

XXII.—The Malacostraca of Durban Bay,

by the

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WITH PLATES XXII and XXIII.

THE present paper includes the consideration of some Penæidæ submitted to me by Mr. E. C. Chubb, Curator of the Durban Museum, and notes on a few out of many species of Malacostraca in general sent me by Mr. H. W. Bell Marley. One of the Penæidæ appears to be an unpublished species. In a field so ably worked by Krauss in years preceding 1848, Mr. Bell Marley's researches with similar zeal and skill are further increasing our knowledge of the local fauna by the discovery of additional species which severally and collectively should prove of much interest.

BRACHYURA.

TRIBE OXYRRHYNCHA.

FAMILY INACHIDÆ.

GENUS HUENIA, de Haan.

1839. *Huenia* (sub-gen.), de Haan, Crust. Japonica, Decas quarta, p. 83.
1895. *Huenia*, Alcock, J. Asiat. Soc. Bengal, vol. lxiv, pt. 2, p. 194 (with references).

HUENIA PROTEUS, de Haan.

1839. *Maja* (*Huenia*) *proteus*, de Haan, loc. cit., p. 95, pl. 23, figs. 4, 5, 6, a, b, and pl. G (*elongata*, *heraldica*).
1895. *Huenia* *p.*, Alcock, loc. cit., p. 195 (with synonymy).
1903. *Huenia* *p.*, Borradaile, Fauna Maldive and Laccadive Archipelagoes, vol. ii, pt. 2, pp. 683, 686, text-fig. 124, pl. 47, figs. 1a, 1b, 2.

(435)

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In his text-figure, Mr. Borradaile exhibits "a sprig of *Halimeda*-weed with a specimen of *Huenia proteus*, showing the likeness of the latter to a 'leaf' of the weed." He gives other particulars which make this a very remarkable instance of an organism's power of adapting itself to its environment. If it is not a case of protective resemblance, one would like to know what other explanation can be offered. The specimen sent by Mr. Bell Marley from Natal Bay was of the normal triangular shape. The carapace of a specimen from the Durban Museum measured 21 mm. in the central line.

TRIBE CYCLOMETOPA.

FAMILY XANTHIDÆ.

See *Annals of South African Museum*, vol. vi, pt. 4, pp. 293, 296.

GENUS EURYCARCINUS, A. Milne-Edwards, 1867.

See *Ann. S. African Mus.*, vol. vi, pt. 4, p. 302.

EURYCARCINUS NATALENSIS (Krauss).

1843. *Galene natalensis*, Krauss, *Südafrik. Crust.*, p. 31, pl. I, fig. 4.

The synonymy of this species has been already considered in the *Ann. S. Afr. Mus.*, loc. cit., p. 302. It is well marked by the diversity of the four teeth of the lateral margins of the carapace, as Krauss describes them, "the first rounded, the second very broad, truncate, and the last two sharp." The colour too is striking, according to Mr. Bell Marley, "when fresh a bright red. Colour in fact looks, in the rocks, like a polished piece of red brick." He commends it for never attempting to use its nippers.

GENUS ZOSIMUS, Leach.

1825. *Zosimus*, Leach, in Desmarest, *Consid. gén. Crust.*, p. 105 (foot-note).

1898. *Zozymus*, Alcock, *J. Asiat. Soc. Bengal*, vol. lxxviii, pt. 2, no. 1, pp. 72, 103.

ZOSIMUS ÆNEUS (Linn).

1758. *Cancer æneus*, Linn. Syst. Nat., ed. 10, p. 630.
1790. *Cancer floridus*, Herbst, Naturg. Krabben und Krebse, vol. i, pt. 8, p. 264, pl. 21, fig. 120.
1852. *Zozymus æneus*, Dana, U.S. Expl. Exp., vol. xiii, p. 192, pl. 10, fig. 3.

Dana describes the remarkable division of the carapace into numerous "areolets"; and his figure gives some idea of the true colour. Alcock supplies a long synonymy and says, "In life the animal is beautifully spotted and ocellated with chocolate-brown on a bluish-grey ground." The specimen from South pier, Durban, with which Mr. Bell Marley has obliged me, has acquired that general hue of red which is indicated more dully in Herbst's figure.

GENUS ATERGATIS, de Haan, 1833.

See Ann. S. Afr. Mus., vol. vi, pt. 4, p. 296.

ATERGATIS ROSEUS (Rüppell), 1830.

See Ann. S. Afr. Mus., loc. cit., p. 297.

This species is clearly described by Alcock with synonymy, in the J. Asiat. Soc. Bengal, vol. lxxvii, pt. 2, no. 1, p. 97, 1898.

The specimen from Durban Bay, obtained by Mr. Bell Marley, answers Alcock's account as well in other respects as in regard to colours in spirits, "brownish-yellow, fingers blackish-brown with whitish teeth and tips."

