

Fig. 13. *Sphaeromopsis heardi*. A, pereopod 1; B, pereopod 2; C, pereopod 3; D, pereopod 4; E, pereopod 6; F, pereopod 5; G, pereopod 7.

tl 3.5 mm, 2 ovig. ♀ tl 4.4 mm, ♀ tl 4.0 mm, 3 juv., sta K-DOM-20, Grand Bay, Dominica, algal turf with sponges on boulders, 3–5 m, coll. BK & MS, 18 Nov 1992.—Paratypes, USNM 252795, ♂ damaged, ovig. ♀ tl 4.9 mm, sta K-DOM-11, Portsmouth, Dominica, algal turf on boulders, 3–5 m, coll. BK & MS, 16 Nov 1992.

Diagnosis.—Male and female having single strong medial tubercle on cephalon. Pereonite 4 in male elongate, unarmed; in female having raised tuberculate area at about midlength. Pleon lacking free anterior pleonites. Antennal flagellum consisting of 3 spinose articles.

Description.—Male: Body elongate-cylindrical, geniculate, between pereonites 4 and 5. Integument sparsely setose. Cephalon with anterior margin concave, anterolateral lobes well produced, rounded in lateral view; dorsolateral eyes large, well pigmented, subcircular; strong conical dorsal tubercle present above eye. Pereonite 1 fused with cephalon, line of fusion marked by slit in ventral margin. Pereonites 2 and 3 unornamented. Pereonite 4 cylindrical, about 4 times longer than wide, lacking ornamentation. Pereonites 5–7 decreasing in length posteriorly, irregularly rugose but lacking clearly defined tubercles or spines. Pleotelson with 2 anterior fused pleonites weakly indicated dorsally; apex rounded.

Antennule of 4 articles, basal article longer and broader than articles 2 and 3, with blunt conical tubercle dorsally; flagellum subequal in length to three basal articles, bearing row of about 15 pairs of aesthetascs along ventral surface. Antenna with 2 basal articles short, articles 3–5 elongate-cylindrical, unornamented; flagellum of 3 articles, each bearing row of flattened spines on ventral surface, terminal article also bearing strong curved terminal spine. Mandibular incisor of 4 cusps; lacinia mobilis dentate, distally noticeably bifid; spine row having 2 fringed spines; molar broadly truncate with strong marginal teeth. Maxilla 1, inner ramus bearing 4 distal fringed setae; outer ra-

mus with about 8 sparsely toothed stout spines, feathery setae on mesial margin. Maxilla 2, inner ramus with about 10 mesiodistal fringed setae; inner lobe of outer ramus bearing 2 distal elongate setae, outer lobe with 3 elongate setae. Maxillipedal palp of 5 articles, article 1 short, article 3 longest and widest, articles 2–5 each bearing several fringed setae mesiodistally; endite distally rounded-truncate, with 4 short fringed setae, mesial margin bearing single strong coupling hook, inner surface of mesial area bearing 2 elongate setae. Pereopod 1 with carpus bearing row of finely fringed setae on posterior margin; propodus bearing 5 fringed setae on posterior margin plus several groups of setae on outer surface, single strongly dentate seta distally; dactylus with single elongate finely fringed terminal seta. Pereopods 2–4 similar, lacking dactylus, with propodi, carpi, and meri bearing elongate setae on posterior margins. Pereopods 5–7 stout, prehensile, dactylus strongly biunguiculate. Pleopod 1, basis with 3 retinaculæ; exopod subequal in length to endopod, with strong notch in lateral margin having 2 elongate fringed setae; distal margins of both rami bearing 5 or 6 elongate plumose setae. Pleopod 2, basis with 3 retinaculæ; exopod shorter than endopod, with 7 plumose setae on distal margin; endopod having 4 plumose setae on distal margin; copulatory stylet stout, articulating near base of endopod, grooved for most of its length, distal third consisting of slender sinuous styliform structure. Pleopod 3, endopod elliptical, lacking marginal setae; exopod shorter than endopod, bearing 2 distal fringed setae. Pleopods 4 and 5 similar, endopod elliptical, lacking marginal setae; exopod shorter than endopod, with single laterodistal fringed seta. Uropod with outer ramus triangular, margins setulose; inner ramus half length and one-third basal width of outer, bearing single strong apical seta.

