

POLYCHAETOUS ANNELIDS
ERECTED BY TREADWELL,
1891 TO 1948, TOGETHER
WITH A BRIEF
CHRONOLOGY

OLGA HARTMAN

BULLETIN
OF THE
AMERICAN MUSEUM OF NATURAL HISTORY
VOLUME 109 : ARTICLE 2 NEW YORK : 1956

POLYCHAETOUS ANNELIDS ERECTED BY TREADWELL,
1891 TO 1948, TOGETHER WITH A BRIEF
CHRONOLOGY

POLYCHAETOUS ANNELIDS ERECTED
BY TREADWELL, 1891 TO 1948,
TOGETHER WITH A BRIEF
CHRONOLOGY

OLGA HARTMAN

CONTRIBUTION NUMBER 162 OF THE ALLAN
HANCOCK FOUNDATION, LOS ANGELES

BULLETIN
OF THE
AMERICAN MUSEUM OF NATURAL HISTORY
VOLUME 109 : ARTICLE 2 NEW YORK : 1956

BULLETIN OF THE AMERICAN MUSEUM OF NATURAL HISTORY

Volume 109, article 2, pages 239–310, plate 21

Issued April 23, 1956

Price: \$1.00 a copy

CONTENTS

INTRODUCTION	245
ALPHABETICAL LIST OF NAMES OF ANNELIDS ERECTED BY TREADWELL	247
ALPHABETICAL LIST OF VALID SPECIES, WITH SYNONYMS	260
LIST OF SPECIES BY FAMILIES	265
SYSTEMATIC DISCUSSION	271
REFERENCES	302

INTRODUCTION

THE PURPOSE OF THE PRESENT REPORT is to assemble the contributions to annelidan literature of the late Aaron Treadwell (1866-1947) during the 58 years (1891-1948) of his publications on the polychaetous annelids. The type specimens on which these studies are based are deposited largely in the American Museum of Natural History in New York City and in the United States National Museum in Washington, D.C. Through the generosity of the administration of the American Museum of Natural History it was possible to examine all the type collections that were deposited there, and those in the New York Zoological Society which are now also in the American Museum. Many of the types in the United States National Museum had been earlier examined by me at Washington, as indicated in the bibliographic citations. The lists below, therefore, include all the names erected by Treadwell and give such identities as are believed to be valid. Some indicated as not seen by me are here given to complete the lists.

Aaron Louis Treadwell was born in Redding, Connecticut, on December 23, 1866. He received a baccalaureate degree in 1888 and master of science in 1890 from Wesleyan University in Middletown, Connecticut. From 1891 to 1900 he was Professor of Biology and Geology at Miami University at Oxford, Ohio. In 1899 he was granted the degree of Doctor of Philosophy from the University of Chicago, where he completed a valuable study on the cytogeny of *Podarke obscura* Verrill under the direction of Profs. C. O. Whitman, C. M. Child, E. G. Conklin, and A. D. Mead.

From 1900 to 1938 Treadwell was Professor of Biology and Zoology at Vassar College in Poughkeepsie, New York, and served as Chairman of its Zoology Department from 1914 to 1938. During most of these years, from 1909 to the time of his death on June 23, 1947, he also held honored positions as Curator of Annelids and Research Associate in the American Museum of Natural History. During several summers, between 1898 and 1907, he was instructor and lecturer at the marine stations at Woods Hole, Massachusetts, and Cold Spring Harbor, Long Island, New York. He made

field investigations at the Bermuda Biological Station during 1916 and was stationed for a time at the Dry Tortugas Laboratory in southern Florida. During the early part of 1920 Treadwell was a member of the exploring party of the Carnegie Institution of Washington to Samoa and Fiji islands, under the direction of Alfred Goldsborough Mayor.

Treadwell held memberships in the American Association for the Advancement of Science, of which he was a Fellow, the American Society of Zoologists, the American Society of Naturalists, and the scholastic society, Phi Beta Kappa.

At least three students were inspired by Treadwell to publish on annelids: Ruth Hoagland, who published on the annelids of the Philippine Islands (1919) and Puerto Rico (1920); Agnes Mullin, who described some annelids (1923) of the Barbados-Antigua Expedition of the University of Iowa; and Jane Winternitz who reported on some annelids (1936) from Florida.

Throughout his life Treadwell maintained a youthful eagerness for the new or unknown. He had the confidence of higher authority and was entrusted with valuable collections from many sources. Most of the types that are now preserved are in better than average condition.

The long list of titles, 71 in the list of references, indicates a prolonged and genuine interest in one of the more difficult groups of marine invertebrates. Except for a rather rigid adherence to the classifications proposed by Chamberlin (1919), Treadwell consulted few monographic works such as Fauvel's monograph for France (1923 and 1927), McIntosh's monograph of the British annelids (1900 to 1924), or similar works. This resulted not through disregard but from necessity, for Treadwell had only occasional access to large library facilities, including those at Harvard and Yale universities and the Library of Congress. Vassar College maintained no large museum collections; thus there was only an occasional chance to compare specimens with those of other institutions. To my knowledge, Treadwell kept no extensive catalogue or bibliography, but was able to draw freely from a

memory that had remarkable retentive powers. It was also my personal impression that the microscopic equipment and laboratory facilities at his command were very meager for the examination of the minute parts which must be distinguished for the characters of most of the marine annelids to be defined.

The original list of 324 names (see below) is here reduced to 266 valid species, of which 138 carry Treadwell's original name. They are distributed in 141 genera and 38 families. A survey of the list shows that most species are in the Polynoidae with 33 species. The Eunicidae have 30; the Nereidae, 24; the Lumbrineridae and Phyllodocidae each, 13; the Sabellidae and Syllidae each, 12; the Terebellidae, 11; the Alciopidae and Serpulidae each, 10; the Ara-

bellidae, nine; the Polyodontidae and Cirratulidae each, eight; and the other families have fewer species.

Among the genera newly elected only *Sphaeropomatus* Treadwell, 1934, is valid, and *Epitoka* Treadwell, 1943, is questionable. *Haliplanella*, 1943, goes to *Halyplanes* Reibisch; *Monorchos*, 1926, to *Lygdamis* Kinberg; *Nuchubanchia*, 1928, to *Travisioopsis* Levinsen; and *Metamphinome*, 1940, to *Hipponoë* Audouin and Milne-Edwards.

Names newly erected herein are *Cirriformia hawaiiensis* for *Audouinea branchiata* Treadwell, 1943, preoccupied; and *Lumbrineris treadwelli* for *Lumbriconereis maculata* Treadwell, 1901. They are discussed more fully below.

ALPHABETICAL LIST OF NAMES OF ANNELIDS ERECTED BY TREADWELL

THE FOLLOWING LISTS alphabetically the names of annelids erected by Treadwell. Included are the original name, with its bibliographic citation, the family name, the type locality, the location of holotype or other authoritative specimen, revised name, if any, and references or comments (A.M.N.H. refers to the American Museum of Natural History; U.S.N.M., to the United States National Museum).

Acanthiclepis longicirrata Treadwell, 1941d, p. 26, figs. 1-4. Polynoidae. Planktonic off Bermuda in 600-800 fathoms. Holotype in A.M.N.H. Referred to *Eunoë purpurea* Treadwell, 1936. See Systematic Discussion.

Acholoë orbiculata Treadwell, 1921a, pp. 1-3, figs. 1-8. Polynoidae. Belgian Congo. Holotype in A.M.N.H. Referred to *Acholoë astericola* (delle Chiaje), 1841. See Systematic Discussion.

Acoetes magnifica Treadwell, 1929c, pp. 1-4, figs. 1-7. Polyodontidae. Montego Bay, Jamaica, British West Indies. Holotype in A.M.N.H. Referred to *Panthalis pustulata* Treadwell, 1924. See Hartman, 1939b, p. 83.

Alciopa distorta Treadwell, 1943b, p. 35, figs. 16-18. Alciopidae. Planktonic east off Hawaii in 50 meters. Holotype in U.S.N.M., not seen by me. Referred to *Naiades cantrainii* delle Chiaje, 1830. See Systematic Discussion.

Alciopa mutilata Treadwell, 1934a, p. 8, pl. 2, figs. 20-21. Alciopidae. Off Puerto Rico in 100 fathoms. Holotype in U.S.N.M., not seen. From the very brief account, it seems to be *Naiades cantrainii* delle Chiaje.

Ammotrypane bermudiensis Treadwell, 1936b, pp. 60-61, figs. 24-26. Opheliidae. Nonsuch Island, Bermuda, in 10-35 feet. Holotype in A.M.N.H. Referred to *Armandia maculata* (Webster), 1884. See Systematic Discussion.

Ampharete brevibranchiata Treadwell, 1926d, pp. 6-7, figs. 11-14. Ampharetidae. Bering Strait, Alaska. Holotype in A.M.N.H. Referred to *Ampharete arctica* Malmgren, 1866. See Systematic Discussion.

Ampharete seribranchiata Treadwell, 1926d, pp. 7-8, figs. 15-16. Ampharetidae. Bering Strait, Alaska. Holotype in A.M.N.H. Referred to *Ampharete eupalea* Chamberlin, 1920. See Berkeley and Berkeley, 1942, p. 201.

Amphinome microcarunculata Treadwell, 1901b, pp. 194-195, fig. 32. Amphinomidae. Puerto Rico. Holotype in U.S.N.M. Questionably *Benthoscolex*

microcarunculata (Treadwell), 1901. See Hartman, 1942c, p. 98.

Anaitides minuta Treadwell, 1937b, p. 148, figs. 16-18. Phyllodocidae. Arena Bank, western Mexico, in 35 fathoms. Holotype in A.M.N.H. Referred to *Anaitides madeirensis* Langerhans, 1879. See Systematic Discussion.

Ancistrosyllis tentaculata Treadwell, 1941a, p. 1, figs. 1-3. Pilargiidae. Long Island, New York. Holotype in A.M.N.H. See Hartman, 1947b, p. 497.

Anthostoma latacapitata Treadwell, 1901b, pp. 203-204, figs. 61-65. Orbiniidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Naineris setosa* (Verrill), 1900. See Hartman, 1951, pp. 67-70, pl. 17, figs. 1-6.

Aphrodita magna Treadwell, 1925a, pp. 1-3, figs. 1, 2. Aphroditidae. Cape Polonia, Uruguay. Holotype in U.S.N.M., not seen.

Arabella attenuata Treadwell, 1906, p. 1172, fig. 62. Arabellidae. Near Monterey Bay, California. Holotype in U.S.N.M. Referred to *Notocirrus attenuatus* (Treadwell), 1906. See Hartman, 1944b, p. 174.

Arabella dubia Treadwell, 1922a, pp. 160-161, fig. 52, pl. 7, figs. 11, 12, pl. 8, figs. 8, 9. Pago Pago Harbor, Samoa. Holotype in A.M.N.H. Referred to *Arabella iricolor* (Montagu), 1804. See Systematic Discussion.

Arabella iridescens Treadwell, 1906, p. 1171, figs. 59-61. Arabellidae. Off Hawaii in 127 fathoms. Holotype in U.S.N.M. Redescribed in Hartman, 1942a, pp. 124-125, fig. 13d.

Arabella pacifica Treadwell, 1941c, p. 23, figs. 18-21. Arabellidae. Sihuatanego, Mexico. Holotype in A.M.N.H. Referred to *Arabella semimaculata* (Moore), 1911. See Systematic Discussion.

Arabella setosa Treadwell, 1921d, pp. 113-114, figs. 421-424, pl. 9, figs. 10, 11. Arabellidae. Buccoo Bay, Tobago, West Indies. Type in A.M.N.H. Questionably *Arabella iricolor* (Montagu), 1804. See Systematic Discussion.

Aracoda attenuata Treadwell, 1911, pp. 5-6, figs. 8-11. Arabellidae. Fort Jefferson, Florida, shore. Holotype in A.M.N.H. Referred to *Arabella* sp. See Systematic Discussion.

Aracoda spatula Treadwell, 1911, pp. 6-7, figs. 12-14. Arabellidae. Fort Jefferson, Florida, shore. Holotype in A.M.N.H. Referred to *Drilonereis spatula* (Treadwell), 1911. See Systematic Discussion.

Aricia cirrata Treadwell, 1901b, pp. 201-202, figs. 54-57. Orbiniidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Scoloplos treadwelli* Eisig, 1914, pp. 405-407, and discussed by Augener, 1933b, p. 318.

Aricidea alata Treadwell, 1901b, p. 202, figs. 58-60. Spionidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Laonice cirrata* (Sars), 1851. See Hartman, 1941, p. 293.

Audouinea branchiata Treadwell, 1943d, p. 1, figs. 1-3. Cirratulidae. Pearl Harbor, Hawaii. Holotype in A.M.N.H. Referred to *Cirriformia hawaiiensis*, new name. See Systematic Discussion.

Audouinea maculata Treadwell, 1929d, p. 10. Cirratulidae. Berbera, British Somaliland. Holotype in A.M.N.H. Referred to *Cirriformia semicincta* (Ehlers), 1905. See Systematic Discussion.

Audouinea oculata Treadwell, 1932b, pp. 17-18, figs. 12-14. Cirratulidae. São Paulo, Brazil. Holotype in U.S.N.M. Referred to *Cirriformia filigera* (delle Chiaje), 1841. See Hartman, 1942a, p. 127-128.

Audouinea pygidia Treadwell, 1936b, p. 64, figs. 22, 23. Cirratulidae. Nonsuch Island, Bermuda, in tidal pools. Paratype in A.M.N.H. Referred to *Cirriformia filigera* (delle Chiaje), 1841. See Systematic Discussion.

Autolytus bidens Treadwell, 1941d, pp. 28-29, fig. 9. Syllidae. Nonsuch Island, Bermuda, planktonic at surface. Holotype in A.M.N.H. Referred to *Odontosyllis enopla* Verrill, 1900. See Systematic Discussion.

Autolytus pacificus Treadwell, 1943b, p. 40, figs. 28-30. Syllidae. Samoa. Holotype in U.S.N.M., not seen.

Autolytus varius Treadwell, 1914c, pp. 237-238, figs. 4-7. Syllidae. San Francisco Bay, California. Types not known to exist. Redescribed by Berkeley and Berkeley, 1948, p. 70, fig. 102.

Branchiomma disparoculatum Treadwell, 1914b, pp. 223-224, pl. 12, figs. 44-46. Sabellidae. Off San Diego, California. Holotype in Los Angeles. Referred to *Megalomma splendida* (Moore), 1905. See Systematic Discussion.

Callizonella pigmenta Treadwell, 1943b, p. 38, fig. 25. Alciopidae. Tropical mid-Atlantic Ocean. Holotype in U.S.N.M., not seen, appears to be *Krohnia* sp.

Capitellides teres Treadwell, 1939a, p. 6, figs. 21-24. Capitellidae. Port Aransas, Texas. Holotype in A.M.N.H. See Hartman, 1951, p. 101.

Castalia longicirrata Treadwell, 1901b, p. 185, figs. 2, 3. Hesionidae. Puerto Rico. Holotype in U.S.N.M. Questionably *Dalhousiella longicirrata* (Treadwell), 1901. See Systematic Discussion.

Castalia mutilata Treadwell, 1901b, p. 185.

Hesionidae. Puerto Rico. Holotype in U.S.N.M. Questionably *Nereimyra mutilata* (Treadwell), 1901. See Systematic Discussion.

Castalia oculata Treadwell, 1906, p. 1148, figs. 1-3. Hesionidae. Hawaii. Questionably *Leocrates oculatus* (Treadwell), 1906. See Systematic Discussion.

Centrocorone spinifera Treadwell, 1939a, pp. 1-3, figs. 1-9. Sabellariidae. Boca de Cangrejoo, Puerto Rico. Holotype in A.M.N.H. Referred to *Phragmatopoma lapidosa* Kinberg, 1867. See Hartman, 1944c, pp. 348-349, pls. 35, 36, 40.

Ceratonereis longicauda Treadwell, 1943a, pp. 1-3, figs. 1-7. Nereidae. Gulf of Davao, Philippine Islands. Holotype in A.M.N.H. Referred to *Ceratonereis anchylochaeta* (Horst), 1924. See Systematic Discussion.

Ceratonereis singularis Treadwell, 1929d, pp. 1-3, figs. 1-8. Nereidae. San José Island, Baja California, Mexico. Holotype in A.M.N.H. Referred to *Ceratonereis mirabilis* Kinberg, 1866. See Hartman, 1948b, p. 71.

Cirratulus branchiatus Treadwell, 1936a, pp. 276-277, fig. 20g. Cirratulidae. Near Amoy, China. Holotype in U.S.N.M. Referred to *Cirriformia chefoensis* (Grube), 1877. See Systematic Discussion.

Cirratulus elongatus Treadwell, 1901b, p. 204, fig. 67. Cirratulidae. Culebra, Panama. Holotype in U.S.N.M., not seen. Indeterminable as to genus.

Cirratulus inhamatus Treadwell, 1937b, p. 153. Cirratulidae. East of Cedros Island, western Mexico, in 38 fathoms. Referred to *Thoryx multifilis* Moore, 1909. See Systematic Discussion.

Cirratulus multicirratulus Treadwell, 1936b, pp. 63-64, figs. 34, 35. Cirratulidae. St. Davids Island, Bermuda, on mud flats. Holotype in A.M.N.H. Referred to *Cirriformia tentaculata* (Montagu), 1808. See Systematic Discussion.

Cirratulus nigromaculata Treadwell, 1901b, p. 204, fig. 66. Cirratulidae. Culebra, Panama. Holotype in U.S.N.M. Referred to *Cirriformia punctata* (Grube), 1859. See Systematic Discussion.

Cirratulus pallidus Treadwell, 1931f, pp. 1-2, figs. 1-3. Cirratulidae. Montego Bay, Jamaica, British West Indies. Holotype in A.M.N.H. Referred to *Cirriformia tentaculata* (Montagu), 1808. See Systematic Discussion.

Corynocephalus magnachaetus Treadwell, 1943b, p. 37, figs. 21, 22. Alciopidae. Equatorial western Pacific Ocean. Holotype in U.S.N.M., not seen.

Dasybranchus rectus Treadwell, 1901b, p. 207, fig. 72. Capitellidae. Culebra, Panama. Holotype in U.S.N.M. Questionable, see Hartman, 1947a, pp. 430-431.

Dasychone loandensis Treadwell, 1943c, p. 4, figs. 21-25. Sabellidae. St. Paul de Loanda, Africa. Holotype in A.M.N.H. Referred to *Branchiomma nigromaculata* (Baird), 1865. See Systematic Discussion.

Dasychone ponce Treadwell, 1901b, p. 209, figs. 76-78. Sabellidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Branchiomma nigromaculata* (Baird), 1865. See Johansson, 1927, p. 162.

Dasychonopsis arenosa Treadwell, 1924b, pp. 1-2, figs. 1-4. Sabellidae. San Juan, Puerto Rico. Holotype in A.M.N.H. Referred to *Branchiomma nigromaculata* (Baird), 1865. See Johansson, 1927, p. 162.

Drieschia atlantica Treadwell, 1936b, pp. 52-53, figs. 7-9. Polynoidae. Nonsuch Island, Bermuda, in 1000 fathoms. Holotype in A.M.N.H. Referred to *Drieschia pellucida* Moore, 1903. See Systematic Discussion.

Drilonereis brunnea Treadwell, 1921d, pp. 111-112. Arabellidae. Tobago, West Indies. Holotype in A.M.N.H. Referred to *Drilonereis spatula* Treadwell, 1921. See Systematic Discussion.

Drilonereis lumbricus Treadwell, 1922a, pp. 161-162, figs. 53-55, pl. 7, figs. 13-15, pl. 8, fig. 10. Arabellidae. Suva Harbor, Fiji. Holotype in A.M.N.H. See Systematic Discussion.

Drilonereis paucidentata Treadwell, 1922a, p. 162, fig. 56, pl. 7, figs. 16, 17, pl. 8, fig. 11. Arabellidae. Fiji. Holotype in A.M.N.H. Referred to *Drilonereis planiceps* (Grube), 1878. See Systematic Discussion.

Drilonereis pinnata Treadwell, 1921d, pp. 110-111, figs. 412-413, pl. 8, fig. 11. Arabellidae. Tobago, West Indies. Holotype in U.S.N.M. Questionably *Arabella iricolor* (Montagu), 1804. See Systematic Discussion, as *Arabella* sp.

Drilonereis similis Treadwell, 1921d, p. 111, figs. 414-417. Arabellidae. Tobago, West Indies. Holotype in A.M.N.H. Referred to *Drilonereis* sp., juvenile stage. See Systematic Discussion.

Enipo cirrata Treadwell, 1925b, pp. 1-3, figs. 1-4. Polynoidae. Kotzebue Sound, Alaska, in 12-17 fathoms. Holotype in U.S.N.M. Referred to *Polynoë gracilis* Verrill, 1874. See Pettibone, 1954, p. 225, as *Enipo*.

Epitoka pelagica Treadwell, 1943b, p. 40, fig. 31. Questionably Pilargiidae or Syllidae. West of Peru, planktonic in 50 meters. Holotype in U.S.N.M., not seen. Except for the reported absence of a median antenna, this resembles species of *Ancistrosyllis* McIntosh.

Eteone maculata Treadwell, 1922b, p. 174, figs. 3-6. Phyllodocidae. Friday Harbor, Washington. Holotype in A.M.N.H. Referred to *Eteone pacifica* Hartman, 1936. See Hartman, 1936, p. 31.

Eteone tuberculata Treadwell, 1922b, pp. 174-

175, figs. 7-10. Phyllodocidae. Friday Harbor, Washington. Holotype in A.M.N.H. Referred to *Eteone longa* (Fabricius), 1780. See Berkeley and Berkeley, 1945, p. 325.

Eulalia foliosa Treadwell, 1924c, p. 10, figs. 16-18. Phyllodocidae. Barbados, West Indies. Holotype in U.S.N.M., not seen.

Eulalia magnapupula Treadwell, 1941c, pp. 21-22, figs. 13-17. Alciopidae. Off Jicarón Island, Pacific Panama, in 500 fathoms. Holotype in A.M.N.H. Referred to *Rhynchonerella angelini* (Kinberg), 1866. See Systematic Discussion.

Eulalia quinquelineata Treadwell, 1901b, p. 192, figs. 27-29. Phyllodocidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Eulalia myriaculum* (Schmarda), 1861. See Augener, 1925, pp. 24-25.

Eulepis fimbriata Treadwell, 1901b, pp. 190-191, figs. 23-24. Pareulepidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Pareulepis fimbriata* (Treadwell), 1901. See Hartman, 1939b, pp. 79-80, pl. 23, figs. 280-288.

Eulepis splendida Treadwell, 1901b, pp. 189-190, figs. 19-22. Pareulepidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Pareulepis wyvillei* (McIntosh), 1885. See Hartman, 1939b, p. 78.

Eunereis africana Treadwell, 1943c, pp. 2-3, figs. 8-13. Nereidae. Lobito, Africa. Holotype in A.M.N.H. Referred to *Platynereis dumerilii* (Audouin and Milne-Edwards), 1834. See Systematic Discussion.

Eunice auriculata Treadwell, 1900; 1901, pp. 196-197, figs. 33-36. Eunicidae. Puerto Rico. Holotype in U.S.N.M. See Hartman, 1944b, p. 101.

Eunice bilobata Treadwell, 1906, pp. 1168-1169, figs. 47, 48. Eunicidae. Off Hawaii in 13.43 fathoms. Holotype in U.S.N.M., not seen.

Eunice culebra Treadwell, 1901b, p. 197, fig. 37. Culebra, Panama. Holotype in U.S.N.M. Referred to *Eunice (Nigidion) cariboea* Grube, 1856. See Monro, 1933, p. 63.

Eunice hawaiiensis Treadwell, 1906, pp. 1166-1167, figs. 42-44. Off Hawaii in 324 to 225 fathoms. Holotype in U.S.N.M. See Hartman, 1944b, p. 101.

Eunice interrupta Treadwell, 1906, pp. 1167-1168, figs. 45-46. Off Hawaii in 43 to 70 fathoms. Holotype U.S.N.M., not seen. Probably *Eunice antennata* Savigny, 1818 (Hartman, 1944b, pp. 115-117).

Eunice nicidioformis Treadwell, 1906, p. 1169, figs. 49-51. Off Hawaii in 95 to 152 fathoms. Holotype in U.S.N.M., not seen.

Eunoë exoculata Treadwell, 1923b, pp. 4-6, figs. 1-4. Polynoidae. Off western Mexico in 475 fathoms. Holotype in U.S.N.M. Referred to *Har-*

- mothoë tenebricosa* Moore, 1910. See Hartman, 1938d, p. 118.
- Eunoë purpurea* Treadwell, 1936b, pp. 51-52, figs. 1-6. Polynoidae. Nonsuch Island, Bermuda, in 600-1000 fathoms. Holotype in A.M.N.H. See Systematic Discussion.
- Eupanthalis evanida* Treadwell, 1926b, pp. 186-188, figs. 6-12. Polyodontidae. Philippine Islands. Holotype in U.S.N.M. Referred to *Panthalis evanida* (Treadwell), 1926. See Hartman, 1938d, p. 127.
- Eupanthalis oahuensis* Treadwell, 1906, pp. 1155-1156, figs. 19-23. Polyodontidae. Off Hawaii in 328 fathoms. Holotype in U.S.N.M. Referred to *Eupanthalis mutilata* (Treadwell), 1906. See Hartman, 1938d, p. 123.
- Eupholoë acuminata* Treadwell, 1934a, pp. 3-4, pl. 1, figs. 7-8. Sigalionidae. Off Puerto Rico in 15 fathoms. Holotype in U.S.N.M. Referred to *Psammolyce flava* Kinberg, 1855. See Hartman, 1942a, pp. 108-109, fig. 8.
- Eupholoë cirrata* Treadwell, 1934a, pp. 5-6, figs. 9-16. Sigalionidae. Off Puerto Rico in 200-260 fathoms. Holotype in U.S.N.M. Referred to *Leanira hystricis* Ehlers, 1874. See Hartman, 1942a, p. 105.
- Eupholoë nuda* Treadwell, 1936b, pp. 53-54, figs. 10-14. Sigalionidae. Nonsuch Island, Bermuda, in 35 feet. Holotype in A.M.N.H. Referred to *Psammolyce arenosa* (delle Chiaje), 1841. See Systematic Discussion.
- Euphrosyne branchiata* Treadwell, 1939c, pp. 170-172, figs. 46c-f. Euphrosinidae. Chesapeake Bay, Maryland, in 70 fathoms. Holotype in U.S.N.M., not seen.
- Euphrosyne longisetis* Treadwell, 1939c, p. 172, figs. 46g-i. Greenland. Holotype in U.S.N.M., not seen.
- Eupomatus decorus* Treadwell, 1931c, pp. 4-5, figs. 3a-d. Serpulidae. Grand Isle, Louisiana. Holotype in U.S.N.M. Referred to *Eupomatus dianthus* (Verrill), 1873, variety *decorus* Treadwell, 1931. See Hartman, 1951, p. 118.
- Eupomatus operculata* Treadwell, 1929d, p. 12. Serpulidae. Berbera, British Somaliland. Holotype in A.M.N.H. Referred to *Eupomatus uncinatus* Philippi, 1844. See Systematic Discussion.
- Eupomatus parvus* Treadwell, 1901b, p. 210, figs. 79, 80. Serpulidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Hydroides parvus* (Treadwell), 1901. See Pixell, 1913, p. 73.
- Eupomatus similis* Treadwell, 1929d, pp. 11-12, fig. 31. Serpulidae. Baja California, Mexico. Paratypes in A.M.N.H. See Systematic Discussion.
- Eurato punctata* Treadwell, 1926a, pp. 17-18, figs. 28-30. Sabellidae. Samoa. Holotype in U.S.N.M., not seen.
- Eurato punctata* Treadwell, 1926a, p. 20. *Lapsus calami* for *Eurato punctata*.
- Eurythoë oculata* Treadwell, 1941c, p. 18, figs. 1-3. Amphinomidae. Balboa, Pacific Panama. Holotype in A.M.N.H. Referred to *Pseudeurythoë oculata* (Treadwell), 1941. See Systematic Discussion.
- Evannella trimaculata* Treadwell, 1924c, pp. 6-7, figs. 1-4. Polynoidae. Barbados, West Indies. Holotype in U.S.N.M. Referred to *Harmothoë trimaculata* (Treadwell), 1924. See Hartman, 1938d, p. 118, figs. 38a, 39a, b.
- Gattyana imbricata* Treadwell, 1926d, pp. 2-4, figs. 1-5. Polynoidae. Bering Strait, Alaska. Holotype in A.M.N.H. Referred to *Gattyana cirrosa* (Pallas), 1766. See Pettibone, 1949, pp. 1, 4.
- Glyceria abbranchiata* Treadwell, 1901b, pp. 200-201, fig. 49. Glyceridae. Puerto Rico. Holotype in U.S.N.M. Referred to *Glyceria tessellata* Grube, 1863. See Augener, 1922b, p. 205.
- Glyceria spadix* Treadwell, 1943a, pp. 3-4, figs. 8-11. Glyceridae. Gulf of Davao, Philippine Islands. Holotype in A.M.N.H. Referred to *Glyceria tessellata* Grube, 1863. See Hartman, 1950, p. 77.
- Goniada brunnea* Treadwell, 1906, p. 1174, figs. 67-70. Off Hawaii in 202-220 fathoms. Holotype in U.S.N.M. Redescribed in Hartman, 1950, pp. 17-19, pl. 1, figs. 1-6.
- Goniada magna* Treadwell, 1945, pp. 2-3, figs. 6-8. Goniadidae. Georges Bank, Massachusetts, in 30 meters. Holotype in A.M.N.H. Referred to *Goniada quinquelabiata* Augener, 1906. See Hartman, 1950, pp. 26-28.
- Goniada oculata* Treadwell, 1901b, p. 201, figs. 50-53. Goniadidae. Puerto Rico. Holotype in U.S.N.M. Questionable, perhaps a species of *Glycinde* Müller. See Hartman, 1950, p. 14.
- Goniada teres* Treadwell, 1931d, pp. 6-7, figs. 19-22. Goniadidae. Montego Bay, Jamaica, West Indies. Holotype in A.M.N.H. See Hartman, 1950, pp. 33-34.
- Haliplanella pacifica* Treadwell, 1943b, p. 32, figs. 4-6. Phyllodocidae. Warm parts of Atlantic and Pacific oceans. Paratypes in A.M.N.H. Referred to *Halyplanes gracilis* Reibisch, 1893. See Systematic Discussion.
- Halosydna fusca-maculata* Treadwell, 1924c, pp. 5-6, figs. 5-9. Polynoidae. Barbados, West Indies. Holotype in U.S.N.M. Referred to *Halosydna fuscamaculata* (Treadwell), 1924. See Hartman, 1938d, pp. 111-112, figs. 36f, g.
- Halosydna fuscomarginata* Treadwell, 1924c, in explanation of figures. *Lapsus calami* for *Halosydna fusca-maculata*, quod vide.
- Halosydna grisea* Treadwell, 1929a, pp. 1-3,

figs. 1-6. Polynoidae. Argentina. Holotype in U.S.N.M. Referred to *Halosydnella grisea* (Treadwell), 1929. See Hartman, 1938d, p. 111; 1948b, p. 22.

Halosydna obtusa-cirrata Treadwell, 1937b, pp. 143-144, pl. 1, figs. 8-11. Polynoidae. Cedros Island, western Mexico, in 45 fathoms. Holotype in A.M.N.H. Referred to *Halosydna latior* Chamberlin, 1919. See Hartman, 1938d, p. 110.

Halosydna oculata Treadwell, 1926a, pp. 8-10, figs. 9-13. Polynoidae. Pago Pago, Samoa. Holotype in U.S.N.M. Referred to *Halosydnella oculata* (Treadwell), 1926. See Hartman, 1938d, pp. 112-113, figs. 36a-c.

Haplobranchus atlanticus Treadwell, 1932a, pp. 279-280, figs. 1-8. Sabellidae. St. Andrews, New Brunswick, Canada. Paratype in A.M.N.H. Referred to *Fabricia sabella* (Ehrenberg), 1836. See Rullier, 1954, p. 22.

Haplosyllis gula Treadwell, 1924c, pp. 11-12, figs. 19-23. Syllidae. West Indies. Holotype in U.S.N.M. Referred to *Haplosyllis spongicola* (Grube), 1855. See Monro, 1933, p. 34.

Harmothoe lanceocirrata Treadwell, 1928a, pp. 454-455, figs. 5-9. Polynoidae. Holotype in A.M.N.H. Referred to *Harmothoe crucis* (Grube), 1856. See Systematic Discussion.

Harmothoe lanceolata Treadwell, 1928a, p. 451. *Lapsus calami* for *Harmothoe lanceocirrata*, *quod vide*.

Harmothoe levis Treadwell, 1937a, pp. 26-27, figs. 1-5. Polynoidae. East Greenland. Holotype in U.S.N.M. Referred to *Harmothoe imbricata* (Linnaeus), 1767. See Hartman, 1938d, p. 129.

Harmothoe sylliformia Treadwell, 1928a, pp. 452-454, figs. 1-4. Polynoidae. Off Galapagos Islands in 300-700 fathoms. Holotype in A.M.N.H. See Systematic Discussion.

Harmothoe tuberculata Treadwell, 1906, p. 1154. Polynoidae. Off Hawaiian Islands in 451 fathoms. Holotype in U.S.N.M. Referred to *Arctonoe tuberculata* (Treadwell), 1906. See Hartman, 1938d, p. 117, figs. 37e, f.

Harmothoe variegata Treadwell, 1917b, pp. 260-261, pl. 1, figs. 17, 18, pl. 2, figs. 1-3. Polynoidae. Dry Tortugas, Florida. Holotype in A.M.N.H. See Systematic Discussion.

Harmothoe villosa Treadwell, 1926a, pp. 10-12, figs. 14-18. Polynoidae. Pago Pago, Samoa. Holotype in U.S.N.M. See Hartman, 1938d, p. 117.

Hemipodia canadensis Treadwell, 1937c, pp. 348-349, figs. 1-3. Glyceridae. Halifax Harbor, Nova Scotia, Canada. Referred to *Glycera capitata* Oersted, 1843. See Hartman, 1950, p. 63.

Hermella varians Treadwell, 1910b, p. 210, fig. 81. Sabellariidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Lygdamis asteriformis*

(Augener), 1906. See Hartman, 1944c, pp. 333-334, pl. 31, figs. 30-33.

Hermodice pennata Treadwell, 1906, p. 1165, fig. 41. Amphinomidae. Off Hawaii in 24 fathoms. Holotype in U.S.N.M. Referred to *Pherecardia striata* (Kinberg), 1857. See Augener, 1927a, p. 122.

Hermodice pennata tutuilensis Treadwell, 1926a, p. 2. Amphinomidae. Pago Pago, Samoa. Holotype in U.S.N.M., not seen. Possibly *Pherecardia* sp.

Hipponoe elongata Treadwell, 1931d, pp. 3-4, figs. 10-12. Amphinomidae. Puerto Rico. Holotype in A.M.N.H. Referred to *Pareurythoe elongata* (Treadwell), 1931. See Systematic Discussion.

Hyalinoecia branchiata Treadwell, 1934a, pp. 6-8, pl. 2, figs. 17-19. Onuphidae. Culebra Island, Puerto Rico, in 300 fathoms. Holotype in U.S.N.M., not seen.

Hydroides californicus Treadwell, 1929d, p. 12, figs. 32, 33. Serpulidae. Western Mexico. Syn-types in A.M.N.H. Referred to *Hydroides crucigera* Mörch, 1863. See Rioja, 1944, p. 409.

Hypsicomus purpureus Treadwell, 1924c, pp. 20-21, figs. 30-33. Sabellidae. Antigua, West Indies. Holotype in U.S.N.M. Referred to *Hypsicomus torquatus* (Grube), 1878. See Hartman, 1942a, p. 133, as *Hypsicomus circumspiciens*.

Iphionella elongata Treadwell, 1931a, pp. 315-317, figs. 2a-d. Polyodontidae. Marinduque Island, Philippine Islands, in 83-159 fathoms. Holotype in U.S.N.M. Referred to *Eupolyodontes elongata* (Treadwell), 1931. See Hartman, 1938d, pp. 125-126, figs. 41a-d.

Laetmonice nitida Treadwell, 1926b, pp. 183-186, figs. 1-5. Aphroditidae. Near Jolo, Sulu Archipelago, in 20 fathoms. Holotype in U.S.N.M., not seen.

Lagisca crassa Treadwell, 1924a, pp. 1-3, figs. 1-4. Polynoidae. Punta Arenas, Chile. Holotype in U.S.N.M. Referred to *Eunoë crassa* (Treadwell), 1924. See Hartman, 1938d, p. 119, figs. 38b-e.

Lanice expansa Treadwell, 1906, p. 1176. Terebellidae. Off Hawaii in 122-143 fathoms. Holotype in U.S.N.M., not seen.

Laonome arenosa Treadwell, 1943d, p. 3, figs. 9-13. Terebellidae. Hawaii. Holotype in A.M.N.H. Referred to *Sabellastarte indica* Savigny, 1820. See Systematic Discussion.

