

STENOCOROPHIUM BOWMANI, A NEW GENUS AND
SPECIES OF THE FAMILY COROPHIIDAE
FROM THE PALAU ISLANDS
(CRUSTACEA: AMPHIPODA)

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Abstract.—A new genus and species of the family Corophiidae, *Stenocorophium bowmani* is described from Babelthuap Island (Palau Islands in southern Pacific, E. of Philippines). This genus is closely related to the genus *Paracorophium* Stebbing 1899, but differs in the simple ♂ gnathopod 2 and the uniramous uropod 3.

Thanks to Dr. Thomas E. Bowman and Dr. J. Laurens Barnard from the Smithsonian Institution, Washington, D.C., I was able to study an amphipod from the bottom of the Ngermeskang River, above tidal influence, on Babelthuap Island (Palau Islands in the South Pacific). The specimen proved to represent a new genus and species of the family Corophiidae, described below.

Stenocorophium, new genus

Diagnosis.—Body smooth, *Paracorophium*-like, urosomites 1-2 coalesced, urosomite 3 free. Antennae normal; accessory flagellum absent. Labrum incised symmetrically; labium with long inner lobes. Maxilla 1: inner lobe short, outer lobe with ca. 7 spines, palp 2-articulate. Maxilla 2: both lobes moderately narrow, inner lobe without dorsal oblique row of setae. Maxilliped: outer lobe with a row of slender spines along inferior margin; palp 4-articulate, palp article 2 elongated, palp article 3 not lobed. Mandible: incisor toothed, molar triturative, palp 3-articulate. Coxa 1 produced at ventroanterior part, coxa 4 without distoposterior lobe, coxa 5 long. Gnathopod 1 subchelate. Gnathopod 2 simple, but its article 4 elongated and article 5 attached proximally on article 4, like that in genus *Paracorophium*. Article 2 of pereopods 6-7 lobed, pereopod 7 extremely enlarged. Uropods 1-2 well developed; peduncle of uropod 1 with ventrodistal long tooth like that in genus *Paracorophium*. Uropod 3 short; inner ramus absent; outer ramus uniarticulate, as long as peduncle. Telson fleshy, short, entire, with distal corner tooth on each side in lateral view. Coxal gills ovoid, normal.

Type-species.—*Stenocorophium bowmani*, n. sp.

¹ Contribution to the knowledge of the Amphipoda 99.

Etymology.—From the Greek, “stenos” (=narrow, close), and the generic name *Corophium*.

Remarks.—*Stenocorophium* shows clear affinities with *Paracorophium* Stebbing 1899 (body-shape, coxae, article 4 of gnathopod 2, uropods 1–2, epimeral plates, pereopods 3–5, gnathopod 1, most mouthparts, etc.). *Paracorophium* is known from Australia and New Zealand, in brackish waters.

Stenocorophium differs from *Paracorophium* by simple gnathopod 2 in males (subchelate or chelate in *Paracorophium*), by the presence of only 7 distal spines on outer lobe of maxilla 1 (9 spines in *Paracorophium*), by the uniramous uropod 3 (biramous in *Paracorophium*), by the lobed article 2 of pereopods 6–7 (unlobed in *Paracorophium*).

Based on Barnard's (1973) revision of the family Corophiidae, the rather isolated position of the genera *Paracorophium* and *Stenocorophium* in the family Corophiidae is evident, based on the shape of gnathopod 2 in males and females.

Stenocorophium bowmani, new species

Figs. 1–5

Description.—Male 3 mm (holotype). Body slender, slightly dorsoventrally compressed, smooth (Fig. 1), urosomites 1–2 coalesced, urosomite 3 free; all 3 metasomites and urosomites 1–2 with 2 dorsal setae each (Fig. 1; 2E–F).

Rostrum short, lateral cephalic lobes acute, ventroanterior sinus present (Fig. 4A), eyes ovoid, horizontal.

Antennae 1–2 slender, shorter than half body length (Fig. 1). Antenna 1: peduncle articles 1–3 progressively shorter, poorly setose; main flagellum 9-articulate, 3 distal articles with one aesthetasc each; accessory flagellum absent (Fig. 2A).