TRIBE CATOMETOPA.

FAMILY GECARCINIDÆ.

GENUS CARDISOMA, Latreille, 1825.

CARDISOMA CARNIFEX (Herbst).

1796. *Cancer carnifex*, Herbst, Naturg. Krabben und Krebse, vol. ii, pt. 6, p. 163, pl. 41, fig. 1.

A dried female specimen, with the right cheliped much larger than the left, from the Durban Museum, has already been recorded in the *Annals of the S. African Museum*, vol. vi, pt. 1, p. 14, with discussion of the synonymy. A male specimen obtained by Mr. Bell Marley has a breadth of 87 mm. by a length of 66 mm. The left cheliped is the larger. The seventh segment of the pleon is here a little over half the length of the sixth, but the proportions are very different from those in *C. hirtipes*, Dana. In obtaining the crab from the mangrove swamps of Durban Bay, Mr. Bell Marley found that it required no little patience and some nerve to remove it from its three foot burrow. "It is," he says, "seldom seen during the day. At night it wanders forth at seasons when the tide entices it to feed. It cracks with ease the hard snails (*Natica mamilla*, Lamarck) that attach themselves to the stumps, and not to speak of other crabs, it is said he will eat young rats as well."

FAMILY GRAPSIDÆ.

See *Ann. S. Afr. Mus.*, vol. vi, pt. 4, p. 320, 1910.

GENUS SESARMA, Say, 1817.

SESARMA TETRAGONUM (J. C. Fabricius), 1798.

See *Ann. S. Afr. Mus.*, vol. vi, pt. 4, p. 321.

A specimen by size and colouring in satisfactory agreement with the account given by Krauss, and quoted under the above reference has been sent me by Mr. Bell Marley, who speaks of it as the only crab on sociable terms with *Cardisoma carnifex*. He has removed both species from one burrow, and adds that "at night too, they may often be seen eating or feasting together."

GENUS METOPOGRAPSUS, Milne-Edwards, 1853.

See *Ann. S. Afr. Mus.*, vol. vi, pt. 4, p. 319.

METOPOGRAPSUS NESSOR (Forskål).

See *Ann. S. Afr. Mus.*, vol. vi, pt. 4, p. 319.

A male example of this species has been sent to me by Mr. Bell Marley from Durban Bay.

MACRURA ANOMALA.

TRIBE PAGURIDEA.

GENUS PAGURUS, Fabricius, 1775.

See S. African Crustacea, Ann. S. Afr. Mus., vol. vi, pt. 4, p. 350.

PAGURUS ENOPSIS, Dana.

1852. *Pagurus enopsis*, Dana, U.S. Expl. Exp., vol. xiii, p. 452, pl. 28, fig. 6a-c.
1905. *P. en.*, Alcock, Catal. Indian Decap. Crust. pt. ii, fasc. 1, pp. 80, 88, pl. 9, fig. 2 (with synonymy).

Alcock gives as distinguishing features of this species: "Left cheliped decidedly larger but not much longer than the right; the joints of the distal half of the antennal flagellum strongly gibbous (chelipeds and legs hairy and spinose)." To this may be added from his general account that the antennal acicle is extremely short. Mr. Bell Marley records the specimen from Natal Bay, as occurring in the shell of the mollusk *Lotorium olearium*.

PAGURUS DEFORMIS, Milne-Edwards.

1836. *Pagurus deformis*, Milne-Edwards, Ann. Sci. Nat. Ser. 2, vol. vi, p. 272, pl. 14, fig. 2.
1875. *P. d.*, Miers, Voy. *Erebus* and *Terror*, Crust., p. 3 (*P. cavipes*), pl. 2, fig. 3.
1905. *P. d.*, Alcock, Catal. Indian Decap. Crust., pt. ii, fasc. 1, pp. 81, 88, pl. 9, fig. 4 (with synonymy).

The eye stalks are short, distally widened for the eyes, which are deeply excavate on the upper side. The large left cheliped has a broad hand, with three conspicuous rows of tubercles along the upper side extending to the movable finger, while that part of the surface which extends to the short thumb is almost smooth; the opposing edges of the finger and thumb are cut into blunt teeth. The third pereopod on the left side has the finger deeply grooved on the outer side. In a specimen from the Durban Museum the carapace measured 22 mm. along the median line. In a smaller specimen from Natal Bay, sent by Mr. Bell Marley, this line was 17 mm. long.

MACRURA GENUINA.

TRIBE STENOPIDEA.

