March 20, 1980 J. Haig

CRUSTACEANA

INTERNATIONAL JOURNAL OF CRUSTACEAN RESEARCH

VOL. 38 MARCH 1980 PART 2

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ISSN 001-216x

LEIDEN—E. J. BRILL—1980

Crustaceana 38 (2) 1980, E. J. Brill, Leiden

SERGIELLA ANGRA, A NEW GENUS AND SPECIES OF SPHAEROMATIDAE (ISOPODA) FROM BRAZIL [1])

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INTRODUCTION

In the course of a study of the isopod fauna from intertidal and shallow infralittoral rocky bottoms I found a remarkable isopod that proved to be a new genus and species of Sphaeromatidae. The specimens were obtained in the algae *Sargassum* at Praia Monsuaba, Angra dos Reis, Rio de Janeiro. This shore is exposed to heavy wave action and *Sargassum* grows compactly together with *Galaxaura, Dictyota* and *Laurencia.*

Sergiella gen. n.

Diagnosis. — Body convex, highest point on pereonites VI and VII. Head approximately as wide as the body. Pereon: pereonite I nearly 2 times wider than pereonite V; coxal plate of pereonite VI 1/2 times broader than that of pereonite VII. Pleon with 2 somites, the first nearly 1/4 times as wide as the second, and the latter not completely divided laterally by 2 sutures. Pleotelson with a semicircular notch and protuberances, even in juveniles; lateral margins folding down and forming a little channel open posteriorly, anteriorly and ventrally, also in mature females. Antenna 1 not expanded in a free plate and basal segment without acute process. Mouthparts strongly metamorphosed in ovigerous females; palp of maxilliped 5-segmented. Marsupium composed of 4 pairs of oostegites arising from the bases of pereopods I-IV. Pleopod 3 with exopod 2-segmented. Outer ramus of pleopod 5 not completely divided. Uropods lamellar with hirsute margins and endopod nearly 1/3 times longer than exopod.

Type-species. — *Sergiella angra* sp. n.

Etymology. — *Sergiella*, gender feminine, is named after Sergio A. Vanin who helped collecting these animals.

Remarks. — *Sergiella angra* belongs to the subfamily Eubranchiatinae (sensu Hurley & Jansen, 1977) because it has both rami of pleopods 4 and 5 fleshy and with transverse pleats.

Within the Eubranchiatinae *Sergiella* seems to be closest to *Dynamenella* and *Dynamene*. It is similar to *Dynamenella* by having the head nearly as wide as the

1) Publication n° 429 of the Instituto Oceanográfico, Universidade de São Paulo.

body, the palp of the maxilliped 5-segmented, the pereonites not equal in width, all coxal plates free, the females with 4 pairs of oostegites and the distal part of the pleotelson with a semicircular notch. *Sergiella* differs from *Dynamenella* by the strongly metamorphosed mouthparts, by the exopod of pleopod 5 which has an incomplete suture and by the uropods which are not equal in length.

On the other hand, *Sergiella* is close to *Dynamene* by the often hirsute dorsal surface of the body and the lateral margins of the pleura, by the highly metamorphosed mouthparts in the ovigerous females, by having the protopodite of the pleopods 1-3 with 3 coupling hooks, by having the uropods unequal in length and with hirsute margins. The new genus differs from *Dynamene* by having the head as broad as the body, by the difference in length of the pereonites, by the pleon which has 2 segments, by having the pleotelsonic channel open posteriorly also in ovigerous females, by the fact that article 3 of antenna 1 is twice longer than article 2, by having the palp of the maxilliped with 5 articles, by the exopod of the pleopod 3 which is completely segmented, and by having the exopod of pleopod 4 without the apical toothed area.

The transformation of the mouthparts in ovigerous females is a remarkable character reported for many genera of Sphaeromatidae (for further information see Baker, 1926; Hansen, 1905; Holdich, 1968a, b; Loyola e Silva, 1963). The genera of Eubranchiatinae that show this characteristic are *Dynamene, Cerceis, Haswellia, Paracerceis* and *Sergiella.*

Hansen (1905) grouped the genera *Cerceis, Haswellia* and *Paracerceis* together because they have an acute process in the basal segment of antenna 1, but *Sergiella* lacks this important taxonomic character.

Hansen (1905) also divided the Eubranchiatinae into 2 groups based on the presence or absence of the segmentation of the exopod of pleopod 3. Even though he considered the groups not natural sections, it was the only practical way he found to separate the genera. Since then, almost all specialists that have studied Sphaeromatidae adopted Hansen's division.

