Catalog of Tunicate Type Specimens in the United States National Museum Collections

LINDA L. COLE
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Robert McC. Adams  
Secretary  
Smithsonian Institution
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Linda L. Cole
ABSTRACT

Cole, Linda L. Catalog of Tunicate Type Specimens in the United States National Museum Collections. Smithsonian Contributions to Zoology, number 487, 12 pages, 1989.—This catalog includes holotypes, paratypes, and syntypes of tunicate species deposited in the United States National Museum Collections, which are in the National Museum of Natural History, Smithsonian Institution. It also includes whole-mount slides as noted. For types other than holotypes, the number of specimens is noted. As of January 1988, the tunicate type collection of the National Museum consists of 256 lots and approximately 500 specimens. The catalog lists types in alphabetical order according to genus and species by the originally assigned names; changes in nomenclature are noted. Preceding the alphabetical type list is a systematic listing of the types, by originally assigned names only.
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Catalog of Tunicate Type Specimens in the United States National Museum Collections

Linda L. Cole

Introduction

The United States National Museum (USNM), Smithsonian Institution, was established not only for the public viewing of objects, but also for the benefit of scientific knowledge and the classification of organisms.

In 1968, almost 100 years after the United States National Museum was established, its collections were divided between two twentieth-century museums: the National Museum of Natural History (NMNH) and the National Museum of History and Technology (now the National Museum of American History). At this point the USNM ceased to exist as an organizational entity, but the USNM name continued to be applied to the collections for which NMNH assumed responsibility.

Most of the tunicate type specimens were collected during various expeditions funded by the Smithsonian. The collection also consists of tunicate type specimens from various other sources, such as the “Albatross” and “Fish Hawk,” that were commissioned by the United States Bureau of Fisheries. Other types were generously donated by research teams and individual scientists.

Most of the types in this collection belong to the class Asciidiacea. However, the collection also includes types of pelagic tunicates, members of the classes Thaliacea and Appendicularia. All specimens belonging to the class Asciidiacea are now stored in alcohol, and all pelagic specimens have always been stored in formalin.

If an author listed a specimen as a “type” in a description, referring to the single specimen that was used to describe a species, in this listing the term has been changed to holotype (the term currently recognized by the International Code of Zoological Nomenclature).

The systematic list in the present work follows the classification of Goodbody (1982), with allowances for the fact that many former type names are now junior synonyms of present-day species. In both the systematic listing and the alphabetical listing, junior synonyms are listed as though they were currently accepted. In the alphabetical listing, their senior synonyms are noted as commentary. Also in the alphabetical listing, taxa renamed because of particular revision are noted. In synonymies of either sort, specimens are listed by their original names and parenthetically by their current designation as well.

ACKNOWLEDGMENTS.—I am very grateful to Dr. A.T. Newberry (University of California, Santa Cruz), Dr. I. Goodbody (University of the West Indies), and M. Downey (formerly NMNH) for reading the manuscript and giving valuable suggestions and comments. I am also indebted to Dr. S. Cairns (NMNH) for his scientific advice and encouragement concerning the manuscript. A special thanks to Norman and Derrick Cole for their patience and understanding during preparation.

Systematic Listing of Tunicate Types

Class Asciidiacea
Order Aplousobranchia
Family Polyclinidae Verrill, 1871
Genus Aplidium Savigny, 1816
Aplidium abyssum Kott, 1969
Aplidium ballyiæ Monniot and Monniot, 1983
Aplidium bilinque Monniot and Monniot, 1983
Aplidium gracile Monniot and Monniot, 1983
Aplidium mirarpae Monniot and Monniot, 1983
Aplidium pellucidum Kott, 1971
Aplidium siderum Monniot and Monniot, 1983

Aplidium yezoense Tokioka, 1967

Genus Amaroucium Milne Edwards, 1841 [=Amarocium sensu Verrill and Smith, 1873; =Amorocium sensu Verrill and Rathbun, 1879; =Amarocium sensu Hartmeyer, 1909]

Amaroucium constellatum Verrill, 1871

Genus Psammaplidium Herdman, 1886
Psammaplidium spauldingi Ritter, 1907

Genus Aplidiopsis Lahille, 1890
Aplidiopsis amoyense Tokioka, 1967

Genus Polycinum Savigny, 1816
Polycinum indicum Sebastian, 1952
Polycinum johnsoni Monniot and Monniot, 1989

