

II.—Decapod and Sessile-eyed Crustaceans from Abd-el-Kuri.

DECAPODA.

BRACHYURA

OCYPODIDÆ.

Uca, Latr.

1. *Uca inversa, Hoffm.*

Gelasimus inversus, Hoffman. See p. 213.

Abd-el-Kuri.

[Observed in abundance on the shores.—*H.O.F.*]

Ocypode, Fabr.

2. *Ocypode kuhlii, De Haan.*

Ocypode kuhlii, De Haan, Fauna Japonica, Crust., p. 58 (1859); De Man, Notes Leyden Mus., iii. p. 250 (1881); Miers, Ann. Mag. Nat. Hist. (5), x. p. 384, pl. xvii. figs. 8, 8b (1882).

Abd-el-Kuri.

Distribution.—Ranging, according to Miers, from Japan, Torres Strait, and Java as far as Madagascar.

R. I. POCKOCK.

MACRURA.

[Amid a few handfuls of Seaweeds hastily collected by me from rock-pools, on our second visit to Abd-el-Kuri, a number of minute Crustaceans and Zoophytes were found included. From among the former Mr. Alfred O. Walker and Mr. Andrew Scott were good enough to separate out for identification the forms to which they have devoted special study, and now contribute the remainder of this memoir. The figures are all from the accurate pencil of Mr. Scott.—*H.O.F.*]

The small collection, which forms the subject of the following memoir, was picked out of the residue from a collection of Algæ. It was gathered by Dr. Forbes at low water at Abd-el-Kuri, in February, 1899, from rocks and tidal pools, and the Crustaceans were apparently only accidentally present among the weeds. It is instructive, as showing how small is our knowledge of the *Edriophthalma* in tropical seas, that of the 13 species of this sub-class in the collection 6, at least, are new to science, two of them requiring the formation of new genera for their reception. One of these genera (*Kuria*) cannot be referred to any of the recognised families of *Amphipoda*.

The following list shows approximately the geographical distribution of the old species and the nearest allies of the new:—

- Hippolyte leptocerus*, (Heller) Mediterranean.
Sphæroma grantii, n. sp. Genus probably cosmopolitan between the 50th parallels of N. and S. latitude.
Edotia, sp. South Africa, if *E. hirtipes*.
Hyale nilssonii (Rathke) Norway, British Seas, Mediterranean, Azores.
Lysianax urodus, n. sp. Near *L. cinghalensis*, Stebbing, Ceylon.
Parambasia forbesii, n. gen. and sp. Near *Ambasia integricauda*, Stebbing, from Kerguelen Island.
Ampelisca, sp. Genus cosmopolitan.
Atylopsis latipalpus, n. sp. The other published species of this genus are all from the temperate regions of the southern hemisphere.
Elasmopus sokotracæ, n. sp. Near *E. insignis*, Chevreux, Seychelles Islands; *E. subcarinata* (Haswell), Australia, and *E. rapax*, Costa, Europe.
Audulla chelifera, Chevreux,* Seychelles Islands.
Pereionotus testudo (Montagu) Mediterranean, with a clearly allied species (*P. thomsoni*, Stebbing) in Australia.
Kuria longimanus, n. gen. and sp. Nearest ally *Bircenna fulvus*, Chilton, New Zealand.
Cerapus flindersi, Stebbing, Torres Straits, Port Jackson.

[CÆNOBITIDÆ.

Cænobita, Latr.

1. *Cænobita rugosa*, Milne-Ed.

Cænobita rugosa, H. Milne-Ed., Hist. Nat. Crust., ii. p. 241 (1837).

Abd-el-Kuri.

See page 214.

Observed in large numbers near the shore, and also a mile or two from the sea, and at an altitude of a couple of hundred feet.—*H.O.F.*]

* This memoir was communicated to the Linnean Society on March 20, 1902. On April 28, 1902, Mr. Walker received, by the kindness of Mons. E. Chevreux, his paper from the *Mémoires de la Société Zoologique de France*, Vol. XIV., on the Amphipod Crustaceans collected by Mons. Ch. Alluaud in the Seychelles Islands. Among these, *Audulla chelifera*, n. sp., Chevreux, is certainly identical with a species which had been described in this paper under the name of *Gammaropsis chelata*, n. sp., and we have accordingly substituted Mons. Chevreux's name. Our *Elasmopus sokotracæ* appears to be almost identical with *E. insignis* n. sp., Chevreux, but there are slight differences which will be indicated below. Finally, *Grubia microphthalmia*, n. sp., Chevreux, is probably the same as we have described as *Grubia longicornis* (Kossmann). Mons. Chevreux, however, is quite justified in making a new species of it, the difference between it and Kossmann's description of *Amphithoïdes longicornis* being, as we had pointed out, considerable.—A. O. W., A. S.

ALPHEIDÆ.**Alpheus, Fabr.****2. Alpheus edwardsii, Audouin.**

Athanasus edwardsii, Audouin, Expl. planch. de Savigny, Descript. de l'Égypt., pl. x. fig. 1 (1809).

One specimen without chelipedes.

HIPPOLYTIDÆ.**Hippolyte, Leach.****3. Hippolyte leptocerus, Heller.**

Virbius leptocerus, Heller, Crust. des südl. Europa, p. 289, pl. x. fig. 5, 6.

Three young specimens.

Rostrum very slender, and bent rather downwards, not reaching beyond the eyes, with one tooth on the upper side and one just beneath the point. In other respects they agree with Heller's description.

Abd-el-Kuri.

(3 specs.)

