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**A NEW SPECIES AND A NEW RECORD OF *SPHAEROMOPSIS*  
HOLDICH AND JONES, 1973 FROM PAKISTAN WATERS  
(ISOPODA, SPHAEROMATIDAE)**

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**ABSTRACT:** *Sphaeromopsis minutus* sp. nov., the sixth species of *Sphaeromopsis* Holdich and Jones is described and figured in detail. The genus *Sphaeromopsis* and species *S. serriguberna* Holdich and Harrison, 1981 is recorded for the first time from northern Arabian Sea, Karachi (Pakistan).

**KEY WORDS:** Isopoda - taxonomy - new species - new record - Pakistan.

**INTRODUCTION**

The five species of the genus *Sphaeromopsis* are known only from Kenya (Holdich and Jones, 1973), Red Sea, north-eastern Australia and Brazil (Holdich and Harrison, 1981), and the Caribbean (Kensley and Schotte, 1994). The present paper describes the sixth species of the genus, and the species *Sphaeromopsis serriguberna* Holdich and Harrison, for the first time from the coast of Pakistan (northern Arabian Sea).

The type material has been deposited in the Museum of the Department of Zoology, University of Karachi.

**SYSTEMATIC ACCOUNT**

**Family Sphaeromatidae Milne-Edwards, 1840**

**Subfamily Dynameninae Bowman, 1981**

**Genus *Sphaeromopsis* Holdich and Jones, 1973**

***Sphaeromopsis minutus* sp. nov.**

(Figs.1-2)

**MATERIAL EXAMINED**

Holotype male, 3.0 mm, 19 September, 1985. Paratypes: 1 male, 3.0 mm, 1 ovigerous female, 2.4 mm, 19 September, 1985; 2 ovigerous females, 2.7-3.0 mm, 22 January, 1993. All the material examined was collected from sand of the intertidal zone of Manora Island (24°47'40"N and 66°58'34"E), near Karachi, Pakistan.

**DESCRIPTION OF ADULT MALE**

Body surface (Fig.1A) smooth. Cephalon (Fig.1A) with rostral process, wider than long, eyes large, posterolaterally situated. Pereonite 1 longer than other pereonites. Coxal plates (Fig.1B) distinct, those of pereonites 2 to 4 triangular, of 5 to 6 rectangular and of 7 almost rounded. Pleon (Fig.1A) subequal to pereonite 1 in length. Pleotelson without ornamentation dorsally, wider than long, distal margin almost rounded, apex with setules. Ventral margin of pleotelson as illustrated in figure 1C.

