



A Range Extension and Natural History Notes on the Painted Globular Frog, *Uperodon taprobanicus* (Parker 1934), in Bangladesh

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The Painted Globular Frog (*Uperodon taprobanicus*) is a largely fossorial species inhabiting a wide range of habitats that include forests, plantations, wetlands, cultivated lands, and areas close to human habitations, where they often occupy wall crevices and tree holes (Sengupta et al. 2009; Inger et al. 2016; Garg 2018). Although considered to be of Least Concern (LC) globally (Inger et al. 2016), few records document the species’ presence in Bangladesh (Reza and Mahony 2007; Hasan and Sumida 2012; Reza and Perry 2015), where it is considered Vulnerable (VU) (IUCN Bangladesh 2015). No previous study in Bangladesh addresses morphometrics, life history, or habitat utilization.

During a heavy rain shower at 2030 h on 14 August 2020, we opportunistically encountered a single individual *Uperodon taprobanicus* (Fig. 1) in a rest house at the Ghorashal Polash Urea Fertilizer Project (GPUFP) (23°59'13.4"N,

90°38'51.1"E; elev. 18 m asl; Fig. 2). A photographic voucher was deposited in the Wildlife Biology Museum at the Department of Zoology of Jahangirnagar University, Savar, Dhaka, Bangladesh (JUHG 0378), and the identity of the frog was confirmed by Dr. Abhijit Das of the Wildlife Institute of India, Dehradun, Uttarakhand, India. The frog probably was attracted by insects (ants, termites, moths, crickets) aggregating near light sources. Of the 13 individuals found during a subsequent visual-encounter survey at 2100–2345 h, six were collected from a single site (approx. 30-m radius) with a clogged, non-functional drainage system in front of an abandoned medical center and a nearby paved road. The site was covered with dead leaves (leaf litter depth ~1.5 cm) and tree branches. Four individuals were found at the road or in adjacent vegetation, two were on the trunk of a Coconut Tree (*Cocos nucifera*), and one was on a Mahogany



Fig. 1. Painted Globular Frogs (*Uperodon taprobanicus*) from the Ghorashal Polash Urea Fertilizer Project (GPUFP). Photograph by Md. Kamrul Hasan.

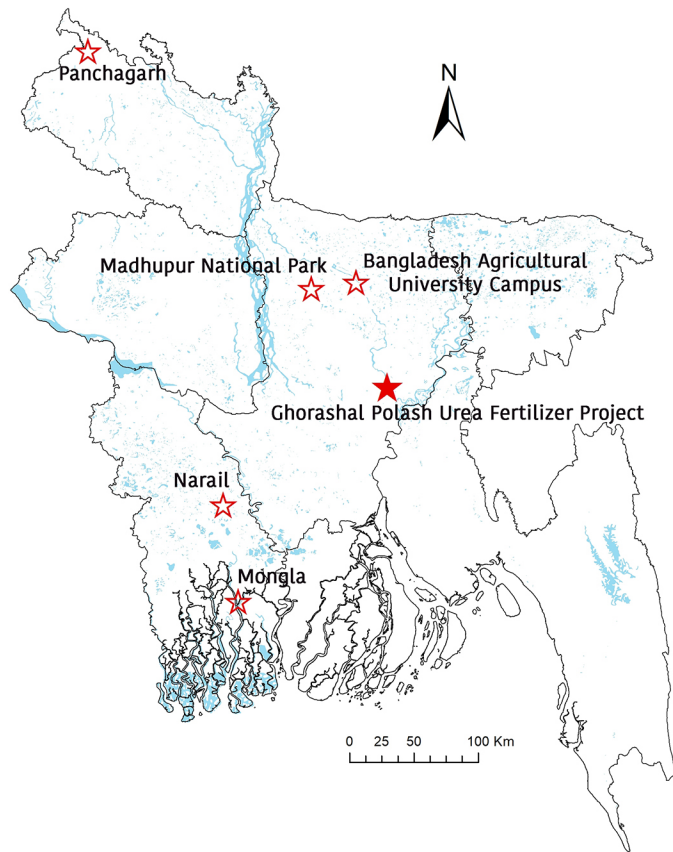


Fig. 2. Map of Bangladesh showing current and previous distribution records of the Painted Globular Frog (*Uperodon taprobanicus*). Open stars indicate previously published records and the solid star marks the new record reported herein.

