

Number 3

TECHNICAL REPORTS

**CATALOG OF THE ISOPOD CRUSTACEA TYPE
COLLECTION OF THE NATURAL HISTORY
MUSEUM OF LOS ANGELES COUNTY**

**Regina Wetzer, Hans G. Kuck, Pedro Baéz R.,
Richard C. Brusca, and Lauma M. Jurkevics**



Natural History Museum of Los Angeles County • 900 Exposition Boulevard • Los Angeles, California 90007

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OF LOS ANGELES COUNTY**

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Technical Reports, Number 3

Natural History Museum of Los Angeles County

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INTRODUCTION

This is the first crustacean type catalog to be issued by the Natural History Museum of Los Angeles County (LACM). It is published in compliance with Recommendation 72G, 4 of the International Code of Zoological Nomenclature (3rd Edition, 1985). This catalog treats the Crustacea Isopoda type material held by LACM, and includes all isopod type material formerly held by the Allan Hancock Foundation, University of Southern California (AHF), from which no type lists were published. Type catalogs of other crustacean taxa are in preparation.

The LACM isopod type collection represents 7 suborders, 29 families, 72 genera and 111 species. The collection consists of 369 lots of primary and secondary types (69 holotypes, 1 neotype, 2 syntypes, 28 allotypes, 1 neoallotype, and 268 other paratype lots) totalling 1334 specimens. Geographic representation of the collection is strongest for temperate and tropical east Pacific species (307 lots) with the remaining species distributed worldwide, primarily in the Indo-Pacific region.

The catalog is arranged alphabetically by suborder, family, genus and species. Each entry contains the following information: original citation (in full), LACM catalog number(s) (other published numbers in parentheses), specific collection locality (including latitude and longitude), habitat (as given in original publication, Velero ship logs and/or on specimen labels), host (where appropriate), collector, and remarks. Sex and length are given only if they were cited in the original publication. New generic assignments made subsequent to the original description are indicated in the "Remarks" sections; in these cases the species authors' names appear in parentheses. Synonymies made subsequent to the original publication are also indicated in the "Remarks" sections by citing the senior synonym and correct author (in these cases, species authors' names are not in parentheses). In all cases, the species names appearing in the "Remarks" sections are the currently recognized names. The remark "missing" indicates that the specimen was once in the collection but cannot be located at the present time.

Definitions and eligibility of types follow the International Code of Zoological Nomenclature (3rd Edition, 1985). We regard all specimens on which the original author based a new species (or subspecies) to constitute the type series. Any specimens mentioned separately, after name-bearing type(s) (i.e., holotype, cotypes, syntypes, lectotype, or neotype) and paratypes (including allotypes) have been designated, are expressly excluded from the type series (Recommendation 72B, vi). Any specimens mentioned after the designation of the holotype, but not excluded from the type series by the author, are part of the type series (Recommendation 72B, i) and are noted in the "Remarks" sections and are listed with additional data in the Appendix.

In 1985 the AHF Crustacea collection was transferred to LACM. Included in the transfer was the type collection and the collection catalogs. The AHF type material had been assigned AHF type numbers (most previously published) and many also had general accession (AHF Acc. No.) and/or catalog numbers (AHF Cat. No.) from the Crustacea Collection Catalog of the Foundation. The first two digits of AHF type numbers indicate the year that specimen was collected; the remaining digits are consecutive numbers, beginning with 1 within each year.

All material, regardless of where or how it was initially cataloged, has been given an LACM catalog number (e.g., LACM 57-112.3; the first two digits represent the year of collection). Specimens that were collected prior to 1900 or for which no date of collection is known have been given a Crustacea "odd lot number" (e.g., LACM 1). Because of the precedent set by AHF of cataloging type material separately from non-type material, there was at one time a list of LACM Crustacea type numbers. These LACM Crustacea type numbers appeared in a few publications, without mention of the LACM catalog number. Because that system is redundant, the assignment of separate LACM Crustacea type numbers has been discontinued; types are now assigned numbers in the regular LACM catalog sequence. In this publication, AHF Crustacea type numbers and all other published numbers associated with these specimens follow the LACM catalog number and are listed in parentheses. "CAS.IZ" numbers indicate specimens once cataloged at the California Academy of Sciences (San Francisco). Scripps Institution of Oceanography is abbreviated as SIO.

During the period from 1975 to 1986, when R. C. Brusca was Curator of Crustacea at AHF, a program of specimen exchange with other institutions was initiated. Many paratypes from the AHF collection were acquired through this program. These specimens usually had associated type numbers or catalog numbers from the original institution. These numbers follow the LACM catalog number and are in parentheses.

Collectors' field numbers and ship station numbers may also appear in the list under "Collector". Many of the AHF/LACM types were collected during expeditions by AHF's research vessels Velero III and Velero IV. Velero station numbers often have a two-digit suffix representing the year of collection. This suffix is not often included in the original publication or on specimen labels. Approximate ("Approx.") coordinates are given for collection localities for which specific coordinates could not be found in the original collection data or ship log or in the literature description of the species in question.

"T" refers to "degrees true north" and is associated with the coordinate degrees in the locality data. For example, "17.3 km, 286.5° T from Point La Jolla; green sandy mud, 776 m, Campbell grab" reads: collected by Campbell grab at a distance of 17.3 kilometers and at a bearing of 286.5 degrees true north from Point La Jolla, on green sandy mud, at a depth of 776 meters. Depth is given to the nearest meter and, if originally given in

fathoms, is converted by multiplying fathoms by the factor of 1.829. Distances are given in kilometers and, if originally given in nautical miles, is converted by multiplying nautical miles by the factor of 1.852. In the case of data discrepancies in published accounts, original Velero ship logs were used as the primary data source.

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CATALOG OF THE ISOPOD CRUSTACEA TYPE COLLECTION OF THE
NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY

ORDER Isopoda Latreille, 1817
SUBORDER Anthuridea Leach, 1814
FAMILY Anthuridae Leach, 1814

Apanthura californiensis Schultz, 1964

Reference: Pacific Science, 18(3):312, fig. 4.
HOLOTYPE: LACM 55-35.1 (AHF Type No. 5512), female, 11 mm.
Locality: USA, California, Los Angeles County, 18.3 km, 203° T from Santa Monica Pier Light; black mud, 73 m, Hayward grab.
Lat./Long.: 33°51.37'N, 118°34.7'W.
Collector: R/V Velero IV Sta. No. 2998-55. 06 Feb 1955.

Bathura luna Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):12, pl. 7.
HOLOTYPE: LACM 60-80.1 (AHF Type No. 6047), female with marsupium, 21 mm.
PARATYPES: LACM 60-80.4, 9 specimens.
Locality: USA, California, Channel Islands, Tanner Canyon, San Clemente Island, 53.5 km, 236° T from China Point Light; green mud, 1320 m, Campbell grab.
Lat./Long.: 32°32.3'N, 118°54.03'W.
Collector: R/V Velero IV Sta. No. 6832-60. 29 Jan 1960.

PARATYPE: LACM 60-88.3.
Locality: USA, California, San Diego County, Coronado Canyon, 8.6 km, 322.5° T from North Coronado Island; green mud, 794 m, Campbell grab.
Lat./Long.: 32°30.70'N, 117°21.62'W.
Collector: R/V Velero IV Sta. No. 6851-60. 01 Feb 1960.

PARATYPE: LACM 60-87.1.
Locality: USA, California, San Diego County, La Jolla Canyon, 20.0 km, 286.5° T from Point La Jolla; green sandy mud, 775 m, Campbell grab.
Lat./Long.: 32°54.35'N, 117°29.55'W.
Collector: R/V Velero IV Sta. No. 7047-60. 07 May 1960.

Cyathura guaroensis Brusca and Iverson, 1985

Reference: Revista de Biología Tropical, 33(Supl. 1):60, fig. 19.
HOLOTYPE: LACM 80-61.1 (AHF Type No. 8012).
PARATYPES: LACM 80-61.2, 5 specimens.
Locality: Costa Rica, Pacific coast, Guanacaste, Playas del

Coco, rocky point south of town; formalin washes of rocks and turf algae.
 Lat./Long.: Approx. $10^{\circ}34.5'N$, $85^{\circ}42.8'W$.
 Collectors: R. C. Brusca and A. M. Mackey. 27 Apr 1980.
 Remarks: One paratype in University of Costa Rica Invertebrate Collection.

PARATYPE: LACM 80-94.1 (AHF Cat. No. 1920-5).
Locality: Costa Rica, Pacific coast, Puntarenas, Playa Tárcoles, outside mouth of Golfo de Nicoya; dark sand with scattered rocky points, intertidal, formalin washes of rocks with associated sediment, onuphid polychaete tubes abundant.
 Lat./Long.: Approx. $9^{\circ}45'N$, $84^{\circ}50'W$.
 Collectors: R. C. Brusca and A. M. Mackey. 22 Feb 1980.

Cyathura munda Menzies, 1951

Reference: Proceedings of the United States National Museum, 101(3273):111, figs. 12, 13.
PARATYPES: LACM 48-62.3, 2 juveniles.
Locality: USA, California, Marin County, Tomales Point, Tomales Bluff, bayside; intertidal zones III-IV.
 Lat./Long.: Approx. $38^{\circ}25'N$, $122^{\circ}59'W$.
 Collector: R. J. Menzies. 23 May 1948.

Haliophasma geminata Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):17, figs. 11, 12.
HOLOTYPE: LACM 56-44.1 (AHF Type No. 566), female, 8 mm.
Locality: USA, California, San Diego County, San Mateo Point, 3.0 km, 209° T from aero beacon; green-black, very fine sand, 23 m, Hayward grab and hydro-winch.
 Lat./Long.: $33^{\circ}21.7'N$, $117^{\circ}35.8'W$.
 Collector: R/V Velero IV Sta. No. 4771-56. 09 Dec 1956.
 Remarks: In addition, LACM holds 317 paratypes from 99 stations listed in the Material Examined section of the original description (see Appendix).

Mesanthura occidentalis Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):20, fig. 14.
HOLOTYPE: LACM 57-28.3 (AHF Type No. 5710), female, 7 mm.
Locality: USA, California, Santa Barbara County, 20.4 km, 089° T from Point Conception Light; bottom of dead kelp fragments and red algae, 16 m, hydro-winch.
 Lat./Long.: $34^{\circ}27.3'N$, $120^{\circ}14.8'W$.
 Collector: R/V Velero IV Sta. No. 4822-57. 17 Jan 1957.
 Remarks: One paratype was partly dissected and its appendages are in a permanent mount. In addition, LACM holds 4 paratypes from 2 stations listed in the Material Examined section of the original description (see Appendix).

FAMILY Paranthuridae Menzies and Glynn, 1968

Bullowanthura pambula Poore, 1978

Reference: Memoirs of the National Museum of Victoria, 39:146, figs. 8, 9.

PARATYPE: LACM 70-156.1.

Locality: Australia, Victoria, Melbourne, Port Phillip Bay; sand, 18 m.

Lat./Long.: 38°18.8'S, 144°53.3'E.

Collector: Port Phillip Bay Environmental Study. Sta. No. 982. Marine Pollution Studies Group, Fisheries and Wildlife Division, Ministry for Conservation. 22 Sep 1970.

Remarks: Gift from the National Museum of Victoria, NMV J555.

Colanthura bruscai Poore, 1984

Reference: Journal of Natural History, 18:704, fig. 3b.

HOLOTYPE: LACM 77-160.1 (AHF Type No. 777), female, 4.9 mm.

ALLOTYPE: LACM 77-160.2 (AHF Type No. 777a), male, 3.6 mm.

PARATYPES: LACM 77-160.3 (AHF Type No. 778), 7 males, 2.5-3.4 mm; 5 females, 4.1-4.4 mm; 9 juveniles, 4.5 mm.

Locality: México, Sonora, Golfo de California, Puerto Peñasco, Station Beach Reef; on Sargassum sp.

Lat./Long.: 31°20'N, 113°35'W.

Collector: R. C. Brusca. 04 Apr 1977.

Remarks: Holotype and paratype appendages mounted on slides. Original description indicates 22 paratypes deposited at AHF.

Colanthura squamosissima Menzies, 1951

Reference: Proceedings of the United States National Museum, 101(3273):114, figs. 14-16.

PARATYPES: LACM 48-62.1 (AHF Type No. 486), 2 males, 2 females.

Locality: USA, California, Marin County, Tomales Point, Tomales Bluff, bayside; formalin wash from holdfast of Macrocystis sp.

Lat./Long.: Approx. 38°25'N, 122°59'W.

Collector: R. J. Menzies. 23 May 1948.

Remarks: =Calianthura squamosissima (Menzies, 1951). Generic reassignment by Schultz, 1977, Proceedings of the Biological Society of Washington, 90(4): 840.

Paranthura elegans Menzies, 1951

Reference: Proceedings of the United States National Museum, 101(3273):106, figs. 9-11.

PARATYPES: LACM 48-62.2, 1 male, 2 ovigerous females, 2 juveniles.

Locality: USA, California, Marin County, Tomales Point,

Lat./Long.: Tomales Bluff, bayside; intertidal zones III-IV.
 Approx. 38°25'N, 122°59'W.
 Collector: R. J. Menzies. 23 May 1948.

SUBORDER *Asellota* Latreille, 1803
 FAMILY *Abyssaniridae* Menzies, 1956

Antias hirsutus Menzies, 1951

Reference: Proceedings of the United States National Museum, 101(3273):143, figs. 27, 28.
PARATYPE: LACM 48-65.1 (AHF Type No. 485).
Locality: USA, California, Marin County, Tomales Point, Tomales Bluff; reef, zone II-III, in rock and sand between coralline and laminarian algal zones, intertidal.
 Lat./Long.: Approx. 38°15'N, 123°00'W.
 Collector: R. J. Menzies. 09 Jun 1948.
 Remarks: Original description indicates 2 male paratypes deposited at AHF. =*Santia hirsutus* (Menzies, 1951). *Santia* was proposed by Sivertsen and Holthuis, 1980, Det Kgl. Norske Videnskabers Selskap Museet, 35:89, as a replacement name for *Antias*, which was shown to be a preoccupied name.

