

pleon. Latter oval-rounded, with central evenly convex area, posterior margin rounded.

Article 3 of antennule six times longer than article 4. Mandible lacking palp; molar distally broad, truncate. Maxilla 1, outer ramus with about eleven distal spines; inner ramus distally broadly rounded, with two fringed setae on medial margin. Maxilla 2 inner ramus with large double fringed seta on medial margin, several simple and fringed spines on rounded distal margin; inner lobe of outer ramus with four elongate distal fringed spines; outer lobe with three fringed spines. Maxilliped with articles 2 and 3 of palp broad, expanded, article 3 with medial margin evenly rounded; endite with strong median flange at right angles to endite surface, bearing three retinaculae. Pereopod 1, dactylus (including strong unguis) equal in length to propodus; latter with several elongate setae and two short spines on posterior (inner) margin; carpus slightly longer than propodus, with two short distal, and two elongate proximal sensory spines on posterodistal corner; basis slightly more than three times length of ischium. Pereopods posterior to pereopod 1 elongate slender, with few slender sensory spines on posterior margins of propodi and carpi. Marsupium formed by four pairs of oostegites on pereonites 1-4. Operculum almost circular, evenly convex. Uropod of single article barely extending beyond pleotelsonic apex.

Remarks

Haplomesus zuluensis shows some similarity to *H. quadrispinosus* (Sars), from the North Atlantic, in the integumental granulation and overall ornamentation, but the lateral spines of pereonite 1 are far more elongate in Sars's species. Using Wolff's key (1962) the present species runs down to *H. robustus* Birstein, but this North Pacific species is squatter and more granulate.

Etymology

The specific name is derived from the coastline adjacent to the area in which the species was collected, i.e. Zululand.

Ischnomesus Richardson, 1908

Ischnomesus glabra sp. nov.

Fig. 42

Material

Transkei. Holotype SAM-A17860, SM 247, 31°55'S 29°38'E, 1 800-1 950 m, 1 ♀, TL 4.0 mm.

Description

Female

Integument brittle, smooth, lacking ornament. Head with anterior margin convex, sunken into pereonite 1. Latter broadest part of body, anterolateral corners rounded. Pereonites 2-3 similar, broader than long. Pereonite 4 as wide as

