

THE SOUTH AFRICAN MUSEUM'S *MEIRING NAUDE* CRUISES
PART 2
CRUSTACEA, DECAPODA, ANOMURA AND BRACHYURA

By
BRIAN KENSLEY
South African Museum, Cape Town

(With 17 figures)

[MS. accepted 7 December 1976]

ABSTRACT

Twenty-seven species of anomuran and brachyuran decapod crustaceans from deep water off Natal are dealt with. Of the nine new records for the area, five are described as new species. These are *Uroptychus foulisi*, *Uroptychus simiae*, *Uroptychus undecimspinosus*, *Pseudodromia spinosissima* and *Rochinia natalensis*.

CONTENTS

	PAGE
Introduction	161
Species list	161
Systematic discussion	163
Acknowledgements	187
References	187

INTRODUCTION

The present paper forms part of a series, based on material collected by the South African Museum during two cruises off the Natal coast, on the R/V *Meiring Naude*. For the scope of, and the background to this programme, as well as for all station data, the reader is referred to Louw (1977).

Only the systematics of the Anomura and Brachyura collected are here presented. It is hoped to deal with aspects of the benthic ecology and zoogeography of the cruises in a separate paper.

The following abbreviations are used throughout this paper: SAM—South African Museum catalogue number; SM—*Meiring Naude* station numbers; CB—carapace breadth; CL—carapace length; R—rostrum; ovig.—ovigerous; juv.—juvenile.

SPECIES LIST

	SM Station no.	♂♂	ovig. ♀♀	♀♀	juv.
Suborder ANOMURA					
Family Paguridae					
<i>Pagurus</i> sp.	22	—	—	1	—
	66	1	—	—	—
<i>Parapagurus pilosimanus</i> Smith	22	—	—	4	—
	28	—	—	1	—
	38	5	6	—	—

	SM Station no.	♂♂	ovig. ♀♀		juv.
<i>Parapagurus pilosimanus</i> Smith (cont.)	58	1	—	—	—
	66	3	4	—	—
	83	5	3	4	—
	91	—	1	—	—
* <i>Porcellanopagurus</i> sp.	43	—	1	—	—
Family Lithodidae					
* <i>Lithodes murrayi</i> Henderson	83	—	—	1	—
Family Chirostylidae					
* <i>Uroptychus foulisi</i> sp. nov.	107	1	—	1	—
<i>Uroptychus nitidus</i> (A. M. Edwards)	28	—	1	—	—
	31	1	1	—	—
	38	23	22	12	—
	44	—	2	—	—
	58	4	3	3	—
	66	8	6	10	—
	72	—	1	—	—
	74	17	20	11	—
	75	2	2	—	—
	83	5	8	2	—
	91	1	2	1	—
	99	—	1	1	—
	107	10	17	8	—
* <i>Uroptychus simiae</i> sp. nov.	23	3	2	1	—
	86	7	4	9	—
* <i>Uroptychus undecimspinosus</i> sp. nov.	43	1	1	1	4
Family Galatheididae					
<i>Munida incerta</i> Henderson	15	4	1	1	—
<i>Munida sanctipauli</i> Henderson	38	—	1	—	—
	67	1	—	—	—
	100	1	—	—	—
	103	1	—	—	—
* <i>Munidopsis dasypus</i> Alcock	10	—	—	1	—
Suborder BRACHYURA					
Family Homolodromiidae					
* <i>Homolodromia bouvieri</i> Doflein	22	1	—	—	—
Family Dromiidae					
* <i>Pseudodromia spinosissima</i> sp. nov.	16	1	—	—	—
	43	—	—	1	—
	86	2	—	—	—
dromiid (damaged)	115	1	—	—	—
Family Dorippidae					
<i>Cymonomus trifurcus</i> Stebbing	86	—	—	1	—
Family Leucosiidae					
<i>Ebalia</i> sp.	86	—	—	—	3
<i>Philyra globulosa</i> A. M. Edwards	114	1	—	—	—
Family Majidae					
<i>Achaeopsis spinulosus</i> Stimpson	86	—	—	1	—

* new record

	SM Station		ovig.		juv.
	no.	♂♂	♀♀	♀♀	
<i>Platymaia turbynei</i> Stebbing	7	29	17	10	—
	15	1	—	—	—
	38	8	7	—	—
	58	9	12	—	—
	66	2	1	1	—
	72	—	1	—	—
	74	4	1	—	—
	107	2	2	—	—
<i>Pleistacantha moseleyi</i> (Miers)	15	—	1	—	—
* <i>Rochinia natalensis</i> sp. nov.	23	1	—	—	—
	43	—	—	1	—
Family Portunidae					
<i>Charybdis smithii</i> McLeay	5	1	—	—	—
	45	1	2	—	—
<i>Portunus hastatoides</i> Fabricius	115	2	—	—	—
<i>Portunus sanguinolentus</i> (Herbst)	115	2	2	—	—
Family Goneplacidae					
<i>Geryon quinquedens</i> Smith	38	3	1	—	—
<i>Geryon</i> sp.	67	—	—	—	1
<i>Litocheira kingsleyi</i> (Miers)	86	1	—	—	—

* new record

SYSTEMATIC DISCUSSION

Family Paguridae

Pagurus sp.

Description

Eyestalks shorter than anterior border of carapace; cornea dilated. Rostrum and ophthalmic scales acute. Fingers of left cheliped longer than palm, scattered conical spines on dorsal surface of palm and fixed finger; carpus with row of spines on inner dorsal margin and scattered spines on rest of dorsal surface. Right cheliped longer and more robust than left, cutting edges of fingers with several large white teeth; dorsal surface of palm with scattered conical spines and numerous elongate setae; carpus with median dorsal row of spines and double row of spines on inner dorsal margin; merus with three spines on disto-dorsal margin and few scattered ventral spines.

Female carrying four unpaired pleopods on abdomen; male with three unpaired pleopods, vasa deferentia not protruding.

Material

SAM-A15340 SM 22 1 ovig. female

SAM-A15339 SM 66 1 male.

Remarks

In the shape and spination of the chelipeds, the present material agrees with *Eupagurus investigatoris* Alcock, 1905 (p. 28, pl. 11 (fig. 2)). This species, however, possesses slender eyestalks which are slightly longer than the anterior

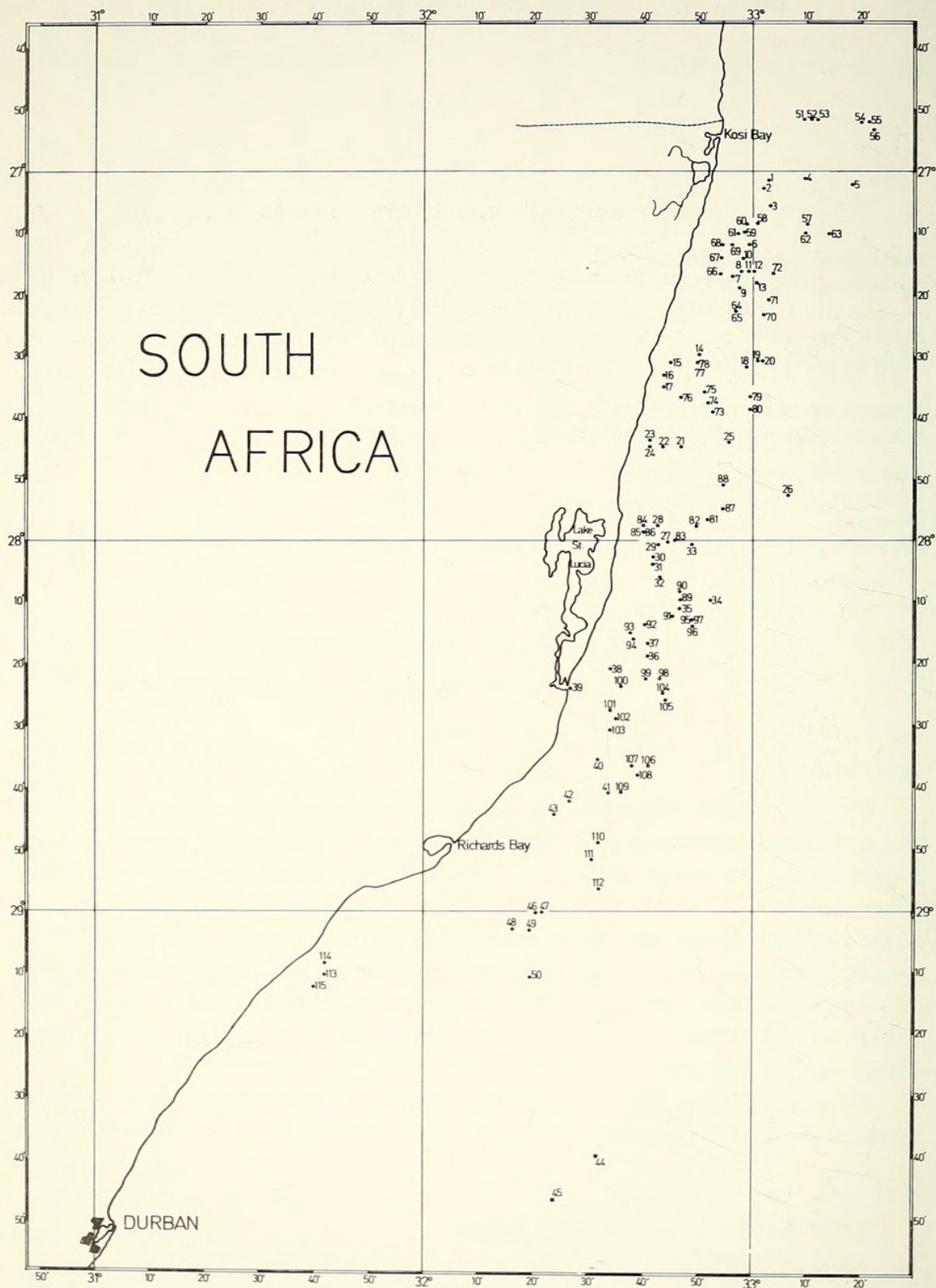


Fig. 1. Map showing distribution of stations.

border of the carapace. As this group of pagurids requires revision, further identification is not attempted.

Porcellanopagurus sp.

Fig. 2

Description

Carapace slightly longer than broad; rostrum broadly triangular; antero-lateral corner a strong triangular tooth; three lateral carapace lobes, first a small spine preceded by a rounded process and followed by two or three crenulations, second and third lobes strong, dentiform; gastric area demarked by shallow grooves. Abdomen straight, right side more inflated than left, tail-fan symmetrical, telson as long as broad with very slight median notch.

Eyestalks not reaching end of third antennal peduncle segment.

Outer distal angle of basal antennal peduncle segment spinose, antennal scale almost twice length of second segment, cylindrical.

Third maxilliped pediform, bases separate.

