

*MUNIDOPSIS ALBATROSSAE*, A NEW SPECIES OF DEEP-SEA  
GALATHEIDAE (DECAPODA, ANOMURA) FROM THE  
EASTERN PACIFIC OCEAN

BY

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While studying the deep-sea Galatheaidea collected from the Gulf of Mexico and Caribbean Sea by the R/V "Alaminos" of Texas A & M University and the R/V "Oregon" of the National Marine Fisheries Service, Pascagoula, Mississippi (Pequegnat & Pequegnat, 1970, and Pequegnat & Pequegnat, 1971), the authors discovered two specimens of the giant galatheid, *Munidopsis sundi* Sivertsen & Holthuis, 1956, which were collected for the first time from the Gulf of Mexico and the Caribbean Sea by the R/V "Alaminos".

During visits to the U.S. National Museum of Natural History in connection with the above studies, the authors encountered another huge *Munidopsis*, closely related to *M. sundi*, from the "Albatross" 1911 collections in the eastern Pacific Ocean. A detailed study was made of the "Albatross" specimen in order to clearly distinguish it from the closely allied Atlantic species, *M. sundi*, resulting in the description given below.

The authors are grateful to Fenner A. Chace, Jr. and Henry B. Roberts for their cooperation in making the facilities of the U.S. National Museum of Natural History available to us; to Mrs. Ramah Taylor for art work; to Bela M. James for photographic work; and to Fenner A. Chace, Jr. for reviewing the manuscript. We owe special thanks to Dr. Torben Wolff for graciously loaning us the "Galathea" specimen, which we have designated as the paratype, from the Zoological Museum, University of Copenhagen.

*Munidopsis albatrossae* new species (figs. 1, 2)

*Munidopsis* n. sp. Wolff, 1961: 148, fig. 16.

Material. — "Albatross" Sta. D 5684: 23°23.5'N 112°30'W, eastern Pacific Ocean south of Magdalena Bay, Baja California, Mexico, 3219 m, 21 April 1911: 1 female (holotype USNM No. 141453).

"Galathea" Sta. 716: 9°21'N 89°12'W, eastern Pacific Ocean off Central America, 3570 m, 7 May 1952: 1 female (paratype, Zoological Museum, University of Copenhagen).

Diagnosis. — A giant species of the orophorhynchus-group of *Munidopsis* with broad-based rostrum and very small, unpigmented, slightly movable eyes bearing a relatively large medial eyespine; anterior and lateral spines of carapace uniform

in size; dorsal surfaces of carapace and abdomen granular, with no large spines; no epipods on pereopods. Closely related to *M. sundi*.

Description. — Rostrum broad at base with sides tapering and acutely narrowing toward tip as in *M. sundi*; tip broken off in holotype, present in paratype. Dorsal surface of rostral base covered with flattened granules and with longitudinal median spinulose carina extending to middle of gastric region of carapace; lateral margin bearing 4 or 5 spinules on each side up to the break; ventral surface flat,

