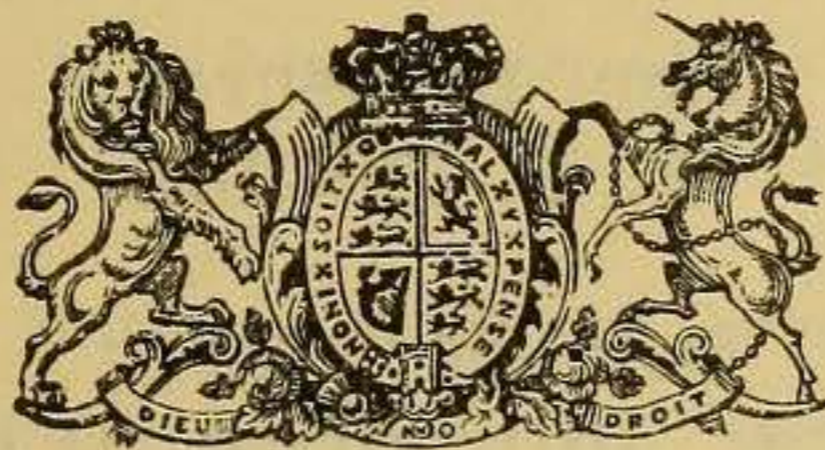


TRANSACTIONS AND PROCEEDINGS
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[WITH TWENTY-SEVEN PLATES AND ONE FIGURE IN THE TEXT.]

EDITED BY WALTER HOWCHIN, F.G.S



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NOTES ON SOME SPECIES OF THE ISOPOD FAMILY
SPHÆROMIDÆ FROM SOUTHERN AUSTRALIAN SEAS.
PART III.

By W. H. BAKER, F.L.S.

[Read October 12, 1911.]

PLATES XXII. AND XXIII.

The present paper deals with only two species, but these are of more than ordinary interest. The first, though here given as a distinct species, may, however, as a variety be useful in elucidating the very attractive genus *Amphoroidea*. The other, besides belonging to the division *Platybranchiata*, presents some unique features of its own.

Family SPHÆROMIDÆ.

Subfamily SPHÆROMINÆ.

Group EUBRANCHIATÆ.

Genus *Amphoroidea*.

Amphoroidea elegans, n. sp. Pl. xxii.

The body is broadly ovate with the epimera spread out laterally. The dorsal surface is very obscurely tuberculate medianly, glabrous, and covered with minute dots. The colour in nature is green, being found among green seaweed.

The head is only a little broader than long, trilobed anteriorly. The eyes are lateral, situated in little angles just anterior to the postero-lateral angles of the head.

The antero-lateral angles of the first thoracic segment reach to the level of the eyes, leaving the anterior portion of the head free. The remaining thoracic segments do not differ much from each other in length.

The anterior portion of the abdomen has a well-marked first segment not showing lateral expansions; the following segment is marked by two sutural lines on each side and has large epimeral expansions a little produced backwards. The posterior portion of the abdomen is domelike, with slightly incurved sides and a shallow lunate posterior notch.

The lamellar expansions of the first antennular joints are rather short and slightly excavate above. There is a very narrow lenticular hiatus between each contiguous margin. The flagellum has 13 joints.

The antennal flagellum has 20 joints, gradually increasing in length, the whole reaching to near the posterior angle of the third thoracic segment.

The epistome is large, with a small median anterior projection.

The mandibles are rather slender with large palps, incisory processes strongly dentate, spine row and secondary plate of left mandible obscure, molar process small, but projecting as far as the incisory process.

Maxillipeds narrow, with lobes of palps small and the fringes of these scanty.

First gnathopods the smallest of the legs, joints very sparingly spined; dactyli small.

Second gnathopods the longest of the legs and not differing much in robustness from those which follow, the second, third, fourth, and fifth joints not differing much in length and covered on their sides, presented inwards with dense, very fine hair; there is also a little tuft of similar hairs near the distal end of the first joint; dactyli small, each with two very small claws; spines are absent.

The third pair of legs are longer than those which follow and little less robust, also strongly ciliated. In the four following pairs the joints are flattened on their surfaces, presented inwards, and are densely furred; the dactyli are short with large curved terminal claws, each showing a somewhat subchelate arrangement with the subterminal claw.

Sternal filaments short, stout, and partially cylindrical.

The uropods are broadly lamellar extending considerably beyond the end of the abdomen, especially the outer rami, the shape of which is irregularly acuminate; the inner rami are truncate.

