

Fig. 10. *Cirolana albidoida*: A, Holotype in dorsal view; B, Whole animal in lateral view; C, Antennule; D, Antenna; E, Right mandible; F, Maxilla 1; G, Maxilla 2; H, Maxilliped; I, Pereopod 1; J, Pereopod 2.

pereonite 4 just less than right-angled, of 5-7 somewhat produced, acute, with oblique upcurving furrow. Pleonite 1 laterally overlapped by pereonite 7; epimera of pleonites

1-2 acutely produced, of pleonite 4 broader, subacute; pleonite 5 lacking free lateral margin.

Antennule reaching to posterior margin

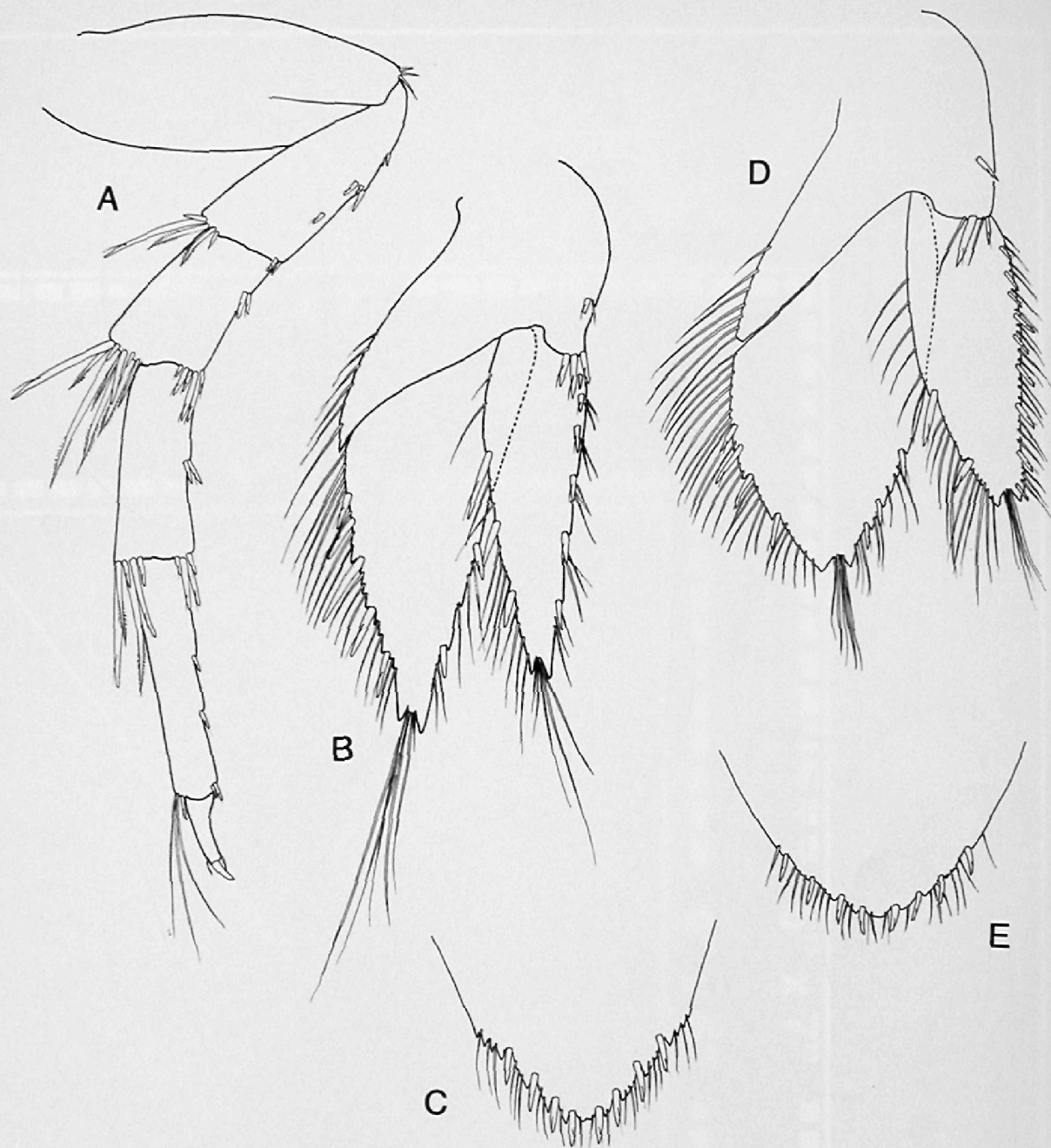


Fig. 11. *Cirolana alboida*: A, Pereopod 7; B, Uropod; C, Pleotelsonic apex. *Cirolana albida*: D, Uropod; E, Pleotelsonic apex.

