

[PROC. ROY. SOC. VICTORIA, 19 (N.S.), Pt. I., 1906].

ART. II.—*Some little known Victorian Decapod Crustacea, with Descriptions of New Species.—No. III.*

BY S. W. FULTON AND F. E. GRANT, F.L.S.

(With Plates III.-V.).

[Read 10th May, 1906.]

Two of the species dealt with in the present paper are new to science, one doubtfully so, as will be seen by the notes attached to it. One species is new to the Australian record and one is new to the Victorian census. The rest of the paper deals with the synonymy of some of our Victorian species.

Since reading our second paper of this series, our partnership has been much broken, owing to Mr. F. E. Grant having been transferred from Melbourne.

Mr. Grant recently paid a visit to London, and took the opportunity of examining the types and collections at the British Museum, where he received much courtesy and kindness, which he here desires to acknowledge. The knowledge thus gained has been of great service to us.

As much of the reference literature is difficult of access at this end of the world, we have quoted in extenso, for the convenience of future workers, the descriptions of genera and species not included in Haswell's Catalogue.

Suborder—BRACHYURA.

Tribe—OXYRHYNCHA.

Family—*Maidae*.

Sub-family—*Muinæ*.

Paramithrax (*Chlorinoides*) *spatulifer*, Haswell.

Haswell. Proc. Linn. Soc. N.S.W., vol. 6, 1882, p. 540.

Haswell. Cat. Aust. Crust., 1882, p. 14.

Chlorinoides coppingeri. Miers. "Challenger" Brachyura, 1886, p. 53, pl. 7, fig. 3 (nec Haswell).

A reference to the type of this species in the Australian Museum, Sydney, enables us to say that the form figured by

Miers (loc. cit.), whose specimen has also been examined by one of us, was incorrectly so identified by that author.

C. coppingeri was described from Port Molle, Q., and has since been taken by one of us near the Port Curtis, Q. This form appears to be confined to more tropical waters and is replaced in cooler latitudes by *C. spatulifer*. *C. coppingeri*, which has in consequence of Miers' incorrect figure, been more than once identified as occurring in Victoria must therefore now be removed from our list.

We may here draw attention to a discrepancy in Haswell's description of *C. spatulifer* in which he states that it has:—"Two long subacute spines on each branchial region, the anterior directed outwards, upwards and backwards," which should read: two long subacute spines on each branchial region directed outwards and upwards, the anterior forward and the posterior backward.

Leptomithrax australiensis. Miers.

L. australiensis, Miers. Ann. and Mag. Nat. Hist., 1875 (4), 27, p. 220.

L. spinulosus, Haswell. Proc. Linn. Soc. N.S.W., 1880, vol. 4, p. 441, pl. 25, fig. 3.

An examination of the types of the above—the first of which is in the British Museum of Natural History, and the second in the Australian Museum, Sydney—enables us to say they are synonymous. This view is upheld by a memorandum in the handwriting of the late Mr. E. J. Miers attached to specimens in the British Museum received in exchange from Sydney.

The species is not uncommon at moderate depths in Port Phillip and Western Port, and large specimens from Bass Strait are occasionally exhibited for sale in the fish shops.

Tribe—CYCLOMETOPA.

Family—*Xanthidae*.

Sub-family—*Xanthinae*.

***Cycloxanthus* (?) *punctatus*,** Haswell. (Pl. III.).

Haswell. Proc. Linn. Soc. N.S.W., 1882, vol. 6, p. 752.

Haswell. Cat. Aust. Crust., 1882, p. 50.

This species is not uncommon in Western Port at moderate depths. It has not been previously figured and the accompanying drawings are taken from a specimen dredged by Mr. C. J. Gabriel off Rhyll.

It has been shown by Miss M. J. Rathbun¹ that the generic name *Cycloxanthus* to which Haswell referred this crab had been preoccupied and is therefore untenable. She therefore proposed the name *Cycloxanthops* for the inclusion of the species of the genus known to her. In her re-definition of this genus,² however, she has included certain features more particularly those relating to the front, which is described as being "horizontal, produced and divided by a median fissure into two deep lamellate lobes, which are truncated and separated from the internal orbital angles by a deepish notch," and which we submit exclude the species under consideration.

