



## LII.—On Crustacea Amphipoda new to Science or to Britain

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LII.—On *Crustacea Amphipoda* new to Science or to Britain.  
By the Rev. ALFRED MERLE NORMAN, M.A.

[Plates XXI., XXII., and XXIII. figs. 1–11.]

Genus HAPLOOPS, Lilljeborg.

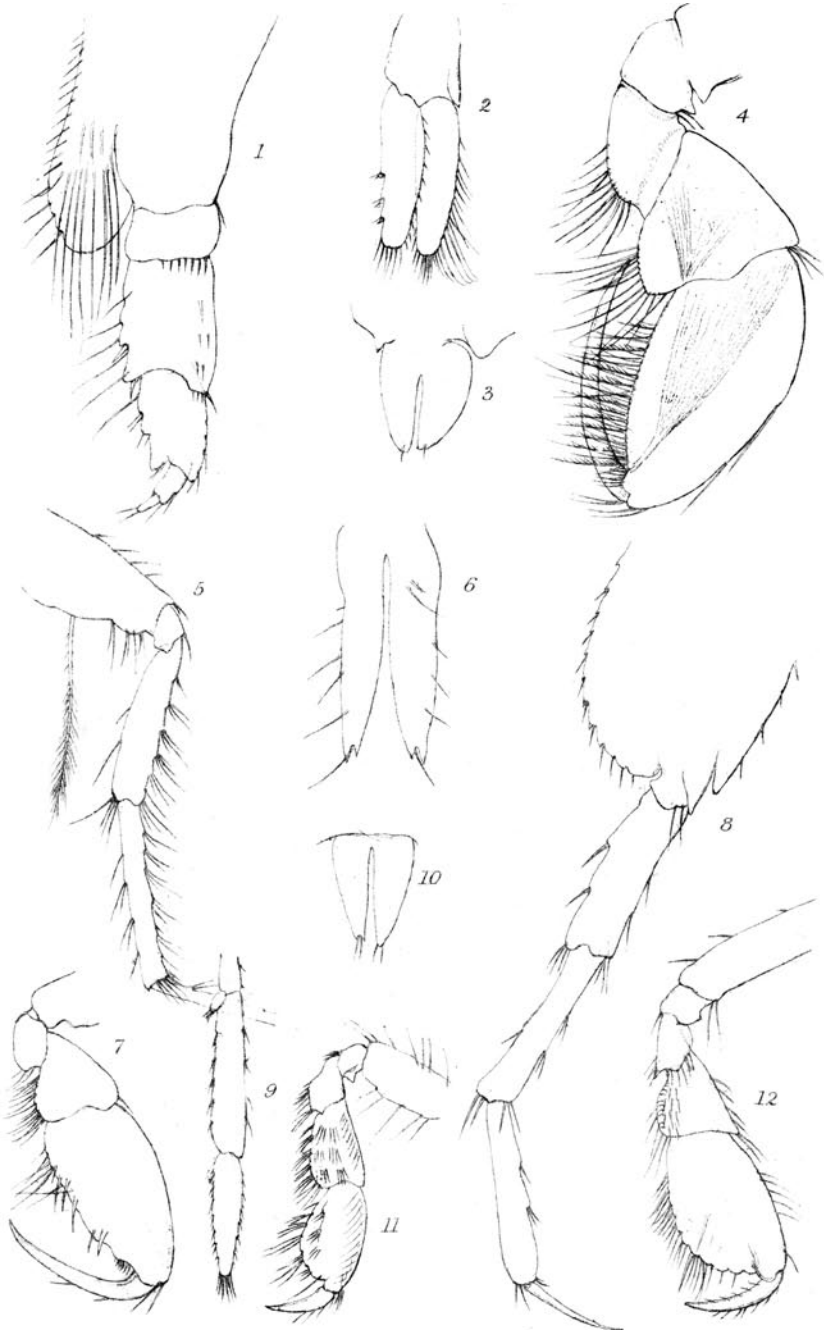
*Body* compressed, coxæ deep. *Eyes* two, simple. *Superior antennæ* slender, no secondary appendage. *Mandibles* with a three-jointed, *maxillæ* with two-jointed, and *maxillipedes* with four-jointed palp. Both *gnathopods* having a small subchelate hand. First and second *pereiopods* with the metacarpus dilated, the wrist and hand narrower, the nail long and straight. *Pleon* having the fifth and sixth segments coalesced. Last *uropods* two-branched, branches flattened.

*Haploops tubicola*, Lilljeborg. Pl. XXI. figs. 1–3.

