

BRIAN KENSLEY

DECAPOD AND ISOPOD CRUSTACEANS FROM
THE WEST COAST OF SOUTHERN AFRICA,
INCLUDING SEAMOUNTS VEMA AND TRIPP

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By

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(With 9 figures)

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ABSTRACT

Seven species of isopods (including *Stenetrium vema* sp. nov. and *Jaeropsis monsmarinus* sp. nov.) and nineteen species of decapods (including *Pseudodromia cacuminis* sp. nov. and *Macropodia cirripilus* sp. nov.) are recorded from seamounts Vema and Tripp, and the Lüderitz area. Zoogeographically, the isopods show strong affinities with the South African fauna, while the decapods include mainly South African and west African forms, with single Indo-Pacific and Austral species.

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INTRODUCTION

The benthic fauna of the continental shelf and seamounts off the west coast of South Africa has barely been investigated. What information exists is to be found in scattered reports, and we are still a long way from even a superficial overview.

The material dealt with in this report comes from several sources and emphasizes the fragmentary state of our knowledge. It was thought useful, however, to publish several new records and species, and to summarize the little that is known about Seamount Vema's crustacean fauna.

Seamount Vema, first discovered in 1957, was visited by personnel from the University of Cape Town and the South African Museum in 1964 and 1966. In 1978 the University of Cape Town did further collecting on the summit peak. Lying about 650 km off the west coast of South Africa at 31°38'S 08°02'E (Fig. 1), and rising steeply from the 5 000 m deep sea-floor, the summit plateau averages about 40 m below the surface. Collecting on this plateau has been done both with air-lift dredge and by scuba divers (see Grindley 1967). Most

