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NOTES ON AUSTRALIAN DECAPODA.

By

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(Plates ix-xi and Figures 1-2.)

Family OCYPODIDAE.

Subfamily SCOPIMERINAE.

Genus SCOPIMERA *De Haan*.

SCOPIMERA INFLATA *A. M. Edwards*.

(Plate ix, figs. 1-2, Plate x, figs. 1-2, Plate xi, and Fig. 1.)

Scopimera inflata Kemp, Rec. Indian Mus., xvi, 5, no. 22, 1919, p. 321.

Although no species of *Scopimera* has been hitherto recognised from the Australian coasts, *S. inflata* is very common on many Queensland beaches, and extends as far southward as Port Jackson, New South Wales. It was first observed by one of us on a coastal beach near Cooktown, North Queensland, and later at Port Stephens, New South Wales. We have it also from Ballina and Trial Bay, New South Wales, and a few small examples were collected on a sheltered beach in Port Jackson.

Habits.—*Scopimera inflata* is rarely found on any but coastal beaches where the sea water is clear and free from mud. The inner harbour beaches on which it occurs are always formed of clean sand, and are in the vicinity of strong currents. It is commonly found near small streams of fresh water which cross the beaches, and its burrows are sometimes found in sand which is kept moist by the soakage of brackish water. But, unlike its allies of the genus *Ocypode*, *Scopimera* is unable to withstand any buffeting by the surf. It prefers flat and sheltered positions of the coastal beaches where the waves are small (Plate x, fig. 1), and where the rise and fall of the tide leaves the sand undisturbed.

In such favourable localities large areas of flat sand several hundred square yards in extent may be seen to be covered with millions of tiny pellets, which, often being above the reach of neap tides, may remain for days together until they are disintegrated by a flowing spring tide.

At the southern end of Fingal Bay, near Port Stephens, these pellets were observed to be very plentiful in September, 1918 and 1919. They are rounded and of uniform size, and roughly arranged in irregular lines, nine to eighteen inches long, radiating from the mouth of the burrow, while larger irregularly shaped pellets excavated from the burrow are scattered among them.

Burrowing is perhaps usually carried out as the tide recedes and while the sand is quite soft and easily moved. The large pellets are excavated and carried up to the mouth of the burrow by the crab, and deposited irregularly near its opening. Some burrows we examined were twelve to fifteen inches deep (Plate x, fig. 2), and penetrated through the firm dry sand to the level of the water, where the sand was very moist and soft. The crab feeds on the surface of the beach in the glaring sun, and is apparently in no way incommoded by the direct rays falling upon its upraised and staring glassy eyes. Likewise, the heavy contrast met with in coming out onto the sunny beach from the dark cool depths of its burrow, seems in no way to effect its excellent vision. It is extremely shy and fleet, and retires to the depths of its burrow upon the least alarm. A wind blown leaf or a butterfly flying overhead is sufficient to scare all the crabs from the beach in its neighbourhood. This perhaps accounts for the shortness of the food trenches, the crabs being too shy to venture far afield from their safe retreat. The crab can be observed feeding only when perfect quiet is maintained, and the slightest indication of one's presence keeps it watchfully at the entrance to the mouth of its burrow. When feeding, the crab moves sideways from its burrow and scoops out a narrow trench with its chelipeds (Plate xi, fig. 1). The excavated sand is passed into the lower portion of the capacious mouth-jaws, where it is sieved for its contained food particles. It is then expelled from their upper portion, and so manipulated as to form a rounded pellet. Upon reaching a definite size, the pellet is passed backwards and deposited on the beach behind the crab, which simultaneously moves on a pace outwards from its burrow; as the trenches are approximately straight, it follows that the pellets are arranged in irregular rows behind them (Plate xi, fig. 2). Some were observed to feed so rapidly that a fresh pellet was produced about every fifteen seconds.

The size of the pellets corresponds with that of the crab that makes them, those of young specimens being much smaller than the pellets of adults.

Identity.—Specimens forwarded to Miss M. J. Rathbun were identified for us as *Scopimera inflata* A. M. Edw.¹ This species has been recently redescribed by Kemp (*loc. cit.*) from a badly damaged adult female specimen which he believes to be one of the original examples determined by A. M. Edwards, and which were rather vaguely localised (“Habite la mer des Indes”). We submitted other

¹ Journ. Mus. Godeffroy i, 4, 1873-74, p. 259 (83).

specimens to him for comparison with it, and in reply he has generously forwarded us the following taxonomic notes, together with the two small text figures which appear in the following pages.