EDRIOPHTHALMA.**ISOPODA.****SPHÆROMIDÆ.****Sphæroma, Latr.****4. Sphæroma grantii, n. sp.** (Plate xiv A. figs. 1-1c.)

One specimen.

Body rather oblong, widest in front, with prominent tubercles. Head as wide as, and rather longer than, the first segment without the epimeres; 2 prominent tubercles towards the front, near the median line, and 2 smaller ones between these and the eyes, but rather in front; 4 more along the hind margin, the two middle the largest. Eyes large and prominent in the posterior angle of the head. Antennules more than half as long as the antennæ, with the basal joint not enlarged.

Mesosome: first segment twice as long as the second; epimeres, as seen from above, widening posteriorly; 4 tubercles on the hind margin, the two middle ones the largest. The next 5 segments sub-equal with 6 small tubercles on the elevated hind margin of each. Seventh segment with the hind margin smooth. All the epimeres are much deflexed. Metasome: first segment smooth, partly concealed by the last mesosome segment; second segment with a large, blunt tooth on each side of the median line, and the hind margin at each side produced into a lobe with the apex sinuate. The remaining segments are coalesced with (1st) 3 large tubercles, and (2nd) 2 prominent blunt teeth on each side of a central excavation. The hinder portion is produced much beyond the uropods, with a tricuspidate sculpture on the upper side, near the end. The uropods have the rami sub-equal, rounded-oblong, with smooth margins; a few short setæ on the inner margin of the inner rami.

Length 4 mm.

Abd-el-Kuri.

The single specimen was not dissected, the external characters being in this case of more value than the internal. The palp of the maxillipedes has narrow joints. The species is characterised by its prominent tubercles, &c.

IDOTEIDÆ.

Edotia, Guérin-Méneville.

5. *Edotia* ? *hirtipes*, Milne-Edw. (Plate xiv A. figs. 2, 2a).

Idotea hirtipes, Milne-Ed., Hist. Nat. Crus., iii. p. 134 (1840).

Two young specimens.

Head as wide as, and rather larger than, the 1st segment; eyes large and prominent. Mesosome: first 4 segments longer and wider than the next 3*; no epimeres are visible in a dorsal view. Metasome: first segment indicated, but not separate, the rest coalesced; the extremity rounded, and the whole fringed with short setæ. Antennæ: the upper reaching beyond the second joint of the lower; the one-jointed flagellum as long as the last two joints of the peduncle; lower antennæ reaching to the 4th segment; the last joint of the peduncle almost as long as the two preceding united; flagellum longer than the peduncle, the first joint as long as the next three together. Uropods, with the terminal portion obliquely pointed, 2 or 3 setules at the tip; the proximal part with 2 plumose setæ at the outer angle and a few setules on the inner margin.

Length 4 mm.

Abd-el-Kuri.

The specimens are too young for certain identification, and may, very possibly, be the above S. African species.

AMPHIPODA.

ORCHESTIIDÆ.

Hyale, Rathke.

6. *Hyale nilssoni*, Rathke, var. Plate xiv A. figs. 3a-3e.)

Amphithoë nilssoni, Rathke, Beitrage Fauna Norweg. Verhaud. der K. Leop.-Carol. deuts. ak. Naturf., xx., abh. i., p. 2640 (Bresl. 1843).

Several specimens, male, female, and young.

Body moderately compressed. Segments of mesosome increasing slightly in length from the head. Hind margin of third metasome segment rather convex and crenate; the posterior angle subacute, and slightly up-turned. Head almost as long as the first two segments together. Lateral angle slightly produced; subacute. Eyes round-oval; the vertical diameter rather greater than that of the first joint† of the

*This means, in all similar cases, longer than the next three *united*.—A. O. W.

†The first joint of upper or lower antennæ means the first exposed—*i.e.*, the antepenultimate-joint. The first joint of a leg is the basipodite, not the coxopodite.

upper antennæ. Upper antennæ about twice as long as the peduncle of the lower; peduncle about half as long as the eleven-jointed flagellum, the joints of which increase in length distally; lower antennæ in the male more than half the length of the body; peduncle about one-third of the length of the flagellum; the last joint as long as the two preceding. First gnathopods: side plates oblong, widening below, with the angles rounded; first joint as long as the next three; carpus produced behind in a semi-circular lobe fringed with setæ which appear to spring from sockets; propodos as long as the two preceding joints, widest a little below the middle and contracted below the palm, below which is a fringe of setæ. Second gnathopods: in the female, like the first gnathopods. In the male the side plates are quadrate, with rounded angles; the propodos is large, widely ovate, and almost exactly like that of *H. nilssoni* (Rathke). In the female the incubatory lamellæ are rounded at the distal end, and fringed with long hairs. Peræopods as in *H. nilssoni*, except the first joint of the last two pairs, which are rather deeply crenate, especially the lower half. Uropods: the first extend beyond the second, and these beyond the third; rami of the first and second longer, of the third shorter, than the peduncles. Telson normal.

Length of adult 6 mm.

Abd-el-Kuri.

Very near *H. nilssoni*, but differs in the length and proportions of the antennæ; form of the carpus and side plates of the gnathopods, and of the incubatory lamellæ, and in the crenate first joints of the last two pair of peræopods. We cannot, however, consider it as more than a variety. Specimens of *N. nilssoni* from N. Wales approach these very closely, especially as regards the antennæ.

LYSIANASSIDÆ.

Lysianax, Stebbing.

7. *Lysianax urodus*,* n. sp. (Plate xiv A. figs. 4-4g.)

