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CRUSTACEA.

PART I.—DECAPODA.

BY

L. A. BORRADAILE, M.A.

*(Fellow, Dean and Lecturer of Selwyn College, Cambridge; Lecturer in Zoology in the University).*

WITH SIXTEEN FIGURES IN THE TEXT.



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# CRUSTACEA.\*

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### I.—INTRODUCTION.

THE species of Decapoda obtained by the "Terra Nova" number 46 in all, and are distributed pretty evenly throughout the taxonomic divisions of the order. According to the localities in which they were taken, they fall into five groups :

- (1) Antarctic.
- (2) From New Zealand and the neighbouring waters.
- (3) From Melbourne Harbour (a single species).
- (4) From between Rio de Janeiro and South Trinidad Island.
- (5) Pelagic species from the tropical and sub-tropical Atlantic.

(1) The Antarctic species were :

*Pasiphaea longispina*, Lenz and Strunck, 1914.

*Chorismus antarcticus* (Pfeffer), 1887.

*Crangon* (*Notocrangon*) *antarcticus*, Pfeffer, 1887, var. *gracilis*, n.

All were taken in the Ross Sea.

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\* In sending to the press this paper and that which follows it, I wish to acknowledge very heartily the courtesy of the authorities of the British Museum (Natural History), who have afforded me facilities for doing at the Museum a good deal of the work which the examination of the "Terra Nova" collection has involved. In particular I am indebted to Dr. W. T. Calman for the readiness with which he has placed at my disposal not only the collections under his charge, but also his own time and knowledge. Miss G. M. Woodward's excellent illustrations owe much to the assistance which she has received from Dr. Calman in their preparation.

abdominal segments except the first. I refer them somewhat doubtfully to this species.

Two specimens were taken at Stations 133, 135.

### TRIBE ANOMURA.

#### SUPER-FAMILY THALASSINIDEA.

#### 23. *Axius (Axius) novae-zealandiae*, n. sp. Fig. 5.

*Diagnosis.*—Cephalothorax deep and strongly compressed, with back continuously curved fore and aft, falling to the rostrum rather steeply, but not so abruptly as in *Scytoleptus*. Cervical groove well marked on the back, but less so at the sides. Flat

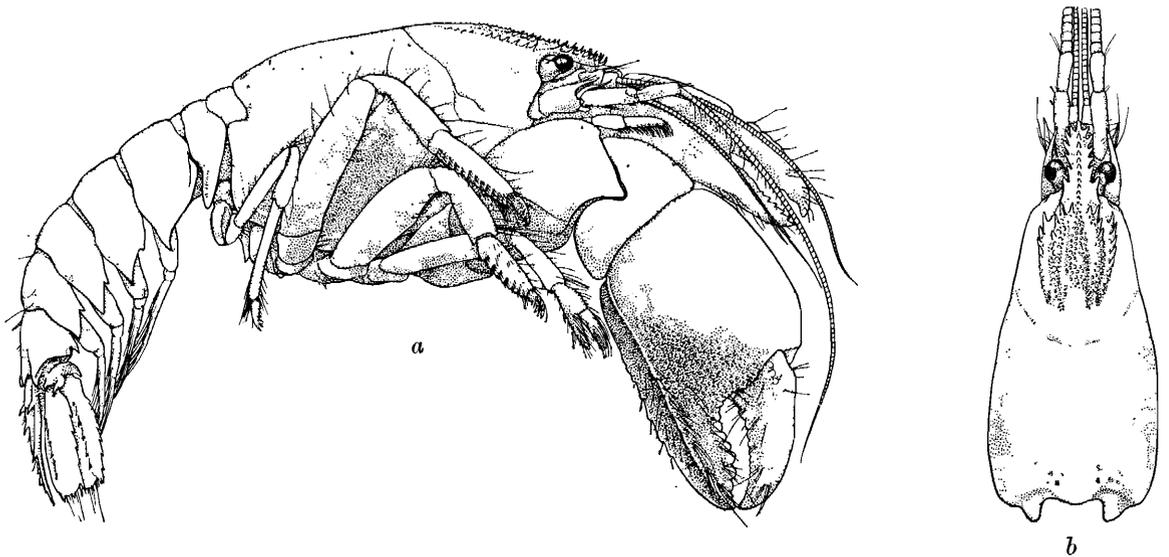


FIG. 5.—*Axius (Axius) novae-zealandiae*, n. sp. (a) Side view,  $\times 2\frac{1}{2}$ ; (b) dorsal view of cephalothorax,  $\times 2\frac{1}{2}$ .