Genus Synoicum Phipps, 1774
Synoicum ostentor Monniot and Monniot, 1983
Synoicum ramulosum Kott, 1969
Synoicum tentaculatum Kott, 1969

Order PHLEBOBRANCHIA

Family CIONIDAE Lahille, 1887

Genus Ciona Fleming, 1822
Ciona pomponiae Monniot and Monniot, 1989

Genus Clavelina Savigny, 1816
Clavelina puertosecensis Millar and Goodbody, 1974

Genus Holozoa Lesson, 1830
Holozoa bursata Van Name, 1921
Holozoa domuncula Hartmeyer, 1913

Genus Protoholozoa Kott, 1969
Protoholozoa lilium Monniot and Monniot, 1981
Protoholozoa pedunculata Kott, 1969

Genus Hypsistozoa Brewin, 1953
Hysistozoa obscura Kott, 1969

Genus Distapia Della Valle, 1881
Distapia megathorax Monniot and Monniot, 1981

Distapia smithi Abbott and Trason, 1968

Family POLYCITORIDAE Michaelsen, 1904

Genus Eudistoma Caullery, 1909
Eudistoma albatrossi Tokioka, 1967
Eudistoma carolinense Van Name, 1918
Eudistoma longa Van Name, 1918
Eudistoma mexicanum Van Name, 1918
Eudistoma platense Van Name, 1918
Eudistoma hepaticus Van Name, 1921

Genus Hypodistoma Tokioka, 1967
Hypodistoma palauense Tokioka, 1970
Genus Clavelina Savigny, 1816

Clavelina puertosecensis Millar and Goodbody, 1974

Genus Holozoa Lesson, 1830
Holozoa bursata Van Name, 1921
Holozoa domuncula Hartmeyer, 1913

Genus Protoholozoa Kott, 1969
Protoholozoa lilium Monniot and Monniot, 1981
Protoholozoa pedunculata Kott, 1969