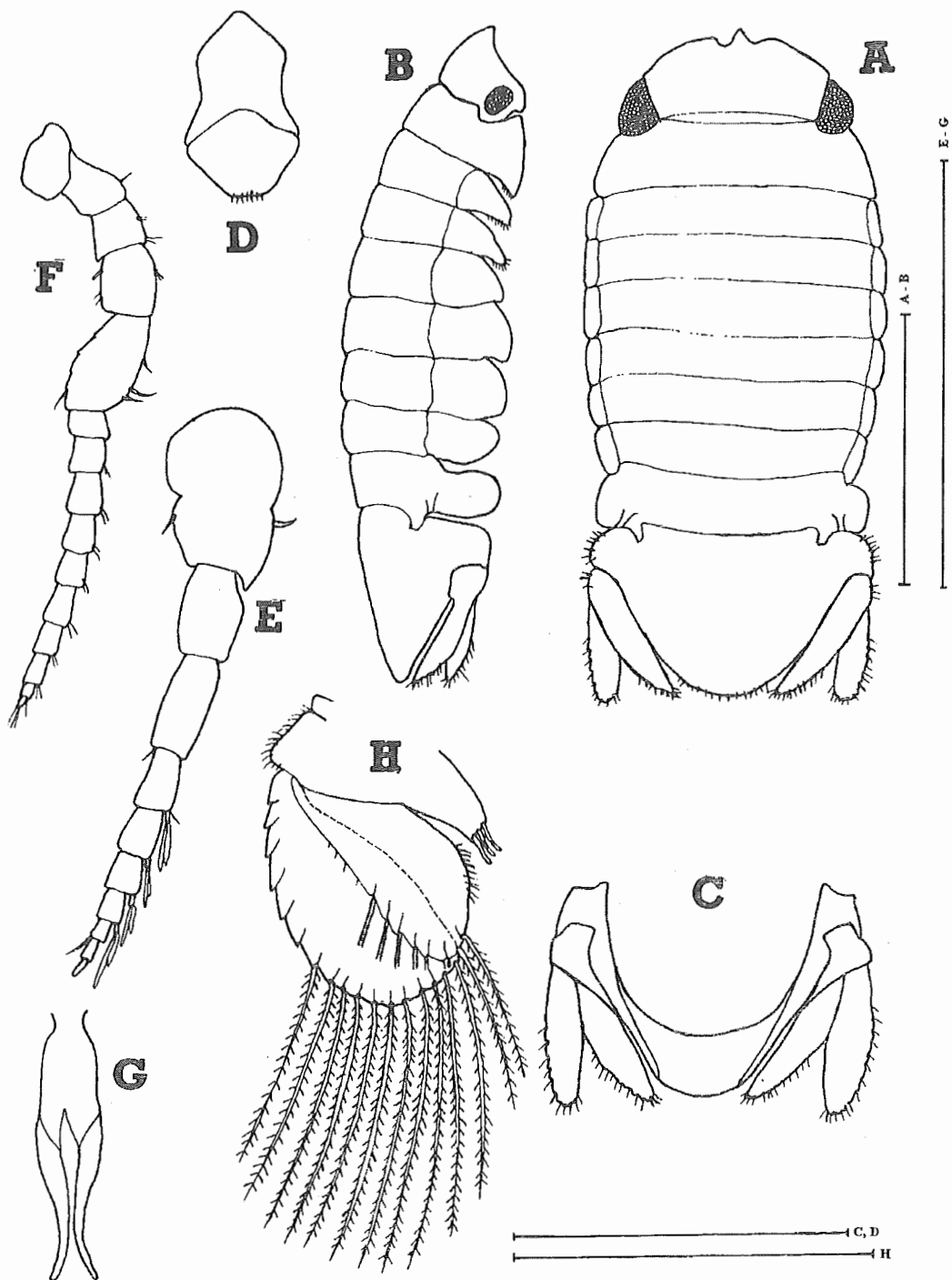


Fig. 1. *Sphaeromopsis minutus* sp. nov., adult male holotype, 3.0 mm. A. dorsal view; B. lateral view; C. ventral view of pleotelson; D. epistome; E. antenna 1; F. antenna 2; G. penes; H. pleopod 1. (Scale: A-D = 1mm; E-H = 0.5mm)

Epistome apically subacute (Fig.1D) with antero-lateral margins straight, postero-lateral margins elongated with concave sides, posterior margin of labrum with few setae.

Antenna 1 (Fig.1E) with flagellum composed of 7 articles, shorter than peduncle.

Antenna 2 (Fig.1F) peduncle articles 2,3 and 4 subequal, article 5 longest, flagellum of 10 articles, subequal to peduncle. Mouth parts of usual sphaeromatid form.

All pereopods biunguiculate, medial margins without dense pads of fine setae. Pereopod 1 (Fig.2A) stout, basis with a distolateral spine and scattered setules on both margins, ischium with short marginal setae and a long seta on lateral margin, merus with three long setae on distolateral and two spines on distomedial margin, carpus medial margin with a large and a small spine, propodus bearing four spines medially. Pereopod 2 (Fig.2B) long, slender, scarcely setose or spiny, distolateral margin of merus provided with three long simple setae (broken). Pereopod 4 (Fig.2C) with rough surface, merus with distolateral margin strongly produced, furnished with three long simple setae. Pereopod 7 (Fig.2D) long, stouter than pereopod 2, distolateral angle of merus with three long simple setae. Penes (Fig.1G) long, fused at base, rami curved inwards proximally, tapering to narrow and outwardly directed apices.

Pleopod 1 (Fig.1H) endopod with medial margin convex bearing short setae, distal margin bluntly pointed and lateral margins slightly concave, peduncle produced medially well beyond the insertion of endopod. Pleopod 2 (Fig.2E) with endopod and exopod subequal in length, appendix masculina arising basally, extending to apex of endopod, narrowing gradually to a slightly pointed apex. Pleopod 3 (Fig.2F) endopod larger than exopod, exopod without articulation. Medial margins of peduncle of pleopod 1-3 with three coupling hooks. All pleopod setae plumose.

