (= *Leptodactylus hylaedactylus*) was described by Cope (1868) “from the Napo or Upper Marañon”. AmphibiaWeb (2017) gives the following general description of its morphology: Males are 22-24 mm, and females are 26-27 mm, snout to vent length (SVL). The dorsum consists of scattered dark markings on a brown background. There are two distinct glandular dorsolateral folds on either side of the body. The distance between each eye to the snout is about one and a half times the diameter of the eye. The ventral surface, including the belly and throat are white. The iris is bronze.

Adenomera cf hylaedactyla occurs throughout South America, including Bolivia, Brazil, Colombia, Ecuador,

French Guiana, Guyana, Paraguay, Peru, Suriname, Venezuela (AmphibiaWeb 2017), and also on Trinidad (Murphy 1997). *Adenomera cf hylaedactyla* from Trinidad is illustrated in Figure. 1.

In Trinidad, *Adenomera cf hylaedactyla* can be distinguished from the similar *Leptodactylus* species by size, the relative lengths of the first and second finger and by the shape of the dorsal markings. *Leptodactylus validus* males are 42 mm and females 50 mm SVL and *L. fuscus* males are 42 mm and females 50 mm SVL. The first finger of *Adenomera hylaedactyla* is shorter than the second finger, while for all *Leptodactylus* spp. recorded in Trinidad, the first finger is longer than the second (Murphy 1997). The dorsal markings of *A. cf hylaedactyla* include two dark triangles along the vertebral line; one on the head, the base of which connects the two orbital sockets and the apex of which points posteriorly, and a second with an anterior pointing apex in loose contact with the first. In contrast, any dorsal markings on the two mentioned *Leptodactylus* spp. are irregular (with *L. validus* only occasionally having indistinct irregular dorsal markings, and more often not having much in the way of distinct dorsal markings).

Little is known about the natural history of *Adenomera cf hylaedactyla* in Trinidad but the natural history of *Adenomera* species have been well documented in South America (Almeida and Angulo 2006) and it is likely that the species in Trinidad may exhibit similar attributes to that described for the genus in Venezuela. Leaf litter has been reported as the most common microhabitat for *Adenomera* species (Borges-Leite *et al.* 2015), but Heyer (1977), referring specifically to *A. hylaedactyla* suggested that they inhabit open grassy areas. The individuals observed at Matura, Aripo Savannas, Arena Forest, Freeport and Nariva Swamp were found in a leaf-litter microhabitat, and the individuals the author saw at Port-of-Spain and near Trinity Hills were in a grassy habitat. All of the individuals observed by the author and others in Trinidad have been during the wet season (June to December).

Given the current lack of natural history data for this species on Trinidad, including recordings of its call, the author encourages additional surveys and ecological observations, in conjunction with DNA tests to further clarify the taxonomic uncertainty.

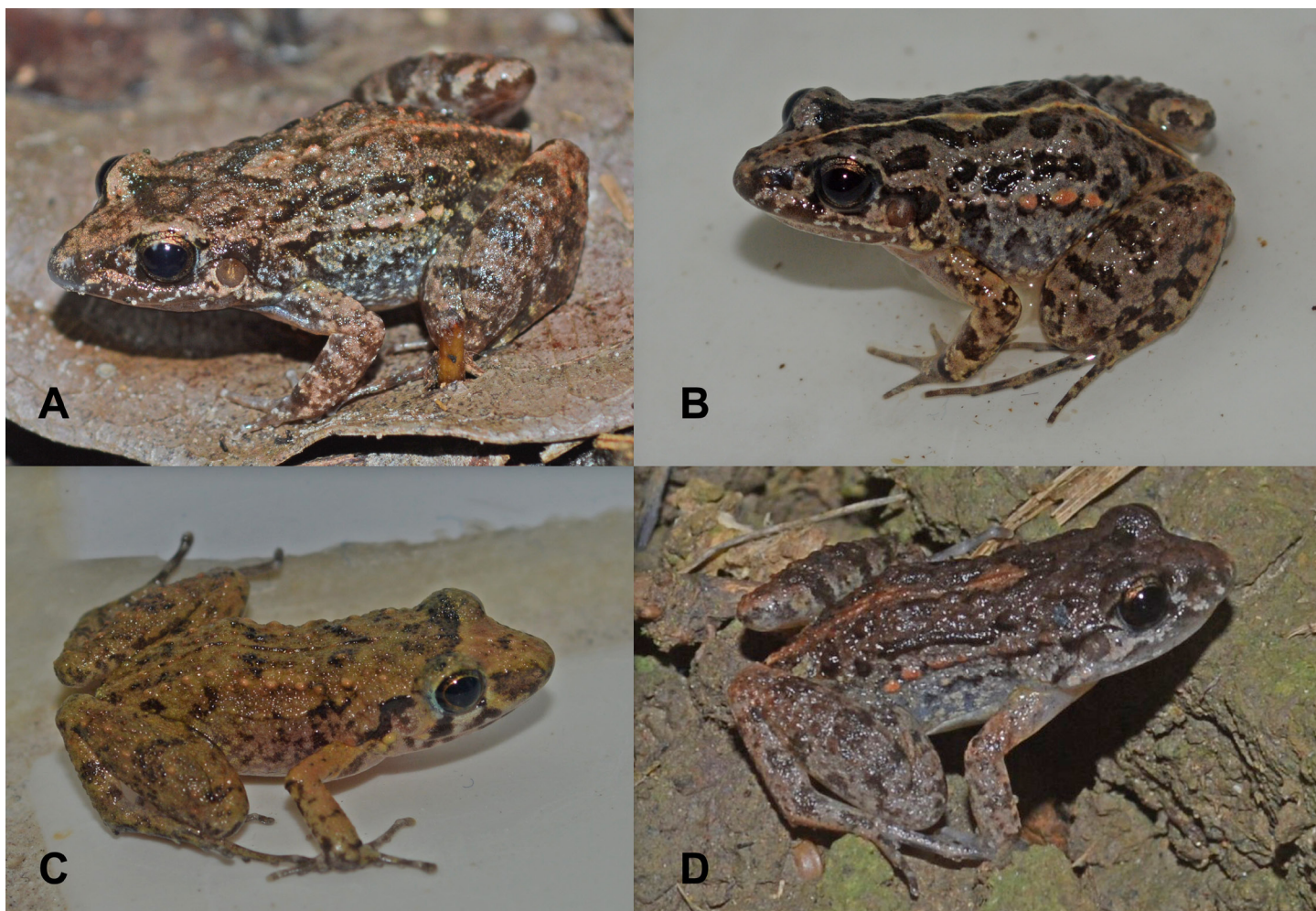


Fig. 1. *Adenomera* cf. *hylaedactyla* from Trinidad. A and B- Nariva Swamp, C- Port-of-Spain, D- Trinity Hills. Individuals were identified by the author based on visual observations of their morphology as noted in Murphy *et al.* (2017).

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Renoir J. Auguste

Department of Life Sciences, The University of the West Indies, St. Augustine, Trinidad and Tobago.
renguste@gmail.com