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THE SOUTH AFRICAN MUSEUM'S *MEIRING NAUDE* CRUISES PART 8 ISOPODA ANTHURIDEA

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THE SOUTH AFRICAN MUSEUM'S *MEIRING NAUDE* CRUISES
PART 8
ISOPODA ANTHURIDEA

By

Brian Kensley

South African Museum, Cape Town

(With 13 figures)

[*MS. accepted 21 March 1978*]

ABSTRACT

Ten species of anthurid and paranthurid isopods are recorded from deep water off Natal. One is described as a new genus, viz. *Natalanthura foveolata*. A further five species are described as new, viz. *Apanthura insignifica*, *Neohyssura skolops*, *Colanthura uncinata*, *Leptanthura minuta*, and *Leptanthura natalensis*.

CONTENTS

INTRODUCTION

The anthuridean isopods were excluded from the report on the isopods of the 1975 and 1976 *Meiring Naude* cruises (Kensley 1977) either for lack of specimens of some species or because of taxonomic uncertainty. With the 1977 cruise more anthurids were collected and some of the taxonomic problems have been resolved. The anthurids of all three cruises are presented here. Station data from the first two cruises may be obtained from Louw (1977), and the South African Museum's unpublished reports and station lists for the 1977 cruise.

SPECIES LIST

	SM Station	♂♂	♀♀	ovig. ♀♀	juvs
Family **Anthuridae**					
Anthelura remipes Barnard	123	—	1	—	—
	129	—	—	—	1
Apanthura insignifica sp. nov.	123	—	2	—	—
	129	1	3	—	—
Mesanthura catenula (Stimpson)	86	—	1	—	1
Natalanthura foveolata gen. et sp. nov.	86	—	6	—	—
	123	—	1	—	—
	129	—	—	1	—
Neohyssura skolops sp. nov.	129	—	1	—	—

Ann. S. Afr. Mus. 77 (1), 1978: 1–25, 13 figs.

	SM Station	♂♂	♀♀	ovig. ♀♀	juvs
Family **Paranthuridae**					
Colanthura uncinata sp. nov.	86	3	—	2	9
	103	13	—	4	12
Leptanthura minuta sp. nov.	78	—	—	1	—
	86	3	2	3	—
	129	2	1	—	—
Leptanthura natalensis sp. nov.	53	2	—	—	1
	60	1	—	—	—
	61	2	—	—	—
	117	1	1	—	—
	123	1	—	—	1
	129	—	7	—	—
Paranthura punctata (Stimpson)	103	—	1	—	—
Pseudanthura tenuis Kensley	53	—	1	—	—
	103	—	6	—	—
	129	1	4	—	—

SYSTEMATIC DISCUSSION

Family **Anthuridae**

Apanthura insignifica sp. nov.

Figs 1–2

Description

Female

Integument thin. Body with following proportions: C<1=2=3<4=5>6>7. Pereonite 7 half length of 6. Pereonites 4 to 7 with faint anterior constriction, pereonite 4 with single, shallow, circular dorsal pit, pereonite 5 with transversely elongate shallow pit, pereonite 6 with two small, shallow pits. Dorsolateral grooves present. Pleonites 1 to 5 completely separate, pleonite 5 slightly longer than preceding pleonites, pleonite 6 with middorsal incision in posterior margin. Telson distally broadly rounded with several setae, widest at about midlength, with low weakly developed middorsal ridge; two large statocysts present at telsonic base. Cephalon with rostrum projecting beyond anterolateral corners; eyes lacking.

Antennular peduncle 4-segmented, basal segment equal to second and third segments together; fourth segment very short, flagellum of two articles bearing three terminal aesthetascs.

Antennal peduncle 5-segmented, two basal segments fairly broad; flagellum of four articles.

Mandibular palp 3-segmented, first and second segments subequal, third segment shorter, with four distal serrate spines; incisor of three teeth, lacinia plate with five teeth; molar process well developed, distally narrowly rounded.

Maxilla elongate, with one strong tooth and five smaller spines distally; inner ramus tipped with single seta.

Lower lip complex tipped with single terminal hook-like lobe on each side.

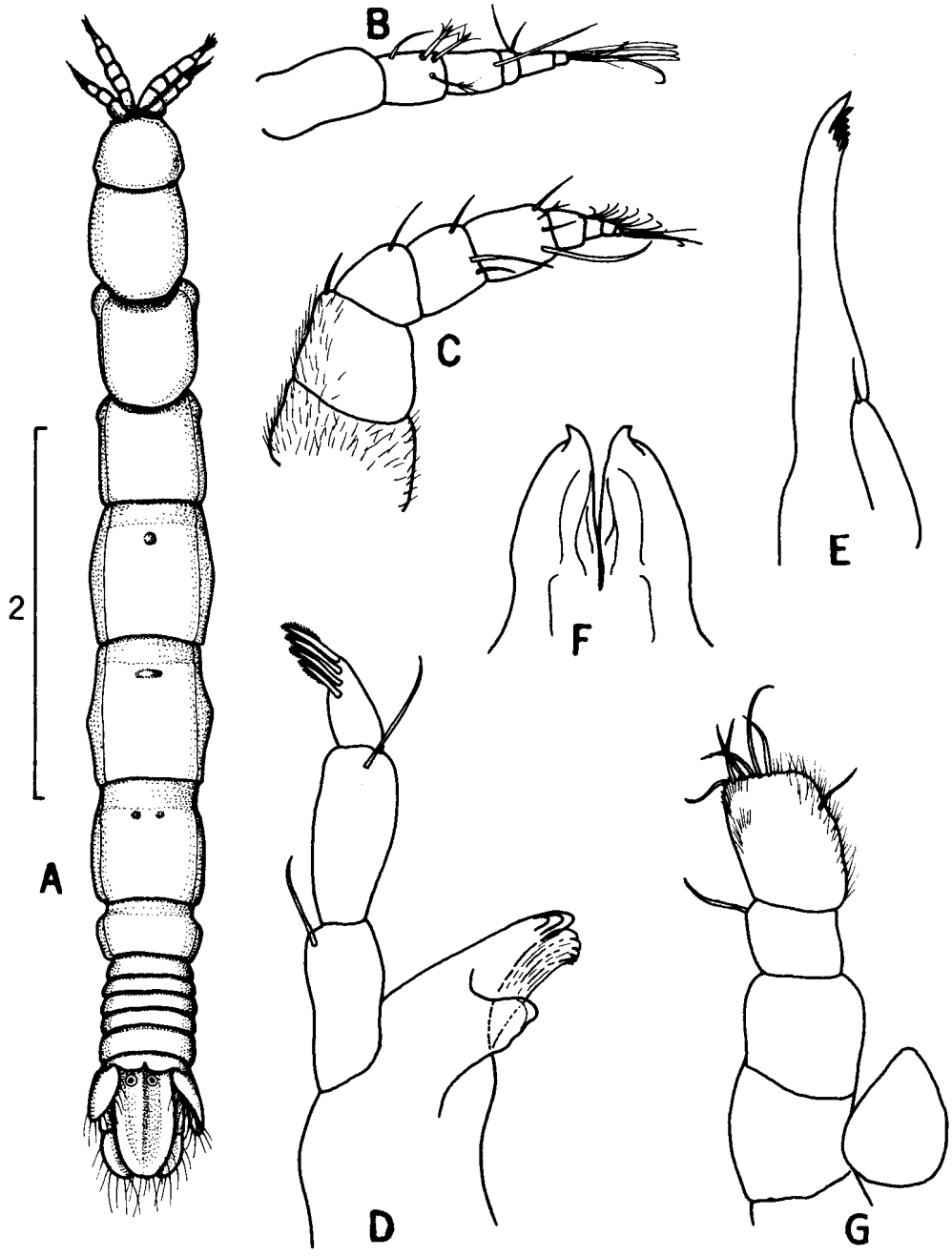

Fig. 1. *Apanthura insignifica*. A. Holotype in dorsal view. B. Antennule. C. Antenna. D. Mandible. E. Maxilla. F. Lower lip complex. G. Maxilliped.