Body moderately compressed; first segment of mesosome rather larger than the rest, which are subequal; first four side plates considerably deeper than the segments; third segment of metasome with the hinder angle rounded. The head is as long as the first segment; the lateral angles rounded. Eyes large, dark, oval, reniform. Upper antennæ rather longer than the lower in the female; the first joint very thick and nearly twice as long as the next two; flagellum seven-jointed, shorter than the peduncle; the accessory appendage three-jointed and about two-thirds the length of the flagellum; the first joint rather longer than the second, the third very small. Lower antennæ: in the female the last three joints of the peduncle are as long as the five-jointed flagellum, and are subequal in length and

* From *οὐρά*, tail, *δδούς*, tooth, in allusion to the tooth on the third uropods.

breadth. First gnathopods: the first joint as long as the next three; the front margin of the carpus about two-thirds the length of the propodos, which is not subchelate; dactylus short, strong, and curved; side plate rounded and expanded forward so as partly to cover the head. Peræopods: the last three pair increasing gradually in length posteriorly; first joint much expanded, with a few shallow teeth on the hind margin. Uropods: the first extend beyond the second, and these beyond the third; the peduncle of these last is about as long as the rami, and has a conspicuous tooth at the extremity of the upper margin; the rami are subequal, and densely setose in the ♂. The telson is entire, rounded at the apex, with two setæ on each side and two pair of setules near the middle. It reaches to about the middle of the peduncle of the third uropods.

Length of adult male 5 mm.

Abd-el-Kuri.

This species is nearly allied to *L. cinghalensis* (Stebbing), but differs chiefly in the form of the eyes.

Parambasia, gen. nov.

Side plates very deep. Mandibles as in *Ambasia integricauda*, Stebbing, but with a distinct accessory lobe. Maxillipedes, as in *Ambasia integricauda*, except the dactylus of the palp which is longer. Upper antennæ, with the first joint overhanging the second, as in *Ambasia danielsseni*, Boeck; **first joint of the flagellum like the succeeding joints.** First gnathopod not subchelate, feeble. Second gnathopod with the propodos short, truncate. Pleopods normal. Uropods slender, with the inner rami shorter than the outer. Telson entire.

The species on which this genus is founded resembles *Ambasia integricauda*, Stebbing ('Challenger' *Amphipoda* p. 695, pl. xxvi.), in the mandibles, the first gnathopods and the telson; but differs in the swollen first joint of the upper antennæ, and in having the first pair of pleopods normal. Sars (*Amphipoda of Norway*, p. 46) considers that Stebbing's species is wrongly placed in *Ambasia* which has in the type species, *A. danielsseni*, Boeck, normal pleopods and a divided telson: the first joint of the flagellum of the upper antennæ is also that of a typical Lysianassid and quite unlike our species and Stebbing's. From *Nannonyx*, G. O. Sars, it differs in the comparatively slender and naked first gnathopod and uropods, in the form of the propodos of the second gnathopod and of the upper antennæ, and in the length of the dactyli of the peræopods.

8. *Parambasia forbesii*, n. sp. (Plate, xiv A. figs. 5-5m.)

One female with ova.

Body compressed: first four side-plates more than twice as deep as the segments, the next three nearly as deep as the segments; hind

margin of the third metasome segment slightly concave, posterior angle acute, minutely produced. Head as long as the first segment; lateral angle rounded. Eyes large, dark, oval. Upper antennæ: first joint swollen and overhanging the next, second and third subequal, and like the joints of the flagellum; flagellum, seven-jointed, the first joint like the remainder but *shorter*, all furnished with long setæ on the lower side; accessory appendage three-jointed, reaching the end of the second joint of the flagellum. Lower antennæ slender, the first joint half as long again as the second and twice as long as the third, flagellum six-jointed. Maxillipedes: ends of the inside plates rather obliquely truncate, with a curved spine near the outer angle; fourth joint of palp rather long and irregularly formed. First gnathopod sparsely setose, not subchelate, the first joint as large as the next four; the second joint as long as the third and fourth; third very short; fourth (wrist) half as long as the hand; side-plates large; front margin expanded below, so as to cover most of the head. Second gnathopods: the propodos widening distally and abruptly truncate; the dactylus small and placed low down on the truncate face with a semi-circular row of stiff hooked setæ directed forward above it. Side-plates expanded below. Peræopods: first and second have the third joint but little enlarged, dactylus about half as long as the preceding joint, no spines except one at the end of the fifth joint; the third has the first joint irregularly oval, wider than deep, the third joint enlarged, side-plate about twice as large as the first joint; the fourth and fifth have the first joint very large, in the fifth larger than the fourth and expanded downwards, dactyli about half as long as the preceding joint. Uropods: in all, the peduncles are longer than the rami, and the outer ramus than the inner. Telson semi-oval, with a minute setule on each side of the extremity.

Length 3 mm.

Abd-el-Kuri.

AMPELISCIDÆ.

Ampelisca, Kröyer.

9. *Ampelisca*, sp. (Plate xiv A. figs. 6a, 6b.)

One specimen: length 2 mm.

This example is too young for determination or description. Its principal characters are the rounded rectangular posterior angle of the third segment of metasome and the broad oval dactylus of the last pair of peræopods.

ATYLIDÆ.

Atylopsis, Stebbing.

10. *Atylopsis latipalpus*,* n. sp. (Plate xiv A. figs. 7-7l.)

One female with ova.

* From the unusually wide palp of the first maxillæ.