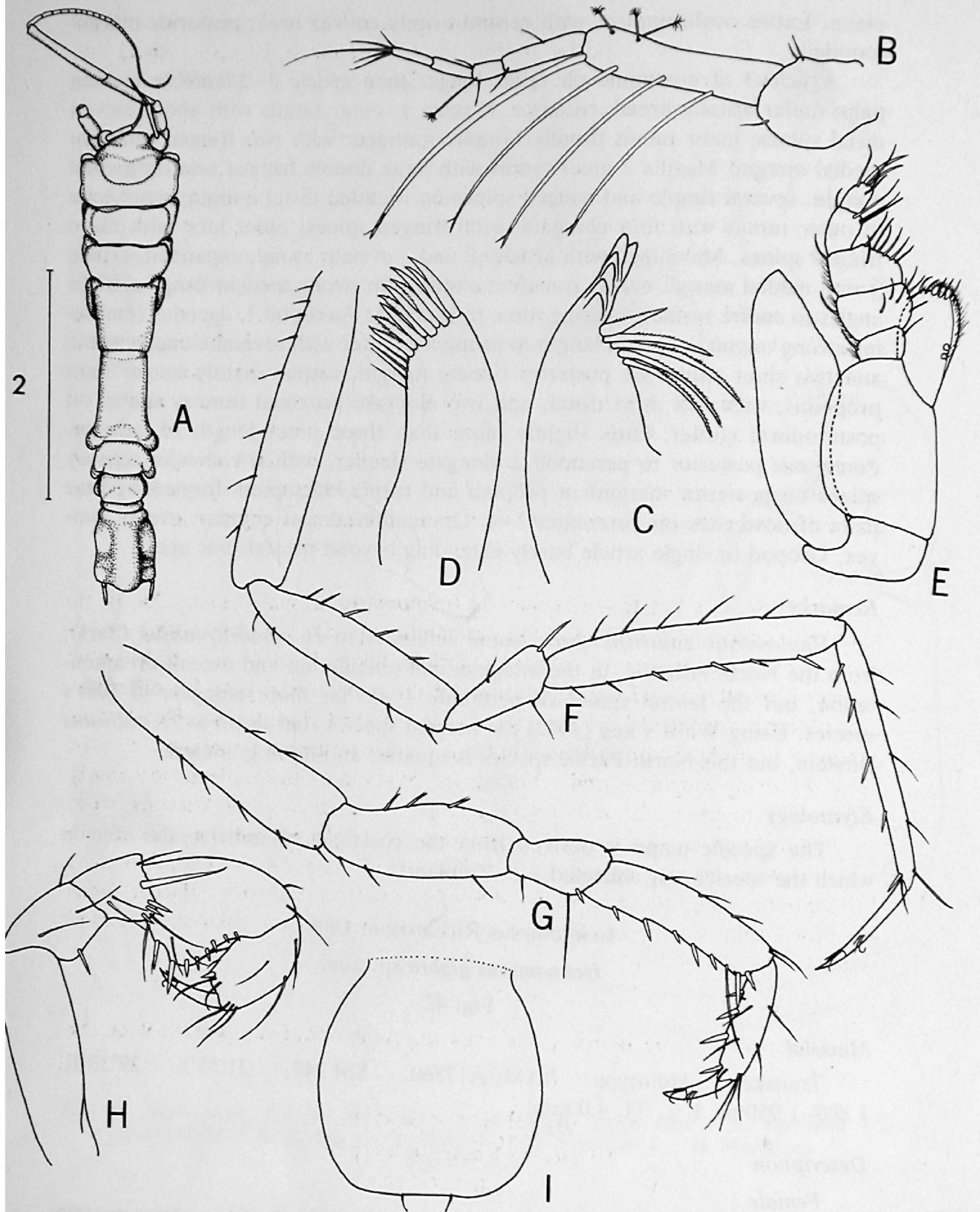


Fig. 42. *Ischnomesus glabra* sp. nov. A. Holotype, dorsal view. B. Antennule. C. Mandible. D. Maxilla 1. E. Maxilliped. F. Pereopod 7. G. Pereopod 2. H. Pereopod 1. I. Operculum, female. Scale = 2 mm.

long. Pereonite 5 longer than wide, about one and one-half times longer than pereonite 4. Pereonite 7 slightly shorter than pereonite 6. Pleon consisting of one very short free pleonite plus pleotelson; latter longer than wide, posterior margin between uropodal bases broadly convex.

Antennule with article 2 subequal in length to article 3 plus flagellum, bearing four elongate ventral sensory spines; flagellum of three articles. Antenna with two distal peduncle articles slender-elongate, article 5 about one-third longer than 4; flagellum of about thirty articles. Mandible lacking palp. Maxilla 1, outer ramus with nine distal spines. Endite of maxilliped not as wide as palp article 2, with two retinaculæ on medial margin. Pereopod 1 considerably shorter than pereopod 2; dactylus claw-like, gently curved; propodus with distal truncate margin bearing single short spine; carpus distally widened, sinuous, armed with six short spines, posterior margin with two longer spines. Pereopod 2 slender, propodus and carpus bearing spines on posterior margins. Pereopods becoming more slender posteriorly, pereopod 7 with narrow dactylus, propodus and carpus; two latter articles with few short spines on posterior margins. Operculum broadly subcircular, distal margin slightly flattened. Uropod with basal article mostly concealed by dorsal pleonal margin, only slightly shorter than distal tapering article.

Remarks

Using Wolff's key to the species of *Ischnomesus*, *I. glabra* most closely resembles *I. anacanthus* Wolff, but the Tasman Sea species differs in having a relatively more elongate second antennular article, fewer distal spines on the outer ramus of maxilla 1, and the proportions of the maxillipedal palp are different. From Menzies' (1962a) key, the present species most closely resembles *I. simplissimus* from the South Atlantic, but this species possesses a mandibular palp, has a relatively longer second article in the antennule, and a pleon posteriorly subacute, rather than broadly convex. *Ischnomesus paucispinis* Menzies, from the South Atlantic, bears some resemblance to *I. glabra*, but has a relatively broader pleon bearing one stout and three small setae on the lateral border. *Ischnomesus vinogradovi* Birstein, 1963, from the north-western Pacific, lacks the broad spinose carpus of pereopod 1, and has a more narrowly rounded pleon.

Etymology

The specific name refers to the smooth, unornamented integument of this species.

Stylomesus Wolff, 1956

Stylomesus natalensis sp. nov.

