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A NEW GENUS AND NEW SPECIES OF
ASELLOTE ISOPOD, *CAECIJAERA*
HORVATHI, FROM LOS ANGELES-
LONG BEACH HARBOR¹

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The marine asellote fauna of California and especially of southern California is very poorly known. It is not surprising, therefore, that several undescribed forms exist in the area. The species described herein is very remarkable for several reasons. It is found in association with the wood-boring isopod *Limnoria* sp. The *Limnoria* sp. of course has often been collected without the asellote; on the other hand, the fact that the asellote has not been collected outside of an association with *Limnoria* is suggestive that a close relationship exists between the two. *Caecijaera* is perhaps commensal with the wood-borer.

The genus *Iais* [as represented by *I. pubescens* (Dana)] contains exclusively commensal species which are associated with *Sphaeroma* and related genera. At least one species of *Jaera* is also occasionally found with sphaeromids (Arcangeli, 1934, pp. 1-19). In the case of *Iais* and *Jaera* the commensal asellotes are usually much smaller than the host, and in *Iais*, at least, the commensals freely traverse the dorsal and ventral surfaces of the sphaeromid or wander among the leaf-like pleopods, apparently undisturbed by the constant rhythmic motion of the pleopods. A similar relationship seems impossible in *Caecijaera*, because this species is often as large as medium-sized specimens of *Limnoria*. In *Limnoria* sp. the size varies between 1.0 and 3.5 mm. in length and

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0.3 and 0.9 mm. in width. Specimens of *Caecijaera* get as large as 1.7 mm. in length and 0.6 mm. in width.

Eyeless abyssal marine asellotes are of course very common, and some intertidal eyeless genera are known from Europe. *Caecijaera* represents the first record of an eyeless intertidal form from America. It is of considerable interest to note that *Caecijaera* has even been taken on submerged test blocks with *Limnoria* sp. from Los Angeles Harbor, as is evidenced from the collections of the Southern California Marine Borer Council.

A fine series of specimens of *Caecijaera* was collected by Mr. Charles Horvath, treasurer of the Southern California Marine Borer Council, who very generously donated the specimens to the Allan Hancock Foundation, and it is with pleasure that I name this species after him. Special thanks are due to the American Museum of Natural History for its generous assistance in the publication of this paper.

ORDER ISOPODA

SUBORDER ASELLOTA

FAMILY PARASELLIDAE HANSEN, 1916

SUBFAMILY PARASELLINAE HULT, 1941

GENUS CAECIJAERA, NEW GENUS

TYPE SPECIES: *Caecijaera horvathi* Menzies.

DIAGNOSIS: Eyes lacking. Second antenna with a scale. First antenna composed of six articles. No epimeral (coxal) plates visible in dorsal view on peraeonal somites. Lateral margins of somites of peraeon evenly convex, not incised; bordered with large, stout, one-pointed setae. Apex of male first pleopods not laterally expanded. Third pleopod of male and female with plumose setae on endopod. Fourth pleopod consisting of a single, fleshy, non-setiferous branch. Dactyl of first peraeopod with two claws. Other peraeopods with two claws. First three articles of maxillipedal palp as wide as endite; terminal articles narrower than first three. First maxilla with a wide, flattened endopod; exopod with long denticulate setae. Mandible peculiar in structure; molar process considerably reduced in size.

AFFINITIES: This genus obviously belongs to Hult's Parasellinae (Hult, 1941), but it shows few affinities with the other genera belonging to that subfamily. *Caecijaera* resembles *Jaera* in lacking dorsally visible epimeral plates and in gross morphology,

but it differs from *Jaera* (see Richardson, 1905, p. 450) in lacking eyes, in having a reduced molar process, and in having bi-unguiculate dactyls. In uropodal and pleopodal structure the genera are further different. It resembles *Iais* in its association with another isopod, but in contrast to *Iais* [*I. pubescens* (Dana)] the epimeral plates of the peraeonal somites are not visible in dorsal view, and the eyes are completely lacking. The scale of the second antenna is lacking in *Iais* [*I. pubescens* (Dana)], whereas it is markedly evident in *Caecijaera*.

Caecijaera horvathi, new species

Figures 1-3

All characteristics mentioned in the generic diagnosis are omitted from the description of the species.

CEPHALON: Cephalon flattened; front trilobate, median lobe extending farthest forward. Lateral borders margined with a fringe of single-pointed setae.

