

_____. 1926. Snakes collected in Burma in 1925. *J. Bombay nat. Hist. Soc.* 31: 558-566; 1 pl.

ZHAO, E.-M. & K. ADLER 1993. Herpetology of China. Society for the Study of Amphibians and Reptiles, Contributions to Herpetology, No. 10, Oxford, Ohio. 522 pp + 48 pl. + 1 folding map.

_____, M. H. HUANG, Y. ZONG, J. ZHENG, Z. J. HUANG, D. I. YANG & D. J. LI (Ed). 1998. Fauna Sinica. Reptilia Vol. 3. Squamata Serpentes. Science Press, Beijing. (In Chinese)

Ashok Captain¹ and Bharat B. Bhatt²
¹3/1 Boat Club Road, Pune 411 001,
 Maharashtra, India.

Email: ashokcaptain@hotmail.com

²State Forest Research Institute, Van Vihar
 P.B. No. 159, Itanagar 791 111, Arunachal
 Pradesh, India.

Received 18 October 2000

Accepted 26 October 2000

Hamadryad Vol. 26, No. 2, pp. 358 – 359, 2001
 Copyright Centre for Herpetology
 Madras Crocodile Bank Trust

Range extension of *Ansonia ornata* (Günther, 1875) and *Indirana* *brachytarsus* (Günther, 1875)

Ansonia ornata, the black torrent toad, is an endemic of the Coorg and Neria region of Dakshina Kannada District of Karnataka, south-western India, with a localized distribution, at around 12°-13° N; 400 to 800 msl (Daniel, 1963; Inger and Dutta, 1986; Daniels, 1991; 1992; 1997; Dutta, 1992). One specimen (BNHS Re 4061) was recorded from a stream within the evergreen forests of Kuppalli Bioreserve (75° 15'-75° 20' E; 13° 35'-13° 40' N), which although belongs to described altitude range for the species, located 110 km north and 175 km north-west of the earlier report from Neria (Daniels, 1992) and Brahmagiri Hills (Daniel, 1967), respectively. This indicates its range extension from 13° N to 14° N.

Description. - A small aquatic toad (SVL 35 mm); without cranial ridges and parotid glands. Dorsally brownish black, underparts with black and yellow spots, limbs cross-banded. Webbing absent on forelimbs. First finger smaller than second, hindlimb 2.3 times longer than forelimb; length of femur nearly 3 times its width and 4/5th length of tibia. Two prominent metatarsal tubercles, webbing full, reaching terminal dilation of all toes, except toe IV.

Indirana brachytarsus, the short-legged frog, is an endemic of the Western Ghats of Kerala and Tamil Nadu, south-western India, between coordinates 8-11° N, and at altitudes ranging between 0-1000 m msl (Daniels, 1992, 1997; Dutta, 1992). It has been reported earlier that the species is having broad ecological range in Kerala, distributed evergreen forests, moist deciduous forests, secondary growth, open grasses and also along streams and litter mat of forest floors (Inger et al., 1984). However, in the present study, one specimen of *I. brachytarsus* (BNHS Re 4062) have been recorded along the litter mat near the stream in the Bhagavathi forest of Kudremukh National Park (13° 10'-13° 26' N; 75° 05'-75° 10' E), nearly 410 km north-west from earlier report of Annamalai Hills.

Description. - Small litter frog (SVL 34 mm). Colouration is similar to *Indirana beddomii*, with prominent black horizontal streak on interorbital space, cross-bars on limbs and lower jaw. Black streak from tympanum to nostril passing through eye and canthus rostralis. Longitudinal warts prominent posterior to eye. Tongue without pa-

TABLE 1: Measurements of *Ansonia ornata* (BNHS Re No. 4061) and *Limnonectes brachytarsus* (BNHS Re No. 4062) recorded from the central Western Ghats.

