

# Steenstrupia

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## Decapod crustaceans collected in southern African waters by the Th. Mortensen Java-South Africa Expedition (Crustacea, Decapoda)

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**Abstract.** A report on 68 species, from both the intertidal and the continental shelf, is presented. The descriptions of *Cryptodromiopsis mortenseni* sp.n., and *Pseudodromia trepidus* sp. n. (Brachyura, Dromiidae), a new record of *Alpheus albatrossae* (Natantia, Alpheidae), and notes on a few rare decapods are included.

Most of the material dealt with in this report, was collected by the Th. Mortensen Java-South Africa expedition in 1929-1930. During his stay in the southern African region, Mortensen made use of the Union Government research vessel »Pickle« from 22.viii.1929, and again from 17-23.xii.1929. The commercial trawler »John C. Meikle« was used from 8-14.xii.1929. Dredgings and trawls were done from both of these vessels, but in addition, hand collecting along the shores was also carried out, and in this latter case, no station numbers were provided. Two samples from the 1935 Swedish Expedition are also included, as well as four samples from the Galathea Expedition. The area covered by this collection stretches from the South West African coast in the west, to Delagoa Bay in the east, with a preponderance of stations in the Table Bay, False Bay, and Durban areas.

All the material was loaned to the author by the Zoological Museum, Copenhagen, where the types will also be housed.

**General Remarks.** The present collection of decapods is comprised of 68 species, made up of 37 species of crabs, 12 species of anomurans, 1 astacid, 2 palinurids, and 11 natantians. The collection is particularly valuable as it provides information on the fauna of the continental shelf of southern Africa, an area which with few exceptions, has been poorly sampled. Thus for several of the species listed, the data provided represent extensions either in geographic ranges or in depth ranges, or additional records of rare species. Just how poorly the continental shelf fauna is known, is illustrated by the fact that although this collection was made 45 years ago, two new species of crab, a possible new species of pagurid, and a completely new record of an alpheid shrimp for the Indian Ocean have been revealed.

*Species List.* In the following list, most of the samples bear the original Th. Mortensen station numbers. These are given without any prefix. Some samples did not receive station numbers, but bear the original "Pickle" numbers. The exact bearings for many of the stations are not given, but rather the approximate locality, for reasons of easy orientation for the reader; thus 'detailed localities within Table Bay and False Bay are not given.

The species are arranged alphabetically within the major decapod divisions, no attention being paid to familial position.

Abbreviations. Gal. = Galathea station; int. = intertidal; juv. = juvenile; P = Pickle station; Sw. Exp. = Swedish Expedition; \*) = species dealt with elsewhere in the present paper.

Species	Station Number	Locality	Depth (Metres)	Material
<b>BRACHYURA</b>				
<i>Achaeopsis spinulosus</i> Stimpson	51	Agulhas Bank	88	2 ♀
	61	False Bay	49	1 ♀
	69	Off Cape Point	55	1 ♂
<i>Achaeopsis thomsoni</i> (Norman)	P 1196, P 1480-83	Off Cape Peninsula	132-247	14 ♂, 1 ♀, 1 ovig.
<i>Arcania undecimspinosa</i> de Haan	24,30	Off Durban	91, 220	2 ♂
<i>Corycodus disjunctipes</i> (Stebbing)	24	Off Durban	220	1 ♂
<i>Cryptodromiopsis bituberculata</i> (Stebbing)	60	False Bay	55	1 ovig.
<i>Cryptodromiopsis mortenseni</i> sp. n. *)	-	Off Durban	100	1 ovig.
<i>Cryptodromiopsis spongiosa</i> (Stimpson)	66, 67	False Bay	15, 31	5 ♂, 5 ♀, 1 ovig.
	69	Off Cape Point	55	1 ♀
	P 4063	Durban	80	1 ♀
	Sw. Exp.	Table Bay	-	1 ♂
<i>Cyclograpsus punctatus</i> H. M. Edwards	Gal. 772	False Bay	Int.	1 ♀
	-	Table Bay	Int.	4 ♂, 2 ♀
<i>Dehaanius dentatus</i> (A. M. Edwards)	63, 67	False Bay	15, 29	9 ♂, 3 ♀, 7 ovig.
<i>Dehaanius scutellatus</i> (McLeay)	-	Bluff, Durban	Int.	1 ♀
<i>Dorippe lanata</i> (Linnaeus)	26, 31	Off Durban	71, 124	1 ♂, 1 ♀, 1 ovig.
<i>Dromidia aegibotus</i> Barnard	69	Off Cape Point	55	1 ♂

