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# A NEW GENUS AND SPECIES OF MARINE ASELLOTE ISOPOD, CAECIANIROPSIS PSAMMOPHILA, FROM CALIFORNIA

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Specimens of marine asellote isopods representing a new genus and new species were collected from a coarse-sand beach several centimeters below the surface of the sand, where they were associated with living snails of the genus *Caecum*, the curious pycnogonid *Rhyncothorax*, and several kinds of polychaetes, especially some belonging to the Archiannelida.

Besides the unusual ability of this species to live buried in sand in the intertidal zone, it is of further interest in being the second known American record of a blind intertidal asellote, the first being *Caecijaera horvathi* Menzies (1951, pp. 1–7), a commensal with the wood-boring isopod, *Limnoria*.

The genus resembles *Thambema* (Stebbing, 1913, p. 237), at least superficially, in its elongated aspect and lack of eyes; for that reason it perhaps belongs in the family Thambematidae (Stebbing, 1912, p. 42). Stebbing's report of a single pleotelsonal somite in *Thambema*

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is probably in error because he shows two somites for the species on plate 36 (Stebbing, 1913). *Caecianiropsis* differs from *Thambema* in having well-developed uropods and in the structure of the male pleopods. The mouthparts are similar. The genus also shows a curious resemblance to the cave-dwelling fresh-water genus *Microcharon* Karaman 1934, one species of which, *Duslenia* (=*Microcharon*, personal communication from Dr. Claude Lévi) *teissieri* Lévi (1950, pp. 42–47), lives also in the intertidal on the coast of France, where it was found in association with an archiannelid polychaete, *Saccocirrus papillocerus* Bobretzky, and the marine mite *Scaptognathus tridens* Trouessart. *Caecianiropsis* differs from *Microcharon* in the structure of the uropods, male pleopods, and the maxillipeds. It seems likely that *Austroniscus ectiformis* Vanhöffen (1914, fig. 80) belongs to *Caecianiropsis;* however, Vanhöffen's specimens seem to be immature and an assignment of that species is uncertain.

### *Caecianiropsis*, new genus

TYPE: *Caecianiropsis psammophila*, new species.

DIAGNOSIS: Maxilliped with two coupling hooks; palp with second and third joints expanded but equaling only 1½ times the width of endognath. First antenna with peduncle of four joints; flagellum with a few joints. Second antenna about one-half the body length; flagellum multiarticulate.

Epimera visible in dorsal view on peraeon somites 1–7. Endopodite of uropods exceeding twice the length of exopodite.

#### *Caecianiropsis psammophila*, new species

FIGURES 1–3

HOLOTYPE: Nonovigerous female, length 1.8 mm, width 0.25 mm.

DIAGNOSIS: Rostrum with frontal margin convex. First antennal flagellum with only two articles; first article exceeding six times the length of last. Posterolateral borders of pleotelson of male each with 1–2 minute spinelike teeth; lateral borders smooth except for many small setae; posterior border with a distinct median convexity. Endopod of uropod exceeding three times the length of exopod. Each lateral apex of first male pleopods with a small, expanded, apically pointed area. Anterior endopodite branch of second male pleopod coiled, equaling body length when straightened out.

Character of body: Colorless and eyeless, very much elongated, length exceeding six times the width.

First maxilla: Outer lobe with about 12 denticulate setae at apex; inner lobe with one long seta and numerous fine setae.