Genus Hypsistozoa Brewin, 1953
Hysistozoa obscura Kott, 1969

Genus Distapia Della Valle, 1881
Distapia megathorax Monniot and Monniot, 1981

Distapia smithi Abbott and Trason, 1968
Genus *Chelyosoma* Broderip and Sowerby, 1830
*Chelyosoma producta* Stimpson, 1864
Family *AGNESIIDAE* Huntsman, 1912
Genus *Agnesia* Michaelsen, 1898
*Agnesia beringia* Ritter, 1913
*Agnesia biscoei* Monniot and Monniot, 1983
*Agnesia tenue* Monniot and Monniot, 1983
Genus *Adagnesia* Kott, 1963
*Adagnesia antarctica* Kott, 1969
*Adagnesia henriquei* Monniot and Monniot, 1983
Genus *Caenagnesia* Arnback, 1938
*Caenagnesia schmitti* Kott, 1969
Order *STOLJDOBRANCHIA*
Family *STYELJDAE* Sluiter, 1895
Subfamily *BOTRYLLJNAE* Adams and Adams, 1858
Genus *Botryllus* Gaertner, 1774
*Botryllus compositus* Tokioka, 1967
Genus *Botrylloides* Milne Edwards, 1841
*Botrylloides violaceus marginatus* Tokioka, 1967
Subfamily *STYELINAE* Herdman, 1881
Genus *Diandrocarpa* Van Name, 1902 [= *Symplegma* Herdman, 1886]
*Diandrocarpa brakenhielmi* var. *stuhlmanni* Michaelsen, 1904
*Diandrocarpa melanosiphonica* Tokioka, 1967
*Diandrocarpa* Van Name, 1921
*Diandrocarpa floridana* Van Name, 1921
*Diandrocarpa sabanilla* Van Name, 1921
Genus *Stolonica* Lacaze-Duthiers and Delage, 1892
*Stolonica lacazei* Van Name, 1918
*Stolonica vesicularis* Van Name, 1918
Genus *Polycarpa* Heller, 1877 [= *Pandocia* Fleming, 1822]
*Polycarpa melanosiphonica* Tokioka, 1967
*Polycarpa* Van Name, 1912
*Polycarpa albatrossi* Van Name, 1912
*Polycarpa nigrigla* Heller, 1877
Genus *Oligocarpa* Hartmeyer, 1911
*Oligocarpa megalorchis* Hartmeyer, 1911
Genus *Cnemidocarpa* Huntsman, 1913
*Cnemidocarpa chinesis* Tokioka, 1967
*Cnemidocarpa victoriae* Monniot and Monniot, 1983
Genus *Styela* Fleming, 1822
*Styela hemicasipita* Ritter, 1913
*Styela izuana hawaiiensis* Tokioka, 1967
*Styela macerentera* Ritter, 1913
*Styela materna* Monniot and Monniot, 1983
*Styela psiliformis* Monniot and Monniot, 1989
*Styela sabulifera* Ritter, 1913
*Styela schmitti* Van Name, 1918
*Styela tinaktae* Van Name, 1918
Genus *Tethyum* Bohadsch, 1761
*Tethyum atlanticum* Van Name, 1912
Family *PYURIDAE* Hartmeyer, 1908
Genus *Pyura* Molina, 1782
*Pyura antillarum* Van Name, 1921
*Pyura duplicata* Van Name, 1918
*Pyura inflata* Van Name, 1918
*Pyura lycoperdon* Monniot and Monniot, 1983
*Pyura multiruga* Monniot and Monniot, 1982
*Pyura tunica* Kott, 1969
Genus *Halocynthia* Verrill, 1879
*Halocynthia haustor* Ritter, 1913
*Halocynthia okai* Ritter, 1907
*Halocynthia washingtonia* Ritter, 1913
Genus *Boltenia* Savigny, 1816
*Boltenia echinata* Ritter, 1907
*Boltenia rubra* Stimpson, 1852
Genus *Culeolus* Herbman, 1878
*Culeolus easeri* Tokioka, 1967
*Culeolus pinguiss* Monniot and Monniot, 1982
*Culeolus pyramidalis* Ritter, 1907
*Culeolus slueri* Ritter, 1913
*Culeolus tanneri* Verrill, 1885
Genus *Microcosmus* Heller, 1878
*Microcosmus acorus* Van Name, 1912
*Microcosmus transversus* Ritter, 1907
Genus *Hartmeyeria* Ritter, 1913
*Hartmeyeria chinesis* Tokioka, 1967
*Hartmeyeria triangularis* Ritter, 1913
Genus *Bathypera* Michaelsen, 1904
*Bathypera goreau* Millar and Goodbody, 1974
Genus *Ctenyura* Van Name, 1918
*Ctenyura intermedia* Van Name, 1918
Family *MOLGULIDAE* Lacaze-Duthiers, 1877
Genus *Molgula* Forbes, 1848 [= *Caesira* Fleming, 1822]
*Molgula estadose* Monniot and Monniot, 1983
*Molgula habanensis* Van Name, 1945
*Molgula oregonia* Ritter, 1913
*Molgula pitalettes* Monniot and Monniot, 1983
*Molgula platanana* Van Name, 1945
*Molgula regularis* Ritter, 1907
*Caesira intumescens* Van Name, 1912
*Caesira luteolenta* Van Name, 1912
*Caesira marienisii* Traustedt, 1885
*Caesira robusta* Van Name, 1912
*Caesira singularis* Van Name, 1912
*Caesira verrilli* Van Name, 1912
Genus *Molguloides* Huntsman, 1922
*Molguloides cyclocarpa* Monniot and Monniot, 1982
Genus *Halomolgula* Ritter, 1907
*Halomolgula ovoida* Ritter, 1907
Genus *Paramolgula* Traustedt, 1885
*Paramolgula canicoli* Monniot and Monniot, 1983
Genus *Eugyrioides* Seeliger, 1906
*Eugyrioides dalli* Ritter, 1913
*Eugyrioides polyducta* Monniot and Monniot,
Alphabetical List of Tunicate Types and Noted Name Changes

Adagnesia antarctica Kott, 1969:99, holotype, USNM 11966; 2 paratypes, USNM 11967, west of Macquarie Island, south Pacific Ocean.

Adagnesia henriquei Monniot and Monniot, 1983:58-60, holotype, USNM 15317, Tierra del Fuego.