FAMILY *Acanthaspidiidae* Menzies, 1962

Acanthaspidia porrecta Menzies and Schultz, 1967

Reference: Antarctic Research Series, 11:155, figs. 13, 14.
HOLOTYPE: LACM 62-84.1 (AHF Type No. 626, AHF Cat. No. 2032-1), female, 10 mm.
PARATYPES: LACM 62-84.2 (AHF Cat. No. 2032-1), 2 females, each 18 mm long.
Locality: Argentina, off Cabo de Hornos, Drake Passage, between hydrographic Sta. Nos. 14 and 15; 3724-3825 m, Menzies trawl.
 Lat./Long.: 58°58'S, 56°03'W.
 Collector: U.S.N.S. Eltanin Sta. No. 394-25. 29 Dec 1962.

Acanthaspidia sulcatacornia Menzies and Schultz, 1967

Reference: Antarctic Research Series, 11:158, figs. 15, 16.
HOLOTYPE: LACM 62-82.1 (AHF Type No. 627, AHF Cat. No. 2036-1), juvenile female, 4 mm.
Locality: Argentina, West Scotia Basin, southeast of Tierra del Fuego, between hydrographic Sta. Nos. 2 and 3; approx. 4008 m, Menzies trawl.
 Lat./Long.: 56°02'S, 61°56'W.
 Collector: U.S.N.S. Eltanin Sta. No. 112 (#4). 20 Jul 1962.

Exacanthaspidia rostratus Menzies and Schultz, 1967

Reference: Antarctic Research Series, 11:171, figs. 25, 26.
HOLOTYPE: LACM 62-93.1 (AHF Type No. 629, AHF Cat. No. 2034-1), female, 9.0 mm.
Locality: United Kingdom, Drake Passage, near South Shetland Islands, between hydrographic Sta. Nos. 11 and 12; 1437 m, 10 ft. Blake trawl.
Lat./Long.: 62°03'S, 61°09'W.
Collector: U.S.N.S. Eltanin Sta. No. 138-25. 08 Aug 1962.

Iolanthe pleuronotus Menzies and Schultz, 1967

Reference: Antarctic Research Series, 11:166, figs. 21-24.
HOLOTYPE: LACM 63-155.1 (AHF Type No. 634, AHF Cat. No. 2030-1), male, 25 mm.
Locality: United Kingdom, Weddell Sea, southeast of South Orkney Islands, between hydrographic Sta. Nos. 12 and 13; 3784 m, Menzies trawl.
Lat./Long.: 63°17'S, 44°55'W.
Collector: U.S.N.S. Eltanin Sta. No. 512-25. 24 Feb 1963.
Remarks: M#246 (F.S.U. MT-VII-3) on original label; F.S.U.= Florida State University.

Paracanthaspidia mucronata Menzies and Schultz, 1967

Reference: Antarctic Research Series, 11:161, figs. 17-20.
HOLOTYPE: LACM 62-85.1 (AHF Type No. 628, AHF Cat. No. 2035-1), female, 6 mm.
PARATYPES: LACM 62-85.2 (AHF Cat. No. 2035-1), 4 females (1 measuring at 4.0 mm).
Locality: United Kingdom, south of Falkland Islands, north of Burdwood Bank, between hydrographic Sta. Nos. 2 and 3; no sampling depth taken (bottom depth at position, 578-567 m), Menzies trawl.
Lat./Long.: 53°08'S, 59°22'W.
Collector: U.S.N.S. Eltanin Sta. No. 340-25. 03 Dec 1962.

PARATYPE: LACM 63-154.1 (AHF Cat. No. 2031-1) female, 13.0 mm.
Locality: United Kingdom, east of Falkland Islands, Cape Pembroke, near hydrographic Sta. No. 25; 855-866 m, Menzies trawl.
Lat./Long.: 51°57'S, 56°39'W.
Collector: U.S.N.S. Eltanin Sta. No. 557. 14 Mar 1963.

FAMILY Dendrotiidae Vanhoffen, 1914

Acanthomunna tannerensis Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):6, pl. 1.
HOLOTYPE: LACM 60-76.4 (AHF Type No. 6041), female, 3.5 mm.
Locality: USA, California, Channel Islands, Tanner Canyon, San Clemente Island, 54.8 km, 250° T from China

Point Light; green muddy sand, 792 m, Campbell grab.

Lat./Long.: 32°37.87'N, 118°58.70'W.
 Collector: R/V Velero IV Sta. No. 6833-60. 29 Jan 1960.

FAMILY Desmosomatidae G.O. Sars, 1897

Desmosoma symmetrica Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):7, pl. 2.
HOLOTYPE: LACM 60-77.2 (AHF Type No. 6042), female with marsupium, 3.2 mm.
Locality: USA, California, Channel Islands, Tanner Canyon, San Clemente Island, 65.4 km, 249° T from China Point Light; coarse muddy sand, 415 m, Campbell grab.
 Lat./Long.: 32°35.80'N, 119°04.92'W.
 Collector: R/V Velero IV Sta. No. 6836-60. 29 Jan 1960.
Remarks: =Momedossa symmetrica (Schultz, 1966). Generic reassignment by Hessler, 1970, Bulletin of the Scripps Institution of Oceanography, 15:62.

FAMILY Haploniscidae Hansen, 1916

Antennuloniscus subellipticus Menzies and Schultz, 1967

Reference: Antarctic Research Series, 11:147, figs. 4, 5.
HOLOTYPE: LACM 62-83.1 (AHF Type No. 625, AHF Acc. No. 1966-2), male, 2.0 mm.
ALLOTYPE: LACM 62-83.3 (AHF Type No. 625a, AHF Acc. No. 1966-2), female, 2.1 mm.
PARATYPES: LACM 62-83.4 (AHF Acc. No. 1966-2), 5 specimens.
Locality: Argentina, off Cabo de Hornos, Drake Passage, between hydrographic Sta. Nos. 6 and 7; 3733-3806 m, 10 ft. Blake trawl.
 Lat./Long.: 57°13'S, 62°48'W.
 Collector: U.S.N.S. Eltanin Sta. No. 126-25. 29 Jul 1962.
Remarks: Original description indicates 3 female and 1 intersex paratypes deposited at AHF.
PARATYPE: LACM 62-131.1 (AHF Acc. No. 1966-2), male, 2.0 mm.
Locality: Argentina, off Cabo de Hornos, Drake Passage, between hydrographic Sta. Nos. 5 and 6; 3825-3975 m, Menzies trawl.
 Lat./Long.: 57°06'S, 63°21'W
 Collector: U.S.N.S. Eltanin Sta. No. 120-25. 28 Jul 1962.

FAMILY Jaeropsididae Nordenstam, 1933

Jaeropsis antarctica Menzies and Schultz, 1967

Reference: Antarctic Research Series, 11:182, figs. 32, 33.
HOLOTYPE: LACM 63-158.1 (AHF Type No. 637), male, 3.5 mm.
 Locality: United Kingdom, Drake Passage, South Shetland Islands, southwest of King George Island; no sampling depth taken (bottom depth at position, 681-1409 m), 5 ft. Blake trawl.
 Lat./Long.: 62°40'S, 59°30'W.
 Collector: U.S.N.S. Eltanin Sta. No. 430. 07 Jan 1963.
 Remarks: Holotype and paratypes not found in collection as of March 1988. Original description indicates 29 paratypes from 4 stations (place of deposition not given).

Jaeropsis concava Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):9, pl. 5.
HOLOTYPE: LACM 59-147.2 (AHF Type No. 5925), male, 3.1 mm.
 Locality: USA, California, Channel Islands, Santa Cruz Channel, off south side of Santa Cruz Island, 4.5 km, 249.5° T from Gull Island; rocks and glauconitic sand, 205 m, Campbell grab.
 Lat./Long.: 33°56.10'N, 119°52.28'W.
 Collector: R/V Velero IV Sta. No. 6806-59. 22 Dec 1959.

Jaeropsis dubia Menzies, 1951

Reference: Proceedings of the United States National Museum, 101(3273):147, fig. 29-33.
PARATYPES: LACM 48-62.5, 4 males, 14 females (3 ovigerous).
 Locality: USA, California, Marin County, Tomales Point, Tomales Bluff, bayside; on Laminaria sp. holdfast and rock.
 Lat./Long.: Approx. 38°25'N, 122°59'W.
 Collector: R. J. Menzies. 23 May 1948.

FAMILY Janiridae G.O. Sars, 1897

Caecianiropsis psammophila Menzies and Pettit, 1956

Reference: Proceedings of the United States National Museum, 106(3376):442, figs. 1-3.
PARATYPES: LACM 49-251.1 (AHF Type No. 4922, AHF Cat. No. 2028-1), 1 male, 1 female.
 Locality: USA, California, Marin County, Tomales Point, Tomales Bluff; reef, zone II, mid-intertidal, approx. 13 cm below surface of coarse sand.
 Lat./Long.: Approx. 38°15'N, 123°00'W.
 Collector: R. J. Menzies. 27 Jan 1949.
 Remarks: Gift from Pacific Marine Station, University of the Pacific, Dillon Beach, California. Original description indicates collection date as 09 July 1949, apparently in error.

Caecijaera horvathi Menzies, 1951

Reference: American Museum Novitates, 1542:3, figs. 1-3.
HOLOTYPE: LACM 50-72.1 (AHF Type No. 505), male, 1.6 mm.
ALLOTYPE: LACM 50-72.2 (AHF Type No. 505a), ovigerous female, 1.7 mm.
PARATYPES: LACM 50-72.3, 7 males, 10 females.
Locality: USA, California, Los Angeles County, Los Angeles-Long Beach Harbor, southwest corner of Terminal Island; from wood infested with Limnoria sp.
Lat./Long.: Approx. 33°45'N, 118°10'W.
Collector: C. Horvath. 06 Dec 1950.

Iais singaporensis Menzies and Barnard, 1951

Reference: Bulletin of the Southern California Academy of Sciences, 50(3):144, pls. 46-50.
PARATYPES: LACM 50-73.1 (AHF Type No. 5013), 3 males, 3 females.
Locality: Malaysia, Singapore Island, Seletar and Punggol.
Lat./Long.: Approx. 1°25'N, 103°54'E.
Host: Sphaeroma sp.
Collector: Raffles Museum. May-Jun 1950.
Remarks: Donated by Raffles Museum. =Iais californica (Richardson, 1904). (Originally as Janiropsis; Proceedings of the United States National Museum, 27:666-667). Species synonymy by Hurley, 1956, Transactions of the Royal Society of New Zealand, 83(Part 4):715.

Ianiropsis analoga Menzies, 1952

Reference: Proceedings of the United States National Museum, 102(3293):141, figs. 60-62.
PARATYPES: LACM 48-67.1 (AHF Type No. 489, AHF Cat. No. 2023-1), 3 males, 3 females.
Locality: USA, California, Marin County, Dillon Beach, Second Sled Road; under rocks and on Laminaria sp. holdfasts.
Lat./Long.: Approx. 38°15'N, 123°00'W.
Collector: R. J. Menzies. 12 May 1948.
Remarks: Gift from Pacific Marine Station, University of the Pacific, Dillon Beach, California.

Ianiropsis epilittoralis Menzies, 1952

Reference: Proceedings of the United States National Museum, 102(3293):149, figs. 66, 67.
PARATYPE: LACM 48-68.1 (AHF Type No. 488, AHF Cat. No. 2026-1).
Locality: USA, California, Marin County, Dillon Beach, First Sled Road; in tidepool on top of Mytilus sp. covered rock.
Lat./Long.: Approx. 38°15'N, 123°00'W.
Collector: R. J. Menzies. 16 May 1948.

Remarks: Gift from Pacific Marine Station, University of the Pacific, Dillon Beach, California. Original description indicates 4 paratypes deposited at AHF.

Ianiropsis montereyensis Menzies, 1952

Reference: Proceedings of the United States National Museum, 102(3293):152, figs. 68, 69.
PARATYPES: LACM 47-33.1 (AHF Type No. 473, AHF Cat. No. 2029-1), 1 male, 1 female.
Locality: USA, California, San Mateo County, Pescadero Point; lowest intertidal zone, under sponge-encrusted rock.
Lat./Long.: Approx. 37°15'N, 122°25'W.
Collector: J. Davis. 19 Jul 1947.

Ianiropsis tridens Menzies, 1952

Reference: Proceedings of the United States National Museum, 102(3293):156, fig. 71.
PARATYPES: LACM 48-65.2 (AHF Type No. 4811, AHF Cat. No. 2025-1), 1 male, 1 female.
Locality: USA, California, Marin County, Tomales Point; reef, from Laminaria sp. holdfast.
Lat./Long.: Approx. 38°15'N, 123°00'W.
Collector: R. J. Menzies. 09 Jun 1948.
Remarks: Gift from Pacific Marine Station, University of the Pacific, Dillon Beach, California.

Janiralata davisi Menzies, 1951

Reference: Proceedings of the United States National Museum, 101(3273):124, figs. 19, 20.
PARATYPE: LACM 47-34.1 (AHF Type No. 472), female.
Locality: USA, California, Monterey County, Carmel Cove; intertidal, zone IV, on undersurface of submerged rock.
Lat./Long.: Approx. 36°34'N, 121°56'W.
Collector: J. Davis. 06 Jul 1947.
Remarks: Specimen donated to R. J. Menzies by F. A. Pitelka, Zoology Dept., University of California, Berkeley.

FAMILY Macrostylidae Hansen, 1916

Vana longiremis Meinert, 1890

Reference: Det Videnskabelige Udbytte af Kanonbæaden "Hauch's" Togter 1883-1886:195, figs. 63-73.
PARATYPES: LACM 3 (AHF Cat. No. 1114-01), 4 specimens.
Locality: Denmark, Denmark Strait, Nordjyllands, 24 km north northeast of Skagen Lightship, Hauch St. 460; 227 m.

Lat./Long.: Approx. 58°02'N, 10°50'E.
 Collector: 22 Jul 1886.
 Remarks: Donated by Torben Wolff. =Macrostylis longiremis (Meinert, 1890). Generic reassignment by Sars, 1899, An Account of the Crustacea of Norway, Bergen Museum, 2(Part 13, 14):250.

FAMILY Microcerberidae Karaman, 1933

Microcerberus boninensis Itô, 1975

Reference: Annotationes Zoologicae Japonenses, 48(2):120, figs. 1-5.
PARATYPES: LACM 73-170.1 (AHF Type No. 732), 4 specimens.
 Locality: Japan, Ogasawara Guntō (Bonin Islands), Mukō Jima Rettō (Mukōjima Island); sand and pebbles, decanting and sieving method.
 Lat./Long.: Approx. 27°45'N, 141°25'E.
 Collector: T. Itô. 11 Apr 1973.