Snout-vent length (SVL)	35.0	34.0
Head length	09.0	09.5
Internasal distance	02.0	04.0
Interorbital distance	04.0	03.0
Diameter of eye	04.0	05.0
Diameter of tympanum (horizontal)	02.0	03.0
Forelimb length	15.0	22.0
Hindlimb length	42.0	57.0

pilla. Interorbital space smaller than internasal and diameter of eye, however the internasal distance and distance between eye and nostril are equal (Table 1). The specimen agrees the description of this species given by Inger et al (1984) and can be differentiated from *I beddomii* by absence of lingual papilla, presence of a greater number of longitudinal warts posterior to eye and on mid-dorsum. Small tympanum (ca. 85% that of *I beddomii*) and greater ratio between forelimb and hindlimb (*I beddomii*, 1:0.32 vs *I brachytarsus*, 1:0.39) with tibiotarsal articulation reaching the nostril. Discs on finger and toe tips smaller and inner metatarsal tubercles less prominent compared to *I beddomii*.

The forests of Western Ghats of India is an abode for various amphibian species. This region harbours as many as 123 species (Molur, 1997; Krishnamurthy, 1999). However, repeated and in-depth surveys were resulted either addition of new species or extension of range of distribution. It has been felt that the intensive observation certainly results in the discovery of new species and improvement in understanding the distribution of amphibian fauna (Inger and Dutta, 1986).

SVK is thankful to Department of Science & Technology for awarding the research project (Number SP/SO/C-39/97) to study the diversity and habitat ecology of amphibians in Malnad region. Facilities provided by Zoological Survey of India, Chennai for the identification of these two species are acknowledged. A. H. Manjunatha Reddy and K. V. Gururaja are thankful to DST for the fellowship awarded to work on amphibian diversity and habitat ecology.

LITERATURE CITED

- DANIEL, J. C. 1963. A field guide to the amphibians of Western India. *J. Bombay nat Hist Soc.* 60(2): 415-438.
- DANIELS, R. J. R. 1991. On the occurrence of Malabar torrent toad (*Ansonia ornata*, Gunther) in South Kanara, Karnataka. *J. Bombay nat Hist Soc.* 88: 127-128.
- _____ 1992. Geographical distribution patterns of amphibians in the Western Ghats, India. *J. Biogeogr.* 19: 521-529.
- _____ 1997. A field guide the frogs and toads of Western Ghats of India. Part I. *Cobra* 27:1-25. and Part II. *Cobra* 28: 1-24.
- DUTTA, S. K. 1992. Amphibians of India: Updated species list with distribution record. *Hamdryad* 17: 1-13.
- INGER, R. F. & S. K. DUTTA. 1986. An overview of amphibian fauna of India. *J. Bombay nat Hist Soc.* 83: 135-146.
- _____, B. H. SHAFFER, M. KOSHY & R. BAKDE. 1984. A report on a collection of amphibians and reptiles from the Ponmudi, Kerala, South India. *J. Bombay nat Hist Soc.* 81: 406-427.
- KRISHNAMURTHY, S. V. 1999. Amphibian diversity in a few selected environs of Western Ghats. In: Biodiversity of Western Ghats complex of Karnataka- resource potential and sustainable utilization, pp: 107-118. S. A. Hussain & K. P. Achar (Eds) Biodiversity Initiative Trust, Mangalore.
- MOLUR, S. 1997. All Indian amphibian assessed according to new IUCN categories. *Froleg.* 2(1): 1-8.
- A. H. Manjunatha Reddy¹, K. V. Gururaja², M. S. Ravichandran³ and S. V. Krishnamurthy^{4*},
^{1, 2 & 4}Department of P.G. Studies and Research in Environmental Science, Kuvempu University, Jnana Sahyadri, Shankaraghatta 577 451, Shimoga Dist. Karnataka, India;
³Zoological Survey of India, Southern Regional Station, 100, Santhome High Road, Chennai 600 028, India
⁴email: svkrishnamurthy@yahoo.co.in
 *Author for correspondence.

Received 13 September 2000

Accepted 27 July 2001