of cephalon; two basal peduncular articles fused, line of fusion faintly visible, article $3\frac{1}{4}$ longer, but narrower than basal article; flagellum of 10 articles, aesthetascs present on distal 8 articles. Antennal peduncle with three basal articles short, articles 4 and 5 more elongate, 4 slightly shorter than 5; flagellum of 19 articles. Mandibular palp of 3 articles, article 2 with 5 elongate and about 11 shorter distal spines, article 3 with 18 marginal spines becoming distally progres-

sively longer; incisor of 3 cusps; molar bearing 22 teeth. Maxilla 1, inner ramus with 3 stout setae; outer ramus with about 11 spines on mediobasal margin. Maxilla 2, inner ramus with 3 fringed proximal setae and about 11 simple distal setae; inner lobe of outer ramus with 9 distal setae, outer lobe with 5 setae. Maxillipedal endite reaching to end of basal palp article, with 2 coupling hooks and 5 fringed setae; palp article 3 longest and widest; articles 2-5 with dense setae on

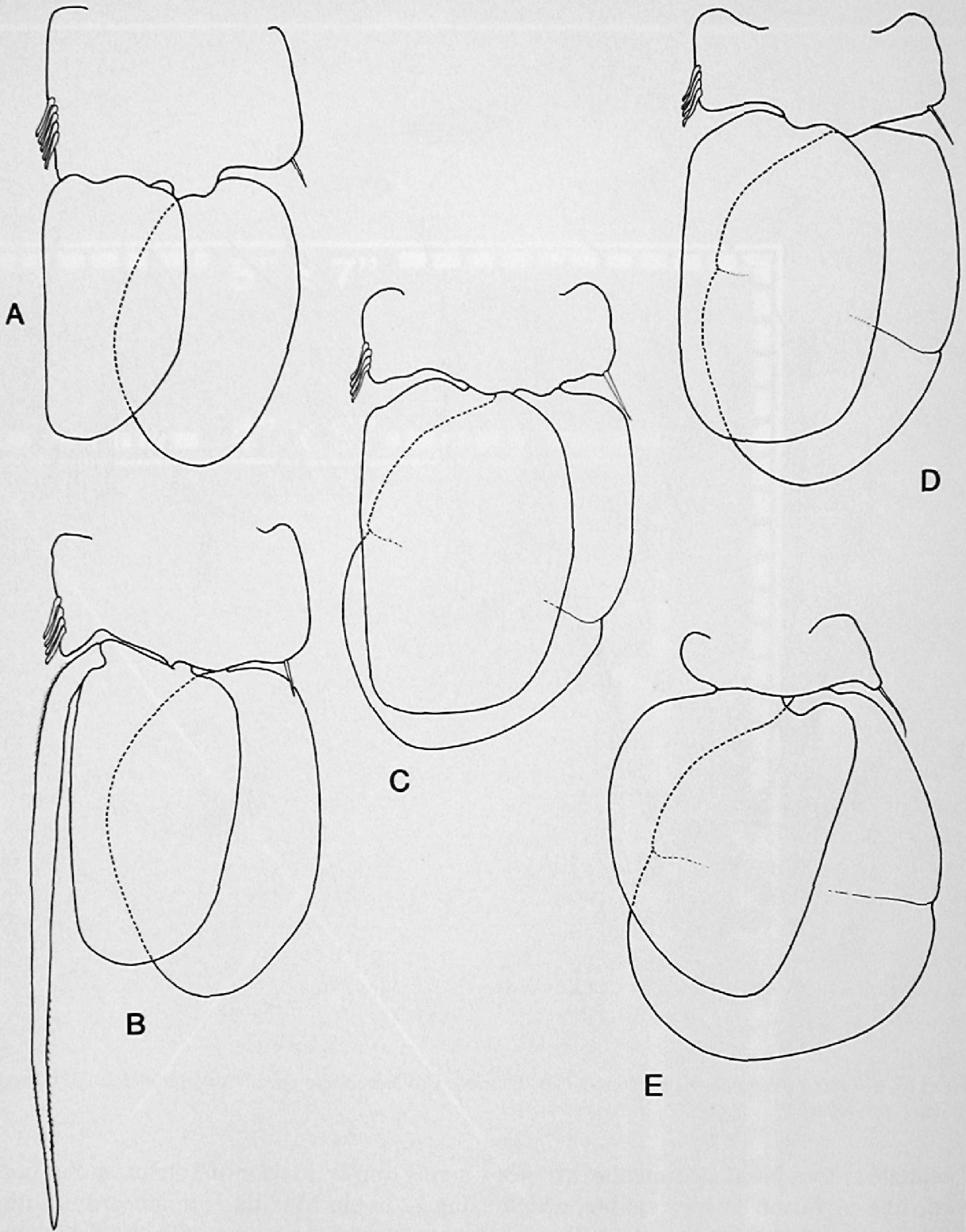


Fig. 12. *Cirolana albidoida* ♂: A, Pleopod 1; B, Pleopod 2; C, Pleopod 3; D, Pleopod 4; E, Pleopod 5.

mediodistal margins, sparser setae on outer margins.

Pereopod 1 robust, dactyl slightly more than half anterior length of propodus; prop-

odus with stout rounded posterodistal spine and 2 smaller sensory spines on posterior margin; carpus triangular, with single sensory spine; merus with 5 stubby rounded

spines on posterior margin; ischium with 2 acute posterodistal spines. Pereopods 2 and 3 similar, dactylus about $\frac{2}{3}$ length of propodus; latter with rounded posterodistal spine and 2 smaller sensory spines on posterior margin; carpus with 2 posterodistal spines; merus with 5 large sensory spines on posterior margin, several anterodistal spines of varying length; ischium with 1 elongate and 2 smaller posterodistal spines, 1 elongate and 2 small anterodistal spines. Pereopods 4–7 similar, becoming progressively more elongate; dactylus about $\frac{1}{3}$ length of propodus; latter elongate-cylindrical, with 3 small spines on posterior margin; carpus about $\frac{2}{3}$ length of propodus, with 2 spines at midlength of posterior margin, clump of 4 posterodistal spines, clump of 6 anterodistal spine of which 2 fringed; merus about $\frac{2}{3}$ length of carpus, with 2 spines in proximal half of posterior margin, clump of 6 posterodistal spines, clump of 9 or 10 anterodistal