C. punctatus, Haswell, it appears to us, would be more properly included in the genus *Lioxantho*, Alcock.³ *Xantho punctatus*, M.-Edw., having, however, been transferred to that genus, our species would, if it is to be properly referred here, require a new specific name for which we would propose that of *Lioxantho haswelli*.

Tribe—CYCLOMETOPA.

Family—*Xanthidae*.

Sub-family—*Pilumninae*.

Pilumnus pilosus, sp. nov. (Pl. IV., Figs. 1-4).

Carapace transverse, flattened, the dorsal anterior portion covered with a dense tomentum, posteriorly less thickly clothed. The frontal and anterior lateral margins carry a long silky fringe which entirely obscures all the marginal and orbital characters; sparingly tomentose below. Regions fairly defined.

After removal of the hairs from the surface it is found to be smooth, the anterior lateral margins are a little shorter than the

1 Rathbun: Proc. Biolog. Soc. Washington, 1897, vol. 11, p. 164.

2 Rathbun: Brachyura and Macrura of Porto Rico in the United States. Fish Commission Bull. for 1900, vol. 2., p. 27.

3 Alcock. Journal Asiatic Soc. Bengal, vol. 67 (2), p. 90, 1898.

posterior and are divided into four obscure lobes of which the last pair are the smallest. Front considerably depressed and divided by an obscure median sulcation. Orbits visible from above, small, their upper margin with two small fissures. The basal antennal joint nearly reaches the frontal process, the flagellum occupying the inner orbital hiatus, epistome well defined, transverse.

Chelipedes sub-equal, smooth, and polished on under surface.

The merus trigonus, very short, without hairs, smooth and polished, its upper margin somewhat reflexed, sharply cristate.

The carpus clothed on the outer surface with a dense tomentum and fringed with long hairs, the surface granulate.

The propodus nearly as deep as long, similarly clothed except a large triangular space on the outer surface which is porcelain-white, smooth, polished, and finely punctate.

The fingers short and stout, pointed, coarsely toothed showing a considerable hiatus when closed, their distal half being black-brown in colour.

Ambulatory legs compressed but not cristate, all the joints fringed with long hairs, the three distal joints of the first three pairs being tomentose, the other joints being clean and polished on their outer surface. The last pair have all the joints fringed and tomentose.

Post-abdomen of the male and female with seven segments, the last two entirely filling the space between the bases of the last pair of ambulatory legs.

This species is not uncommon under stones between tide lines in Port Phillip and Western Port, though it may easily be overlooked as it lies very close, its colour and clothing protecting it.

REFERENCES.

Haswell¹ has a note identifying a specimen taken at Port Molle, Queensland, as *Pulumnus fimbriatus*, Milne-Edwards,² in which Miers³ agrees. The latter author fully described it, and forms a new genus (*Cryptocaeloma*) for its reception.

¹ Haswell. *Cat. Aust. Crust.*, 1882, p. 66, pl. 1, fig. 4.

² Milne-Edwards. *Hist. Nat. Crust.*, 1834, t. I., p. 416.

³ Miers. *H.M.S. Alert*, 1884, p. 227, pl. 23, fig. A.
Miers. *H.M.S. Challenger*, 1886, p. 149.

One of us, on a recent trip to the north-east Queensland Coast, obtained a specimen of the species taken by Haswell and by the "Alert," but on comparison with the South coast habitant there seems a possibility that it is not Milne-Edwards species, and that the South coast species is more likely to be *P. fimbriatus*, Milne-Edwards, whose description is so meagre.

Pilumnus fimbriatus was described by Milne-Edwards in his Hist. Nat. Crust. as from Australia. He appears to have been dealing at the time with numerous species collected by the "Astrolabe" which vessel called at Western Port, a number of his forms being characteristic denizens of Bass Strait. This circumstance would seem to favour our suggestion as to the true identity of *Pilumnus fimbriatus*. This matter can only be settled by comparison of the two species with the type in the Paris Museum.

The whole genus requires revision and this species, like other Australian forms, cannot remain in the genus as at present defined. We have therefore described the southern form under the name of *Pilumnus pilosus*, plateing it and the northern form side by side, leaving some future monographist to settle the synonymy and generic standing.