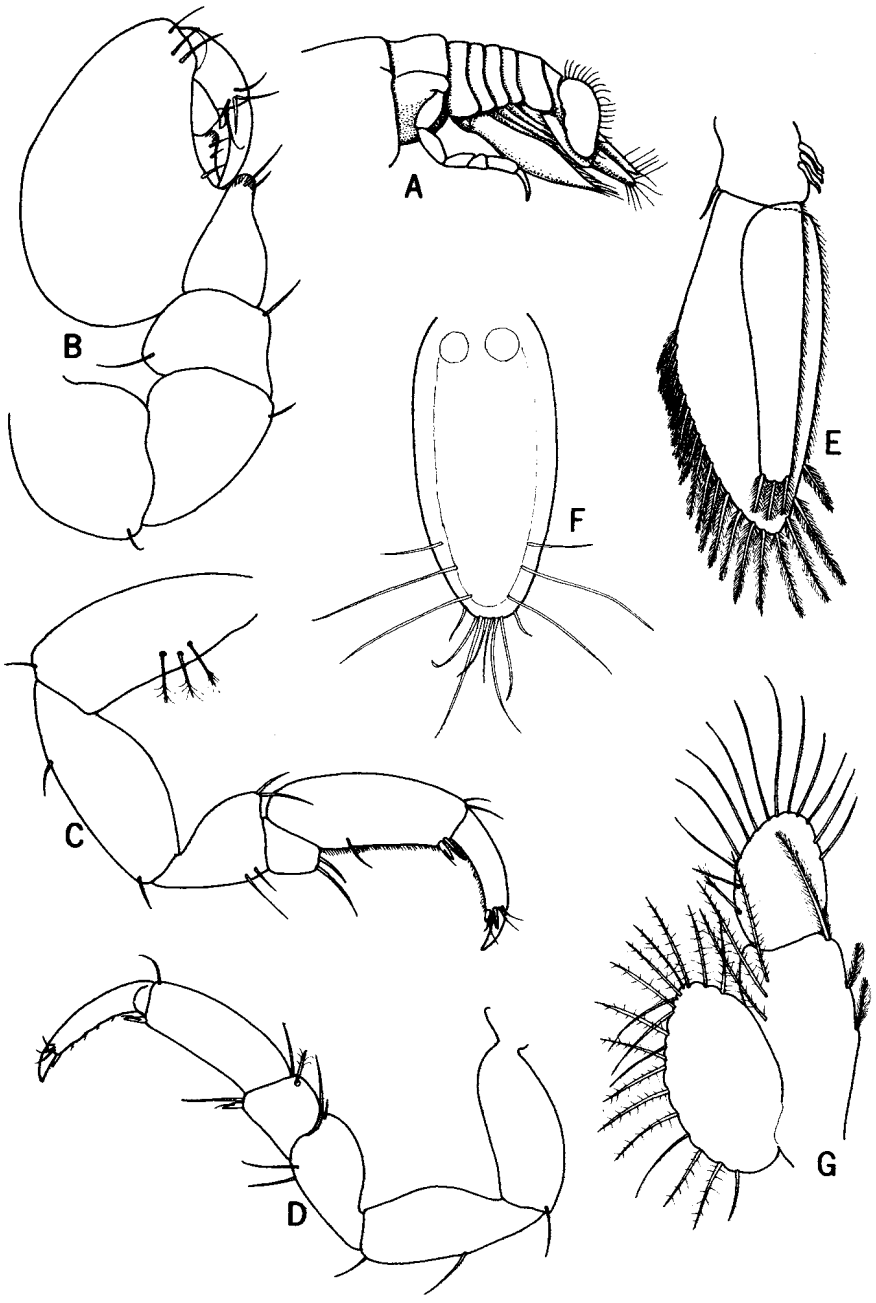

Fig. 2. *Apanthura insignifica*. A. Pereonite 7 and pleon in lateral view. B. Pereopod 1. C. Pereopod 2. D. Pereopod 7. E. Pleopod 1. F. Telson. G. Uropod.

Maxilliped 5-segmented, terminal segment rectangular with several setae on mediodistal corner.

Pereopod 1 unguis half length of dactylus, with small spine at base; propodus broad, palm concave with strong, rounded lobe at about midpoint; carpus triangular, distally narrowly rounded.

Pereopods 2 to 7 similar, with carpi barely underriding propodi, and becoming slightly more elongate posteriorly.

Pleopod 1 exopod operculate, about three times wider and slightly longer than the endopod, bearing numerous distal plumose setae; endopod with three distal plumose setae; basis with three retinaculae.

Uropodal exopod folding over telson, oval in outline, reaching to end of basis, bearing several sparsely plumose setae; endopod oval, fringed with simple setae.

Submale

Antennular flagellum of about twelve articles extending posteriorly to second pereonite, lacking whorls of aesthetascs.

Pereopod 1 as in female.

Stylet on pleopod 2 not yet detached from endopod.

Material

Holotype SAM–A15646 ♀ TL 5,9 mm SM 123 30°33'S 30°48'E 690 m

Paratype SAM–A15646 1♀ TL 5,2 mm SM 123

Paratypes SAM–A15647 1 sub. ♂ TL 5,6 mm 1♀ TL 4,5 mm SM 129 30°54'S 30°31'E 850 m

Paratypes USNM 170542 2 ♀♀ TL 5,6 mm 5,4 mm SM 129

Remarks

Of the twelve species of *Apanthura* described, only *A. coppingeri* Barnard from the Dundas Straits (northern Australia) and *A. africana* Barnard from South Africa lack eyes. The rhomboid-shaped telson, and the slender uropodal endopod of *A. coppingeri* easily distinguish this species from *A. insignifica*. *A. africana*, known from Saldanha Bay to Still Bay, is a much larger species (up to 20 mm) recorded from shallow water. *A. africana* can further be separated from *A. insignifica* by the maxilliped, which possesses a small terminal segment, and an apically acute telson.

Etymology

The specific name refers to the small size of this species.

Natalanthura gen. nov.

Diagnosis

Integument heavily indurate and very obviously pitted. Mandible with spike-shaped molar on right side, molar reduced to a spine on left side.

Maxilliped 5-segmented with well developed endite. Carpus of pereopods 4 to 7 slightly underriding propodus. Pleopod 1 operculate. Pleonites 1 to 3 subequal, separate; pleonites 4 and 5 fused; pleonite 6 indistinguishably fused with telson. Paired statocysts difficult to detect but probably present beneath two pits at telsonic base.

Type species

Natalanthura foveolata

Etymology

The generic name *Natalanthura* is derived from the South African province of Natal, in whose waters the species was caught, plus the usual 'anthura' suffix. Gender: feminine.

Remarks

The unusual fusion of the pleonites is not encountered in any of the described genera of anthurids. The mandibular structure would also seem to be unique, although reminiscent of *Panathura*. These two features demand the erection of a new genus.

Natalanthura foveolata gen. et sp. nov.

Figs 3–4

Description

Female

Integument indurate and obviously pitted. Anterolateral corners of cephalon extending slightly beyond rostrum. Eyes feebly pigmented, of three or four ocelli. Pereonites with strong dorsolateral ridges and two large dorsal pits per segment in addition to numerous smaller pits. Lateral walls of pereonites pitted. Pereonites 1 to 4 increasing in width and length, pereonite 4 widest and longest; posterior three pereonites decreasing in length, seventh half length of sixth. Pereonites 3 to 5 with oblique dorsal grooves converging anteriorly. Pleon with anterior three pleonites free and distinct; pleonite 4 and 5 fused, line of fusion marked by row of pits; pleonite 6 completely fused with telson. Latter longer than pleonites 1 to 5 combined, distal margin evenly convex, dentate, with strong mediodorsal rounded ridge.

Antennule with broadly curved basal segment plus six additional segments; fourth segment short, terminal segment bearing setae and three or four aesthetascs.

Antenna with 4-segmented peduncle; broad and relatively elongate basal segment with distal triangular part folded over antennule; flagellum of six articles.

Mandible with distal incisor tridentate, quite strongly sclerotized; lacinia plate with row of twelve short teeth; right mandible with digitiform molar

process bearing row of small denticles and striations; molar process reduced to small spine in left mandible; palp 3-segmented, middle segment longest and widest, terminal segment bearing three stout setae.

Maxilla slender and elongate, with four terminal teeth.

Maxilliped 5-segmented, terminal segment rounded, bearing four setae; endite elongate-lanceolate, apically acute, with single seta on median margin, reaching just beond proximal margin of third segment.

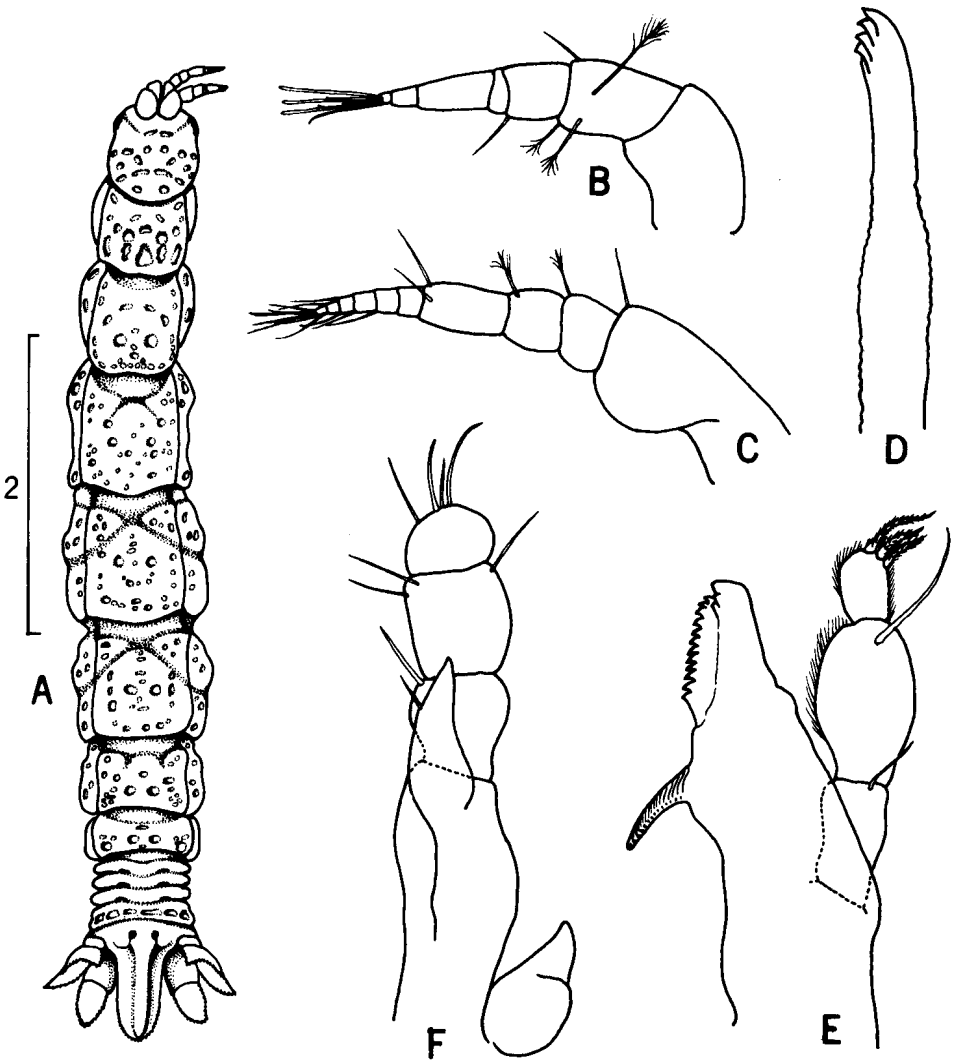

Fig. 3. *Natalanthura foveolata*. A. Holotype in dorsal view. B. Antennule. C. Antenna. D. Maxilla. E. Right mandible. F. Maxilliped.

