

Key to the Species of Podoceridae Reported in the Southern California Bight According to SCAMIT Edition 14

(Adapted from Laubitz 1977 and JL Barnard 1969 by Dean Pasko, 26-Jul-2022)

1. Body with dorsal carinae or processes 2
- Body without dorsal carinae or processes 3
2. Palm of male gnathopod 2 with three palmar processes at finger hinge; female coxa 1 triangular, ventral margin flat *Podocerus cristata*
- Palm of male gnathopod 2 with one processes at finger hinge; female coxa 1 bilobed with well produced anterior lobe extending over one-half of basis, posterior lobe small *Podocerus fulanus*
3. Male gnathopod 2 with article 4 (merus) unproduced, not guarding carpus; living among various substrates, not specific to sponges *Podocerus brasiliensis*
- Male gnathopod 2 with article 4 (merus) produced along hind margin of carpus; found living among sponges *Podocerus spongicolus*

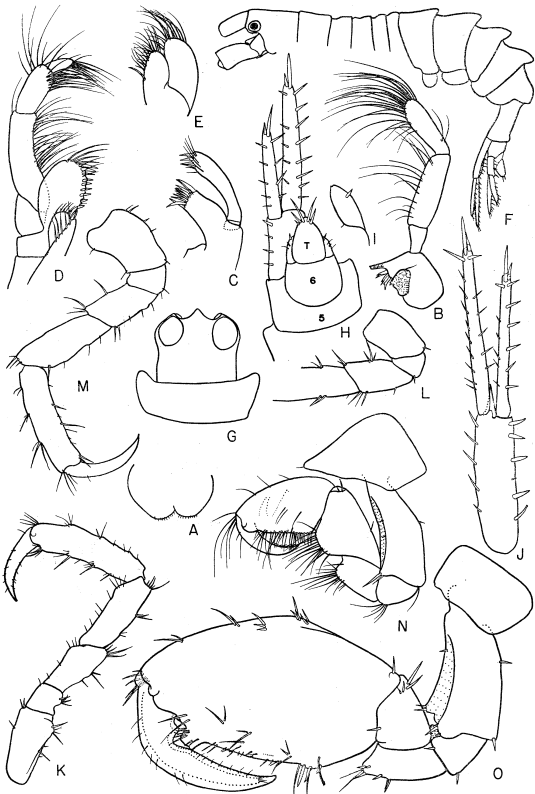
REFERENCES

Barnard, J.L. 1962. Benthic Marine Amphipoda of Southern California I. Families Aoridae, Photidae, Ischyroceridae, Corophiidae, Podoceridae. *Pacific Naturalist* 3(1): 3-72.

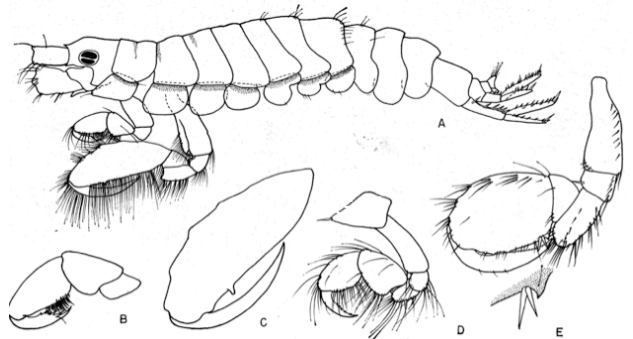
Barnard, J.L. and Donald J. Reish. 1959. Ecology of Amphipoda and Polychaeta of Newport Bay, California. *Allan Hancock Foundation Publications, Occasional Paper* 21: 1-106.

Chapman, J.W. 2007. Amphipoda. In: *The Light and Smith Manual: Intertidal Invertebrates from Central California to Oregon*. Ed J.T. Carlton. 4th Edition. Pp. 545–618.