1888. *Stenopidea*, Bate, Rep. Voy. *Challenger*, vol. xxiv, pp. 55, 206.
 1902. *S.*, Alcock, Catal. Indian Deep-sea Macrura and Anomala, p. 142.
 1907. *Stenopides*, Borraidaile, Ann. Nat. Hist., Ser. 7, vol. xix, p. 464.
 1888. *Stenopidea*, Bate, Rep. Voy. *Challenger*, vol. xxiv, pp. 56, 206.
 1893. *S.* (part), Stebbing, Internat. Sci. Ser., vol. xxiv, p. 211.
 1901. *S.*, Alcock, loc. cit., p. 143.

GENUS STENOPUS, Latreille.

1825. *Stenopus*, Latreille, in Desmarest, Consid. gen. Crust., p. 226.
 1830. *S.*, Latreille, Le Règne Animal, vol. iv, p. 93.
 1878. *S.*, Huxley, Pr. Zool. Soc. London, p. 779 (branchial formula).

STENOPUS HISPIDUS (Olivier).

1811. *Palæmon hispidus*, Olivier, Encycl., vol. viii, p. 666, pl. 319, fig. 2 (fide auctorum).
 1825. *Stenopus hispidus*, Latreille, in Desmarest, loc. cit., p. 227.
 1830. *S. h.*, Latreille, loc. cit.
 1837(?) *S. h.*, Milne-Edwards, Le Règne Animal, illustrated edition - pl. 50, fig. 2.
 1837. *S. h.*, Milne-Edwards, Hist. Nat. Crust., vol. ii, p. 407, pl. 25, fig. 13.
 1850. *S. h.*, Adams & White, Zool. Samarang, Crust., p. 61, pl. 12, fig. 6.
 1852, 1855. *S. h.*, Dana, U.S. Expl. Exp., vol. xiii, p. 607, pl. 40, fig. 8.
 1888. *S. h.*, Bate, Rep. Voy. *Challenger*, vol. xxiv, p. 211, pl. 30.
 1898. *S. h.*, Borraidaile, Pr. Zool. Soc. London, p. 1002, pl. 63, figs. 2a, 2b.

Milne-Edwards in 1837 gives a reference to the undated illustrated edition of Le Règne Animal. In each work the colouring ascribed to this attractive species is farcical. Later on, however, beautifully coloured figures were published by Adams and by Dana, the crimson

splashes of colour precisely corresponding with those on the specimen sent by Mr. Bell Marley from Durban Bay. The crimson parts of the body and third pereopods are finely set off against the white or pellucid other parts of the organism. The white antennæ were useful to Mr. Bell Marley for locating this swiftly-moving prawn. To eject him from his favourite haunts "entails no small amount of patience and labour since he dodges with lightning rapidity backwards and forwards from cover to cover, generally taking what advantage he can of obstacles in the way of old iron, etc" (*in litt.*). The sprawling out of their legs and arms when making long darts from place to place surprised the observer but no doubt had its use for the fugitives.

TRIBE PENÆIDEA.

See Alcock, Indian Decap. Crust., pt. iii, fasc. 1, 1906.

FAMILY PENÆIDÆ.

See de Man, Siboga-Exp., Mon. xxxixa, 1911, 1913.

GENUS PENÆUS, J. C. Fabricius, 1798.

For restrictions and extensions see the authorities above-named, the Annals of S. African Museum, vol. xv, pt. 1, 1914, and Balss, Ostasiat. Decap., pt. 2, 1914, from which numerous other references can be obtained.

PENÆUS SEMISULCATUS, de Haan. (Plato XXII):

1849. *Penæus semisulcatus*, de Haan, Crust. Japon. decas sexta, p. 191, pl. 46, fig. 1.
 1900. *P. ashiaka*, Kishinouye, J. Fish bureau Tokyo, vol. viii, no. 1, p. 14, pls. 3, 7, figs. 4, 4a, 4b.
 1911. *P. semisulcatus*, de Man, Siboga-Exp., Mon. xxxixa, p. 97.
 1914. *P. s.*, Balss, Ostasiat. Decap., pt. 2, pp. 13, 14.

The Durban Museum specimen agrees well with de Haan's description and figure, so far as they agree with one another. But while his text states that the internal flagellum of the upper antennæ is twice as long as the outer (*bis longius externo*), his figure shows them practically equal. In our specimen one flagellum is about 32 mm.

long, the other (broken) 12 mm. shorter. Kishinouye distinguishes his *P. asiaka* from *P. semisulcatus* by the shorter flagella of the first antennæ, which he figures as subequal, and much shorter instead of longer than the peduncle. I accept the identification of Kishinouye's species with the present on de Man's authority, but there is another rather conspicuous difference in the greater length of the wrist of the third pereopods, as shown in de Haan's figure and in the Durban specimen, as compared with Kishinouye's figures, the larger of which only a little exceeds the African example in size. The dorsal teeth of the carapace are seven in number, the hindmost rather remote from the next, as the foremost is from the apex. The rostrum has three ventral teeth, the foremost of which is well in advance of the foremost dorsal tooth, yet still some distance from the apex of the rostrum.

