

First Record of a Mangrove Frog *Fejervarya cancrivora* (Amphibia: Ranidae) In the Pondicherry Mangroves, Bay of Bengal-India

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Abstract: A rare species of *F. cancrivora* was reported for the first time in Pondicherry mangroves, southeast coast of India. It is a characteristic species of Mangrove Amphibian fauna of the Bay of Bengal and the descriptions of the species are provided.

Key words: Amphibia • Frog • Mangrove • Species • Bay of Bengal

INTRODUCTION

Although the crab-eating frog *Fejervarya cancrivora* (Gravenhorst, 1829) is one of the most widely distributed species in Asian region and live wholly in saline waters. Their common name, the crab-eating frog, is derived from their preference for small invertebrates (including crabs) and vertebrate [1]. The Crab-eating Frog occurs in a range of habitats including coastal scrub, marshes, disturbed forests and mangroves where it can tolerate brackish water. *F. cancrivora* are highly tolerant of brackish water, but survive well over a range of salinities 0-39 ppt [2]. Pondicherry mangrove occurs as fringing vegetation over 168 ha distributed along the sides of Ariankuppam estuary, which is seasonally bar-built and semi diurnal type that flows eastwards and empties into the Bay of Bengal at Veerampattinam on the south east coast of India [3]. Two adult specimens have been found in the Veerampattinam during post monsoon season of 2009 (Figure 1), preserved in 10% neutral formalin and stained with Rose Bengal solution for easy spotting.

Systematic Part

Class: Amphibia, Linnaeus, 1758

Order: Anura Merrem, 1820

Family: Ranidae Rafinesque, 1814

Fejervarya cancrivora (Gravenhorst, 1829) Figure 1.

Common Name: Marine Toad, Crab-eating Frog,
Mangrove Frog

Synonym Name: *Rana cancrivora* (Gravenhorst, 1829)



Fig. 1: *Fejervarya cancrivora* from Pondicherry Mangroves, India

MATERIALS AND METHOD

Two specimens found in India, Veerampattinam, Pondicherry mangrove. Coll. P. Satheeshkumar, Jan. 2009 dated 20.01.2009. Specimens were identified to the lowest practical taxonomic level using standard references [4, 5].

Description of the Species: Size: up to over 8 cm, fingers pointed, first longer than second, fingers without dermal fringes; toes also pointed, web almost reaching tips of first, second and third toes on outer border and on inner border of fifth and outermost tubercle of fourth toe, a free flap of skin on outer edge of fifth toe; irregular longitudinal ridges on back.

Colour. Back, sides and tail muscle dark grey to chocolate brown, with even darker spots extending onto fins; venters lightly coloured.

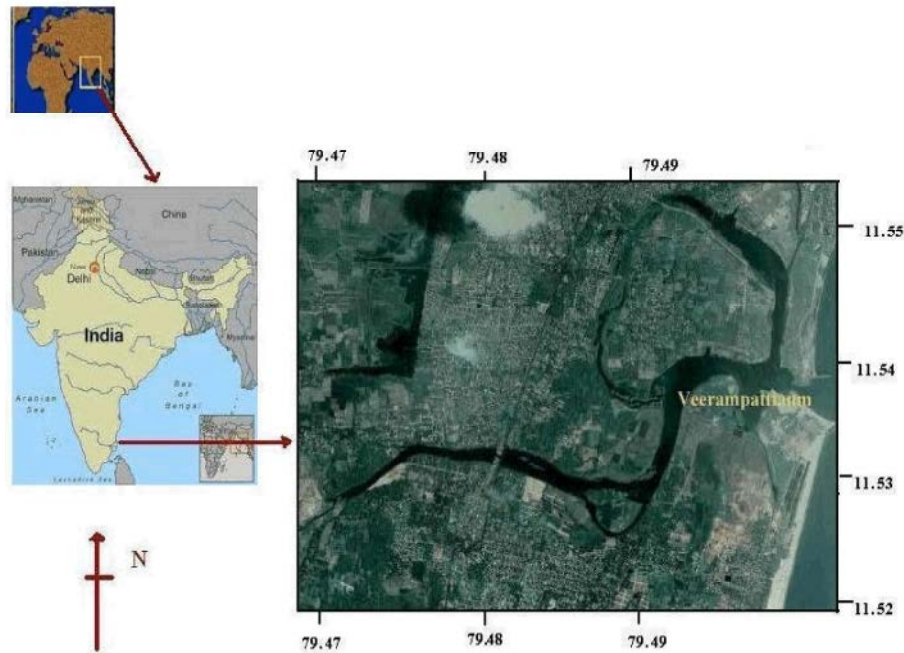


Fig. 2: Map of the study site of Pondicherry Mangroves, India

Distribution: South-eastern Asia including the Philippines and more rarely as far west as Orissa in India
IUCN Red List Status: Least Concern [6].

Habitat and Ecology: It occurs in mangrove forest, estuarine habitats, swamps and open, wet coastal areas. It also thrives in man-made environments such as rice paddy fields. It is tolerant of moderate salinity [4].

Geographically, the study area lies within the boundaries of $11^{\circ}46'03''$ - $11^{\circ}53'40''$ N, $79^{\circ}49'45''$ - $79^{\circ}48'00''$ E (Figure 2). The present record of *Fejervarya cancrivora* is the first report from Pondicherry mangroves, southeast coast of India (never before recorded in mainland India, Except West Orissa Coast). It inhabits mangrove swamps and marshes and is the only known modern amphibian which can tolerate salt water. It is locally favored for its eating quality and is often farmed for its edible legs. This frog can tolerate marine environments (immersion in sea water for brief periods or brackish water for extended periods) by increasing urea production and retention and also by remaining slightly hyperosmotic within urea and sodium flux. Pondicherry coastal area is polluted due to the discharge of industrial, domestic and agricultural wastes through small tributaries and channels into the Bay of Bengal [7]. In addition, the study area of Pondicherry coast has natural environmental handicaps as a result from its isolated position and several manmade

stresses are considered to be mainly responsible for a decline of Amphibians. Habitat destruction and degradation might also be threatening some populations, in particular the destruction of mangroves for wood, expansion of human settlements and the construction of roads. Monitoring of populations and harvest levels in countries where it is exploited is urgently required this baseline information of Mangrove frog resources and abundance that would form a useful tool for further ecological assessment and monitoring of this coastal mangrove ecosystem.

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