“In my opinion all the specimens are correctly identified as *Scopimera inflata* A. Milne-Edwards. I have compared them with the female in the Indian Museum, on which I published some notes in 1919 (*loc. cit.*), and find that, so far as can be judged from the imperfect condition of that specimen, the agreement is exact. Our female is without definite locality, and, as I have pointed out, almost certainly came from the Godeffroy Museum; it is no doubt part of the material determined by A. Milne-Edwards and, inasmuch as other authentic specimens seem no longer to exist, may conveniently be regarded as a co-type. The specimen is in poor condition and, apart from the loss of several limbs, is much macerated. I noted in 1919 that the upper surface of the carapace appeared to be without evident sculpture, but on re-examining it in comparison with the Australian material I have been able to detect a pattern of fine grooves. This pattern is in precise agreement with that seen in the Australian specimens and does not differ greatly from that described by Roux in *S. kochi*. The strong tubercles found in specimens from New South Wales on the lateral and anterior parts of the carapace are practically indistinguishable in our specimen, but their disappearance is no doubt due to maceration. For the same reason the merus and ischium of the outer maxilliped appear smooth, whereas they are obscurely tuberculate in well-preserved individuals. The legs that exist agree most closely with those of Australian females, and large males from Australia possess the tooth on the inner side of the carpus of the cheliped which was noticed by A. Milne-Edwards in his original description.

“The three specimens from Cooktown in Queensland are not specifically distinguishable from those found in New South Wales. They are, however, considerably smaller, due no doubt to a less favourable environment, and the grooves of the carapace are less distinct.

“The rediscovery of *Scopimera inflata* is a matter of considerable interest, and the fresh material now examined shows that some emendation is necessary in the characters which I gave in 1919 (*loc. cit.*, p. 311) for the separation of the species from *S. kochi* Roux and *S. sigillorum* (Rathbun).

“[*Affinities.*—] *Scopimera inflata* differs from Roux's detailed description² of *S. kochi*, a species found at Merauke in New Guinea, in the following particulars:—

(i) The lateral margins of the front are raised and almost smooth, with the median portion much sunken and bearing an obscurely tuberculate \perp -shaped elevation. In *S. kochi* the edge of the front is described as finely granular, and in the middle there is a swollen area bearing a longitudinal carina.

² Roux, in Nova Guinea, v, Zool., 1917, p. 610, pl. xxvii, figs. 21-24.

(ii) The mesogastric region is not concave.

(iii) The fine grooves in the middle of the carapace form a pattern similar to that found in *S. kochi*, but the median limb of the M-figure is suppressed, the grooves of either side not quite meeting in the middle line. The lateral stroke of the M curves outwards and forwards as in the allied species. In the specimens examined the grooves show some variation; their development in two individuals is shown in Figure 1.

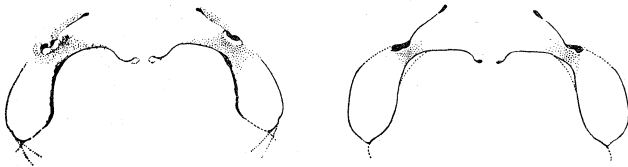


Fig. 1.

Showing variation of the carapace grooves as exhibited by two individuals of *Scopimera inflata*.

(iv) There is a granulate line above the base of the last leg and at the inner end of this line a crescentic depression. These features are not mentioned by Roux.

(v) The outer maxilliped is similar to that of *S. kochi*, but the merus is more angulate antero-internally, a blunt ridge (not shown in the figure I gave in 1919) extends downwards from the carpal articulation for nearly half the length of the segment, and the granules which may be seen in large specimens on this segment and on the ischium are small and obscure, differing widely from the large tubercles of the allied species.

(vi) The inner margin of the carpus of the chelipeds is conspicuously angulate in well-grown females,³ and in the male bears a stout tooth. In *S. kochi* this margin is evenly rounded.

(vii) At the base of the mobile finger there is in adult males a large rounded tooth with a serrate edge, in females a low serrate elevation.

(viii) The walking legs appear to resemble those of *S. kochi* very closely; Roux has not stated that tympana occur on both sides of the merus, but it is unlikely that his species differs in this respect.

(ix) In the abdomen of the male the antero-lateral projections of the fourth segment are less acute than in Roux's figure, the suture between the fourth and fifth is strongly curved, and the fifth segment is rather more constricted basally.

³ This statement is correct to a certain degree. An examination of very large female specimens (12 mm. wide) in the collection of the Australian Museum, however, has proved that these examples, while not possessing a spine equal to that of males of the same size, nevertheless bear a structure on the area in question, which is quite as acute and which could not be termed angulate.

“Other valuable characters could no doubt be found on actual comparison of specimens, but *S. kochi* seems to be readily distinguished by the absence of a tooth or angulation on the inner border of the carpus of the cheliped. *S. inflata* appears to be the larger of the two species; in the largest male examined the breadth of the carapace between the antero-lateral angles is 10.5 mm.