Antenna 2 shorter than antenna 1: peduncle article 3 short, articles 4–5 slender, article 4 longer than article 5, each with 2–3 bunches of setae longer than diameter of articles (Fig. 2A); flagellum 4-articulate, shorter than peduncle, bearing several setae longer than diameter of articles, calceolae absent. Antennal gland cone short, not reaching tip of peduncle article 3.

Labrum broader than long, symmetrically incised (Fig. 4B). Labium not gaping, with long inner lobes (Fig. 3A); outer lobes without distinct proximal dilatations (=fingers).

Maxilla 1: inner lobe very small, without setae (Fig. 4C), outer lobe with 7 distal spines having 1–2 lateral teeth each; left and right palp symmetrical to each other, 2-articulate, provided with 5–6 distal slender spines.

Maxilla 2: both lobes longer than broad; inner lobe shorter than outer, bearing rows of marginal setae only, dorsal oblique row of setae absent; outer lobe with distal setae only (Fig. 2B).

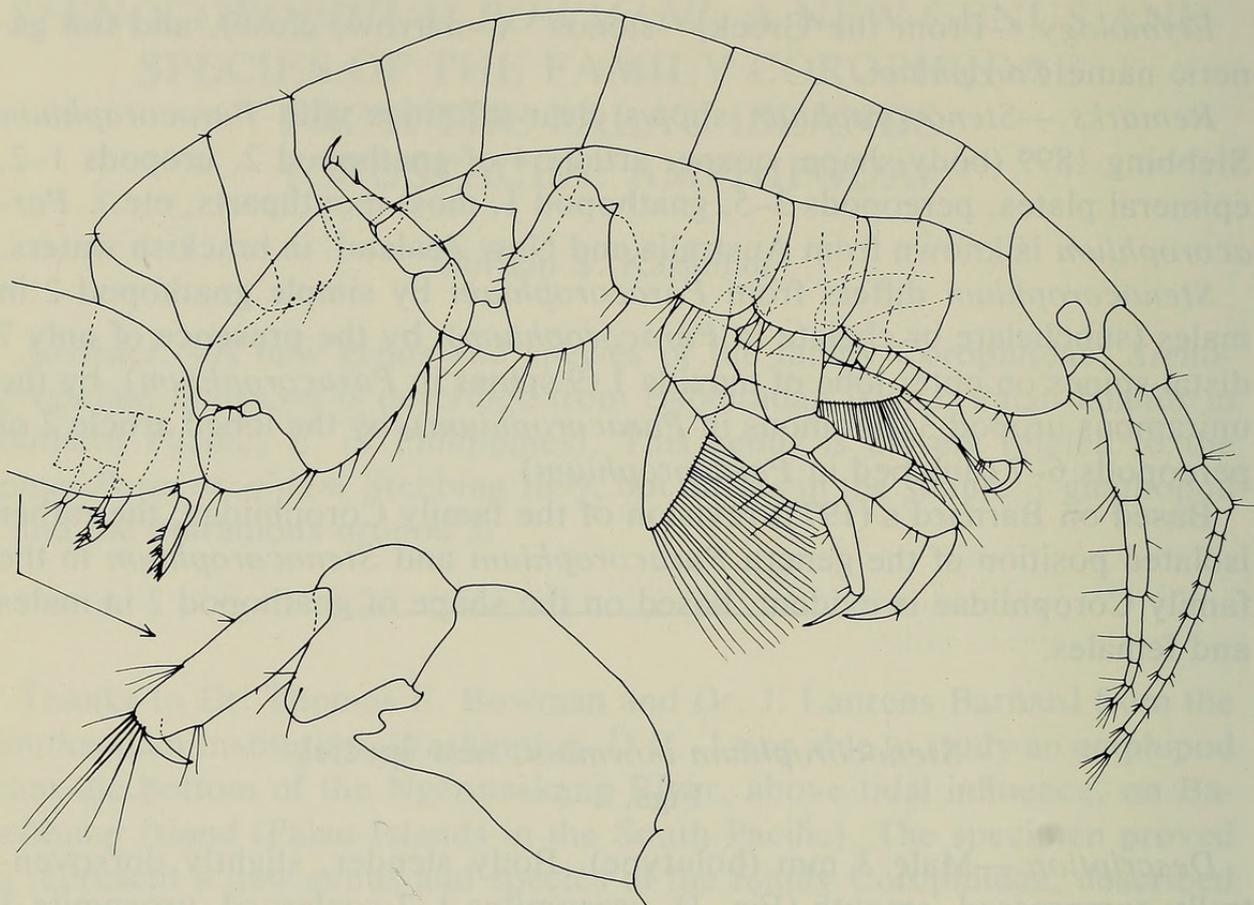


Fig. 1. *Stenocorophium bowmani*: male, lateral view.

