

Buccal cavern quadrangular, very well defined anteriorly; the external maxillipeds do not nearly cover it, but leave the efferent branchial channels permanently widely open; the endostomial ridges that define these last are well defined posteriorly, but do not reach the anterior border of the buccal cavern.

Chelipeds in the female, markedly unequal, fingers long, pointed.

Legs long, slender, compressed, spiny.

As there is only a single female in the Indian Museum, I cannot be sure of the place of this genus in the system. It *probably* belongs to the *Cancroidea*, and should be placed near *Galene*.

Platypilumnus gracilipes, Wood-Mason.

Platypilumnus gracilipes. Wood-Mason MS., Alcock, Ann. Mag. Nat. Hist. May, 1894, p. 401: Ill. Zool. Investigator, Crust. pl. xiv. fig. 6: J. A. S. B., Vol. LXVII. pt. 2, 1898, p. 233.

Carapace much depressed, perfectly flat above, with the surface nearly smooth centrally and very finely and closely granular laterally, and with the regions indistinctly defined. The front has the form of a horizontally projecting bilobed lamella, with the free edge sharply and very evenly spinate and the sides turned abruptly downwards. The margins of the orbit are spinulate, the upper margin the more distinctly so, and the lower margin terminates internally in a strong oblique spine, the point of which inclines towards the sharply vertical tooth formed by the already mentioned downfolding of the lateral edge of the frontal lamella.

The antero-lateral borders of the carapace, which are arcuate and are shorter than the postero-lateral, are armed with three large spines, in front of, between, and behind which are several spinules.

The pterygostomial regions are large and inflated, and the branchial apertures, especially the efferent aperture, are large and patulous.

The eyestalks are large and are of moderate length; the corneal region is rather small.

The antennules are long and are transversely folded, their basal joint is large and inflated.

The antennæ are long, their basal joint is slender and free; the second joint lies loosely in the internal orbital hiatus.

The inner edge of the meropodite of the external maxillipeds is convex, with a pair of little spines at the summit of the convexity; the succeeding joint arises at the antero-internal angle.

The thoracic legs are furnished with many spines and long hairs. The chelipeds, which are robust, are unequal; their prismatic arm has all its borders spiny; the short inflated wrist is sharply granular and spinulate in the distal

half of its dorsal surface and along the outer edge, while the inner edge bears a pair of rather large spines; the hand is spinulate everywhere in the smaller cheliped, but only in the proximal third of its outer surface in the larger; the fingers also of the smaller cheliped are spinulate on the outer surface, while those of the larger cheliped are smooth; the cutting-edges of the fingers are finely and unevenly toothed.

The other thoracic legs are long, compressed, and slender, and have the meropodite spiny along both edges, the carpopodite and propodite spiny along the front edge, and the dactylopodite styliform.

Colour in the fresh state yellowish red.

Andaman Sea, 188-220 fms. A single female.

Sub-family *Pilumninæ*.

NECTOPANOPE, Wood-Mason.

Nectopanope, Wood-Mason, Ann. Mag. Nat. Hist. March, 1891, p. 261: Alcock, J. A. S. B. Vol. LXVII. pt. 2, 1898, p. 212.

Carapace broad, approaching the quadrilateral, convex fore and aft, the branchial regions so inflated and convex dorsally as to make the transverse plane of the carapace strongly concave in the middle line, the other regions obscurely defined, the surface smooth.

The antero-lateral borders are very much shorter than the postero-lateral, are very thin and sharp, and are cut into teeth of which the first is confluent with the outer orbital angle.

Front broad, a third the greatest breadth of the carapace, straight, square cut, slightly projecting beyond the supra-orbital angle, from which it is sharply cut off by an angular notch, on either side.

Orbits large, with a thin, sharp, prominent margin; a notch internal to the middle of the upper margin, the notch breaking this margin into two curves, one corresponding to the eye-stalk the other to the cornea: eyes large, reniform, on moderately stout stalks.

Antennules folding transversly. The basal antenna-joint is very short, but almost touches the turned down side-edge of the front: the flagellum, which is considerably longer than the major diameter of the larger orbit, springs from the rather broad orbital hiatus.

The buccal cavern is broader anteriorly than posteriorly, and the mouth parts do not nearly reach its front edge, so that a wide and permanent gap is left: the crests of the endostome are not very strong, but the free edge of the endostome corresponding to the efferent branchial channel, on either side, is deeply excavated. The outer wall of the efferent branchial canal forms a strong angular bulge in the pterygostomial region.

The chelipeds in the female are equal; the fingers are compressed and pointed, not hollowed.

The legs are long and slender, the propodite and dactylus of the last pair strongly compressed and a little broadened.

This form is most nearly related to *Eurycarcinus*.

Nectopanope rhodobaphes, Wood-Mason.

Nectopanope rhodobaphes, Wood-Mason, Ann. Mag. Nat. Hist. March, 1891, p. 261; Alcock, J. A. S. B. Vol. LXVII. pt. 2, 1898, p. 213, and Ill. Zool. Investigator, Crust. pl. xxxviii. fig. 6.

Carapace about $\frac{3}{4}$ as long as broad. Front extremely obscurely grooved in the middle line. Antero-lateral border cut into three thin sharp-edged teeth, of which the first is broad and rounded and confluent with the orbit, the second is broad and anteriorly acuminate, and the third almost spiniform.

Chelipeds smooth: in the female they are equal and are a little over $1\frac{3}{4}$ times the length of the carapace: arm with an acute spine near the far end of the upper border; inner angle of wrist acute, spiniform; fingers thin, compressed, pointed and hooked at tip, armed with thin, lacinate teeth, the thumb very broad.

Legs thin, the first three pairs not much shorter than the chelipeds, with long compressed-styliform dactylus: the last pair a good deal shorter, with thin blade-like propodite and dactylus closely fringed with hair.

Colours in spirit uniform yellowish white: in life pink, with a dotted, V-shaped, white mark between the gastric and branchial regions.

In the Indian Museum is a single female specimen from off the Godávári coast 98-102 fms.

Nectopanope longipes, which was provisionally referred to this genus by Wood-Mason, who had insufficient material for examination, turns out, now that numerous good specimens have been dredged by the "Investigator," to be a *Catometope* belonging to the genus *Carcinoplax*.

Sub-family *Eriphiinae*.

SPHENOMERIDES, Wood-Mason and M. J. Rathbun.

[SPHENOMERUS, Wood-Mason.]

Sphenomerus, Wood-Mason, Ann. Mag. Nat. Hist. March, 1891, p. 233; Alcock, J. A. S. B. Vol. LXVII., pt. 2, 1898, p. 227; *Sphenomerides*, M. J. Rathbun, Proc. Biol. Soc. Washington, XI, 1898, p. 164.

Carapace transversely oval or subcircular, the front and antero-lateral margins forming together a semicircle; markedly convex in both directions, perfectly smooth, without trace of regions.

Antero-lateral borders shorter than the postero-lateral—a spinule at their point of junction.

Front somewhat deflexed, broad and broadly bilobed. Orbits affording little or no concealment to the eyes, without fissures or sutures: there is a gap between the front and the inner angle of the orbit, in which the antennary flagellum is lodged. The fronto-orbital border, in the adult, is not quite $\frac{4}{5}$ the greatest breadth of the carapace.

The antennules fold nearly transversely: the basal antenna-joint does not reach the front, the flagellum is a good deal longer than the major diameter of the orbit.

The buccal cavern is a little narrowed anteriorly. The crests of the endostome are very faint, but to make up for this the anterior edge of the buccal cavern is puffed out and is very deeply excised on either side of the middle line; the anterior margin of the foliaceous process of the first maxillipeds is also excised to correspond, and so a permanent expiratory orifice is formed, which is very large and prominent beyond the almost transverse anterior edge of the merus of the external maxillipeds.

The chelipeds are stout, very long and not very unequal; the whole of the arm projects beyond the edge of the carapace: the fingers are somewhat compressed and are pointed.

The legs are rather slender.

The abdomen of the male consists of five pieces, the 3-5th somites being rigidly united but without obliteration of sutures.

Sphenomerides trapezioides, Wood-Mason.

Sphenomerus trapezioides, Wood-Mason, Ann. Mag. Nat. Hist. March, 1891, p. 263: Ill. Zool. Investigator, Crust. pl. v. fig. 2 (where the carapace is drawn a little too broad): Alcock, J. A. S. B. Vol. LXVII. pt. 2, 1898, p. 228.

Carapace about $\frac{4}{5}$ as long as broad, convex in all directions, smooth, polished.

The front is about $\frac{3}{5}$ the greatest breadth of the carapace, is obliquely deflexed, and is divided into two rather shallow broadly-rounded lobes the free edge of which is entire.

The supra-orbital angle is not defined, but the dentiform or spiniform angle of the lower edge of the orbit can be seen from above.

The antero-lateral margins form with the front a semicircular curve, each carries three sharp spinules, namely, one at the outer angle of the orbit, one at the junction with the postero-lateral border and one exactly intermediate between the other two.

The chelipeds are a little, but not very remarkably, unequal: the larger one is about $2\frac{1}{2}$ times the length of the carapace. Their surface is smooth and polished. The arm, the whole of which is visible beyond the carapace, has much the same shape as in *Trapezia*, but its anterior border, though serrated, is not expanded; the lower border of the hand is sharp and somewhat dilated posteriorly, as in *Trapezia*: the inner angle of the wrist is rounded, but sometimes carries a small spinule.

The legs are slender smooth and polished, and have a few hairs distally.

Colours in spirit yellowish white, fingers sometimes blackish in their basal half.

Length of carapace of largest specimen 9 millim., breadth 11 millim.

In the Indian Museum are 11 specimens from the Andaman Sea at depths between 130 and 290 fms.

As the name *Sphenomerus* has been in use since 1860 for a genus of Coleoptera, Miss Mary J. Rathbun (Proc. Biol. Soc. Washington, XI. 1898, p. 164) has proposed to alter the name of this genus to *Sphenomerides*.

Family *Portunidae*.

GONIOSOMA, A. Milne Edwards.

Goniosoma, A. Milne Edwards, Ann. Sci. Nat. Zool., (4) XIV. 1860, p. 263, and Archiv. du Mus. X. 1861, p. 367; Miers, Challenger Brachyura, p. 189.

Goniosoma hoplites, Wood-Mason.

Goniosoma hoplites, Wood-Mason, Ann. Mag. Nat. Hist. (4) XIX. 1877, p. 422; Alcock and Anderson, J. A. S. B. Vol. LXIII. pt. 2, 1894, p. 184; Ill. Zool. Investigator, Crust. pl. xxiii. fig. 6.

Surface of body and appendages covered with a dense coat of very short fine adherent hairs. Gastric cardiac and branchial regions well defined, the first two tumid, the last inflated, the summit of their convexities with a few clustered granules.