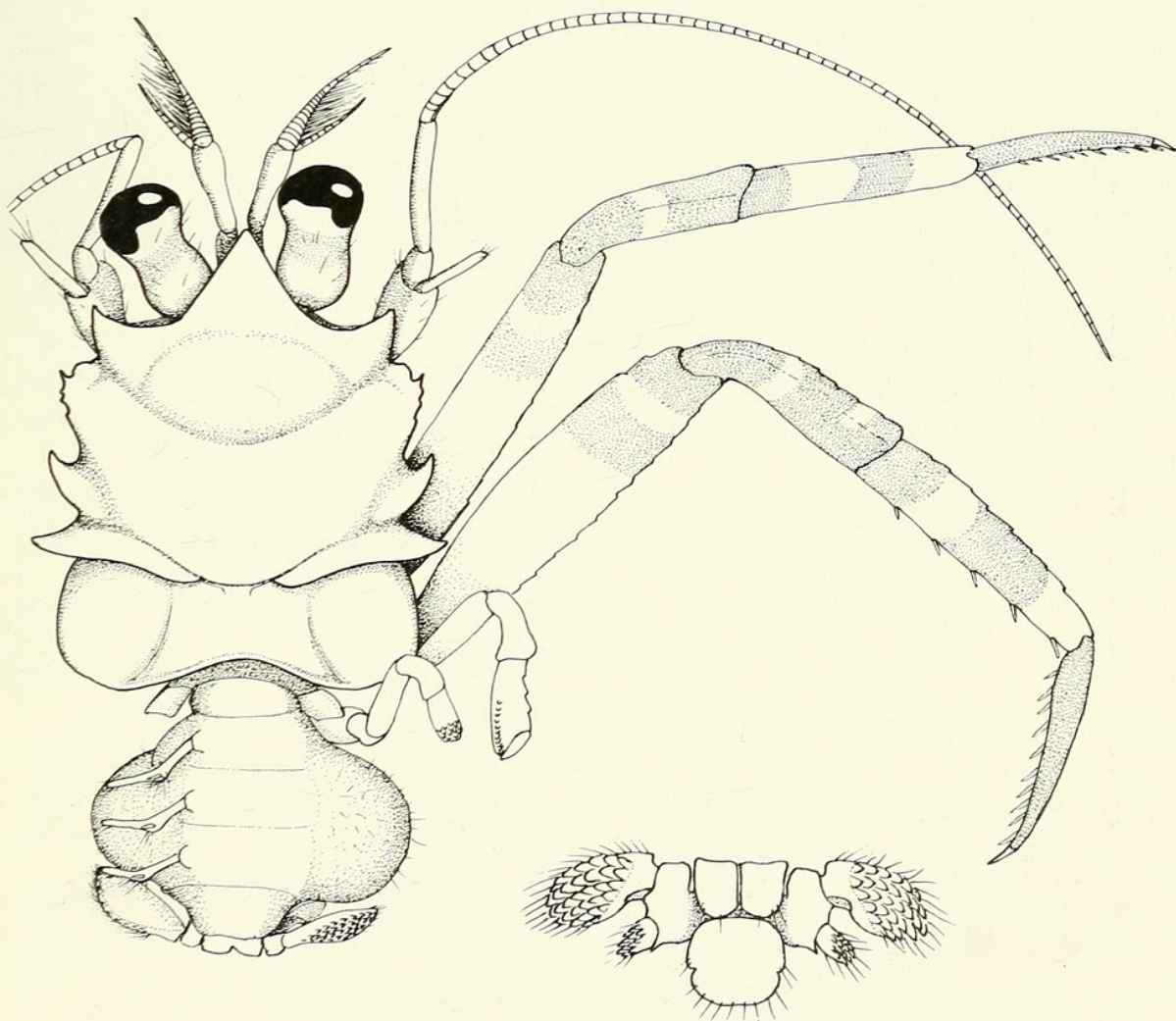


Fig. 2. *Porcellanopagurus* sp. Dorsal view with tail fan enlarged.

Chelipeds both regenerating, not fully developed.

Second and third pereopods similar, third slightly longer; dactyli with short slender spines on ventral margin, meri four times longer than wide.

Fourth pereopod longer than fifth, subdorsal, propodus carrying row of denticles on dorsal margin, distal lobe forming chela with claw-like dactyl.

Fifth pereopod with tiny chela, propodus armed with distal denticles.

Three biramous pleopods present on left side, upper ramus tiny.

Colour pattern: ambulatory pereopods with broad red bands on a cream ground; carapace, rostral apex and eyestalks with red patches.

Material

SAM-A15302 SM 43 1♂ CL 4,1 mm CB 4,0 mm.

Remarks

Four species of this rather rare genus have been recorded, viz. *P. edwardsi* Filhol, from Auckland Is., Campbell Is., Stewart Is., and North Cape, New Zealand; *P. platei* Lenz from Juan Fernandez (regarded by Bennett (1932) as extremely close to, if not synonymous with *P. edwardsi*); *P. japonica* Balss from Japan, and *P. tridentatus* Whitelegge from New South Wales.

The incompletely developed chelipeds of the present specimen make identification difficult. Some differences between the above-mentioned four species and the present small female, however, are apparent. The telson of *P. edwardsi* is broader than long, rather than almost circular in the Natal specimen; the latter also lacks a median rostral ridge. The close similarity of *P. platei* to *P. edwardsi* also eliminates this species; in addition Lenz (1902, pl. 23, fig. 2) shows the telson apically pointed. *P. tridentatus* differs from the present species in that the lateral carapace lobes are smaller and more spinose, and the meri of the ambulatory pereopods are three times longer than wide. *P. japonica* also possesses a pointed telson and the lateral carapace lobes are not as strong as the Natal specimen.

In view of the small number of specimens in this genus, the taxonomic uncertainty, and the lack of chelipeds in this specimen, specific status cannot be given with any certainty.

Family **Lithodidae**

Lithodes murrayi Henderson

Fig. 3

Lithodes murrayi Henderson, 1888: 43, pl. 4. Hale, 1941:272, pl. 3 (figs 3-4). Arnaud, 1971: 167.

Previous records

Possession Is., Prince Edward Is., Macquarie Is., Crozet Is., off Durban (unpublished, P. Berry, pers. comm.).

Material

SAM-A15004 SM 83 1 ovig. ♀ CL+R 158 mm.

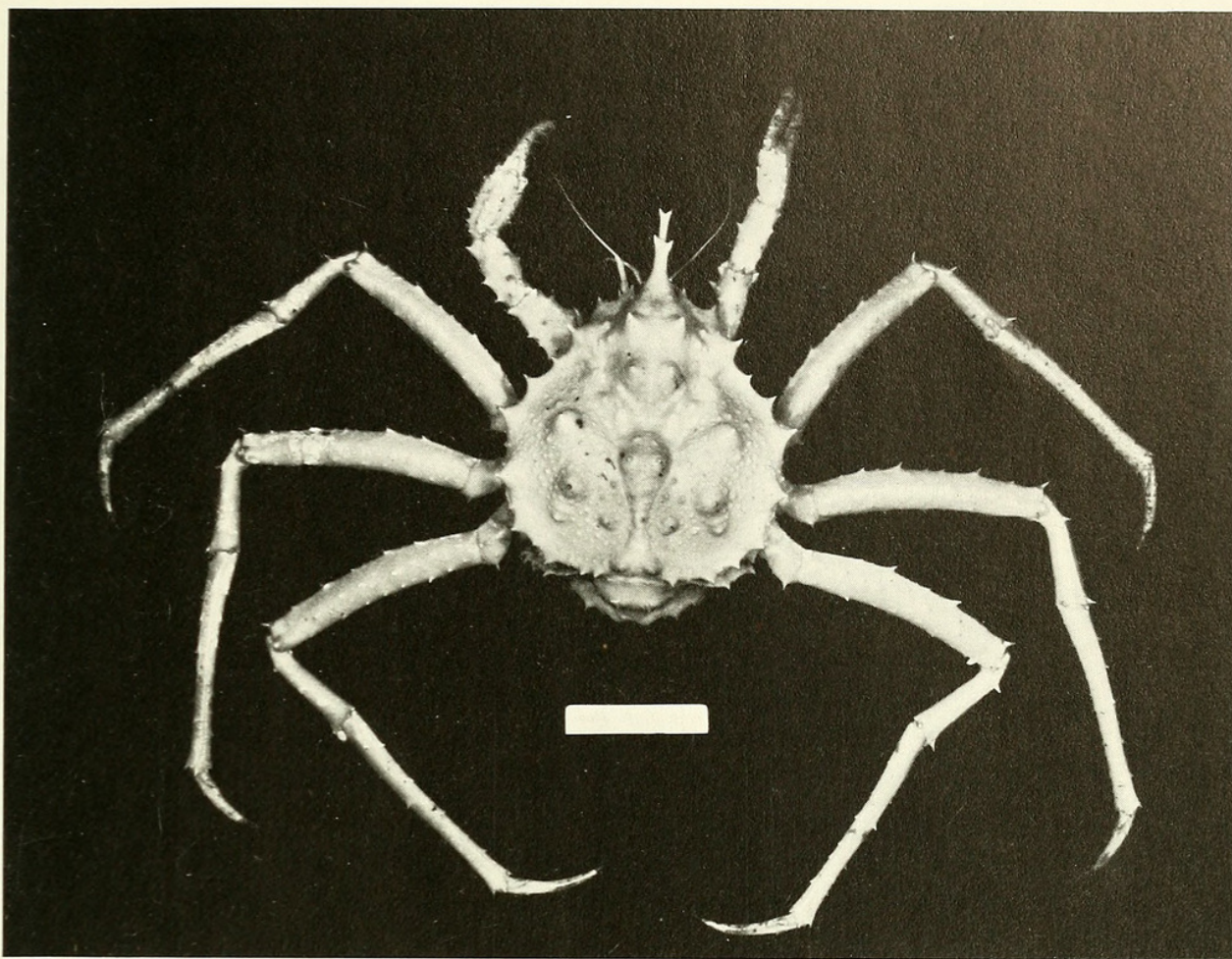


Fig. 3. *Lithodes murrayi*. Scale = 50 mm.

Uroptychus nitidus (A. M. Edwards)

Fig. 4

Diptychus nitidus Edwards, 1880: 62.

Uroptychus nitidus Stebbing, 1902: 32; 1910: 365. Barnard, 1950: 495. fig. 92g-i.

Uroptychus nitidus occidentalis Faxon, 1895: 101, pl. 26 (fig. 1). Baba, 1973: 120, fig. 2, pl. 4 (fig. 1).

Uroptychus nitidus var. *concolor* Edwards & Bouvier, 1894: 225, figs 16, 21.

Previous records

Off Natal, off East London, West Indies, eastern North Atlantic, west coast of America, off Florida.

Material

See *Species List*, page 162.

Remarks

Both the fact that several subspecies of this species have been described, and that Edwards & Bouvier (1894), Stebbing (1902) and Chace (1942) mention

variations within specimens from a single locality, indicate that this widespread species is very variable. Within the present Natal material, variation in the carapace spination was noticed. In the majority of specimens (and also in the material from Florida that was examined) the slight ridges lateral to the rostral base are barely noticeable (Fig. 4 bottom), but in a small percentage of both males and females this ridge bears a single small spine (Fig. 4 top).

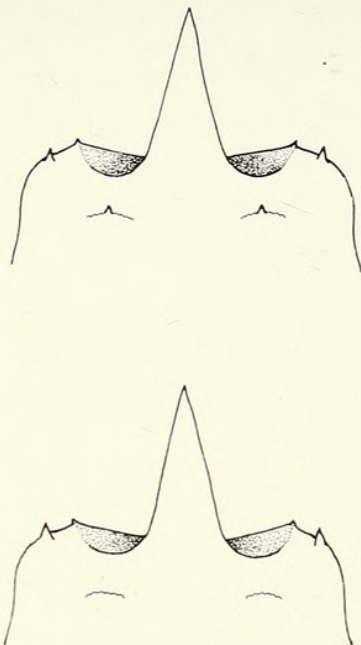


Fig. 4. *Uroptychus nitidus*. Variation in anterior carapace.

Uroptychus foulisi sp. nov.

Fig. 5

Description

Carapace and appendages carrying numerous fine silky hairs; carapace dorsally unarmed, with numerous tiny pits, broadest at level of second ambulatory pereopods, broader than mid-dorsal length (not including rostrum); rostrum extending well beyond eyestalks, margin entire; antero-lateral angle a strong spinose process, lateral margin with strong ridge-like tubercle at anterior quarter, short spinose tubercle at about midpoint followed by about five tubercles decreasing in size posteriorly. Sternum between third maxillipeds with V-shaped emargination, with no trace of median notch.

