

ON SOME FRESHWATER GASTROTRICHA FROM NORTH-EASTERN REGION, WITH REMARKS ON INDIAN TAXA.

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INTRODUCTION

Our knowledge of Indian freshwater Gastrotricha is scanty and scattered. The various earlier contributions are by Annandale (1907), Stewart (1908), Vanamala Naidu (1962), Visveswara (1963,1964), Dhanapathi (1976), Rao & Mohan (1977) and Sharma (1980).

The present report deals with five species of freshwater Gastrotricha from Meghalaya State, North-Eastern India. All the studied species are new to this region while only one species comprises a new record from India. Comments are made on the nature and composition of Gastrotrich fauna of India.

MATERIAL AND METHODS

The material for this study was collected from some freshwater bodies in Meghalaya State (Fig. 1). Methods of collection and preservation are detailed by Sharma (1980). The drawings are made using a camera lucida and measurements are given in micrometers (μm).

TAXONOMIC NOTES

Chaetonotus similis Zelinka 1889
(Fig. 2)

Present specimens of *C. similis* are identical with those examined from West Bengal (Sharma 1980). This species has also been reported previously from this country from Andhra Pradesh (Vanamala Naidu 1962, Dhanapathi 1976, Rao & Mohan 1977). Total length : 170-176.

Chaetonotus anomalus Brunson 1959
(Fig. 3)

Forms agree with those reported from West—(Sharma *loc. cit*) in that the long spines do not project beyond the body. The only earlier report of this species from India is from Andhra Pradesh (Dhanapathi 1976). Total length : 150-156.

