

XII.—Some Crustacea of Natal,

by the

Rev. T. R. R. Stebbing, M.A., F.R.S., F.L.S., F.Z.S.

WITH PLATES XVIII–XX.

A COLLECTION of Crustacea made recently by Mr. H. W. Bell Marley on the coast of Natal, though consisting chiefly of species already known to occur there, is interesting for the careful notes which he proposes to publish on the colours of freshly taken specimens. These may prove very useful to other collectors for prompt identification of their captures, in place of the minute scrutiny often exacted by museum students when original hues have faded or completely changed. Apart from this, some examples of the *Caridea* seemed to call for fuller discussion, and in one instance even to claim specific distinction. At the same time attention is directed to the increasing difficulty in naming specimens within the family *Alpheidae*, partly from the variability of some features in the species themselves, partly from imperfect descriptions in the original institution of the species, but partly, on the other hand, one might venture to suggest, from over reliance on differences of measurement, such as among mankind would justify a bewildering specific diversity.

TRIBE CARIDEA.

FAMILY HIPPOLYTIDÆ.

For a valuable key to numerous genera of this family, see Kemp, Records of the Indian Museum, vol. x, pt. 2, no. 4, p. 82, 1914.

GENUS HIPPOLYSMATA, Stimpson.

1860. *Hippolysmata*, Stimpson, Pr. Ac. Sci. Philad., p. 95 (26).
1914. *H.*, Kemp, Rec. Ind. Mus., vol. x, pt. 2, pp. 83, 112.
1916. *H.*, Kemp, Rec. Ind. Mus., vol. xii, pt. 8, p. 401.

In the key, *Lysmata* has "Upper antennulæ flagellum unequally biramous." *Hippolysmata* has it uniramous, that is, the shorter inner ramus is wholly, instead of only partially, coalesced with its companion. As Mr. Kemp observes, the distinction is so slight that any distinction of genera depending on it may have to be relinquished.

HIPPOLYSMATA MARLEYI, sp. nov. Plate XVIII.

This species makes an approach to *Lysmata chiltoni*, Kemp, 1914, by the dentation of the carapace and by having a second peræopod in which the movable finger is decidedly longer than the fixed one, but in our specimen this only applies to one member of the pair. Here, as in *Nauticaris unirecedens*, Bate, which is identified with Stimpson's *Hippolysmata vittatus*, the hindmost tooth on the carapace is well separated from the tooth next before it. This latter is behind the orbit and in common with the three teeth which precede it carries a dorsal setule. Such a setule occurs on the level which produces the rostrum beyond the eye, in front of which it has two small ventral denticles. There is a carinate tooth over the base of the first antenna; the antero-lateral angle is rounded, without denticle. The triangular telson, about thrice as long as its breadth at the base, narrows gradually to a slightly obtuse apex with a small median spine, the distal half laterally fringed with plumose setæ; of the two pairs of dorsal spines, the proximal is above the centre.

In the first antennæ the thickened part of the outer flagellum is as long as the peduncle, the whole flagellum being more than twice the length of the carapace, with the inner flagellum not much shorter. The second antenna is considerably longer than the whole body, the scale narrowing distally, the small lateral tooth not extending beyond the slightly convex apex.

The mandibles show no sign of a palp and in other respects appear to agree with those which I have described and figured for *Exhippolysmata tugelæ* (Ann. S. Afr. Mus., vol. xv, p. 94, pl. 89, 1915), "the molar comprising a broad spinuliferous band and by its side a projecting dentate plate." The other mouth-organs are in near agreement with those of the species just mentioned, but not showing the small conical joint at the apex of the endopod in the first maxilliped and having a shorter exopod in the third.

The first peræopods have the fifth joint or wrist shorter than the palm of the chela, the fingers of which close completely and are definitely more than half the palm's length. The slender second peræopods have about twenty divisions to the wrist, the two preceding joints not annulate. In the third peræopods the finger has two spines in advance of the apex, while in the fourth and fifth it is rather stouter and carries three spines.

In the first pleopods the short inner ramus is produced into a long retinaculum ending in eight minute hooks. The uropods are broad,

rather longer than the telson, the outer and longer ramus showing a faint diæresis.

The length of the carapace is 12 mm., of the pleon about 23 mm., including 5 mm. for the telson. Mr. Bell Marley reports the colour in life as "golden-brown on white with irregular lines and curves, antennæ red, legs brown and white."

