

A NEW SPECIES OF MONSTRILLID COPEPOD FROM SOUTH AFRICAN WATERS

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ABSTRACT

All the species of monstrillids (Copepoda, Monstrilloida) reported from African waters are listed. A new species, *Monstrilla papilliremis*, is described from Richard's Bay, South Africa.

The Monstrilloida is an aberrant group of the Copepoda, distinguished by the complete lack in the adult of the second antennae, mouth-parts and gut. Sars (1921) divided the group into two sections, each comprising a single family. One family, the Thespesiopsyllidae, is placed in the Cyclopoida by some authors (Fosshagen 1970), since its members have many cyclopoidan features. The second family is the Monstrillidae, in which the cephalosome and first thoracic segments are fused, forming a cylindrical cephalic segment, which has on its ventral surface a small protuberance or 'mouth'. The gonads almost completely fill this cephalic segment. There are four fully-developed pairs of swimming legs, with a fifth pair which is much reduced, or, in the males of some genera, entirely absent. The eggs, when laid, are carried on a pair of 'ovigerous spines' which arise from the first abdominal segment of the female, a very unusual arrangement found only in one other group of copepods, the Phyllocolidae. The larvae develop as parasites of polychaetes or prosobranch molluscs. They live in the host's blood system and grow as a bag of cells, similar to many insect parasitoids. The pre-adult eventually develops within this bag and is released; the host is not usually killed by the infestation.

The genus *Monstrilla* is distinguished from other genera by the male possessing four, and the female three, abdominal segments, having the eyes poorly developed or absent, the 'mouth' being more centrally placed on the cephalic segment than in other genera, and in the male often possessing rudimentary fifth legs which are absent in most other genera (Isaac 1975).

Very little has been published on monstrilloids from African waters. Gurney (1927) working in the Suez area found *Strilloma grandis* (Giesbrecht), *Thaumaleus longispinosus* (Bourne) and *Monstrillopsis gracilis* (Gurney); Rose & Vaissière (1952), in their catalogue of North African copepods, list *Monstrilla helgolandica* Claus, *M. longiremis* Giesbrecht, *M. gracilicauda* Giesbrecht, *Strilloma grandis*, *Thaumaleus rigidus* (Thompson), *T. longispinosus* and *Monstrillopsis dubia* (T. Scott); Marques (1961), working in Portuguese Guinea, found *Thaumaleus longispinosus* and another species which was probably *T. rigidus*; Al-Kholy (1963) described, from the Red Sea, *Monstrilla longipes* A. Scott, *M. gohari* Al-Kholy, *M. ghardaqensis* Al-Kholy, *Thaumaleus reticulatus* Giesbrecht, *T. ghardaqana* (Al-Kholy) and *Monstrillopsis gracilis*; Isaac (1975) working on specimens in the British Museum (Natural History) mentioned a specimen