The gastric region is divided into three subregions and is crossed transversely, near the middle, by an almost straight beaded line: each branchial region is crossed transversely by an anteriorly-convex beaded line, which stops at the gastric region: these are the only ridges on the carapace.

Antero-lateral borders cut into six teeth (including the orbital angle) the first five of which are broad and serrated, while the sixth is an acutely salient spine much longer than the others.

The space between the eyes, which is a third the greatest breadth of the carapace (lateral spines not included) is cut into eight bluntish lobes, the middle two of which are the broadest: the two outermost on either side (which belong

rather to the orbit than to the front) are the most acute, and are separated from the middle four, that form the front proper, by a deep notch.

There is a single fissure near the middle of the upper margin of the orbit, the second fissure of this margin being a closed suture. The inner angle of the lower edge of the orbit is not dentiform. The epistome is very slightly sunk.

Chelipeds slightly more than twice the length of the carapace, rather more than half their extent being hand, and having the usual squamiform markings. There are 2 or 3 spines on the distal half of the anterior (inner) border of the arm; a very strong spine at the inner angle of the wrist and three small spines on the outer angle; four spines on the hand, one being on the outer surface at the extreme base, the other three grouped in a triangle at and near the distal end of the upper surface.

Colours in life, salmon pink, clouded on carapace.

Length of carapace 24 millim., breadth including spines 45 millim., measured to base of spines 38 millim.

Coromandel coast, 80 to 110 fms.

Sub-family *Carcininae*.

BENTHOCHASCON, Alcock and Anderson.

Carapace subquadrilateral, its breadth being very little greater than its length, depressed, the regions faintly indicated by slight inequalities of level.

Front about a fourth the greatest breadth of the carapace, sufficiently prominent beyond the orbits, cut into three elegant lobes of nearly equal size, the middle one being notched at tip. Antero-lateral borders hardly arched, much shorter than the postero-lateral borders which they meet at a widely obtuse and hardly noticeable angle, cut into four teeth (including the outer angle of the orbit), the hindmost of which is spiniform. Postero-lateral borders slightly convergent. Posterior border rather longer than the fronto-orbital.

Eyestalks short and thick; eyes very large. The orbits are deep; in the upper margin are traces of two obsolescent sutures, and in the lower margin, just below the outer angle, is a shallow and inconspicuous notch: the inner angle of the lower margin is acutely produced.

The antennules fold almost transversely, their basal joint is very large, their fossæ are widely open to their respective orbits.

The antennæ lie loosely in the orbital hiatus: the basal joint is short slender and moveable, and has its antero-external angle produced to form a blunt spinule; the next joint just reaches the turned down edge of the front, the flagellum is considerably longer than the orbit.

The epistome is wide fore and aft, and is well demarcated from the buccal cavern.

Though the expiratory channels are very well-defined grooves, there are no distinct crests on the endostome.

The external maxillipeds do not close the buccal cavern in front, but fall much short of its anterior margin, leaving the expiratory canals permanently open.

Chelipeds massive, somewhat unequal in the female (male unknown): a strong spine at the inner angle of the wrist.

Legs long, stout and compressed, especially as to the merus joints: the dactyli of the first three pairs are styliiform: the dactylus and propus of the last pair are broadly foliaceous for swimming.

This is more closely related to *Bathynectes* than to any other genus, but in *Benthochascon* the front is only three lobed, the antero-lateral borders are cut into four teeth only (including the orbital angle), the slender basal antennal joint is shorter, the meropodites of the first three pairs of legs are stouter and more compressed, and the propus and dactylus of the last pair of legs are more foliaceous; also the carapace is longer, much flatter, and owing to the shortness of the antero-lateral borders, different in shape.

Benthochascon Hemingi, Alcock and Anderson. Plate III. fig. 2.

Carapace about seven-eighths as long as broad, its surface very finely granular, its regions faintly marked as inconspicuous swellings separated by shallow and inconspicuous depressions.

The front forms a thin laminar three-lobed projection. The antero-lateral borders are thin, and are not much more than half the length of the postero-lateral: they are cut into four procurved teeth, of which the foremost is the outer orbital angle and the largest, and the hindmost is spine-like and the longest. The posterior border, between the bases of the last pair of legs, is concave.

The eyes are large and full, their major diameter being from an eighth to a sixth the breadth of the carapace: the inner suborbital angle forms a thin tooth that is almost as prominent as the outer lobes of the front.

The chelipeds in the female are about two-thirds as long again as the carapace, and their surface is everywhere quite smooth to the naked eye, the hand—of which about half is formed by the fingers—forms rather more than half their entire length: the inner angle of the wrist is a large acute spine, and there is a spinule on the inner upper edge of the palm just behind the finger-joint: the fingers are curved, compressed, hooked at tip, and sharply toothed.

The first three pairs of legs are nearly twice the length of the carapace, the third pair being slightly the longest: they are smooth and bare. At the far end

of the upper border of the merus of all four pairs is a notch and spiniform tooth.

The last pair of legs is not much longer than the chelipeds, and has the carpus shortened and broadened and the next two joints paddle-like—the edges of all these three joints being elegantly plumed.

Two females from the Andaman Sea, one from 405, the other from 185 fathoms.

The larger specimen, which is laden with tiny eggs, has a carapace 48 millim. long and 51 millim. broad.

Colours in life, recorded by Dr. A. R. Anderson: carapace very pale orange above, the anterior edge and first two teeth of lateral margin white; merus joints pale orange above, the colour extending onto the carpus, the rest of the legs chalky white; eyes bluish-grey: eggs brick red.

CATOMETOPA.

Family *Ocypodidae*.

Subfamily *Carcinoplacinae*.

CARCINOPLAX, Edw.

Curtonotus, DeHaan, Faun. Japon. Crust. p. 20.

Carcinoplax, H. Milne Edwards, Ann. Sci. Nat. Zool. (3) XVIII. 1852, p. 164.

Carapace subquadrilateral, transverse, convex fore and aft and strongly declivous anteriorly, nearly flat from side to side, often tomentose, the regions not very well defined.

Front broadish—a third to a fourth the greatest breadth of the carapace in extent—straight and square-cut, generally projecting beyond the orbits.

Antero-lateral borders much shorter than the postero-lateral, commonly armed with 2 or 3 teeth (including the orbital angle): postero-lateral borders subparallel.

Orbits of good size, usually with a low entire margin. The antennules fold quite transversely, beneath the front. The antennal flagella are long, sometimes half the length of the carapace, or more: the basal antenna-joint, which lies in the orbital hiatus, does not nearly reach to the front.

The palate is sharply marked off from the transverse rather narrow epistome, and the efferent branchial channels are well defined. The external maxillipeds completely close the buccal cavern: the merus is broad, with its antero-external angle a little expanded, and gives attachment to the palp at its antero-internal angle.

The chelipeds are equal in length, but one hand may be a little stouter than the other: the wrists are broad and have their inner angle strongly pronounced.

The legs are longish, compressed, and are either tomentose or have the terminal joints plumose.

The abdomen in both sexes consists of seven distinct segments: the second and third segments in the male have the lateral angles produced or lobate and occupy the whole width of the sternum.

Carcinoplax longipes (Wood-Mason).

Nectopanope longipes, Wood-Mason, Ann. Mag. Nat. Hist. March 1891, p. 262: Illustrations of the Zoology of the R. I. M. S. Investigator, Crustacea, pl. xiv. fig. 7.

Carapace subquadrilateral, strongly declivous in front of the level of the lateral-epibranchial angles, smooth, slightly tomentose, the regions very faintly marked.

The front, which is not quite a third the greatest breadth of the carapace, is square-cut, prominent beyond the orbits and folded antennules, entire, sublaminar, and obliquely deflexed. The antero-lateral borders, which are not two-thirds the length of the postero-lateral, are oblique and are armed with two procurved spine-like teeth—one hepatic, the other at the lateral epibranchial angle—and with a third very inconspicuous blunt denticle just behind the orbital angle; the postero-lateral borders are subparallel.

The orbits are rather shallow and afford little concealment to the eyes; their edge is entire. The eyestalks are short, thickish, and normally mobile: the eyes are smallish, but are perfectly formed.

The antennules are large and fold quite transversely; their fossæ are open to their respective orbits.

The basal antenna-joint is slender and very short, the next joint reaches the front, the flagellum is slender and is not much less than half the length of the carapace.

The chelipeds are twice the length of the carapace and are quite smooth: the arm has a denticle beyond the middle of the upper border, the inner angle of the wrist has a very strong spine with sometimes an accessory spinule at its base, the hands are somewhat unequal in size.

The legs are long and slender and have the dactylus thickly plumose, and the two preceding joints more scantily hairy: the third pair, which are slightly the longest, are nearly two and a half times, the fourth (last) pair, which are slightly the shortest, are about twice the length of the carapace.

Colours in spirit pinkish white, fingers blackish brown: in life (recorded by Dr. Anderson) pink, with dark brown fingers.

Length of carapace 13 millim., breadth 15 millim.

1 male and 1 small female from the Andamans, 240-220 fms.: 1 small female from the Andamans, 238-290 fms.: 18 specimens of both sexes from the Travancore coast, 430 fms.

This species is a true *Carcinoplax* (*Curtonotus*), as I have assured myself by actual comparison with specimens of *C. longimanus* DeHaan, and of another Indian *Carcinoplax* (from the Gulf of Martaban, 53 and 67 fms.) that appears to be only a variety of *C. longimanus*.

From these the present species chiefly differs in its broader and more prominent front and shorter chelipeds.

The removal of this species to *Carcinoplax* does not affect the integrity of the genus *Nectopanope* (typified by *Nectopanope rhodobaphes*), which is a Cancroid genus closely allied to *Heteropanope* and *Eurycarcinus*.

PSOPHETICUS, Wood-Mason.

Wood-Mason, Admin. Rep. Marine Survey of India, 1890-91, p. 20 (name only).

Carapace transverse, perfectly square, moderately convex fore and aft and declivous anteriorly, nearly flat from side to side, the regions hardly indicated.

Front prominent, square-cut, about one-third the greatest breadth of the carapace, its free margin sharp entire and laminar: antero-lateral borders about half the length of the postero-lateral and in the same straight line with them, the junction being marked by a spine.

Orbits shallow, affording no concealment to the eyes; the hollow for the rather slender eyestalk is very distinctly delimited from that in which the large reniform eye rests: the outer orbital angle is dentiform and very prominent.

The antennules fold quite transversely, their fossæ are widely open to the respective orbits.

Basal antenna-joint short and slender, the next joint reaches the front; the flagellum, which lies in the orbital hiatus, is much longer than the orbit.

Epistome sufficiently broad fore and aft, well delimited from the buccal cavern. The ridges of the endostome are faint, but the expiratory canals are well-defined grooves. The pterygostomian regions are acutely carinated by the bulging of the expiratory canals. The external maxillipeds are just like those of *Carcinoplax* (*Curtonotus*), but the gap between them and the front of the buccal cavern is somewhat wider.