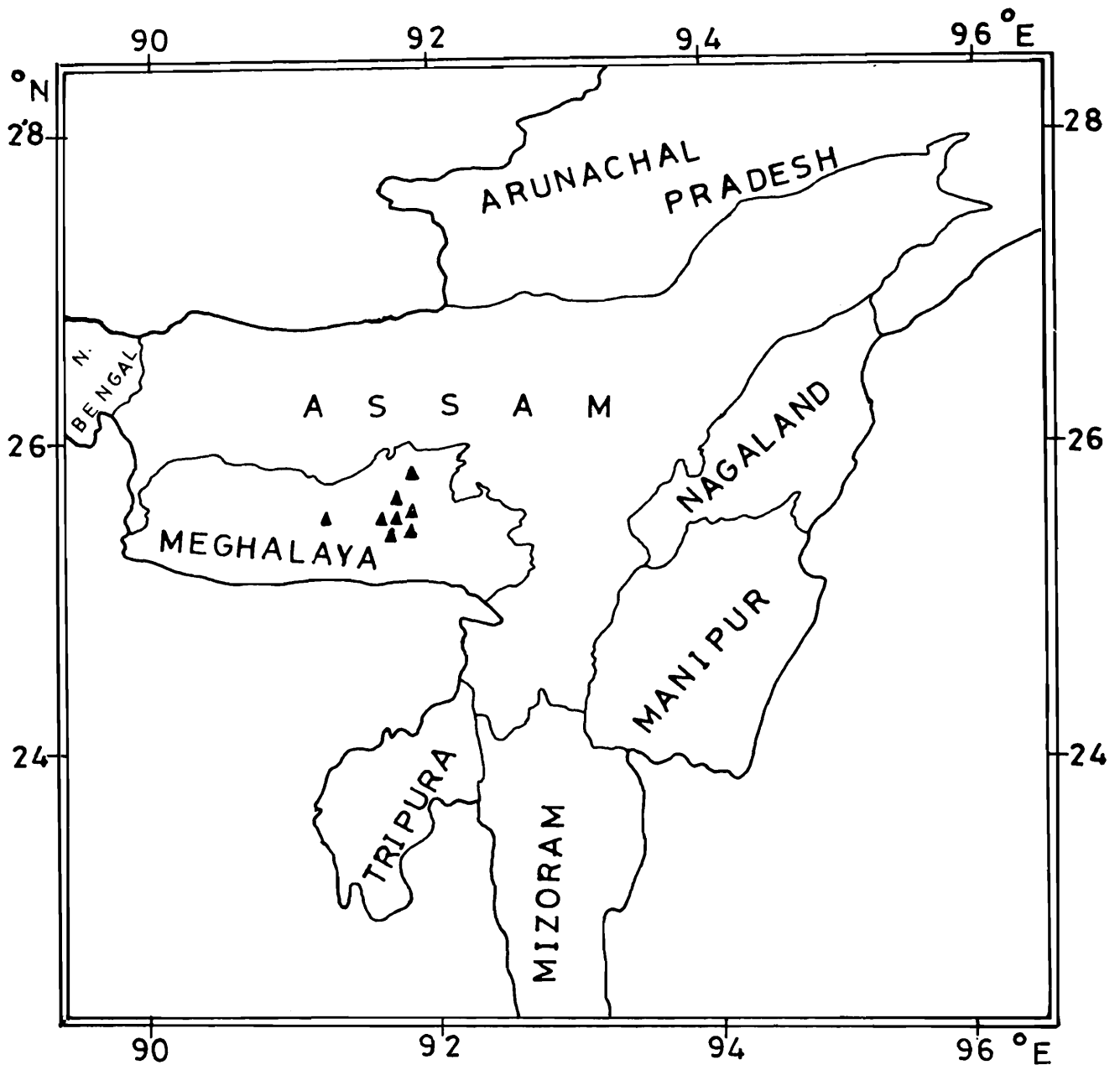


Fig. 1. Map of North-Eastern India showing sites of collection.

Chaetonotus spinulosus Stokes 1887
(Fig. 4)

Head five-lobed. Anterior and posterior tectile bristles present. Body with seven long and bifurcate spines, arranged in two rows. It differs from *C. octonarius* in the arrangement of its long spines. This species represents a new record from India. Total length 62.

Lepidodermella squamatum (Dujardin 1841)
(Fig. 5)

Head five-lobed. Body covered with scales arranged in alternate rows and projecting beyond the body surface. Reported previously from India from Andhra Pradesh (Rao & Mohan 1977) and West Bengal (Sharma 1980). Total length : 162.

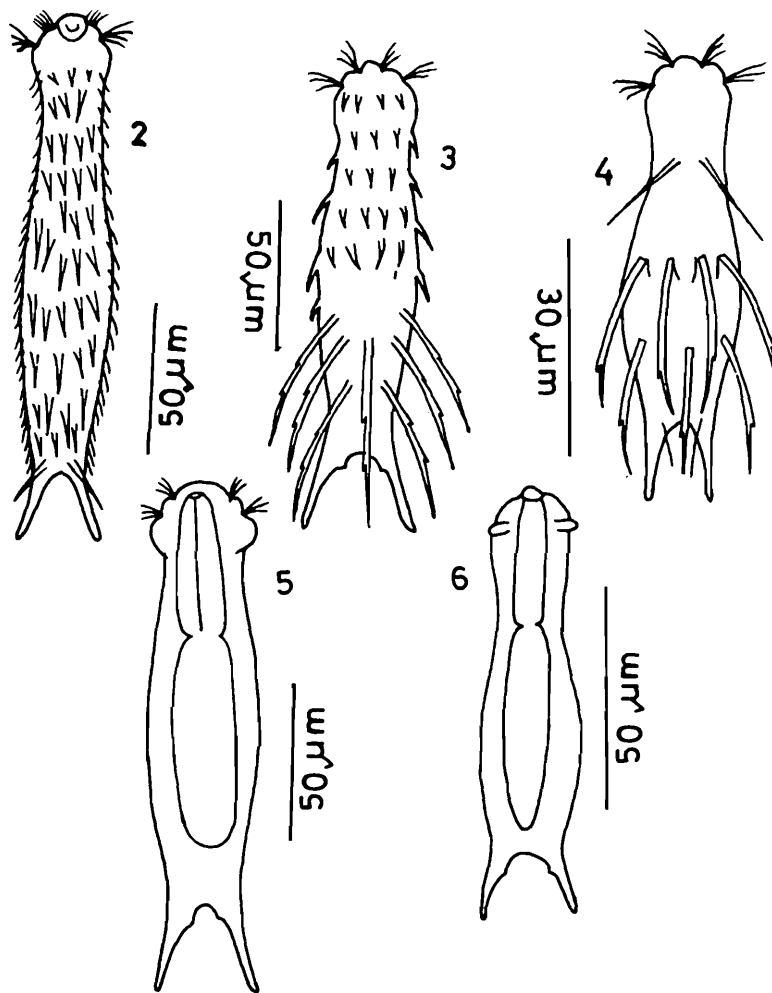


Fig. 2. *Chaetonotus similis* Zelinka 1889, dorsal view; Fig. 3. *Chaetonotus anomalus* Brunson 1959, dorsal view; Fig. 4. *Chaetonotus spinulosus* Stokes 1887, dorsal view; Fig. 5. *Lepidodermella squamatum* (Dujardin 1841), dorsal view; Fig. 6. *Ichthydium auritum* Brunson 1950, dorsal view.