One male specimen from Victor Harbour.

I have specimens of an *Amphoroidea* from Tasmania which agree well with M. Edwards' figure of *A. typa*, except that the posterior notch is lunate as in the present species. They, however, differ from it in having a narrower body, in having the basal antennular joints larger and more projecting, their combined anterior margins being more arcuate, with the inner margins nearly parallel, in the legs being destitute of fur, in there being a greater distinction in size between the first three pairs of legs and the following ones, and in the uropods being somewhat slenderer. There are four females, none of which show signs of brood.

Group PLATYBRANCHIATÆ.

Genus *Paracassidina*, n. gen.

Paracassidina pectinata, n. sp. Pl. xxiii.

The body is ovate, smooth, moderately convex, with epimera spread outwards, bearing a margin fringe which is short, dense, and with a few longer hairs projecting.

The epistome projects anteriorly as an ovate plate strengthened above by a keel, whose base is in close contact with a short truncate rostral projection, bearing a small swelling on each side.

The head is short, extended laterally to obtuse points; the eyes are prominent and large.

The first thoracic segment is medianly short with its epimeral regions reaching a little anterior to the eyes. The rest of the segments are short and differ little from one another.

The anterior portion of the abdomen shows two segments with an anterior one almost completely covered by the last segment of thorax. The posterior portion is domeshaped, the end being rounded without notch or channel.

The basal antennular joint is trilobed, the anterior lobe is laminate, a little curved outwards, and reaches much beyond the epistomial projection, it has a superior thickening; the median lobe is not laminate, but shorter and narrow, also thickened above, and has near its end on the inner side an opaque swelling like a gland; the lobe is apparently hollow; the posterior lobe is small and laminate. The second joint is slightly expanded, with its antero-distal angle a little produced, the third joint is narrow, the flagellum short with 5 or 6 joints.

The antennal peduncle is of ordinary kind; its flagellum carries 12 joints, which reach as far as the fourth thoracic segment.

The mandibles are small and short with incisory plate, secondary plate, spine row, and molar not much projecting; the palp is long and slender.

The first and second pairs of maxillæ are short and of the usual type.

In the maxillipeds the plate of the second joint is rather short with a distal crowd of short setæ. The palp is large; the third joint is as long as the second, its lobe is proximal, so that a wide gap exists between it and that of the penultimate joint; this joint is short with a long lobe, which is longer and larger than the terminal joint and is situated close to it, so that the setæ of both intermingle.

The first gnathopod is a peculiar prehensile apparatus. The basis, which is nearly as long as the succeeding joints taken together, is slender and a little curved outwards, the merus has its "heel" prolonged, reaching as far as the end of the propodus, where it carries about 10 long, curved, stiff setæ; the propodus also reaches beyond the insertion of the dactylus, this part being thickened and carrying about 6 similar setæ; the dactylus is long and slender.

The second gnathopod is of the usual kind; a rather short curved basis is stout compared with the succeeding joints; the ischium is long and the following joints short and subequal; the dactylus is short and stout with single claw.

The remaining legs are similar, with long ischium joints rendering the succeeding ones very short; the basal joints are robust and little pads are found at their distal ends, as also at the ends of the three following joints; the legs are sparingly hairy with few spines.

In the first pleopods, which are the smallest, the endopod is oblong and about twice as long as broad; the fringes of both rami are very long.

The second pleopods are larger than the first, the fringes are long, and the *appendix* is broad and exceeds the length of the inner ramus.

The third pleopods are fringed, the exopod has a division not very near the end, and there is a slight insinuation on the inner margin.

The fourth pleopod is composed of two ovate thin plates without fringes.

In the fifth pleopods the exopod is nearly twice as long as broad, with three lobes one above the other on the inner margin, as in *Chitonopsis*; there is a faint indication of a division near the end.

The uropods are lamellar, rather narrow, the inner ramus reaches to the end of the abdomen, the outer ramus is a small plate filling a cleft in the side of the uropod.

The female is similar to the male, except that the middle lobe of the first antennular joint is absent and the anterior lobe is smaller; the flagellum has 3 joints; the antenna also is slenderer; the prolongation of the epistome is shorter.

One male and one female without visible brood.

Dredged by Drs. Verco and Torr, Geographe Bay, Western Australia, in 16 to 20 fathoms.

DESCRIPTION OF PLATES.