<i>Ebalia pondoensis</i> Barnard*	24, 27, 28, 31	Off Durban	124-293	10 ♂, 5 ♀, 2 ovig.
<i>Ebalia tuberculata</i> Miers	30	Off Durban	91	2 ♂, 1 ovig.
<i>Ebalia tuberculosa</i> (H.M. Edwards)	59	Off Cape Point	243	1 ♂
<i>Eudromidia hendersoni</i> (Stebbing)*	50	Agulhas Bank	64	1 ♂
<i>Eurynome aspera</i> (Pennant)	24, 30, 31	Off Durban	91-220	4 ♂, 4 ovig.
	60	False Bay	55	1 ♂, 1 ♀
<i>Exodromidia bicornis</i> (Studer)	55, 56, 57	Off Cape Peninsula	216-326	8 ♂, 1 ♀, 1 ovig.
<i>Exodromidia spinosa</i> (Studer)	55, 59, 73, 74	Off Cape Peninsula	216-267	4 ♂, 1 ovig.
	P 1481		201	2 ♂
<i>Goneplax angulata</i> (Pennant)	Gal. 156	32.37S., 17.25E.	116	1 ♀
	51	Agulhas Bank	88	1 ♂
<i>Homola alcocki</i> (Stebbing)	24, 29	Off Durban	165, 220	1 ♂, 1 ♀
<i>Hymenosoma orbiculare</i> Desmarest	Gal. 169	False Bay	20	1 ♂, 2 ♀, 2 ovig.
<i>Inachus dorsettensis</i> (Pennant)	24, 27, 31	Off Durban	124-232	10 ♂, 2 ♀, 4 ovig.
<i>Inachus guentheri</i> (Miers)	30, 31	Off Durban	91, 124	8 ♂, 1 ♀, 5 ovig.
	51	Agulhas Bank	88	2 ♀
	60	False Bay	55	1 ♂
	69	Off Cape Point	55	2 ♀
<i>Litocheira kingsleyi</i> (Miers)	57, 58, 74	Off Cape Peninsula	267-326	3 ♂
<i>Macropodia falcifera</i> (Stimpson)	49, 50, 51	Agulhas Bank	64-88	5 ♂, 1 ♀, 2 ovig.
	69	Off Cape Point	55	2 ♂
<i>Macropodia formosa</i> Rathbun	24, 31	Off Durban	124, 220	2 ♂
<i>Matuta lunaris</i> (Forsk.)	-	Lourenço Marques	Int.	1 ♂
<i>Medaeus granulatus</i> (Haswell)	-	Durban	Int.	2 ♂
<i>Petalomera wilsoni</i> (Fulton & Grant)	30, 31	Off Durban	91, 124	2 ♀
	P 4063	33.34S., 27.09E.	80	1 ♂
	-	Durban	240	2 ♂
<i>Pilumnoides perlatus</i> (Poeppig)	63	False Bay	29	1 ♀
	Sw. Exp.	Table Bay	Int.	2 ovig.
<i>Pilumnoplax heterochir</i> (Studer)	55, 73	Off Cape Peninsula	216	6 ♂, 3 ♀
	P 1482	Off Cape Peninsula	210	1 ♀
<i>Platylambrus quemvis</i> Stebbing	26	Off Durban	71	1 ♀
	54	Off Cape Peninsula	172	2 ♂, 2 ♀, 2 juv.

