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SIRIELLA TUBERCULUM, A NEW SPECIES (CRUSTACEA: MYSIDACEA: MYSIDAE) FROM AKAJIMA ISLAND, RYUKYU ISLANDS, JAPAN

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Siriella tuberculum, a new species (Crustacea: Mysidacea: Mysidae) from Akajima Island, Ryukyu Islands, Japan

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Abstract.—A new species of Mysidae, *Siriella tuberculum,* is described from the Ryukyu Islands. This species is distinguished from other species of the genus *Siriella* by the rounded rostrum and the armature on the uropod and telson in both sexes, and particularly by the presence of a single, medial, dorsal protuberance on the carapace in the adult female.

In the genus *Siriella* sexual dimorphism is frequently observed in the carapace, antennal scale and telson in addition to secondary sexual characters that include marsupium, penis, antennule and pleopods. During a study of Mysidacea in vicinity of the Ryukyu Islands, an undescribed species which shows sexual dimorphism in the carapace was collected from Akajima Island. Females of this mysid have a dorsal tubercle just anterior to the cervical sulcus which is lacking in male specimens. The only other species with a similar character is *Siriella nodosa,* the females of which have two tubercles compared to only one in the undescribed species. In this paper we present the description of this new species of *Siriella.*

The type specimens are deposited in the National Science Museum, Tokyo (NSMT).

Siriella tuberculum, new species
Figs. 1–2

Type series.—Holotype (NSMT-Cr 11747), adult male (6.9 mm); allotype (NSMT-Cr 11748), adult female (6.3 mm); paratypes (NSMT-Cr 11749), adult male (6.8 mm) and adult ovigerous female (6.4 mm); Aka Harbor, Akajima Island, Ryukyu Islands, 8 m, bottom trap, 24 Jun 1990.

Other material: 1 immature male (4.6 mm), 1 immature female (4.5 mm) and 3 juveniles (2.2–3.6 mm); Aka Harbor, surface towing, 23 Jun 1990, collected by M. Murano, T. Ishimaru, K. Koike and K. Koike.

Description.—Carapace anteriorly produced into low triangular rostral plate with narrowly rounded apex, not extending to base of antennular peduncles, lateral margin of rostrum slightly concave (Fig. 1A, B); posterior margin of carapace emarginate, leaving last 3 thoracic somites exposed dorsally; female, small, with an obtusely angled pre-cervical protuberance present on median dorsal surface (Fig. 1C).

Eye short, expanded, as long as broad, cornea occupying half of eye, globular, wider than eyestalk; eyestalk without papilliform process (Fig. 1A, B).

Antennular peduncle of male more robust than that of female, first segment as long as third, third segment armed with 1 seta on inner margin and 2 setae at inner distal corner (Fig. 1A); female, first segment 1.2 times longer than third, second segment armed with 1 long seta at inner distal corner, third segment armed with 1 long seta on inner margin and 2 long setae at inner distal corner (Fig. 1B).

Antennal scale of male extending to middle of third segment of antennular peduncle,