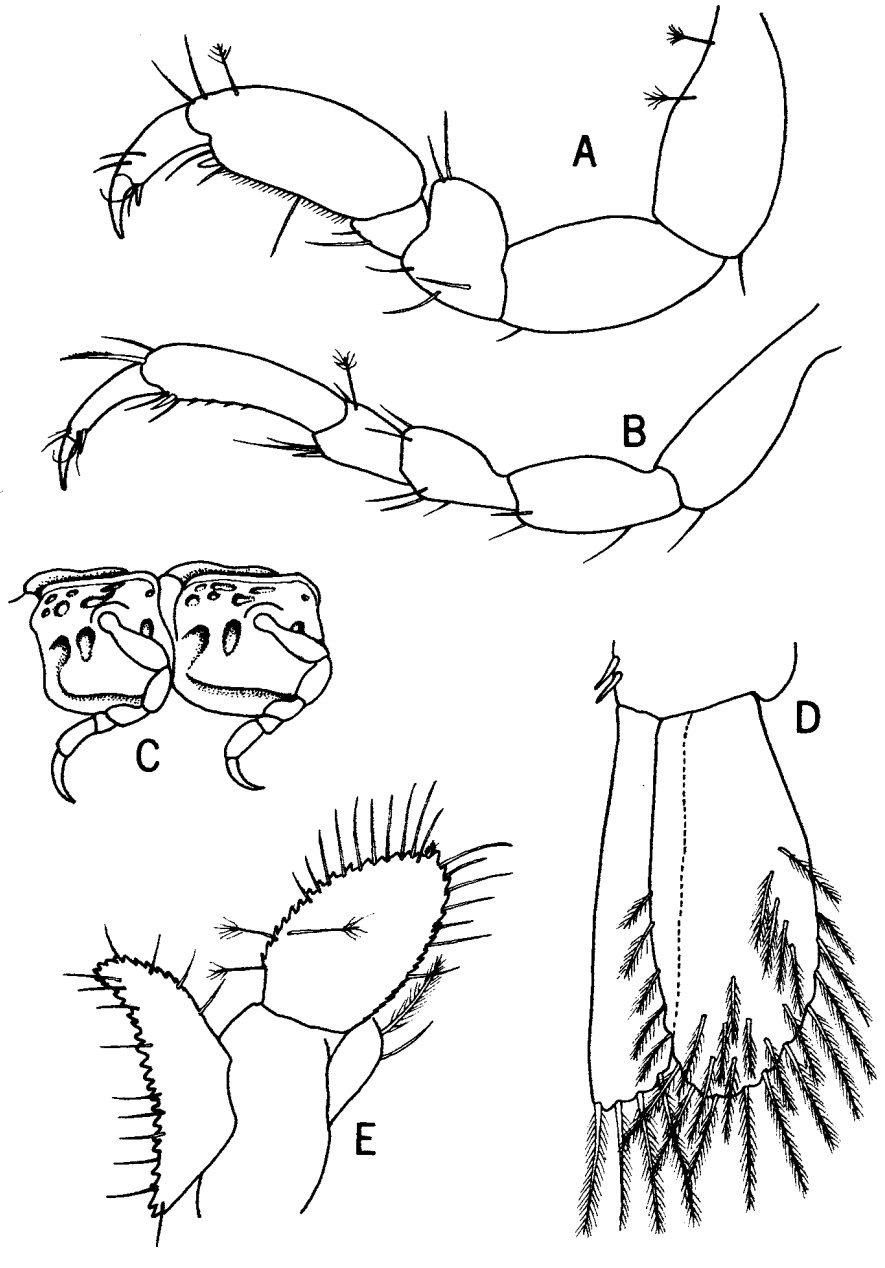

Fig. 4. *Natalanthura foveolata*. A. Pereopod 1. B. Pereopod 7. C. Pereonites 4 and 5 in lateral view. D. Pleopod 1. E. Uropod.

Pereopods 1 and 2 similar, unguis one-third length of dactylus, with single spine at base; propodus with single distal spine and numerous setules on palmar margin. Posterior pereopods with unguis one-third length of dactylus, with short spine at base, propodus with strong distal spine and four or five short, slender spines on ventral margin, and single serrate seta on upper distal margin; carpus about half length of, and slightly underriding, propodus.

Brood pouch formed by four pairs of oostegites.

Pleopod 1 operculate, rami of equal length, endopod half width of exopod, with four distal plumose setae; exopod with numerous plumose setae distally, and with outer surface bearing scales; basis bearing two coupling hooks.

Uropodal endopod subequal to basis in length, entire margin strongly dentate; exopod crescentic and curved, margin strongly dentate; basis triangular in cross-section.

Material

Holotype SAM–A15648 ♀ TL 5,8 mm SM 86 27°59′S 32°40′E 550 m
Paratypes SAM–A15648 2 ♀♀ TL 3,5 mm 5,4 mm SM 86
Paratypes USNM–170543 3 ♀♀ TL 4,3 mm 4,3 mm 4,6 mm SM 86
Paratype SAM–A15649 1 ♀ TL 3,4 mm SM 123 30°33′S 30°48′E 690 m
Paratype SAM–A15650 1 ovig. ♀ TL 6,9 mm SM 129 30°53′S 30°31′E 850 m

Etymology

The specific name refers to the pitted nature of the integument.

Neohyssura skolops sp. nov.

Figs 5–6

Description

Female

Integument thin, only uropods and telson slightly indurate. Body proportions: C<1<2=3<4=5=6>7. Dorsolateral grooves present on pereonites but very difficult to see; dorsal pits absent. Anterior five pleonites separate, equal in length and breadth; pleonite 6 fused with telson; latter with broad, rounded base, tapering rapidly into cylindrical spike-like structure tipped with setae; no statocysts visible. Eyes absent. Anterolateral corner of cephalon extending beyond low rostrum.

Antennular peduncle 4-segmented, two basal segments broad, fourth segment set obliquely into third, short; flagellum of five articles with few setae and single apical aesthetasc.

Antennal peduncle 5-segmented, second and fifth segments subequal, longer than third and fourth segments; second segment grooved to receive antennule; flagellum of seven articles.

Mandibular palp 3-segmented, first and third segments subequal, about one-third length of second segment; incisor of three teeth, lacinia plate bearing five blunt teeth; molar process blunt, tapering.

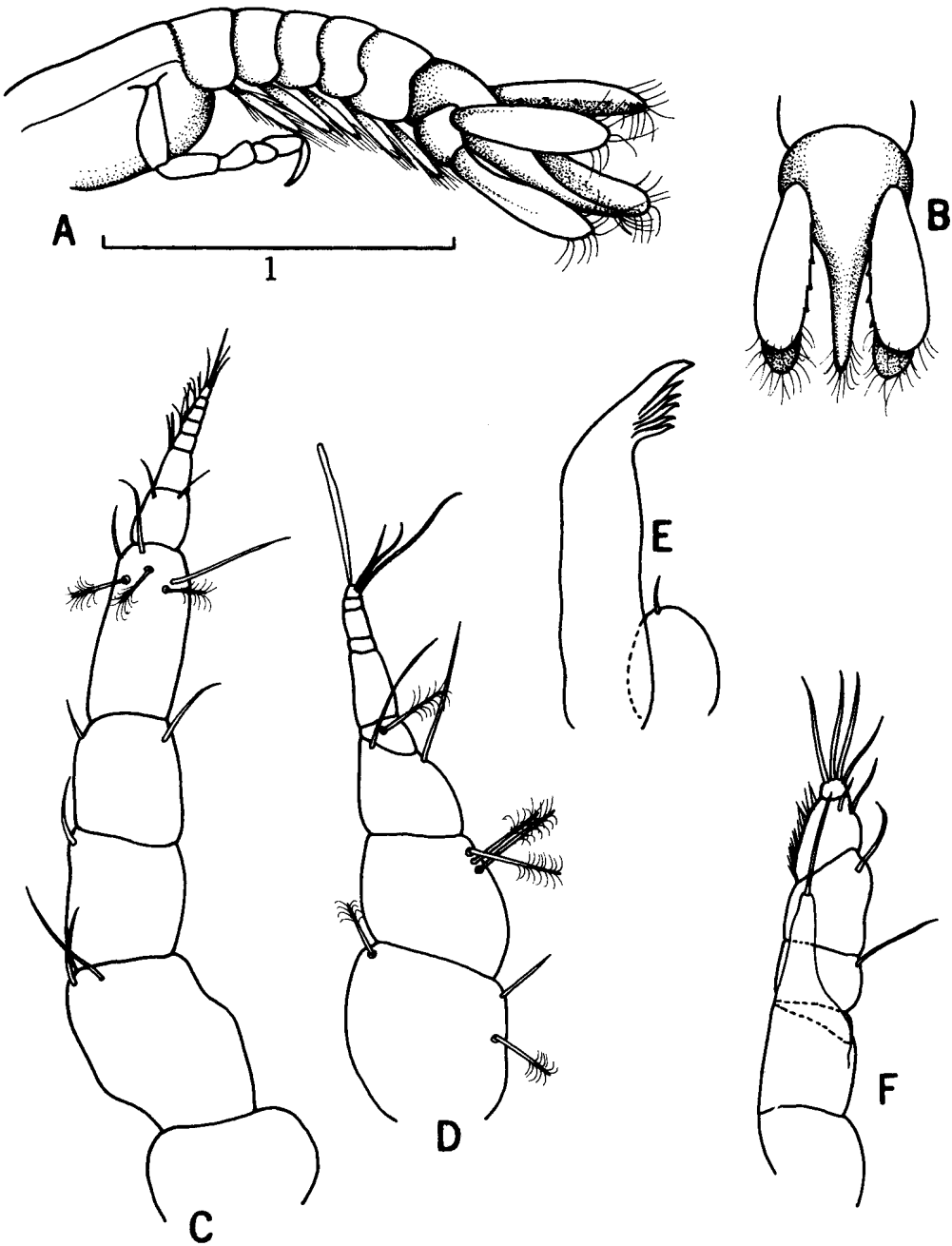

Fig. 5. *Neohyssura skolops*. A. Pereonite 7 and pleon in lateral view. B. Telson and uropods in dorsal view. C. Antenna. D. Antennule. E. Maxilla. F. Maxilliped.