area of back with, in the middle, an elongate-triangular patch of granules, which narrows forwards to become the middle keel of the rostrum, where its granules pass into a single row of about a dozen spines. At each side of this patch a strip of granules, which just behind base of rostrum become spines. Outside this again the edging-keel of the flat area, bearing from seven to ten spines, which are small behind, but grow larger in front till the last is a stout thorn at some distance from base of rostrum. Beyond this thorn, keel continued till it becomes side keel of rostrum, where it bears six long spines. Rostrum thus bears above three spined keels. It ends in an upcurved spine. Eyes well pigmented, reaching barely half-way along rostrum. Antennular stalk outreaching rostrum by its end-joint. Second and third joints subequal, and together shorter than first. Basicerite of antenna equal to first joint

of antennule; ischiocerite outreaching, by about half of its length, antennular stalk. Fixed and movable spines of antenna well developed, the latter a little longer than the former, and both a little outreaching the rostrum. Antenna a little longer than carapace including the rostrum. Third maxilliped outreaching rostrum by its last two joints, the last joint being a little longer than the preceding. Legs of the first pair unequal; that on right side, which is the larger, outreaching rostrum by its wrist and hand. Palm square, fingers nearly as long as the palm, fixed finger with a row of about ten blunt teeth. Inside of palm covered with fine pearly granules except near the wrist, and a patch of similar granules on the outside at the base of the fixed finger. Above, sides of palm slope to a sharp edge; lower side flat, with on outer side a sharp keel, continued along fixed finger. Smaller hand resembling larger, but more slender. Both sparsely hairy. Second leg outreaching rostrum by its hand, whose fingers are a little longer than the palm, and hairy all over the outer side. In third and fourth legs, propodite with some spines below in short transverse rows, more numerous on fourth leg than on third, and at the end a tuft of hairs, the dactylopodite having two longitudinal rows of spines and a sharp end-claw. In last leg only the distal two spine-rows on the propodite remain, hair-tuft longer, and broadened dactylopodite bites against a process of end of propodite, so that a clumsy subchela exists. Abdomen smooth. In male, each pleuron ends in a sharp point, and third to sixth bear each a spine on the fore edge. In female, pleura are broader but have a sharply cut hinder angle, except on sixth segment, and bear some hairs. Endopodite of the uropod with one, and exopodite with two keels; endopodite with about half a dozen spines on its outer edge and the same number on its keel; exopodite with the same arrangement on its outer edge and outer keel, but its inner keel smooth. Telson with, in its basal part, two marginal and four dorsal spines, in its distal part on each side two marginal spines, and on the broad, rounded end a group of three small spines on each side and a longer median spine.

Length of largest specimen, 6 cm.

Six specimens were taken at Station 96.

#### SUPER-FAMILY GALATHEIDEA.

##### FAMILY GALATHEIDAE.

###### 24. *Galathea pusilla*, Hend., 1885.

*Galathea pusilla*, Henderson, Ann. Mag. Nat. Hist. (5) XVI, p. 407; "Challenger" Anomura, p. 121, pl. XII, fig. 1 (1888).

Seven specimens were taken at Stations 90 and 96.

###### 25. *Uroptychus maori*, n. sp. Fig. 6.

Closely related to *U. nitidus* (A. M.-Edw.), 1880, but differs in that (1) the antennal scale is only as long as the eye, and broader than in *U. nitidus*; (2) the

ischium of the cheliped bears distally a fairly strong, straight spine below, and a very strong, curved spine above; (3) the fingers of the big chela are irregularly dentate with coarse and fine teeth, while those of the small chela are finely and regularly dentate save for a single big tooth on the movable finger.

One specimen was taken at Station 90.