“*Scopimera sigillorum* (Rathbun)⁴, described from a single female found at Sandakan Bay, Borneo, is extremely closely related to *S. inflata*, and it is not impossible that the two are synonymous. Miss Rathbun’s remark that ‘a broad furrow on the front is continued across the gastric region’ does not, however, apply well to the specimens I have seen and she does not make any mention of the tympanum, traversed by a narrow longitudinal ridge, on the inner face of the merus of the cheliped. This important character is found in both *S. kochi* and *S. inflata*, but not in any other species of the genus, though a similarly divided tympanum is found in the walking legs of *S. investigatoris* Alcock and *S. proxima* Kemp. The carpus of the cheliped is said to have the ‘inner angle rounded’; in all other respects the description agrees very closely with Australian specimens of *S. inflata*.”

While considering the foregoing valuable notes, it is appropriate to point out here that Miss Rathbun, on comparing a similar series of *S. inflata* to that examined by Kemp, with the female holotype of *S. sigillorum*, considered the latter a distinct species nearest to *S. inflata*. She writes that on comparing females of the two species it was found that the shape of the body and legs was similar. But goes on to state that “In *S. sigillorum* the carapace is nearly devoid of granules; only a short line of granules behind the basal half of the eyestalk and nearly parallel to the orbital margin, and a border of granules on an angular projection above and behind the antero-lateral angle of the carapace.” Further, she considers that *S. inflata* “has the antero-lateral angle a little more prominent laterally. Rostrum wider. Ischium of maxilliped longer in proportion to the merus” (a difference referred to by Kemp in 1919, *loc. cit.* p. 324). Finally, “*S. sigillorum* has no tooth at the inner angle of the wrist” or carpus, a character which we find in *S. inflata* as noted by Kemp in a previous paragraph.

Conclusions.—In view of the fact that Miss Rathbun had the added advantage of being able to compare specimens of both species, it would appear to us that the two should be considered distinct, unless variation in further specimens of *S. sigillorum* should prove it to be synonymous with *S. inflata*, as suggested by Kemp in this paper.

We are indebted to Mr. H. Furst for the excellent photographs which illustrate the paper. He not only devoted considerable time and trouble to securing those illustrating the sand pellets, but also

⁴ Rathbun—Proc. U.S. Nat. Mus. xlvii, 1914, p. 82.

opened up a burrow so carefully that he was able to take a splendid picture of its interior. To Mr. J. R. Kinghorn our thanks are due for the figure of the crab, which is prepared from a male specimen measuring 9 mm. between the antero-lateral angles of the carapace, and 7 mm. from the rostrum to the posterior margin of the carapace.

Localities.—Near Cooktown, North Queensland; collected by A. R. McCulloch, 1913. Finches Bay, near Cooktown, North Queensland; collected by A. R. McCulloch, 1918. Ballina, New South Wales; collected by R. Etheridge, Junr., 1893. Trial Bay, New South Wales, on lagoon sand flats, about quarter of a mile from ocean; collected by J. R. and A. Kinghorn, January, 1920, and January, 1921. Fingal Bay, near Port Stephens, New South Wales; collected by A. R. McCulloch, 1918, and September, 1919. Roslyn Gardens, Middle Harbour, Port Jackson, New South Wales; collected by A. R. McCulloch, October, 1919.

Family GRAPSIDAE.

Subfamily GRAPSINAE.

Genus METOPOGRAPSUS *Milne Edwards.*

METOPOGRAPSUS LATIFRONS (*White*).

Grapsus latifrons White, Jukes, Voyage "Fly," ii, 1847, p. 337, pl. ii, fig. 2.

Metopograpsus latifrons Kingsley, Proc. Acad. Nat. Sci. Philad., 1880, pp. 190, 191.

A male and female of this species, which has not hitherto been recorded from Australia, have been compared with the figures and descriptions referred to above, and prove to be similar in every respect. They were collected by one of us in June, 1918, when they were observed crawling about on the roots of mangroves well above the water-line. They did not retire to the water when approached, but doubled and dodged around the branches, rendering their capture difficult. Their brilliant violet colouration, particularly of the hands, made them very conspicuous.

Locality.—On mud-flat mangroves, Endeavour River estuary at Cooktown, North Queensland; collected by A. R. McCulloch, 1918.

Family PILUMNIDAE.

Genus CARPILIUS *Leach.*

CARPILIUS MACULATUS (*Linnaeus*).

Carpilius maculatus Alcock, Journ. Asiat. Soc. Bengal lxvii, pt. ii, No. 1, 1898, p. 79 (and synonymy). *Id.* Pesta, Denkschr. k. Akad. Wiss., Wien, math.-naturw. Kl. lxxxviii, 1913, p. 39, Taf. iii, fig. 4.

A large carapace of this species (135 mm. wide), together with a major chela from a somewhat smaller specimen, have recently been received from Queensland. These specimens have been carefully compared with the figures referred to above, with which they agree in all structural details. The distribution of the red colour spots on the carapace is the same as that described by Alcock (*loc. cit.*).

No previous record of the occurrence of the species in Australian waters appears to have been published.

Locality.—Washed up on reef at Holbourne Island, off Port Denison, Queensland; collected by E. H. Rainford, 1921.