The subjects of these plates have been lodged in the National Museum, Melbourne.

Tribe—CATOMETOPA.

Family—*Gonoplacidae*, Dana.

Sub-family—*Pseudorhombilinae*, Alcock.

Genus—*Litocheira*, Kinahan.

Litocheira bispinosa, Kinahan.

Kinahan. Journal Roy. Dublin Soc., vol. 1, 1858, pl. 3, fig. 1, a.

A reference to Dr. Kinahan's specimens in the British Museum of Natural History enables us to say that *Melia brevipes*, Haswell (Cat. Aust. Crust., p. 72, pl. 1, fig. 7, 1882) is a synonym of the above species. *Melia brevipes* was recorded by Haswell from Griffith's Point, Western Port. The species is not an uncommon one in Port Phillip and Western Port.

Tribe—CATOMETOPIA.

Family—*Hymenosomidae*, Ortmann.Genus—*Trigonoplax*, M.-Edw.

Trigonoplax, Milne-Edwards. Ann. Sci. Nat. Zool. (3),
20, 1853, p. 224.

Alcock. Jour. Asiatic Soc. Bengal, vol. lxxix., part 2, no. 2,
1900, p. 386.

“This is best regarded as a subgenus of *Elamena*, from which it differs only in the following unimportant particulars:—(1) the edge of the carapace is not turned up, (2) the interantennular septum is a mere ridge, (3) the chelipeds in the male, as in the female, are very slender.”—(Alcock).

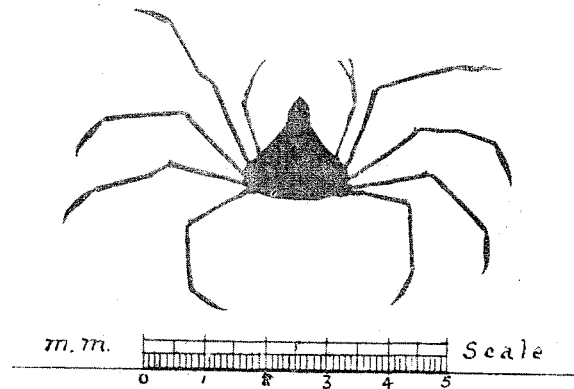
***Elamena (Trigonoplax) unguiformis*, de Haan.**

Elamene unguiformis, de Haan. Faun. Japon. Crust.,
p. 75, pl. 29, fig. 1, and pl. H. Henderson, J. R.
Trans. Linn. Soc. Zool. (2), vol. 5, 1893, p. 394.

Trigonoplax unguiformis, Milne-Edwards. Ann. Sci. Nat.
Zool. (3), 20, 1853, p. 224.

Ortmann. Zool. Jahrb. Syst. 7, 1893-94, p. 31.

Elamena (Trigonoplax) unguiformis, Alcock. Journ. Asiatic
Soc. Bengal, vol. 69., part 2, no. 2, 1900, p. 387.



***Elamena unguiformis*.**

"Carapace smooth, flat; lamella broadly pentagonal with the postero-lateral sides about a third as long as any of the others, the regions not defined, the sides entire, unarmed. Front a broad, horizontal, triangular lamina. No post-ocular tooth; eyes not concealed by the front, though the eyestalks are. Inter-annular septum a mere ridge. Epistome as long as broad. Chelipeds and legs smooth and slender. Chelipeds not stouter than the legs, about $1\frac{1}{2}$ times as long as the carapace; fingers slender, as long as the slender sub-cylindrical palm, their tips spooned.

The anterior border of the meropodite of all the legs ends in an inconspicuous denticle, the dactylus of all is long, sub-falciform and strongly compressed, and has two or three denticles at the top of the posterior border. The second and third pairs of legs, which are the longest, are more than three times the length of the carapace."—(Alcock).

Dredged off Rhyll, Western Port, Victoria, by J. Gabriel.

Sub-order—BRACHYURA ANOMALA.

Family—*Dromiidae*.

Platydromia thomsoni, nobis.

Proc. Roy. Soc. Victoria, vol. 14 (n.s.), 1902, pl. 2, p. 57.