Laonome oculifera Treadwell, 1914b, pp. 222-223, pl. 12, figs. 39-43. Sabellidae. San Pedro, California. Holotype in Los Angeles. Referred to *Pseudopotamilla ocellata* Moore, 1905. See Hartman, 1938a, pp. 25-27, pl. 2, figs. 6, 7.

Laonome punctata Treadwell, 1906, p. 1179, figs. 76, 77. Sabellidae. Oahu, Hawaii. Holotype

in U.S.N.M. Referred to *Sabellastrate indica* Savigny, 1820. See Systematic Discussion.

Laonome sanjuanensis Treadwell, 1941a, pp. 3-4, figs. 4-8. Sabellidae. East San Juan, Puerto Rico, in tidal pool. Holotype in A.M.N.H. Referred to *Sabellastarte magnifica* (Shaw), 1800. See Systematic Discussion.

Leodice aciculata Treadwell, 1922a, pp. 143-144, figs. 24, 25, pl. 3, figs. 7-13. Eunicidae. Samoa and Fiji. Holotype in A.M.N.H. Referred to *Eunice afra* Peters, 1854. See Systematic Discussion.

Leodice arcturi Treadwell, 1928a, pp. 475-477, figs. 32-39. Eunicidae. Off New Jersey in 633 fathoms. Holotype in A.M.N.H. Referred to *Eunice norvegica* (Linnaeus), 1767. See Systematic Discussion.

Leodice argentinensis Treadwell, 1929a, pp. 3-5, figs. 7-12. Eunicidae. Mar del Plata, Argentina. Holotype in U.S.N.M. Referred to *Eunice argentinensis* (Treadwell), 1929. See Rioja, 1944, pp. 128-130, figs. 39-46.

Leodice armillata Treadwell, 1922a, pp. 144-146, figs. 26-29, pl. 3, figs. 14-19. Eunicidae. Pago Pago Harbor, Samoa. Holotype in A.M.N.H. Referred to *Eunice armillata* (Treadwell), 1922. See Systematic Discussion.

Leodice biformi-cirrata Treadwell, 1922a, pp. 148-149, figs. 34, 35, pl. 4, figs. 6-11. Eunicidae. Suva Harbor, Fiji. Holotype in A.M.N.H. Referred to *Eunice grubei* Gravier, 1900. See Systematic Discussion.

Leodice bucciensis Treadwell, 1921d, pp. 54-56, figs. 174-183. Eunicidae. Buccoo Bay, Tobago, West Indies. Holotype in A.M.N.H. Referred to *Eunice afra* Peters, 1854. See Systematic Discussion.

Leodice crassi-tentaculata Treadwell, 1922a, pp. 146-148, figs. 30-33, pl. 4, figs. 1-5. Eunicidae. Pago Pago Harbor, Samoa. Holotype in A.M.N.H. Referred to *Eunice crassitentaculata* (Treadwell), 1922. See Systematic Discussion.

Leodice flava-punctata Treadwell, 1922a, pp. 136-138, figs. 8-11, pl. 2, figs. 1-7. Eunicidae. Pago Pago Harbor, Samoa. Holotype in A.M.N.H. Referred to *Eunice afra* Peters, 1854. See Systematic Discussion.

Leodice gracili-cirrata Treadwell, 1922a, pp. 149-150, figs. 36-38, pl. 5, figs. 1-8. Eunicidae. Suva Harbor, Fiji. Holotype in A.M.N.H. Referred to *Eunice armillata* (Treadwell), 1922. See Systematic Discussion.

Leodice guanica Treadwell, 1921d, pp. 39-40, figs. 107-116, pl. 2, figs. 9-12. Eunicidae. Sand Key, Florida. Holotype in A.M.N.H. Referred to *Eunice afra* Peters, 1854. See Systematic Discussion.

Leodice langi Treadwell, 1943c, p. 3, figs. 14-18. Eunicidae. Capetown, Africa. Holotype in A.M.N.H. Referred to *Eunice savignyi* (Grube), 1878. See Systematic Discussion.

Leodice notata Treadwell, 1921d, pp. 52-54, figs. 164-173, pl. 4, fig. 12. Eunicidae. West Indies. Referred to *Eunice ?afra* Peters, 1854. See Hartman, 1944b, pp. 111-112, pl. 6, figs. 142-144; and Systematic Discussion.

Leodice rubrivittata Treadwell, 1921d, pp. 34-36, figs. 85-94, pl. 1, fig. 18. Eunicidae. Buccoo Bay, Tobago, West Indies. Holotype in A.M.N.H. Referred to *Eunice vittata* delle Chiaje, 1828. See Augener, 1927b, p. 40.

Leodice spongicola Treadwell, 1921d, pp. 25-27, fig. 53. Eunicidae. Montego Bay, Jamaica, West Indies. Holotype in A.M.N.H. Referred to *Eunice filamentosa* Grube, 1856. See Systematic Discussion.

Leodice suviensis Treadwell, 1922a, pp. 138-139, figs. 12-16, pl. 2, figs. 8-13. Eunicidae. Suva Harbor, Fiji. Referred to *Eunice afra* Peters, 1854. See Systematic Discussion.

Leodice tenuis Treadwell, 1921d, pp. 51-52, figs. 154-163, pl. 4, fig. 11. Eunicidae. Florida Keys. Holotype in A.M.N.H. Referred to *Eunice tenuis* (Treadwell), 1921. See Systematic Discussion.

Leodice tubicola Treadwell, 1922a, pp. 139-142, figs. 17-23, pl. 3, figs. 1-6. Eunicidae. Pago Pago Harbor, Samoa. Holotype in A.M.N.H. Referred to *Eunice tubifex* Crossland, 1904. See Systematic Discussion.

Leodice viridis vernalis Treadwell, 1922a, pp. 133-134, pl. 1, figs. 8-11. Suva Harbor, Fiji. Holotype in A.M.N.H. Referred to *Palola siciliensis* (Grube), 1840. See Systematic Discussion.

Lepidasthenia elegans Treadwell, 1941c, pp. 19-20, figs. 4-7. Polynoidae. Off Cedros Island, Mexico, in 45 fathoms. Holotype in A.M.N.H. Referred to *Arctonoe vittata* (Grube), 1855. See Systematic Discussion.

Lepidasthenia lactea Treadwell, 1939a, pp. 3-5, figs. 13-15. Polynoidae. Galveston, Texas. Holotype in A.M.N.H. Referred to *Lepidasthenia commensalis* Webster, 1879. See Hartman, 1951, p. 17.

Lepidasthenia longicirrata Treadwell, 1928a, pp. 460-461, figs. 22-26. Polynoidae. West of Peru. Holotype in A.M.N.H. Referred to *Lepidasthenia natans* (Chamberlin), 1919. See Systematic Discussion.

Lepidasthenia occelata Treadwell, 1936a, pp. 264-265, figs. 18e-h. Polynoidae. Near Amoy, China. Holotype in U.S.N.M. Referred to *Lepidasthenia interrupta* (Marenzeller), 1902. See Hartman, 1938d, p. 114.

Lepidasthenia ornata Treadwell, 1937b, pp. 145-

147, pl. 1, figs. 12-15. Polynoidae. Arena Bank, Mexico, in 35 fathoms. Holotype in A.M.N.H. Referred to *Lepidasthenia virens* (Blanchard), 1849. See Systematic Discussion.

Lepidasthenia picta Treadwell, 1938a, pp. 456-457, figs. 10-13. Polynoidae. Off Galapagos Islands in 15 feet. Holotype in A.M.N.H. Referred to *Lepidasthenia varius* Treadwell, 1917. See Systematic Discussion.

Lepidasthenia rufa Treadwell, 1928a, pp. 457-458, figs. 14-17. Polynoidae. Puerto Rico. Holotype in A.M.N.H. See Systematic Discussion.

Lepidasthenia variegata Treadwell, 1928a, pp. 458-459, figs. 18-21. Polynoidae. Off Puerto Rico in 125 fathoms. Holotype in A.M.N.H. Referred to *Lepidasthenia rufa* Treadwell, 1928. See Systematic Discussion.

Lepidasthenia varius Treadwell, 1917b, pp. 259-260, pl. 1, figs. 11-16. Polynoidae. Dry Tortugas, Florida. Holotype in A.M.N.H. See Systematic Discussion.

Lepidonotus atratus Treadwell, 1940, pp. 3-4, figs. 10-13. Polynoidae. Gulf of Devas, Philippine Islands. Holotype in A.M.N.H. Referred to *Thormora jukesii* Baird, 1865. See Systematic Discussion.

Lepidonotus inquilinus Treadwell, 1917b, p. 258, pl. 1, figs. 4-10. Polynoidae. Key West Harbor, Florida, shore. Holotype in A.M.N.H. Referred to *Lepidasthenia* sp., juvenile stage. See Systematic Discussion.

Lepidonotus minutus Treadwell, 1936a, pp. 262-264, figs. 18a-d. Polynoidae. Near Amoy, China. Holotype in U.S.N.M. Referred to *Lepidonotus caelorus* Moore, 1903. See Hartman, 1938d, p. 108.

Lepidonotus pallidus Treadwell, 1939a, p. 3, figs. 10-12. Polynoidae. Freeport, Texas. Holotype in A.M.N.H. Referred to *Lepidonotus sublevis* Verrill, 1873. See Hartman, 1951, p. 17.

Lepidonotus pilosus Treadwell, 1937b, pp. 141-143, pl. 1, figs. 1-7. Polynoidae. Arena Bank, Mexico, in 45 fathoms. Holotype in A.M.N.H. Referred to *Chaetacanthus magnificus* (Grube), 1875. See Hartman, 1939b, pp. 28-29.

Leptonereis egregiacirrata Treadwell, 1924c, pp. 13-14, fig. 24. Nereidae. Antigua, West Indies. Holotype in U.S.N.M., not seen. Questionable, description may be based on more than one species. Treadwell, 1939b, p. 233, referred it to *Nereis*.

Leptonereis mexicana Treadwell, 1942, pp. 1-4, figs. 2-9. Nereidae. Off Baja California, Mexico. Holotype in A.M.N.H. Referred to *Nicon mexicana* (Treadwell), 1942. See Systematic Discussion.

Leptonereis nota Treadwell, 1941b, pp. 1-3, figs. 7-10. Nereidae. Galveston, Texas. Holotype

in A.M.N.H. Referred to *Laeonereis culveri* (Webster), 1879. See Hartman, 1951, p. 44.

Loimia minuta Treadwell, 1929d, pp. 10-11, figs. 28-30. Terebellidae. Dry Tortugas, Florida. Holotype in A.M.N.H. Referred to *Loimia medusa* (Savigny), 1820. See Systematic Discussion.

Lopadorhynchus varius Treadwell, 1943b, p. 32, figs. 7-10. Lopadorhynchidae. Between United States and Hawaii, pelagic. Holotype in U.S.N.M., not seen.

Lumbriconereis bilabiata Treadwell, 1901b, p. 199, figs. 45, 46. Lumbrineridae. Puerto Rico. Holotype in U.S.N.M. Referred to *Lumbrineris bilabiata* (Treadwell), 1901. See Hartman, 1942a, p. 120.

Lumbriconereis grandis Treadwell, 1906, pp. 1170-1171, figs. 52-56. Lumbrineridae. Off Hawaii in 257-319 fathoms. Holotype in U.S.N.M. Referred to *Lumbrineris grandis* (Treadwell), 1906. See Hartman, 1942a, pp. 114-116, figs. 10h, k, l.

Lumbriconereis maculata Treadwell, 1901b, pp. 198-199, figs. 42-44. Lumbrineridae. Puerto Rico. Holotype in U.S.N.M. Referred to *Lumbrineris treadwelli*, new name. See Systematic Discussion.

Lumbriconereis minuta Treadwell, 1906, p. 1171, figs. 57-58. Lumbrineridae. Off Hawaii in 238-253 fathoms. Holotype in U.S.N.M. Referred to *Lumbrineris minuscula* Moore, 1911. See Hartman, 1942a, p. 116, figs. 12e, f.

Lumbriconereis parvapedata Treadwell, 1901b, p. 198, figs. 38-40. Lumbrineridae. Culebra, Panama. Holotype in U.S.N.M. Referred to *Lumbrineris parvapedata* (Treadwell), 1901. See Hartman, 1942a, pp. 118-119, figs. 10i, j, m.

Lumbrineris bicirrata Treadwell, 1929b, pp. 1-3, figs. 1-7. Lumbrineridae. Friday Harbor, Washington. Holotype in A.M.N.H. Referred to *Lumbrineris bicirrata* (Treadwell), 1909. See Hartman, 1944b, p. 156. Berkeley and Berkeley, 1948, p. 99, referred it to *Lumbrineris bifurcata* (McIntosh), 1885.

Lumbrineris branchiata Treadwell, 1912d, pp. 94-95, figs. 333-343, pl. 8, figs. 5-6. Lumbrineridae. Buccoo Bay, Tobago, West Indies. Holotype in A.M.N.H. Referred to *Lumbrineris branchiata* (Treadwell), 1929. See Systematic Discussion.

Lumbrineris candida Treadwell, 1921d, pp. 96-97, figs. 344-350, pl. 8, figs. 7-9. Lumbrineridae. British West Indies. Holotype in A.M.N.H. See Systematic Discussion.

Lumbrineris cervicalis Treadwell, 1922b, p. 176, figs. 14-21. Lumbrineridae. Friday Harbor, Washington. Holotype in A.M.N.H. Referred to *Lumbrineris inflata* Moore, 1911. See Systematic Discussion.

Lumbrineris cingulata Treadwell, 1917b, p. 263, pl. 2, figs. 7-12. Lumbrineridae. Bermuda.

Holotype in A.M.N.H. Referred to *Lumbrineris inflata* Moore, 1911. See Systematic Discussion.

Lumbrineris elongata Treadwell, 1931c, p. 3, figs. 2a-d. Lumbrineridae. Grand Isle, Louisiana. Holotype in U.S.N.M. Referred to *Lumbrineris parvapedata* (Treadwell), 1901. See Hartman, 1942a, pp. 118-119, fig. 10.

Lumbrineris nuchalis Treadwell, 1921d, pp. 104-106, figs. 386-394, pl. 9, fig. 5. Lumbrineridae. Buccoo Bay, Tobago, West Indies. Holotype in U.S.N.M. See Hartman, 1944b, p. 140.

Lumbrineris paucidentata Treadwell, 1921d, pp. 99-100, figs. 357-364, pl. 9, figs. 1-4. Lumbrineridae. Dry Tortugas, Florida. Holotype in A.M.N.H. Referred to *Lumbrineris*, near *latreillii* Audouin and Milne-Edwards, 1834. See Systematic Discussion.

Lumbrineris similabris Treadwell, 1926d, pp. 5-6, figs. 6-10. Lumbrineridae. Bering Strait, Alaska. Holotype in A.M.N.H. Referred to *Lumbrineris similabris* (Treadwell), 1926. See Systematic Discussion.

Lumbrineris singularisetis Treadwell, 1931d, p. 1, figs. 1-3. Lumbrineridae. Monterey, California. Holotype in A.M.N.H. Referred to *Lumbrineris zonata* (Johnson), 1901. See Systematic Discussion.

Lysidice fusca Treadwell, 1922a, pp. 154-155, figs. 42-44, pl. 6, figs. 7-13. Eunicidae. Samoa and Fiji. Holotype in A.M.N.H. Referred to *Lysidice ?collaris* Grube, 1870. See Systematic Discussion.

Lysidice parva Treadwell, 1922a, pp. 155-156, figs. 45, 46, pl. 6, figs. 14-17. Eunicidae. Samoa. Holotype in A.M.N.H. Referred to *Lysidice ?collaris* Grube, 1870. See Systematic Discussion.

Lysidice sulcata Treadwell, 1901b, p. 200, figs. 47, 48. Eunicidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Lysidice collaris* Grube, 1870. See Fauvel, 1919, p. 477.

Lysidice tortugae Treadwell, 1921d, pp. 85-86, figs. 298-304. Eunicidae. Florida. Holotype in A.M.N.H. See Systematic Discussion.

Macellicephala maculosa Treadwell, 1931a, pp. 313-315, figs. 1a-g. Polyodontidae. Marinduque Island, Philippine Islands, in 106 fathoms. Holotype in U.S.N.M. Referred to *Eupanthalis maculosa* (Treadwell), 1931. See Hartman, 1938d, p. 125.

Maldane cristata Treadwell, 1923b, pp. 9-10, figs. 5-8. Maldanidae. Baja California, Mexico, in 475 fathoms. Paratype in A.M.N.H. See Systematic Discussion.

Maldane philippinensis Treadwell, 1931a, pp. 320-321, figs. 4a-d. Maldanidae. Off Si Amil Island, Philippine Islands, in 890 fathoms. Holotype in U.S.N.M., not seen.

Maldanella corallicola Treadwell, 1929d, p. 8, figs. 21-24. Maldanidae. Loggerhead Key, Florida. Holotype in A.M.N.H. Referred to *Euclymene corallicola* (Treadwell), 1929. See Systematic Discussion.

Maldanella fimbriata Treadwell, 1934a, pp. 8-9, pl. 2, figs. 22-24. Maldanidae. Off Puerto Rico in 80-100 fathoms. Holotype in U.S.N.M. Referred to *Asychis fimbriata* (Treadwell), 1934. See Systematic Discussion.

Marphysa acicularum brevibranchiata Treadwell, 1921d, pp. 60-61, figs. 194-200, pl. 5, figs. 5-8. Eunicidae. Bermuda. Holotype in U.S.N.M. Referred to *Marphysa sanguinea* (Montagu), 1815. See Hartman, 1944b, p. 128.

Marphysa aransensis Treadwell, 1939a, p. 5, figs. 16, 17. Eunicidae. Port Aransas, Texas. Holotype in A.M.N.H. See Systematic Discussion.

Marphysa bellii oculata Treadwell, 1921d, pp. 61-64, pl. 5, figs. 13, 14. Eunicidae. Key West Harbor, Florida. Holotype in A.M.N.H. See Systematic Discussion.

Marphysa brevitentaculata Treadwell, 1921d, pp. 69-70, figs. 235-243, pl. 6, figs. 13, 14. Eunicidae. West Indies. Holotype in A.M.N.H. See Systematic Discussion.

Marphysa fragilis Treadwell, 1911, pp. 2-5, figs. 1-7. Eunicidae. Loggerhead Key, Florida, shore. Holotype in A.M.N.H. Referred to *Marphysa regalis* Verrill, 1900. See Systematic Discussion.

Marphysa languida Treadwell, 1921d, pp. 73-75, figs. 257-268. Eunicidae. Guanica Harbor, Puerto Rico. Holotype in A.M.N.H. Referred to *Marphysa minima* (Hansen), 1882. See Systematic Discussion.

Marphysa nobilis Treadwell, 1917b, pp. 265-266, pl. 3, figs. 3-9. Eunicidae. Southern Florida. Holotype in A.M.N.H. Referred to *Marphysa sanguinea* (Montagu), 1815. See Systematic Discussion.

Marphysa orientalis Treadwell, 1936a, pp. 266-268, figs. 18i-o. Eunicidae. Near Amoy, China. Holotype in U.S.N.M. See Systematic Discussion.

Marphysa simplex Treadwell, 1922a, pp. 151-152, pl. 5, figs. 8-12. Eunicidae. Suva Harbor, Fiji. Holotype in A.M.N.H. Referred to *Marphysa mossambica* (Peters), 1854. See Systematic Discussion.

Marphysa viridis Treadwell, 1917b, pp. 264-265, pl. 2, figs. 13-18, pl. 3, figs. 1-2. Eunicidae. Southern Florida, shore. Holotype in A.M.N.H. Referred to *Marphysa sanguinea* (Montagu), 1815. See Systematic Discussion.

Melaenis tropicus Treadwell, 1934a, pp. 1-2, pl. 1, figs. 1-6. Aphroditidae. Off Virgin Islands in 300 fathoms. Holotype in U.S.N.M. Referred



Aaron Louis Treadwell
1866-1947

From a photograph in the possession of Treadwell's daughter,
Mrs. Beardsley Ruml

to *Hermeione hystrix* (Savigny), 1818. See Hartman, 1944a, p. 9.

Metalonome brunnea Treadwell, 1917b, p. 268, pl. 3, figs. 24-27. Sabellidae. Nassau Harbor, Bahamas. Holotype in A.M.N.H. Referred to *Sabellastarte magnifica* (Shaw), 1800. See Systematic Discussion.

Metamphinome multibranchiata Treadwell, 1940, pp. 1-2, figs. 1-3. Amphinomidae. Galveston, Texas, on a floating log. Holotype in A.M.N.H. Referred to *Hipponoë multibranchiata* (Treadwell), 1940. See Hartman, 1951, p. 29.

Monorchos philippinensis Treadwell, 1926b, pp. 190-193, figs. 18-20. Sabellariidae. Between Siquijor and Bohol Islands, Philippine Islands, in 805 fathoms. Referred to *Lygdamis philippinensis* (Treadwell), 1926. See Hartman, 1944c, pp. 334-335.

Myriana cirrata Treadwell, 1931b, pp. 2-3, figs. 2a-c. Syllidae. Chesapeake Bay, Maryland, in 16 to 46 meters. Holotype in U.S.N.M., not seen.

Mysta maculata Treadwell, 1920a, pp. 593-594, figs. 1-4. Phyllodocidae. Sulade Island, Philippine Islands, in 24 fathoms. Holotype in U.S.N.M. Referred to *Mysta ornata* (Grube), 1878. See Fauvel, 1933, p. 17.

Mystides gracilis Treadwell, 1941d, pp. 26-27, figs. 5-7. Phyllodocidae. Off Bermuda, planktonic at surface. Holotype in A.M.N.H. Referred to *Anaitides madeirensis* (Langerhans), 1879. See Systematic Discussion.

Nainereis mutilata Treadwell, 1931d, pp. 5-6, figs. 13-18. Orbiniidae. Montego Bay, Jamaica, West Indies. Holotype in A.M.N.H. Referred to *Naineris mutilata* Treadwell, 1931. See Systematic Discussion.

Namonereis kartaboensis Treadwell, 1926c, pp. 101-103, fig. 33. Nereidae. Kartabo, British Guiana. Holotype in A.M.N.H. Referred to *Lycastis kartaboensis* (Treadwell), 1926. The type has been dried.

Neanthes obscura Treadwell, 1928a, p. 472, figs. 50-53. Nereidae. Cocos Islands, west of Costa Rica. Holotype in A.M.N.H. Referred to *Perinereis helleri* (Grube), 1878. See Systematic Discussion.

Neosabellides alaskensis Treadwell, 1943e, pp. 1-2, figs. 1-5. Ampharetidae. Nunivak Island, Alaska. Holotype in A.M.N.H. Referred to *Asabellides sibirica* (Wirén), 1883. See Systematic Discussion.

Nereis ambiguus Treadwell, 1937b, pp. 149-151, pl. 2, figs. 19-24. Nereidae. Sulphur Bay, Clarion Island, Mexico, in 20 fathoms. Holotype in A.M.N.H. Referred to *Nereis riisei* Grube, 1856. See Systematic Discussion.

Nereis arroyensis Treadwell, 1901b, pp. 193-194, figs. 30-31. Nereidae. Puerto Rico. Holotype

in U.S.N.M. See Systematic Discussion.

Nereis brevicirrata Treadwell, 1920b, pp. 467-468, figs. 1-4. Nereidae. Santos, Brazil. Holotype in U.S.N.M. Referred to *Perinereis brevicirrata* (Treadwell), 1920. See Hartman, 1938b, p. 14.

Nereis brevicirrata Treadwell, 1929d, pp. 3-5, figs. 9-14. Nereidae. Key Largo, Florida. Holotype in A.M.N.H. Referred to *Nereis pelagica largoensis* Treadwell, 1931. See Systematic Discussion.

Nereis (Ceratoneis) alaskensis Treadwell, 1921c, pp. 1-3, figs. 1-4. Nereidae. Valdez Harbor, Alaska, in 200 fathoms. Holotype in U.S.N.M. Referred to *Ceratoneis paucidentata* (Moore), 1903. See Hartman, 1938b, p. 13.

Nereis (Ceratoneis) bartletti Treadwell, 1937a, pp. 30-31, figs. 8-13. Nereidae. Off Greenland in 129 fathoms. Holotype in U.S.N.M. Referred to *Ceratoneis hircinicola* (Eisig), 1870. See Hartman, 1938b, p. 13.

Nereis decora Treadwell, 1932b, pp. 15-17, figs. 6-11. Nereidae. São Paulo, Brazil. Holotype in U.S.N.M. Referred to *Nereis riisei* Grube, 1856. See Hartman, 1938a, p. 7.

Nereis disparsetosa Treadwell, 1932b, pp. 13-15, figs. 1-5. Nereidae. São Paulo, Brazil. Holotype in U.S.N.M. Referred to *Pseudonereis palpata* (Treadwell), 1923. See Hartman, 1938b, p. 14.

Nereis heterocirrata Treadwell, 1931c, pp. 1-2, figs. 1a-e. Nereidae. Near Chochi, Japan. Holotype in U.S.N.M., not seen.

Nereis largoensis Treadwell, 1931d, p. 3. Nereidae. Key Largo, Florida. Holotype in A.M.N.H. Referred to *Nereis pelagica largoensis* Treadwell, 1931. See Systematic Discussion.

Nereis (Leptonereis) acuta Treadwell, 1923a, pp. 3-5, figs. 1-7. Nereidae. Santos, Brazil. Holotype in U.S.N.M. Referred to *Laeonereis culveri* (Webster), 1879. See Hartman, 1938b, p. 14.

Nereis (Leptonereis) distorta Treadwell, 1936a, pp. 273-275, figs. 20a-f. Nereidae. Near Amoy, China. Holotype in U.S.N.M., not seen. Based only on a male in epitokous stage.

Nereis (Neanthes) amoyensis Treadwell, 1936a, pp. 272-273, figs. 10j-m. Nereidae. Near Amoy, China. Holotype in U.S.N.M. Referred to *Nereis amoyensis* (Treadwell), 1936. See Systematic Discussion.

Nereis (Neanthes) australis Treadwell, 1923c, pp. 1-3, figs. 1-5. Nereidae. Off Punta del Este, Maldonado, Uruguay. Holotype in U.S.N.M. Referred to *Neanthes succinea* (Frey and Leuckart), 1847. See Monroe, 1938, p. 313.

Nereis (Neanthes) linea Treadwell, 1936a, pp. 268-270, figs. 19a-e. Nereidae. Near Amoy, China. Holotype in U.S.N.M. Referred to *Perinereis aibuhitensis* Grube, 1878. See Hartman, 1938b, p. 15.

- Nereis (Neanthes) orientalis* Treadwell, 1936a, pp. 270-272, figs. 19f-i. Nereidae. Near Amoy, China. Holotype in U.S.N.M. Referred to *Perinereis aibuhitensis* Grube, 1878. See Hartman, 1938b, p. 15.
- Nereis (Neanthes) palpata* Treadwell, 1923a, pp. 5-9, figs. 8-15. Nereidae. São Paulo, Brazil. Paratype in U.S.N.M. Referred to *Pseudonereis palpata* (Treadwell), 1923. See Hartman, 1938b, p. 14. This may be identical with *Pseudonereis atopodon* Chamberlin, 1919 (Hartman, 1938b, p. 15).
- Nereis (Neanthes) paucidentata* Treadwell, 1939a, p. 6, fig. 25. Nereidae. Charlestown, Massachusetts. Holotype in A.M.N.H. Referred to *Nereis riisei* Grube, 1856. See Systematic Discussion.
- Nereis (Neanthes) varia* Treadwell, 1941a, p. 3. Nereidae. New name for *Nereis (Neanthes) paucidentata* Treadwell, 1939. Referred to *Nereis riisei* Grube, 1856. See Systematic Discussion.
- Nereis notomacula* Treadwell, 1914b, pp. 191-192, pl. 11, figs. 8-12. Nereidae. Entrance to San Francisco Bay, California. Syntype in A.M.N.H. Referred to *Platynereis bicanaliculata* (Baird), 1863. See Systematic Discussion.
- Nereis (Platynereis) integer* Treadwell, 1920a, pp. 595-597, figs. 1-4. Nereidae. Philippine Islands. Holotype in A.M.N.H. Referred to *Platynereis polyscalma* Chamberlin, 1919. See Hartman, 1938b, p. 15.
- Nereis singularis* Treadwell, 1943b, p. 41, figs. 33-37. Nereidae. East of New England, planktonic at surface. Holotype in U.S.N.M. This appears to be an immature stage of *Ceratonereis mirabilis* Kinberg, 1866, known from the Gulf Stream. *Nereis singularis* Wesenberg-Lund, 1949, p. 278, from Iran is another species and resembles *Neanthes oxyrhopa* (Marenzeller), 1879.
- Nereis spinifera* Treadwell, 1929d, pp. 5-6, figs. 15-20. Nereidae. Puget Sound, Washington. Holotype in A.M.N.H. Referred to *Perinereis monterea* (Chamberlin), 1918. See Systematic Discussion.
- Nerine minuta* Treadwell, 1939a, p. 5, figs. 18-20. Spionidae. Port Aransas, Texas. Holotype in A.M.N.H. Referred to *Nerinides agilis* (Verrill), 1873. See Systematic Discussion.
- Nicidion fusca-fasciata* Treadwell, 1922a, pp. 156-157, figs. 47-50, pl. 7, fig. 5. Eunicidae. Pago Pago, Samoa. Holotype in A.M.N.H. Referred to *Eunice (Nicidion) gracilis* Crossland, 1903. See Systematic Discussion.
- Nicomache antiguensis* Treadwell, 1924c, pp. 16-17, figs. 25-29. Maldanidae. Antilles, West Indies. Holotype in U.S.N.M., not seen. This may be referred to *Nicomache antillensis* Augener, 1922, from the same locality.
- Nuchubranchia palmata* Treadwell, 1928a, pp. 481-482, figs. 66-68. Typhloscolecidae. Off the Galapagos Islands in 400-600 fathoms. Holotype in A.M.N.H. Referred to *Travisioopsis coniceps* (Chamberlin), 1919. See Systematic Discussion.
- Odonotosyllis octodentata* Treadwell, 1917b, p. 257, pl. 1, figs. 1-3. Syllidae. Dry Tortugas, Florida. Holotype in A.M.N.H. A valid species.
- Oenone brevimaxillata* Treadwell, 1931d, pp. 1-3, figs. 4-9. Lysaretidae, Mexico. Referred to *Lysarete brasiliensis* Kinberg, 1865. See Hartman, 1942c, pp. 101-102.
- Onuphis branchiata* Treadwell, 1931a, pp. 317-320, figs. 3a-g. Onuphidae. Marinduque Island, Philippine Islands, in 106 fathoms. Holotype in U.S.N.M., not seen.
- Onuphis stigmatis* Treadwell, 1922b, pp. 176-178, figs. 22-34. Onuphidae. San Juan Island, Washington, shore. Holotype in A.M.N.H. Referred to *Nothria stigmatis* (Treadwell), 1922. See Hartman, 1944b, pp. 89-91, pl. 11, figs. 240-247.
- Ophylax minuta* Treadwell, 1937a, p. 29, figs. 6, 7. Syllidae. Fox Channel, Greenland. Holotype in U.S.N.M., not seen. Pettibone (1954, p. 256) referred it to *Sphaerosyllis arenaceus* Claparède, 1863.
- Ophelina magna* Treadwell, 1914b, pp. 216-218, pl. 12, figs. 34-36. Opheliidae. off southern California in 3-40 fathoms. Paratype in A.M.N.H. Referred to *Ophelia magna* (Treadwell), 1914. See Hartman, 1936, p. 32.
- Ophelina mucronata* Treadwell, 1914b, pp. 218-219, pl. 12, figs. 37, 38. Opheliidae. La Jolla, California, shore. Paratype in A.M.N.H. Referred to *Euzonus (Thoracophelia) mucronata* (Treadwell), 1914. See Systematic Discussion.
- Panthalis oculatea* Treadwell, 1901b, pp. 188-189, figs. 14-18. Polyodontidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Polyodontes oculatea* (Treadwell), 1901. See Hartman, 1939b, pp. 83-84, pl. 24, figs. 294-299.
- Panthalis pacifica* Treadwell, 1914b, pp. 184-186, pl. 11, figs. 1-7. Polyodontidae. Off San Diego, California, in 50 to 100 fathoms. Holotype in Los Angeles. See Hartman, 1939b, pp. 87-88, pl. 26, figs. 309-312.
- Panthalis pustulata* Treadwell, 1924c, pp. 7-9, figs. 10-15. Polyodontidae. English Harbor, Antigua, West Indies. Holotype in U.S.N.M. See Hartman, 1939b, p. 87.
- Paramarphysa teres* Treadwell, 1922a, pp. 153-154, figs. 40, 41, pl. 6, figs. 2-6. Eunicidae. Pago Pago Harbor, Samoa. Holotype in A.M.N.H. See Systematic Discussion.
- Parasabella minuta* Treadwell, 1941a, p. 4, figs. 9-12. Sabellidae. São Sebastião, Brazil. Holotype in A.M.N.H. Referred to *Potamilla minuta*

(Treadwell), 1941. See Systematic Discussion.

Parasabella sulfurea Treadwell, 1917b, p. 267, pl. 3, figs. 16-23. Sabellidae. Dry Tortugas, Florida. Holotype in A.M.N.H. Referred to *Hypsicomus torquatus* (Grube), 1878. See Hartman, 1951, p. 116.

Perinereis diversidentata Treadwell, 1943c, pp. 1-2, figs. 1-7. Nereidae. Cape Cross, Africa. Holotype in A.M.N.H. Referred to *Pseudonereis variegata* (Grube), 1856. See Systematic Discussion.

Phalacrophorus attenuatus Treadwell, 1943b, p. 34, fig. 14. Iospilidae. Marshall Islands, pelagic in 50 meters. Holotype in U.S.N.M. Resembles *Phalacrophorus uniformis* Reibisch, 1895. See Systematic Discussion.

Phalacrophorus maculatus Treadwell, 1943b, p. 34, figs. 11-13. Iospilidae. Off Ecuador at surface. Holotype in U.S.N.M., paratype in A.M.N.H. Referred to *Phalacrophorus pictus* Greeff, 1879. See Systematic Discussion.

Phalacrophorus niger Treadwell, 1943b, pp. 33-34, fig. 15. Iospilidae. North central Atlantic Ocean, pelagic in 50 meters. Holotype in U.S.N.M. Referred to *Iospilus phalacroides* Viguier, 1886. See Systematic Discussion.

Phyllochaetopterus verrillii Treadwell, 1943d, pp. 1-3, figs. 4-8. Chaetopteridae. Oahu, Hawaii. Holotype in A.M.N.H. A valid species.

Phyllodoce fusca-cirrata Treadwell, 1926a, pp. 14-15, figs. 25-27. Phyllodocidae. Pango Pango, Samoa. Holotype in U.S.N.M. Referred to *Anaitides tenuissima* (Grube), 1878. See Systematic Discussion.

Phyllodoce magna-oculata Treadwell, 1901b, p. 191, figs. 25, 26. Phyllodocidae. Puerto Rico. Holotype in U.S.N.M. See Hartman, 1942a, pp. 110-111, figs. 9c-d.

Phyllodoce nicoyensis Treadwell, 1928b, pp. 1-3, figs. 1-3. Phyllodocidae. Gulf of Nicoya, Costa Rica. Holotype in U.S.N.M., not seen.

Phyllodoce panamensis Treadwell, 1917a, pp. 428-430, figs. 1-2. Phyllodocidae. Chame Point, Panama. Holotype in U.S.N.M. Referred to *Anaitides panamensis* (Treadwell), 1917. See Monroe, 1933, p. 24.

Phyllodoce pulla Treadwell, 1926a, pp. 12-13, figs. 19-21. Phyllodocidae. Japan. Holotype in U.S.N.M., not seen. This may agree with *Anaitides madeirensis* (Langerhans), 1879.

Phyllodoce stigmata Treadwell, 1925c, pp. 116-118, fig. 11. Phyllodocidae. Off Hawaii, pelagic. Holotype deposited in Hawaii, not seen.

Phyllodoce tortugae Treadwell, 1917b, p. 262, pl. 2, figs. 4-6. Phyllodocidae. Loggerhead Key, Florida. Holotype in A.M.N.H. See Systematic Discussion.

Phyllodoce varia Treadwell, 1928a, p. 467, figs.

69-71. Phyllodocidae. Galapagos Islands. Holotype in A.M.N.H. Referred to *Anaitides madeirensis* (Langerhans), 1879. See Systematic Discussion.

Phyllodoce variegata Treadwell, 1926a, p. 12. *Lapsus calami* for *Phyllodoce violacea*, quod vide.

Phyllodoce violacea Treadwell, 1926a, pp. 13-14, figs. 22-24. Phyllodocidae. Suva, Fiji. Holotype in U.S.N.M. See Systematic Discussion.