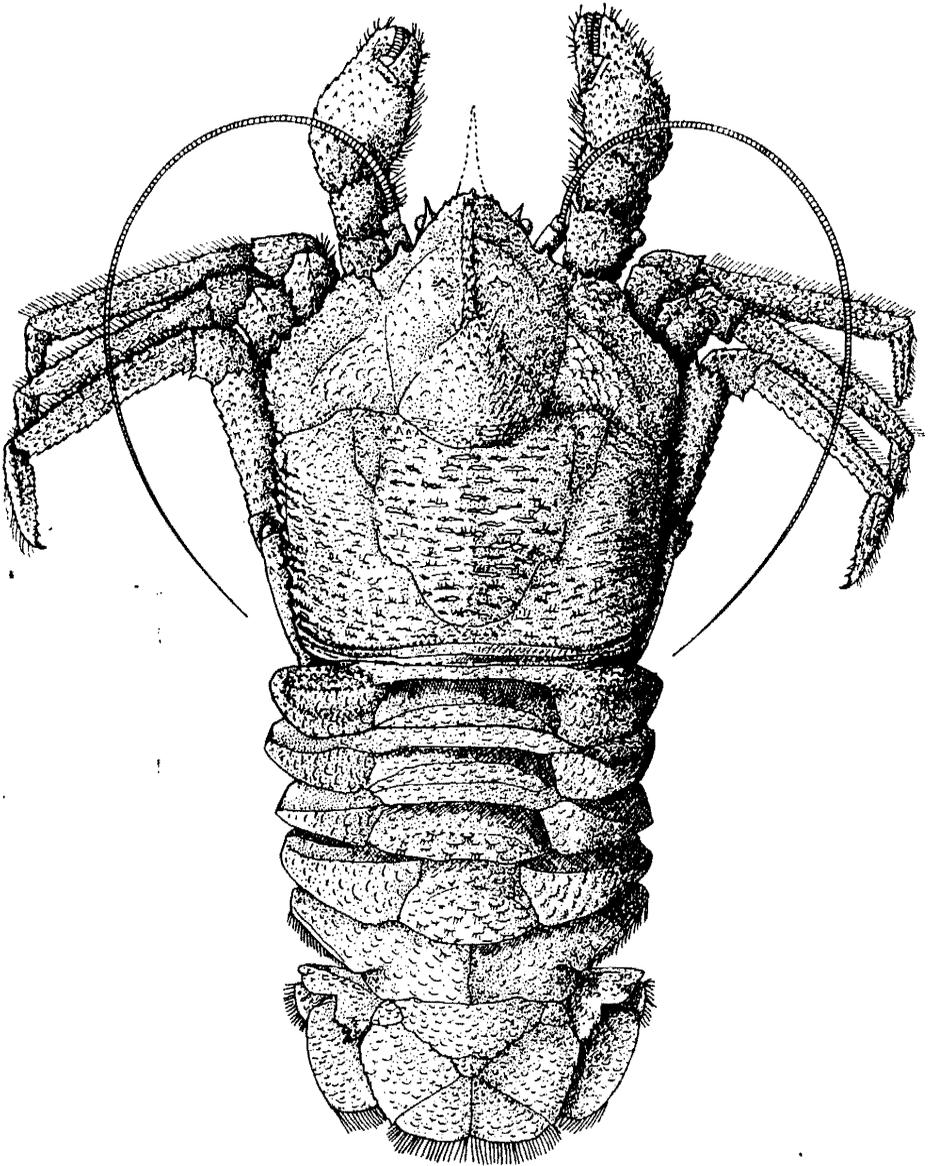


Figure 1. *Munidopsis albatrossae* new species, female holotype, dorsal view, 2/3 actual size.

marked with small flattened tubercles, and with median carina absent or only faintly developed.

Carapace broadest anteriorly and about as broad as long (as measured from posterior margin of orbit to median point of posterior margin of carapace); median region of carapace somewhat raised, sloping down toward lateral margins; dorsal surface covered with small tubercles anteriorly, interrupted transverse ridges bearing setae posteriorly. No large spines on dorsal surface of carapace except for two small anterior gastric spines, each composed of three small spines on a protuberance; tubercles of median portion of gastric region prolonged into spinules. Anterior margin of carapace relatively narrow and separated from lateral margin by a groove. Antennal spine equal to or slightly larger than antero-lateral spine. Lateral margin of carapace with numerous spines of more or less uniform small size, except first tooth which is slightly larger in paratype; antero-lateral spine not appreciably larger than other lateral spines and located anterior and medial to lateral-most point of carapace. Posterior margin with three transverse, interrupted ridges; spineless.

Sternum smooth except for hair-filled lines separating segments and other scattered hair-filled grooves.

Abdomen broad; first somite smooth anteriorly under carapace but transversely ridged in posterior part into four weakly-developed, interrupted ridges and setose grooves; second, third, and fourth abdominal somites heavily ridged in posterior portions and bearing small interrupted setose ridges anteriorly; fifth and sixth somites showing no pronounced transverse ridges or grooves, but major portions of dorsal surfaces covered with tubercles. Pleura elongate and blunt-tipped, their posterior halves bearing tubercles, their anterior halves smooth, except for second pleuron, which is tuberculate all over, tapering to rounded point at tip. Posterior margin of sixth somite straight in center but laterally lobed. Telson consisting of eight calcified pieces arranged essentially as in *M. sundi*.

Eyes movable; cornea small, globular, and without pigment. No external spine; internal spine strong, acute, and extending well beyond cornea.

Basal segment of antennular peduncle with two strong spines placed external to base of next segment, inner spine of these two slightly stronger than outer one and bearing a small spine on its ventral base; toothed lobe present on ventral side of anterior border of basal segment ending in a larger triangular tooth medially.

Basal segment of antennal peduncle broad, bearing a large, broad-based ventro-internal spine with accessory spinules and a smaller ventro-external tooth. Anterior margin of second segment bears three spines; one dorsal, one external (the largest), and one internal (which bears accessory spinules). Anterior margin of third segment with three-toothed dorso-external lobe, three-toothed ventro-external lobe, low ventral denticulate lobe, and small double internal spine. Last segment of peduncle with denticulate dorso-external lobe and smaller rounded denticulate ventro-external lobe.