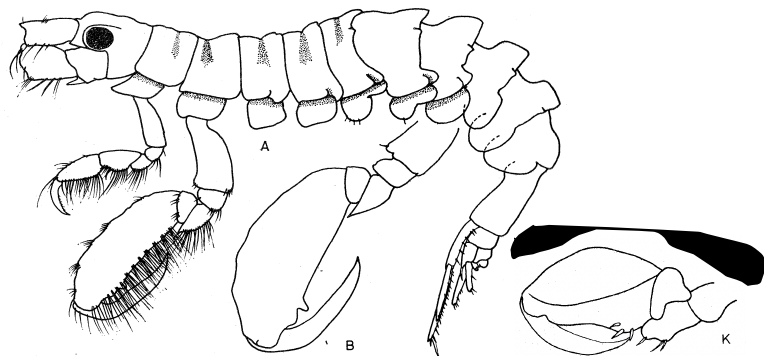
Thomas, J.D. and L.D. McCann. 2007. The Families Argissidae, Dexaminidae, Eusiridae, Gammaridae, Leucothoidae, Melphidippidae, Oedicerotidae, Pardaliscidae, Phoxocephalidae, Podoceridae, Stegocephalidae, Stenothoidae, Stilipedidae, Synopiidae, and Urothoidae. Pp. 21-136. In Carlton, James T. (ed.). *The Light and Smith Manual: intertidal invertebrates from central California to Oregon*. University of California Press, Berkeley, California, U.S.A. 1001pp.



Podocerus fulanus (male) from JL Barnard & Reish 1959



Podocerus brasiliensis (male) from JL Barnard 1962



Podocerus cristatus (male) from JL Barnard 1962

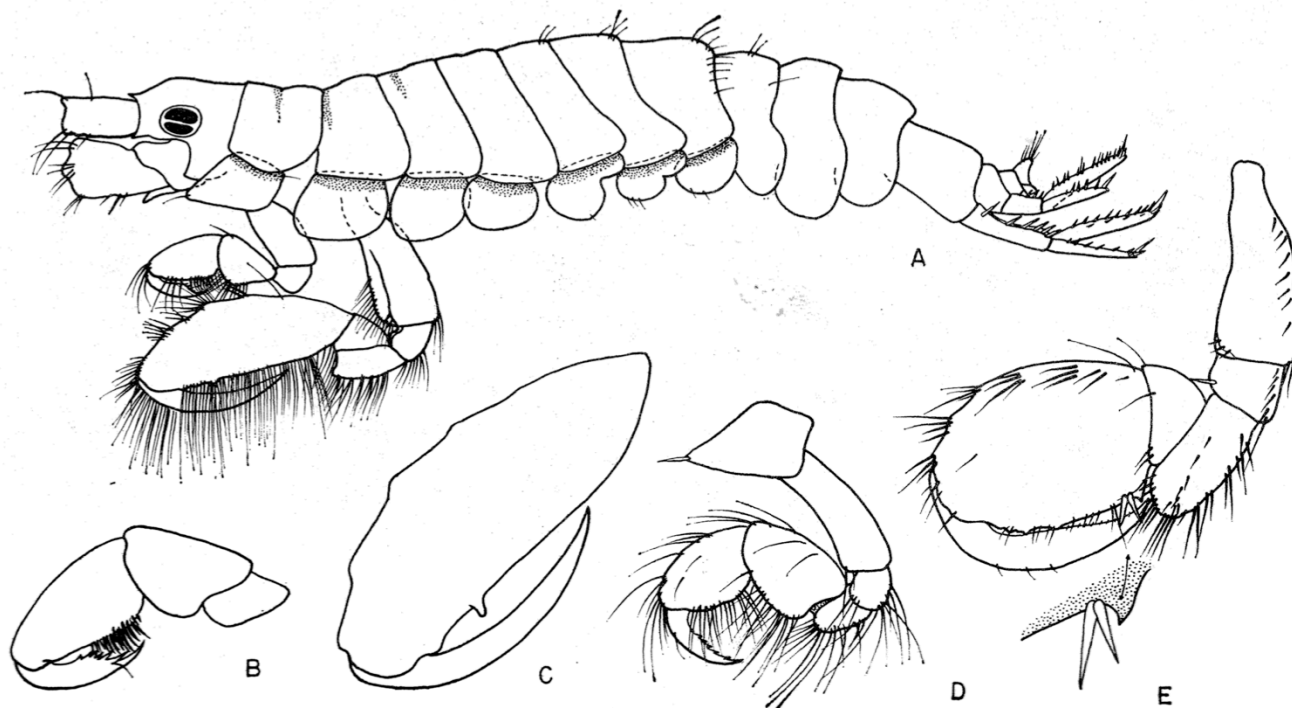


Fig. 30. *Podocerus brasiliensis* (Dana). Male, 5.0 mm, Los Angeles Harbor, 1951: A, lateral view: B,C, gnathopods 1, 2, minus setae. Female, 4.0 mm: D,E, gnathopods 1, 2.