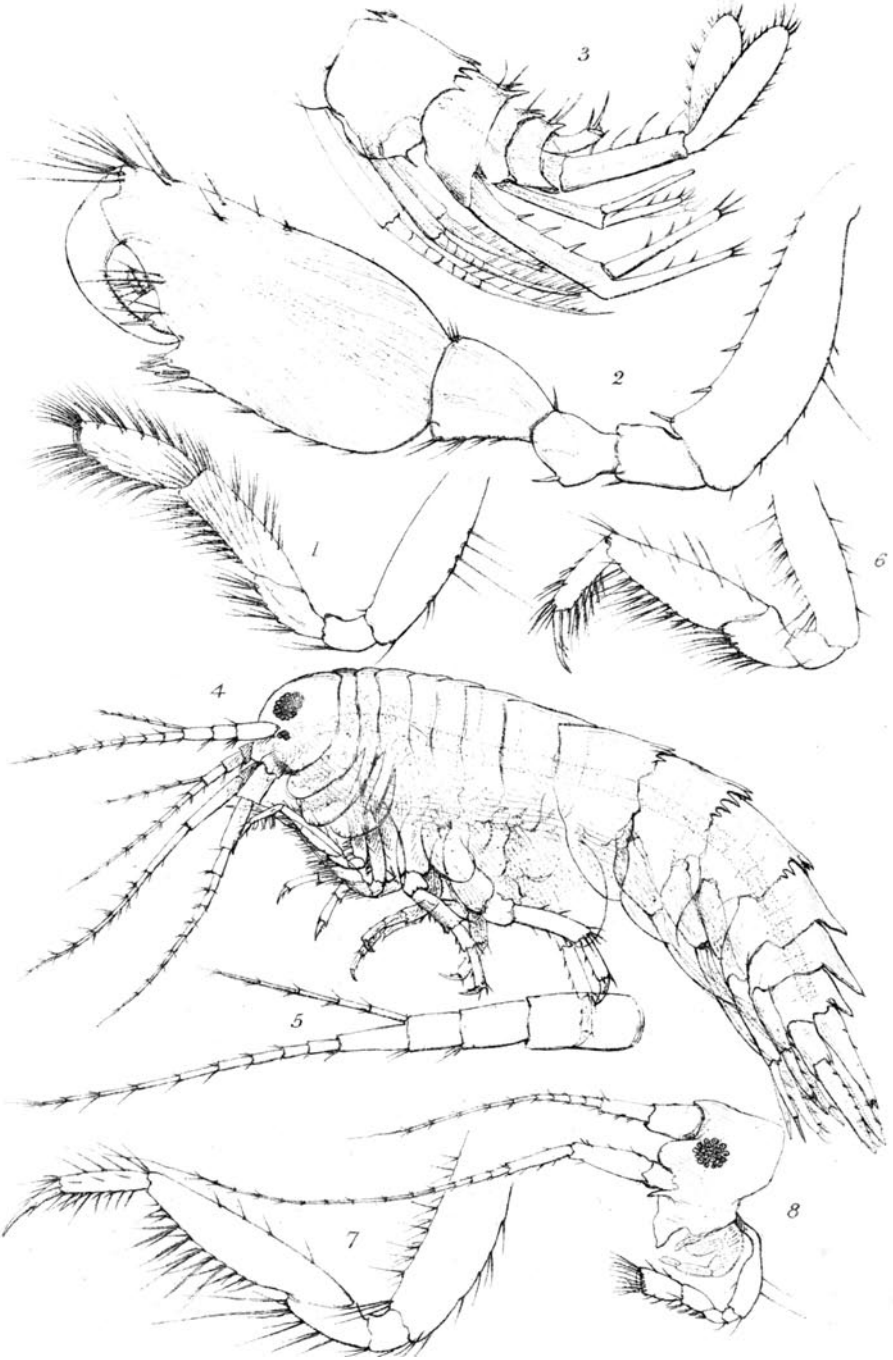
*Ampelisca Eschrichtii*, Lilljeborg, Öfvers. af Kongl. Vet. Akad. Förhandl. 1852, p. 6.

*Haploops tubicola*, Lilljeborg, Öfvers. af Kongl. Vet. Akad. Förhandl. 1855, p. 134; Bruzelius, Skand. Amphip. Gammaridea (1859), p. 88; Bate, Cat. Amphip. Crust. Brit. Mus. p. 371; Norman, Trans. Tyneside Nat. Field Club, vol. v. (1863) p. 279; Göes, Crust. Amphip. maris Spetsbergiam alluentis (1865), p. 12.

