

The same was apparently true for *Trilobus gracilis* described by Paramonov, but here the duplicates are more distant, suggesting a somewhat earlier separation.

In the bivulvar *Dorylaimus* previously recorded by the present writer there were two vulvae 0.062 mm. apart, each with a vagina, a uterus, and an ovary. This suggests that a separation of the paired anlage of the anterior and the posterior branch of the female apparatus took place, since normally these dorylaims are amphidelphic.

In the *Mononchus* here described the duplication involves the whole anterior branch of the normal female apparatus suggesting a separation of its anlage at a very early date of its development, but still at a time when the anlage for the normal female apparatus would have already divided into its anterior and posterior branch.

The causes for these duplications are unknown. It is remarkable that they all concern female specimens and that up to the present no such duplications have been observed in male nematodes.

ZOOLOGY.—*Two new species of Isopod Crustaceans from California.*<sup>1</sup>

J. O. MALONEY, U. S. National Museum. (Communicated by WALDO L. SCHMITT.)

In the course of his studies on littoral ecology at Monterey Bay, California Coast, Dr. G. E. MacGinitie of the Hopkins Marine Station obtained, among other crustaceans, two species of isopods of the family Idotheidae which seem never to have been described, *Synidotea macginitiei* and *Pentidotea montereyensis*. The description of each is based on a male holotype preserved in alcohol.

A specimen from San Francisco Bay, however, has been taken as the type of *S. macginitiei*, as Dr. MacGinitie's specimens were small and with adult characters not fully developed. The specimens from San Francisco Bay were identified by earlier workers as *Synidotea laticauda*,<sup>2</sup> though they are more closely related to *Synidotea bicuspidata* (Owen).<sup>3</sup>

*Synidotea macginitiei*, new species

*Description.*—Body ovate, length 15 mm., width 7.25 mm. (third and fourth thoracic segments widest). Head 2.5 mm. long, 3.25 mm. wide, with

<sup>1</sup> Published by permission of the Secretary of the Smithsonian Institution. Received November 30, 1932.

<sup>2</sup> BENEDICT, JAMES E. *A revision of the genus Synidotea*. Proc. Acad. Nat. Sci. Philadelphia, 1897. 389-404. figs. 1-13.

<sup>3</sup> RICHARDSON, H. *Monograph on the Isopods of North America*. U.S.N.M. Bull. 54: pp. i-lviii, 1-727. figs. 1-740. 1905.



front produced on either side of a median excavation in a narrow border, the lateral portions of which form an angle with the dorsal portion as in *S. bicuspidata*. Eyes not visible in a ventral view, small, round, and situated on either side some distance from lateral margin which is expanded to form a narrow border. First and second articles of first antenna about equal in length; third, one and one-half times length of second; fourth a little shorter than third. First pair of antennae extend to middle of fourth peduncular joint of second pair. Basal and second articles of second antenna about equal in length, basal article not visible in dorsal view; third and fourth each about twice as long as second; fifth nearly as long as third and fourth together. Flagellum consists of fifteen articles. terminal one tipped with a tuft of hairs. Second antenna extends to posterior margin of third thoracic segment. Ventral side of left outer lobe of first maxilla consists of eleven tooth-like spines, many of them denticulate, and one long tapering spine. Some of the long plumose hairs of outer lobe of second maxilla extend to second joint of second antenna. (See Fig. 1.)