ANTENNAE: Basal article of first antenna expanded, second article one-half of the length and width of basal article; other articles progressively narrower and shorter than first two. First article of second antenna flattened and extending laterally. Scale of second antenna elongate, marginally setiferous. Flagellum of second antenna with about 14 articles and only about one-half of the width of cephalon in length.

ORAL APPENDAGES: Maxilliped with two coupling hooks. First maxilla with two branches, exopod with eight denticulate setae at apex; endopod wide and flattened, with four stout setae at apex and fringed apically with numerous very thin setae. Exopod of second maxilla with two lobes, each lobe with four denticulate setae at apex. Mandible with a triarticulate palp; incisor with five teeth; lacina of left mandible with five teeth and an inner cutting flange; one plumose seta in setal row; right mandible with three apically expanded denticulate setae in setal row; molar process with five teeth and an elongate, marginally serrated seta.

PERAEONAL APPENDAGES: Peraeopods paucisetiferous.

PLEONAL APPENDAGES: Operculum of female with a median projecting lobe at distal margin, marginally setiferous. Sympod of male first pleopods peculiar in structure, lateral angles with a medially recurved area; apex of each sympod with six setae.

REMARKS: The structure that I have called the molar process need not be one. On the basis of location alone one might con-

sider it merely a modified setal row. However, the fact that the right and left molar processes in most asellote genera are similar in structure, whereas the setae of corresponding setal rows are usually different, suggests that the structure is a true molar process.

MEASUREMENTS: Holotype male, length, 1.6 mm.; width, 0.6 mm. Allotype, ovigerous, length, 1.7 mm.; width, 0.6 mm.

TYPE LOCALITY: Southwest corner of Terminal Island, Los Angeles-Long Beach Harbor, California. Collected by Mr. Charles Horvath, December 6, 1950, from wood infested with *Limnoria* sp.

LOCATION OF TYPES: Allan Hancock Foundation, holotype, allotype, and seven male and 10 female paratypes. The American Museum of Natural History, five male and five female paratypes.

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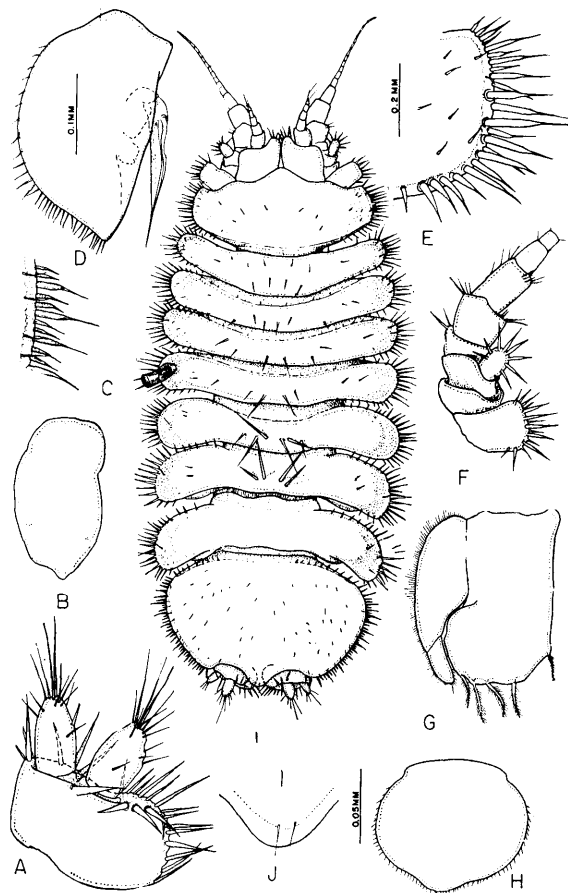


FIG. 1. *Caecijaera horvathi* Menzies. A. Uropod. B. Fourth pleopod, male. C. Lateral border of telson. D. Second pleopod, male. E. Lateral border of cephalon. F. Second antenna. G. Third pleopod, male. H. Operculum, female. I. Male, dorsal view. Note protozoan on fourth somite of pereopod. J. Apex of telson. Illustrations with similar magnifications: A, C, E, and J; B, D, F, and G; H and I.

