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ANCINUS SETICOMVUS, n. sp. (ISOPODA), FROM SANTA BARBARA, CALIFORNIA

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ABSTRACT: *Ancinus seticomvus*, n. sp. is described from two sandy beaches near Santa Barbara, California. It is very similar to *A. depressus* (Say) from the East coast of North America and the Gulf of Mexico.

INTRODUCTION

A sandy beach sampling program was initiated as part of a research grant* awarded to the Allan Hancock Foundation following the blow-out of Platform A in the Santa Barbara Channel. In the course of the sampling program, an unknown sphaeromid isopod was recovered from two of the three beaches being studied, Coal Oil Beach (just south of Coal Oil Point), and Carpinteria State Beach (approximately 1/2 mile south of the entrance gate). Personal communication with Dr. Robert Y. George, Depart. of Oceanography, Florida State University, and a search of the literature convinced me that it was a new species.

FLABELLIFERA
SPHAEROMIDAE
Genus *ANCINUS* Milne Edwards (1840)

A discussion of the characteristics of *Ancinus* Milne Edwards may be found in Menzies and Barnard (1959) and Menzies and Frankenberg (1966).

Ancinus seticomvus, new species
Figures 1 and 2

Material. Holotype male (AHF Arthropod Collection No. 692), allotype female (AHF Arthropod Collection No. 692a), and 8 paratypes collected at Coal Oil Beach, Santa Barbara County, California, July 29, 1969. Three additional specimens (not paratypes) from the same locality, and one from Carpinteria State Beach, Ventura County, California, October, 1969. Specimens collected with hand shovel in lower intertidal areas of beaches.

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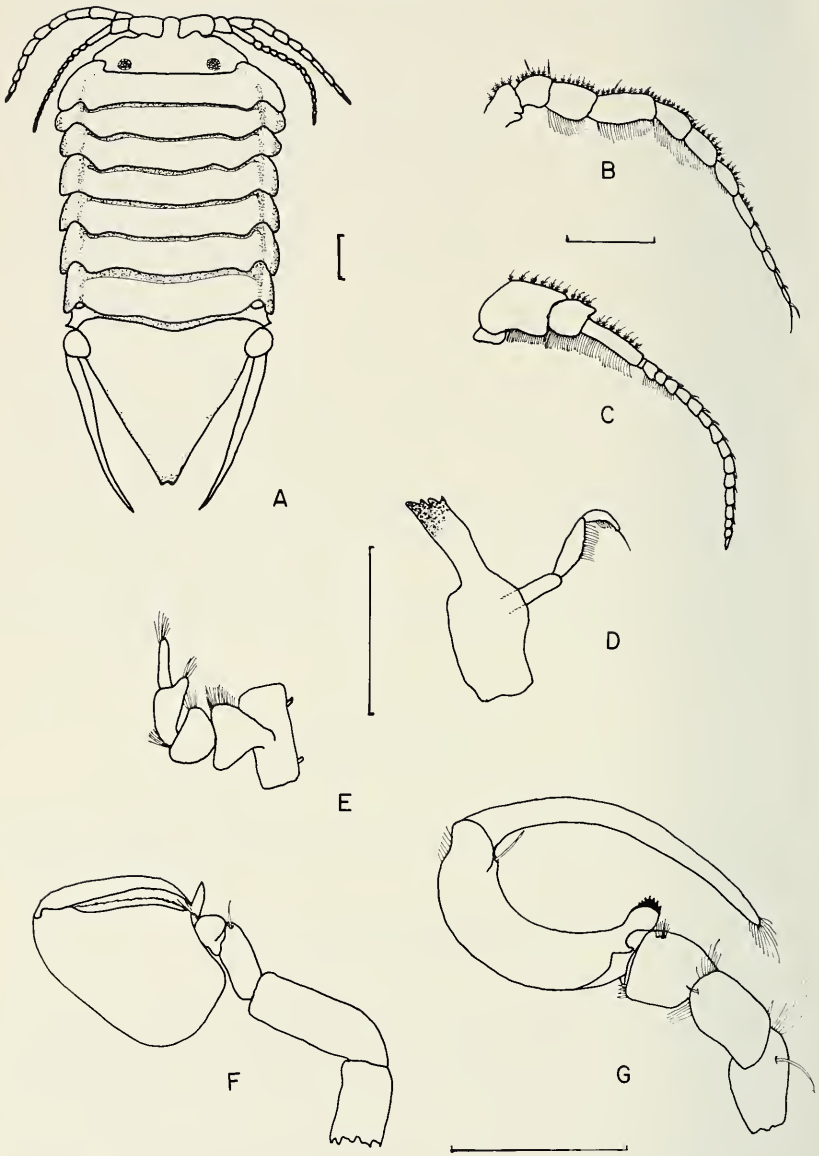