Family ATYIDAE.

Genus ATYA Leach.

Species of this genus are known from the West Indies, Africa, Indo-Malaysia and the Pacific Islands, but none appears to have been hitherto recognised from Australia.

ATYA STRIOLATA, *sp. nov.*

(Plate ix, figs. 3-4, and Plate x, fig. 3.)

Rostrum not quite reaching the middle of the second joint of the antennular peduncle, acute, sharply keeled above and with five teeth below; a lateral carina commences near the tip on each side and runs without interruption into the orbital margin. Lower orbital angle forming a flattened projecting spine; no branchiostegal spine. Carapace smooth, with a very faintly impressed line defining the branchial area; pleon smooth, the lower margins of the posterior pleura with a fringe of hairs. Telson rather flat above, with a row of seven movable spinules on each side of the median line, commencing about the middle of its length and terminating on its posterior margin; the latter bears a short fixed spinule on the median line and a long movable spine inside each outer angle; an upper row of short bristles and a lower row of much longer ones. A strong flattened spine on the lower surface of the telson between the bases of the uropods.

A long and slender spine projects forward from the outer side of the first joint of the antennular peduncle; the third joint of the peduncle attains the level of the external spine of the scaphocerite. Twenty-two to twenty-four of the basal joints of the external flagellum are much thickened, after which it becomes abruptly narrower. The outer inferior angle of the peduncle of the scaphocerite is produced into a sharp spine, and a second stronger spine arms the outer margin of the scaphocerite; antennal peduncle reaching a little beyond the middle of the second joint of the antennular peduncle.

First and second pairs of periopods similar in structure, but the latter are a little longer than the former; both are unarmed, and the tips of their setæ reach beyond the spine of the scaphocerite. Third, fourth and fifth periopods decreasing in size backwards. The merus of the third pair is armed with four minute spinules on its upper margin, and several more overhang its upper distal border; three larger spines form a row on its postero-inferior surface, and five stout spinules form a crest on the distal portion of its interno-inferior margin. Carpus with several rows of small spinules on all its surfaces, and a larger spine on its postero-inferior surface. Propodus covered with rows of small spinules which are most crowded on its lower surface. Dactylus short and broad basally, with a long terminal spine and some short strong ones on its lower edge. The fourth periopod is similar to the third but less spinate and without the inner crest of spines on the merus. Merus and carpus of the fifth periopod similar to those of the fourth though still less spinate; the propodus is similarly spiny, but has an additional larger spine projecting from the distal postero-inferior angle; the dactylus has only a terminal spine and a comb of closely set spinules on its postero-inferior border.

First pair of pleopods smallest, the third largest; all are unarmed. Posterior angle of the peduncle of each uropod forming a flat spine; each outer uropod with an oblique row of spines at the junction of its hard and soft portions.

Colour.—Green in life, closely speckled with microscopic blackish-brown dots. A broad, light yellowish, median band extends from the tip of the rostrum to the end of the telson, which is closely speckled and sharply defined by blackish borders. Five narrow longitudinal stripes along each side of the carapace, some of which are more or less interrupted; these are light in colour without darker speckles, and have dark margins. Two similar stripes along each side of the abdomen. Uropods pale green basally, changing to light blue terminally; the outer with a light distal spot with an ill-defined darker border, the inner with a similar but less distinct spot. Antennular peduncles with a light stripe on the upper surface, the remainder green. Limbs and antennæ translucent green; pencils of the fingers darker at the bases and tips.

Described and figured from an adult specimen, 44 mm. long from the tip of the rostrum to the end of the telson. It has unfortunately lost the third to fifth periopods, which have been described and figured from a somewhat smaller specimen taken with the holotype.

Variation.—A series of thirty-nine specimens 22-51 mm. long, does not exhibit any striking variation such as has been described in other species of the genus. The form and armature of the appendages appear to be very similar in all; the rostrum is rather more slender and longer in some large ovigerous females than in the specimens described. All exhibited the same colour-marking in life, though the smaller examples were lighter than the larger ones.

Occurrence.—We are indebted to our friends Mr. J. R. Kinghorn, Mr. E. Troughton, and Mr. A. Musgrave for their active assistance in securing this representative series of such a rare and wily crustacean. One of us first secured a single specimen at Norton's Basin, on the Nepean River, New South Wales, fifteen years ago, and, though additional specimens have often been sought for, until recently, few have been obtained. These shrimps appear to occur only in running water and in rock localities (Pl. x, fig. 3) where there are stones for them to hide under. They apparently dislike any but clear water, and most of our specimens were secured after we had driven them from their hiding places by stirring up the sediment at the bottom of a small pool from which we had removed the loose boulders and stones. We stretched a cheese-cloth barrier across the only overflow from the pool, and, as each shrimp sought to leave the disturbed water by heading off down stream, it was trapped and lifted out with a small hand-net, together with small fishes, specimens of *Paratya australiensis* Kemp, and other of its neighbours. Adjacent pools, in which the conditions were apparently similar but into which the water had ceased to flow, had evidently been deserted by the *Atya*, as no specimens could be found in them though we adopted the same tactics as in the case of the productive pool. The amount of water flowing in the river at the time the shrimps were secured was very small, owing to a period of drought. None of the series were ovigerous, but three large females secured by Mr. Kinghorn at an earlier date carried an abundance of well-developed eggs.