Species	Station Number	Locality	Depth (Metres)	Material
	P 1445	30.09S., 30.58E.	320	1 ♂, 1 ovig.
<i>Portunus pelagicus</i> (Linnaeus)	Gal. 187	Durban	–	1 ovig.
<i>Pseudodromia latens</i> Stimpson	49	Agulhas Bank	75	1 ♀
	–	False Bay	50	2 ♀
<i>Pseudodromia trepidus</i> sp. n.*)	P 4063	33.34., 27.09E.	80	1 ♀
<i>Scyramathia hertwigi</i> Doflein	56	Off Cape Peninsula	293	1 ovig.
ANOMURA				
<i>Anapagurus hendersoni</i> Barnard	24, 31	Off Durban	124–220	4 ♂, 3 ovig.
	60	False Bay	55	1 ♂, 1 ovig.
<i>Dardanus arrosor</i> (Herbst)	24–31	Off Durban	71–293	3 ♂, 3 ♀, 1 juv.
	49, 50	Agulhas Bank	64–75	6 ♂, 1 ♀, 1 ovig.
	–	Table Bay	–	1 ♂
	–	South Africa	–	2 ♂, 1 ovig.
<i>Dardanus megistos</i> (Herbst)	P 2539	29.51S., 31.24E	440	1 ♀
<i>Diogenes brevirostris</i> Stimpson	–	Natal	Int.	1 ♂
	–	Algoa Bay	Int.	1 ♀
<i>Diogenes costatus</i> Henderson	50	Agulhas Bank	64	1 ♀
	63, 64	False Bay	29	2 ♂
	–	South Africa	–	1 ♂
<i>Diogenes extricatus</i> Stebbing	–	South Africa	–	1 ♂
<i>Galathea dispersa</i> Bate	24, 28, 30	Off Durban	91–293	18 ♂, 1 ♀, 25 ovig.
	60, 61	False Bay	49, 55	16 ♂, 10 ♀, 2 ovig.
	69	Off Cape Point	55	7 ♂
<i>Galathea intermedia</i> Liljeborg	26, 27	Off Durban	71, 232	10 ♂, 9 ovig.
	50	Agulhas Bank	64	2 ♂
<i>Munida semoni</i> Ortmann	24, 30	Off Durban	91, 220	9 ♂, 3 ♀, 6 ovig.
? <i>Nematopagurus</i> sp.*)	24	Off Durban	220	1 ♀
<i>Neolithodes asperrimus</i> Barnard	P 6471–73	Off Durban	422	1 juv. ♀
<i>Paguristes gamianus</i> (H. M. Edwards)	–	False Bay	–	1 ovig.
<i>Pagurus</i> sp. (damaged)	31	Off Durban	124	1 ♂, 1 ♀



<i>Parapagurus dimorphus</i> (Studer)	54, 55, 59 P 1196, P 1481-82	Off Cape Peninsula Off Cape Peninsula	172-243 159-210	9 ♂, 17 ♀, 25 ovig. 3 ♂, 9 ♀, 3 ovig.
<i>Parapagurus pilosimanus</i> Stebbing	P 1483	Off Cape Peninsula	247	2 ♂
<i>Porcellana streptocheles</i> Stimpson	26 60, 63	Off Durban False Bay	71 29, 55	1 ♀, 1 ovig. 1 ♂, 1 ♀, 1 juv.
<i>Upogebia savignyi</i> Strahl	50	Agulhas Bank	64	1 ♂, 1 ovig.
ASTACIDA				
<i>Nephropsis atlantica</i> Norman	P 6471-3	Off Durban	422	1 ♀
PALINURA				
<i>Jasus lalandii</i> (H. M. Edwards)	49 -	Agulhas Bank Table Bay	75 -	1 ♂ 1 ♂, 1 ♀
<i>Palinurus gilchristi</i> Stebbing	25 49	Off Durban Agulhas Bank	412 75	1 ♂ 1 ♂, 1 ♀
NATANTIA				
<i>Alope orientalis</i> (de Man)	-	Durban	-	2 ovig.
<i>Alpheus albatrossae</i> (Banner)*	30	Off Durban	91	5 ♂, 8 ovig.
<i>Alpheus edwardsii</i> (Audouin)	-	Lourenço Marques	-	1 ♂, 2 ♀, 2 ovig.
<i>Alpheus lottini</i> Guérin	-	Inhaca Is.	Int.	1 ovig.
<i>Athanas indicus</i> (Coutière)	-	Bluff, Durban	Int.	1 ♂
<i>Athanas minikoensis</i> Coutière	-	Durban	Int.	1 ovig.
<i>Eualus ctenifera</i> (Barnard)	60, 61 69	False Bay Off Cape Point	False Bay 55	49, 55 2 ovig.
<i>Hippolysmata kuekenthali</i> (De Man)	-	Bluff, Durban	-	1 ovig.
<i>Palaemon pacificus</i> (Stimpson)	- -	Table Bay Durban	- -	2 ovig. 1 ovig.
<i>Pontocaris lacazei</i> Gourret	56, 57, 73	Off Cape Peninsula	216-326	1 ♂, 1 ovig.
<i>Synalpheus anisocheir</i> Stepping	67	False Bay	15	4 ♂, 3 ♀, 1 ovig.