Figure 1. A, holotype male, dorsal view; 10.5 mm long, 5.0 mm wide; B, antennule; C, antenna D, mandible; E, maxilliped; F, first peraeopod; G, second peraeopod of holotype. Each line equals 1.0 mm. Illustrations with similar magnifications: A; B, C; D, E; F, G.

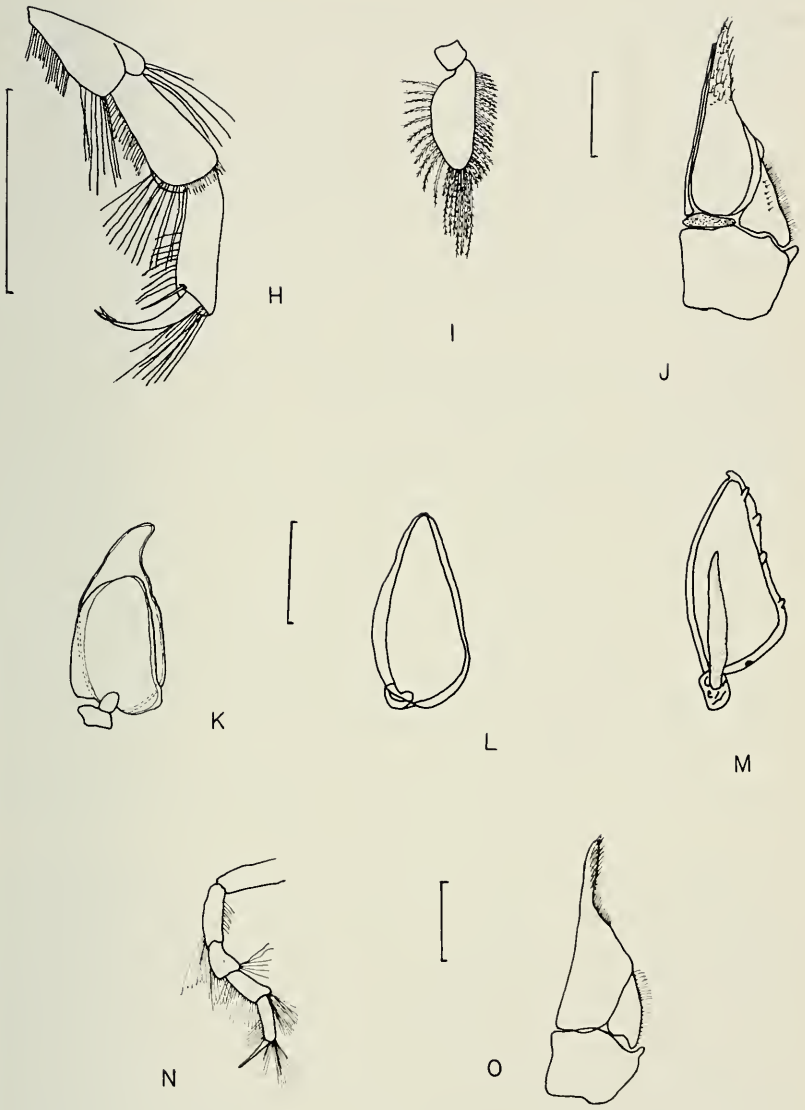

Figure 2. H, apex of seventh peraeopod; I, first pleopod; J, second pleopod of holotype with appendix masculina; K, third pleopod; L, fourth pleopod; M, fifth pleopod; N, apex of second peraeopod of allotype; O, second pleopod of allotype. Each line equals 1.0 mm. Illustrations with similar magnifications: H; I, J; K, L, M; N, O.

Diagnosis. Ancinus with proximal portion of propodite of second peraeopod of male with a medially placed knob bearing from 5 to 7 setae.