Uropod lamellar, endopod lateral and distal margins beset with setules, exopod with apex and lateral margin serrated bearing setules.

#### OVIGEROUS FEMALE

Sexual dimorphism not pronounced, female differs from male only in primary sexual characteristics. Brood pouch not formed from oostegites. Two ventral pockets covering the ventral of pereon act as brood pouch.

#### COLOUR IN ALCOHOL

Pale cream.

#### ETYMOLOGY

The specific name *minutus* (Latin) means 'little' or 'small' referring to the species small size.

#### REMARKS

*Sphaeromopsis minutus* sp. nov. resembles *S. amathistis* Holdich and Jones, 1973 in having the similar body shape. The new species can be separated easily from *S. amathistis* by the differences in the morphology of the penes, first pair of pleopods and short and broad carpus of pereopod 7. It also differs by the absence of dense pads of fine setae on the medial margins of pereopods.

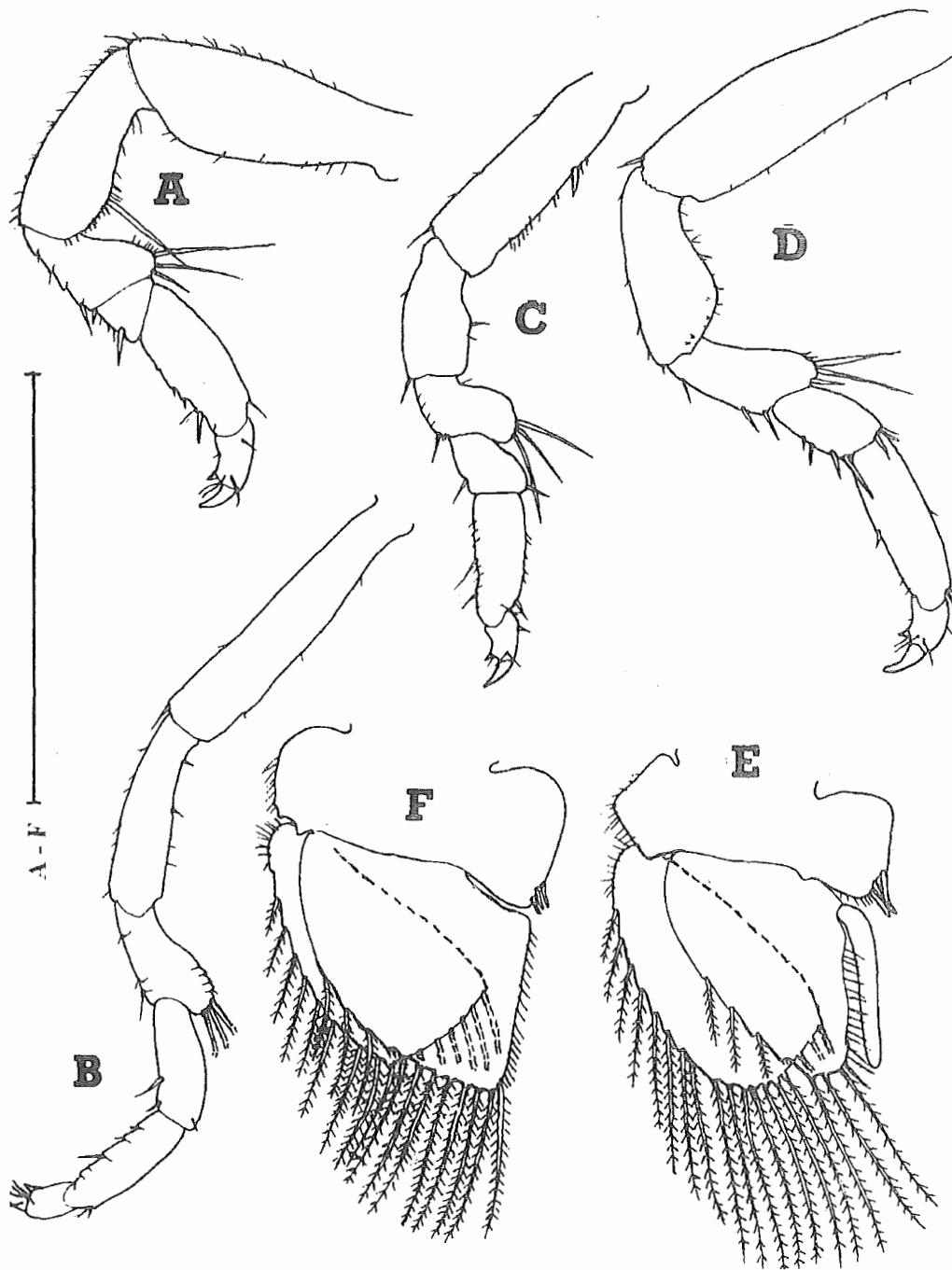


Fig. 2. *Sphaeromopsis minutus* sp. nov., adult male holotype, 3.0 mm. A. pereopod 1; B. pereopod 2; C. pereopod 4; D. pereopod 7; E. pleopod 2; F. pleopod 3. (Scale = 0.5 mm).

**DISTRIBUTION**

Known only from the type locality.

***Sphaeromopsis serriguberna* Holdich and Harrison, 1981**  
(Figs.3-4)

*Sphaeromopsis serriguberna* Holdich and Harrison, 1981: 290.

**MATERIAL EXAMINED**

1 male, 2.9 mm, 14 October, 1985; 1 male, 2.0 mm, 21 July 1993; 1 male, 3.0 mm, 26 January, 1994. Present specimens were taken from the sand of intertidal coast of Bulleji, Karachi.

**TYPE LOCALITY**

Kurrimine, Queensland, Australia.

**DESCRIPTION OF ADULT MALE FROM PAKISTAN**

Body surface (Fig.3A) without ornamentation. Pereonites 1 to 7 subequal in length. Pleotelson (Fig.3A) subtriangular with semicircular raised portion middorsally, wider than long, apex narrow and subtruncate. Posterolateral margin of pleotelson (Fig.3B) slightly curved inwards.