Agnesia beringia Ritter, 1913:493, 9 syntypes, USNM 5689, eastern Bering Sea, Alaska. This species is a junior synonym of Agnesia septentrionalis Huntsman, 1911, which is the name that Van Name (1945) used. Agnesia septentrionalis is also the name that Van Name used when he identified a specimen (USNM 10633) in the United States National Museum. Ritter, however, did not agree that the two species were the same.

Agnesia biscoei Monniot and Monniot, 1983:56–57, holotype, USNM 14493; 35 paratypes, USNM 14500, South Shetland Islands.

(Agnesia septentrionalis: see Agnesia beringia Ritter, 1913.)

Agnesia tenue Monniot and Monniot, 1983:57–58, holotype, USNM 14489; 2 paratypes, USNM 14494, Isla de Los Estados.

Amaroucium constellatum Verrill, 1871:359, 30 syntypes, USNM 4642; 15 syntypes, USNM 102, Vineyard Sound, Massachusetts; 1 syntype, USNM 4643, Woods Hole, Massachusetts. In the original description of this species, the genus was spelled Amouroucium. The spelling was changed by Verrill and Smith (1873) to Aplidium. In 1879 it was spelled Aplorocium in a publication by Verrill and Rathbun (1879:231), and Hartmeyer (1909) changed the spelling to Amaroucium. However, the practice within the last thirty years has been to refer to this genus using the original generic name Aplidium (Savigny, 1816). The name Amaroucium was used by Milne Edwards for any colony that was massive or capitate with zooids divided into three parts and more than 10 rows of stigmata (Milne Edwards, 1841). Amaroucium is now considered as only a subgenus of Aplidium; thus, Amaroucium constellatum is known as Aplidium (Amaroucium) constellatum.

Aplidodiopsis amoyense Tokioka, 1967:45, holotype, USNM 11529, probably vicinity of Amoy, China.

Aplidium abyssum Kott, 1969:47, holotype, USNM 11970, Peru-Chile Trench.

Aplidium balleniens Monniot and Monniot, 1983:13–14, 1 paratype, USNM 14504, Balleny Islands, Antarctica.


(Aplidium constellatum: see Amaroucium constellatum Verrill, 1871.)

Aplidium gracile Monniot and Monniot, 1983:17–18, holotype, USNM 14496; 12 paratypes, USNM 14503, off Tierra del Fuego.
Aplidium miripartum Monniot and Monniot, 1983:24-25, holotype, USNM 14486, off Antarctic Peninsula, Antarctica (64°47’30"S, 64°07’12"W).

Aplidium pellucidum Kott, 1971:11-82, holotype, USNM 12012, Chile.

Aplidium siderum Monniot and Monniot, 1983:28, holotype, USNM 14491, Antarctic Peninsula, Antarctica.

(Aplidium spauldingi: see Psammaplidium spauldirigi Ritter, 1907.)


Ascidia caguayensis Millar and Goodbody, 1974:153-155, holotype, USNM 12286; 7 paratypes, USNM 12287, Port Royal, Jamaica.

Ascidia callosa Stimpson, 1852:228, 25 syntypes, USNM 3206, Massachusetts Bay, Massachusetts. This species has been transferred to the genus Molgula by Hartmeyer (1923).


Ascidia clementea Ritter, 1907:32-35, 1 syntype, USNM 5309, San Clemente Island, California. The same applies for this species as for A. callosa: labelled A. clementea, then P. clementea, and once again A. clementea.

Ascidia fusca Monniot and Monniot, 1989, holotype, USNM 18248, off Isla Barla Bartholome, Galapagos Islands (00°03.91’N, 90°19.21’W).


Ascidia unalsakensis: see Phallusia unalaskensis Ritter, 1913.)

Ascidia verriformis: see Phallusia verriformis Ritter, 1913.)

Ascidia lutea Millar and Goodbody, 1974:150-152, 7 syntypes, USNM 12283, Discovery Bay, Jamaica.

Bathypera goreaui Millar and Goodbody, 1974:156-158, holotype, USNM 12292; 1 paratype, USNM 12293; 1 paratype, USNM 12294; 1 paratype, USNM 12295, Discovery Bay, Jamaica.

Benthascidia michaeleni Ritter, 1907:24-32, 2 syntypes, USNM 5310, near San Diego, California.