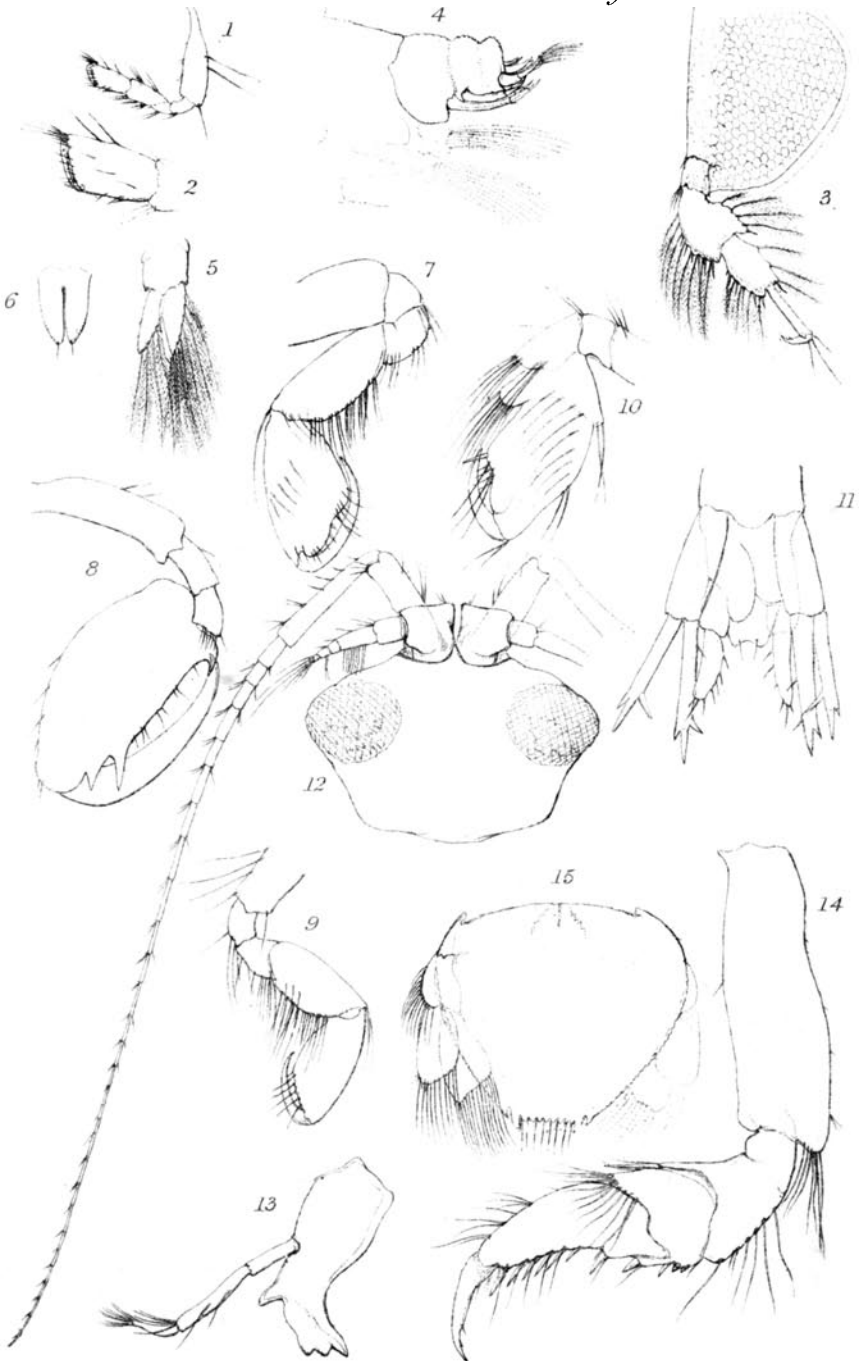
*Superior antennæ* shorter than inferior; middle joint of peduncle the longest. *Inferior antennæ* having the peduncle rather longer than that of superior, last joint slightly longer than fourth; flagella of both antennæ fringed throughout with unusually long and conspicuous setæ. *Gnathopods*: both pair alike, hairy; hand ovate, rather shorter than wrist; finger small. *First* and *second pereiopods* with metacarpus very long and flattened, longer than wrist and hand combined; wrist very short, hand double length of wrist; nail very long, slender, and acute. *Third* and *fourth pereiopods* presenting an unusual appearance, from the wrist being much broader at its termination than the hand, which articulates with the anterior portion of its distal extremity, while the posterior portion is furnished with a bundle of stout spines; there are also three transverse rows of spines on the sides of the wrist; hand as long as wrist, but only half as broad; nail very short, stout. *Last pereiopods* with the thigh produced posteaally and also inferiorly, but in such a way that the hinder margin is slightly concave; surface of thigh setose; metacarpus and wrist expanded, wide, flat, lobed at the margins and edged with spines and spine-like setæ; hand and nail very minute, combined scarcely larger than an ordinary nail; hand articulating with



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the wide extremity of the wrist, in a central hollow between two lobes. *Pleon* usually (but not invariably) having a hump on the back of the fourth segment. *Telson* squamiform, semi-elliptic, cleft almost to the base, cleft narrow, not widening at the extremity. *Uropods*: first scarcely equalling second; last having two flattened, one-jointed, equal rami; inner margin of inner ramus with three short blunt spines, its extremity and both margins of exterior ramus setose. Length  $\frac{1}{10}$  inch.