Maxilliped: inner lobe with a row of marginal plumose setae; outer lobe bearing a row of slender spines along inferior margin; palp 4-articulate, article 2 elongate, article 3 short, not lobed, article 4 short with distal spines (Fig. 5A).

Mandible: incisor toothed, molar triturative, strong (Fig. 3B); palp 3-segmented: article 1 short, smooth, article 2 with 3 setae; article 3 shorter than article 2, bearing 6 D-setae, 4–5 submarginal C-setae, 2 long E-setae, one group of A-setae and one group of B-setae.

Coxae moderate, coxae 1–5 of subequal size, coxae 6–7 short. Coxae 1–7 with simple or plumose ventral setae (Fig. 2C–D, 4D). Coxa 1 with produced ventroanterior part (Fig. 3C), coxa 4 without any trace of ventroposterior lobe (Fig. 2D). Coxa 5 bilobed, anterior lobe much longer than posterior (Fig. 5B); coxa 6 short, bilobed (Fig. 5C); coxa 7 ovoid, entire (Fig. 5D).

Gnathopod 1 subchelate (Fig. 3C–D); articles 3–4 short; article 3 with 3 strong and long distoposterior plumose setae; article 5 inflated, bearing numerous setae along posterior margin; article 6 shorter than 5, twice longer than broad, with concave posterior margin, poorly setose; palm convex, poorly inclined, weakly crenellated, without corner or subcorner spines (Fig. 3D); dactyl exceeding width of article 6, with one seta at outer margin.

