

A REVIEW OF AMPHIBIAN STUDIES IN KERALA STATE, INDIA

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Studies on Indian amphibians are comparatively few and have not equaled with the progress made on other vertebrate groups. The studies date back to fauna volumes published by Boulenger (1882, 1890 & 1892) and Smith (1935 & 1943). Later, Ferguson (1904) listed the Batrachians of Travancore and Annandale (1918) described tadpoles. Myers (1942a & b) described a new frog from Anamalai Hills and described another one from Travancore. There is a big lacuna after that. Nothing was published substantially to fill the lacuna. The studies conducted in Kerala are presented in Table 1.

Daniel (1963a,b; 1975), and Daniel and Sekar (1989) published field guides for the identification of amphibians of Western India along with details on their distribution. However, since this study was based on the museum specimens, its scope was rather limited. Daniels (1997a,b,c) published field guides for the identification of frogs and toads in the Western Ghats.

Pillai (1978; 1981) described new species from Wyanad and Silent Valley National Park. Pillai and Pattabiraman (1981a,b) reported genus *Anosonia* from Silent Valley and documented the amphibians in Sabarigiri forests with description of new species. Pillai (1986) and Inger *et al.*, (1984a,b) documented the amphibians of Silent Valley and Ponnudi in southern part of Kerala respectively.

Enlisting of species was also made from other locations. Radhakrishnan (1996a,b) enlisted the amphibians in Aralam and Parambikulam Wildlife Sanctuaries. In addition to this, Radhakrishnan *et al.*, (1996) made a taxonomic study on the amphibians in Eravikulam National Park. Zacharias and Bhardwaj (1996) made a preliminary study on the amphibians of Periyar Tiger Reserve. Recently, Easa (1998) made a study on the herpetofauna in Kerala part of Nilgiri Biosphere Reserve documenting the amphibians along with their microhabitat preferences and abundance. Swengel (1990; 1993) updated the endemic amphibians of Western Ghats.

Apart from survey and documentation, Andrews (1979) studied the food and feeding habits and George (1995b) assessed the status of *Rana hexadactyla*. George and Andrews (1995) made

a detailed study on the food spectrum of *Rana hexadactyla* from Kuttanadu. Andrews (1994) documented the amphibians of Kuttanadu and Andrews and George (1995) prepared a key for the identification of the amphibians of Kuttanadu. George and Leelamma (1995) recorded *Uperodon globulosum* from Kerala. George *et al.*, (1996) attempted captive rearing of the Malabar Gliding Frog, *Rhacophorus malabaricus*. The updated list of Dutta (1992; 1997) has amphibians of Kerala along with their distribution records.

In general, studies on the amphibians of Kerala are scanty and limited to documentation in Protected Areas. Much needs to be done to update the earlier studies, record the details of microhabitat and collect information on the abundance, richness and diversity in different areas/habitats.

Amphibian publications with reference to Kerala

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- Annandale, N. (1918).** Some undescribed tadpoles from the hills of southern India. *Rec. Indian Mus.* 15: 18-23.
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Table 1. Amphibian studies in Kerala.

Author/s	Year of Publication	Study area	Type of Work
Andrews	1979	Travancore	Biology
Annandale	1918	Travancore	New description
Boulenger	1892	Travancore	New description
Daniel	1963a&b and 1975	Western Ghats	Distribution
Daniel & Sekar	1989	Western Ghats	Distribution
Ferguson	1904	Travancore	Survey
George	1995	Pooyamkutty	Survey
George	1996	Pooyamkutty	Survey
George & Leelamma	1995a	Kerala	New record
George <i>et al.</i>	1992	Kuttanad	Survey
Inger <i>et al.</i>	1984a	Ponmudi	Survey
Inger <i>et al.</i>	1984b	Ponmudi	Survey
Myers	1942a	Travancore	New description
Myers	1942b	Anamalai hills	Survey
Pillai	1978	Wayanad	New description
Pillai	1981	Silent Valley	New descriptions
Pillai	1986	Silent Valley	Survey
Pillai & Pattabiraman	1981a	Silent Valley	New description
Pillai & Pattabiraman	1981b	Sabarigiri	Survey
Radhakrishnan	1996a	Aralam	Survey
	1996b	Parambikulam	Survey
Zacharias & Bhardwaj	1996	Periyar Tiger Reserve	Survey

Please note that the above not actual study dates.

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