

## (IV)

## CONSERVATION OF AMPHIBIANS IN INDIA

Amphibians, the third most diverse group of vertebrate are represented by frogs, toads, caecilians and salamanders. Most of the herpetofauna are threatened and are declining more rapidly than birds and mammals (Stuart *et al.*, 2004). Amphibians are first animals with backbone and are the first vertebrates who invaded the terrestrial ecosystem successfully. They appeared much before the human and shared space with dinosaurs. Though dinosaurs were extinct, amphibians shared comfortable space with human. Total number of 6990 amphibians' species are documented in July, 2012. (Which is now 7032 (18<sup>th</sup> September, 2012 according to amphibianweb.org). Among them 6177 anurans, 623 caudatas and 190 caecilians were described all over the world. One third of them are threatened with extinction. In every 20 minutes a species is pushed to extinction and more than 1000 acres of forest are destroyed. Half of the known amphibians are declining in number steadily. Habitat destruction for timber, cultivation, pollution and direct intervention by humans are thought to be the prime reasons for their decline. Habitats are also condensed by forest fire in India. Amazingly India has lost almost 50 species which is the highest number of lost species from any country in the world. Twenty per cent of all Indian amphibians are facing extinction.

150 new species has been discovered from India. *Rhacophorus lateralis* is an endangered species of Rhacophorid tree frog which was rediscovered from India after 150 years (Biju, 2004a). *R. lateralis* is only found in two areas of the Southern Western Ghats of India: Kerala and Karnataka at an elevation of about 800 m amsl. The species lives in tropical rain forests and deciduous forests. It is usually found in the lower cover and understory level of the forest (Biju *et al.*, 2004a). When handled, *R. lateralis* changes colour to bright

brown with coffee coloured dots in only 5 seconds (Molur and Molur, 2010). Conservation programmes are taken up to protect this frog species. *Philautus wynaadensis*, first documented from southern peninsula is endemic to India. They live in subtropical or tropical moist lowland forests. It is threatened by habitat loss (Biju *et al.*, 2004b and Biju *et al.* (2005)).

A new legless amphibian of family Chikilidae is discovered by Biju from India. (Kamei *et al.*, 2012). Finding caecilian is not an easy task because they live under the soil. This is a flagship species from northeast India. This animal commonly called tailless burrowing caecilians; their relatives are found in Africa 7000km away from India. It also gives prehistoric evidences of migration as well as evolutionary path influenced by continental shift. The chikilidae's home in tropical forest now faces remarkable changes due to agriculture and deforestation.

Amphibians are tremendously susceptible to little fluctuation in temperature and moisture. Changes in global weather patterns (e.g. El Nino events or global warming) can modify breeding behaviour, influence reproductive success, reduce immune functions and raise their sensitivity to chemical contaminants (Pratihari, 2011). *Nasikabatrachus sahyadrensis*, Indian purple frog has small distribution range and is critically endangered. It spends eleven months under burrow and come for reproduction for just two weeks. Habitat loss and degradation is known to be major causes of decline of *Nasikabatrachus sahyadrensis* from the Western Ghats, a large area of which has been deforested for agricultural purpose. Very little informations are available of their population ecology, behaviour and threats. More detailed information is needed to conserve the species other than habitat conservation.

## References

- Biju, S.D., Dutta, S., Vasudevan, K., Srinivasulu, C. and Vijayakumar, S.P. (2004a). *Rhacophorus lateralis*. 2006 IUCN Red List of Threatened Species.
- Biju, S.D., Bhudhe, G.D., Dutta, S., Vasudevan, K., Srinivasulu, C. and Vijayakumar, S.P. (2004b). *Philautus wynaadensis*. 2006 IUCN Red List of Threatened Species.
- Biju, S. D., Franky Bossuyt and M. M. Lannoo (2005). Two New *Philautus* (Anura: Ranidae: Rhacophorinae) from Ponmudi Hill in the Western Ghats of India. *Copeia*: February 2005, Vol. 2005, No. 1, pp. 29-37.
- Kamei, R.G., San Mauro, D., Gower, D.J., Van Bocxlaer, I., Sherratt, E., Thomas, A., Babu, S., Bossuyt, S., Wilkinson, M. and Biju, S. D. (2012). "Discovery of a new family of amphibians from northeast India with ancient links to Africa". *Proceedings of the Royal Society B*: 1-6" for all answer regarding CHIKILIDAE.
- Molur, S., and Molur, P. (2010). *Rhacophorus lateralis* in Madikeri, Kodagu, Karnataka. *Frogleg*, 14.
- Pratihari, S. (2011). Threat to amphibian population in district Midnapore, West Bengal (India). *Indian Forester*, 137(10):1230-1231.

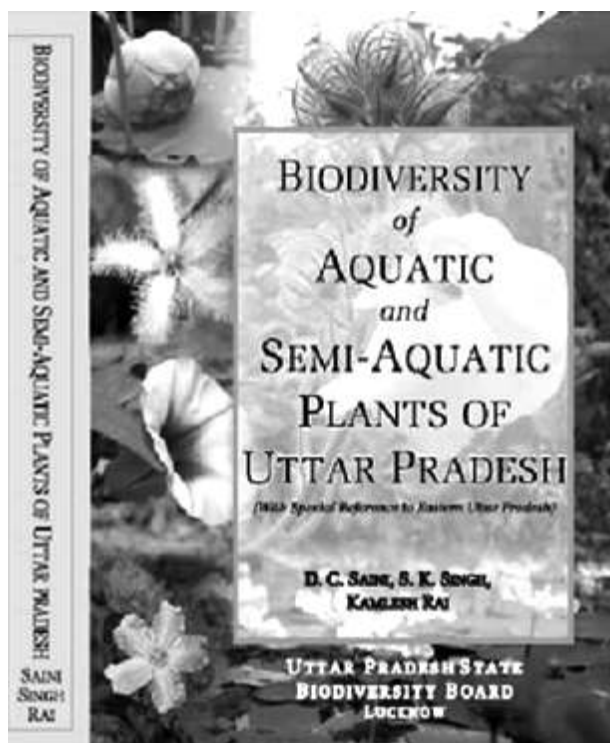
Stuart, S.N., Chanson, J.S., Cox, N.A., Young, B.E., Rodrigues, A.S.L., Fischman D.L. and. Waller, R.W. (2004). Status and trends of amphibian declines and extinctions worldwide. *Science*, 306: 1783-1786.

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