

III.—On further Pelagic Entomostraca collected by Mr. J. Y. Gibson
in Durban Bay,

by

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PLATES V and VI.

A FURTHER collection made by the tow-net in Durban Bay and sent to me by Mr. Gibson contains additional species as follows :

Paracalanus parvus, Claus.

Acrocalanus gibber, Giesbrecht.

Heterocalanus serricaudatus, T. Scott.

Temora dubia, Lubbock.

Centropages furcatus, Dana.

Centropages tenuicornis, sp. nov.

Aphelura typica, gen. and sp. nov.

Acartia longisetosa, sp. nov.

Euterpe gracilis, Claus.

Corycaeus danae, Giesbrecht.

GENUS CENTROPAGES, Kröyer.

CENTROPAGES TENUICORNIS, n. sp. Plate VI, figs. 3-6.

Male. Right anterior antenna (fig. 3) very slender, the median joints slightly dilated, entirely destitute of serrated plates and bearing only few very short, simple setæ. Endopodites of the first four pairs of swimming feet bi-articulate, those of the fifth pair tri-articulate, terminal spines of the outer branches long, slender and quite devoid of marginal serratures; fifth pair of feet of the usual prehensile type (fig. 6); abdomen four-jointed (fig. 4) the caudal segments scarcely longer than the last abdominal segment. Female unknown. Length 1.75 mm.

GENUS TEMORA, Baird.

TEMORA DUBIA (Lubbock). Plate VI, figs. 7-10.

This species was described and figured originally by Sir John Lubbock and afterwards by myself in my Report on the "Challenger" Copepoda. Dr. Giesbrecht has more recently in his work on the Neapolitan Copepoda, assigned the species figured by me to two distinct

species, *Yemora stylifera*, Dana and *T. discandata*, Giesbrecht. I am unable to accept this identification seeing that the figures given by him do not, as regards either *T. stylifera* or *T. discandata* agree at all accurately with those of the "Challenger" Report. On the other hand the characters of the Durban Bay specimens, as here figured for the sake of comparison, are precisely those which I have taken as belonging to *T. dubia*.

GENUS ACARTIA, Dana.

ACARTIA LONGISETOSA, sp. nov. Plate VI, figs. 1-2.

Female. Body elongated, claviform; metasome slightly tapering in front, abruptly truncated behind, where the lateral angles are produced, forming well marked backward-pointing spines. Anterior antennae reaching when reflexed beyond the extremity of the metasome, beset with numerous very long setae and bearing near the base one or more sharp spine-like denticles, indistinctly articulate at the proximal third (fig. 1). Feet of the fifth pair very small, bi-articulate (fig. 2) bearing two minute apical setae. Length 1.1 mm.

GENUS APHELURA, * gen. nov.

Body somewhat tapered in front, forehead produced into a sharply bifurcate rostrum; urosome in the male three-jointed, in the female two-jointed, anterior antenna shorter than the metasome, 12-14 (?) jointed, posterior antennae, mandibles and maxillae as in *Pontellina*; outer branches of the first four pairs of swimming feet composed of two joints, inner branches of one joint only; fifth pair wanting in the *female*, in the *male* cylindrical, rudimentary, composed of two joints and bearing a very minute supplementary branch. A pair of simple lenticular eyes.

APHELURA TYPICA, sp. nov. Plate V.

Female. Length 1.2 mm. Anterior antennae reaching somewhat beyond the middle of the metasome twelve-jointed (?) (fig. 3), the joints near the base very indistinctly marked; last segment of the metasome produced anteriorly into a short stout mucronate process

* *Apheltes*, simple; *oura*, a tail.

(fig. 7). Abdomen two-segmented, first segment about half as long as broad (fig. 7), second segment four times as long as the first, caudal stylets long and slender, cylindrical, about as long as the combined lengths of the two abdominal segments.

Male. Abdomen composed of three segments (fig. 8); caudal stylets shorter and stouter than in the female; fifth pair of feet simple, bi-articulate (figs. 6, 8).