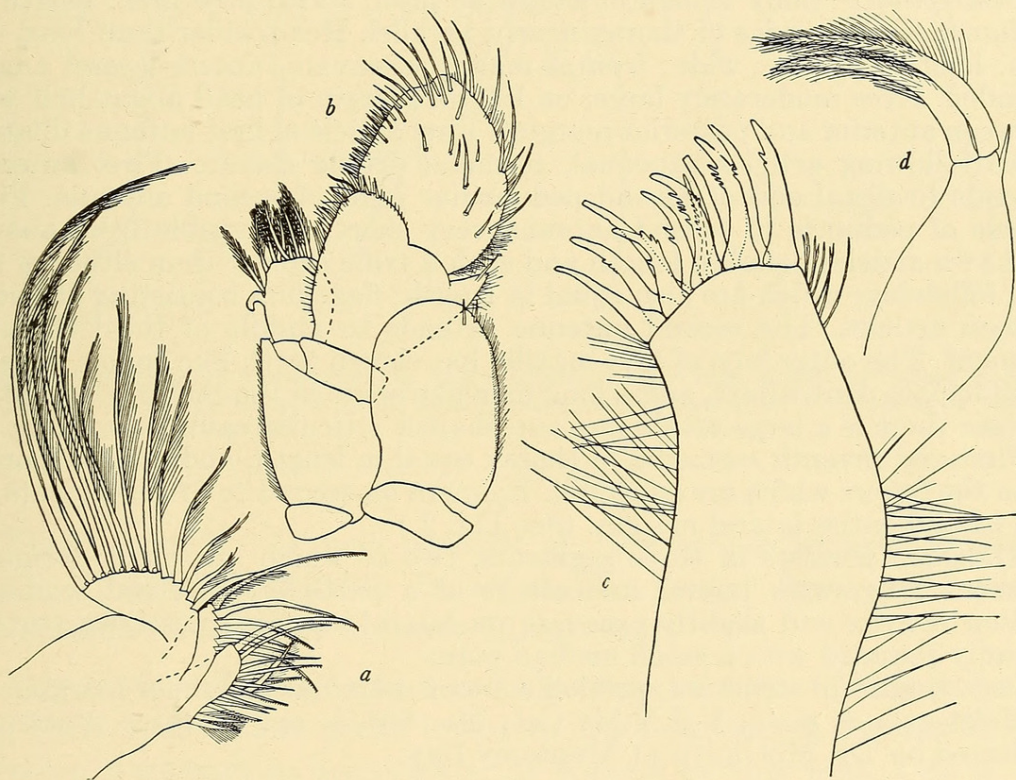


Fig. 1.—*Synidotea macginitiei*, new species. a, right second maxilla. b, left maxilliped; c, left first maxilla, outer lobe. d, left first maxilla, inner lobe.

The first segment of the thorax, measured on the median dorsal line, is the shortest, following segments subequal. Lateral margins of segments almost straight.

Abdomen triangular in shape, length 6.75 mm., with median notch at apex of terminal segment. Telson is similar to that of *S. bicuspidata*, and is as wide at base as it is long. The legs are similar in shape; propodus, carpus, and merus thickly beset with hairs on inner margin.

Color in alcohol a yellowish-brown with irregular markings of dark brown. These markings prominent on head and longitudinal median portion of



body. Sides of head below eyes and epimera with many small splotches of dark brown.

*Holotype*.—A male, U.S.N.M. Cat. No. 66413 taken by the *Albatross* in San Francisco Bay, California has been selected as the type. Dr. MacGinitie collected six specimens at Monterey Bay, of which the largest is 9.5 mm. long. The species is named for him, as it was his material which first called my attention to this new species.

*Remarks*.—This species is close to *S. bicuspidata*, the more noticeable differences being in the head and mouth parts. The frontal margin is more nearly straight and the eyes more laterally situated in *S. bicuspidata* than in *S. macginitiei*. A prominent lateral margin below the eyes is absent in *S. bicuspidata*. The epipod of the maxilliped, the outer lobe and relative length of its plumose hairs of first maxilla, and the teeth and denticulations of outer lobe of second maxilla are different in the two species.

#### ***Pentidotea montereyensis*, new species**

*Description*.—Body elongate, length 25 mm., width 3.75 mm., length of abdomen 8 mm.; sides of thorax nearly parallel. Head wider than long, 4.5 mm. long, 3.25 mm. wide; frontal margin excavate, antero-lateral angles rounded. Eyes moderately large, on lateral margin of head about half way between anterior and posterior margins. First article of first antenna dilated, three following articles subequal, terminal article clavate. First antenna extends to distal end of second peduncular joint of second antenna. First article of peduncle of second antenna very short, not visible from above; next two articles equal in length and each a trifle shorter than either of the two following, which are also equal in length; flagellum consisting of about sixteen articles. The second antenna extends to middle of third thoracic segment. The outer lobe of first maxilla has eleven tooth-like spines, several of which are denticulate, and a long hair-like spine in the center. On ventral surface there is a large setule in a cup-shaped articular cavity.

First and seventh segments of thorax equal in length, and a little shorter than the others which are subequal. Epimera on second to fifth segments do not extend entire lateral margin. (See Fig. 2.)

Abdomen consists of three segments, two of which are small; terminal segment long, with lateral indications of a partially coalesced segment. Telson convex and slightly excavate on lateral margins; posterior portion broadly rounded with a small median point.

Legs similar in structure; propodus beset with hairs on inner margin.

*Holotype*.—A male, U.S.N.M. Cat. No. 66414, one of three specimens collected by Dr. McGinitie at Monterey Bay.