However, the segmentation of the exopod of pleopod 3 is not a good character since it may not be constant within a genus, for instance in *Dynamenella* (Hansen, 1905; Hurley & Jansen, 1977; Loyola e Silva, 1960; Menzies, 1962; Menzies & Glynn, 1968). It is preferable to employ this character only to complement a description, but not to group genera.

Although only females and juveniles of the present new species are known, the differences are sufficient to establish a new genus.

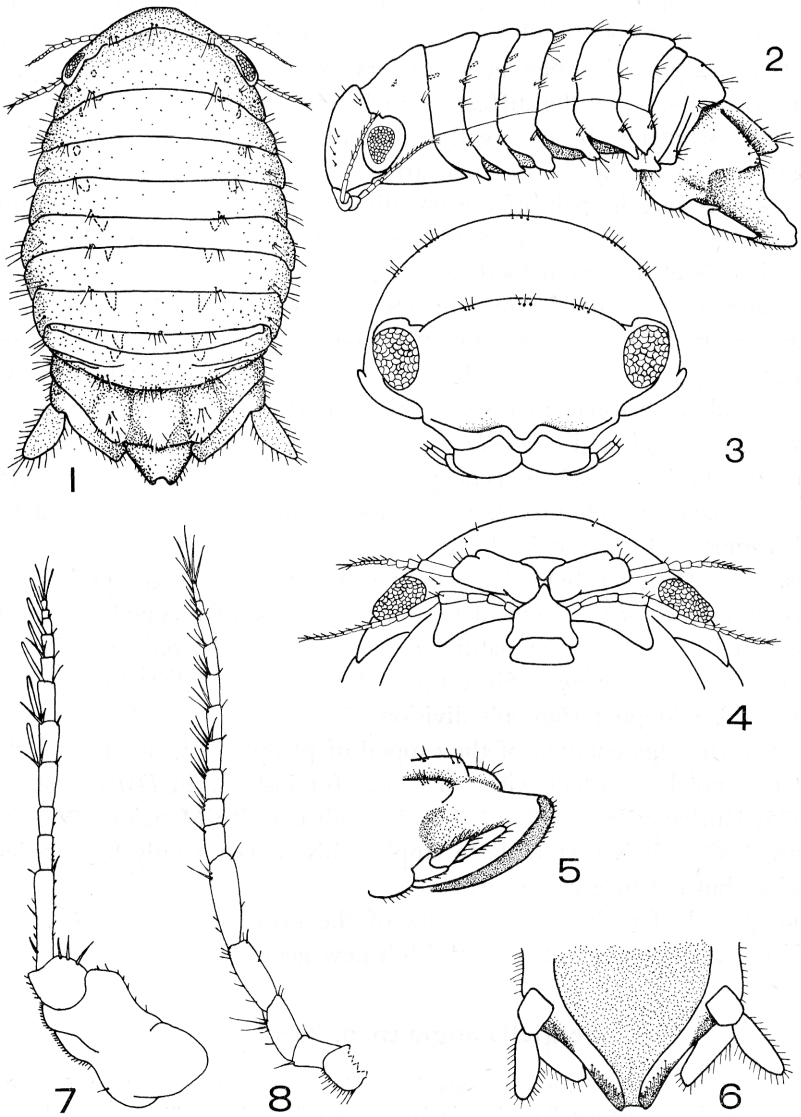
Sergiella angra sp. n. (figs.1-24)

Material examined. — 3 females and 5 juveniles, collected on 27 February 1978, from *Sargassum* sp., Praia Monsuaba, Angra dos Reis, Rio de Janeiro, Brazil. A. M. S. Pires and S. A. Vanin col.

Types. — Holotype, adult female with marsupial pouch, 5.3 mm. Paratypes: 1 adult female, 4.7 mm; the other broken; 5 juveniles. All specimens deposited in Museu de Zoologia, Universidade de São Paulo.