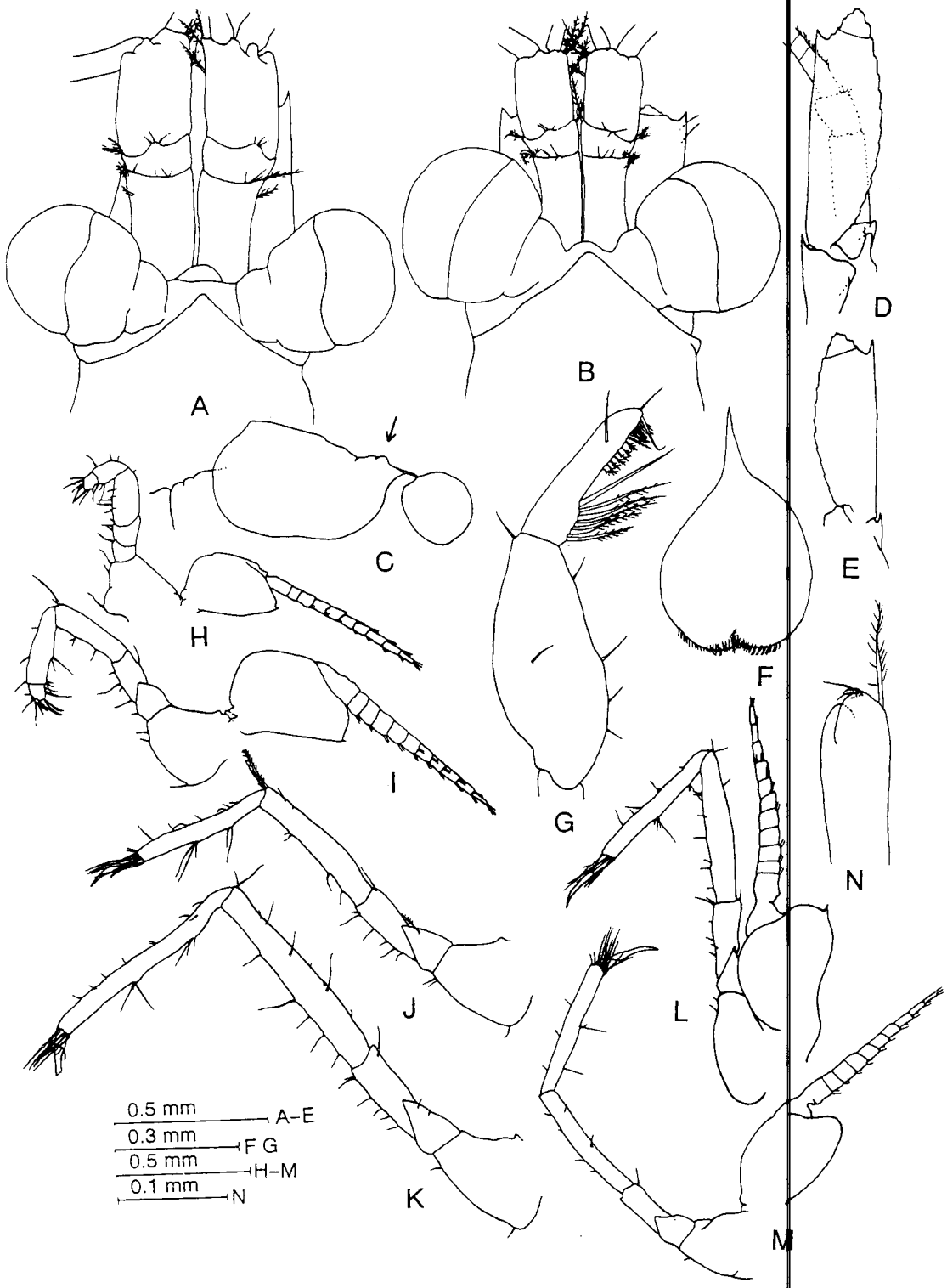

Fig. 1. *Siriella tuberculum,* new species. A, D, F–N: holotype; B, C, E: allotype. A, Anterior end, dorsal view; B, anterior end, dorsal view; C, carapace, lateral view; D, antenna; E, antennal scale; F, labrum; G, mandibular palp; H, first thoracic limb; I, second thoracic limb; J, endopod of third thoracic limb; K, endopod of fourth thoracic limb; L, seventh thoracic limb; M, eighth thoracic limb; N, penis.

3.4 times as long as broad, with indistinct suture near distal end, distal segment as long as broad, lateral margin naked and straight, distal lobe 4 times as long as spinous process terminating external margin (Fig. 1D); female scale nearly 3 times longer than broad, distal lobe only slightly longer than terminal spinous process of external margin (Fig. 1E). Antennal peduncle extending to distal fourth of scale, second segment longest, about twice as long as broad and twice as long as third segment (Fig. 1D).