Cornea of eye narrower than eyestalk, latter setose.

Crest on basal antennular segment apically truncate with spine at each distal corner. Antennal acicle not quite reaching midpoint of distal peduncular segment; second segment with small point on inner distal angle.

Dactylus and propodus of third maxilliped with thick pad of setae; ischium with inner margin finely denticulate.

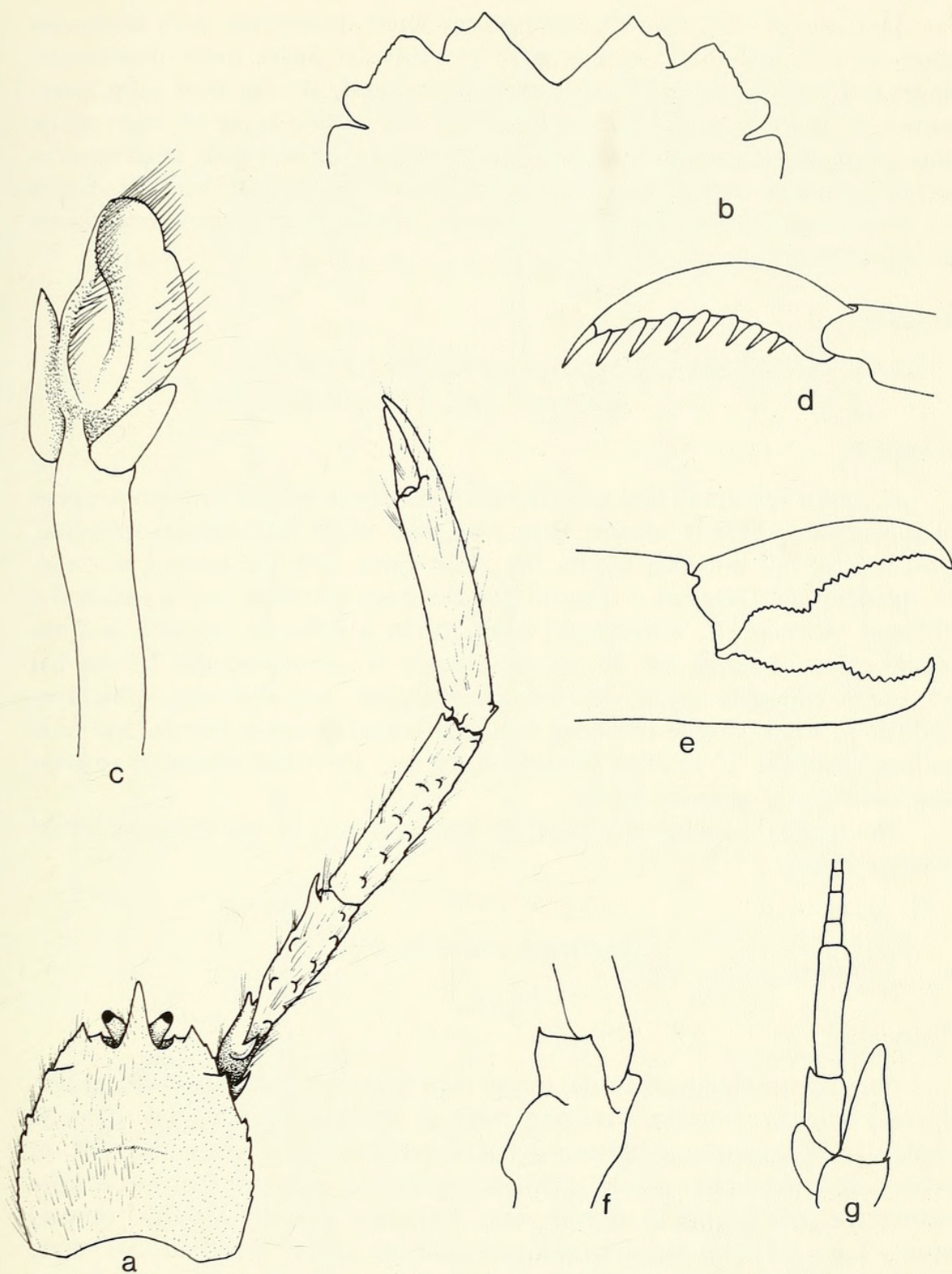


Fig. 5. *Uroptychus foulisii*.

a. Holotype in dorsal view, setae of right side omitted; b. anterior portion of sternum; c. second pleopod, male; d. dactylus of second pereopod; e. chela; f. base of antennule; g. antenna.

Dactylus of cheliped with cutting edge finely denticulate, with triangular tooth at proximal third; cutting edge of propodal finger finely denticulate, finger and thumb half length of palm; carpus slightly shorter than palm, outer surface with scattered low tubercles; merus with strong spine on inner distal angle, rest of merus with scattered low tubercles; ischium with small ventro-distal spine and strong hook-like dorso-distal spine; similar hook-like spine on basis. Dactyli of ambulatory pereopods curved, with eight strong spines on ventral edge.

Material

SAM-A15336 SM 107. holotype 1♂ CL+R 7,5 CB 6,9
allotype 1 ovig. ♀ CL+R 8,2 CB 7,9

Remarks

U. foulisi belongs to that group of the genus characterized by the possession of a carapace which is broader than long, and which lacks dorsal spination. Five species fall into this group, but none agree with the present material. *U. suluensis* van Dam has a rostrum and chelipeds too short and broad, and a different sternum. *U. tormentosus* Baba shows a different sternum and the lateral carapace spines are not strong enough. *U. onychodactylus* Tirmizi has no lateral carapace spines, non-spinose chelipeds, and different ambulatory dactyli. *U. siraji* Tirmizi possesses crenulate lateral carapace margin and non-spinose chelipeds. *U. scambus* Benedict has a very short and triangular rostrum and lacks lateral carapace spines.

The species is named for Capt. G. Foulis, master of the Research Vessel *Meiring Naude*.

Uroptychus simiae sp. nov.

Figs 6-7

Description

Carapace (excluding rostrum) longer than wide; rostrum broadly triangular, dorsally slightly concave, reaching halfway along eyestalks; antero-lateral angle strongly spinose; single strong lateral carapace spine followed by two or three smaller denticles; lateral plate bearing five or six spines just below linea anomurica, not visible in dorsal view. Carapace dorsally smooth, cervical groove faint. Anterior sternum with two spines at base of broad median notch, two broad spines at base of third maxillipeds, single large spine and several serrations at base of chelipeds.

Distal process of basal antennular segment with four blunt denticles.

Antennal acicle not reaching end of peduncle.

Third maxilliped with median margin of merus finely denticulate, proximal teeth larger and more spaced; ischium with three teeth on median margin.

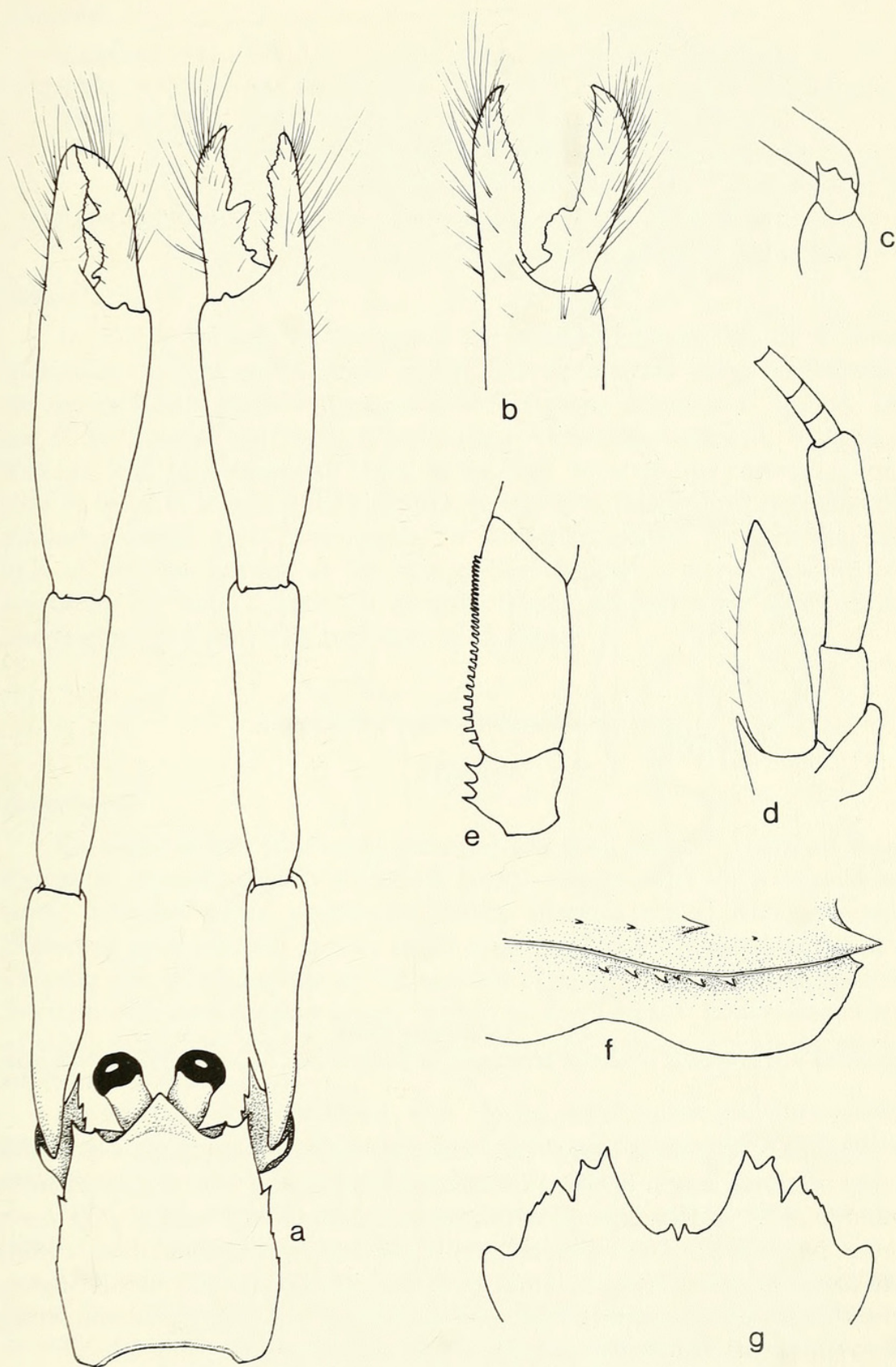


Fig. 6. *Uroptychus simiae*.

a. Holotype in dorsal view; b. chela of female; c. base of antennule; d. antenna; e. merus and basis of third maxilliped; f. antero-lateral area of carapace; g. anterior portion of sternum.

