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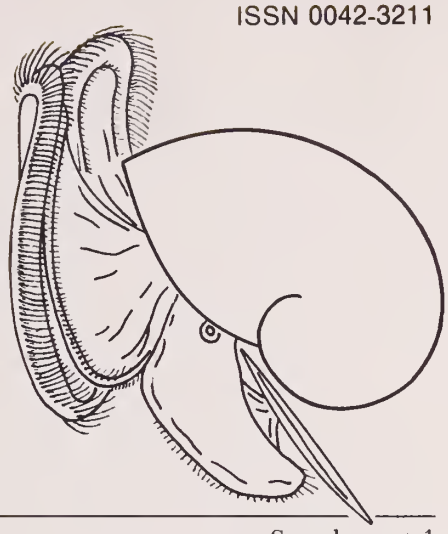

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Catalog of Recent and Fossil Molluscan Types in the Santa Barbara Museum of Natural History. I. Caudofoveata, Polyplacophora, Bivalvia, Scaphopoda, and Cephalopoda

by

PAUL H. SCOTT, F. G. HOCHBERG, AND BARRY ROTH

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Scope of the journal

The Veliger is open to original papers pertaining to any problem concerned with mollusks.

This is meant to make facilities available for publication of original articles from a wide field of endeavor. Papers dealing with anatomical, cytological, distributional, ecological, histological, morphological, physiological, taxonomic, evolutionary, etc., aspects of marine, freshwater, or terrestrial mollusks from any region will be considered. Short articles containing descriptions of new species or lesser taxa will be given preferential treatment in the speed of publication provided that arrangements have been made by the author for depositing the holotype with a recognized public Museum. Museum numbers of the type specimen must be included in the manuscript. Type localities must be defined as accurately as possible, with geographical longitudes and latitudes added.

Very short papers, generally not exceeding 500 words, will be published in a column entitled "NOTES, INFORMATION & NEWS"; in this column will also appear notices of meetings, as well as news items that are deemed of interest to our subscribers in general.

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by

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Abstract. The non-gastropod molluscan types currently housed in the Department of Invertebrate Zoology at the Santa Barbara Museum are listed. Three hundred seventeen type lots are reported, representing 211 recent species and 9 species originally described as fossils. Each type lot recorded includes a complete citation, type locality, and the current type status of the specimens. An author index and alphabetic index are provided. Lectotype designations are made for three species: *Mopalia chacei* Berry, 1919; *Placiphorella pacifica* Berry, 1919; and *Venus fordii* Yates, 1890.

INTRODUCTION

In the past five years the Santa Barbara Museum of Natural History has added approximately 1400 primary molluscan type lots to its holdings. The majority of these specimens were contained in the extensive mollusk collection of the late S. Stillman Berry, which the museum received in 1985 (HOCHBERG, 1985). Many of the types represent species described by Berry (for a complete listing of Berry's taxa see SWEENEY & ROPER, 1984). Also included are a number of important species from the eastern Pacific Ocean that Berry obtained through exchange with the United States National Museum of Natural History, the Harvard University Museum of Comparative Zoology, and the Philadelphia Academy of Natural Sciences. Types acquired in exchange by Berry include species described by P. P. Carpenter, C. B. Adams, W. H. Dall, and many other authors.

The Department of Invertebrate Zoology at the Santa Barbara Museum of Natural History was formally established in 1958, although the museum was founded in 1916. A number of important mollusk collections, donated in the early 1940s, form the nucleus around which the department was organized. The current shelled mollusk collection contains about 180,000 species lots. With the addition of cephalopods from the Allan Hancock Foundation our current holdings of octopuses and squids totals over 7000 species lots.

A number of mollusk paratypes and hypotypes were destroyed in a fire at the museum in 1962. SPHON (1962) detailed the types lost in the fire and later (SPHON, 1966) published an updated list of types housed in the department.

Several works on the molluscan taxa of selected authors were consulted during the compilation of this catalog. HERTZ (1984) illustrated the types of S. S. Berry that were described in his *Leaflets in Malacology*. The species described by H. N. Lowe, and descriptions jointly authored by H. A. Pilsbry & Lowe, are listed in HERTZ (1986), along with illustrations of previously unfigured types. Names introduced by H. A. Pilsbry are listed in CLENCH & TURNER (1962). TURNER (1956) listed and illustrated the eastern Pacific species of C. B. Adams, and included many lectotype designations. W. H. Dall's taxa are listed in BOSS *et al.* (1968). PALMER (1958, 1963) and KEEN (1968) discussed the eastern Pacific taxa of P. P. Carpenter and provide numerous type illustrations.

FORMAT

This catalog lists primary types (holotypes, paratypes, syntypes, neotypes, lectotypes, and paralectotypes) of recent

and fossil mollusks in the classes Caudofoveata, Polyplacophora, Bivalvia, Scaphopoda, and Cephalopoda. Records of the gastropod types will be included in a future catalog. Types not regulated by the *International Code of Zoological Nomenclature* (RIDE *et al.*, 1985) (hereafter *ICZN*), including hypotypes and plaster casts of types, are excluded. The catalog is arranged systematically by class, subclass or order, and family. Species-group names are arranged alphabetically within each family. Two indices are provided: an author index that lists all taxa described by a given author, and an alphabetic index by species-group name.

The format for each species-group name is as follows:

species, *Genus* (*Subgenus*)
AUTHOR, date: Original citation.
Type category: Catalog number (number of specimens, preservative); last catalog number if any.
LOCALITY as published in original description.
Remarks: Lectotype information, specimen condition, other previous catalog numbers, etc.

The following general guidelines are used:

Genus-group names are as originally proposed and do not include new combinations.

Family-group names are those currently used in the literature. BERNARD (1983) was the primary source for families of the Bivalvia, KAAS & VAN BELLE (1980) and VAN BELLE (1981) for the Polyplacophora, VOSS (1977) and CLARKE (1988) for the Cephalopoda, and BOSS (1982) for the Caudofoveata and Scaphopoda.

The **original citation** includes only figures and plates that illustrate actual specimens in the collection of the Santa Barbara Museum of Natural History.

The **type series** is the most difficult category to delineate. The *ICZN* (RIDE *et al.*, 1985) was used as our guideline. We have tried to use the code conservatively to avoid subsequent confusion with the status of a type series. Each type lot was categorized using the following definitions.

Holotype—the single specimen designated by the author to be the name-bearing type in the original publication. In a few instances we have demonstrated that a species-group taxon was based on a single specimen and have designated the holotype by monotypy [*ICZN* Art. 73a (ii)].

Paratypes—all specimens remaining in a type series after a holotype has been designated, or other specimens designated as paratypes in the original description.

Syntypes—all specimens in a type series in which neither a holotype nor a lectotype has been designated.

Lectotype—a specimen in a type series that has been designated by a subsequent author as the name-bearing type. This includes specimens that have been inadvertently referred to in print as the "holotype" or "the type" (*ICZN* Art. 74b). We have attempted to trace the current status of each species group and include lectotype designations, although some designations may have been overlooked.

Lectotype (herein)—In several instances S. S. Berry neglected to designate types in the original publication, but labeled his specimen as the "Type" or "Holotype" and entered them as such in his collection catalog. We feel the authors intent was clear for these type specimens and have chosen to designate lectotypes in accordance with *ICZN* Art. 74a. We have also designated a lectotype for one species described by L. G. Yates.

Paralectotypes—all specimens remaining in the type series after a lectotype has been designated.

The **number of specimens** in each type lot is stated and, where applicable, information on incomplete specimens (single valves or plates, etc.) is included. Bivalves are listed as a matched pair of valves (pair) or as single unmatched valves (valves). In a few cases a dash (–) in this section indicates that the specimen is represented by a small fragment. Such cases are further mentioned in the remarks section. The **current preservative** is either a dried shell/body (dry), 70% ethyl alcohol (70% EtOH), or balsam.

The immediately **previous catalog number** is given when available. Other previous numbers are given in the remarks section. S. S. Berry frequently gave his chiton specimens two numbers. The first number is his general catalog number, the second [in brackets] is a chiton catalog number.

The **locality** is as published in the original description and may include additional information from the specimen label. We have included current higher geographic categories (country, state, province, etc.) to maintain a consistent format. In addition, if station numbers were given in the original description (*e.g.*, United States Fish Commission Stations) we have included the latitude and longitude, or bearing of the station when available. Localities in the United States begin with the state in uppercase; localities in other countries or oceans begin with the country or ocean in uppercase. Anglicized names have been changed to their proper place name (*e.g.*, Angeles Bay is changed to Bahía de los Angeles). If a place name is no longer in common use we have provided the currently accepted name in brackets. Metric equivalents have been included in brackets if non-metric units of measurement were included in the original description or label.

The **remarks** include reference to lectotype designations and any important data not mentioned in the above categories. When available we have included the current repository of the holotypes and lectotypes for those taxa that the Santa Barbara Museum of Natural History houses only paratypes or paralectotypes.

ABBREVIATIONS

Standard abbreviations as recommended in the *Council of Biology Editors Style Manual* (HUTH *et al.*, 1978) have been

used throughout the text. In addition the following collection abbreviations have been used.

AHF—Allan Hancock Foundation Cephalopod Type Collection
ANSP—Academy of Natural Sciences of Philadelphia
CAS—California Academy of Sciences, San Francisco
CMNH—Carnegie Museum of Natural History, Pittsburgh
LACM—Los Angeles County Museum of Natural History
MCZ—Museum of Comparative Zoology, Harvard University
SBMNH—Santa Barbara Museum of Natural History
SDNHM—San Diego Natural History Museum
SSB—S. Stillman Berry Collection
USFC—United States Fish Commission
USNM—United States National Museum of Natural History

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Gene Coan and Henry Chaney provided many helpful comments on sections of this manuscript. Bill Emerson (American Museum of Natural History, New York) assisted with the determination of type status for the scaphopods. George Kennedy (Los Angeles County Museum of Natural History) provided current data on the fossil localities. Henry Chaney photographed the chiton lectotypes. The following individuals and institutions provided information on their type holdings: Robert Van Syoc and Michael Kellogg (California Academy of Sciences); Diane Tyler and Mike Sweeney (U.S. National Museum of Natural History); Clif Coney and Gale Sphon (Los Angeles County Museum of Natural History).

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TYPE CATALOG

CLASS CAUDOFOVEATA

Chaetodermatidae

montereyensis, *Chaetoderma*
Heath, 1911: Mem. Mus. Comp. Zool. 45(1):61–62.
Syntype: SBMNH 35034 (1, dry).
California, Monterey Co., Monterey Bay, off Pt. Pinos Light [bearing S 10°W, 9.9 mi (15.9 km)]; 228–213 fm [417–390 m]; USFC Sta. 4524.
Remarks: Specimen dried, previously preserved in fluid (possibly alcohol).

CLASS POLYPLACOPHORA

ORDER NEOLORICATA

Leptochitonidae

abbreviatus, *Lepidopleurus halistreptus*
Dall, 1908: Bull. Mus. Comp. Zool. 43(6):354.
Syntypes: SBMNH 34461 (3, dry); previous number SSB 14556.

MEXICO, Guerrero, off Acapulco; 16°32′N, 99°48′W; 493 fm [902 m]; green mud; USFC Sta. 3417.
Remarks: All specimens articulated. *ex* USNM 223498.

ambustus, *Lepidopleurus*
DALL, 1919: Proc. U.S. Natl. Mus. 55(2283):499–500.
Syntype: SBMNH 34462 (1, dry); previous number SSB 14557.
CALIFORNIA, Santa Barbara Co., Santa Barbara Channel; 20–40 fm [37–73 m].
Remarks: Specimen articulated. *ex* USNM 274120.

clarki, *Leptochiton*
BERRY, 1922: Proc. Calif. Acad. Sci. (4)11(18):412, 427–430, pl. 1, fig. 10, text figs. 1–4.
Holotype: SBMNH 34397 (1, dry); previous number SSB 3987 [605].
CALIFORNIA, Los Angeles Co., Santa Monica [=Los Angeles], Long Wharf Canyon [Potrero Canyon]; San Pedro Pleistocene [Palos Verdes Sand or equivalent, upper Pleistocene].
Remarks: 1 intermediate valve in 2 pieces. S. S. Berry originally described the type locality as Santa Monica; however, the locality is now within the city limits of Los Angeles.

farallonis, *Lepidopleurus*
DALL, 1902: Proc. U.S. Natl. Mus. 24(1264):557.
Syntype: SBMNH 34458 (–, dry); previous number SSB 27978.
CALIFORNIA, San Francisco Co., off Farallon Ids.; 37°23′N, 123°08′W; 391 fm [715 m]; clay; USFC Sta. 3104.
Remarks: S. S. Berry label "fragment of right side of valve 7 of holotype." *ex* USNM 109025.

heathi, *Lepidopleurus* (*Xiphiozona*)
BERRY, 1919: Lorquinia 2(6):45.
Lectotype: SBMNH 34380 (1, dry); previous number SSB 3513 [123].
Paralectotype: SBMNH 34381 (1, dry); previous number SSB [124a].
Paralectotypes: SBMNH 34382 (5, 70% EtOH); previous number SSB [124].
CALIFORNIA, Monterey Co., off Monterey; 15 fm [27 m].
Remarks: Lectotype designated: BERRY, S. S. 1919. Proc. California Acad. Sci. (4)9(1):6–8; lectotype illustrated in pl. 1, figs. 1, 2; SBMNH 34381 illustrated in pl. 2, figs. 1–6.

opacus, *Lepidopleurus*
DALL, 1908: Bull. Mus. Comp. Zool. 43(6):218, 354–355.
Syntype: SBMNH 34460 (1, dry); previous number SSB 23883.
SOUTHEAST PACIFIC OCEAN, between the Galápagos Ids. and mainland Peru; 04°33′S, 87°42′30″W; 2005 fm [3667 m]; ooze; USFC Sta. 4647.
Remarks: 1 valve. *ex* USNM 110664.

HANLEYIDAE

spicata, *Hanleya*
BERRY, 1919: Proc. Calif. Acad. Sci. (4)9(1):8–10, pl. 1, fig. 3.
Holotype: SBMNH 34396 (1, balsam); previous number SSB 4102 [63].
CALIFORNIA, Monterey Co., Monterey Bay, ledge off Pt. Pinos; on a fragment of rock; "depth probably 200 ft" [61 m].
Remarks: Specimen cleared and mounted on a slide in balsam; cover slip is cracked, obscuring view of specimen.