## BRACHYURA, LEUCOSIIDAE

*Ebalia pondoensis* Barnard

*Ebalia tuberculata* auct., not Miers, Barnard, 1947:373; 1950:367, figs. 70a-e.

*Ebalia pondoensis* Barnard, 1955:4.

*Material.* 10 ♂, 5 ♀, and 2 ovig., off Durban, 124-293 m, (Sts. 24, 27, 28, 31).

*Previous records.* From East London to Durban, 60-300 m.

*Remarks.* Barnard (1955) in an easily-overlooked list of species of crustaceans new to southern Africa, mentions briefly that the species previously recorded as *Ebalia tuberculata* from South Africa, was not Miers' species. He then proposed the name *E. pondoensis* for this species, and noted that Stebbing's species *E. barnardi* is the true *E. tuberculata* Miers.

*Lectotype.* From the material collected by the ss. "Pieter Faure", a male has been selected and designated as lectotype (Off Durban, 29.50 S., 31.10 E., 96 m. South African Museum No. SAM-A13783).

## BRACHYURA, DROMIIDAE

*Cryptodromiopsis mortenseni* sp.n. Figs. 1a-g

*Holotype.* 1 ovig. ♀, carapace length 5,5 mm, carapace breadth 5,3 mm, off Durban, 30.04 S., 30.00 E., 100 m. (St. 60).

*Description.* Female. Carapace (including fronto-lateral teeth) slightly longer than wide, margins of frontal teeth and carapace granulate, rest of carapace smooth; covered with short curved densely plumose hairs; frontal lobes broadly triangular, rostral point ventral to frontal lobes but visible in dorsal view; suborbital tooth broad, granular; postero-lateral margin of branchial region bearing three granulate tubercles.

Basal segments of antennae and antennules granular.

Medial margin of third segment, and medial and distal margins of fourth segment of third maxilliped bearing row of uniform granules.

Finger and thumb of cheliped bent at slight angle to, and shorter than palm of chela; tips of finger and thumb rounded; rounded tubercle present on upper surface of palm at base of finger; outer and upper surface of propodus bearing scattered tiny granules; carpus and merus also granular, both with irregular knobs.

Second and third pereopods similar, dactyli slender, proximally straight, distally curved, corneous unguis about one fifth length of dactylus, ventral surface bearing three or four corneous spines; articulation with propodus involving a rounded tubercle from base of dactylus extending onto forwardly extended tubercles of propodus; upper margin of carpus with few granules; merus triangular in cross section, with row of granules along each edge.

Fourth pereopod shorter than fifth, dactylus slender, claw-like, meeting slender spine from distal end of propodus.

Fifth pereopodal carpus and merus more elongate than in fourth pereopod; dactylus slender, claw-like, meeting much smaller spine-like extension of propodus.

Sternal grooves ending close together, on slightly elevated process situated between bases of first and second pereopods.