Boltenia echinata Ritter, 1907:14-16, 1 syntype, USNM 5290; 1 syntype, USNM 5291, Point Loma Lighthouse, California.

(Boltenia ovifera: see Boltenia rubra Stimpson, 1852.)

Boltenia rubra Stimpson, 1852:232, 30 syntypes, USNM 3206, Massachusetts Bay, Massachusetts. This species has been referred to by many different synonyms, as shown by Van Name (1945), but the name now used by most ascidian specialists is Boltenia ovifera, used by Hartmeyer (1903) with reference to his redescriptions of a species that was originally named Vorticella ovifera (Linnnacus, 1767).

Brooksia benticola van Soest, 1975:117-118, holotype, USNM 12686; 3 paratypes, USNM 12685 (31°41’N, 63°47’S); 1 paratype, USNM 12687 (32°00’N, 64°00’W), Bermuda.


Caesira intumescentes Van Name, 1912:482-484, 1 syntype, USNM 669, Grand Bank, Newfoundland. This species, described by Van Name, was identical to a poorly described species that Macleay (1825) had previously described and named Cystingia griffithsii. Huntsman (1922b) transferred the species to Molgula griffithsii.

Caesira martensis Traustedt, 1885:19, 1 syntype, USNM 5557, northwest Australia. This species has been transferred to the genus Molgula by Sluiter (1900).

Caesira robusta Van Name, 1912:503-509, 2 syntypes, USNM 4034, Woods Hole, Massachusetts. This species has been transferred to the genus Molgula by Hartmeyer (1914).

Caesira singularis Van Name, 1912:516-518, 1 syntype, USNM 5598, Long Island Sound, Massachusetts. Van Name (1945) later agreed with Arnabach Christie Linde’s (1928) description of a new genus in which she named a new species, Heterostigma separ, that resembled Van Name’s species. Van Name (1945) followed her course and from then on referred to this species as Heterostigma singularis. Current specialists seem to follow this course too, and so the name currently used is H. singularis.

Caesira verrilli Van Name, 1912:516-518, holotype, USNM 687, North Atlantic Ocean, southeast of Georges Bank. This species has been transferred to the genus Molgula by Hartmeyer (1923).


Cibacapsa griffithsii. Van Name's species. Van Name (1945) later agreed with Arnabach Christie Linde's (1928) description of a new genus in which she named a new species, Heterostigma separ, that resembled Van Name's species. Van Name (1945) followed her course and from then on referred to this species as Heterostigma singularis. Current specialists seem to follow this course too, and so the name currently used is H. singularis.

Ciona pomponiae Monniot and Monniot, 1989, holotype, USNM 18247, James Bay, off Isla San Salvador, Galapagos Islands (00°10'.S, 90°53'.W).

Cleveina pueroaeensis Millar and Goodbody, 1974:143–146, holotype, USNM 12288, Rio Bueno, Jamaica; 1 paratype, USNM 12289; 1 paratype, USNM 12290; 1 paratype, USNM 12291, Discovery Bay, Jamaica.

Cnemidocarpa chinesis Tokioka, 1967:188–190, holotype, USNM 11799; 9 paratypes, USNM 11800, China.


Cnemidocarpa jolense Millar and Goodbody, 1974:143–146, holotype, USNM 11802, Otsu, Tochigi, Japan.

Clavelina puertosecensis Stuhlmanni, var. Diandrocarpa brakenhielmi Michaelsen, 1904:50, 1 syntype, USNM 5556, Dar-es-Salaam, Tanganyika. This species is a junior synonym of Symplegma viride Herdman, 1886, which is the name that is currently used.

Didemnum jolense Van Name, 1918:147–148, holotype, USNM 6040; 1 paratype, USNM 5926, near Jolo Light, Philippines. Tokioka (1967) later treated this species as a variety of Tridemnum savignii instead of as a distinct species, thus listing it as T. savignii var. jolense.

(Didemnum candidum fusiferum: see Didemnum fusiferum Van Name, 1921.)

Didemnum fusiferum Van Name, 1921:283–494, holotype, USNM 7006, Florida. Originally described as a species, but Van Name (1945) later regarded it as a subspecies of D. candidum. Thus, the taxon is currently known as Didemnum candidum fusiferum.