In a specimen agreeing with the above in size and most other respects, the apical portion of the rostrum free from teeth is more prolonged, and the foremost ventral tooth is widely separated from the two teeth behind it.

PENÆUS DURBANI, sp. nov. (Plate XXII).

The dorsal teeth of the carapace are six, the hindmost about as remote from its successor as the foremost is from the rather blunt apex of the rostrum, of which the single ventral tooth is slightly in advance of the foremost dorsal. The third pleon segment is faintly angled in the median line, the fourth carinate but not quite from the base, the fifth and sixth fully, the carina of the sixth being produced into a short tooth. The telson is deeply sulcate in the median line, the furrow not starting quite from the base and not reaching the acute apex; the margins are setose in the distal half, but no marginal denticles could be perceived.

The eyes have the usual setose protective lamina. The peduncle of the first antenna, 22 mm. long, does not reach the end of the broad scale of the second antenna; one of the flagella was 30 mm. long, the other perhaps subequal but imperfect, both were flat at the base. The flagellum of the second antenna 225 mm., once and a half the length of the body from apex of rostrum to apex of telson.

The body of the mandible has stubborn angles which do not admit of flattening, while the palp is thinly laminar with a vast second joint edged with setæ. The first maxilla was not observed, and the following mouth-organs seemed to be such as are characteristic of the genus.

The third pereopod, with its extremely long wrist is in close agreement with that noticed above for *P. semisulcatus*. It measured

32 mm., the hand being 13 mm. in length, with the finger a little shorter than the palm. The fourth pereopods are shorter than the fifth. The thelycum is of the type which Kishinouye figures for his *P. monodon*, identified by de Man with Dana's *P. carinatus*.

On the first pleopod the peduncle carries a small two- or three-jointed appendage, which looks like a rudimentary endoped, its terminal joint laminar, triangular, pellucid.

PENÆUS INDICUS, Milne-Edwards, var. *LONGIROSTRIS*, de Man.

1837. *Penæus indicus*, Milne-Edwards, Hist. Nat. Crust., vol. ii, p. 415.
 1892. *P. i.*, var. *longirostris*, de Man, in Weber, Zool. Ergebn. Nied. Ost. Ind., vol. ii, p. 511, pl. 29, fig. 53.
 1906. *P. i.*, Alcock, Catal. Indian Decap. Crust., pt. iii, fasc. 1, p. 12, pl. 1, fig. 3a.
 1911, 1913. *P. i.*, var. *l.*, de Man, Siboga-Exp., Mon. xxxixa, p. 103, pl. 9, figs. 32a, 32b.

Milne-Edwards observes that "*Palemon longicornis*, Olivier, Encyl. Méth. t.x. p. 622," appears to be very near to the present species. If its identity with it could be accepted, the name would properly be *Penæus longicornis* (Olivier). According to Alcock it is capable of attaining a length of 200 mm. Its great variability, explained by Alcock and de Man, makes the study of it rather perplexing. Especially the elongation and slenderness of the rostrum in the younger and smaller specimens give them a very different appearance from that of the large forms.

A Durban Museum specimen, measuring 105.5 mm. in length, of which 40.5 mm. belongs to the carapace and 12.5 to the telson, has the rostrum apically much in advance of the antennal scale. The dorsal teeth are seven, the foremost being 13 mm. distant from the apex and the hindmost 12 mm. from the hind margin. The ventral teeth are four, three of them widely spaced in front of the foremost dorsal tooth. The petasma of the specimen is small, reaching little beyond the peduncle of the pleopod, the two halves not fastened together, but in close contact.

Other specimens of somewhat larger size have the thelycum of the females two oval plates in close contact, the contiguous edges in one case forming a raised ridge.

In this species the molar portion of the mandibular trunk is oval, not squared as it appears in *Penæus durhani*.

GENUS *PENÆOPSIS*, A. Milne-Edwards.

See the *Annals of S. African Museum*, vol. xv, pt. 1, p. 15, 1914, and de Man, *Siboga-Exp.*, Mon. xxxix, pls. 6, 7, 8, 1913.

PENÆOPSIS SPINULICAUDA, Stebbing.

1914. *Penæopsis spinulicauda*, Stebbing, *Ann. S. Afr. Mus.*, vol. xv, pt. 1, p. 17, pl. 68(4).

In regard to this species, already recorded from Durban Bay, I should notice that the telson is strongly grooved in the median line, a feature not shown in my figure, and should add the caution that the feature alluded to in the specific name is microscopic, not easily detected until the telson has been mounted for minute observation.