Chelipeds moderately massive, of normal length, slightly unequal in the male and still less so in the female. Legs long, moderately stout, almost hairless, some of the joints are spiny: dactyli long and slender.

The abdomen of the male consists of seven distinct segments and occupies all the space between the last pair of legs.

This genus is very little different from *Carcinoplax*, *Pilumnoplax*, *Litochira* etc. and perhaps ought rather to be regarded as a subgenus of *Carcinoplax* than as an independent genus. All that separate it from *Carcinoplax* (e. g. *C. longimanus*) are the perfectly square carapace, the less distinct endostomial ridges, and the spiny merus joints and slender hairless dactyli of the legs.

Psopheticus stridulans, Wood-Mason.

Psopheticus stridulans, Wood-Mason, Illustrations of the Zoology of the In. Astigator, Crustacea, pl. v. fig. 1 (1892): Alcock, Ann. Mag. Nat. Hist., May 1894, p. 402.

Carapace three-fourths as long as broad, smooth and polished, crossed transversely in its posterior half by a broad groove which is continued obliquely across the pterygostomial regions to the angles of the mouth.

A thin sharp prominent tooth at the outer orbital angle, and an obliquely-prominent spine at the junction of the antero-lateral and postero-lateral borders.

The subocular and subhepatic regions are inflated, and together form a granular eminence against which a strong spine on the upper border of the arm can be brought to play, producing a sound. Hence the names *Psopheticus* and *stridulans*.

The major diameter of the reniform eye is between a sixth and a seventh the breadth of the carapace: though the orbit does not conceal the eye its edges are well and cleanly cut.

The chelipeds in the adult male are a little more, in the adult female a little less, than twice the length of the carapace, and are smooth and polished, as also are the legs. The arm has a strong upstanding claw-like tooth near the middle of its upper border, one or two spinules near the far end of the outer border, and a spinule near the far end of the inner border: the wrist has both the inner and the outer angles spiniform.

The third pair of legs, which are slightly the longest of the four, are rather more than two-and-a-half times the length of the carapace. In all, the anterior edge of the meropodites is armed with spines and the same edge of the carpopodites with spinules—these being least numerous and least distinct in the case of the first pair.

Colours in glycerine: chelipeds and legs rather dusky red; carapace dusky red behind the transverse groove—which forms a very sharply-defined red band—livid red, or almost violet, in front of it; eyestalks almost purple, eyes purplish-black. Eggs in life magenta.

The carapace of the largest male is 15 millim. long and 20 millim. broad.

Only known, so far, from the Andaman Sea: 2 males and a female from 173 fms., 2 males and a female (Types of the species and genus) from 188–220 fms., 7 females (3 with eggs) from 185 fms., a male and 4 females from 370–419 fms.

PILUMNOPLAX, Stimpson.

Pilumnoplax, Stimpson, Proc. Acad. Nat. Sci. Philad. 1858 (1859) p. 93: Miers, Challenger Brachyura, p. 225.

Closely related to *Carcinoplax* from which it appears to differ only in the following particulars:—

- (1) The carapace, instead of being convex fore and aft, is flat and depressed.
- (2) The front is somewhat broader and the orbits are deeper.
- (3) The ridges that define the efferent branchial channels are rather less distinct.

Pilumnoplax Sinclairi, Alcock and Anderson. Plate III. fig. 1.

Carapace subquadrilateral, much depressed, a little more than three-quarters as broad as long, very finely frosted, perfected bare, the regions fairly indicated.

Front horizontal, slightly prominent, square cut, grooved but not distinctly notched in the middle, more than a third the greatest breadth of the carapace; its free edge is turned vertically downwards to form a narrow concave facet with raised margins.

The antero-lateral borders are not much more than half the length of the postero-lateral: they are thin and sharp, and are cut into three teeth, of which the first is broad and somewhat emarginate and the other two are acute. On the postero-lateral borders, just behind the junction with the antero-lateral, is a denticle.

The eyes are small but well-formed, and are freely movable. The orbits conceal the retracted eyes to dorsal view: their upper margin is fissured near the middle, and the lower margin is slightly excavated just below the outer angle: the inner angle of the lower margin is not prominent, though dentiform.

The antennules fold transversely, and their fossæ are freely open to respective orbits.

The basal antenna-joint is short and slender: the next joint reaches front: the flagellum, which arises in the orbital hiatus is about twice the length of the orbit.

The outer maxillipeds completely close the buccal cavern.

The chelipeds in the female (male unknown) are unequal, the larger one being not quite twice as long as the carapace: their surface, under the lens, is finely frosted: the inner angle of the wrist is strongly pronounced and is capped by a pair of acute teeth.

Legs moderately stout, unarmed, smooth, almost hairless: the third pair, which are somewhat the longest, are about two-and-a-half-times the length of the carapace. The dactyli are compressed-styliform.

Colours in spirit french-grey, fingers much darker grey.

A single female specimen, from off the Travancore coast 430 fms., has the carapace 13 millim. long and 16 millim. broad.

This species is closely related to *Pilumnoplax heterochir* (Studer) Miers, but is distinguished from it by the entire and more prominent front, by the absence of transverse markings on the carapace, by the longer legs, and by the smoothness of the chelipeds and legs.

From *Pilumnoplax abyssicola* Miers, which it also closely resembles, it is distinguished by the smooth carapace (to the naked eye), by the turned-down milled edge of the front, by the spinule on the postero-lateral border, by the fissured upper-margin of the orbit, and by the double spine at the inner angle of the wrist.

Subfamily *Rhizopinæ*.

CAMATOPSIS.

Carapace deep, rudely sub-semicircular, hardly broader than long, strongly convex fore and aft and declivous anteriorly, nearly flat from side to side across the branchial regions: its antero-lateral borders short sharp and entire, its postero-lateral borders long sharpish and parallel or slightly divergent: its only markings are two longitudinal grooves, hardly visible on the undenuded carapace, that mark off the epibranchial regions.

Front considerably less than a fourth the greatest breadth of the carapace, obscurely bilobed.

Orbits large, deep, the upper margin entire and cut in the anterior border of the carapace: eyestalks large, tumid, conical, almost immovably fixed in the orbits: eyes reduced to a speck of pigment placed on the under surface of the tip of their stalks.

Antennularly fossæ widely open to their respective orbits, small, and filled entirely by the basal antennular joint, to the complete exclusion of the large flagellum: the interantennular septum, though very narrow, is complete.

The small basal antenna-joint is wedged in between and beneath the eyestalk and antennule, the second joint hardly reaches to the front, the flagellum is large and considerably longer than the orbit.

The epistome is of considerable width fore and aft, especially at its middle. The buccal cavern is square, though rather broader in front than behind, and is almost entirely covered by the external maxillipeds. These have the merus as long as, and markedly broader than the ischium, owing to the semilunar expansion of the outer border of the merus: the palp, which is of good size, is jointed to the antero-internal angle of the merus.

The chelipeds are moderately massive and have their movements of abduction and extension somewhat restricted, in the male the hands are unequal. The arm is short and trigonal, the wrist rather long and crooked.

Legs sufficiently long and stout, the penultimate pair being the longest; their dactyli are sharply trigonal and elegantly plumose: the last pair are subdorsal and have the dactylus slightly curved and compressed.

The abdomen of the male, which is four-jointed: does not nearly fill the space between the last pair of legs.

Between the 4th and 5th segments of the sternum, in the male, is intercalated a long narrow plate that appears to cover the external genital ducts.

This seems to be more closely related to *Xenophthalmodes* than to any other genus.

Camatopsis rubida, Alcock and Anderson. Plate IV. fig. 3.

Carapace very finely granular when denuded. The narrow front and the antero-lateral borders form a semicircular curve: the postero-lateral borders are slightly divergent, the greatest breadth of the carapace being between the bases of the penultimate pair of legs. The tumid anterior (true inner) borders of the eyestalks bulge beyond the orbital concavities of the anterior border of the carapace.

The efferent branchial canals cause an angular bulging or carination of the pterygostomian regions.

The chelipeds are unequal in the male (female unknown), the longer one being about $1\frac{3}{4}$ times the length of the carapace. They are unarmed. In the larger hand the fingers meet only at tip and are finely toothed in the distal half only, being rather deeply notched in the basal half, while on the inner surface of the movable finger is a curious truncated spine. In the smaller hand the fingers meet throughout their extent and only the immovable finger is distinctly toothed, one or two of its teeth being enlarged.

The first and last pair of legs are about $1\frac{2}{3}$ times, the second and third pair are about twice, the length of the carapace. In the last pair of legs the terminal joints are more strongly ciliated, and the dactylus is slightly curved and compressed as for swimming.

Colours in spirit rich chocolate brown. Animal entirely covered with velvet.

Three males from the Andaman Sea, 194 fathoms. The carapace of the largest is 9 millim. long and 10 millim. broad.

HEPHTHOPELTA n. gen.

Carapace very deep, inflated, rudely semicircular, about as long as broad, convex fore and aft and vertically deflexed anteriorly, all its borders entire and all except the posterior tumid, the cardiac and branchial regions well delimited.

Front considerably less than a third the greatest breadth of the carapace, bilobed, vertically deflexed.

Orbits small, shallow, excavated in the vertically-deflexed anterior border of the carapace, not concealing the eyes. Though the eyes are small and their stalks immovably fixed, they are well formed, well defined and well pigmented.

The antennular fossæ are widely open to their respective orbits, and are filled by the basal antennular joints, to the exclusion of the flagella: the inter-antennular septum, though very narrow, is complete.

The basal antenna-joint is small, slender, and does not nearly reach the front; it lies between the eyestalk and antennule: the flagellum, which arises in the orbital hiatus, is hardly longer than the orbit.

The epistome is of considerable width fore and aft. The buccal cavern is square, though slightly narrower in front than behind: the excurrent branchial canals are well defined. The external maxillipeds, which completely cover the buccal cavern, have the merus shorter and slightly narrower than the ischium and somewhat oval in shape, and the palp jointed to the antero-internal angle of the merus and of good size.

The legs are all long and slender and end in a slender dactylus: the last pair are subdorsal.

The chelipeds are lost in the single specimen obtained, which is a female.

Hepthopelta is closely allied to *Camatopsis*, but differs from it (1) in the form of the carapace, which is inflated and subspherical and has the fronto-orbital region vertically deflexed, (2) in the well formed eyes, (3) in the small antennary flagella, (4) in the narrower and differently shaped merus of the external maxillipeds, and (5) in the longer and more slender legs.

Both it and *Camatopsis* connect the *Rhizopinæ* with the *Pinnoteridæ*.

Hepthopelta lugubris, n. sp. Plate IV. fig. 2.

Carapace as long as broad, roughly semicircular or semiglobose, of thin texture, its surface very finely frosted and somewhat pubescent.