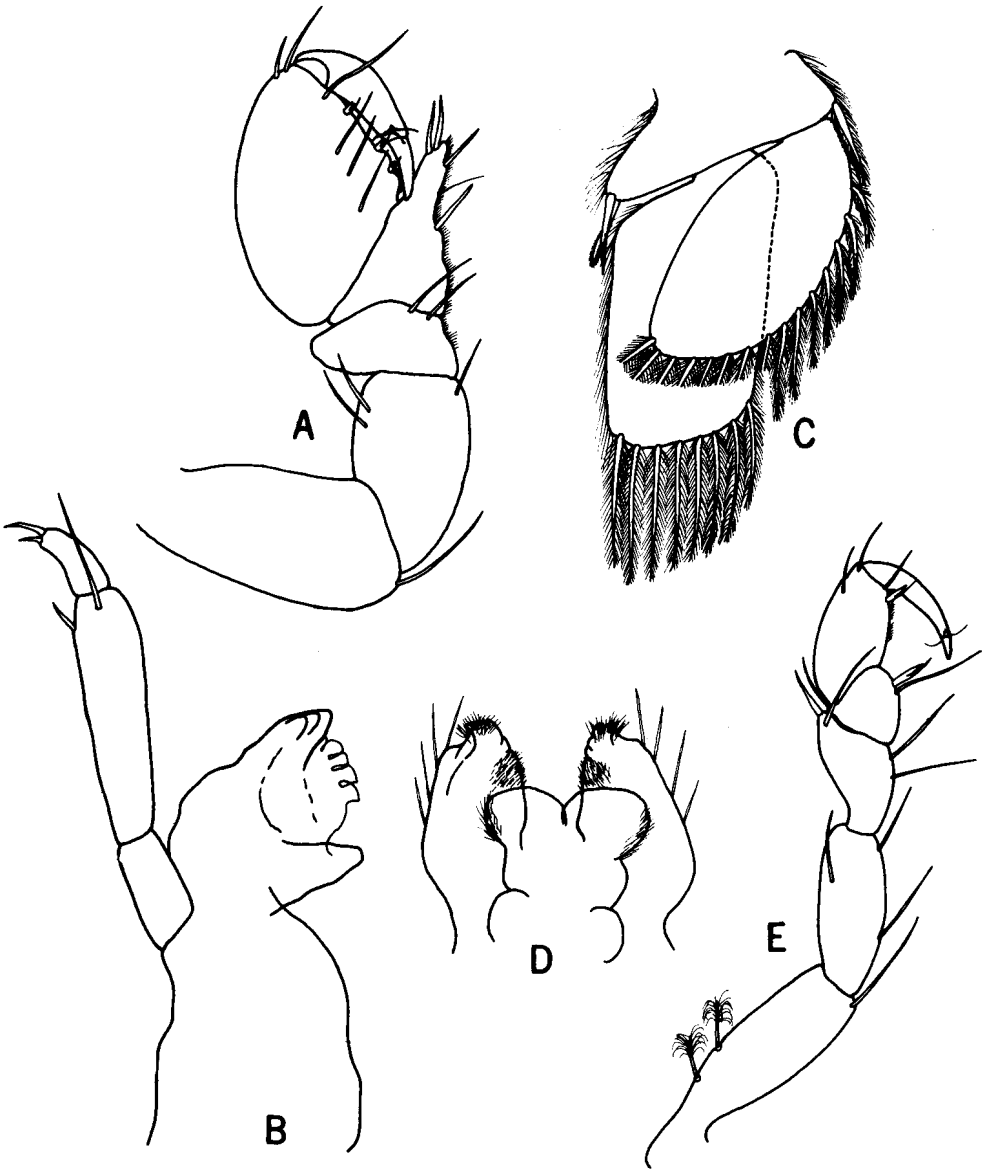

Fig. 6. *Neohyssura skolops*. A. Pereopod 1. B. Mandible. C. Pleopod 1. D. Lower lip complex. E. Pereopod 7.

Maxilla with one strong, outer spine and five smaller spines distally.

Lobes of lower lip distally bearing two short acute processes.

Maxilliped 7-segmented, terminal segment short, bearing four setae; thin-walled endite tapering, with single terminal seta.

Pereopods 1 to 3 similar, subchelate, pereopod 2 more robust than 1 or 3; unguis one-third length of dactylus, propodus proximally broad, palm convex between three short sensory spines, with few scattered setae on inner face; carpus triangular, produced distally well beyond base of propodus to meet dactylus. Pereopods 4 to 7 slender, unguis one-sixth length of dactylus; propodus with strong posterodistal spine; carpus short, underriding propodus, with strong sensory spine on posterior margin.

Uropods somewhat indurate, both rami reaching telsonic apex; exopod situated dorsal to telson, with four strong teeth on medial margin, apically rounded; basis with strong mediodistal spine visible in ventral view.

Material

Holotype SAM–A15651 ♀ TL 5,8 mm SM 129 30°53'S 30°31'E 850 m

Remarks

Barnard (1925) noted that '*Hyssura*' *spinicauda* Walker, 1901, did not fit the generic diagnosis of *Hyssura* but he did not decide on the generic status. Amar (1952), on examining a specimen from Corsica, erected the new genus *Neohyssura* which he defined as follows: close to *Hyssura* but the maxillipeds with seven segments, lacking endite, seventh pereopod present, pereopods 4 to 7 with triangular carpus underriding propodus.

The present specimen agrees with all except one of these characters. The maxilliped does have a thin-walled endite (easily overlooked), but for the rest is very similar to that of *N. spinicauda*. The shape of the telson also differs, being narrowly triangular and bearing lateral spines in *N. spinicauda* but narrowly spike-like in *N. skolops*. (See Walker 1901, pl. 27, figs 7–11; Monod 1925, pl. 44.)

Etymology

The specific name '*skolops*' is taken from the Greek word meaning a sharp object such as spike, and refers to the shape of the telson.

Family **Paranthuridae**

Colanthura uncinata sp. nov.

Figs 7–8

Description

Male

Entire integument covered with small imbricate scales. Rostrum extending slightly beyond anterolateral corners of cephalon. Eyes ovate, lateral, consisting of fourteen ocelli. Cephalon two-thirds length of pereonite 1. Pereonites 1 to 5