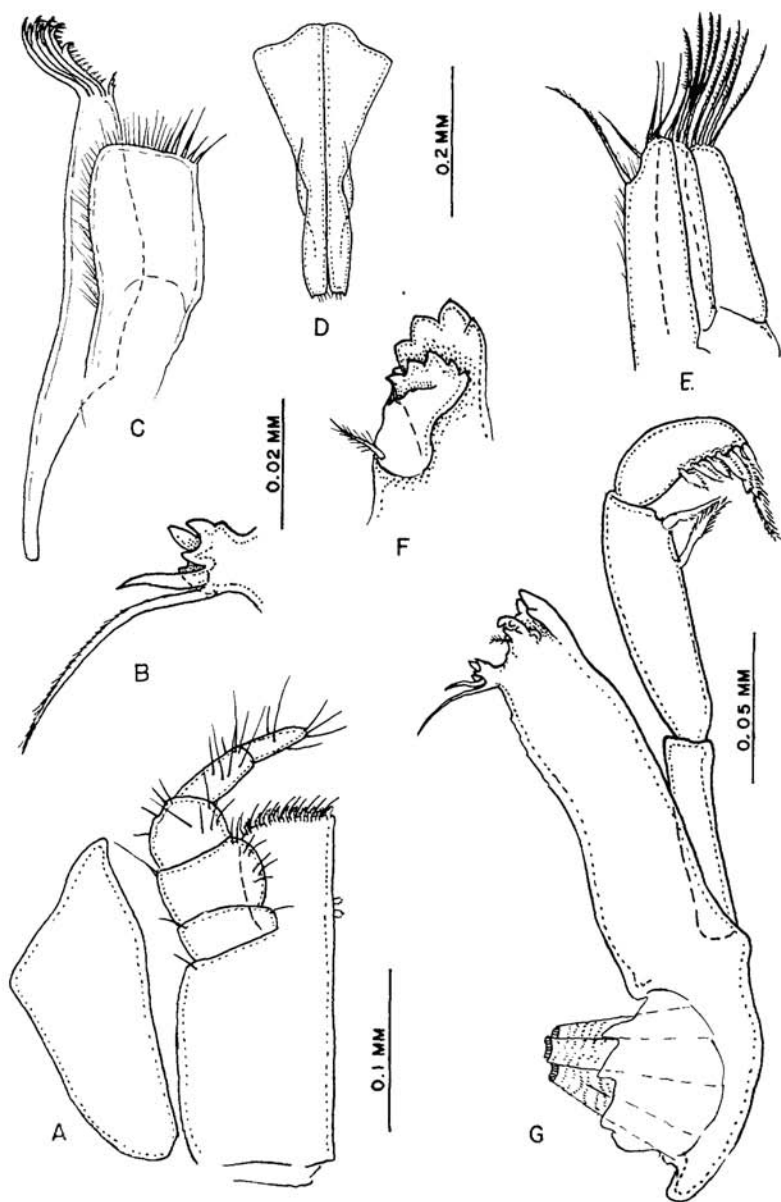


FIG. 2. *Caecijaera horvathi* Menzies. A. Maxilliped. B. Apex of molar process, mandible. C. First maxilla. D. First pleopods, male. E. Second maxilla. F. Incisor and lacinia, mandible. G. Mandible. Illustrations with similar magnifications: A; B and F; C, E, and G; D.

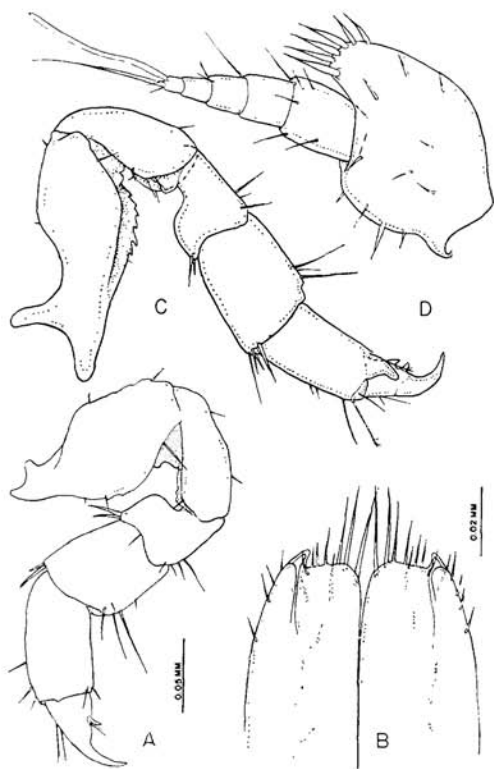


FIG. 3. *Caecijaera horvathi* Menzies. A. First pereopod. B. Apex of first pleopod, male. C. Seventh pereopod. D. First antenna. Illustrations with similar magnifications: A, C, and D; B.