Pionosyllis manca Treadwell, 1931b, pp. 1-2, figs. 1a-e. Syllidae. Off Cape Henry, Virginia, in 20 fathoms. Holotype in U.S.N.M., not seen. This appears to be a representative of *Exogoninae* instead of *Syllinae*.

Pista groenlandica Treadwell, 1937a, pp. 33-35, figs. 14-16. Terebellidae. Cobourg Island, Baffin Bay, Arctic Ocean. Holotype in U.S.N.M., paratype in A.M.N.H. Referred to *Pista maculata* (Dalyell), 1853. See Pettibone, 1954, p. 324.

Placostegus calciferus Treadwell, 1929d, pp. 12-13, figs. 34-36. Serpulidae. Juba Cove, Guanica Harbor, Puerto Rico. Holotype in A.M.N.H. Referred to *Sclerostyla ctenactis* Mörch, 1863. See Systematic Discussion.

Plotobia paucichaeta Treadwell, 1943b, pp. 38-39, fig. 26. Tropical southern Pacific Ocean, planktonic at surface. Holotype in U.S.N.M. Referred to *Travislopsis benhami* Monroe, 1936. See Friedrich, 1950, p. 316.

Polydora californica Treadwell, 1914b, pp. 203-204, pl. 12, figs. 23-29. Spionidae. Locality unknown. Paratype in A.M.N.H. Referred to *Boccardia* sp. See Systematic Discussion.

Polynoë alba Treadwell, 1906, pp. 1149-1150, figs. 5-7. Polynoidae. Honolulu, Hawaii. Holotype in U.S.N.M. Referred to *Lepidasthenia alba* (Treadwell), 1906. See Hartman, 1942a, p. 103.

Polynoë branchiata Treadwell, 1901b, p. 186, figs. 5-7. Polynoidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Chaetacanthus magnificus* (Grube), 1875. See Seidler, 1924, pp. 97-98.

Polynoë lucida Treadwell, 1906, pp. 1150-1151, figs. 8-10. Polynoidae. Off Hawaii in 83-113 fathoms. Holotype in U.S.N.M. Referred to *Lepidasthenia alba* (Treadwell), 1906. See Hartman, 1942a, p. 103.

Polynoë mutilata Treadwell, 1906, pp. 1152-1153, figs. 12-15. Polyodontidae. Off Hawaii in 328 and 319 fathoms. Holotype in U.S.N.M., paratype in A.M.N.H. Referred to *Eupanthalis mutilata* (Treadwell), 1906. See Hartman, 1938d, p. 123.

Polynoë nodosa Treadwell, 1901b, p. 187, figs. 8, 9. Polynoidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Hermenia verruculosa* Grube, 1856. See Treadwell, 1911, pp. 9-11, figs. 23-26.

Polynoë spicula Treadwell, 1906, pp. 1151-1152,

fig. 11. Polynoidae. Monterey Bay, California. Holotype in U.S.N.M. Referred to *Lepidonotus caelorus* Moore, 1903. See Hartman, 1938d, p. 108.

Polymoella brunnea Treadwell, 1943b, pp. 31-32, figs. 1-3. Polynoidae. Off Ecuador, planktonic. Holotype in U.S.N.M., not seen.

Polyodontes californicus Treadwell, 1941c, pp. 20-21, figs. 9-12. Polyodontidae. Chamela Bay, Mexico, in 16 fathoms. Holotype in A.M.N.H. Referred to *Polyodontes panamensis* (Chamberlin), 1919. See Systematic Discussion.

Polyophthalmus incertus Treadwell, 1936b, pp. 61-62, figs. 27-29. Opheliidae. Nonsuch Island, Bermuda. Holotype in A.M.N.H. Referred to *Polyophthalmus pictus* (Dujardin), 1839. See Systematic Discussion.

Polyophthalmus papillatus Treadwell, 1943c, p. 3, figs. 19, 20. Opheliidae. Lobito, Africa. Holotype in A.M.N.H. Referred to *Polyophthalmus pictus* (Dujardin), 1839. See Systematic Discussion.

Pomatoceros davaoensis Treadwell, 1942, pp. 4-5, figs. 12-14. Serpulidae. Gulf of Davao, Philippine Islands. Holotype in A.M.N.H. Referred to *Pomatoceros caeruleus* (Schmarda), 1861. See Systematic Discussion.

Potamilla californica Treadwell, 1906, p. 1178. Sabellidae. Monterey Bay, California. Holotype in U.S.N.M. Referred to *Hypsicomus californicus* (Treadwell), 1906. See Hartman, 1942a, p. 133.

Potamilla elongata Treadwell, 1906, p. 1178, figs. 73-75. Sabellidae. Off Hawaii in 256-277 fathoms. Holotype in U.S.N.M., paratype in A.M.N.H. Referred to *Potamethus elongatus* (Treadwell), 1906. See Hartman, 1942a, pp. 134-135, figs. 15b-d; Berkeley and Berkeley, 1951, p. 333-334.

Prionospio plumosa Treadwell, 1931b, pp. 3-5, figs. 3a-d. Spionidae. Chesapeake Bay, Maryland. Holotype in U.S.N.M. Referred to *Prionospio treadwelli* Hartman, 1951. See Hartman, 1951, p. 84.

Sabella alba Treadwell, 1917b, pp. 266-267, pl. 3, figs. 10-15. Sabellidae. Dry Tortugas, Florida. Holotype in A.M.N.H. Referred to *Hypsicomus elegans* (Webster), 1884. See Hartman, 1951, p. 115.

Sabellaria setosa Treadwell, 1906, pp. 1180-1181, figs. 78-81. Sabellariidae. Off Hawaii in 253-382 fathoms. Holotype in U.S.N.M. Referred to *Phalacrostemma setosa* (Treadwell), 1906. See Hartman, 1944c, p. 330.

Scolecoplepis alaskensis Treadwell, 1914b, pp. 201-203, pl. 12, figs. 21, 22. Spionidae. Shumagin Islands, Alaska. Paratype in A.M.N.H. Referred to *Nerine alaskensis* (Treadwell), 1914. See Hartman, 1948a, p. 8.

Scoloplos rufa Treadwell, 1941b, p. 1, figs. 1-6. Orbiniidae. Galveston, Texas. Holotype in A.M.N.H. Referred to *Haploscoloplos robustus* (Verrill), 1873. See Systematic Discussion.

Semiodera glabra Treadwell, 1928a, pp. 479-480, figs. 62-65. Flabelligeridae. Off Galapagos Islands in 15 feet. Holotype in A.M.N.H. Referred to *Semiodera cariboum* (Grube), 1856. See Systematic Discussion.

Sphaeropomatus miamiensis Treadwell, 1934b, pp. 338-344, 9 figs. Serpulidae. Miami River, Florida, on carapace of shrimp. Holotype in U.S.N.M. See Systematic Discussion.

Spio acuta Treadwell, 1914b, pp. 199-201, pl. 11, figs. 14-20. Spionidae. San Diego, California. Holotype in Los Angeles. Referred to *Nerinides acuta* (Treadwell), 1914. See Hartman, 1941, pp. 294-296, pl. 45, figs. 1-8.

Spio hirsuta Treadwell, 1928a, pp. 478-479, figs. 54-57. Spionidae. East of Cocos Islands, Pacific Panama. Holotype in A.M.N.H. Referred to *Nerine cirratulus hirsuta* (Treadwell), 1928. See Systematic Discussion.

Spirographis braziliensis Treadwell, 1932b, pp. 18-19, figs. 15-19. Sabellidae. Brazil. Holotype in U.S.N.M., not seen.

Sthenelais grubei Treadwell, 1901b, pp. 187-188, figs. 10-13. Sigalionidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Leanira grubei* (Treadwell), 1901. See Hartman, 1942a, pp. 106-107.

Streblosoma crassibranchia Treadwell, 1914b, pp. 208-209, pl. 12, figs. 30, 31. Terebellidae. San Clemente Island, California. Holotype in Los Angeles. See Systematic Discussion.

Streblosoma crassibranchiata Treadwell, 1914b, p. 234. *Lapsus calami* for *Streblosoma crassibranchia*, quod vide.

Streblosoma magna Treadwell, 1937b, pp. 155-156, figs. 26-28. Terebellidae. Arena Bank, Mexico, in 45 fathoms. Holotype in A.M.N.H. Referred to *Thelepus crispus* Johnson, 1901. See Systematic Discussion.

Streblosoma verrilli Treadwell, 1911, pp. 11-12, figs. 27-29. Terebellidae. Near Fort Jefferson, Florida, on shore. Holotype in A.M.N.H. Referred to *Thelepus setosus* (Quatrefages), 1865. See Systematic Discussions.

Stylarioides dubius Treadwell, 1929a, pp. 9-10, figs. 25-27. Flabelligeridae. Dry Tortugas, Florida. Paratypes in A.M.N.H. Referred to *Pherusa dubia* (Treadwell), 1929. See Systematic Discussion.

Stylarioides glabra Treadwell, 1901b, p. 208, figs. 73-75. Flabelligeridae. Puerto Rico. Holotype in U.S.N.M. Referred to *Semiodera glabra* (Treadwell), 1901. See Systematic Discussion.

Syllis complanata Treadwell, 1901b, p. 183, fig. 1. Syllidae. Puerto Rico. Holotype in

U.S.N.M., not seen. This may be a species of *Typosyllis* Langerhans, as it seems to have only composite setae.

Terebella hiata Treadwell, 1931e, pp. 80-81, figs. 14c-f. Terebellidae. Haiti. Holotype in A.M.N.H. Referred to *Polymniella aurantiaca* Verrill, 1900. See Systematic Discussion.

Terebella parvabranchiata Treadwell, 1906, p. 1175, fig. 71. Terebellidae. Off Hawaii in 444-478 fathoms. Holotype in U.S.N.M., not seen.

Terebellides tentaculata Treadwell, 1906, p. 1177, fig. 72. Ampharetidae. Off Hawaii in 278-473 fathoms. Holotype in U.S.N.M., paratype in A.M.N.H. Referred to *Melinnexis tentaculata* (Treadwell), 1906. See Systematic Discussion.

Thelepus branchiatus Treadwell, 1906, pp. 1176-1177. Terebellidae. Off Hawaii in 122-143 fathoms. Holotype in U.S.N.M., not seen.

Thelepus crassibranchiatus Treadwell, 1901b, p. 206, figs. 69-71. Terebellidae. Puerto Rico. Holotype in U.S.N.M. Referred to *Thelepus cincinnatus* (Fabricius), 1780. See Augener, 1906, p. 182; Hessle, 1917, p. 213.

Thelepus haitiensis Treadwell, 1931e, pp. 79-80, figs. 14a-b. Terebellidae. Haiti. Holotype in A.M.N.H. See Systematic Discussion.

Tomopteris longisetis Treadwell, 1936b, pp. 58-59, figs. 18-21. Tomopteridae. Nonsuch Island, Bermuda, pelagic in 500-1000 fathoms. Holotype in A.M.N.H. Referred to *Tomopteris nisseni* Rosa, 1908. See Systematic Discussion.

Tomopteris opaca Treadwell, 1928a, pp. 463-464, fig. 29. Tomopteridae. Off Galapagos and Cocos Islands in 550-700 fathoms. Holotype in A.M.N.H. Referred to *Tomopteris nisseni* Rosa, 1908. See Systematic Discussion.

Tomopteris tentaculata Treadwell, 1928a, pp. 464-465, figs. 30-31. Tomopteridae. Off Galapagos Islands, planktonic at surface. Holotype in A.M.N.H. See Systematic Discussion.

Torea fasciata Treadwell, 1943b, p. 35, figs. 19, 20. Alciopidae. Between United States and Hawaii, planktonic in 50 meters. Holotype in U.S.N.M., not seen.

Travisiopsis atlantica Treadwell, 1936b, pp. 62-63, figs. 30-33. Typhloscolecidae. Nonsuch Island, Bermuda, in 600-700 fathoms. Holotype in A.M.N.H. Referred to *Travisiopsis lanceolata* Southern, 1911. See Systematic Discussion.

Trophonia inflata Treadwell, 1914b, pp. 213-214, pl. 12, fig. 33. Flabelligeridae. Southern California along shore to 28 fathoms. Paratype in A.M.N.H. Referred to *Pherusa inflata* (Treadwell), 1914. See Hartman, 1952, pp. 71-74, figs. 1, 2.

Trophonia minuta Treadwell, 1914b, p. 213, pl. 12, fig. 32. Flabelligeridae. Off La Jolla, Cali-

fornia, in 10 fathoms. Holotype in Los Angeles. Referred to *Pherusa inflata* (Treadwell), 1914. See Hartman, 1952, p. 71.

Trypanosyllis adamanteus Treadwell, 1914c, pp. 235-237, figs. 1-3. Syllidae. San Francisco, California, along shore. Paratype in A.M.N.H. Redescribed by Rioja, 1941, pp. 697-698, pl. 2, figs. 16-20.

Typosyllis aciculata Treadwell, 1945, pp. 1-2, figs. 1-5. Syllidae. Pacific Grove, California. Holotype in A.M.N.H. Redescribed by Reish, 1950, pp. 1-5, figs. 1-8.

Typosyllis crassicirrata Treadwell, 1925c, pp. 113-115, fig. 10. Syllidae. Laysan Island, Hawaii. Holotype in Hawaii, not seen.

Uncinereis lutea Treadwell, 1928a, pp. 469-471, figs. 40-49. Nereidae. Off the West Indies on sargassum. Paratypes in A.M.N.H. Referred to *Platynereis dumerilii* (Audouin and Milne-Edwards), 1834. See Systematic Discussion.

Uncinereis trimaculosa Treadwell, 1940, p. 3, figs. 4-9. Nereidae. Galveston, Texas. Holotype in A.M.N.H. Referred to *Platynereis dumerilii* (Audouin and Milne-Edwards), 1934. See Hartman, 1951, p. 47.

Vanadis collata Treadwell, 1928a, pp. 462-463, figs. 27, 28. Alciopidae. Off Galapagos Islands in 400 fathoms. Holotype in A.M.N.H. Referred to *Vanadis crystallina* Greeff, 1876. See Systematic Discussion.

Vanadis fusca-punctata Treadwell, 1906, pp. 1159-1160, figs. 29-31. Alciopidae. Off Hawaii at surface to 238 fathoms. Holotype in U.S.N.M. Referred to *Vanadis formosa* Claparède, 1870. See Støp-Bowitz, 1948, p. 25.

Vanadis minuta Treadwell, 1906, pp. 1158-1159, figs. 25-28. Alciopidae. Off Hawaii, pelagic in 4 fathoms. Holotype in U.S.N.M. Redescribed by Støp-Bowitz, 1951, pp. 7-8.

Vanadis uncinata Treadwell, 1943b, p. 36, figs. 23, 24. Alciopidae. Equatorial Pacific Ocean, planktonic in 50 meters. Holotype in U.S.N.M., not seen.

Vermilia glandulata Treadwell, 1936b, p. 65, pp. 36-39. Serpulidae. Gurnets Rock, Bermuda, in 35 feet. Holotype in A.M.N.H. Referred to *Vermiliopsis bermudiensis* (Bush), 1904. See Hartman, 1942b, p. 90, figs. 154, 155.

Vermiliopsis hawaiiensis Treadwell, 1943d, pp. 3-4, figs. 14, 15. Serpulidae. Holotype in A.M.N.H. Referred to *Vermiliopsis multianmulata* (Moore), 1923. See Systematic Discussion.

Vermiliopsis torquata Treadwell, 1943d, p. 4, figs. 16, 17. Serpulidae. Hawaii. Syntypes in A.M.N.H. Referred to *Vermiliopsis multianmulata* (Moore), 1923. See Systematic Discussion.

ALPHABETICAL LIST OF VALID SPECIES, WITH SYNONYMS

- Acholoë astericola* (delle Chiaje), 1841, as *Acholoë orbiculata* Treadwell, 1921
Ampharete arctica Malmgren, 1866, as *Ampharete brevibranchiata* Treadwell, 1926
Ampharete eupalea Chamberlin, 1920, as *Ampharete seribranchiata* Treadwell, 1926
Anaitides madeirensis Langerhans, 1879, as *Anaitides minuta* Treadwell, 1937, *Mystides gracilis* Treadwell, 1941, and *Phyllodoce varia* Treadwell, 1928
Anaitides panamensis (Treadwell), 1917, as *Phyllodoce panamensis* Treadwell, 1917
Anaitides pulla (Treadwell), 1926, as *Phyllodoce pulla* Treadwell, 1926
Anaitides tenuissima (Grube), 1878, as *Phyllodoce fusca-cirrata* Treadwell, 1926
Ancistrosyllis tentaculata Treadwell, 1941
Aphrodita magna Treadwell, 1925
Arabella iricolor (Montagu), 1804, as *Arabella dubia* Treadwell, 1922, and questionably *Arabella setosa* Treadwell, 1921, and *Drilonereis pinnata* Treadwell, 1921
Arabella iridescens Treadwell, 1906
Arabella semimaculata (Moore), 1911, as *Arabella pacifica* Treadwell, 1941
Arabella sp., as *Aracoda attenuata* Treadwell, 1911
Arctonoë tuberculata (Treadwell), 1906, as *Harmothoë tuberculata* Treadwell, 1906
Arctonoë vittata (Grube), 1855, as *Lepidasthenia elegans* Treadwell, 1941
Armandia maculata (Webster), 1884, as *Ammotrypane bermudiensis* Treadwell, 1936
Asabellides sibirica (Wirén), 1883, as *Neosabellides alaskensis* Treadwell, 1943
Asychis fimbriata (Treadwell), 1934, as *Maldanella fimbriata* Treadwell, 1934
Autolytus pacificus Treadwell, 1943
Autolytus varius Treadwell, 1914
?Benthoscolex microcarunculata (Treadwell), 1901, as *Amphinome microcarunculata* Treadwell, 1901
Boccardia sp., as *Polydora californica* Treadwell, 1914
Branchiomma nigromaculata (Baird), 1865, as *Dasychone ponce* Treadwell, 1901, *Dasychnopsis arenosa* Treadwell, 1924, and *Dasychone loandensis* Treadwell, 1943
Callizonella pigmenta Treadwell, 1943, perhaps *Krohnia* sp.
Capitellides teres Treadwell, 1939
Ceratonereis anchylochaeta (Horst), 1924, as *Ceratonereis longicauda* Treadwell, 1943
Ceratonereis hircinicola (Eisig), 1870; as *Nereis* (*Ceratonereis*) *bariletti* Treadwell, 1937
Ceratonereis mirabilis Kinberg, 1866, as *Ceratonereis singularis* Treadwell, 1929, and perhaps *Nereis singularis* Treadwell, 1943
Ceratonereis paucidentata (Moore), 1903, as *Nereis* (*Ceratonereis*) *alaskensis* Treadwell, 1921
Chaetacanthus magnificus (Grube), 1875, as *Lepidonotus pilosus* Treadwell, 1937, and *Polynoë branchiata* Treadwell, 1901
Cirratulus elongatus Treadwell, 1901, questionable
Cirriformia ?chefooensis (Grube), 1877, as *Cirratulus branchiatus* Treadwell, 1936
Cirriformia filigera (delle Chiaje), 1841, as *Audouinea oculata* Treadwell, 1932, and *Audouinea pygidia* Treadwell, 1936
Cirriformia hawaiiensis, new name for *Audouinea branchiata* Treadwell, 1943, preoccupied
Cirriformia punctata (Grube), 1859, as *Cirratulus nigromaculata* Treadwell, 1901
Cirriformia semicincta (Ehlers), 1905, as *Audouinea maculata* Treadwell, 1929
Cirriformia tentaculata (Montagu), 1808, as *Cirratulus pallidus* Treadwell, 1931, and *Cirratulus multicirratulus* Treadwell, 1936
Corynocephalus magnachaetus Treadwell, 1943
?Dalhousiella longicirrata (Treadwell), 1901, as *Castalia longicirrata* Treadwell, 1901
Dasybranchus rectus Treadwell, 1901, questionable
Drieschia pellucida Moore, 1903, as *Drieschia atlantica* Treadwell, 1936
Drilonereis lumbricus Treadwell, 1922
Drilonereis planiceps (Grube), 1878, as *Drilonereis paucidentata* Treadwell, 1922
Drilonereis spatula (Treadwell), 1911, as *Aracoda spatula* Treadwell, 1911, and *Drilonereis brunnea* Treadwell, 1921
Drilonereis sp., juvenile, as *Drilonereis similis* Treadwell, 1921
Epitoka pelagica Treadwell, 1943, questionable as to family status
Eteone ?longa (Fabricius), 1780, as *Eteone tuberculata* Treadwell, 1922
Eteone pacifica Hartman, 1936, as *Eteone maculata* Treadwell, 1922
Euclymene corallicola (Treadwell), 1929, as *Maldanella corallicola* Treadwell, 1929
Eulalia foliosa Treadwell, 1924
Eulalia myriacylum (Schmarda), 1861, as *Eulalia quinquelineata* Treadwell, 1901

- Eunice afra* Peters, 1854, as *Leodice aciculata* Treadwell, 1922, *Leodice flava-punctata* Treadwell, 1922, *Leodice bucciensis* Treadwell, 1921, *Leodice guanica* Treadwell, 1921, *Leodice suviensis* Treadwell, 1922, and questionably *Leodice notata* Treadwell, 1921
- Eunice antennata* Savigny, 1818, as *Eunice interrupta* Treadwell, 1906
- Eunice argentinensis* (Treadwell), 1929, as *Leodice argentinensis* Treadwell, 1929
- Eunice armillata* (Treadwell), 1922, as *Leodice armillata* Treadwell, 1922, and *Leodice gracilicirrata* Treadwell, 1922
- Eunice auriculata* Treadwell, 1900 and 1901
- Eunice bilobata* Treadwell, 1906
- Eunice crassi-tentaculata* (Treadwell), 1922, as *Leodice crassi-tentaculata* Treadwell, 1922
- Eunice filamentosa* Grube, 1856, as *Leodice spongicola* Treadwell, 1921
- Eunice grubei* Gravier, 1900, as *Leodice biformicirrata* Treadwell, 1922
- Eunice hawaiiensis* Treadwell, 1906
- Eunice nicidioformis* Treadwell, 1906
- Eunice* (*Nicidion*) *cariboea* Grube, 1856, as *Eunice culebra* Treadwell, 1901
- Eunice* (*Nicidion*) *gracilis* Crossland, 1903, as *Nicidion fusca-fasciata* Treadwell, 1922
- Eunice norvegica* (Linnaeus), 1767, as *Leodice arcturi* Treadwell, 1928
- Eunice savignyi* (Grube), 1878, as *Leodice langi* Treadwell, 1943
- Eunice tenuis* (Treadwell), 1921, as *Leodice tenuis* Treadwell, 1921
- Eunice tubifex* Crossland, 1904, as *Leodice tubicola* Treadwell, 1922
- Eunice vittata* (delle Chiaje), 1828, as *Leodice rubrivittata* Treadwell, 1921
- Eunoë crassa* (Treadwell), 1924, as *Lagisca crassa* Treadwell, 1924
- Eunoë purpurea* Treadwell, 1936, as *Acanthiclepis longicirrata* Treadwell, 1941
- Eupanthalis maculosa* (Treadwell), 1931, as *Macellicephala maculosa* Treadwell, 1931
- Eupanthalis mutilata* (Treadwell), 1906, as *Polynoë mutilata* Treadwell, 1906, and *Eupanthalis oahuensis* Treadwell, 1906
- Euphrosine branchiata* Treadwell, 1939, as *Euphrosyne branchiata* Treadwell, 1939
- Euphrosine longisetis* Treadwell, 1939, as *Euphrosyne longisetis* Treadwell, 1939
- Eupolyodontes elongata* (Treadwell), 1931, as *Iphionella elongata* Treadwell, 1931
- Eupomatus dianthus decorus* Treadwell, 1931, as *Eupomatus decorus* Treadwell, 1931
- Eupomatus similis* Treadwell, 1929
- Eupomatus uncinatus* Philippi, 1844, as *Eupomatus operculata* Treadwell, 1929
- Eurato punctata* Treadwell, 1926, questionable
- Euzonus* (*Thoracophelia*) *mucronata* (Treadwell), 1914, as *Ophelina mucronata* Treadwell, 1914
- Fabricia sabella* (Ehrenberg), 1836, as *Haplobranchius atlanticus* Treadwell, 1932
- Gattyana cirrosa* (Pallas), 1766, as *Gattyana imbricata* Treadwell, 1926
- Glycera ?capitata* Oersted, 1843, as *Hemipodia canadensis* Treadwell, 1937
- Glycera tessellata* Grube, 1863, as *Glycera abranchiata* Treadwell, 1901, and *Glycera spadix* Treadwell, 1943
- Goniada brunnea* Treadwell, 1906
- Goniada oculata* Treadwell, 1901, questionably *Glycinde* sp.
- Goniada quinquelabiata* Augener, 1906, as *Goniada magna* Treadwell, 1945
- Goniada teres* Treadwell, 1931
- Halosydna latior* Chamberlin, 1919, as *Halosydna obtusa-cirrata* Treadwell, 1937
- Halosydnella fusca-maculata* (Treadwell), 1924, as *Halosydna fusca-maculata* Treadwell, 1924, and *Halosydna fuscomarginata* Treadwell, 1924
- Halosydnella grisea* (Treadwell), 1929, as *Halosydna grisea* Treadwell, 1929
- Halosydnella oculata* (Treadwell), 1926, as *Halosydna oculata* Treadwell, 1926
- Haliplanella gracilis* Reibisch, 1893, as *Haliplanella pacifica* Treadwell, 1943
- Haploscoloplos robustus* (Verrill), 1873, as *Scoloplos rufa* Treadwell, 1941
- Haplosyllis spongicola* (Grube), 1855, as *Haplosyllis gula* Treadwell, 1924
- Harmothoë crucis* (Grube), 1856, as *Harmothoë lanceocirrata* Treadwell, 1928, and *Harmothoë lanceolata* Treadwell, 1928
- Harmothoë imbricata* (Linnaeus), 1767, as *Harmothoë levis* Treadwell, 1937
- Harmothoë sylliformia* Treadwell, 1928
- Harmothoë tenebricosa* Moore, 1910, as *Eunoë exoculata* Treadwell, 1923
- Harmothoë trimaculata* (Treadwell), 1924, as *Evarnella trimaculata* Treadwell, 1924
- Harmothoë variegata* Treadwell, 1917
- Harmothoë villosa* Treadwell, 1926
- Hermenia verruculosa* Grube, 1856, as *Polynoë nodosa* Treadwell, 1901
- Hermione hystrix* (Savigny), 1818, as *Melaenis tropicus* Treadwell, 1934
- Hipponoë multibranchiata* (Treadwell), 1940, as *Metamphnime multibranchiata* Treadwell, 1940
- Hyalinoecia branchiata* Treadwell, 1934
- Hydroides crucigera* Mörch, 1863, as *Hydroides californicus* Treadwell, 1929

- Hydroides parvus* (Treadwell), 1901, as *Eupomatus parvus* Treadwell, 1901
- Hypsicomus californicus* (Treadwell), 1906, as *Potamilla californica* Treadwell, 1906
- Hypsicomus torquatus* (Grube), 1878, as *Sabella alba* Treadwell, 1917, *Hypsicomus purpureus* Treadwell, 1924, and questionably *Parasabella sulfurea* Treadwell, 1917
- Iospilus phalacroides* Viguier, 1886, as *Phalacrophorus niger* Treadwell, 1943
- Laonereis culveri* (Webster), 1879, as *Nereis* (*Leptonereis*) *acuta* Treadwell, 1923, and *Leptonereis nota* Treadwell, 1941
- Laetmonice nitida* Treadwell, 1926
- Lanice expansa* Treadwell, 1906
- Laonice cirrata* (Sars), 1851, as *Aricidea alata* Treadwell, 1901
- Leanira grubei* (Treadwell), 1901, as *Sthenelais grubei* Treadwell, 1901
- Leanira hystericis* Ehlers, 1874, as *Eupholoe cirrata* Treadwell, 1934
- ?*Leocrates oculatus* (Treadwell), 1906, as *Castalia oculata* Treadwell, 1906
- Lepidometria commensalis* Webster, 1879, as *Lepidasthenia lactea* Treadwell, 1939
- Lepidasthenia alba* (Treadwell), 1906, as *Polynoë alba* Treadwell, 1906, and *Polynoë lucida* Treadwell, 1906
- Lepidasthenia interrupta* (Marenzeller), 1902, as *Lepidasthenia ocellata* Treadwell, 1936
- Lepidasthenia natans* (Chamberlin), 1919, as *Lepidasthenia longicirrata* Treadwell, 1928
- Lepidasthenia rufa* Treadwell, 1928, as *Lepidasthenia variegata* Treadwell, 1928
- Lepidasthenia varius* Treadwell, 1917, as *Lepidasthenia picta* Treadwell, 1928
- Lepidasthenia virens* (Blanchard), 1849, as *Lepidasthenia ornata* Treadwell, 1937
- Lepidasthenia* sp., juvenile, as *Lepidonotus inquilinus* Treadwell, 1917
- Lepidonotus caelorus* Moore, 1903, as *Polynoë spicula* Treadwell, 1906, and *Lepidonotus minutus* Treadwell, 1936
- Lepidonotus sublevis* Verrill, 1873, as *Lepidonotus pallidus* Treadwell, 1939
- Leptonereis egregiacirrata* Treadwell, 1924, questionable
- Loimia medusa* (Savigny), 1820, as *Loimia minuta* Treadwell, 1929
- Lopadorhynchus varius* Treadwell, 1943
- Lumbrineris bicirrata* (Treadwell), 1929, as *Lumbrineris bicirrata* Treadwell, 1929
- Lumbrineris bilabiata* (Treadwell), 1901, as *Lumbriconereis bilabiata* Treadwell, 1901
- Lumbrineris branchiata* (Treadwell), 1921, as *Lumbrineris branchiata* Treadwell, 1921
- Lumbrineris candida* (Treadwell), 1921, as *Lumbrineris candida* Treadwell, 1921
- Lumbrineris grandis* (Treadwell), 1906, as *Lumbriconereis grandis* Treadwell, 1906
- Lumbrineris inflata* Moore, 1911, as *Lumbrineris cervicalis* Treadwell, 1922, and questionably *Lumbrineris cingulata* Treadwell, 1917
- Lumbrineris*, near *latreilli* Audouin and Milne-Edwards, 1834, as *Lumbrineris paucidentata* Treadwell, 1921
- Lumbrineris minuscula* Moore, 1911, as *Lumbriconereis minuta* Treadwell, 1906
- Lumbrineris nuchalis* (Treadwell), 1921, as *Lumbrineris nuchalis* Treadwell, 1921
- Lumbrineris parvapedata* (Treadwell), 1901, as *Lumbriconereis parvapedata* Treadwell, 1901, and *Lumbrineris elongata* Treadwell, 1931
- Lumbrineris similabris* Treadwell, 1926, as *Lumbrineris similabris* Treadwell, 1926
- Lumbrineris treadwelli*, new name for *Lumbriconereis maculata* Treadwell, 1901, preoccupied
- Lumbrineris zonata* (Johnson), 1901, as *Lumbrineris singularisetis* Treadwell, 1931
- Lycastis kartaboensis* (Treadwell), 1926, as *Namonereis kartaboensis* Treadwell, 1926
- Lygdamis asteriformis* (Augener), 1906, as *Hermella varians* Treadwell, 1901
- Lygdamis philippinensis* (Treadwell), 1926, as *Monorchos philippinensis* Treadwell, 1926
- Lysarete brasiliensis* Kinberg, 1856, as *Oenone brevimaxillata* Treadwell, 1931
- Lysidice collaris* Grube, 1870, as *Lysidice sulcata* Treadwell, 1901, *Lysidice parva* Treadwell, 1922, and questionably *Lysidice fusca* Treadwell, 1922
- Lysidice tortugae* Treadwell, 1921
- Maldane cristata* Treadwell, 1923
- Maldane philippinensis* Treadwell, 1931
- Marphysa aransensis* Treadwell, 1939
- Marphysa bellii oculata* Treadwell, 1921
- Marphysa brevitentaculata* Treadwell, 1921
- Marphysa minima* (Hansen), 1882, as *Marphysa languida* Treadwell, 1921
- Marphysa mossambica* (Peters), 1854, as *Marphysa simplex* Treadwell, 1922
- Marphysa orientalis* Treadwell, 1936
- Marphysa regalis* Verrill, 1900, as *Marphysa fragilis* Treadwell, 1911
- Marphysa sanguinea* (Montagu), 1815, as *Marphysa acicularum brevibranchiata* Treadwell, 1921, *Marphysa nobilis* Treadwell, 1917, and *Marphysa viridis* Treadwell, 1917
- Megalomma splendida* (Moore), 1905, as *Branchiomma disparoculatum* Treadwell, 1914
- Melinnexis tentaculata* (Treadwell), 1906, as *Terebellides tentaculata* Treadwell, 1906
- Myriana cirrata* Treadwell, 1931

- Mysta ornata* (Grube), 1878, as *Mysta maculata* Treadwell, 1920
Naiades cantrainii delle Chiaje, 1828, as *Alciopa distorta* Treadwell, 1943, and perhaps *Alciopa mutilata* Treadwell, 1934
Naineris mutilata Treadwell, 1931, as *Nainereis mutilata* Treadwell, 1931
Naineris setosa (Verrill), 1900, as *Anthostoma latacapitata* Treadwell, 1901
Neanthes succinea (Frey and Leuckart), 1847, as *Nereis* (*Neanthes*) *australis* Treadwell, 1923
?Nereimyra mutilata (Treadwell), 1901, as *Castalia mutilata* Treadwell, 1901
Nereis amoyensis (Treadwell), 1936, as *Nereis* (*Neanthes*) *amoyensis* Treadwell, 1936
Nereis arroyensis Treadwell, 1901
Nereis heterocirrata Treadwell, 1931
Nereis (*Leptonereis*) *distorta* Treadwell, 1936, questionable
Nereis pelagica largoensis Treadwell, 1931, as *Nereis brevicirrata* Treadwell, 1929, and *Nereis largoensis* Treadwell, 1931
Nereis riisei Grube, 1856, as *Nereis ambiguus* Treadwell, 1937, *Nereis decora* Treadwell, 1932, *Nereis* (*Neanthes*) *paucidentata* Treadwell, 1939, and *Nereis* (*Neanthes*) *varia* Treadwell, 1941
Nerine alaskensis (Treadwell), 1914, as *Scolecoplepis alaskensis* Treadwell, 1914
Nerine cirratulus hirsuta (Treadwell), 1928, as *Spio hirsuta* Treadwell, 1928
Nerinides acuta (Treadwell), 1914, as *Spio acuta* Treadwell, 1914
Nerinides agilis (Verrill), 1873, as *Nerine minuta* Treadwell, 1939
Nicomache antillensis Augener, 1922, as *Nicomache antiquensis* Treadwell, 1924
Nicon mexicana (Treadwell), 1942, as *Leptonereis mexicana* Treadwell, 1942
Nothria stigmatis (Treadwell), 1922, as *Onuphis stigmatis* Treadwell, 1922
Notocirrus attenuatus (Treadwell), 1906, as *Arabella attenuata* Treadwell, 1906
Odontosyllis enopla Verrill, 1900, as *Autolytus bidens* Treadwell, 1941
Odontosyllis octodentata Treadwell, 1917
Onuphis branchiata Treadwell, 1931
Ophelia magna (Treadwell), 1914, as *Ophelina magna* Treadwell, 1914
Palola siciliensis (Grube), 1840, as *Leodice viridis vernalis* Treadwell, 1922
Panthalis evanida (Treadwell), 1926, as *Eupanthalis evanida* Treadwell, 1926
Panthalis pacifica Treadwell, 1914
Panthalis pustulata Treadwell, 1924, as *Acoetes magnifica* Treadwell, 1929
Paramarphysa teres Treadwell, 1922
Pareulepis fimbriata (Treadwell), 1901, as *Eulepis fimbriata* Treadwell, 1901
Pareulepis wyvillei (McIntosh), 1885, as *Eulepis splendida* Treadwell, 1901
?Pareurythoe elongata (Treadwell), 1931, as *Hipponoë elongata* Treadwell, 1931
Perinereis aibuhitensis Grube, 1878, as *Nereis* (*Neanthes*) *linea* Treadwell, 1936, and *Nereis* (*Neanthes*) *orientalis* Treadwell, 1936
Perinereis brevicirrata (Treadwell), 1920, as *Nereis brevicirrata* Treadwell, 1920
Perinereis helleri Grube, 1878, as *Neanthes obscura* Treadwell, 1928
Perinereis montereae (Chamberlin), 1918, as *Nereis spinifera* Treadwell, 1929
Phalacrophorus pictus Greeff, 1879, as *Phalacrophorus maculatus* Treadwell, 1943
Phalacrophorus uniformis Reibisch, 1895, as *Phalacrophorus attenuatus* Treadwell, 1943
Phalacrostemma setosa (Treadwell), 1906, as *Sabellaria setosa* Treadwell, 1906
Pherecardia striata (Kinberg), 1857, as *Hermodice pennata* Treadwell, 1901
Pherecardia sp., as *Hermodice pennata tutuilensis* Treadwell, 1926
Pherusa dubia (Treadwell), 1929, as *Stylarioides dubius* Treadwell, 1929
Pherusa inflata (Treadwell), 1914, as *Trophonia inflata* Treadwell, 1914, and *Trophonia minuta* Treadwell, 1914
Phragmatopoma lapidosa Kinberg, 1867, as *Centrocorone spinifera* Treadwell, 1939
Phyllochaetopterus verrillii Treadwell, 1943
Phyllodoce magna-oculata Treadwell, 1901
Phyllodoce nicoyensis Treadwell, 1928
Phyllodoce stigmata Treadwell, 1925
Phyllodoce tortugae Treadwell, 1917
Phyllodoce violacea Treadwell, 1926, as *Phyllodoce variegata* Treadwell, 1926
Pionosyllis manca Treadwell, 1931, generic status questionable
Pista maculata (Dalyell), 1853, as *Pista groenlandica* Treadwell, 1937
Platynereis bicanaliculata (Baird), 1863, as *Nereis notomacula* Treadwell, 1914
Platynereis dumerilii (Audouin and Milne-Edwards), 1834, as *Eunereis africana* Treadwell, 1943, *Leptonereis maculata* Treadwell, 1928, *Uncinereis lutea* Treadwell, 1928, and *Uncinereis trimaculosa* Treadwell, 1940
Platynereis polyscalma Chamberlin, 1919, as *Nereis* (*Platynereis*) *integer* Treadwell, 1920
Polymniella antantica Verrill, 1900, as *Terebella hiata* Treadwell, 1931
Polynoë gracilis (Verrill), 1874, as *Enipo cirrata* Treadwell, 1925
Polynoella brunnea Treadwell, 1943