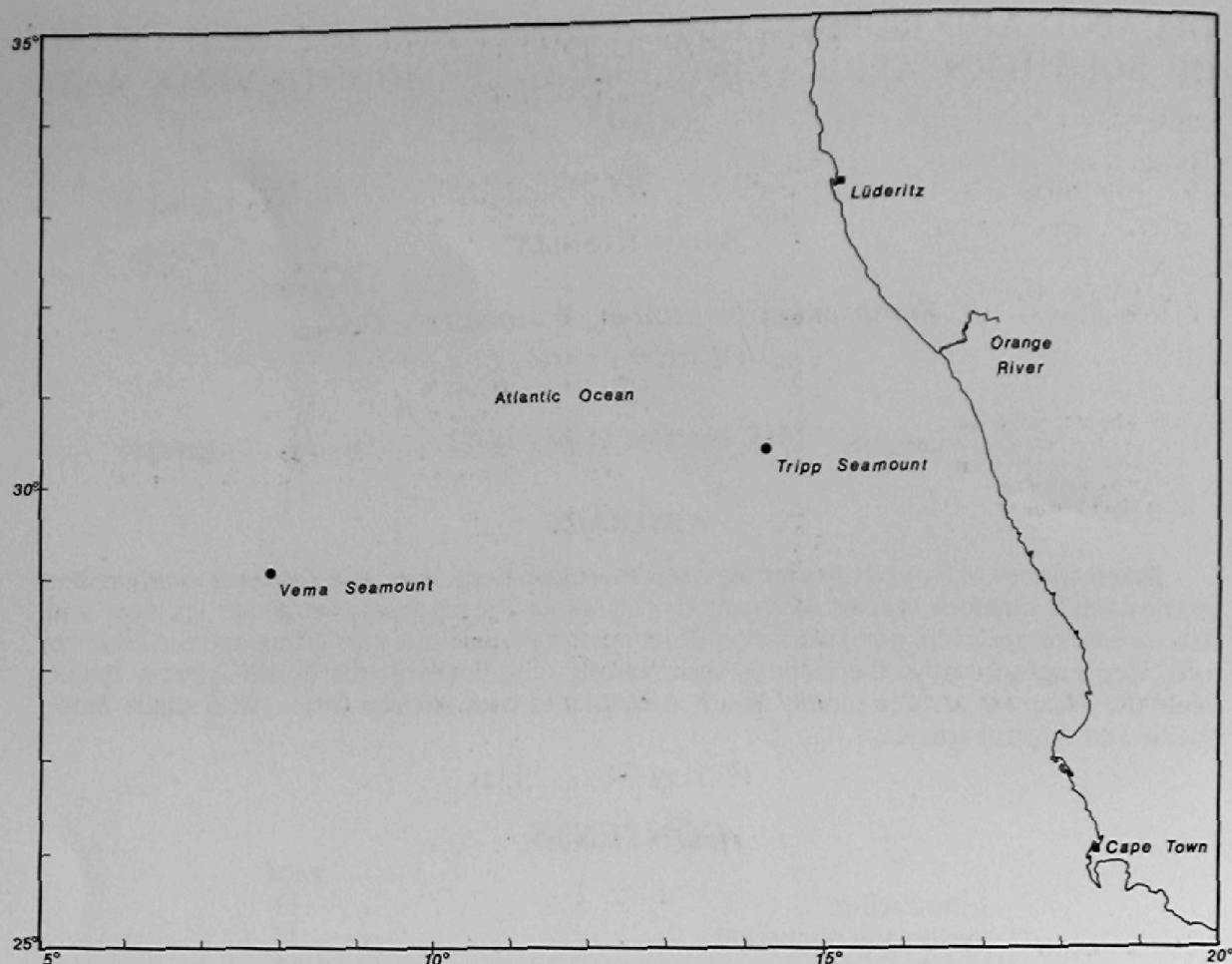


Fig. 1. Map showing localities.

of this material has been deposited in the South African Museum, while a preliminary account of the fauna was given by Berrisford (1969). The Decapoda in this latter report were given preliminary identifications by J. Forest and D. Guinot of the Paris Museum.

Material from Seamount Tripp was collected in the late 1960s by the then Division of Sea Fisheries and the South African Museum, and a few specimens came from commercial fishing boats on the west coast. Seamount Tripp (20°36'S 14°15'E) has received even less attention than Vema, the three specimens mentioned here having been accidentally caught during hydrographic operations. The summit is about 150 m below the sea surface.

Abbreviations used

- CL—carapace length
- CW—carapace width
- IK—Isaacs Kidd trawl
- juv.—juvenile(s)
- ovig.—ovigerous
- SAM—South African Museum
- USNM—United States National Museum
- VEM—Vema station numbers

SYSTEMATIC DISCUSSION
 Order ISOPODA

SPECIES LIST

	Material	Station No.	Locality	Distribution
Family Idoteidae				
✓ <i>Glyptidotea lichtensteini</i> (Krauss)	2 juvs 3 juvs	VEM 2.3 VEM 4.3	Vema, 39 m Vema, 40 m	Lüderitz to Transkei
✓ <i>Paridotea unguolata</i> (Pallas)	1 ♂	VEM 2.2	Vema, 39 m	Walvis Bay to East London; Australia; New Zealand; Chile; Argentina
Family Cirolanidae				
✓ <i>Cirolana saldanhae</i> Barnard	1 ovig. ♀ 1 damaged 1 juv. 1 ♀	VEM 2.3 VEM 4.3 VEM 4.6	Vema, 39 m Vema, 40 m Vema, 42 m	Orange River mouth to Saldanha Bay
Family Sphaeromatidae				
✓ <i>Cymodoce unguiculata</i> Barnard	1 ♀	VEM 4.6	Vema, 42 m	Lüderitz to False Bay
✓ <i>Cymodoce allia sublevis</i> Barnard	1 ♀	VEM 4.2	Vema, 40 m	Lüderitz to East London
Family Stenetriidae				
✓ <i>Stenetrium vema</i> sp. nov.	2 ovig. ♀ 2 ovig. ♀ 2 ♀ 3 ♂ 4 ovig. ♀ 4 ♀ 8 ♂ 1 ♂ 1 ♀ 1 ♂	VEM 2.1 VEM 2.2 VEM 2.3 VEM 4.1 VEM 4.2 VEM 4.6	Vema, 39 m Vema, 39 m Vema, 39 m Vema, 40 m Vema, 40 m Vema, 42 m	—
Family Jaeropsidae				
<i>Jaeropsis monsmarinus</i> sp. nov.	1 ♀ 1 ♂	VEM 4.3	Vema, 40 m	—

Family Stenetriidae

Stenetrium vema sp. nov.