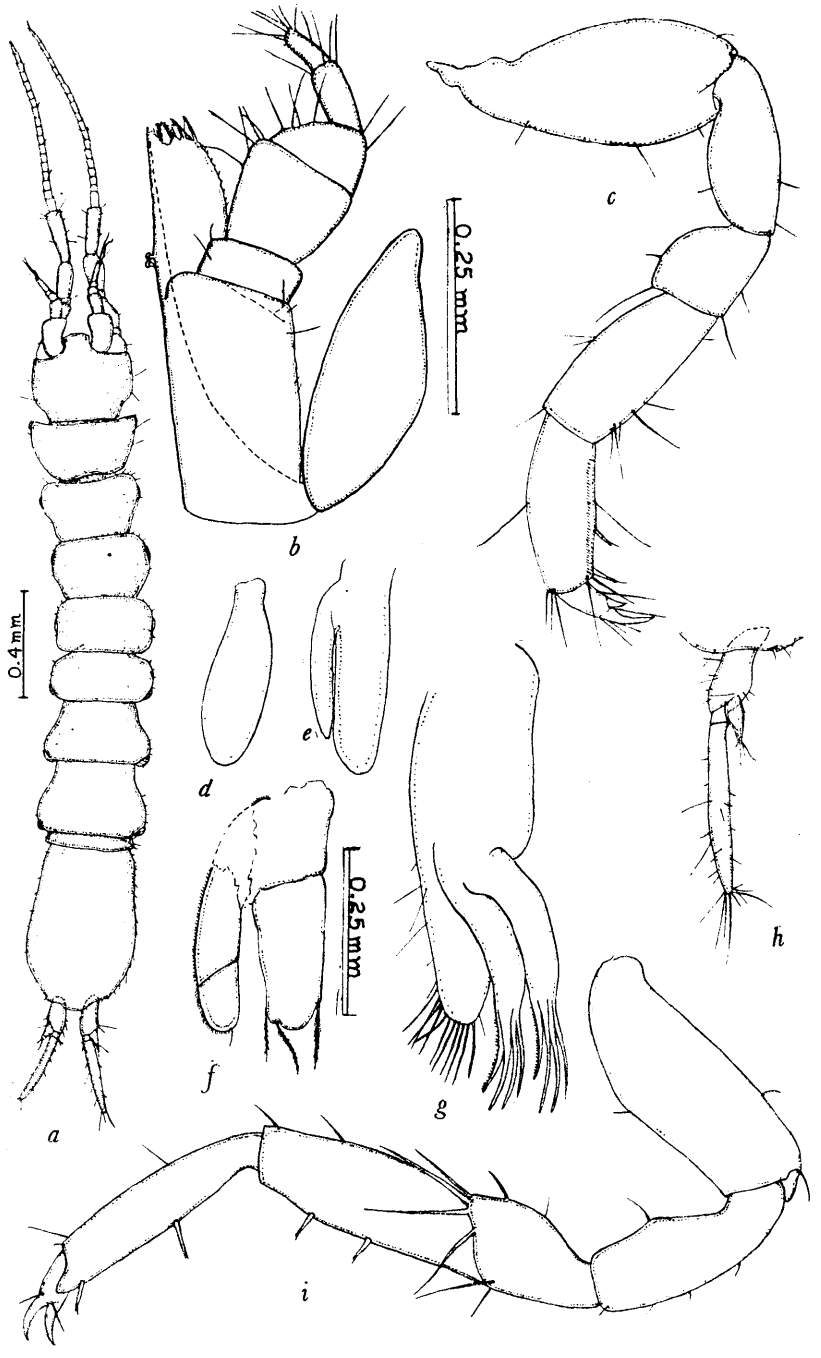


FIGURE 1.—*Caecianiropsis psammophila*, new species: *a*, male paratype; *b*, maxilliped; *c*, first peraeopod; *d*, fifth pleopod; *e*, fourth pleopod; *f*, third pleopod; *g*, second maxilla; *h*, uropod; *i*, seventh peraeopod. Magnification: *a*, scale at left of figure; *b*, *c*, *i*, scale between figures *b*, *c*; *d*, *e*, *f*, *h*, scale at right of figure *f*; *g*, not known.

Second maxilla: Each of the two outer lobe lappets with four apical setae; inner lobe with about 11 apical setae.

Mandible: Left mandible incisor with five teeth; lacina with five teeth; setal row with five plus one seta. Right mandible incisor with five teeth; lacina lacking; setal row with six setae. Palp with second article depressed at setiferous area which bears three denticulate setae.