ISOPODA.

TRIBE FLABELLIFERA.

FAMILY SPHÆROMIDÆ.

1905. *Sphæromide*, Hansen, *Quart. J. Microsc. Sci.*, vol. xlix, pt. 1, p. 69. Other references are given in *Ann. S. Afr. Mus.*, vol. vi, pt. iv, p. 246, 1910.

GENUS *SPHÆROMA*, Bosc. 1802.

See especially Hansen's treatise above-mentioned.

SPHÆROMA WALKERI, Stebbing.

1905. *Sphæroma walkeri*, Stebbing, in Herdman's *Rep. Pearl fish*, *Suppl. Rep.* xxiii, p. 31, pl. 7.

This species by all its characters belongs to Hansen's group *Sphærominae hemibranchiata*, and would seem to be nearly allied to *Sphæroma felix*, Lanchester, 1902, although the mouth-organs and pleopods of that species have not been discussed, and the dorsal view figured would lead one to expect a smooth animal instead of one strongly ridged and tuberculate as suggested by the textual description. In *S. felix* the tubercles of the pleon are said to be "concealed under a rather dense, but very short, pubescence," and the telsonic segment is described and figured as "bluntly triangular," neither of which characters applies to our present species.

While the transverse lines of granules or tubercles on the head and earlier segments of the pereon are not always easy to make out, on the last two or three of the segments they become increasingly conspicuous, and the lateral corners of the seventh segment are drawn notably backward. This segment overshadows two transverse rows of tubercles, at the base of the pleon, which are flanked by prominently scalloped side pieces. To the transverse rows of tubercles succeed many which strike the eye rather as longitudinal rows, four of them descending to a broad concavity with raised edges and a broadly rounded faintly scalloped apical margin.

When a specimen is reluctantly flattened out the peduncle of the first antenna tends to show in advance; the first joint is bent and clasps the second, which is not longer than broad, half as long as the slender third joint, regarded in my former account (perhaps rightly) as the first of the flagellum. The undoubted flagellum of 12 short joints had in a male specimen sensory filaments on the intermediate eight joints. In the second antennæ the last three joints of the peduncle are approximately equal, the flagellum of 14 joints having brushes of setæ on the first seven, here also only in the male.

The mandibles have a strong bent trunk with stout molar and some spines difficult to observe between the molar and a slender projecting plate which perhaps represents the accessory. The mouth-organs are alike in the two sexes, and, as the figures show, they have the characters proper to this genus, in particular the maxillipeds having no produced inner lobes on joints of the palp, such as occur in *Exospharoma*.

The limbs are all extremely setose, with the difference that the setæ on the last four pairs are closely matted and on some joints fringe both margins, whereas the much longer setæ on the first three pairs belong to the outer border in freer arrangement. As in various allied species the first gnathopod is distinguished from all the other limbs by having the antepenultimate joint triangular, very short, under-riding the sixth joint. The second gnathopod is like the first pereopod, but rather longer, these and the following limbs having the fifth joint end on to the sixth. The second pereopod closely resembles the third, except in position, the inner margins of these two pairs confronting one another. The fourth and fifth pairs are successively longer. The finger shares comparatively little in the increase of size, since the sixth joint just matches it in length in the first gnathopod but in the fifth pereopod is two and a half times as long.

The masculine appendage of the second pleopod is slender and long, descending considerably beyond the triangular plate of the endopod from near the base of which it takes its origin. The apical and sub-apical bosses on the exopod of the fifth pleopod are five in number. The exopod of the uropods has the outer margin serrate with nine points, the inner setulose; the endopod shows faint surface granulation.

The specimen figured was the largest in the collection; and proved to be a female with an abundant brood. It measured about 12 mm. by 5.5 mm. The eggs, about 1 mm. long, are all curved as if in preparation for the obstinate globosity which they subsequently exhibit. The male specimen from which the details have been figured was rather smaller than the female.

Mr. Bell Marley found the specimens on posts in water with sea-squirts. A minute specimen of *Iais pubescens* (Dana) occurred among the Spheromids.

AMPHIPODA.

TRIBE GAMMARIDEA.

FAMILY GAMMARIDÆ.

See Das Tierreich, vol. xxi, pp. 364 and 729, 1906.

GENUS MELITA, Leach.

See Das Tierreich, vol. xxi, p. 421.

MELITA FRESNELII (Audouin).

See Das Tierreich, vol. xxi, p. 423.

A single specimen, male, from Durban Bay, has on the left side the highly characteristic large second gnathopod, rendered almost chelate by the production of the hand in thumb-like opposition to the finger.

GENUS ELASMOPUS, A. Costa, 1853.

See Das Tierreich, vol. xxi, p. 441.

ELASMOPUS BRASILIENSIS (Dana).