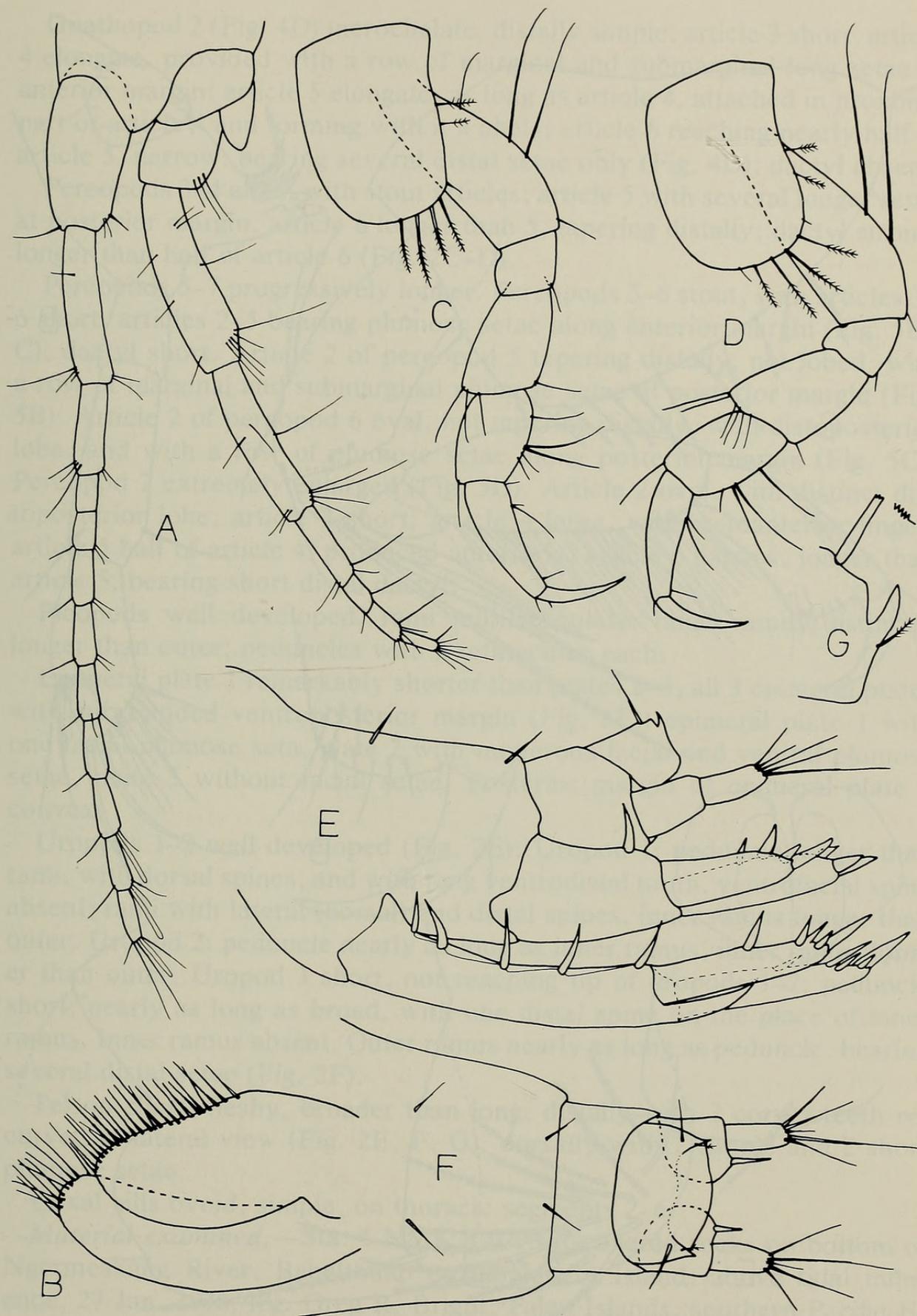


Fig. 2. *Stenocorophium bowmani*: A, Antennae 1-2; B, Maxilla 2; C, Pereopod 3; D, Pereopod 4; E, Urosome and uropods, lateral view; F, Urosome with uropods and telson, dorsal view; G, Distal part of telson, lateral.