Tree (*Swietenia mahagoni*). We also observed a considerable number of Assam Forest Frogs (*Hydrophylax leptoglossa*) at the site. The habitat was once part of a dry deciduous forest dominated by Sal Trees (*Shorea robusta*), most of which have been replaced by exotics such as Rain Tree (*Albizia saman*), Acacia (*Acacia auriculiformis*), Eucalyptus (*Eucalyptus* sp.), palms, and other ornamental and fruit trees. The GPUFP is currently abandoned except for localized construction work renovating the country’s oldest urea fertilizer-producing factory. We encountered no Painted Globular Frogs during a second survey on 9–11 October 2020.

In Bangladesh, *U. taprobanicus* has been recorded from deciduous and degraded deciduous forests, in human-occupied habitats, and from near mangroves (Reza and Mahony 2007; Hasan and Sumida 2012; Reza and Perry 2015). Throughout its range, *U. taprobanicus* is largely associated with arboreal habitats, in which they exploit tree holes (Sengupta et al. 2009). However, due to the lack of mature trees in the study area, frogs were concentrated in debris and roadside vegetation. When handled, they exhibited defensive behavior described previously by Jena and Palita (2020), which involved inflating their bodies and assuming the shape of a ball.

Table 1. Morphometric data of Painted Globular Frogs (*Uperodon taprobanicus*) (n = 14; sexes unknown) from the Ghorashal Polash Urea Fertilizer Project (GPUFP) in Bangladesh. Measurements are presented ± one SD (range in parentheses).

Characters	Measurements
Snout-vent length (mm)	34.8 ± 3.4 (26.6–39.1)
Head length (mm)	10.9 ± 1.3 (7.8–13.2)
Head width (mm)	13.7 ± 1.7 (11.1–16.2)
Internarial distance (mm)	3.3 ± 0.1 (3.1–3.5)
Interorbital distance (mm)	5.1 ± 0.6 (3.4–5.7)
Eye diameter (mm)	4.3 ± 0.5 (2.3–4.7)
Distance from eye to nostril (mm)	3.3 ± 0.2 (2.4–3.5)
Length of forelimb (mm)	15.7 ± 1.3 (12.0–17.5)
Length of 1st finger (mm)	4.8 ± 0.7 (3.2–5.8)
Length of 2nd finger (mm)	5.8 ± 0.8 (4.2–7.2)
Length of hindlimb (mm)	31.9 ± 2.1 (26.2–34.4)
Length of femur (mm)	13.0 ± 0.8 (10.2–13.6)
Length of tibia (mm)	11.7 ± 0.8 (9.8–12.9)
Length of tarsus (mm)	7.1 ± 0.6 (6.2–8.3)

Morphometric and meristic data of 14 measured frogs (Table 1) conformed to descriptions of *U. taprobanicus* in the published literature (Sengupta et al. 2009; Hasan et al. 2014; Garg et al. 2018; Jena and Palita 2020). However, maximum snout-vent length (SVL) (34.8 mm) of our frogs was considerably less than the size of typical adults (59.4 mm) (Sengupta et al. 2009), although our data are very similar to those of samples collected near Santinagar, Kokrajhar District, Assam, India, where the maximum SVL was 35.5 mm (Sengupta et al. 2009). The distance between Santinagar and GPUFP is ~270 km, but both populations might be part of the sub-population of the species to which Sengupta et al. (2009) assigned the specimens from Assam. Sengupta et al. (2009) also reported that *U. taprobanicus* is restricted to north of the Brahmaputra River, which apparently acts as a barrier. Although this might be valid for the species’ distribution in India, in Bangladesh it has been reported from both east and west of the river. Our population at 90°38'E appears to represent the eastern limit of the species’ distribution, which previously was thought to be 90°25'E (Sengupta et al. 2009).

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