

Occurrence of Sri Lankan bullfrog, *Uperodon taprobanicus* (Parker, 1934) (Amphibia: Anura: Microhylidae) in Burdwan, West Bengal, India

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Abstract

The Asian painted frog or Sri Lankan Bullfrog, *Uperodon taprobanicus* (Parker) is recorded first time from Burdwan, West Bengal. It is an anuran Amphibia in the family Microhylidae. The species is listed as “Least Concern” in IUCN Red List.

Keywords: Amphibia, Anura, Burdwan, Sri Lankan Bullfrog, *Uperodon taprobanicus*, Microhylidae, Least Concern

1. Introduction

Frogs and toads are common dweller of terrestrial ecosystems consuming wide range of insects and macroinvertebrates [1-3] and serving as prey to a wide range of predators [4-8]. Contrast to their versatile ecosystem functions, the toads and frogs in West Bengal are being least studied beyond few common species [9-13]. Sri Lankan Bullfrog, *Uperodon taprobanicus* (Parker) is a nocturnal, semi-fossorial insectivorous microhylid species, breeding in small pools, usually seasonal rain pools, or ponds. The frog inhabits a wide range of habitats, including wetlands, riverbanks, forests and residential, agricultural and urban areas [12-13].

The aim of the study is to present first record of Sri Lankan Bullfrog, *Uperodon taprobanicus* from Burdwan, West Bengal, India.

2. Materials and Methods

On 3rd July 2013 around 20.00 hours, first individual of *Uperodon taprobanicus* was encountered by the corresponding author at the Campus of the University of Burdwan (23°15'08.6"N, 87°50'48.9"E), Golapbag, Burdwan, West Bengal. Second individual of the same species was captured on 5th July 2013 around 19.00 hrs in the same place by the second author. The University Campus is in the vicinity of Ramnabagan Wildlife Sanctuary spreading over an area of 14.31 ha and having deciduous forest patches made by the then Maharaja of Burdwan. The Golapbag Campus of university itself has a pristine patch of forest with a perennial water source adjacent to Zoology Department. Possibly this protective undisturbed place is the habitat of this frog species who had come out for the search of food. In addition, numerous froglets of the same species were noticed adjacent to the boundary of the protected area. Both the adult frogs were kept in separate glass tanks (40 cm × 30 cm × 30 cm) (Figs. 1, 2, 3) providing soft substrates in one side holding moisture and covered with lid. Body weight was measured on a Satorius make digital balance (0.1g). Length of whole body and different body parts was measured in cm scale. Photographs were taken in Nikon Coolpix 500. Frog was identified following after [9-17].



Fig 1: Sri Lankan Bullfrog with different attributes like colour pattern of integument, tip of snout and eyes. It is in inflated condition after experiencing threat confined within an aquarium.



Fig 2: Sri Lankan Bullfrog made a burrow in the temporary made habitat with soft substrates within the aquarium.



Fig 3: Sri Lankan Bullfrog with tips of fingers and toes, and exuded sticky secretory substance on the integument.

3. Results and Discussion

Frogs were noticed where insects congregated by attracting a light source. When the frogs were attempted to capture, they tried to escape but when they failed to do so, they inflated themselves followed by death feigning behaviour. During grasping the frogs using senesced leaf to bring in the laboratory, they secreted a sticky substance from the skin glands as manifested on the dried leaves. Possibly it is their strategy to deter their enemy. It may cause a burning sensation on human

skin [18]. Both of them had made a burrow for hiding in confinement. During their confinement in the tank several live insects like ants, grasshoppers, dragonflies, blue bottle flies etc. were put in the tank as food on regular basis. However, neither day time nor evening time (complete dark condition), they did make any attempt to catch the prey. Their refusal to take food may be due to their confinement. Captured first specimen any how had escaped from the tank on 9th July, 2013 leaving trails on the glass wall through. This finding corroborates Daniels [13]. Another one released in the same place from where it was caught after 6th day of capturing. The frog was identified as Sri Lankan Bullfrog, *Uperodon taprobanicus* (Parker) (Figs. 1, 2, 3) belonging to the subfamily Microhylinae of family Microhylidae of order Anura. Microhylidae (around 564 named species) accounts for approximately 8.5% of global frog diversity [19]. When the first assessment of this species was made [20], it was included under the genus *Kaloula* Gray. Recently, Peloso *et al.* [21] have transferred the species to the genus *Uperodon* Duméril and Bibron. It is a medium sized frog with a tiny head, wide mouth, short snout and squat round body. Hind legs and feet are short and thick with feet have two broad sharp spades used for digging, Digits are long, rather slender without webs and tips are enlarged to form adhesive discs. First finger is shorter than the second one. The species is characterized by the thick, black-edged, light orange band which extends from the eye to the groin along each dorso-lateral side of the body. The upper side is dark brown and the underside pale. Necessary measurements of both the specimens are provided in table 1.

Table 1: Morphometric data of Sri Lankan Bullfrog, *Uperodon taprobanicus* (Parker)

S. No.	Morphological characters	Measurement
1.	Weight	13.04-13.63g
2.	Body Length (Snout-vent)	50-55mm
3.	Distance between eyes	8-10mm
4.	Eye diameter	3-4mm
5.	Distance between two ends of the jaw	12-14mm
6.	Distance between snout and eye	5-6mm
7.	Forelimb length	20-22 mm
8.	Femur length	16-18mm
9.	Tibial length	18-20mm

The species is listed as Least Concern under IUCN Red List [17]. From regional perspective, unlike other frequently distributed anuran species like *Duttaphrynus melanostictus* (Schneider), *Hoplobatrachus tigerinus* (Daudin) etc. in the study area, the present species seldom occurs here. The frog is endemic to South Asia (Bangladesh, India and Sri Lanka) [17, 22]. This species is found throughout much of eastern India. It has been recorded from sea level up to 200m asl in India, and from sea level up to 1,300 m asl in Sri Lanka [9, 17].

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