1853-55. *Gammarus brasiliensis*, Dana, U.S. Expl. Exp., vol. xiii, p. 956, pl. 65, fig. 10.

1906. *Elasmopus b.*, Stebbing, Das Tierreich, vol. xxi, p. 443.

As I have remarked under the last reference, Bate, in describing the second gnathopods of his *Maera pectenierus*, speaks of "the anterior portion of the palm projecting to a tubercle." That I find to be the case in a dissected specimen from Durban Bay. Bate speaks of the third uropods as being slightly the longest, and Dana uses the expression, "the three pairs of caudal stylets subequal," in accordance with which I recorded "uropods 1-3 subequal." If these statements were taken literally, they would exclude the African specimens from identification with this species, since they have the second uropods shorter than the first, and the third notably shorter than the second. But the figures supplied by Dana and Bate make it tolerably clear that those authors noted only a near equality in the extension backward of the three pairs, without considering the difference in their starting points. In the third pair the inner branch is shorter and much narrower than the outer.

FAMILY PODOCERIDÆ.

See Das Tierreich, vol. xxi, pp. 694 and 741, 1906.

GENUS PODOCERUS, Leach, 1814.

See Das Tierreich, vol. xxi, pp. 700 and 741.

PODOCERUS BRASILIENSIS (Dana).

1853 & 1855. *Platophium brasiliense*, Dana, U.S. Expl. Exp., vol. xiii, p. 838, pl. 55, figs. 9 a-l.

1906. *Podocerus brasiliensis*, Stebbing, Das Tierreich, vol. xxi, p. 704.

Dana's figures of the female make it quite clear that Mr. Bell Marley's specimens from Durban Bay belong to this species. The dissected specimen had a three-jointed flagellum to the first antenna, so far justifying Dana's statement that the number of joints varies from 3-5. The specimen had the marsupial plates well developed. The strongly produced fourth joint of the second gnathopods in the female attracts attention.

FAMILY COROPHIIDÆ.

See Das Tierreich, vol. xxi, p. 662, 1906.

GENUS COROPHIUM, Latreille, 1806.

See Das Tierreich, vol. xxi, pp. 685 and 740.

COROPHIUM ACHERUSICUS, A. Costa.

1857. *Corophium acherusicum*, A. Costa, Mem. Ac. Napoli, vol. i, p. 232.
1893. *C. a.*, Della Valle, Fauna and Flora Neapel, vol. xx, p. 364, pl. 1, fig. 11, pl. 8, figs. 17, 18, 20-41.
1900. *C. a.*, Chevreux, Results Camp. Monaco, vol. xvi, p. 109.
1904. *C. a.*, Stebbing, Spolia Zeylanica, vol. ii, pt. 5, p. 26.
1906. *C. a.*, Stebbing, Das Tierreich, vol. xxi, pp. 692 and 740.

The full description and effective figures of this species by Prof. Della Valle, in his fine work on the Amphipoda of the Naples station, make it clear to my mind that the specimens collected by Mr. Bell Marley in Durban Bay are in full agreement with the Mediterranean form, the specific distinctness of which is guaranteed by the high authority of M. Ed. Chevreux. In describing the second gnathopod Della Valle states that the finger is armed with two strong teeth on the distal half of its concave margin. This would be a useful distinction from the earlier *Corophium bonellii* of Milne-Edwards, which has only one such tooth, but its importance is weakened by Della Valle's preliminary statement that the finger in question is furnished with "one or two" teeth in Costa's species. He also states that the fourth and fifth joints of this gnathopod are fused together without any indication of their respective limits, and figures them accordingly. But a male and a female, for which I was indebted to the Professor's kindness, showed the boundary line in each case, and I now find it quite distinct in the dissected specimen from Natal.

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fresnelii (Melita)	- 446	Sphæroma	- 444
Gammaridæ	- 446	Sphæromidæ	- 444
Gammaridea	- 446	spinulicauda (Penæopsis)	- 444
Gecarcinidæ	- 437	Stenopidæ	- 440
Grapsidæ	- 438	Stenopidea	- 440
hispidus (Stenopus)	- 440	Stenopus	- 440
indicus (Penæus)	- 443	tetragonum (Sesarma)	- 438
Isopoda	- 444	walkeri (Sphæroma)	- 444
longirostris var. (Penæus)	- 443	Xanthidæ	- 436
Macrura anomala	- 439	Zosimus	- 436
Macrura genuina	- 440	Zozymus	- 436

EXPLANATION OF PLATES XXII and XXIII,

Illustrating paper by the Rev. T. R. R. Stebbing on
"The Malacostraca of Durban Bay."

PLATE XXII.

Penæus durbani, sp. nov.

