

Fig. 6. *Anopsilana jonesi*, male: A, Pereopod 7; B, Pereopod 1; C, Pereopod 2; D, Pleopod 1; E, Pleopod 2; F, Pleopod 3; G, Pleopod 4; H, Pleopod 5.

distal spine; merus with row of 8 blunt spines on posterior margin and 3 anterodistal sensory spines; carpus about half length of propodus, with 3 posterodistal spines; propodus with single spine at midlength and another distally on posterior margin; unguis about half length of rest of dactylus. Pereopods 4–7 similar; ischium with 4 pairs of spines on posterior margin, 3 spines anterodistally; merus with 2 groups of spines on posterior margin, group of sensory and ser-

rate spines anterodistally; carpus rectangular, with pair of spines on posterior margin, plus dense cluster of sensory and serrate spines along distal margin; propodus elongate-rectangular, with few spines along posterior margin. Pleopod 1, endopod parallel-sided, narrower than ovate exopod. Pleopod 2, copulatory stylet apically acute, reaching slightly beyond, and articulating at base of, endopod; exopod ovate. Pleopods 3–5, endopods narrower and shorter than

exopods, lacking marginal setae; exopods broadly ovate, biarticulate, with marginal setae. Uropodal sympod produced along medial margin of endopod, bearing few distal setae; endopod widening distally, reaching beyond pleotelsonic apex, with about 12 marginal spines plus numerous setae; exopod narrow, lanceolate, apically acute, with 10–12 marginal spines.

Female: Essentially similar to male, but lacking tubercles and ridges on cephalon, pereonites, and pleonite 4. Setae on antennal flagellum shorter than in male.

Color pattern.—Similar in both sexes. Dorsal integument of cephalon and pereonite 1 with scattered brown chromatophores; pereonites 2–7 with solid central area, laterally with scattered chromatophores; pleonites 1–3 with middorsal patch of pigment; pleonite 4 and basal pleotelson with 2 patches, plus large irregular central blotch on pleotelson; uropodal endopod with irregular central patch.

Remarks.—The approximately nine known species of *Anopsilana* (see Bruce 1986) can be grouped into those occurring in freshwater caves (generally unpigmented and eyeless), and those pigmented forms such as *A. browni* (Van Name), *A. luciae* (Barnard), and *A. oaxaca* Carvacho and Haasmann, which occur in estuaries. The present species belongs to the latter group, and indeed, was caught along with single specimens of *A. browni* from Anderson Lagoon in the Sittee River and from Salt Creek. The two species may be separated by three easily seen features. 1. The color pattern, that of *A. browni* lacking the solid middorsal area on the pereon. 2. The frontal lamina, which in *A. browni* is distally broadly rounded and strongly projecting. 3. The strong double tubercles on the cephalon and rows of rounded tubercles on the pereonites and pleonites of male *A. browni*, contrasted with the three low tubercles on the cephalon and the low ridges on the pereonites of male *A. jonesi*.

Etymology.—The species is named for Dr.

Meredith Jones, of the Department of Invertebrate Zoology, Smithsonian Institution, who collected the first specimens of this species along with numerous other isopods from localities in the Caribbean.

Eurydice personata, new species
Figs. 7, 8

Material.—Holotype, USNM 211436, 1 ♂, 6.0 mm, paratypes, USNM 128314, 19 ♂, 5.0–6.0 mm, 4 ovig. ♀, 5.1–6.4 mm, 6 non-ovig. ♀, Mona Island, Puerto Rico, 40–50 ft, coll. R. Menzies and P. Glynn, 10 May 1966.—USNM 211435, 63 ♂, 3.5–4.5 mm, 1 ovig. ♀, 5.0 mm, 95 non-ovig. ♀, Bahamas north of Bimini Is., 1–2 m, coll. M. Jones, 22 Aug 1962.—USNM 111388, 2 ovig. ♀, 4.1 mm, Bahamas, surface plankton tow at night, coll. J. McCain, 14 Jul 1964.—USNM 60689, 3 ♂, 3.5–4.5 mm, 2 non-ovig. ♀, Bermuda, 27 Sep 1933.—USNM 65871, 1 non-ovig. ♀, Bigie Bay, Haiti, 23 Apr 1930.—USNM 221547, 38 ♂, 4.5–4.8 mm, 6 ovig. ♀, 4.9–5.8 mm, Grande Cay, Cuba, 19 Apr 1937.—USNM 86369, 7 juvs., off Miami, Florida, Jun 1942.—USNM 225445, 1 ovig. ♀, 5.6 mm, off Georgia, 27 m, 14 May 1981.—USNM 225440, 1 non-ovig. ♀, off Georgia, 18 m, 28 Jul 1981.—USNM 225448, 1 juv., off South Carolina, 34 m, 27 Jul 1981.—USNM 225450, 1 ♂, 1 non-ovig. ♀, 1 juv., off Georgia, 26 m, 12 Aug 1981.