These shrimps swim steadily forward through the water with an even movement, and only jerk backward by flexing the abdomen in the manner common to prawns as an extreme measure. They also run freely in an upright position over the flat surface of a table, and if thrown on their sides, will speedily regain their normal position. They readily left a shallow dish of water by crawling over its sides, a habit which is evidently associated with their migration from one pool to another when drought conditions cut off the supply of running water. Some highly interesting notes on the habits of an allied species, *A. molluscensis*, are given by Cowles⁵, and the habits of *A. striolata* are probably not very different.

Locality.—Norton's Basin, Nepean River, New South Wales; 18th February, 1915; 16th to 23rd November, 1919; and November, 1920.

⁵ Cowles—Philipp. Journ. Sci. x, Sect. D, No. 1, 1915, p. 11.

Family PONTONIIDAE.*Subfamily* PONTONIINAE.*Genus* PERICLIMENES *Costa*.*Subgenus* ANCYLOCARIS *Schenkel*.PERICLIMENES (ANCYLOCARIS) BREVICARPALIS (*Schenkel*).

(Figure 2.)

Palaemon sp. Saville-Kent, Barrier Reef of Australia, 1893, p. 145, col. pl. ii.*Periclimenes* (*Ancylocaris*) *brevicarpalis* Kemp, Rec. Indian Mus. xxiv, 2, 1922, p. 185, pl. vi, fig. 8, and figs. 40-42.

This species is very common on the Barrier Reef in association with *Discosoma*, together with small fishes (*Amphiprion percula*) and an unidentified crab of the family *Porcellanidae*.⁶ All three commensals are very brilliantly coloured, and are peculiarly helpless when deprived of the protection of their host. If the anemone be irritated so that it retracts within a crevice, its queerly assorted associates swim around in a dazed plight so that they can be easily captured by hand. They move about freely among the tentacles of the anemone, and are in no way affected by their stinging nematocysts. The anemone is unaffected by their movements, though it readily retracts when touched by one's hand or any other unfamiliar substance. The sting of these anemones is not appreciable, but the innumerable nematocysts of the bulbous ends of the tentacles penetrate the skin of one's finger so readily that the tentacles are torn from the animal as the hand is withdrawn. The power which enables it to discriminate between the delicate touch of a fish's fins, which leaves it undisturbed, and that of a wriggling worm, which it readily captures and ingests, is very difficult to understand.

A female specimen of *P. (A.) brevicarpalis* secured by one of us from an anemone in a lagoon at Hope Islands, off Cooktown, North Queensland, in 1918, was quite transparent, though the eggs, branchiæ, and intestines appeared translucent brown; porcelain white areas were present on the cephalothorax and abdomen, distributed as in the accompanying figure,⁷ and the two largest patches, on the median line, appeared granular. The antennal and antennular flagellæ were pale violet. The chelipeds and fingers were transparent, with deep violet cross-bands at the joints, and across the fingers. The telson and uropods had each at its extremity a large orange yellow ocellus with a deep purplish violet margin; rest of tail-fan porcelain white.

Male examples obtained with the female were smaller and less ornate. The limbs and tail-fan were as described above, but the cephalothorax was only imperfectly marked, the eye markings being most conspicuous. Only the large median spot was present on the abdomen, the lateral ones being absent.

⁶ Kent—Nat. in Austr., 1897, p. 220, pl. 39.

⁷ The white marks on the cephalothorax and abdomen are copied from a drawing made in the field. This shows their relative positions, but does not indicate which particular segment they occur upon.

As Kemp (*loc. cit.*) has already noted, the colour of the species is very variable, and other examples from Port Denison and Saddleback Island, Queensland, are described by the donor, Mr. E. H. Rainford, as having the four ocelli on the tail-fan coloured rich brown with lighter centres. The other colours he noted agree with the above description. Further, some field notes made by one of us in 1907 at Murray Island, Torres Strait, describe a living specimen as being transparent, with four white scarlet-edged ocelli on each side, and one each of a similar colour on the telson and uropods. Legs with distal end of joints dark violet.