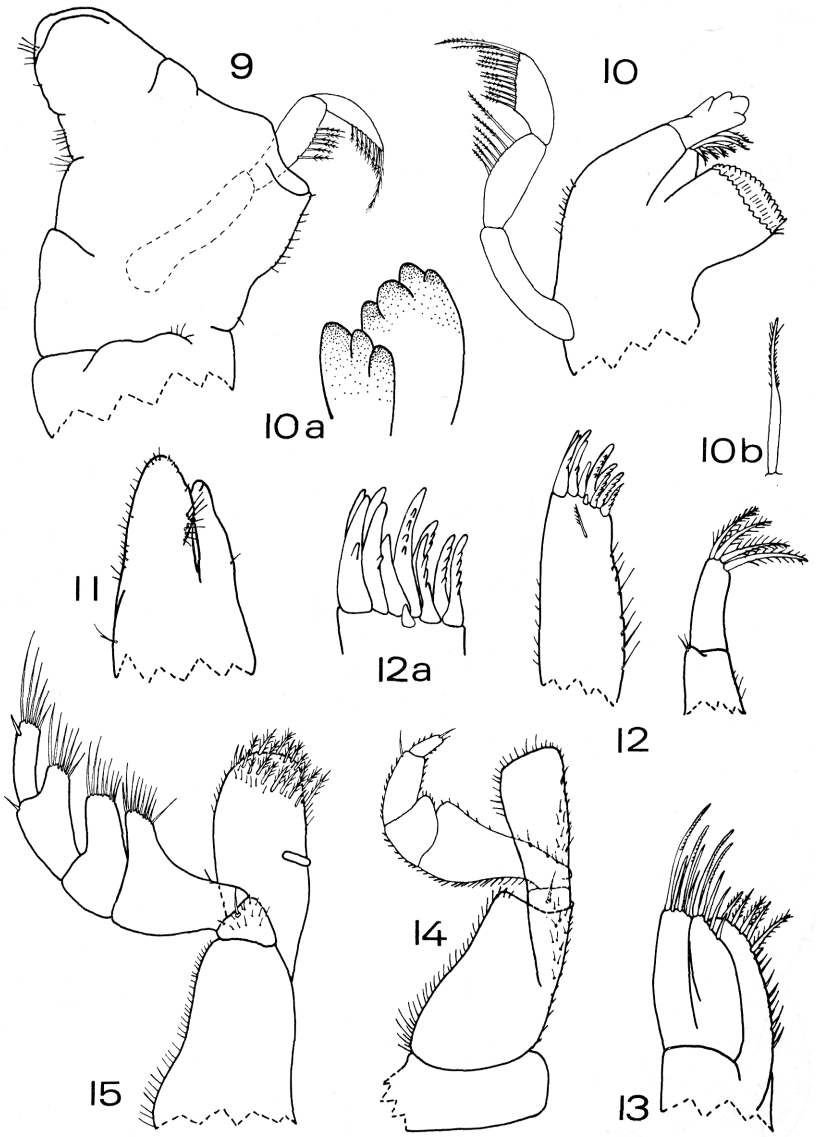
Diagnosis. — This species is easily distinguished by the presence of 3 prominent conical tubercles on the pleotelson; the pleotelson is relatively acute and projecting beyond the uropods; the body segments show 8 longitudinal rows of setae of which 2 are marginal.

Description. — Holotype female (figs. 1-2). Body convex, with 8 longitudinal rows of translucent white setae forming tufts. Color whitish-yellow with sparse brown chromatophores and 2 rows of translucent spots tapering backwards.