Description.—Male: Body about 4 times longer than greatest width. Coxae of pereonites 2–7 ending in acute denticle. Pleonites 2–5 posteroventrally acute. Pleotelson wider than middorsal length, with anterior hollow; posterior margin between notches slightly convex, with 2 pairs of spines, inner pair longer than outer, between 5 and 6 times longer than wide. Cephalon lacking rostrum; frontal lamina narrow, lanceolate, distally acute; clypeus broadly triangular, distally acute and projecting anteroventrally; eyes large, lateral, reaching to ventral surface.

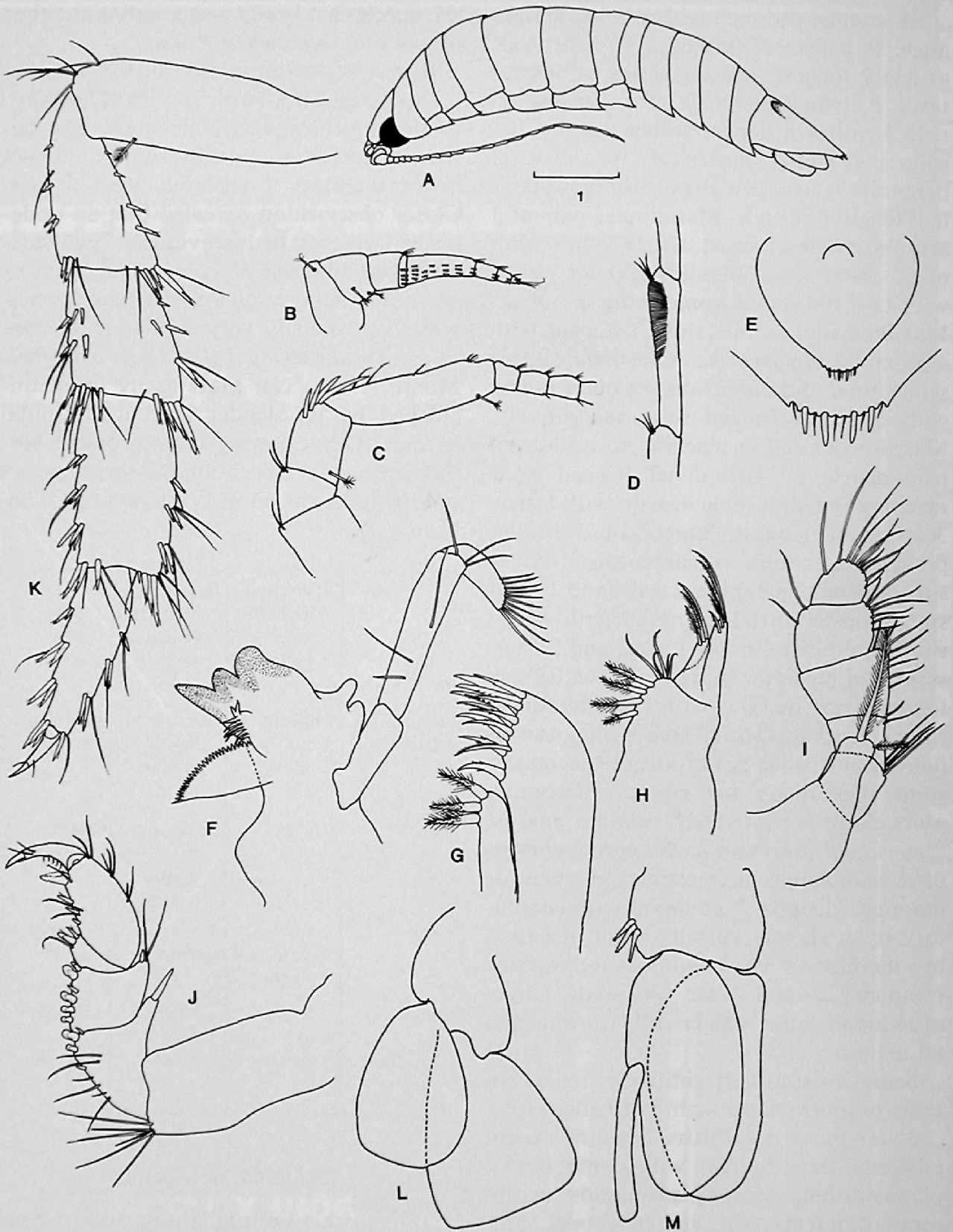


Fig. 7. *Eurydice personata*: A, Adult in lateral view; B, Antennule; C, Antennal peduncle; D, Antennal flagellar article enlarged; E, Pleotelson; F, Mandible; G, Maxilla 1; H, Maxilla 2; I, Maxilliped; J, Pereopod 1; K, Pereopod 7; L, Male pleopod 1; M, Male pleopod 2.

Antennular peduncle with article 2 at right angle to article 1; flagellum of 6 articles, article 2 longest, bearing series of aesthetascs. Antennal peduncle of 4 articles, article 3 with 4–6 slender spines distally; flagellum reaching posteriorly to level of pereonite 7, articles with plicate organ about half length of article. Mandibular palp of 3 articles, article 2 longest, article 3 with comb of 10 distal setae. Maxilla 1, outer ramus with 12 distal spines, some being spinulose. Maxilla 2, inner ramus short, truncate, with 4 proximal fringed setae and 5 distal simple setae; inner and outer lobes of outer ramus with 3 and 5 fringed setae respectively. Maxillipedal endite reaching to middle of palp article 2, with distal fringed setae reaching to palp article 4; palp with article 3 widest and longest. Pereopod 1–3 similar, prehensile; ischium with anterodistal extension bearing single spine, 2 acute and 2 blunt spines posterodistally; merus with single short anterodistal spine, 1 acute and 5 blunt spines on posterior margin; carpus lacking free anterior margin, with 2 posterodistal spines; propodus with 3 spines on posterior margin plus stout posterodistal specialized spine. Pereopods 4–7 similar, becoming more elongate posteriorly, ischium, merus, carpus, and propodus each bearing clumps of sensory spines on anterior and posterior margins. Pleopod 2, endopod with copulatory stylet clavate, distally blunt, reaching by one-fifth of its length beyond ramus. Uropodal exopod ovate, five-sixths length of endopod; latter with broadly truncate distal margin.