Figs 2-3

Description

Male

Body about three and one-half times longer than wide, with scattered setae dorsally. Cephalon broader than long, with well-developed dorsal reniform eyes; anterolateral corners produced, acute; antennal spine of frontal margin triangular, acute; rostrum wider than long, pentagonal, two anterior margins with tiny teeth, apex an obtuse angle somewhat dorsally flexed. Pereonites 1-4 with anterolateral corners acute, posterolateral corners rounded; midventral keel hardly developed, with tiny denticle on pereonites 1-3, absent on 4; pereonites 5-7 with anterolateral corners rounded, posterolateral corners of 5 rounded, 6 bluntly produced, 7 acute; midventral keel with strong posterior spine on 6 and 7. First pleonite short, reduced; pleotelson wider than long, with single strong lateral tooth in posterior half of margin, followed by sinuous margin leading to rounded apex; middorsal region gently convex, barely demarcated from lateral regions.

Antennular peduncle 3-segmented, basal segment broader and longer than two distal segments, second segment shorter than third, bearing elongate simple setae; flagellum of 29-30 articles. Basal antennal segment produced into spinose process on outer distal angle; second segment shorter than first; third segment outer distal margin deeply excavate for insertion of large setiferous scale; fourth segment less than half length of third. Mandibular palp 3-segmented, basal segment with single, strong fringed seta; second segment