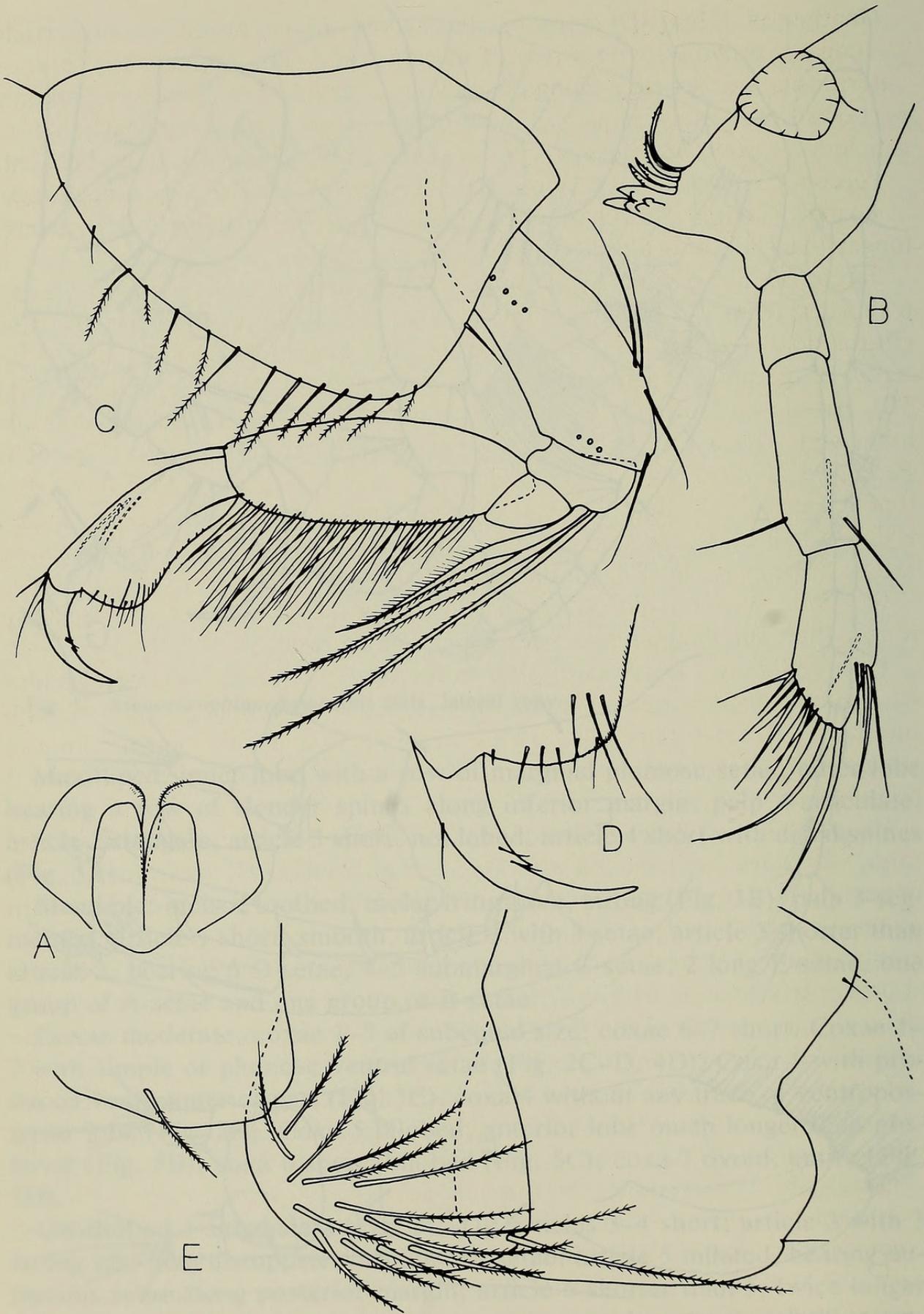


Fig. 3. *Stenocorophium bowmani*: A, Labium; B, Mandible; C-D, Gnathopod 1; E, Epimeral plates 1-3.

Gnathopod 2 (Fig. 4D) merochelate, distally simple; article 3 short, article 4 elongate, provided with a row of marginal and submarginal long setae at anterior margin; article 5 elongate, as long as article 4, attached in proximal part of article 4 and forming with it a chela; article 6 reaching nearly half of article 5, narrow, bearing several distal setae only (Fig. 4D); dactyl absent.

Pereopods 3–4 alike, with stout articles; article 5 with several longer setae at posterior margin; article 6 longer than 5, tapering distally; dactyl strong, longer than half of article 6 (Fig. 2C–D).

Pereopods 5–7 progressively longer. Pereopods 5–6 stout, with articles 3–6 short, articles 2–5 bearing plumose setae along anterior margin (Fig. 5B–C), dactyl short. Article 2 of pereopod 5 tapering distally, not lobed, with a row of marginal and submarginal plumose setae at posterior margin (Fig. 5B). Article 2 of pereopod 6 oval, not tapering distally, with distoposterior lobe, and with a row of plumose setae along posterior margin (Fig. 5C). Pereopod 7 extremely enlarged (Fig. 5D). Article 2 oval, with distinct distoposterior lobe; article 3 short; article 4 large, with distoanterior finger; article 5 half of article 4, produced anteriorly; article 6 narrow, longer than article 5, bearing short distal dactyl.

Pleopods well developed, rami multiarticulate, inner ramus distinctly longer than outer; peduncles with 2 retinaculae each.

Epimeral plate 1 remarkably shorter than plates 2–3, all 3 epimeral plates with subrounded ventroposterior margin (Fig. 3E); epimeral plate 1 with one facial plumose seta, plate 2 with numerous facial and ventral plumose setae, plate 3 without facial setae. Posterior margin of epimeral plate 3 convex.

Uropods 1–2 well developed (Fig. 2E). Uropod 1: peduncle longer than rami, with dorsal spines, and with long ventrodial tooth, ventrofacial spine absent; rami with lateral (dorsal) and distal spines, inner ramus longer than outer. Uropod 2: peduncle nearly as long as inner ramus, inner ramus longer than outer. Uropod 3 short, not reaching tip of uropods 1–2: peduncle short, nearly as long as broad, with one distal spine on the place of inner ramus. Inner ramus absent. Outer ramus nearly as long as peduncle, bearing several distal setae (Fig. 2F).

Telson short, fleshy, broader than long, distally with 2 corner teeth recurved in lateral view (Fig. 2E, F, G), dorsally with 2 simple and 2 short plumose setae.

Coxal gills ovoid, simple, on thoracic segments 2–6.