Female: Essentially similar to male, but body proportionally slightly broader.

Color pattern.—Entire dorsum except posterior three-fourths with dense brown pigmentation; sternites, pereopods (except propodi and dactyli), and pleopodal sympods pigmented (based on Georgia and South Carolina material).

Etymology.—The specific name is derived from the Latin *personatus*, meaning wearing a mask, and refers to the fact that

this species has been masquerading as either of two other species of *Eurydice*.

Remarks.—Examination of the material of three western Atlantic species of *Eurydice* in the Smithsonian's collections, and perusal of the literature, led to some confusion in my attempts to separate these species. Closer observation revealed that an undescribed species had previously been misidentified either as *E. convexa* or *E. littoralis*. *Eurydice personata*, the new species, while superficially very similar to *E. convexa* Richardson, 1900 (= *E. littoralis* Moore, 1901), can most easily be distinguished by its slender lanceolate frontal lamina. The following table provides further means for separating the three species occurring in the Florida Keys and Caribbean.

	<i>E. convexa</i> Richardson, 1900	<i>E. piperata</i> Menziés & Frankenberg, 1966	<i>E. personata</i> , new species
Frontal lamina	truncate, faintly bilobed	truncate, faintly bilobed	lanceolate acute
Pleotelson apex	convex	truncate to faintly convex	faintly convex
spines	4, moderate length	4, very short	4, elongate
♂ antennal plicate organ	1/5 length of article	1/6 length of article	1/2 length of article

Xylolana, new genus

Diagnosis.—Frontal lamina and rostrum fused, broad, separating antennular bases. Clypeus conical, projecting. Antennular peduncle of 3 articles; antennal peduncle of 5 (?4) articles, articles 3–5 subequal in length. Mandibular palp directed anteriorly. Max-