Comments from JL Barnard (1962): There are three known species of *Podocerus* in southern California: *Podocerus cristatus* of the open sea, *Podocerus brasiliensis* of bays and estuaries (especially where pollution occurs), and *Podocerus fulanus*, n. sp., probably a native estuarine species which is intolerant of polluted conditions. *P. fulanus* differs from the other two species by the poorly setose palm of male gnathopod 2 and the single palmar process near the finger hinge. In the other two species the palm is heavily setose and bears two palmar processes. The new species differs also from *P. brasiliensis* by the dorsal body carinae. Its further relationship may be seen in the foregoing key to the species.

Podocerus fulanus

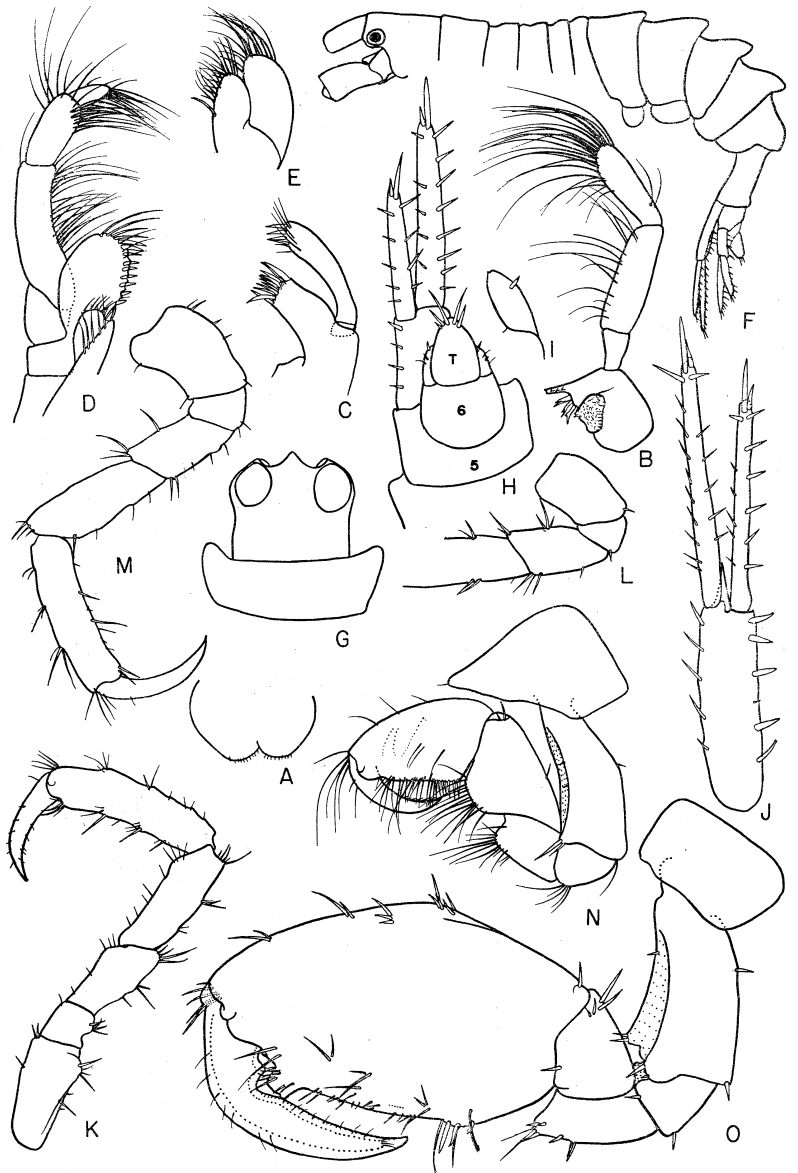
Diagnostic Characters:

- Eyes large, rounding, and bulging
- No small spine/tooth process on segment 2 of Antenna 2
- Body segments 6-7 have dorsal carinae (crest) (Midline dorsal body crest)
- Abdomen notched with dorsal flare
- Setation lacking on abdominal body segments
- Single palmar processes on Male G2 near finger hinge
- G2 poorly setose
- Is intolerant of polluted areas

Illustration:

Male, 5 mm, station 44.