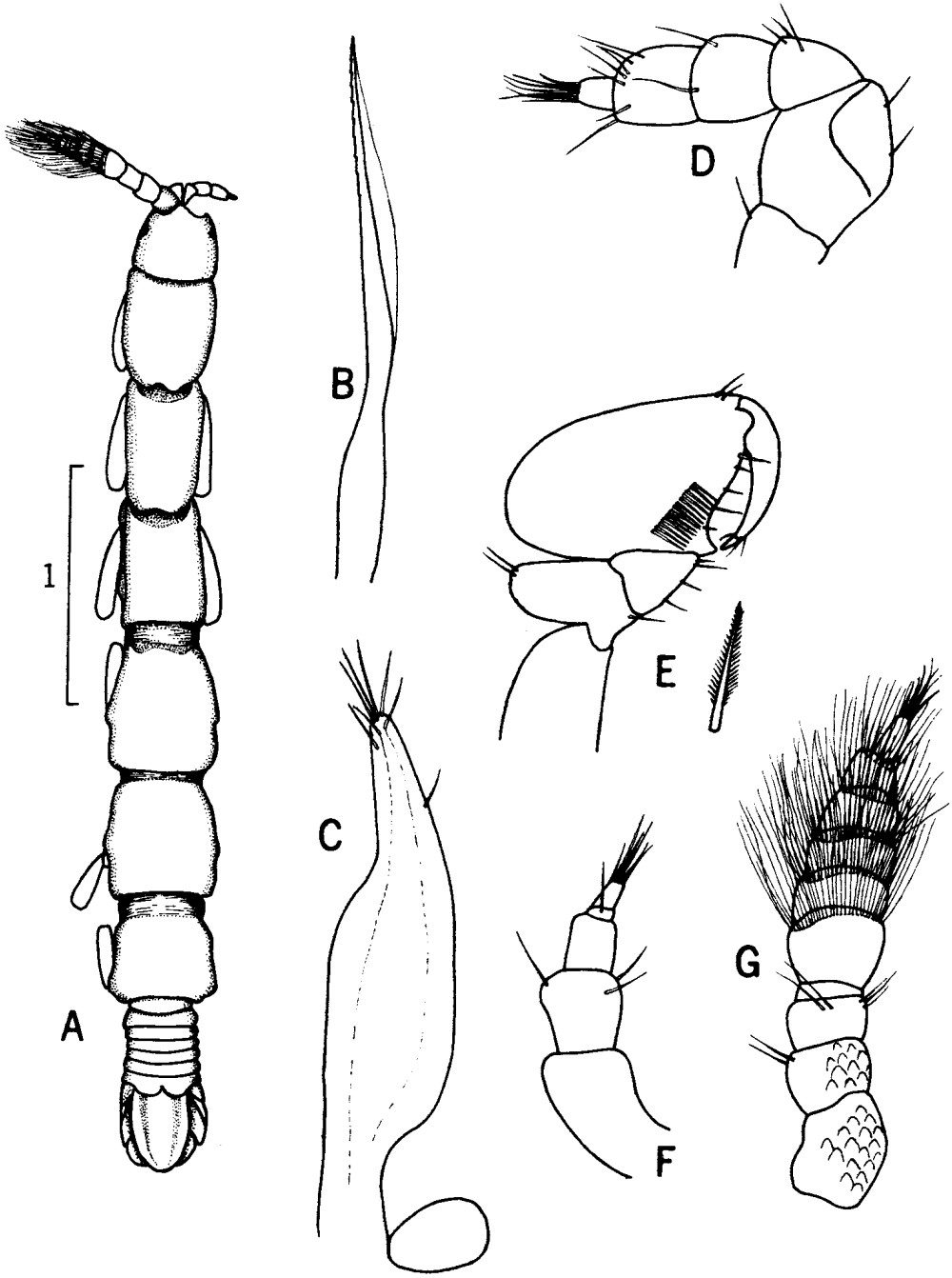

Fig. 7. *Colanthura uncinata*. A. Holotype in dorsal view. B. Maxilla. C. Maxilliped. D. Antenna. E. Pereopod 1 with spine further enlarged. F. Antennule ♀. G. Antennule ♂.

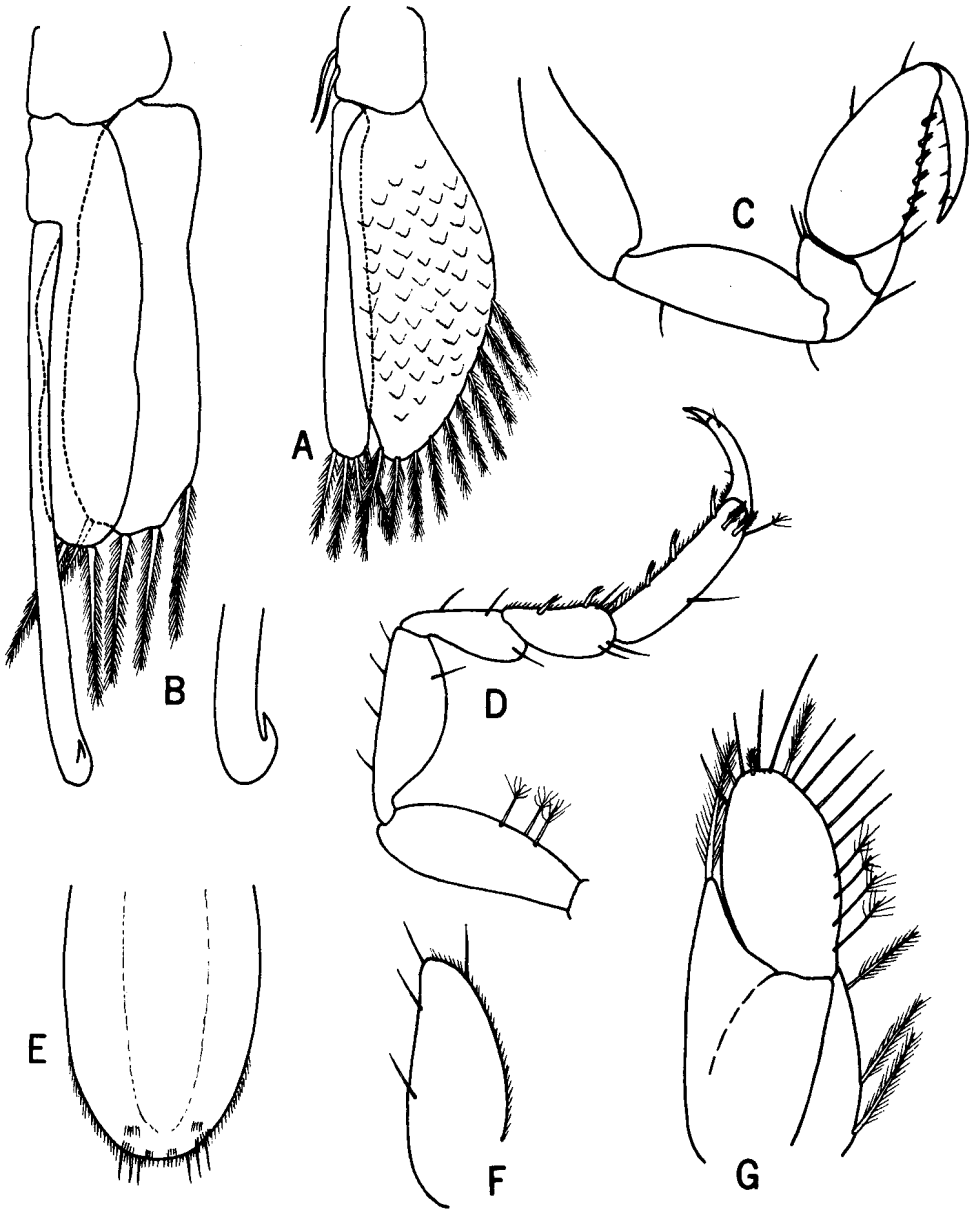

Fig. 8. *Colanthura uncinata*. A. Pleopod 1. B. Pleopod 2 ♂ with apex of stylet further enlarged. C. Pereopod 2. D. Pereopod 6. E. Telson. F. Uropodal exopod. G. Uropodal endopod and basis.

increasing in width, but subequal in length; posterior margins of pereonites 1 and 2 bilobed. Pereonite 6 two-thirds length of pereonite 5; pereonite 7 very short, subequal to anterior pleonites in length and width, lacking pereopods. Ventral surface of pereonites formed by two longitudinal, low, rounded ridges, conspicuously scaled. Pleon narrower than pereon; pleonites 1 to 5 subequal, pleonite 6 posteriorly bilobed, almost twice length of preceding pleonite. Telson equal to pleonites 1 to 6 in length, distally evenly convex; dorsally with low, rounded median area widest proximally.

Antennular peduncle 4-segmented, basal segment largest; flagellum of six articles, five proximal articles broad, bearing dense aesthetascs, terminal article narrow, bearing setae.

Antennal peduncle 5-segmented, second segment largest and broadest; flagellum reduced to setiferous terminal article about one-third width and half length of penultimate segment.

Mandible reduced to blunt lobe lacking palp.

Maxilla very slender, acute, with about ten faint distal serrations.

Maxilliped elongate, consisting of a single segment, distally narrowed, with about seven terminal setae.

Pereopod 1 dactylus strongly curved, unguis short; propodus broadly oval, palm gently sinuous, with triangular proximal process and row of fourteen fringed spines set back from the triangular process.

Pereopod 2 dactylus gently curved, unguis short; propodus proximally broad, distally narrowed, palm with short spines.

Pereopods 3 to 7 similar, unguis of dactylus relatively longer than in pereopods 1 and 2; propodus with three spines and numerous fine setules on ventral margin, plus two distal fringed spines; carpus not underriding propodus, bearing two ventral spines.

Pleopod 1 exopod broad and operculate, with scales on external face; endopod as long as, but one-third width of, exopod.

Pleopod 2 exopod and endopod subequal in length and width, each with few distal plumose setae; stylet of endopod extending well beyond apices of rami, distally rounded with strong subapical hook.

Uropodal endopod just extending to telsonic apex, oval; exopod narrowly ovate, apically narrowly rounded.

Ovigerous female

Antennule consisting of five segments, penultimate segment very short.

Pereopod 1 similar to that of male, but with spine row of six (rather than fourteen) spines. Brood pouch formed by four pairs of oostegites, containing four eggs or four larvae.

Material

Holotype SAM–A15652 ♂ TL 3,9 mm SM 103 28°31'S 32°34'E 680 m
Allotype SAM–A15652 ovig. ♀ TL 4,5 mm SM 103

Paratypes USNM 170544	2 ♂♂	1 ovig. ♀	SM 103
	10 ♂♂	2 ovig. ♀♀	12 immature SM 103
Paratypes SAM–A15653	2 ♂♂	1 ovig. ♀	SM 86 27°59′S 32°40′E 550 m
	1 ♂	1 ovig. ♀	9 immature SM 86

Remarks

Four species of *Colanthura* have been described. These are *C. tenuis* Richardson, 1902, from Bermuda; *C. squamosissima* Menzies, 1951, from California; *C. nigra* Nunomura, 1975, from Japan, and *C. caeca* Mezhov, 1976, from Russia. The present material most closely resembles the Californian species, this similarity being most marked in the character of the integument, both species being almost covered with imbricate scales. Several differences between these two species are apparent. These include pleonites 1 to 5, which in *C. uncinata* are subequal, while in *C. squamosissima* pleonite 5 is four times the length of the preceding segment; the telson, which is more obviously tapered in *C. uncinata*; and the apex of the stylet of pleopod 2 ♂, which has a swollen apical lobe in Menzies's species, but is hooked in *C. uncinata*. The stylet of pleopod 2 ♂ in *C. caeca* is also apically hooked, but possesses three smaller supplementary apical spines (Mezhov 1976, fig. 3). The shape of the uropodal exopod and telson, and the propodal spination of the pereopods of the Russian species differs from *C. uncinata*.