Material examined.—Sta. 1 NMK 4-02, silt-covered rocks on bottom of Ngermeskang River, Babelthuap (=Babeldoab) Island, above tidal influence, 27 Jan. 1976, leg. Greg R. Bright, Palau Islands, southern Pacific E. of Philippines, ♂ holotype, 3 mm, deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560. (USNM 331543)

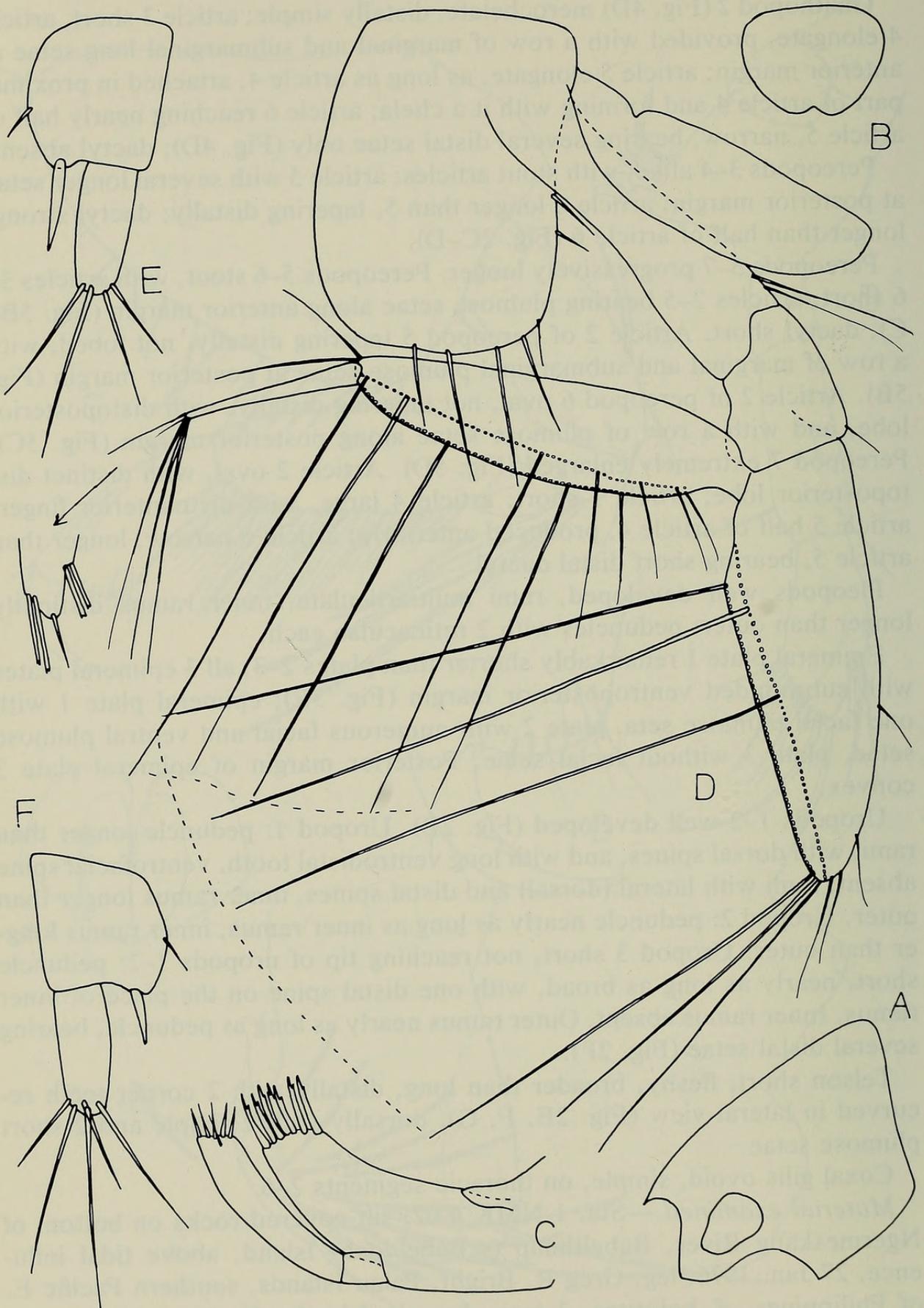


Fig. 4. *Stenocorophium bowmani*: A, Head; B, Labrum; C, Maxilla 1; D, Gnathopod 2; E, Left uropod 3; F, Right uropod 3.