Locality: Isezela.

GENUS ALOPE, White.

- 1847. *Alope*, White, Pr. Zool. Soc., p. 123.
- 1903. *A.*, G. M. Thomson, Tr. Linn. Soc., vol. viii, p. 440.
- 1904. *A.*, W. H. Baker, Tr. R. Soc. S. Australia, vol. xxviii, p. 154.
- 1909. *A.*, McCulloch, Rec. Austral. Mus., vol. vii, p. 313.
- 1914. *A.*, Kemp, Rec. Ind. Mus., vol. x, pp. 83, 89.

Kemp, whose valuable treatise supplies other references, incidentally remarks that "Filhol's *Hippolyte spinifrons*, as is shown by the figure, is undoubtedly synonymous with White's *Alope palpalis*; he refers to the supra-orbital spines as 'épines sus-orbitaires' following Milne-Edwards' mistake in terminology." It is true that in the description of *H. spinifrons* by Milne Edwards (Hist. Nat. Crust., vol. ii, p. 377) we find printed "épines suborbitaires." But undoubtedly it was the printer and not Milne Edwards who made the mistake, which Filhol corrects instead of following, since the prefix "sus" signifies *supra* not *sub*. Thomson also, it will be seen (loc. cit., p. 445) misconstrues Filhol. In the two species of the genus now accepted, *A. palpalis*, White, and *A. australis*, Baker, the latter author supposes the first maxillæ to differ in a marked but very improbable manner. He has evidently been led to this conclusion by the circumstance that according to Thomson's figure and description the first maxilla of *A. palpalis* is devoid of the customary inner plate. It is, I think, practically certain that the supposed loss is due to an accident in dissection.

ALOPE AUSTRALIS, Baker. Plate XIX.

- 1904. *Alope australis*, Baker, Tr. R. Soc. S. Australia, vol. xxviii, p. 154, pl. 30.
- 1909. *A. a.*, McCulloch, Rec. Austral. Mus., vol. vii, p. 313, text-fig. 17.
- 1914. *A. a.*, Kemp, Rec. Ind. Mus., vol. x, p. 91, pl. 1, figs. 3-5.

Baker's description of the carapace suffers somewhat from the loss of a line for which one already given is substituted. In Kemp's account, what is said of "the first pair of peræopods" must refer to the first pair of maxillipeds. Our specimen from Isezela, Natal, a female 30.5 mm. long, laden with eggs, does not essentially differ from Baker's account of the Australian form. The rostrum does not reach beyond the eyes and there are only four median teeth as in some of McCulloch's specimens, and in that which Haswell refers to *A. palpalis*. The telson has the dorsal spines and setæ as described by Baker, but the truncate apex carries four spines. The three joints of the palp of the mandibles are equal, all setose; no cutting plate could be perceived. As shown in the figure, the inner plate of the first maxilla appears reversed, and such a position of it in the other species may have caused Thomson to overlook it. Both of the second peræopods have the wrist composed of seven jointlets, with the two preceding joints showing only the faintest signs of subdivision into two parts each, as proved to be the case with Baker's specimen (see McCulloch, loc. cit.). Yet this is of no use for specific distinction, since Kemp finds that exactly the same character may occur in *A. palpalis*. The second antennæ agree well with Baker's account, as also the third maxillipeds.

Mr. Bell Marley records the colour in life as "red speckled on pale brown, legs banded red, antennæ white," and says that it was found "under large rocks near water's edge."

In another specimen from the same locality, colour "brown-red speckled on grey," a male, with carapace 13 mm. long and pleon twice that length measured round the curve to the apex of the telson, the rostrum reaches slightly beyond the eyes. The dorsal teeth are four. The endopod of the first maxilliped is apically simple, not bifid. The third maxillipeds are very unequal in length. The second peræopods show obscurely nine jointlets to the wrist, with the two preceding joints pretty clearly subdivided.

FAMILY ALPHEIDÆ.

See Ann. S. Afr. Mus., vol. xv, p. 79, 1915.

GENUS ALPHEUS, Fabricius, 1798.

When drawing up the description of *Alpheus notabilis*, sp. nov., for the above-mentioned Annals, p. 80, pls. 84, 85, I overlooked Dr. de Man's account of his *acutocarinatus* in Siboga Exp., Mon. 39a, p. 401,

1911, and had probably not seen his figures in the same work, pl. 21, fig. 94, 1913. The imperfection of the single specimen on which *A. notabilis* was founded leaves its separation from de Man's earlier species somewhat doubtful.