- Polyodontes ocullea* (Treadwell), 1901, as *Panthalis ocullea* Treadwell, 1901
- Polyodontes panamensis* (Chamberlin), 1919, as *Polyodontes californicus* Treadwell, 1941
- Polyophthalmus pictus* (Dujardin), 1839, as *Polyophthalmus incertus* Treadwell, 1936, and *Polyophthalmus papillatus* Treadwell, 1943
- Pomatoceros caeruleus* (Schmarda), 1861, as *Pomatoceros davaoensis* Treadwell, 1942
- Potamethus elongatus* (Treadwell), 1906, as *Potamilla elongata* Treadwell, 1906
- Potamilla minuta* (Treadwell), 1941, as *Parasabella minuta* Treadwell, 1941
- Prionospio treadwelli* Hartman, 1951, as *Prionospio plumosa* Treadwell, 1931
- Psammolyce arenosa* (delle Chiaje), 1841, as *Eupholoë nuda* Treadwell, 1936
- Psammolyce flava* Kinberg, 1855, as *Eupholoë acuminata* Treadwell, 1934
- Pseudeurythoë oculata* (Treadwell), 1941, as *Eurythoë oculata* Treadwell, 1941
- Pseudonereis palpata* (Treadwell), 1923, as *Nereis* (*Neanthes*) *palpata* Treadwell, 1923, and *Nereis disparsetosa* Treadwell, 1932
- Pseudonereis variegata* (Grube), 1856, as *Perinereis diversidentata* Treadwell, 1943
- Pseudopotamilla occelata* Moore, 1905, as *Laonome oculifera* Treadwell, 1914
- Rhynchonerella angelini* (Kinberg), 1866, as *Eulalia magnapupula* Treadwell, 1941
- Sabellastarte indica* Savigny, 1820, as *Laonome punctata* Treadwell, 1906, and *Laonome arenosa* Treadwell, 1943
- Sabellastarte magnifica* (Shaw), 1800, as *Meta-laonome brunnea* Treadwell, 1917, and *Laonome sanjuanensis* Treadwell, 1941
- Sclerostyla ctenactis* Mörch, 1863, as *Placostegus calciferus* Treadwell, 1929
- Scoloplos treadwelli* Eisig, 1914, as *Aricia cirrata* Treadwell, 1901
- Semiodera cariboum* (Grube), 1856, as *Semiodera glabra* Treadwell, 1928
- ?*Semiodera glabra* (Treadwell), 1901, as *Stylaroides glabra* Treadwell, 1901
- Sphaeropotamatus miamiensis* Treadwell, 1934
- Sphaerosyllis arenaceus* Claparède, 1863, as *Oophylax minuta* Treadwell, 1937
- Spirographis braziliensis* Treadwell, 1932
- Streblosoma crassibranchia* Treadwell, 1914, as *Streblosoma crassibranchiata* Treadwell, 1914
- Syllis complamata* Treadwell, 1901
- Terebella parvabranchiata* Treadwell, 1906
- Tharyx multifilis* Moore, 1909, as *Cirratulus inhamatus* Treadwell, 1937
- Thelepus branchiatus* Treadwell, 1906
- Thelepus cincinnatus* (Fabricius), 1780, as *Thelepus crassibranchiatus* Treadwell, 1901
- Thelepus crispus* Johnson, 1901, as *Streblosoma magna* Treadwell, 1937
- Thelepus haitiensis* Treadwell, 1931
- Thelepus setosus* (Quatrefages), 1865, as *Streblosoma verrilli* Treadwell, 1911
- Thormora jukesii* Baird, 1865, as *Lepidonotus atratus* Treadwell, 1940
- Tomopteris nissenii* Rosa, 1908, as *Tomopteris longisetis* Treadwell, 1936, and *Tomopteris opaca* Treadwell, 1928
- Tomopteris tentaculata* Treadwell, 1928
- Torea fasciata* Treadwell, 1943
- Travisiopsis benhami* Monro, 1936, as *Plotobia paucichaeta* Treadwell, 1943
- Travisiopsis coniceps* (Chamberlin), 1919, as *Nuchubranchia palmata* Treadwell, 1928
- Travisiopsis lanceolata* Southern, 1911, as *Travisiopsis atlantica* Treadwell, 1936
- Trypanosyllis adamanteus* Treadwell, 1914
- Typosyllis aciculata* Treadwell, 1945
- Typosyllis crassicirrata* Treadwell, 1925
- Vanadis crystallina* Greeff, 1876, as *Vanadis colata* Treadwell, 1928
- Vanadis formosa* Claparède, 1870, as *Vanadis fusca-punctata* Treadwell, 1906
- Vanadis minuta* Treadwell, 1906
- Vanadis uncinata* Treadwell, 1943
- Vermiliopsis bermudensis* (Bush), 1904, as *Vermilia glandulata* Treadwell, 1936
- Vermiliopsis multiannulata* (Moore), 1923, as *Vermiliopsis hawaiiensis* Treadwell, 1943, and *Vermiliopsis torquata* Treadwell, 1943

LIST OF SPECIES BY FAMILIES

APHRODITIDAE

- Aphrodita magna* Treadwell, 1925
Hermione hystrix (Savigny), 1818, as *Melaenis tropicus* Treadwell, 1934
Laetmonice nitida Treadwell, 1926

POLYNOIDAE

- Acholoë astericola* (delle Chiaje), 1841, as *Acholoë orbiculata* Treadwell, 1921
Arctonoë tuberculata (Treadwell), 1906, as *Harmothoë tuberculata* Treadwell, 1906
Arctonoë vittata (Grube), 1855, as *Lepidasthenia elegans* Treadwell, 1941
Chaetacanthus magnificus (Grube), 1875, as *Polynoë branchiata* Treadwell, 1901, and *Lepidonotus pilosus* Treadwell, 1937
Drieschia pellucida Moore, 1903, as *Drieschia atlantica* Treadwell, 1936
Eunoë crassa (Treadwell), 1924, as *Lagisca crassa* Treadwell, 1924
Eunoë purpurea Treadwell, 1936, as *Acanthiclepis longicirrata* Treadwell, 1941
Gattyana cirrosa (Pallas), 1776, as *Gattyana imbricata* Treadwell, 1926
Halosydna latior Chamberlin, 1919, as *Halosydna obtusa-cirrata* Treadwell, 1937
Halosydnella fusca-maculata (Treadwell), 1924, as *Halosydna fusca-maculata* Treadwell, 1924, and *Halosydna fuscomarginata* Treadwell, 1924
Halosydnella grisea (Treadwell), 1929, as *Halosydna grisea* Treadwell, 1929
Halosydnella oculata (Treadwell), 1926, as *Halosydna oculata* Treadwell, 1926
Harmothoë crucis (Grube), 1856, as *Harmothoë lanceocirrata* Treadwell, 1928, and *Harmothoë lanceolata* Treadwell, 1928
Harmothoë imbricata (Linnaeus), 1767, as *Harmothoë levis* Treadwell, 1937
Harmothoë sylliformia Treadwell, 1928
Harmothoë tenebricosa Moore, 1910, as *Eunoë exoculata* Treadwell, 1923
Harmothoë trimaculata (Treadwell), 1924, as *Evarnella trimaculata* Treadwell, 1924
Harmothoë variegata Treadwell, 1917
Harmothoë villosa Treadwell, 1926
Hermenia verruculosa Grube, 1856, as *Polynoë nodosa* Treadwell, 1901
Lepidametria commensalis Webster, 1879, as *Lepidasthenia lactea* Treadwell, 1939
Lepidasthenia alba (Treadwell), 1906, as *Polynoë alba* Treadwell, 1906, and *Polynoë lucida* Treadwell, 1906
Lepidasthenia interrupta (Marenzeller), 1902, as *Lepidasthenia ocellata* Treadwell, 1936

- Lepidasthenia natans* (Chamberlin), 1919, as *Lepidasthenia longicirrata* Treadwell, 1928
Lepidasthenia rufa Treadwell, 1928, as *Lepidasthenia variegata* Treadwell, 1928
Lepidasthenia varius Treadwell, 1917, as *Lepidasthenia picta* Treadwell, 1928
Lepidasthenia virens (Blanchard), 1849, as *Lepidasthenia ornata* Treadwell, 1937
Lepidasthenia sp., juvenile, as *Lepidonotus inquilinus* Treadwell, 1917
Lepidonotus caelorus Moore, 1903, as *Polynoë spicula* Treadwell, 1906, and *Lepidonotus minutus* Treadwell, 1936
Lepidonotus sublevis Verrill, 1873, as *Lepidonotus pallidus* Treadwell, 1939
Polynoë gracilis (Verrill), 1874, as *Enipo cirrata* Treadwell, 1925
Polynoella brunnea Treadwell, 1943
Thormora jukesii Baird, 1865, as *Lepidonotus atratus* Treadwell, 1940

POLYDONTIDAE

- Eupanthalis maculosa* (Treadwell), 1931, as *Macellicephala maculosa* Treadwell, 1931
Eupanthalis mutilata (Treadwell), 1906, as *Polynoë mutilata* Treadwell, 1906, and *Eupanthalis oahuensis* Treadwell, 1906
Eupolyodontes elongata (Treadwell), 1931, as *Iphionella elongata* Treadwell, 1931
Panthalis evanida (Treadwell), 1926, as *Eupanthalis evanida* Treadwell, 1926
Panthalis pacifica Treadwell, 1914
Panthalis pustulata Treadwell, 1924, as *Acoetes magnifica* Treadwell, 1929
Polyodontes oculatea (Treadwell), 1901, as *Panthalis oculatea* Treadwell, 1901
Polyodontes panamensis (Chamberlin), 1919, as *Polyodontes californicus* Treadwell, 1941

SIGALIONIDAE

- Leanira grubei* (Treadwell), 1901, as *Sthenelais grubei* Treadwell, 1901
Leanira hysticis Ehlers, 1874, as *Eupholoë cirrata* Treadwell, 1934
Psammolyce arenosa (delle Chiaje), 1841, as *Eupholoë nuda* Treadwell, 1936
Psammolyce flava Kinberg, 1855, as *Eupholoë acuminata* Treadwell, 1934

PAREULEPIDAE

- Pareulepis fimbriata* (Treadwell), 1901, as *Eulepis fimbriata* Treadwell, 1901
Pareulepis wyvillei (McIntosh), 1885, as *Eulepis splendida* Treadwell, 1901

AMPHINOMIDAE

- ?*Benthoscolex microcarunculata* (Treadwell), 1901, as *Amphinome microcarunculata* Treadwell, 1901
Hipponoë multibranchiata (Treadwell), 1940, as *Metamphnime multibranchiata* Treadwell, 1940
 ?*Pareurythoë elongata* (Treadwell), 1931, as *Hipponoë elongata* Treadwell, 1931
Pseudeurythoë oculata (Treadwell), 1941, as *Eurythoë oculata* Treadwell, 1941
Pherecardia striata (Kinberg), 1857, as *Hermodice pennata* Treadwell, 1901
Pherecardia sp., as *Hermodice pennata tutuilen-sis* Treadwell, 1926

EUPHROSINIDAE

- Euphrosine branchiata* Treadwell, 1939, as *Euphrosyne branchiata* Treadwell, 1939
Euphrosine longisetis Treadwell, 1939, as *Euphrosyne longisetis* Treadwell, 1939

PHYLLODOCIDAE

- Anaitides madeirensis* Langerhans, 1879, as *Anaitides minuta* Treadwell, 1937, *Mystides gracilis* Treadwell, 1941, and *Phyllodoce varia* Treadwell, 1917
Anaitides panamensis (Treadwell), 1917, as *Phyllodoce panamensis* Treadwell, 1917
Anaitides tenuissima (Grube), 1878, as *Phyllodoce fusca-cirrata* Treadwell, 1926
Eteone ?longa (Fabricius), 1870, as *Eteone tuberculata* Treadwell, 1922
Eteone pacifica Hartman, 1936, as *Eteone maculata* Treadwell, 1922
Eulalia foliosa Treadwell, 1924
Eulalia myriacyclum (Schmarda), 1861, as *Eulalia quinquelineata* Treadwell, 1901
Phyllodoce magna-oculata Treadwell, 1901
Phyllodoce nicoyensis Treadwell, 1928
Phyllodoce pulla Treadwell, 1926
Phyllodoce stigmata Treadwell, 1925
Phyllodoce tortugae Treadwell, 1917
Phyllodoce violacea Treadwell, 1926, as *Phyllodoce variegata* Treadwell, 1926

ALCIOPIDAE

- Callizonella pigmenta* Treadwell, 1943, perhaps *Krohmia* sp.
Corynocephalus magnachaetus Treadwell, 1943
Naiades cantraimii delle Chiaje, 1828, as *Alciopa distorta* Treadwell, 1943, and perhaps *Alciopa mutilata* Treadwell, 1934
Rhynchonerella angelini (Kinberg), 1866, as *Eulalia magnapupula* Treadwell, 1941
Torea fasciata Treadwell, 1943

- Vanadis crystallina* Greeff, 1876, as *Vanadis colata* Treadwell, 1928
Vanadis formosa Claparède, 1870, as *Vanadis fusca-punctata* Treadwell, 1906
Vanadis minuta Treadwell, 1906
Vanadis uncinata Treadwell, 1943

LOPADORHYNCHIDAE

- Halyplanes gracilis* Reibisch, 1893, as *Haliplanella pacifica* Treadwell, 1943
Lopadorhynchus varius Treadwell, 1943

IOSPILIDAE

- Iospilus phalacroides* Viguier, 1886, as *Phalacrophorus niger* Treadwell, 1943
Phalacrophorus pictus Greeff, 1879, as *Phalacrophorus maculatus* Treadwell, 1943
Phalacrophorus uniformis Reibisch, 1895, as *Phalacrophorus attenuatus* Treadwell, 1943

TYPHLOSCOLECIDAE

- Travisiopsis benhami* Monro, 1936, as *Plotobia paucichaeta* Treadwell, 1943
Travisiopsis coniceps (Chamberlin), 1919, as *Nuchubbranchia palmata* Treadwell, 1928
Travisiopsis lanceolata Southern, 1911, as *Travisiopsis atlantica* Treadwell, 1936

TOMOPTERIDAE

- Tomopteris nisseni* Rosa, 1908, as *Tomopteris opaca* Treadwell, 1928, and *Tomopteris longisetis* Treadwell, 1936
Tomopteris tentaculata Treadwell, 1928

HESIONIDAE

- ?*Dalhousiella longicirrata* (Treadwell), 1901, as *Castalia longicirrata* Treadwell, 1901
Mysta ornata (Grube), 1878, as *Mysta maculata* Treadwell, 1920
 ?*Leocrates oculata* (Treadwell), 1906, as *Castalia oculata* Treadwell, 1906
 ?*Nereimyra mutilata* (Treadwell), 1901, as *Castalia mutilata* Treadwell, 1901

PILARGIIDAE

- Ancistrostylis tentaculata* Treadwell, 1941
Epitoka pelagica Treadwell, 1943, questionably pilargiid or syllid

SYLLIDAE

- Autolytus pacificus* Treadwell, 1943
Autolytus varius Treadwell, 1914
Haplosyllis spongicola (Grube), 1855, as *Haplosyllis gula* Treadwell, 1924
Myriana cirrata Treadwell, 1931
Odontosyllis enopla Verrill, 1900, as *Autolytus bidens* Treadwell, 1941

- Odontosyllis octodentata* Treadwell, 1917
Pionosyllis manca Treadwell, 1931, questionable
Sphaerosyllis arenaceus Claparède, 1863, as
Oophylax minuta Treadwell, 1937
Syllis complanata Treadwell, 1901
Trypanosyllis adamanteus Treadwell, 1914
Typosyllis aciculata Treadwell, 1945
Typosyllis crassicirrata Treadwell, 1925

NEREIDAE

- Ceratonereis anchylochaeta* (Horst), 1924, as
Ceratonereis longicauda Treadwell, 1943
Ceratonereis hircincola (Eisig), 1870, as *Nereis*
(Ceratonereis) bartiletti Treadwell, 1937
Ceratonereis mirabilis Kinberg, 1866, as *Cerato-*
nereis singularis Treadwell, 1929, and perhaps
Nereis singularis Treadwell, 1943
Ceratonereis paucidentata (Moore), 1903, as
Nereis (Ceratonereis) alaskensis Treadwell,
 1921
Laeonereis culveri (Webster), 1879, as *Nereis*
(Leptonereis) acuta Treadwell, 1923, and *Lep-*
tonereis nota Treadwell, 1941
Leptonereis egregiacirrata Treadwell, 1924, ques-
 tionable
Lycastis kartaboensis (Treadwell), 1926, as *Na-*
monereis kartaboensis Treadwell, 1926
Neanthes succinea (Frey and Leuckart), 1847,
 as *Nereis (Neanthes) australis* Treadwell, 1923
Nereis amoyensis (Treadwell), 1936, as *Nereis*
(Neanthes) amoyensis Treadwell, 1936
Nereis arroyensis Treadwell, 1901
Nereis heterocirrata Treadwell, 1931
Nereis (Leptonereis) distorta Treadwell, 1936,
 questionable
Nereis pelagica largoensis Treadwell, 1931, as
Nereis brevicirrata Treadwell, 1929, and *Nereis*
largoensis Treadwell, 1931
Nereis riisei Grube, 1856, as *Nereis ambiguus*
 Treadwell, 1937, *Nereis decora* Treadwell, 1932,
Nereis (Neanthes) paucidentata Treadwell,
 1939, and *Nereis (Neanthes) varia* Treadwell,
 1941
Nicon mexicana (Treadwell), 1942, as *Lepto-*
nereis mexicana Treadwell, 1942
Perinereis aibuhitensis Grube, 1878, as *Nereis*
(Neanthes) linea Treadwell, 1936, and *Nereis*
(Neanthes) orientalis Treadwell, 1936
Perinereis brevicirrata (Treadwell), 1920, as
Nereis brevicirrata Treadwell, 1920
Perinereis helleri Grube, 1878, as *Neanthes ob-*
scura Treadwell, 1928
Perinereis monterea (Chamberlin), 1918, as
Nereis spinifera Treadwell, 1929
Platynereis bicanaliculata (Baird), 1863, as
Nereis notomaculata Treadwell, 1914
Platynereis dumerilli (Audouin and Milne-

- Edwards), 1834, as *Uncinereis lutea* Treadwell,
 1928, *Leptonereis maculata* Treadwell, 1928,
Uncinereis trimaculosa Treadwell, 1940, and
Eunereis africana Treadwell, 1943
Platynereis polyscalma Chamberlin, 1919, as
Nereis (Platynereis) integer Treadwell, 1920
Pseudonereis palpata (Treadwell), 1923, as
Nereis (Neanthes) palpata Treadwell, 1923, and
Nereis disparsetosa Treadwell, 1932
Pseudonereis variegata (Grube), 1856, as *Peri-*
nereis diversidentata Treadwell, 1943

GLYCERIDAE

- Glycera ?capitata* Oersted, 1843, as *Hemipodia*
canadensis Treadwell, 1937
Glycera tessellata Grube, 1863, as *Glycera abran-*
chiata Treadwell, 1901, and *Glycera spadix*
 Treadwell, 1943

GONIODIDAE

- Goniada brunnea* Treadwell, 1906
Goniada oculata Treadwell, 1901, questionably
Glycinde sp.
Goniada quinquelabiata Augener, 1906, as *Goni-*
ada magna Treadwell, 1945
Goniada teres Treadwell, 1931

ONUPHIDAE

- Hyalinoecia branchiata* Treadwell, 1934
Nothria stigmatis (Treadwell), 1922, as *Onuphis*
stigmatis Treadwell, 1922
Onuphis branchiata Treadwell, 1931

EUNICIDAE

- Eunice afra* Peters 1854, as *Leodice aciculata*
 Treadwell, 1922, *Leodice bucciensis* Treadwell,
 1921, *Leodice flava-punctata* Treadwell, 1922,
Leodice guanica Treadwell, 1921, *Leodice swi-*
ensis Treadwell, 1922, and questionably *Leodice*
notata Treadwell, 1921
Eunice antennata Savigny, 1818, as *Eunice inter-*
rupta Treadwell, 1906
Eunice argentinensis (Treadwell), 1929, as *Leo-*
dice argentinensis Treadwell, 1929
Eunice armillata (Treadwell), 1922, as *Leodice*
armillata Treadwell, 1922, and *Leodice gracili-*
cirrata Treadwell, 1922
Eunice auriculata Treadwell, 1900 and 1901
Eunice bilobata Treadwell, 1906
Eunice crassi-tentaculata (Treadwell), 1922, as
Leodice crassi-tentaculata Treadwell, 1922
Eunice filamentosa Grube, 1856, as *Leodice spon-*
gicola Treadwell, 1921
Eunice grubei Gravier, 1900, as *Leodice bifirmi-*
cirrata Treadwell, 1922
Eunice hawaiiensis Treadwell, 1906
Eunice nicidioformis Treadwell, 1906

- Eunice (Nidion) cariboea* Grube, 1856, as *Eunice culebra* Treadwell, 1901
Eunice (Nidion) gracilis Crossland, 1903, as *Nidion fusca-fasciata* Treadwell, 1922
Eunice norvegica (Linnaeus), 1767, as *Leodice arcturi* Treadwell, 1928
Eunice savignyi (Grube), 1878, as *Leodice langi* Treadwell, 1943
Eunice tenuis (Treadwell), 1921, as *Leodice tenuis* Treadwell, 1921
Eunice tubifer Crossland, 1904, as *Leodice tubicola* Treadwell, 1922
Eunice vittata (delle Chiaje), 1828, as *Leodice rubrivittata* Treadwell, 1921
Lysidice collaris Grube, 1870, as *Lysidice sulcata* Treadwell, 1901, *Lysidice parva* Treadwell, 1922, and questionably *Lysidice fusca* Treadwell, 1922
Lysidice tortugae Treadwell, 1921
Marphysa aransensis Treadwell, 1939
Marphysa bellii oculata Treadwell, 1921
Marphysa brevitentaculata Treadwell, 1921
Marphysa minima (Hansen), 1882, as *Marphysa languida* Treadwell, 1921
Marphysa mossambica (Peters), 1854, as *Marphysa simplex* Treadwell, 1922
Marphysa orientalis Treadwell, 1936
Marphysa regalis Verrill, 1900, as *Marphysa fragilis* Treadwell, 1911
Marphysa sanguinea (Montagu), 1815, as *Marphysa acicularum brevivibranchiata* Treadwell, 1921, *Marphysa nobilis* Treadwell, 1917, and *Marphysa viridis* Treadwell, 1917
Palola siciliensis (Grube), 1840, as *Leodice viridis vernalis* Treadwell, 1922
Paramarphysa teres Treadwell, 1922

LUMBRINERIDAE

- Lumbrineris bicirrata* (Treadwell), 1929, as *Lumbrineris bicirrata* Treadwell, 1929
Lumbrineris bilabiata (Treadwell), 1901, as *Lumbriconereis bilabiata* Treadwell, 1901
Lumbrineris branchiata (Treadwell), 1921, as *Lumbrineris branchiata* Treadwell, 1921
Lumbrineris candida (Treadwell), 1921, as *Lumbrineris candida* Treadwell, 1921
Lumbrineris grandis (Treadwell), 1906, as *Lumbriconereis grandis* Treadwell, 1906
Lumbrineris inflata Moore, 1911, as *Lumbrineris cervicalis* Treadwell, 1922, and questionably *Lumbrineris cingulata* Treadwell, 1917
Lumbrineris, near *latreilli* Audouin and Milne-Edwards, 1834, as *Lumbrineris paucidentata* Treadwell, 1921
Lumbrineris minuscula Moore, 1911, as *Lumbriconereis minuta* Treadwell, 1906
Lumbrineris nuchalis (Treadwell), 1921, as *Lum-*

- brineris nuchalis* Treadwell, 1921
Lumbrineris parvapedata (Treadwell), 1901, as *Lumbriconereis parvapedata* Treadwell, 1901, and *Lumbrineris elongata* Treadwell, 1931
Lumbrineris similabris (Treadwell), 1926, as *Lumbrineris similabris* Treadwell, 1926
Lumbrineris treadwelli, new name, for *Lumbriconereis maculata* Treadwell, 1901
Lumbrineris zonata (Johnson), 1901, as *Lumbrineris singularisetis* Treadwell, 1931

ARABELLIDAE

- Arabella iricolor* (Montagu), 1804, as *Arabella dubia* Treadwell, 1922, and questionably *Drilonereis pinnata* Treadwell, 1921 and *Arabella setosa* Treadwell
Arabella iridescens Treadwell, 1906
Arabella semimaculata (Moore), 1911, as *Arabella pacifica* Treadwell, 1941
Arabella sp., as *Aracoda attenuata* Treadwell, 1911
Drilonereis lumbricus Treadwell, 1922
Drilonereis planiceps (Grube), 1878, as *Drilonereis paucidentata* Treadwell, 1922
Drilonereis spatula (Treadwell), 1911, as *Aracoda spatula* Treadwell, 1911, and *Drilonereis brunnea* Treadwell, 1921
Drilonereis sp., juvenile, as *Drilonereis similis* Treadwell, 1921
Notocirrus attenuatus (Treadwell), 1906, as *Arabella attenuata* Treadwell, 1906

LYSARETIDAE

- Lysarete brasiliensis* Kinberg, 1865, as *Oenone brevimaxillata* Treadwell, 1931

ORBINIIDAE

- Haploscoloplos robustus* (Verrill), 1873, as *Scoloplos rufa* Treadwell, 1941
Naineris mutilata Treadwell, 1931, as *Nainereis mutilata* Treadwell, 1931
Naineris setosa (Verrill), 1900, as *Anthostoma latacapitata* Treadwell, 1901
Scoloplos treadwelli Eisig, 1914, as *Aricia cirrata* Treadwell, 1901

SPIONIDAE

- Boccardia* sp., as *Polydora californica* Treadwell, 1914
Laonice cirrata (Sars), 1851, as *Aricidea alata* Treadwell, 1901
Nerine alaskensis (Treadwell), 1914, as *Scolecolepis alaskensis* Treadwell, 1914
Nerine cirratulus hirsuta (Treadwell), 1928, as *Spio hirsuta* Treadwell, 1928
Nerinides acuta (Treadwell), 1914, as *Spio acuta* Treadwell, 1914

- Nerinides agilis* (Verrill), 1873, as *Nerine minuta* Treadwell, 1939
Prionospio treadwelli Hartman, 1951, as *Prionospio plumosa* Treadwell, 1931

CHAETOPTERIDAE

- Phyllochaetopterus verrillii* Treadwell, 1943

CIRRATULIDAE

- Cirratulus elongatus* Treadwell, 1901, questionable
Cirriiformia ?chefooensis (Grube), 1877, as *Cirratulus branchiatus* Treadwell, 1936
Cirriiformia filigera (delle Chiaje), 1841, as *Audouinea oculata* Treadwell, 1932, and *Audouinea pygidia* Treadwell, 1936
Cirriiformia hawaiiensis, new name for *Audouinea branchiata* Treadwell, 1943
Cirriiformia punctata (Grube), 1859, as *Cirratulus nigromaculata* Treadwell, 1901
Cirriiformia semicincta (Ehlers), 1905, as *Audouinea maculata* Treadwell, 1929
Cirriiformia tentaculata (Montagu), 1808, as *Cirratulus multicirratus* Treadwell, 1936, and *Cirratulus pallidus* Treadwell, 1931
Tharyx multifilis Moore, 1909, as *Cirratulus inhamatus* Treadwell, 1937

OPHELIIDAE

- Armandia maculata* (Webster), 1884, as *Ammotrypane bermudiensis* Treadwell, 1936
Euzonus (*Thoracophelia*) *mucronata* (Treadwell), 1914, as *Ophelia mucronata* Treadwell, 1914
Ophelia magna (Treadwell), 1914, as *Ophelina magna* Treadwell, 1914
Polyophtalmus pictus (Dujardin), 1839, as *Polyophtalmus incertus* Treadwell, 1936, and *Polyophtalmus papillatus* Treadwell, 1943

FLABELLIGERIDAE

- Pherusa dubia* (Treadwell), 1929, as *Stylarioides dubius* Treadwell, 1929
Pherusa inflata (Treadwell), 1914, as *Trophonia inflata* Treadwell, 1914, and *Trophonia minuta* Treadwell, 1914
Semiodera cariboum (Grube), 1856, as *Semiodera glabra* Treadwell, 1928
?Semiodera glabra (Treadwell), 1901, as *Stylarioides glabra* Treadwell, 1901

CAPITELLIDAE

- Capitellides teres* Treadwell, 1939
Dasybranchus rectus Treadwell, 1901, questionable

MALDANIDAE

- Asychis fimbriata* (Treadwell), 1934, as *Maldanella fimbriata* Treadwell, 1934

- Euclymene corallicola* (Treadwell), 1929, as *Maldanella corallicola* Treadwell, 1929
Maldane cristata Treadwell, 1923
Maldane philippinensis Treadwell, 1931
Nicomache antillensis Augener, 1922, as *Nicomache antiguensis* Treadwell, 1924

SABELLARIIDAE

- Lygdamis asteriformis* (Augener), 1905, as *Hermella varians* Treadwell, 1901
Lygdamis philippinensis (Treadwell), 1926, as *Monorchos philippinensis* Treadwell, 1926
Phalacrostemma setosa (Treadwell), 1906, as *Sabellaria setosa* Treadwell, 1906
Phragmatopoma lapidosa Kinberg, 1867, as *Centrocorone spinifera* Treadwell, 1939

AMPHARETIDAE

- Ampharete arctica* Malmgren, 1866, as *Ampharete brevibranchiata* Treadwell, 1926
Ampharete eupalea Chamberlin, 1920, as *Ampharete seribranchiata* Treadwell, 1926
Asabellides sibirica (Wirén), 1883, as *Neosabellides alaskensis* Treadwell, 1943
Melinnexis tentaculata (Treadwell), 1906, as *Terebellides tentaculata* Treadwell, 1906

TEREBELLIDAE

- Lanice expansa* Treadwell, 1906
Loimia medusa (Savigny), 1820, as *Loimia minuta* Treadwell, 1929
Pista maculata (Dalyell), 1853, as *Pista groenlandica* Treadwell, 1937
Polymniella aurantiaca Verrill, 1900, as *Terebella hiata* Treadwell, 1931
Streblosoma crassibranchia Treadwell, 1914, as *Streblosoma crassibranchiata* Treadwell, 1914
Terebella parvabranchiata Treadwell, 1906
Thelepus branchiatus Treadwell, 1906
Thelepus cincinnatus (Fabricius), 1780, as *Thelepus crassibranchiatus* Treadwell, 1901
Thelepus crispus Johnson, 1901, as *Streblosoma magna* Treadwell, 1937
Thelepus haitiensis Treadwell, 1931
Thelepus setosus (Quatrefages), 1865, as *Streblosoma verrilli* Treadwell, 1911

SABELLIDAE

- Branchiomma nigromaculata* (Baird), 1865, as *Dasychone loandensis* Treadwell, 1943, *Dasychone ponce* Treadwell, 1901, and *Dasychonopsis arenosa* Treadwell, 1924
Eurato punctata Treadwell, 1926, questionable
Fabricia sabella (Ehrenberg), 1836, as *Haplobranchus atlanticus* Treadwell, 1932

Hypsicomus californicus (Treadwell), 1906, as *Potamilla californica* Treadwell, 1906
Hypsicomus torquatus (Grube), 1878, as *Sabella alba* Treadwell, 1917, *Hypsicomus purpureus* Treadwell, 1924, and questionably *Parasabella sulfurea* Treadwell, 1917
Megalomma splendida (Moore), 1905, as *Branchiomma disparoculatum* Treadwell, 1914
Potamethus elongatus (Treadwell), 1906, as *Potamilla elongata* Treadwell, 1906
Potamilla minuta (Treadwell), 1941, as *Parasabella minuta* Treadwell, 1941
Pseudopotamilla ocellata Moore, 1905, as *Laonome oculifera* Treadwell, 1914
Sabellastarte indica Savigny, 1820, as *Laonome punctata* Treadwell, 1906, and *Laonome arenosa* Treadwell, 1943
Sabellastarte magnifica (Shaw), 1800, as *Meta-lonome brunnea* Treadwell, 1917, and *Laonome sanjuanensis* Treadwell, 1941
Spirographis braziliensis Treadwell, 1932

SERPULIDAE

Eupomatus dianthus (Verrill), 1873, *decorus* Treadwell, 1931, as *Eupomatus decorus* Treadwell, 1931
Eupomatus similis Treadwell, 1929
Eupomatus uncinatus Philippi, 1844, as *Eupomatus operculata* Treadwell, 1929
Hydroides crucigera Mörch, 1863, as *Hydroides californicus* Treadwell, 1929
Hydroides parvus (Treadwell), 1901, as *Eupomatus parvus* Treadwell, 1901
Pomatoceros caeruleus (Schmarda), 1861, as *Pomatoceros davaoensis* Treadwell, 1942
Sclerostyla ctenactis Mörch, 1863, as *Placostegus calciferus* Treadwell, 1929
Sphaeropomatus miamiensis Treadwell, 1934
Vermiliopsis bermudensis (Bush), 1904, as *Vermilia glandulata* Treadwell, 1936
Vermiliopsis multiannulata (Moore), 1923, as *Vermiliopsis hawaiiensis* Treadwell, 1943, and *Vermiliopsis torquata* Treadwell, 1943

SYSTEMATIC DISCUSSION

POLYNOIDAE

Acholoë astericola (delle Chiaje), 1841

Polynoë astericola DELLE CHIAJE, 1841, p. 106.

Acholoë orbiculata TREADWELL, 1921a, pp. 1-3, figs. 1-8.

The holotype of *Acholoë orbiculata* comes from the Belgian Congo. It is a slender specimen about 50 mm. long. Many pairs of elytra cover the dorsal side of the body. Cirriferous parapodia have unique nail-headed processes shown by Treadwell (fig. 5). The specimen agrees fully with *Acholoë astericola* (delle Chiaje) which is fully diagnosed by Fauvel (1923a, p. 94, fig. 36). Augener (1918, p. 152) has recorded the species from western Africa.

Arctonoë vittata (Grube), 1855

Polynoë vittata GRUBE, 1855, pp. 82-83.

Lepidasthenia elegans TREADWELL, 1941c, pp. 19-20, figs. 4-7.

The holotype of *Lepidasthenia elegans* comes from east of Cedros Island, western Mexico, in 45 fathoms. It agrees fully with *Arctonoë vittata* (Grube). Anteriormost notosetae are delicately bidentate at the distal end. The specimen has been preserved in alcohol; consequently the typical broad, dark, transverse bar on the dorsum of the anterior end is faded. Variations in color pattern are discussed elsewhere (Hartman, 1948a, p. 11). The species is common throughout the northeast Pacific and is a frequent commensal with mollusks, echinoderms, and other invertebrates (Hartman, 1939b, pp. 29-30, pl. 3, figs. 33-37).

Drieschia pellucida Moore, 1903

Drieschia pellucida MOORE, 1903, pp. 794-798, pl. 55, figs. 1-2.

Drieschia atlantica TREADWELL, 1936b, pp. 52-53, figs. 7-9.

The holotype of *Drieschia atlantica* was taken off Bermuda in 1000 fathoms. It agrees fully with *D. pellucida* Moore (1903), originally described from 70 miles off Massachusetts in the Gulf Stream. In the parapodia the two or three larger inferiormost setae resemble those of species of *Scalisetosus* McIntosh, but the basalmost scale is less pronounced. *Drieschia pel-*

cida occurs in deep waters of the Gulf Stream. Fauvel (1939, p. 30) regards it as the same as *D. pelagica* Michaelsen (1892) from Ceylon.