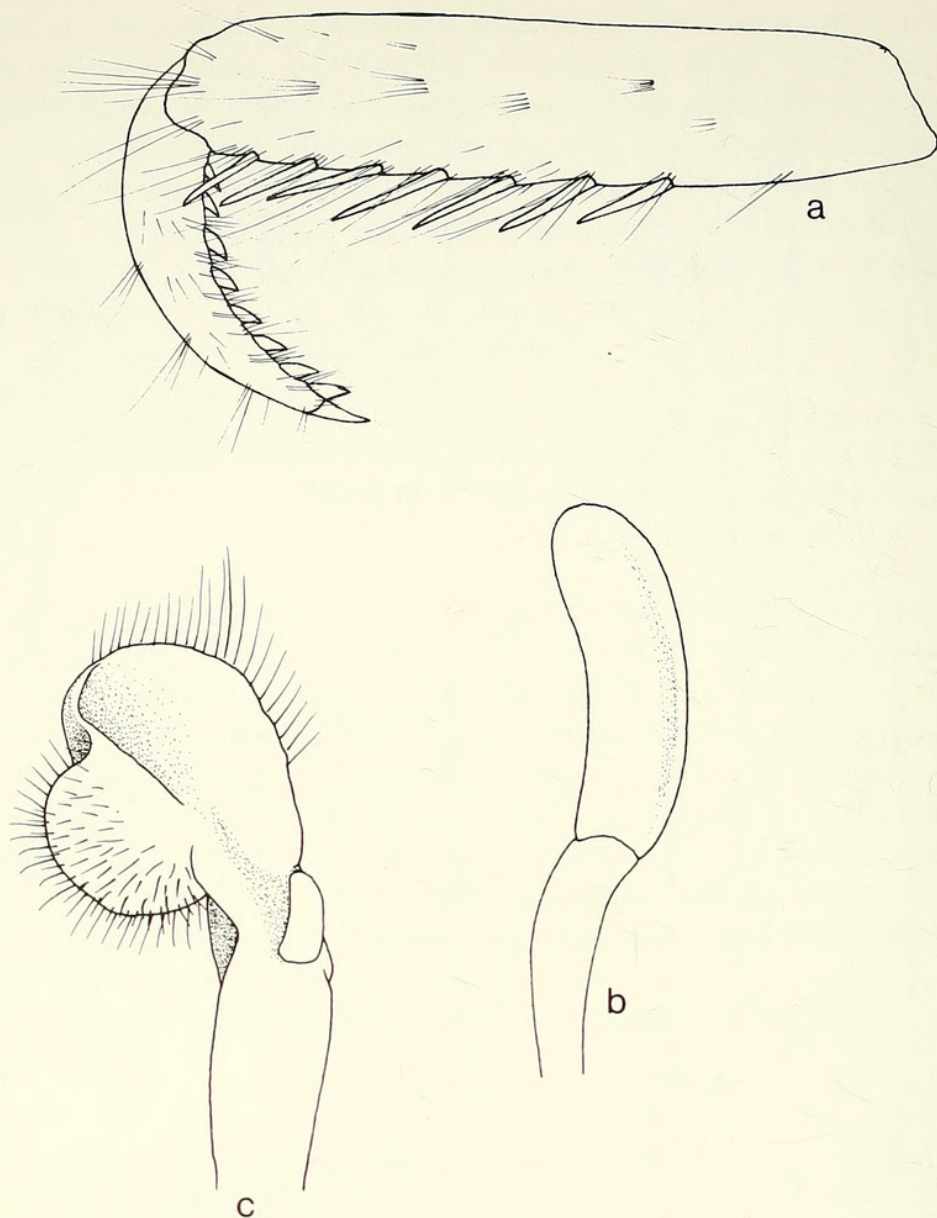


Fig. 7. *Uroptychus simiae*.

a. Dactylus and propodus of second pereopod; b. pleopod one, male; c. pleopod two, male.

Chelipeds four times longer than carapace and rostrum; finger and thumb about two-thirds length of palm, dactylus apically acute, with triangular tooth at midpoint of cutting edge plus smaller proximal tooth; cutting edge finely serrate; finger of propodus with broadly triangular point at distal third, cutting edge finely serrate; carpus smooth, equal to palm in length; merus slightly shorter than carpus, unarmed; ischium with dorsal hook-like spine and strong disto-ventral spine followed by three or four smaller spines.

Ambulatory pereopods with strongly curved dactyli, armed with eight broad ventral teeth; propodi with seven elongate ventral spines and numerous setae.

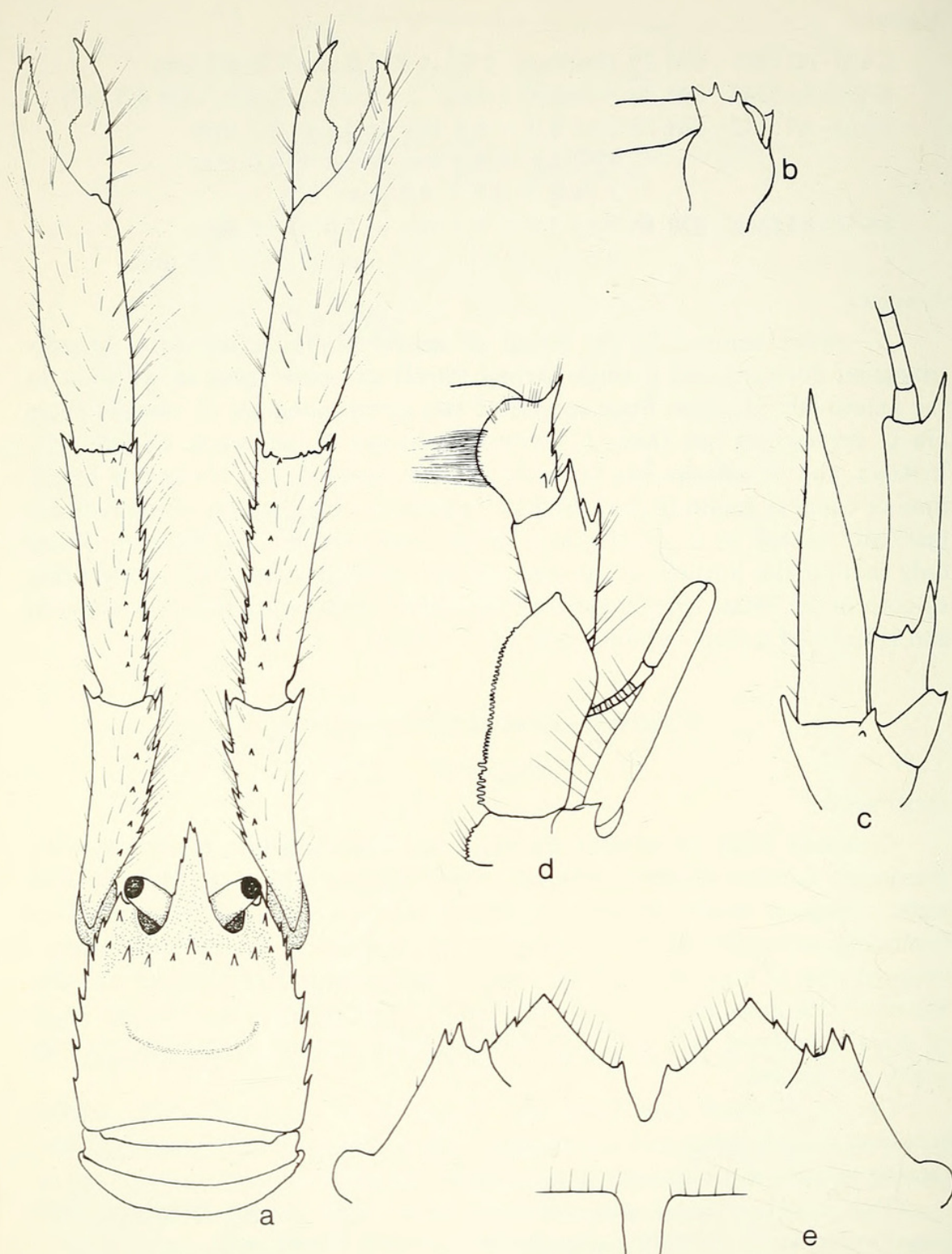


Fig. 8. *Uroptychus undecimspinosus*.

a. Holotype in dorsal view; b. base of antennule; c. antenna; d. third maxilliped; e. anterior portion of sternum.

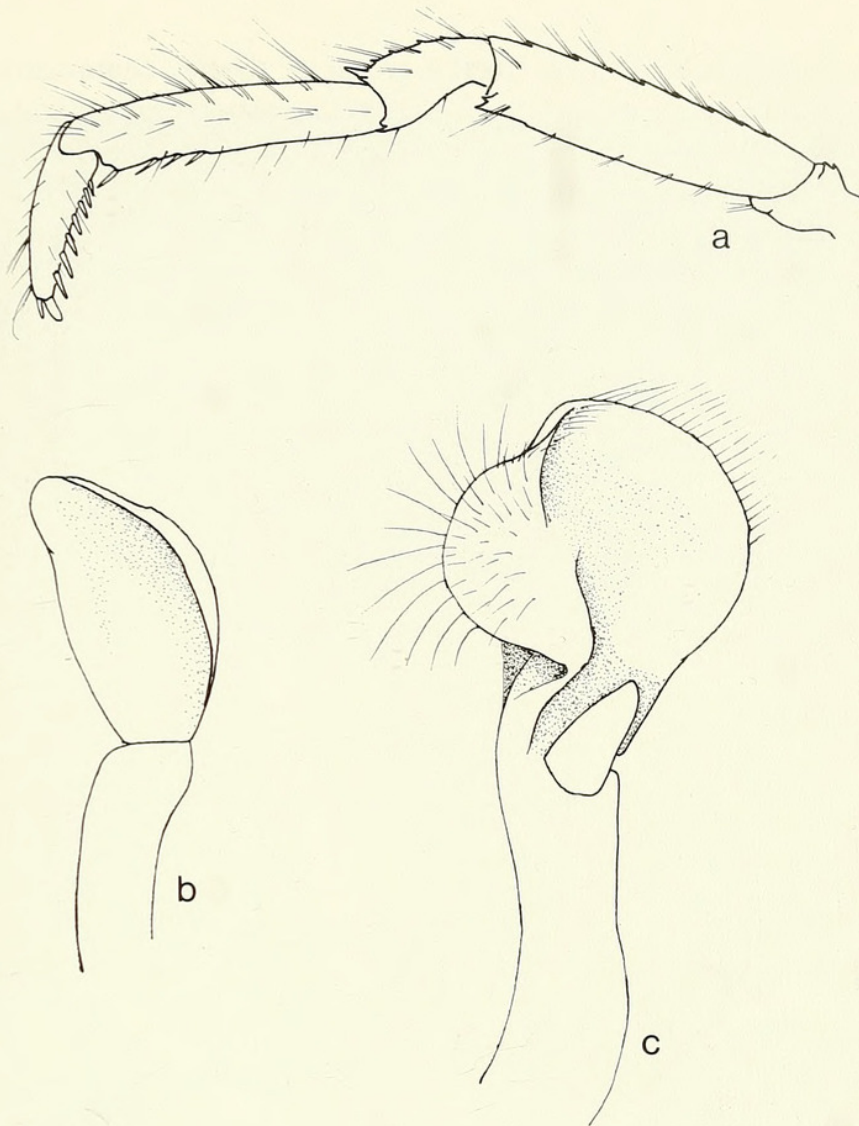


Fig. 9. *Uroptychus undecimspinosus*.

a. Ambulatory pereiopod; b. pleopod one, male; c. pleopod two, male.

and about seven strong ventral spines; ischium and basis short, each armed with single ventro-distal spine. Ambulatory pereiopods with about nine spines on ventral margin of dactyli, propodi with four disto-ventral spines, carpi with single disto-dorsal spine.

Material

SAM-A15315 SM 43 1♂ Holotype CL+R 5,9 mm CB 4,0 mm

1 ovig. ♀ Allotype 5,9 × 4,1 mm

1♀ Paratype 6,1 × 4,1 mm

4 juveniles.

Remarks

U. undecimspinosus belongs to the group of species characterized by the possession of spinose lateral carapace margins, a rostrum with minutely spinose margins, a row of spines across the anterior carapace, spinose carpi and meri, and smooth dactyli and propodi of the chelipeds. Several species can be placed in this group on most of these criteria, but none agrees with the present material. *U. intermedius* Edwards has smooth rostral margins, *U. sibogae* van Dam has smooth rostral margins and lacks anterior carapace spines; *U. nanophyes* McArdle has a similar rostrum and lateral carapace spines, but also has a granular or tubercular carapace. *U. spinosus* (Edwards & Bouvier) lacks anterior carapace spines, and has spinose propodi of the chelipeds. *U. minutus* Benedict lacks anterior carapace spines, has relatively short chelipeds, and a smooth rostrum. *U. parvulus* Henderson lacks anterior carapace spines, has a smooth rostrum, and a non-pectinate third maxilliped.