ISCHNOCHITONIDAE

aethonus, *Ischnochiton* (*Stenoplax*)
DALL, 1919: Proc. U.S. Natl. Mus. 55(2283):507–508.
Syntype: SBMNH 34464 (–, dry); previous number SSB 27979.
MEXICO, Baja California Sur, near Cabo San Lucas; 24°11′45″N, 109°55′W; 10 fm [18 m]; shell bottom; USFC Sta. 2827.
Remarks: S. S. Berry label "shred of holotype." *ex* USNM 218814.

amabilis, *Ischnochiton* (*Lepidozona*)
BERRY, 1917: Proc. U.S. Natl. Mus. 54(2223):6–8, pl. 4, fig. 5, pl. 5, figs. 1–4.
Paratypes: SBMNH 34377 (2, dry); previous number SSB [113].
JAPAN, Tsugaru-Heiya Pref., off Cape Tsiuka; 40°33′50″N, 140°36′45″E; 47 fm [86 m]; bottom of sand, shells, and coarse gravel; USFC Sta. 4808.
Remarks: One specimen articulated on girdle, 1 specimen disarticulated, without girdle. Holotype USNM 215630.

asthenes, *Ischnochiton* (*Lepidozona*)
BERRY, 1919: Lorquinia 2(6):47.
Lectotype: SBMNH 34389 (1, dry); previous number SSB 3913 [466].
Paralectotype: SBMNH 34390 (1, dry); previous number SSB 3914 [471a].
Paralectotypes: SBMNH 34391 (15, dry); previous number SSB 3914 [471].
Paralectotypes: SBMNH 34392 (5, dry); previous number SSB [472].
CALIFORNIA, Los Angeles Co., White's Point; under stones at low tide.
Remarks: Lectotype designated: BERRY, S. S. 1919. Proc. Calif. Acad. Sci. (4)9(1):18–21; SBMNH 34390 illustrated in pl. 8, figs. 1, 2. Lectotype specimen articulated.

californiensis, *Ischnochiton* (*Lepidozona*)
BERRY, 1931: Proc. Malacol. Soc. London 19(5):255–258, pl. 29, fig. 1.
Holotype: SBMNH 34407 (1, dry); previous number SSB 5226 [1699].
Paratypes: SBMNH 34408 (10, dry); previous number SSB 3119 [65].
CALIFORNIA, San Diego Co., La Jolla, rocky shore near Scripps Institution of Oceanography; between tides.
Remarks: All specimens articulated. Holotype is illustrated in pl. 29, fig. 1.

circumsenta, *Stenoplax*
BERRY, 1956: Leafl. Malacol. 1(13):72.
Holotype: SBMNH 34425 (1, dry); previous number SSB 13602 [2227].
Paratype: SBMNH 34491 (1, dry); previous number SSB 13627 [2228].
MEXICO, Baja California Sur, Scammon's Lagoon [Laguna Ojo de Liebre], sand flats W of Isla Concha; under shells of *Pecten circularis*.
Remarks: Holotype articulated, paratype partially disarticulated.

connellyi, *Callistochiton*
WILLETT, 1937: Nautilus 51:25–26.
Paratypes: SBMNH 34478 (4, dry); previous number SSB 10411.
MEXICO, Baja California Norte, near Ensenada, Arbolitos Point [south of Punta Banda?].
Remarks: All specimens articulated. *ex* Connelly collection. Holotype LACM 1048.

crossota, *Nuttallina*
Berry, 1956: Leafl. Malacol. 1(13):71–72.
Holotype: SBMNH 34423 (1, dry); previous number SSB 15133.

Paratypes: SBMNH 34424 (13, dry); previous number SSB 14966.
MEXICO, Sonora, Puerto Peñasco, W end of long bight; under stones in tide pools on reef.
Remarks: Holotype articulated; paratypes—12 articulated specimens, 1 disarticulated specimen.

euryplax, *Chaetopleura* (*Pallochiton*)
BERRY, 1945: Amer. Midl. Natur. 34(2):491–492, text figs. 1–9.
Holotype: SBMNH 34409 (1, dry); previous number SSB 8943 [2095].
Paratypes: SBMNH 34410 (2, dry); previous number SSB 8564.
MEXICO, Sonora, Bahía de Adair; taken alive under stones at low tide.
Remarks: Holotype—8 disarticulated valves and dried girdle; paratypes—1 disarticulated specimen with radula, 1 articulated specimen with radula, 1 unmatched radula.

fackenthallae, *Cyanoplax*
BERRY, 1919: Lorquinia 2(6):45.
Holotype (monotypy): SBMNH 34383 (1, dry); previous number SSB 3907 [441].
CALIFORNIA, Monterey Co., Pacific Grove.
Remarks: 8 disarticulated valves (No. 7 broken) and dried girdle. S. S. Berry did not designate a holotype in the original description but his card catalog indicates only one specimen in the type lot. No other specimens that were collected before the date of the species description were located in his collection.

ferminicus, *Callistochiton decoratus*
Berry, 1922: Proc. Calif. Acad. Sci. (4)11(18):409, 483, pl. 14, figs. 7, 8.
Holotype: SBMNH 34401 (1, dry); previous number SSB 4571 [1040].
Paratype: SBMNH 34402 (1, dry); previous number SSB 4572 [1095].
CALIFORNIA, Los Angeles Co., Pt. Fermin, "Chiton Bed"; lower San Pedro Pleistocene [upper (?) Pleistocene].
Remarks: Each lot has 1 intermediate valve. The type locality is the second terrace of WOODRING *et al.* (1946, U.S. Geologic Survey Professional Paper 207).

fisheri, *Callistochiton*
DALL, 1919: Proc. U.S. Natl. Mus. 55(2283):512.
Syntype: SBMNH 34467 (1, dry); previous number SSB 14561.
ALASKA, Aleutian Ids., Tanaga Id., Glory of Russia Bay.
Remarks: Specimen partially disarticulated. *ex* USNM 110353.

gallina, *Ischnochiton* (*Lepidozona*)
BERRY, 1925: Proc. Malacol. Soc. London 16(5):228–229, pl. 11, figs. 1, 2.
Holotype: SBMNH 34404 (1, dry); previous number SSB 4898 [757].
CALIFORNIA, Los Angeles Co., off White's Point.
Remarks: Specimen articulated, valve 2 is cracked.

golischi, *Ischnochiton* (*Lepidozona*)
BERRY, 1919: Lorquinia 2(6):47.
Lectotype: SBMNH 34395 (1, dry); previous number SSB 4093 [1068].
CALIFORNIA, Los Angeles Co., off Santa Monica; 100 fm [183 m]; from coral.
Remarks: Lectotype designated: BERRY, S. S. 1925. Proc. Malacol. Soc. London 21(5):230, pl. 11, figs. 3, 4.

heathiana, *Stenoplax* (*Stenoradsia*)
BERRY, 1946: Proc. Malacol. Soc. London 26(6):161–164, pl. 4, figs. 7, 9, text figs. 1–6.
Paratypes: SBMNH 34415 (4, dry); previous number SSB 885 [294].
CALIFORNIA, Monterey Co., Pacific Grove, shore of Monterey Bay; between tides.
Paratypes: SBMNH 34416 (2, dry); previous number SSB 4728 [1218].
Paratype: SBMNH 34417 (1, dry & 70% EtOH); previous number SSB 8572 [131].
Paratype: SBMNH 34418 (1, dry & 70% EtOH); previous number SSB 8572c [131c].
Paratype: SBMNH 34419 (1, 70% EtOH); previous number SSB [2097].
CALIFORNIA, Monterey Co., Pacific Grove, on the shore between the "Third Beach" and the Marine Laboratory; between tides.
Remarks: SBMNH 34416 illustrated in pl. 4, figs. 7, 9. SBMNH 34417 illustrated in text figs. 1–6. SBMNH 34418—articulated 7 valve specimen, body in alcohol. SBMNH 34419—body only without valves or girdle. Holotype CAS 064459.

histrio, *Stenoplax*
BERRY, 1945: Amer. Midl. Natur. 34(2):493–495.
Holotype: SBMNH 34411 (1 valve, dry); previous number SSB 11982 [1902].
Paratypes: SBMNH 34412 (4, dry & 70% EtOH); previous number SSB 7116 [1901].
MEXICO, Baja California Sur, Mulege, El Gallo [Punta Gallito?].
Remarks: Holotype only valve 4, remaining valves of holotype at California Academy of Sciences (CAS 029671); paratypes—3 articulated specimens, 1 disarticulated specimen, 3 bodies in alcohol.

imitator, *Eudoxochiton*
IREDALE, 1914: Proc. Malacol. Soc. London 11(1):30–31.
Syntype: SBMNH 34475 (1, dry); previous number SSB 5518.
NEW ZEALAND, Kermadec Ids., Sunday Id.
Remarks: Specimen articulated.

inefficax, *Lepidozona*
BERRY, 1963: Leafl. Malacol. 1(22):138.
Paratype: SBMNH 34447 (1, dry); previous number SSB 28711.
MEXICO, Baja California Norte, Bahía Sebastian Vizcaino; 28°26.5′N, 114°36′W; 55–57 fm [101–104 m]; on the brachiopod *Terebratalia obsoleta*; trawler "Alaska."
Remarks: This specimen is mentioned in the original description, and was collected with the holotype. The holotype, apparently lost (HERTZ, 1984), is not at the California Academy of Sciences (M. Kellogg, 1988, pers. comm.).

interfossa, *Ischnochiton* (*Lepidozona*)
BERRY, 1917: Proc. U.S. Natl. Mus. 54(2223):8–10, pl. 3, figs. 8, 9, pl. 5, figs. 5–8.
Paratypes: SBMNH 34378 (2, dry); previous number SSB [114].
JAPAN, Tsugaru-Heiya Pref., off Cape Tsiuka; 41°35′50″N, 140°36′45″E; 47 fm [86 m]; bottom of sand, shells, and coarse gravel; USFC Sta. 4808.
Remarks: Holotype USNM 215631.

intermedius, *Ischnochiton*
HEDLEY & HULL, 1912: Proc. Linnean Soc. New S. Wales 37(2):274–275.

Syntypes: SBMNH 34471 (3, dry); previous number SSB 5237.
NORFOLK ISLAND.
Remarks: All specimens articulated.

isoglypta, *Stenoplax*
BERRY, 1956: Leafl. Malacol. 1(13):72–73.
Holotype: SBMNH 34426 (1, dry); previous number SSB 19160 [2226].
PERU, Isabel Id.
Remarks: 6 disarticulated valves, 1 dried body. Portions of the holotype distributed by S. S. Berry; valve No. 6 to USNM 612205, and 1 valve to CAS 043940. The authors have been unable to locate the type locality of Isabel Island.

keepiana, *Lepidochitona*
BERRY, 1948: Leafl. Malacol. 1(4):14–15.
Holotype: SBMNH 34420 (1, dry); previous number SSB 11992 [2146].
Paratypes: SBMNH 34421 (7, dry); previous number SSB 3978 [868].
CALIFORNIA, Orange Co., Newport Bay.
Remarks: Holotype articulated; paratypes—4 articulated specimens, 2 partially disarticulated specimens, 1 disarticulated specimen.

laurae, *Dendrochiton*
BERRY, 1963: Leafl. Malacol. 1(22):136.
Holotype: SBMNH 34439 (1, dry); previous number SSB 29878.
MEXICO, Baja California Norte, Bahía de los Angeles.
Remarks: Specimen articulated.

lincolnensis, *Ischnochiton atkinsoni*
ASHBY, 1920: Trans. Roy. Soc. So. Australia 44:275–277.
Syntype: SBMNH 34455 (1, dry); previous number SSB 6723.
AUSTRALIA, South Australia, Port Lincoln.
Remarks: Specimen articulated.

lioplax, *Oligochiton*
BERRY, 1922: Proc. Calif. Acad. Sci. (4)11(18):405, 431–433, pl. 1, figs. 1–6.
Paratype: SBMNH 34398 (1, dry); previous number SSB 5052 [606].
CANADA, British Columbia, Vancouver Id., W of Otter Point, between mouths of Muir and Kirby creeks; from conglomerates and sandstones along the sea cliff; Oligocene [lower Miocene, Juanian Stage], Sooke Formation; Stanford University (North Pacific) locality N.P. 129.
Remarks: 1 head valve attached to matrix. Holotype CAS 61805.46.

lirulatus, *Dendrochiton*
BERRY, 1963: Leafl. Malacol. 1(22):136–137.
Holotype: SBMNH 34440 (1, dry); previous number SSB 29879.
Paratypes: SBMNH 34442 (7, dry); previous number SSB 29826.
Paratypes: SBMNH 34443 (12, dry); previous number SSB 29833.
MEXICO, Baja California Norte, N of San Felipe, Ensenada Blanca; under stones in low intertidal rubble.
Paratypes: SBMNH 34441 (2, dry); previous number SSB 25452.
MEXICO, Baja California Norte, N cove of San Felipe.
Remarks: All specimens articulated except SBMNH 34441, which is partially disarticulated.

lobium, *Basiliochiton*
BERRY, 1925: Proc. Acad. Natur. Sci. Philadelphia 77:27–28, pl. 2, figs. 1, 2.
Holotype: SBMNH 34403 (1, dry); previous number SSB 4908 [1353].
CALIFORNIA, San Diego Co., La Jolla, tide pool in the "Devil's Slide."
Remarks: Specimen articulated but all valves cracked.

magdalena, *Nuttalina*
DALL, 1919: Proc. U.S. Natl. Mus. 55(2283):502.
Syntype: SBMNH 34463 (1, dry); previous number SSB 14558.
MEXICO, Baja California Sur, Bahía Magdalena.
Remarks: Specimen articulated. *ex* USNM 217924.

mixta, *Tonicia*
DALL, 1919: Proc. U.S. Natl. Mus. 55(2283):515–516.
Syntype: SBMNH 34468 (1, dry); previous number SSB 14562.
MEXICO, Baja California Norte, Bahía de los Angeles.
Remarks: Specimen articulated.

nipponica, *Ischnochiton*: Berry, 1918 (see *Ischnochiton pilsbryanus*)

pella, *Lepidozona*
BERRY, 1963: Leafl. Malacol. 1(22):137–138.
Holotype: SBMNH 34444 (1, dry); previous number SSB 25471.
Paratype: SBMNH 34445 (1, dry); previous number SSB 29827.
MEXICO, Baja California Norte, San Felipe; under the cleaner stones on a very muddy rocky shore, low mid-tide.
Paratypes: SBMNH 34446 (14, dry); previous number SSB 29827.
MEXICO, Baja California Norte, San Felipe, below El Faro, under muddy rocks, low mid-tide.
Remarks: All specimens articulated.

perplexus, *Eudoxochiton*
IREDALE, 1914: Proc. Malacol. Soc. London 11(1):29.
Syntype: SBMNH 34474 (1, dry); previous number SSB 5230.
NEW ZEALAND, Kermadec Ids., Sunday Id.
Remarks: Specimen articulated.

pilsbryanus, *Ischnochiton* (*Lepidozona*)
BERRY, 1917: Proc. U.S. Natl. Mus. 54(2223):10–12, pl. 7, figs. 1–7.
Paratype: SBMNH 34379 (1, dry); previous number SSB [119].
JAPAN, Oshima-Hauto Pref., Hokkaido, off Cape Shirakami; 41°17′20″N, 140°07′W; 195 fm [357 m]; bottom of fine gray sand; USFC Sta. 4810.
Remarks: Junior homonym of *Ischnochiton* (*Stenochiton*) *pilsbryanus* Bendall, 1897; renamed *Ischnochiton* (*Lepidozona*) *nipponica* Berry, 1918; Nautilus 31(4):144. Holotype USNM 215632.

psaltes, *Dendrochiton*
BERRY, 1963: Leafl. Malacol. 1(22):135.
Holotype: SBMNH 34435 (1, dry); previous number SSB 29877.
Paratypes: SBMNH 34436 (26, dry).
Paratype: SBMNH 34437 (1, dry).
Paratype: SBMNH 34438 (1, dry).
CALIFORNIA, San Diego Co., Mission Bay, near entrance.
Remarks: All specimens articulated. SBMNH 34438 is a 7-valved specimen.

saccharina, *Tonicella*
DALL, 1878: Proc. U.S. Natl. Mus. 1(1):2.
Paralectotype: SBMNH 34457 (1, dry); previous number SSB 14558.
ALASKA, Shumagin Ids., Yukon Harbor; 13 fm [24 m].