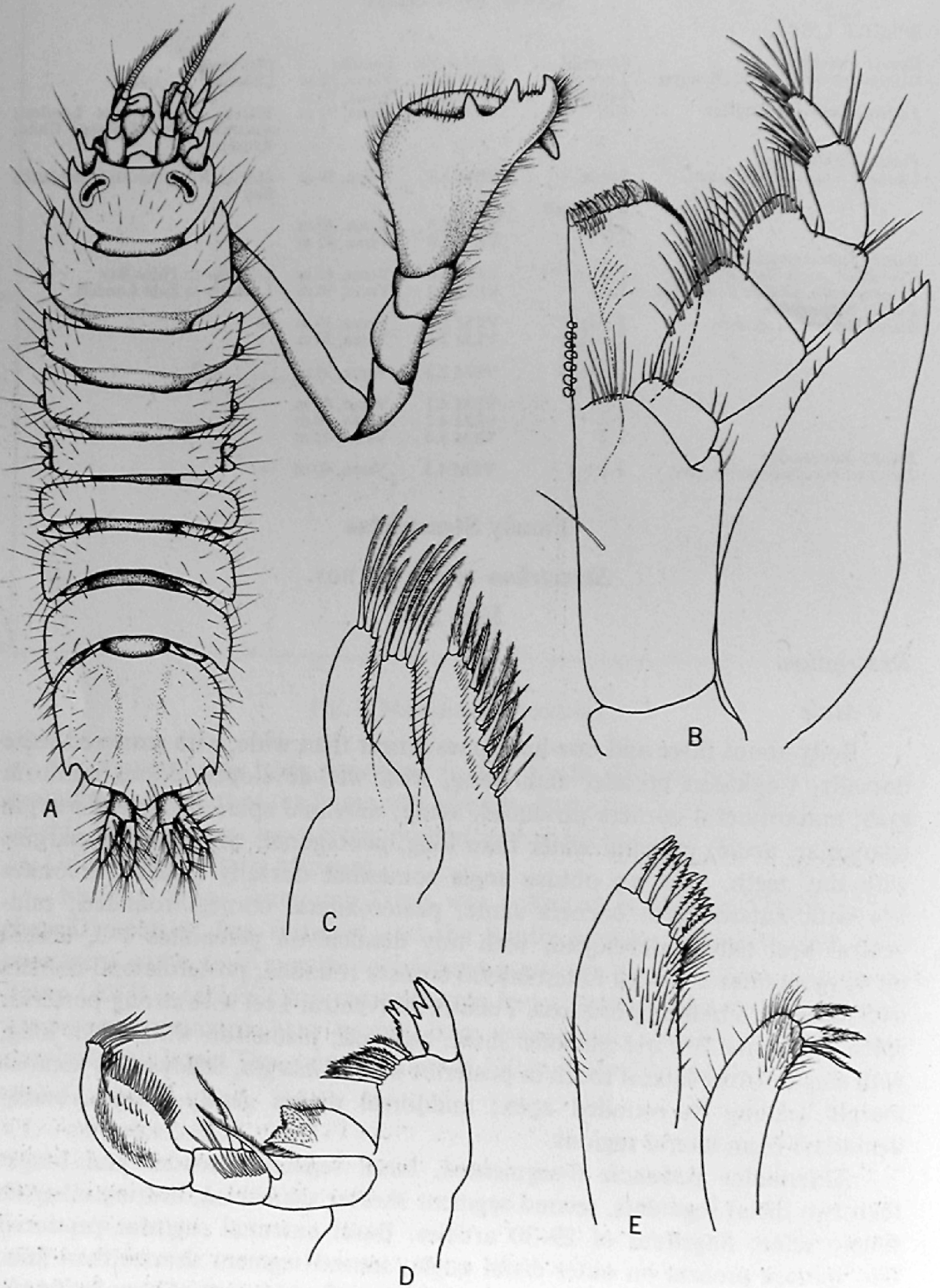


Fig. 2. *Stenetrium vema*.
 A. Holotype in dorsal view. B. Maxilliped. C. Maxilla 2. D. Mandible. E. Maxilla 1.

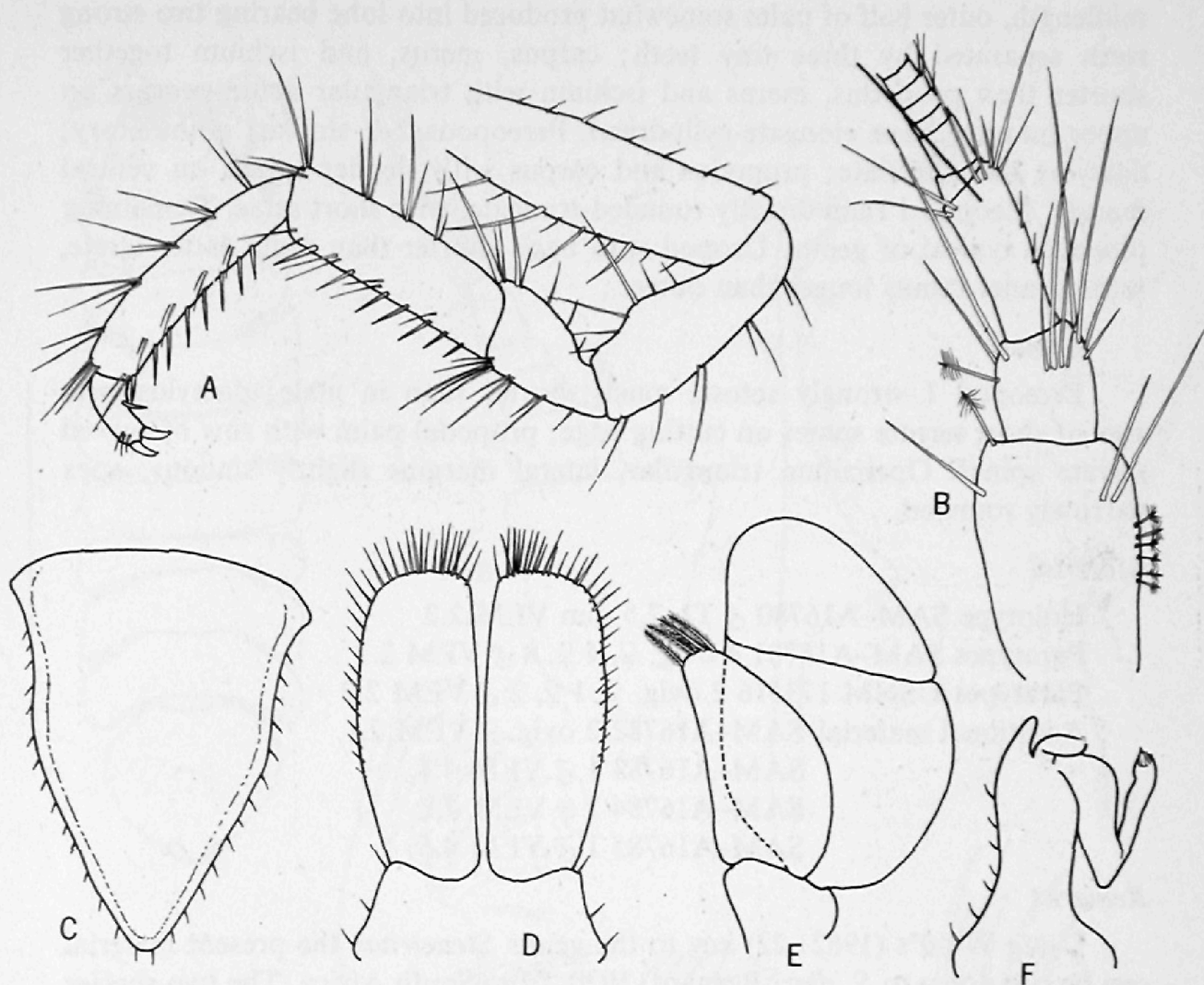


Fig. 3. *Stenetrium vema*.