U. undecimspinosus is named for the eleven dorsal spines on the anterior carapace.

Family Galatheidæ*Munidopsis dasypus* Alcock

Fig. 10

Munidopsis dasypus Alcock, 1894: 329; 1901: 252. MacGilchrist, 1905: 245. Tirmizi, 1966: 218, fig. 32.

Previous records

South Arabian Coast, 1536—1939 m; Gulf of Aden, 1270 m.

Material

SAM-A15296 SM 10. 1 ovig. ♀ CL+R 21,0 mm CB 10,0 mm.

Remarks

Slight differences exist between the present ovigerous female and the above-mentioned descriptions. The posterior carapace margin possesses two spines, while earlier material varied from four to eight spines. The lateral carapace margin lacks a spine behind the strong antero-lateral spine, as figured in the *Investigator* specimen (Alcock 1895, pl. 13 (fig. 9)), while the chelipeds of the Natal specimen are less spinose, especially the meri. The basal segment of the antennular peduncle agrees with Tirmizi's (1966) figure 32B of the male, rather than with the female. Nevertheless, these differences cannot be considered of specific importance, considering the great distances over which the species is distributed. MacGilchrist (1905) noted the variability of the carapace spination in this species, and this no doubt also applies to the spination of the appendages.

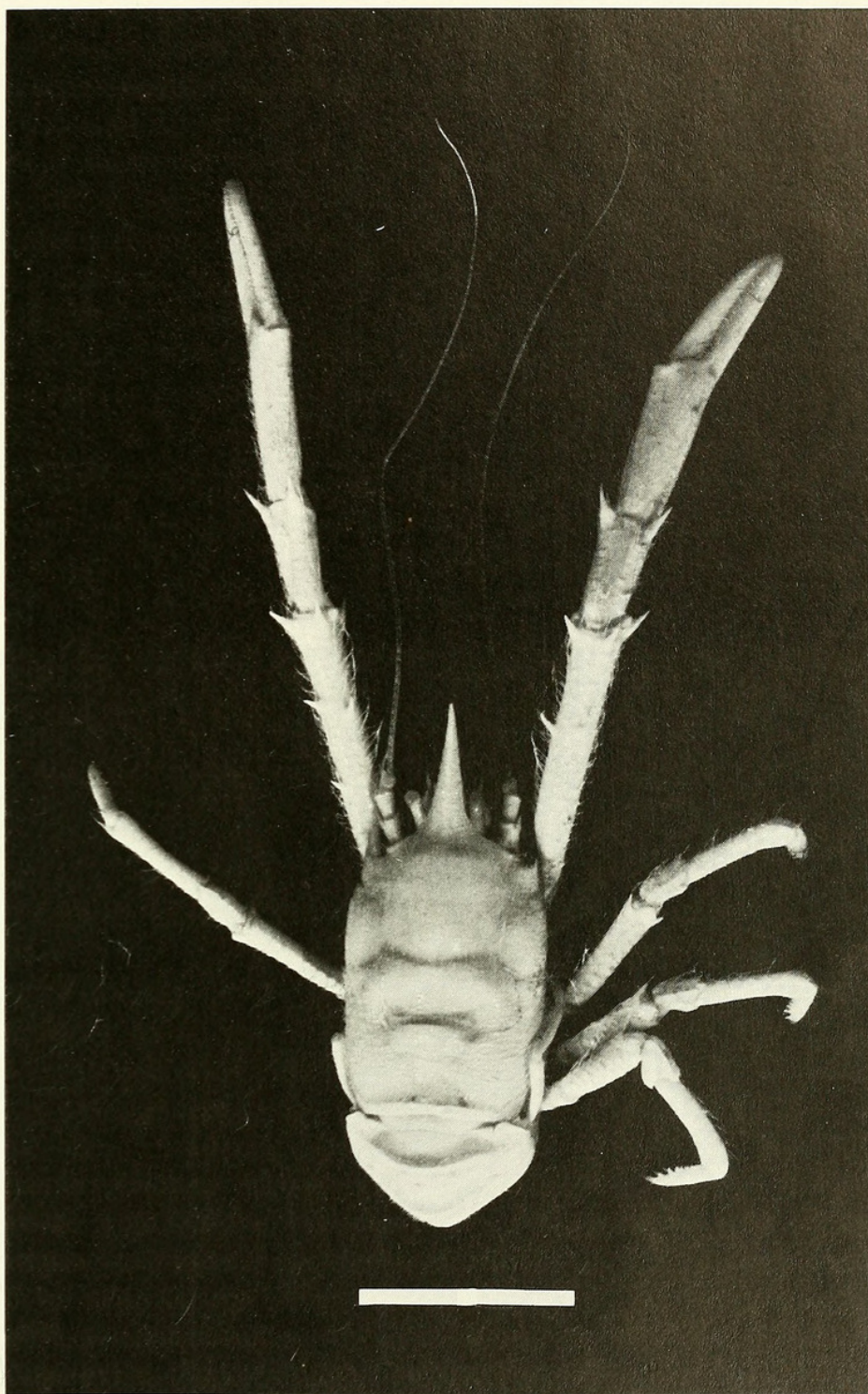


Fig. 10. *Munidopsis dasypus*. Scale = 10 mm.

Family **Homolodromiidae***Homolodromia bouvieri* Doflein

Figs 11-12

Homolodromia bouvieri Doflein, 1904: 4, fig. 1, pl. 5 (figs 1-3), pl. 38 (figs 9-13), pl. 43 (fig. 3).*Previous records*

East African Coast, 863 m (1♂).

Material

SAM-A15297 SM 22 1♂ CL+R 22,7 mm CB 18,4 mm.

Remarks

This appears to be only the second specimen of *H. bouvieri* and the third specimen of the genus known. The other species, *H. paradoxa*, is known from a single specimen from the West Indies.

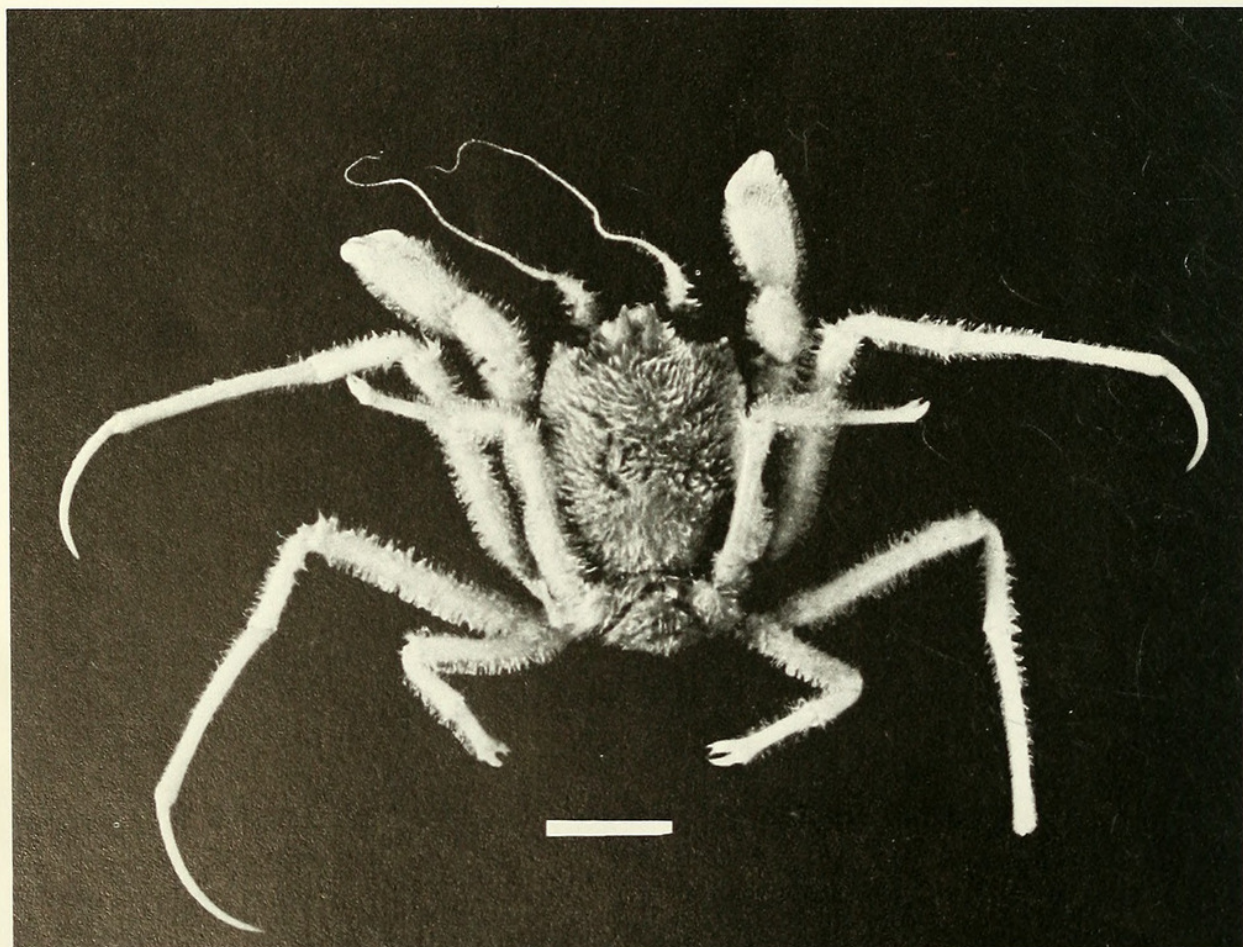


Fig. 11. *Homolodromia bouvieri*. Scale = 10 mm.

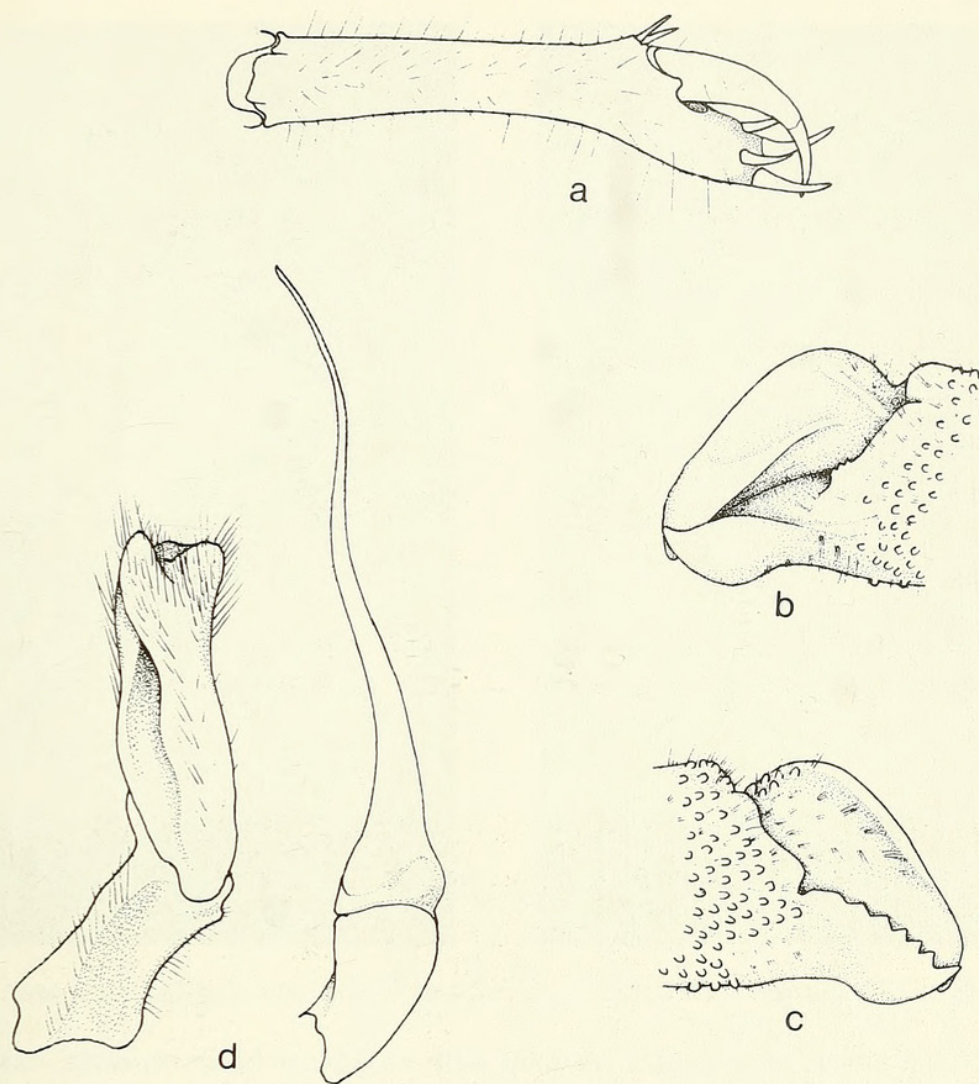


Fig. 12. *Homolodromia bouvieri*.

a. Dactylus and propodus of fourth pereopod; b. inner view of chela; c. outer view of chela; d. first and second pleopods, male.