I was for a length of time disposed to look upon this species as being perhaps only an immature form of some Pontellid, but as a larger number of specimens came to light, all alike in every essential character, I came to the conclusion that it must be taken to be a fully developed form of somewhat rudimentary type. Whether the form here described as the male is rightly so considered may be open to doubt. It is, of course, possible that the specimens here described under the new generic term *Aphelura* may prove to belong to a transitional or larval stage, but even then the form is so remarkable that the proposed name may well apply to it.

Two or three very interesting Naupliiform larvae were found in these Durban Bay nettings, and are here partially figured, as it does not appear that any descriptions or drawings of the earlier stages of *Calanidae* or *Pontellidae* have hitherto been published, and it seems to me more than probable that the forms here figured may belong to *Aphelura typica*. The earlier of the two stages (plate I, fig. 9) has an elongated fusiform body 1 mm. in length, tapering gradually from the obtuse anterior extremity to the posterior rather attenuated and bifurcated caudal termination. It is imperfectly segmented and shows a faintly marked straight alimentary canal. The two posterior segments have short aculeiform marginal spines. There are three pairs of biramous limbs attached near the front of the body. A more advanced form is shown in fig. 10. Here the two pairs of antennae— anterior and posterior—are shown almost fully developed, and there are just behind the antennae four pairs of limbs representing probably the mandibles, maxillae and maxillipeds. Towards the posterior extremity are seen two pairs of imperfectly developed swimming feet, while the urosome has attained a condition only slightly advanced from that of the earlier stage. Length 1.6 mm.

Professor G. O. Sars has kindly examined the specimen figured in Plate I, fig. 9, and writes to me "Your specimen is quite certainly an early larval stage (nauplius) of a Calanoid belonging to the Pontellid group. I have had the opportunity of examining several developing stages of our common *Anomaloecira patersoni* and find that your

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specimen on the whole agrees pretty well with them, both as regards the external form of the body and the structure of the appendages, though being probably referable to another Pontellid."

EXPLANATION OF PLATES V & VI,

Illustrating Dr. G. S. Brady's paper "On Further Pelagic Entomostraca collected by Mr. J. Y. Gibson in Durban Bay."

PLATE V.

Aphelura typica.

- Fig. 1.—x 65. Female (?) seen from left side.
 Fig. 2.—x 140. Forehead with rostrum and eyes.
 Fig. 3.—x 140. Anterior antenna.
 Fig. 4.—x 140. Mandible.
 Fig. 5.—x 140. One of the swimming feet.
 Fig. 6.—x 240. Foot of fifth pair (male?).
 Fig. 7.—x 84. Urosome and last segment of metasome, female.
 Fig. 8.—x 84. Urosome and last segment of metasome with fifth pair of feet (male?).
 Fig. 9.—x 84. Larva of *Aphelura* (?) Nauplius stage.
 Fig. 10.—x 84. Larva of *Aphelura* (?) more advanced stage.

PLATE VI.

Acartia longisetosa.