Fig. A, upper lip; B, mandible; C, E, maxillae 1, 2; D, maxilliped; F, body, lateral view; G, head and first segment, dorsal view; H, urosome segments 5-6 and telson, dorsal view; I, J, uropods 3, 1; K, L, M, peraeopods 2, 4, 5; N, O, gnathopods 1, 2.



Podocerus fulanus (from Barnard JL 1979-Gulf of Calif and Galapagos)

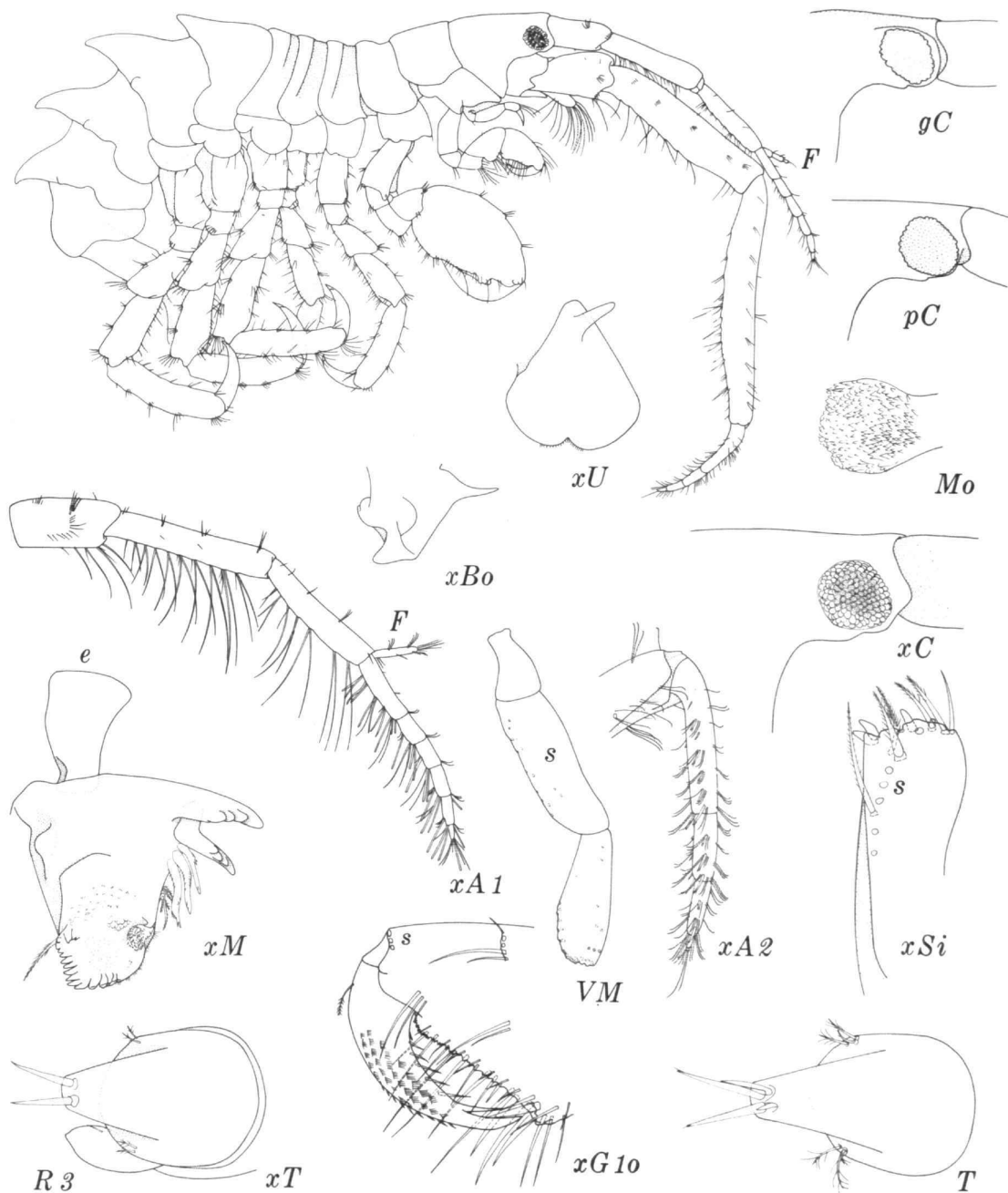


FIGURE 73.—*Podocerus fulanus* J. L. Barnard, male "a," 5.4 mm (g = male "g," 4.0 mm; p = male "p," 4.2 mm; x = male "x," 5.3 mm).