Remarks: Specimen articulated. Lectotype designated: FERREIRA, A. J. 1982. Veliger 25(2):114–115; USNM 30914.

sanctaemonicae, *Ischnochiton* (*Lepidozona*)
BERRY, 1922: Proc. Calif. Acad. Sci. (4)11(18):412, 478–480, pl. 12, figs. 1–9.
Holotype: SBMNH 34399 (1, dry); previous number SSB 3992 [883].
Paratypes: SBMNH 34400 (2, dry); previous number SSB 3993 [881,886].
CALIFORNIA, Los Angeles Co., Santa Monica [=Los Angeles], Long Wharf Canyon [Potrero Canyon]; upper San Pedro Pleistocene [upper Pleistocene, Palos Verdes Sand or equivalent].
Remarks: Holotype (1 intermediate valve) illustrated in figs. 4–6; paratypes (1 head valve, 1 tail valve) illustrated in figs. 1–3, 7–9.

semiliratus, *Dendrochiton*
BERRY, 1927: Proc. Malacol. Soc. London 17(4):160–163, text figs. 1–4.
Paratypes: SBMNH 34405 (2, dry); previous number SSB 5130 [1472].
Paratypes: SBMNH 34406 (2, dry); previous number SSB 5129 [1470].
CANADA, British Columbia, Vancouver Id., Departure Bay.
Remarks: SBMNH 34405 (1 articulated, 1 disarticulated), illustrated in text figs. 1–4; SBMNH 34406—articulated. Holotype CAS 064257.

sonorana, *Stenoplax* (*Maugerella*) *conspicua*
BERRY, 1956: Leafl. Malacol. 1(13):73–74.
Holotype: SBMNH 34427 (1, dry); previous number SSB 15131.
Paratypes: SBMNH 34428 (14, dry); previous number SSB 14949 [2230].
Paratypes: SBMNH 34429 (4, dry); previous number SSB 17359 [2233].
Paratypes: SBMNH 34430 (4, dry); previous number SSB [2231].
Paratypes: SBMNH 34431 (11, dry); previous number SSB [2232].
MEXICO, Sonora, Puerto Peñasco, W end of long bight; under stones on reef.
Remarks: All specimens articulated except SBMNH 34429 and 34431 where 1 specimen in each lot is disarticulated.

stearnsii, *Ischnochiton*
DALL, 1902: Proc. U.S. Natl. Mus. 24(1264):557–558.
Syntype: SBMNH 34459 (–, dry); previous number SSB 16974.
CALIFORNIA, San Francisco Co., off Farallon Ids.; 37°23′N, 123°08′W; 391 fm [715 m]; clay; USFC Sta. 3104.
Remarks: S. S. Berry label "holotype fragment"; 1 intermediate valve fragment. *ex* USNM 109024.

subtilis, *Lepidozona*
BERRY, 1956: Leafl. Malacol. 1(13):74.
Holotype: SBMNH 34432 (1, dry); previous number SSB 15132.
Paratypes: SBMNH 34434 (33, dry); previous number SSB 14962 [2239].
MEXICO, Sonora, Puerto Peñasco, W end of long bight; under stones in pools on reef; mid-tide.
Paratypes: SBMNH 34433 (13, dry); previous number SSB 14962 [2238].
MEXICO, Sonora, W shore of Bahía Punta Peñasco; under stones near low-tide level.
Remarks: All specimens articulated.

thamnoporus, *Mopalia* (*Dendrochiton*)
BERRY, 1911: Proc. Acad. Natur. Sci. Philadelphia 63(1911): 487–490.
Lectotype: SBMNH 34370 (1, dry); previous number SSB 4101 [8a].
Paralectotypes: SBMNH 34371 (9, dry); previous number SSB 5048.
CALIFORNIA, Monterey Co., off Monterey; 15 fm [27 m].
Remarks: Lectotype disarticulated, missing valves 3 and 4. Paralectotypes—all specimens articulated, several valves cracked. Lectotype designated: BERRY, S. S. 1919. Proc. Calif. Acad. Sci. (4)9(1):4–5, figs. 1–2. Name emended from *Mopalia thamnopora* in lectotype designation.

willetti, *Ischnochiton* (*Lepidozona*)
BERRY, 1917: Proc. Calif. Acad. Sci. (4)7(10):236–238, text figs. 1, 2.
Holotype: SBMNH 34372 (1, dry); previous number SSB 3700 [159].
Paratypes: SBMNH 34492 (7, dry); previous number SSB 3699 [210].
ALASKA, Forrester Id.; 15–20 fm [27–37 m].
Remarks: All specimens articulated. Holotype illustrated in text figs. 1, 2.

CALLISTOPLACIDAE

meridionalis, *Callistochiton antiquus*
ASHBY, 1919: Trans. Roy. Soc. So. Australia 43:400.
Paratypes: SBMNH 34456 (7, dry); previous number SSB 4551.
AUSTRALIA, South Australia, St. Vincent's Gulf, Marino.
Remarks: All specimens articulated. Holotype reported in the South Australia Museum, Adelaide (not verified in this study).

MOPALIIDAE

aepynotus, *Callistochiton*
DALL, 1919: Proc. U.S. Natl. Mus. 55(2283):511.
Syntype: SBMNH 34466 (–, dry); previous number SSB 14560.
WASHINGTON, Puget Sound; 48°11′30″N, 122°48′W; 37 fm [68 m]; rocky bottom; USFC Sta. 3593.
Remarks: S. S. Berry label "holotype fragment." *ex* USNM 225448.

chacei, *Mopalia* (Figure 1)
BERRY, 1919: Lorquinia 2(6):46.
Lectotype (**herein**): SBMNH 34393 (1, 70% EtOH); previous number SSB 4129 [118].
Paralectotypes: SBMNH 35048 (6, dry); previous number SSB [767].
Type locality: CALIFORNIA, San Diego Co., La Jolla; Coll. S. S. Berry, 18 Feb. 1913.
Paralectotype: SBMNH 35049 (1, dry); previous number SSB 3968 [745].
CALIFORNIA, Los Angeles Co., Santa Monica, 3.7 mi [6 km] N of Long Wharf.
Remarks: S. S. Berry specimen label and collection catalog designated SBMNH 34393 as the "type"; lectotype specimen articulated on body and girdle; SBMNH 35048—3 specimens articulated, 3 disarticulated; SBMNH 35049—disarticulated, several valves broken.

cirrata, *Mopalia*
BERRY, 1919: Lorquinia 2(6):45–46.
Holotype (monotypy): SBMNH 34387 (1, dry); previous number SSB [642].
ALASKA, Icy Strait, Dundas Bay [bearing from Pt. Wimbleton,

S 20° W, 0.4 mi (0.6 km)]; 6.5–9 fm [12–16 m]; USFC Sta. 4263.
Remarks: 2 valves disarticulated, remainder articulated on girdle. S. S. Berry did not designate a holotype but his card file indicates only one specimen was in the type lot. The only other lot in the Berry collection was collected after the date of publication of the original species description.

cithara, *Mopalia*
BERRY, 1951: Proc. Malacol. Soc. London 28(6):220, 222–224, pl. 26, figs. 16, 18, text figs. 1–8.
Holotype: SBMNH 34422 (1, 70% EtOH); previous number SSB 13013 [2102].
CANADA, British Columbia, Vancouver Id., just inside Clayoquot Sound, SE shore of Round Id.; on boulders at −0.5 ft [−0.15 m] tide.
Remarks: 2 disarticulated valves, remainder articulated on body; head valve missing.

egretta, *Mopalia*
BERRY, 1919: Lorquinia 2(6):45.
Lectotype: SBMNH 34384 (1, dry); previous number SSB 3939 [281].
Paralectotype: SBMNH 34385 (1, 70% EtOH); previous number SSB [284].
Paralectotype: SBMNH 34386 (1, dry); previous number SSB 3940 [640].
Paralectotype: SBMNH 34448 (1, dry); previous number SSB 12645 [2073].
ALASKA, Forrester Id.; 20 fm [37 m].
Remarks: Lectotype designated: Berry, S. S. 1919. Proc. Calif. Acad. Sci. (4)9(1):13–17; lectotype (articulated) illustrated in pl. 6, fig. 1; SBMNH 34385 illustrated in pl. 6, fig. 2; SBMNH 34386 illustrated in pl. 7, figs. 1–6. SBMNH 34448 is not listed in the lectotype designation but the S. S. Berry specimen label and corresponding collection catalog refer to it as a "paratype."

lactica, *?Chaetopleura*
DALL, 1919: Proc. U.S. Natl. Mus. 55(2283):509–510.
Syntype: SBMNH 34465 (1, dry); previous number SSB 14559.
CALIFORNIA, Los Angeles Co., Santa Catalina Id., Catalina Harbor.
Remarks: Specimen articulated. *ex* USNM 172900.

lionotus, *Mopalia imporcata*
PILSBRY, 1918: Nautilus 31(4):126.
Paratype: SBMNH 35084 (1, dry); previous number SSB [1812].
CALIFORNIA, Los Angeles Co., White's Point.
Remarks: *ex* H. N. Lowe No. 1542. All but one valve articulated on girdle. Holotype ANSP 117952.

pacifica, *Placiphorella* (Figure 2)
BERRY, 1919: Lorquinia 2(6):46.
Lectotype (**herein**): SBMNH 34394 (1, dry & 70% EtOH); previous number SSB [92].
Type locality: ALASKA, Prince of Wales Id., Kasaan Bay, true bearing from center of Round Id., S 10° W at 0.4 mi [0.6 km]; 95–98 fm [174–179 m]; USFC Sta. 4245; Coll. 11 July 1903, Steamer *Albatross*.
Remarks: S. S. Berry specimen label and collection catalog designated this as the "Type." Specimen disarticulated, body in alcohol.

phorminx, *Mopalia*
BERRY, 1919: Lorquinia 2(6):46.
Lectotype: SBMNH 34388 (1, dry); previous number SSB 1769 [549].
CALIFORNIA, Monterey Co., Monterey Bay, ledge off Pt. Pinos, on a rock fragment; "depth probably 200 feet" [61 m].
Remarks: All but 2 valves articulated. Lectotype designated: Berry, S. S. 1919. Proc. Calif. Acad. Sci. (4)9(1):10–13, pl. 3, figs. 1, 2, pl. 4, figs. 1–3, pl. 5, figs. 1–3.

rufa, *Placiphorella*
BERRY, 1917: Proc. Calif. Acad. Sci. (4)7(10):241–244, text figs. 3, 4.
Holotype: SBMNH 34373 (1, 70% EtOH); previous number SSB 1411 [240].
Paratypes: SBMNH 34374 (3, dry); previous number SSB 3836 [242].
Paratype: SBMNH 34376 (1, dry); previous number SSB 3837 [242a].
ALASKA, Forrester Id.; 15–20 fm [27–37 m].
Paratype: SBMNH 34375 (1, dry); previous number SSB 3836 [245].
ALASKA, Forrester Id.; 25 fm [46 m].
Remarks: All specimens articulated except SBMNH 34376. Holotype illustrated in text fig. 3; SBMNH 34376 illustrated in text fig. 4.

tasmanica, *Kopionella*
ASHBY, 1920: Trans. Roy. Soc. So. Australia 44:268–271.
Syntype: SBMNH 34454 (1, dry); previous number SSB 6731.
AUSTRALIA, Tasmania, D' Entrecasteaux Channel, Woodbridge.
Remarks: Specimen articulated, smashed.

CHITONIDAE

corypheus, *Chiton*
HEDLEY & HULL, 1912: Proc. Linnean Soc. New So. Wales 37(2):277–278.
Syntypes: SBMNH 34472 (2, dry); previous number SSB 5524.
NORFOLK ISLAND.
Remarks: Both specimens articulated.

exasperata, *Rhyssoplax*
IREDALE, 1914: Proc. Malacol. Soc. London 11(1):41–43.
Syntypes: SBMNH 34476 (2, dry); previous number SSB 5525.
NEW ZEALAND, Kermadec Ids., Sunday Id.
Remarks: Both specimens articulated.

funereus, *Chiton*
HEDLEY & HULL, 1912: Proc. Linnean Soc. New So. Wales 37(2):279–280.
Syntypes: SBMNH 34473 (2, dry); previous number SSB 5241.
AUSTRALIA, New South Wales, Lord Howe Id.
Remarks: Both specimens articulated.

lamyi, *Chiton*
DUPUIS, 1918: Bull. Mus. d'Hist. Natur. 7(1917):538.
Syntype: SBMNH 34469 (1, dry); previous number SSB 4009.
RED SEA.
Remarks: Specimen articulated. Type locality published as Gulf of Aden [Djibouti], Obock.

lebruni, *Tonicia*
DE ROCHEBRUNE, 1884: Bull. Soc. Philomathique Paris (7)8: 35.
Syntypes: SBMNH 34477 (2, dry); previous number SSB 4015.
CHILE, Estrecho de Magallanes, Punta Arenas.
Remarks: Both specimens articulated.

nigropunctata, *Acanthopleura*
CARPENTER, 1865: Proc. Zool. Soc. London (1865):511–512.
Syntype: SBMNH 35041 (1, dry); previous number SSB 14517.

French Polynesia, Society Ids.
Remarks: Specimen articulated.

Acanthochitonidae

shaskyi, *Acanthochitona*
Ferreira, 1987: Bull. So. Calif. Acad. Sci. 86(1):47–52.
Paratype: SBMNH 34359 (1, 70% EtOH).
Costa Rica, Isla del Coco, Bahía Chatham; 05°33′N, 87°02′W; 46–69 m.
Remarks: Holotype CAS 061094.

Cryptoplacidae

pritchardi, *Cryptoplax*
Hall, 1905: Proc. Roy. Soc. Victoria 17(2):391–392.
Syntypes: SBMNH 34470 (2, dry); previous number SSB 6024.
Australia, Victoria, Muddy Creek; Victoria Tertiary.
Remarks: 2 disarticulated valves.

CLASS BIVALVIA

SUBCLASS PALAEOTAXODONTA

Malletiidae

pacifica, *Malletia*
Dall, 1897: Bull. Natur. Hist. Soc. British Columbia 2:11.
Syntypes: SBMNH 34045 (2 pair, dry); previous number SSB 27959.
California, Santa Barbara Co., Pt. Conception, 34°19′25″N, 120°38′30″W; 278 fm [508 m]; in green mud; USFC Sta. 3198.
Remarks: *ex* USNM 123572.

peruviana, *Malletia*
Dall, 1908: Bull. Mus. Comp. Zool. 43(6):219, 384.
Paratypes: SBMNH 34678 (1 pair, 2 valves, dry); previous number SSB 27961.
Peru, 24 mi [39 km] off Punta Aguja; 05°46′S, 81°31.9′W; 1036 fm [1895 m]; dark brown mud; USFC Sta. 4654.
Remarks: *ex* USNM 110576. Holotype USNM 110574.

sorror, *Malletiella*
Soot-Ryen, 1957: Astarte 16:2.
Paratypes: SBMNH 34093 (2 pair, dry); previous number SSB 27962.
Chile, off Aranco Prov.; 38°08′S, 75°53′W; 677 fm [1238 m]; yellow mud; USFC Sta. 2791.
Remarks: *ex* USNM (no number). Holotype USNM 606947.