Göes remarks on this species:—"Ex abyssis ad Aukpadlartok Grœnlandiæ copiam magnam retulit Torell speciminum valde robustorum et oculis quatuor, duobus in vertice, duobus in angulo infero-laterali antico capitis insignium—ceterum cum nostra plane congruentium." My Northumberland specimens agree with those from Greenland in having four simple eyes. The number of eyes, therefore, would not seem to be constant; but there are ample grounds for separating the genus *Haploops* from *Ampelisca*.

First found by me in deep water off Berwick, and seven miles off Tynemouth, Northumberland, in 1862, and again dredged in 1866 in the Minch.

#### Genus TESSAROPS, n. g.

*Eyes* four—two (large, compound) situated above the origin of the superior antennæ, and two (nearly simple) below the others, at the base of the superior antennæ. *Superior antennæ* furnished with a very slender secondary appendage. Both pair of *gnathopods* simple, not subchelate. Last *pereiopods* short, stout. *Pleon* having dorsal margins of segments toothed. *Telson* squamiform. Last *uropods* two-branched.

*Tessarops hastata*, n. sp. Pl. XXII. figs. 4-7.

? *Tiron acanthurus*, Lilljeborg, Amphipoda Lysianassina, 1865, p. 19.

? *Syrrhoë bicuspis*, Göes, Crust. Amphip. maris Spetsbergiam alluentis, 1865, p. 12, pl. 40. figs. 26 a-l.

*Head* produced. Upper *eyes* ovate, large; lower eyes (in type specimen) consisting of two lenses. *Superior antennæ* having each joint of the peduncle shorter than the preceding one; flagellum composed of ten, secondary appendage of five very long articulations; the basal articulation of the flagellum longer than either of the last two joints of the peduncle; the secondary appendage is remarkably slender at the base, and equals the first four articulations of the flagellum in length. *Inferior antennæ* considerably longer than the superior; last joint of peduncle equal to two-thirds the length of the penultimate, flagellum of about the same length as the peduncle.

The antennæ present a very unusual appearance, from their peculiar nakedness and smooth rounded contour; there is not a single spine upon any part, and the peduncles have but very few, minute, scarcely noticeable cilia. *First gnathopods* having the wrist long and slender, gradually (but only slightly) tapering from the base to the distal extremity; hand very narrow, not subchelate, no palm; finger half as long as hand, nearly straight, with a spine on the inner margin at half its length; posterior margin of wrist and hand setose. *Second gnathopods* almost exactly like the first; but the margin of wrist and hand is more sparingly setose, and the whole form rather more slender. Last *pereiopods* short and stout; thigh much expanded posteaally; both wrist and hand shorter than the preceding joint (metacarpus); nail strong, short, very thick at the base. *Pleon* having distal margins of first three segments serrate (teeth about ten); fourth, fifth, and sixth segments produced posteaally into a single spear-like process, that of the fifth segment of immense size. *Telson* squamiform, of great size, equalling the three preceding segments in length. First *uropods* longer than the second, and reaching to the middle of the rami of the last; last *uropods* slightly extending beyond the telson, consisting of a short flattened peduncle and two flattened blades of equal length. *Length* a little more than a fourth of an inch. *Colour* reddish; antennæ banded with brown; eyes blood-red.

This is a very remarkable genus, on account of the character of the eyes, the peculiar naked appearance of the antennæ, and the structure of the pleon and its appendages.

The type specimen was sent to me by Mr. Dawson, who dredged it, in 1865, off the Aberdeenshire coast.

My only specimen is mounted for the microscope, and I am prevented obtaining a dorsal view of the telson, which may or may not be cleft.

#### NICIPPE, Bruzelius.

*Body* rather stout; coxæ moderately deep. *Antennæ* slender, the upper with secondary appendage. *Mandibles* dissimilar, furnished with three-jointed palps—the one having an accessory process or internal branch, the other without it. Palp of first *maxillæ* two-jointed. *Maxillipedes* having the laminae small, and the palp four-jointed. Both pair of *gnathopods* subchelate. Last three pairs of *pereiopods* gradually increasing in length. Last *uropods* two-branched, both branches composed of one joint only.

*Nicippe tumida*, Bruzelius. Pl. XXI. figs. 4-6.

*Nicippe tumida*, Bruzelius, Skandinaviens Amphipoda Gammaridea (1859), p. 99, pl. 4. fig. 19; Bate, Cat. Amphip. British Museum, p. 374.