The fronto-orbital region is vertically deflexed and almost invisible in a dorsal view.

Epibranchial and cardiac regions tumid, circumscribed by deepish grooves.

Legs subcylindrical, with a finely frosted and pubescent surface: the third pair, which are slightly the longest, are about $2\frac{3}{4}$ times the length of the carapace: the posterior (lower) border of the merus of the first two pairs is spinulose.

Colours in spirit, light yellow, eyes black.

A single female, without chelipeds, from the Andaman Sea, 490 fms. The carapace is 8 millim. long, and the same in breadth.

Family *Ptenoplacidae*.

Carapace flat, depressed. Front extremely narrow, projecting freely far beyond the interantennular septum. Orbits imperfect. No distinct antennular fossæ. Epistome none (linear): buccal cavity broad, subquadrate: external maxillipeds subpediform and affording almost no concealment to the underlying (*i. e.* overlying) parts, the palp articulating at the summit of the narrow merus. In neither sex does the abdomen nearly cover the sternum between the bases of the fourth pair of peræopods.

[Fifth pair of peræopods are subdorsal in position, are reduced in size, and arise near the middle line of the body.] Type *Ptenoplax notopus*.

At first sight, from its general shape, from its elongate third pair of trunk-legs and its almost rudimentary notopodal fifth pair, from its extremely incomplete orbits, from the absence of antennular fossæ, and from the curiously small and slender external maxillipeds, Homolid affinities are suggested; but that this singular form has nothing to do with the *Homolidæ* is shown: (1) by the position of the openings of the oviducts, which is typically Cancroid; (2) by the form and position of the openings of the efferent ducts of the male, which are typically Catometopan; and (3) by the number and disposition of the branchiæ, of which there are only six on each side.

In the number and arrangement of the branchiæ, as well as in the position and degenerate form of the fifth pair of legs and the obsolete epistome, it might be supposed that it had affinities with the *Dorippidæ* (*Dorippe* and *Ethusa* more especially). That this is not the case is shown (1) by the position, above indicated, of the genital openings of the male; (2) by the great broad buccal orifice, which is only very partially covered by the maxillipeds; (3) by the form of the carapace, which is broad, and completely covers the thorax; (4) by the form of the antennules, which are not obliquely or almost vertically folded in distinct fossæ as they are in *Ethusa* and *Dorippe*; and (5) by the form of the sternal plastron, which in our new form is a broad pentagonal plate as in many Ocy-podoids.

It is a true Catometope, but of an archaic type.

PTENOPLAX, Alcock and Anderson.

Archæoplax, Alcock and Anderson, J. A. S. B. Vol. LXIII. pt. 2, 1894, p. 180.

Ptenoplax, Alcock and Anderson, Ill. Zool. Investigator, Crust. pl. xv. 1895.

Carapace transverse, greatly depressed, with the front very narrow, and declivous, yet forming a distinct rostrum (*i. e.*, its front border is not fused with the epistome, but is free). Abdomen in both sexes narrow, not nearly co-extensive in breadth with the sternum between the penultimate pair of trunk-legs.

Orbits and antennulary fossæ very imperfect, hardly more perfect than in Homola, and formed on somewhat the same plan as they are in the Dromidæ. That is to say, there is a shallow common orbito-antennulary fossa—into which, however, the antennules fold transversely, and entirely below, not beside, the eyes—and the lower boundary of this fossa is formed by the basal joint of the antennule, the basal joint of the antenna, and an external tooth. The eyestalks are moderately long, are slender and tapering, and do not nearly fill their region of the orbit: the eyes are small.

Antennules well developed, transversely folded on the inflated basal joint, *which is free and exposed from its origin.* Antennal peduncles arising external to, and in the same plane with, the antennules: the flagella long.

Buccal opening much wider in front than behind, not nearly covered by the short slender external maxillipeds: efferent branchial channels well defined, anteriorly produced and patulous: epistome linear: the palp of the external maxillipeds articulates with the apex of the narrow meropodite.

Chelipeds unequal in the male, sub-equal in the female: first, second and third pairs of legs long, slender and compressed (the second pair the longest), with long sabre-shaped dactyli. *Last pair of legs reduced to feather-like rudiments, arising close together, high up, almost on the back.*

Genital ducts of the male opening at a distinct tubercle on the base of the fifth pair of legs, the tubercle being embedded in a notch in the posterior border of the sternum.

Six gills on either side.

Ptenoplax notopus, Alcock and Anderson.

Archæoplax notopus, Alcock and Anderson, J. A. S. B. Vol. LXIII, pt. 2, 1894, p. 181, pl. ix. figs. 3, 3a-b.

Ptenoplax notopus, Alcock and Anderson, Ill. Zool. Investigator, Crust. pl. xv. figs. 2, 2a-b.

Carapace extremely flat and depressed, transversely oval, with the anterior and antero-lateral margins slightly concave; its surface punctate beneath a shaggy reddish fur.

The front proper is extremely narrow—about one-fourteenth the greatest breadth of the carapace—and is deflexed with the tip free and horizontal, the tip also being slightly expanded and bilobed just as in *Macrophthalmus*.

The orbital borders of the carapace, which together are half the greatest width of the carapace, are concave on either side of the front, each concavity being interrupted near the middle by a small projection: the antero-lateral borders are short and oblique, are broadly concave, and are rather acutely produced at their junction with the anterior margin: the postero-lateral borders, which constitute four-fifths or more of the lateral extent of the carapace, are convex, and form a small tooth at their angular junction with the antero-lateral borders: the

posterior border is raised and gently convex. The inflated branchial regions are fairly well delimited from the gastro-cardiac regions.

Two remarkable almost straight sutures cross the carapace from side to side: the anterior at the level of the junction of the antero-lateral with the postero-lateral borders, the posterior at the middle of the cardiac region. These sutures are remarkably distinct, equally from the exterior and from the interior of the carapace.

The side walls of the carapace, though low, meet the dorsal surface almost at a right angle. The pterygostomian regions are deeply grooved or creased transversely in the neighbourhood of the large afferent branchial orifices. The sternum in both sexes is widely pentagonal.

The orbits are remarkably incomplete, their inferior border being formed only by a large acute lamelliform spine and by the basal joint of the antennule and of the antenna.

The eye-stalks are long (their length being contained 6 or 7 times in the greatest breadth of the carapace), slender, tapering, and slightly bent: the eyes are small and hemispherical.

The antennules have the basal joint hugely inflated, globular, quite free and exposed from its origin, and freely mobile: the second and third joints, which are long and slender, fold transversely on the base of the first.

The antennæ arise just below the infra-orbital spine, and outside and in the same line with, the antennules: their flagellum is half the length of the carapace.

The buccal cavity is considerably wider in front than behind: the external maxillipeds are so small and slender as to leave completely exposed the mandibles, the wide endostome, and a part of the wide and produced efferent branchial channels.

The epistome is linear. The fourth joint of the external maxillipeds arises from the apex of the small oval third joint.

All the trunk-legs are thickly fringed with a shaggy reddish hair.

The chelipeds are subequal in the female, but are unsymmetrical in the male: their length, half of which is formed by the hand, slightly exceeds the breadth of the carapace: both hands in the female, and the smaller hand in the male, are elongate compressed and sharp-edged, and have the fingers curved compressed acute, slightly excavated on the inside, and indistinctly dentate along the opposed edges: the larger hand of the male has the palm inflated.

Of the legs, the 2nd pair is the longest, measuring rather more than twice the greatest breadth of the carapace: all are slender compressed and quite smooth, and all end in long sharp sabre-shaped dactyli.

The last pair of trunk-legs are quite unique in form and disposition: they arise quite close to the middle line of the body and high up, almost on the back; they are short, being considerably less than the breadth of the carapace in length, and are very slender and flexible; and they are so thickly fringed with shaggy hairs as to look like feathers.

The abdomen in the male consists of 5 separate pieces—the 3rd–5th segments being coalescent: its breadth opposite the penultimate pair of trunk-legs is about one-third that of the sternum at the same point. In the female the abdomen consists of 7 separate segments, and its breadth opposite the penultimate pair of trunk-legs is half that of the sternum at the same level. The genital openings in the female have the usual position on the sternum: in the male they are placed at the summit of a prominent tubercle situated at the antero-internal angle of the basal joint of the 5th pair of legs, the tubercle being embedded in a notch in the posterior border of the sternum.

The carapace of an average egg-laden female is nearly 17 millim. long, and nearly 22 millim. broad. Males are somewhat smaller.

Colours chestnut brown, carapace lighter: eggs scarlet.

Bay of Bengal, Coromandel coast 100-250 fms.; Andaman Sea, 185 fms.

Family *Pinnoteridae*.

PINNOTERES, Latreille.

Pinnotheres, Latreille, Hist. Nat. Crust. et Ins. VI. 78 and in Cuvier, Règne An. 2nd ed. 1829, p. 48: Lamarck, (Hist. Nat. An. sans V. (2nd edit.) Vol. V. p. 410): Bosc, Hist. Nat. Crust., I. p. 239: Leach, Malac. Pod. Brit.: Desmarest, Consid. Gen. Crust. p. 116: Milne Edwards, Hist. Nat. Crust. II. 30, and Ann. Sci. Nat., Zool., (3) XVIII. 1852, p. 138 and (3) XX. 1853, p. 216: De Haan, Faun. Japon. Crust. p. 34: Dana, U. S. Expl. Exp. Crust. pt. I. p. 378: Bell, British Stalk-eyed Crust. p. 119: Miers, Challenger Brachyura, p. 275: Ortmann, Zool. Jahrb. Syst. etc. VII. 1894, p. 698: O. Bürger Zool. Jahrbucher, Syst. etc. VIII. 1895, p. 362: Adensamer, Ann. Nat. Hist. Hofmus. Wien., 1897, p. 105.

Pinnoterres abyssicola, Alcock and Anderson. ♀

Carapace as long as broad, circular, smooth: front rather prominent, about one-fifth the greatest breadth of the carapace. The whole of the eyes and eye-stalks and almost the whole of the orbit are visible in a dorsal view. The eyes are well developed but very pale. The dactylus of the external maxillipeds is styliform, and is inserted at the end of the preceding joint. The lower border of the immobile finger is fringed with fine hairs. The legs are slender: the 2nd and 3rd pairs are both about $1\frac{1}{2}$ times as long as the carapace, and have the dactylus slightly longer than it is in the other two pairs.

A single female with eggs, and with a carapace about 8 millim. in diameter, was taken by Dr. A. R. S. Anderson from a living individual of a large species of Lamellibranch (*Lima indica*, E. A. Smith) dredged off the coast of Travancore at a depth of 430 fms.

It is interesting to notice that this species is quite like any other *Pinnoteres* and has apparently undergone no further modification to fit it for deep-sea life.