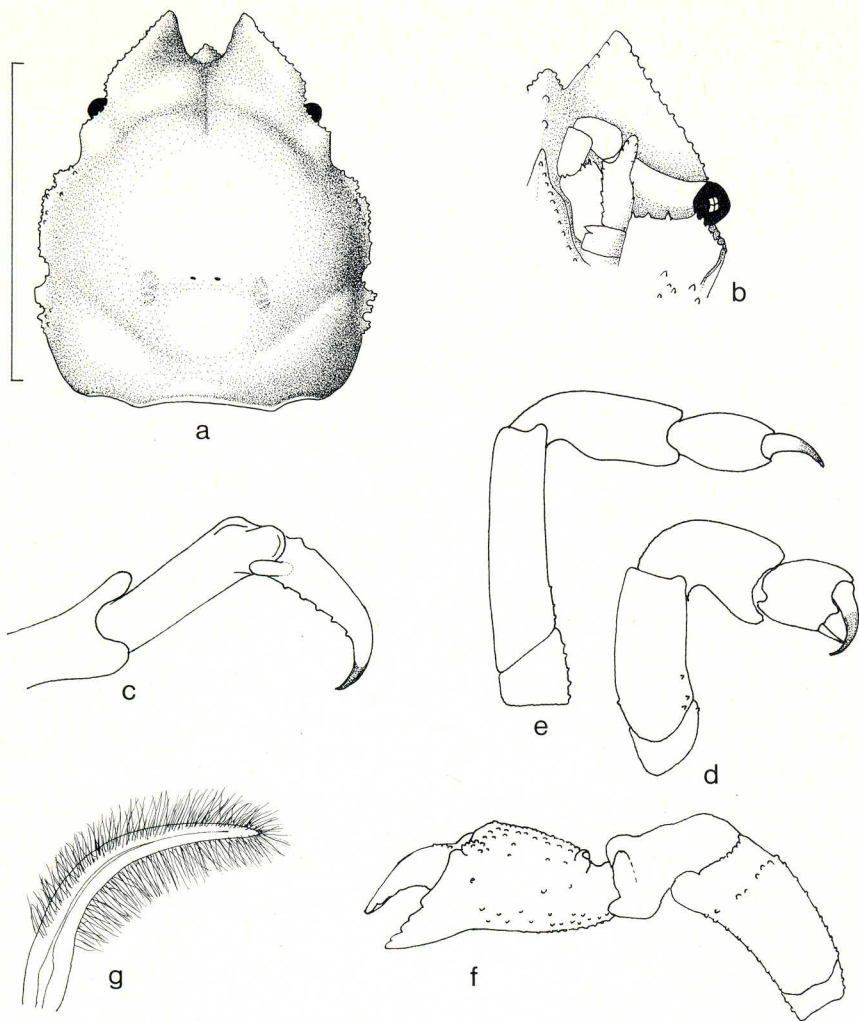


Fig. 1. *Cryptodromiopsis mortenseni* sp. n. Holotype. a) Carapace in dorsal view, setae removed, scale 5 mm; b) Ventral view of anterior carapace region; c) Dactylus and propodus of third pereopod; d) Fourth pereopod; e) Fifth pereopod; f) Cheliped; g) Carapace hair.

**Remarks.** The feature of the sternal grooves ending together, with the lack of pereopodal epipods, and the nodose legs, places this species in the genus *Cryptodromiopsis* Borradaile.

There is a marked resemblance between this species and *Cryptodromiopsis lepidota* Barnard, 1947, especially in the broadly triangular frontal lobes, the overall small size, in the fifth pereopod being slightly longer than the fourth. The



distinctive scale-like covering of Barnard's species, however, is here replaced by short curved densely-plumose hairs, while the ventrally situated median rostral point is visible in dorsal view, unlike *C. lepidota*. The granular appearance of the appendages and carapace margins, however, also easily separate the two species.

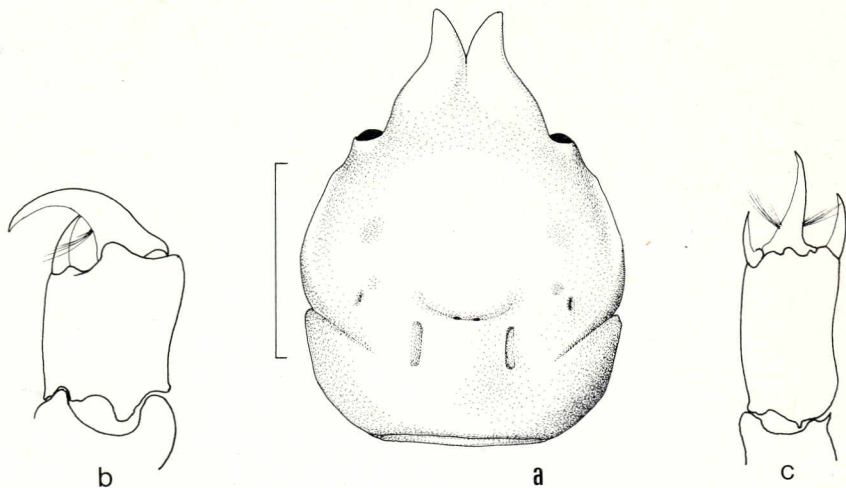


Fig. 2. *Eudromidia hendersoni* (Stebbing). a) Carapace in dorsal view, setae removed, scale 5 mm; b) Dactylus and propodus of fourth pereopod; c) Dactylus and propodus of fifth pereopod.