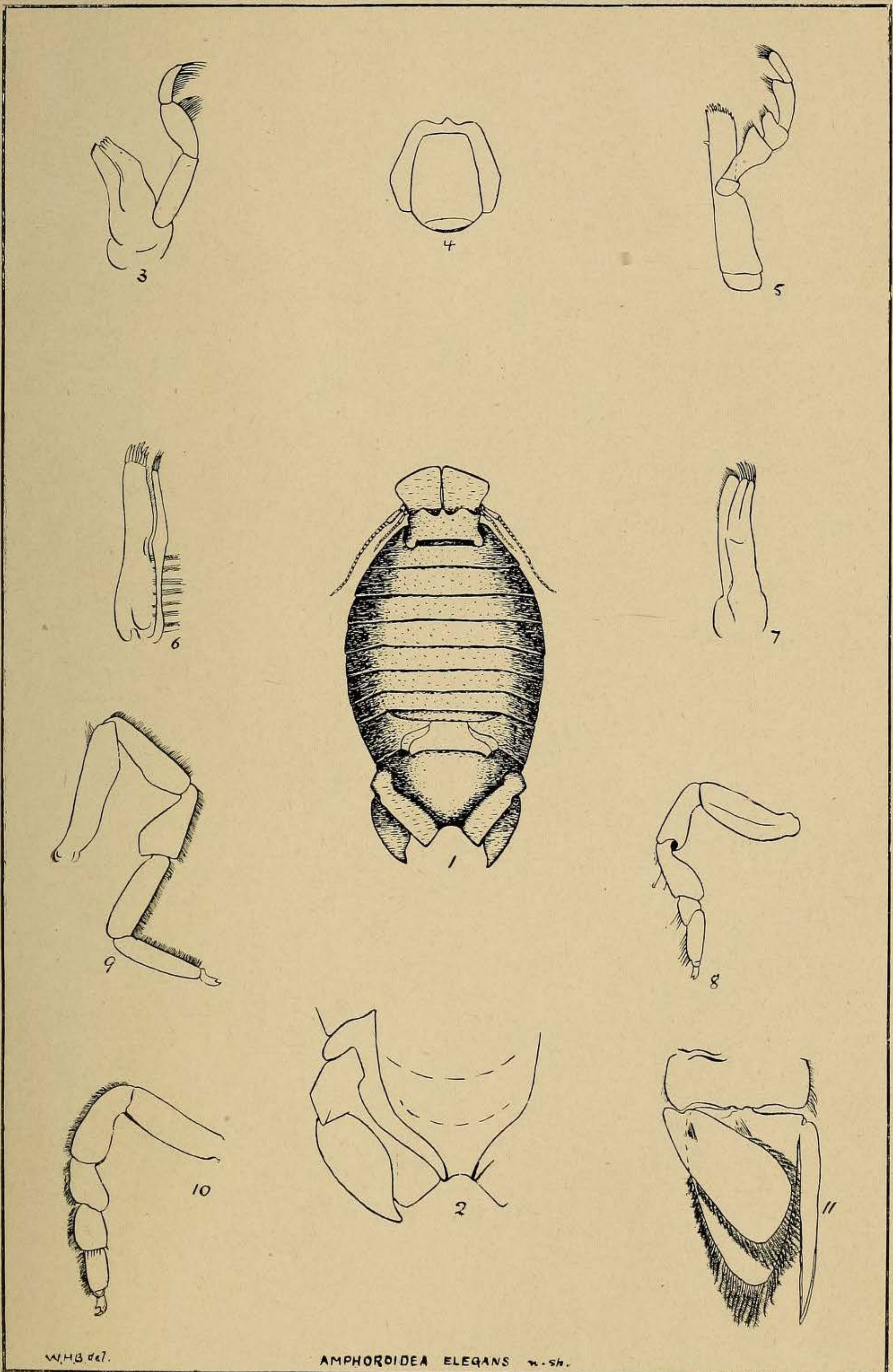
PLATE XXII.

- Fig. 1. *Amphoroidea elegans*, n. sp., magnified $2\frac{1}{2}$ diameters.
 „ 2. „ „ „ posterior portion of abdomen from the underside.
 „ 3. „ „ „ mandible.
 „ 4. „ „ „ epistome.
 „ 5. „ „ „ maxilliped.

Fig. 6.	<i>Amphoroidea elegans</i> ,	first maxilla.
„ 7.	„	second maxilla.
„ 8.	„	first gnathopod.
„ 9.	„	second gnathopod.
„ 10.	„	seventh leg.
„ 11.	„	second pleopod of male.