Stebbing (Marine Investigations of South Africa, vol. 4, Crust., pl. 3, p. 60, 1905) states that it is not clear from our description whether it is intended to indicate that the sternal sulci of the female terminate between the chelae or between the first pair of ambulatory legs.

To render our description more clear, we take this opportunity of adding that the sulci end on the chelipede segment of sternum, and a line drawn across the sternum from the point of articulation of the basal joint of the cheliped with the sternum just touches the anterior margin of the curved ridges which meet in the centre line.

Family—*Callianassidae*.Genus—*Callianassa*, Leach.***Callianassa ceramica*, sp. nov. (Plate V.).**

The cephalothorax, abdomen and appendages in dried specimens are everywhere of a pale cream colour with a highly glazed surface like fine china. In living examples, however, and specimens preserved in spirits, the skeleton is found to be imperfectly calcified except in the chelipedes.

The cephalothorax is about one-third the total length of the body, and is laterally compressed. The rostral point is short, but is well defined and extends considerably beyond the lateral angles, which are only faintly indicated. A well-defined groove on the dorsal surface runs parallel with the front, extending downwards as far as the base of the outer antennae, and thence in two parallel lines, one on each side defining the branchial region and curving upwards and backwards to meet near the posterior margin. The cephalothorax is otherwise perfectly smooth.

The abdomen is much flattened dorso-ventrally. The first segment is narrowed anteriorly and is membranous. The second is somewhat more calcified, but not so much as those succeeding.

The longest segments are the second and sixth, which are subequal, being followed in diminishing sequence by the fifth, third, fourth and first. The first two segments are quite smooth, the following three are fringed with strong hair, and the final segment also carries a few short hairs. No dorsal carina or spines are present on any of the segments.

The eye-lobes are rounded, and contiguous on their inner margins. The eyes are small and only slightly pigmented.

The first antennae are about three-fourths as long as the second. The first joint extends beyond the eye-lobes, the second is slightly longer than the first, and the flagella which carry a few slender setae are as long as the first two joints combined. The second antennae are as robust as the first but have a shorter peduncle and much longer lash.

The third maxillipeds have the third and fourth joints rounded and much swollen, with their line of junction wide and truncated,

the two joints together being subglobose. From the point of insertion of the fifth joint there runs across their inner faces to the articulation with the second joint a finely serrate ridge. All the joints from the third upwards are sparingly fringed with hair.

Of the chelipeds either the right or left may be the larger. The larger cheliped has a few small serrations on the lower margin of the third joint, but the upper is unarmed. The fourth has a well-defined ridge running longitudinally down its outer face. On its lower margin there is a long anterior crest, and near its distal end a well-defined tooth-like lobe. Both are evenly serrate on the edge. The fifth joint is only three-quarters as long as broad, and is clothed with a few scattered tufts of hairs along its lower margin. The sixth joint is of the same width as the fifth—the palm is subquadrate and the surface is deeply pitted in its lower half. The thumb is unarmed but carries several scattered tufts of stiff hairs. The seventh joint, which also bears scattered tufts of hair, slightly overlaps the thumb at its distal extremity. It carries a faintly indicated tooth in its distal half, and a strongly doubly crowned molar-like tooth near the point of articulation.

The smaller cheliped has the hand and palm of the same breadth and approximately the same length. The fingers are separated by a wide interval, and the dactylus carries a small tooth in its distal third.

All the pereopods are much flattened and leaf-like. The last four pairs have the shape characteristic of the family, and all are sparingly clothed with hairs. The fifth pair are subchelate.

The telson is of the same length as the last segment of the abdomen. It is unarmed, and has its posterior margin rounded and sparingly clothed with short hairs on its margin.

Both of the uropods are longer than the telson. They are rounded at their distal ends and carry a strong fringe of hairs on their outer margin.

The length of the type from the tip of the rostrum to the end of the telson is 53 mm.

These specimens appear to us to vary sufficiently from any of those mentioned by Stebbing in his recent enumeration of the

family¹ to entitle them to specific rank. The species in its general appearance strongly suggests *Trypaea australiensis*, Dana, from which it differs in the inner antennae not bearing a deep, comb-like fringe of hairs, in the shape of the larger chelipede and in other features.

We have taken it burrowing in muddy flats in both Port Phillip and Western Port.