Mr. E. A. Smith, who has kindly named the host species for me, writes that "it is exceedingly close to the Norwegian *Lima excavata*.....*Lima goliath* from Japan is another near relation. It is questionable whether they do not all belong to one widely distributed form."

Mr. Smith, to whose voluntary kindness we are indebted for numerous interesting reports—published in the *Annals and Magazine of Natural History* for 1894 and succeeding years—on the Investigator Deep-sea Mollusca, has already remarked the "close similarity" of certain of them "to species which occur in the North Atlantic."

Since the foregoing was sent to press I have received a copy of Miss M. J. Rathbun's *Brachyura of the Florida Keys* (Bull. Lab. Nat. Hist. Iowa, June, 1898, pp. 250-294, pl. i-ix), in which are to be found some remarkable corroborations of the views expressed in the Introduction to this Report as to the Atlantic affinities of the fauna of the moderate depths of Indian Seas.

For instance, *Thyrolambrus astroides* Rathbun (1894), dredged by the "Albatross" off Havana in 67 and 189 fathoms, is believed by Miss Rathbun, who has had the figure published in the "Investigator" *Illustrations* to guide her, to be identical with *Parthenope (Parthenomerus) efflorescens* Alcock (1895), dredged by the "Investigator" in the Andaman Sea at 36 fathoms. Miss Rathbun also records the species from Mauritius.

Again, *Pilumnoplax americana* Rathbun (June 1898) dredged off the coast of Florida in 70-110, 116, and about 200 fathoms, is identical with the *Pilumnoplax Sinclairi* here described (p. 74), from 430 fathoms off the Travancore coast.

Further, *Chasmocarcinus* Rathbun, from off Trinidad, 31-34 fathoms and off the Bahamas in 97 fathoms, seems to differ but slightly from the *Camatopsis* of page 75 of this Report.

Also, after this paper was sent to press I discovered a new species of *Mursia (M. aspera)* that had been stowed away by some well-meaning attendant. The discovery was made just in time to enable me to insert the description of the species in its proper place but not soon enough to allow for the correction of the table of the percentage composition of the Indian Brachyurous fauna on p. 3.

ADDENDA.

The three following deep-sea species, which have just come in from the ship, as part of the collection of the present season (1898-99), have to be added.

OXYRHYNCHA.

Family *Maidæ*: Sub-family *Inachinæ*.

GRYPACHÆUS, Alcock.

Grypachæus, Alcock, Journ. Asiatic Soc. Bengal, Vol. LXIV. Pt. ii. 1895, p. 177.

Carapace triangular, spiny, separated from the frontal region by a post-ocular "neck," not concealing the first two abdominal terga even in the male.

Rostrum spiny: composed of two short divergent spinelets, with a strong median deflexed (interantennular) spine, not visible from above. Eyes laterally projecting, movable, but not sufficiently retractile to be ever concealed. Small supra-ocular and post-ocular spines are present as part of the general spinature. Antennæ dorsally exposed from the basal joint of the peduncle, which joint is long slender cylindrical and spiny and is not intimately fused with the neighbouring parts. External maxillipeds with the merus elongate, much narrower than the ischium, and not much broader than the carpopodite. Legs hairy and spiniferous. Abdomen six-jointed in ♀, curiously short and truncated in ♂.

Branchial formula apparently as is *Encephaloides*.

Grypachæus hyalinus (Alcock & Anderson.)

Acheus hyalinus, Alcock & Anderson, J. A. S. B., Pt. ii. 1894, p. 205.

Grypachæus hyalinus, Alcock, J. A. S. B., Vol. LXIV. Pt. ii. 1895, p. 177. pl. iii. figs. 4, 4a.

Carapace sub-triangular, thin, vitreous, spiny especially in its anterior half: the regions well delimited, and the post-ocular portion constricted to form a "neck." The gastric and branchial regions, but more especially the latter, are particularly convex.

The rostrum, as seen from above, ends in two short spines, each of which has a spine or two at its base; but from in front or from below it shows as a strong vertically deflexed (interantennular) spine.

The eyes are large; and the long eye-stalks, which bear one or two tubercles on their front surface, are movable backwards, and are exposed from their base in all positions. The antennæ are visible, dorsally, from the end of the basal joint of the peduncle, which joint is long, slender, cylindrical and spiny.

The external maxillipeds are large, hairy, and almost pediform, owing to the narrowness of the merus and the coarseness of the palp.

The chelipeds in the male are half again as long as the carapace and rostrum and are very much more massive than the legs, and in the female are as long as the carapace and rostrum and not much more massive than the legs: all the joints except the fingers are spiny. The fingers are much shorter than the palm, which in the male is considerably inflated.

The first three pair of legs are spiny and hairy, the hairs of the posterior edge being remarkably long, stiff, close-set, and regular: the first pair are the longest, being in the male rather more, in the female rather less, than twice the length of the carapace and rostrum: the next two pair decrease in length successively. The last pair, which are also hairy, are the shortest of all, are subdorsal in position, and are subchelate, the propodite having its near end dilated to receive the folded back dactylus:

the apposed edge of the dactylus being minutely, that of the propodite being sharply and conspicuously, spinate. Except that the dactylus is nearly as long as the propodite, the last pair of legs is very like that of *Homola*.

The largest male has a carapace 18 millim. in extreme length and 11 millim. in greatest breadth.

Off the Malabar coast, 68-148 fathoms.

[Two females of this species were dredged off Trincomalee in 28 fathoms some years ago; but the characteristic expansion of the branchial chambers shows that the species belongs to the deep-sea fauna.]

Subfamily *Pisinae*.

SPHENOCARCINUS, A. Milne Edwards.

Sphenocarcinus auroræ, n. sp.

Closely resembles *S. cuneus* (see p. 50), but differs in the following particulars:—

The rostrum, measured from the anterior extremity of the post-ocular process, is in the male about three-fourths, in the female from three-fifths to three-fourths, the length of the rest of the carapace: in both sexes it is equally distinctly bifid at the end.

The pre-ocular processes end subacutely, and are therefore much more spine-like than in *S. cuneus*.

The tubercles of the carapace, though they have the same position and much the same shape, are smaller, and are therefore separated by much wider channels: the gastric tubercle instead of touching the cardiac tubercle, is widely separated from it, and the cardiac tubercle is heart-shaped rather than triangular.

As regards the male sex only: the pair of carinae on the dorsal surface of the carpopodites of the chelipeds and legs are blunt, the carina on the dorsal surface of the meropodites is almost indistinguishable, and the arms of the chelipeds are very much stouter than the corresponding joints of the gressorial legs.

Colours of fresh spirit specimens: light saffron-pink suffused with rose-pink, the rostrum almost crimson.

Twenty-seven specimens from off the Travancore coast, 224-284 fms.

Length of carapace and rostrum 19 millim. ♂ and ♀.

 " " rostrum alone 8 " "

Greatest breadth of carapace 13.5 " "

In some females the rostrum is relatively shorter.

CYCLOMETOPA.

Family *Xanthidae*. Subfamily *Galeninae*.

Geryon, Kröyer.

Geryon, Kröyer, Nat. Hist. Tidskr. (1) I. 1837, p. 20: ?Miers, Challenger Brachyura p. 223: de Man, Notes Leyden Mus. XII. 1890, p. 69: A. Milne Edwards et Bouvier, Résult. Camp. Sci. Hirondelle, Brachyures et Anomoures, p. 41 (Monaco, 1894).

Chalæpus, Gerstaecker, Archiv. f. Naturges. XXII. 1856, i p. 118.

Carapace subquadrilateral with the fore-part rounded, very little broader than long, convex (sometimes strongly so) fore and aft, slightly convex from side to side across the branchial regions, the surface more or less pitted or finely eroded, the regions obscurely defined.

Antero-lateral borders rather shorter than the postero-lateral, moderately arched, with from 3 to 5 teeth or acuminate lobes (including the outer orbital angles).

Fronto-orbital border about half the greatest breadth of the carapace. Front horizontal, or obliquely deflexed, about one-fifth the extreme breadth of the carapace, quadrilobed or quadridentate, the two middle teeth slightly the more prominent.

Supra-orbital margin with two suture lines or fissures, of which the outer one is sometimes hardly discernible: inner angle of lower border of orbit usually dentiform and prominent.

The antennules fold nearly transversely. The antennæ occupy the widely-open orbital hiatus: The basal joint is short and is not fixed down, the second joint reaches the front, the flagellum is long.

Buccal cavern square, the efferent branchial channels well defined by ridges: external maxillipeds large, completely closing the buccal cavern, the anterior border of the merus somewhat oblique and arched.

Chelipeds subequal, massive, fingers strong and pointed.

Legs long, stoutish, more or less compressed, ending in stout, bare, styliform dactyli.

Abdomen in both sexes seven-jointed and completely covering the sternum at its base.

Geryon affinis, Milne Edwards and Bouvier.

Geryon affinis, A. Milne Edwards et E. Bouvier, Résult. Camp. Sci. Hirondelle, Brachyures et Anomoures, p. 41, pl. i. (Monaco, 1894).

One specimen, a female with a carapace nearly 4.5 inches long and 5 inches broad, from off the Travancore coast, 224-284 fms. It is absolutely identical with the species dredged off the Azores at about 340-770 fathoms, and unmistakably described and figured by MM. Milne Edwards and Bouvier. To those who know how many species are common to the like depths of the two regions its occurrence here will cause no surprise.

Carapace slightly broader than long, little convex, its surface rugulose or pitted, especially on the branchial regions, its regions fairly well defined, the gastric region convex and obscurely divided into three sub-regions.

Front about one-fifth the greatest breadth of the carapace, obliquely deflexed, lamellar, cut into 4 teeth of which the middle two are the most prominent.

Antero-lateral borders with five prominences or teeth (including the outer orbital angle) of which the 1st, 3rd, and 5th are the most pronounced: a broad low ridge extends from the last tooth right round the inner limit of the branchial region on either side.

Orbits large, not completely filled by the eyes: of the two breaks in the upper margin the inner is a distinct fissure while the outer is a mere crease: the inner angle of the lower border is prominent and acutely dentiform.

The external maxillipeds fall a little short of the edge of the epistome, the surface of their ischiopodite, like that of the neighbouring part of the pterygostomial regions is rugulose or pitted.

Chelipeds slightly unequal: all surfaces of the hand, the outer surface of the wrist and part of the outer surface of the arm are marked with low sub-squamiform rugulosities: the upper border of the arm ends, some distance behind the end of the joint, in a spine, and the inner angle of the wrist is strongly spiniform: the fingers are longer than the palm and their apposed teeth are strong and interlock closely.

The gressorial legs are stout, and their surfaces are pitted: they end in stout styliform dactyli which are grooved along both the dorsal and the ventral surfaces.

The colours in life are admirably shown in the figure given by MM. Milne Edwards and Bouvier.

INDEX.