The sixth segment of the mesosome is the shortest, the seventh the longest; first 4 side-plates about $\frac{2}{3}$ rds of the depth of the segments; posterior margin of third segment of metasome rounded, with a slight indication of the posterior angle; segments of urosome distinct. Head longer than the first segment. Eyes large, oval, dark. Mandibles as in *Paratybus*, small; palps lost. First maxillæ: outer plate crowned with rather long denticulate setæ; inner plate small, with three long plumose setæ on the apex; palp remarkably broad, much wider than the outer plate; the inner angle of the second joint cut off, and the sloping edge with five short teeth; the top of the joint with three setæ. Second maxillæ normal. Maxillipedes with the third joint scarcely produced over the base of the fourth, otherwise normal. Upper antennæ $\frac{2}{3}$ rds as long as the lower; peduncle short, the joints successively decreasing in length and thickness; flagellum ten-jointed, the first joint the longest. Lower antennæ: the first joint very short, the second as long as, but thicker than, the third; flagellum with about 25 joints. First gnathopods: the first joint almost as long as the next four; the second and third short; the wrist as long as the hand, the posterior angle prominent; the hand with parallel margins, the palm oblique, shorter than the posterior margin, slightly convex. Second gnathopods like the first, but rather larger; the first joint longer and stouter; the posterior angle of the wrist produced to about $\frac{1}{3}$ rd the length of the hand. Peræopods: the first and second have the first joint as long as the next three; the third and fourth as long as the fifth; the last pair have the first joint rather deeper than wide, the hind margin slightly serrate. All the peræopods have strong curved dactyli, and are more or less spinous. Uropods: the first and second with narrow peduncles and rami, the former the longer; inner rami shorter than the outer; peduncles of the third less than half as long as the rami, which are lanceolate and equal, the inner rather the wider; both are spinous on both margins, and furnished with plumose setæ on the inner. Telson divided to about half its length; the extremities of the divisions rounded, and without spines.

Length 4 mm.

Abd-el-Kuri.

But for the divided telson, this genus would seem to belong rather to *Calliopiidae* than *Atylidae*.

GAMMARIDÆ.

Elasmopus, A. Costa.

11. *Elasmopus sokotræ*, n. sp. (Plate xiv B. figs. 1-1i.)

Sixteen specimens—males, females with ova and young.

The first two segments of the mesosome are the shortest, the remaining segments increase in length successively; the side plates of the first four are not as deep as the segments; lower margins rounded; the

third segment of the metasome has the posterior angle acute, and slightly turned up ; the first segment of the urosome has, in the male, a prominent tooth on each side of the median line. The head is as long as the first two segments. Eyes oval, dark, placed close to the edge of the rounded lateral angle. Upper antennæ nearly twice as long as the lower ; end of the peduncle in the male reaching to the end of that of the lower antennæ ; in the female exceeding it by the last joint ; first joint thick, almost as long as the second ; third joint in the male one-third, in the female two-thirds the length of the second ; flagellum rather longer than the peduncle ; accessory appendage (often wanting in the female) of three subequal joints. Lower antennæ : Last joint of the peduncle rather shorter than the preceding, the two together rather longer than the flagellum. Mandibles very deep, the palp small, shorter than the upper margin, the first joint the shortest, the remaining two of equal length, without setæ, except two at the tip. First gnathopods : the first joint about as long as the next three, propodos oval, as long as the two preceding joints, palm undefined ; hind margins of hand and wrist setose ; dactylus about one-third the length of the hand. Second gnathopods : in the male the propodos is very large, oval, very sparsely setose, the palm as long as the posterior margin, and defined by a tubercle and the usual spines ; a larger spinous tubercle near the base of the dactylus, and a smaller one between these two ; dactylus strong ; carpus short, and somewhat produced behind in a very setose lobe. In the female the propodos is much smaller, oval, very setose, the palm not defined ; carpus about half the length of the propodos. Peræopods : the first and second moderately strong, the hind margins of the fourth and fifth joints spinous, and a long spine on the side of the latter towards the distal end. Remaining legs extremely robust, spinous, and setose, the third joint as wide as the expanded first, which is finely serrate on the lower part of the hind margin. The dactylus in all five pairs has a secondary tooth, and two or three setæ, and is strong and curved. Uropods : first and second with peduncle longer than the rami, the inner of which in both pairs terminates in a very long spine ; both pairs reach to the end of the telson ; the third pair are very short, wide, and spinous, the rami equal, rather longer than the peduncle. The telson reaches the end of the peduncle of the third uropods ; it is cleft to the base with three unequal spines at the extremity of each division.

Length of male, 7 mm. ; female, with ova, 5 mm.

Abd-el-Kuri.

This species shows even more than the usual differences of the genera *Elasmopus*, *Maera*, and their allies between the sexes, viz., in the upper antennæ, the second gnathopods, the presence in the male only of teeth on the urosome, and in the size. It is very near to *E. subcarinata* (Haswell), as described in the 'Challenger' *Amphipoda*, but differs in

having a three-jointed accessory appendage, in the approximate equality of the three joints of the mandibular palp, and a few other minor particulars. As regards the mandibular palp, we prefer Prof. G. O. Sars' definition of the genus, which wisely, in our opinion, makes no mention of this part, as Boeck does. We, therefore, do not feel called upon to create a new genus (as Mr. Stebbing felt constrained to do in *Parelasmpopus*), because the third joint is neither "much larger" than the second, nor "curved," etc. We venture to think that the introduction of such trivial characters into the definition of a genus only leads to the unnecessary multiplication of genera. It is hardly necessary to say that Costa, the founder of the genus, says nothing about the mouth organs. As a specific character, the mandibular palp is often very useful—*e.g.*, it would be almost impossible to distinguish the female of this species from that of *E. rapax* (Costa) but for the difference between the small naked appendage of the former, which cannot be seen till the mandible is dissected out, and the powerful setose one of the latter, which projects far beyond the mouth. From *E. insignis* (Chevreux) it differs in the sculpture and comparative nudity of the posterior margin of the propodos of the second gnathopod of the male, and in the absence of the teeth on the first urosome segment in the female.