Antepenultimate segment of exopod of third maxilliped reaches beyond end of

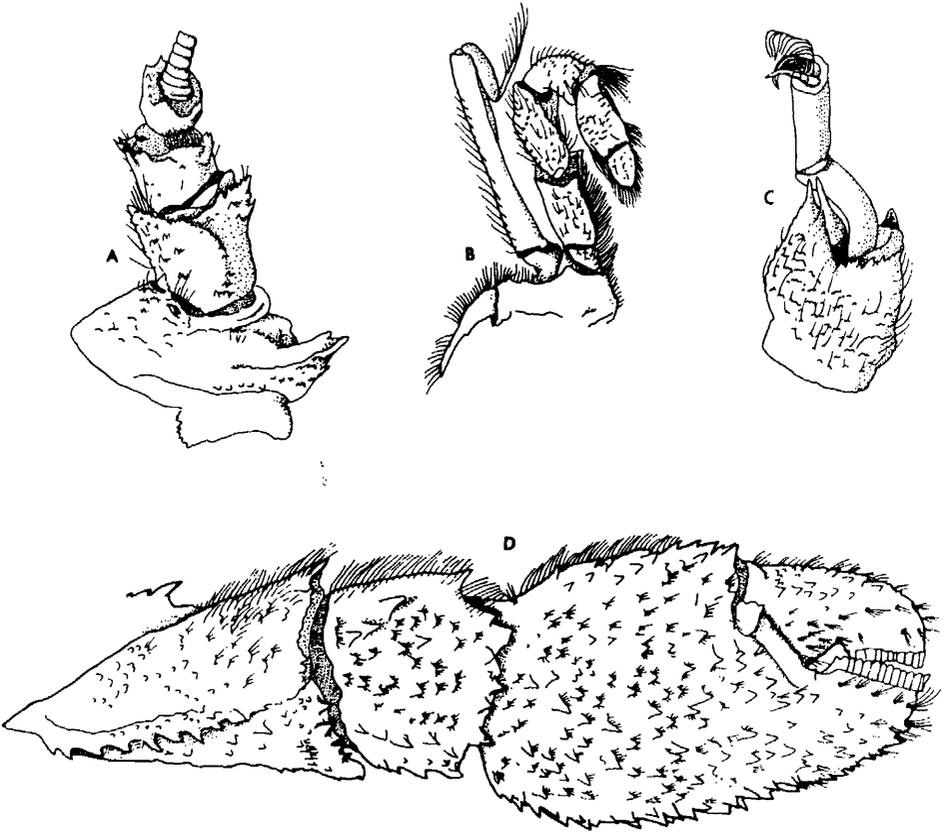


Figure 2. *Munidopsis albatrossae* new species, female holotype. A, right antennal peduncle, ventral view,  $\times 2.8$ ; B, right third maxilliped, ventral view,  $\times 1.8$ ; C, right antennule, ventral view,  $\times 2.5$ ; D, right cheliped,  $\times 1.6$ .

merus of endopod. Inner margin of merus of endopod irregularly serrate, but not definitely denticulate or spinous; a blunt tooth on dorsal surface of anterior edge.

Legs, like carapace, covered with tubercles, which become spinelike on chelipeds and along longitudinal ridges of ambulatory legs. No epipods on chelipeds or ambulatory legs. Chelipeds short and heavy, slightly longer than carapace. Chela flattened and nearly  $2/3$  as high as long; fingers as long as palm with prominent tufts of hairs, their cutting edges crenulate and their tips spoon-shaped; they close over their full length. Both surfaces of chela armed with tubercles and spines, dorsal surface more spinous. Carpus shorter than palm; dorsal surface spinous; with 6 to 8 spines on distal margin. Distal margin of merus bears two prominent dorsal spines with numerous smaller spines and two ventral spines.

Three ambulatory legs similar; first extending beyond chela by length of dactyl on left side; right one shorter (barely reaching tip of chela). Lower margin of dactylus bearing a row of 12 to 17 denticles. Tubercles on upper and lateral sur-