	<i>Page.</i>		<i>Page.</i>
Arachnodromia	... 17	Hepthopelta	... 76
" Baffini	... 19	" lugubris	... 77
Benthochascon	... 68	Homola	... 6, 7
" Hemingi	... 69	" andamanica	... 7
Calappa	... 20	" megalops	... 9
" exanthematosa	... 21	" profundorum	... 10
Camatopsis	... 75	Homolax	... 9
" rubida	... 76	Hypsophrys	... 12
Carcinoplax	... 70	" longipes	... 15
" longipes	... 71	" superciliosa	... 14
Cyonomops	... 35	Lyreidus	... 38
" glaucomma	... 36	" Chameri	... 38
Cyrtomaia	... 44	Maia	... 55
" Suhmi, var.	... 45	" gibba	... 56
Dromia	... 16	Mursia	... 22
" Kendalli	... 16	" aspera	... 24
Dynomene	... 19	" bicristimana	... 23
" margarita	... 19	Nectopanope	... 64
Echinoplax	... 42	" rhodobaphes	... 65
" pungens	... 43	Orphnoxanthus	... 61
" rubida	... 44	" microps	... 61
Encephaloides	... 47	Oxypleurodon	... 51
" Armstrongi	... 47	" Stimpsoni	... 51
" Rivers-Andersoni	... 49	Parilia	... 28
Ethusa	... 31	" Alcocki	... 28
" andamanica	... 33	Pariphiculus	... 30
" desciscens	... 35	" coronatus	... 30
" gracilipes	... 34	Paromola	... 10
" indica	... 32	Paromolopsis	... 11
" investigatoris	... 34	" Boasi	... 11
" pygmaea	... 33	Physachæus	... 39
Ethusina	... 34	" ctenurus	... 40
Geryon	... 84	" tonsor	... 41
" affinis	... 85	Pilumnoplax	... 74
Grypachæus	... 83	" Sinclairi	... 74
" hyalinus	... 83	Pinnoteris	... 81
Goniosoma	... 67	" abyssicola	... 81
" hoplites	... 67	Platymaia	... 45

	<i>Page.</i>		<i>Page.</i>
Platymaia Wyville-Thomsoni	... 46	Seyramathia pulchra	... 52
Platypilumnus	... 62	„ Rivers-Andersoni	... 53
„ gracilipes	... 63	Sphaerodromia	... 16
Psopheticus	... 72	Sphenocarcinus	... 49
„ stridulans	... 73	„ auroræ	... 84
Ptenoplacidae	... 78	„ cuneus	... 50
Ptenoplax	... 78	„ Stimpsoni	... 51
„ notopus	... 79	Sphenomerides	... 65
Randallia	... 25	„ trapezioides	... 66
„ lamellidentata	... 26	Sphenomerus	... 65
„ pustulosa	... 27	Trachycarcinus	... 58
Seyramathia	... 51	„ glaucus	... 59
„ Beauchampi	... 54	Trichopeltarium	... 57
„ globulifera	... 55	„ ovale	... 57

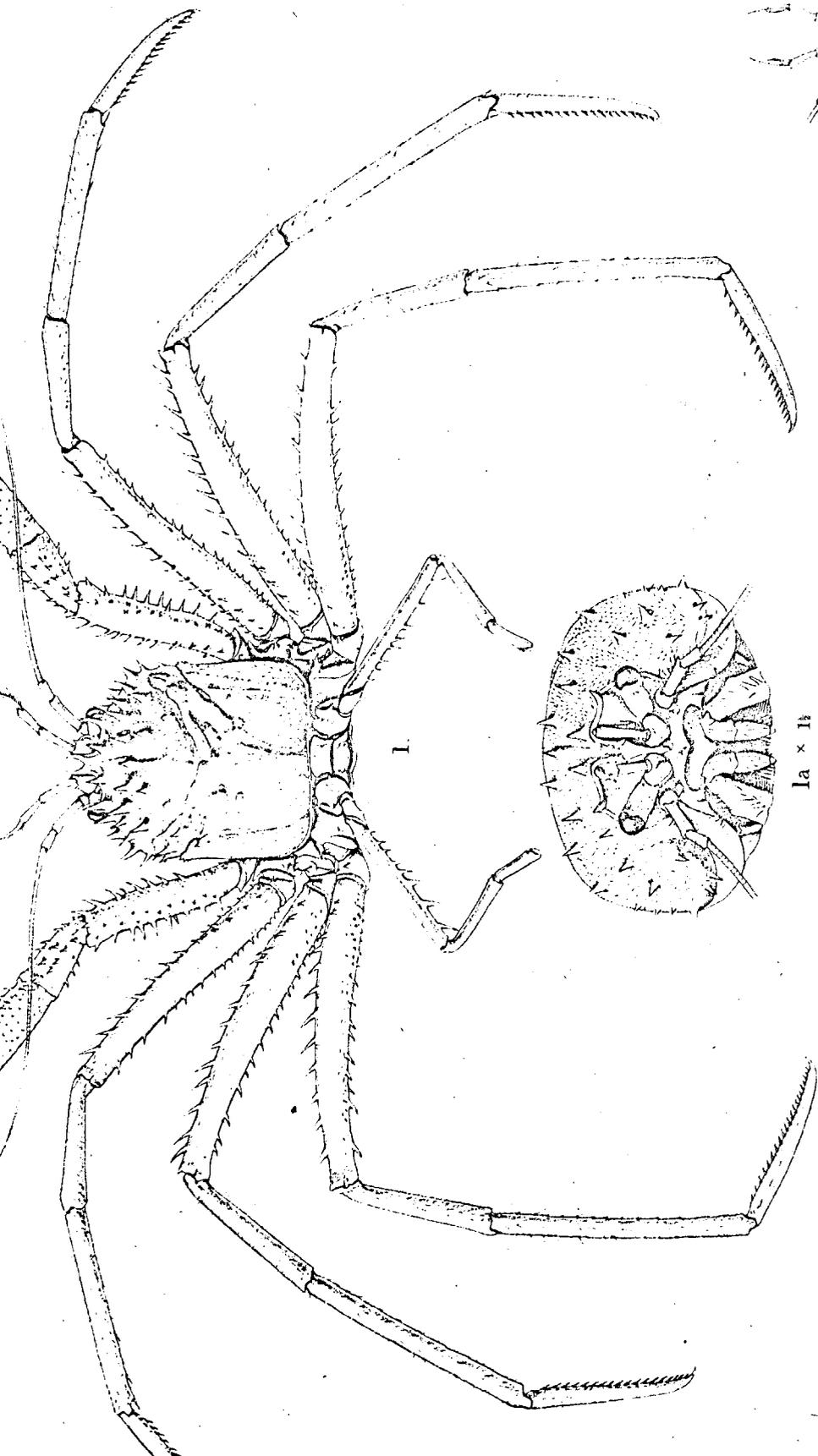
EXPLANATION OF PLATE I.

Fig. 1, 1b. *Hypsophrys longipes*.

Fig. 1a. *Hypsophrys longipes* $\times 1\frac{1}{2}$.

Fig. 2. *Homola (Paromola) profundorum* $\times 2$.

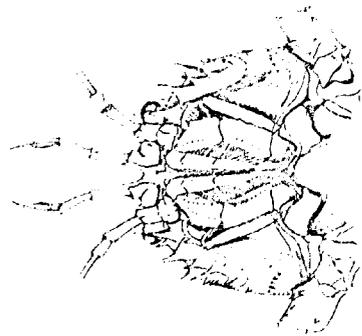
Fig. 2a. *Homola (Paromola) profundorum* $\times 3$.



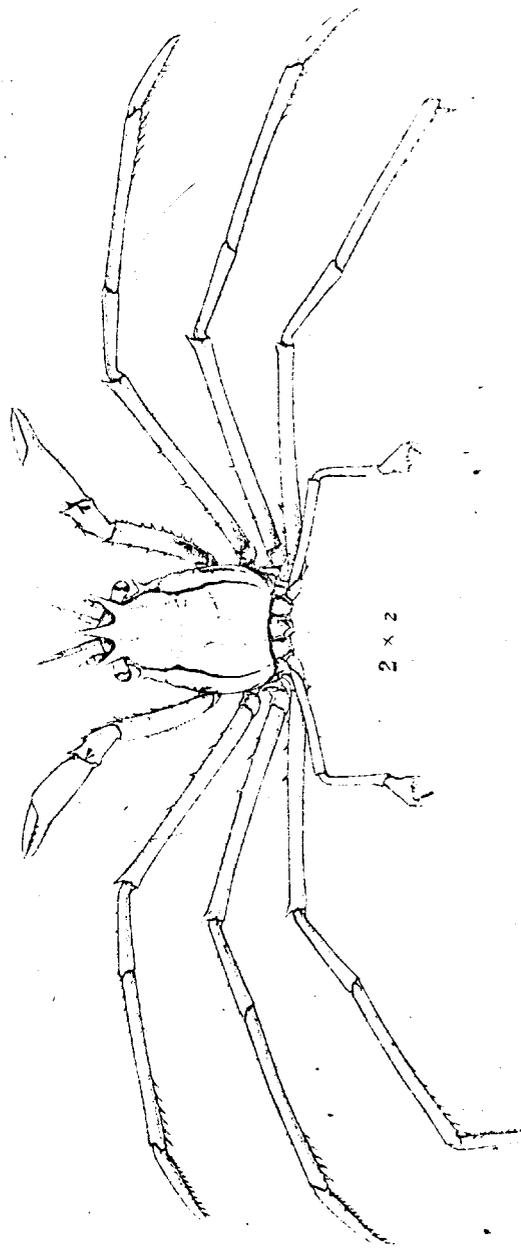
1



1a x 1b



1b



2 x 2



x 3

EXPLANATION OF PLATE II.

Fig. 1. *Arachnodromia Baffini* × 2.

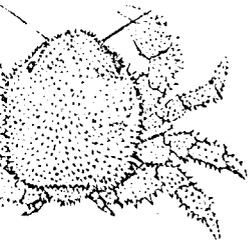
Fig. 1a, 1b, 1c. *Arachnodromia Baffini* × 3.

Fig. 2. *Trachycarcinus glaucus* × 2.

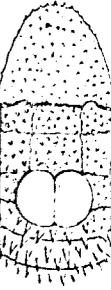
Fig. 2a. *Trachycarcinus glaucus* × 4.

Fig. 3. *Dynomene margarita* × 4.