A. Pereopod 2. B. Antennular peduncle. C. Operculum ♀. D. Pleopod 1 ♂. E. Pleopod 3 ♂. F. Pleopod 2 ♂.

with row of short spines and single, strong fringed seta; terminal segment strongly curved, with row of spines on inner margin, several elongate setae on distal narrowed part; left mandible with incisor of four large cusps, sclerotized lacinia of two strong cusps and serrate spine; spine row of six serrate spines; molar bearing short marginal spines, roughened distal surface; right mandible lacking lacinia; spine row of sixteen serrate spines. Maxilla 1 outer ramus with eleven strong dentate spines; inner ramus distally with two strong and two slender setae. Maxilla 2 both lobes of outer ramus each with five elongate fringed spines; inner ramus with eight fringed spines and several setae. Maxilliped exopod apically acute; palp of five segments, each with numerous simple setae; endite with seven coupling hooks on median margin, several fringed spines and seven or eight flattened fringed scales. Pereopod 1 almost equal to entire body in length; dactylus strongly curved, longer than propodal palm; propodus widening distally, palm with strong tooth at about

midlength, outer half of palm somewhat produced into lobe bearing two strong teeth separated by three tiny teeth; carpus, merus, and ischium together shorter than propodus, merus and ischium with triangular acute process on upper margin; basis elongate-cylindrical. Pereopods 2-7 similar, ambulatory; dactylus biunguiculate; propodus and carpus with slender spines on ventral margin. Pleopod 1 rami distally rounded-truncate, with short setae. Remaining pleopods typical of genus. Uropod with basis shorter than rami; latter terete, setose, inner ramus longer than outer.

Female

Pereopod 1 strongly setose, much shorter than in male; dactylus with row of short serrate spines on cutting edge; propodal palm with row of curved serrate spines. Operculum triangular, lateral margins slightly sinuous, apex narrowly rounded.

Material

Holotype SAM-A16780 ♂ TL 7,5 mm VEM 2.2

Paratypes SAM-A16781 4 ovig. ♀, 4 ♀, 8 ♂ VEM 2.3

Paratypes USNM 173516 2 ovig. ♀, 1 ♀, 2 ♂ VEM 2.2

Additional material SAM-A16782 2 ovig. ♀ VEM 2.1

SAM-A16783 1 ♂ VEM 4.1

SAM-A16784 1 ♀ VEM 4.2

SAM-A16785 1 ♂ VEM 4.6

Remarks

Using Wolff's (1962: 22) key to the genus *Stenetrium* the present material can be run down to *S. diazi* Barnard, 1920, from South Africa. The two species are undoubtedly similar, especially in the elongate form and structure of pereopod 1 of the mature male. Several differences separate the two species: the rostrum of *S. diazi* has a concave anterior margin, the rami of pleopod 1 ♂ are acutely rounded on the inner distal angle, while pereopod 1 ♂, although having a somewhat elongate propodus, does not have the outer distal lobe bearing two large teeth separated by three tiny teeth; instead it possesses two blunt, closely opposed teeth near the articulation.

Etymology

The specific name is derived from the type locality, Seamount Vema.

Family Jaeropsidae

Jaeropsis monsmarinus sp. nov.

Figs 4-5

Description

Male

Body about three times longer than wide, with numerous scattered, short setules dorsally. Cephalon with lateral margins entire, apex rounded.