Epistome with subtriangular apex and concave lateral margins.

Antenna 1 (Fig.3C) with flagellum composed of 8 articles extending to middle of pereonite 1. Antenna 2 (Fig.3D) peduncle longer than flagellum, flagellum with 8 articles. Maxillipedal endite (Fig.3E) with single coupling hook and three developed spines and many setae along terminal margin, palp articles 2 to 4 with setose lobes.

All pereopods with simple, well developed accessory unguis, lateral margins of merus, carpus and propodus bearing pads of fine setae. Pereopod 1 (Fig.4A) median lobe of merus with long setae, lateral margin with five setae interspersed with longer setae, carpus distal half bearing three robust spines on lateral margin. Pereopod 2 (Fig.4B) relatively less setose. Pereopod 4 (Fig.4C) medial margin of ischium and merus with long setae, merus strongly lobed. Distolateral margin of carpus of pereopod 6 with one long, stout spine. Pereopod 7 (Fig.4D) long, medial margin of ischium and merus produced into lobes, beset with long setae, distal margin of carpus bearing long spines.

Penes (Fig.3F) long, fused at base, with thickened regions midway along external margins, rami tapering abruptly to acute apices.

Pleopod 1 (Fig.3H) endopod subrectangular, inner margin furnished with fine setae, lateral margin slightly concave, exopod distal margin truncate, peduncle produced as a well developed lobe medially, bearing three coupling hooks. Pleopod 2 (Fig.4E) with appendix masculina extending just beyond endopod, bearing setules proximally. Pleopod 3 (Fig. 4F) endopod larger than exopod, subtriangular, exopod lacking articulation. Peduncle of pleopods 2 to 3 bearing three coupling spines.

Uropod (Figs.3A, 3G) endopod distal margin crenulate, inner margin beset with setules, exopod lateral and distal margins crenulate, medial margin bearing short setae.