- n.s. ♀ Figure of female specimen, in lateral view, natural size.
 T. Telson in dorsal view, much magnified in correspondence with other details, except the rudimentary appendage of plp. 1.
 m, m. Mandible. The upper figure showing the palp in full view, the lower with the palp only partially in view, and at an angle, the body of the mandible placed to show its two edges.
 mxp. 1. The first maxilliped.
 prp. 3. Hand and finger of the third peræopod.
 th. Thelycum.
 plp. 1. First peræopod, with supposed rudiment of endopod more highly magnified.

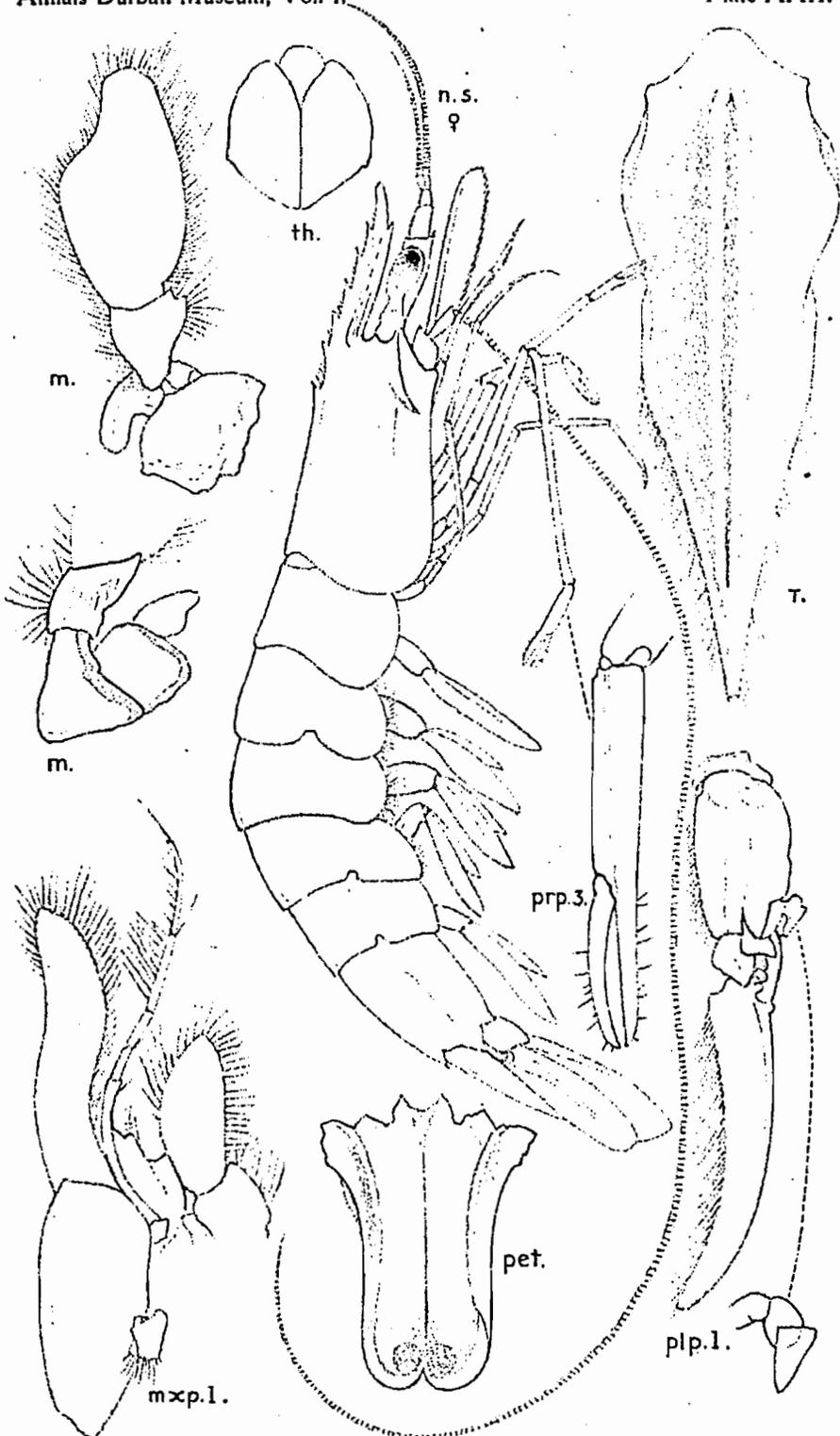
Penæus semisulcatus, de Haan.

- pet. The petasma, partially opened.

PLATE XXIII.

Spharoma walkeri, Stebbing.