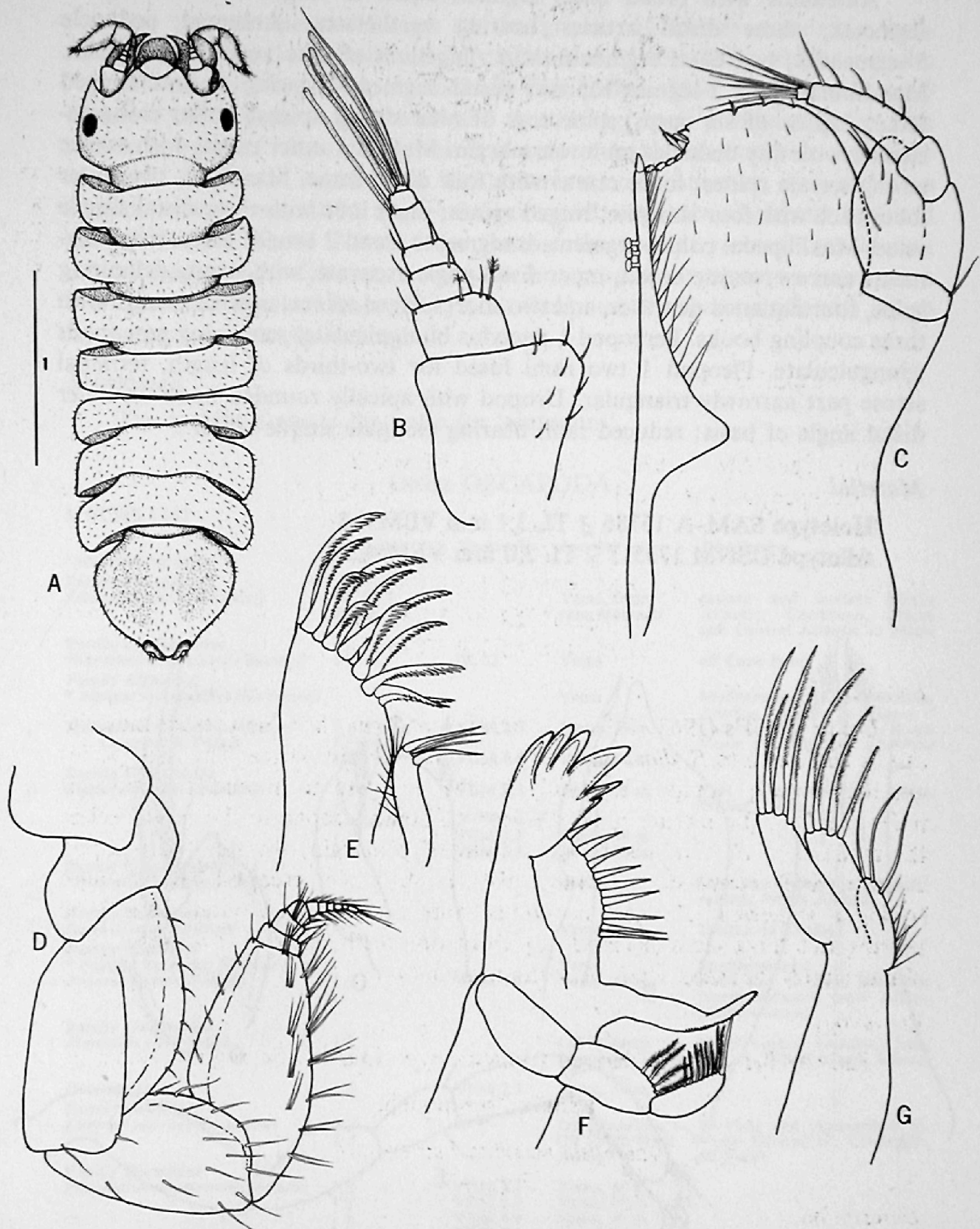


Fig. 4. *Jaeropsis monsmarinus*.

A. Holotype in dorsal view. B. Antennule. C. Maxilliped. D. Antenna. E. Maxilla 1. F. Mandible. G. Maxilla 2.

Antennule with broad basal segment equal in length to following six segments; three distal articles bearing aesthetascs. Antennal peduncle 5-segmented; two basal segments short; flagellum of nine very short articles. Mandibular palp 3-segmented, two distal segments bearing several fringed setae; incisor of six cusps; spine row of nine strong spines; molar elongate-slender with tiny denticles on lower margin. Maxilla 1 outer ramus with twelve strong serrate spines; inner ramus with four distal setae. Maxilla 2, two outer lobes each with four elongate fringed spines; inner lobe with three distal simple setae. Maxillipedal palp 5-segmented, segments 1 and 2 broad, three distal segments narrow; endite broad, inner distal angle excavate, with strong delimiting spine, four flattened denticles, and two short fringed spines; median margin with three coupling hooks. Pereopod 1 dactylus biunguiculate, remaining pereopods triunguiculate. Pleopod 1 two rami fused for two-thirds of length, terminal setose part narrowly triangular. Uropod with apically rounded hook on inner distal angle of basis; reduced rami bearing elongate simple setae.