Tindariidae

brunnea, *Tindaria*
Dall, 1916: Proc. U.S. Natl. Mus. 52:401.
Syntypes: SBMNH 34047 (3 pair, dry); previous number SSB 27956.
Alaska, Bering Sea, south of Pribilof Ids.; 54°54′N, 168°59′W; 1401 fm [2562 m]; in green ooze; USFC Sta. 3604.
Remarks: *ex* USNM 226333.

californica, *Tindaria*
Dall, 1916: Proc. U.S. Natl. Mus. 52:400.
Syntype: SBMNH 34048 (1 pair, dry); previous number SSB 27958.
California, Santa Barbara Co., Santa Barbara Ids.; 34°11′N, 120°15′W; 276 fm [504 m]; in green mud; USFC Sta. 2840.
Remarks: *ex* USNM 96972. Depth reported as 27.6 fm (in error) in U.S. Comm. Fish & Fisheries, Rept. Commissioner, Pt. 26 (for 1900):405.

Nuculanidae

acapulcensis, *Leda* (*Saccella*)
Pilsbry & Lowe, 1932: Proc. Acad. Natur. Sci. Philadelphia 84:107.
Paratypes: SBMNH 33987 (1 pair, 1 valve, dry); previous number SSB 23439.
Mexico, Guerrero, Acapulco, 20 fm [37 m].
Remarks: *ex* H. N. Lowe No. 464. Holotype ANSP 155634.

acrita, *Leda* (*Jupiteria*)
Dall, 1908: Bull. Mus. Comp. Zool. 43:374–375.
Syntypes: SBMNH 34057 (10 pair, 3 valves, dry); previous number SSB 27941.
Panama, Bahía de Panama; 08°44′N, 79°09′W; 29.5 fm [54 m]; green mud; USFC Sta. 2799.
Remarks: *ex* USNM 610320.

callimene, *Leda* (*Jupiteria*)
Dall, 1908: Bull. Mus. Comp. Zool. 43:219, 372–373.
Syntypes: SBMNH 34058 (1 pair, 1 valve, dry); previous number SSB 27940.
Panama, Golfo de Panama; 07°32′N, 78°36′30″W; 259 fm [474 m]; hard gray mud, silt; USFC Sta. 3396.
Remarks: *ex* USNM 604252.

cellulita, *Leda*
Dall, 1896: Nautilus 10(1):1–2.
Syntypes: SBMNH 34677 (2 pair, dry); previous number SSB 27947.
Washington, Kitsap Co., Puget Sound, near Port Orchard; dredged.
Remarks: *ex* USNM 107487.

conceptionis, *Leda*
Dall, 1896: Nautilus 10(1):2.
Syntypes: SBMNH 34056 (2 pair, dry); previous number SSB 1645.
California, Santa Barbara Co., off Pt. Conception; 34°19′25″N, 120°38′30″W; 278 fm [508 m]; green mud; USFC Sta. 3198.
Remarks: *ex* USNM 107426.

exoptata, *Leda* (*Adrana*)
Pilsbry & Lowe, 1932: Proc. Acad. Natur. Sci. Philadelphia 84:107–108.
Paratypes: SBMNH 34486 (2 pair, dry); previous number SSB 23438.
Mexico, Sonora, Guaymas; 20 fm [36 m].
Remarks: Holotype ANSP 155633.

gomphoidea, *Leda*
Dall, 1916: Proc. U.S. Natl. Mus. 52:396.
Syntype: SBMNH 34059 (1 pair, dry); previous number SSB 27942.
Oregon, off Tillamook Bay; 45°30′N, 124°52′W; 786 fm [1437 m]; green mud; USFC Sta. 3346.
Remarks: *ex* USNM 212889.

limata, *Leda hamata* var.
Dall, 1916: Proc. U.S. Natl. Mus. 52:397–398.
Syntypes: SBMNH 34050 (4 valves, dry); previous number SSB 27943.
California, Santa Barbara Co., Santa Rosa Id.; 34°06′N, 120°02′W; 53 fm [97 m]; fine gray sandy mud; USFC Sta. 2902.
Remarks: *ex* USNM 211292.

liogona, *Leda*
DALL, 1916: Proc. U.S. Natl. Mus. 52:396.
Syntypes: SBMNH 34049 (4 pair, dry); previous number SSB 27944.
ALASKA, Bering Sea, S of Pribilof Ids.; 54°54′N, 168°59′W; 1401 fm [2562 m]; in green ooze. USFC Sta. 3604.
Remarks: *ex* USNM 214089.

redondoensis, *Nuculana*
BURCH. 1944: Minutes of Conch. Club So. California No. 33: 9–10.
Syntypes: SBMNH 35036 (2 pair, 3 valves, dry); previous number SSB 15357.
CALIFORNIA, Los Angeles Co., off Redondo Beach; 25 fm [46 m]; gravel.

YOLDIIDAE

beringiana, *Yoldia*
DALL, 1916: Proc. U.S. Natl. Mus. 52:399.
Syntype: SBMNH 34053 (1 pair, dry); previous number SSB 27948.
ALASKA, Bering Sea, off Pribilof Ids.; 54°11′30″N, 167°25′W; 987 fm [1805 m]; green mud. USFC Sta. 3607.
Remarks: *ex* USNM 226195.

cecinella, *Yoldia*
DALL, 1916: Proc. U.S. Natl. Mus. 52:399.
Syntypes: SBMNH 34054 (3 pair, 3 valves, dry); previous number SSB 27952.
MEXICO, Baja California Sur, La Paz; 24°18′N, 118°22′W; 26.5 fm [48 m]; in broken shell bottom; USFC Sta. 2823.
Remarks: *ex* USNM 610321.

gibbsii, *Malletia*
DALL, 1897: Bull. Natur. Hist. Soc. British Columbia 2:10–11.
Syntypes: SBMNH 34046 (1 pair, 1 right valve, dry); previous number SSB 27955.
CANADA, British Columbia, Queen Charlotte Ids.; [51°23′N, 130°34′W; 876 fm (1602 m)]; in green mud; USFC Sta. 2860.
Remarks: *ex* USNM 107646.

oleacina, *Yoldia*
DALL, 1916: Proc. U.S. Natl. Mus. 52:398.
Syntypes: SBMNH 34051 (1 pair, 2 valves, dry); previous number SSB 27949.
ALASKA, Arctic Ocean, north of Bering Strait.
Remarks: *ex* USNM 223407.

orcia, *Yoldia*
DALL, 1916: Proc. U.S. Natl. Mus. 52:399.
Syntypes: SBMNH 34055 (3 pair, 1 valve, dry); previous number SSB 27953.
CALIFORNIA, San Diego Co., off San Diego; 32°40′30″N, 117°31′30″W; 822 fm [1503 m]; green mud. USFC Sta. 2923.
Remarks: *ex* USNM 114201.

secunda, *Yoldia*
DALL, 1916: Proc. U.S. Natl. Mus. 52:398.
Syntype: SBMNH 34052 (1 pair, dry); previous number SSB 27950.
ALASKA, Clarence Strait; 55°46′N, 132°24′W; 322 fm [589 m]; green mud gravel. USFC Sta. 3077.
Remarks: *ex* USNM 206421. One valve broken into three pieces.

SUBCLASS PTERIOMORPHIA

ARCIDAE

bailyi, *Acar*
BARTSCH, 1931: Proc. U.S. Natl. Mus. 80(9):2.
Paratype: SBMNH 34083 (1 pair, dry); previous number SSB 8048.
CALIFORNIA, Orange Co., Balboa; under stones.

rostae, *Barbatia* (*Acar*)
BERRY, 1954: Leafl. Malacol. 1(12):67.
Paratypes: SBMNH 34036 (16 pair, dry); previous number SSB 14494.
MEXICO, Sinaloa, Mazatlán.
Remarks: Holotype CAS 043983.

tabogensis, *Arca* (*Byssoarca*)
C. B. ADAMS, 1852: Ann. Lyceum Natur. Hist. 5:486–487, 545.
Paralectotypes: SBMNH 34087 (5 valves, dry); previous number SSB 14553.
PANAMA. Taboga Id.
Remarks: *ex* MCZ (no number). Lectotype designated: TURNER, R. D. 1956. Harvard Univ., Occ. Papers Moll. 2(20):130; MCZ 186299.

LIMOPSIDAE

diegensis. *Limopsis*
DALL, 1908: Bull. Mus. Comp. Zool. 43:220, 395.
Syntypes: SBMNH 34060 (5 pair, dry); previous number SSB 16971.
CALIFORNIA, off San Diego; 32°40′30″N, 117°31′30″W; 822 fm [1503 m]; mud; USFC Sta. 2923.
Remarks: *ex* USNM 111422.

juarezi, *Limopsis*
DALL, 1908: Bull. Mus. Comp. Zool. 43(6):220, 396–397.
Syntype: SBMNH 34680 (1 pair, dry); previous number SSB 27963.
PANAMA, Golfo de Panama; 06°17′N, 82°05′W; 1672 fm [3058 m]; sand; USFC Sta. 3360.
Remarks: *ex* USNM 122891.

zonalis, *Limopsis*
DALL, 1908: Bull. Mus. Comp. Zool. 43(6):220, 393–394.
Syntypes: SBMNH 34679 (2 pair, dry); previous number SSB 16961.
PANAMA, Golfo de Panama; 07°09′30″N, 81°08′30″W; 546 fm [999 m]; mud; USFC Sta. 3356.
Remarks: *ex* USNM 122878.

MYTILIDAE

cylista, *Botula*
BERRY, 1959: Leafl. Malacol. 1(18):107.
Paratypes: SBMNH 34010 (19 pair, dry); previous number SSB 26466
MEXICO, Sinaloa, north of Mazatlán, "Las Gaviotas Beach," at rocky point; from shells of *Ostrea iridescens*.
Remarks: Holotype CAS 043975.

diegensis. *Mytilus edulis*
COE, 1945: Minutes of Conch. Club So. California 48:28.
Syntypes: SBMNH 35026 (3 pair, dry); previous number SSB 11969.
CALIFORNIA. San Diego Co., Mission Bay.

hancocki, *Lithophaga* (*Leisolenus*)
SOOT-RYEN, 1955: Allan Hancock Pacific Exp. 20(1):102–103.
Paratype: SBMNH 34094 (1 pair, dry); previous number SSB 25124.
ECUADOR, Galápagos Ids. [Archipiélago de Colon], N of Isla Floreana [Isla Santa Maria], crater of Isla Onslow; in *Pavona* coral; Allan Hancock Sta. 804-38.
Remarks: Holotype LACM 2175.

pacificum, *Dacrydium*
DALL, 1916: Proc. U.S. Natl. Mus. 52:405.
Syntypes: SBMNH 34061 (3 pair, dry); previous number SSB 27967.
ALASKA, Bering Sea; 54°54′N, 168°59′W; 1401 fm [2562 m]; mud; USFC Sta. 3604.
Remarks: *ex* USNM 214092.

puntarenensis, *Mytilus* (*Hormomya*)
PILSBRY & LOWE, 1932: Proc. Acad. Natur. Sci. Philadelphia 84:104.
Paratypes: SBMNH 33973 (4 pair, dry); previous number SSB 23441.
COSTA RICA, Golfo de Nicoya, Puntarenas.
Remarks: Holotype ANSP 155629.

rogersi, *Lithophaga* (*Labis*) *attenuata*
BERRY, 1957: Leafl. Malacol. 1(14):76.
Paratypes: SBMNH 34035 (7 pair, dry); previous number SSB 25385.
MEXICO, Sonora, Bahía de Adair, outer reefs of Cholla Cove.
Paratypes: SBMNH 35024 (5 pair, dry).
MEXICO, Sonora, Bahía de Adair, NW side of Cholla Cove; boring in reefs.
Paratype: SBMNH 01726 (1 pair, dry).
MEXICO, Sonora, Bahía de Adair, NW side of Cholla Cove; boring in limey, fossiliferous mudstone.
Remarks: SBMNH 35024 *ex* Donald Shasky Coll. SBMNH 01726—exchange with Mark Rogers, August 1962. Holotype CAS 032072.

sacculifer, *Volsella*
BERRY, 1953: Trans. San Diego Soc. Natur. Hist. 11(16):407–409, text fig. 1.
Paratype: SBMNH 34027 (1 pair, dry); previous number SSB 20654.
CALIFORNIA, Los Angeles Co., San Pedro Bay.
Remarks: Holotype CAS 064463.

PTERIIDAE

viridizona, *Pteria*
DALL, 1916: Proc. U.S. Natl. Mus. 52:403.
Syntype: SBMNH 34062 (1 pair, dry); previous number SSB 16972.
CALIFORNIA, Los Angeles Co., Long Beach.
Remarks: *ex* USNM 172600.

LIMIDAE

sphoni, *Lima* (*Plicacesta*)
HERTLEIN, 1963: Occ. Papers Calif. Acad. Sci. 40:3–5, figs. 1–3.
Holotype: SBMNH 03183 (1 pair, dry).
CALIFORNIA, between Santa Catalina Id. and Santa Barbara Id.; 457–549 m (250–300 fm); on drag boat *Christine*.

OSTREIDAE

amara, *Ostrea*
CARPENTER, 1864: Proc. Zool. Soc. London (for 1863) (3): 363.
Syntypes: SBMNH 34089 (2 pair, dry); previous number SSB 14551.
PANAMA, Panama Prov., Panama City.
Remarks: 2 pair attached to one another. *ex* MCZ (no number).

panamensis, *Ostrea*
CARPENTER, 1864: Proc. Zool. Soc. London (for 1863) (3): 362.
Syntype: SBMNH 34088 (1 valve, dry); previous number SSB 14550.
PANAMA, Panama Prov., Panama City.
Remarks: *ex* MCZ 77140.

DIMYIDAE

californiana, *Dimya*
BERRY, 1936: Proc. Malacol. Soc. London 22(3):126–128, pl. 13B, figs. 1–4.
Holotype: SBMNH 34031 (1 pair, dry); previous number SSB 7748.
CALIFORNIA, Los Angeles Co., Santa Monica; 100 fm [183 m]; on stone; collected by fishermen.

coralliotis, *Dimya*
BERRY, 1944: Proc. Malacol. Soc. London 26(1):25–26, Figs. 1–4.
Holotype: SBMNH 34032 (1 pair, dry); previous number SSB 8435.
CALIFORNIA, Orange Co., 10 mi [16 km] in westerly direction off Huntington Beach; 100 fm [183 m]; adhering between branches of coral *Dendrophyllia oldroydi*.
Remarks: Small piece of coral included in lot.

filipina, *Dimya*
BARTSCH, 1913: Proc. U.S. Natl. Mus. 45(1983):305–306.
Paratype: SBMNH 34104 (1 valve, dry); previous number SSB 8046.
PHILIPPINES, Anima Sola Id.; 13°20′N, 123°14′15″E; 105 fm [192 m]; coarse gray sand bottom; USFC Sta. 5217.
Remarks: *ex* USNM 246281. Holotype USNM 246281.

PLICATULIDAE

anomioides, *Plicatula*
KEEN, 1958: Bull. Amer. Paleon. 38(172):241–242.
Paratype: SBMNH 34081 (1 valve, dry); previous number SSB 27318.
MEXICO, Sonora, Guaymas, breakwater in front of Miramar Hotel.
Remarks: Holotype CAS 064585.

PECTINIDAE

berryi, *Pecten*: Bernard, 1983 (see *Pecten lunaris*)

camerella, *Aequipecten* (*Leptopecten*)
BERRY, 1968: Leafl. Malacol. 1(25):155–156.
Holotype: SBMNH 34028 (1 pair, dry).
Paratypes: SBMNH 34029 (12 pair, dry); previous number SSB 34811.
Paratypes: SBMNH 34030 (13 pair, dry); previous number SSB 34811.

