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### The Species of *Plesionika* from California and Western Mexico (Natantia: Pandalidae)

Three genera of pandalid shrimp are known from offshore waters of southern California, U.S.A. and Baja California, Mexico: *Pandalopsis*, *Pandalus*, and *Plesionika*. Of these three, only *Plesionika* is characterized by possession of exopods on the third maxillipeds.

During sorting, cataloguing, and identification of shrimp in the collections of the Allan Hancock Foundation, specimens of *Plesionika beebei*, *Plesionika mexicana*, and *Plesionika martia semilaevis* were found. Extensions of the ranges of all three species are presented in this paper. *Plesionika mexicana* is reported for the first time from California. A key to the species in the eastern Pacific Ocean is provided.

*Plesionika beebei* Chace 1937

*Plesionika beebei* Chace 1937:114-115, fig. 2.

*Previous records.*—23 miles east by south of Tortuga Island, 13-20 miles north-east of San Ildefonso Island, Gorda Banks, Mexico; between 74 and 923 m (Chace, 1937).

*Material*.—34 miles southeast of Punta Tosca, Baja California, 528–738 m, 24 January 1954, R.V. *Velero IV* station 2586-53, one broken specimen. Southeast of Salina Cruz, Gulf of Tehuantepec, Mexico, 410 m, 20 November 1958, Wisner and Parker, one specimen.

*Plesionika martia semilaevis* Bate 1888

*Plesionika semilaevis* Bate 1888:644, pl. 113, fig. 3.

*Plesionika martia semilaevis*: de Man, 1920:116–121, pl. 10, figs. 24–24b.

*Plesionika* sp.: Ebeling, Ibara, Lavenberg, and Rohlf, 1970:12.

*Previous records*.—Philippines, Borneo, Sydney Harbor, Kermadec Islands, Fiji, South Africa, Japan, and Hawaiian Islands; 262–2215 m, on green mud, coral mud, and volcanic mud (Bate, 1888; de Man, 1920). San Pedro Basin, California, lower mesopelagic (Ebeling et al. 1970).

*Material*.—Twenty-seven specimens from 38 stations, from 18½ miles off Santa Barbara Island, California to 51 miles from Cabo Punta Banda, Baja California; 812–3046 m, Isaacs-Kidd midwater trawl, 1952–1969, R.V. *Velero IV*.

*Remarks*.—As mentioned by de Man (1920), *P. martia* is a most variable species. The specimens examined possess two small spines or spinules on the dorsal surface of the rostrum instead of six dorsal teeth, which de Man (op. cit.) found to be the most common number in his specimens. The ventral armature of the rostrum varies from pronounced fine teeth (from five to 12 in the specimens examined) to teeth almost obscured by a thick fringe of setae. A carina along the dorsal midline of the carapace, characteristic of the species, is present in specimens from California and Baja California.

The specimens trawled by the R.V. *Velero IV* usually were broken badly. The walking legs were torn either at the base or below the carpus, preventing the accurate counting of their meral spines or measurement of the proportions of the segments of the walking legs relative to each other. In the least damaged specimens these legs are extremely long and delicate relative to the carapace.

Scales occur on the carapaces of undamaged specimens. These scales, similar to those figured by Mauchline et al. (1977, figs. 2–5) for acanthephyrid and systellaspid shrimp, may have a sensory function.

The specimens from California were colored red in life (Yaldwyn, 1963, unpublished key). Ovigerous females were taken on 26 July 1967 and 19 September 1963.

*Plesionika mexicana* Chace 1937

*Plesionika mexicana* Chace 1937:112–114, fig. 1.

*Previous records*.—Arena Bank, Gorda Banks, and three miles east of Cabo Falso, Baja California, Mexico; 55–138 m, muddy, sandy, shelly and hard substrates (Chace, 1937).

*Material*.—Off Redondo Beach, California; 90–258 m, 5 May 1940, R. V. *Velero IV* station 1034-40, numerous specimens, many of them ovigerous. 1¼ mile southwest of Cabeza Ballena, Mexico; 55 m, 11 March 1949, R.V. *Velero IV* station 1726-49, 13 specimens. Off Pacora Island, off Bahia Honda, Panama, 28–46 m, *Velero III* station 245-34, 21 February 1934, four specimens, one of them ovigerous. Off Medidor Island, Bahia Honda, Panama, 55–65 m, rock and mud,

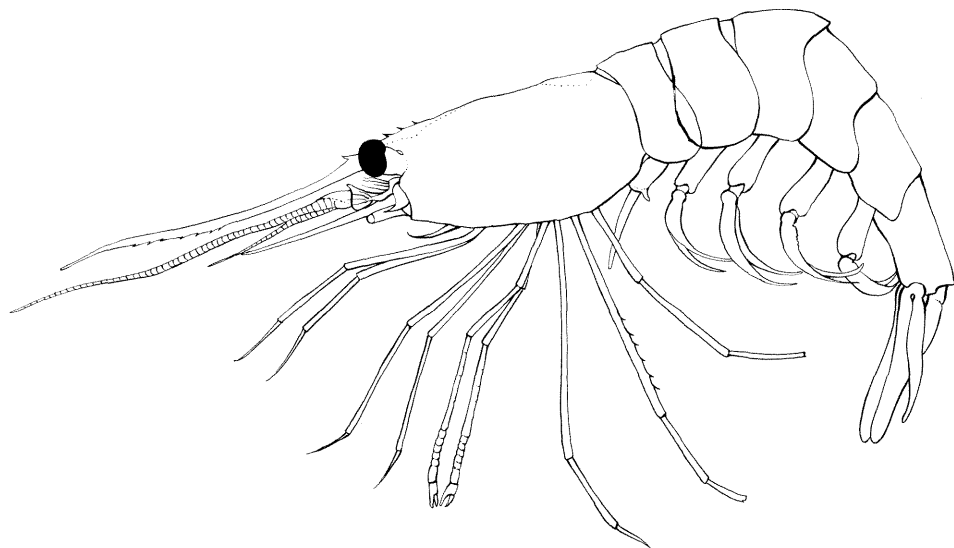


Fig. 1. *Plesionika martia semilaevis*. Female, total length 49.5 mm. 5.7 miles,  $43\frac{1}{2}^{\circ}$  true from Ship Rock, Santa Catalina Island, California. 846–864 m, 24 February 1961. R. V. *Velero IV* station 7299-61.

28 March 1939, *Velero III* station 948-39, numerous specimens, many of them ovigerous. Off La Plata Island, Ecuador; 83–102 m, rock and mud bottom, 10 February 1934, *Velero III* station 212-34, two specimens, one of them ovigerous.

*Remarks.*—Despite extensive collecting by the R.V. *Velero III* and *Velero IV*, other ships and collectors, no specimens of *P. mexicana* have been reported from California since 1940. These animals may have strayed into northern waters during a particularly warm year but were unable to maintain a population in the area.

#### Key to the Eastern Pacific Species of *Plesionika*

1. Second pereopods markedly unequal in length ..... *P. mexicana*.  
    Second pereopods equal or subequal in length ..... 2
2. Rostrum moderately upcurved, with 2–8 dorsal spines .....  
    ..... *P. martia semilaevis*.  
    Rostrum straight or strongly upcurved, with 11 or more dorsal spines ..... 3
3. Carpus of second pereopod with 8 segments, rostrum nearly straight  
    ..... *P. beebei*.  
    Carpus of second pereopod with 14–17 segments, rostrum strongly  
    upcurved .....  
    ..... *P. trispinus* (Pacific coast of Colombia, Squires and Barragan, 1976).

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