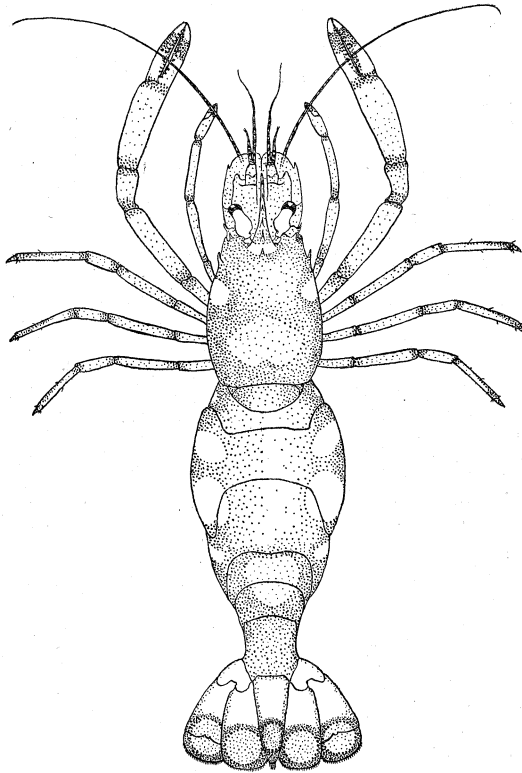


Fig. 2.

Periclimenes (Ancylocaris) brevicarpalis.

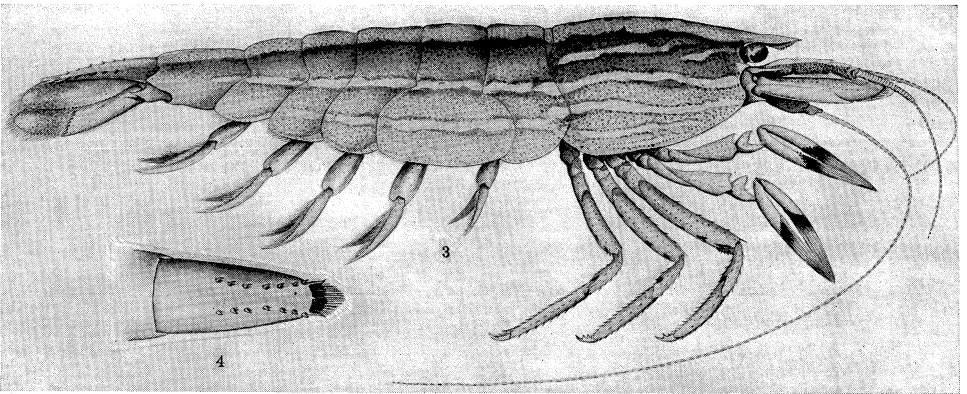
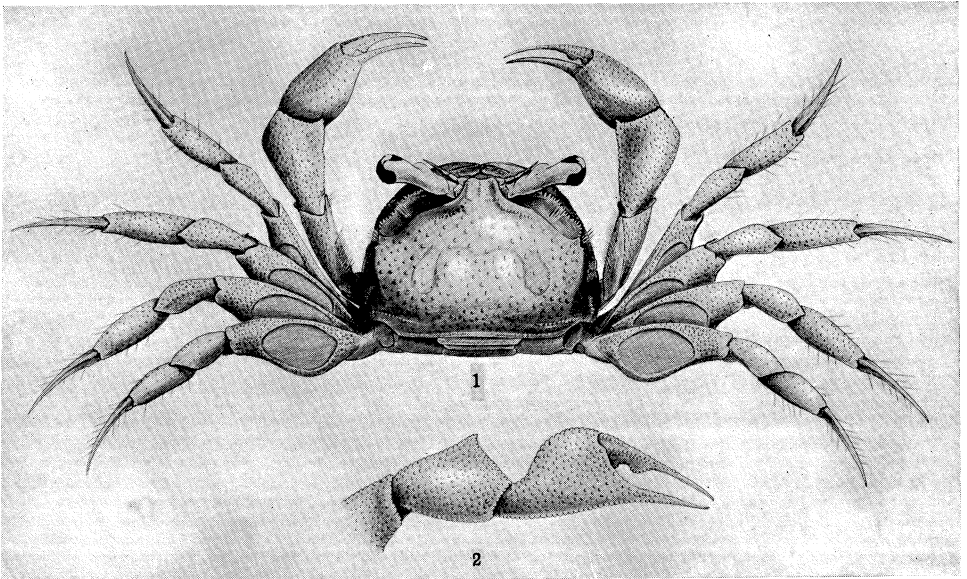
Ovigerous female measuring 30 mm. from tip of rostrum to end of telson.

Locality.—Hope Islands (lagoon), N. Queensland.

Localities.—Hope Islands (lagoon), off Cooktown, North Queensland; collected by A. R. McCulloch, 1918. Port Denison, Queensland; collected by E. H. Rainford, 1921. Saddleback Island, off Port Denison, Queensland; collected by E. H. Rainford, 1921.

EXPLANATION OF PLATE IX.