Lepidasthenia virens (Blanchard), 1849

Polynoë virens BLANCHARD, 1849, p. 16, pl. 1, fig. 2.

Lepidasthenia ornata TREADWELL, 1937b, pp. 145-147, figs. 12-15.

The holotype of *Lepidasthenia ornata* comes from Arena Bank, western Mexico, in 35 fathoms; it has entangled terebellid tentacles, indicating that it was associated with a host species. It is a typical representative of *Lepidasthenia virens* (Blanchard) known to be a commensal of *Thelepus crispus* Johnson. It is noteworthy that both the polynoid and its host species (as *Streblosoma magna*) are recorded in the same report as coming from the same station. *Lepidasthenia virens* is more fully described (Hartman, 1939b, pp. 46-47, pl. 8 as *Lepidametria*).

Lepidasthenia varius Treadwell, 1917

Lepidasthenia varius TREADWELL, 1917b, pp. 259-260, figs. 11-16.

Lepidasthenia picta TREADWELL, 1928a, pp. 456-457, figs. 10-13; 1941c, pp. 18-19.

The type of *Lepidasthenia varius* comes from Dry Tortugas, Florida, and that of *Lepidasthenia picta* from the Galapagos Islands in 15 feet. Parapodia are distally rounded and compressed. Neurosetae are deeply incised at the tip in all segments; the superiormost one or two in a fascicle are somewhat slenderer than subacicular ones but otherwise similar. Setal fascicles are fuller in anterior segments, with 15 to 20 setae in a bundle, and more spinous along their free length than those in back where they number about seven in a bundle. Treadwell (1941c, p. 19) gave corrections and additions to the original account and recorded the species more extensively from Port Parker, Costa Rica, in 1½ to 4 fathoms.

Lepidasthenia rufa Treadwell, 1928

Lepidasthenia rufa TREADWELL, 1928a, pp. 457-458, figs. 14-17.

Lepidasthenia variegata TREADWELL, 1928a, pp. 458-460, figs. 18-21.

Types of both *Lepidasthenia rufa* and *L. variegata* originate from Puerto Rico; they are identical. The notopodium is a long, digitate, and very slender lobe arising from the dorsal midlength of the neuropodium; it is supported by a single aciculum. The neuropodium has setae of two kinds; supra-acicular ones are longer and slenderer than subacicular ones and have an entire tip. Subacicular setae are abruptly thicker and have a distal end that is incised, with the accessory tooth short and thick at the base and shorter than the main tooth or fang. The species is known only from Puerto Rico.

***Lepidasthenia natans* (Chamberlin), 1919**

Harmopsides natans CHAMBERLIN, 1919, pp. 48-51, pl. 6, figs. 1-5.

Lepidasthenia longicirrata TREADWELL, 1928a, pp. 460-461, figs. 22-26.

The holotype of *Lepidasthenia longicirrata* comes from west of Peru and may thus be pelagic. It agrees in all details with *Lepidasthenia natans* (Chamberlin) described from west of Peru, southwest coast of Central America, and between Peru and Easter Island. The body is unusually short for species of this genus, but the absence of notopodial fascicles and the lepidonotoid prostomium are characters of *Lepidasthenia* (Hartman, 1942a, pp. 102-103). The so-called notopodial setae described for *L. longicirrata* are embedded acicula. *Lepidasthenia natans* has unique neurosetae; in the superior part of the fascicle they are very long, distally attenuated, and delicately spinous; farther down they gradually shorten, become more distinctly spinous, and have a bifid tip. The species is not known outside the type localities.

***Lepidasthenia* sp., juvenile stage**

Lepidonotus inquilinus TREADWELL, 1917, p. 258, figs. 4-10.

The holotype and cotype collections contain individuals small to about 15 mm. in length, taken July 6, 1915, on a *Marphysa* species at Mangrove Key in Key West Harbor, Florida. They are immature specimens of a species of *Lepidasthenia*. The number of elytral scars varies, but none has more than 15 pairs; posterior segments are immature, prostomial antennae are lepidonotoid. Parapodia are long, laterally projecting, with notopodia reduced to

long, slender lobes; they have embedded acicula and one or two slender notosetae. Neuro-podia are much larger and have a prolonged superior lobe. The supra-acicular fascicle has a few slenderer setae with a long spinous region. Subacicular setae are more numerous, coarser, and gradually shorter at the lowermost end of the fascicle. The presence of a few notosetae is typical of *Lepidametria commensalis* Webster, which is known to be present in southern Florida. *Lepidametria* Webster is hardly distinguishable from *Lepidasthenia* Malmgren, except for the presence of notosetae in the first, and their absence in the second, genus, a character that varies with the age of the individuals.

***Thormora jukesii* Baird, 1865**

Thormora jukesii BAIRD, 1865, pp. 199-200.

Lepidonotus atratus TREADWELL, 1940, pp. 3-4, figs. 10-13.

The type of *Lepidonotus atratus* comes from Digos, Gulf of Devas, Philippine Islands. It retains a few of the two kinds of notosetae characteristic of *Thormora* Baird; some are coarser and spinous along their free length; others are slenderer, smooth along their free length, and hastate in shape. Elytra lack marginal fringe. *Thormora jukesii* is a common Indo-Pacific species (Pruvot, 1930, pp. 9-11, pl. 1, figs. 11-15).

***Harmothoë crucis* (Grube), 1856**

Polynoë crucis GRUBE, 1856, p. 47.

Harmothoë lanceocirrata TREADWELL, 1928a, pp. 454-455, figs. 5-9.

The holotype of *Harmothoë lanceocirrata* comes from the Leeward Islands east of Puerto Rico. It agrees in all details with the West Indian *Harmothoë crucis* (Grube). Diagnostic features include the elytra that are conspicuously fringed along their outer lateral margins and have macrotubercles on their dorsal surface. The tubercles are spines, some with entire tip, others with bifid or trifid tip. More numerous ones are much finer spines. Neurosetae are about as coarse as notosetae; all are in full, dense fascicles and project laterally. Inferiormost setae terminate in a bifid tip in which the accessory tooth is at a noticeable distance from the main fang. Uppermost neurosetae are longest and have an entire tip. Tips of setae in the middle of the fascicle intergrade from

an entire to a bifid one. Acicular lobes of both notopodia and neuropodia are prolonged laterally as slender processes, largely concealed by the full setal fascicles. The prostomial eyes are small, or one or two of the four may be absent. *Harmothoë crucis* is a common intertidal polynoid in West Indian seas. Ehlers (1887, pp. 49-50, pl. 10, figs. 9-10, pl. 11, fig. 1, as *Poly-noë polytricha*) has given a comprehensive account, and Augener (1925, pp. 22-23) a partial synonymy.

***Harmothoë sylliformia* Treadwell, 1928**

Harmothoë sylliformia TREADWELL, 1928a, pp. 452-453, figs. 1-4.

The holotype comes from Tagus Cove, Al-bemarle Island, Galapagos Islands, in 300 to 700 fathoms. It is accompanied with a calanoid copepod and may thus be a pelagic species. The 20 or more specimens in the collection are in various stages of development; one of them shows traces of the fifteenth elytraphoral scar and the others are less fully developed.

The prostomium is broadly bilobed; its frontal peaks are very slender, papillar, and continuous with the broad ocular lobes. The four eyes are moderately large; the anterior pair is located at the sides and just in front of the widest part of the prostomium; the posterior eyes are near the posterior margin of the prostomium and also lateral. The median prostomial furrow is little marked. The base of the median antenna is large and broad; it fills the space between the slender prostomial peaks. Palpi and cirri are smooth. Notosetae are more than twice as thick as neurosetae but much shorter; they are transversely spinous and terminate in an entire, blunt tip. They range from nearly straight to arcuate ones. Neurosetae are much slenderer and longer; they range from longer spinous ones in the superiormost part of the fascicle, to short, thick spinous ones below. All neurosetae are delicately bifid at the tip, with the accessory tooth short and widely divergent from the main fang. Typical neuropodia have about 25 or more setae in a bundle; others have fewer. Elytra are largely lacking from the collection. A detached one in the bottom of a paratype vial is broadly oval and weakly excavate at its anterior margin; its scar of attachment is eccentric. The excavate region in front of the scar has a lunar patch of microtuber-

cles, all of one kind and closely spaced; they are limited to this area. Other parts of the elytrum are smooth except for a few widely strewn, digitate tubercles that are delicately attached and perhaps easily lost.

Harmothoë sylliformia is known only from deep waters off the Galapagos Islands.

***Harmothoë variegata* Treadwell, 1917**

Harmothoë variegata TREADWELL, 1917b, pp. 260-261, pl. 1, figs. 17-18, pl. 2, figs. 1-3.

The holotype comes from Dry Tortugas, Florida, taken June to July, 1909. There are 15 pairs of elytra, and the last seven segments are exposed. Elytra have a pigment pattern as shown by Treadwell (fig. 17). The prostomium has four small, widely spaced eyes. Prostomial peaks are little developed. Notosetae are very coarse, distally slightly bifid and weakly pectinated along their free length. Neurosetae are slenderer and of two kinds; most are deeply bidentate at the tip and pectinated beyond their thickest region; a single lowermost one is distally entire as shown by Augener (1927b, p. 46, figs. A-D, as *Paralepidonotus boholensis curacaoensis* Horst). This author used the confused generic name *Malmgrenia* McIntosh, and noted that *Harmothoë variegata* Treadwell was perhaps the same as Horst's species from Curaçao. He further referred *Harmothoë roberti* Augener (1922c, pp. 40-41) from Tortugas, Florida, to the same species and reviewed the confusion of generic names. Treadwell's specific name is the oldest.

Harmothoë variegata Treadwell is known from littoral areas of the West Indies.

***Eunoë purpurea* Treadwell, 1936**

Eunoë purpurea TREADWELL, 1936b, pp. 51-52, figs. 1-6.

Acanthicolepis longicirrata TREADWELL, 1941d, p. 26, figs. 1-4.

The holotype of *Eunoë purpurea* comes from off Bermuda in 500 to 900 fathoms; that of *Acanthicolepis longicirrata* is from off Bermuda in 500 to 800 fathoms. The two are identical. The prostomium is harmothoid; the body consists of fewer than 31 segments; elytophores number 15 pairs. Notosetae greatly exceed in thickness the neurosetae. On the prostomium the anterior eyes are at the sides; all are very large with the two of a side nearly

coalescent. *Eunoë purpurea* is known only from great depths off Bermuda; it may be a bathypelagic species.

SIGALIONIDAE

Psammolyce arenosa (delle Chiaje), 1941

Sigalion arenosum DELLE CHIAJE, 1841, pp. 58, 107, pl. 98, figs. 4-5.

Psammolyce rigida TREADWELL, 1901, p. 188; not Grube, 1868.

Eupholoë nuda TREADWELL, 1936b, pp. 53-54, figs. 10-14.

The holotype of *Eupholoë nuda* comes from Gurnets Rock, Bermuda, in 35 feet from coral. Although all elytra are missing, the scars are present on segments 2, 4, 5, 7 and all odd-numbered segments to 29, and on every segment thereafter to the posterior end. The four prostomial eyes are as first described. The second segment has the unique composite setae that characterize *Psammolyce arenosa* (delle Chiaje); these setae have a long spinous shaft and a short falcate appendage. The third segment has a very long slender dorsal cirrus. In typical neuropodia the most numerous composite setae are thick falcigers with short appendages; the lowermost are much slenderer and have longer appendages. *Psammolyce arenosa* has been widely reported from tropical parts of the West Indian and Atlantic regions. Augener (1933a, p. 193) has established some of the synonymy.

POLYOLONTIDAE

Polyodontes panamensis (Chamberlin), 1919

Panthalis panamensis CHAMBERLIN, 1919, pp. 86-89, pl. 11, figs. 4-8, pl. 12, figs. 1-6.

Polyodontes californicus TREADWELL, 1941c, pp. 20-21, figs. 9-12.

The holotype of *Polyodontes californicus* comes from Chamela Bay, Mexico, in 16 fathoms. It is posteriorly incomplete. Elytra are colored brown along their inner halves and fade to lighter brown at the sides; they are surrounded with a paler border. The individual agrees with *P. panamensis* (Chamberlin) first described from the Pacific side of Panama and recorded also from the Galapagos Islands, from shore to 89 fathoms (Hartman, 1939b, p. 84).

AMPHINOMIDAE

Pseudeurythoë oculata (Treadwell), 1941

Eurythoë oculata TREADWELL, 1941c, p. 18, figs. 1-3.

The type specimen is from Balboa, Panama, at the dock. The body is vermiform and measures about 180 mm. long; it was sexually mature in July. The prostomial caruncle is a very small papillar lobe at the postmedian margin of the prostomium as typical of *Pseudeurythoë* Fauvel. Branchiae are present from the third segment to near the posterior end of the body; they are dendritically branched and located at the posterior face of notopodia, behind the insertion of the dorsal cirrus. Notopodia have full, spreading fascicles of long, slender, nearly colorless setae and an accompanying single transverse series of several yellow acicula that terminate distally in an elongated knob. Neuro-podia have similar full spreading fascicles; they are accompanied with a transverse series of five or six thicker, darker spines, each with a short lateral boss some distance from the tip (about as shown by Treadwell, fig. 3, except that in most setae the lateral process is smaller than shown).

Pseudeurythoë oculata approaches *P. ambiguus* (Monro) recorded from the Pacific side of Panama and North Carolina (Hartman, 1945, p. 12); the latter lacks the conspicuous prostomial eyes.

?Pareurythoë elongata (Treadwell), 1931

Hipponoë elongata TREADWELL, 1931d, pp. 3-4, figs. 10-12.

Pareurythoë elongata HARTMAN, 1951, p. 28.

The holotype comes from Puerto Rico. It is large, measures about 185 mm. long, and grossly resembles a larger individual of *Eurythoë complanata* (Pallas) in size and proportions. It is at once distinguished from the latter for its prostomial parts. The prostomium is subquadrate; its posterior and lateral margins are largely concealed by a caruncle that has the form of a broadly divergent V with spreading branches and its base slightly prolonged so as to lie at the middorsum of the first setigerous segment. The distal ends of the caruncle extend forward and nearly conceal the two pairs of large dark eyes. The caruncle is flat depressed and thus easily overlooked, but its outlines are visible with subdued illumination or when the prostomium is turned to the side. The anterior pair of eyes is located at

the sides of the prostomium immediately at the sides of the posterior paired antennae. The posterior eyes can be seen from the side or when the overlying caruncle is pushed aside. The base of the median antenna is visible slightly behind the line that would connect the posterior paired eyes.

The first segment is setigerous and medially divided by the posterior base of the caruncle. The second segment extends across the body and is broader. Branchiae are first present from the third segment; they are large, dendritically branched, and continued on segments to near the posterior end of the body. Notopodia have thick fascicles of yellow, very slender, distally pointed setae. Neuropodia have similar setae, accompanied with fascicles of somewhat thicker spines that are distally blunt and have a short lateral spur, as first described.

The generic name, *Pareurythoe* Gustafson, is questioned because of the unique caruncle which is unlike that of any other amphinomid. The various species of *Pareurythoe* are discussed elsewhere (Hartman, 1951, p. 28). *?Pareurythoe oculata* differs from others in having an overlapping caruncle.

PHYLLODOCIDAE

Anaitides madeirensis (Langerhans), 1879

Phyllodoce (Anaitis) madeirensis LANGERHANS, 1879, pp. 307-308, pl. 17, fig. 44.

Phyllodoce varia TREADWELL, 1928a, p. 467, figs. 69, 70.

Anaitides minuta TREADWELL, 1937b, p. 148, pl. 2, figs. 16-18.

Mystides gracilis TREADWELL, 1941d, pp. 27-28, figs. 5-7.

The type of *Anaitides minuta* is from Arena Bank, western Mexico, in 35 fathoms; that of *Mystides gracilis* is from off Bermuda at the surface. Both are representatives of *Anaitides* Czerniawsky. The proboscis has, on either side near the base, about six longitudinal rows of papillae with six or more in a row. The prostomium has a nuchal papilla at its postmedian incision but no median antenna. The first two tentacular segments are fused, thus not as in *Mystides* Théel in which they are distinct. In posterior segments the dorsal cirri are sub-tetragonal as typical for *Anaitides madeirensis* (Langerhans).

Phyllodoce varia comes from the Galapagos

Islands, probably at the surface; it is a small immature stage of *Anaitides* and its proboscical characters are those of *A. madeirensis* (Langerhans). In the original illustration (Treadwell, fig. 69) the nuchal papilla is not shown; it should be indicated at the postmedian incision of the prostomium. *Anaitides madeirensis* has a circum-mundane distribution in warm littoral seas (Fauvel, 1923a, pp. 150-151, fig. 53, as *Phyllodoce*).

?Anaitides pulla (Treadwell), 1926

Phyllodoce pulla TREADWELL, 1926a, pp. 12-13, figs. 19-21.

This comes from Japan; its type is deposited in the United States National Museum. Its affinities are with species of *Anaitides* Czerniawsky, and it may be close to, if not the same as, *A. madeirensis* (Langerhans) (see above).

Anaitides tenuissima (Grube), 1878

Phyllodoce tenuissima GRUBE, 1878, pp. 95-96.

Phyllodoce fusca-cirrata TREADWELL, 1926a, pp. 14-15, figs. 25-27.

The type of *Phyllodoce fusca-cirrata* comes from Samoa and is deposited in the United States National Museum. From its description it can be referred to *Anaitides tenuissima* (Grube) first described from Bohol, Philippine Islands, and well illustrated as *Phyllodoce macrolepidota* by Willey (1905, p. 265, pl. 3). Fauvel (1932a, p. 70, as *Phyllodoce*) recorded it from Indo-Pacific seas and gave synonymies.

Phyllodoce violacea Treadwell, 1926

Phyllodoce violacea TREADWELL, 1926a, pp. 13-14, figs. 22-24.

Phyllodoce variegata TREADWELL, 1926a, p. 12.

Phyllodoce pruvoti FAUVEL, 1930a, pp. 512-514, fig. 1. HARTMAN, 1954c, pp. 631-633, fig. 175D, G-I.

The type of *Phyllodoce violacea* originates from Suva, Fiji, and is deposited in the United States National Museum. Striking features include its great length (attaining about 1000 mm.) and the brilliant coloring of iridescent to dark brown. Dorsal cirri are dark brown and have very pale borders. The prostomium has two very small eye spots. Composite setae have a short, slightly curved, smooth appendage (Hartman, 1954c, fig. 175). These characters

agree with those of *Phyllodoce pruvoti* Fauvel; the two are considered identical. The species has a distribution that includes Fiji, the Loyalty Islands (Fauvel, 1930), and the northern Marshall Islands (Hartman, 1954).

Phyllodoce tortugae Treadwell, 1917

Phyllodoce tortugae TREADWELL, 1917b, p. 262, figs. 4-6.

This originates from Loggerhead Key, Dry Tortugas, Florida. On the proboscis the papillae are dispersed, but they leave bare a broad middorsum and midventrum as first shown. The body is greatly prolonged; dorsal cirri are foliaceous, long, and triangular and they have pinnately arranged markings. The species is known only through its original discovery.

LOPADORHYNCHIDAE

Halyplanes gracilis Reibisch, 1893

Halyplanes gracilis REIBISCH, 1893, p. 252.

Haliplanes gracilis REIBISCH, 1895, pp. 24-26, pl. 2, figs. 10-13. BERGSTRÖM, 1914, p. 90.

Haliplanella pacifica TREADWELL 1943b, p. 32, pl. 1, figs. 4-6.

The holotype of *Haliplanella pacifica* is in the United States National Museum. Its specific name suggests that it came from the Pacific Ocean, but it originates from the middle Atlantic Ocean in 100 meters. A paratype collected from an adjacent station in about the same depth is in the American Museum of Natural History. The latter is a small individual that measures less than 1.5 mm. long and is very darkly stained. The segments with tentacular cirri are completely free from one another. The two pairs of prostomial antennae are very slender and short. The first segment has two pairs of slender cirri and a setigerous fascicle with simple spine-like setae. The second segment has a pair of very large tentacular cirri and fascicles of composite setae. Segments farther back have dorsal cirri that are short and compressed cylindrical. These features are identical with those of *Halyplanes gracilis* Reibisch (1893) known from the same general localities. The original generic name, *Halyplanes* Reibisch (1893, p. 252), was later spelled *Haliplanes* (Reibisch, 1895, p. 24; Bergström, 1914, p. 90). *Haliplanella* Treadwell (1943, p. 32) was first used by Treadwell although erroneously attributed to Reibisch.

Halyplanes gracilis is known from northern, southern equatorial, and Guinea currents (Reibisch) and in tropical equatorial regions of the Pacific Ocean (Treadwell, 1943, map 1).

IOSPILIDAE

Iospilus phalacroides Viguiet, 1886

Iospilus phalacroides VIGUIET, 1886, p. 392, pl. 23, figs. 1-6. FAUVEL, 1923a, p. 194, fig. 72e.

Phalacrophorus niger TREADWELL, 1943b, pp. 33-34, fig. 15.

The type of *Phalacrophorus niger* originates from the north central Atlantic Ocean, pelagic in 50 meters. It is considered identical with *Iospilus phalacroides* Viguiet, especially because segments 3 and 4 are without dorsal and ventral cirri, the pigmentation pattern is identical, and the pharynx is presumably unarmed. These characters are those of *Iospilus* Viguiet, not *Phalacrophorus* Greeff. *Iospilus phalacroides* occurs in warmer parts of the Atlantic Ocean and off southern Europe (Fauvel, 1923a, p. 194).

Phalacrophorus pictus Greeff, 1879

Phalacrophorus pictus GREEFF, 1879, p. 249, pl. 14, figs. 25-30. REIBISCH, 1895, p. 10, pl. 1, figs. 4-7. FAUVEL, 1923a, p. 196, fig. 72f.

Phalacrophorus maculatus TREADWELL, 1943b, p. 34, figs. 11-13.

A paratype of *Phalacrophorus maculatus* in the American Museum of Natural History compares fully with *P. pictus* Greeff (Reibisch, 1895, p. 10).

Phalacrophorus pictus is recorded from equatorial parts of the Pacific and Atlantic oceans, between latitude 40° N. and latitude 40° S.

Phalacrophorus uniformis Reibisch, 1895

Phalacrophorus uniformis REIBISCH, 1895, pp. 15-17, pl. 1, figs. 10-16.

? *Phalacrophorus attenuatus* TREADWELL, 1943b, p. 34, fig. 14.

This species is distinguished from *P. pictus* Greeff for having an attenuate, instead of short, body. The anterior eight or more, instead of only three, parapodia are rudimentary.

Phalacrophorus attenuatus agrees with *P. uniformis* in these respects. The first comes from the Marshall Islands; the second, from the Indo-Pacific and South Atlantic areas (Reibisch, 1895, p. 17). Their identity is suggested.

ALCIOPIDAE

Rhynchonerella angelini (Kinberg), 1866*Kronia angelini* KINBERG, 1866, p. 242.*Eulalia magnapupula* TREADWELL, 1941c, pp. 21-22, figs. 13-17.

Two individuals are labeled *Eulalia magnapupula*; they originate from the Pacific side of Panama in 50 fathoms in plankton. They are representatives, not of *Eulalia* Savigny, but of an alciopid, *Rhynchonerella angelini* (Kinberg), that is very common in the warmer parts of the eastern Pacific Ocean. Støp-Bowitz (1948, pp. 34-36) has given a diagnostic account and synonymy.

Naiades cantrainii delle Chiaje, 1830,
Støp-Bowitz, 1948*Naiades cantrainii* DELLE CHIAJE, 1830, *sensu* Støp-Bowitz, 1948, p. 24.*Alciopa distorta* TREADWELL, 1943b, p. 35, figs. 16-18.

The holotype of *Alciopa distorta* is at the United States National Museum and originates from east of the Hawaiian Islands in 50 meters. The description and geographic range agree fully with published accounts of *Naiades cantrainii* delle Chiaje (see Støp-Bowitz, 1948, pp. 24-25, fig. 15).

Vanadis crystallina Greeff, 1876*Vanadis crystallina* GREEFF, 1876, pp. 68-69, pl. 3, figs. 35-39.*Vanadis collata* TREADWELL, 1928a, pp. 462-463, figs. 27, 28.

The holotype of *Vanadis collata* was collected off the Galapagos Islands in 400 fathoms. The first six or more parapodial pairs are very small, as characteristic of *V. crystallina* Greeff. The two agree also in prostomial and parapodial parts. Treadwell (1928a, fig. 27) shows the proboscis partly everted.

TYPHLOSCOLECIDAE

Travisiopsis coniceps (Chamberlin), 1919*Plotobia coniceps* CHAMBERLIN, 1919, pp. 156-158, pl. 66, figs. 2-4.*Nuchubranchia palmata* TREADWELL, 1928a, pp. 481-482, figs. 66-68.

The holotype of *Nuchubranchia palmata* comes from the Galapagos Islands in 400 to

600 fathoms. Prostomial, parapodial, and anal structures are considerably damaged but are about as first shown (Treadwell, figs. 66-68). This is identical with *Travisiopsis coniceps* (Chamberlin) described from about the same locality, off Peru and the Galapagos Islands from surface to 300 fathoms. Støp-Bowitz (1948, p. 61) has designated the synonymy and geographic distribution.

Travisiopsis lanceolata Southern, 1911*Travisiopsis lanceolata* SOUTHERN, 1911, pp. 30-32, pl. 1, figs. 3, 5, 6.*Travisiopsis atlantica* TREADWELL, 1936, pp. 62-63, figs. 30-33; 1941c, p. 22.

The holotype of *Travisiopsis atlantica* comes from Nonsuch Island, Bermuda, pelagic in 600 fathoms; later it is recorded from the Pacific side of Panama in 500 fathoms (Treadwell, 1941c). The type agrees fully with recent accounts of *T. lanceolata* (Støp-Bowitz, 1948, p. 58; Friedrich, 1950, p. 317). Monro (1939, pp. 347-348) has recorded the species off southern New England in 0 to 750 meters and off Brazil in about the same depth.

TOMOPTERIDAE

Tomopteris nisseni Rosa, 1908*Tomopteris nisseni* ROSA, 1908, p. 1.*Tomopteris opaca* TREADWELL, 1928a, pp. 463-464, fig. 29.*Tomopteris longisetis* TREADWELL, 1936b, pp. 58-59, figs. 18-21.

Tomopteris opaca comes from the Galapagos and Cocos Islands. Its most conspicuous feature is the frilled condition of the parapodial flanges. The posterior end is without a tail but is frayed and thick, and appears as if a tail had been present and was broken off. In other respects it agrees fully with *Tomopteris nisseni* Rosa as described by Støp-Bowitz (1948, pp. 44-46, fig. 29). *Tomopteris longisetis* comes from Nonsuch Island, Bermuda, in 500 to 1000 fathoms and is at once recognizable as a large individual of *T. nisseni* Rosa. In this respect, however, it is exceeded by one measuring 105 mm. long, 5 mm. wide, and with 39 parapodial segments described by Støp-Bowitz (1948, p. 45). This species is very common in northern Atlantic waters in depths from surface to 3239 meters (Støp-Bowitz, 1948).

Tomopteris tentaculata Treadwell, 1928

Tomopteris tentaculata TREADWELL, 1928a, pp. 464-465, figs. 30-31.

This comes from the Galapagos Islands in 1100 fathoms. It is only about 6 mm. long and may be immature. Conspicuous features include the paired epaulettes that form a raised ridge on either side of the prostomium. The first pair of cirri are largely concealed beneath the larger second pair. The chromophile glands are located at the inferior part of the neuropodial flange. Small gonadal elements are visible in the upper part of the neuropodial lobe. There is no tail. This may represent a juvenile stage of a better-known species.

HESIONIDAE**?Dalhousiella longicirrata** (Treadwell), 1901

Castalia longicirrata TREADWELL, 1901b, p. 185, figs. 2, 3.

Hesione longicirrata TREADWELL, 1939b, pp. 216-217, fig. 44.

This comes from Fish Hawk Station 6079, off St. Thomas, Virgin Islands, Sail Rock, in 20 to 23 fathoms in coral, and is deposited in the United States National Museum. It cannot belong to *Hesione* Savigny which is characterized by having no palpi. It is not *Castalia* Savigny (a synonym of *Nereimyra* Blainville) which has only six pairs of tentacular cirri. The body is short and consists of about 19 segments. Parapodia are uniramous. The prostomium has a pair of articulated palpi, a pair of slender frontal antennae, and a large facial tubercle. There are four eyes in trapezoidal arrangement. Tentacular cirri number eight pairs. Setae are composite falcigers in which the appendage is long, knife-like, and distally bifid. These characters are those of *Dalhousiella* McIntosh (see Fauvel, 1923a, p. 234).

Three other species of *Dalhousiella* have been described from West Indian localities. These include *D. longisetis* (Grube, 1856, p. 15) from St. Croix which is incompletely known; *D. carpenteri* McIntosh, recorded from the Caribbean Sea in 720 to 800 meters (Monro, 1939, p. 348); and *D. hesionides* (Augener, 1906, p. 157, as *Castalia*) off the West Indies in 164 and 399 fathoms. *Dalhousiella carpenteri*, including probably *D. hesionides*, is characterized for having composite falcigers which are deeply bifid at the tip.

?Nereimyra mutilata (Treadwell), 1901

Castalia mutilata TREADWELL, 1901b, p. 185, fig. 4.

Irma mutilata TREADWELL, 1939b, pp. 213-214, fig. 41.

Two very imperfect specimens come from San Antonio Bridge, San Juan, Puerto Rico. They have lost dorsal and tentacular cirri and setal appendages. The species cannot belong to *Irma* Grube, which is a synonym of *Podarke* Ehlers (Horst, 1921, p. 78), because a median prostomial antenna is absent. *Castalia* Savigny is preoccupied and is replaced by *Nereimyra* Blainville (Støp-Bowitz, 1948, p. 61).

The body is about 17 mm. long and consists of 53 segments. The prostomium is quadrate, wider than long, and has a pair of large, bi-articulated palpi and a pair of very small frontal antennae. There are four eyes in quadrate arrangement. Tentacular cirri number six pairs. Parapodia are uniramous. The generic name is questioned because the character of setal appendages is not known.

?Leocrates oculata (Treadwell), 1906

Castalia oculata TREADWELL, 1906, p. 1148, figs. 1-3.

The holotype specimen is in the United States National Museum; it comes from the vicinity of Hawaii in 49 to 176 fathoms on a rocky bottom. The body is short, fusiform, and consists of 16 parapodial segments. There are eight pairs of tentacular cirri. The frontal margin of the prostomium has a thick, short, median antenna. The facial tubercle is a minute papilla. A median antenna is lacking but was perhaps lost from the specimen. Parapodia are biramous; notopodia have slender setae, and neuropodia have composite falcigers with a bifid tip. These characters agree with those of *Leocrates chinensis* Kinberg (Hartman, 1948b, p. 47) except that the anterior eyes are greatly enlarged and a median antenna is absent. The identity of the two cannot therefore be determined.

SYLLIDAE**Odontosyllis enopla** Verrill, 1900

Odontosyllis enopla VERRILL, 1900, pp. 627-628.
Autolytus bidens TREADWELL, 1941d, pp. 28-29, fig. 9.

The type of *Autolytus bidens* comes from Bermuda off shore at the surface. It is a typical representative of *Odontosyllis enopla* Verrill, first described from the same place (Verrill, 1900, p. 627). Ventral cirri are triangular, compressed lobes. The prostomium is overlain at its posterior margin by a nuchal hood; composite setae are identical. Galloway and Welch (1911, pp. 13-39, pls. 1-5) have described the luminescence of this species, and Huntsman (1948, pp. 363-369) has described the conditions for spawning at Bermuda.

NEREIDAE

Nicon mexicana (Treadwell), 1942

Leptonereis mexicana TREADWELL, 1942, pp. 1-4, figs. 2-9.

The holotype comes from outside Topolobampo Bay, Baja California, Mexico; others are from Grande Point, San José Bay, Baja California. All are in the epitokous reproductive stage and include both male and female individuals. Parapodia have no foliaceous dorsal lobe which characterizes *Leptonereis* Kinberg (Hartman, 1948b, p. 56, pl. 8). In the male epitoke there is a long pre-epitokal region of at least 55 segments and a long post-epitokal or third region with normal parapodia. Prostomial eyes are large; each is round and has a reddish brown lens occupying most of the upper disk. Notopodia have no homogomph falcigers. Acicula are black and occur singly in parapodial rami. The prostomium is subrectangular in its preocular part instead of triangular as originally shown. The paired prostomial antennae are large and digitate; they extend distally nearly to the end of the palpostyle. In the male epitoke the posterior parapodia have a long, slender, dorsal cirrus extending distally beyond the notopodial lobe; the cirrus is inserted at the upper base of the lobe. The latter is long and slender; it resembles the middle lobe but is slenderer. The everted proboscis is smooth; it is without pharyngeal processes. The distal paired jaws are dark horny brown and have crenulated teeth at the cutting edge.

Nicon mexicana is known only from the western side of Mexico.

Nereis riisei Grube, 1856

Nereis riisei GRUBE, 1856, pp. 162-163.

Nereis decora TREADWELL, 1932b, pp. 15-17, figs. 6-11.

Nereis ambiguus TREADWELL, 1937b, pp. 149-151, pl. 2, figs. 19-24.

Nereis (Neanthes) paucidentata TREADWELL, 1939a, p. 6, fig. 25.

Nereis (Neanthes) varia TREADWELL, 1941a, p. 3.

The type of *Nereis decora* comes from Villa Bella, Ilha de São Sebastião, Brazil; that of *N. ambiguus* originates from Sulphur Bay, Clarion Island, in 20 fathoms. *Nereis (Neanthes) paucidentata* is from Charlestown, Massachusetts. The name *Nereis (Neanthes) varia* was proposed to replace the last-named, presumed to be preoccupied.

The proboscis of the specimen of *Nereis ambiguus* which I examined had not been observed, as it was withdrawn and not dissected. Area I has three small teeth in tandem; II has a patch of larger, dark amber paragnaths; III is similar to II, IV resembles VI in having about 10 to 12 paragnaths in two or three irregular rows; V has none; VI has about 12 cones in a transverse patch of three irregular rows; VII and VIII (continuous) have a single row of 10 larger and smaller cones. Areas II and III are the most conspicuous. The original description of the proboscis stated that paragnaths are absent from areas I and II, III has a tuft of about eight on a side, IV has three in a transverse row, V has none, VI has three or four, VII has seven or eight very long and blunt-pointed cones on either side, having irregular ones in front of them, and VIII a circular patch of about 20. I am unable to fit this formula, especially as it concerns areas VII and VIII, to the specimen examined by me. The jaws are large and pale except for the dentate edge, which has about nine light brown teeth along the cutting edge. Homogomph falcigers are first present from about segment 26, or the middle of the body. Acicula are black and occur singly in a ramus (Hartman, 1940a, pp. 221-222).

The holotype of *Nereis (Neanthes) paucidentata* measures about 40 mm. long and 5 mm. wide; peristomial tentacles are moderately thick and short. In median parapodia the distal lobes are dark; the dorsal lobe is very large and has its dorsal cirrus inserted at the upper base. On the pharynx area I has a single cone,

II has three to six in a cluster, III has an irregular double row, IV has a diagonal double row, V and VI have one each, and VII and VIII are continuous and have a double alternating row.

These several individuals are believed identical and are referred to the common West Indian *Nereis riisei* Grube. It has been further reported from Haiti, Florida, and French Guiana (Fauvel, 1932b, pp. 28-30, fig. 4), also the Gulf of California to Ecuador (Hartman, 1940a, pp. 221-222, pl. 33, fig. 37). Its geographic range extends along both sides of middle America and the coastal fringes of the Gulf Stream.

Nereis pelagica largoensis Treadwell, 1931

Nereis brevicirrata TREADWELL, 1929d, pp. 3-5, figs. 9-14.

Nereis largoensis TREADWELL, 1931, p. 3. HARTMAN, 1951, pp. 45-46.

The holotype comes from Key Largo, Florida. It has much resemblance to *Nereis pelagica* Linnaeus, especially in its prostomial and parapodial parts. On the pharynx area I has two small cones in tandem (originally given as one); area V has a single small cone (originally described as absent); VI has four large paragnaths in diamond arrangement; areas VII and VIII (continuous) have three or four rows in a transverse band, with the outer row on the maxillary side having the largest ones.

In median and posterior parapodia the notopodial lobe increases in length going back to a rectangular shape; the dorsal cirrus is inserted at the upper base of this lobe. In posterior segments notopodia have homogomph falcigers in which the appendage is about six times as long as wide, and slightly curved in its distal half when seen in profile; the cutting edge is smooth, and the free part is about as long as the embedded part.

Nereis pelagica largoensis Treadwell differs from the stem species chiefly for having the posterior notopodial lobes longer, and area V has a paragnath instead of lacking it. It differs from *N. pelagica occidentalis* Hartman (1945, p. 20) from North Carolina in that the notopodial falciger has an appendage of another kind. *Nereis pelagica largoensis* is recorded from areas in the Gulf of Mexico (Hartman, 1951, p. 46).