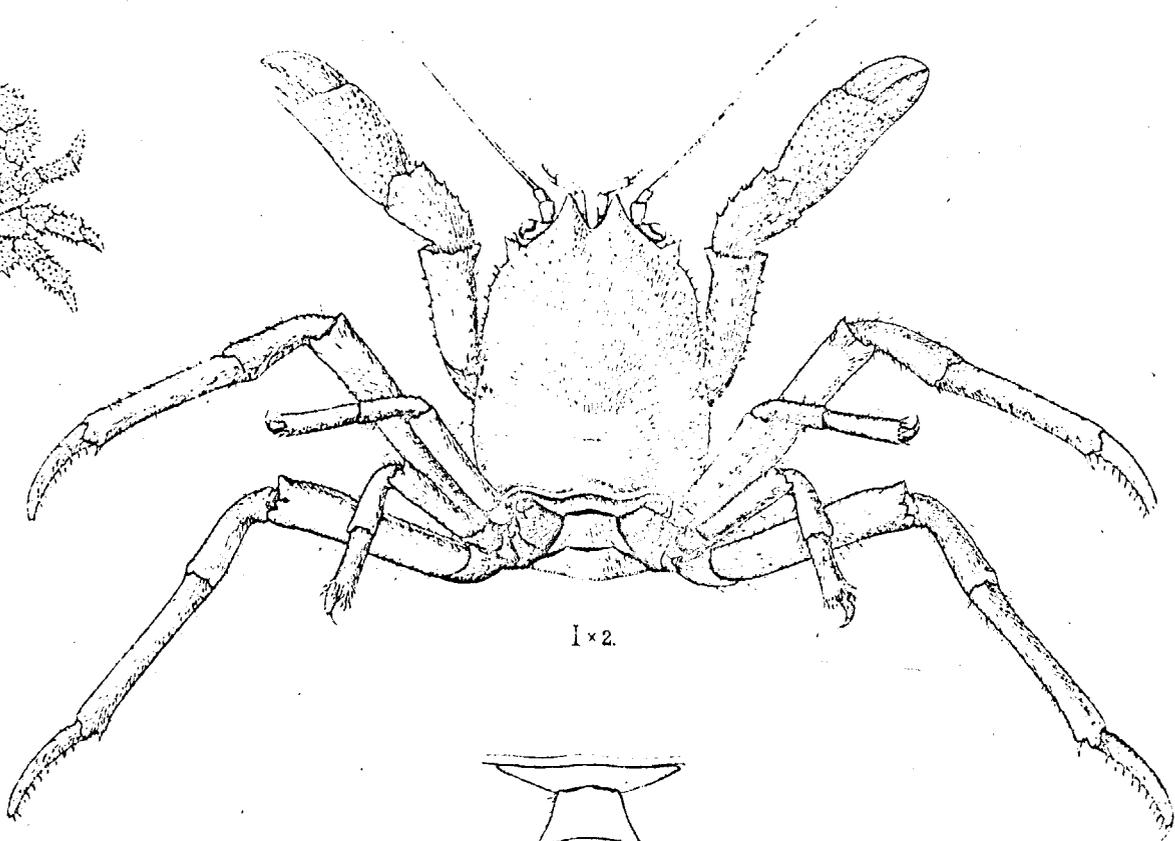
Fig. 3a. *Dynomene margarita* × 8.



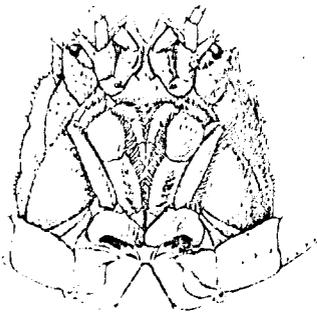
3 x 4.



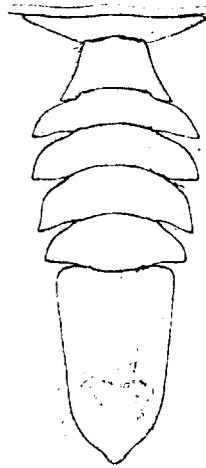
3a x 8.



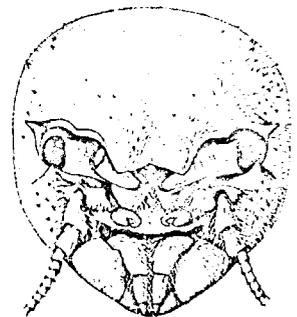
1 x 2.



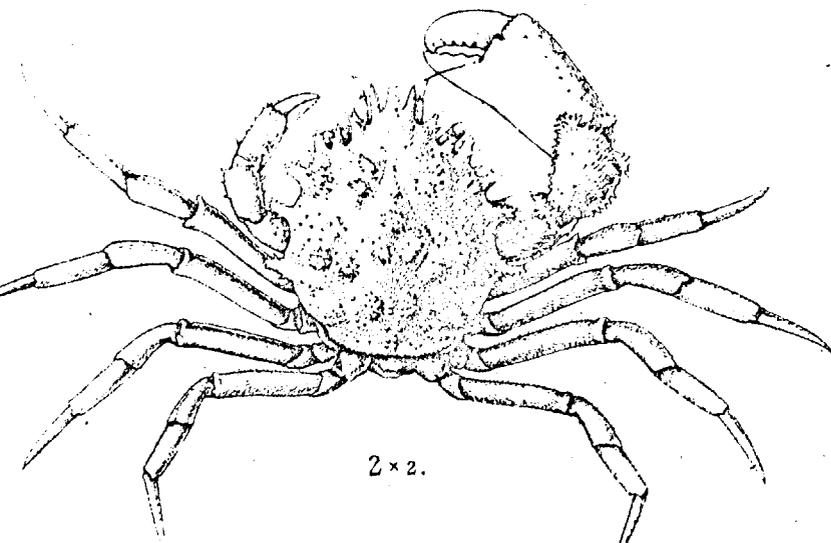
1a x 3.



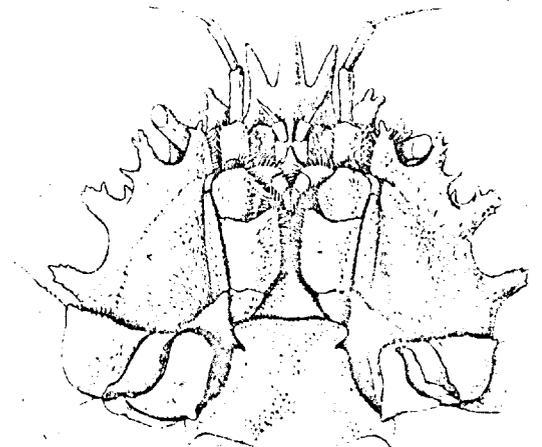
1b x 3.



1c x 3.



2 x 2.



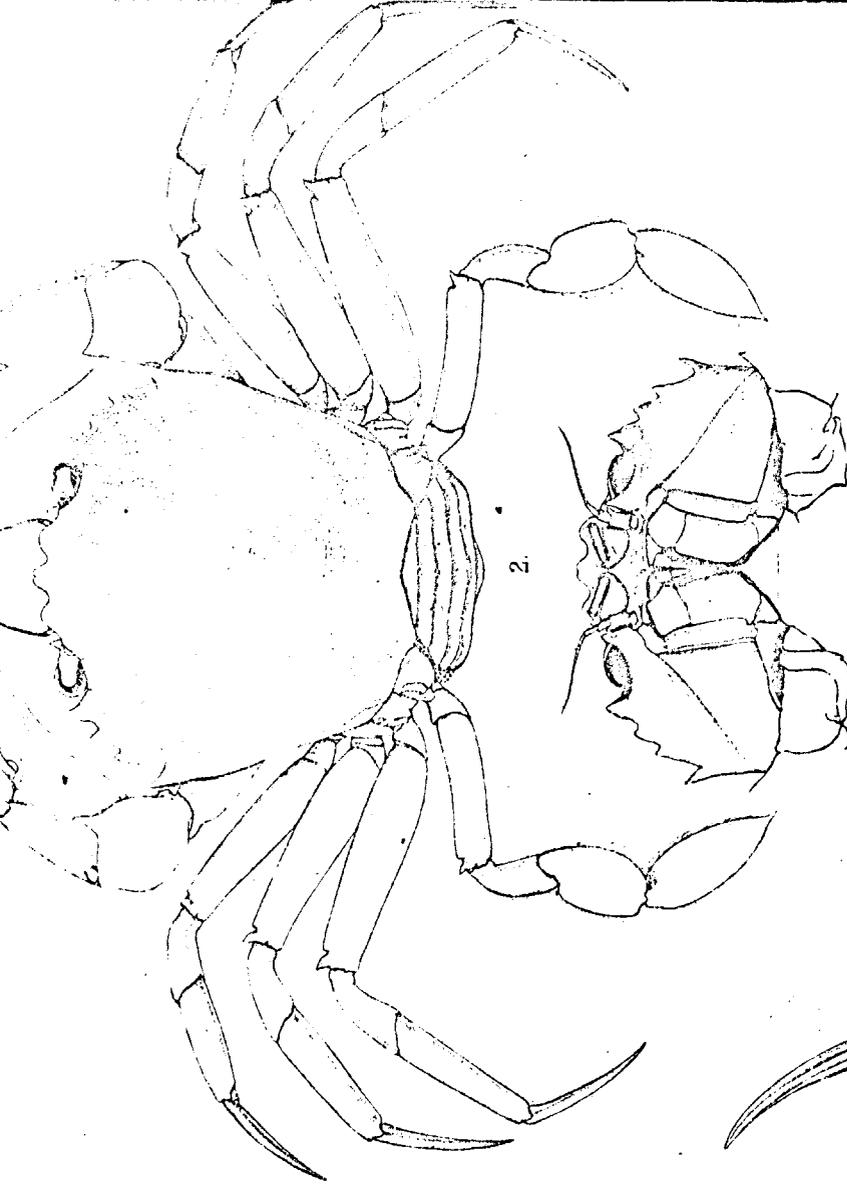
EXPLANATION OF PLATE III.

Fig. 1. *Pilumnoplax Sinclairi* × 2.

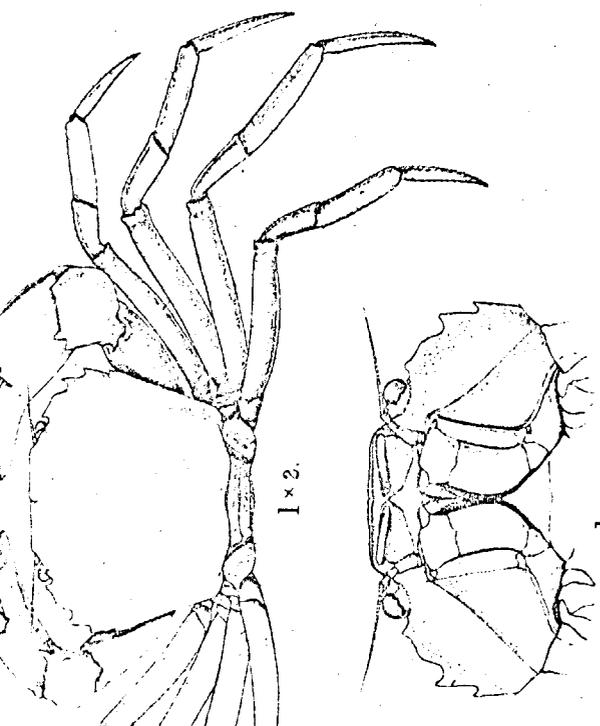
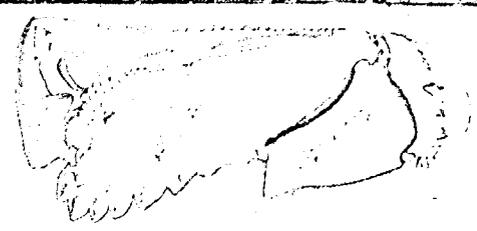
Fig. 1a. *Pilumnoplax Sinclairi* × 3.

