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The first teresomatan caecilian (Amphibia: Gymnophiona) from the Eastern Ghats of India—a new species of *Gegeneophis* Peters, 1880

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Abstract

A new species of caecilian amphibian, *Gegeneophis orientalis* **sp. nov.**, is described based on a series of nine specimens from high elevation (ca. 1,200 m) habitats in the Eastern Ghats in the states of Andhra Pradesh and Odisha, India. This species differs from all other congeners in having only bicuspid teeth in the outer as well as inner rows. The new species is the first caecilian reported from the state of Odisha, the first teresomatan caecilian from the Eastern Ghats, and is the only Indian indotyphlid known from outside the Western Ghats region.

Key words: herpetology, Indotyphlidae, taxonomy, Western Ghats

Introduction

India is a centre of diversity of caecilian amphibians (Gymnophiona) with 38 nominal species (c. 20% of the current global total) occurring here (e.g., www.amphibiaweb.org). As currently conceived, the Indian caecilian fauna includes representatives of three of the ten families in this order (Wilkinson *et al.*, 2011; Kamei *et al.*, 2012), the endemic Chikilidae Kamei *et al.*, 2012, and two families that include non-Indian representatives—Ichthyophiidae Taylor, 1968 and Indotyphlidae Lescure, Renous & Gasc, 1986. Within India, caecilians are known mainly from the northeast and from the Western Ghats region of the peninsula (Fig. 1). Western Ghats' biodiversity has received considerable attention as part of a global diversity hotspot (Bossuyt *et al.*, 2004), but the Eastern Ghats region is less well studied (Shyamal, 2007; Muthumperumal & Parthasarthy, 2010). The Eastern Ghats is a broken range of mountains close to the southeastern coast of peninsular India. Although the biota of the Eastern Ghats is less diverse than that of the Western Ghats, it also has endemic species and genera, including reptiles (Das, 1996; Srinivasulu & Das, 2008) and plants (Pullaiah & Rao, 2002). To date, there has been only a single report of any caecilian from the Eastern Ghats, an unstriped species of *Ichthyophis* from southern parts of Andhra Pradesh (Ramaswami, 1947).

Recent fieldwork in the Eastern Ghats resulted in the discovery of the first caecilians from the state of Odisha and the second from Andhra Pradesh. These new caecilians are clearly teresomatan (Wilkinson & Nussbaum, 2006) because they lack true tails and have a rounded body terminus. They can be assigned to the family Indotyphlidae on the basis of having imperforate stapes, bicuspid teeth, and inner mandibular teeth (a combination of features seen elsewhere only in some African and central American dermophiids). Within the Indotyphlidae, these new caecilians fall within the current conception of *Gegeneophis* Peters, 1880, as the only indotyphlids with the eye covered with bone (Wilkinson *et al.*, 2011), yet they differ sufficiently substantially from previously described members of this genus as to warrant description as a new species.