MEXICO, Baja California Sur, region of La Ribera; 35–40 fm [64–73 m].
Remarks: Holotype is figured in KEEN, A. M. 1971. *Shells of tropical west America*. p. 90, fig. 196; SBMNH 34029—S. S. Berry label "measured paratypes." SBMNH 34030 separated from other lot of SSB 34811, possibly for distribution.

euterpes, *Pecten* (*Leptopecten*)
BERRY, 1957: Leafl. Malacol. 1(14):75–76.
Paratype: SBMNH 34034 (1 pair, dry); previous number SSB 9993.
MEXICO, Guerrero, Acapulco; 6–10 fm [11–18 m].
Remarks: Holotype CAS 043977.

exquisitus, *Cyclopecten*
GRAU, 1959: Allan Hancock Pacific Exp. 23:34–36.
Paratype: SBMNH 34099 (1 pair, dry); previous number SSB 26831.
ECUADOR, Galápagos Ids. [Archipiélago de Colon], off Wenman Id. [Isla Wolf]; 01°23′10″N, 91°48′45″W; 100–150 fm [183–274 m]; Allan Hancock Sta. 143-34; on corals and millipores.
Remarks: Holotype LACM 1747.

lowei, *Pecten* (*Chlamys*)
HERTLEIN, 1935: Proc. Calif. Acad. Sci. 21(25):308–311.
Paratypes: SBMNH 34100 (2 pair, dry); previous number SSB 23443.
MEXICO, Baja California Sur, Isla del Carmen; 20 fm [37 m].
Remarks: Holotype CAS 065995.

lunaris, *Pecten*
BERRY, 1963: Leafl. Malacol. 1(23):139–140.
Paratypes: SBMNH 34673 (4 pair, dry); previous number SSB 34920.
MEXICO, Sonora, off Morro Colorado; 30–45 fm [55–82 m].
Remarks: Junior homonym of *Pecten lunaris* Romer, 1839; replacement name *Pecten berryi* Bernard, 1983; Can. Spec. Publ. Fish. Aquat. Sci. 61:26. Holotype CAS 043980.

pugetensis, *Pecten islandicus* var.
I. S. OLDROYD, 1920: Nautilus 33(4):136.
Paratype: SBMNH 34893 (1 pair, dry); previous number SSB 5055.
WASHINGTON, San Juan Co., Puget Sound, San Juan Id.
Remarks: Holotype CAS 064278.

randolphi, *Pecten*
DALL, 1897: Nautilus 11(8):86.
Syntypes: SBMNH 34063 (3 pair, dry); previous number SSB 1844.
WASHINGTON, Jefferson Co., W of Destruction Id.; 47°40′40″N, 125°20′W; 516 fm [944 m]; USFC Sta. 3343.
Remarks: *ex* USNM 107749.

zephyrus, *Cyclopecten*
GRAU, 1959: Allan Hancock Pacific Exp. 23:23, 25–27.
Paratypes: SBMNH 34892 (2 pair, dry); previous number SSB 26830.
CALIFORNIA, Los Angeles Co., Santa Catalina Id., 5.5 mi [8.8 km] off Long Pt.; 400–430 fm [732–786 m]; gray-green mud; Allan Hancock *Velero IV* Sta. 1613-48.
Remarks: Holotype LACM 1745.

SPONDYLIDAE

ursipes, *Spondylus*
BERRY, 1959: Leafl. Malacol. 1(18):107–108.
Paratype: SBMNH 34011 (1 pair, dry); previous number SSB 18756.
Paratype: SBMNH 34012 (1 pair, dry); previous number SSB 18689.
MEXICO, Baja California Norte, Isla Angel de la Guarda, Puerto Refugio; 20 m.
Remarks: SBMNH 34012—several specimens of the brachiopod *Argyrotheca lowei* attached. Holotype CAS 043984.

SUBCLASS HETERODONTA

LUCINIDAE

aequizonata, *Lucina*
STEARNS, 1890: Proc. U.S. Natl. Mus. 13:220–221.
Syntype: SBMNH 34079 (1 pair, dry); previous number SSB 23921.
CALIFORNIA, N of Santa Rosa Id., 34°11′N, 120°15′W; 276 fm [505 m]; in green mud; USFC Sta. 2840.
Remarks: *ex* USNM 104044. Depth reported as 27.6 fm (in error) in U.S. Comm. Fish & Fisheries, Rept. Commissioner, Pt. 26 (for 1900):405.

heroicus, *Phacoides* (*Lucinoma*)
DALL, 1901: Proc. U.S. Natl. Mus. 23:812, 828.
Syntype: SBMNH 34064 (1 pair, dry); previous number SSB 23887.
MEXICO, Baja California Sur, E of Santa Rosalia; 27°23′45″N, 111°25′W; 1005 fm [1838 m]; green mud; USFC Sta. 3010.
Remarks: *ex* USNM 108818.

THYASIRIDAE

cyclia, *Adontorhina*
BERRY, 1947: Bull. Amer. Paleon. 31(127):260–261.
Paratypes: SBMNH 34033 (42 valves, dry); previous number SSB 10405.
CALIFORNIA, Los Angeles Co., San Pedro; Hilltop Quarry; upper fine marl; lower Pleistocene [middle Pleistocene, Lomita Marl].
Remarks: Holotype CAS 063460.

sphaericosa, *Adontorhina*
SCOTT, 1986: Veliger 29(2):150–153, fig. 2.
Holotype: SBMNH 33911 (1, 70% EtOH).
Paratypes: 33910 (3 pair, 7 valves, 70% EtOH).
ALASKA, Boca de Quadra fjord; 55°10.2′N, 130°37.5′W; 280 m; 90% silt and clay.
Remarks: Holotype illustrated in fig. 2.

UNGULINIDAE

impolita, *Diplodonta*
BERRY, 1953: Trans. San Diego Soc. Natur. Hist. 11(16):409–411.
Paratypes: SBMNH 34026 (2 pair, 1 valve, dry); previous number SSB 3658.
ALASKA, Forrester Id.; 15 fm [27 m].
Remarks: Both pair are drilled by a predator. Holotype CAS 064464.

phoebe, *Pegmapex*
BERRY, 1960: Leafl. Malacol. 1(19):115.
Holotype: SBMNH 34018 (1 valve, dry); previous number SSB 26488.
MEXICO, Sinaloa, Mazatlán, Playa Las Gaviotas.
Remarks: This is the left valve only; the right valve is CAS 043982.

CYRENOIDIDAE

panamensis, *Cyrenoida*
PILSBRY & ZETEK, 1931: Nautilus 45(2):69.

Paratypes: SBMNH 34098 (2 pair, dry); previous number SSB 25879.
PANAMA, Panama Prov., Panama City, Pena Prieta.
Remarks: Holotype ANSP 155418.

GALEOMMATIDAE

brissae, *Scintillona*
MORTON & SCOTT, 1989: Asian Mar. Biol. 6:00–00, pl. 1P.
Holotype: SBMNH 35074 (1 pair, dry).
Paratype: SBMNH 35075 (1 pair, 70% EtOH).
HONG KONG, New Territories, Tolo Channel; 22°29′N, 114°19′E; subtidal mud; attached to spines of *Brissus latecarinatus* (Echinoidea).
Remarks: Holotype valves chipped, left valve broken in two pieces.

electilis, *Crenimargo*
BERRY, 1963: Leafl. Malacol. 1(23):140–141.
Paratypes: SBMNH 34017 (1 pair, 1 valve, dry); previous number SSB 29640.
MEXICO, Colima, ca. 5 mi [8 km] N of Manzanillo, Peninsula de Santiago, Playa las Hadas.
Remarks: Holotype CAS 043976.

mexicanum, *Galeomma* (*Lepirodes?*)
BERRY, 1959: Leafl. Malacol. 1(18):108–109.
Paratypes: SBMNH 34013 (3 valves, dry); previous number SSB 27514.
MEXICO, Baja California Norte, Bahía San Luis Gonzaga; dredged in 3–4 fm [5–7 m].
Remarks: Holotype CAS 043981.

KELLIIDAE

macrophtalmensis, *Pseudopythina*
MORTON & SCOTT, 1989: Asian Mar. Biol. 6:00–00.
Paratypes: SBMNH 35071 (8 pair, 70% EtOH).
Paratypes: SBMNH 35072 (4 pair, 70% EtOH).
HONG KONG, New Territories, Tolo Harbor, Hoi Sing Wan; 22°26′N, 114°15′E; intertidal sandy mudflats; attached to *Macrophtalmus latreille* (Decapoda).
Remarks: Both lots preserved with crab host.

maipoensis, *Pseudopythina*
MORTON & SCOTT, 1989: Asian Mar. Biol. 6:00–00.
Paratypes: SBMNH 35126 (7 pair, 70% EtOH).
HONG KONG, New Territories, Mai Po, 22°30′N, 114°04′E; in tidal shrimp ponds.

nodosa, *Pseudopythina*
MORTON & SCOTT, 1989: Asian Mar. Biol. 6:00–00.
Paratypes: SBMNH 35069 (2 pair, 70% EtOH).
HONG KONG, Hong Kong Id., Tai Tam Bay; 22°15′N, 114°11′E; intertidal sandy mudflats; attached to *Sipunculus nudus* (Sipuncula).

ochetostomae, *Pseudopythina* (*Borniopsis*)
MORTON & SCOTT, 1989: Asian Mar. Biol. 6:00–00.
Paratypes: SBMNH 35068 (1 pair, 70% EtOH).
HONG KONG, New Territories, Tolo Harbor, Ting Kok; 22°28′15″N, 114°12′45″E; intertidal mudflats; in burrows of *Ochetostoma erythrogrammon* (Echiura).

LASAEIDAE

nipponica, *Lasaea*
KEEN, 1938: Proc. Malacol. Soc. London 23(1):26–28.
Paratype: SBMNH 34080 (1 pair, dry); previous number SSB 8926.
Paratypes: SBMNH 33368 (2 pair, dry).
JAPAN, NE Matsushima, Rikuzen [Miyagi Pref.], Watanoha.
Remarks: SBMNH 33368 *ex* Stanford University Coll.
Holotype CAS 065119.

MONTACUTIDAE

aleutica, *Mysella*
DALL, 1899: Proc. U.S. Natl. Mus. 21:881, 892–893, 896.
Syntypes: SBMNH 34065 (3 pair, dry); previous number SSB 27968.
ALASKA, Aleutian Ids., Kiska Id., Kiska Harbor; beach.
Remarks: *ex* USNM 159320.

siphonosomae, *Barrimysia*
MORTON & SCOTT, 1989: Asian Mar. Biol. 6:00–00.
Paratypes: SBMNH 35073 (2 pair, 70% EtOH).
HONG KONG, Hong Kong Id., Tai Tam Bay; 21°15′N, 114°11′E; intertidal sandy mudflats; in burrows of *Siphonosoma cumanense* (Sipuncula).

CARDITIDAE

alaskana, *Venericardia* (*Cyclocardia*)
DALL, 1903: Proc. Acad. Natur. Sci. Philadelphia 54:710–711, 715.
Paralectotype: SBMNH 34069 (1 pair, dry); previous number SSB 23957.
ALASKA, Aleutian Ids., N end Nunivak Id.
Remarks: *ex* USNM 109271. Lectotype designated: COAN, E. V. 1977. Veliger 19(4):378; USNM 109271.

bailyi, *Cardita*: Burch, 1944 (see *Venericardia nodulosa*)

barbarensis, *Venericardia*
STEARNS, 1890: Proc. U.S. Natl. Mus. 13:214–215.
Paralectotypes: SBMNH 34078 (2 pair, dry); previous number SSB 8159.
CALIFORNIA, Santa Barbara Co., off Santa Barbara Ids.; 34°11′N, 120°15′W; 276 fm [505 m]; in green mud; USFC Sta. 2840.
Remarks: Small right valve broken and glued. *ex* USNM 104045. Lectotype designated: COAN, E. V. 1977. Veliger 19(4):376–377; USNM 104045.

hilli, *Cardita*
WILLETT, 1944: Bull. So. Calif. Acad. Sci. 43(1):19–20.
Syntypes: SBMNH 34076 (2 valves, dry); previous number SSB 11918.
CALIFORNIA, Orange Co., mesa at head of Newport Bay; upper Pleistocene [Palos Verdes Sand or equivalent].
Remarks: Unmatched "type pair" designated as holotype (LACMIP 1067) in original description; therefore, lectotype must be designated, preferably one of the two valves in the LACM lot.

longini, *Cardita* (*Cyclocardia*): Baily, 1945 (see *Venericardia nodulosa*)

meridionalis, *Miodontiscus*
DALL, 1916: Proc. U.S. Natl. Mus. 52(2183):408.
Paralectotypes: SBMNH 34450 (2 valves, dry); previous number SSB 10379.
CALIFORNIA, San Diego Co., off Pt. Loma [true bearing from Pt. Loma Lighthouse N 41° E, 8.6 mi (14 km)]; 67–78 fm [123–143 m]; USFC Sta. 4309.
Remarks: *ex* USNM (no number). Lectotype designated: COAN, E. V. 1977. Veliger 19(4):384; USNM 208948.

montereyensis, *Cardita* (*Cyclocardia*) *ventricosa*
SMITH & GORDON, 1948: Proc. Calif. Acad. Sci. 26(8):172, 212–216.
Paratype: SBMNH 34077 (1 pair, dry); previous number SSB 16173.
CALIFORNIA, Monterey Co., Monterey Bay, 4.6 mi [7.4 km] NW of Pt. Pinos; 63 fm [115 m]; in fine sand, sand pellets, and pebbles.
Remarks: Holotype CAS 065588.

nodulosa, *Venericardia*
DALL, 1919: Proc. Biol. Soc. Washington 32:249–250.
Paralectotypes: SBMNH 35037 (4 valves, dry); previous number SSB 11929.
CALIFORNIA, Santa Barbara Co., Santa Rosa Id.; 34°05′N, 120°02′W; 48 fm [88 m]; mud; USFC Sta. 2901.
Remarks: *ex* USNM 211887. Secondary homonym of *Cardita nodulosa* Lamarck, 1819. Valid replacement name is *Cardita bailyi* Burch, 1944 (Minutes of Conch. Club So. Calif. No. 39:13). Unnecessary replacement name: *Cardita* (*Cyclocardia*) *longini* Baily, 1945 (Nautilus 58(4):118–119). Lectotype designated: COAN, E. V. 1977. Veliger 19(4):376; USNM 211887.

redondoensis, *Cardita ventricosa*
T. BURCH *in* J. BURCH, 1944: Minutes of Conch. Club So. Calif. No. 39:14–15.
Paralectotype: SBMNH 02056 (1 pair, dry).
Paralectotype: SBMNH 32145 (1 pair, dry).
CALIFORNIA, Los Angeles Co., Redondo Beach; 100 fm [183 m]; mud.
Remarks: Lectotype designated: BURCH, J. Q. 1945. Minutes of Conch. Club So. Calif. No. 47:30; USNM 434052.

umnaka, *Cardita*
WILLETT, 1932: Trans. San Diego Soc. Natur. Hist. 7:87–88.
Paralectotypes: SBMNH 34075 (10 valves, dry); previous number SSB 11917.
ALASKA, Aleutian Ids., Umnak Id.
Remarks: Lectotype designated: COAN, E. V. 1977. Veliger 19(4):380; LACM 1034.