Microcerberus fukudai Itô, 1974

Reference: Journal of the Faculty of Science, Hokkaidō University, Series VI, Zoology 19(2):339, figs. 1-3 and pl. 27.
PARATYPES: LACM 73-171.1 (AHF Type No. 733), 3 specimens.
 Locality: Japan, Hokkaidō, Tombetsu; rinsed from sand.
 Lat./Long.: Approx. 45°00'N, 142°30'E.
 Collector: T. Itô. 25 Jul 1973.

FAMILY Munnidae G.O. Sars, 1897

Munna chromatocephala Menzies, 1952

Reference: Proceedings of the United States National Museum, 102(3293):128, figs. 52, 53.
PARATYPES: LACM 48-70.1 (AHF Type No. 481, AHF Cat. No. 2024-1), 1 male, 4 females.
 Locality: USA, California, Marin County, Dillon Beach, First Sled Road; north rocks, in Mytilus sp. biotope.
 Lat./Long.: Approx. 38°15'N, 123°00'W.
 Collector: R. J. Menzies. 23 Jan 1948.
 Remarks: Original description indicates 4 female paratypes deposited at AHF.

Munna magnifica Schultz, 1964

Reference: Pacific Science, 18(3):310, fig. 2.
HOLOTYPE: LACM 54-94.2 (AHF Type No. 5417), female (with embryos in marsupium), 2.0 mm.
PARATYPE: LACM 54-94.4.
 Locality: USA, California, Channel Islands, Santa Barbara Island, 24.3 km, 301° T from North Light; cobbles,

gravel and compact black mud, 457 m, Campbell grab.
 Lat./Long.: 33°35.98'N, 119°15.18'W.
 Collector: R/V Velero IV Sta. No. 2969-54. 31 Oct 1954.

Munna spinifrons Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):13, fig.7.
HOLOTYPE: LACM 57-28.4 (AHF Type No. 576), male, 1.5 mm.
 Locality: USA, California, Santa Barbara County, 20.4 km,
 089° T from Point Conception Light; silty sand,
 16 m, hydro-winch.
 Lat./Long.: 34°27.3'N, 120°14.8'W.
 Collector: R/V Velero IV Sta. No. 4822-57. 17 Jan 1957.
 Remarks: In addition, LACM holds 3 paratypes from the
 holotype station listed in the Material Examined
 section of the original description (see
 Appendix).

Munna ubiquita Menzies, 1952

Reference: Proceedings of the United States National Museum,
 102(3293):120, figs. 46-48.
PARATYPES: LACM 48-71.1 (AHF Type No. 4810, AHF Cat. No.
 2027-1), 1 male, 4 ovigerous females.
 Locality: USA, California, Marin County, Dillon Beach, First
 Sled Road; north rocks, with Scrupocellaria
californica.
 Lat./Long.: Approx. 38°15'N, 123°00'W.
 Collector: R. J. Menzies. 21 Jan 1948.
 Remarks: Original description indicates 6 paratypes
 deposited at AHF. =Uromunna ubiquita (Menzies,
 1952). Generic reassignment by Poore, 1984,
 Proceedings of the Royal Society of Victoria,
 96(2):81.

FAMILY Munnopsidae M. Sars, 1869

Eurycope californiensis Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):8, pl. 3.
HOLOTYPE: LACM 60-89.1 (AHF Type No. 6043), female, 3.5 mm.
PARATYPE: LACM 60-89.3.
 Locality: USA, California, Orange County, Newport Canyon,
 8.8 km, 174° T from base of Newport Pier; green
 mud and gray sand (some very coarse), 465 m,
 Campbell grab.
 Lat./Long.: 33°31.47'N, 117°54.97'W.
 Collector: R/V Velero IV Sta. No. 7032-60. 5 May 1960.

Ilyarachna acarina Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):9, fig. 2.
HOLOTYPE: LACM 57-83.1 (AHF Type No. 578), female, 4 mm.

Locality: USA, California, Santa Barbara County, 18.9 km, 147° T from Santa Barbara Breakwater Light; green mud, 91 m, hydro-winches.
 Lat./Long.: 34°15.80'N, 119°34.47'W.
 Collector: R/V Velero IV Sta. No. 4980-57. 11 Apr 1957.
 Remarks: In addition, LACM holds 23 paratypes from 10 stations listed in the Material Examined section of the original description (see Appendix).

Ilyarachna profunda Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):9, pl. 4.
HOLOTYPE: LACM 60-87.2 (AHF Type No. 6044), male, 3.0 mm.
 Locality: USA, California, San Diego County, La Jolla Canyon, 20.0 km, 286.5° T from Point La Jolla; green sandy mud, 775 m, Campbell grab.
 Lat./Long.: 32°54.35'N, 117°29.55'W.
 Collector: R/V Velero IV Sta. No. 7047-60. 07 May 1960.

FAMILY Nannoniscidae Hansen, 1916

Nannonisconus latipleonus Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):11, pl. 6.
HOLOTYPE: LACM 54-55.1 (AHF Type No. 5415), male, 2.8 mm.
 Locality: USA, California, Los Angeles County, Redondo Canyon, 17.2 km, 287.5° T from Palos Verdes Point; many large rocks and blue-gray mud, 459 m, Hayward grab.
 Lat./Long.: 33°48.0'N, 118°32.0'W.
 Collector: R/V Velero IV Sta. No. 2793-54. 22 May 1954.

FAMILY Paramunnidae Vanhoffen, 1914

Austrosignum erratum Schultz, 1964

Reference: Pacific Science, 18(3):307, fig. 1.
HOLOTYPE: LACM 58-166.1 (AHF Type No. 5814), male, 1.8 mm.
 Locality: USA, California, Santa Barbara County, Santa Barbara Channel, 8.5 km, 137° T from Gaviota Pier; olive green, silty sand, 128 m, hydro-winches and orange peel grab.
 Lat./Long.: 34°24.8'N, 120°08.7'W.
 Collector: R/V Velero IV Sta. No. 6003-58. 16 Dec 1958.
 Remarks: =Munnogonium erratum (Schultz, 1964). Generic reassignment by Bowman and Schultz, 1974, Proceedings of the Biological Society of Washington 87(25):270.

Austrosignum tillerae Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):8, fig. 1.

HOLOTYPE: LACM 56-26.11 (AHF Type No. 567), female, 1 mm.

PARATYPE: LACM 56-26.2.

Locality: USA, California, San Diego County, 9.6 km, 294° T from Point Loma Light; green mud and shells, 101 m, hydro-winches and Hayward grab.

Lat./Long.: 32° 41.8'N, 117° 20.4'W.

Collector: R/V Velero IV Sta. No. 4753-56. 08 Dec 1956.

Remarks: Holotype missing as of 19 February 1971.
= Munnogonium tillerae (Menzies and Barnard, 1959). Generic reassignment by Bowman and Schultz, 1974, Proceedings of the Biological Society of Washington, 87(25):266.

PARATYPE: LACM 57-22.2.

Locality: USA, California, Santa Barbara County, 6.9 km, 179° T from Point Arguello Light; 88 m, hydro-winches.

Lat./Long.: 34° 30.3'N, 120° 39.0'W.

Collector: R/V Velero IV Sta. No. 4814-57. 16 Jan 1957.

PARATYPE: LACM 57-28.14.

Locality: USA, California, Santa Barbara County, 20.3 km, 089° T from Point Conception Light; 16 m, hydro-winches.

Lat./Long.: 34° 27.3'N, 120° 14.8'W.

Collector: R/V Velero IV Sta. No. 4822-57. 17 Jan 1957.

PARATYPE: LACM 57-132.2.

Locality: USA, California, San Diego County, 16.7 km, 185° T from Point Loma Light; red sand, 55 m, hydro-winches.

Lat./Long.: 32° 31'N, 117° 15.3'W.

Collector: R/V Velero IV Sta. No. 5193-57. 14 Aug 1957.

PARATYPE: LACM 57-228.2.

Locality: USA, California, Santa Barbara County, 16.8 km, 106° T from Santa Barbara Point Light; green mud, 44 m, hydro-winches.

Lat./Long.: 34° 21.3'N, 119° 32.58'W.

Collector: R/V Velero IV Sta. No. 5176-57. 03 Jul 1957.

Paramunna quadratifrons Iverson and Wilson, 1980

Reference: Proceedings of the Biological Society of Washington, 93(4):983, figs. 1-4.

PARATYPES: LACM 78-181.1 (AHF Type No. 781, AHF Cat. No. 1950-01), 2 specimens.

Locality: USA, California, Channel Islands, south of Anacapa Islands; light brown, coarse sand and shell, 197 m, box core.

Lat./Long.: 33° 53.24'N, 119° 23.35'W.

Collector: R/V Thomas G. Thompson Sta. No. 81832. 24 Aug 1978.

Remarks: Original description indicates 2 male and 1 female paratypes deposited at AHF.

SUBORDER Epicaridea Latreille, 1831
 FAMILY Bopyridae Rafinesque, 1815

Bopyrella thomsoni muiensis Danforth, 1970

Reference: Pacific Science, 24(4):462, fig. 1.
HOLOTYPE: LACM 66-269.1 (AHF Type No. 664, AHF Acc. No. 1969-29), female, 11.0 mm.
ALLOTYPE: LACM 66-269.2 (AHF Type No. 664a), male, 2.5 mm.
Locality: Marshall Islands, Enewetak (Eniwetok) Atoll, Henry (Mui) Island.
Lat./Long.: Approx. 11°30'N, 162°15'E.
Host: Alpheus strenuus Dana, female; from right gill chamber.
Collector: J. W. Knudsen. Sta. No. 193. 12 Aug 1966.

Bopyrione longicapitata Markham, 1980

Reference: Proceedings of the First International Marine Biological Workshop: The Marine Flora and Fauna of Hong Kong and Southern China, Hong Kong, 1980:348, figs. 14, 15.
HOLOTYPE: LACM 80-97.1 (AHF Type No. 805, AHF Cat. No. 2208-05), female, 6.78 mm.
ALLOTYPE: LACM 80-97.2 (AHF Type No. 805a, AHF Cat. No. 2208-05), male, 1.10 mm.
Locality: United Kingdom, Hong Kong, Tolo Harbour, west side of Starfish Bay; under intertidal rocks.
Lat./Long.: 22°24.92'N, 114°14.7'E.
Host: Alpheus lobidens de Haan? (AHF Cat. No. 2208-06).
Collector: J. C. Markham. 02 May 1980.

Cancricepon garthi Danforth, 1970

Reference: Pacific Science, 24(4):464, fig. 2.
HOLOTYPE: LACM 67-197.1 (AHF Type No. 671, AHF Acc. No. 1969-29), female, 2.5 mm.
ALLOTYPE: LACM 67-197.2 (AHF Type No. 671a), male, 1.0 mm.
Locality: Marshall Islands, Enewetak (Eniwetok) Atoll, Enewetak (Eniwetok-Fred) Island.
Lat./Long.: Approx. 11°30'N, 162°15'E.
Host: Dacryopilumnus eremita Nobili; from left branchial area.
Collector: J. W. Knudsen. Sta. No. JWK-406. 08 Aug 1967.

Grapsicepon sinensis Danforth, 1971

Reference: Micronesica, 7(1,2):163, fig. 1.
HOLOTYPE: LACM 68-250.1 (AHF Type No. 686, AHF Acc. No. 1969-29), female, 3.5 mm.
ALLOTYPE: LACM 68-250.2 (AHF Type No. 686a), male, 1.0 mm.
Locality: United Kingdom, Hong Kong.
Lat./Long.: Approx. 22°15'N, 114°10'E.
Host: Lissocarcinus orbicularis Dana, female; from

left branchial cavity, which in turn was taken from the respiratory tree of Holothuria argus Jaeger.

Collector: L. B. Trott. 13 Jul 1968.
 Remarks: No. 713681 CR3. Allotype not found in collection as of June 1987.

Hypercepon guamensis Danforth, 1971

Reference: Micronesica, 7(1,2):167, fig. 2.
HOLOTYPE: LACM 66-271.1 (AHF Type No. 665, AHF Acc. No. 1969-29), female, 5.0 mm.
ALLOTYPE: LACM 66-271.2 (AHF Type No. 665a), male, 2.5 mm.
 Locality: USA, Guam, Tumon Bay, Gun Beach.
 Lat./Long.: Approx. 13°30'N, 144°46'E.
 Host: Trapezia ferruginea Latreille, female; from left branchial chamber, strongly compressed among the gills.
 Collector: L. G. Eldredge. 20 Feb 1966.

Ionella murchisoni Danforth, 1970

Reference: Bulletin of the Southern California Academy of Sciences, 69(1):27, fig. 1.
HOLOTYPE: LACM 65-206.1 (AHF Type No. 6513, AHF Acc. No. 1969-29), female.
ALLOTYPE: LACM 65-206.2 (AHF Type No. 6513a), male.
 Locality: USA, Hawaiian Islands, Oahu, Kaneohe Bay, Sand Island.
 Lat./Long.: Approx. 21°27'N, 157°47'E.
 Host: Callianassa sp., from right gill chamber.
 Collector: E. Murchison. 25 Feb 1965.

Litobopyrus longicaudatus Markham, 1980

Reference: Proceedings of the First International Marine Biological Workshop: The Marine Flora and Fauna of Hong Kong and Southern China, Hong Kong, 1980:346, fig. 13.
HOLOTYPE: LACM 80-97.3 (AHF Type No. 803, AHF Cat. No. 2208-01), female, 2.30 mm.
ALLOTYPE: LACM 80-97.4 (AHF Type No. 803a, AHF Cat. No. 2208-01), male, 0.66 mm.
PARATYPES: LACM 80-97.5 (AHF Type No. 801, AHF Cat. No. 2208-04), 1 male, 2 females.
 Locality: United Kingdom, Hong Kong, Tolo Harbour, west side of Starfish Bay; under intertidal rocks.
 Lat./Long.: 22°24.92'N, 114°14.7'E.
 Host: Athanas sp.
 Collector: J. C. Markham. 02 May 1980.

Merocepon knudseni Danforth, 1970

Reference: Pacific Science, 24(4):467, fig. 4.
HOLOTYPE: LACM 65-207.1 (AHF Type No. 6512, AHF Acc. No.