Nereis arroyensis Treadwell, 1901

Nereis arroyensis TREADWELL, 1901b, pp. 193-194, figs. 30-31. HOAGLAND, 1919, p. 574. TREADWELL, 1939b, p. 223.

The holotype is in the United States National Museum and comes from Arroyo, Puerto Rico. The pharyngeal armature has not previously been described. The paragnaths of the maxillary ring are larger than those on the oral one. Area I has three pointed cones in tandem; II is a crescent-shaped patch with about 12 larger cones; III has a broad patch of 25 to 30 cones; IV has about 20 pointed cones. On the oral ring V is bare; VI has a cluster of six pointed cones; VII and VIII are continuous and have many smaller and a few larger cones in three to five irregular rows. The jaws are dark brown; each has five coarse, blunt teeth. The parapodial lobes resemble those of *Nereis irrorata* (Malmgren) (Fauvel, 1923a, p. 342).

Nereis arroyensis is not known outside Puerto Rico.

Nereis amoyensis (Treadwell), 1936

Nereis (Neanthes) amoyensis TREADWELL, 1936b, pp. 272-273, figs. 19j-m.

The holotype is in the United States National Museum and comes from Amoy, China. It is referred to *Nereis*, *sensu stricto*, instead of *Neanthes* Kinberg because the notopodia have falcigerous setae. The appendage resembles that of *Nereis pelagica* Linnaeus, with which this species may be allied.

Ceratonereis anchylochaeta (Horst), 1924

Nereis (Lycoris) anchylochaeta HORST, 1924, pp. 155-157, pl. 30, figs. 8, 9.

Ceratonereis longicauda TREADWELL, 1943a, pp. 1-3, figs. 1-7.

The holotype of *Ceratonereis longicauda* comes from Padado, Gulf of Davao, Philippine Islands. Notopodia have only spinigerous setae. On the pharynx the oral ring has paragnaths only on areas VII and VIII; there are three cones in a transverse row and each one is on a brown, weakly chitinated patch. Neuropodia have composite falcigers in anterior and median segments. Posterior neuropodia have a characteristic simple falciger (Horst, 1924, figs. 8-9).

Ceratonereis anchylochaeta is widely re-

corded from Indo-Pacific regions (Fauvel, 1932, pp. 88-89).

Platynereis dumerilii (Audouin and Milne-Edwards), 1834

Nereis dumerilii AUDOUIN AND MILNE-EDWARDS, 1834, p. 296.

Uncinereis lutea TREADWELL, 1928a, pp. 469-471, figs. 40-49.

Leptonereis maculata TREADWELL, 1928a, p. 469.

Uncinereis trimaculosa TREADWELL, 1940, p. 3, figs. 4-9.

Eunereis africana TREADWELL, 1943c, pp. 2-3, figs. 8-13.

The holotype of *Uncinereis lutea* comes from the Sargasso Sea on sargassum. *Leptonereis maculata* (not a holotype, as it was presumed to be the same as *Nicon maculata* Kinberg) is from the vicinity of the Galapagos Islands. *Uncinereis trimaculosa* comes from a floating log at Galveston, Texas, and *Eunereis africana* was taken at Lobito, Africa. All are typical representatives of *Platynereis dumerilii* (Audouin and Milne-Edwards) and come from localities within the known geographic range. Specimens labeled *Leptonereis maculata* are in the epitokous stage; the pharyngeal pectinae are present but faded. Some have paler, others darker, posterior parapodial lobes. Unique features of all are the reduced pharyngeal pectinae, the composite notopodial falciger of median and posterior parapodia, and the long tentacular cirri (Hartman, 1945, p. 22).

Platynereis dumerilii is cosmopolitan in warm seas and associated with algae. In epitokous stages the pharyngeal parts tend to change in the direction of loss or darker pigmentation of the basal areas.

Platynereis bicanaliculata (Baird), 1863

Nereis bicanaliculata BAIRD, 1863, p. 109.

Nereis notomaculata TREADWELL, 1914b, pp. 191-192, pl. 11, figs. 8-12.

A syntype of *Nereis notomaculata* comes from San Francisco Bay, California. It is characterized especially for the presence of simple, dark brown falcigers in median and posterior notopodia, occurring usually singly in a parapodium. In other respects also this compares with *Platynereis bicanaliculata* (Baird), earlier known as *P. agassizi* (Ehlers) and as such reported from many littoral regions of the north-

east Pacific. It has been more widely recorded from Hawaii and Australia (Hartman, 1954b, pp. 36-37, figs. 38, 39).

Perinereis helleri Grube, 1878

Nereis (Perinereis) helleri GRUBE, 1878, pp. 81-82.

Neanthes obscura TREADWELL, 1928a, p. 472, figs. 50-53.

The holotype of *Neanthes obscura* comes from west of Costa Rica. In the original account of the pharyngeal armature, the formula should read area VI with a single transverse piece on either side, areas VII and VIII continuous with a double irregular row of paragnaths. This is a typical representative of *Perinereis* and agrees with *P. helleri* Grube. The distal ends of the peristomial cirri are pseudoannulated, as is the case for many nereids from southern Pacific regions. Fauvel (1932, p. 104) has given a diagnostic key of the group of species to which *P. helleri* Grube belongs.

Perinereis monterea (Chamberlin), 1918

Nereis (Neanthes) monterea CHAMBERLIN, 1918, pp. 174-175.

Nereis spinifera TREADWELL, 1929d, pp. 5-6, figs. 15-20.

The holotype individual of *Nereis spinifera* comes from Puget Sound, Washington; it agrees fully with *Perinereis monterea* (Chamberlin) which is known from other parts of the northeastern Pacific Ocean (Hartman, 1940a, p. 229).

Pseudonereis variegata (Grube), 1856

Nereilepas variegata GRUBE, 1856, p. 165.

Perinereis diversidentata TREADWELL, 1943c, pp. 1-2, figs. 1-7.

Pseudonereis variegata DAY, 1953, p. 425.

The holotype individual of *Perinereis diversidentata* comes from Cape Cross, Africa. The everted pharynx has pectinae on the maxillary ring and chitinized cones on the oral ring; this is therefore referred to *Pseudonereis* Kinberg. Posterior dorsal lobes are elongate to rectilinear and have the dorsal cirrus attached so as to leave a free margin at its inferior side which is about as broad as the base of the dorsal cirrus. *Pseudonereis variegata* (Grube) has been recorded from South Africa (Day, 1951, p. 32),

and the synonymy has been established (Day, 1953, p. 425).

EUNICIDAE

Eunice armillata (Treadwell), 1922

Leodice armillata TREADWELL, 1922a, pp. 144-147, figs. 26-29, pl. 3, figs. 14-19.

Leodice gracili-cirrata TREADWELL, 1922a, pp. 149-150, figs. 36-38, pl. 5, figs. 1-8.

Leodice armillata comes from Aua and Utile reefs in Pago Pago Harbor, Samoa; *Leodice gracili-cirrata* is from Suva Harbor, Fiji. In both specimens the prostomial antennae are neatly articulated; dorsal cirri are prolonged. Branchiae are first present from about the third or fourth segment and have up to seven filaments; branchiae are absent from posterior segments. Acicula are yellow; subacicular hooks occur singly in parapodia; they terminate distally in a bifid tip in which the accessory tooth is at right angles to the fang. The two are believed to agree in all specific details. The species is close to, if not identical with, *Eunice mindanevensis* McIntosh (1885) from the Philippine Islands and other parts of the Southern Hemisphere (see Ehlers, 1908, pp. 90-92, pl. 12).

Eunice afra Peters, 1854

Eunice afra PETERS, 1855, p. 39.

?*Leodice notata* TREADWELL, 1921a, pp. 52-54, figs. 164-173, pl. 4, fig. 12.

Leodice bucciensis TREADWELL, 1921d, pp. 54-56, figs. 174-183.

Leodice guanica TREADWELL, 1921d, pp. 39-40, figs. 107-116, pl. 2, figs. 9-12.

Leodice aciculata TREADWELL, 1922a, pp. 143-144, figs. 24, 25, pl. 3, figs. 7-13.

Leodice flava-punctata TREADWELL, 1922a, pp. 136-138, figs. 8-11, pl. 2, figs. 1-7.

Leodice suviensis TREADWELL, 1922a, pp. 138-139, figs. 12-16, pl. 2, figs. 8-13.

The type specimen of *Leodice aciculata* and that of *L. suviensis* originate in Suva Harbor, Fiji; that of *L. flava punctata* comes from Pago Pago Harbor, Samoa; *L. guanica* comes from Sand Key, Florida; *L. bucciensis* comes from Buccoo Bay, Tobago, West Indies, and *L. notata* is also from the West Indies. All are considered identical with the circum-mundane, tropical *Eunice afra* Peters. Characteristic features include the distribution and kind of branchial branching; they are first present from

about segment 11 or not before 20 and have filaments that number from one to five at maximum development (rarely they may number eight or nine filaments). Acicula are dark brown to black, subacicular hooks are distally hooded and have a bifid tip, with the lateral tooth about at right angles to the shaft. Prostomial antennae are short and smooth or irregularly articulate. Hartman (1944b, pp. 110-111) gives a partial synonymy. *Eunice afra* is widely distributed in Indo-Pacific and West Indian seas, in littoral zones.

Eunice crassi-tentaculata (Treadwell), 1922

Leodice crassi-tentaculata Treadwell, 1922a, pp. 146-148, figs. 30-33, pl. 4, figs. 1-5.

The holotype comes from Pago Pago Harbor, Samoa. It is near *E. afra* Peters (see above) in having the first branchiae present far back, in this case not before segment 30. Branchial filaments are limited to two at maximum development. Acicula and subacicular hooks are dark to black; the latter are distally bifid. The specimen differs from typical *E. afra* in having prostomial antennae that are proportionately very large, long, and conspicuous.

Eunice grubei Gravier, 1900

Eunice grubei GRAVIER, 1900, pp. 258-261, figs. 125-129, pl. 14, figs. 87, 88.

Leodice biformi-cirrata TREADWELL, 1922a, pp. 148-149, figs. 34, 25, pl. 4, figs. 6-11.

The holotype of *Leodice biformi-cirrata* came from Suva, Fiji, April, 1920. Branchiae are present from the third setigerous segment and have up to seven filaments in pectinate arrangement. Prostomial antennae are moniliform. Acicula are dark to black. Subacicular hooks are distally bifid, with the subdistal one oblique to the shaft. Composite setae are distally bidentate and falcigerous. This agrees fully with *Eunice grubei* Gravier, first described from the Red Sea and well known from Indo-Pacific areas (Fauvel, 1932, p. 136).

Eunice tubifex Crossland, 1904

Eunice tubifex CROSSLAND, 1904, pp. 303-310, figs. 52-55, pl. 21, figs. 1-8.

Leodice tubicola TREADWELL, 1922a, pp. 139-142, figs. 17-23, pl. 3, figs. 1-6.

The holotype of *Leodice tubicola* comes from Pago Pago Harbor, Samoa. It is accompanied

by fragments of the tube. Characteristic features include two kinds of composite setae (falcigerous and spinigerous), the sharply recurved yellow subacicular hooks, and the unique tube. Treadwell recognized the similarities of the two but considered *tubicola* different from *tubifex*, especially because of differences in size. *Eunice tubifex* is recorded from Indo-Pacific seas (Fauvel, 1930b, p. 26), the China Sea (Monro, 1924), and southern Africa (Day, 1934, p. 50).

Eunice savignyi Grube, 1878

Eunice savignyi GRUBE, 1878, pp. 150-151.

Leodice langi TREADWELL, 1943c, p. 3, figs. 14-18.

The holotype of *Leodice langi* comes from Cape Town, South Africa. The mandibles were lost in dissection but are illustrated (Treadwell, fig. 18). The five prostomial antennae are torn off at the base, so that it is not known whether they were smooth or articulated. Prostomial eyes are large, dark, and visible between the bases of the two outer pairs of antennae. One of the peristomial cirri remains; it extends back to the first setigerous segment and has four articles, a longest basal and two shorter more distal; the distal-most one is again longer. Branchiae are first present from the third setigerous segment as a minute filament located near the upper base of the long dorsal cirrus. At the sixth or seventh segment each branchia is bifid, with the two branches about equally long but greatly surpassed in length by the larger dorsal cirrus. The eighth segment has a trifid branchia. The number of filaments increases to about eight at parapodium 19 and decreases again thereafter. Branchiae are absent from a long posterior end.

Ventral cirri are thick, cirriform through the sixth setiger; thereafter a broad, glandular pad covers most of the ventral cirrus to near the slender tip. Acicula and subacicular hooks are pale yellow. The first are slightly curved at the tip and taper to a slender end. The latter occur singly or by two's in a parapodium; they terminate in a bifid tip in which the main fang is nearly at right angles to the shaft and the secondary tooth is much smaller. Composite falcigers are bifid, with the main tooth only slightly curved to the appendage and the secondary tooth much smaller than the main one.

Eunice savignyi was first described from the Philippine Islands and has been recognized as a representative of the fauna of the Agulhas Current (Fauvel, 1932, p. 136).

Eunice norvegica (Linnaeus), 1767

Nereis norvegica LINNAEUS, 1767, p. 1086.

Leodice arcturi TREADWELL, 1928a, pp. 475-477, figs. 32-39.

The holotype of *Leodice arcturi* was taken off New Jersey in 633 fathoms. It is a slender individual, measuring about 80 mm. long and 2 mm. wide. The prostomial antennae are smooth and cirriform. Branchiae are present from the sixth or seventh setiger and have up to 14 pectinately arranged filaments; they end abruptly after about segment 42. Subacicular hooks are yellow and distally bifid, hooded. Composite hooks are bifid falcigers. These characters agree with those of *Eunice norvegica* (Linnaeus) (as *E. pennata* in Fauvel, 1923a, pp. 400-401, figs. 56h-o). The species is known to be a deep-water commensal of polyps in north Atlantic regions.

Eunice filamentosa Grube, 1856

Eunice filamentosa GRUBE, 1856, p. 56.

Leodice spongicola TREADWELL, 1921d, pp. 25-27, fig. 53.

The holotype of *Leodice spongicola* comes from Montego Bay, Jamaica, taken in July, 1931. Branchiae are first present from the twenty-fourth setiger. Acicula are yellow; subacicular hooks are yellow and have the unique structure known for *Eunice filamentosa* (Hartman, 1944b, p. 107, pl. 6, figs. 123-126). The species is known mainly from West Indian localities in littoral zones.

?*Eunice tenuis* (Treadwell), 1921

Leodice tenuis TREADWELL, 1921d, pp. 51-52, figs. 154-163, pl. 4, fig. 11.

The holotype comes from Dry Tortugas, Florida. The prostomium and jaws are lacking. Branchiae are first present between segments 80 to 90 and have single long filaments on many segments, or successive segments have none. Maximum number of filaments is three. Acicula are yellow; subacicular hooks are pale, distally bifid, and hooded. Composite setae are distally bifid falcigers and hooded. This indi-

vidual resembles species of *Eunice* (*Nicidion*) mainly for the great reduction of its branchiae. It may approach *E. (Nicidion) cariboea* Grube, also known from West Indian seas.

Eunice (Nicidion) gracilis Crossland, 1904

Nicidion gracilis CROSSLAND, 1904, pp. 327-329, figs. 65, 66, pl. 22, figs. 10, 11.

Nicidion fusca-fasciata TREADWELL, 1922a, pp. 156-157, figs. 47-50, pl. 7, fig. 5.

The holotype of *Nicidion fusca-fasciata* (given as *Nicidion flava-fasciata* in the records of the American Museum of Natural History) comes from Pago Pago Harbor, Samoa, 1928-1929. It agrees fully with *Eunice (Nicidion) gracilis* Crossland, first described from Zanzibar and widely recorded from Indo-Pacific seas (Fauvel, 1932, pp. 140-141, figs. 20a-f).

Palola siciliensis (Grube), 1840

Eunice siciliensis GRUBE, 1840, p. 83.

Leodice viridis vernalis TREADWELL, 1922a, pp. 133-134, pl. 1, figs. 8-11.

The holotype of *Leodice viridis vernalis* comes from Suva Harbor, Fiji, April, 1920. It is a small individual and measures about 2.5 mm. across. There are no subacicular hooks. Branchiae are first present from about segment 91 and occur irregularly on following segments; they are simple filaments or sometimes divided. This agrees with *Palola siciliensis* (Grube) known from circum-mundane tropical seas, especially in coral reefs. Fauvel (1932, p. 139) has given a diagnosis and synonymy.

Lysidice tortugae Treadwell, 1921

Lysidice tortugae TREADWELL, 1921d, pp. 85-86, figs. 298-304.

The holotype of *Lysidice tortugae* comes from Florida, and was associated with sponge. It differs from other species of the genus notably for its very long, slender body, resembling a drilonereid in that respect. The prostomium is deeply bilobed and overlain by three slender, filiform antennae. The two eyes are dark and crescentic in shape. The first two segments have no parapodia, and the first segment is only about a third as long as the second. The species is known only through its original discovery.

Lysidice collaris Grube, 1870

Lysidice collaris GRUBE, 1870, pp. 495-496.

Lysidice sulcata TREADWELL, 1901, p. 200, figs. 47, 48.

?*Lysidice fusca* TREADWELL, 1922a, pp. 154-155, figs. 42-44, pl. 6, figs. 7-13.

?*Lysidice parva* TREADWELL, 1922, pp. 155-156, figs. 45, 46, pl. 6, figs. 14-17.

The type of *Lysidice sulcata* is from Puerto Rico; that of *L. fusca* is from Samoa; and that of *L. parva*, from Samoa. The last two differ from each other chiefly in that the former is larger than the latter. All are referable to *Lysidice collaris* Grube, known from cosmopolitan tropical littoral seas. Okuda (1937, pp. 288-289, figs. 34a-e) has illustrated the diagnostic parts.

KEY TO SPECIES OF *Marphysa* DESCRIBED
BY TREADWELL

1. Composite setae absent. *Marphysa mossambica*
Composite setae present. 2
2. Composite setae spinigerous. 3
Composite setae falcigerous. 5
Composite setae both falcigerous and spinigerous; branchiae abrupt and limited to about segments 10 to 22; eyes large.
..... *Marphysa bellii oculata*
3. Composite spinigers few and limited to anterior segments; subacicular setae absent.
..... *Marphysa brevitentaculata*
Composite spinigers more numerous; subacicular setae present. 4
4. Subacicular setae distally bifid; acicula dark to black; furcate setae conspicuous and of two kinds, coarse and fine-toothed in posterior segments. *Marphysa sanguinea*
Subacicular setae distally acicular; acicula yellow; furcate setae absent.
..... *Marphysa aransensis*
5. Subacicular setae distally bifid; acicula pale brown or dark yellow; branchiae with few (2 or 3) filaments. *Marphysa minima*
Subacicular setae distally entire; acicula dark or black; branchiae with filaments more numerous and in pectinate arrangement.
..... *Marphysa regalis*

Marphysa orientalis Treadwell (1936) from China (not seen by me) resembles *Marphysa sanguinea*, but the presence of subacicular setae was not noted.

Marphysa sanguinea (Montagu), 1815

Nereis sanguinea MONTAGU, 1815, pp. 20-21, pl. 2, pl. 3, fig. 1.

Marphysa viridis TREADWELL, 1917b, pp. 264-265, pl. 2, figs. 13-18, pl. 3, figs. 1-2.

Marphysa nobilis TREADWELL, 1917b, pp. 265-266, pl. 3, figs. 3-9.

The holotype of *Marphysa nobilis* is from Mangrove Key, Florida, June, 1915, and that of *Marphysa viridis* is from Boca Grande Key, Florida, July, 1915. Both are easily referable to the older, widely distributed *Marphysa sanguinea* (Montagu). Branchiae are first present from segments 24 and 22; the maximum number of filaments is five in palmate-pectinate arrangement; they are continued back to near the posterior end of the body. Dorsal cirri of branchial segments are proportionately very small. Acicula are dark to black and fade distally. Parapodia have composite spinigers. Subacicular setae are distally bifid. *Marphysa sanguinea* is known from the east and west coasts of America, in warm littoral seas, and from cosmopolitan areas.

Marphysa aransensis Treadwell, 1939

Marphysa aransensis TREADWELL, 1939a, p. 5, figs. 16, 17.

The holotype comes from Aransas Pass, Texas. The proportions of the single individual agree with the description. I find the first branchiae present on setigerous segment 24 as a single filament and so continued to 29 where double filaments occur. There are three filaments on segment 38 and the number increases to four or five filaments in postmedian segments. The filaments are in unipinnate arrangement, with all pinnae about equally long and each about twice as long as the much thicker, triangular dorsal cirrus. Branchiae are present through a long region. Composite setae are spinigerous, with the appendage long and acutely pointed at the tip. Acicula are dark yellow and occur singly or doubly in a parapodium; they do not project from the fleshy lobe or they may be slightly emerging. Subacicular setae are present in branchial segments; they are yellow and occur singly in a ramus; they terminate distally in a blunt spine and are weakly curved along their length.

Median and posterior segments have no furcate setae. The position which would be taken by such setae has a supra-acicular fascicle of long, slender, slightly limbate setae that number 10 or more in a bundle.

On the dissected pharynx (which had not been previously examined), the maxillary parts are pale or yellow; I (forceps) are very long and slender; II has five teeth on each side; III has seven on one, none on the other, side; IV has four and seven teeth, and V is a plate. The mandibular plates are now decalcified.

Marphysa aransensis differs from *M. sanguinea* by having subacicular setae that are distally acicular, not bifid; furcate setae are absent instead of present; acicula are yellow, not dark. The maxillary formulas differ in that maxillae II had five teeth on a side instead of three or four. Earlier (Hartman, 1944b, p. 126) I regarded the two as identical, without having seen the type specimen from the Gulf of Mexico.

Marphysa aransensis is known only from the type locality at Aransas Pass, Texas.

Marphysa brevitentaculata Treadwell, 1921

Marphysa brevitentaculata TREADWELL, 1921d, pp. 69-70, figs. 235-243, pl. 6, figs. 13, 14.

The holotype specimen comes from Tobago, British West Indies, taken in April, 1928. As originally stated, it is very long, measuring about 600 mm. long and 2 to 4 mm. wide, and consists of more than 800 segments. The prostomium is almost semicircular and has only a very slight emargination at its frontal margin. Prostomial antennae are very short. Anterior parapodia are very small and inconspicuous. The jaws of the holotype have been removed and are not in the vial. Another individual was dissected and found to have the following formula: I (forceps) are long and falcate; II has six teeth on the left and five on the right side, with the largest tooth distalmost and decreasing in size basally; III has eight equally small crenulated teeth on the left, and none on the right side; IV has four small teeth like those on III, on the left, and nine similar teeth on the right side; V is a small chitinated plate on each side. This differs from the original account in that II has five teeth on a side, III has six, IV has three and nine.

Parapodia have broadly rounded foliaceous post-setal lobes, especially in prebranchial and anterior branchial segments. Anterior segments have composite spinigers with a short appendage; they are located in small fascicles in a subacicular position. Farther back they are

replaced by simple setae. Furcate setae are present, though few in number, in branchial segments. Subacicular setae are absent; their position is taken over by simple, narrowly limbate, distally pointed setae. Acicula are dark to black and occur singly in median and posterior segments.

Marphysa brevitentaculata resembles *M. mossambica* (Peters) which also inhabits deep burrows, has very short parapodial lobes, and becomes very long (to 600 mm.) (Crossland, 1903, p. 139). The latter, however, has a deeply incised prostomium, and composite setae are altogether absent. Other species with an undivided prostomium are *M. mortenseni* Monro (1928, p. 88), *M. strangulum* (Grube, 1878), *M. bellii* (Audouin and Milne-Edwards, 1834), *M. adensis* (Gravier, 1900), and *M. macintoshi* (Crossland, 1903). *Marphysa brevitentaculata* and *M. macintoshi* agree in having composite spinigers and branchiae present on many segments. The others named have composite falcigers and branchiae limited to a few anterior segments. *Marphysa brevitentaculata* differs from *M. macintoshi* in that the latter has subacicular setae, the former has none.

Marphysa brevitentaculata is known only from the West Indies in littoral sands.

Marphysa mossambica (Peters), 1854

Eunice mossambica PETERS, 1854, p. 612.

Marphysa simplex TREADWELL, 1922a, pp. 151-152, fig. 39, pl. 5, figs. 8-12.

The holotype specimen of *Marphysa simplex* comes from Fiji. It is characterized by having no composite setae; branchiae are pectinately divided; the prostomium is incised at its frontal margin. Branchiae are first present from about segment 29 to segment 32, rapidly come to have four or five filaments each, and are continued on segments to the posterior end of the body. In anterior segments the acicula number four or five in a ramus and are black; in posterior segments they diminish in number to only one. These characters agree with those of *Marphysa mossambica* (Peters) as described by Crossland (1903, p. 139). Fauvel (1932, p. 142) has indicated its geographic distribution in Indo-Pacific seas.

Marphysa minima (Hansen), 1882

Nausicaa minima HANSEN, 1882, p. 8, pl. 2, figs. 22-25.

Marphysa languida TREADWELL, 1921d, pp. 73-75, figs. 257-258.

The holotype and only specimen of *Marphysa languida* comes from Guanica Harbor, Puerto Rico, taken in May, 1915. As originally stated, the pharyngeal parts are missing and were not described. The prostomium is deeply bilobed at its frontal margin. Branchiae are first present at about segment 60 and come to have at most two or three filaments; they are absent from about the last 50 segments. Acicula are dark yellow or pale brown at the base and number about three in a parapodium in anterior segments, and one or two in median and posterior segments. Subacicular setae are yellow, distally bifid, and occur singly in a ramus. Furcate setae are present, located in the upper end of the setigerous fascicle, in median and posterior segments. Composite setae are falcigerous. These characters agree with those of *M. minima* (Hansen), first described from Brazil. Another nearly related species is *M. atlantica* (Kinberg) from the La Plata region in 30 to 40 fathoms. It differs in that branchiae are first present from about segment 20. As *M. languida*, this has been further described and recorded from western Mexico (Rioja, 1941, pp. 712-715, pl. 5, figs. 6-15). Its geographic range thus includes both coasts of tropical America.

Marphysa regalis Verrill, 1900

Marphysa regalis VERRILL, 1900, p. 636.

Marphysa fragilis TREADWELL, 1911, pp. 2-5, figs. 1-7.

The holotype of *Marphysa fragilis* comes from Loggerhead Key, Dry Tortugas, Florida, taken in July, 1910. It is characterized for having composite falcigers; subacicular setae are acicular and dark. It agrees fully with *M. regalis* Verrill (Hartman, 1944b, p. 126). The species is known from Bermuda and the West Indies.

Marphysa bellii oculata Treadwell, 1921

Marphysa bellii oculata TREADWELL, 1921d, pp. 61-64, figs. 201-211, pl. 5, figs. 13-14.

This comes from Mangrove Key in Key West Harbor, Florida. It is unique in having both falcigerous and spinigerous composite setae; subacicular spines are distally bifid. Branchiae are very large and abrupt in their occurrence; they are present only on segments

10 to 22 where they have 10 or 11 pinnae each. The variety differs from the stem species for having, instead of lacking, prostomial eyes, although Fauvel (1923a, p. 410) described them as present. It is possible therefore that there is no specific distinction separating the variety from the stem form. *Marphysa bellii* (Audouin and Milne-Edwards) is known from southern and southwestern Europe (Fauvel, 1923a, p. 410).

Paramarphysa teres Treadwell, 1922

Paramarphysa teres TREADWELL, 1922a, pp. 153-154, figs. 40-41, pl. 6, figs. 2-6.

This species comes from Samoa. Its resemblance to *P. orientalis* Willey (1905, p. 283) from the Gulf of Manaar is noteworthy. Okuda (1937, pp. 287-288, figs. 32-33) concluded that the two differ in prostomial parts. In other respects they seem to be similar.

LUMBRINERIDAE

Lumbrineris similabris Treadwell, 1926

Lumbrineris similabris TREADWELL, 1926d, p. 5, figs. 6-10.

The single specimen of *Lumbrineris similabris* comes from Bering Strait between King Island and the two Diomedes. It is a large, fragmented specimen, resembling *Lumbrineris fragilis* (Müller). Most setae and hooks are broken off close to the body, so that their presence cannot be determined in anterior segments. According to Berkeley and Berkeley (1942, p. 195) simple hooks are present from the seventh setiger. Acicula are dark brown to black and number to five in a ramus; setae are dark amber to translucent brown. The post-setal lobe is broadly rounded, but in far posterior segments it elongates somewhat but continues as a broadly rounded lobe.

On the dissected pharynx maxillae III and IV have each a single broad, short tooth; II has four teeth on the right and four on the left side, with the teeth increasing in size distally and the third and fourth teeth widely separated. Maxillary carriers are longer than broad.

Lumbrineris similabris is abundant off Alaska in 12 to 15 fathoms and Vancouver Island, Canada, in 23 fathoms (Berkeley and Berkeley, 1942, p. 195).

Lumbrineris zonata (Johnson), 1901

Lumbriconereis zonata JOHNSON, 1901, pp. 408-409, pl. 9, figs. 93-100.

Lumbrineris singularisetis TREADWELL, 1931d, p. 1, figs. 1-3.

The holotype of *Lumbrineris singularisetis* comes from Monterey, California. On the dissected pharynx maxilla III has two teeth on each side, IV has a single tooth on each side. Parapodial lobes of posterior segments are short. This agrees fully with *Lumbrineris zonata* (Hartman, 1944b, p. 144) extensively known from littoral zones of the northeastern Pacific Ocean.

Lumbrineris branchiata (Treadwell), 1921

Lumbrineris branchiata TREADWELL, 1921d, pp. 94-95, figs. 333-343, pl. 8, figs. 5, 6.

The holotype of *Lumbrineris branchiata* comes from Buccoo Bay, Tobago, West Indies, taken in April, 1918. The body is very long, slender, and resembles that of a drilonereid. A long posterior end is presumed missing from it. The prostomium is conical, a little longer than wide, and has no eyes. Anterior parapodia are very small and inconspicuous. Simple hooded hooks are present from the first one and accompanied with about an equal number of pointed limbate setae. Acicula are yellow and embedded. In median or perhaps later segments the pointed setae are completely replaced by simple hooded hooks. Posterior parapodia have characteristic fleshy, alate processes located behind and below the parapodial base; they agree with those shown for *Lumbrineris alata* Hartman (1951, pl. 15, fig. 1) for specimens described from the Gulf of Mexico. In other respects, also, there is agreement with *L. branchiata*, so that the two must undoubtedly be regarded as the same. Far posterior segments are present in collections as *L. alata*; they show that the post-setal lobe elongates considerably to form a digitate lobe directed laterally.

Lumbrineris branchiata is known from the West Indies and the Gulf of Mexico. *Lumbriconereis branchiata* Fauvel (1943, pp. 22-24, fig. 2) from the Gulf of California is a different species; it is unique in having palmately tufted branchiae near the base of parapodia and the prostomium broadly depressed. The specific name is a homonym.

Lumbrineris candida (Treadwell), 1921

Lumbrineris candida TREADWELL, 1921d, pp. 96-97, figs. 344-350, pl. 8, figs. 7-9.

The holotype comes from Buccoo Bay, Tobago, West Indies. The body is very long and slender, as first described. The prostomium is conical, slightly depressed, and about as long as broad. Anterior segments have simple hooded hooks in addition to pointed setae. In posterior segments the post-setal lobe is digitate, with the lobe about as long as the prolonged parapodial base; it extends distally beyond the tips of the hooded hooks. Embedded acicula are yellow. The maxillae are dentate, thus not as originally described; II has about four teeth on each side, III has two short teeth on each side, and the last is a broad thin plate.

Lumbrineris candida belongs to the *L. tetraura* group (Hartman, 1944b, pp. 147-150), from which it may be distinguished by its greatly attenuated form. It is known only from the type locality.

Lumbrineris inflata (Moore), 1911

Lumbrineris inflata MOORE, 1911, pp. 289-291, pl. 19, figs. 128-132, pl. 20, figs. 133, 134.

Lumbrineris cingulata TREADWELL, 1917b, p. 263, pl. 2, figs. 7-12.

Lumbrineris cervicalis TREADWELL, 1922b, p. 176, figs. 14-21.

The holotype of *Lumbrineris cingulata* comes from Bermuda in crevices of coral rock near low-water mark; that of *Lumbrineris cervicalis* is from Friday Harbor, Washington, taken in February, 1920. The first is a slender, nearly cylindrical individual measuring about 37 mm. long and 1 mm. wide. Acicula and setae are yellow or nearly colorless. Anterior parapodia have pointed limbate setae and one or two hooded hooks that are incompletely or imperfectly composite; posterior hooded hooks are entire. Posterior parapodial lobes are short and not noticeably different from those of median parapodia. It is believed identical with *Lumbrineris inflata* (Moore). The specimen from Friday Harbor is much larger but agrees in all details with *Lumbrineris inflata* (see Hartman, 1944b, p. 161, for synonymy and distribution).

Lumbrineris paucidentata (Treadwell), 1921

Lumbrineris paucidentata TREADWELL, 1921a, pp. 99-100, figs. 357-364, pl. 9, figs. 1-4.

The holotype comes from Dry Tortugas, Florida, taken in July, 1914. The pharyngeal parts have been dissected out and are missing. Anterior parapodia have composite hooded hooks in which the articulation is complete. Acicula are yellow. In posterior parapodia the post-setal lobe does not elongate; these segments have simple hooded hooks without pointed setae. The individual resembles *Lumbrineris latreilli* Audouin and Milne-Edwards (Hartman, 1944b, pp. 158-159, pl. 9, figs. 213-216) except that the mandibles were described as very broad and short, and maxillae as nearly edentate.

Lumbrineris treadwelli, new name

Lumbriconereis maculata TREADWELL, 1901b, pp. 198-199, figs. 42-44.

Lumbrineris maculata TREADWELL, 1942a, pp. 119-120, figs. 11h, 14d, e.

This species comes from Puerto Rico and Florida (Treadwell, 1921d, p. 103). It is re-described in Hartman (1942a, pp. 119-120). The preoccupied specific name is replaced by *L. treadwelli*, new name.

ARABELLIDAE

Arabella iricolor (Montague), 1804

Nereis iricolor MONTAGU, 1804, p. 82.

Arabella dubia TREADWELL, 1922a, pp. 160-161, fig. 52, pl. 7, figs. 11, 12, pl. 8, figs. 8, 9. Not Hansen, 1882.

?*Arabella setosa* TREADWELL, 1921d, pp. 113-114, figs. 421-424, pl. 9, figs. 10-11.

The holotype of *Arabella dubia* comes from Pago Pago, Samoa; that of *Arabella setosa* is from Buccoo Bay, Tobago, West Indies. The pharyngeal armature has been removed from the former and is missing. Most setae are broken off. The prostomium has four eyes arranged in a transverse row. Parapodial lobes and other parts that have been described agree with those of *Arabella iricolor* (Montagu). The specimen labeled *Arabella setosa* has post-setal parapodial lobes that are longer than is typical, but in other respects it agrees with *A. iricolor*, which is known from cosmopolitan areas in littoral seas.

Arabella semimaculata (Moore), 1911

Aracoda semimaculata MOORE, 1911, pp. 295-297, pl. 20, figs. 143-149.

Arabella pacifica TREADWELL, 1941c, p. 23, figs. 18-21.

The holotype of *Arabella pacifica* comes from Sihuantanejo, Mexico, in coral. It is a moderately large individual of *Arabella semimaculata* (Moore). Posterior segments have prolonged post-setal lobes. Prostomial eyes are hardly visible and seem to be absent. The species is known from southern California to western Mexico in littoral zones.

Arabella sp.

Aracoda attenuata TREADWELL, 1911, pp. 5-6, figs. 8-11.

Drilonereis attenuata TREADWELL, 1921d, pp. 107-108, figs. 395-399, pl. 9, figs. 6-9.

The holotype comes from Dry Tortugas, Florida. Parapodia have no projecting acicula as is typical for species of *Drilonereis*. On the maxillae the forceps are dentate only at the base and not along the entire cutting edge as in *Notocirrus*. It is, therefore, not the same as *Arabella attenuata* Treadwell (1906) which is referred to *Notocirrus* (Hartman, 1944b, p. 176). The prostomium is oval and has a deep middorsal longitudinal groove and eye spots at its posterior margin. Anterior parapodia are very small. In far posterior segments the post-setal lobe does not elongate. The specimen may be an immature stage of another species of *Arabella*. The specific name is preoccupied.

Arabella sp.

Drilonereis pinnata TREADWELL, 1921d, pp. 110-111, figs. 412-413, pl. 8, fig. 11.

This species comes from Buccoo Bay, Tobago, West Indies, taken in April, 1918. Parapodia have no projecting acicula, and on the maxillae the forceps are falcate. It is therefore a species of *Arabella*. Anterior parapodia are not reduced. In posterior segments the post-setal lobe is not noticeably prolonged. On the jaw pieces, II has five teeth on a side, III has four on a side, and IV has two on each side. This may be a representative of *Arabella iricolor* (Montagu) (see above).