CHAMIDAE

clarionensis, *Pseudochama*
WILLETT, 1938: Nautilus 52(2):48–49.
Paratypes: SBMNH 34097 (2 valves, dry); previous number SSB 38820.
MEXICO, Islas Revillagigedo, Isla Clarion; 18°22′N, 114°44′W; 20–35 fm [36–64 m]; dredged.
Remarks: Holotype LACM 1058.

squamuligera, *Chama*
PILSBRY & LOWE, 1932: Proc. Acad. Natur. Sci. Philadelphia 84:103.
Paratype: SBMNH 34004 (1 valve, dry); previous number SSB 23445.
NICARAGUA, Rivas Dept., San Juan del Sur.
Remarks: *ex* H. N. Lowe No. 475. Holotype ANSP 155623.

CRASSATELLIDAE

nuculiformis, *Crassinella*
BERRY, 1940: Bull. Amer. Paleon. 25(94A):149–151, pl. 17, fig. 2.
Paratypes: SBMNH 34038 (31 valves, dry); previous number SSB 7708.
CALIFORNIA, Los Angeles Co., San Pedro, W side of Gaffey St. in cut just below General St; lower Pleistocene [middle Pleistocene, San Pedro Sand].
Remarks: Holotype CAS 66015.01.

pacifica, *Gouldia*
C. B. ADAMS, 1852: Ann. Lyceum Natur. Hist. 5:499, 545.
Paralectotypes: SBMNH 34085 (2 valves, dry); previous number SSB 16942.
PANAMA, Panama Prov., Panama City.
Remarks: *ex* MCZ (no number). Lectotype designated: TURNER, R. D. 1956. Harvard Univ. Occ. Papers Moll. 2(20):132; MCZ 186297.

CARDINIIDAE

cristulata, *Tellidorella*
BERRY, 1963: Leafl. Malacol. 1(23):140.
Paratypes: SBMNH 34014 (24 valves, dry); previous number SSB 29464.
Paratypes: SBMNH 34015 (6 valves, dry).
MEXICO, Sonora, off Puerto Libertad, 29°51.8′N, 112°46.8′W; 40 fm [73 m]; sand and shell bottom; Scripps Inst. Oceanog. Sta. P-204-60.
Remarks: Holotype CAS 043974 (right valve only).

MACTRIDAE

vanattae, *Mactra* (*Micromactra*)
PILSBRY & LOWE, 1932: Proc. Acad. Natur. Sci. Philadelphia 84:90.
Paratype: SBMNH 34008 (1 pair, dry); previous number SSB 23449.
EL SALVADOR, Golfo de Fonseca, La Union.
Remarks: *ex* H. N. Lowe No. 494. Holotype ANSP 155931.

williamsi, *Mactra* (*Mactra*)
BERRY, 1960: Leafl. Malacol. 1(19):116–117.
Paratype: SBMNH 34019 (1 valve, dry); previous number SSB 9849.
ECUADOR, Guayas Prov., La Libertad; 10 fm [18 m].
Remarks: Holotype CAS 043985.

SOLENIDAE

myrae, *Ensis*
BERRY, 1953: Trans. San Diego Soc. Natur. Hist. 11(15):398–401, text fig. 3.
Paratypes: SBMNH 34021 (2 pair, dry); previous number SSB 1256.
Paratypes: SBMNH 34022 (3 pair, dry); previous number SSB 18370.
Paratypes: SBMNH 34023 (3 pair, 2 valves, dry); previous number SSB 18371.
CALIFORNIA, Los Angeles Co., San Pedro Bay.
Paratypes: SBMNH 34024 (3 pair, dry).
Paratypes: SBMNH 34025 (2 pair, 3 valves, dry).
CALIFORNIA, Los Angeles Co., San Pedro Bay, Terminal Id.; cast up during storm.
Remarks: SBMNH 34021—smaller specimen illustrated in text fig. 3. SBMNH 34024—one valve of one pair broken. SBMNH 34025—1 pair, 2 valves broken. Holotype CAS 064460.

pazensis, *Solen*
LOWE, 1935: Trans. San Diego Soc. Natur. Hist. 8(6):17–18.
Paratype: SBMNH 34003 (1 pair, dry); previous number SSB 23451.
MEXICO, Baja California Sur, La Paz.

Remarks: *ex* H. N. Lowe No. 11391. Holotype SDNHM 50564.

rudis, *Solen*
C. B. ADAMS, 1852: Ann. Lyceum Natur. Hist. 5:524–525, 548.
Paralectotypes: SBMNH 34084 (3 pair, dry); previous number SSB 14555.
PANAMA, Panama Prov., Panama City; in coarse sand, among stones on reef, near low water mark.
Remarks: *ex* MCZ (no number). Lectotype designated: TURNER, R. D. 1956. Harvard Univ. Occ. Papers Moll. 2(20):130; MCZ 186271.

TELLINIDAE

erythronotus, *Tellina* (*Angulus*)
PILSBRY & LOWE, 1932: Proc. Acad. Natur. Sci. Philadelphia 84:94.
Paratypes: SBMNH 34006 (1 pair, 1 valve, dry); previous number SSB 23448.
PANAMA, Bahía Montijo, near Mariato.
Remarks: *ex* H. N. Lowe No. 646. Holotype ANSP 155010.

guaymasensis, *Tellina* (*Angulus*)
PILSBRY & LOWE, 1932: Proc. Acad. Natur. Sci. Philadelphia 84:94.
Paratype: SBMNH 34007 (1 pair, dry); previous number SSB 23447.
MEXICO, Sonora, Guaymas; 20 fm [37 m].
Remarks: *ex* H. N. Lowe No. 482. Holotype ANSP 155573.

puella, *Tellina*
C. B. ADAMS, 1852: Ann. Lyceum Natur. Hist. 5:507, 546.
Paralectotypes: SBMNH 34086 (2 valves, dry); previous number SSB 14544.
PANAMA, Panama Prov., Panama City.
Remarks: *ex* MCZ (no number). Lectotype designated: TURNER, R. D. 1956. Harvard Univ. Occ. Papers Moll. 2(20):130; MCZ 186305.

salmonea, *Maera*
CARPENTER, 1864: Brit. Assoc. Adv. Sci., Rept. 33 (for 1863): 627, 639.
Paralectotype: SBMNH 34090 (1 pair, dry); previous number SSB 14518.
WASHINGTON, Strait of Juan de Fuca, between Neah Bay and Vancouver, British Columbia.
Remarks: *ex* MCZ (no number). Lectotype designated: COAN, E. V. 1971. Veliger 14 (suppl.):13; USNM 73449.

SEMELIDAE

jamesi, *Semele*
COAN, 1988: Veliger 31(1/2):33–35, fig. 62.
Holotype: SBMNH 34941 (1 pair, dry).
Paratypes: SBMNH 34942 (21 pair, 5 valves, dry).
COSTA RICA, Isla del Coco, Bahía Chatham; 05°33′N, 87°02′30″W; 46–69 m; dredged; in coral rubble.
Remarks: *ex* Donald Shasky Coll. Holotype illustrated in fig. 62.

PSAMMOBIIDAE

vespertina, *Sanguinolaria*
Pilsbry & Lowe, 1932: Proc. Acad. Natur. Sci. Philadelphia 84:90–91, pl. 12, figs. 3, 4.
Paratypes: SBMNH 34005 (2 pair, dry); previous number SSB 23450.
NICARAGUA, Rivas Dept., San Juan del Sur.
Remarks: *ex* H. N. Lowe No. 488. Holotype ANSP 155013.

vicina, *Tellina*
C. B. ADAMS, 1852: Ann. Lyceum Natur. Hist. 5:509–510, 546.
Paralectotypes: SBMNH 34895 (2 valves, dry); previous number SSB 16953.
PANAMA.
Remarks: Locality on original label "Taboga Id., Panama," but listed as "Panama City, Panama" on S. S. Berry label; original description lists as Panama. Lectotype designated: TURNER, R. D. 1956. Harvard Univ. Occ. Papers Moll. 2(20):128; MCZ 186365.

DONACIDAE

dorotheae, *Donax*
MORRISON, 1971: Proc. Biol. Soc. Washington 83(45):554–556.
Paratypes: SBMNH 32286 (2 pair, dry).
Paratype: SBMNH 35047 (1 pair, dry).
LOUISIANA, Jefferson Parish, Grand Isle.
Remarks: SBMNH 32286 *ex* Anne Craig Coll.; SBMNH 35047 *ex* Twila Bratcher Coll. Holotype USNM 679773.

DREISSENIDAE

adamsi, *Mytilopsis*
MORRISON, 1946: Smithsonian Misc. Coll. 106(6):46–47.
Paratypes: SBMNH 34095 (4 pair, dry); previous number SSB 16981.
PANAMA, Archipielago Las Perlas, Isla San Jose, upper end of lagoon at mouth of "Musselshell Creek."
Remarks: *ex* USNM 542185.

PISIDIIDAE

decisum, *Pisidium*
STERKI, 1922: Ann. Carnegie Mus. 13(3–4):430–431.
Paratypes: SBMNH 35028 (10 pair, dry); previous number SSB 4816.
MAINE, Waldo Co., Unity, Lake Winnecook.
Remarks: Holotype CMNH 9214.

griseolum, *Pisidium*
STERKI, 1922: Ann. Carnegie Mus. 13(3–4):432–433.
Paratypes: SBMNH 35030 (8 pair, dry); previous number SSB 4814.
MAINE, Waldo Co., Unity, Lake Winnecook.
Remarks: Holotype CMNH 9218.

hendersoni, *Sphaerium*
STERKI, 1906: Nautilus 20(6):69–70.
Syntypes: SBMNH 35050 (3 pair, 1 valve, dry); previous number SSB 2141.
COLORADO, Weld Co., 25 mi [40 km] NE of Greeley, Crow Creek.

limpidum, *Pisidium*
STERKI, 1922: Ann. Carnegie Mus. 13(3–4):433.
Paratypes: SBMNH 35031 (29 pair, dry); previous number SSB 4836.
MONTANA, Wheatland Co., Elk Creek [E Fork Roberts Creek], 1 mi [1.6 km] S of Oxford Station.
Remarks: Holotype CMNH 9198.

lineatum, *Sphaerium*
STERKI, 1910: Nautilus 23(11):142–143.
Syntype: SBMNH 35051 (1 pair, dry); previous number SSB 4846.
INDIANA, Kosciusko Co., Turkey Lake.

mutatum, *Pisidium compressum*
STERKI, 1922: Ann. Carnegie Mus. 13(3–4):430.
Paratypes: SBMNH 35027 (4 pair, dry); previous number SSB 4818.
MAINE, Waldo Co., Unity, Lake Winnecook.
Remarks: Holotype CMNH 9211.

paradoxum, *Pisidium*
STERKI, 1922: Ann. Carnegie Mus. 13(3–4):431–432.
Paratypes: SBMNH 35029 (25 pair, dry); previous number SSB 4813.
MAINE, Waldo Co., Unity, Lake Winnecook.
Remarks: Holotype CMNH 9215.

pilula, *Pisidium*
STERKI, 1922: Ann. Carnegie Mus. 13(3–4):437–438.
Paratypes: SBMNH 35033 (2 pair, dry); previous number SSB 4801.
CANADA, British Columbia, Vancouver Id., Quamichan; small swamp.
Remarks: Holotype CMNH 9261.

prognathum, *Pisidium*
STERKI, 1922: Ann. Carnegie Mus. 13(3–4):436–437.
Syntypes: SBMNH 35032 (11 pair, dry); previous number SSB 4802.
CANADA, British Columbia, Vancouver Id., Quamichan; small swamp.
Remarks: One specimen with brood.

VESICOMYIDAE

gigas, *Callocardia*
DALL, 1896: Proc. U.S. Natl. Mus. 18:18–19.
Syntype: SBMNH 34067 (1 pair, dry); previous number SSB 27969.
MEXICO, Baja California Sur, off Bahía Concepción; 27°09′N, 111°42′W; 857 fm [1567 m]; mud; USFC Sta. 3009.
Remarks: *ex* USNM 110551.

lepta, *Callocardia*
DALL, 1896: Proc. U.S. Natl. Mus. 18:17–18.
Paratype: SBMNH 34066 (1 pair, dry); previous number SSB 27903.
MEXICO, Baja California Sur, off Bahía Concepción; 27°09′N, 111°42′W; 857 fm [1567 m]; mud; USFC Sta. 3009.
Remarks: *ex* USNM 126751. Holotype USNM 126751.

VENERIDAE

caryonautes, *Transennella*
BERRY, 1963: Leafl. Malacol. 1(23):141–142.
Paratypes: SBMNH 34016 (2 pair, dry); previous number SSB 28061.
MEXICO, Sinaloa, vicinity of Mazatlán; from shrimp fisherman.
Remarks: Holotype CAS 043973.

cymata, *Psephidia*
DALL, 1913: Proc. U.S. Natl. Mus. 45:593.
Syntypes: SBMNH 34068 (2 pair, 1 valve, dry); previous number SSB 16973.
MEXICO, Baja California Sur, San Bartolome Bay [Bahía Tortugas].
Remarks: *ex* USNM 226158.

fordii, *Venus* (Figure 3)
YATES, 1890: Bull. Santa Barbara Soc. Natur. Hist. 1(2):40, 46, pl. 1, figs. 1–3.
Lectotype (**herein**): SBMNH 22900 (1 pair, dry).
Type locality: CALIFORNIA, Santa Barbara Co., Santa Barbara Channel.
Remarks: L. G. Yates did not designate a type and mentioned several specimens in the original description; therefore, a lectotype must be designated. This specimen matches in every detail the specimen illustrated in pl. 1, figs. 1–3. The specimen also has two holographic Yates labels "*Venus toreuma* Gld. found in Santa Barbara Channel Cal. by the fisherman in deep water (new to Cal?)" and "*Cytherea fordi* Yates, Fordi fomerly *Venus toreuma*, Santa Barbara Isld."

hesperius, *Pitar* (*Lamelliconcha*)
BERRY, 1960: Leafl. Malacol. 1(19):115–116.
Holotype: SBMNH 34020 (1 valve, dry); previous number SSB 28065.
MEXICO, Sinaloa, vicinity of Mazatlán; from shrimp fisherman.
Remarks: Left valve only; right valve CAS 043978.

scarificata, *Tivela*
BERRY, 1940: Bull. Amer. Paleon. 25(94A):151–152.
Paratypes: SBMNH 34037 (25 valves, dry).
Paratypes: SBMNH 35025 (19 pair, dry); previous number SSB 7710.
CALIFORNIA, Los Angeles Co., San Pedro, NW corner of Beacon and 2nd Streets; lower Pleistocene [middle Pleistocene, San Pedro Sand].
Remarks: Holotype CAS 66014.01.

schefferi, *Liocyma*
BARTSCH & REHDER, 1939: Nautilus 52(4):111–112.
Paratypes: SBMNH 34082 (3 pair, dry); previous number SSB 8922.
ALASKA, Aleutian Ids., Chuginadak Id.; 10 fm [18 m].
Remarks: *ex* USNM (no number). Holotype USNM 535344.

sororcula, *Transennella*
PILSBRY & LOWE, 1932: Proc. Acad. Natur. Sci. Philadelphia 84:102.
Paratypes: SBMNH 33982 (3 pair, dry); previous number SSB 23446.
NICARAGUA, Rivas Dept., San Juan del Sur, 20 fm [37 m].
Remarks: Holotype ANSP 155599.

triserialis, *Cytherea* (*Tivela*) *crassatelloides*
STEARNS, 1899: Proc. U.S. Natl. Mus. 21(1149):376.
Syntypes: SBMNH 34101 (2 pair, 1 valve, dry); previous number SSB 20457.
CALIFORNIA.
Remarks: *ex* M. Burton Williamson Coll.; *ex* F. M. Reed Coll. Lot includes original label by Stearns and each valve labeled "var. v."