ALLOTYPE: 1969-29), female, 18.0 mm.
 LACM 65-207.2 (AHF Type No. 6512a), male, 6.0
 mm.
Locality: Marshall Islands, Enewetak (Eniwetok) Atoll,
 Enewetak (Eniwetok-Fred) Island.
Lat./Long.: Approx. 11°30'N, 162°15'E.
Host: Eriphia sebana (Shaw and Nodder), female; from
 right branchial chamber.
Collector: J. W. Knudsen. Sta. No. II. 05 Feb 1965.

Onychocepon seychellensis Danforth, 1971

Reference: Micronesica, 7(1,2):169, fig. 3.
HOLOTYPE: LACM 66-270.1 (AHF Type No. 666, AHF Acc. No.
 1969-29), female, 4.0 mm.
ALLOTYPE: LACM 66-270.2 (AHF Type No. 666a), male, 2.0 mm.
Locality: Indian Ocean, Seychelles, Mahé Island, Port Glaud.
Lat./Long.: Approx. 4°35'S, 55°30'E.
Host: Tetralia glaberrima (Herbst), male; from left
 branchial chamber.
Collector: A. J. Bruce. Sta. No. 14, Coral 31. 04 Jul 1966.

Pleurocryptosa enosteoides Markham, 1980

Reference: Proceedings of the first International Marine
 Biological Workshop: The Marine Flora and Fauna of
 Hong Kong and Southern China, Hong Kong, 1980:329,
 figs. 4, 5.
HOLOTYPE: LACM 80-99.1 (AHF Type No. 802, AHF Cat. No.
 2206-04), female, 3.94 mm.
ALLOTYPE: LACM 80-99.2 (AHF Type No. 802a), male, 1.18 mm.
Locality: United Kingdom, Hong Kong, Mirs Bay, Breakers
 Reef; bottom of coral head, 18 m.
Lat./Long.: Approx. 22°15'N, 114°10'E.
Host: Enosteoides ornatus (Stimpson).
Collector: M. Holland. Apr 1980.

Probopyriscus novempalensis Markham, 1980

Reference: Proceedings of the First International Marine
 Biological Workshop: The Marine Flora and Fauna of
 Hong Kong and Southern China, Hong Kong, 1980:341,
 figs. 11, 12.
HOLOTYPE: LACM 80-100.1 (AHF Type No. 804, AHF Cat. No.
 2202-01), female, 5.51 mm.
ALLOTYPE: LACM 80-100.2 (AHF Type No. 804a, AHF Cat. No.
 2202-01), male, 1.62 mm.
Locality: United Kingdom, Hong Kong, Mirs Bay, Ninepins
 Islands, North Reef; 14 m, SCUBA.
Lat./Long.: Approx. 22°15'N, 114°20'E.
Host: Alpheus sp.
Collectors: Various SCUBA divers. 22 Apr 1980.

Pseudione novaeguineensis Danforth, 1971

Reference: Bulletin of the Southern California Academy of Sciences, 70(2):99, fig. 1b-g.
HOLOTYPE: LACM 69-118.1 (AHF Type No. 694, AHF Acc. No. 1970-3), female, 3.5 mm.
ALLOTYPE: LACM 69-118.2 (AHF Type No. 694a), male, 1.1 mm.
PARATYPES: LACM 69-118.3, 2 males, 2 females.
Locality: New Guinea, Papua New Guinea, near Maiwara; on mangrove roots.
Lat./Long.: 5°4.4'S, 145°43.7'E.
Host: Clibanarius sp., aff. longitarsis (De Haan).
Collector: R/V Alpha Helix, E. Ball. 26 Oct 1969.

Stegophryxus hyphalus Markham, 1974

Reference: Bulletin of the Southern California Academy of Sciences, 73:36, figs. 6-8.
HOLOTYPE: LACM 39-130.1 (AHF Type No. 3928), female, 6.1 mm.
ALLOTYPE: LACM 39-130.3 (AHF Type No. 3928a), male, 2.6 mm.
PARATYPE: LACM 39-130.2, female.
Locality: USA, California, Channel Islands, northwest of San Clemente Island; mud, 216-384 m.
Lat./Long.: 32°59.5'N, 118°38.4'W.
Host: Parapagurodes makarovi McLaughlin and Haig.
Collector: R/V Velero III Sta. No. 1026-39. 09 Dec 1939.

PARATYPES: LACM 41-209.1, 1 male, 5 females.
Locality: USA, California, Channel Islands, Santa Catalina Island, 4.6 km southeast of Seal Rocks; rock and lumpy gray sand, 159-165 m, dredge.

Lat./Long.: 33°17.3'N, 118°15.8'W.
Host: Parapagurodes laurentae McLaughlin and Haig.
Collector: R/V Velero III Sta. No. 1429-41, D-3. 25 Oct 1941.

PARATYPES: LACM 39-10.1, 1 male, 1 immature female.
Locality: USA, California, Channel Islands, San Clemente Island, off Pyramid Cove; sand and mud, 143-201 m.

Lat./Long.: 32°47.2'N, 118°22.2'W.
Host: Parapagurodes laurentae McLaughlin and Haig.
Collector: R/V Velero III Sta. No. 914a-39. 19 Feb 1939.

PARATYPES: LACM 39-7.1, 1 male, 1 female.
Locality: USA, California, Channel Islands, San Clemente Island, off Wilson Cove; sand and broken shell, 110-155 m.

Lat./Long.: 33°00.3'N, 118°33.2'W.
Host: Parapagurodes makarovi McLaughlin and Haig.
Collector: R/V Velero III Sta. No. 911-39. 18 Feb 1939.

PARATYPES: LACM 39-85.1, 1 male, 1 female.
PARATYPES: LACM 39-85.2, 3 males, 6 females (1 immature).
Locality: USA, California, Channel Islands, 10.2 km north

of Santa Barbara Island; gray sand, 139-159 m, dredge.
 Lat./Long.: 33°34.9'N, 119°00.5'W.
 Hosts: Parapagurodes laurentae McLaughlin and Haig
 (for LACM 39-85.1); Parapagurodes makarovi
 McLaughlin and Haig (for LACM 39-85.2).
 Collector: R/V Velero III Sta. No. 981-39, D-2. 29 May
 1939.
 Remarks: Original description indicates (for LACM 39-85.2)
 3 male and 7 female (1 immature) paratypes
 deposited at AHF.

PARATYPE: LACM 39-116.1, immature female.
Locality: USA, California, Channel Islands, San Clemente
 Island, south of Pyramid Cove; sand and shell,
 101-126 m.
 Lat./Long.: 32°45.9'N, 118°26.2'W.
 Host: Parapagurodes laurentae McLaughlin and Haig.
 Collector: R/V Velero III Sta. No. 1012-39. 9 Nov 1939.

PARATYPES: LACM 39-124.1, 1 male, 2 females.
Locality: USA, California, Channel Islands, north of San
 Clemente Island; gray sand, 247-274 m.
 Lat./Long.: 33°03.2'N, 118°40.5'W.
 Host: Parapagurodes makarovi McLaughlin and Haig.
 Collector: R/V Velero III Sta. No. 1020-39. 24 Nov 1939.

PARATYPE: LACM 41-19.2, female.
Locality: USA, California, Channel Islands, San Clemente
 Island, off Wilson Cove; coralline and shell,
 95-112 m, dredge.
 Lat./Long.: 33°00.6'N. 118°32.5'W.
 Host: Parapagurodes laurentae McLaughlin and Haig.
 Collector: R/V Velero III Sta. No. 1239-41. 22 Feb 1941.

PARATYPE: LACM 39-87.1, female.
Locality: USA, California, Channel Islands, 28.7 km north
 northwest of Santa Barbara Island; boulders, 128
 m, dredge.
 Lat./Long.: 33°43.5'N, 119°09.5'W.
 Host: Parapagurodes makarovi McLaughlin and Haig.
 Collector: R/V Velero III Sta. No. 983-39. 29 May 1939.

PARATYPE: LACM 40-147.1, female.
Locality: USA, California, Channel Islands, 7.4 km southeast
 of Santa Catalina Island; fine green sand, 210-198
 m, dredge.
 Lat./Long.: 33°17.0'N, 118°14.5'W.
 Host: Parapagurodes makarovi McLaughlin and Haig.
 Collector: R/V Velero III Sta. no. 1173-40. 20 Aug 1940.

Trapezicepon domeciae Danforth, 1971

Reference: Micronesica, 7(1,2):172, fig. 4.
HOLOTYPE: LACM 64-126.1 (AHF Type No. 642, AHF Acc. No.

1969-29), female, 4.0 mm.
ALLOTYPE: LACM 64-126.2 (AHF Type No. 642a), male, 2.0 mm.
Locality: Indian Ocean, Maldives; from host on Acropora sp.
Lat./Long.: Approx. 4°N, 73°E.
Host: Domecia glabra Alcock, female; from right
branchial chamber.
Collector: J. S. Garth. Sta. No. GA 64-37a, lot 3. 21 Apr
1964.

SUBORDER Flabellifera Sars, 1882
 FAMILY Aegidae Leach 1815

Rocinela murilloi Brusca and Iverson, 1985

Reference: Revista de Biología Tropical, 33(Supl. 1):44, fig.
14a-j.
HOLOTYPE: LACM 73-109.1 (AHF Type. No. 737, AHF Cat. No.
202-05), nongravid female.
PARATOPOTYPES: LACM 73-109.2 (AHF Cat. No. 202-05), 8 specimens.
Locality: Costa Rica, Pacific coast, Guanacaste, 25.9 km,
233° T from Punta Guiones; 1372-1865 m, beam
trawl.
Lat./Long.: 9°40.95'N, 85°48.2'W
Collector: R/V Velero IV Sta. No. 18932-73. 12-13 May
1973.

FAMILY Cirolanidae Dana, 1853

Cirolana californiensis Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):14, pl. 8.
HOLOTYPE: LACM 60-88.4 (AHF Type No. 6048), female, 8.0 mm.
Locality: USA, California, San Diego County, Coronado
Canyon, 8.6 km, 322.5° T from North Coronado
Island; green mud, 794 m, Campbell grab.
Lat./Long.: 32°30.70'N, 117°21.62'W.
Collector: R/V Velero IV Sta. No. 6851-60. 01 Feb 1960.

PARATYPES: LACM 60-76.3 (AHF Cat. No. 952-1), 2 specimens.
Locality: USA, California, Channel Islands, Tanner Canyon,
San Clemente Island, 54.8 km, 250° T from China
Point Light; green muddy sand, 792 m, Campbell grab.
Lat./Long.: 32°37.87'N, 118°58.70'W
Collector: R/V Velero IV Sta. No. 6833-60. 29 Jan 1960.
Remarks: =Natatalana californiensis (Schultz, 1966).
Generic reassignment by Bruce, 1981, Australian
Journal of Marine and Freshwater Research, 32:958.

Cirolana joanneae Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):15, pl. 9.
HOLOTYPE: LACM 59-149.4 (AHF Type No. 5926), female, 3.0
mm.

Locality: USA, California, Channel Islands, Santa Cruz
 Channel, off south side of Santa Cruz Island, 4.3
 km, 246.5° T from Gull Island; rocks and some
 green sand, 201 m, Campbell grab.
 Lat./Long.: 33°56.05'N, 119°52.05'W.
 Collector: R/V Velero IV Sta. No. 6805-59. 22 Dec 1959.

PARATYPES: LACM 54-94.1 (AHF Cat. No. 960-1), 3 specimens.
 Locality: USA, California, Channel Islands, Santa Barbara
 Island, 24.3 km, 301° T from North Light; cobbles,
 gravel and compact black mud, 457 m, Campbell
 grab.
 Lat./Long.: 33°35.98'N, 119°15.18'W.
 Collector: R/V Velero IV Sta. No. 2969-54. 31 Oct 1954.
 Remarks: Schultz's (1966) holotype locality data (Velero
 Sta. 6806) are apparently in error; original label
 with specimen reads "Velero Sta. 6805." Schultz's
 (op. cit.) paratype locality data are also
 apparently in error (Velero Sta. 6805, 6806).
 =Metacirolana joanneae (Schultz, 1966).
 Generic reassignment by Bruce, 1981, Australian
 Journal of Marine and Freshwater Research, 32:954.

Eurydice branchiropus Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):32, figs. 26, 27.
HOLOTYPE: LACM 57-67.1 (AHF Type No. 579), female, 3 mm.
 Locality: USA, California, San Diego County, 18.5 m, 174° T
 from Point Loma Light; coarse red sand, 40 m,
 hydro-winch and orange peel grab.
 Lat./Long.: 32°30.0'N, 117°13.3'W.
 Collector: R/V Velero IV Sta. No. 4910-57. 26 Mar 1957.
 Remarks: In addition, LACM holds 4 specimens from the
 holotype locality listed in the Material Examined
 section of the original description (see
 Appendix). =E. caudata Richardson, 1899. Species
 synonymy by Bowman, 1977, Proceedings of the
 Biological Society of Washington, 89(57):654.

Excirolana chamensis Brusca & Weinberg, 1987

Reference: Contributions in Science, Natural History Museum
 of Los Angeles County, 392:11, figs. 1-4.
HOLOTYPE: LACM 84-215.1 (AHF Type No. 3013), male, 4.3 mm.
PARATYPE: LACM 84-215.2 (AHF Type No. 3014), male, head
 broken from body.
 Locality: Panamá, near Panamá, Bahía de Punta Chame, near
 old part of town by National Theater; polluted
 beach.
 Lat./Long.: Approx. 8°57'N, 79°30'W.
 Collector: J. Weinberg. 15 Dec 1984.

PARATYPES: LACM 84-218.1 (AHF Type No. 3015), 5 adults
 (2.4-2.6 mm), 3 mancas (1.7 mm each).
 Locality: Panamá, near Panamá, Bahía de Punta Chame; fine

Lat./Long.: sand beach.
 Approx. 8°57'N, 79°30'W.
 Collector: J. Weinberg. 25 Sep 1984.

Metacirolana costaricensis Brusca and Iverson, 1985

Reference: Revista de Biología Tropical, 33(Supl. 1):36, fig. 11d.
HOLOTYPE: LACM 80-60.1 (AHF Type No. 8011).
PARATYPES: LACM 80-60.2, 2 specimens.
 Locality: Costa Rica, Pacific coast, Guanacaste, Parque Nacional Santa Rosa; rocky littoral approx. 1 km from mouth of mangrove estero (separated by sand beach), large surf, formalin washes of rocks and turf algae.
 Lat./Long.: Approx. 10°48'N, 86°57'W.
 Collectors: R. C. Brusca, A. M. Mackey, M. M. Murillo and A. Dittle. 26 Apr 1980.