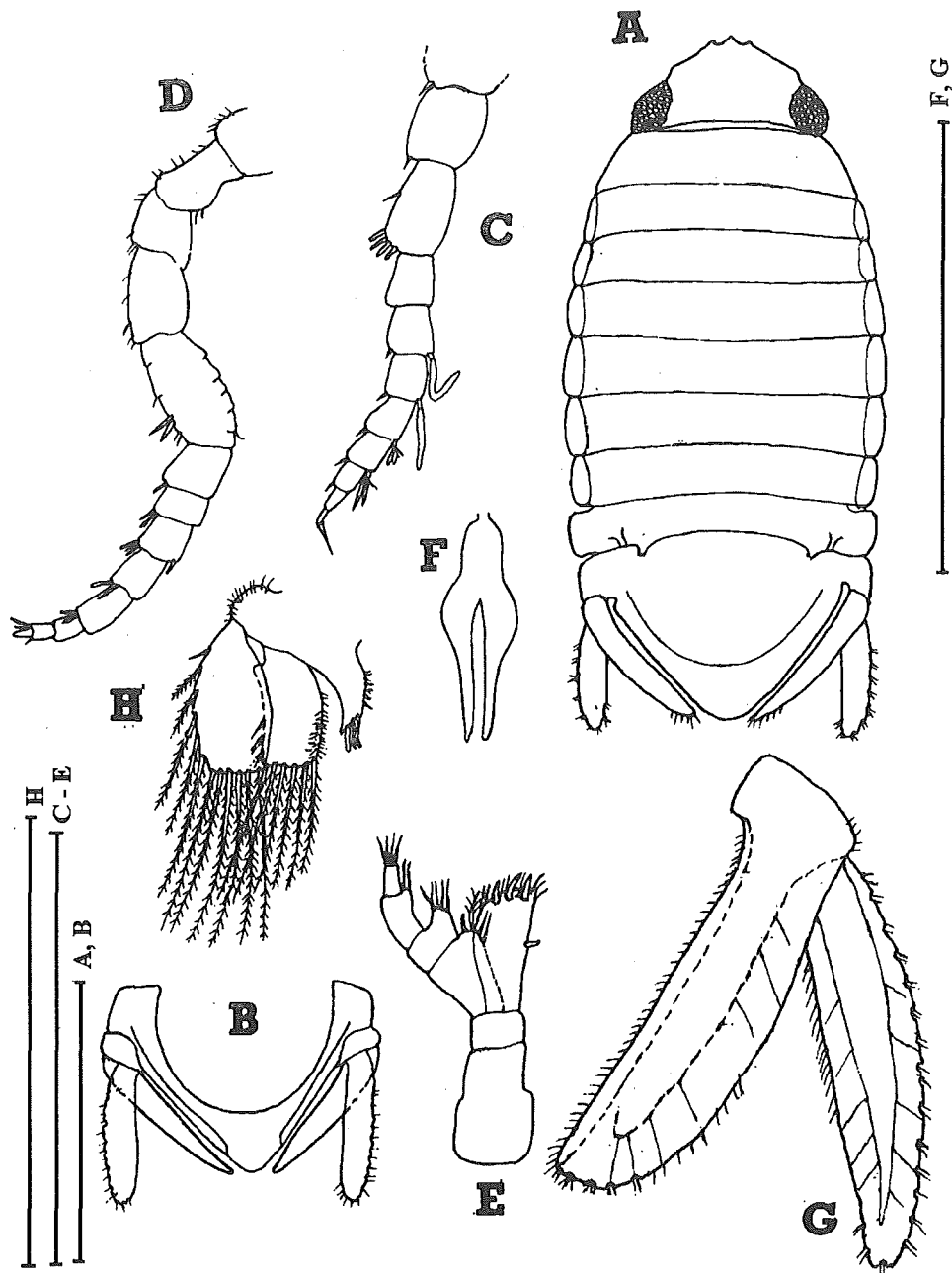


Fig. 3. *Sphaeormopsis serriguberna* Holdich and Harrison, 1981. Adult male, 2.0 mm.  
 A. dorsal view; B. ventral view of pleotelson; C. antenna 1; D. antenna 2; E. maxilliped; F. penes; G. uropod; H. pleopod 1. (Scale: A-B = 1mm; C-H = 0.5mm)