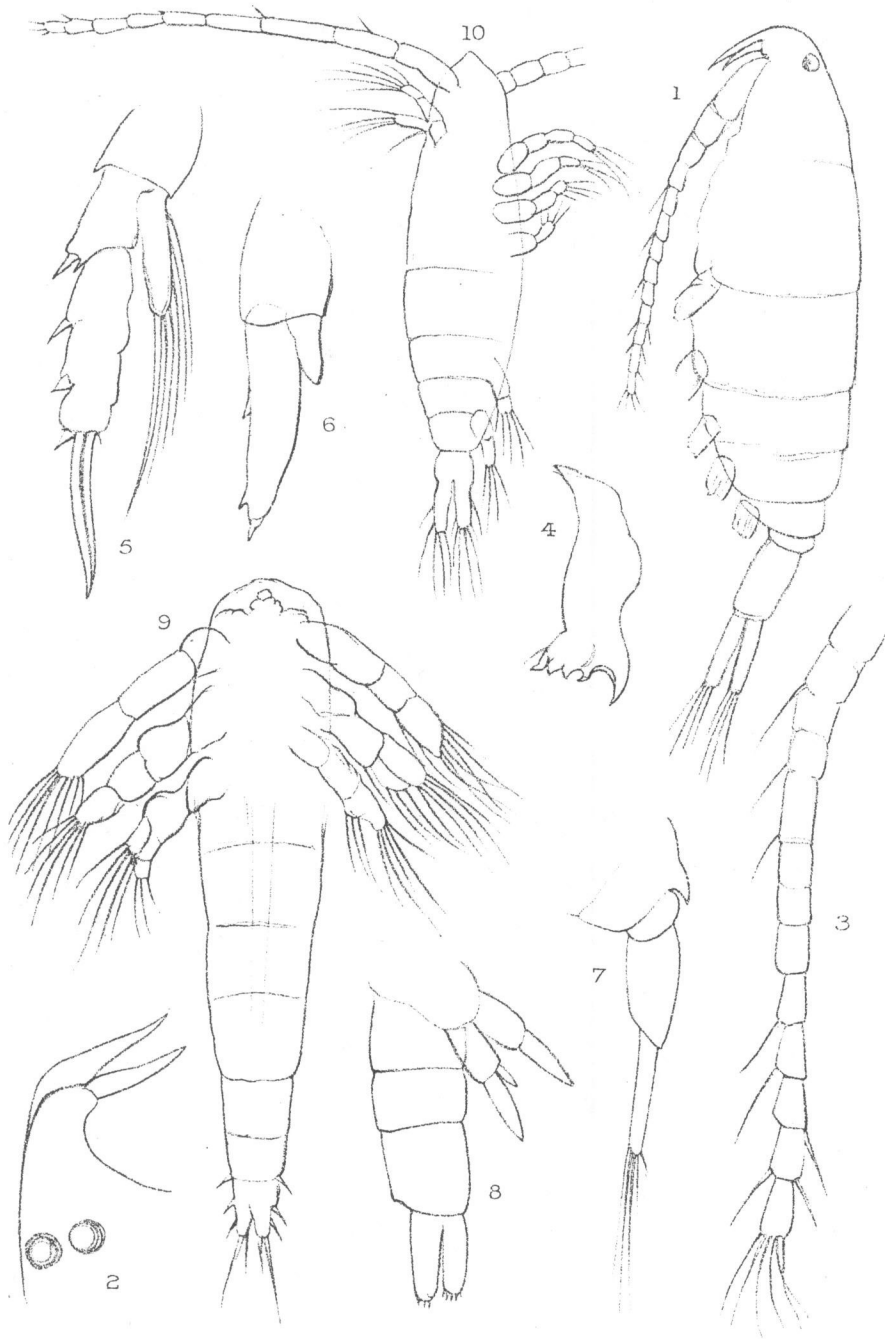
- Fig. 1.—x 84. Female seen dorsally.
 Fig. 2.—x 240. Female, fifth foot.

Centropages tenuicornis (Male).

- Fig. 3.—x 84. Right anterior antenna.
 Fig. 4.—x 84. Urosome.
 Fig. 5.—x 240. Terminal spines of fourth foot.
 Fig. 6.—x 140. Fifth pair of feet.

Temora dubia (Male).