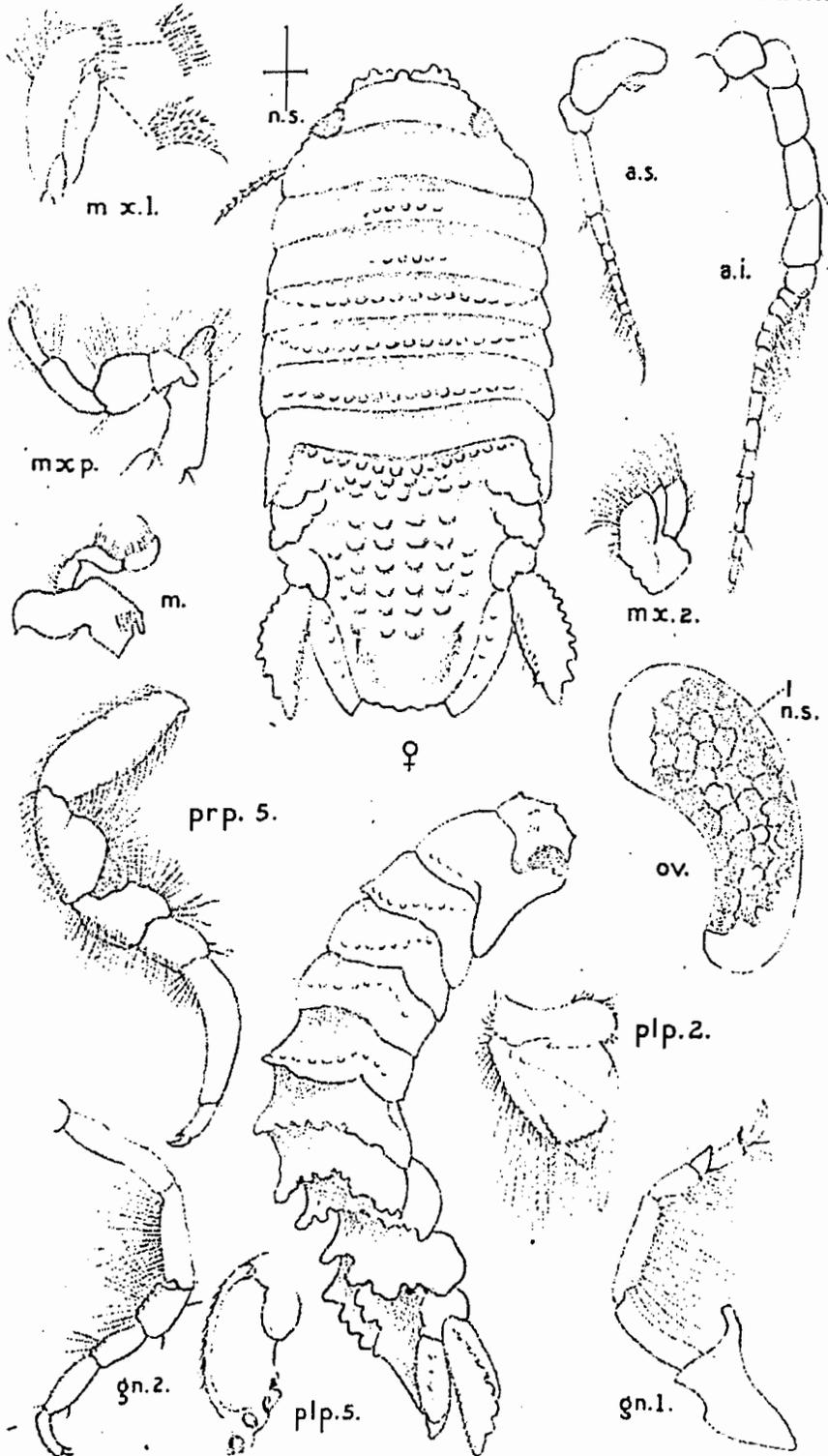
- n.s. Lines indicating natural size of female specimen figured above in dorsal view, and below in lateral view, without appendages except the uropods.
 ov., ns. Ovum magnified, and line indicating its actual length.
 a.s., a.i. First and second antennæ of the male from which the remaining figures are drawn.
 m., mx. 1, mx. 2, mxp. Mandible, first and second maxillæ, and maxilliped. The antennæ and mouth-organs are drawn to a uniform scale, higher than that employed for the following appendages. The higher magnification of the ten spines and four setæ of the first maxilla agrees with that of the ovum.
 gn. 1, gn. 2, prp. 5. First and second gnathopods, and fifth peræopod.
 plp. 2, plp. 5. Second pleopod, and exopod of the fifth.



T. R. R. Stebbing del.

John Singleton & Sons lith.

PENAEUS DURBANI, sp. nov. and *P. SEMISULCATUS*, de Haan.



T. R. R. Stebbing del.

John Singleton & Sons lith.

SPHAEROMA WALKERI, Stebbing.