Didemnum nekosiota Tokioka, 1967:67–70, holotype, USNM 11381; 34 paratypes, USNM 11801, barrier reef 8 miles northwest of Koror Island, Palau Islands; 10 paratypes, USNM 11418, Peleliu boat channel between Ngargersal and Kongauru Islands, Palau Islands.


Didemnum saba elenae Van Name, 1945:50, 1 syntype, USNM 5556, Dar-es-Salaam, Tanzania.

Didemnum siphonale Monniot and Monniot, 1981, holotype, USNM 11954, Pescadero Point, Monterey County, California.

Dimeatus mirus Monniot and Monniot, 1981, holotype, USNM 12911; 5 paratypes, USNM 12912 (with 2 slides), Pacific Antarctic Basin (60°24'S, 115°01'W).


Distaplia megathorax Monniot and Monniot, 1981, holotype, USNM 12914, Ross Sea, Antarctica.

(Distaplia skoogi: see Holozoa domuncula Hartmeyer, 1913.)

Distaplia smithi Abbott and Trason, 1968:143–153, holotype, USNM 11369; 4 paratypes, USNM 11370, Peru.

**Ecteinascidia tortugensis** Plough and Jones, 1937:100–101, 6 paratypes, USNM 10613, Dry Tortugas, Florida.

**Eudistoma albatrossi** Tokioka, 1967:124, holotype, USNM 11811, 1 paratype, USNM 11812, off Omai Zaki Light, Honshu, Japan.

**Eudistoma carolinense** Van Name, 1945:123–124, holotype, USNM 10497, Charleston, South Carolina.

**Eudistoma hepaticus** Hartmeyer, 1913:441–443, 2 syntypes, USNM 10647, northern end of Gulf of California.

**Eudistoma marianense** Van Name, 1921:348, 3 syntypes, USNM 11414, Iwayama Bay, Palau Islands.

**Eugyrioides dalli** Ritter, 1912:439–443, 2 syntypes, USNM 5678, Kyska Harbor, Alaska. This species has been transferred to the genus *Paraguayrioides* by Hartmeyer (1914).

**Eugyrioides polyducta** Monniot and Monniot, 1983:115, holotype, USNM 15319 (with two slides), Strait of San Juan de Fuca, Washington.

**Euherdmania morgani** Millar and Goodbody, 1974:147–150, holotype, USNM 12284, West of Drunkenman Cay, Jamaica; 1 paratype, USNM 12285, Drunkenman Cay, Jamaica.

**Fritillaria taeniogona** Tokioka, 1957:363–364, 7 syntypes, USNM 11376, off Costa Rica and Peru.

**Halocynthia haustorfoliacea** Ritter, 1913:447–448, 6 syntypes, USNM 11792; 2 paratypes, USNM 11793, Auau channel, between Maui and Lanai, Hawaii.

**Holozoa bursata** Van Name, 1921:120–121, 1 paratype, USNM 5679, Strait of San Juan de Fuca, Alaska. This is a junior synonym of *Distaplia stylifera* (Kowalevsky, 1874).

**Holocyathus marinae** Tokioka, 1967:92–93, holotype, USNM 7240, Key West, Florida Keys, Florida. This is a junior synonym of *Distaplia sarcina* (Ritter, 1913).

**Hypodistoma palauense** Tokioka, 1970:75, holotype, USNM 11975, Peru-Chile Trench.

**Leptoclinides hawaiiensis** Tokioka, 1967:92–93, holotype, USNM 7240, Key West, Florida Keys, Florida. This is a junior synonym of *Distaplia sarcina* (Ritter, 1913).

**Microcosmus nacreus** Van Name, 1912:439–443, 2 syntypes, USNM 5682; 3 syntypes, USNM 5681, Oregon (44°28'N, 124°25'W).


**Molgula platana** Van Name, 1945:405–406, 4 Paratypes, USNM 10496, off Nova Scotia, Canada. This is a junior synonym of *Microcosmus glacialis* (Kiaer, 1893).