*Eudromidia hendersoni* (Stebbing). Figs. 2a-c

*Eudromia hendersoni* Stebbing, 1921:462, pl. 19.

*Eudromidia hendersoni*, Barnard, 1950:315, fig. 59g,h.

**Material.** 1 ♂, carapace length including rostrum 11,4 mm, carapace breadth 9,0 mm, 6,4 km S. off Cape Barracouta (St. 50).

**Previous record.** 1 ♀, False Bay, Cape, 35 m.

**First description of male.** Dorsal and ventral surfaces of cephalothorax and appendages covered with short dense pile of hairs. Rostrum well developed, consisting of two apically narrowly-rounded diverging lobes, with tiny ventral knob situated between and below dorsal lobes; no other ornamentation or spination on carapace, except for oblique groove in branchial region. Abdomen of seven segments, first segment narrow, with lateral extensions between carapace and bases of fifth pereopods; remaining abdominal segments not as broad as first, but longer: sixth and seventh segments narrower than preceding segments; seventh segment triangular, tapering to acute point.

Finger and thumb of cheliped bent at shallow angle to rest of hand, apex of finger acute, cutting edges consisting of six or seven rounded serrations; upper surface of hand somewhat flattened, with a ridge on inner margin; carpus with two rounded knobs on distal margin; no epipods present.



Second and third pereopods with barely noticeable knobs at distal ends of propodi and carpi.

Fourth pereopod slightly shorter than fifth, dactylus slender, clawlike, forming pincer with slender propodal spine.

Fifth pereopod with slender slightly curved claw-like dactylus, flanked by similarly-shaped spine on upper and lower distal margin of propodus.

*Remarks:* This species was previously known from a single female from False Bay. Stebbing's description (1921) is inadequate as the thick pile of hairs was not removed to reveal underlying structures. By the time Barnard dealt with the same specimen, it was in poor condition and fragmented.

*Pseudodromia trepidus* sp.n. Figs. 3a-d

*Holotype.* 1 ♀, carapace length including rostrum 11,9 mm, carapace breadth 11,2 mm, 33.34 S., 29.09 E., 80 m (St. P 4063).

*Description.* Female. Carapace slightly longer than wide, strongly globose. Carapace and legs covered with dense pile of short hairs; front tridentate, median spine smaller than, and ventral to lateral teeth; latter narrowly rounded, inner orbital tooth well developed. Branchial groove well defined, marked by blunt spine on postero-lateral margin.

Finger and thumb of chela proximally serrated, distally possessing four or five large rounded teeth; propodus, carpus, and merus having low irregular rounded knobs.

Pereopods two and three similar, dactyli gently curved, strong corneous unguis present, ventral margin bearing three corneous spines.

Fourth pereopod shorter than fifth, dactylus slender, claw-like, propodus short, unarmed; carpus and merus unequal in length.

Fifth pereopodal dactylus slender, tapering and claw-like, propodus with anterior and posterior spine at distal end flanking dactylus; carpus and merus more elongate than in fourth pereopod, merus slightly longer than carpus. Sternal grooves ending on a boss between bases of second pereopods.

*Remarks:* The lack of epipods on the relatively smooth pereopods, the tridentate front of the carapace, the sternal grooves ending together, and especially the fifth pereopod being longer than the fourth, together place this specimen in the genus *Pseudodromia*. Of the two South African species of this genus which possess a tridentate front, (See Gordon, 1950: 212), *P. latens* has the two dorsal teeth parallel, while in *P. rotunda* the ventral tooth is equal in size to the two dorsal ones, unlike the present specimen. The specimen closely resembles *Dromidia unidentata* (Rüppell) especially in the shape and ornament of the carapace, and in the relative lengths of the fourth and fifth pereopods. Although the characteristic of a fifth pereopod being longer than the fourth is the distinguishing feature of the genus *Pseudodromia*, this species of *Dromidia* known from several localities in the Indian Ocean also shows this feature. The structure of the propodi and dactyli of the fifth pereopods of these species, however, shows distinct differences. In *D. unidentata* the dactylus is strongly tridentate with two smaller subsidiary spines, while the dactylus of *P. trepidus* is a single claw-like structure flanked by two propodal spines. Furthermore the finger and thumb of *D. unidentata* is relatively longer than