Drilonereis lumbricus Treadwell, 1922

Drilonereis lumbricus TREADWELL, 1922a, pp. 161-162, figs. 53-55, pl. 7, figs. 13-15, pl. 8, fig. 10.

The holotype is from Fiji. Anterior parapodia are reduced so as to appear absent; the

setae project directly from the body wall. Parapodia are first distinct from about segment 30. Acicula are very large, thick, and project from parapodia for a considerable distance. On the maxillary pieces, the forceps have teeth at the base; II has four teeth on a side. Mandibles are present and black. *Drilonereis logani* Crossland (1924, pp. 64-70, figs. 80-88) from eastern Africa shows remarkable resemblance and may be the same.

Drilonereis planiceps (Grube), 1878

Arabella planiceps GRUBE, 1878, pp. 174-175, pl. 8, figs. 4-4b.

Drilonereis paucidentata TREADWELL, 1922a, p. 162, fig. 56, pl. 7, figs. 16, 17, pl. 8, fig. 11.

The holotype of *Drilonereis paucidentata* (labeled *D. pacifica* in the records of the Museum) comes from Suva, Fiji, taken in April, 1920. Another specimen, which was used for the description, is from Pago Pago Harbor, Samoa. On the holotype the pharyngeal armature has been dissected out and is missing. The prostomium is greatly depressed, broadly rounded in front, and has no eyes. The first two segments have no parapodia. Farther back they are very small and in posterior segments the post-setal lobe elongates about as originally shown. Acicula are yellow; they extend from the parapodium at their distal ends and are accompanied by two or three broadly limbate, geniculate, distally pointed setae without denticulations at the cutting edge. In addition, there is a thick fascicle of many slender setae which terminate in a long, very slender tip (shown by Crossland, 1924, p. 61, for *Drilonereis major*, and by Grube, 1878, pl. 8, for *Arabella planiceps*). Mandibles are absent.

Crossland (1924, p. 63) suggested the possible identity of his *Drilonereis major* with *D. planiceps* (Grube). However, the similarities of *D. planiceps* from the Philippine Islands, *D. paucidentata* from Fiji and Samoa, and *D. major* from Suez and Zanzibar are so great that there can be little doubt of their identity. All are very long, slender forms and have a depressed, semicircular prostomium without eyes. Anterior parapodia are reduced; far posterior parapodia have post-setal lobes only slightly elongated. Mandibles are usually absent. Maxillary plates are about the same. Parapodial setae are of two kinds, one or two

in a parapodium are shorter, geniculate, distally pointed, and have a smooth cutting edge; many others terminate in a very long, slender tip.

An individual reported from Bikini Atoll, northern Marshall Islands (Hartman, 1954c, p. 634), is believed conspecific. The geographic range thus includes a large area in the Indo-Pacific regions.

***Drilonereis spatula* (Treadwell), 1911**

Aracoda spatula TREADWELL, 1911, pp. 6-7, figs. 12-14.

Drilonereis spatula TREADWELL, 1921d, pp. 108-109, figs. 400-406.

Drilonereis brunnea TREADWELL, 1921d, pp. 111-112, figs. 418-420.

As *Aracoda spatula* this was collected from a reef near Fort Jefferson, Florida, in June, 1909. The body is slender, about 170 mm. long and 2.5 mm. wide at most. The prostomium is broadly rounded, longer than wide, has a mid-dorsal longitudinal groove, and has no eyes. Maxillae I (forceps) are falcate; II has seven teeth on a side. Anterior parapodia are very small. Acicula are yellow, heavy, and project for a considerable distance from the parapodial lobe. In posterior segments the post-setal lobe is elongate and erect. *Drilonereis spatula* is believed to include *D. brunnea* which comes from Buccoo Bay, Tobago, West Indies. It is not known outside West Indian localities.

***Drilonereis* sp., juvenile**

Drilonereis similis TREADWELL, 1921d, p. 111, figs. 414-417, pl. 8, fig. 12.

This comes from Buccoo Bay, Tobago, West Indies. It is perhaps an immature stage of *Drilonereis spatula* (see above).

ORBINIIDAE

***Naineris mutilata* Treadwell, 1931**

Naineris mutilata TREADWELL, 1931d, pp. 5-6, figs. 13-18.

This comes from Montego Bay, Jamaica, West Indies. It is broken in several pieces but is believed to represent parts of a single individual. The prostomium is broadly rounded at its anterior margin; there are no visible eyes. It is followed by a single smooth ring or peristomium. Branchiae are present from the second setigerous segment and already large; they

are continued on all successive segments to the end of the body. In this respect the species is unique. Thoracic neurosetae are largely long pointed setae in full fascicles; they are accompanied with a few acicular spines in an inferior position; when perfect they have a distal hood.

Furcate setae are present in abdominal notopodia; the two tines are unequally long. Abdominal neuropodia have four or five yellow acicula that emerge from the neuropodial lobe for a considerable distance, in a spreading fascicle. They are accompanied by many distally pointed, longer setae.

Naineris mutilata differs from *N. laevigata* (Grube) in having branchiae present from the second, instead of a later, segment. Thoracic neuropodia have a broadly foliaceous post-setal lobe and mostly pointed setae instead of a smaller lobe and setae of another kind.

Naineris mutilata is known only from the type locality.

***Haploscoloplos robustus* (Verrill), 1873**

Anthostoma robustum VERRILL, 1873, pp. 597-598, pl. 1, fig. 76.

Scoloplos rufa TREADWELL, 1941b, p. 1, figs. 1-6.

The holotype of *Scoloplos rufa* comes from Offats Bayou, Galveston, Texas. It is a slender, immature specimen. Branchiae are first present though small on setigerous segment 23 and gradually increase in size from about segment 26, or in abdominal segments where they are large and erect. An interrampal cirrus is present, the first from posterior thoracic segments, and it is continued for about 12 anterior abdominal segments. It was originally described as a "much smaller lobe . . . on the dorsal neuropodial surface," but not illustrated.

Branchiae are simple throughout, not double as originally shown (Treadwell, fig. 5). The illustration shows both branchiae of a segment, and the midpoint of the dorsum is shown between the bases of the paired branchiae. Abdominal neuropodia have long, transverse ridges, not divided lobes; they are like those for *Haploscoloplos robustus* (Hartman, 1951, pl. 21, figs. 4-6), and not as for *H. fragilis* (Verrill), with which I had earlier thought *Scoloplos rufa* identical (Hartman, 1951, p. 76).

The geographic distribution of *Haploscolop-*

los robustus is about the same as that of *H. fragilis* (Verrill); both occur along the eastern shores of the United States and in the Gulf of Mexico.

SPIONIDAE

Nerinides agilis (Verrill), 1873

Nerine agilis VERRILL, 1873, p. 600.

Nerine minuta TREADWELL, 1939a, p. 5, figs. 18-20.

Nerine agilis HARTMAN, 1951, p. 81.

This species is here referred to *Nerinides* Mesnil instead of *Nerine* Johnston because it lacks hooded hooks in the notopodia, whereas *Nerine* has such hooks in both notopodia and neuropodia of posterior segments. In *Nerinides agilis* the neuropodial hooks are distally bidentate, with the main fang at an obtuse angle to the shaft. Branchiae are first present from the second setigerous segment. On the prostomium the four eyes are in a straight transverse row. The species is known from New England south into the Gulf of Mexico, in littoral sands.

Boccardia sp.

Polydora californica TREADWELL, 1914b, pp. 203-204, pl. 12, figs. 23-29. Not Fewkes, 1889.

A paratype specimen labeled as coming from California has branchiae on setigerous segments 2 to 4 and from 7, continued back on many segments; this specimen is therefore a representative of *Boccardia* and agrees with *B. proboscidea* Hartman (1940b, pp. 382-387). The original account was based perhaps on another specimen which is not known to exist; it was said to have come from an unknown locality, taken from a tangled mass of tubes apparently constructed by the *Polydora*. Such tubes are not constructed by *Boccardia proboscidea* Hartman, which inhabits vertical burrows in shaley rocks.

The specific name of *Polydora californica* Treadwell is a homonym of *Spio californica* Fewkes, 1889, which has been referred to *Polydora*, *sensu latior* (Hartman, 1940b, pp. 386-387). It seems best, therefore, to drop *Polydora californica* Treadwell from the list of valid species.

Nerine cirratulus hirsuta (Treadwell), 1928

Spio hirsuta TREADWELL, 1928a, pp. 478-479, figs. 54-57.

The holotype comes from east of Cocos Island, Pacific Panama. Length of 80 segments is 18 mm. Branchiae are first present from the second setiger, and hooded hooks are present in both notopodia and neuropodia. This is therefore referred to *Nerine* Johnston. The prostomium is rounded in front and has four eyes in a transverse row; they are located on the prostomial ridge, not on the peristomium as originally shown (Treadwell, fig. 54). The lateral margins of the peristomium are elevated as a pair of folds.

Branchiae are fused to the notopodial lobe for the entire length of the lobe. Their general outlines are about as first shown (Treadwell, fig. 55). Hooded hooks are first present at about segment 28 in both notopodia and neuropodia and are present only in median segments; they are distally bidentate. Tufts of white setae first appear in neuropodium 37, and in notopodium 45; they are conspicuous where present and distinguish this subspecies from the stem, *Nerine cirratulus* (delle Chiaje). The prostomial eyes have the arrangement shown for *Nerine cirratulus saipanensis* Hartman (1954a, p. 230, fig. 2a) but the latter has an acutely pointed prostomium.

Nerine cirratulus hirsuta is known only from Cocos Island.

CIRRATULIDAE

Tharyx multifilis Moore, 1909

Tharyx multifilis MOORE, 1909, pp. 267-268, pl. 9, fig. 43.

Cirratulus inhamatus TREADWELL, 1937b, p. 153, pl. 2, fig. 25.

The type of *Cirratulus inhamatus* comes from east of Cedros Island, Baja California, Mexico, in 38 to 40 fathoms. It now lacks all tentacular structures, including the larger paired palpi which characterize *Tharyx* Webster, but their bases are visible. The prostomium has no eyes. Notopodia and neuropodia have only slender, capillary setae of one kind in all segments; in postmedian segments they number 20 to 30 in a fascicle and are arranged in a double transverse series. Setae are directed laterally in long, silky, flowing tufts. Notopodia and neuropodia of a side are separated from each other by a small interval. The bases of the lateral branchiae, to be seen

on a few segments, are immediately above the notopodial ridge.

The first, or palpal-bearing, segment shows the bases of a pair of slender tentacular filaments. This segment is followed by the first setigerous segment, but the two are not clearly separated from each other except by lateral grooves. The first setiger has biramous parapodia and the base of a slender filament immediately above the notopodial elevation. These characters agree with those of *Tharyx multifilis* Moore, known from southern California and western Mexico.

***Cirriformia semicincta* (Ehlers), 1905**

Cirratulus semicinctus EHLERS, 1905, pp. 292-293, pl. 9, figs. 11-14.

Audouinea maculata TREADWELL, 1929d, p. 10.

The holotype of *Audouinea maculata* comes from Berbera, British Somaliland, tropical eastern Africa. It agrees fully with *Cirriformia semicincta* (Ehlers), first described from Hawaii and more widely recorded from circumtropical regions. Notable features include the presence of dorsal tentacles on the fourth setigerous segments; notopodia and neuropodia have acicular spines; the pigment pattern of dispersed dark spots over the surface persists through preservation.

***Cirriformia punctata* (Grube), 1859**

Cirratulus punctatus GRUBE, 1859, p. 107.

Cirratulus nigromaculata TREADWELL, 1901b, p. 204, fig. 66; 1939b, p. 273.

Cirratulus niger HARTMAN, 1939a, pp. 17-18, fig. 31.

The body is grayish yellow flecked with black; the dorsal tentacles are transversely barred with yellow and black, and the lateral branchiae are lightly barred or plain. Dorsal tentacles are attached on about the third setigerous segment, where they form a crowded paired bundle, each just above the insertion of the lateral branchia. This species is thus referred to *Cirriformia* Hartman instead of *Cirratulus* Savigny, in which dorsal tentacles are on the first setigerous segment. Neuropodial spines are first present in about the sixth neuropodium; the first are single in a ramus, accompanied with slender pointed setae; farther back they increase to three in a fascicle and are accompanied with a few pointed

setae to the end of the body. Notopodial spines are first present a little farther back and increase in number to two or three in a fascicle; they are also accompanied with capillary setae.

Lateral branchiae, in middle and posterior segments, are inserted dorsolaterally, at a point above the notopodium for a distance exceeding that between the branches of a parapodium.

Cirriformia punctata was first recorded from the West Indies and is known from more extensive tropical regions of eastern America.

***Cirriformia chefooensis* (Grube), 1877**

Cirratulus chefooensis GRUBE, 1877, pp. 50-51.

?*Cirratulus branchiatus* TREADWELL, 1936a, pp. 276-277, fig. 20g.

The single type specimen of *Cirratulus branchiatus*, deposited in the United States National Museum, comes from the vicinity of Amoy, China. I have not seen it, but am questionably referring it to the older *C. chefooensis* (Grube) because of the agreement in the descriptions of both. Tentacular structures arise from the dorsum of the fifth or sixth setigerous segment. Posterior parapodia have transverse rows of curved acicular spines that alternate with slender pointed setae. The geographic distributions agree.

***Cirriformia filigera* (delle Chiaje), 1841**

Cirratulus filigerus DELLE CHIAJE, 1841, p. 85.

Audouinea pygidia TREADWELL, 1936b, p. 64, figs. 22, 23.

The type of *Audouinea pygidia* comes from Nonsuch Island, Bermuda, in tidal pools. Dorsal tentacles are inserted on the sixth setigerous segments. Acicular spines are first present in the neuropodium of segment 18; they number two or three in a row. Farther back they are thicker, distally more curved, and occur singly in a ramus. Notopodial spines are first present from about the anterior third of the body, where there are two to four in a series. These characters are those of *Cirriformia filigera* (delle Chiaje) earlier recorded from southeastern United States (Hartman, 1945, p. 35).

***Cirriformia tentaculata* (Montagu), 1808**

Terebella tentaculata MONTAGU, 1808, pp. 110-111, pl. 6, fig. 2.

Cirratulus pallidus TREADWELL, 1931f, pp. 1-2, figs. 1-3.

Cirratulus multicirratulus TREADWELL, 1936b, pp. 63-64, figs. 34, 35.

The holotype of *Cirratulus pallidus* comes from Montego Bay, Jamaica, West Indies; that of *Cirratulus multicirratulus* is from St. Davids Island, Bermuda, on mud flats. Both are species of *Cirriformia*, because dorsal tentacles are present on a segment behind the first setigerous one. Posterior parapodia have yellow, distally curved acicular spines in transverse series. Lateral branchiae are inserted a short distance above the notopodial base. The distribution for the Atlantic shores of North America is given in Hartman (1945, p. 35).

Cirriformia hawaiiensis, new name

Audouinia branchiata TREADWELL, 1943d, p. 1, figs. 1-3.

The holotype of *Audouinia branchiata* is from Pearl Harbor, Hawaii. It is unique in having a prosomium that is dusky at its frontal margin; this region is continued laterally to the paired ocular patches, immediately above the oral groove. Anterior parapodia have only pointed setae. Distally curved acicular spines are first present in neuropodia from segment 23. Notopodial spines first appear much farther back and are never so thick or so curved as neuropodial ones. In posterior median segments the neuropodial spines number five or six in a transverse row; they alternate with slender pointed setae and are dark amber in color. In posterior segments their number diminishes to two or three in a series. Lateral branchiae are inserted above the notopodial ridge; in posterior segments their origin is progressively higher so as to be dorsolateral.

Cirriformia hawaiiensis differs from other species of the genus for its unique prostomial parts. The specific name is changed because *branchiatus* Treadwell, 1943, is preoccupied by *Cirratulus branchiatus* Treadwell, 1936, which is also a species of *Cirriformia* (see above).

OPHELIIDAE

Armandia maculata (Webster), 1884

Ophelina maculata WEBSTER, 1884, p. 322, pl. 11, figs. 54-55.

Ammotrypane bermudiensis TREADWELL, 1936b, p. 60.

The holotype of *Ammotrypane bermudiensis*

is from Nonsuch Island, Bermuda, in 10 to 35 feet in sand. It is now dark so that the arrangement of lateral eye spots is not easily seen. In the original description they are noted as 21 pairs, first present from between segments 5 and 6, and continued back to between segments 25 and 26. This is thus referred to *Armandia* Filippi. The prostomium terminates in a slender palpode. Large nuchal organs are in front of the mouth which is in line with the first pair of setigerous bundles. Branchiae are present from the second segment and continued to the end of the body; they number 30 pairs. The pygidial funnel is broken and its long median filament lost; there is a semicircular midventral flange at the base to which a long filament might have been attached. The dorsal distal margin of the funnel has a long, longitudinal fissure with crenulate margin and perhaps was the base of terminal papillae. One can distinguish about 11 pairs of crenulations. These features agree with those of *Armandia maculata* (Webster) first described from Bermuda (see Hartman, 1942a, pp. 129-130, fig. 14a).

Euzonus (Thoracophelia) mucronata
(Treadwell), 1914

Ophelina mucronata TREADWELL, 1941b, pp. 218-219, pl. 12, figs. 37, 38.

This species has been earlier referred to *Thoracophelia* Ehlers (Hartman, 1938c, p. 107). *Thoracophelia* is more conveniently regarded as a subgenus of *Euzonus* Grube, 1866. A generic diagnosis follows. The body consists of three regions: a cephalic, a thoracic, and an abdominal. The cephalic region is set off from the thorax by a muscular constriction behind the second setigerous segment. The thorax is separable from the abdomen by a pair of prominent glandular ridges which are part of the thorax; it consists of eight setigerous segments. The abdomen is slenderer, consists of 28 or 29 segments, and tapers to a pygidial area. Total number of segments is about 38 or 39. The prostomium is acutely pointed and merges in an inflated part comprising the first two segments. The first or peristomial segment has the oral aperture on its ventral side, a pair of nuchal organs at the sides and the first setal tufts.

The thorax includes eight biramous segments; paired sensory organs are located between the rami. The abdomen has a deep mid-ventral longitudinal groove along most of its length. Branchiae are present on a limited number of segments. The posterior end terminates in a pygidium with a large, triangular midventral lobe and many pairs of lateral filaments. The genus is conveniently recognized for two subgenera: *Euzonus*, *sensu stricto*, and *Thoracophelia* Ehlers. In the first the branchiae are pectinately divided; in the second they are bifurcated.

KEY TO SPECIES OF *Euzonus* GRUBE, EMENDED

1. Branchiae deeply bifurcated.....
.....Subgenus *Thoracophelia*, 2
Branchiae pectinately divided or secondarily
dichotomously branched.....
.....Subgenus *Euzonus*, 4
2. Each branch of the bifurcation without lateral
processes.....3
Each branch of the bifurcation with lateral
processes.....*Euzonus*
(*Thoracophelia*) *williamsi* (Hartman)
3. With 20 pairs of branchiae; anus with five pairs
of dorsal papillae.....
Euzonus (*Thoracophelia*) *furcifera* Ehlers
With 18 pairs of branchiae; anus with seven
pairs of dorsal papillae.....*Euzonus*
(*Thoracophelia*) *mucronata* (Treadwell)
4. Branchiae unipectinately branched.....5
Branchiae pectinate at the base and dichotomous
more distally.....6
5. Branchiae number 15 pairs.....
Euzonus (*Euzonus*) *dillonensis* (Hartman)
Branchiae number 19 pairs.....
....*Euzonus* (*Euzonus*) *ezoensis* (Okuda)
6. Branchiae number 17 pairs.....
.....*Euzonus* (*Euzonus*) *arcticus* Grube
Branchiae number 15 pairs.....
.....*Euzonus* (*Euzonus*) *yasudai* (Okuda)

Euzonus Grube has been emended by both Augener (1912, pp. 176-178) and Annenkova (1935, pp. 235-236). The latter regarded *Thoracophelia* Ehlers as identical with *Euzonus* Grube. The group is at present limited largely to the North Pacific Ocean, except for *E. (E.) arcticus* Grube, which is Arctic.

The anatomy and biology of *Euzonus* (*Thoracophelia*) *mucronata* (Treadwell) have been described by McConnaughey and Fox, 1949.

Polyophthalmus pictus (Dujardin), 1839

Nais picta DUJARDIN, 1839, p. 293, pl. 7, figs. 9-12.

Polyophthalmus incertus TREADWELL, 1936b, pp. 61-62, figs. 27-29.

Polyophthalmus papillatus TREADWELL, 1943c, p. 3, figs. 19, 20.

The holotype of *Polyophthalmus incertus* comes from Nonsuch Island, Bermuda, taken at the surface at night; that of *Polyophthalmus papillatus* comes from Lobito, Africa. Both are easily referable to the widely known *P. pictus* (Dujardin). In *P. incertus* the setae of the last few segments are considerably prolonged. In *P. papillatus* I find 28 setigerous segments; the anal papillae have fallen off but their bases can be distinguished. I would say that the everted proboscis is labiate, with a deep mid-ventral groove, not globular as originally stated.

Polyophthalmus pictus has a known geographic range that includes Bermuda and western Africa.

FLABELLIGERIDAE

Semiodera cariboum (Grube), 1856

Siphonostomum cariboum GRUBE, 1856, pp. 108-109.

Semiodera glabra TREADWELL, 1928a, pp. 479-480, figs. 62-65.

The type of *Semiodera glabra* comes from southeast of Galapagos Islands in 15 feet. The large tongue-like process, characteristic of *Semiodera* Chamberlin, is fully everted. The epithelial covering of the body is largely sloughed off, so that the body appears nearly smooth. Small bits of the papillated cover are present about the parapodial bases and near the posterior end. The everted oral organ shows the bases of tentacular filaments, strewn over most of the lower or ventral side of the organ, except for a median bare ridge or stripe. Its lateral margins are crenulated as shown by Ehlers (1887, pl. 42). This agrees fully with *Semiodera cariboum* (Grube).

The type locality, originally given as Galapagos Islands, was changed to Haiti by Treadwell (1929d, p. 9). *Semiodera cariboum* was first described from St. Croix, West Indies, in 6 fathoms. Ehlers (1887) reported it from

Key West, Florida, in 1 to 2 fathoms. *Stylarioides capensis americana* Monro (1928, pp. 96-97) from Taboga, Panama, shore under stones, may refer to the same species.

Stylarioides glabra Treadwell (1901b, p. 208) from Puerto Rico, is also perhaps referable to *Semiodera* Chamberlin, as it is said to have the unique oral process. The type specimen is in the United States National Museum. Its distinction from *Semiodera cariboum* (Grube) is not possible from the meager description.

***Pherusa dubia* (Treadwell), 1929**

Stylarioides dubius TREADWELL, 1929d, pp. 9-10, figs. 25-27.

A paratype collection comes from Dry Tortugas, Florida. There are three small individuals with proportions as first described. In general appearance they resemble *Pherusa inflata* (Hartman, 1952, p. 72) but differ in the character of setae and oral tentacles. The cephalic cage consists of a few very long, slender, distally pointed setae which are weakly transversely barred; most appear smooth and translucent. The bars are widely spaced, so that each bar is about twice as long as wide, or longer. The anterior end of the body is obliquely truncate, with the ventral or oral end the more distally prolonged.

The appendages surrounding the prostomium include four pairs of long, slender tentacles inserted on a semicircular ridge over the prostomium, with the lateralmost about in line with the bases of the paired palpi. A fifth pair of tentacular bases is visible between the outer row and the outer base of the palpi. The bases of the uppermost or medial pair are largest, and there is gradual decrease in size laterally.

Parapodia are biramous and have notosetae and neuropodial hooks. The first few segments have slender, long, distally pointed setae, which were originally overlooked, and a fascicle of pointed neurosetae. In typical parapodia the ventral hooks are coarse, yellow, and number three or four in a transverse row; they are accompanied with slender, hair-like setae. Each hook is simple, distally curved, and tapers to a blunt tip. *Pherusa dubia* is known only from Florida.

MALDANIDAE

***Asychis fimbriata* (Treadwell), 1934**

Maldanella fimbriata TREADWELL, 1934a, pp. 8-9, pl. 2, figs. 22-24.

The holotype is at the United States National Museum and comes from off southern Puerto Rico in 80 to 100 fathoms. I regard it as a species of *Asychis* Kinberg rather than *Maldanella* McIntosh; the former is characterized by having an anal plaque, the latter by having none. *Maldanella fimbriata* is said to have 20 setigerous segments with a collar at the frontal margin of the first segment; the anal plaque is bilobed at the dorsal margin and has a few lateral fringes. The first four segments are short, the next five longer, and the last are again shorter. As the cephalic plaque is shown without conspicuous nuchal ridges, the species seems to belong to *Asychis* Kinberg and not *Maldane* Grube. It shows resemblance to *Asychis collariceps* (Augener, 1906, pp. 163-167, pl. 6, figs. 114-120), also from West Indian localities, in 169 to 395 fathoms, but the anal plaques are not the same, according to the illustrations. *Asychis fimbriata* (Treadwell) has not been recorded outside its type locality.

***Maldane cristata* Treadwell, 1923**

Maldane cristata TREADWELL, 1923b, pp. 9-10, figs. 5-8.

Maldane carinata MOORE, 1923, pp. 233-235.

As *M. cristata* this comes from off Cape San Lucas, Baja California, Mexico, in 630 fathoms (Albatross Station D 5698). As *M. carinata* Moore it was taken off San Clemente Island, in 654 to 704 fathoms (Albatross Station 4405), off Santa Rosa Island, in 31 to 45 fathoms (Albatross Station 4431), and off Point Pinos Lighthouse in 1073 fathoms (Albatross Station 4547), California.

The margins of cephalic and anal plaques are smooth. The body attains a length of about 130 mm. and a width of 2.5 mm. On the cephalic plaque the crest is narrow, elevated, prominent, and extends lengthwise along most of the length. The first two setigerous segments have thick body walls; farther back they are thinner. The first setiger has only slender setae; uncini are present from the second one. Un-

cinial rows are short at first and much longer farther back.

In addition to the localities named above, this form has been described, as *Maldane cristata* (Monro, 1937, pp. 306-307, fig. 23), from the Gulf of Oman, Arabian Sea, in 195 meters.

Euclymene corallicola (Treadwell), 1929

Maldanella corallicola TREADWELL, 1929d, p. 8, figs. 21-24.

The single specimen comes from Loggerhead Key, Dry Tortugas, Florida, in coral rock. It measures about 100 mm. long; greatest width is about 4 mm. at the fifth segment. The body is abruptly narrower at the ninth segment and remains so to the posterior end. There are 19 setigerous segments and two ante-anal ones. The anal funnel has 29 marginal lobes which are about equally small but some are irregularly bifid and others broken off. The cephalic plaque is distinct and has a raised median ridge which extends forward to form the prostomial lobe. Nuchal ridges, not previously described, are visible as a pair of slightly raised ridges parallel to the median one; they extend about halfway through the cephalic plaque. No prostomial ocelli are visible. The dorsal margin of the cephalic plaque is entire, not crenulate as in *Euclymene coronata* Verrill; there are two deeply emarginate notches at the sides.

The first three setigerous segments are similar to one another in that each neuropodium has a single large, yellow, distally curved spine projecting from the neuropodium. More posterior neuropodia have rows of rostrate yellow hooks. These characters are those of *Euclymene* Verrill. *Euclymene corallicola* (Treadwell) approaches *E. grossa newporti* Berkeley and Berkeley (1941) described from southern California.

AMPHARETIDAE

Melinnexis tentaculata (Treadwell), 1906

Terebellides tentaculata TREADWELL, 1906, p. 1177, fig. 72.

Paratypes of *Terebellides tentaculata* in the American Museum of Natural History originate from Hawaii. They agree fully with the brief original account and may have come from the original collection, taken off Hawaii in 278

to 743 fathoms. Grossly examined, these individuals resemble *Melinna* Malmgren, but they have no heavy nuchal spines, and a very large median oral tentacle is conspicuously extended forward in front of the prostomium. Branchiae number four pairs; all are similar, tapering cylindrical. Thoracic and abdominal uncini are short, avicular, with three or four teeth in a single row, the largest tooth at the base.

The similarity of these features to those of *Sosaniopsis armipotens* Moore (1923, pp. 215-216, pl. 18, figs. 26-29) from off Santa Catalina Island in 2228 fathoms, red mud, is at once obvious and suggests their identity. Furthermore, *Melinna monocera* Augener (1906, pp. 177-180, pl. 6, figs. 121-125) from off the West Indies in 116 and 170 fathoms is nearly allied.

Annenkova (1931, pp. 269-270, fig. 1) has characterized the genus *Melinnexis* and reviewed some of the literature.

Asabellides sibirica (Wirén), 1883

Sabellides sibirica WIRÉN, 1883, pp. 418-419.
Neosabellides alaskensis TREADWELL, 1943e, pp. 1-2, figs. 1-5.

The holotype of *Neosabellides alaskensis* comes from Nash Harbor, Nunivak Island, Alaska, taken in July, 1937. Over-all length is about 18 mm., width 1 mm. The anterior margin of the prostomium is prolonged because of the everted condition of the oral tentacles. The bases of the four pairs of branchiae are like those of *Asabellides sibirica* (Wirén) (see Annenkova, 1929, pp. 494-495, pl. 38, figs. 50-51, pl. 39, figs. 60-65, for illustrated diagnosis), with three pairs forming a transverse series and a fourth pair inserted behind the others at the middle of each series. The paired nephridial papillae are visible at the middorsum, behind the innermost branchial bases. The thorax consists of 14 setigerous segments; uncini are present from the third segment. The abdomen consists of about 22 segments. In abdominal parapodia, the dorsal cirri are small and inconspicuous.

The synonymy is believed to include, in addition to *Neosabellides alaskensis*: *Asabellides orientalis* Annenkova, 1929, from the northwestern Pacific Ocean (*vide* Annenkova, 1938, p. 201), and *Pseudosabellides littoralis*

Berkeley and Berkeley, 1943, from Ungava, Hudson Bay, and western Canada.

Asabellides sibirica may be considered a common Arctic intertidal species. It constructs a fragile, loose-fitting tube, two or three times as long as the occupant, coated with sand and mud particles (Berkeley and Berkeley, 1943).

***Ampharete arctica* Malmgren, 1866**

Ampharete arctica MALMGREN, 1866, pp. 364-365, pl. 26, fig. 77.

Ampharete brevibranchiata TREADWELL, 1926d, pp. 6-7, figs. 11-14.

The holotype of *Ampharete brevibranchiata* comes from Bering Strait, between King Island and the two Diomedes. It is a moderately large, typical individual of *Ampharete arctica* Malmgren. Berkeley and Berkeley (1952, pp. 65-66, figs. 133-35) have given a diagnostic account for individuals from the northern Pacific. Paleae are conspicuous, number about 30 pairs; each is slender and distally pointed. Branchiae number four pairs; they are cirri-form and arranged in anterior and posterior rows. The body consists of 14 thoracic setigerous, and 13 abdominal, segments. Uncini are present from the third setiger; they have about 10 teeth in a single row at the cutting edge.

Ampharete arctica is known from circum-polar areas in moderate depths (Berkeley and Berkeley, 1952, p. 66).

TEREBELLIDAE

***Polymniella aurantiaca* Verrill, 1900**

Eupolymnia (Polymniella) aurantiaca VERRILL, 1900, pp. 660-661.

Terebella hiata TREADWELL, 1931e, pp. 80-81, fig. 14.

The holotype of *Terebella hiata* comes from Haiti. It agrees fully with *Polymniella aurantiaca* Verrill, first described from Bermuda, in having the peculiar distribution of branchiae (see Hartman, 1942b, p. 74). Uncinial ridges are present from the second setiger, and thoracic notosetae are continued posteriorly through a long region. Uncini are in double rows. Noto-setae are distally denticulate. The species is known only from Bermuda and Haiti.

***Loimia medusa* (Savigny), 1820**

Terebella medusa SAVIGNY, 1820, p. 85.

Loimia minuta TREADWELL, 1929d, pp. 10-11, figs. 28-30.

The holotype of *Loimia minuta* comes from Dry Tortugas, Florida. It agrees fully with *L. medusa* (Savigny) as revised by Fauvel (1914, pp. 145-146, pl. 7, figs. 6-9) and reported from other West Indian localities by Monro (1928, pp. 99-100; 1939, pp. 347-348). The species has a cosmopolitan distribution in warm seas.

***Thelepus crispus* Johnson, 1901**

Thelepus crispus JOHNSON, 1901, p. 428, pl. 17, figs. 175-178.

Streblosoma magna TREADWELL, 1937b, pp. 155-156, figs. 26-28.

The type of *Streblosoma magna* comes from Arena Bank, Baja California, Mexico, in 35 to 45 fathoms. It has setae from the second branchial segment and uncingerous tori from the third, or first postbranchial, segment. Branchiae number three pairs and form filamentous tufts. Notopodial fascicles of pointed setae are present on many segments, to near the posterior end of the body. These characters are those of *Thelepus* Leuckart. Thoracic ventral scutes are furrowed and folded, not well defined as in *Thelepus setosus* (Quatrefages). Uncingerous pin-nules are wart-like, not prominent. These features distinguish the species *Thelepus crispus* Johnson, as diagnosed by Berkeley and Berkeley (1942, p. 204).

Thelepus crispus is a common littoral terebellid in the northeastern Pacific. It frequently harbors a polynoid commensal, *Lepidasthenia virens* (Blanchard), in its southern ranges and *Halosydna brevisetosa* Kinberg farther to the north.

***Thelepus setosus* (Quatrefages), 1865**

Phenacia setosa QUATREFAGES, 1865, pp. 376-377.

Streblosoma verrilli TREADWELL, 1911, pp. 11-12, figs. 27-29.

Streblosoma verrilli was collected from a reef near Fort Jefferson, Florida. Setae are first present from the second branchial segment and uncini from the third setigerous one. Branchiae are in tufts on three successive segments. Noto-setae are present on about 40 segments and absent from somewhat more than half of the body length. The peristomial ridge has many eye spots in dispersed arrangement.

Uncini have a large fang that is surmounted by two larger teeth side by side, or there may be another smaller one above these. Notosetae are distally somewhat expanded and have smooth cutting edges. There are 13 ventral scutes in the thoracic region. These characters are those of *Thelepus setosus* (Quatrefages), previously recorded from southern Florida and in the Gulf of Mexico (Hartman, 1951, p. 113).

***Thelepus haitiensis* Treadwell, 1931**

Thelepus haitiensis TREADWELL, 1931e, pp. 79-80, figs. a-b.

The holotype comes from Haiti. Except for the absence of eye spots on the peristomium, this species seems indistinguishable from *Thelepus setosus* (see above). It is known only from the original account.

***Streblosoma crassibranchia* Treadwell, 1914**

Streblosoma crassibranchia TREADWELL, 1914b, pp. 208-209, pl. 12, figs. 30, 31.

Streblosoma crassibranchiata TREADWELL, 1914b, p. 234.

The locality and date, originally questioned, are given in the vial, labeled as type, as San Clemente Island, California, June, 1896. Branchiae are present on three segments; the number of filaments in each is five, four, and three on one side and five, four, and seven on the other one. Notosetae are present from the second branchial segment, and uncini are first present on the fourth setigerous one. The peristomium has many small eye spots. The thorax includes at least 18 segments provided with notopodia. Thoracic uncini are subrectangular, with a major fang surmounted by subequal teeth arranged in a crescent.

Streblosoma crassibranchia has been found more abundantly in the vicinity of the Channel Islands of southern California, in moderate depths.

SABELLIDAE

***Branchiomma nigromaculata* (Baird), 1865**

Sabella nigromaculata BAIRD, 1865, p. 159, pl. 5, figs. 5, 6.

Dasychone loandensis TREADWELL, 1943c, p. 4, figs. 21-25.

Dasychone nigromaculata DAY, 1955, p. 445, fig. 7.

The type of *Dasychone loandensis* comes

from St. Paul de Loanda, Africa. The color has faded, but the body retains the dispersed dark flecks characteristic of *Branchiomma nigromaculata*. The thoracic collar is entire; it has a pair of midventral lobes projecting forward to cover the base of the crown. The collar is continued laterally as a continuous band to the dorsal side of the body, within the notopodial bases. There are no distinct dorsal lappets, but there are thickened paired areas where they would be. This differs from the original figure (Treadwell, fig. 21) in that the ventral lobes are rounded at the end, not pointed; the dorsal lobes are not sharply set off.

The tentacular crown has paired filaments on the outer sides of the radioles, characteristic of *Branchiomma* K  lliker, 1858 (not Clapar  de, 1869). The filaments at the base of the radioles are smaller and have brown tips; those near the middle are broader and longer. Paired eye spots occur between successive pairs of processes, nearer the proximal outer ones, not midway between them.

Dasychone loandensis is regarded as a possible variety of *B. nigromaculata* (Day, 1955, p. 445).

Branchiomma nigromaculata is widely dispersed on both shores of the middle Atlantic Ocean (Johansson, 1927, p. 164).