**Molgula pigalettae** Monniot and Monniot, 1983:111, holotype, USNM 5830, Oregon (44°28'N, 124°25'W).

**Molgula habanensis** Van Name, 1945:402–403, 8 paratypes, USNM 5810, off Havana, Cuba.

**Molgula martensii** Monniot and Monniot, 1983:112, holotype, USNM 5830, Oregon (44°28'N, 124°25'W).

**Molgula gracilis** Ritter, 1912:120–121, 1 paratype, USNM 5830, Oregon (44°28'N, 124°25'W).


**Molgula singularis** Van Name, 1912:439–443, 2 syntypes, USNM 5830, Oregon (44°28'N, 124°25'W).

**Molgula verrilli** Monniot and Monniot, 1983:111, holotype, USNM 5830, Oregon (44°28'N, 124°25'W).


**Hartmeyeria triangularis** Ritter, 1913:461–463, 13 syntypes, USNM 5679, Kyska Harbor, Aleutian Islands, Alaska. (Heterostigma singularare: see Caesia singularis Van Name, 1912.)

**Holocynthia bursata** Van Name, 1921:366, 2 syntypes, USNM 7240, Key West, Florida Keys, Florida. This is a junior synonym of *Distaplia stylifera* (Kowalevsky, 1874).

**Holocynthia dominica** Hartmeyer, 1913:125–144, 1 syntype, USNM 6111, Cape Colony, South Africa. This is a senior synonym of *Distaplia skoogi* Michael, 1934.

**Hypodistoma palaense** Tokioka, 1970:75, holotype, USNM 11975, Peru-Chile Trench.

**Hypopistrophus obscura** Kott, 1969:33–35, holotype, USNM 11975, Peru-Chile Trench.

**Hypotrochus singularis** Van Name, 1912:439–443, 2 syntypes, USNM 5682; 3 syntypes, USNM 5681, Oregon (44°28'N, 124°25'W).

**Hypotrochus regularis** Ritter, 1912:439–443, 2 syntypes, USNM 5682; 3 syntypes, USNM 5681, Oregon (44°28'N, 124°25'W).
Oligocarpa megalorchis Hartmeyer, 1911:403, 1 syntype, USNM 6107, off Ecuador.
Pandocia albatrossi Van Name, 1912:579–580, 1 syntype, USNM 4726, off Nantucket Shoals, Massachusetts. This species was transferred to the genus Polycarpa by Hartmeyer (1923).
Paramolgula canioi Monniot and Monniot, 1983:117–119, holotype, USNM 12916; 1 paratype, USNM 12917, South Atlantic Ocean (51°02'S, 142°47'W).
Perophora viridis Goodbody and Cole, 1987:246–254, holotype, USNM 5305, San Nicolas Island, California. The name was changed to Amaroucium spauldingi by Hartmeyer (1909). Because Amaroucium has come to be recognized as a subgenus of Aplidium, the taxon is currently referred to as Aplidium spauldingi.

Pyrosoma atlanticum dipleurosoma and Pyrosoma paradoxum Metcalf and Hopkins, 1919:249–251, holotype, USNM 6469 (hybrid); 1 paratype, USNM 6420, Capitancillo Island Light, off northern Cebu Island, Philippines.
Pyrosoma atlanticum hawaiiensis Metcalf and Hopkins, 1919:246–248, holotype, USNM 6443; 4 paratypes, USNM 3069, north Pacific Ocean, between Hawaii and California.
Pyrosoma ellipticum Metcalf and Hopkins, 1919:231–233, holotype, USNM 6416, vicinity of Formosa, China Sea.
Pyrosoma hybridum Metcalf and Hopkins, 1919:229–230, holotype, USNM 6470; 5 paratypes, USNM 6408, vicinity of Formosa, China Sea.
Pyrosoma verticillatum cylindricum Metcalf and Hopkins, 1919:227–229, holotype, USNM 6468; 1 paratype, USNM 6412, Nogas Island, Sulu Sea, vicinity of southern Panay, Philippines.
Pyura antillarum Van Name, 1921:451, holotype, USNM 7032, Lesser Antilles, Caribbean.
Pyura duplicata Van Name, 1918:79–81, holotype, USNM 6038, Catabalogan, Samar, Philippines.
Pyura haustor: see Halocynthia haustor foliacea Ritter, 1913 and Halocynthia washingtonia Ritter, 1913.
Pyura inflata Van Name, 1918:74–76, holotype, USNM 6037, near Observation Island, Philippines.
Pyura lycopodera Monniot and Monniot, 1983:91–92, holotype, USNM 14488, South Shetland Islands.
Pyura multiruga Monniot and Monniot, 1982, holotype,
USNM 12906; 20 paratypes, USNM 12907 (with 7 slides); 1 paratype, USNM 12908 (tunic only), Ross Sea, Antarctica.