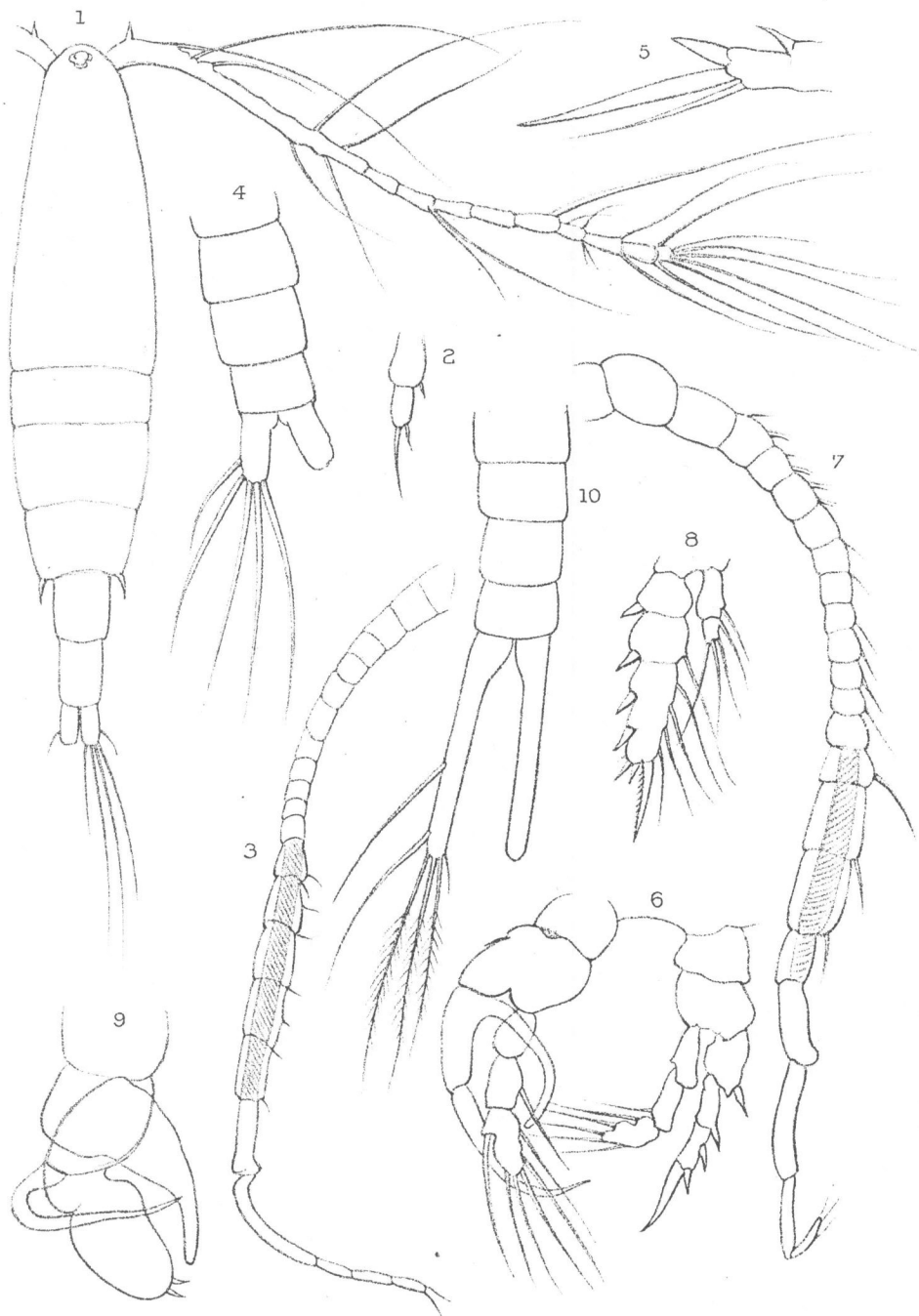
- Fig. 7.—x 84. Right anterior antenna.
 Fig. 8.—x 84. Foot of third pair.
 Fig. 9.—x 110. Fifth pair of feet.
 Fig. 10.—x 84. Urosome,



G.S.Brady del.

West Newman lith.

APHELURA TYPICA.



G.S.Brady del. West, Newman lith.
1-2 ACARTIA LONGISETOSA (♀). 3-6 CENTROPAGES TENUICORNIS (♂).
7-10 TEMORA DUBIA (♂).