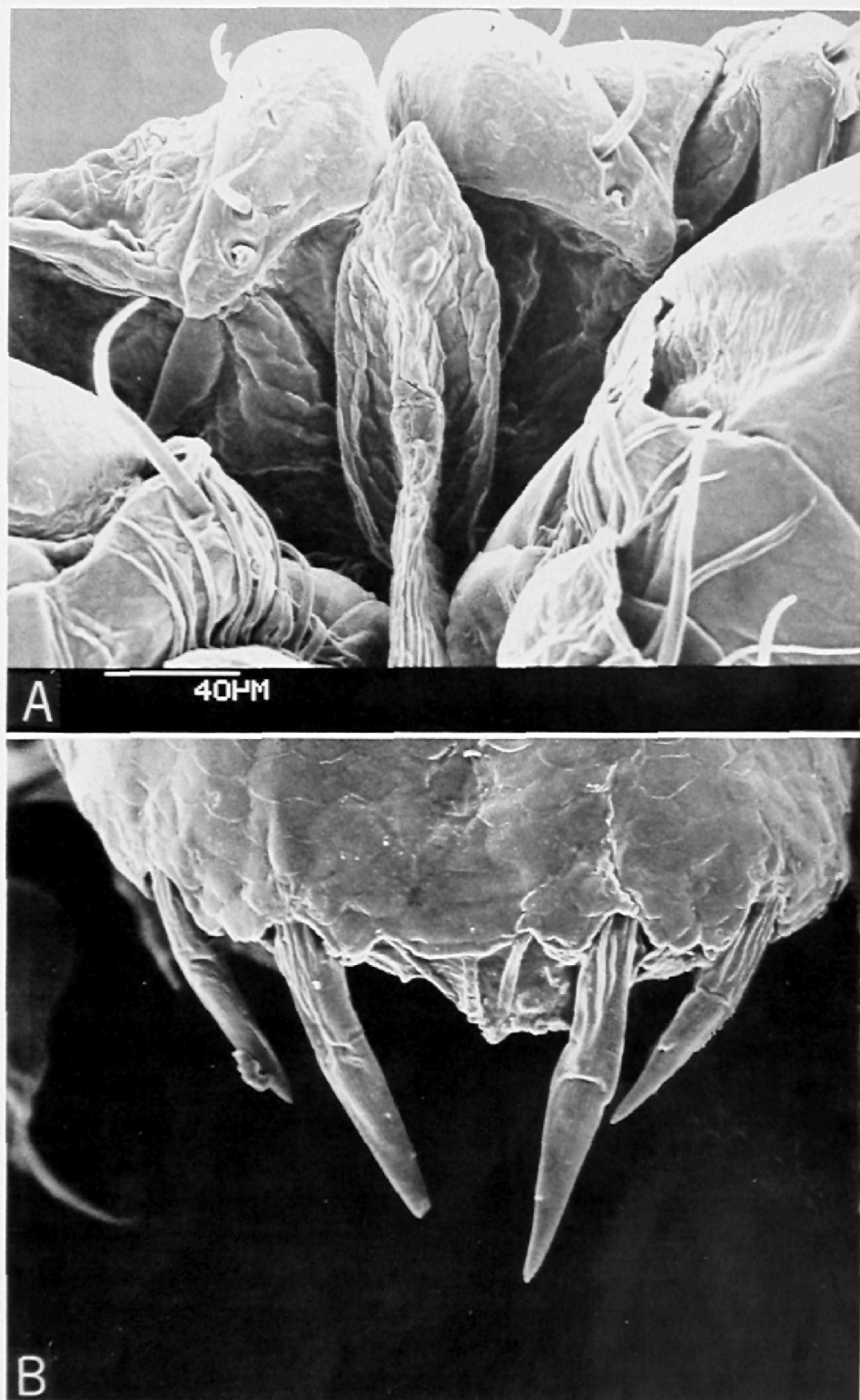


Fig. 8. *Eurydice personata*: A, Frontal lamina; B, Apex of pleotelson.

illipedal endite reduced, lacking coupling hooks. Pereonite 1 twice length of pereonite 2. Pereopods 1–3 with meri not anterodistally produced. Pereopods 4–7, articles not flattened, lacking natatory setae. Short penes

present on sternite of pereonite 7. Pleopod 2 in male with copulatory stylet articulating in distal half of mesial margin of endopod. Pleopods 3–5, exopod biarticulate; endopod lacking marginal setae. Pleonite 5 lacking

free lateral margin, overlapped laterally by pleonite 4. Uropodal sympod produced along mesial margin of endopod.