Family **Dromiidae**

Pseudodromia spinosissima sp. nov.

Figs 13–15

Description

Female. Carapace, sternum, appendages, and dorsal surface of abdomen all bearing numerous short needle-like spines interspersed with numerous long finely spinulose hairs. Carapace length (including frontal lobes) slightly more than breadth, convex, regions not demarked; front tridentate, median point ventral to lateral lobes, dorsally visible; median and lateral lobes bearing spines. Spinose epistome meeting median rostral point; suborbital process broad, bearing several strong spines marginally. Abdomen broad, terminal segment cordiform, no sign of uropodal vestiges. Sternal grooves ending close together on median process between bases of chelipeds.

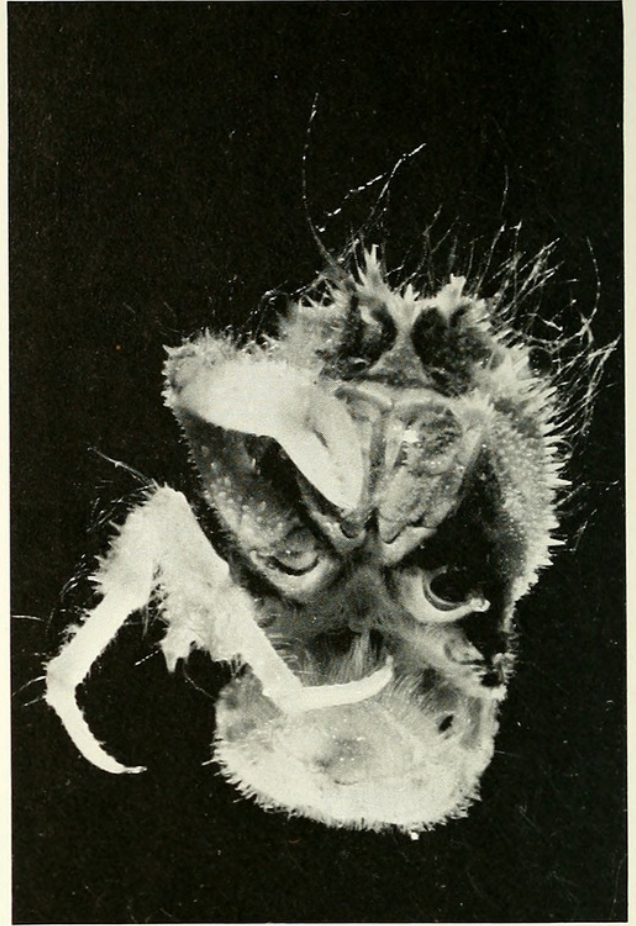
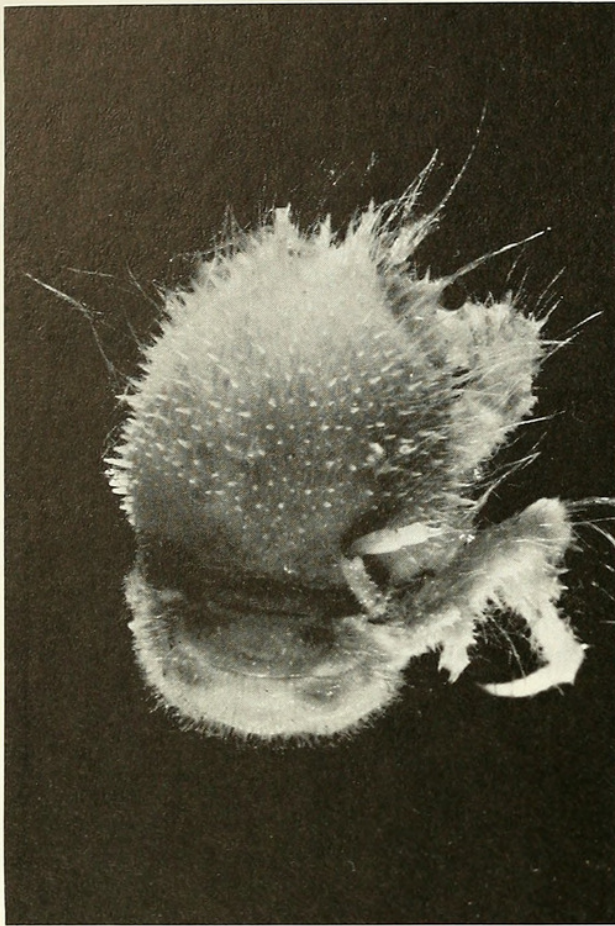


Fig. 13. *Pseudodromia spinosissima*. Dorsal and ventral view of ovigerous female.

Second antennal peduncle segment with spinose process on distal external angle. Endopod of third maxilliped operculiform, third to sixth segments bearing spines, exopod terete, tapering, not quite reaching to distal margin of fourth endopodal segment.

Chelipeds equal, finger and thumb of chela equal in length to palm, latter dorsally spinose, ventrally granular.

Two pairs of ambulatory pereopods similar, dactyli equal in length to propodi, distally curved, with five small ventral spines. Fourth pereopod slightly shorter than fifth, dactylus strongly curved, forming pincer with straight spine from distal end of propodus. Merus of fifth pereopod somewhat longer than that of fourth, dactylus strongly curved, forming pincer with distal propodal spine.

Branchial formula 6+3, i.e. six gills (that above fifth pereopod reduced) plus three epipodites, one each on maxillipeds one to three.

Three large eggs under abdomen.

Male. Carapace and pereopodal appendages as in female. Abdomen narrow and more spinose than in female, terminal segment tapering to narrow stalk bearing a tiny spinose knob. Coxae of both fifth pereopods bearing elongate cylindrical vas deferens directed towards midline. First pleopod

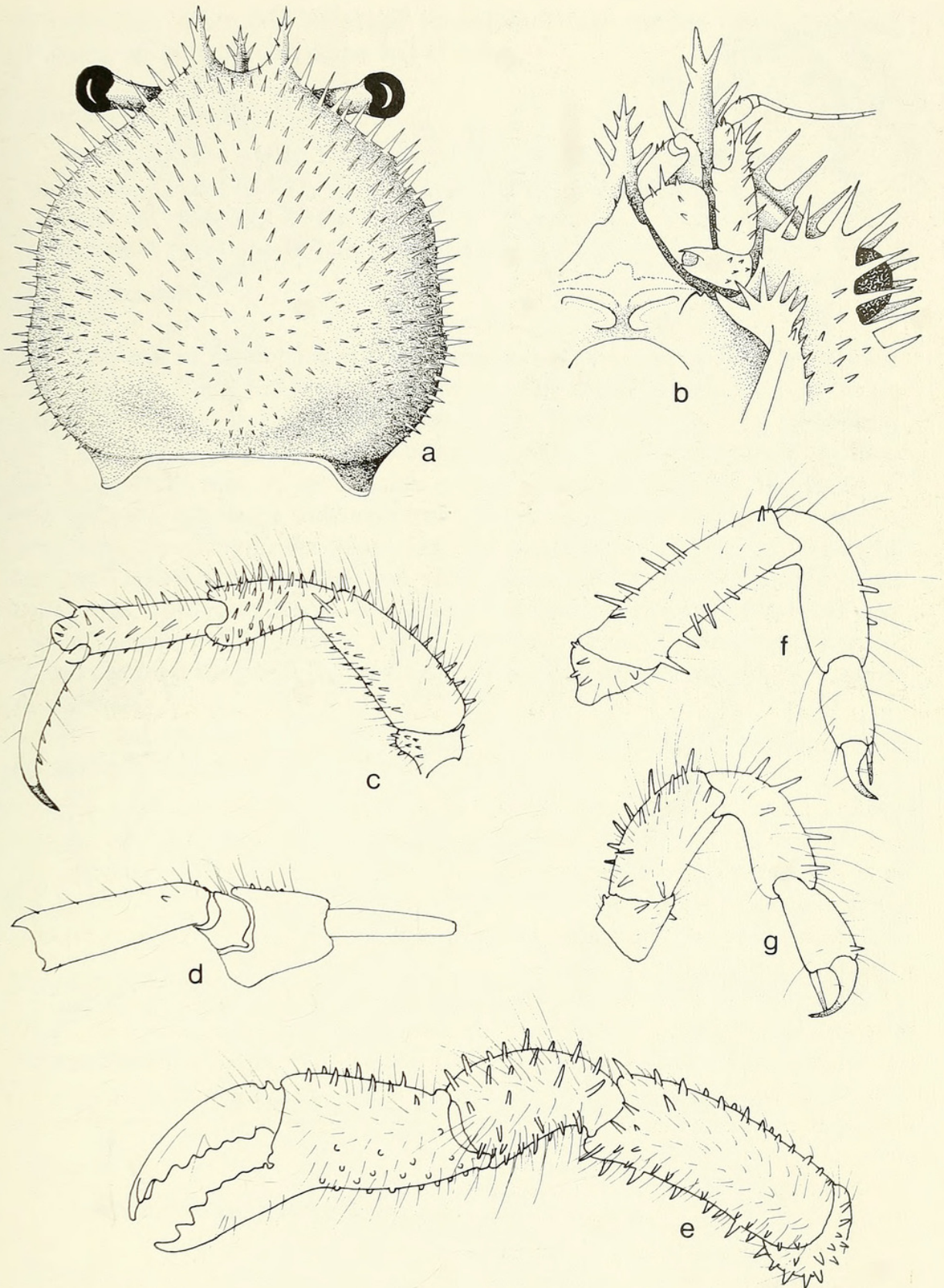


Fig. 14. *Pseudodromia spinosissima*.

a. Carapace, setae omitted; b. antero-ventral portion of cephalothorax; c. second pereiopod; d. male fifth pereiopod with vas deferens; e. cheliped; f. fifth pereiopod; g. fourth pereiopod.