CORBULIDAE

cylindrica, *Panamicorbula*
MORRISON, 1946: Smithsonian Misc. Coll. 106(6):47–48.
Paratype: SBMNH 34096 (1 valve, dry); previous number SSB 27974.
PANAMA, Archipiélago Las Perlas, Isla San Jose, Rio Marina mangrove swamp; in drift.
Remarks: Specimen chipped. Holotype USNM 542186.

SPHENIOPSIDAE

berryana, *Grippina*
KEEN, 1971: Sea shells of tropical west America (2nd ed.):270.
Paratype: SBMNH 34819 (1 pair, dry); previous number SSB 28427.
MEXICO, Baja California Sur, Isla Carmen, NW side Bahía Salinas; 3–5 fm [5–9 m].
Remarks: Holotype CAS 064756.

PHOLADIDAE

fitchi, *Penitella*
TURNER, 1955: Johnsonia 3(33):71–75.
Paratypes: SBMNH 34091 (6 pair, dry); previous number SSB 18258.
Paratypes: SBMNH 34092 (2 pair, dry).
MEXICO, Baja California Sur, Bahía San Bartolome [Bahía Tortugas], 1 mi [1.6 km] E of village at base of cliff.
Remarks: Holotype MCZ 189413.

hopkinsi, *Penitella*
KENNEDY & ARMENTROUT, 1989: Veliger 32(3):320–324.
Paratype: SBMNH 34961 (1 pair, dry).
ALASKA, Gulf of Alaska, Wingham Id., SE margin of modern emergent marine abrasion platform on SW facing end of island.

richardsoni, *Penitella*
KENNEDY, 1989: Veliger 32(3):316–318, figs. 12, 14.
Paratype: SBMNH 34955 (1 pair, dry).
Paratype: SBMNH 34956 (1 pair, dry).
CALIFORNIA, Monterey Co., Monterey Bay, Del Monte Beach.
Remarks: Figure 12 is SBMNH 34955, figure 14 is SBMNH 34956.

TEREDINIDAE

canalis, *Bankia* (*Bankia*)
BARTSCH, 1944: Smithsonian Misc. Coll. 104(8):1–3.
Paratype: SBMNH 34102 (1 pair, dry); previous number SSB 27428.
PANAMA, Canal Zone, Balboa; taken from laminated board that had been exposed for 2 months; Sta. 25385.
Remarks: Holotype USNM 568817.

zeteki, *Bankia* (*Neobankia*)
BARTSCH, 1921: Proc. Biol. Soc. Washington 34:26–27.
Paratype: SBMNH 34103 (1 pair, dry); previous number SSB 27429.
PANAMA, Canal Zone, Balboa; taken from greenheart timber of the canal locks.
Remarks: Holotype USNM 341128.

SUBCLASS ANOMALODESMATA

PANDORIDAE

forresterensis, *Kennerlyia*
WILLETT, 1918: Nautilus 31(4):134–135.
Paratypes: SBMNH 34894 (1 pair, 9 valves, dry); previous number SSB 4121.
ALASKA, Forrester Id.; 50 fm [91 m].
Remarks: Holotype ANSP 118200.

rhypis, *Pandora* (*Kennerlia*)
PILSBRY & LOWE, 1932: Proc. Acad. Natur. Sci. Philadelphia 84:105.
Paratypes: SBMNH 34009 (3 pair, 18 valves, dry); previous number SSB 16411.
Paratypes: SBMNH 33009 (10 valves, dry).
EL SALVADOR, Golfo de Fonseca, La Union.
Remarks: SBMNH 33009 *ex* E. P. Chace Coll. Holotype ANSP 155503.

THRACIIDAE

beringi, *Thracia*
DALL, 1915: Proc. U.S. Natl. Mus 49(2116):442–443.
Paralectotypes: SBMNH 34449 (2 valves, dry); previous number SSB 23948.
ALASKA, Aleutian Ids., Kiska Id., Kiska Harbor.
Remarks: 1 left and 1 right valve. *ex* USNM 221555. Lectotype designated: COAN, E. V. 1990. Veliger 33(1):26–27.

pedroana, *Cyathodonta*
DALL, 1915: Proc. U.S. Natl. Mus. 49:445.
Paralectotype: SBMNH 34284 (1 pair, dry); previous number SSB 23930.
CALIFORNIA, Los Angeles Co., San Pedro Harbor.
Remarks: *ex* USNM 207527. Lectotype designated: COAN. E. V. 1990. Veliger 33(1):46–48.

VERTICORDIIDAE

perplicata, *Verticordia*
DALL, 1890: Proc. U.S. Natl. Mus. 12(773):278.
Syntype: SBMNH 35052 (1 right valve, dry); previous number SSB 23882.
ECUADOR, near Galápagos Ids. [Archipiélago de Colon]; 00°24′S, 89°06′W; 812 fm [1485 m]; mud; USFC Sta. 2807.
Remarks: Specimen broken and glued, small fragment missing. *ex* USNM 95852.

CLASS SCAPHOPODA

ORDER DENTALIIDA

DENTALIIDAE

berryi, *Dentalium*
SMITH & GORDON, 1948: Proc. Calif. Acad. Sci. (4)26(8):216–217.
Paratype: SBMNH 35020 (1, dry); previous number SSB 16172.
CALIFORNIA, Monterey Co., Monterey Bay, Humpback Reef; 40 fm [73 m]; fine muddy sand and shale fragments; dredged.
Remarks: Shell and dried body.

brevicornu, *Dentalium*
SHARP & PILSBRY *in* PILSBRY & SHARP, 1897: Manual Conch. (1)17:125.
Syntype: SBMNH 35013 (1, dry); previous number SSB 32467.
ECUADOR, near Galápagos Ids. [Archipiélago de Colon]; 00°36′30″S, 89°19′00″W; 634 fm [1159 m]; USFC Sta. 2808.
Remarks: *ex* USNM 122809.

dalli, *Dentalium*
PILSBRY & SHARP, 1897: Manual Conch. (1)17:114–115.
Syntype: SBMNH 35040 (1, dry); previous number SSB 32479.
CALIFORNIA, Santa Barbara Co., Santa Barbara Channel, N of Santa Rosa Id.; 34°15′N, 120°14′30″W; 265 fm [485 m]; USFC Sta. 3200.
Remarks: *ex* USNM 203133 (split lot from USNM 107696).

innumerabile, *Dentalium*
PILSBRY & SHARP, 1897: Manual Conch. (1)17:119.
Paralectotypes: SBMNH 35012 (6, dry); previous number SSB 32480.
PANAMA, Bahía de Panama; 08°44′N, 79°09′W; 29.5 fm [54 m]; green mud; USFC Sta. 2799.
Remarks: *ex* USNM 107697. Lectotype ANSP 35564.

magellanicum, *Dentalium majorinum*
PILSBRY & SHARP, 1897: Manual Conch. (1)17:28.
Syntype: SBMNH 35022 (1, dry); previous number SSB 32483.
STRAIT OF MAGELLAN: 52°38'S, 70°110'30"W; 77.5 fm [142 m]; ooze; USFC Sta. 2777.
Remarks: *ex* USNM 601272.

megathyris, *Dentalium*
DALL, 1890: Proc. U.S. Natl. Mus. 12(773):293.
Syntypes: SBMNH 35017 (2, dry); previous number SSB 32468.
ECUADOR, near Galápagos Ids. [Archipiélago de Colon]; 00°24'00"S, 89°06'00"W; 812 fm [1485 m]; USFC Sta. 2807.
Remarks: *ex* USNM 117830.

numerosum, *Dentalium*
DALL, 1895: Proc. U.S. Natl. Mus. 17(1032):686.
Syntypes: SBMNH 35016 (5, dry); previous number SSB 32474.
MEXICO, Baja California Norte, near Isla Cedros; 24°18'N, 110°22'W; 26.5 fm [48 m]; sand; USFC Sta. 2823.
Remarks: *ex* USNM 87559.

panamense, *Dentalium megathyris*
DALL, 1908: Bull. Mus. Comp. Zool. 43(6):358.
Syntype: SBMNH 35019 (1, dry); previous number SSB 32470.
PANAMA, Golfo de Panama; 06°10'N, 83°06'W; 1471 fm [2690 m]; green ooze; USFC Sta. 3361.
Remarks: *ex* USNM 122977.

ORDER GADILIDA

GADILIDAE

albicomatus, *Cadulus*
DALL, 1890: Proc. U.S. Natl. Mus. 12(773):295.
Syntypes: SBMNH 35018 (2, dry); previous number SSB 32485.
EDUADOR, off Manta; 00°37'N, 81°W; 401 fm [733 m]; green mud; USFC Sta. 2792.
Remarks: *ex* USNM 602251.

austinclarki, *Cadulus* (*Platyschides*)
EMERSON, 1951: Jour. Washington Acad. Sci. 41(1):24–26.
Paratypes: SBMNH 35021 (2, dry); previous number SSB 32493.
MEXICO, Baja California Norte, Bahía de Santa Ines, W around Punta Santa Ines; 6–12 ft [2–4 m]; fine black sand; dredged.
Remarks: *ex* USNM 602347. Holotype USNM 564527.

californicus, *Cadulus*
PILSBRY & SHARP, 1898: Manual Conch. (1)17:180–181.
Paralectotypes: SBMNH 35038 (2, dry); previous number SSB 32488.
CALIFORNIA, San Diego Co., off San Diego; 32°40'30"N, 117°31'30"W; 822 fm [1503 m]; USFC Sta. 2923.
Remarks: *ex* USNM 203136 (split lot from USNM 107698). Lectotype designated: SHIMEK, R. L. 1989. Veliger 32(3): 235–236.

dalli, *Cadulus*
PILSBRY & SHARP, 1898: Manual Conch. (1)17:155–156.
Syntype: SBMNH 35039 (1, dry); previous number SSB 32484.
PATAGONIA [Chile], west coast; 51°02'30"S, 74°08'30"W; 122 fm [223 m]; USFC Sta. 2783.
Remarks: *ex* USNM 122736 (error in publication as 123736).

major, *Cadulus panamensis* var.
PILSBRY & SHARP, 1898: Manual Conch. (1)17:192–193.
Paralectotypes: SBMNH 35015 (2, dry); previous number SSB 32492.
MEXICO, Baja California Norte, NW of Islas de Todos Santos; 23°33'N, 110°37'W; 66 fm [120 m]; sand; USFC Sta. 2830.
Remarks: *ex* USNM 602249 (split lot from USNM 96570). Lectotype designated: EMERSON, W. K. 1971. Nautilus 84(3): 79–80, fig. 1; USNM 96750.

panamensis, *Cadulus*
SHARP & PILSBRY *in* PILSBRY & SHARP, 1898: Manual Conch. (1)17:191–192.
Paralectotype: SBMNH 35014 (1, dry); previous number SSB 32491.
PANAMA, Golfo de Panama; 07°56'N, 79°41'30"W; 51.5 fm [94 m]; green mud; USFC Sta. 2805.
Remarks: *ex* USNM 602248. Lectotype designated: EMERSON, W. K. 1971. Nautilus 84(3):78, 81, fig. 2; USNM 122795.

striatus, *Cadulus*
DALL, 1898: Manual Conch. (1)17:179.
Syntypes: SBMNH 35023 (2, dry); previous number SSB 32486.
PANAMA, Golfo de Panama; 07°09'45"N, 80°50'W; 322 fm [589 m]; mud; USFC Sta. 3354.
Remarks: *ex* USNM 602252 (split lot from USNM 122992).

CLASS CEPHALOPODA

SUBCLASS COLEOIDEA

PYROTEUTHIDAE

addolux, *Pyroteuthis*
YOUNG, 1972: Smithsonian Contr. Zool. 97:12, 23–25, pls. 3B, 4I–L.
Holotype: SBMNH 34962 (1, 70% EtOH); previous number AHF 2.
NORTHEAST PACIFIC OCEAN; 31°39'N, 133°16'W; R/V *Swan*, Sta. 27A.
Paratype: SBMNH 34963 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 26°N, 147°W; R/V *Swan*, Sta. 13A.
Paratype: SBMNH 34964 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°28'N, 118°48'W; [10.6 mi (17 km) at 225°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 3380 m wire out; R/V *Velero IV*, Sta. 8238.
Paratype: SBMNH 34965 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 31°14'N, 118°45'W; [107 mi (172 km) at 251°T from Pt. Banda, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 1230 m wire out; R/V *Velero IV*, Cruise 789, Sta. 10838.
Remarks: Holotype is the only specimen figured.

ENOPLOTEUTHIDAE

falco, *Abraliopsis*
YOUNG, 1972: Smithsonian Contr. Zool. 97:12, 13–17, pls. 1 A, B; 2 A–G.
Holotype: SBMNH 34957 (1, 70% EtOH); previous number AHF 1.
NORTHEAST PACIFIC OCEAN; 28°54'N, 118°08'W; [18 mi (29 km) at 153°T from N point of Isla Guadalupe, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 93 m wire out; R/V *Velero IV*, Cruise 674, Sta. 10679.
Paratypes: SBMNH 34958 (4, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 29°58'N, 119°12'W; [ca. 68

mi (109 km) at 314°T from N point of Isla Guadalupe, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 1845 m wire out; R/V *Velero IV*, Cruise 609, Sta. 9899.
Paratype: SBMNH 34959 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 29°33'N, 118°59'W; [ca. 44 mi (71 km) at 302°T from N point of Isla Guadalupe, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 310 m wire out; R/V *Velero IV*, Cruise 609, Sta. 9901.
Paratype: SBMNH 34960 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 29°05'N, 118°06'W; [ca. 12.3 mi (20 km) at 116°T from N point of Isla Guadalupe, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 1230 m wire out; R/V *Velero IV*, Cruise 674, Sta. 10677.
Remarks: Holotype is the only specimen figured.

