



## Two new species of amphibian nematodes from Bhadra Wildlife Sanctuary, Western Ghats, India.

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### Abstract

Two new species namely, *Cosmocercoides karnatakaensis* sp.nov. and *Narsingiella clinotarsi* sp.nov. from amphibian hosts from Bhadra Wildlife Sanctuary, Western Ghats are described. *Cosmocercoides karnatakaensis* **sp. nov.** is characterized by males with small body length, long spicules, small gubernaculum, minute somatic papillae reaching up to esophagus, rosette complex caudal papillae as 8:5:12 pairs and simple caudal papillae as 3:0:0 pairs ; females with small body length, long tail, posteriorly situated vulva and oviparous. *Narsingiella clinotarsi* **sp. nov.** is characterized by male having long esophagus, two unequal spicules with trilobed shaft, small gubernaculum and 14 pairs of caudal papillae as 6:1:7 pattern and female having long esophagus, short conical tail and vulva situated at midbody. Both the genera are recorded for the first time from Western Ghats. Key to the species of *Cosmocercoides* is provided.

**Key words:** *Cosmocercoides*, *Narsingiella*, amphibian hosts, Bhadra Wildlife Sanctuary, Western Ghats

### Introduction

The Western Ghats is one of the 34 Global Hotspots for conservation identified by Conservation International by the CEPF WesternGhats factsheets. ([www.cepf.net/xp/cepf/static/pdfs/CEPF\\_WesternGhats\\_factsheet.pdf](http://www.cepf.net/xp/cepf/static/pdfs/CEPF_WesternGhats_factsheet.pdf) accessed 13 December 2008). It is also one of the world's eight "Hottest of biodiversity Hotspots" and harbour 156 species of amphibians. Nematode parasites from two species of amphibians from Western Ghats are described. Members of the genus *Cosmocercoides* Wilkie, 1930 are mainly parasitic in amphibians and reptiles (Vanderburgh & Anderson, 1987) and the genus *Narsingiella* Rao, 1978, is parasitic in amphibians (Sood, 1990). The genus *Cosmocercoides* comprises 17 species from different biogeographical regions, out of which 7 species are reported from India (Table 2.), the present being the eighth species. The new species *Cosmocercoides karnatakaensis* sp.nov. is photomicrographed and described. The genus *Narsingiella* is monotypic and is recorded after 30 years of its discovery in 1978. The genus *Narsingiella* was placed in the family Aspidoderidae by Rao, 1978, but Sood (1990) while compiling all the amphibian nematodes from South Asia, placed it under the family Oxyuridae because of the presence of esophageal endbulb. The new species is placed under the genus *Narsingiella*, because of three important generic characters, namely, presence of cervical cordons, two esophageal bulbs and preanal sucker. The new species *Narsingiella clinotarsi* sp.nov. is photomicrographed and described. Both the nematode genera are recorded for the first time from Western Ghats, India, and the amphibians, *Hylarana temporalis* and *Clinotarsus curtipes* are new host records for the genera *Cosmocercoides* and *Narsingiella* respectively.

### Materials and methods

Amphibian hosts, Bronzed frog, *Hylarana temporalis* (Günther) and Bicoloured frog, *Clinotarsus curtipes*