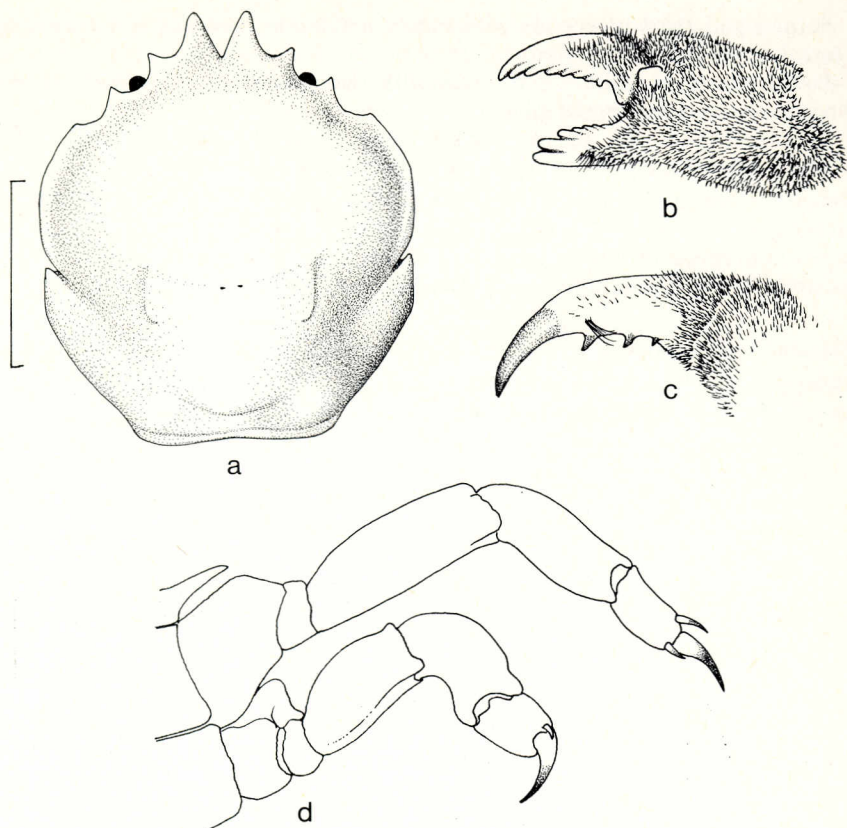


Fig. 3. *Pseudodromia trepidus* sp. n. Holotype. a) Carapace in dorsal view, setae removed, scale 5 mm; b) Chela; c) Dactylus of third pereopod; d) Fourth and fifth pereopods.

that of the present species and possess more teeth on the cutting edge. While the present specimen is placed in the genus *Pseudodromia*, it is clearly necessary that some of the southern African dromiid genera be re-examined and redefined. The specific name reflects my unease regarding the generic position of this species.

#### ANOMURA, PAGURIDAE

? *Nematopagurus* sp. Fig. 4

*Material.* 1 ♀, off Durban, 220 m (St. 24).

*Remarks.* The third maxillipeds being separate at their bases places this specimen in the Eupagurinae. Several features would seem to place this specimen in or close to the genus *Nematopagurus*. These include the presence of a pair of pleopods on the first abdominal segment, plus four single pleopods on the left side of the following four segment, eleven gills on each side, and the finger and thumb of the

chelipeds moving horizontally. As no male is available, however, the condition of the vasa deferentia and the pleopods is unknown, and the generic position of the species must remain uncertain. The sculpture and proportions of the chelipeds do not resemble any pagurids known from southern Africa, and this specimen may well represent an undescribed species.