ALPHEUS GRACILIS, Heller. Plate XX.

1861. *Alpheus gracilis*, Heller, Sitz. K. Ak. Wiss. Wien, vol. xlv, p. 271, pl. 3, figs. 19, 20.

1811. *A. g.*, de Man, Siboga Exp., Mon. 39a, pp. 341, 342.

The female specimen here referred to *A. gracilis*, Heller, has the feature on which alone Coutière establishes var. *alluaudi* (Mald. and Lacc. Archip., vol. ii, pt. 4, p. 882 (1905), namely, that the finger in the third, fourth and fifth peræopods is simple, instead of having its apex bidentate. But as his only available specimens are said to be males without the first pair of peræopods, identification seems too indefinite. In var. *luciparensis*, de Man (Siboga Exp. Mon. 39a, pp. 337, 338; 1911; pl. 14, figs. 66, 66a; 1913) the accessory claw or tooth appears to be "somewhat smaller than the type," thus bridging the interval towards its disappearance.

The front of the carapace and the two pairs of antennæ are in good agreement with de Man's figures. In the first antennæ the thickened part of the flagellum has about half a dozen distal joints free. In the first peræopods the smaller chela on the right, though much narrower is not very considerably shorter than its companion on the left. The delicate second peræopods have the chela and the divisions of the wrist in agreement with the type species. This flexible apparatus is no doubt one of the many modifications of a "cleanser foot" found in different groups of Crustacea. The distal margin of the telson is convex, the median tooth described by Heller being due to an error of observation, as explained by de Man. Such an error was easy to make, since between the two pairs of spines at the angles there is a dense fringe of about twenty long plumose setæ. The length of the specimen obtained by Mr. Bell Marley at Isezela was about 30 mm., the ova small, the colouring "a deep white line down back, with chocolate-brown each side, claw lighter, tail a mixture of brown and yellow."

ALPHEUS LOTTINI, Guérin.

1837. *Alpheus lottini*, Guérin, Voy. de la Coquille, vol. ii, Crust., pl. 3, fig. 3, 1838, *A. lottinii*, p. 38.

1837. *A. lothinii*, Milne Edwards, Hist. Nat. Crust., vol. ii, p. 353.

Among the very numerous species of *Alpheus* discussed in the elaborate treatises of de Man and Coutière I have failed to find any notice of Guérin's species, although I should suppose that it properly takes precedence of *A. ventrosus*, M. Edwards, by the acknowledgment which Milne Edwards himself awards to the excellence of Guérin's figure.

The specimen which I name above is a very small one, with carapace 8 mm. long and pleon 13 mm. It is a female laden with eggs, unfortunately without the smaller chela of the first pair, but with the large chela on the left and the second peræopods agreeing well with Guérin's figure. The peduncle of the second antenna just reaches the extremity of the scale. The finger, however, in the last three peræopods is apically duplex, a feature not shown in Guérin's figure, that author writing of these limbs that they are without spines, perhaps from an oversight due to insufficient magnification. The specimen was taken by Mr. Bell Marley at Vetch's pier. He describes the colouring as "pale olive yellow, claw white, nippers black."

EXPLANATION OF PLATES XVIII-XX,

Illustrating paper by the Rev. T. R. R. Stebbing on
"Crustacea of Natal."

PLATE XVIII.

Hippolysmata marleyi, sp. nov.

- n.s. Line indicating natural size of the specimen of which the details are here figured.
- car. Carapace partly figured in profile, with the eye.
- T. Telson in dorsal aspect.
- a.s., a.i. First antenna and part of second.
- m., m., mx. 1., mx. 2. The mandibles, one in part; the first and second maxillæ.
- prp. 1, 2, 3, 4. First and second peræopods, with chela of second further enlarged; finger of third much magnified; fourth with finger further magnified in agreement with that of the third,
- urp. Uropod, uniform in scale with the telson,



Stebbing, Thomas R. R. 1919. "Some Crustacea of Natal." *Annals of the Durban Museum* 2, 119–124.

View This Item Online: <https://www.biodiversitylibrary.org/item/92667>

Permalink: <https://www.biodiversitylibrary.org/partpdf/82749>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Smithsonian

Copyright & Reuse

Copyright Status: Public domain. The BHL considers that this work is no longer under copyright protection.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.