Type species.—*Xylolana radicolica*, new species.

Etymology.—The generic name is derived from the Greek word *xylon* for wood, referring to the woody habitat of the animal, plus the commonly-used suffix 'lana,' derived from *Cirolana*, originally an anagram of Carolina.

Remarks.—Discovery of an apparently specialized and highly adapted species such as the one under discussion, immediately exposes a gap in our knowledge of the taxonomy of the cirolanids. (With few exceptions, this gap is present in most of the major isopod groups.) With no phylogenetic analysis at the generic level, there is no way of knowing which characters are apomorphic and which plesiomorphic. Separation of genera, while probably reflecting the phylogenetic relationships fairly well, is thus a shaky and somewhat subjective process. Well defined and long-understood genera such as *Eurydice* will present little problem, but with unusual and adapted forms such as the present species, generic placement becomes very difficult. Has a projecting clypeus evolved more than once? Is the condition with pleonite 4 overlapping pleonite 5 apomorphic? These and other similar questions arise in trying to place the present material.

The projecting clypeus would indicate affinity with the Eurydicinae, while the lateral overlapping of pleonite 5 by pleonite 4 would indicate the Cirolaninae. Features such as the fusion of the rostrum and frontal lamina, the medially-articulating copulatory stylet, and the lack of marginal setae on the endopods of pleonites 3–5, however, all indicate a stronger affinity with the Eurydicinae. Within the latter subfamily, the present species does not agree with the definitions of any of the genera. Using the available keys to the Cirolanidae also proves unsatisfactory. For example, using Bruce's

1986 key, the present species runs down to *Eurylana*, from which it differs in several features. There seems to be no choice but to describe a new genus for this material, in which small size and choice of habitat might well have dictated several of the specialized features.

Xylolana radicolica, new species

Material.—Holotype, USNM 211437, ♂ 2.6 mm, paratypes, USNM 211438, 1 ovig. ♀ (cephalon plus anterior 4 pereonites only), 1 non-ovig. ♀ (cephalon missing), 1 non-ovig. ♀, 1.9 mm (SEM specimen), from dead in-situ red mangrove prop roots, 1 m, Twin Cays, Belize, coll. K. Rützler, Feb 1987.—Paratype, USNM 211439, non-ovig. ♀, 3.3 mm, from dead in-situ red mangrove prop roots, 1 m, Twin Cays, Belize, coll. B. Kensley, 12 Dec 1986.

Description.—Male: Body about 4 times longer than greatest width (at pereonites 4 and 5). Cephalon sunken into pereonite 1, with large well pigmented eyes; area between posterior margin and line joining posterior margins of eyes somewhat inflated; antennular bases separated by broad, flattened, fused rostrum and frontal lamina. Clypeus narrowly conical, projecting distally. Pereonite 1 about twice length of pereonite 2. Coxae of pereonites 2 and 3 posteriorly rounded; of pereonites 4–7 becoming progressively more produced and elongate posterodistally. Pleonites 1–3 short; pleonite 4 laterally broad, overlapping pleonite 5 and base of pleotelson, with oblique row of plumose setae; pleonite 5 short, lacking free lateral margin. Pleotelson basally broad with faint rounded middorsal ridge, becoming abruptly narrowed from base of uropodal sympod, tapering slightly to broadly rounded posterior margin.

Antennular peduncle of 3 articles, article 3 longest; flagellum of 6 articles, articles 3–5 each bearing 2 aesthetascs, terminal article with single aesthetasc. Antennal peduncle of 4 articles, article 4 only slightly longer