PHOTIDÆ.

Audulla, Chevreux.

Audulla, Chevreux, Mem. Soc. Zool. de Fr., xiv. p. 388 (1902).

12. *Audulla chelifera*, Chevreux. (Plate xiv B. figs. 2a, 2b.)

Audulla chelifera, Chevreux, loc. supra cit.

Fifteen specimens, male, female, and young.

Body slender; the two first segments the shortest, the last three of the mesosome the longest; posterior angle of the third metasome segment acute and upturned; the first two segments of the urosome are dorsally depressed, with a pair of upright setæ near the hind margin; side plates small and rounded. Head as long as the two first segments; lateral angle acute, the dark, oval eye being situated in it. Mouth organ normal. Upper antennæ: first and third joints subequal in length; the second considerably longer; the accessory appendage is five-jointed; the last joint minute. Lower antennæ like the upper, except the thinner first joint. First gnathopod like that of *Gammaropsis erythrophthalmus* (Lillje); the side plate obtusely rhomboidal. Second gnathopod in the male very large; the first joint rather longer than the next three; carpus short, triangular. Propodos as long as all the preceding joints, oblong, the hinder margin produced to meet the point of the dactylus, so that the limb is truly chelate; the upper and lower margins with rows of long setæ; dactylus very short and strong, like a parrot's upper mandible, with a strong tooth

in the middle of the inner margin. In the female the propodos is much smaller, oval, the palm oblique, more than half the length of the posterior margin; the whole densely setose; the dactylus is serrate on the distal two-thirds of its length. The peræopods resemble those of *G. erythrophthalmus*, except that in the last three pairs the first joint is considerably narrower. The first and second uropods have the peduncle about as long as the rami, with a few spines on both; the outer rami are a little shorter than the inner; the third are the same, but stouter; the tips of the rami densely spinous. The telson is of the usual convex, semi-tubular form, but the extremity is hollowed out, so as to present a deep sinus when flattened out. It has a strong spine, terminated by a setule, and a small setule near it at the extremity of each lobe.

Length of male 5 mm.; the female is rather shorter and stouter.

The males of this species may easily be distinguished by the chelate second gnathopod.

Abd-el-Kuri.

The above species was described by us as *Gammaropsis chelata* before M. Chevreux's paper was received. We still consider that the structure of the third uropods places it in the *Photidæ*, rather than the *Ischyroceridæ*, to which it is referred by Mons. Chevreux.

(Several species.)

AMPHITHOIDÆ.

Grubia, Czerniavski.

13. *Grubia longicornis*, Kossmann. (Plate xiv B. figs. 3a-3e.)

Amphithoides longicornis, Kossman (?) Zool. Reise Roth. Meeres, 2 Häft., 1st Lief., p. 135, pl. ii. (1880.)

One adult male and two young.

The first two segments of body of equal length, the remainder increasing successively; side-plates of the first five segments rather deeper than the segments; the whole body finely but not closely granulate; branchial vesicles large, broadly oval; third segment of the metasome with the lower margin convex, the posterior angle slightly upturned. The head is half as long again as the first segment, the lateral angle rounded. Eye rather small, round, red. Mouth organs as in *Amphithoë* (cf. Sars *Amphipoda of Norway*), but the mandibular palp in a young specimen is relatively smaller, and has only a few setæ at the extreme tip. Upper antennæ considerably longer than the lower, the first joint thicker and rather shorter than the second, which is four times as long as the third; flagellum with 40-50 joints; accessory appendage one-jointed, half as long as the first joint of the flagellum. Lower antennæ: first joint shorter than and about as thick as that of the upper; second and third subequal and rather longer than the second joint of the upper; in the adult male the lower margins of the distal third of the second, the whole of the third and the first few joints of the flagellum are densely fringed with plumose setæ;

flagellum with about thirty joints, the first few ill defined. First gnathopods as in *Amphithoë rubricata* (Mont.), but the side-plates are expanded below towards the head, and have a few setæ at the hind corner. Second gnathopods: anterior margin of the wrist about two-thirds as long as the hand, which is broadly oval; palm oblique, slightly convex and even, shorter than the posterior margin—these two joints in the adult male are densely clothed on the front side with plumose setæ; side-plates oblong-oval, with setæ at the hind corner. Peræopods: the first and second as in *Amphithoë*, the remaining pairs wanting in all three specimens. Uropods: peduncle of the first rather longer, of the second rather shorter than the rami; outer rami the shorter; peduncle of the third more than twice as long as the short, thick rami, of which the outer is the shorter, and furnished with two hooked spines as in *Amphithoë*. Telson half as long as the peduncles of the third uropods, like *Amphithoë*, but rather more rounded.

Length of adult male 11 mm.

Abd-el-Kuri.

In spite of considerable discrepancies with Kossmann's description of *Amphithoides longicornis*, it is probable that our specimens should be referred to that species. His specimens were only 4 mm. in length—the size of one of our young ones. These had lost all their antennæ, but in the adult male the peduncle of the lower antennæ is much longer relatively to the upper than in his species. Again, the accessory appendage in his is two-jointed, and the outer ramus of the third uropods is said to have only one hook, while in ours these figures are reversed, but it is very easy to make mistakes in such points. Della Valle (*Gammarini del Golfo de Neapoli*, p. 464) unites this species with *G. crassicornis* (Costa), but the form of the second gnathopod in the male is quite different.

PHLIADIDÆ.