Politolana wickstena Wetzer, Delaney and Brusca, 1987

Reference: Contributions in Science, Natural History Museum of Los Angeles County, 392:3, figs. 1-7.
HOLOTYPE: LACM 85-171.1 (LACM Type No. 3008), nongravid female, 24.75 mm.
PARATYPES: LACM 85-171.2 (LACM Type No. 3009), 3 nongravid females, 24.26 mm, 26.07 mm, and 26.57 mm.
 Locality: USA, Florida, Bay County, south of Panama City, northeast Gulf of Mexico; approx. 488 m, baited bottom trap.
 Lat./Long.: 28°22.89'N, 86°14'W.
 Collectors: R/V Citation, M. K. Wicksten and B. Cocke. 17 May 1985.
PARATYPES: LACM 85-197.1 (LACM Type No. 3010), 2 nongravid females, 27.89 mm and 30.53 mm.
 Locality: Northwest Gulf of Mexico.
 Collector: R/V Citation, M. K. Wicksten. May 1985.
 Remarks: Depth and coordinates not known.
PARATYPES: LACM 85-175.1 (LACM Type No. 3011), 3 nongravid females, 25.41 mm, 27.23 mm and 27.38 mm.
 Locality: USA, Florida, Bay County, south of Panama City, northeast Gulf of Mexico; 500-600 m, baited bottom trap.
 Lat./Long.: 28°22.29'N, 86°25.20'W.
 Collectors: R/V Citation, M. K. Wicksten and B. Cocke. Jun 1985.
PARATYPES: LACM 86-700.1 (LACM Type No. 3012), 2 males (15.80 mm and 18.20 mm), 32 females.
 Locality: USA, Florida, Bay County, south of Panama City, northwest Gulf of Mexico; 500-600 m, baited

bottom trap.

Lat./Long.: Approx. 28°22.29'N, 86°25.20'W.
 Collectors: R/V Citation, M. K. Wicksten and B. Cocke. Sep
 1986.

FAMILY Corallanidae Hansen, 1890

Excorallana bruscai Delaney, 1984

Reference: Bulletin of Marine Science, 34(1):5, figs. 1-4,
 14-17, 22.
HOLOTYPE: LACM 66-268.1 (AHF Type No. 6611, AHF Cat. No.
 1004-01), male, 7.88 mm.
Locality: México, Sonora, Golfo de California, Puerto de
 Lobos; seine on sand beach in evening.
Lat./Long.: Approx. 30°25'N, 112°50'W.
Collectors: D. A. Thomson and University of Arizona class. 26
 Feb 1966.
Remarks: Original description indicates collection date as
 22 February 1968, apparently in error.

PARATYPE: LACM 66-272.1 (AHF Cat. No. 1006-01), male, 8.25
 mm.
Locality: México, Sonora, Golfo de California, Puerto
 Peñasco, Station Beach; rocky intertidal.
Lat./Long.: Approx. 31°20'N, 113°35'W.
Collector: P. S. Miles. 25 Feb 1966.
Remarks: Original description indicates collection date as
 22 February 1968, apparently in error.

PARATYPE: LACM 79-165.1, female, 7.5 mm.
Locality: México, Sonora, Golfo de California, Puerto
 Peñasco, Station Beach; infauna of coquina reef.
Lat./Long.: Approx. 31°20'N, 113°35'W.
Collector: P. Pepe. Sample No. ZI, 92, 4. 23 Apr 1979.

PARATYPE: LACM 79-166.1, gravid female, 9.15 mm.
Locality: México, Sonora, Golfo de California, Puerto
 Peñasco, Station Beach; infauna of coquina reef.
Lat./Long.: Approx. 31°20'N, 113°35'W.
Collector: P. Pepe. Sample No. ZI, 60, 17. 23 Apr 1979.

PARATYPES: LACM 79-167.1, 4 males, 8.63 mm, 8.25 mm, 9.38 mm
 and 8.63 mm, and 3 females, 8.63 mm, 9.0 mm and
 6.0 mm (damaged).
Locality: México, Sonora, Golfo de California, Puerto
 Peñasco, Station Beach; infauna of coquina reef.
Lat./Long.: Approx. 31°20'N, 113°35'W.
Collector: P. Pepe. Sample No. ZI, 129, 21. 23 Apr 1979.

PARATYPES: LACM 79-168.1, 3 females, 9.0 mm (gravid), 8.25
 mm and 6.75 mm (damaged).
Locality: México, Sonora, Golfo de California, Puerto
 Peñasco, Station Beach; infauna of coquina reef.

- Lat./Long.: Approx. $31^{\circ}20'N$, $113^{\circ}35'W$.
 Collector: P. Pepe. Sample No. ZII, 85, 27. 27 Apr 1979.
- PARATYPES: LACM 79-169.1, 4 males, 7.88-8.63 mm, and 1 female, 8.63 mm.
- Locality: México, Sonora, Golfo de California, Puerto Peñasco, Station Beach; infauna of coquina reef.
- Lat./Long.: Approx. $31^{\circ}20'N$, $113^{\circ}35'W$.
 Collector: P. Pepe. Sample No. ZII, 51, 83. 28 Jan 1979.
 Remarks: Original description indicates 5 male and 1 female paratypes (place of deposition not given); a group of 2 males and 1 female was found inside an empty vermetid gastropod Serpulorbis margaritaceous (Chenu, ex Rousseau, MS) tube.
- PARATYPE: LACM 81-99.1, male, 8.63 mm.
 Locality: México, Sonora, Golfo de California, Puerto Peñasco, Pelican Point; low intertidal coquina reef, commensal in white sponge Leucetta losangelensis.
- Lat./Long.: Approx. $31^{\circ}20'N$, $113^{\circ}35'W$.
 Collector: P. M. Delaney. 19 Apr 1981.
 Remarks: Original description indicates collection date as 29 April 1981, apparently in error.
- PARATYPE: LACM 68-252.1 (UA Cat. No. 68-139), male, 10.13 mm.
 Locality: México, Sonora, Golfo de California, Puerto Peñasco, Cholla Bay.
- Lat./Long.: Approx. $31^{\circ}20'N$, $113^{\circ}35'W$.
 Collector: R. C. Brusca. 16 Feb 1968.
- PARATYPE: LACM 71-38.1 (AHF Cat. No. 1007-01), male, 6.75 mm.
 Locality: México, Sonora, Golfo de California, Puerto Peñasco, Cholla Bay; low intertidal on muddy sand.
- Lat./Long.: Approx. $31^{\circ}20'N$, $113^{\circ}35'W$.
 Collector: R. C. Brusca. 10 Jul 1971.
- PARATYPE: LACM 80-111.1, male, 7.5 mm.
 Locality: México, Baja California Sur, Golfo de California, Bahía Concepción; on subtidal coralline algae.
- Lat./Long.: Approx. $26^{\circ}55'N$, $111^{\circ}50'W$.
 Collector: E. W. Iverson. 18 Aug 1980.
- Excorallana delaneyi Stone and Heard, 1989
- Reference: Gulf Research Reports, 8(2):199, figs. 1-3, 5-8.
PARATYPES: LACM 85-198.1, 5 males, 5 females.
- Locality: USA, Florida, Gulf County, St. Joseph Bay; from Halichondria sp., 0.5-1 m.
- Lat./Long.: $29^{\circ}48'N$, $85^{\circ}24'W$.
 Collector: I. Stone and R. W. Heard. 09 Jul 1985.
 Remarks: Published coordinates ($29^{\circ}48''$ N, $089^{\circ}24''$ W) seem to be in error.

Excorallana houstoni Delaney, 1984

Reference: Bulletin of Marine Science, 34(1):11, figs. 5-7,
 20, 21.
HOLOTYPE: LACM 80-96.1 (AHF Type No. 807), female.
PARATYPE: LACM 80-96.2, female.
 Locality: México, Baja California Sur, Golfo de California,
 Bahía Concepción; formalin wash of intertidal
 rocks with oysters and barnacles.
 Lat./Long.: Approx. 26°55'N, 111°50'W.
 Collector: E. W. Iverson. Sta. No. EWI-4. 16 Aug 1980.
 Remarks: Original description indicates 4 female paratypes
 deposited at AHF.

PARATYPE: LACM 76-565.1, female, 5.25 mm.
 Locality: México, Colima, Manzanillo, Bahía Audiencia;
 formalin wash of barnacles.
 Lat./Long.: Approx. 19°00'N, 104°20'W.
 Collectors: R. C. Brusca, B. R. Wallerstein, P. Pepe and A. M.
 Mackey. 04 Sep 1976.

PARATYPE: LACM 66-122.1, female, 8.25 mm.
 Locality: Ecuador, East Pacific Ocean, Islas Galápagos,
 southeast side of Isla Santa Cruz, Punta Nuñez; 18
 m, SCUBA.
 Lat./Long.: 00°44.60'S, 90°13.85'W.
 Collector: R/V Anton Bruun cruise 16. 21 May 1966.

Excorallana kathyae Menzies, 1962

Reference: Pacific Naturalist, 3(11):345, fig. 7.
PARATYPES: LACM 61-99.1 (AHF Type No. 6140), 28 specimens.
 Locality: México, Baja California, Pacific coast, eastern
 arm of Bahía de San Quintín; formalin wash of
 oyster head.
 Lat./Long.: Approx. 30°30'N, 116°00'W.
 Collector: San Quintin Bay Survey Sta. No. SQ 181, near Benthic
 Sta. No. 12, J. L. Barnard. 14 Aug 1961.
 Remarks: Menzies' notation of 328 paratypes is probably in
 error. =E. truncata (Richardson, 1899). Species
 synonymy by P. M. Delaney, 1982, Journal of
 Crustacean Biology, 2(2):273.

FAMILY Cymothoidae Leach, 1818

Lironeca bowmani Brusca, 1981

Reference: Zoological Journal of the Linnean Society, 73(2):
 165, figs. 15, 16.
HOLOTYPE: LACM 79-160.1 (AHF Type No. 791, AHF Cat. No.
 1999-01), female.
 Locality: México, Sinaloa, Golfo de California, Bahía
 Mazatlán.
 Lat./Long.: Approx. 23°11'N, 106°25'W.

Collector: M. Hendrickx. 22 Aug 1979.
 Remarks: Donated by M. Hendrickx of Estación Mazatlán,
 Universidad Nacional Autónoma de México.

PARATYPE: LACM 65-203.1 (AHF Cat. No. 2048-1, SIO Cat. No.
 C 3873, SIO Acc. No. BI65-31), female.
 Locality: México, Golfo de California, northeast side of Isla
 Santa Cruz; 27°-32° m, Chemfish and SCUBA.
 Lat./Long.: 25°18.3'N, 110°41.7'W.
 Collector: R. Rosenblatt, Sta. No. SIO 65-343 (RR65-89).
 22 Jul 1965.
 Remarks: Donated by Scripps Institution of Oceanography.

PARATYPE: LACM 68-249.1 (AHF Cat. No. 75-17-1).
 Locality: México, Sonora, El Golfo de Santa Clara; mud and
 sand, shrimp boat haul, otter trawl.
 Lat./Long.: Approx. 31°41'N, 114°30'W.
 Collector: K. Muench, et al. 22 Feb 1968.

PARATYPE: LACM 79-164.1 (AHF Cat. No. 2047-1), female.
 Locality: México, Sinaloa, Golfo de California, Bahía
 Mazatlán.
 Lat./Long.: Approx. 23°11'N, 106°25'W.
 Collectors: M. Hendrickx and A. Von der Heiden. 1979/1980.

PARATYPE: LACM 78-179.1 (AHF Cat. No. 1138-02), female.
 Locality: México, Sonora, Golfo de California, mouth of Río
 Colorado; trawl.
 Lat./Long.: Approx. 31°41'N, 114°30'W.
 Host: Micropogon megalops Gilbert, Sciaenidae, on
 gills.
 Collectors: B. Walker, J. R. Hendrickson and S. Strand. 14 May
 1978.
 Remarks: Donated by University of California, Los Angeles
 (from Ichthyology Collection).

Lironeca convexa Richardson, 1905

Reference: Proceedings of the United States National Museum,
 29(1430):445, figs. 1-2.
NEOTYPE: LACM 73-172.1 (AHF Type No. 734, AHF Cat. No.
 414-01), female. (See Brusca, 1981. Zoological
 Journal of the Linnean Society 73(2):170, figs. 15,
 18).
NEOALLOTYPE: LACM 73-172.2 (AHF Type No. 734a, AHF Cat. No.
 414-01), male.
 Locality: México, Nayarit, Playa Novillero, west of Tecuala;
 sandy beach, beach seine.
 Lat./Long.: Approx. 22°21'N, 105°40'W.
 Host: Female in mouth, male in gills of Serranus sp.
 Collector: P. Winkler. 26 Apr 1973.
 Remarks: Donated by University of Arizona (from Ichthyology
 Collection) No. UA68-124.

Lironeca menziesi Brusca, 1981

Reference: Zoological Journal of the Linnean Society, 73(2): 173, figs. 15, 19.

HOLOTYPE: LACM 49-154.2 (AHF Type No. 4924, AHF Cat. No. 129-06), female.

ALLOTYPE: LACM 49-154.3 (AHF Type No. 4924a, AHF Cat. No. 129-06), male.

PARATYPES: LACM 49-154.4 (AHF Cat. No. 129-06), 30 specimens.

Locality: México, west of Baja California, Isla Guadalupe, Ensenada Melpomene; rock bottom, shore collection, Eisenia sp.

Lat./Long.: Approx. 28°53.0'N, 118°17.7'W.

Collector: R/V Velero IV Sta. No. 1912-49. 17 Dec 1949.

PARATYPES: LACM 46-44.1 (AHF Cat. No. 1597-01), 32 specimens.

Locality: México, west of Baja California, southwest tip of Isla Guadalupe; tidal reef.

Lat./Long.: Approx. 28°51'N, 118°15'W.

Host: Clinocottus analis, gill cavity.

Collector: R/V Velero IV Sta. No. 1519-46, C. L. Hubbs (H46-201). 16 Aug 1946.

PARATYPES: LACM 46-45.1 (AHF Cat. No. 504-1), 2 females.