Etymology

The specific name is taken from the hooked stylet of pleopod 2 ♂.

Leptanthura minuta sp. nov.

Figs 9–10

Description

Male

Body slender, elongate, not indurate. No dorsal pits or dorsolateral grooves present. Cephalon subequal to pereonite 1 in length; eyes lacking. Body proportions: C=1<2=3=4<5>6>7. Pleon equal to pereonites 6 and 7 together in length; all pleonites distinct, pleonites 1 and 5 slightly longer than 2 to 4; pleonite 6 with convex distal margin. Telson elongate-oval in outline, distally evenly rounded, with four median setae; ventrally concave; dorsally with gently raised central area; prominent statocyst present with single mediodorsal pore.

Antennule with 4-segmented peduncle, basal segment largest, fourth segment very narrow; flagellum of eight articles each with dense whorl of aesthetascs.

Antenna with 5-segmented peduncle, second segment longest, with distodorsal triangular part folding over basal antennular segment; flagellum of four articles.

Mandible narrowly triangular, apically acute; 3-segmented palp with middle segment two and a half times length of basal segment, terminal segment short and curved, with single terminal seta.

Maxilla lanceolate, apically acute, with about twelve faint distal serrations.

Maxilliped 3-segmented, with few distal setae; second segment six times longer than wide.

Pereopod 1 dactylus fairly stout, unguis one-third length of rest of segment; propodus proximally broad, palm straight with low triangular proximal

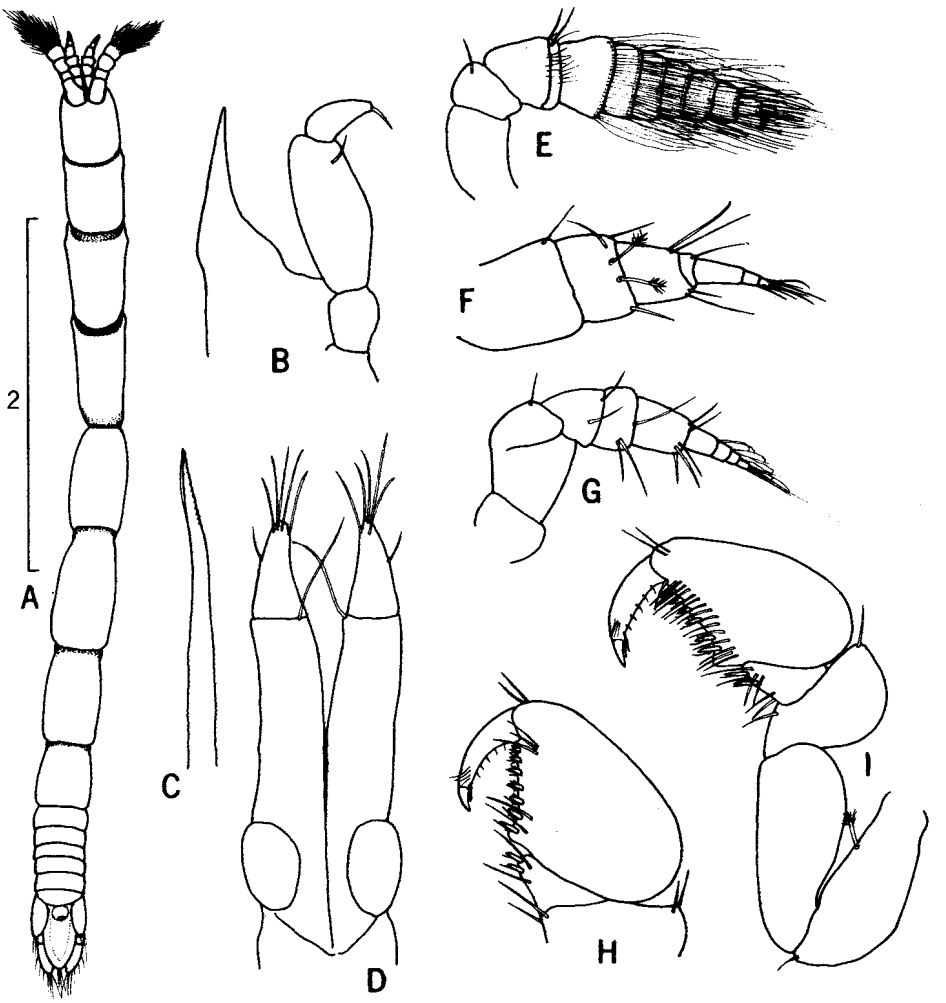

Fig. 9. *Leptanthura minuta*. A. Holotype in dorsal view. B. Mandible. C. Maxilla. D. Maxilliped. E. Antennule ♂. F. Antennule ♀. G. Antenna. H. Pereopod 1 ♀. I. Pereopod 1 ♂.

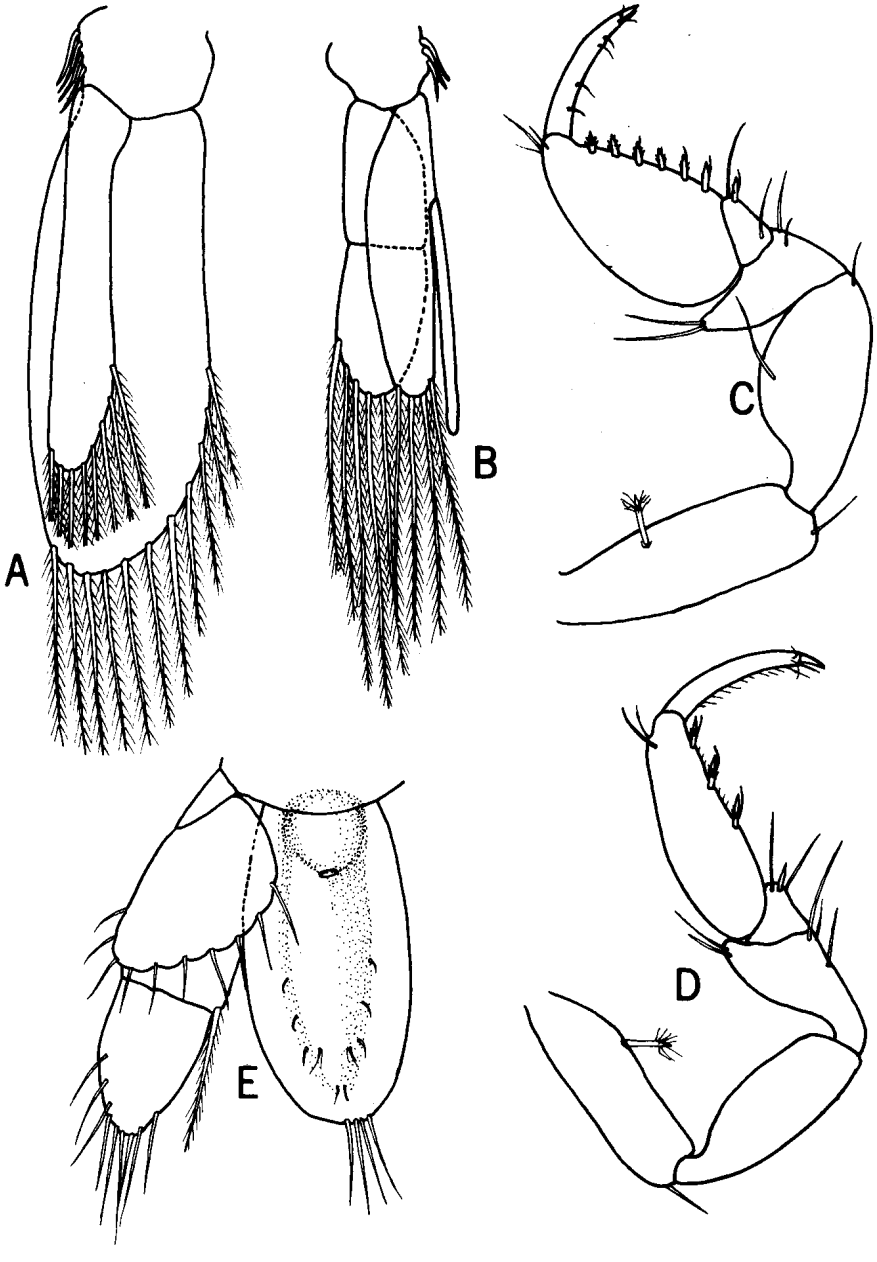

Fig. 10. *Leptanthura minuta*. A. Pleopod 1. B. Pleopod 2 ♂. C. Pereopod 2. D. Pereopod 7. E. Telson and uropod.

tooth, armed with six short serrate spines and numerous simple setae; carpus triangular, small, with two spines and four setae on ventral margin.

Pereopod 2 slightly less robust than pereopod 1, propodus with six spines on palm, lacking dense setae found on pereopod 1; carpus with single ventral spine. Pereopods 4 to 7 similar, slender; propodi with three serrate spines on ventral margin; carpus short, triangular, underriding propodus, with single ventral spine.

Pleopod 1 basis with four retinaculae on median margin, exopod operculate, two and a half times longer than broad with about ten to twelve distal elongate plumose setae; endopod one-third width and two-thirds length of exopod, with eight distal plumose setae.

Pleopod 2 with three or four retinaculae on basis; rami subequal in length; exopod with transverse articulation at midlength and about eight distal plumose setae; endopod with four distal plumose setae, stylet on median margin extending well beyond apex of ramus, apically blunt.

Uropodal exopod extending to base of endopod, triangular-oval, median margin crenulate and setose; basis with single elongate plumose seta at mediodistal angle; endopod with several distal setae, apically rounded.

Female

Antennule with 4-segmented peduncle, basal segment longest and broadest, fourth segment very narrow; flagellum reduced, consisting of three articles.