Female: Integument relatively more tuberculate than in male. Cephalon with strong conical middorsal tubercle, submedian pair

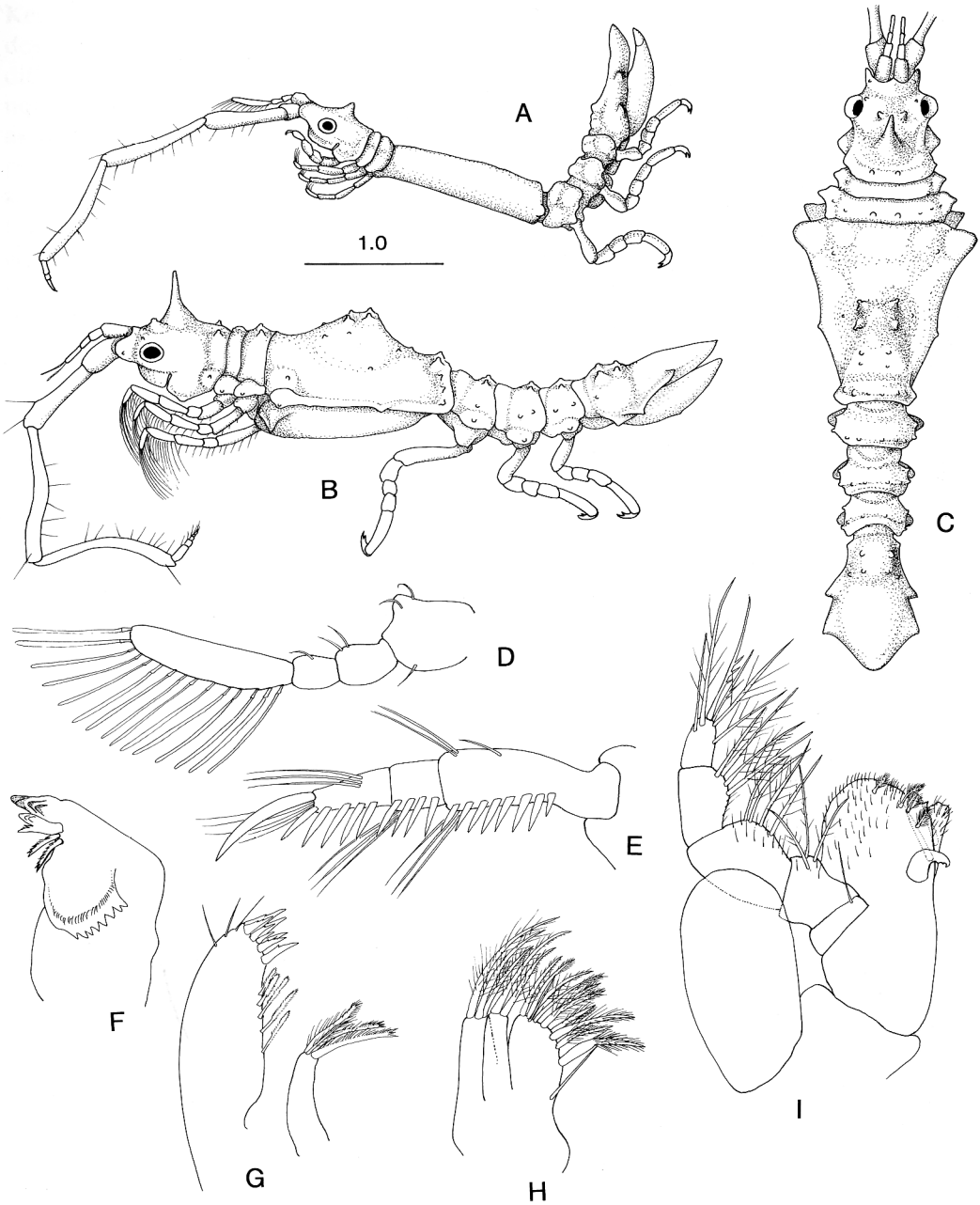


Fig. 14. *Astacilla marna*. A, male in lateral view; B, female in lateral view; C, female in dorsal view; D, antennule; E, flagellum of antenna; F, mandible; G, maxilla 1; H, maxilla 2; I, maxilliped.

of smaller tubercles between eyes; fused pereonite 1 with submedian dorsal pair of small tubercles. Pereonites 2 and 3 with few small scattered tubercles. Pereonite 4, anterior

width subequal to midlength, tapering posteriorly in dorsal view, anterolateral corners rounded, with triangular anteroventral tubercle visible in dorsal view; raised area at