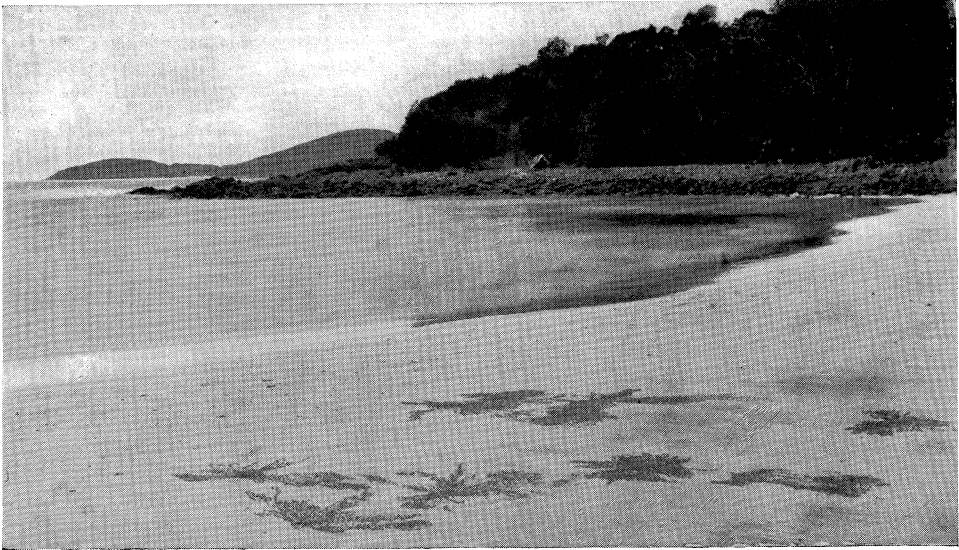
- Fig. 1 *Scopimera inflata* A. M. Edwards, male specimen 9 mm. wide,
from Finches Bay, near Cooktown, North Queensland.
- „ 2. Right chela of same specimen.
- „ 3. *Atya striolata*, sp. nov. Holotype, 44 mm. long, from Norton's
Basin, Nepean River, New South Wales. The third to
fifth pereopods are wanting in the holotype, and have been
drawn from a somewhat smaller paratype.
- „ 4. Dorsal view of the telson of the holotype, length 6 mm.



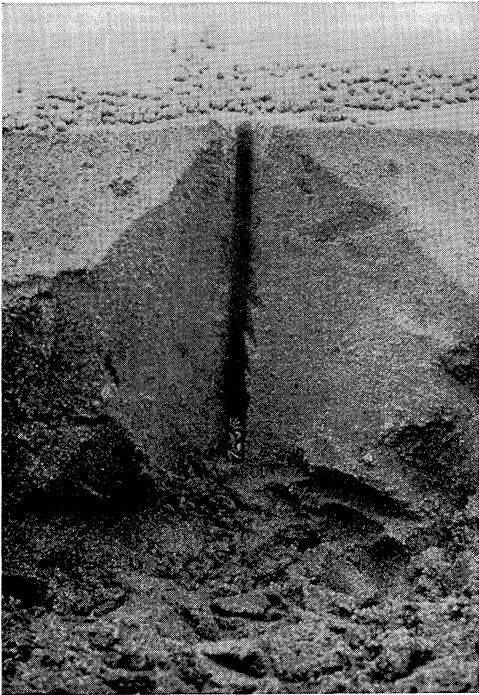
J. R. KINGHORN (1, 2, 4),
A. R. McCULLOCH (3), del.

EXPLANATION OF PLATE X.

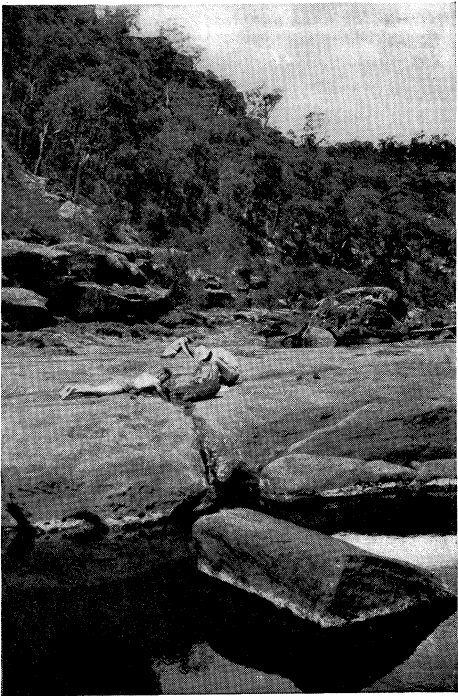
- Fig. 1. Showing a few isolated burrows of *Scopimera inflata*.
Fingal Bay, near Port Stephens, New South Wales;
January 28, 1920.
- „ 2. Showing a section of the burrow of *Scopimera inflata* penetrating the firm dry sand to the moist sand below. Depth about 12 inches. The crab is shown at the base of the burrow, while some pellets are scattered around its entrance on the flat of the beach.
Fingal Bay, near Port Stephens, New South Wales;
January 28, 1920.
- „ 3. Collecting a series of *Atya striolata*, sp. nov. at the type locality, Norton's Basin, Nepean River, New South Wales;
November, 1920.