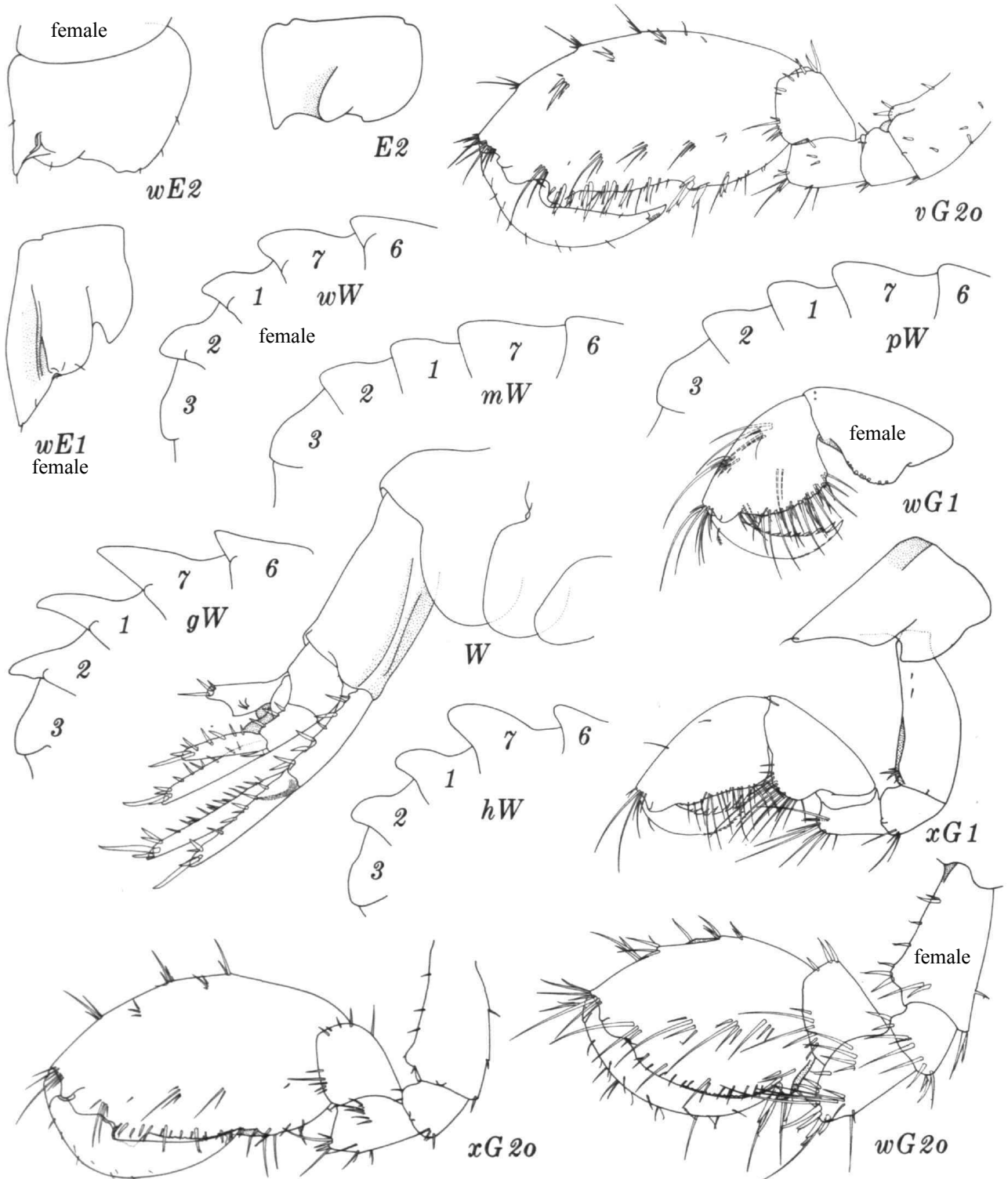


FIGURE 74.—*Podocerus fulanus* J. L. Barnard, male "a," 5.4 mm (g = male "g," 4.0 mm; h = male "h," 3.4 mm; m = male "m," 3.6 mm; p = male "p," 4.2 mm; w = female "w," 5.1 mm; x = male "x," 5.3 mm).