Locality: México, west of Baja California, southwest tip of Isla Guadalupe; tidepool.

Lat./Long.: Approx. 28°51'N, 118°15'W.

Host: Clinocottus analis, gill cavity.

Collector: R/V Velero IV Sta. No. 1521-46, C. L. Hubbs (H46-203), "Zaca" expedition. 16 Aug 1946.

PARATYPES: LACM 65-204.1 (AHF Cat. No. 2051-1, SIO Cat. No. C 3871), 2 males, 1 female.

Locality: México, Baja California Sur, east of Cabo San Lucas, off Rancho El Tule; 0-15 m, rotenone and SCUBA.

Lat./Long.: 22°57.4'N, 109°47.7'W.

Collector: R/V Neptunus Rex Sta. No. SIO 65-185 (MV65-II-13), B. J. Zahuranec. 19 Jun 1965.

Remarks: Donated by Scripps Institution of Oceanography.

PARATYPES: LACM 49-161.1 (AHF Cat. No. 1818-02), 3 specimens.

Locality: México, west of Baja California, Isla Guadalupe, 4.2 km, 043° from South Bluff; sand, 64-73 m, steel dredge.

Lat./Long.: 28°54.61'N, 118°13.92'W.

Collector: R/V Velero IV Sta. No. 1925-49. 20 Dec 1949.

PARATYPE: LACM 49-75.1 (AHF Cat. No. 1595-01), female.

Locality: México, Baja California Sur, Golfo de California, Los Frailes; rocky beach, tidepools, shore collection.

Lat./Long.: $23^{\circ}22.8'N$, $109^{\circ}24.62'W$.
 Collector: R/V Velero IV Sta. No. 1734-49. 13 Mar 1949.

PARATYPES: LACM 46-53.1 (AHF Cat. No. 1596-01), 30
 specimens.
 Locality: México, west of Baja California, south end of Isla
 Guadalupe; near outer edge of lava reef, tidepool
 fish.
 Lat./Long.: Approx. $28^{\circ}53'N$, $118^{\circ}18'W$.
 Collector: C. L. Hubbs Sta. Nos. H46-139 and H46-140. 06 Dec
 1946.

PARATYPES: LACM 71-530.1 (AHF Cat. No. 1928-01), 2 females.
 Locality: México, Baja California Sur, just south (approx.
 2.8 km) of Punta Arena, 274-457 m offshore; approx.
 3-9 m, hook and line, dip net.
 Lat./Long.: Approx. $23^{\circ}35'N$, $109^{\circ}26'W$.
 Collector: R/V Searcher Sta. No. 44, C. Swift. 02 Feb 1971.

Mothocyia arrosor Bruce, 1986

Reference: Journal of Natural History, 20:1139, figs. 28, 29.
PARATYPE: LACM 50-71.1, male, 12.3 mm; ovigerous female,
 24.0 mm.
 Locality: France, East Pacific Ocean, Clipperton Island.
 Lat./Long.: $10^{\circ}N$, $109^{\circ}W$.
 Host: Euleptorhamphus viridis, under gill covers.
 Collector: Scripps Institution of Oceanography, Sta. No. SIO
 62-341-23A. 10 Dec 1950.
 Remarks: Gift from United States National Museum of Natural
 History. Original description indicates collection
 date as 01 December 1950, apparently in error.

Mothocyia collettei Bruce, 1986

Reference: Journal of Natural History, 20:1145, figs. 31-33.
PARATYPE: LACM 24-1.1 (CAS.IZ.10466), ovigerous female,
 23.8 mm.
 Locality: USA, Hawaiian Islands.
 Lat./Long.: Approx. $30^{\circ}00'N$, $155^{\circ}30'W$.
 Host: Tylosurus crocodilus.
 Collector: Nov 1924.
 Remarks: Gift from United States National Museum of Natural
 History.

Mothocyia gilli Bruce, 1986

Reference: Journal of Natural History, 20:1159, figs. 41, 42.
PARATYPE: LACM 52-40.1 (AHF Type No. 529, AHF Cat. No.
 424-01, USNM Acc. No. 329488), ovigerous female,
 12.0 mm.
 Locality: México, Sonora, Golfo de California, Guaymas,
 Ensenada San Francisco, 1.6-4.0 km east of Punta
 de las Cuevas.
 Lat./Long.: Approx. $27^{\circ}58'N$, $111^{\circ}00'W$.

Host: *Hyporhamphus unifasciatus* (Ranzani), under right opercle.
 Collector: B. W. Walker. 31 Jan 1952.
 Remarks: Gift from United States National Museum of Natural History (from Ichthyology Collection) No. 80.

PARATYPES: LACM 70-157.1 (AHF Type No. 708, AHF Cat. No. 409-01; USNM Acc. No. 329488), male, 7.2 mm; ovigerous female, 11.2 mm.

 Locality: México, Colima, Bahía Manzanillo.
 Lat./Long.: Approx. 19°00'N, 104°30'W.
 Host: *Hyporhamphus unifasciatus* (Ranzani), under gills.
 Collector: J. Fitch. Jan 1970.
 Remarks: Gift from United States National Museum of Natural History.

Mothocyia ihi Bruce, 1986

Reference: Journal of Natural History, 20:1166, figs. 47, 48.
PARATYPE: LACM 1 (SU 15835), ovigerous female, 19.0 mm.
 Locality: New Zealand, North Island, Central Auckland, Auckland.
 Lat./Long.: Approx. 36°55'S, 174°45'E.
 Host: *Hyporhamphus ihi*.
 Remarks: Gift from United States National Museum of Natural History. Date of collection unknown.

Mothocyia rosea Bruce, 1986

Reference: Journal of Natural History, 20:1162, figs. 43, 44.
PARATYPES: LACM 39-265.1 (SU 47349), immature male, 6.5 mm; non-ovigerous female, 6.8 mm.
 Locality: USA, California, San Diego County, off San Diego.
 Lat./Long.: 32°40'N, 117°12'W.
 Host: *Hyporhamphus rosea*.
 Collector: N. B. Scofield. 21 Feb 1939.
 Remarks: Gift from United States National Museum of Natural History.

FAMILY Limnoriidae Dana, 1852

Limnoria tripunctata Menzies, 1951

Reference: Bulletin of the Southern California Academy of Sciences, 50(2):86, pl. 30.
PARATYPES: LACM 48-64.1 (AHF Type No. 484), 2 males, 2 females.
 Locality: USA, California, San Diego County, edge of Mission Bay, Pacific Beach, Fanuel Street; from redwood ladder at foot of street.
 Lat./Long.: Approx. 32°45'N, 117°15'W.
 Collectors: Dr. and Mrs. R. J. Menzies. 23 Dec 1948.
 Remarks: Missing from LACM collection as of July 1987.

FAMILY Serolidae Leach, 1814

Serolina acaste Poore, 1987

Reference: Memoirs of the Museum of Victoria, 48(2):146, figs. 4-6.

PARATYPES: LACM 81-97.1 (LACM Type No. 3003, LACM Acc. No. A.10994.85-1), 1 male, 1 juvenile.

Locality: Australia, Victoria, Bass Strait, south of Cape Otway; fine sand, 92 m, epibenthic sled.

Lat./Long.: 39°06.7'S, 143°28.7'E.

Collectors: FRV Hai-Kung, BSS Sta. No. 119, Cruise No. 81-HK-1. G. C. B. Poore et al., Victorian Institute of Marine Sciences. 31 Jan 1981.

Remarks: Gift from the Museum of Victoria, Melbourne, Australia, 15 October 1985.

Serolina clarella Poore, 1987

Reference: Memoirs of the Museum of Victoria, 48(2):154, figs. 9-11.

PARATYPE: LACM 65-209.1 (LACM Type No. 3001, LACM Acc. No. A.10994.85-1), juvenile.

Locality: Australia, Victoria, Western Port, Crib Point; sand and shell, 15 m, Smith-McIntyre grab.

Lat./Long.: 38°20.79'S, 145°14.41'E.

Collector: Crib Point Benthic Survey Sta. No. 34N. Marine Studies Group, Fisheries and Wildlife Department, Ministry for Conservation. 18 Mar 1965.

Remarks: Gift from the Museum of Victoria, Melbourne, Australia, 15 October 1985.

Serolina nepea Poore, 1987

Reference: Memoirs of the Museum of Victoria, 48(2):178, figs. 29-31.

PARATYPES: LACM 81-98.1 (LACM Type No. 3000, LACM Acc. No. A.10994.85-1), 1 male, 1 female, 1 juvenile.

Locality: Australia, Tasmania, Bass Strait, east of Flinders Island; fine sand and mud, 124 m, epibenthic sled.

Lat./Long.: 39°44.8'S, 148°40.6'E.

Collectors: NZO1 R/V Tangaroa, BSS Sta. No. 167, Cruise No. 81-T-1. G. C. B. Poore et al., Victorian Institute of Marine Sciences. 14 Nov 1981.

Remarks: Gift from the Museum of Victoria, Melbourne, Australia, 15 October 1985.

FAMILY Sphaeromatidae H. Milne-Edwards, 1840

Ancinus daltonae Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):31, fig. 25.

HOLOTYPE: LACM 57-25.1 (AHF Type No. 5714), female, 4 mm.

Locality: USA, California, Santa Barbara County, 0.5 km,

Lat./Long.: 177° T from Point Conception Light; medium-coarse gray sand, 18 m, hydro-winches.
 Collector: 34°26.5'N, 120°28.2'W.
 Remarks: R/V Velero IV Sta. No. 4819-57. 16 Jan 1957.
 In addition, LACM holds 3 paratypes (1 being the labeled allotype) in 1 lot (see Appendix).
 =Bathycopea daltonae (Menzies and Barnard, 1959).
 Generic reassignment by Silva, 1971, Arquivos do Museu Nacional, 54:212.

Ancinus seticomvus Trask, 1970

Reference: Bulletin of the Southern California Academy of Sciences, 69(3-4):145, figs. 1, 2.
HOLOTYPE: LACM 69-116.1 (AHF Type No. 692), male, 10.5 mm.
ALLOTYPE: LACM 69-116.2 (AHF Type No. 692a), ovigerous female, 8.0 mm.
PARATYPES: LACM 69-116.3, 5 specimens.
 Locality: USA, California, Santa Barbara County, Coal Oil Beach; lower intertidal on sandy beach, hand shovel.
 Lat./Long.: Approx. 34°28'N, 119°50'W.
 Collector: T. Trask. 29 Jul 1969.
 Remarks: Original description and label in jar indicates 8 paratypes (place of deposition not given). =A. granulatus Holmes and Gay, 1909. Species synonymy by Schultz, 1973, Crustaceana, 25(3):267.

Exosphaeroma inornata Dow, 1958

Reference: Bulletin of the Southern California Academy of Sciences, 57(2):93, pls. 30-32.
HOLOTYPE: LACM 48-74.1 (Mus. 1113, LACM Acc. No. A.7181.58-1), male, 5.2 mm.
ALLOTYPE: LACM 48-74.2 (Mus. 1114, LACM Acc. No. A.7181.58-2), female, 5.3 mm.
PARATYPES: LACM 48-74.3 (Mus. 1115, LACM Acc. No. A.7181.58-3), 210 specimens, 2.5-6.0 mm.
 Locality: USA, California, Los Angeles County, San Pedro, Point Fermin; under holdfasts of Macrocystis sp.
 Lat./Long.: Approx. 33°40'N, 118°20'W.
 Collector: J. L. Mohr. 29 Nov 1948.
 Remarks: Original description indicates 232 paratypes deposited at LACM.

Exosphaeroma insulare Van Name, 1940

Reference: Bulletin of the American Museum of Natural History, 77(Art.II):125, fig. 17a, b.
SYNTYPE: LACM 38-270.1 (Cat. No. AMNH 8092).
 Locality: USA, California, Channel Islands, San Nicolas Island; freshwater pond.
 Lat./Long.: 33°15'N, 119°30'W.
 Collector: T. D. A. Cockerell. 1938.

Remarks: =Gnorimosphaeroma insulare (Van Name, 1940).
Generic reassignment by Menzies, 1954, American
Museum Novitates, 1683:7.

Gnorimosphaeroma kurilense Kussakin, 1974

Reference: Sbornik Rabot Instituta Biologicheskikh Morya, 1:
234, fig. 6.
PARATYPES: LACM 55-40.1, 4 specimens.
Locality: USSR, Kuril'skiye Ostrova (Kuril Islands), Shikotan
Island, Krabovaja Bay; river.
Lat./Long.: Approx. 43°51'N, 146°47'E.
Collector: O. G. Kussakin. 25 May 1955.
Remarks: Gift from O. G. Kussakin.

Paraleptosphaeroma glynni Buss and Iverson, 1981

Reference: Postilla, 184:4, figs. 1-3.
PARATYPES: LACM 78-180.1 (AHF Type No. 782), 77 specimens.
Locality: Panamá, Pacific coast, Punta Paitilla, 5 km south
of entrance to Canal de Panamá; tidepools, on
bryozoan-encrusted cobble.
Lat./Long.: 8°54'N, 79°31'W.
Collector: L. W. Buss. Feb-Aug 1978.
Remarks: Original description indicates 81 paratypes
deposited at AHF.

FAMILY Tridentellidae Bruce, 1984

Tridentella glutacantha Delaney and Brusca, 1985

Reference: Journal of Crustacean Biology, 5(4):737, figs.
6-10 (except 8j).
ALLOTYPE: LACM 53-113.1 (AHF Type No. 5323a, AHF Cat. No.
2053-02), female, 16.7 mm.
Locality: USA, California, Los Angeles County, 24.7 km, 156°
T, south southeast of Los Angeles Breakwater
Light; large boulders, 329-293 m, biological rock
dredge.
Lat./Long.: 33°30.28'N, 118°08.49'W
Collector: R/V Velero IV Sta. No. 2416-53. 27 Sep 1953.

PARATYPE: LACM 41-103.1, female, 9.2 mm.
Locality: USA, California, Channel Islands, Santa Catalina
Island, 13.0 km west southwest of Church Rock;
loose rock bottom, 283-278 m, dredge.
Lat./Long.: 33°14.7'N, 118°11.7'W.
Collector: R/V Velero III Sta. No. 1323-41. 18 May 1941.
Remarks: Holotype (male), CAS.IZ.025948, deposited at the
California Academy of Sciences.