Pereionotus, Bate & Westwood.

14. *Pereionotus testudo*, Montagu. (Plate xiv B. figs. 4a, 4b.)

Icridium fuscum, Grube, Arch. für Naturgesch. (1864), Vol. i., p. 195, Taf. v.

To this species we refer—at all events, provisionally—a single specimen, which agrees with it in every respect, except in the second uropods having two rami instead of one. This is, no doubt, the form mentioned by Mr. Stebbing (*Trans. Linn. Soc.*, (2), vol. vii., p. 417). Mons. Chevreux has very kindly sent us a similar specimen, and writes as follows:—"I have found the two forms (with one and two rami) in the same localities, among algæ, on the coast of Provence, as well as of Algeria. They have absolutely the same aspect, and only differ in the character of the uropods. It may be a case of sexual dimorphism, but these animals are rare everywhere and I have not sufficient specimens to be sure upon this point."

FAMILIÆ INCERTÆ SEDIS.**Kuria,* gen. nov.**

Body laterally compressed. Mandibles with dentate primary and secondary cutting edges; molar tubercle rather large; palp wanting. Maxillipedes with inner and outer plates very small, especially the latter; palp four-jointed. Antennæ subequal; flagella few jointed; no accessory appendage. Gnathopods subequal, very long and slender; propodos in both pairs long and narrow, with a small subchelate palm. Peræopods: last three pair very robust, with the first and third joints greatly developed. Third uropods with one ramus. Telson divided to the base, consisting of two subtriangular plates set on edge.

Abd-el-Kuri.

A very aberrant genus. Its nearest ally seems to be the New Zealand genus *Bircenna* (Chilton), which Mr. Stebbing has placed in the *Phliadidæ* (*Trans. Linn. Soc.*, 2nd ser., vol. vii., p. 421), where, however, it seems somewhat out of place with genera such as *Pereionotus*, *Iphinotus*, etc. It resembles *Kuria* in the characters of the antennæ, gnathopods, mandible, and maxillipedes, and the uniramous third uropods, but differs in having very shallow side plates, and an entire telson.

15. *Kuria longimanus*, n. sp. (Plate xiv B. figs. 5-5n.)

Two females with ova.

Body rather plump; first and second segments subequal, remaining segments of the mesosome rather longer than these; first four side-plates deeper than the segments, upper posterior angle of the fourth cut away; third metasome segment with the hind margin almost straight, with two narrow notches, posterior angle subacute; urosome with the three segments coalesced. Head small and partly concealed by the first side-plate; no rostrum. Eyes rather small, oval, dark. Upper antennæ rather shorter than the head, and first segment, first and second joints respectively, about twice as thick, but the same length as the following joint; flagellum four-jointed, with a rather long seta, and two or three short ones on the lower margin of each joint. Lower antennæ with seven joints in all, the peduncle apparently of two joints only, of which the first is very small. In both pairs of antennæ it is difficult to distinguish the peduncle from the flagellum. First gnathopods very long and slender, reaching beyond the end of the antennæ; first joint as long as the next three, wrist as wide and almost as long as the hand, which is about five times as long as wide; palm very small, oblique, and defined by a spine; dactylus projecting beyond the palm by about one-fourth of its length; side-plates oblong, the anterior angle rounded, the surface covered

* Derived from Abd-el-Kuri, where the specimens were taken.

with short setules. Second gnathopods like the first. Peræopods: first and second with the first joint narrow and about as long as the next three; third joint a little expanded and produced downwards to a spine; fourth joint about one-fourth as long as the fifth; dactylus strong and curved; the third have the first joint semi-circular, with the hind margin deeply crenate, a forked setule between each of the lobes, a strong spine on the anterior margin near the top, and another in a downward prolongation of that margin; the second joint is small with three spines on the front margin; the third has about eight spines on the front, and the hind margin is greatly produced and dilated, crenate, and furnished with forked setules, as in the first joint; the fifth joint is about as long as the third and fourth, with two or three spines on the front margin; in the last pair the first joint is much wider, and almost circular, the hind margin rather finely serrate with simple setules in the notches; the third joint is much less produced behind, and has four or five setæ in front. The side-plates of all and the first joints of the last three pair of peræopods are studded with setules, especially towards the hind margin. Uropods: the first and second have the peduncles rather shorter than the rami, which are equal and similar; in the third the peduncle is short and thick, with a strong spine at the outer extremity. The single ramus is about as long as the peduncle, with a large and small spine at the tip. The telson is divided almost to the base, and the two sub-triangular divisions turned up on edge, the lower margin being convex and the upper straight, with two or three setæ near the distal end.

Length 2 mm.

Abd-el-Kuri.

COROPHIDÆ.

Cerapus, Say.

16. *Cerapus flindersi*, Stebbing. (Plate xiv B. figs. 6-6g.)

Cerapus flindersi, Stebbing, 'Challenger' Report, Vol. xxix., p. 1163, pl. cxxv. (1888).

One female. Length 4 mm.

This agrees in all respects with the female described by Mr. Stebbing ('Challenger' *Amphipoda*), from Flinders Passage, Torres Straits. The male has been described by Dr. C. Chilton in the *Records of the Australian Museum*, vol. ii., 1892, from Port Jackson.

PLATE XIV A.

Fig. 1. SPHÆROMA GRANTII, n.sp., p. 218.

1a, Side view ; **1b**, Head from beneath ; **1c**, Tail from beneath.

Fig. 2. EDOTIA, sp., p. 219.

2a, Operculum.

Fig. 3. HYALE NILSSONI, Rathke, var., p. 219.