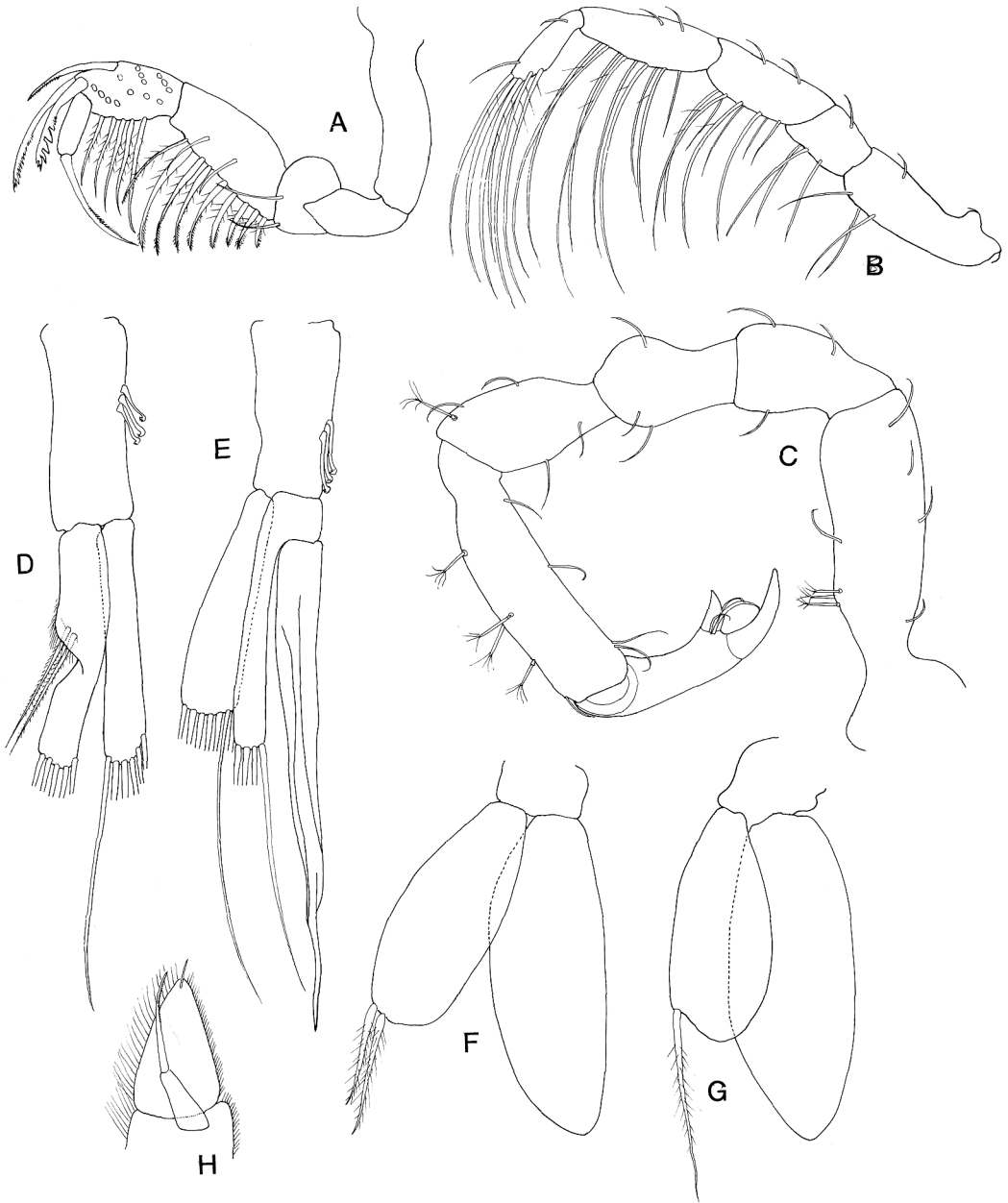


Fig. 15. *Astacilla marna*. A, pereopod 1; B, pereopod 2; C, pereopod 7; D, pleopod 1; E, pleopod 2; F, pleopod 3; G, pleopod 4; H, apex of uropod.

about middle of dorsal surface formed by 4 tubercles arranged in square; several small scattered tubercles on irregular surface of tergum; row of small tubercles along posterior margin. Pereonites 5-7 similar, de-

creasing in length posteriorly, more tuberculate than in male. Pleotelson as in male.

Remarks.—Of the three species of *Astacilla* known from the Caribbean area, *A. marna* most closely resembles *A. spinata*

(Menzies & Kruczynski, 1983) (= *A. regina* Kensley, 1984, known from Belize, Barbados, and St. Lucia; see Müller 1993c). Many differences separate these two species, most notably in size (*A. spinata* is roughly twice as large as *A. marna*), general body proportions of the male and ovigerous female as well as in ornamentation. Differences in the appendages, e.g., the antennal flagellum (2 non-spinose articles in *A. spinata*, 3 spinose articles in *A. marna*), the setation of the notch of the exopod of pleopod 1 (3 long setae in *A. spinata*, 2 in *A. marna*), copulatory stylet of the male pleopod 2 (apically bifid in *A. spinata*, with a single stylet in *A. marna*), uropodal setation (endopod with two apical setae in *A. spinata*, one in *A. marna*), also easily differentiate these two species.

Arcturella sawayae Moreira, 1973, from the São Paulo region of Brazil and known only from a single ovigerous female, has a strong pair of tubercles on the cephalon, a single strong spinose tubercle on each of pereonites 1–3, lacks middorsal tubercles on pereonite 4, and is over twice the length of *Astacilla marna*.

Etymology.—The species is named for Ms. Marna Disbrow of Vancouver, Canada, whose generosity made the second Dominica fieldtrip possible.

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