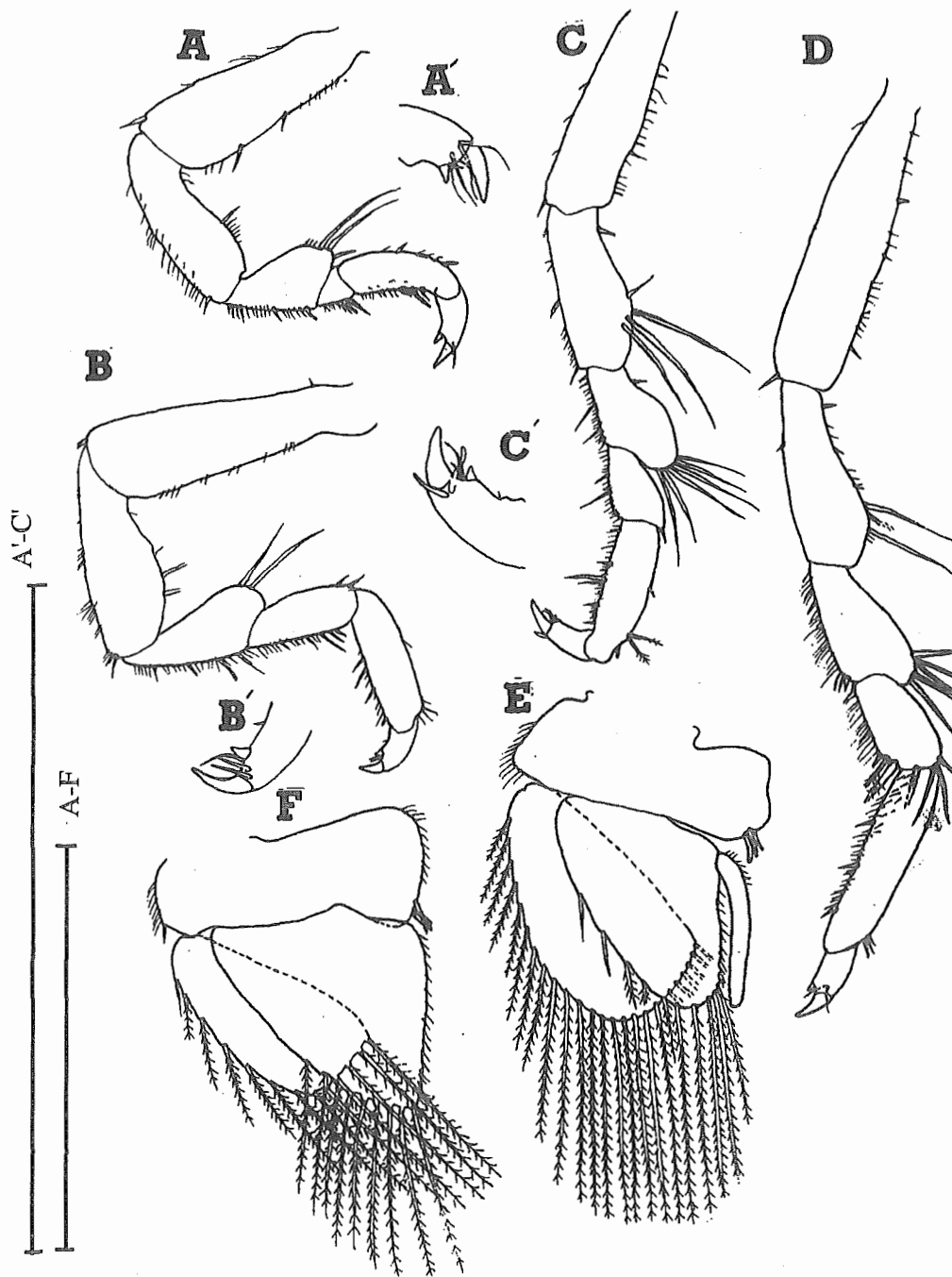


Fig. 4. *Sphaeromopsis serriguberna* Holdich and Harrison, 1981. Adult male, 2.0 mm. A. pereopod 1; A'. pereopod 1, dactylus; B. pereopod 2; B'. pereopod 2, dactylus; C. pereopod 4; C'. pereopod 4, dactylus; D. pereopod 7; E. pleopod 2; F. pleopod 3. (Scale = 0.5 mm).



**FEMALE**

Not available in the present collection.

**COLOUR IN ALCOHOL**

Reddish brown.

**DISTRIBUTION**

Previously known from the type locality Kurrimine, Queensland (Australia) in the Pacific Ocean now its range extends to Karachi, Pakistan in the Indian Ocean.

**REMARKS**

The specimens at hand agree well with the description and illustrations given by Holdich and Harrison (1981) except that antenna 2 has 8 articles instead of 12, and pereopods are relatively less setose and the carpus of pereopod 7 differs in having non-plumose spine like setae on medial and distal margins.

**ACKNOWLEDGEMENT**

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