*Superior antennæ* with very short peduncle, not longer than the head, first two joints subequal, last joint not half the length of the preceding; flagellum long and slender, first joint long, following joints wider than long; appendage five-jointed. *Inferior antennæ* much shorter than the superior, but the peduncle considerably longer. *Gnathopods* of similar structure; wrist short, triangular; hand regularly ovate, palm undefined, finger slender, only very slightly curved, as long as the hand. *Pereiopods* with peculiarly long, perfectly simple, straight nails; last pair long and slender, thigh narrow, furnished with a most remarkable appendage on the middle of the posterior margin (which is not expanded); this appendage consists of a very long styliform process, the distal portion of which is a plume formed of hairs springing from all sides of the axis. *Pleon* with two small teeth on the posterior dorsal margin of the fourth segment. *Telson* squamiform, divided almost to the base, and consisting of two long, narrow, diverging portions, furnished with three or four lateral and two terminal long slender spines. *Uropods*: first pair rather longer than second, both margined with numerous very long slender spines; last pair having on the basal portion a tuft of long slender spines; rami subequal, long, narrowly lanceolate, fringed with very long plumose setæ. *Length* not quite half an inch.

Two specimens, taken by Mr. Jeffreys and myself, in July 1866, in the Sound of Skye. Mr. Bate, in his 'Catalogue of the Amphipodous Crustacea in the British Museum' (p. 374), states that he had seen a specimen from Shetland; but possibly there may have been some mistake in this, as the species is not included in the 'British Sessile-eyed Crustacea.'

The short peduncle of the upper antennæ, the ovate gnathopods, and, above all, the extraordinary styliform appendage of the thigh of the last pereiopods at once suffice to distinguish this species. What the use of the last-mentioned organ is I can form no idea; the nearest approach to it in structure that I know among the Crustacea is to be found in the abdominal setæ of the Cladocera.

## Genus ERIOPIS, Bruzelius.

*Body* elongated, slightly compressed; coxæ small. *Superior antennæ* with a slender peduncle and a very minute secondary appendage. *Inferior antennæ* subpediform. *Mandibles* two-



branched, with a molar tubercle and a three-jointed palp. *First maxille* having a two-jointed, and *maxillipedes* a four-jointed palp. *Gnathopods* with subchelate hands. Last three *pereiopods* gradually increasing in length. Last *uropods* two-branched, branches very unequal, the inner short, the outer nearly as long as the whole pleon, composed of two flattened joints.

*Eriopis elongata*, Bruzelius. Pl. XXI. figs. 7-10.

*Eriopis elongata*, Bruzelius, Skandinaviens Amphipoda Gammaridea (1859), p. 65, pl. 3. fig. 12; Bate, Cat. Amphip. Crust. Brit. Mus. p. 178, pl. 32. fig. 5.

*Superior antennæ* of immense length; peduncle long and slender, first two joints subequal, a spine at the distal extremity of the first, third short; flagellum of extraordinary length; secondary appendage very minute, and only to be seen when carefully looked for, consisting of two joints, closely appressed to the first joint of the flagellum. *Inferior antennæ* about equal in length to the peduncle of the superior; flagellum six-jointed and shorter than the last joint of the peduncle. *First gnathopods* smaller than the second; hand triangular, greatly widening from the base to the palm, which is scarcely at all oblique and slightly convex; finger simple, nearly straight. *Second gnathopods* with an ovate hand, twice as long as the wrist, palm continuous with the posterior margin, and two-thirds the length of the hand, armed with four spines; finger long, simple, gently curved, with about ten little cilia on the inner margin. *Last pereiopods* having the posterior margin of the thigh deeply serrate, and a small cilium springing from each serration. *Telson* squamiform, divided almost to the base, each portion terminating in two spines. *Uropods*: first pair rather longer than the second; last pair monstrously developed, consisting of a basal joint and two branches—one branch shorter than the basal joint, the other nearly equalling in length the whole pleon, and consisting of two linear flattened joints, the second slightly shorter than the first. *Length*  $\frac{4}{10}$  inch.

A single specimen was taken by Mr. Jeffreys and myself in the Sound of Skye, in 1866. The very long superior antennæ and extraordinarily developed uropods give to this species a most remarkable appearance. My British specimen and a Bohuslän example, for which I am indebted to Prof. Lovén, both want the telson and posterior uropods: the description and figure, therefore, of these organs have been taken from Bruzelius, while the rest of the animal is described from the Skye specimen: this last had the uropods when dredged; but being put into a bottle of spirit with other Crustacea, they were unfortunately broken off and thus lost.

*Mæra Lovéni*, Bruzelius. Pl. XXI. figs. 11, 12.

*Gammarus Lovéni*, Bruzelius, Skandinaviens Amphipoda Gammaridea (1859), p. 59, pl. 1. fig. 9.

*Mæra Lovéni*, Bate, Cat. Amphip. Crust. Brit. Mus. p. 193, pl. 35. fig. 1.