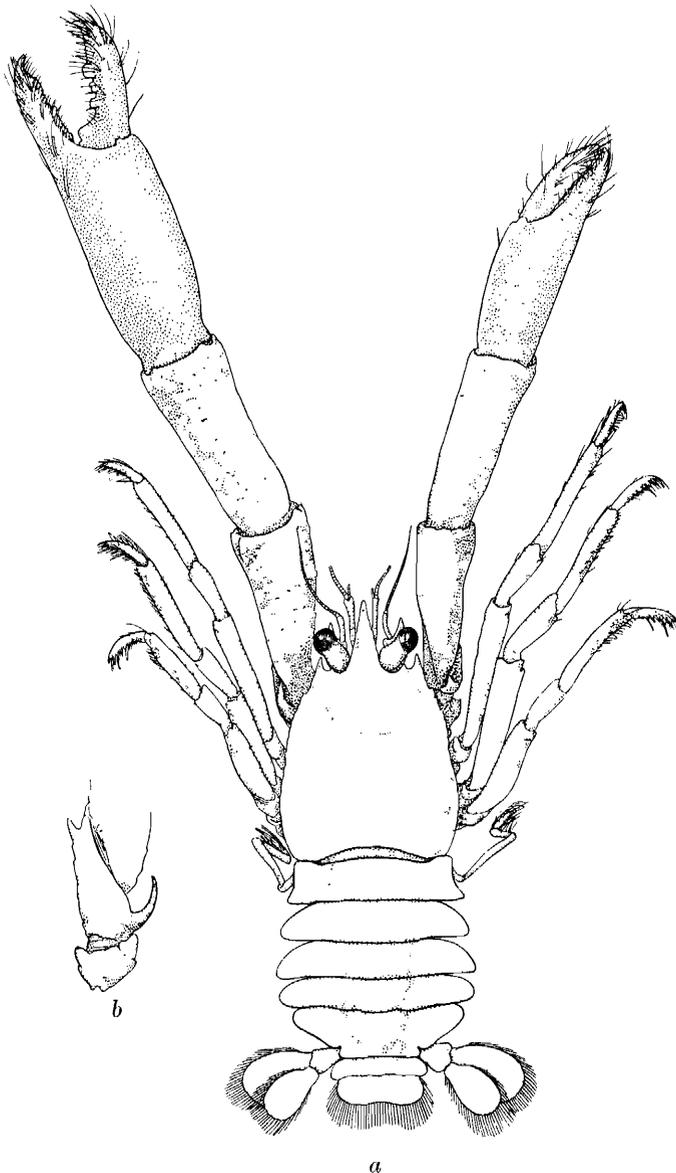


FIG. 6.—*Uroptychus maori*, n. sp. (a) Dorsal view,  $\times 2\frac{1}{2}$ ; (b) externoventral view of ischium of great cheliped,  $\times 2\frac{1}{2}$ .

26. *Uroptychus novae-zealandiae*, n. sp. Fig. 7.

*Diagnosis*.—Carapace perfectly smooth and unarmed save for one spine at the anterolateral angle and a larger one at a short distance behind it; regions ill-marked;

rostrum slightly outreaching eyes, unarmed, hollow above. Eystalks long, sub-cylindrical; eyes small. Antennule outreaching rostrum by flagella. Antenna outreaching rostrum by nearly the whole of the narrow region of its flagellum. All flagella short. Abdomen smooth. Third maxilliped outreaching eyes by end-joint and half propodite, polished, little hairy except near the tip. Cheliped of good length; hand equal to rest of limb; meropodite spiny only where it articulates with carpopodite,