3a, Lower antenna ; **3b**, 1st gnathopod, ♂ ; **3c**, 2nd do., ♂ ; **3d**, 2nd do., ♀ ; **3e**,

Fig. 4. LYSIANAX URODUS, n.sp., p. 220.

4a, Upper antenna ; **4b**, Lower do. ; **4c**, 1st gnathopod ; **4d**, 1st peræopod ; **4e**, 3rd do. ; **4f**, 5th do. ; **4g**, Telson and 3rd uropod, ♂.

Fig. 5. PARAMBASIA FORBESII, n.gen. et sp., p. 221.

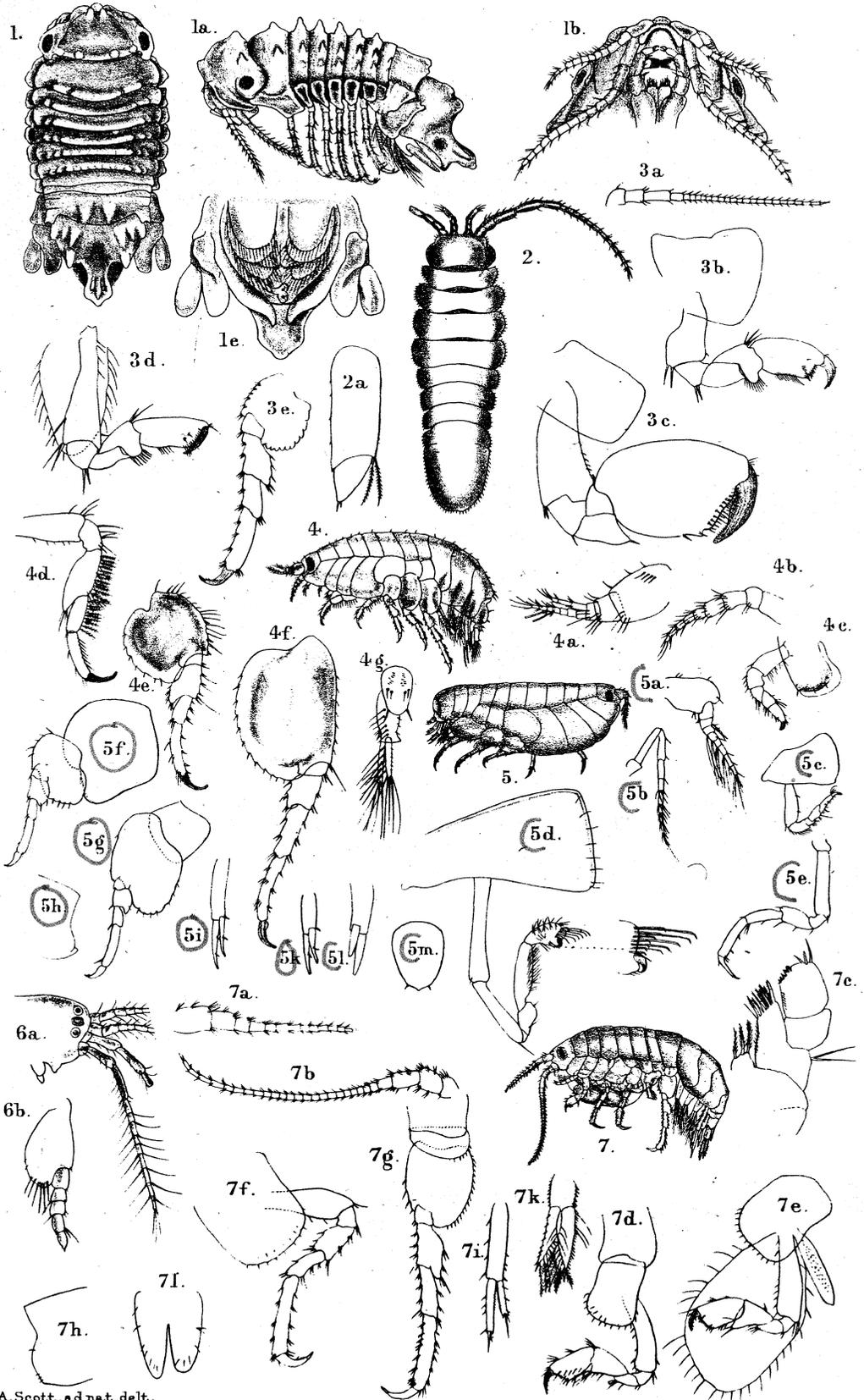
5a, Upper antenna ; **5b**, Lower do. ; **5c**, 1st gnathopod ; **5d**, 2nd do. ; **5e**, 1st peræopod ; **5f**, 3rd do. ; **5g**, 5th do. ; **5h**, 3rd segment of metasome ; **5i**, 1st uropod ; **5k**, 2nd do. ; **5l**, 3rd do. ; **5m**, Telson.

Fig. 6. AMPELISCA, sp., p. 222.

6a, Head ; **6b**, 5th peræopod.

Fig. 7. ATYLOPSIS LATIPALPUS, n.sp., p. 222.

7a, Upper antenna ; **7b**, Lower do. ; **7c**, 1st Maxilla ; **7d**, 1st gnathopod ; **7e**, 2nd do. ; **7f**, 1st peræopod ; **7g**, 5th do. ; **7h**, 3rd segment of metasome ; **7i**, 1st uropod ; **7k**, 3rd do. ; **7l**, Telson (malformed).



A. Scott, ad nat. delt.
R.E. Minter, lith.

CRUSTACEANS FROM ABD-EL-KURI

Minter Bros imp.

PLATE XIV B.

Fig. 1. ELASMOPUS SOKOTRÆ, n.sp., p. 223.