Ichthydium auritum Brunson 1950
(Fig. 6)

Head three-lobed; posterior lobes as earlike flaps. No tectile bristle present. Recorded earlier from this country only from West Bengal (Sharma 1980). Total length : 90.

REMARKS

Five species of freshwater gastrotrichs are presently documented from the state of Meghalaya in North-Eastern India. While only *Chaetonotus spinulosus* represents a new report from India, all the reported species are new to this region. Further, all the examined taxa were rare in the present material. Agreeing with Sharma (1980), most of the studied species were associated with habitats rich in detritus and decaying organic matter; with some localities having dissolved oxygen values even below 1.0 mg/l *Chaetonotus* spp. also showed affinity with filamentous algae and various macrophytes.

Twenty-four species of freshwater Gastrotricha (including the present study) have so

far been reported from India (APPENDIX I); this comprises about 10% of the world's fauna. The Indian taxa belong to six genera and are spread over three families. Genus *Chaetonotus* comprises a dominant fraction of the reported species. *C. similis* appears to be relatively common in its occurrence. Certain other species i.e., *C. techyneusticus*, *C. formosus* and *C. anomalus* have been collected from various localities in Eastern India. On the other hand, *Chaetonotus novenarius*, *Ichthydium minimum*, *I. monolobum*, *Polymerurus nodicaudis* and *Neogosseia antennigera* are known only from Central India. The endemic forms i.e., *Stylochaeta abarbita*, *Chaetonotus trianguliformis*, *C. monobarbatus*, *C. laterospinosus*, *C. sextospinosus*, *C. caudalspinosus* and *Polymerurus magnus* comprise a significant component (34.3%) of the gastrotrich fauna of this country and are apparently restricted to Central India.

The studies so far conducted reflect that Gastrotrich fauna of India is rich and varied eventhough a majority of previous works are from Eastern India. It shall be still interesting to examine further extensive collections from different latitudes and longitudes of this subcontinent.

SUMMARY

Five species of freshwater Gastrotricha are collected from Meghalaya State in North-Eastern India. Of these, *Chaetonotus spinulosus* represents a new record from India while all the examined taxa are new to this region. Remarks are made on the composition of Gastrotrich fauna of this country and a list of Indian taxa is presented.

APPENDIX – I

List of freshwater Gastrotricha reported from India

Class GASTROTRICHA
Family CHAETONOTIDAE

Chaetonotus anomalus Brunson 1950; *Chaetonotus brevispinosus* Zelinka 1889; *Chaetonotus caudalspinosus* Visveswara 1964; *Chaetonotus formosus* Stokes 1887; *Chaetonotus laterospinosus* Visveswara 1964; *Chaetonotus longipinosus* Stokes 1887; *Chaetonotus monobarbatus* Visveswara 1964; *Chaetonotus novenarius* Greuter 1917; *Chaetonotus octonarius* Stokes 1887; *Chaetonotus schulzei* Zelinka 1889; *Chaetonotus sextospinosus* Visveswara 1964; *Chaetonotus similis* Stokes 1887; *Chaetonotus spinulosus* Stokes 1887; *Chaetonotus tachyneusticus* Brunson 1948; *Chaetonotus trianguliformis* Visveswara 1964; *Chaetonotus vulgaris* Brunson 1950; *Ichthydium auritum* Brunson 1950; *Ichthydium minimum* Brunson 1950; *Ichthydium monolobum* Brunson 1950; *Lepidodermella squamatum* (Dujardin 1841); *Polymerurus magnus* Visveswara 1963; *Polymerurus nodicaudus* Voigt 1901.

Family DASYDYTIDAE

Stylochaeta abarbita Visveswara 1963.

Family NEOGOSSEIDAE

Neogosseia antennigera (Goose 1857).

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