1



2



3

H. FURST (1-2),
A. MUSGRAVE (3), photos.

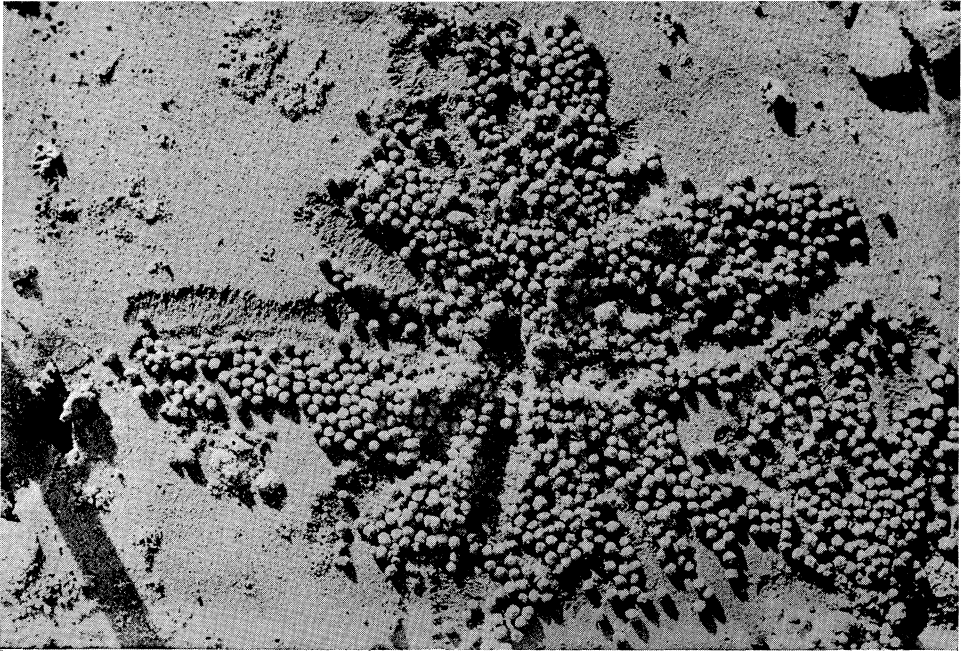
EXPLANATION OF PLATE XI.

Fig. 1. Burrow and pellets of *Scopimera inflata*, showing the radiating trenches excavated for food, and the sifted pellets arranged behind them. The large and irregularly-shaped sand pellets are those carried out by the crab while excavating its burrow.

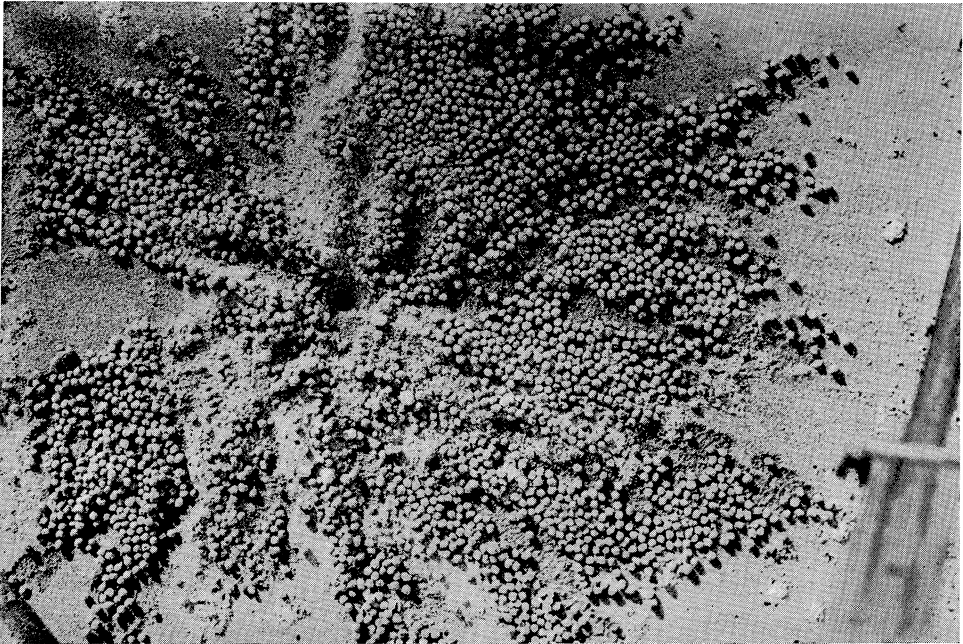
Fingal Bay, near Port Stephens, New South Wales;
January 28, 1920.

„ 2. Burrow and sand pellets of *Scopimera inflata*; illustrating the large number of pellets formed by a single crab.

Fingal Bay, near Port Stephens, New South Wales;
January 28, 1920.



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