A NEW SPECIES OF NAMANEREIDINAE: NAMALYCASTIS GLASBYI SP. NOV. FROM INDIAN WATERS

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A new species of the Genera Namalycastis, Subfamily Namanereidinae, Family Nereidae, is being described here. Collections from Gorai creek, Mumbai, included Nereid worms previously undescribed. Namalycastis indica is a species of Namalycastis recorded most frequently from India. Subsequently N.fauveli has been described from Indian waters. In addition to this N. abiuma species group has also been observed though not recorded. As N. indica and N. abiuma resemble each other, there has been some confusion with regards to their occurrence from the different areas studied. The present study records the occurrence of a new species Namalycastis glasbyi, a key is being provided to help distinguish the different species of Namalycastis occurring in Indian waters.

Key words: Nereidae, Namalycastis glasbyi sp. nov., Mumbai, Namalycastis indica, Namalycastis fauveli

Table 1: Records of distribution of Namalycastis indica and N. fauveli along the Indian coast

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Reference</th>
<th>Study area</th>
<th>N. indica</th>
<th>N. fauveli</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Southern (1921)</td>
<td>Chilika Lake</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Balasubrahmanyam &amp; Vellar (1960)</td>
<td>Vellar</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>


MATERIAL AND METHODS

During the present study four specimens of the genus Namalycastis were collected from sandy, clayey intertidal
Fig. 1: Nemalycastis glasbyi: a. head; b. parapodia of segment 8; c. parapodia of segment 20; d. parapodia of segment 50; e. parapodia of segment 100; f. parapodia of segment 160; g. jaw piece, ventromedial view; h. neuropodal setae

sediments, about 3 km upstream in Gorai creek, Mumbai. Gorai creek situated in the suburbs of Mumbai (formerly Bombay) (19° 12’ N, 72° 48’ E) extends 12 km inland through vast mangrove mudflats and low-lying marshy area. South of the creek mouth, lies the Akse-Madh coastal strip; the northern bank of the creek is bordered by Manori village, which forms a natural beach. As these specimens were different from the species of Namalycastis described earlier, more detailed
Observations were made.

Three of the four specimens were complete; the largest had 289 segments up to 64 mm long and 1 mm wide. The longest tentacular cirrus reached up to the fifth segment. Maximum width is at segment 15 after which it tapers gradually. The prostomium has a shallow cleft with a narrow longitudinal groove extending from tip to mid-posterior of prostomium. Eyes are in a straight line at the posterior margin of the prostomium and nearly coalescent. The proboscis is armed with a pair of jaws but lacks paragnaths and papillae. Each jaw has a distinct terminal tooth, a single subterminal tooth (Fig. 1g) and a group of four teeth ensheathed proximally. The presence of a single subterminal tooth distinguishes this specimen from all others of the *N. abiuma* sp. group.

The parapodia are sub-biramous, each carries two acicula. Neuropodial ligule bilobed with superior lobe papilliform and inferior lobe globular. Notopodial spiniger starts from setiger 4-6 and varies in number from 1-3, extending up to the 60th segment. Neurosetae are in two fasicles, one below and one above the ventral aciculum. The fasicle above the ventral aciculum (VA) has 8 spinigers and 5 falcigers; the fasicle below the VA has 3 spinigers and 8 falcigers.

Joint of the dorsal cirri with cirrophore is indistinct, posterior dorsal cirri nearly three and a half times as long as the parapodial lobe. The dorsal cirri increase in length posteriorly. On the anterior segment it is conical and only as long as the podium, almost double in length 50th segment onwards and nearly four times long at the 160th segment. At the posterior end the length is five times its width (Fig. 1a-h). Though there is no articulation, a slight constriction is present in the dorsal cirrus.

**DISCUSSION**

*N. indica* and *N. abiuma* sp. group are similar in external appearance, and unless setal types and distribution are examined carefully the two species are very difficult to separate (Glasby 1999). Glasby is also of the opinion that most descriptions of *N. indica* in the taxonomic literature fail to give an adequate account of setal type distribution and therefore it is quite possible that the two species have been widely confused. Doubtful taxonomic reference to *N. indica* include those of Ghosh (1963), Day (1967) and Sunder Raj and Sanjeeva Raj (1987). As there is considerable difficulty in describing the distribution of setae, i.e. pre and post supra-aciccular neurosetae, and the pre and post subaciccular neurosetae, it is not surprising that there is considerable doubt about earlier taxonomic references.

The present specimens differ from *N. indica* by presence of nearly coalescent eyes, unjointed dorsal cirrus that is elongated and enlarged in the posterior segments. It also differs from *N. fauveli* in which the anterior cleft is absent, the two pairs of eyes arranged transversely and presence of 2-3 subterminal teeth in the jaw. It differs from *N. abiuma* by the presence of notopodial setae (1-3) up to the mid body region, in no particular order, and by the presence of unequal number of heterogomph spinigers and falcigers in the neuropodia.

The presence of a single subterminal tooth in the jaw and the presence of notopodial setae ranging between 1 and 3 in the anterior part of the body distinctly separates these specimens from the previously described species and is therefore described here as a new species *Namalycastis glasbyi*.

**KEY TO DISTINGUISH GENUS NAMALYCASTIS OBSERVED FROM INDIAN WATERS**

1. Acicular neuropodial ligule bilobed, superior lobe papilliform, inferior lobe globular -------------------------------------------------- 2
   - Acicular neuropodial ligule subconical or weakly bilobed ........ 4
2. Antennae small, extending to tip of palpaphore ................. 3
   - Antennae small, usually extending short of tip of palpaphore, jaw with 4-5 subterminal teeth & 3-5 ensheathed proximally

   **N. abiuma** sp. group

3. Jaw with 4 subterminal teeth, 4 ensheathed proximally
   .................................................................  N. abiuma
   - Jaw with 1 subterminal tooth and 4 ensheathed proximally
     ..................................................................... N. glasbyi

4. Jaw with 2-3 subterminal teeth, 2-4 ensheathed proximally, heterogomph falcigers with boss extremely prolonged ........
   .................................................................  N. fauveli
   - Jaw with 2-5 subterminal teeth, 3-5 ensheathed proximally, heterogomph falcigers with boss not prolonged ...... N. indica

**Habitat:** Holotype from a tidal creek nearly 3 km upstream, salinity unknown.

**Type locality:** Gorai creek, Mumbai, west coast of India.

**Etymology:** Named after Dr. Christopher J. Glasby for his detailed study of Namanereidinae.

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REFERENCES


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