Fig. 43

Material

Natal, south of Durban. Holotype SAM-A17861, SM 129, 30°53'S 30°31'E, 850 m, 1 ♂, TL 4.0 mm. Paratypes SAM-A17862, SM 117, 30°17'S 31°10'E,

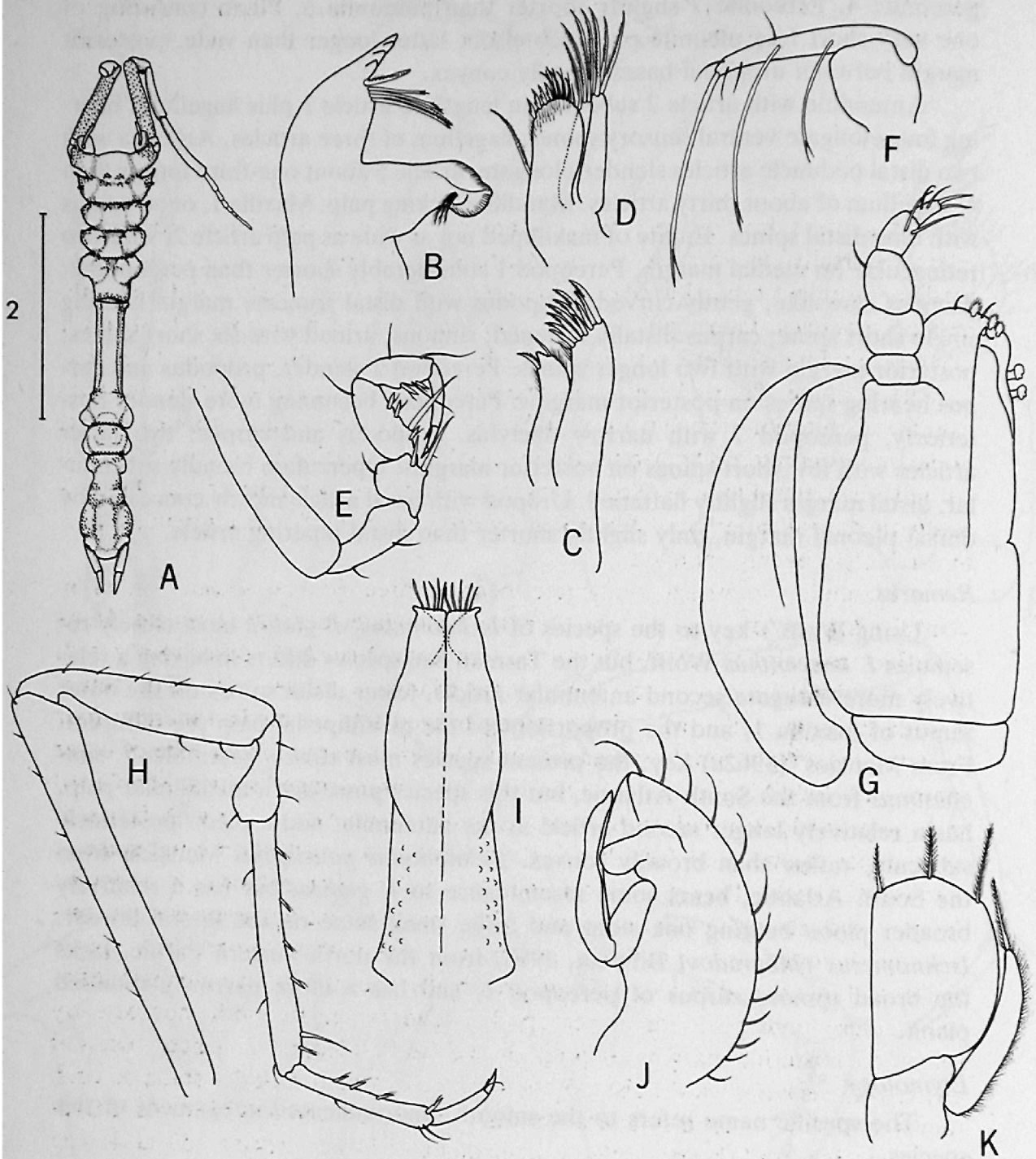


Fig. 43. *Stylomesus natalensis* sp. nov. A. Holotype, dorsal view. B. Mandible. C. Maxilla 1. D. Maxilla 2. E. Pereopod 1. F. Antennule. G. Maxilliped. H. Pereopod 7. I. Pleopod 1 male. J. Pleopod 2 male. K. Pleopod 3 male. Scale = 2 mm.

820 m, 1 ♀, TL 3,6 mm, 1 ♀ (damaged), 1 juv. Paratypes SAM-A17863, SM 123, 30°33'S 30°48'E, 690 m, 2 ♀, TL 4,0 mm, 4,0 mm. Paratypes USNM 189081, SM 129, 850 m, 2 ♂, TL 4,3 mm, 3,9 mm, 1 ovig. ♀ (damaged), 1 ♀.

Description

Male

Integument brittle, very finely granulate overall, granulations becoming coarser dorsally. Head with anterior margin gently convex, with two low submedian granulate tubercles near fusion line of pereonite 1. Latter with low submedian tubercles, laterally with short dorsal and dorsolateral spine (broken off in some specimens). Pereonite 2 with single short lateral spine. Pereonite 3 lacking lateral spine. Pereonite 4 about one-third length of pereonite 5; latter with cylindrical anterior part having double submedian longitudinal row of coarse granules. Pereonite 6 about one-fourth length of pereonite 5. Pereonite 7 fused with pleon. Lateral bulge indicates single pleonite fused with pleotelson. Pleotelson with central raised area demarked by irregular row of coarse granules, posterior margin evenly rounded.