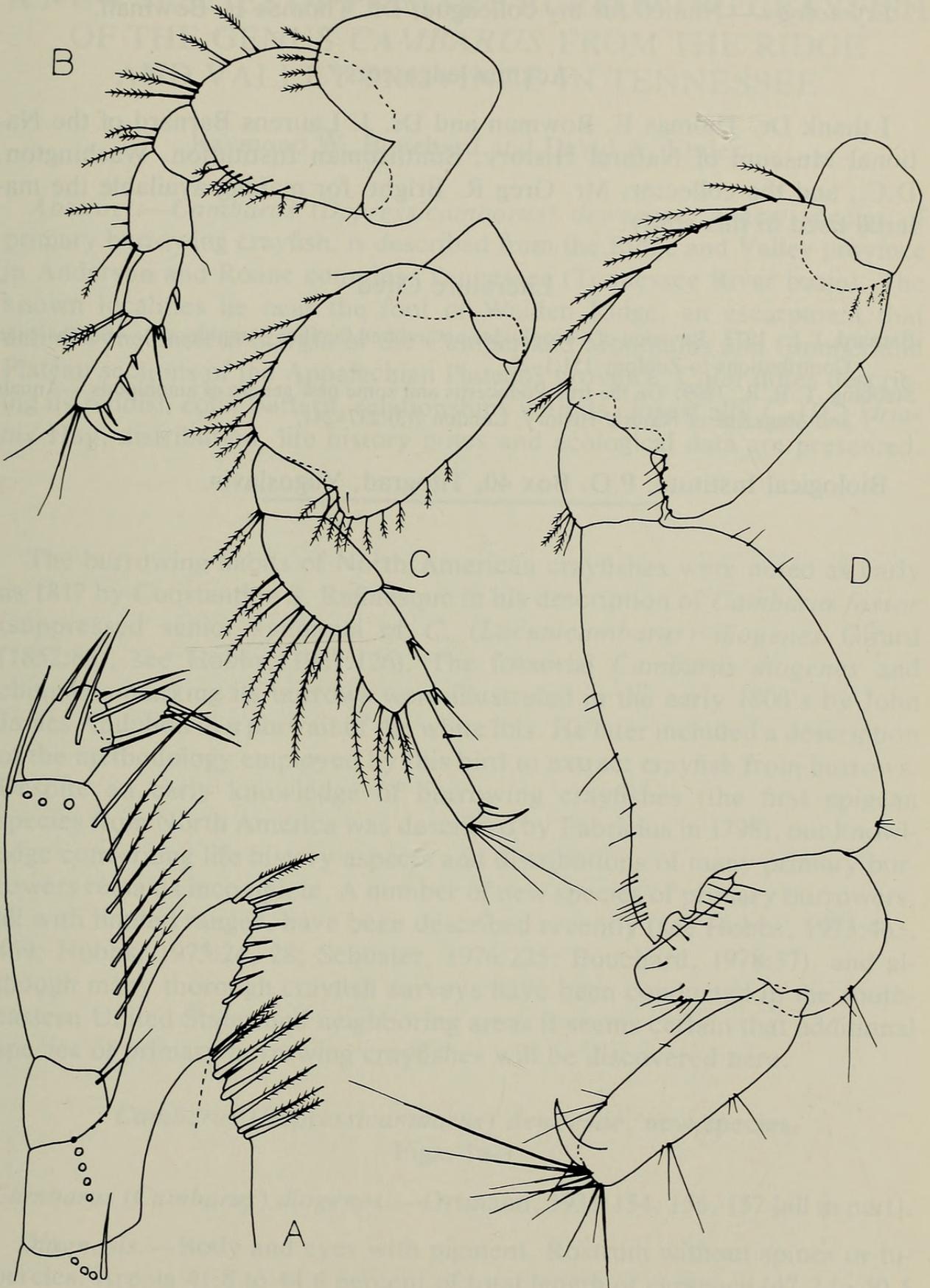


Fig. 5. *Stenocorophium bowmani*: A, Maxilliped; B, Pereopod 5; C, Pereopod 6; D, Pereopod 7.

Etymology.—Named for my colleague, Dr. Thomas E. Bowman.

Acknowledgments

I thank Dr. Thomas E. Bowman and Dr. J. Laurens Barnard of the National Museum of Natural History, Smithsonian Institution, Washington, D.C., and the collector, Mr. Greg R. Bright, for making available the material used in this study.

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