Pereopod 1 very similar to pereopod 1 ♂, but lacking numerous simple setae on palm.

Brood pouch of four pairs of oostegites, anterior pair smallest.

Material

Holotype	SAM–A15654 ♂ TL 4,6 mm	SM 86	27°59′S	32°40′E 550 m
Allotype	SAM–A15654 ovig. ♀ TL 4,5 mm	SM 86		
Paratypes	SAM–A15654 1 ♂ 1 ovig. ♀ 1 ♀	SM 86		
Paratypes	USNM 170545 1 ♂ 1 ovig. ♀ 1 ♀	SM 86		
	SAM–A15655 1 ovig. ♀	SM 78	27°31′S	32°50′E 750 m
	SAM–A15656 2 ♂♂ 1 ♀	SM 129	30°53′S	30°31′E 850 m

Remarks

The present small blind species with its characteristic elongate-oval telson and crenulate uropodal exopod bears no close resemblance to any of the approximately eighteen described species of *Leptanthura*. Certainly it is very different from the described South African species, viz. *L. agulhasensis*, *L. laevigata*, and *L. urospinosa*. The shape of the telson of *L. minuta* to some extent resembles that of *L. antarctica* Kussakin, 1967, but the shape of the uropodal endopod and exopod, the antennular peduncle, and the first pereopod easily separate these species.

Etymology

The specific name derives from the small size of the adult animals.

Leptanthura natalensis sp. nov.

Figs 11–12

Description

Male

Body very slender and elongate. No dorsal pits. No dorsolateral grooves present, but dorsolateral ridge developed on cephalon and pereonites 1 and 2. Cephalon lacking eyes. Body proportions: 1<2<3<4>5>6>7. Pereonite 5 in small males (6–7 mm) with two rounded posteroventral lobes; holotype male (20,6 mm) with similar lobes on pereonite 7. Pleonites free. Telson distally broadly rounded, not indurated, dorsally slightly concave, with single, large proximal statocyst.

Antennule with 4-segmented peduncle, basal segment largest, fourth segment short; flagellum of thirteen articles.

Antenna 8- or 9-segmented, of which three distal segments are probably flagellum; second segment longest.

Mandible acutely triangular, palp 3-segmented, basal segment two-thirds length of middle segment, latter with single elongate distal seta, terminal segment short and curved.

Maxilla slender, with twelve serrations and three barbs distally.

Maxilliped 4-segmented, second segment four and a half times longer than wide, with short distal lobe bearing two setae at mediodistal angle; two distal segments narrowing, bearing few setae.

Pereopod 1 dactylus with very short unguis; palm of propodus almost straight, with low proximal triangular lobe, and row of fourteen short sensory spines, several elongate setae, and dense border of short simple setae.

Pereopod 2 propodus narrower than that of pereopod 1, with nine or ten sensory spines on palm, lacking dense border of simple setae; carpus small, triangular, with two spines on ventral margin.

Pereopod 7 with short carpus bearing two spines and underriding propodus; latter with three spines on ventral margin.

Pleopod 1 operculate, not indurated; endopod considerably shorter than exopod, both rami bearing distal plumose setae; basis bearing about six retinaculae on medial margin.

Pleopod 2 endopod shorter than exopod, with apically blunt stylet on medial margin; exopod with distinct transverse articulation at about midlength, both rami with distal plumose setae; basis armed with five or six retinaculae on medial margin.

Uropodal basis triangular in cross-section, longer than endopod; latter narrower than basis, with tuft of apical setae; exopod broadly oval, with few marginal setae, exopods overlapping telson dorsally.

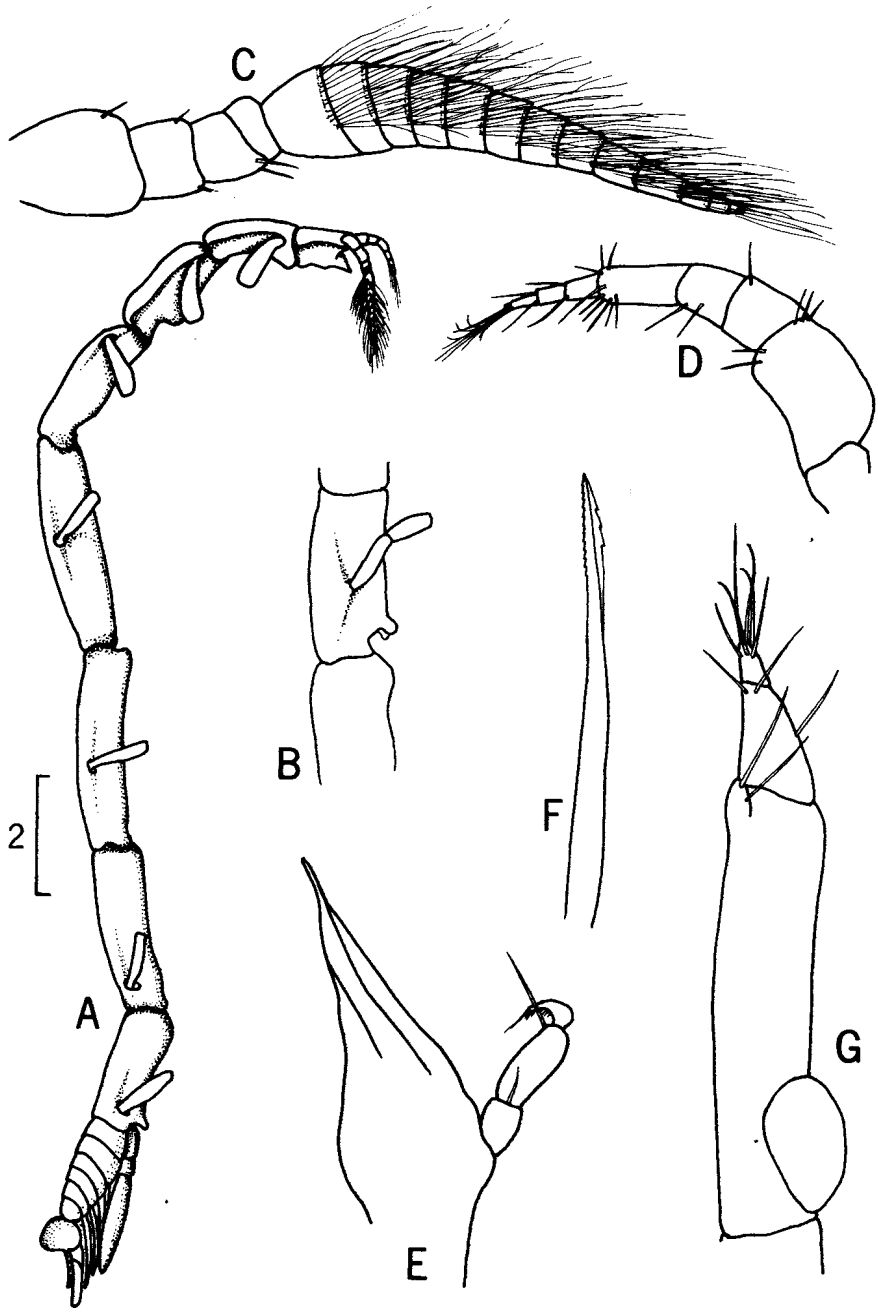

Fig. 11. *Leptanthura natalensis*. A. Holotype in lateral view. B. Pereonite 5 of 6,8 mm ♂. C. Antennule ♂. D. Antenna. E. Mandible. F. Maxilla. G. Maxilliped.