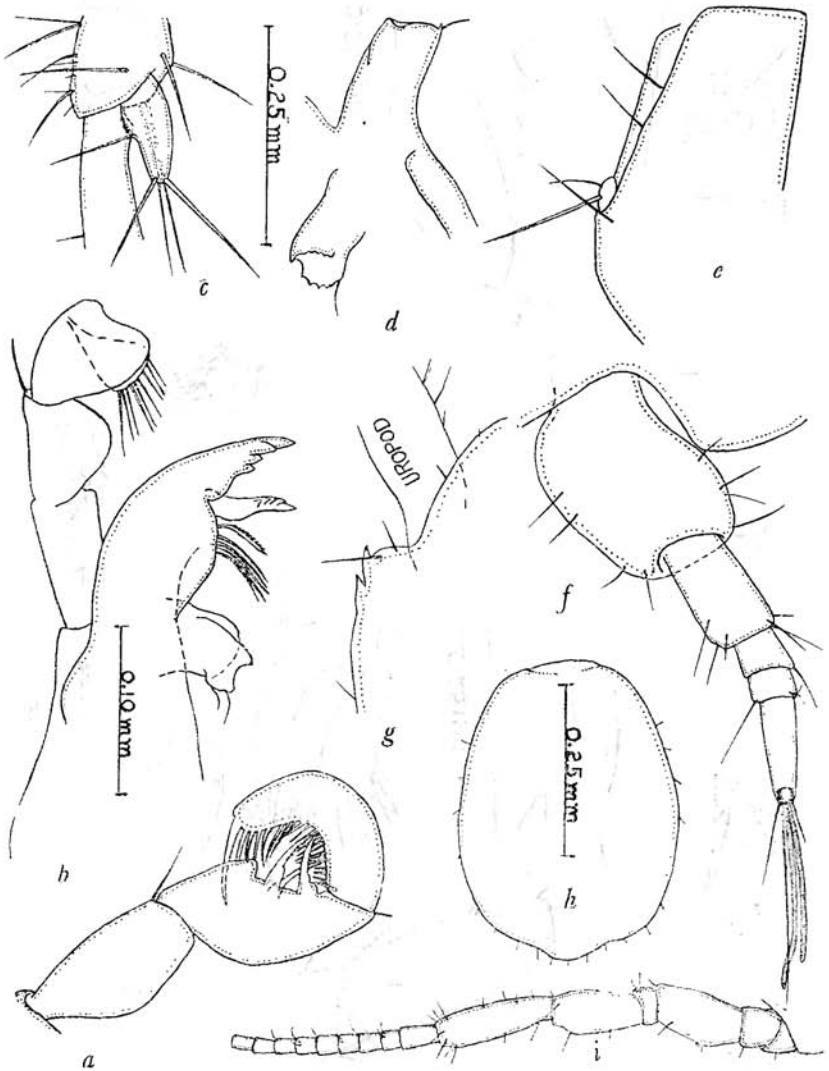


FIGURE 2.—*Caecianiropsis psammophila*, new species: *a*, distal articles of mandibular palp; *b*, left mandible; *c*, uropod; *d*, molar process; *e*, antennal scale on third article of peduncle of second antenna; *f*, first antenna; *g*, posterolateral border pleotelson; *h*, female operculum; *i*, second antenna. Magnification: *a*, as shown on figure *d*; *c*, *g*, *f*, scale at right of figure *c*; *h*, as shown on the figure; *i*, not known.

TYPE LOCALITY: Tomales Bluff, Tomales Point, reef, Marin County, Calif., in coarse sand about 5 cm. below the surface of sand, mid-intertidal zone, Jan. 27, 1949, R. J. Menzies, holotype; July 9, 1949, 38 paratypes.

MATERIAL EXAMINED: In addition to the above-mentioned specimens the following were examined: Monterey County, Calif.: Asilomar, on tentacle of *Synapta* sp., lower intertidal zone, July 16, 1947, Cadet Hand, 2 paratypes.

