

**CONTRIBUTION TO THE AMPHIBIAN FAUNA OF ANDAMAN AND  
NICOBAR WITH A NEW RECORD OF THE MANGROVE FROG,  
*RANA CANCRIVORA*.**

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**INTRODUCTION**

The amphibian fauna of Andaman and Nicobar Islands is very poorly known. Barring the few records of Ranid frogs in his monograph by Boulenger (1920), the papers on the Amphibia of Andaman and Nicobar are those of Cherchi (1954), Pillai (1977) and Mansukhani and Sarkar (1980).

The present paper is based on a collection sent to the author by Dr A.K. Das from the Andaman and Nicobar Regional Station, Port Blair in 1980 and an earlier collection made by Shri S. Chakrapani in October, 1972. In all, 15 examples have been studied and these belong to two families and four species.

The discovery of *Rana cancrivora* inhabiting mangrove swamps and hitherto not known from either Indian mainland or Andaman and Nicobar deserves special mention. One example of *Rana keralensis*, presently considered to be restricted to Kerala and Tamilnadu has also been recorded from Andaman.

**SYSTEMATIC ACCOUNT**

Class AMPHIBIA  
Order ANURA  
Family RANIDAE

**1. *Rana cancrivora* Gravenhorst**

1920. *Rana cancrivora*, Boulenger, *Rec. Indian Mus.*, 20 : 23.

1923. *Rana cancrivora*, Van Kampen, *The Amphibia of the Indo-Australian Archipelago* : 170.

1954. *Rana cancrivora*, Inger, *Fieldiana Zoology*, 33 : 260.

*Material examined* : 1 ex., Carbyn's cove, Port Blair, 6.ii.1980, Coll. K.K.Tiwari; 1 ex., Krishnanagar, Havelock, 10. vi. 1980, Coll. M.K. Dev Roy. Both the specimens were from mangrove swamps.

*Distribution* : *R. cancrivora* is known from Malay Peninsula, Java, Sumatra, Borneo and Philippines. It has not previously been recorded from the Indian Mainland or Andamans.

*Description* : Head a little broader than long, inter-orbital space narrower than upper eyelid, tympanum distinct, its diameter half that of eye, tips of fingers and toes obtuse, first

finger extending beyond second, tibio-tarsal articulation reaches eye, toes three-fourths webbed, the webs strongly notched, two distal phalanges of fourth toe free, outer metatarsal separated nearly to the base and with a distinct dermal fringe along the outer side, an inner blunt metatarsal tubercle, no outer tubercle.

Upper surface with short elongated folds and tubercles in the example from Krishnagar (48 mm in total length) while, it is smooth in the example from Carbyn's Cove (34 mm). Smooth ventrally.

Brown above with a few dark spots. No vertebral line. A small white spot on forehead between the anterior corners of eyes. Ventrally white, faintly marbled with brown.

*Remarks:* Annandale (1920) remarks that this species is frequently found in brackish water and is able to survive in sea water for short periods. This has enabled the species to live in the mangrove swamps of Andaman. No other species of frog was collected from these areas. Inger (1954) notes that in the Philippines, they may be found in ditches, rice fields, ponds or swamps.

*Rana cancrivora* is the only amphibian recorded from mangrove areas of South East Asia (Macnae, 1968). Its tadpoles are common in pools within the swamp and eggs are laid in crab holes.

*Rana cancrivora* is not known from the Indian mainland. Although not previously recorded from Andaman and Nicobar group of islands, its occurrence is not unexpected judging from its known pattern of distribution.

## 2. *Rana keralensis* Dubois

1920. *Rana verrucosa*, Boulenger, *Rec. Indian Mus.*, 20 : 26.

*Material examined* : 1 ex., Mayabunder, Andaman, 13.x.1972, Coll. S. Chakrapani.

*Distribution* : Forested hills of Kerala and Tamilnadu.