spines, several of which fringed; ischium with several small spines on posterior margin and clump of 5 anterodistal spines, 2 of which fringed. Pleopods, all rami fringed with plumose setae; pleopod 1 peduncle roughly rectangular, with 5 coupling hooks on median margin, endopod slightly shorter and narrower than exopod, latter elongate-ovate; pleopod 2, peduncle roughly rectangular, with 4 coupling hooks on medial margin, copulatory stylet articulating at base of endopod, slender, tapering reaching by half its length beyond rami; pleopod 3, peduncle with 4 coupling hooks, exopod longer and broader than endopod, with indistinct transverse articulation at midlength; pleopod 4 peduncle with 4 coupling hooks, exopod broadly ovate, with distinct articulation at midlength; pleopod 5 exopod becoming almost circular in outline, with distinct articulation at midlength. Uropodal peduncle bearing 3 spines at laterodistal angle, mesiodistal angle produced into acute triangular setose lobe; exopod subequal in length to, but half basal width of, endopod, with 5 spines on lateral margin, 3 on inner

margin, apically bifid; endopod with 2 or 3 spines on lateral margin, 5 on inner margin, apically bifid; apices of both rami bearing elongate simple setae.

Remarks.—Of the Caribbean species of *Cirolana*, the present species closely resembles *C. albida* Richardson, 1901, known only from the type locality, Sugarloaf Key, Florida. This resemblance is seen in the overall size, the shape of the frontal lamina, the integumental pitting, and the overall similarity of the appendages. The major differences are seen in the proportions of the uropods and telson. In *C. albidoida*, the uropodal rami are more slender, the endopod especially being almost straight-sided; the posterior telson is also straight-sided, apically somewhat narrowed, with four marginal serrations anterior to the apical spination. *Cirolana albida* has the outer margin of the uropodal endopod distinctly convex, with both endopod and exopod proportionally broader; the telson is posteriorly more rounded than in the new species, and lacks the proximal serrations. The copulatory stylet of pleopod 2 in the male provides another differences, extending by almost half its length beyond the rami in the new species, and just barely beyond the rami in *C. albida*. The number of antennal flagellar articles in *C. albida* (20–32) would seem to be higher than in *C. albidoida* (18–20).