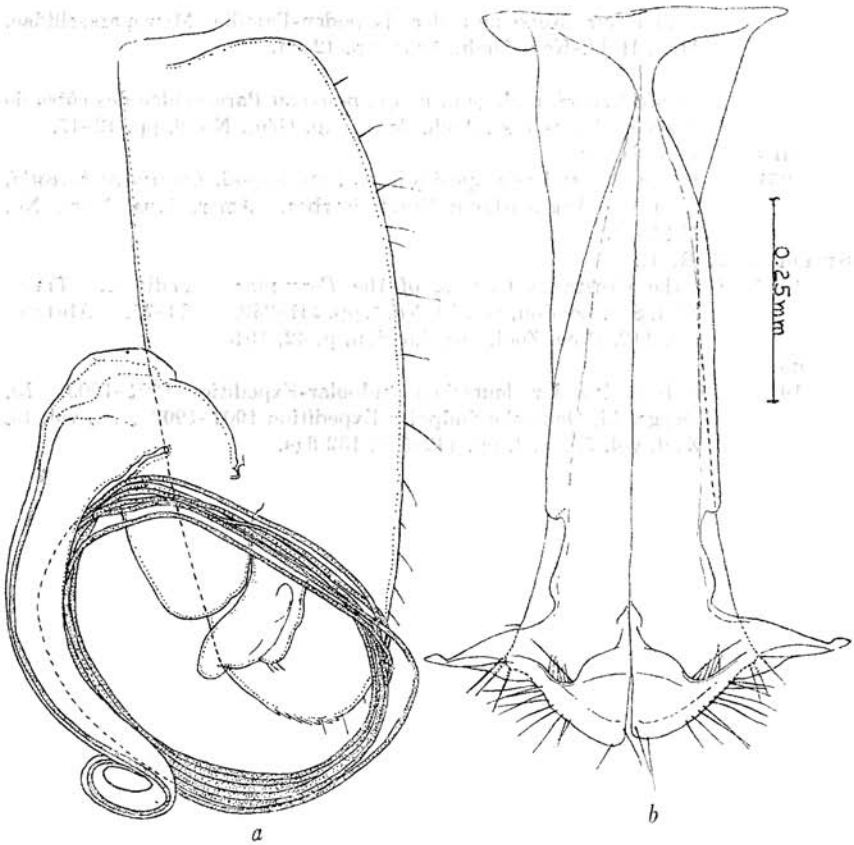


FIGURE 3.—*Caecianiropsis psammophila*, new species: *a*, second male pleopod; *b*, first male pleopods, inner surface. Magnification as indicated by the scale.

GEOGRAPHICAL DISTRIBUTION: Marin County to Monterey County, Calif.

TYPES: Type specimens have been deposited in the collections of the following institutions: United States National Museum, holotype, No. 89543, 40 paratypes; Allan Hancock Foundation, 2 paratypes;

Rijksmuseum Van Natuurlijke Historie, Leiden, 2 paratypes; Pacific Marine Station, 3 paratypes, Acc. No. 1330 Arth.

REMARKS: This species differs from *Caecianiropsis ectiformis* (Vanhöffen), its closest known relative, in having spinelike teeth on the posterolateral borders of the pleotelson. Such teeth appear lacking in that species.

## Literature cited

KARAMAN, S.
1934. Beiträge zur Kenntniss der Isopoden-Familie Microparasellidae. Mitt. Hohl.-Karstforsh., 1934, pp. 42–44.

LÉVI, CLAUDE
1950. *Duslenia teisseri*, nov. gen., n. sp., nouveau Parasellidae des côtes de France. Notes Rev. Arch. Zool. Exp. Gén., No. 6, pp. 42–47.

MENZIES, ROBERT JAMES
1951. A new genus and new species of asellote isopod, *Caecijaera horvathi*, from Los Angeles-Long Beach Harbor. Amer. Mus. Nov., No. 1542, pp. 1–7.

STEBBING, T. R. R.
1912. On the Crustacea Isopoda of the *Porcupine* Expedition. Trans. Zool. Soc. London, vol. 20, No. 4, pp. 231–239, pls. 24–26. (Abstract No. 112, Proc. Zool. Soc. London, p. 42, 1913.)

VANHÖFFEN, E.
1914. Die Isopoden der deutschen Sudpolar-Expedition 1901–1903. *In*, Drygalski, Deutsche Sudpolar Expedition 1901–1903 . . ., vol. 15, Zool. vol. 7, No. 4, pp. 449–598, 132 figs.

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