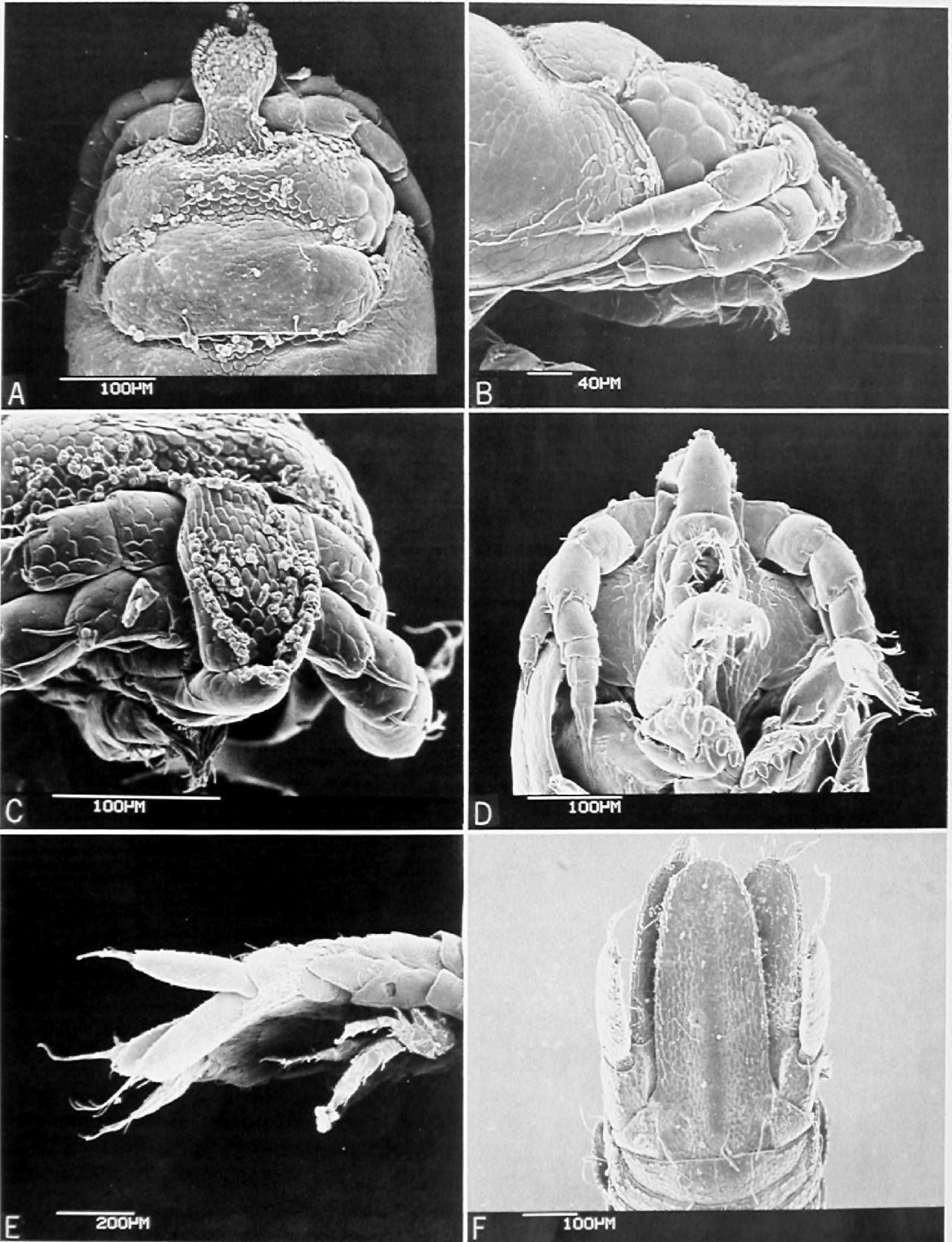


Fig. 9. *Xylolana radiculicola*, paratype: A, Cephalon in dorsal view; B, Cephalon in lateral view; C, Cephalon in oblique-anterior view; D, Cephalon in ventral view; E, Pleon in lateral view; F, Pleotelson and uropods in dorsal view.