Podocerus cristatus (from Barnard 1962)

Podocerus cristatus (Thomson)

Figs. 31, 32

Stebbing 1906: 706 (and literature); Stebbing 1910: 651; Thomson 1913: 245; K. H. Barnard 1916: 276-277; Schellenberg 1925: 188; ?Chilton 1926: 513-515, fig. 2; Chevreux 1935: 131; K. H. Barnard 1940: 483; Shoemaker 1942: 48-49. ?*Podocerus cristatus rotundatus* Schellenberg 1931: 260-262, fig. 135. Not *Podocerus* sp., J. L. Barnard 1959: 40, pl. 14.

REMARKS: There is little doubt that these specimens, commonly distributed subtidally in southern California, are *P. cristatus*. Although there is wide variability in *Podocerus*, the specimens show distinctly the carinae of peraeonal segments 6-7 and pleonal segments 1-2, as well as a small one on peraeonal segment 5, and, in large specimens, the rudiments of

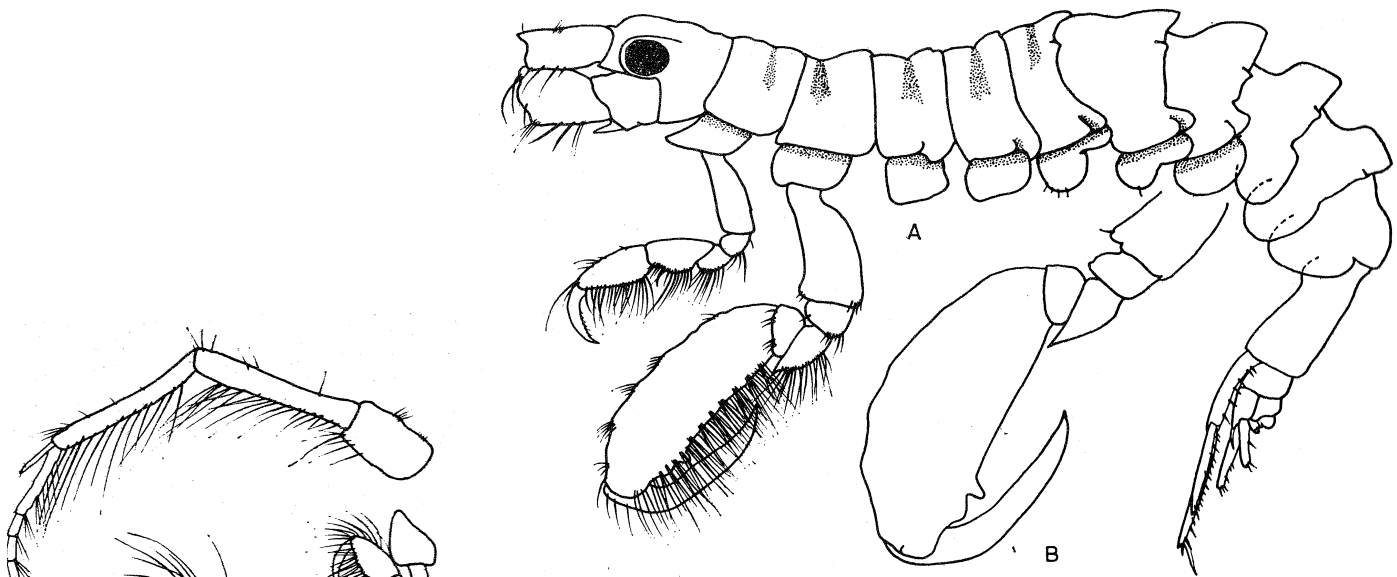


Fig. 31. *Podocerus cristatus* (Thomson). Male, 6.0 mm, sta. 4938: A, lateral view; B, gnathopod 2, minus setae.