Fig. 2, 2a. *Benthochascon Hemingi*.

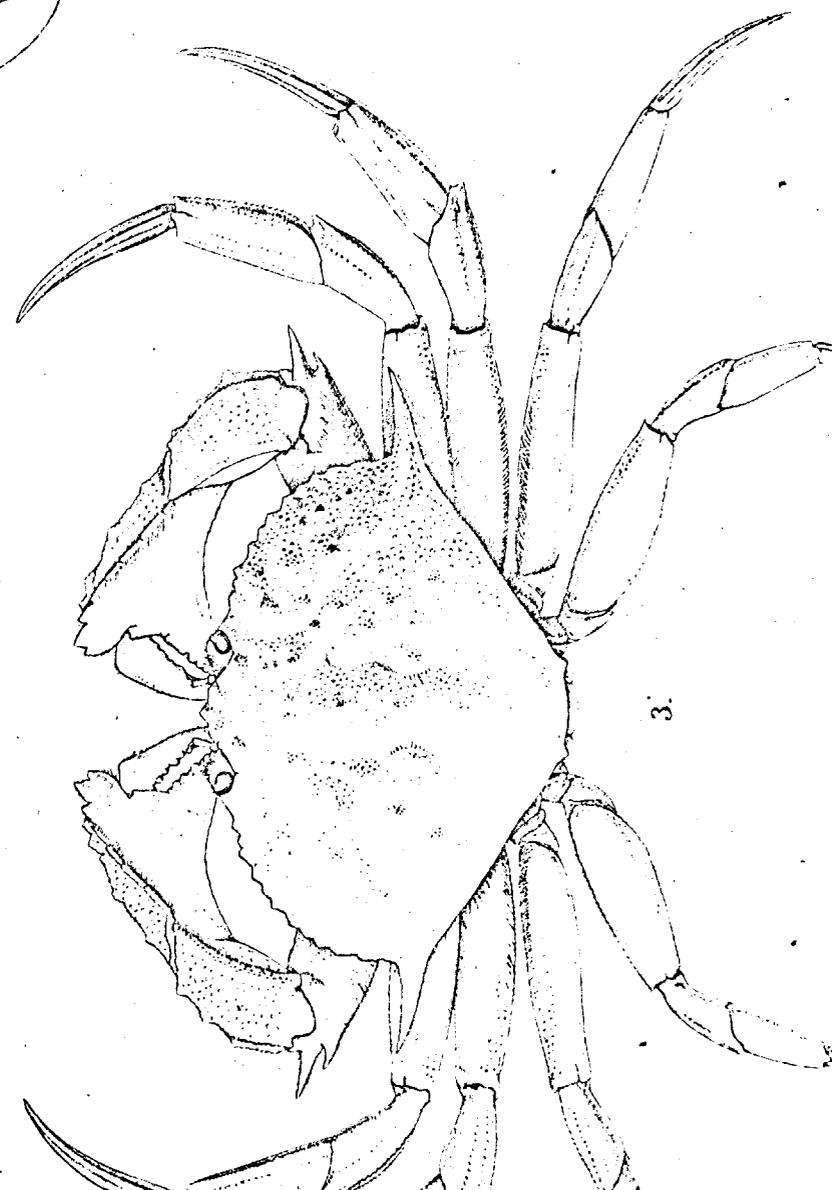
Fig. 3, 3a, 3b. *Mursia bicristimana*.



2 a.



1 a x 3



3.

EXPLANATION OF PLATE IV.

Fig. 1. *Parilia Alcocki*.

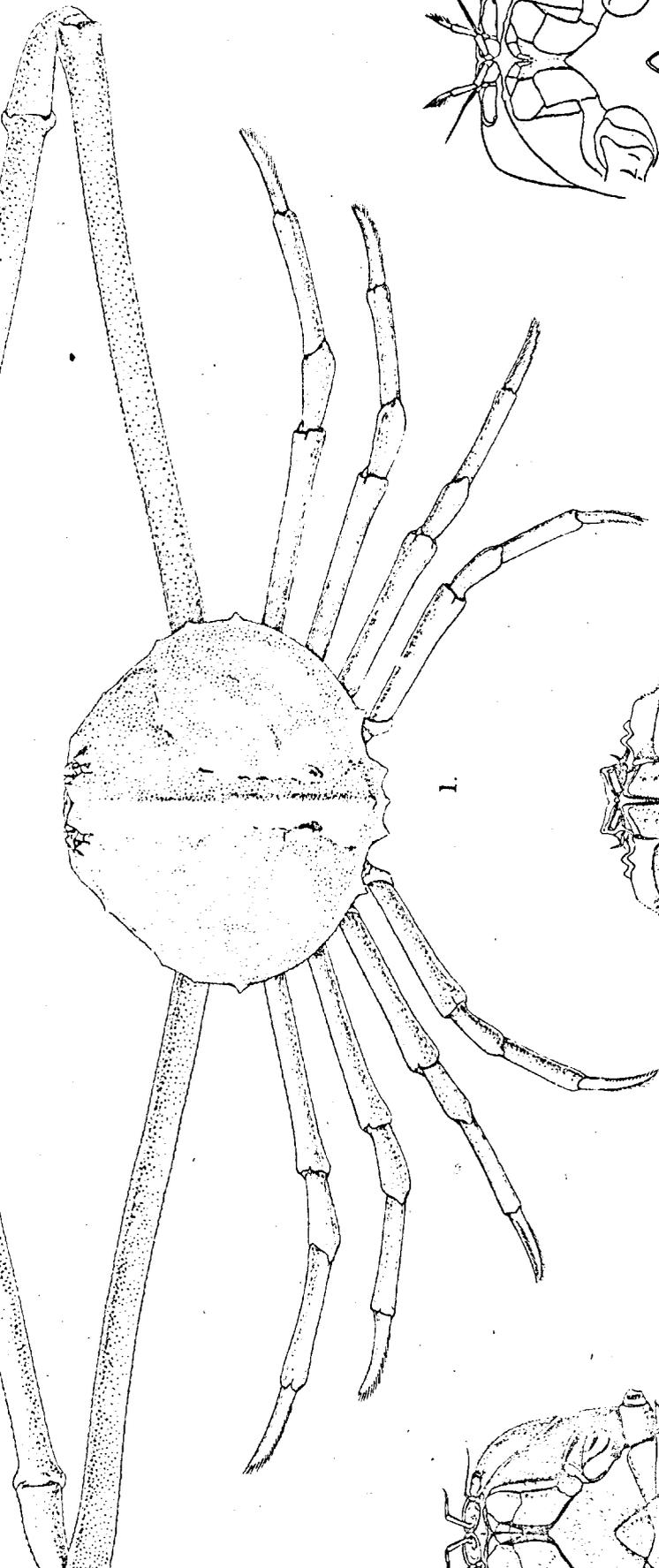
Fig. 1a. *Parilia Alcocki* $\times 1\frac{1}{2}$.

Fig. 2. *Hephthopelta lugubris* $\times 2$.

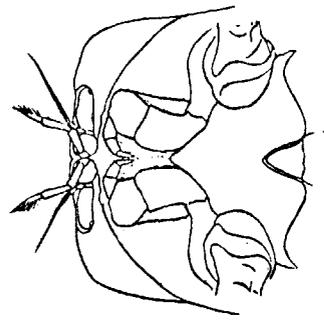
Fig. 2a, 2b. *Hephthopelta lugubris* $\times 4$.

Fig. 3. *Camatopsis rubida* $\times 2$.

Fig. 3a, 3b, 3c. *Camatopsis rubida* $\times 4$.



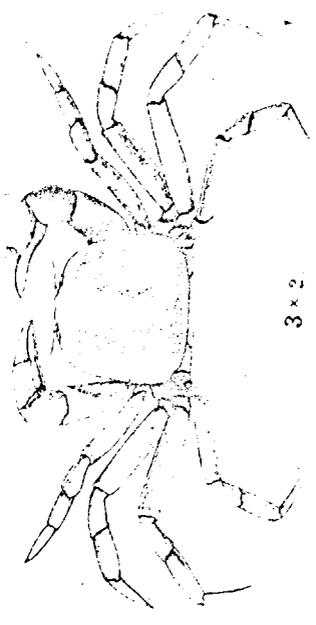
1.



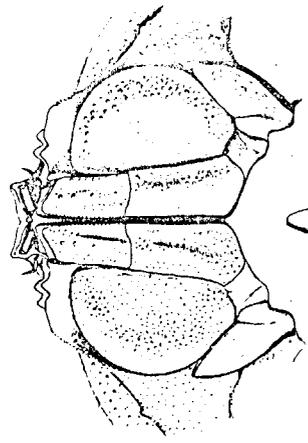
3a x 4.



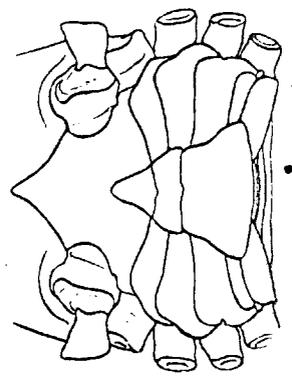
3b x 4.



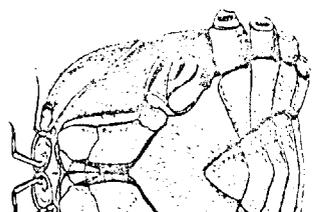
3 x 2.



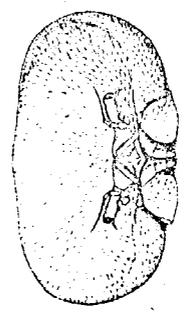
1a x 1 1/2.



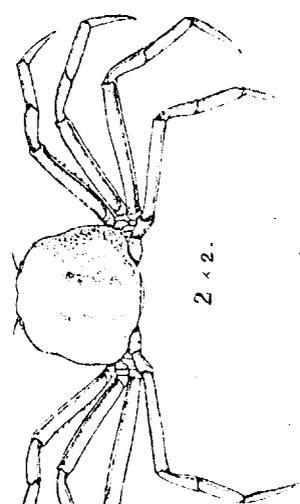
3c x 4.



2a x 4.



2b x 4.



2 x 2.