Etymology.—The specific epithet, meaning “like albida,” refers to the high degree of similarity of the two species.

Cirolana minuta Hansen, 1890

Fig. 13, 14

Cirolana minuta Hansen, 1890:347, pl. 3 fig. 5, pl. 4 fig. 1.—Richardson, 1901:512; 1905:83, 92, fig. 74.—Menzies and Glynn, 1968:11.—Schultz, 1969:180, fig. 279.—Bruce, 1981:961.

?*Cirolana minuta*: Stebbing, 1900:634 [Loyalty Islands].

Material.—SYNTYPES, Copenhagen

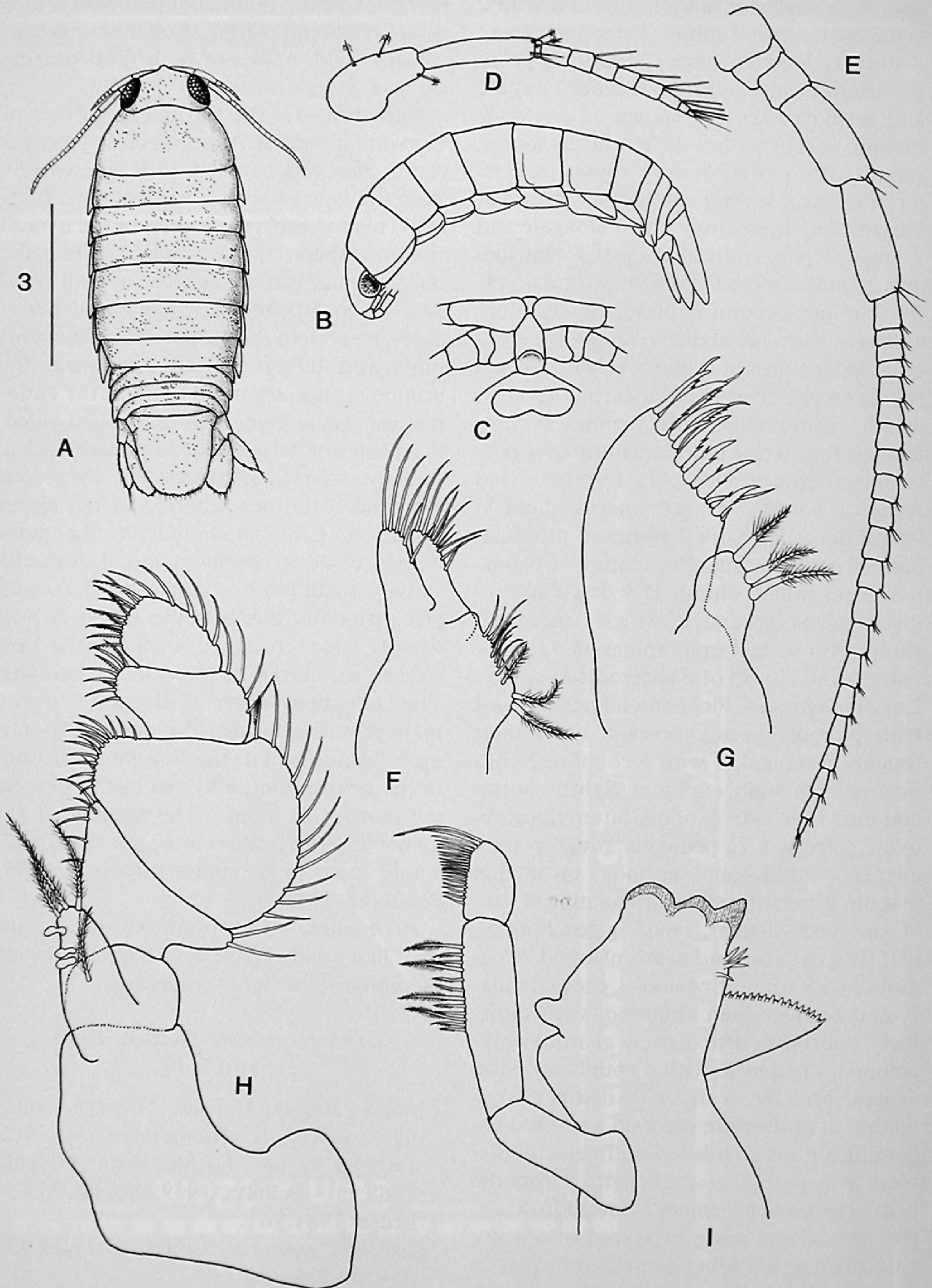


Fig. 13. *Cirolana minuta*: A, Adult ♀ in dorsal view; B, Adult in lateral view; C, Antennal, antennular bases and frontal lamina; D, Antennule; E, Antenna; F, Maxilla 2; G, Maxilla 1; H, Maxilliped; I, Mandible.

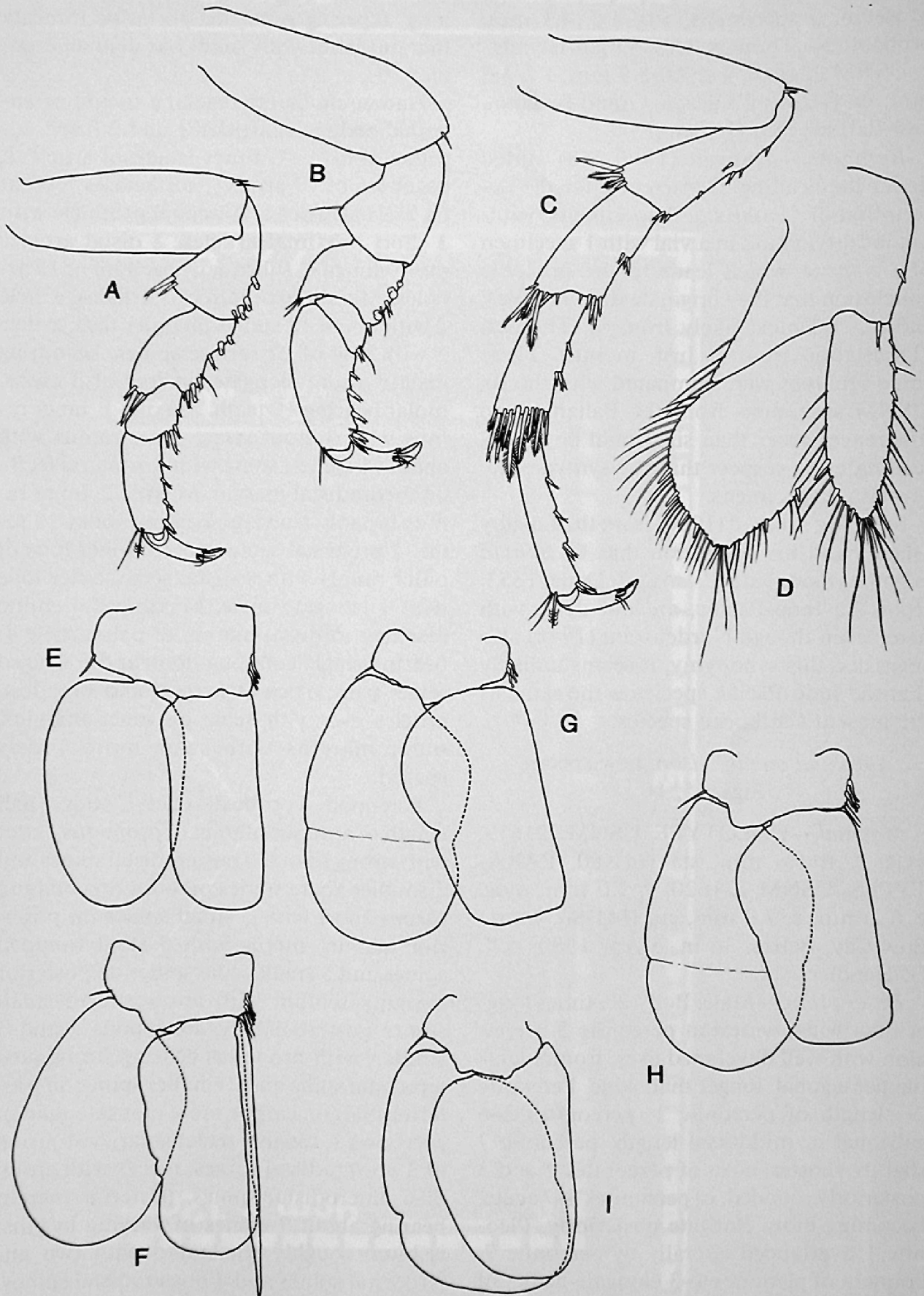


Fig. 14. *Cirolana minuta*: A, Pereopod 1; B, Pereopod 2; C, Pereopod 7; D, Uropod; E, Pleopod 1; F, Pleopod 2; G, Pleopod 3; H, Pleopod 4; I, Pleopod 5.