*Remarks* : This small frog measuring 30 mm in head and body agrees well with the descriptions of Boulenger (1920) and Daniel (1975). This new record of the species from the Andaman Island constitutes a major extension outside its distribution viz. the southern tip Indian mainland.

## 3. *Rana limnocharis* (Boie) Wiegmann

1920. *Rana limnocharis*, *Rec. Indian Mus.*, 20 : 28.

1923. *Rana limnocharis*, Van Kampen, *The Amphibia of the Indo-Australian Archipelago* : 167.

*Material examined* : 1 ex., Havelock Island, 6.x.72, coll. S. Chakrapani, 2 exs., Havelock Island, 8.x.72, Coll. S. Chakrapani; 1 ex., South Port Blair, 18.x.72, Coll. S. Chakrapani; 1 ex., Kalighat, 18.x.72, Coll. S. Chakrapani; 1 ex., Dilthaman tank, Port Blair, 19.vii.78, Coll. M.K. Dev Roy; 1 ex., Delanipur, Port Blair, 1.x.1980, Coll. H.L. Das.

*Distribution* : India, Sri Lanka, South China and Japan to the Malay Peninsula and the Philippines.

**Remarks:** 7 examples ranging from 22 mm to 50 mm in body length are referable to this species notwithstanding a certain degree of variation exhibited by a few examples.

Boulenger (1920) recognises three separate sub-species including *andamanensis* from the Andaman group of islands. The present examples do not readily fall into the frame work of *andamanensis*. Owing to its wide distribution in diverse habitats and abundance, *R. limnocharis* exhibits considerable intraspecific variations which often renders recognition of subspecies difficult.

#### Family BUFONIDAE

#### 4. *Bufo camortensis* Mansukhani and Sarkar.

1980 . *Bufo camortensis*, Mansukhani and Sarkar, *Bull. zool.Surv. India*, 3 (1 & 2) : 97.

**Material examined:** 1 ex., Arong, Car Nicobar, 26 . xii . 1979, Coll . M.K.Dev Roy; 1 ex., Chukchuka, Car Nicobar, 28 .xii .1979, Coll . M.K. Dev Roy; 1 ex., I. A. F. Car Nicobar, 29. xii. 1979, Coll. M.K.Dev Roy; 1 ex., Kynuka, Car Nicobar, 30. xii. 1979, Coll. M.K. Dev Roy; 1 ex., Kakana, Car Nicobar, 5. i. 1980, Coll. M.K. Dev Roy; 1 ex., Kimus, Car Nicobar, 5.i. 1980, Coll. M.K. Dev Roy.

**Distribution:** Known only from Andaman and Nicobar Islands, India.

**Remarks:** Six more specimens ranging in size from 32 mm to 86 mm are being recorded from the above localities in Car Nicobar since its discovery in 1980 from Camorta and Nancowry Islands.

Except for the two small examples measuring 32 and 35 mm from I.A.F. and Arong respectively, the presence of a parietal ridge, though faint, is unmistakable. Though not mentioned in the description, this ridge is clearly discernible in the figure given by the authors. The presence of a parietal ridge would certainly alter the interspecific affinities of this species. Contrary to the view held by Mansukhani and Sarkar, on the basis of the presence of a parietal ridge, *B. camortensis* is likely to be more related to *B. parietalis* Boul., *B. fergusonii* Boul. or *B. silentvalleyensis* Pillai (1981) known from the hills of southern India or with *B. biporcatus* Gravenhorst from Java, Borneo and Burma and not to *B. melanostictus*. The parietal ridge in *B.camortensis* is deflected to the median line making an angle with the supraorbital ridge as in *B. parietalis* or *B. silentvalleyensis*.

In all other characters the present specimens agree with the descriptions of Mansukhani and Sarkar.

#### SUMMARY

Four species of Amphibia falling under two families are being reported from Andaman and Nicobar. The discovery of the mangrove frog, *Rana cancrivora* is significant since it has not previously been recorded from either these islands or from the Indian mainland. *Rana keralensis* which was restricted to Kerala and Tamilnadu is also recorded from Andaman.

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