*Superior antennæ* having the first two joints of the peduncle remarkably long, slender, and smooth, the second joint slightly longer than the first, third joint not one-third the length of the second; flagellum (about 17-jointed) not quite as long as the peduncle; secondary appendage 5-jointed, equal to four joints of flagellum in length. *Inferior antennæ* scarcely, if at all, longer than peduncle of superior antennæ, the peduncle having the last two joints subequal and long; flagellum of about seven joints. *First gnathopods* with wrist subtriangular, posteally furnished with numerous tufts of setæ, and having five transverse and three oblique rows of setæ on the side, the setæ of the oblique rows much smaller than those of the transverse rows; hand subovate, equal in length to the wrist, wider at the extremity than at the base; palm convex, scarcely defined, scattered setæ on both margins; finger strong, only slightly curved, simple, with a few setæ on the outer and about nine little cilia on the inner margin. *Second gnathopods* with a short triangular wrist, which is much wider at the extremity than the last, and has a few scattered setæ on the front, and numerous setæ on the hinder margin; hand large, twice as long as the wrist, subquadrate, widening distally, with a few setæ on each margin; palm slightly oblique, defined, a little convex, and serrated, serrations distant, six only on length of palm; finger strong, slightly curved, simple, with a few setæ on exterior and about nine minute cilia on inner margin. *First pereopods* having the nail long (half as long as hand) and nearly straight.

The only evidence I as yet have of this species being British is the anterior half of the animal here described, which was dredged by Mr. Jeffreys and myself in the Sound of Skye, in 1866. It agrees so closely with Bruzelius's description and figures of *M. Lovéni* that there can, I think, be no question as to its identity with that species. I have very minutely described the parts of the animal obtained, that those who hereafter may meet with perfect specimens of *M. Lovéni* may be better able to decide whether the Skye fragment has rightly been referred to that species; but of this I do not entertain the slightest doubt, as it exactly agrees with Bruzelius's description and figures.

*Mæra Batei*, n. sp. Pl. XXII. figs. 1-3.

*Superior antennæ* having second joint of peduncle consider-

ably longer than the first; third joint short, not more than one-fourth the length of the second; flagellum about equal in length to peduncle (22-24 joints); appendage 4-5-jointed. *Inferior antennæ* short, about equal to peduncle of superior in length, last two joints of peduncle subequal; flagellum not longer than last joint of peduncle (about 8 articulations). *First gnathopods* slender; wrist and hand parallel-sided, of equal breadth throughout, both margins fringed with setæ; hand shorter than wrist; palm slightly oblique, finger slender. *Second gnathopods* in ♂ very large; wrist triangular, short; hand large, subquadrate, with an oblique palm extending one-third its length; palm furnished with three well-marked tubercles, the distal tubercle flat-topped (or cup-formed?), surmounted by a circlet of setæ; finger stout, very strongly curved, inner edge sparingly ciliated, closing with the palm between the first and second tubercles, arching over and leaving a space between its inner margin and the summit of the distal tubercle; second gnathopods in ♀ only slightly stronger than the first pair, and not differing greatly from them in structure; the hand, however, is ovate, the inferior margin gradually sloping upwards to the base of the finger, without having any defined palm; finger small, furnished with two spines near the end. *Last pereopods* with the thigh (basos) narrow and nearly parallel-sided, the distal joints strongly spined, the claw strong and nearly straight. *Pleon* having the infero-posteal angles of second and third segments not serrate, but furnished with a single spine; dorsal margin of all the segments except the first toothed; second segment with three, third with five teeth; fourth, fifth, and sixth with two teeth, each tooth having a spine at the inner side of its base. *Uropods*: first pair much longer than the second, but scarcely longer than the peduncle of the last; last immensely developed, the peduncle long and very stout, the rami subequal, consisting of very long flattened blades, edged with and terminating in spines; the length of the entire uropod is nearly equal to that of the last six segments of the pleon taken together. *Length* (full-grown male)  $\frac{3}{8}$  inch, exclusive of antennæ.

Dredged off St. Martin's Point, Guernsey, in 1864, by Mr. Jeffreys and myself.

I can see no sufficient characters by which to distinguish the genus *Megamæra* of Mr. Bate from *Mæra*; the depth of the coxæ is very variable in closely allied species.

It will be seen from the preceding description that the female differs very materially from the male in the size and structure of the second pair of gnathopods. This is universally the case in the genus; and from a want of knowledge of this fact

the two sexes have frequently been described as different species. The number of British forms must be considerably reduced. *Megamera Othonis* is the female of *M. longimana*; and *Megamera Alderi* is the female of *Melita obtusata*, with which species *Melita proxima* must also be united as another and the more usual form of the male.

I have named this species after my friend Mr. Spence Bate—a slight tribute to one who deserves much honour for his valuable labours in the investigation of the Sessile-eyed Crustacea.