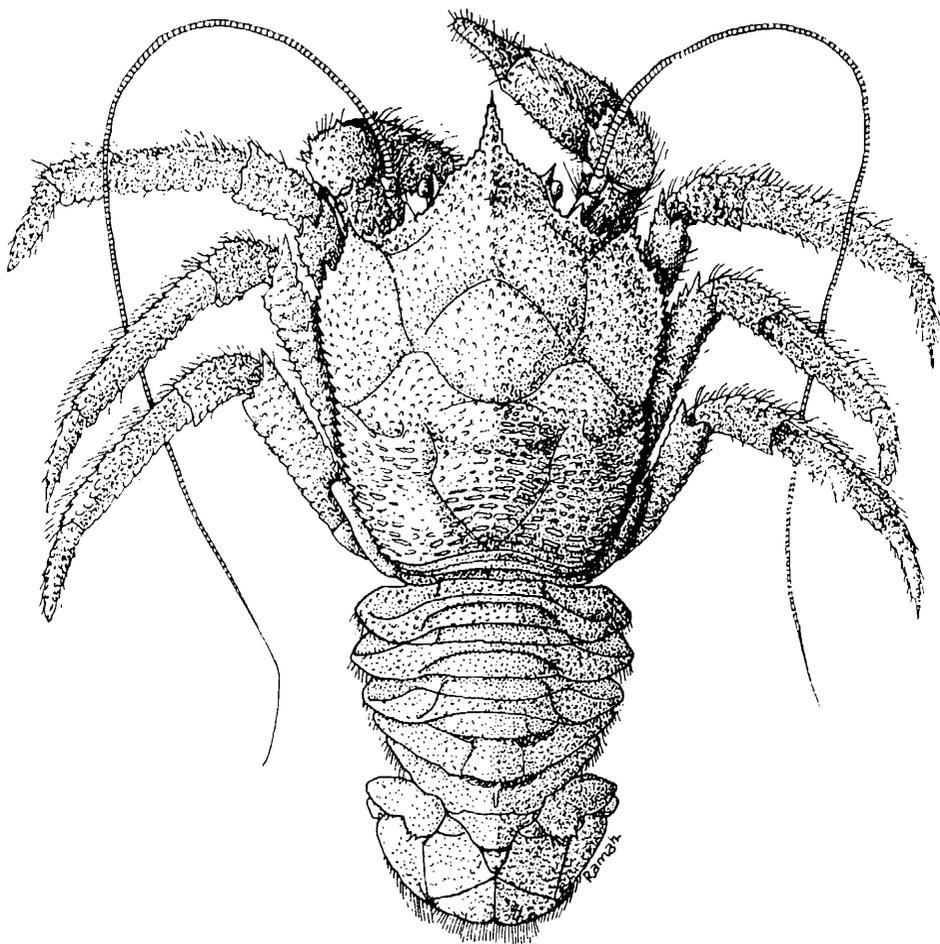


Figure 3. *Munidopsis sundi* Sivertsen & Holthuis, 1956. Male specimen from Colombian Basin, Caribbean Sea, 2/3 actual size. (after Pequegnat & Pequegnat, 1971).

faces of ambulatory legs extended into spines and arranged in longitudinal rows. Fringe of long hairs on anterior margin of propodus.

Size. — Carapace length of female holotype, 87 mm; width 86 mm. Total length (excluding rostrum), 189 mm; length of left cheliped, 93 mm. Female paratype measures 82 mm carapace length (105 mm including rostrum) with total body length of 173 mm (196 mm including rostrum); length of left cheliped, 88 mm.

Remarks. — *Munidopsis albatrossae* belongs to the orophorhynchus-group of *Munidopsis*. It is a giant-sized species closely related to *M. sundi* Sivertsen & Holthuis, 1956 (fig. 3) from which it differs as follows: (1) setose bands on carapace more pronounced than in *M. sundi*; (2) anterior branch of cervical groove not as distinct; (3) anterior margin of carapace noticeably less broad; (4) first tooth behind anterior branch of cervical groove not appreciably larger than other

lateral spines, considerably larger in *M. sundi*; (5) first abdominal somite not completely smooth, but with four rows of weak, interrupted ridges and setose grooves on posterior portion; (6) anterior half of second, third, and fourth abdominal somites not all smooth as in *M. sundi*, but bearing interrupted setose ridges; (7) eyes more freely movable than in *M. sundi*; (8) posterior margin of carapace relatively broader than in *M. sundi*.

The female paratype differs slightly from the holotype in that (1) a faint indication of median carina is present on ventral surface of rostrum of paratype, absent in holotype; (2) first of series of lateral teeth behind anterior branch of cervical groove slightly more prominent than rest of teeth in paratype, but not as large as in *M. sundi*; and (3) teeth on segments of antennal peduncle not as clearly defined as in holotype.

In the case of *M. sundi* the abdomen in the male specimen taken by the "Alaminos" in the Caribbean (fig. 3) is considerably narrower than in the female specimen of this species taken by the "Alaminos" in the northwest Gulf of Mexico (Pequegnat & Pequegnat, 1971). It is probably safe to speculate that the same differences exist between the sexes in *M. albatrossae*, although no male specimen of this species is available at this time for comparison.

*Munidopsis albatrossae* is named for the U.S. Fish Commission steamer "Albatross", the vessel which captured this specimen in 1911 and whose deep-sea dredgings during the late 19th and early 20th centuries have contributed greatly to our knowledge of deep-sea biology and oceanography.

#### RÉSUMÉ

Description d'une nouvelle espèce de Galatheidae gigantesque, *Munidopsis albatrossae* n. sp., du Pacifique oriental au large de la Basse Californie, Mexique, à 3219 m de profondeur.

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