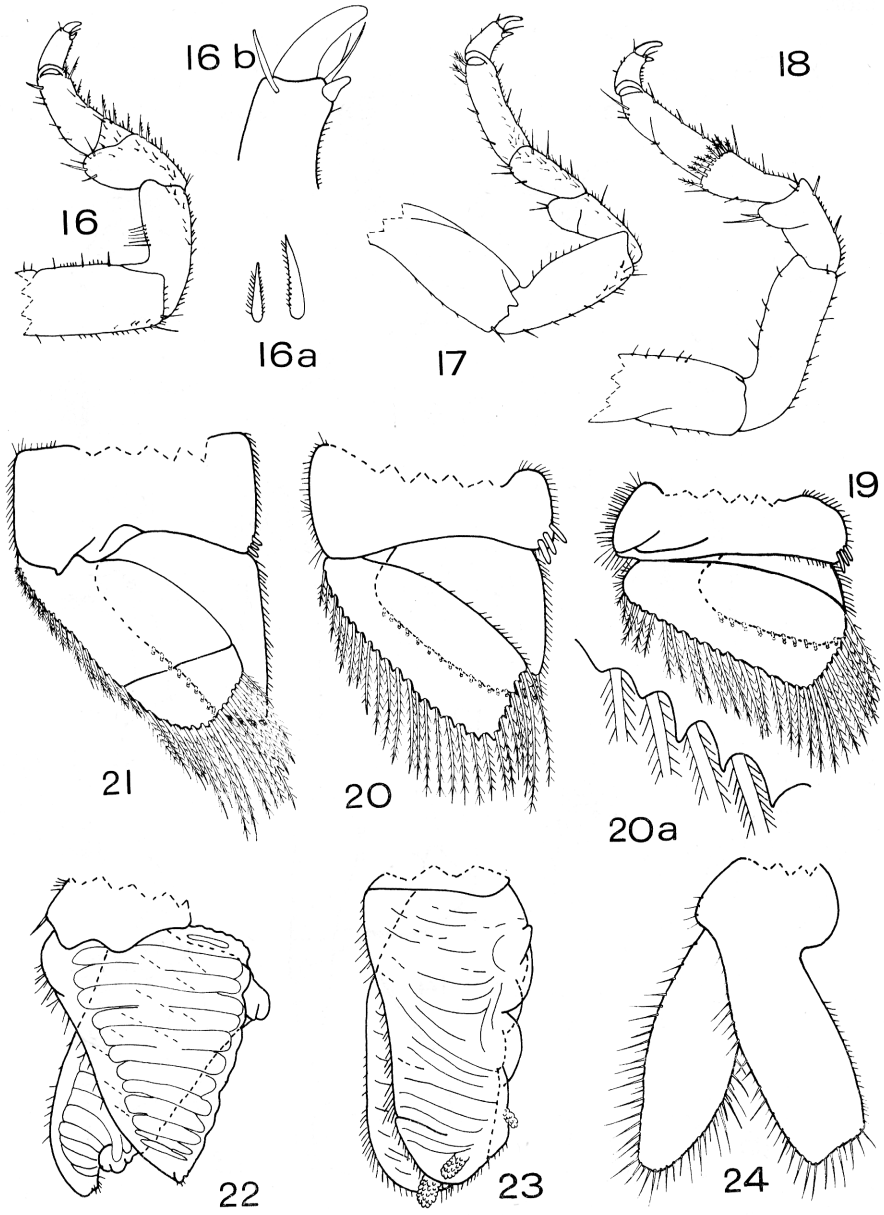
Figs. 1-8. *Sergiella angra* sp. n. holotype, adult female, 5.3 mm long. 1, body, dorsal; 2, body, lateral; 3, head, frontal; 4, head, ventral; 5, pleotelson, lateral; 6, pleotelson, ventral; 7, antenna 1, right; 8, antenna 2, right.

Head twice broader than long and with a transverse anterior ridge (fig. 3). Interantennal process triangular; epistoma subtriangular with the angles enlarged; labrum almost rectangular (fig. 4). Eyes large, roundish and lateral, dark brown in color.



Figs. 9-15. *Sergiella angra* sp. n. 9, 11, 14, holotype, adult female, 5.3 mm long; 10, 12, 13, 15, paratype, adult female, 4.7 mm long. 9, left mandible; 10, right mandible; 10a, left mandible showing lacinia mobilis; 10b, bipectinate setae from mandibular palp; 11, maxilla 1, right; 12, maxilla 2, right; 12a, apex of outer lobe of maxilla 2; 13, maxilla 2, right; 14, maxilliped, left; 15, maxilliped, right.

Pereon. Pereonite I, the widest, nearly twice wider than pereonite V, which is the narrowest; the other pereonites equally developed. Epimeric sutures visible from pereonite II to VII.



Figs. 16-24. *Sergiella angra* sp. n., holotype, adult female, 5.3 mm long. 16, pereopod I, right; 16a, setae from ventral margin of carpus and propodus of same; 16b, dactylus of same; 17, pereopod II, right; 18, pereopod VII, right; 19, pleopod 1, right; 20, pleopod 2, right; 20a, outer margin of exopod of pleopod 2; 21, pleopod 3, right; 22, pleopod 4, right; 23, pleopod 5, right; 24, uropod, right.

Pleon. Pleonite 1 well developed, with 1 segment free and without tubercles, and 2 incomplete sutures; pleotelson with a shallow apical semicircular notch and 3 prominent tubercles, 2 lateral and 1 median, above the notch; sides a little folded down but not forming a tube (figs. 5-6).

Antenna 1 (fig. 7) reaching posterior margin of the head. Peduncular article 1 the largest, 3 times longer than article 2; article 3 long and thin, nearly twice longer than article 2. Flagellum with 10 articles, flagellar articles 3 to 7 and 9 bearing 1 estethe at distal end, terminal article with some long simple setae.