Antennule with article 2 elongate, bearing three elongate sensory spines on ventral margin. Antennal peduncle article 2 elongate, densely granulate. Mandible lacking palp; molar distally broad, truncate. Maxilla 1, outer ramus with about ten distal fringed spines; inner ramus triangular between two distal setae. Maxilla 2, inner ramus with single strong fringed seta on median margin; four dentate and several simple spines on rounded distal margin; inner lobe of outer ramus with four fringed spines, outer lobe with three fringed spines. Maxilliped with palp article 2 broadest, but not markedly expanded; endite with flange at right angles to endite surface, bearing two aesthetascs, with short blunt spine at mediiodistal angle. Pereopod 1 considerably shorter than following pereopods; dactylus with strong unguis; propodus with two spines on posterior margin; carpus slightly longer than propodus, posterior margin with two short distal spines and one elongate and one short spine proximally; merus with two elongate distal spines. Pereopods posterior to pereopod 1 slender-elongate, with short sensory spines on posterior margins of propodi and carpi. Pleopod 1, length two and one-half times basal width; distal margin truncate, armed with five setae on each ramus, and short blunt distolateral process. Pleopods 2 and 3 as illustrated. Uropod reaching well beyond pleotelsonic apex, of two articles, distal article shorter.

Female

Body essentially similar to male, but cylindrical part of pereonite 5 broader and lacking double submedian dorsal row of granules. Operculum subcircular, exposed surface granulate, rounded boss-like tubercle proximally near articulation.

Remarks

Stylomesus natalensis closely resembles *S. granulatus* Menzies, 1962a, from the South Atlantic, especially in the overall granulate integument, the form of the male pleopod 1 apex, and pereopod 1. Menzies' species, however, lacks spines on the anterior pereonites (although these have sometimes been broken off in the present material), and has a relatively more slender pereonite 5 (three times longer than wide), and a narrower pleon with a more produced posterior margin between the uropods. *Stylomesus simulans* Menzies has a posterior pereon and pleon similar to *S. natalensis*, but as the former was described only from posterior fragments, it is perhaps best not to associate the present material with it.

Etymology

The specific name refers to Natal, the coastline close to the type locality.

DISTRIBUTION AND ZOOGEOGRAPHY

The 1975-9 South African Museum's *Meiring Naude* cruises traversed the area from the southern Mozambique border to just south of East London. Apart from scattered deep stations occupied by the R.S. *Pieter Faure* at the turn of the century, and the transect off Still Bay to 200 m depths by the R.V. *Thomas B. Davie* in 1972-3, these cruises represent the only moderately comprehensive survey in relatively deep water on the southern African east coast. The ninety-two benthic stations ranged in depth from 40 to 1 950 m, i.e. from the shallow continental shelf to the continental slope (see Louw 1977, 1980), with most of the stations being in the 500-900 m depth range, i.e. in the steep lower shelf to slope area.

The results of these cruises, in terms of the isopods collected (including the data from six earlier papers), may be summarized in the following way: 81 species of identifiable isopods were collected; of these, 40 were described as new; 3 new genera, viz. *Agularcturus*, *Naudea*, and *Natalianira*, and 1 new family, the Bathynataliidae, were diagnosed. Of the 81 species, 14 have previously been recorded from off the west coast of South Africa; 9 occur from relatively shallow depths to more than 200 m, 4 species appear to be confined to depths of less than 200 m, and 1 species seems to be a true deep-shelf species, occurring in depths of more than 200 m.

The depth distribution of the 81 species may be categorized as follows: 29 species seem to be confined to depths of less than 200 m. Of these, only *Panathura serricauda*, and *Stenetrium crassimanus* (both from St. Paul and Amsterdam islands), have been recorded outside South African waters; 23 species occur from relatively shallow depths to lower shelf depths, with *Stenetrium saldanha* known from the St. Paul and Amsterdam islands, and *Spinianirella walfishensis* known from the Walvis Basin; 28 species appear to be confined to the lower

shelf-slope depths, with *Bathycopea typhlops* known from the Irish Sea (North Atlantic), *Stenetrium abyssale* known from the Tasman Sea, and *Acanthomunna spinipes* known from the Antarctic.

From all three categories, therefore, only seven species have been recorded outside southern African waters. While to speak of an endemic fauna may be too presumptuous with regard to the deeper occurring species, it would certainly seem that there is a distinct endemic east-coast shallow-shelf isopod fauna.

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