The type will be deposited with the National Museum, Melbourne, and a co-type with the Australian Museum, Sydney.

Genus *Trypaea*, Dana.

"Near *Callianassa* in outer maxillipeds and feet, inner antennae sub-pediform, flagella shorter than last basal joint."—(Dana).

Trypaea australiensis, Dana.

Trypaea australiensis, Dana. U.S. Explor. Exped. Crust., 1852, 1, p. 573, pl. 32, fig. 4a, b, c,

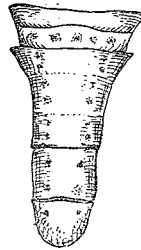
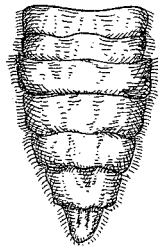
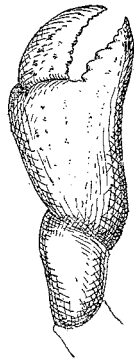
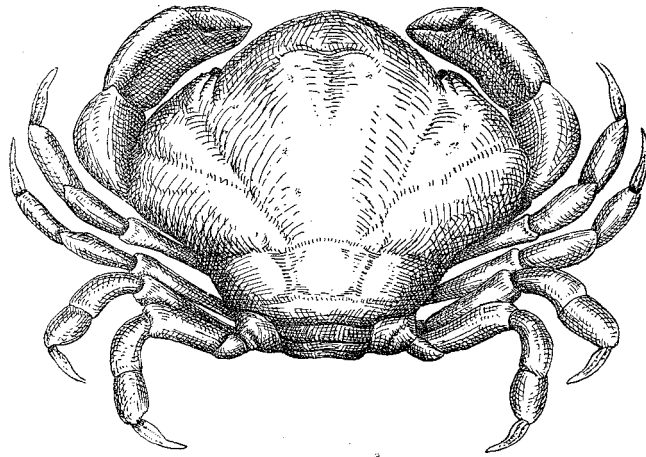
Trypaea porcellana, Kinahan. Jour. Roy. Dublin Soc., 1, 1858, p. 130, pl. 4, fig. 2.

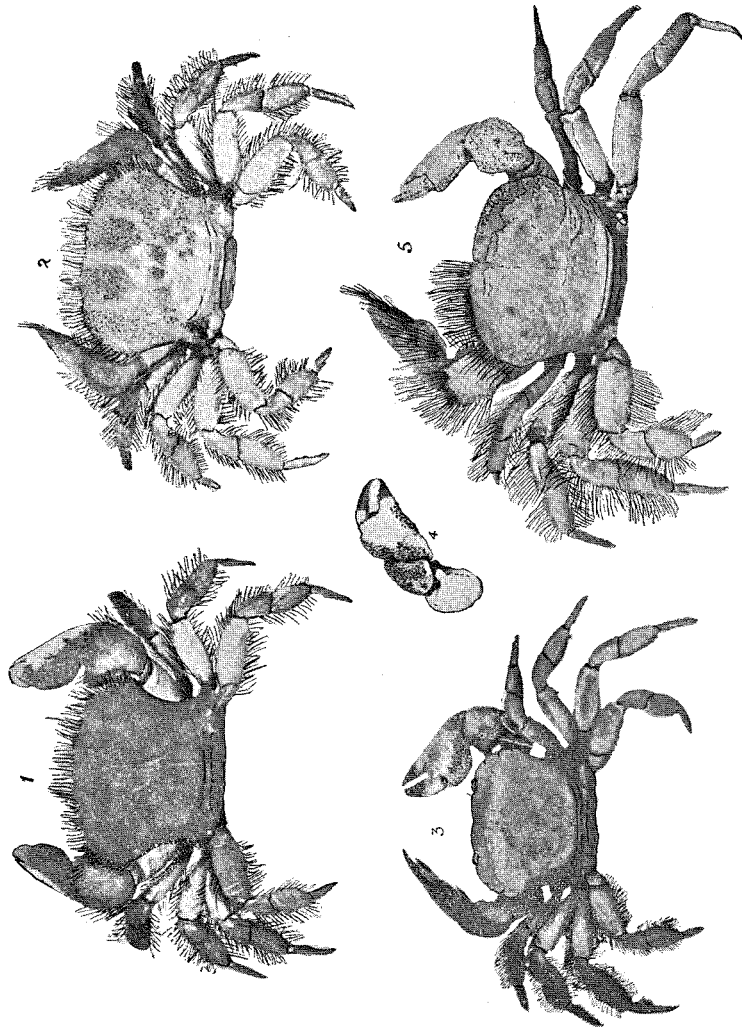
"Front not triangular, anterior feet much compressed, arm, carpus and hand having an acute edge above. Larger hand broad, smooth, but little longer than carpus; fingers nearly half as long as hand not gaping, finely denticulate within, superior finger a little the longer, arcuate; carpus somewhat smaller than hand, arm having a cultriform process below near the base; caudal segment about as long as broad, nearly rounded at apex, length two and three-fourths inches. Eyes on very short peduncles. Outer antennae about half as long as body. Fingers with a few short tufts of hair. Lower as well as upper edge of hand, arm and carpus acute.