Museum, 3 specimens, 5.0, 4.6, 4.1 mm, probably St. Thomas, U.S. Virgin Islands.

USNM 221618, 4 ♂, 7.0-8.9 mm, 1 ♀, 4.6 mm, sta GB-7, off Lucaya, Grand Bahama, 180-220 m, coll. D. Camp.

Remarks.—Hansen (1890:348) stated under the heading 'Occurrence' for the description of *C. minuta*: 3 specimens, without locality, found in a vial with 1 specimen of *C. parva*, which leads to the probable conclusion that they originate from the West Indies, and most likely from St. Thomas. (Translation from J. Just, in litt.). These three syntypes were compared with the six USNM specimens from the Bahamas; no differences other than size could be found, leading us to suspect that the syntypes are immature specimens.

Stebbing's record (1900) from the Loyalty Islands and his suggestion that *C. minuta* is synonymous with *C. latistylis* Dana, 1853, from the Indo-Pacific, are not dealt with here. Even though Nordenstam (1946) also suggested this synonymy, it seems unlikely that the Indo-Pacific species is the same as the present Caribbean species.

Cirolana crenulitelson, new species

Figs. 15, 16

Material.—HOLOTYPE, USNM 221619, ovig. ♀, tl 6.8 mm, sta H41-80, PARATYPES, USNM 221620, ♀, 7.0 mm, ovig. ♀, 6.2 mm, ♂, 7.0 mm, sta H41-80, Carrie Bow Cay, Belize, 36 m, 5 Apr 1980, coll. G. Hendler.

Description.—Male: Body $2\frac{1}{2}$ times longer than wide, widest at pereonite 5. Cephalon with well developed eyes; frontal lamina pentagonal, longer than wide. Pereonite $2\frac{2}{3}$ length of pereonite 1; pereonites 2-6 subequal in middorsal length, pereonite 7 slightly shorter; coxa of pereonites 2 and 3 posteriorly rounded, of pereonites 4-7 acute, becoming more elongate posteriorly. Pleonite 1 overlapped laterally by pereonite 7; epimera of pleonites 1-3 elongate-acute, of pleonite 4 rounded; pleonite 5 lacking free lateral margin. Telson basally wider than

long, tapering gently to posterior truncate margin; latter with small but distinct crenulations.

Antennule barely reaching to end of antennal peduncle; articles 1 and 2 fused, together almost $1\frac{1}{2}$ times length of article 3; flagellum of 10 articles, aesthetascs present on 8 distal articles. Antennal peduncle with 3 short proximal articles, 2 distal articles more elongate, subequal; flagellum of 15 articles. Mandibular palp of 3 articles, article 2 with about 18 spines on outer face; article 3 with row of 22 serrate spines, becoming distally more elongate; incisor of 3 cusps; molar bearing 10 teeth. Maxilla 1, inner ramus with 3 stout setae; outer ramus with about 11 spines, some with few lateral teeth, on mediodistal margin. Maxilla 2, inner ramus broadly truncate, bearing about 15 setae, 2 proximal setae fringed; inner lobe of outer ramus with 9 distal setae, outer lobe with 4 elongate setae. Maxillipedal endite reaching to distal margin of palp article 1, bearing single coupling hook and 5 fringed setae; palp article 3 longest and broadest, articles 3-5 with setae on inner margins, outer margins with setae more widely spaced.