Labrum with forwardly directed long spine (Fig. 1F). Mandibular palp with second segment about twice as long as broad, third segment ⅔ as long as second segment (Fig. 1G). Maxilla with second segment of endopod more than 3 times as long as broad.

First and second thoracic endopods short, terminating in a strong nail. Third to eighth thoracic endopods slender, carpopropodus undivided; third limb with merus armed with long plumose seta at outer distal corner, fourth to eighth limbs without such seta on merus. Thoracic exopods 10-segmented in first and eighth limbs, 11-segmented in second to seventh limbs; basal plates of first to seventh exopods with small tooth on outer distal corner (Fig. 1H–M).

Penis 2.6 times as long as broad, distal margin rounded, armed with 1 long plumose seta at anterior corner and 3 naked setae on apex (Fig. 1N).

Abdomen consisting of 6 somites, first somite ⅚ length of second somite, second to fifth somites subequal, sixth somite 1.5 times longer than fifth.

Male pleopods developed; first pleopod with 10-segmented exopod, endopod present as bilobed and straight pseudobranchial process; second to fifth pleopods with 11-segmented exopods, endopods subequal in length to exopod, 11-segmented, with bilobed pseudobranchial rami which are spirally coiled in second to fourth pairs and straight in fifth pair; no modified setae on all pleopods (Fig. 2A–E).

Endopod of uropod extending beyond telson for ⅓ of its length, tapering, armed on inner ventral margin from statocyst region to apex with 23 prominent barbed spines, which are increasing regularly in size towards apex and not arranged in series; exopod of uropod longer than endopod of uropod, divided by obscure suture at distal third, proximal segment with external margin naked except for distal ⅛ armed with 4 spines, distal segment 1.7 times as long as broad, setose all round (Fig. 2F, G).

Telson 1.2 times longer than sixth abdominal somite, about 2.5 times as long as broad, not reaching articulation of exopod of uropod; lateral margin armed with 2 large spines near base, followed by unarmed section which occupies ¼ of the margin, distal half armed with continuous row of 16–18 spines increasing in length distally; distal margin armed with pair of long stout spines between which 3 tiny spines and pair of plumose setae are present (Fig. 2G).

Marsupium composed of 3 pairs of brood laminae.

Remarks.—*Siriella tuberculum* clearly belongs to the *thompsoni* subgroup (Ii 1964) because the pseudobranchial rami on the second to fourth male pleopods are spirally coiled, the male pleopods are without modified setae, and the exopod of the uropod has spines confined to the distal part of the outer margin of the proximal joint.

Siriella tuberculum shows prominent sexual dimorphism in the carapace. Adult females have a small protuberance just anterior to the cervical groove. This character is not present in males and relates *S. tuberculum* to *S. nodosa* Hansen, 1910. In the latter species, however, adult females contain two protuberances, pre-cervical and post-cervical, along the median line of the carapace. In immature specimens of *S. nodosa* only a single protuberance is found, but its position is posterior to the cervical groove (Hansen 1910, Tattersall 1936). Furthermore, *S. tuberculum* is distinguished from *S. nodosa* in the following points: The