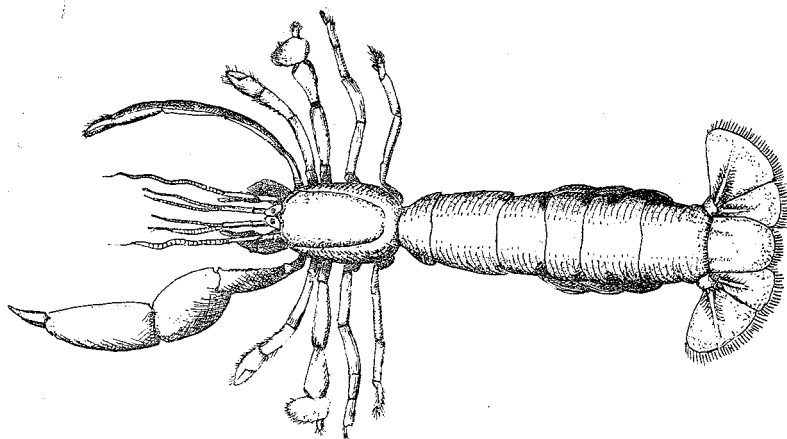
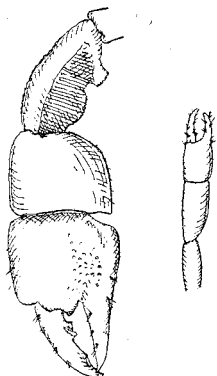
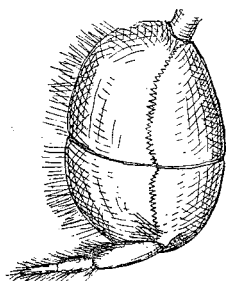
District of Illawarra, New South Wales, along shores."—(Dana).

Trypaea australiensis was described by Dana from a specimen taken at Illawarra, N.S.W. It is exceedingly abundant, burrowing in muddy flats at many parts of our coast and in New South Wales, and we have a large series from numerous collecting grounds, including the type locality of Dana.

¹ Marine Investigations of South Africa, 1903, p. 38.







T. porcellana was described by Kinahan from Port Phillip. He differentiates Dana's species from it "in wanting the triangular teeth on the movable finger and forearm, in having the inner part of the fingers finely denticulate and in not having the front of the carapace produced as a small triangular rostrum."

The diagnostic characters given by Kinahan for his species we have found to be invariably characteristic of the male, while Dana's figure and description correspond to the female. This we have found to be true after examination of a large number of specimens and we have no hesitation in giving the synonymy as above.

DESCRIPTION OF PLATES.

PLATE III.

Cycloxanthus punctatus, showing whole animal; and chelipede and abdomen of male and of female.

PLATE IV.

- Fig. 1—*Pilumnus pilosus*. ♂
,, 2—*Pilumnus pilosus*. ♀
,, 3—*Pilumnus pilosus* (Type), from which the tomentum and hairs have been rubbed off to allow outline of carapace to be seen.
,, 4—*Pilumnus pilosus*. Side view of cheliped with hair removed.
,, 5—*Cryptocaeloma fimbriatum*, Miers, partly denuded of hair.

PLATE V.

Callianassa ceramica, sp. n. Whole animal, third maxillipede and large and small chelipedes.