Description. Length of anterior rostral process of cephalon about 1.7 times width (Fig. 1A). Area of cephalon adjacent to rostral process and latero-posterior margins of cephalon excavated. Sides of peraeon nearly parallel. Epimera visible on all peraeonal segments of both sexes. Peraeonal segments subequal in width and length. Pleon triangular-shaped, tapering to a notched apex, resembling a funnel. First pelonal segment barely visible. Uropods uniramous.

Antennule (Fig. 1B) composed of a peduncle of 4 articles and a flagellum of 8 articles. The two proximal articles subequal, both smaller than following two subequal pedunculate articles. Antennules and antennae about equal in length. Antenna with peduncle of 3 articles, proximal article inflated; flagellum of 15-16 articles (Fig. 1C). Cutting edge of mandible (Fig. 1D) bearing 4 teeth. Mandibular palp with 3 articles. Endite of maxilliped (Fig. 1E) bearing two coupling hooks; maxillipedal palp consisting of 4 articles. First peraeopod (Fig. 1F) sub-chelate in both sexes; second peraeopod prehensile in male, ambulatory in female (Figs. 1G, 2N). Pleopods 1 and 3-5 (Figs. 21, K-M) same in male and female; pleopod 2 (Fig. 2J) of male bearing appendix masculina, with apex not reaching apex of endopod. Uropods of male exceeding apex of pleon (Fig. 1A); female uropods approximately even with apex of pleon or shorter.

Measurements. Length of holotype male 10.5 mm, width 5.0 mm at edges of first thoracic segment. Length of allotype female (ovigerous) 8.0 mm, width 4.0 mm at edges of first thoracic segment.

Color. Exoskeleton pigmented, giving both sexes a dark tan color.

Affinities. Ancinus seticomvus [seti- from Latin "seta" = a bristle; comvus from Greek "Kombos" (comvos) = knob] is similar in appearance to *Ancinus depressus* (Say). A comparison of the characteristics and illustrations given here with those give for *A. depressus* in Menzies and Frankenberg (1966) and Richardson (1909) would reveal close agreement for most criteria mentioned. However, the two species differ in at least two pertinent characters: (1) the knob located medially on the proximal portion of the propodite of the second peraeopod in the male is rounded and bears 5-7 setae in *A. seticomvus* (Fig. 1G), while it is pointed and appears to bear but one stout spine in the male *A. depressus;* (2) the dactylopodite of the same appendage is proportionately much longer in *A. seticomvus* than in *A. depressus,* the ratio of dactylopodite length to propodite length being 1.3 : 1 in the former and 1 : 1 in the latter species. The second peraeopod of the male is pre-

sumably used as a clasping organ during mating in both species. Differences in the structure of such an important appendage could conceivably operate as effective mechanical, pre-mating, reproductive isolating mechanisms.

Some parts of other extremities of *A. seticomvus* also appear to be more elongate than corresponding parts of *A. depressus,* but this may be a function of overall size. Thus the male *A. depressus* described by Menzies and Frankenburg (1966) was 3 mm wide and 7 mm long, and the uniramous uropods do not exceed the tip of the telson, whereas the male *A. seticomvus* described herein is 5 mm wide and 10.5 mm long, and the uniramous uropods exceed the tip of the telson by 1/6th to 1/5th the total length of the uropod.

Distribution. While *A. depressus* is found on the East coast of North American and in the Gulf of Mexico. *A. seticomvus* has been collected only from two beaches in Santa Barbara, on the West coast of North America, to date. Thus, in addition to morphological differences between the two species, the differences in geographical distribution, resulting in reproductive isolation, warrants considering the two specifically distinct. If populations of the two species are later found in close proximity to each other, a re-evaluation of the proposed separation could then be undertaken.

The only other species in the genus is *Ancinus daltonae,* described from the eastern Pacific by Menzies and Barnard in 1959. An examination of the illustrations of *A. daltonae* would indicate several morphological differences between it on the one hand, and *A. seticomvus* and *A. depressus* on the other.

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Literature Cited

Menzies, R. J., and J. L. Barnard. 1959. Marine Isopoda on coastal shelf bottoms of Southern California: systematics and ecology. *Pacific Nat.* 1 (11-12): 3-35.

Menzies, R. J., and D. Frankenberg. 1966. *Handbook on the common marine isopod Crustacea of Georgia.* Univ. Georgia Press, Athens.

Richardson, H. 1909. The isopod crustacean, *Ancinus depressus* (Say). *Proc. U.S. Nat. Mus.* 36: 173-177.

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