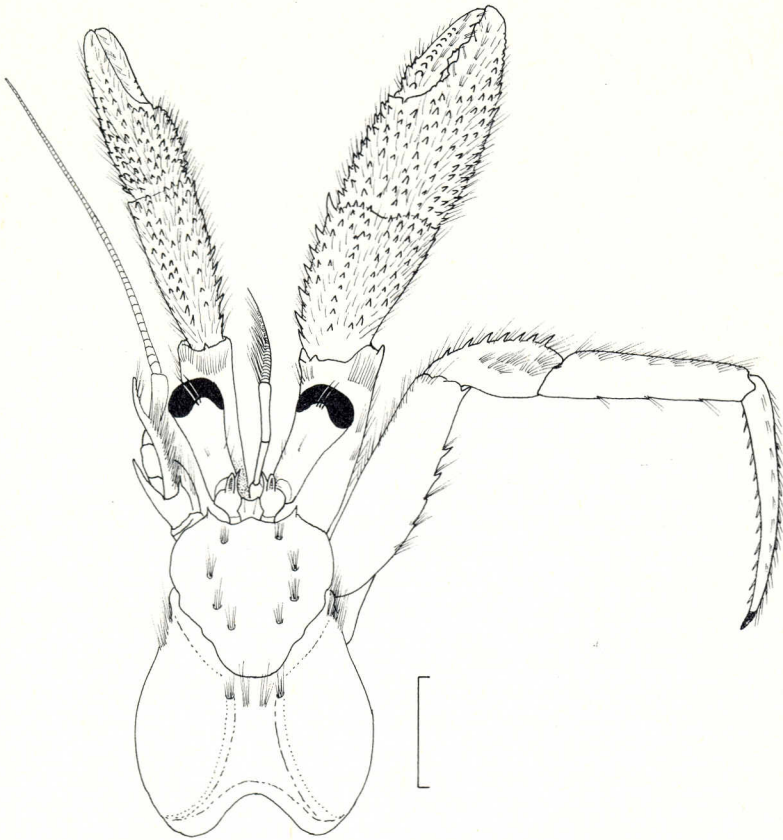


Fig. 4. ? *Nematopagurus* sp. Cephalothorax and appendages in dorsal view, scale 5 mm.

#### NATANTIA, ALPHEIDAE

*Alpheus albatrossae* (Banner). Figs. 5a,b

*Crangon albatrossae* Branner, 1953:60, fig. 18.

*Alpheus albatrossae*, Miya, 1974:121, pl.20.

**Material.** 5 ♂, carapace lengths 5,1–7,4 mm, total lengths 14,5–20,0 mm, 8 ovig. ♀, carapace lengths 5,0–7,4 mm, total lengths 13,4–20,4 mm, off Durban, 30.04 S., 31.01 E., 91 m (St. 30).



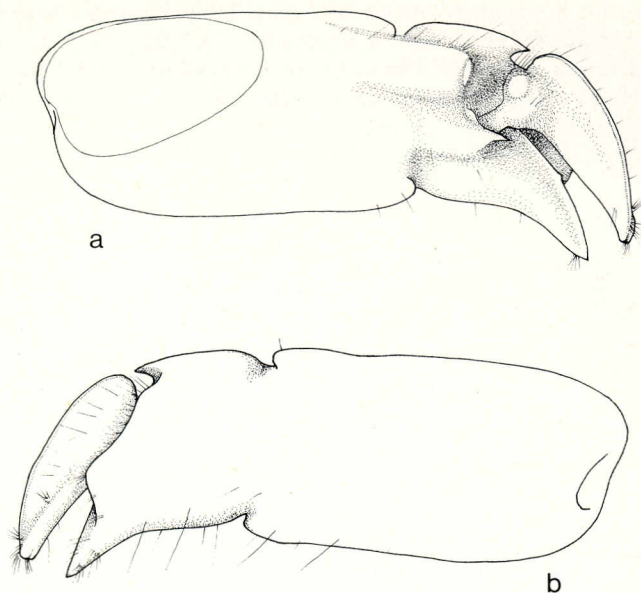


Fig. 5. *Alpheus albatrossae* (Banner). Large chela, median view (a), outer view (b).

*Previous records.* Southern Japan, East China Sea, Micronesia, Hawaii.

*Remarks.* The presence of supra-orbital spines, unarmed merus of third pereopod, simple dactyli on posterior three pairs of pereopods, and the nature of the larger cheliped, places this species in the *Megacheles* group.

Miya (1974) lists four differences between the Japanese and Hawaiian material. The Natal specimens agree with the Japanese specimens on these four points: styliform bristles on the anterior four pleopods, finger of larger chela not bulbous, merus of third pereopod eight times longer than wide, distal margin of uropodal endopod fringed with five to thirteen spinules.

Slight differences do exist between the larger chelae of the Japanese and the present specimens. The finger and thumb would seem to be more oblique, from Miya's figure (pl. 20B) but this is perhaps due to the angle from which the appendage is viewed.

#### *Acknowledgements*

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