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Kotumsaridae, a new family of subterranean amphipod crustaceans from India, with description of *Kotumsaria bastarensis*, new genus, new species

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Abstract

Kotumsaridae, a new family of amphipod crustaceans is described from Kotumsar Cave in the state of Chhattisgarh, India. The family is based on *Kotumsaria bastarensis*, new genus and species, which is the only known member of the new family recorded to date. Although the new family appears to share some morphological characters with several other taxa from the southern hemisphere considered members of the superfamily Crangonyctoidea, including the New Zealand endemic genus *Paracrangonyx*, both its taxonomic and phylogenetic affinities remain unclear. Specimens of the new taxon, measuring just over 2 mm in length, were collected from the sediments of a pool in Kotumsar Cave but are believed to have migrated from deeper interstices. *Kotumsaria bastarensis* is only the third subterranean amphipod recorded to date from the Indian subcontinent.

Key words: stygobiotic, amphipods, Kotumsaridae, India, Kotumsar cave, subterranean groundwater

Introduction

During biological exploration of Kotumsar cave in Kanger Valley National Park in the Bastar District of the Indian state of Chhattisgarh, one of us (YRR) collected a series of tiny amphipod crustaceans from the sediments of a cave pool. A detailed examination of the specimens revealed a unique, new family of gammaridean amphipod crustaceans that is described below and provisionally, pending further study, placed in the superfamily Crangonyctoidea (sensu Bousfield 1982, 1983; see also Williams & Barnard, 1988). The description of the family Kotumsaridae is accompanied by descriptions of the new genus and species *Kotumsaria bastarensis*. This is the third stygobiotic amphipod species so far described from India, the other two being *Indoniphargus indicus* (Chilton**,** 1923) from various groundwater habitats (e.g., springs, well water, mine pit) in the northeastern states of Bihar, Orissa, and West Bengal, and *Bogidiella indica* Holsinger**,** Ranga Reddy & Messouli (2006) from water wells in the southeastern state of Andhra Pradesh.

Material and methods

The material was collected with a plankton net (mesh size 70 µm) from water after disturbing the sediments of the cave pools manually. Also, a rigid PVC tube (length 70 cm, diameter 4 cm) was used for coring. The cores were collected from the sediment surface to a depth of about 10 cm. Samples were fixed in 5% formaldehyde. Specimens were isolated into 70% alcohol.

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