#### HELLERIA, nov. gen.

*Eyes* compound. *Superior antennæ* slender, much shorter than inferior, with secondary appendage. Both *gnathopods* subchelate. *Last pereopods* rather short, furnished with long plumose setæ. Fifth and sixth segments of *pleon* coalesced into one. *Last uropods* two-branched. *Telson* squamiform, cleft almost to the base.

This genus is easily distinguished by the peculiar structure of the hinder portion of the pleon, with its coalesced fifth and sixth segments. I have dedicated it to Prof. Heller, who has done so much to elucidate the Crustacea of the south of Europe.

#### *Helleria coalita*, n. sp.

Pl. XXII. fig. 8, and Pl. XXIII. figs. 1–6.

*Eye* round, situated between the origins of the upper and lower antennæ. *Superior antennæ* having first joint of peduncle of moderate dimensions, somewhat shorter than the second; third joint not longer than, and scarcely differing in appearance from, the first joint of the flagellum; the peduncle not furnished with any spines, having only a few very small cilia; flagellum consisting of about nine elongated articulations, and slightly exceeding the peduncle in length. *Inferior antennæ* very long, last and penultimate joints of peduncle subequal in length, the latter with the lower margin convex, the upper clothed with short down; flagellum slender, the joints remarkably long. *First gnathopods* with wrist and hand of about equal length, the latter subquadrate; palm scarcely oblique, well defined, a little convex; finger gently curved, shutting closely with the palm. *Second gnathopods* almost identical with the first in size and structure. *Last pereopods* short; thigh expanded behind into a semielliptic lobe, which is widest above, and has a simple (*i. e.* not serrate) margin; metacarpus and wrist wide, and fringed on both margins with long plumose setæ, which project at right angles from the limb; hand narrow, styliform, equal to wrist in length; nail strong, bent at right angles to the hand. *Pleon* with coxæ of first

three segments deep, their infero-posteal angles completely rounded off. A marked line of separation between third and fourth segments; fourth, fifth, and sixth segments almost coalesced, the two latter actually so; the dorsal margin elevated into three little tuberculated humps, which mark the three segments; the sixth segment abruptly truncated behind, the telson being attached to the lower edge of the truncation. *Telson* squamiform, semielliptical, cleft almost to the base, cleft linear. First *uropods* much longer than second, and as long as the last (exclusive of their setæ), last having a broad peduncle and two widely lanceolate rami, which have their margins furnished with long plumose setæ. The structure of the shell of this species consists of hexagonal cells, which are extremely conspicuous and remarkably regular and elegant on the coxæ of the last pereopods. *Length* scarcely a tenth of an inch.

This species has never been taken with the dredge: it is a capital swimmer, and is procured by means of the surface-net.

Shetland (A. M. N. and Mr. D. Robertson); Moray Firth (Mr. T. Edward); Firth of Clyde (Mr. D. Robertson).

The characters which will enable this species to be recognized at a glance are, first, the coalesced fifth and sixth segments of the pleon, and the remarkable posterior truncation of the latter; and, secondly, the form of the last pereopods, and especially their elegant hexagon-celled thighs.

#### MICROPROTOPUS, Norman.

*Superior antennæ* furnished with a secondary appendage. *First gnathopods* subchelate. *Second gnathopods* subchelate, larger than the first, greatly developed in the male, but scarcely larger than the first in the female. *Uropods* terminating in simple spines, those of the last pair having only a single ramus. *Telson* tubular.

This genus is closely allied to *Microdeuteropus*. It differs from that genus inasmuch as the second gnathopods are larger than the first, the contrary being the case in *Microdeuteropus*—and in the last pair of caudal appendages, which have only one branch.

*Microtopotopus maculatus*, Norman. Pl. XXIII. figs. 7–11.

*Microtopotopus maculatus*, Norman, Report British Association, 1866 (1867), Reports, p. 203.

*Male*.—*Eye* small, round, crimson, situated on a projecting lobe between the bases of the two pairs of antennæ. *Antennæ* subequal in length; the peduncle of the *superior* reaches a little beyond the penultimate joint of the peduncle of the *in-*

*ferior* antennæ; the basal joint is thicker than the second, to which it is subequal in length; the third joint is shorter and more slender than either of the preceding; flagellum 9-10-jointed, of about the same length as the peduncle; the secondary appendage minute, two-jointed, not so long as the first joint of the flagellum. *Inferior antennæ* stronger than the superior; both pairs are furnished with scattered hairs, but no spines. The *mandible* is furnished with a three-jointed palp. The *first gnathopods* have the hand equal in length to the wrist, but broader, and widening from the base to the extremity; the palm is oblique and concave; the nail well developed, simple, and extending rather beyond the palm. The *second gnathopods* have the wrist very short; but the hand is greatly developed, and is as long as the whole of the rest of the leg, of an oblong form, having a slightly concave palm extending its whole length, bounded at the supero-anteal corner by a tooth-like process, which, however, is only developed in mature specimens, being wholly absent or evanescent in the young; the distal portion of the palm is furnished with two large teeth; finger large, strong, curved, fully as long as the hand; its inner margin, under a high power of the microscope, is seen to be finely crenated, or, rather, rasped like a file. *Pereiopods* having the same general characters as those of the genus *Microdeuteropus*, last pair long, a tuft of hair at the base of the nail, as is usual in the last-named genus. *Telson* tubular, tipped with two or three hairs. *Uropods*: first slightly longer than the second, which, again, are slightly longer than the last, terminating in simple (*i. e.* not hamate) spines; last pair having only a single branch.