*Ritterella mirifica* Monniot and Monniot, 1983:34, holotype, USNM 14492, Bransfield Strait, Antarctic.

*Ritterella rubra* Abbott and Trason, 1968:143–147, holotype, USNM 11951; 20 paratypes, USNM 11952, Monterey County, California.

*Salpa maxima tuberculata* Metcalf and Bell, 1918:87–88, holotype, USNM 6472; 2 paratypes, USNM 6454, Pamilacan Island, vicinity of western Bohol, Philippines.

*Salpa younii* Van Soest, 1973:9–15, holotype, USNM 12014 (32°08′N, 63°47′W); 1 paratype, USNM 12015 (32°08′N, 63°47′W); 1 paratype, USNM 12016 (32°20′N, 63°33′W); 4 paratypes, USNM 12017; 2 paratypes, USNM 12018 (31°50′N, 63°52′W), Bermuda.


*Situla rineharti* Monniot and Monniot, 1989, holotype, USNM 18244, north of Seymour Island, Galapagos Islands (00°21.88′S, 90°15.75′W); 1 paratype, USNM 18245, Tower Island, Galapagos Islands (00°16.98′N, 89°59.81′W).

*Stolonica styeliformis* Van Name, 1918:107–109, 13 syntypes, USNM 6042, off Jolo Light, Philippines.

*Stolonica vesicularis* Van Name, 1918:109–111, holotype, USNM 6034, off Jolo Light, Philippines.

*(Styela atlanticum: see Tethyum atlanticum Van Name, 1912.)*

*Styela hemicaespitosa* Ritter, 1913:471–475, holotype, USNM 5684; 7 paratypes, USNM 11627; 29 paratypes, USNM 11628, southern California.


*Styela macrenerson* Ritter, 1913:466–471, holotype, USNM 5686, Bering Sea, Pribilof Islands, Alaska.

*Styela materna* Monniot and Monniot, 1983:81–82, holotype (three slides), USNM 15324, South Georgia Island, south Atlantic Ocean.

*Styella psoliformis* Monniot and Monniot, 1989, holotype, USNM 18246, north of Isla Española, Galapagos Islands (01°18.72′S, 89°48.81′W).

*Styella sabulifera* Ritter, 1913:475–476, 50 syntypes, USNM 5687, in Bristol Bay, Bering Sea, Alaska. Van Name (1945) lists this species as a junior synonym of *Cnemidocarpa rhizophus* (Redikorzev, 1907).

*Styella schnitzi* Van Name, 1945:298–299, 5 paratypes, USNM 10495, off Montevideo, Uruguay (36°42′S, 56°23′W).

*Styella tinaktae* Van Name, 1918:88–91, holotype, USNM 6041; 1 paratype, USNM 18260, off Tinakta Island, Sulu Archipelago, Philippines.

(Symplegma viride: see *Diandrocarpa brakenhielmi* var. *stuhlmanni* Michaelson, 1904.)

*Synoicum ostendor* Monniot and Monniot, 1983:33, holotype, USNM 14490; 100 paratypes, USNM 14502, Balleny Islands, Antarctica.


*Synoicum tentaculatum* Kott, 1969:69–70, holotype, USNM 11973; 1 paratype, USNM 11974, South Orkney Islands.

*Tethyum atlanticum* Van Name, 1912:552, 1 syntype, USNM 5599, off Martha’s Vineyard, Massachusetts. This species has been transferred to the genus *Styela* by Van Name (1921).

*Thalia democratica* Forskål, 1775:112–117, holotype, USNM 6473; 1 paratype, USNM 6474, Luzon, Philippines.

*Traustedtia multitentaculata bicristata* Metcalf and Bell, 1918:143–147, 1 syntype, USNM 6430, off Martha’s Vineyard, Massachusetts.

*(Trididemnum savignii var. jolense: see *Didemnopsis jolense* Van Name, 1918.)*
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