*Remarks*.—This species stands near *Pentidotea aculeata* Stafford,<sup>4</sup> differing mainly in the shape of thoracic segments, their epimera, and median notch of telson. The lateral margins of the first three thoracic segments of *P. aculeata* are more angulate, while those of *P. montereyensis* are almost straight; the median notch in *P. aculeata* is much longer; and all the epimera of *P. aculeata* extend to posterior margin, while in *P. montereyensis* only the last two epimera do so.

<sup>4</sup> STAFFORD, B. E. *Studies in Laguna Beach Isopoda*. Jour. Ent. Zool. Claremont, Cal. 5: 182-188. figs. 6-10. 1913.



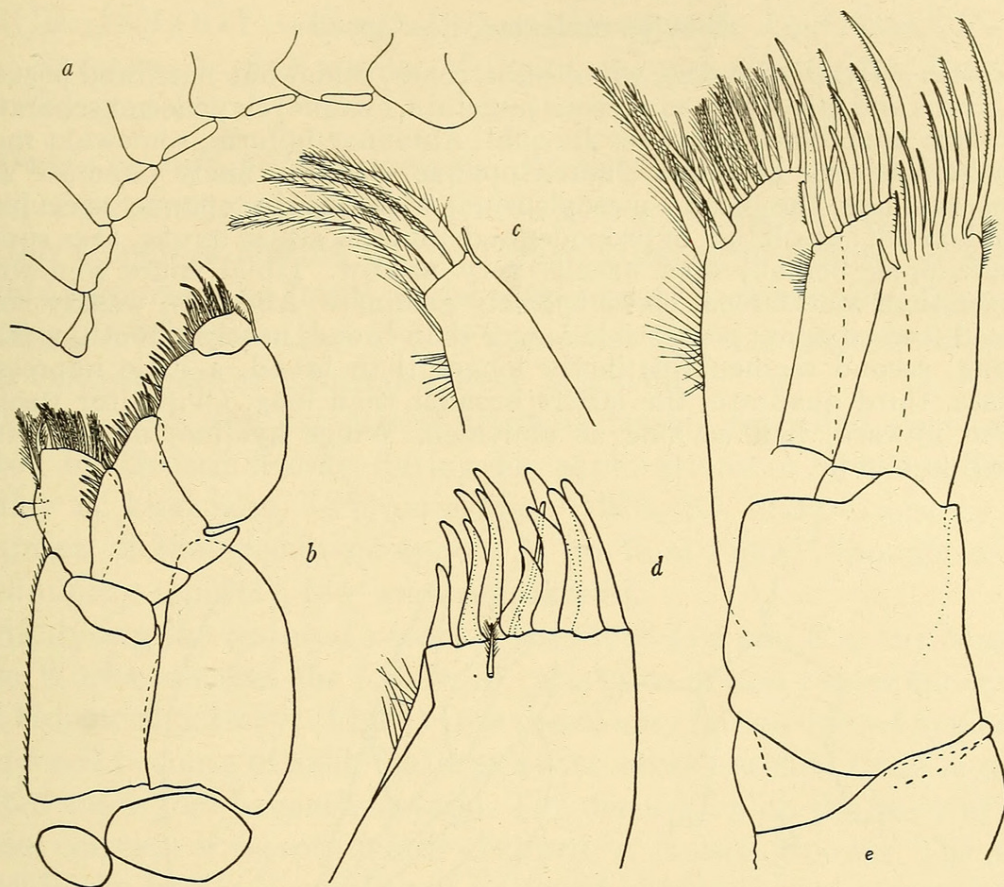


Fig. 2.—*Pentidotea montereyensis*, new species, *a*, right lateral side of thorax showing epimera. *b*, left maxilliped. *c*, left first maxilla, inner lobe. *d*, left first maxilla, outer lobe. *e*, left second maxilla.

ENTOMOLOGY.—A new parasite of *Laspeyresia molesta* Busck.<sup>1</sup>

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(Communicated by HAROLD MORRISON.)

*Laspeyresia molesta* Busck, a very destructive pest of pears and apples, each year causes great losses to fruit culture in Japan. It is, therefore, necessary to investigate the control of this pest. I have to date found only one species of the family Ichneumonidae, *Ephialtes laspeyresiae* Uchida, parasitic on *L. molesta*. But R. A. Cushman, of the United States Bureau of Entomology, has just sent me specimens of a second species reared from this host in Japan. This beneficial insect appears to me to be new to science, and I describe it below.

My best thanks are hereby extended to R. A. Cushman, who sent me this valuable material.

<sup>1</sup> Received November 7, 1932.



1933. "Two new species of Isopod Crustaceans from California." *Journal of the Washington Academy of Sciences* 23, 144–147.

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