The *female* differs widely from the male in the structure of the second pair of gnathopods, which, instead of being the immensely developed organs of that sex, are scarcely larger than the first pair, from which they differ chiefly in the form of the wrist, which is very short, broader than long, and somewhat cup-shaped, the infero-posteal angle being projected into a rounded lobe.

Length hardly exceeding a tenth of an inch, it being one of our smallest Amphipods. Colour yellowish, more or less covered with umber-brown spots; these spots are seen under the microscope to be dendritic; they often form bands across the segments, or at times so coalesce as to make the whole animal appear of a brown colour.

Found among *Laminariæ* at Tobermory, in the Island of Mull, July 1866.

I am indebted to the kindness of Mr. G. S. Brady for the figures of Plate XXI. and a part of those in Pl. XXII.

EXPLANATION OF THE PLATES.

PLATE XXI.

- Fig. 1.* *Haploops tubicola*, Lilljeborg. Last pereopod,  $\times 40$ .  
*Fig. 2.* The same. Last uropod,  $\times 40$ .  
*Fig. 3.* The same. Telson,  $\times 40$ .  
*Fig. 4.* *Nicippe tumida*, Bruzelius. Gnathopod,  $\times 40$ .  
*Fig. 5.* The same. Last pereopod,  $\times 40$ .  
*Fig. 6.* The same. Telson,  $\times 40$ .  
*Fig. 7.* *Eriopis elongata*, Bruzelius. Second gnathopod,  $\times 40$ .  
*Fig. 8.* The same. Last pereopod,  $\times 40$ .  
*Fig. 9.* The same. Last uropod (after Bruzelius).  
*Fig. 10.* The same. Telson (after Bruzelius).  
*Fig. 11.* *Mæra Lovéni*, Bruzelius. First gnathopod,  $\times 16$ .  
*Fig. 12.* The same. Second gnathopod,  $\times 16$ .

PLATE XXII.

- Fig. 1.* *Mæra Batei*, Norman. First gnathopod, ♂,  $\times 40$ .  
*Fig. 2.* The same. Second gnathopod, ♂,  $\times 40$ .  
*Fig. 3.* The same. End of pleon.  
*Fig. 4.* *Tessurops hastata*, Norman,  $\times 16$ .  
*Fig. 5.* The same. Superior antenna,  $\times 40$ .  
*Fig. 6.* The same. First gnathopod,  $\times 40$ .  
*Fig. 7.* The same. Second gnathopod,  $\times 40$ .  
*Fig. 8.* *Helleria coalita*, Norman. Fore part of body,  $\times 40$ .

PLATE XXIII.

- Fig. 1.* *Helleria coalita*, Norman. Second gnathopod,  $\times 40$ .  
*Fig. 2.* The same. Extremity of same,  $\times 85$ .  
*Fig. 3.* The same. Last pereopod,  $\times 60$ .  
*Fig. 4.* The same. Last segment of pleon,  $\times 40$ .  
*Fig. 5.* The same. Last uropod,  $\times 60$ .  
*Fig. 6.* The same. Telson,  $\times 63$ .  
*Fig. 7.* *Microprotopus maculatus*, Norman. First gnathopod, ♂,  $\times 85$ .  
*Fig. 8.* The same. Second gnathopod, ♂,  $\times 85$ .  
*Fig. 9.* The same. First gnathopod, ♀,  $\times 85$ .  
*Fig. 10.* The same. Second gnathopod, ♀,  $\times 85$ .  
*Fig. 11.* The same. Telson and uropods,  $\times 85$ .

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LIII.—*On two Isopods, belonging to the Genera Cirolana and Anilocra, new to the British Islands.* By the Rev. A. M. NORMAN, M.A.

[Plate XXIII. figs. 12–15.]

CRUSTACEA ISOPODA.

Fam. *Ægida*.

*Cirolana truncata*, n. sp. Pl. XXIII. figs. 12–15.

*Head* much wider than long; greatest width in the centre, at the projection of the eyes, narrower behind and in front, which is slightly tridentate. *Superior antennæ* suddenly bent in a remarkable way at a right angle at the junction of the first and second joints of the peduncle, the first being projected directly forwards, the second directly transversely; third joint