Antenna 2 (fig. 8) reaching posterior margin of pereonite I. Peduncular articles 1 to 3 equally developed; article 5 nearly twice longer than article 3. Flagellum with 10 articles, the last 2 very short and thin, each flagellar article bearing 2 to 4 setae at distal end, terminal article with some long setae.

Mandible (fig. 9) highly modified, without incisive and molar processes, setal row and lacinia mobilis. Palp normally developed with comb setae.

Mandible of paratype female, 4.7 mm (fig. 10). Incisor of the right mandible with 4 chitinous teeth, left mandible with lacinia mobilis (fig. 10a) bearing 3 teeth. Setal row composed of 6 spiny setae; molar process well developed, with many denticles. Palp long and stout; article 2 with 6 bipectinate setae on distal part of lateral margin; article 3 with 12 bipectinate setae (fig. 10b), the distal one the longest.

Maxilla 1 of holotype (fig. 11) strongly modified. Apex of exopod with 4 setae and 3 minute spines; both margins setose. Endopod bare.

Maxilla 1 of paratype female, 4.7 mm (figs. 12-12a). Exopod with 11 stout spines, 10 long and 1 very short; inner margin with long setae, outer margin with setae minute and delicate. Endopod short with 4 distal plumose setae.

Maxilla 2 of holotype, with 3 reduced lobes with setose margins, and without any spiny or plumose setae.

Maxilla 2 of paratype female, 4.7 mm (fig. 13). Palp and exopod with 5 setae each; endopod with setae on the lateral margin, 5 plumose and the remaining simple.

Maxilliped of holotype (fig. 14). Palp poorly developed; articles 2 to 4 without prominent lobes and long setae; terminal article with 2 short setae. Endite with hirsute surface, but without plumose setae.

Maxilliped of paratype female, 4.7 mm (fig. 15). Palp well developed; article 2 large, nearly twice longer than article 1; articles 2 to 4 lobed and almost triangular, each lobe bearing 10, 12, 12 setae on its apex, respectively; article 5 cylindrical and slender with 10 apical setae and a single subterminal one. Endite with hirsute apical surface, bearing many plumose setae; 1 coupling hook.

Pereopods all similar in form (figs. 16-18); basis and ischium long, with many little setae on lateral margins; carpus and propodus bearing many bipectinate and simple setae (fig. 16a); dactylus short (fig. 16b) with 2 curved claws and 2 setae. Pereopod I rather short and strong; pereopod VII, the longest, with carpus bearing a horizontal row of bipectinate setae on anterior margin.

Pleopods 1 to 3 similar in form (figs. 19-21); protopodite rectangular with 3 coupling hooks on inner margin. All endopods and exopods with long plumose marginal setae; exopod of third pleopod segmented.

Pleopod 4 (fig. 22) fleshy, endopod and exopod with deep transverse pleats; both rami unsegmented and with few setae on outer margins.

Pleopod 5 (fig. 23) fleshy, both rami with deep wrinkles; exopod not completely segmented with 3 squamiferous protuberances, 2 distal and 1, larger, placed on ventral margin.

Uropods lamellar (fig. 24), endopod nearly 1/4 times longer than exopod. Peduncle fused to the endopodite. Outer ramus with outer margin convex and apex acute; inner ramus subrectangular, with truncate apex. Both rami with margins smooth and setose.

Brood pouch formed by 4 pairs of oostegites arising from pereopods I to IV.

Juveniles similar to adult females, but the 3 protuberances of pleotelson are not very conspicuous. Male unknown.

Etymology. — *angra* from Angra dos Reis, the place where the species was first collected.

Habitat. — The specimens were found among *Sargassum* of the infralittoral fringe, 0.5 m depth, and submitted to an intensive wave action.

ACKNOWLEDGEMENTS

I would like to express my gratitude to Dr. T. K. Björnberg, Department of Zoology, Instituto de Biociências, Universidade de São Paulo, who critically read the manuscript.

RÉSUMÉ

Description d'un Isopode Sphaeromatidae, *Sergiella angra* gen. n. et sp. n., recueilli dans le phytal de *Sargassum* dans la zone infralitorale de la côte sud du Rio de Janeiro, Brésil. Le nouveau genre appartient à la sous-famille d'Eubranchiatinae et est proche de *Dynamenella* et de *Dynamene*. Comparaison avec ces genres montre la validité de *Sergiella*.

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Received for publication 20 October 1978.