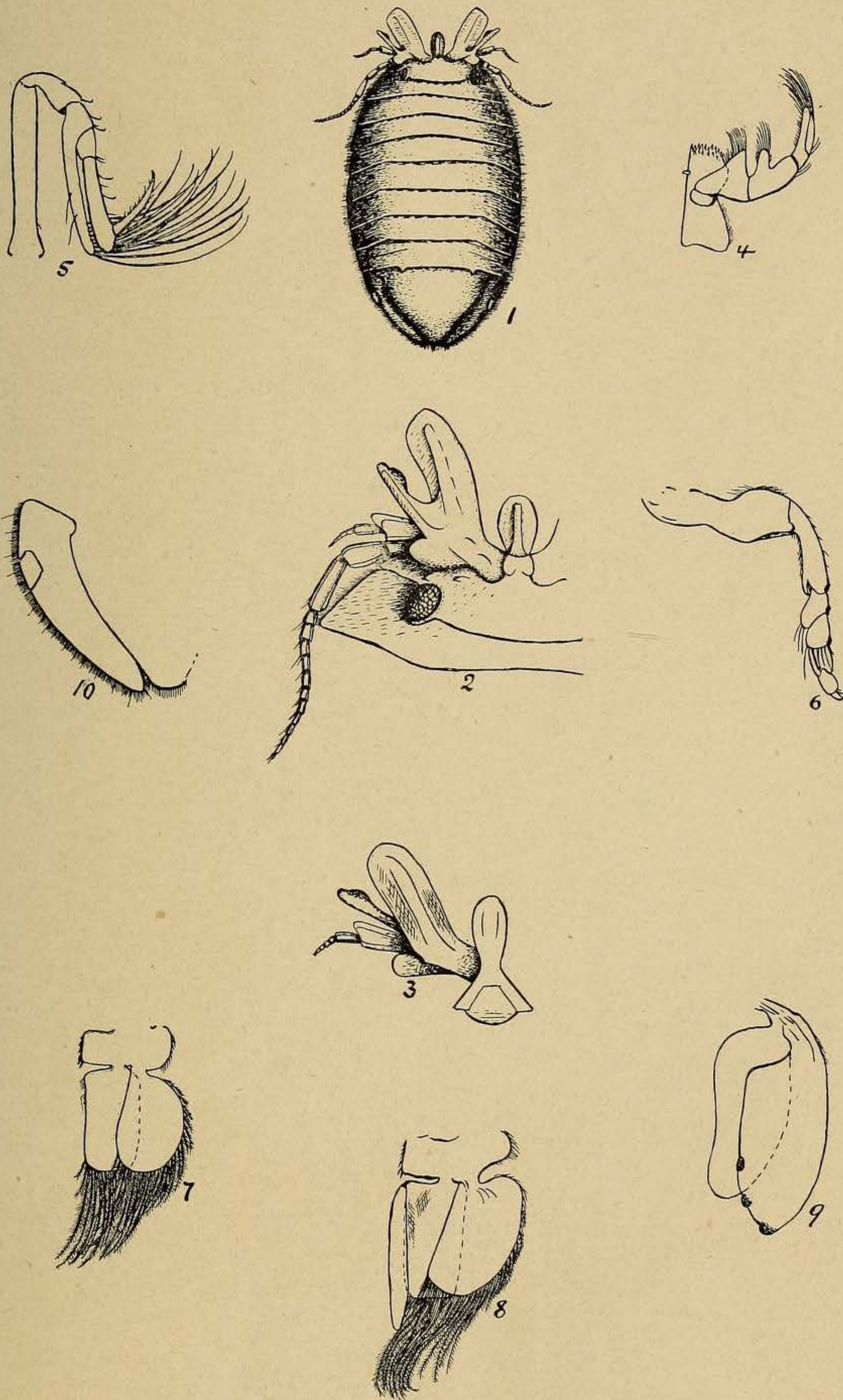
PLATE XXIII.

Fig. 1.	<i>Paracassidina pectinata</i> ,	n. gen. et sp., magnified 6 diameters.
„ 2.	„	„ anterior region from above.
„ 3.	„	„ antennule and epistome from below.
„ 4.	„	„ maxilliped.
„ 5.	„	„ first gnathopod.
„ 6.	„	„ second gnathopod.
„ 7.	„	„ first pleopod.
„ 8.	„	„ second pleopod, male.
„ 9.	„	„ fifth pleopod.
„ 10.	„	„ uropod.



W.H.B. del.

AMPHORDIDEA ELEGANS n. sp.



W.H.B. det.

PARACASSIDINA PECTINATA n. gen. et sp.