Material

Holotype SAM-A 16786 ♂ TL 3,1 mm VEM 4.3

Allotype USNM 173517 ♀ TL 3,0 mm VEM 4.3

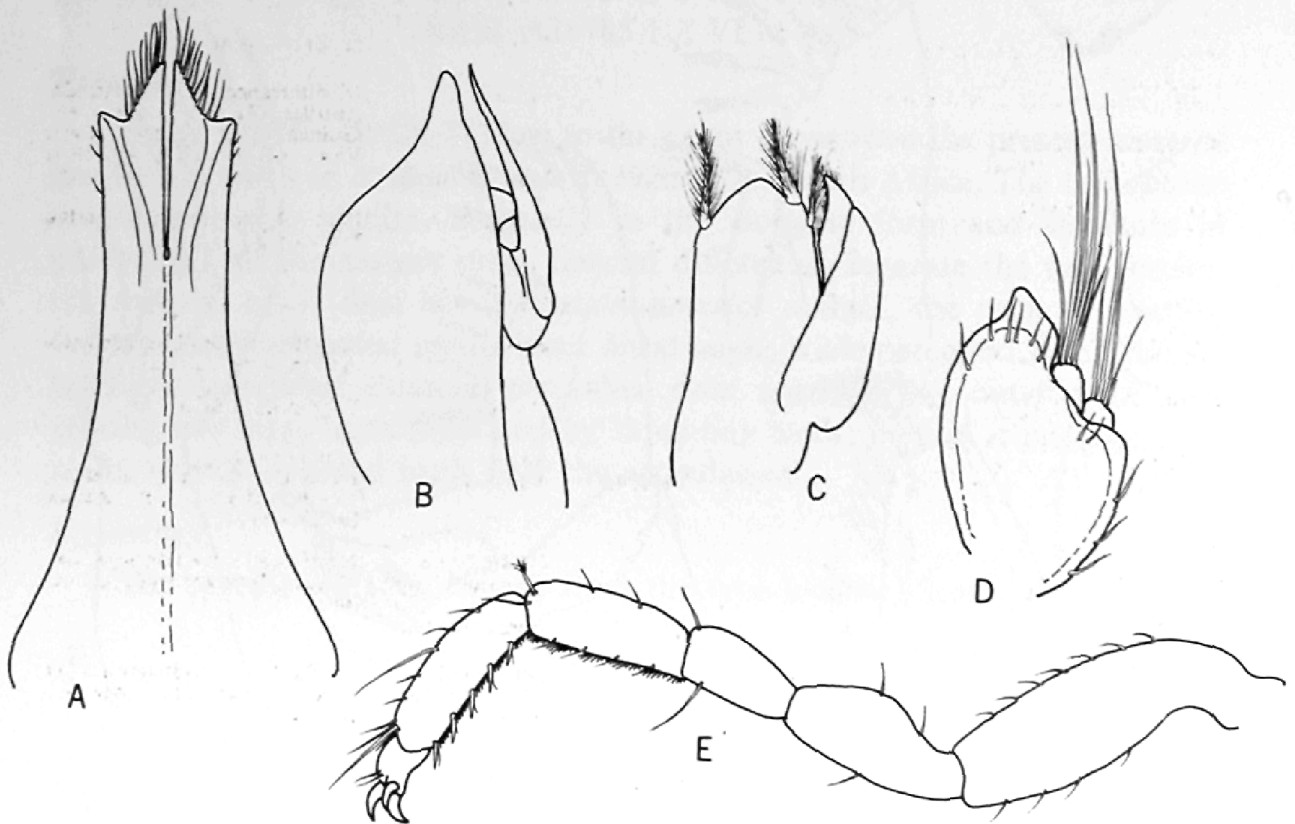


Fig. 5. *Jaeropsis monsmarinus*.

A. Pleopod 1 ♂. B. Pleopod 2 ♂. C. Pleopod 3 ♀. D. Uropod. E. Pereopod 2.