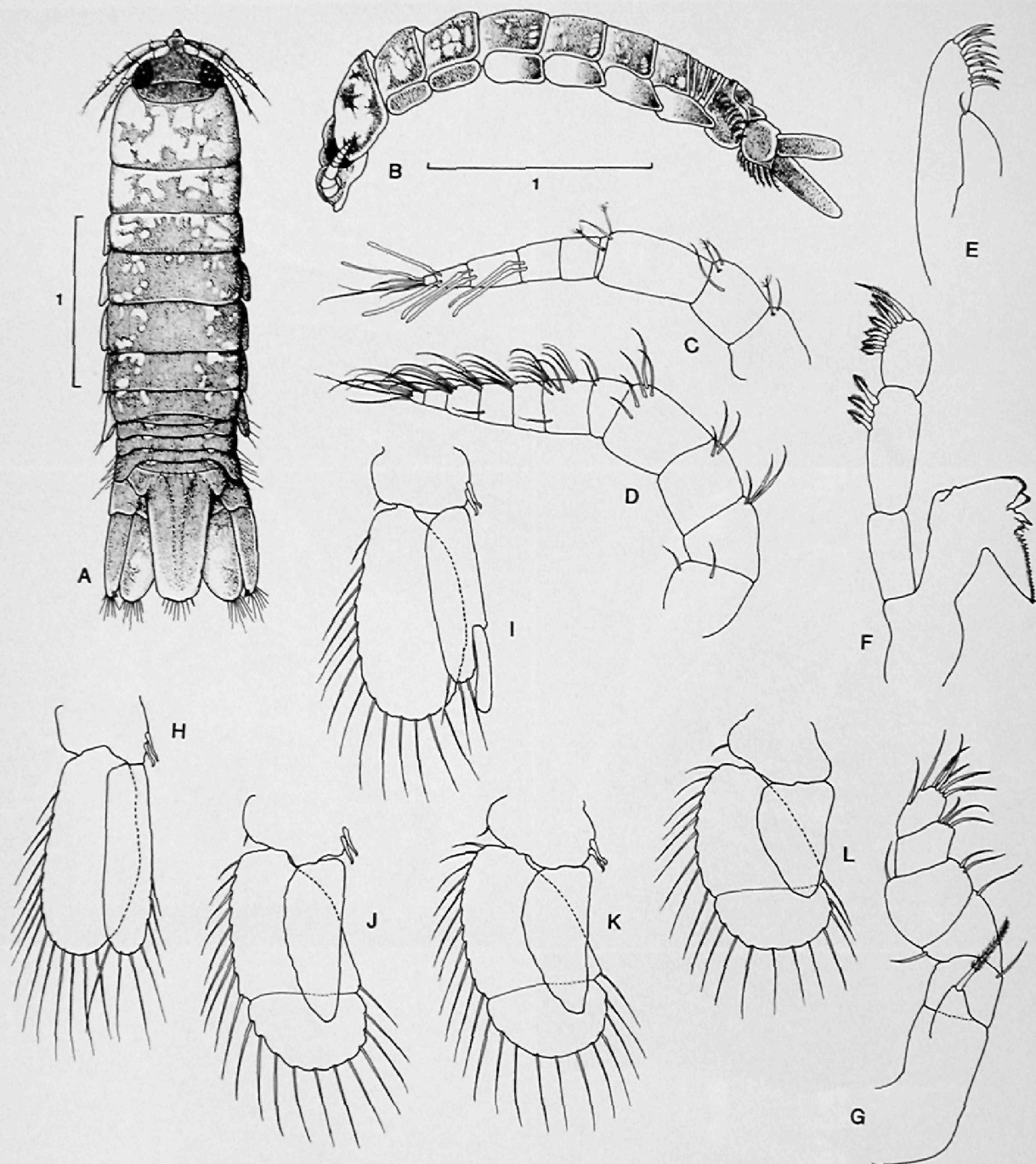


Fig. 10. *Xylolana radiculicola*, male paratype: A, Adult in dorsal view; B, Adult in lateral view, pereopods and pleopods not shown; C, Antennule; D, Antenna; E, Maxilla 1; F, Mandible; G, Maxilliped; H, Pleopod 1; I, Pleopod 2; J, Pleopod 3; K, Pleopod 4; L, Pleopod 5.

than 2 preceding articles; flagellum of 7 setose articles. Mandibular palp of 3 articles, article 2 longest, with 3 fringed spines distally, article 3 with 7 fringed spines becoming more elongate distally; body of mandible somewhat elongate, incisor of 2 rounded cusps; lacinia and spine row reduced; molar triangular, with row of mar-

ginal spines. Maxilla 1, outer ramus with 9 distal spines; inner ramus with single distal seta. Maxillipedal endite short, reaching to middle of palp article 1, with single distal seta; palp of 5 articles, article 3 longest and widest. Pereopods 1-3 similar, becoming progressively shorter posteriorly. Pereopod 1, merus with 1 acute and 4 rounded spines