Tridentella quinicornis Delaney and Brusca, 1985

Reference: Journal of Crustacean Biology, 5(4):732, figs. 2-5,

8j.

HOLOTYPE: LACM 49-151.1 (AHF Type No. 4926), male, 10.73 mm.

ALLOTYPE: LACM 49-151.2 (AHF Type No. 4926a), gravid female, 9.75 mm.

PARATYPE: LACM 49-151.3, female, 6.44 mm.

Locality: USA, California, Channel Islands, off west side of Santa Catalina Island, Farnsworth Bank, 030° T; corals, bryozoans, 31-27 m, dredge.

Lat./Long.: 33°20.60'N, 118°31.06'W.

Collector: R/V Velero IV Sta. No. 1903-49. 07 Sep 1949.

SUBORDER Gnathiidea Leach, 1814
 FAMILY Gnathiidae Harger, 1880

Gnathia clementensis Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):17, pl. 10.

HOLOTYPE: LACM 60-82.1 (AHF Type No. 6049), male, 8.5 mm.

Locality: USA, California, Channel Islands, San Clemente Canyon, San Clemente Island, 14.7 km, 123° T from Pyramid Head Light; manganese nodules and limestone rock, 1587 m, Campbell grab.

Lat./Long.: 32°44.58'N, 118°12.7'W.

Collector: R/V Velero IV Sta. No. 6840-60. 30 Jan 1960.

Gnathia coronadoensis Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):17, pl. 11.

HOLOTYPE: LACM 60-88.1 (AHF Type No. 6050), male, 3.5 mm.

Locality: USA, California, San Diego County, Coronado Canyon, 8.6 km, 322.5° T from North Coronado Island; green mud, 794 m, Campbell grab.

Lat./Long.: 32°30.70'N, 117°21.62'W.

Collector: R/V Velero IV Sta. No. 6851-60. 01 Feb 1960.

Gnathia hirsuta Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):18, pl. 12.

HOLOTYPE: LACM 59-149.2 (AHF Type No. 5927), male, 4.0 mm.

Locality: USA, California, Channel Islands, Santa Cruz Channel, off south side of Santa Cruz Island, 4.3 km, 246.5° T from Gull Island; rocks and some green sand, 201 m, Campbell grab.

Lat./Long.: 33°56.05'N, 119°52.05'W.

Collector: R/V Velero IV Sta. No. 6805-59. 22 Dec 1959.

Remarks: =G. sanctaecrucis. New name substituted for previously occupied name G. hirsuta by Schultz, 1972, Crustaceana, 23 (Part 1):112.

Gnathia productatridens Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):30, fig. 24.
HOLOTYPE: LACM 57-121.1 (AHF Type No. 5712), male, 3.2 mm.
Locality: USA, California, Santa Barbara County, 23.5 km,
 134° T from Santa Barbara Point Light; green
 sticky silt, 89 m, hydro-winch.
Lat./Long.: 34°14.8'N, 119°32.4'W.
Collector: R/V Velero IV Sta. No. 5173-57. 03 Jul 1957.

PARATYPE: LACM 57-157.1.
Locality: USA, California, Santa Barbara County, 20.0 km,
 138° T from Santa Barbara Point Light; dark olive
 green silt, 95 m, hydro-winch.
Lat./Long.: 34°15.7'N, 119°34.6'W.
Collector: R/V Velero IV Sta. No. 5325-57. 17 Oct 1957.
Remarks: In addition, LACM holds 9 paratypes from 4
 stations listed in the Material Examined section
 of the original description (see Appendix).

Gnathia steveni Menzies, 1962

Reference: Pacific Naturalist, 3(11):346, fig. 8.
PARATYPES: See Remarks and Appendix (Beaudette Foundation
 Cat. No. 86).
Locality: México, Baja California, Pacific coast, eastern
 arm of Bahía de San Quintín; dredged algae and
 sponges near cannery.
Lat./Long.: Approx. 30°30'N, 116°00'W.
Collector: San Quintin Bay Survey Sta. No. SQ 175, J. L.
 Barnard. Apr 1960-Aug 1961.
Remarks: LACM holds 4 paratypes from this station listed in
 the Material Examined section of the original
 description (see Appendix).

Gnathia tridens Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):29, fig. 23.
HOLOTYPE: LACM 57-28.2 (AHF Type No. 5711), male, 3.0 mm.
Locality: USA, California, Santa Barbara County, 20.4 km,
 089° T from Point Conception Light; bottom of dead
 kelp fragments and red algae, 16 m, hydro-winch.
Lat./Long.: 34°27.3'N, 120°14.8'W.
Collector: R/V Velero IV Sta. No. 4822-57. 17 Jan 1957.
Remarks: Original description indicates 95 paratypes from
 the holotype locality (place of deposition not
 given). LACM holds 4 paratypes from 2 stations
 listed in the Material Examined section of the
 original description (see Appendix).

Gnathia trilobata Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):19, pl.
 13.
HOLOTYPE: LACM 60-88.2 (AHF Type No. 6051), male, 5.0 mm.

Locality: USA, California, San Diego County, Coronado Canyon, 8.6 km, 322.5° T from North Coronado Island; green mud, 794 m, Campbell grab.
 Lat./Long.: 32°30.70'N, 117°21.62'W.
 Collector: R/V Velero IV Sta. No. 6851-60. 01 Feb 1960.

SUBORDER Oniscidea Latreille, 1803
 FAMILY Scyphacidae Dana, 1853

Armadilloniscus coronacapitalis Menzies, 1950

Reference: Proceedings of the California Academy of Sciences, Fourth Series, 26(13):468, figs. 1-16, pls. 22-24.
PARATYPES: LACM 46-49.1, 2 males, 2 females.
 Locality: USA, California, Marin County, Tomales Bay, cove opposite Hog Island on east side of Tomales Point; coarse-grained granitic sand, under rocks at high tide line.
 Lat./Long.: Approx. 38°15'N, 123°00'W.
 Collector: R. J. Menzies. 03 Aug 1946.

FAMILY Trichoniscidae Sars, 1899

Trichoniscus (Miktoniscus) medcofi Van Name, 1940

Reference: Bulletin of the American Museum of Natural History, 77(Art. II):111, fig. 2.
SYNTYPES: LACM 36-194.1, 2 specimens.
 Locality: USA, Illinois, Champaign County, Urbana, University of Illinois; moist floor of the Botanical Greenhouse.
 Lat./Long.: Approx. 40°07'N, 88°12'W.
 Collector: J. C. Medcof. 27 Oct 1936.

SUBORDER Valvifera Sars, 1882
 FAMILY Astacillidae G.O. Sars, 1897

Idarcturus allelomorphus Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):22, fig. 16.
HOLOTYPE: LACM 57-77.1 (AHF Type No. 5713), female, 5.2 mm.
 Locality: USA, California, Santa Barbara County, 23.5 km, 86.5° T from Point Conception Light; medium-coarse gray sand, 17 m, hydro-winch.
 Lat./Long.: 34°27.4'N, 120°12.9'W.
 Collector: R/V Velero IV Sta. No. 4938-57. 09 Apr 1957.
 Remarks: In addition, LACM holds 22 paratypes from 13 stations listed in the Material Examined section of the original description (see Appendix).

Microarcturus tannerensis Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):20, pl. 14.
HOLOTYPE: LACM 60-80.2 (AHF Type No. 6045), female, 5.5 mm.
Locality: USA, California, Channel Islands, Tanner Canyon,
San Clemente Island, 53.5 km, 236° T from China
Point Light; green mud, 1320 m, Campbell grab.
Lat./Long.: 32°32.3'N, 118°54.03'W.
Collector: R/V Velero IV Sta. No. 6832-60. 29 Jan 1960.

FAMILY Chaetiliidae Dana, 1853

Chaetilia tasmanica Poore, 1985

Reference: Memoirs of the Museum of Victoria, 46(2):156, figs. 2-5, pl. 34b, c.
PARATYPES: LACM 81-94.1 (LACM Type No. 3002, LACM Acc. No. A.10994.85-1), 2 specimens.
Locality: Australia, Tasmania, Convict Beach, near Southport;
intertidal beach sand.
Lat./Long.: 43°27'S, 146°58'E.
Collector: A. McGifford. 18 Mar 1981.
Remarks: Gift from the Museum of Victoria, Melbourne,
Australia, 15 October 1985.

FAMILY Idoteidae Fabricius, 1798

Colidotea findleyi Brusca and Wallerstein, 1977

Reference: American Museum Novitates, 2634:6, figs. 2, 3.
HOLOTYPE: LACM 69-117.1 (AHF Type No. 6910), male.
ALLOTYPE: LACM 69-117.2 (AHF Type No. 6910a), female.
Locality: México, Sonora, Golfo de California, approx. 8 km
north of Cabo Tepoca (=Puerto Lobos); beach backed
by high sand dunes, mostly sand, few rocks, some
isolated patches of bedrock forming slight reef,
exposed vegetation, 1 m, shore/beach seine on sand
and bedrock.
Lat./Long.: Approx. 30°17'N, 112°50'W.
Collector: L. T. Findley. 05 Jun 1969.
Remarks: Gift from University of Arizona (from Ichthyology
Collection) No. UA 69-22.

PARATYPE: LACM 40-17.2 (AHF Cat. No. 117-01), female.
Locality: México, Golfo de California, south shore of Isla
Tiburón; shingle, shore collection.
Lat./Long.: 28°45.6'N, 112°17.8'W.
Collector: R/V Velero III Sta. No. 1045-40. 25 Jan 1940.

PARATYPE: LACM 46-46.1 (AHF Cat. No. 116-01), female.
Locality: México, west of Baja California, south end of Isla

Guadalupe, Ensenada Melpomene, anchorage just west of South Bluff.
 Lat./Long.: Approx. $28^{\circ}52'N$, $118^{\circ}19'W$.
 Collector: C. L. Hubbs. Sta. No. H46-158 A-B. 09 Dec 1946.

PARATYPES: LACM 49-155.2 (AHF Cat. No. 126-01), 7 males, 10 females.
 Locality: México, west of Baja California, Isla Guadalupe, between Ensenada Melpomene and inner island; rocks and volcanic sand, 9-27 m, boat dredge.
 Lat./Long.: $28^{\circ}52.64'N$, $118^{\circ}16.93'W$.
 Collector: R/V Velero IV Sta. No. 1914-49. 18 Dec 1949.

PARATYPES: LACM 67-198.1 (AHF Cat. No. 115-01), 2 females.
 Locality: México, Sonora, Golfo de California, Puerto Peñasco, Norse Beach; tidepools, limestone flat, 1 m, night collection.
 Lat./Long.: Approx. $31^{\circ}20'N$, $113^{\circ}35'W$.
 Collector: 02 Dec 1967.

PARATYPES: LACM 75-141.1 (AHF Cat. No. 121-01), 2 specimens.
 Locality: México, Sonora, Golfo de California, Puerto Peñasco, Station Beach; limestone (coquina) reef, low intertidal on Sargassum sp.
 Lat./Long.: Approx. $31^{\circ}20'N$, $113^{\circ}35'W$.
 Collector: R. C. Brusca. 08 Jun 1975.
 Remarks: Original description indicates 1 male paratype deposited at AHF.

PARATYPES: LACM 76-89.2 (AHF Cat. No. 03-18), 12 males, 9 females.
 Locality: México, Baja California, Golfo de California, approx. 64 km south of San Felipe, Campo Coloraditos; washes of Sargassum sp. from limestone and basalt rocks in low intertidal.
 Lat./Long.: Approx. $30^{\circ}30'N$, $114^{\circ}40'W$.
 Collector: R. C. Brusca and B. Wallerstein. 01 Jan 1976.

PARATYPE: LACM 72-299.1 (AHF Cat. No. 124-01), male.
 Locality: México, Sonora, Golfo de California, Bahía de Kino, Old Kino.
 Lat./Long.: Approx. $28^{\circ}58'N$, $111^{\circ}58'W$.
 Collector: C. E. Lehner, Sta No. CEL 720415. 15 Apr 1972.
 Remarks: Gift from University of Arizona (from Ichthyology Collection) No. UA 72-6.

PARATYPE: LACM 72-298.2 (AHF Cat. No. 125-01).
 Locality: México, Sonora, Golfo de California, Puerto Peñasco; limestone reef, from Sargassum sp. in mid-intertidal.
 Lat./Long.: Approx. $31^{\circ}20'N$, $113^{\circ}35'W$.
 Collector: M. Price. 24 Mar 1972.

Colidotea wallersteini Brusca, 1983

Reference: Transactions of the San Diego Society of Natural History, 20(4):74, figs. 4, 5.
HOLOTYPE: LACM 45-10.1 (AHF Type No. 452), male.
Locality: México, Baja California, Pacific coast, Punta Clara, south of Río Santo Tomás.
Lat./Long.: Approx. 31°30'N, 116°30'W.
Collector: C. L. Hubbs. Sta. No. H45-217a. 18 Dec 1945.

PARATYPES: LACM 49-249.3 (AHF Type No. 4925, AHF Cat. No. 758-05), 2 specimens.
Locality: México, west of Baja California, Isla Guadalupe, Ensenada Melpomene at landing; intertidal, shore collection, rock wash.
Lat./Long.: 28°51.97'N, 118°17.87'W.
Collectors: R/V Velero IV Sta. No. 1915-49, R. J. Menzies and D. J. Reish. 18 Dec 1949.

Edotea sublittoralis Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):21, fig. 15.
HOLOTYPE: LACM 56-17.1 (AHF Type No. 565), female, 4.0 mm.
Locality: USA, California, Orange County, 4.4 km, 302° T from Newport Pier; green to black silt, 10 m, Hayward grab.
Lat./Long.: 33°37.65'N, 117°58.27'W.
Collector: R/V Velero IV Sta. No. 4720-56. 21 Nov 1956.
Remarks: In addition, LACM holds 59 paratypes from 21 stations listed in the Material Examined section of the original description (see Appendix).

Erichsonella cortezi Brusca and Wallerstein, 1977

Reference: American Museum Novitates, 2634:10, figs. 6, 7.
HOLOTYPE: LACM 70-158.1 (AHF Type No. 706, AHF Cat. No. 85-02), male.
Locality: México, Sonora, Golfo de California, Puerto Peñasco; rocky, in algal mat of low intertidal, approx. 0 tide level.
Lat./Long.: Approx. 31°19'N, 113°35'W.
Collector: R. C. Brusca. 30 Dec 1970.