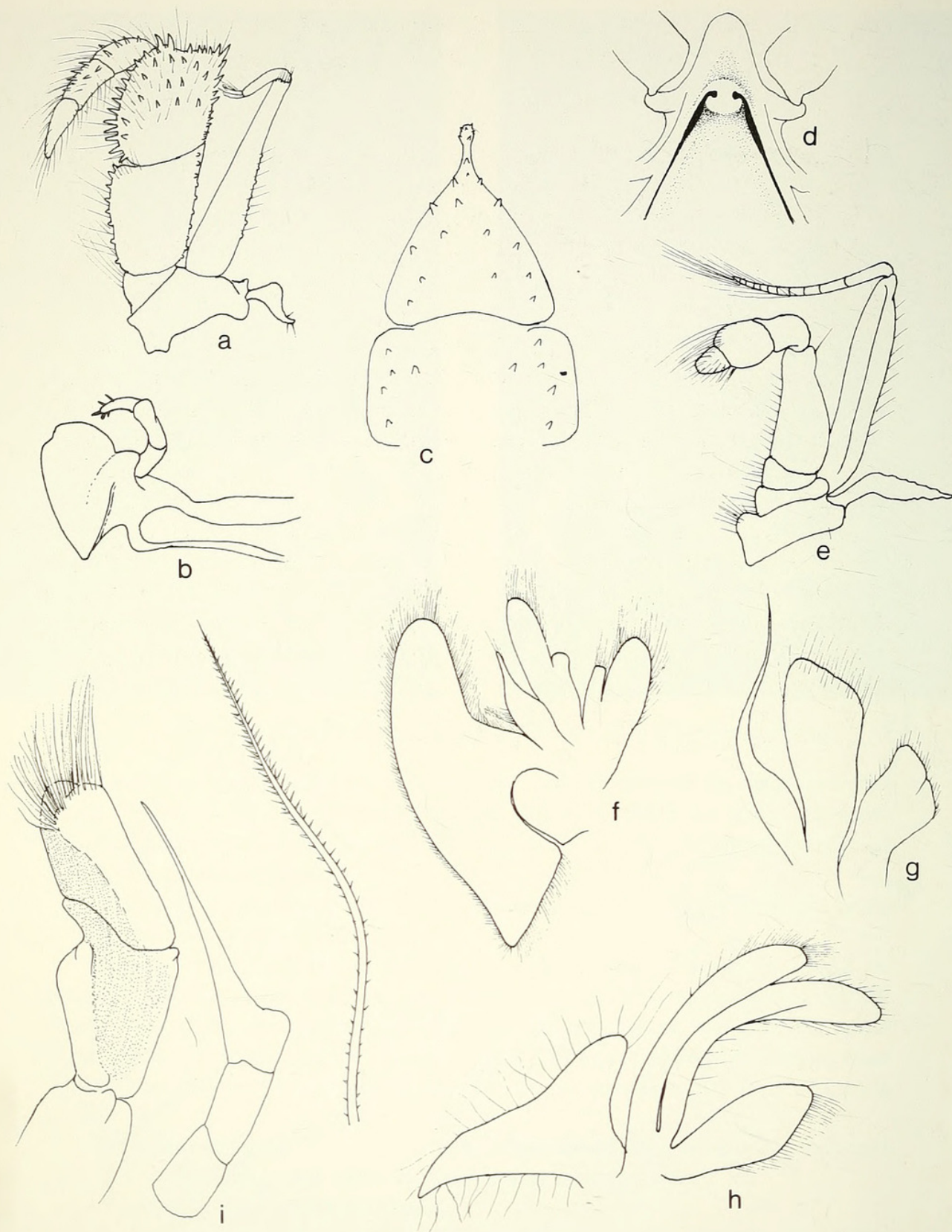


Fig. 15. *Pseudodromia spinosissima*.

a. Third maxilliped; b. mandible; c. apex of male abdomen; d. sternal grooves of female; e. second maxilliped; f. maxilla; g. maxillule; h. first maxilliped; i. male first and second pleopods, with apex of latter further enlarged.

2-segmented, inner face hollowed to accommodate narrow tapering second pleopod, apically bearing dense tuft of setae.

Material

SAM-A15301 SM 86 Holotype 1♂ CL+R 5,5 mm CB 4,8 mm

SAM-A15290 SM 43 Allotype 1 ovig. ♀ 6,0 × 5,2 mm

SAM-A15300 SM 86 Paratype 1♂ 5,1 × 4,4 mm

SAM-A15299 SM 16 Paratype 1♂ 4,6 × 3,9 mm.

Remarks

The lack of pereopodal epipods, the pereopods lacking ridges or knobs, the tridentate front, and the fifth pereopod being slightly longer than the fourth places this species in the genus *Pseudodromia*. Gordon (1950) in a description of *P. murrayi* Gordon has dealt thoroughly with the characteristics of the four species of this genus. *P. spinosissima* would seem to fit well into the group of two species possessing a tridentate front, viz. *P. rotunda* (McLeay) and *P. latens* Stimpson, especially in the possession of a distal lobe on the second antennal peduncle segment, a sternal boss on which the sternal furrows end in the female, and in the close resemblance of the first and second pleopods of the first and second pleopods of the male. A feature only reported for *P. murrayi* and present in this species is the projecting vas deferens from the coxa of the fifth pereopods in the male.

As the specific name implies, the species is extremely spinose, which immediately separates it from the other species.

Family Majidae

Platymaia turbynei Stebbing

Fig. 16

Platymaia turbynei Stebbing, 1902: 3, pl. 5; 1920: 232; 1924: 1, pl. 10. Barnard, 1950: 31, 816, fig. 6a-c. Dell, 1963: 251. Griffin, 1974: 27.

Previous records

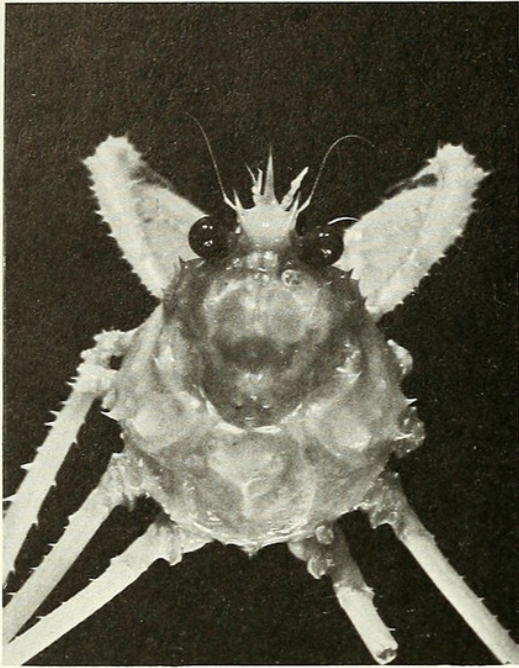
Off Durban, off Delagoa Bay, southern Moçambique Channel.

Material

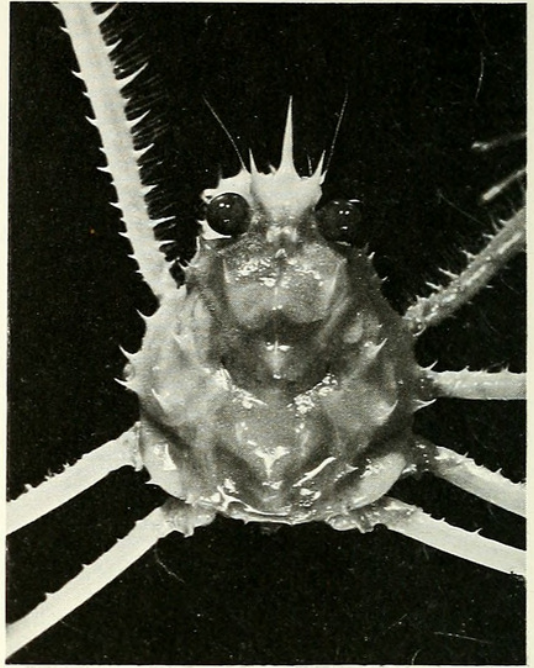
See *Species List*, page 162.

Remarks

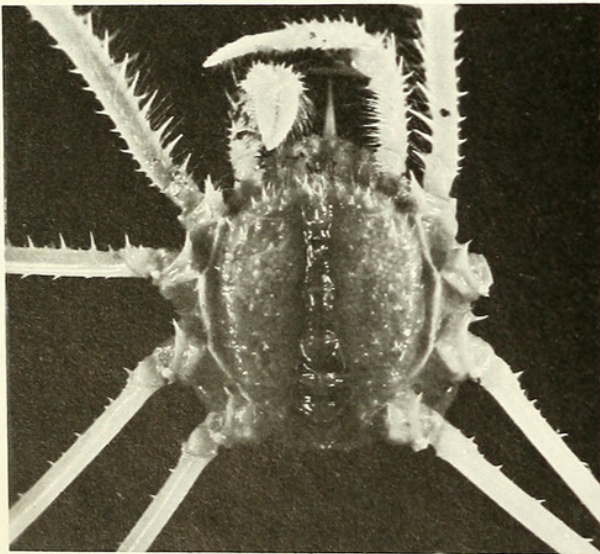
From the material now available, five size groups can be distinguished on the basis of carapace length, viz. 9–11 mm, 13–16 mm, 21–23 mm, 31–36 mm, and 42–47 mm for both sexes. Ovigerous females range from 44–47 mm.



a



c



b



d

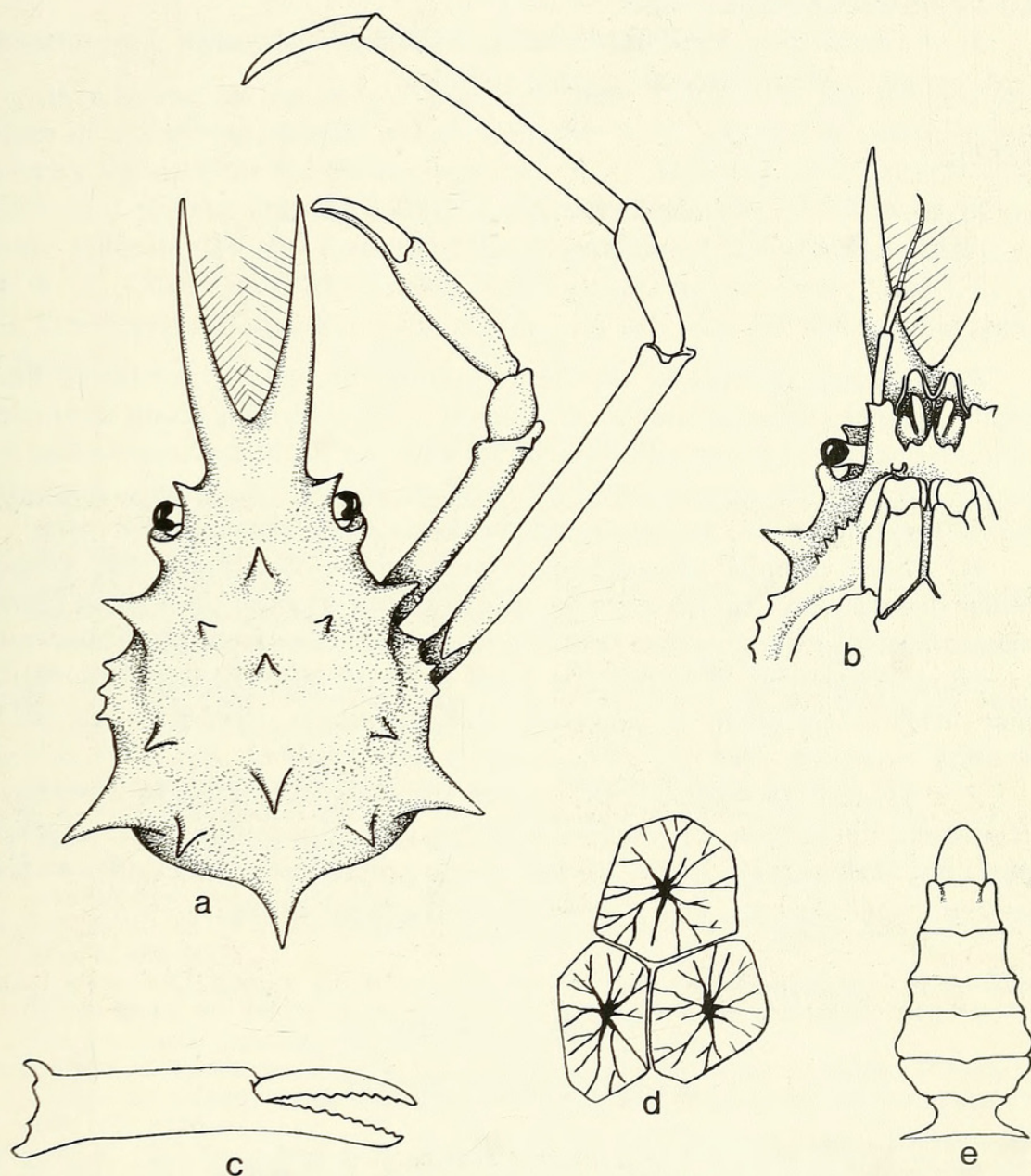
Fig. 16. *Platymaia turbynei*.
a-b. Dorsal and ventral view, ovigerous female; c-d. dorsal and ventral view, adult male.

