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Groundwater cyclopoid copepods of peninsular India, with description of eight new species

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Table of contents

Abstract	3
Introduction	4
Material and methods	5
Taxonomic results	7
Subphylum Crustacea Brünnich, 1772	7
Class Maxillopoda Dahl, 1956	7
Subclass Copepoda H. Milne Edwards, 1840	7
Order Cyclopoida Burmeister, 1835	7
Family Cyclopinidae Kiefer, 1954	7
Genus <i>Allocyclopina</i> Kiefer, 1954	7
<i>Allocyclopina inopinata</i> Defaye & Ranga Reddy, 2008	7
Family Cyclopettidae Martínez Arbizu, 2000	7
Genus <i>Paracyclopina</i> Smirnov, 1935	7
<i>Paracyclopina orientalis</i> (Lindberg, 1941)	7
Family Cyclopidae Rafinesque, 1815	18
Subfamily Halicyclopiniae Kiefer, 1927	18
Genus <i>Halicyclops</i> Norman, 1903	18
<i>Halicyclops martinezi</i> n. sp.	18
Key to the Indian species of the genus <i>Halicyclops</i> Norman, 1903	30
Subfamily Cyclopiniae Kiefer, 1927	30
Genus <i>Rybocyclops</i> Dussart, 1982	30
<i>Rybocyclops defayeeae</i> n. sp.	30
<i>Rybocyclops dussarti</i> Ranga Reddy & Defaye, 2008	40
<i>Brevicyclops</i> n. g.	40
<i>Brevicyclops brevisetosus</i> n. g., n. sp.	40
<i>Brevicyclops asetosus</i> n. g., n. sp.	49
<i>Brevicyclops viduus</i> n. g., n. sp.	54
Genus <i>Anzycyclops</i> Karanovic, Eberhard & Murdoch, 2011	60
<i>Anzycyclops indicus</i> n. sp.	60
Genus <i>Haplocyclops</i> Kiefer, 1952	71
Subgenus <i>Haplocyclops</i> (<i>Kiefercyclops</i>) Karanovic & Ranga Reddy, 2005	71
<i>Haplocyclops</i> (<i>Kiefercyclops</i>) <i>primitivus</i> n. sp.	71
<i>Haplocyclops</i> (<i>Kiefercyclops</i>) <i>godavari</i> n. sp.	80
Biogeography	87
Acknowledgements	87
References	88

Abstract

To date, only three stygobiotic cyclopoid species are known from India: *Haplocyclops* (*Kiefercyclops*) *fiersi* Karanovic & Ranga Reddy, 2005 and *Rybocyclops dussarti* Ranga Reddy & Defaye, 2008, from bores, and *Allocyclopina inopinata* Defaye & Ranga Reddy, 2008, from brackish conditions of a hyporheic habitat. Analysis of numerous groundwater samples collected during 2008–2013 from the hyporheic and phreatic habitats in the coastal deltaic belt of the Rivers Krishna and Godavari in Andhra Pradesh state, southeastern India, has shown ten stygobiotic cyclopoid species, of which eight are new to science: *Anzycyclops indicus* n. sp., *Brevicyclops asetosus* n. g., n. sp., *Brevicyclops brevisetosus* n. g., n. sp., *Brevicyclops viduus* n. g., n. sp., *Halicyclops martinezi* n. sp., *Haplocyclops* (*Kiefercyclops*) *godavari* n. sp., *Haplocyclops* (*Kiefercyclops*) *primitivus* n. sp., and *Rybocyclops defayeeae* n. sp. All these species are formally described and illustrated herein. *Allocyclopina inopinata*, which perfectly agrees with its original account, is also recorded in several localities besides its type locality. The heretofore incompletely characterised *Paracyclopina orientalis* (Lindberg, 1941) is redescribed. A new cyclopoid genus, *Brevicyclops* n. g., is established for three aforementioned new species. Its most diagnostic synapomorphy is the extreme reduction or complete absence of the principal outer apical seta of caudal ramus. So far, the cosmopolitan genus *Halicyclops* Norman, 1903, is known by six species in India, all from the surface environments. Now, a new species, *H. martinezi* n. sp., is described from an interstitial hyporheic habitat, and an identification key given for all the Indian species. The genus *Anzycyclops* Karanovic, Eberhard & Murdoch, 2011, which has hitherto been known from the Western Australia and New Zealand, is discovered in this study. A new species, *Anzycyclops indicus* n. sp., which has a close relationship with its Western Australian congeners, is described. A brief note on the biogeography of the Indian stygobiotic crustaceans is also added.

Key words: *Anzycyclops*, *Brevicyclops* n. g., *Haplocyclops*, *Rybocyclops*, stygofauna, taxonomy

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