ALLOTYPE: LACM 70-159.1 (AHF Type No. 706a, AHF Cat. No. 90-01), female.
Locality: México, Sonora, Golfo de California, Puerto Peñasco; rocky intertidal.
Lat./Long.: Approx. 31°20'N, 113°35'W.
Collectors: University of Arizona Invertebrate Zoology class. 06 Mar 1970.

PARATOPOTYPE: LACM 72-301.1 (AHF Cat. No. 81-01), male.
Locality: México, Sonora, Golfo de California, Puerto

Lat./Long.: Peñasco; tidepool in rocky intertidal.
 Approx. 31°20'N, 113°35'W.
 Collector: M. Price. 18 Mar 1972.

Erichsonella crenulata Menzies, 1950

Reference: Bulletin of the Southern California Academy of Sciences, 49(1):29, pls. 8-10.
HOLOTYPE: LACM 49-252.1 (AHF Type No. 492), male, 23.0 mm.
ALLOTYPE: LACM 49-252.2 (AHF Type No. 492a), ovigerous female, 17.0 mm.
PARATYPE: LACM 49-252.3 (AHF Type No. 492b), male, 20.0 mm.
 Locality: USA, California, Orange County, upper Newport Bay; on Zostera sp.
 Lat./Long.: Approx. 33°38'N, 117°58'W.
 Collector: J. L. Barnard. 30 Nov 1949.
 Remarks: Original description indicates collection date as 20 November 1949, apparently in error.

Idotea schmitti Menzies, 1950

Reference: The Wasmann Journal of Biology, 8(2):174, pls. 5a-f, 9g-h.
HOLOTYPE: LACM 46-47.1 (AHF Type No. 462), female, 13.5 mm.
ALLOTYPE: LACM 46-47.2 (AHF Type No. 462a), male, 30.0 mm.
 Locality: USA, California, Marin County, Dillon Beach, Second Sled Road; intertidal, outermost zone.
 Lat./Long.: Approx. 38°15'N, 123°00'W.
 Collector: R. J. Menzies. 28 Jun 1946.
PARATYPES: LACM 48-72.1 (Pacific Marine Station Acc. No. 1254) 2 ovigerous females.
 Locality: USA, California, Marin County, Dillon Beach, Second Sled Road; approx. zone III, on rock covered with calcareous algae.
 Lat./Long.: Approx. 38°15'N, 123°00'W.
 Collector: Mrs. R. J. Menzies. 21 Feb 1948.

Parasymmerus annamaryae Brusca and Wallerstein, 1979

Reference: Proceedings of the Biological Society of Washington, 92(2):256, figs. 1, 2.
HOLOTYPE: LACM 76-565.2 (AHF Type No. 765, AHF Cat. No. 500-02), male.
ALLOTYPE: LACM 76-565.3 (AHF Type No. 765a, AHF Cat. No. 500-02), female.
PARATOPOTYPES: LACM 76-565.4 (AHF Cat. No. 500-02), 22 specimens.
 Locality: México, Colima, Manzanillo, Bahía Audiencia, north shore, beach in front of Hotel Las Hadas; mussel bed with brown algae, exposed granite bedrock and boulders, approx. 1 m below high tide mark.
 Lat./Long.: Approx. 19°00'N, 104°20'W.
 Collectors: R. C. Brusca, B. Wallerstein, P. Pepe and A. M. Mackey. 04 Sep 1976.

PARATYPE: LACM 46-11.1 (AHF Cat. No. 86-01), non-ovigerous female.
Locality: México, Sinaloa, Golfo de California, 3.2 km north of Mazatlán; small reef, -0.5 m tide, pronounced surf.
Lat./Long.: Approx. 23°14'N, 106°28'W.
Collector: E. Y. Dawson. Sta. No. 71. 08 Dec 1946.

Synidotea calcarea Schultz, 1966

Reference: Allan Hancock Pacific Expeditions, 27(4):21, pl. 15.
HOLOTYPE: LACM 60-76.1 (AHF Type No. 6046), female, 6.0 mm.
PARATYPES: LACM 60-76.5, 2 specimens.
Locality: USA, California, Channel Islands, Tanner Canyon, San Clemente Island, 54.8 km, 250° T from China Point Light; green muddy sand, 792 m, Campbell grab.
Lat./Long.: 32°37.87'N, 118°58.70'W.
Collector: R/V Velero IV Sta. No. 6833-60. 29 Jan 1960.

Synidotea francesae Brusca, 1983

Reference: Transactions of the San Diego Society of Natural History, 20(4):70, figs. 1-3.
HOLOTYPE: LACM 73-175.1 (AHF Type No. 736), female.
ALLOTYPE: LACM 73-175.2 (AHF Type No. 736a), male.
Locality: México, Sonora, El Golfo de Santa Clara, approx. 6.4 km southeast of town; found "scavenging"? on cast up tubes of Chaetopterus sp., on sandy beach.
Lat./Long.: Approx. 31°50'N, 114°25'W.
Collector: D. G. Lindquist. 07 Apr 1973.
Remarks: Original description indicates collection date as 17 April 1973, apparently in error.

Synidotea magnifica Menzies and Barnard, 1959

Reference: Pacific Naturalist, 1(11):26, figs. 20, 21.
HOLOTYPE: LACM 57-103.1 (AHF Type No. 577), female, 6 mm.
Locality: USA, California, San Diego County, 3.9 km, 242.5° T from Oceanside Pier; dark green micaceous silt, 60 m, hydro-winch.
Lat./Long.: 33°10.5'N, 117°25.4'W.
Collector: R/V Velero IV Sta. No. 5108-57. 04 Jun 1957.
Remarks: In addition, LACM holds 23 paratypes from 11 stations listed in the Material Examined section of the original description (see Appendix).

APPENDIX

PARATYPES BASED ON EXTERNAL EVIDENCE

Recommendation 72B of the International Code of Zoological Nomenclature (3rd Edition, 1985) has been followed throughout the above list. We regard the type series of a species to include all specimens whose stations were listed in the Material Examined section of the original description (even if not designated by the author(s) specifically as part of the type series) if, after the holotype had been designated by the author(s), no other types had been designated. The following list comprises those species which have specimens meeting the above criteria, but which were not previously recognized as part of a type series.

In some instances, LACM holds a greater number of specimens per station than are listed for that station in the Material Examined section of the original description, and it is not possible to determine at present which specimens of those stations were examined by the author(s). All specimens from those stations are therefore assumed to be of paratypic status.

(P) or (A) next to the LACM No. refers to paratypes or allotypes previously recognized by AHF as part of the type series of the species. SQ = San Quintin Bay Survey station (not a Velero station).

Haliophasma geminata Menzies & Barnard, 1959

<u>Velero IV</u> Sta. No.	LACM No.	# paratypes at LACM	# paratypes in Material Examined
2128-52	52-41.3	3	3
2436-53	53-81.2	1	1
2630-54	54-28.1	2	2
2637-54	54-30.2	1	1
2843-54	54-62.2	2	2
2852-54	54-99.1	1	1
3389-55	55-57.2	4	4
3391-55	55-61.2	1	1
3505-55	55-50.1	1	1
4329-56	56-64.1	1	1
4330-56	56-66.1	10	11
4722-56	56-19.2	4	4
4747-56	56-25.1	1	1
4753-56	56-26.4	2	1
4754-56	56-27.1	1	1
4757-56	56-30.1	2	2
4762-56	56-35.1	6	6
4767-56	56-40.2	1	1
4769-56	56-42.2	1	2
4771-56	56-44.3 (P)	3	2

<u>Velero IV</u> Sta. No.	LACM No.	# paratypes at LACM	# paratypes in Material Examined
4772-56	56-45.1	1	1
4784-56	56-54.1	1	1
4786-56	56-56.1	2	2
4817-57	57-23.1	7	7
4820-57	57-26.1	3	2
4823-57	57-29.1	1	1
4824-57	57-30.1	3	3
4827-57	57-33.2	2	2
4828-57	57-34.2	1	1
4845-57	57-46.2	1	1
4850-57	57-48.1	8	8
4854-57	57-51.1	1	1
4855-57	57-52.1	23	24
4856-57	57-53.3	9	9
4860-57	57-55.1	1	1
4868-57	57-210.2	3	3
4910-57	57-67.2	1	2
4920-57	57-69.1	1	1
4924-57	57-71.1	1	2
4927-57	57-73.2	6	5
4937-57	57-76.1	1	1
4951-57	57-81.1	9	8
4954-57	57-214.1	1	1
4955-57	57-216.1	5	5
4956-57	57-82.1	1	4
4981-57	57-84.1	1	1
4983-57	57-86.1	1	1
5092-57	57-98.1	1	1
5098-57	57-100.1	9	9
5111-57	57-105.1	2	1
5148-57	57-107.1	4	4
5160-57	57-109.2	6	6
5161-57	57-110.1	2	2
5162-57	57-111.1	3	3
5163-57	57-112.2	8	8
5166-57	57-115.1	7	7
5167-57	57-116.3	3	3
5168-57	57-117.1	6	5
5169-57	57-118.1	1	1
5173-57	57-121.2	4	3
5187-57	57-128.1	1	1
5191-57	57-131.1	1	1
5197-57	57-204.1	1	1
5202-57	57-134.1	1	1
5259-57	57-149.1	4	4
5261-57	55-151.1	2	2
5262-57	57-152.1	1	1
5271-57	57-155.1	4	1
5330-57	57-158.1	2	2

<u>Velero IV</u> Sta. No.	LACM No.	# paratypes at LACM	# paratypes in Material Examined
5331-57	57-159.1	2	2
5348-57	57-161.1	1	1
5367-57	57-218.1	5	5
5370-57	57-167.1	1	1
5371-57	57-203.1	2	2
5372-57	57-168.1	1	1
5378-57	57-227.2	2	2
5400-57	57-174.1	3	3
5402-57	57-175.2	1	1
5404-57	57-176.1	4	4
5408-57	57-178.1	6	1
5409-57	57-179.1	2	1
5410-57	57-180.1	1	1
5413-57	57-181.1	4	4
5417-57	57-183.1	3	1
5419-57	57-184.1	3	5
5509-57	57-215.1	5	6
5533-57	57-195.1	2	2
5536-57	57-197.1	6	6
5537-57	57-198.1	3	3
5558-58	58-13.1	5	5
5560-58	58-15.1	2	2
5563-58	58-18.1	3	2
5564-58	58-206.1	1	3
5572-58	58-207.1	2	2
5586-58	58-28.1	1	1
5628-58	58-40.2	9	1
5688-58	58-215.1	1	1
5736-58	58-64.9	13	1
5737-58	58-65.10	8	2

Mesanthura occidentalis Menzies & Barnard, 1959

4822-57	57-28.11	2 (P)	2
5503-57	57-189.1	2	1

Munna spinifrons Menzies & Barnard, 1959

4822-57	57-28.12	3 (P)	4
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Ilyarachna acarina Menzies & Barnard, 1959

2845-54	54-101.1	1	1
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<u>Velero IV</u> Sta. No.	LACM No.	# paratypes at LACM	# paratypes in Material Examined
2846-54	54-102.1	1	1
4753-56	56-26.5	4	4
4767-57	56-40.1	1 (P)	1
4824-57	57-30.4	1	1
4855-57	57-52.2	2	10
4951-57	57-81.3	8	3
4980-57	57-83.3	1	12
	57-83.5	1 (P)	--
5510-57	57-192.2	1	1
5560-58	58-15.4	2	1

Eurydice branchuropus Menzies & Barnard, 1959

4910-57	57-67.4	4	4
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Ancinus daltonae Menzies & Barnard, 1959

4819-57	57-25.2	1 (A)	4
	57-25.3	2 (P)	--

Gnathia productatridens Menzies & Barnard, 1959

4814-57	57-22.6	3	1
5160-57	57-109.10	2	1
5173-57	57-121.3	3 (P)	3
5174-57	57-122.2	1	1

Gnathia steveni Menzies, 1962

SQ 175	60-93.1	4 (P)	5
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Gnathia tridens Menzies & Barnard, 1959

4822-57	57-28.16	1 (P)	95
5164-57	57-113.5	3	3

Idarcturus allelomorphus Menzies & Barnard, 1959

<u>Velero IV</u> Sta. No.	LACM No.	# paratypes at LACM	# paratypes in Material Examined
4464-56	56-67.3	1	1
4676-56	56-62.2	2	2
4785-56	56-55.7	4	4
4814-57	57-22.4	1	1
4822-57	57-28.18	1	1
4827-57	57-33.6	1	1
4850-57	57-48.5	3	1
4938-57	57-77.6	4 (P)	5
5166-57	57-115.7	1	1
5168-57	57-117.7	1	1
5171-57	57-119.3	1	1
5173-57	57-121.7	1	1
5413-57	57-181.4	1	1

Edotea sublittoralis Menzies & Barnard, 1959

2312-53	53-110.2	2	2
4464-56	56-67.2	5	5
4719-56	56-16.2	2	1
4720-56	56-17.2	1 (P)	4
	56-17.5	3	--
4746-56	56-24.2	1	1
4758-56	56-31.4	4	4
4759-56	56-32.4	5	3
4761-56	56-34.2	7	7
4762-56	56-35.4	1	1
4771-56	56-44.5	1	1
4813-57	57-248.3	1	1
4818-57	57-24.4	2	2
4825-57	57-31.7	2	3
4840-57	57-41.4	1	1
4841-57	57-42.2	5	5
4853-57	57-220.3	1	1
4862-57	57-56.3	2	2
4956-57	57-82.6	5	5
5043-57	53-94.4	1	1
	53-94.5	2	--
5508-57	57-191.3	1	1
5583-58	58-27.5	4	3

Synidotea magnifica Menzies & Barnard, 1959

4722-56	56-19.14	1 (P)	1
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<u>Velero IV</u> Sta. No.	LACM No.	# paratypes at LACM	# paratypes in Material Examined
4760-56	56-33.3	1 (P)	1
4785-56	56-55.16	1 (P)	1
4817-57	57-23.17	9 (P)	9
4820-57	57-26.13	1 (P)	1
4850-57	57-48.12	1 (P)	1
4981-57	57-84.8	1 (P)	1
5163-57	57-112.10	2 (P)	2
5167-57	57-116.16	3 (P)	3
5168-57	57-117.14	2 (P)	2
5585-58	58-213.6	1 (P)	1

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