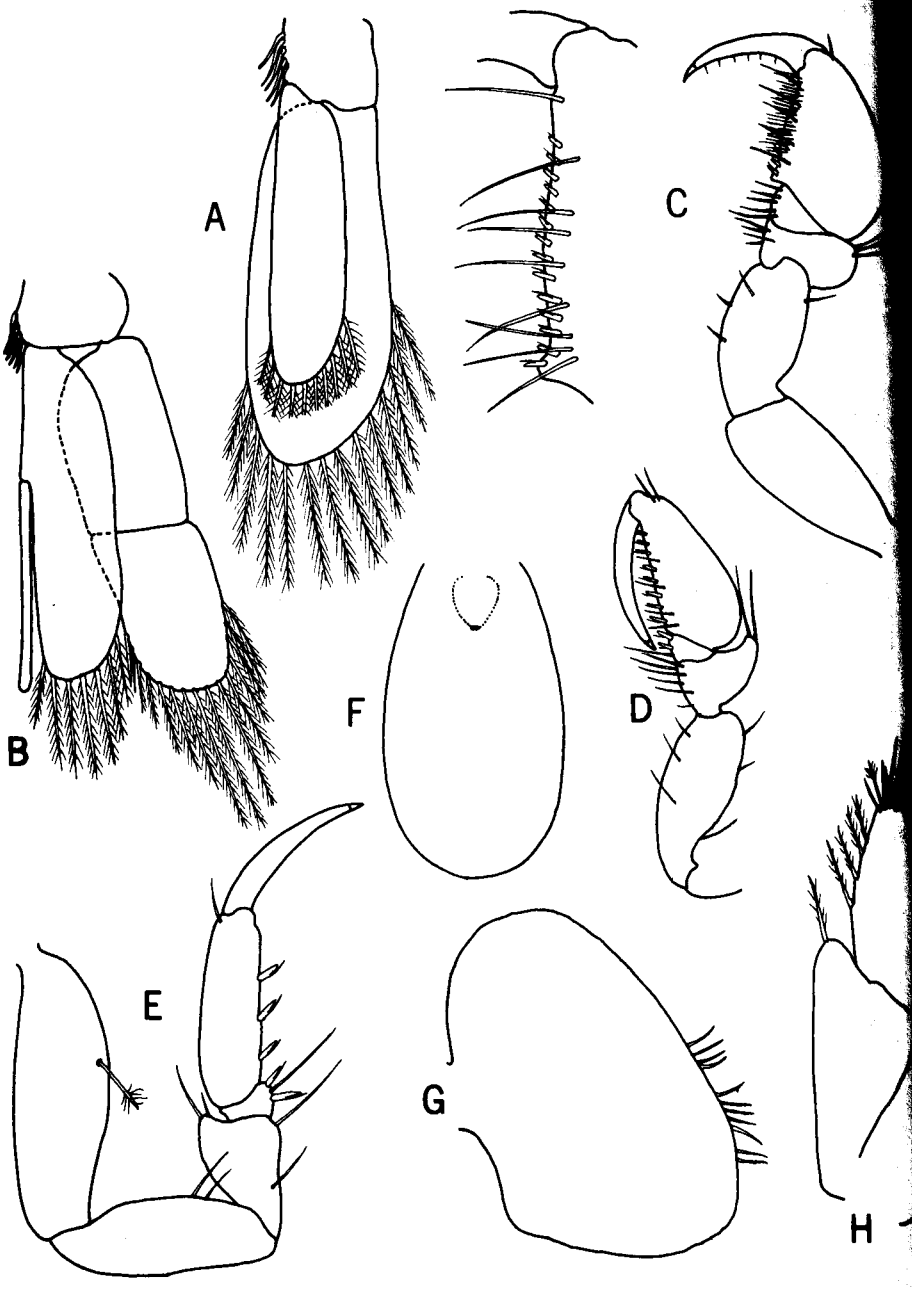

Fig. 12. *Leptanthura natalensis*. A. Pleopod 1. B. Pleopod 2 ♂. C. Pereopod 1 ♂, with pal
enlarged (short, simple setae omitted). D. Pereopod 2. E. Pereopod 7. F. Telso
G. Uropodal exopod. H. Uropodal basis and endopod.

Material

Holotype SAM–A15657 ♂ TL 20,6 mm SM 60 27°09′S 32°58′E 800 m
Paratypes SAM–A15658 2 ♂♂ TL 6,8 mm 6,7 mm 1 juv. 4,8 mm SM 53 26°51′S 33°12′E 720 m
Paratypes SAM–A15659 2 ♂♂ TL 6,7 mm 7,5 mm SM 61 27°10′S 32°58′E 820 m
Paratypes USNM 170546 1 ♂ TL 8,0 mm 1 ♀ 5,7 mm SM 117 30°17′S 31°10′E 820 m
SAM–A15660 1 ♂ 9,9 mm 1 juv. SM 123 30°33′S 30°48′E 690 m
SAM–A15661 7 ♀♀ complete but damaged SM 129 30°53′S 30°31′E 850 m

Remarks

The general structure of the pereon and pleon, as well as the mandible, maxilliped, antennae, and pereopods of the present material, agrees with *Leptanthura*, and quite closely resembles *L. laevigata* and *L. glacialis*. The broadly rounded telson is similar to that of *L. laevigata* (Stimpson) (Barnard 1925), but *L. natalensis* lacks the characteristic notch in the uropodal exopod, and is a more attenuated species both in body shape and pereopodal proportions. The terminal maxillipedal segment is longer than that of *L. laevigata*. *L. glacialis* Hodgson (Kussakin 1967) has a uropodal exopod similar to *L. natalensis* but possesses an apically pointed telson, and shorter and broader antennal segments. *L. glacialis* appears to have a 3-segmented maxilliped, rather than the 4-segmented structure of *L. natalensis*.

Etymology

The specific name is taken from the province, Natal, from whose waters the species was taken.

Pseudanthura tenuis Kensley

Fig. 13

Pseudanthura tenuis Kensley, 1978: 222, figs 1–2.

Description

Male

Antennular peduncle 4-segmented; segments broad, basal segment equal in length to three distal segments combined; basal flagellar article broad and almost as long as remaining seven flagellar articles together; six distal articles each with pair of aesthetascs.

Pleopod 2 stylet of endopod extending well beyond apex of ramus, straight, apically rounded.

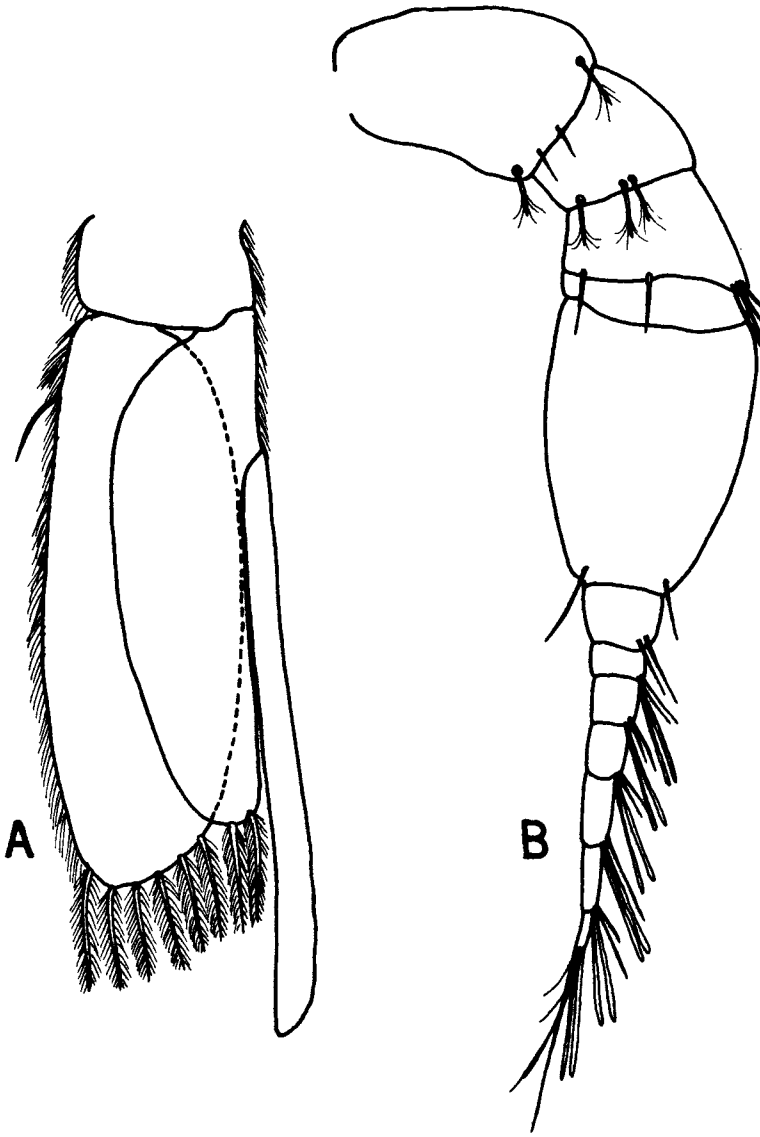

Fig. 13. *Pseudanthura tenuis*. A. Pleopod 2 ♂. B. Antennule ♂.

Material

1 ♀ TL 9,9 mm SM 53 26°51'S 33°12'E 720 m
6 ♀♀ TL 6,0–25,3 mm SM 103 28°31'S 32°34'E 680 m
1 ♂ TL 20,7 mm SM 129 30°53'S 30°31'E 850 m

Remarks

P. tenuis Kensley was described from seven females from localities very close to that of the present material. Now that a single male is available, the two main sex-linked characters are described and figured.

ACKNOWLEDGEMENTS

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REFERENCES

AMAR, R. 1952. Isopodes marins du littoral Corse. *Bull. Soc. zool. Fr.* **77**: 349–355.

BARNARD, K. H. 1925. A revision of the family Anthuridae (Crustacea Isopoda) with remarks on certain morphological peculiarities. *J. Linn. Soc.* **36**: 109–160.

KENSLEY, B. 1977. The South African Museum's *Meiring Naude* cruises. Part 7. Marine Isopoda. *Ann. S. Afr. Mus.* **74**: 125–157.

KENSLEY, B. F. 1978. Two new species of the genus *Pseudanthura* Richardson (Crustacea, Isopoda, Anthuridea). *Proc. biol. Soc. Wash.* **91**: 222–233.

KUSSAKIN, O. G. 1967. Fauna of Isopoda and Tanaidacea in the coast zones of the Antarctic and Subantarctic waters. *Biol. Rep. Sov. Antarct. Exped.* (1955–58) **3**: 220–380.

LOUW, E. 1977. The South African Museum's *Meiring Naude* cruises. Part 1. Station data 1975, 1976. *Ann. S. Afr. Mus.* **72**: 147–159.

MENZIES, R. J. 1951. New marine isopods, chiefly from northern California, with notes on related forms. *Proc. U.S. natn. Mus.* **101**: 105–156.

MEZHOV, B. V. 1976. New species of Anthuroidea from the upper part of the sublittoral zone of the Middle Kurile Islands. *Biol. Sea* **5**: 19–27.

MONOD, T. 1925. Tanaidacés et Isopodes aquatiques de l'Afrique Occidentale et Septentrionale. *Bull. Soc. Sci. nat. Maroc* **5**: 233–247.

NUNOMURA, N. 1975. Marine Isopoda from the rocky shore of Osaka Bay, Middle Japan. *Bull Osaka Mus. nat. Hist.* **29**: 15–35.

RICHARDSON, H. 1902. The marine and terrestrial isopods of the Bermudas, with descriptions of new genera and species. *Trans. Conn. Acad. Arts Sci.* **11**: 277–310.

WALKER, A. O. 1901. Contributions to the Malacostracan fauna of the Mediterranean. *J. Linn. Soc.* **28**: 290–307.