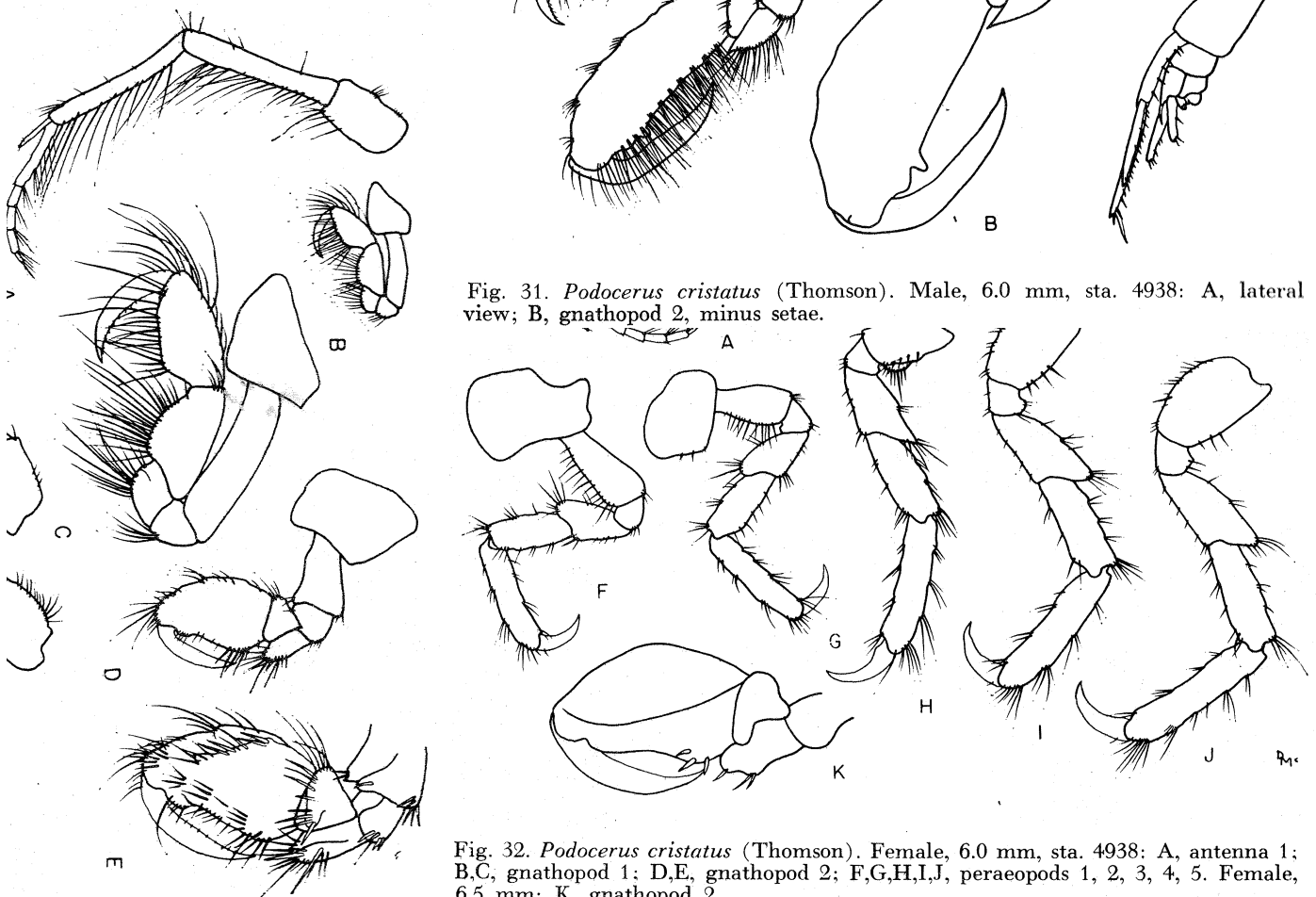


Fig. 32. *Podocerus cristatus* (Thomson). Female, 6.0 mm, sta. 4938: A, antenna 1; B,C, gnathopod 1; D,E, gnathopod 2; F,G,H,I,J, peraeopods 1, 2, 3, 4, 5. Female, 6.5 mm: K, gnathopod 2.