1a, Mandible; **1b**, 1st gnathopod, ♂; **1c**, 2nd do., ♂; **1d**, 2nd do., ♀;
1e, 1st peræopod; **1f**, 3rd do.; **1g**, 5th do.; **1h**, 3rd
 uropod; **1i**, Telson.

Fig. 2. AUDULLA CHELIFERA, Chevreux, p. 225.

2a, 2nd gnathopod, ♂; **2b**, 2nd do., ♀.

Fig. 3. GRUBIA LONGICORNIS, Kossmann, p. 226.

3a, Head; **3b**, 1st gnathopod; **3c**, 2nd do.; **3d**, 3rd uropod; **3e**,
 Telson.

Fig. 4. PEREIONOTUS TESTUDO, Mont., var., p. 227.

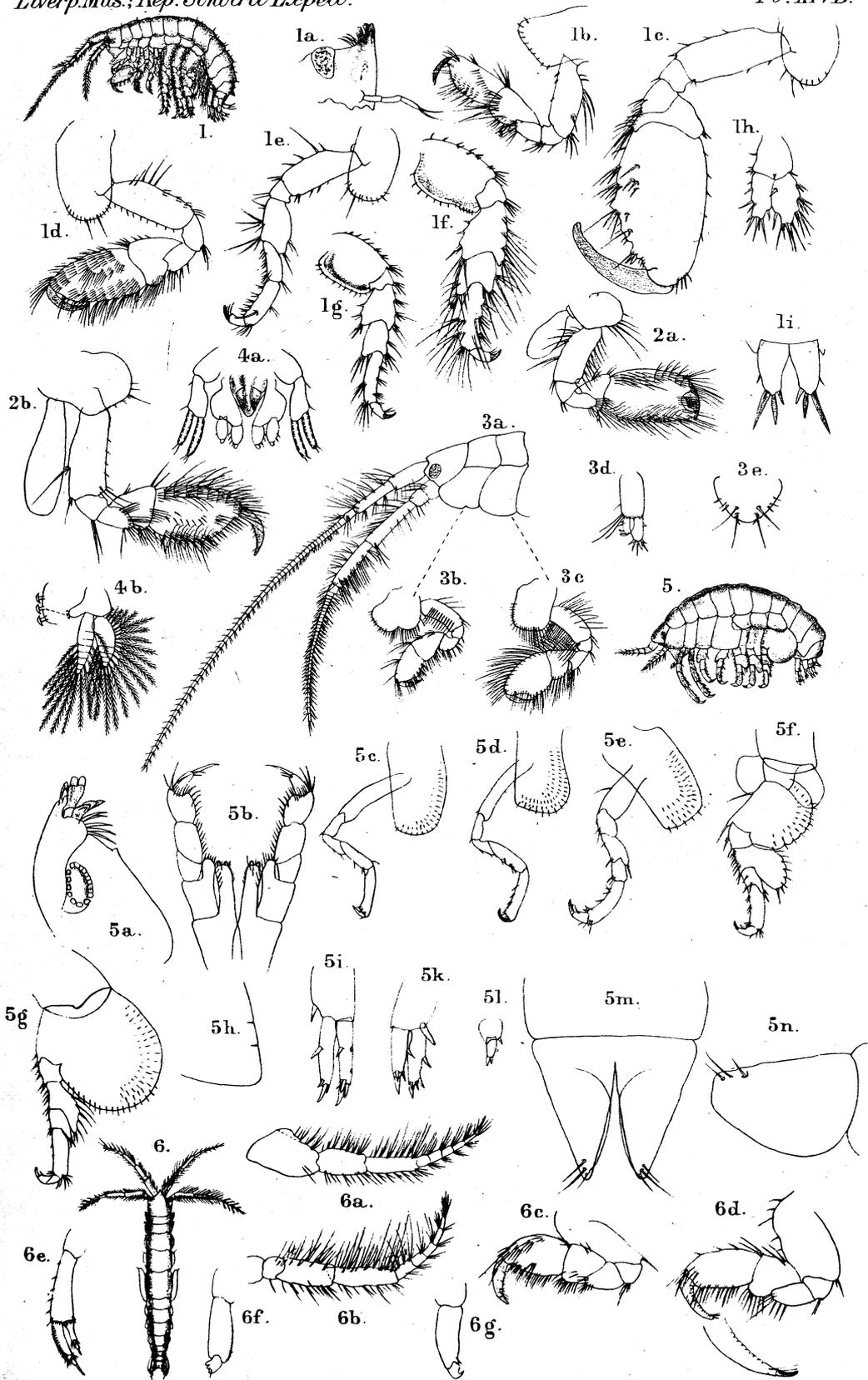
4a, Urosome from beneath; **4b**, 3rd peræopod.

Fig. 5. KURIA LONGIMANUS, n.gen. et sp., p. 228.

5a, Mandible; **5b**, Maxillepedes; **5c**, 1st gnathopod; **5d**, 2nd do.;
5e, 1st peræopod; **5f**, 3rd do.; **5g**, 5th do.; **5h**, 3rd
 segment of metasome; **5i**, 1st uropod; **5k**, 2nd do.; **5l**,
 3rd do.; **5m**, Telson; **5n**, do., side view.

Fig. 6. CERAPUS FLINDERSI, Stebbing, ♀, p. 229.

6a, Upper antenna; **6b**, Lower do.; **6c**, 1st gnathopod; **6d**, 2nd
 do.; **6e—6g**, 1st, 2nd, and 3rd uropods.



A. Scott, ad nat. delt.
R. E. Minter, lith.

Mintern Bros. imp.