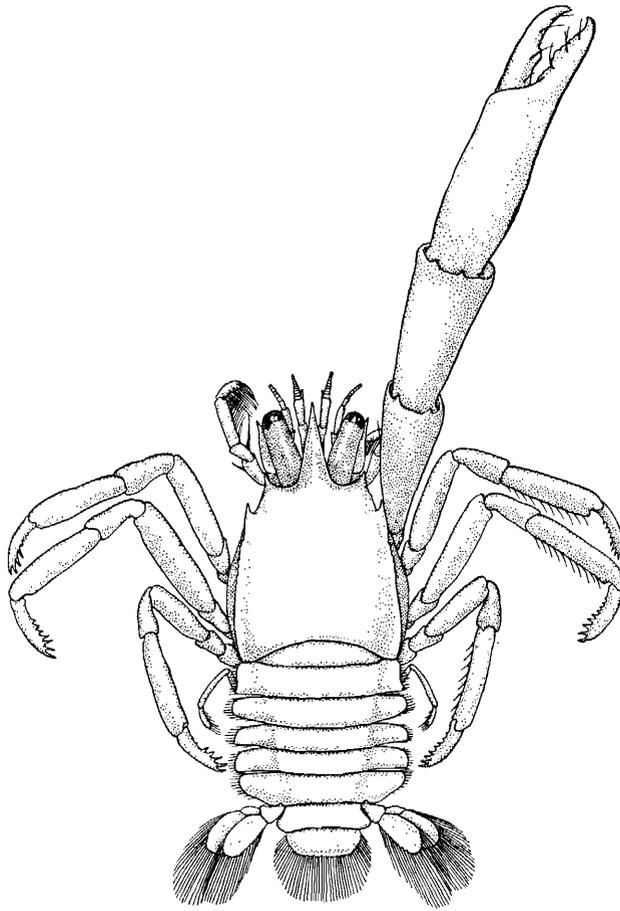


FIG. 7.—*Uroptychus novae-zealandiae*, n. sp.,  $\times 7$ .

which has also two spines at distal end; rest of limb smooth and unarmed; fingers shorter than palm, with faint traces of teeth. Second, third, and fourth legs smooth, unarmed save for a few slender spines at end of propodite, and a row of strong spines under dactylopodite.

Length, 8 mm.

One specimen was taken at Station 96.

## SUPER-FAMILY PAGURIDEA.

## FAMILY PAGURIDAE.

## SUB-FAMILY PAGURINAE.

27. *Paguristes subpilosus*, Hend., 1888.

*Paguristes subpilosus*, Henderson, "Challenger" Macrura, p. 77, pl. VIII, fig. 2.

The specimens would agree equally well with the description of *P. barbatus* (Heller) (Ortmann, Zool. Jahrb. VI, Syst., p. 279) were it not that the dactylopodites of the second and third legs are a good deal longer than the propodites and do not show a distinct continuation of the hairy line on the outside of the latter.

Four specimens were taken at Stations 90 and 96.

## SUB-FAMILY EUPAGURINAE.

28. *Eupagurus norae*, Chilton, 1911.

*Eupagurus edwardsii*, Filhol, Bull. Soc. Philomath. Paris (7), VIII, p. 66 (1883); Miss. Ile Campbell, III, ii, p. 412, pl. LII, figs. 1, 2 (1885); Thomson, Trans. N.Z. Inst. 1898, pp. 173, 182.

*Eupagurus norae*, Chilton, Rec. Canterbury Mus. I, p. 299 (1911).

The specimens agree closely with Thomson's description, but in most, though not in all, the teeth on the fingers of the great chela are obsolescent.

Many of both sexes were dredged in shallow water at Station 134, off New Zealand.

29. *Eupagurus kirki*, Filhol, 1885.

*Eupagurus kirki*, Filhol, Miss. Ile Campbell, III, ii, p. 416, pl. LI, fig. 5; Thomson, Trans. N.Z. Inst. 1898, p. 175, pl. XX, figs. 8-10.

According to Thomson, the antennular stalk should be one-fourth shorter than the eyestalk. In the three specimens taken by the Expedition the antennular stalk slightly outreaches the eye.

Station 134.

30. *Eupagurus crenatus*,\* n. sp. Fig. 8.

*Diagnosis*.—Carapace smooth, with a few sparse hairs. Rostrum low, broad, not covering eye somite. Length of eyestalks moderate, less than width of carapace just behind antennae. Antennular stalk outreaching eye by nearly all its last joint. Antennal scale outreaches eye; flagellum outreaching, by a little, second leg. Third maxilliped a little outreaching antennule. First legs unequal. In the right, which is the larger of the two, meropodite hatchet-shaped in side view, its outer surface scaly, a spine at distal end of its upper edge and a row of smaller spines along lower edge; wrist faintly granular on outer side, strongly so above, some of the granules rising into

\* In allusion to the crenate ridges on the hands of the chelipeds.