Pereopod 1 robust, dactyl about half length of anterior margin of propodus; latter with strong rounded posterodistal spines and 2 smaller acute spines on posterior margin; carpus short with 2 small spines on posterior margin; merus with 5 stout rounded spines and 5 small acute spines on posterior margin; ischium with few scattered small spines posterodistally. Pereopods 2 and 3 similar, with propodus bearing strong posterodistal spine and 2 smaller spines on posterior margin; carpus more elongate than in pereopod 1, roughly rectangular, with group of 3 posterodistal spines; merus with group of 6 anterodistal spines, posterior margin bearing about 9 spines of varying lengths; ischium roughly triangular, with two anterodistal spines and 4 posterodistal spines. Pereopods 4-7 becoming more elongate, similar; dactyl slightly less than half length

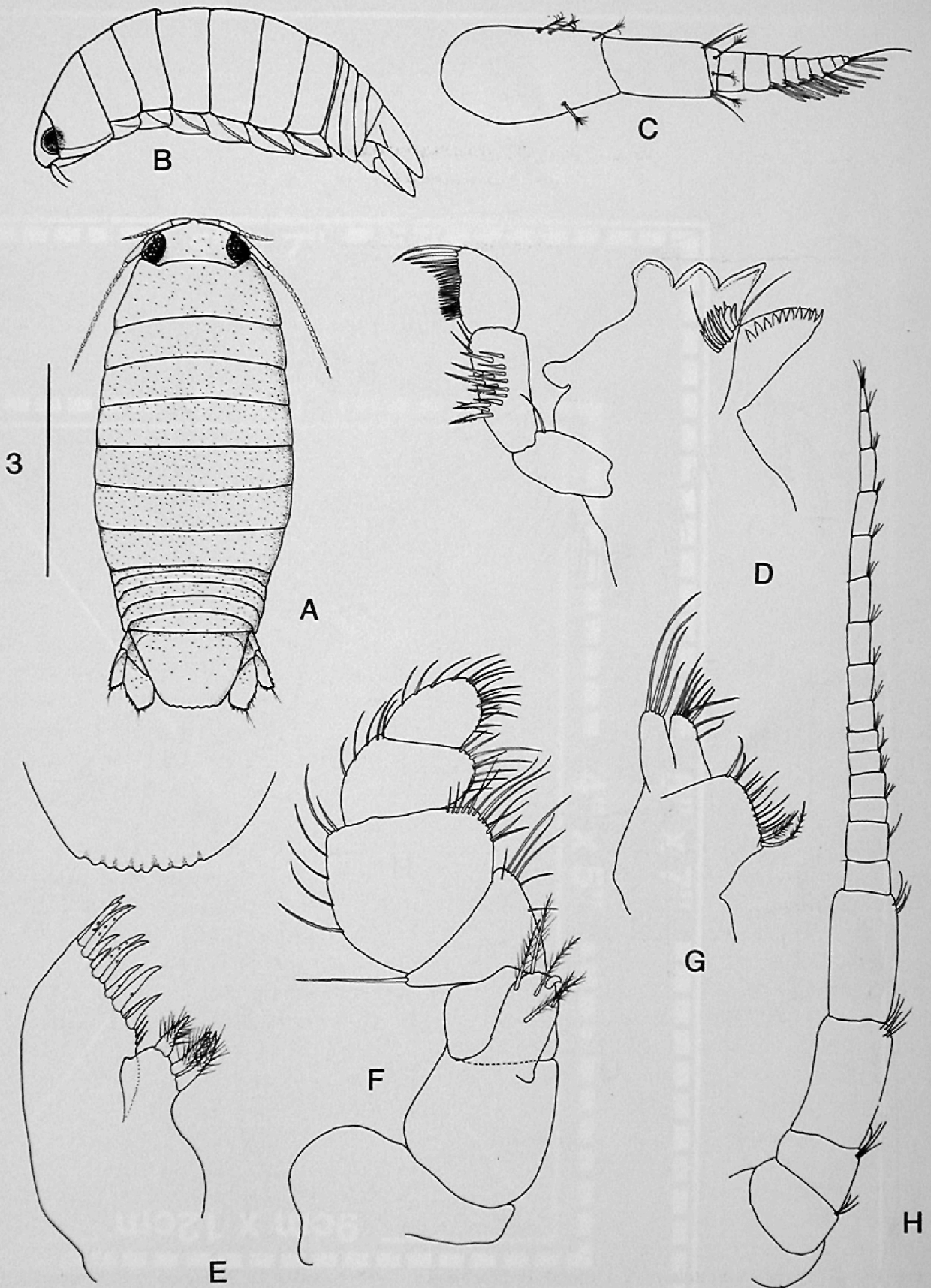


Fig. 15. *Cirolana crenulitelson*: A, Adult in dorsal view; B, Adult in lateral view; C, Antennule; D, Mandible; E, Maxilla 1; F, Maxilliped; G, Maxilla 2; H, Antenna.