GONATIDAE

californiensis, *Gonatus*
YOUNG, 1972: Smithsonian Contr. Zool. 97:12, 51–56, pls. 15B, 16J–P.
Holotype: SBMNH 34978 (1, 70% EtOH); previous number AHF 6.
NORTHEAST PACIFIC OCEAN; 33°32'N, 118°24'W; [6 mi (10 km) at 039°T from Ship Rock, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 1385 m wire out; R/V *Velero IV*, Sta. 7221.
Paratypes: SBMNH 34979 (2, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°36'N, 118°28'W; [7.8 mi (13 km) at 204°T from Pt. Vincente Lighthouse, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 1845 m wire out; R/V *Velero IV*, Sta. 7157.
Paratype: SBMNH 34980 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°30'N, 118°18'W; [7.05 mi (11.3 km) at 022°T from Long Pt., Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 2000 m wire out; R/V *Velero IV*, Sta. 7410.
Paratypes: SBMNH 34981 (3, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°15'N, 118°31'W; [14.4 mi (23 km) at 163°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 2000 m wire out; R/V *Velero IV*, Sta. 8114.
Paratype: SBMNH 34982 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°29'N, 118°19'W; [5.35 mi (8.6 km) at 030°T from Long Pt., Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 2300 m wire out; R/V *Velero IV*, sta. 7411.
Remarks: Holotype is the only specimen figured.

onyx, *Gonatus*
YOUNG, 1972: Smithsonian Contr. Zool. 97:12, 43–46.
Holotype: SBMNH 34969 (1, 70% EtOH); previous number AHF 4.
Paratype: SBMNH 34970 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°19'N, 118°45'W; [12.2 mi (19.6 km) at 220°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 2000 m wire out; R/V *Velero IV*, Sta. 8117.
Paratypes: SBMNH 34971 (2, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°32'N, 118°23'W; [6.5 mi (10.5 km) at 045°T from Ship Rock, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 2000 m wire out; R/V *Velero IV*, Sta. 7279.
Paratypes: SBMNH 34972 (4, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°33'N, 118°22'W; [7.4 mi (11.9 km) at 049°T from Ship Rock, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 2300 m wire out; R/V *Velero IV*, Sta. 7394.

pyros, *Gonatus*
YOUNG, 1972: Smithsonian Contr. Zool. 97:12, 49–51.
Holotype: SBMNH 34973 (1, 70% EtOH); previous number AHF 5.
NORTHEAST PACIFIC OCEAN; 33°37'N, 118°26'W; [6.75 mi (10.9 km) at 036.5°T from Ship Rock, Santa Catalina Id., California]; Isaacs-Kidd midwater trawl; 2300 m wire out; R/V *Velero IV*, Sta. 7412.
Paratypes: SBMNH 34975 (2, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°15'N, 118°32'W; [13.5 mi (21.7 km) at 169°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 2000 m wire out; R/V *Velero IV*, Sta. 8028.
Paratype: SBMNH 34976 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°10'N, 118°22'W; [8 mi (13 km) at 200°T from East End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 1385 m wire out; R/V *Velero IV*, Sta. 8031.
Paratype: SBMNH 34977 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°15'N, 118°35'W; [13.4 mi (21.6 km) at 172°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 midwater trawl; 770 m wire out; R/V *Velero IV*, Sta. 8123.
Paratype: SBMNH 34974 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°29'N, 118°20'W; [5.3 mi (8.5 km) at 010.5°T from Long Pt, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 1690 m wire out; R/V *Velero IV*, Sta. 7389.
Remarks: Based on pen length either the holotype or paratype SBMNH 34977 is figured in pls. 13B, 14J–Q, and 17G–I.

BATHYTEUTHIDAE

berryi, *Bathyteuthis*
ROPER, 1968: Proc. Biol. Soc. Washington 81:169–172, pls. 6A, C–F, H, 7A–F.
Holotype: SBMNH 35007 (1, 70% EtOH); previous number AHF 10.
NORTHEAST PACIFIC OCEAN, Catalina Basin, 10.9 mi [17.5 km] SSW of West End Light, Santa Catalina Id., California; 33°14'45"N, 118°37'20"W; Isaacs-Kidd 10 ft midwater trawl; ca. 1200 m; R/V *Velero IV*, Sta. 8714.

OCTOPOTEUTHIDAE

deletron, *Octopoteuthis*
YOUNG, 1972: Smithsonian Contr. Zool. 97:12, 40–43, pl. 11A, B.
Holotype: SBMNH 34966 (1, 70% EtOH); previous number AHF 3.
NORTHEAST PACIFIC OCEAN; 33°15'N, 118°37'W; [13.3 mi (21.4 km) at 182.5°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 925 m wire out; R/V *Velero IV*, Cruise 541, Sta. 8716.
Paratype: SBMNH 34967 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 33°01'N, 119°04'W; [34.6 mi (58.7 km) at 222°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 3090 m wire out; R/V *Velero IV*, Cruise 550, Sta. 8878.
Paratype: SBMNH 34968 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 32°33'N, 118°04'W; [22.8 mi (36.7 km) at 131°T from China Pt., San Clemente Id., California]; Isaacs-Kidd 10 ft midwater trawl; 1385 m wire out; R/V *Velero IV*, Cruise 817, Sta. 11097.
Remarks: Holotype is the only specimen figured.

MASTIGOTEUTHIDAE

pyrodes, *Mastigoteuthis*

YOUNG, 1972: Smithsonian Contr. Zool. 97:13, 64–69, pls. 25, 26I–Q.

Holotype: SBMNH 34983 (1, 70% EtOH); previous number AHF 7.

NORTHEAST PACIFIC OCEAN; 33°32′N, 118°23′W; [6.5 mi (10.5 km) at 045°T from Ship Rock, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 2300 m wire out; R/V *Velero IV,* Sta. 7279.

Paratype: SBMNH 34988 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 30°18′N, 118°53′W; [67 mi (108 km) at 302.5°T from N end of Isla Guadalupe, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 3090 m wire out; R/V *Velero IV,* Cruise 838, Sta. 11225.

Paratype: SBMNH 34984 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 33°11′N, 118°28′W; [18.2 mi (29.3 km) at 158°T; Isaacs-Kidd 10 ft midwater trawl; 1540 m wire out; R/V *Velero IV,* Cruise 554, Sta. 8934.

Paratype: SBMNH 34985 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 29–30°N, 117–118°W; Isaacs-Kidd 10 ft midwater trawl; R/V *Velero IV,* Cruise 789, Sta. 10841 or 10844 (exact station number unknown by original author).

Paratype: SBMNH 34987 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 29°40′N, 118°48′W; [39.5 mi (63.5 km) at 318°T from N end of Isla Guadalupe, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 4000 m wire out; R/V *Velero IV,* Cruise 832, Sta. 11181.

Paratype: SBMNH 34986 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 28°54′N, 117°49′W; [24 mi (38.6 km) at 125°T from N end of Isla Guadalupe, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 4000 m wire out; R/V *Velero IV,* Cruise 789, Sta. 10844.

Remarks: Holotype is the only specimen figured.

CHIROTEUTHIDAE

calyx, *Chiroteuthis*

YOUNG, 1972: Smithsonian Contr. Zool. 97:13, 69–72, pl. 22N, O.

Holotype: SBMNH 34989 (1, 70% EtOH); previous number AHF 8.

NORTHEAST PACIFIC OCEAN; Santa Catalina Basin?, off southern California; Isaacs-Kidd 10 ft midwater trawl; R/V *Velero IV,* Sta. 9349? (see remarks).

Paratype: SBMNH 34990 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 33°22′N, 118°45′W; [10 mi (16 km) at 227°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 770 m wire out; R/V *Velero IV,* Sta. 8292.

Paratype: SBMNH 34991 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 32°48′N, 120°56′W; [20 mi (32 km) at 168°T from San Juan Seamount]; Isaacs-Kidd 10 ft midwater trawl; 310 m wire out; R/V *Velero IV,* Cruise 609, Sta. 9890.

Paratype: SBMNH 34992 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 33°18′N, 118°42′W; [11.8 mi (19 km) at 205°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 1075 m wire out; R/V *Velero IV,* Cruise 636, Sta. 10260.

Remarks: Holotype is the only specimen figured. Original description and original label with the holotype do not include a precise type locality (listed as 9349?).

oligobessa, *Valbyteuthis*

YOUNG, 1972: Smithsonian Contr. Zool. 97:12, 72–74, pl. 23A.

Holotype: SBMNH 34993 (1, 70% EtOH); previous number AHF 8.

Paratype: SBMNH 34994 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 32°27′N, 120°12′[27′]W; [68 mi (109 km) at 273°T from Bishop Rock Light, California]; Isaacs-Kidd 10 ft midwater trawl; 4000 m wire out; R/V *Velero IV,* Cruise 805, Sta. 10976.

Paratype: SBMNH 34995 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 32°45′N, 120°31′W; [74 mi (119 km) at 286°T from Bishop Rock lighthouse, California]; Isaacs-Kidd 10 ft midwater trawl; 3090 m wire out; R/V *Velero IV,* Cruise 805, Sta. 10973.

Paratype: SBMNH 34996 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 32°29′N, 118°01′W; [35 mi (56 km) at 131°T from China Pt., San Clemente Id., California]; Isaacs-Kidd 10 ft midwater trawl; 4000 m wire out; R/V *Velero IV,* Cruise 817, Sta. 11101.

Paratype: SBMNH 34997 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 29°40′N, 118°48′W; [39.5 mi (63.5 km) at 318°T from N end of Isla Guadalupe, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 4000 m wire out; R/V *Velero IV,* Cruise 832, Sta. 11181.

Paratype: SBMNH 34998 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 33°17′N, 118°42′W; [11.7 mi (18.8 km) at 199°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 3370 m wire out; R/V *Velero IV,* Cruise 636, Sta. 10265.

Remarks: Holotype is the only specimen figured. Longitude for the holotype in original description differs from original label. *Velero IV* station data, 32°27′N, 120°27′W, appears to be the correct trawl midpoint.

CRANCHIIDAE

dislocata, *Leachia*

YOUNG, 1972: Smithsonian Contr. Zool. 97:12, 80–83, pl.32A–C, E–K, R.

Holotype: SBMNH 34999 (1, 70% EtOH); previous number AHF 11.

NORTHEAST PACIFIC OCEAN; 32°35′N, 118°06′W; [19 mi (31 km) at 137°T from China Pt. Light, San Clemente Id., California]; Isaacs-Kidd 10 ft midwater trawl; 40 m wire out; R/V *Velero IV,* Cruise 817, Sta. 11100.

Paratype: SBMNH 35000 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 33°15′N, 118°32′W; [13.5 mi (21.7 km) at 169°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 2000 m wire out; R/V *Velero IV,* Sta. 8028.

Paratype: SBMNH 35001 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 33°19′N, 118°44′W; [10.8 mi (17.4 km) at 215°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 1385 m wire out; R/V *Velero IV,* Sta. 8116.

Paratype: SBMNH 35002 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 33°21′N, 118°46′W; [11.3 mi (18.1 km) at 232°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 1385 m wire out; R/V *Velero IV,* Sta. 8024.

Paratype: SBMNH 35003 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 33°03′N, 119°00′W; [33.0 mi (53.0 km) at 219°T from West End Light, Santa Catalina Id., California]; Isaacs-Kidd 10 ft midwater trawl; 925 m wire out; R/V *Velero IV,* Cruise 550, Sta. 8881.

Paratype: SBMNH 35004 (1, 70% EtOH).

NORTHEAST PACIFIC OCEAN; 33°20′N, 118°37′W; [ca. 22 mi (35 km) at 276°T from NW point of Isla Guadalupe, Baja

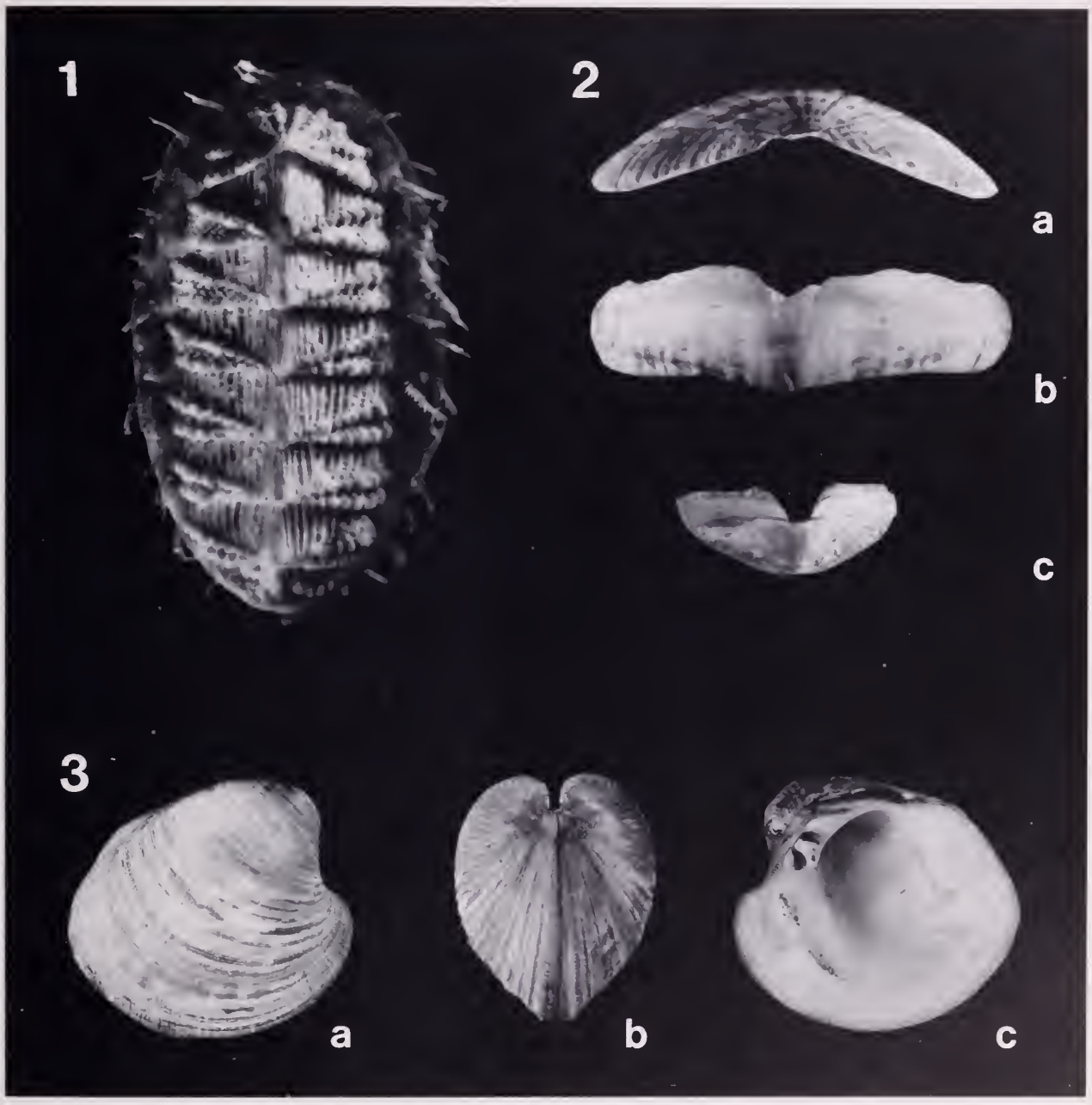

Figure 1

Lectotype (**herein**) of *Mopalia chacei* Berry, 1919; SBMNH 34393; length 14.2 mm, width 8.1 mm.

Figure 2

Lectotype (**herein**) of *Placiphorella pacifica* Berry, 1919; SBMNH 34394. a. Head valve, length 12.2 mm. b. Fifth valve, length 12.5 mm. c. Tail valve, length 6.8 mm.

Figure 3

Lectotype (**herein**) of *Venus fordii* Yates, 1890; SBMNH 22900. a. External of right valve, length 52.3 mm, height 50.7 mm. b. Anterior view of both valves, width 42.0 mm. c. Internal of right valve.

California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 2460 m wire out; R/V *Velero IV,* Cruise 609, Sta. 9905.
Paratype: SBMNH 35005 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 30°23′N, 118°29′W; [82 mi (132 km) at 171°T from N point of Isla Guadalupe, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 4000 m wire out; R/V *Velero IV,* Cruise 789, Sta. 10840.
Paratype: SBMNH 35006 (1, 70% EtOH).
NORTHEAST PACIFIC OCEAN; 31°18′N, 117°22′W; [42 mi (68 km) at 230°T from Pt. Banda light, Baja California Norte, Mexico]; Isaacs-Kidd 10 ft midwater trawl; 3090 m wire out; R/V *Velero IV,* Cruise 805, Sta. 10985.
Remarks: Holotype is the only specimen figured.

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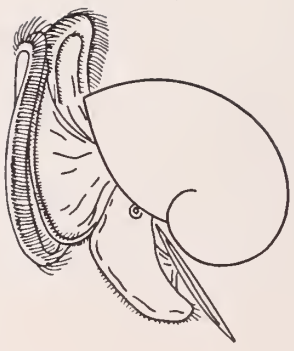
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