Rochinia natalensis sp. nov.

Fig. 17

Description

Female. Entire integument of carapace, chelipeds and ambulatory legs covered with close-packed vesicles. Carapace pyriform, rostrum two elongate diverging 'horns'; carapace carrying 16 major conical spines: four median spines (two gastric, one cardiac, one intestinal), paired marginal supra-ocular spines, paired marginal hepatic spines, paired protogastric spines, three pairs

Fig. 17. *Rochinia natalensis*.

a. Holotype; b. antero-ventral portion of cephalothorax; c. chela; d. integumental vesicles; e. male abdomen.

mesobranchial spines (largest pair marginal) (see Griffin 1966: 22 for terminology). In addition three pairs small tubercles in lateral epibranchial area. Post-orbital process hollowed. Pterygostomian carrying four small tubercles.

Basal antennal segment with outer distal angle almost spinose.

Chelipeds equal, finger and thumb shorter than palm, curved, cutting edges serrate; merus with disto-dorsal acute tubercle, two small dorsal tubercles proximally, two small widely-separated ventral tubercles.

First pair of ambulatory legs longer than chelipeds or following legs; all legs with short acute tubercle at distal end of meri. Abdomen 7-segmented, globose between pereionial bases.

Male (immature). Essentially similar to female. Abdomen 7-segmented, third segment widest, terminal segment rounded.

Material

SAM-A15323 SM 43 Holotype 1 ovig. ♀ CL 16,0 mm

SAM-A15324 SM 23 Paratype 1 ♂ CL 8,0 mm.

Remarks

R. natalensis belongs to the 'histris' group of species, possessing four median carapace spines (Yaldwyn & Dawson 1976: 100). This group comprises eight species, six of which differ markedly from the Natal specimens either in the shape and/or the disposition of the carapace spines. Two species, however, show similarities to *R. natalensis*, but neither agrees completely.

R. tanneri (Smith) known from Massachusetts to Florida, has a very similar disposition of carapace spines, but lacks the group of three small spines in the branchial region, neither does it possess the dense carpet of vesicles over the entire integument. Further, the basal antennal segment carries a single spine, while the antenna is unarmed in *R. natalensis*. (See Rathbun 1925, pl. 227.)

R. vesicularis (Rathbun) known from the Galapagos Islands, does have an integumental covering of vesicles, but differs in the disposition of the carapace spines (see Rathbun 1925, pl. 230) and in the possession of two spines on the basal antennal segment, and a spine on the cheliped carpus.

Family **Portunidae**

Charybdis smithii McLeay

Gonioneptunus smithii: Barnard, 1950: 163, fig. 31j.

Charybdis smithii: Stephenson & Rees, 1967: 285. Crosnier & Thomassin, 1974: 1109, fig. 7.

Previous records

Almost entire Indian Ocean.

Material

SAM-A15325 SM5 1♂ CL 25,4 mm CB 36,5 mm

SAM-A15326 SM45 1♂ 25,1 × 36,0 mm

1♀ 30,0 × 42,4 mm

1♀ 31,4 × 45,0 mm.

Remarks

This species was originally recorded from the 'Cape of Good Hope', almost certainly this was from off the east coast, possibly off Natal.

ACKNOWLEDGEMENTS

In addition to the people and institutions thanked in the introductory paper of this series, I should like to thank Mr S. X. Kannemeyer of the South African Museum for the photographs, Dr R. B. Manning of the Smithsonian Institution for the loan of *Uroptychus* material, and Dr A. Crosnier of the Paris Museum for the loan of *Charybdis* material. I am very grateful to Dr E. A. Chace Jr. of the Smithsonian Institution, and Prof. J. H. Day of the University of Cape Town for reading the MS. and for their many useful criticisms.

REFERENCES

- ALCOCK, A. 1894. Natural history notes from H.M. Indian Marine Survey Steamer 'Investigator'. Series 2, no. 1, On the results of deep-sea dredging during the season 1890-91. *Ann. Mag. nat. Hist.* (6) 13: 321-334.
- ALCOCK, A. 1895. Illustrations of the zoology of the H.M. Indian Marine surveying steamer *Investigator*, Calcutta. *Ill Zool. 'Investigator'* (3).
- ALCOCK, A. 1901. *A descriptive catalogue of the Indian Deep-Sea Crustacea Decapoda Macrura and Anomala in the Indian Museum*. Calcutta: Trustees of the Indian Museum.
- ALCOCK, A. 1905. *Catalogue of the Indian Decapod Crustacea in the collection of the Indian Museum. Part II. Anomura*. Calcutta: Trustees of the Indian Museum.
- ARNAUD, P. M. 1971. *Lithodes murrayi* Henderson, 1888 (Crustacea, Decapoda, Anomura) dans les eaux côtières des îles Crozet (SW de l'Océan Indien). *Tethys* 3: 167-172.
- BABA, K. 1973. Remarkable species of the Chirostylidae (Crustacea, Anomura) of Japanese waters. *Mem. Fac. Ed. Kumamoto Univ.* 22: 117-124.
- BARNARD, K. H. 1950. Descriptive catalogue of South African Decapod Crustacea (Crabs and Shrimps). *Ann. S. Afr. Mus.* 38: 1-837.
- BENNETT, E. W. 1932. Porcellanids and *Porcellanopagurus* from New Zealand. *Rec. Canterbury Mus.* 3: 469-481.
- CHACE, F. A. 1942. Reports on the scientific results of the Atlantis expeditions to the West Indies, under the joint auspices of the University of Havana and Harvard University. The Anomuran Crustacea. I. Galatheidea. *Torreia* 2: 1-106.
- CROSNIER, A. & THOMASSIN, B. 1974. Sur des crabes de la famille des Portunidae (Crustacea Decapoda) nouveaux pour Madagascar ou rares. *Bull. Mus. natn. Hist. nat., Paris* (3) 241: 1097-1118.
- DELL, R. K. 1963. Some deep-water crabs (Crustacea, Brachyura) from New Zealand. *Rec. Dominion Mus.* 4: 243-253.
- DOFLEIN, F. 1904. Brachyura. *Wiss. Ergebn. dt. Tiefsee-Exped. 'Valdivia'* 6: 1-314.
- EDWARDS, A. M. 1880. Reports on the results of dredging by the United States Coast Survey Steamer 'Blake' VIII. Études préliminaires sur les Crustacés *Bull Mus comp. Zool. Harv.* 8: 1-68.

- EDWARDS, A. M. & BOUVIER, E.-L. 1894. Considérations générales sur la famille des Galathéides. *Annls. Sci. nat. (zool.)* **16**: 191-327.
- FAXON, W. 1895. Reports on an exploration of the west coasts of Mexico, central and South America, and off the Galapagos Islands, in charge of Alexander Agassiz, by the U.S. Fish Commission steamer 'Albatross' during 1891, Lieut. Commander Z. L. Tanner, U.N.S. commanding. The stalk-eyed Crustacea. *Mem. Mus. comp. Zool. Harv.* **18**: 1-292.
- GORDON, I. 1950. Crustacea: Dromiacea. Part I. Systematic account of the Dromiacea collected by the 'John Murray' Expedition Part II. The morphology of the spermatheca in certain Dromiacea. *Scient. Rep. John Murray Exped.* **9**: 201-253.
- GRIFFIN, D. J. G. 1966. The marine fauna of New Zealand: Spider Crabs, Family Majidae (Crustacea, Brachyura). *Mem. N.Z. oceanogr. Inst.* **35**: 9-112.
- GRIFFIN, D. J. G. 1974. Spider crabs (Crustacea: Brachyura: Majidae) from the International Indian Ocean Expedition, 1963-1964 *Smithson. Contr. Zool.* **182**: 1-35.
- HALE, H. M. 1941. Decapod Crustacea. *Rep. B.A.N.Z. antarct. Res. Exped. (B)* **4**: 259-285.
- HENDERSON, J. R. 1888. Report on the Anomura collected by H.M.S. *Challenger* during the years 1873-1876. *Rep. Voy. Challenger* **27**: 1-221.
- LENZ, H. 1902. Die Crustaceen der Sammlung Plate. (Decapoda und Stomatopoda) *Fauna Chilensis* **2**: 731-772. (Supplement to Zool. Jb.)
- LOUW, A. E. 1977. The South African Museum's *Meiring Naude* cruises. Part 1. Station data 1975, 1976. *Ann. S. Afr. Mus.* **72**: 147-159.
- MACGILCHRIST, A. C. 1905. Natural history notes from the R.I.M.S. ship 'Investigator' Capt T. H. Heming R.N. commanding. Series III no. 6, An account of the new and some of the rarer Decapoda Crustacea obtained during the surveying season 1901-1904. *Ann. Mag. nat. Hist. (7)* **15**: 233-268.
- RATHBUN, M. J. 1925. The spider crabs of America. *Bull. U.S. natn. Mus.* **129**: 1-598.
- STEBBING, T. R. R. 1902. South African Crustacea. *Mar. Invest. S. Afr.* **1**: 14-66.
- STEBBING, T. R. R. 1910. General catalogue of the South African Crustacea. *Ann. S. Afr. Mus.* **6**: 281-593.
- STEBBING, T. R. R. 1920. South African Crustacea. *Ann. S. Afr. Mus.* **17**: 231-272.
- STEBBING, T. R. R. 1924. Crustacea of Natal. *Rep. Fish. mar. biol. Surv. Un. S. Afr.* **3**: 1-16.
- STEPHENSON, W. & REES, M. 1967. Portunid crabs (Crustacea: Decapoda: Portunidae) collected by the 'Discovery' in the Indian Ocean. *J. nat. Hist.* **1**: 285-288.
- TIRMIZI, N. M. 1966. Crustacea: Galatheidae. *Scient. Rep. John Murray Exped.* **11**: 169-234.
- YALDWYN, J. C. & DAWSON, E. W. 1976. First records of the crab genera *Homola*, *Randallia* and *Rochinia* from New Zealand (Crustacea: Decapoda: Brachyura). *Rec. Nat. Mus. N.Z.* **1**: 91-103.



Kensley, Brian Frederick. 1977. "The South African Museum's Meiring Nande cruises Part 2. Crustacea, Decapoda, Anomura and Brachyura." *Annals of the South African Museum. Annale van die Suid-Afrikaanse Museum* 72, 161–188.

View This Item Online: <https://www.biodiversitylibrary.org/item/126399>

Permalink: <https://www.biodiversitylibrary.org/partpdf/93813>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In Copyright. Digitized with the permission of the rights holder

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://www.biodiversitylibrary.org/permissions/>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.