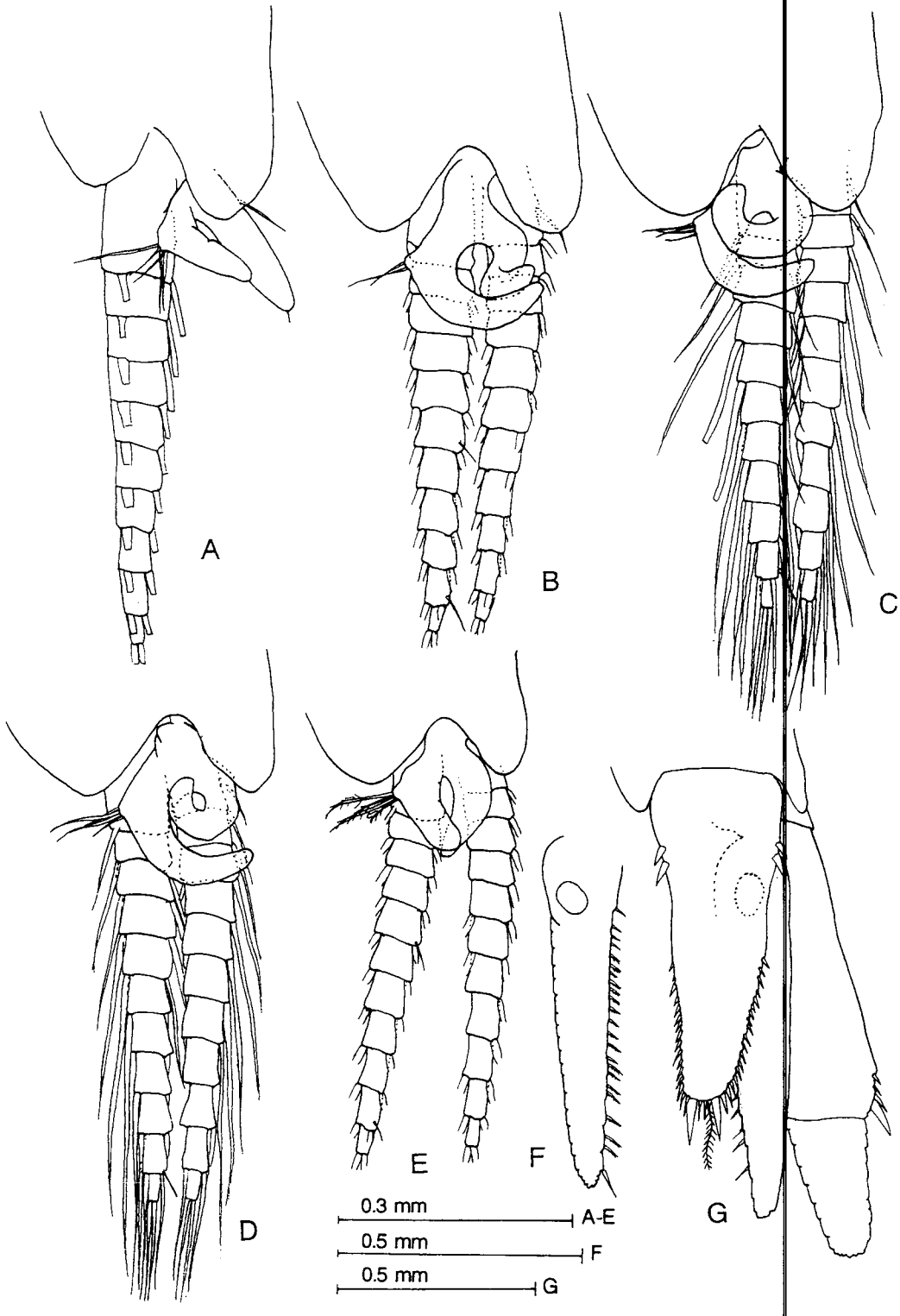

Fig. 2. *Siriella tuberculum,* new species. A–G: holotype. A, First pleopod; B, second pleopod; C, third pleopod; D, fourth pleopod; E, fifth pleopod; F, endopod of uropod, ventral view; G, uropod and telson, dorsal view.

telson has two spines on the lateral margin near the base as opposed to one in *S. nodosa*; and, the median margin of the endopod of the uropod is furnished with spines that become longer distally, while these spines are arranged in a series of longer and shorter ones in *S. nodosa.*

Etymology.—Siriella tuberculum is named after the presence of a small tubercle just anterior to the cervical groove of the carapace.

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