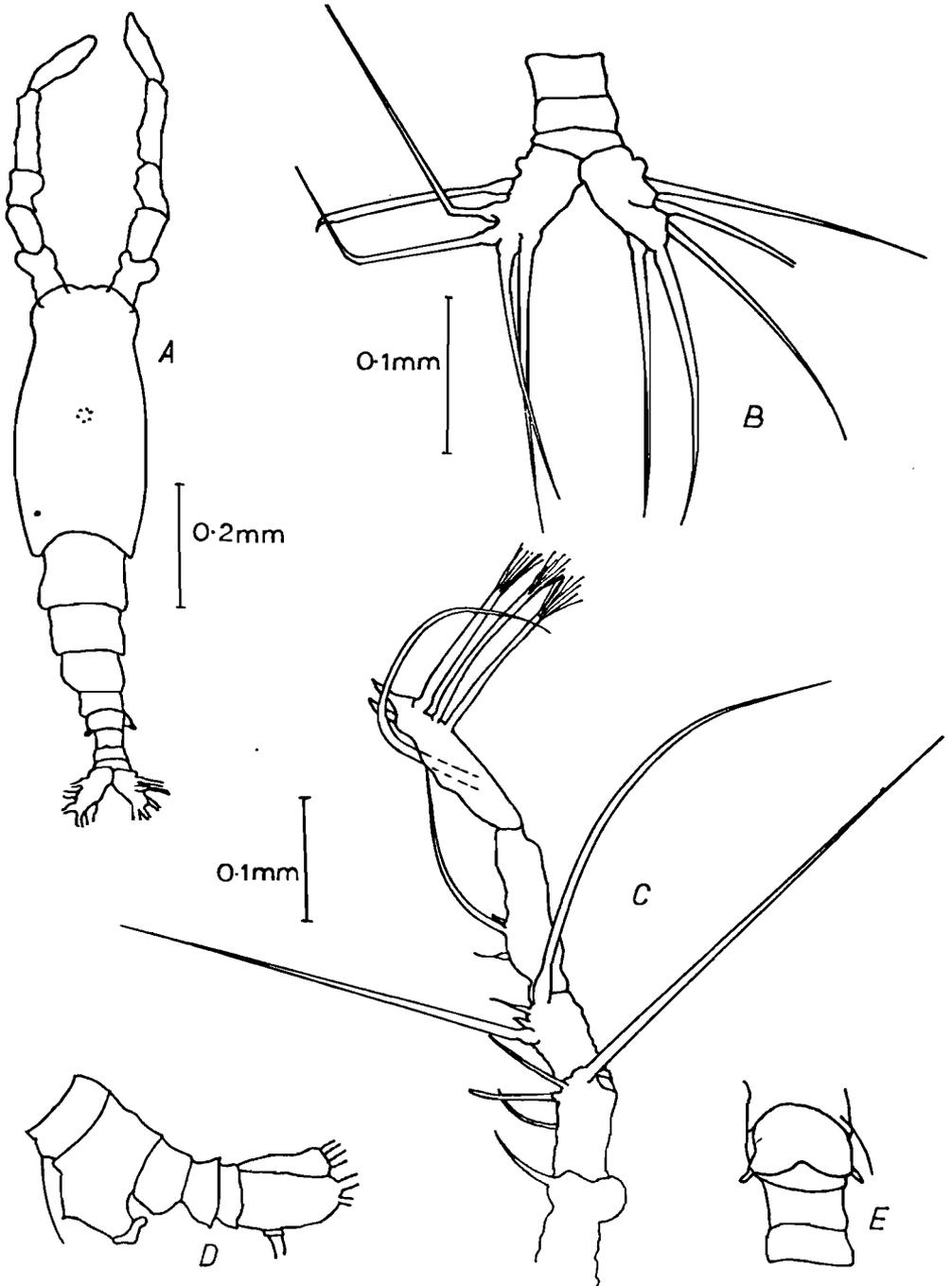


FIGURE 1

Monstrilla papilliremis sp. n. Male. A, dorsal; B, second to fourth abdominal segments and furcal rami, dorsal; C, right antenna, dorsal; D, fifth thoracic segment and abdomen, lateral; E, genital region, ventral. (D & E same scale as B.)

of *Thaumaleus gigas* A. Scott caught in the Red Sea. To this list is now added the species described below.

Monstrilla papilliremis sp.n.

The specimen, a male, body length 0,84 mm was obtained near the mouth of Richard's Bay, South Africa, 28°47'S/32°05'E, in a surface plankton haul on 23 July 1971 and is deposited in the Port Elizabeth Museum. The cephalothorax had collapsed dorso-ventrally, so a lateral view of the specimen was not drawn (see Figure 1).

The antennae, which consist of five joints, are approximately 1,2 times the length of the cephalothorax; as in all male monstrillids, there is an articulation between the two end joints. The end segment of the antenna bears three bifurcating vibrissae on its outer edge, and at the tip two spines, one of which is possibly articulated, and the other the spinous tip of the segment; the third segment bears two very long setae, and the second segment has one. The first segment has a swelling on the outer edge at the tip. The cephalothorax is about half the body length, with the 'mouth' half-way along the ventral side (its position is marked in dotted lines in Figure 1A). The four pairs of swimming legs are of the usual monstrillid pattern, being very powerfully developed, with the basal part large and muscular, and both rami with three articulations, (see, for instance, Sars 1921); the fifth legs are represented by two small knobs, one of which bears a short seta. The genital segment bears a short protuberance ventrally, which reaches as far as half-way along the second abdominal segment. This genital protuberance has a small, blunt, twisted, spine-like process at the tip of both lappets, and a small pointed knob on the anterior tip. The second abdominal segment is produced bluntly below; the third and fourth segments look as though they might have telescoped together slightly. Each furcal ramus bears five setae, of similar lengths, three apically or sub-apically, one 0,6 and the other 0,5 of the way back from the tip, on the outer edge.

This species is distinguishable from others by the size, the male genitalia having the anterior pointed knob and the furcal ramus having the papilla on the external border.

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