***Megalomma splendida* (Moore), 1905**

Pseudopotamilla splendida MOORE, 1905, pp. 564-566, pl. 37, figs. 23-27.

Branchiomma disparoculatum TREADWELL, 1914b, pp. 223-224, figs. 44-46.

The type of *Branchiomma disparoculatum* was dredged off San Diego, California. It is referred to *Megalomma* Johansson, because the radioles have terminal compound eyes. In this case they are limited to the dorsalmost pair of radioles, and the eyes are large and spiralled about the subdistal part of the stem. The thoracic collar is conspicuous and has large, dorsal lappets. It agrees fully with *Megalomma splendida* (Moore), recorded from dredged depths in the northeastern Pacific Ocean (Moore, 1923, p. 242) and as *Branchiomma burrdardum* Berkeley and Berkeley (1941, p. 55).

***Potamilla minuta* (Treadwell), 1941**

Parasabella minuta TREADWELL, 1941a, p. 4, figs. 9-12.

The holotype comes from São Sebastião Island, Brazil. It measures about 10 mm. long, and the branchiae are 3 mm. long. The tentacular crown consists of eight (not seven) pairs of radioles. I am unable to find eye spots, but there are pigmented bars at wide intervals along the radiolar length. The thoracic collar conceals the peristomium except at the dorsal side; it consists of a pair of lobes with midventral incision and is widely separated dorsally; the ventral lappets are overlapping.

The thorax has only four (not five) setigerous segments; the first segment is uniramous and has only pointed setae. Thoracic notosetae are of two kinds; the uppermost are longer and limbate; the lower are abruptly shorter and mucronate. Neurosetae include avicular and pennoned kinds.

In the abdomen the notopodial uncini are in single rows of seven or more, and the neurosetae are in conspicuous fascicles of 24 or more long, limbate, distally pointed setae. The fecal groove runs forward midventrally along the abdomen, turns right between the fifth and sixth ventral shields, and is continued forward middorsally from the fourth segment. The tube is thin walled, externally covered with a layer of fine sand grains.

This individual may represent an immature stage, as its author suggested, but it cannot be referred to a known species chiefly because of its low thoracic count of only four setigers and because of the presence of a peculiar foliaceous, frilled membrane extending along the inner base of the tentacular crown.

Potamilla minuta is known only through its original find.

Sabellastarte magnifica (Shaw), 1800

Tubularia magnifica SHAW, 1800, pp. 228-229, pl. 9, figs. 1-6.

Metalonome brunnea TREADWELL, 1917b, p. 268, pl. 3, figs. 24-27.

Laonome sanjuanensis TREADWELL, 1941a, pp. 3-4, figs. 4-8.

The holotype of *Laonome sanjuanensis* comes from east San Juan, Puerto Rico, in a tidal pool. It is a pale, small individual, perhaps immature, representative of *Sabellastarte* Savigny. Thoracic notosetae are of one kind, tapering limbate, longer above and shorter below. Thoracic neurosetae are entirely avicular.

The thoracic collar has no dorsal lappets. It is referred to *S. magnifica* (Shaw), widely reported from West Indian localities.

The holotype of *Metalonome brunnea* comes from Nassau Harbor, Bahamas, and a lot of paratypes comes from the same place. Portions of the tube are white, somewhat chitinated, and externally covered with fine white silt. The thoracic collar has a pair of prolonged triangular lobes on its ventral ends; it extends laterally as a shorter membrane to the dorso-lateral side and ends above the first notosetal fascicles. Thoracic notosetae are of a single kind and include longer and shorter limbate kinds. Thoracic neurosetae are entirely avicular. This is believed to be identical with *Sabellastarte magnifica* (Shaw).

Sabellastarte indica Savigny, 1820

Sabellastarte indica SAVIGNY, 1820, p. 77.

Laonome punctata TREADWELL, 1906, p. 1179.

Laonome arenosa TREADWELL, 1943d, p. 3, figs. 9-13.

The holotype of *Laonome arenosa* comes from Pearl Harbor, Hawaii. The thoracic collar consists of a pair of semicircular dorsal lobes; it has a pair of dorsolateral clefts, lesser ventrolateral clefts, and a deep midventral fissure that divides the two longest paired ventral lappets. Thoracic setae are like those of *Sabellastarte* Savigny.

Nine paratype individuals of *Laonome punctata* are from Waialua Reef, Oahu, Hawaii, taken in 1902. They retain much of the dark pigment on the tentacular crown and thoracic collar; the pale body is dorsally speckled with small dark spots, and a larger spot is present in the space between notopodia and neuropodia. These characters agree with those of *Sabellastarte indica* Savigny, which is often regarded as the same as *S. magnifica* (Shaw) (Johansson, 1926, pp. 15-16, figs. 1-5). *Sabellastarte indica* is at most a Pacific form of the West Indian *S. magnifica* (Shaw).

SERPULIDAE

Sclerostyla ctenactis Mörch, 1863

Sclerostyla ctenactis MÖRCH, 1863, p. 386. WRIGLEY, 1951, p. 184, fig. 38.

Placostegus calciferus TREADWELL, 1929d, pp. 12-13, figs. 34-36.

Spirodiscus calciferus TREADWELL, 1939b, p. 301.

The holotype of *Placostegus calciferus* comes from Julia Cove, Guanica Harbor, Puerto Rico, from a calcareous tube grown firmly on a shell. Unique features include the completely calcified opercular stalk and disk and the transversely barred radioles of the tentacular crown. This form agrees with *Sclerostyla ctenactis* Mörch, first described from St. Thomas in the Antilles, and later named *Sclerostyla differens* Augener (1922, p. 50) from the Barbados and Colón, Panama. Another individual in the collections of the Allan Hancock Foundation was collected by the "Velero III" and comes from Octavia Bay, Colombia; it is illustrated by Wrigley (1951, fig. 38).

***Sphaeropomatus miamiensis* Treadwell, 1934**

Sphaeropomatus miamiensis TREADWELL, 1934b, pp. 339-341, figs. 1-5.

The tubes are white, massed, erect, and resemble those of the Filigraninae. The thorax has seven setigerous segments; the first or collar segment is uniramous. Its notosetae are of two kinds: some are transversely spinous, others are slender capillary setae. The next six thoracic segments have smooth notosetae and neurosetae which are uncinata with many teeth along the cutting edge. Tentacular radioles number eight on the left, and nine on the right, side; they terminate in blunt, abrupt tips. Each radiole has eight or nine transverse paired red spots, possibly eyes resembling those of *Sabella crassicornis* Sars, but the spots tend to merge crosswise.

The collar and thoracic membranes are distinct. The operculum is on the left side; it has a straight stalk surmounted by a soft, vesicular cap, largest on its ventral side; its distal end is flat or only slightly convex; its basal part is cup-like or slightly grooved, possibly through shrinking. The operculum has no chitinized or horny parts.

Specimens in the American Museum of Natural History come from Indian River, Florida, and were collected by Mr. J. C. Armstrong. Those of the type collection in the United States National Museum come from the Miami River, Florida, from the carapace of a crab. The discrepancies therefore in the original account and the diagnosis herein given may be the result of actual differences in local populations.

***Eupomatus uncinatus* Philippi, 1844**

Eupomatus uncinatus PHILIPPI, 1844, p. 195, pl. 6, fig. Q.

Eupomatus operculata TREADWELL, 1929d, p. 12.

The holotype of *Eupomatus operculata* comes from Berbera, British Somaliland. It is unique in having two nearly equally large opercula, as first described. Each operculum has a long cylindrical stalk; the basal chalice has about 38 denticulations of equal size in a circular arrangement. The distal cup consists of six (on one operculum) and seven (on the other one) terminal curved fangs which are nearly equally large and similarly developed. Each fang has a small pointed spur visible within the cup, to be seen when the spines are pushed apart. The presence of two opercula, instead of a single operculum, is abnormal and has no specific significance. In other respects, this form agrees with *Eupomatus uncinatus* Philippi, well known from tropical parts of the Atlantic Ocean and its adjacent seas.

***Eupomatus similis* Treadwell, 1929**

Eupomatus similis TREADWELL, 1929d, pp. 11-12, fig. 31.

This species originates from Baja California, Mexico. It measures only about 12 mm. long and is free from its tube. The operculum has a basal chalice longest on its ventral side and bordered with about 40 crenulations. The distal cup is also asymmetrical, with the longest spine on the dorsalmost end and the shortest one on the opposite side; the spines number about 20 and are curved inward at their distal end. At the inner base of each spine is a recurved hook directed inward and down so that it points towards the center. Some of the lateral spines of the distal cup have a projecting boss at their outer distal side, but there are no lateral teeth. The accessory operculum is represented by a small, fleshy, club-shaped knob on the left side.

This individual agrees with the description of *Hydroides recurvispina* Rioja, 1941, from Acapulco, western Mexico, except that there is greater asymmetry in the operculum of *Eupomatus similis* than in *H. recurvispina*.

***Vermiliopsis multiannulata* (Moore), 1923**

Metaverilia multiannulata MOORE, 1923, pp. 251-253, pl. 18, fig. 48.

Vermiliopsis hawaiiensis TREADWELL, 1943d, pp. 3-4, figs. 14, 15.

Vermiliopsis torquata TREADWELL, 1943d, p. 4, figs. 16, 17.

The holotypes of *Vermiliopsis hawaiiensis* and *V. torquata* come from Hawaii. In the first one the operculum is conspicuous for its large size and very dark color. The body is only about 4.5 mm. long and the operculum with stalk another 3 mm. The thoracic collar is four-lobed, with the dorsolateral lobes larger than the others and widely separated on the dorsal margin; the ventrolateral lobes are in contact midventrally. The tentacular crown has four pairs of radioles in which the distal ends are free. The thorax has six uncinigerous segments. The tube is thick and longitudinally ridged.

Vermiliopsis torquata measures about 9 mm. long and 0.5 mm. wide. The operculum has a heavy stalk and terminates in an operculum resembling that of *V. hawaiiensis*. Radioles number about 12 on a side and also have a long, free tip. The thoracic collar has a pair of prominent dorsal lobes. These two individuals are

believed to be the same as *Vermiliopsis multiannulata* (Moore), first described from dredged areas of California, and later from Acapulco, Mexico (Rioja, 1941, p. 734, pl. 9, figs. 27-31).

Pomatocerus caeruleus (Schmarda), 1861

Placostegus caeruleus SCHMARDA, 1861, pp. 29-30, pl. 21, fig. 178.

Pomatoceros davaoensis TREADWELL, 1942, pp. 4-5, figs. 12-14.

The holotype of *Pomatoceros davaoensis* Treadwell comes from Padada, Gulf of Davao, Philippine Islands. It is a typical individual of *P. caeruleus* as described by Ehlers (1905, pp. 67-70, pl. 9, figs. 11-19, as *Pomatoceros strigiceps*) for individuals from New Zealand. Abdominal uncini have 10 or 11 teeth in a single row. The opercular stalk is very thick and has conspicuous lateral wings; its distal end is provided with a tri-pronged process far larger than originally shown (Treadwell, fig. 12). Mesnil and Fauvel (1939, p. 35) have indicated a partial synonymy and geographic range.

REFERENCES

- ANNENKOVA, N. P.
 1929. Beiträge zur Kenntnis der Polychaeten-Fauna der USSR. Fam. Pectinariidae Quatrefages (Amphictenidae Malmgren) und Ampharetidae Malmgren. Ann. Mus. Zool. Acad. Sci. USSR, pp. 477-502, pls. 37-39.
 1931. Zur Polychaetenfauna von Franz-Joseph-Land (*Melinnexis* gen. nov. *arctica* sp. nov.). Zool. Anz., vol. 95, pp. 269-272, 4 figs.
 1935. Ueber *Dysponetus pygmaeus* Levinsen und *Euzonus arcticus* Grube. Compt. Rendus Acad. Sci. URSS, vol. 3 (8), no. 5, pp. 233-236.
 1938. [Polychaeta of the northern Japanese Sea and their horizontal and vertical distribution.] Trudy, Hydrobiological Expedition SSSR, 1934, to the Japanese Sea, pp. 81-230, 16 figs. [In Russian.]
- AUDOUIN, J. V., AND H. MILNE-EDWARDS
 1834. Recherches pour servir à l'histoire naturelle du littoral de la France, ou recueil de mémoires sur l'anatomie, la physiologie, la classification et les mœurs des animaux de nos côtes. Paris, vol. 2, Annélides, 290 pp., 8 pls.
- AUGENER, HERMANN
 1906. Westindische Polychaeten. Bull. Mus. Comp. Zool. Harvard College, vol. 43, pp. 91-196, 8 pls.
 1912. Beitrag zur Kenntnis verschiedener Anneliden und Bemerkungen über die *Nephtys*-Arten und deren epitoke Formen. Arch. Naturgesch., yr. 78A, no. 10, pp. 162-212, 2 pls.
 1918. Polychaeta. Beiträge zur Kenntnis des Meeresfauna West-Afrikas. Hamburg, W. Michaelsen, vol. 2, no. 2, pp. 67-625, 6 pls.
 1922a. Ueber litorale Polychaeten von Westindien. Sitzber. Gesell. Naturf. Fr. Berlin, pp. 38-63.
 1922b. Litorale Polychaeten von Juan Fernandez. In Skottsberg, Carl, The natural history of Juan Fernandez and Easter Island. Uppsala, vol. 3, Zoology, pp. 161-218, 1 pl.
 1922c. Ueber litorale Polychaeten von Westindien. Sitzber. Gesell. Naturf. Fr. Berlin, pp. 38-63.
 1925. Ueber westindische und einige andere Polychaeten-typen von Grube (Oersted) Krøyer, Mörch und Schmarda. Publ. Univ. Zool. Mus. Copenhagen, vol. 39, pp. 1-47, 2 figs.
- 1927a. Polychaeten von Neu-Pommern. Sitzber. Gesell. Naturf. Fr. Berlin, for 1926, pp. 119-152, 1 pl.
 1927b. Bijdragen tot de Kennis der Fauna van Curaçao. Resultaten eener Reis van Dr. C. J. van der Horst in 1920. Polychaeten von Curaçao. Zool. Genoots. Nat. Artis Magistra, Amsterdam, vol. 15, pp. 39-82, 9 figs.
 1933b. Polychaeten aus den zoologischen Museen von Leiden und Amsterdam. III. *Ibid.*, vol. 17, pp. 317-410, figs. 14-31.
 1933a. Polychaeten aus den zoologischen Museen von Leiden und Amsterdam. I. Zool. Meded. Leiden, vol. 15, pp. 177-260, 31 figs.
- BAIRD, WILLIAM
 1863. Descriptions of several new species of worms belonging to the Annelida Errantia and Sedentaria or Tubicola of Milne Edwards. Proc. Zool. Soc. London, pp. 106-110.
 1865a. On new tubicolous annelids in the collection of the British Museum. Jour. Linnean Soc. London, Zool., vol. 8, pp. 157-160, 1 pl.
 1865b. Contributions towards a monograph of the species of Annelides belonging to the Aphroditacea, containing a list of the known species, and a description of some new species, contained in the British Museum. *Ibid.*, vol. 8, pp. 172-202.
- BERGSTRÖM, ERIK
 1914. Zur Systematik des Polychaeten Familie der Phyllodociden. Zool. Bidr. Uppsala, vol. 3, pp. 37-224, 81 figs.
- BERKELEY, E., AND C. BERKELEY
 1941. On a collection of Polychaeta from southern California. Bull. Southern California Acad. Sci., vol. 40, pt. 1, pp. 16-60, 18 figs.
 1942. North Pacific Polychaeta, chiefly from the west coast of Vancouver Island, Alaska and Bering Sea. Canadian Jour. Res., vol. 20, pp. 183-208, 6 figs.
 1943. Biological and oceanographical conditions in Hudson Bay. Jour. Fish. Res. Board Canada, vol. 6, no. 2, pp. 129-132.
 1945. Notes on Polychaeta from the coast of western Canada. Ann. Mag. Nat. Hist., ser. 11, vol. 12, pp. 316-335, 6 figs.
 1948. Annelida, Polychaeta errantia. Canadian Pacific Fauna, no. 9b (1), Fish. Res.

- Board Canada, Toronto, pp. 1-100, 160 figs.
1951. A second record of the polychaetous annelid *Potamethus elongatus* (Treadwell). Jour. Washington Acad. Sci., vol. 41, no. 10, pp. 333-334, figs. 1-4.
1952. Annelida, Polychaeta sedentaria. Canadian Pacific Fauna, no. 9b (2), Fish. Res. Board Canada, Toronto, pp. 1-139, 292 figs.
- BLANCHARD, EMILE
1849. Anelides du Chile. In Gay, Claude, Historia física y política de Chile. Paris, Zoologia, vol. 3, pp. 9-52, pls. 1, 2.
- CHAMBERLIN, R. V.
1918. Polychaetes from Monterey Bay. Proc. Biol. Soc. Washington, vol. 31, pp. 173-180.
1919. The Annelida Polychaeta. Mem. Mus. Comp. Zool. Harvard College, vol. 48, pp. 1-514, pls. 1-80.
- DELLE CHIAJE, S.
1841. Descrizione e notomia degli animali invertebrati della Sicilia cateriore osservati vivi negli anni 1822-1830. Naples, 5 vols. (annelids in vol. 3).
- CROSSLAND, CYRIL
1903. On the marine fauna of Zanzibar and British East Africa, from collections made by Cyril Crossland in the years 1901 and 1902. Polychaeta. Proc. Zool. Soc. London, pp. 129-144, 4 figs., 2 pls.
1904. The marine fauna of Zanzibar and British East Africa from collections made by Cyril Crossland in the years 1901 and 1902. The Polychaeta, pt. 3. *Ibid.*, pp. 287-330, figs. 43-46, pls. 20-22.
1924. Polychaeta of tropical East Africa, the Red Sea and Cape Verde Islands, collected by Cyril Crossland and of the Maldive Archipelago collected by Professor Stanley Gardiner. The Lumbriconereidae and Staurocephalidae. *Ibid.*, pp. 1-106, 126 figs.
- DAY, J. H.
1934. On a collection of South African Polychaeta, with a catalogue of the species recorded from South Africa, Angola, Mosambique, and Madagascar. Jour. Linnean Soc. London, vol. 39, no. 263, pp. 15-82, 16 figs.
1951. The polychaet fauna of South Africa. Part 1. The intertidal and estuarine Polychaeta of Natal and Mosambique. Ann. Natal Mus., vol. 12, pt. 1, pp. 1-67, 8 figs.
1953. The polychaet fauna of South Africa. Part 2. Errant species from Cape shores and estuaries. *Ibid.*, vol. 12, pt. 3, pp. 397-441, 6 figs.
1955. The Polychaeta of South Africa. Part 3. Sedentary species from Cape shores and estuaries. Jour. Linnean Soc. London, vol. 42, pp. 407-452, 8 figs.
- DUJARDIN, FELIX
1839. Observations sur quelques annélides marins. Ann. Sci. Nat. Paris, ser. 2, vol. 11, pp. 287-194, pl. 1, figs. 1-12.
- EHLERS, ERNST
1887. Report on the annelids of the dredging expedition of the U. S. coast survey steamer *Blake*. Mem. Mus. Comp. Zool. Harvard College, vol. 15, vi+335 pp., 60 pls.
1905. Anneliden der Sammlung Schauinsland. Ergebnisse einer Reise nach dem Pacific, Schauinsland 1896-97. Zool. Jahrb. Syst., Jena, vol. 22, pp. 281-302, pl. 9.
1908. Die Bodensässigen Anneliden aus den Sammlungen der deutschen Tiefsee-Expedition. In Chun, Carl (ed.), Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition auf dem Dampfer "Valdivia" 1898-1899. Jena, vol. 16, no. 1, pp. 1-168, 23 pls.
- EISIG, HUGO
1914. Zur Systematik, Anatomie und Morphologie der Ariciiden nebst Beiträgen zur generellen Systematik. Mitt. Zool. Stat. Neapel, vol. 21, pp. 153-600, 23 figs., pls. 10-27.
- FAUVEL, PIERRE
1914. Annélides polychètes de San Thomé (Golfe de Guinée) recueillies par M. Ch. Gravier. Arch. Zool. Exp. Gén. Paris, vol. 54, pp. 105-155, pls. 7, 8.
1919. Annélides polychètes de la Guyane française. Bull. Mus. Hist. Nat. Paris, vol. 25, pp. 472-479, 2 figs.
- 1923a. Polychètes errantes. Faune de France, Paris, vol. 5, pp. 1-488, 188 figs.
- 1923b. Annélides polychètes des îles Gambier et de la Guyane française. Mém. Accad. Nuovi Lincei Rome, ser. 2, vol. 6, pp. 1-59, figs. 1-8.
- 1930a. Annélides polychètes de Nouvelle-Calédonie, recueillies par Mme. A. Pruvot-Fol en 1928. Arch. Zool. Exp. Gén. Paris, vol. 69, pp. 501-562, 9 figs.
- 1930b. Annelida Polychaeta of the Madras Government Museum. Bull. Madras Govt. Mus., Nat. Hist. Sec., vol. 1, no. 2, pp. 1-72, 18 figs.
1932. Annelida polychaeta of the Indian Mu-

- seum, Calcutta. Mem. Indian Mus., vol. 12, no. 1, pp. 1-262, 40 figs., 9 pls.
1933. Annélides polychètes du Golfe du Pei Tchen Ly de la collection de Musée Hoang ho Pai ho. Publ. Mus. Hoangho Pai ho Tien-Tsein, vol. 15, pp. 1-67, 6 figs.
1939. Annelida polychaeta. Résultats scientifiques des croisières du Navire-École Belge "Mercator." Mém. Mus. Hist. Nat. Belgique, ser. 2, fasc. 15, pp. 1-37.
1943. Annélides polychètes de Californie recueillies par L. Diguët. Mém. Mus. Hist. Nat. Paris, vol. 18, fasc. 1, pp. 1-32, 2 figs.
- FRIEDRICH, HERMANN
1950. Beiträge zur Kenntnis der Polychätenfamilie Typhloscolecidae. Die pelagischen Polychaeten der "Meteor"-Expedition, II. Zool. Jahrb. Syst. Ökol. u. Geogr., vol. 79, no. 3, pp. 309-320, 4 figs.
- GALLOWAY, T. W., AND PAUL S. WELCH
1911. Studies on a phosphorescent Bermudan annelid, *Odontosyllis enopla* Verrill. Trans. Amer. Micros. Soc., vol. 30, pp. 13-39, pls. 1-5.
- GRAVIER, CHARLES
1900. Contribution à l'étude des annélides polychètes de la Mer Rouge. (Pt. 1). Nouv. Arch. Mus. Paris, ser. 4, vol. 2, fasc. 2, pp. 137-282, pls. 9-14.
- GREEFF, RICHARD
1876. Untersuchungen über die Alciopiden. Verhändl. K. Leopoldinisch-Carolinischen Deutschen Akad. Naturf., vol. 39, pp. 33-132, 6 pls.
1879. Ueber pelagische Anneliden von der Küste der canarischen Inseln. Zeitschr. Wiss. Zool. Leipzig, vol. 32, pp. 237-284, pls. 13-15.
- GRUBE, A. E.
1840. Actinien, Echinodermen und Würmen des Adriatischen und Mittelmeers. Königsberg, J. H. Bon, pp. 61-88, 1 pl.
1855. Beschreibung neuer oder wenig bekannter Anneliden. Arch. Naturgesch., Berlin, vol. 21, no. 1, pp. 81-128, pls. 3-4.
- 1856-1859. Annulata Oerstediana. Enumeratio Annulorum, quae in itinere per Indiam occidentalem et Americam centralem annis 1845-1848 . . . in itinere ad Americam Meridionalem collectis. Vidensk. Medd. Naturhist. For., Copenhagen, pt. 1, pp. 44-62; pt. 2, pp. 158-186; pt. 3, pp. 105-120.
1870. Beschreibungen neuer oder weniger bekannter von Hrn. Ehrenberg gesammelter Anneliden des rothen Meeres. Monatsber. Akad. Wiss. Berlin, pp. 484-521.
1877. Ueber eine Sammlung von wirbellosen Seethieren, welche Herr Dr. Eugen Reimann dem hiesigen zoologischen Museum zum Geschenk gemacht. Jahrb. Ges. Vaterl. Kultur, Breslau, vol. 54, pp. 48-51.
1878. Annulata Semperiana. Mem. Acad. Sci. St. Petersburg, vol. 25, ix+300 pp., 15 pls.
- HANSEN, G. ARMAUER
1882. Recherches sur les annélides recueillies par M. le professeur Eduard van Beneden pendant son voyage au Brésil et à la Plata. Mem. Acad. Roy. Sci. Belgique, vol. 44, pp. 1-29, pls. 1-7.
- HARTMAN, OLGA
1936. Nomenclatorial changes involving California polychaete worms. Jour. Washington Acad. Sci., vol. 26, pp. 31-32.
- 1938a. Annotated list of the types of polychaetous annelids in the Museum of Comparative Zoölogy. Bull. Mus. Comp. Zoöl. Harvard College, vol. 85, pp. 1-31, 3 pls.
- 1938b. Nomenclatorial changes involving types of polychaetous annelids of the Nereidae in the United States National Museum. Jour. Washington Acad. Sci., vol. 28, pp. 13-15.
- 1938c. Descriptions of new species and new generic records of polychaetous annelids from California of the families Glyceridae, Eunicidae, Stauronereidae and Opheliidae. Univ. California Publ. Zool., vol. 43, pp. 93-112, 63 figs.
- 1938d. The types of the polychaete worms of the families Polynoidae and Polyodontidae in the United States National Museum and the description of a new genus. Proc. U. S. Natl. Mus., vol. 86, pp. 107-134, 7 figs.
- 1939a. The polychaetous annelids collected by the Presidential Cruise of 1938. Smithsonian Misc. Coll., vol. 98, pp. 1-22, 3 figs.
- 1939b. Polychaetous annelids. Aphroditidae to Pisionidae. Allan Hancock Pacific Expeditions. Los Angeles, vol. 7, pp. 1-156, pls. 1-28.
- 1940a. Polychaetous annelids. Chrysopetalidae to Goniadidae. Allan Hancock Pacific Expeditions. Los Angeles, vol. 7, pp. 173-287, pls. 31-44.

- 1940b. *Boccardia proboscidea*, a new species of spionid worm from California. Jour. Washington Acad. Sci., vol. 30, pp. 382-387, 1 fig.
1941. Some contributions to the biology and life history of Spionidae from California. Allan Hancock Pacific Expeditions. Los Angeles, vol. 7, pp. 289-324, pls. 45-48.
- 1942a. The identity of some marine annelid worms in the United States National Museum. Proc. U. S. Natl. Mus., vol. 92, pp. 101-140, 15 figs.
- 1942b. A review of the types of polychaetous annelids at the Peabody Museum of Natural History, Yale University. Bull. Bingham Oceanogr. Coll., vol. 8, pp. 1-98, 161 figs.
- 1942c. Report on the scientific results of the *Atlantis* expeditions to the West Indies under the joint auspices of the University of Havana and Harvard University. Mem. Soc. Cubana Hist. Nat., vol. 16, no. 2, pp. 89-104, pls. 8-9.
- 1944a. Polychaetous annelids. Allan Hancock Atlantic Exped. Rept., no. 3, pp. 1-33, pls. 1-2.
- 1944b. Polychaetous annelids. Eunicea. Allan Hancock Pacific Expeditions. Los Angeles, vol. 10, no. 1, pp. 1-238, pls. 1-18.
- 1944c. Polychaetous annelids. Paraonidae, Magelonidae, Longosomidae, Ctenodrilidae and Sabelliidae. Allan Hancock Pacific Expeditions. Los Angeles, vol. 10, no. 3, pp. 311-389, pls. 27-42.
1945. The marine annelids of North Carolina. Bull. Duke Univ. Marine Sta., no. 2, pp. 1-54, 10 pls., 2 charts.
- 1947a. Polychaetous annelids. Capitellidae. Allan Hancock Pacific Expeditions. Los Angeles, vol. 10, no. 4, pp. 391-481, pls. 43-58, 1 chart.
- 1947b. Polychaetous annelids. Pilargiidae. Allan Hancock Pacific Expeditions. Los Angeles, vol. 10, no. 5, pp. 482-523, pls. 59-63.
- 1948a. The polychaetous annelids of Alaska. Pacific Sci., Univ. Hawaii, vol. 2, no. 1, pp. 1-58, 12 figs., 2 charts.
- 1948b. The marine annelids erected by Kinberg with notes on some other types in the Swedish State Museum. Arkiv Zool., Stockholm, vol. 42A, no. 1, pp. 1-137, pls. 1-18.
1950. Polychaetous annelids. Goniadidae, Glyceridae, Nephtyidae. Allan Hancock Pacific Expeditions. Los Angeles, vol. 15, no. 1, pp. 1-181, 3 figs., 19 pls.
1951. The littoral marine annelids of the Gulf of Mexico. Publ. Inst. Marine Sci., vol. 2, no. 1, pp. 7-124, pls. 1-27.
1952. The identity of *Stylarioides inflata* (Treadwell). Pacific Sci., Univ. Hawaii, vol. 6, no. 1, pp. 71-74, 2 figs.
- 1954a. New species of polychaetous annelids from the Marshall and Gilbert Islands. Jour. Washington Acad. Sci., vol. 44, pp. 228-232, 2 pls.
- 1954b. Australian Nereidae. Trans. Roy. Soc. South Australia, vol. 77, pp. 1-41, 39 figs., 2 charts.
- 1954c. Marine annelids from the northern Marshall Islands. Prof. Paper U. S. Geol. Surv., no. 260Q, pp. 615-644, figs. 169-178.
- HESSLE, CHRISTIAN
1917. Zur Kenntnis der terebellomorphen Polychaeten. Zool. Bidr., Uppsala, vol. 5, pp. 39-258, 66 figs., pls. 1-5.
- HOAGLAND, RUTH
1919. Polychaetous annelids from Porto Rico, the Florida Keys and Bermuda. Bull. Amer. Mus. Nat. Hist., vol. 41, pp. 517-591, pls. 29-32.
- HORST, R.
1921. A review of the family of Hesionidae with a description of two new species. Zool. Meded., Leiden, vol. 6, pp. 73-83.
1922. On some polychaetous annelids from Curaçao. Bijdr. Dierk., Amsterdam, Feest-Nummer, no. 22, pp. 193-201, 2 figs.
1924. Polychaeta errantia of the Siboga-Expedition. Part 3. Nereidae and Hesionidae. Monographie 24c de Uitkomsten op zoologisch, botanisch, oceanographischen en geologisch gebied verzameld in Nederlandsch Oost-Indië 1899-1900 an boord H. M. Siboga onder commando van . . . Tydeman, Leiden, livr. 99, pp. 145-198, 7 pls.
- HUNTSMAN, A. G.
1948. *Odontosyllis* at Bermuda and lunar periodicity. Jour. Fish. Res. Board Canada, vol. 7, no. 6, pp. 363-369.
- JOHANSSON, KARL ERIK
1926. Bemerkungen über die Kinbergschen Arten der Familien Hermellidae und Sabelliidae. Arkiv Zool., Stockholm, vol. 18A, no. 7, pp. 1-28, 9 figs.
1927. Beiträge zur Kenntnis der Polychaeten-Familien Hermellidae, Sabelliidae und Serpulidae. Zool. Bidr., Uppsala, vol. 11, pp. 1-184, 15 figs., 5 pls.

JOHNSON, HERBERT PARLIN

1901. The Polychaeta of the Puget Sound region. *Proc. Boston Soc. Nat. Hist.*, vol. 29, pp. 381-437, pls. 1-19.

KINBERG, JOHAN GUSTAF HJALMAR

1866. *Annulata nova*. Öfvers. K. Vetensk.-Akad. Förhandl., Stockholm, vol. 22, pp. 239-258.

LANGERHANS, PAUL

1879. Die Wurmfauuna von Madiera. *Zeitschr. Wiss. Zool.* Leipzig, vol. 33, pp. 267-316, pls. 14-18.

LINNAEUS, CAROLUS

1767. *Systema naturae*. Editio duodecima, reformata. Stockholm, p. 1086.

MC CONNAUGHEY, BAYARD H., AND DENNIS L. FOX

1949. The anatomy and biology of the marine polychaete *Thoracophelia mucronata* (Treadwell), Opheliidae. *Univ. California Publ. Zool.*, vol. 47, pp. 319-340, pls. 26-30.

MCINTOSH, WILLIAM CARMICHAEL

1885. Report on the Annelida Polychaeta collected by H.M.S. Challenger during the years 1873-76. *In* Report on the scientific results of the voyage of H.M.S. Challenger. London, Zoology, vol. 12, pp. 1-554, pls. 1-55, 1a-39a.

1901. Notes from the Gatty Marine Laboratory, St. Andrews. *Ann. Mag. Nat. Hist.*, ser. 7, vol. 8, pp. 216-232, 1 pl.

MALMGREN, ANDERS JOHAN

1866. Nordiska Hafs-Annulater. Öfvers. K. Vetensk.-Akad. Förhandl., Stockholm, vol. 22, pp. 355-410, pls. 18-29.

MESNIL, FELIX, AND PIERRE FAUVEL

1939. Polychètes sédentaires de l'expédition du "Siboga." Maldanidae, Cirratulidae, Capitellidae, Sabellidae et Serpulidae. Monographie 24^e de Uitkomst en op zoologisch, botanisch, oceanographisch en geologisch gebied verzameld in Nederlandsch Oost-Indië 1899-1900 an boord H.M. Siboga onder commando van . . . Tydeman. Leiden, livr. 133, pp. 1-42, 12 figs.

MÖRCH, OTTO A. L.

1863. *Revisio critica Serpulidarum*. *Naturhist. Tidsskr.*, Copenhagen, ser. 3, vol. 1, pp. 347-470, 1 pl.

MONRO, C. C. A.

1924. On the Polychaeta collected by H.M.S. *Alert*, 1881-1882. *Jour. Linnean Soc.* London, vol. 36, pp. 37-64, 24 figs.
1928. On the Polychaeta collected by Dr. Th. Mortensen off the coast of Panama.

Foren. Vidensk. Medd. Dansk Naturhist., vol. 85, pp. 75-103, 19 figs.

1933. The Polychaeta Errantia collected by Dr. C. Crossland at Colón in the Panama region and the Galapagos Islands during the expedition of the S.Y. *St. George*. *Proc. Zool. Soc. London*, pt. 1, pp. 1-96, 36 figs.

1937. Polychaeta. *In* The John Murray Expedition 1933-34, Scientific reports. London, British Museum (Natural History), vol. 4, Zoology, pt. 8, pp. 243-321, 28 figs.

1938. On a small collection of Polychaeta from Uruguay. *Ann. Mag. Nat. Hist.*, ser. 11, vol. 2, pp. 311-314, 3 figs.

1939. Polychaeta of the *Rosaura* Expedition. *Novitates Zool.*, vol. 41, pp. 345-354, figs. 280-283.

MONTAGU, GEORGE

1804. Descriptions of several marine animals found on the south coast of Devonshire. *Trans. Linnean Soc. London*, vol. 7, pp. 80-84, pl. 7.

1808. New and rare animals found on the south coast of Devonshire. *Ibid.*, vol. 9, pp. 108-111, pls. 6-8.

1815. Descriptions of several new or rare animals principally marine found on the south coast of Devonshire. *Ibid.*, vol. 11, pp. 18-21, pls. 3-5.

MOORE, JOHN PERCY

1903. Some pelagic Polychaeta new to the Woods Hole fauna. *Proc. Acad. Nat. Sci. Philadelphia*, vol. 55, pp. 793-801, pl. 55.

1905. Five new species of *Pseudopotamilla* from the Pacific coast of North America. *Ibid.*, vol. 57, pp. 555-569.

1909. Polychaetous annelids from Monterey Bay and San Diego, California. *Ibid.*, vol. 61, pp. 235-295, pls. 7-9.

1911. The polychaetous annelids dredged by the U.S.S. *Albatross* off the coast of southern California in 1904. Euphrosynidae to Goniadidae. *Ibid.*, vol. 63, pp. 234-318, pls. 15-21.

1923. The polychaetous annelids dredged by the U.S.S. *Albatross* off the coast of southern California in 1904. Spionidae to Sabellariidae. *Ibid.*, vol. 75, pp. 179-259, pls. 17, 18.

OKUDA, SHIRO

1937. Polychaetous annelids from the Palau Islands and adjacent waters, the South Sea Islands. *Bull. Biogeogr. Soc. Japan*, vol. 7 (12), pp. 257-316, 59 figs.

PETERS, WILHELM C. H.

1854. Naturwissenschaftliche Reise nach Mosambique in 1842 bis 1848 ausgeführt. Monatsber. Akad. Wiss. Berlin, pp. 610-614.
1855. Ueber die Gattung *Bdella* (Sav.) und die in Mosambique beobachteten Anneliden. Arch. Naturgesch., vol. 21, no. 1, pp. 35-42.

PETTIBONE, MARIAN H.

1949. Polychaetous annelids of the Polynoidae from the northeastern Pacific, with a description of a new species. Amer. Mus. Novitates, no. 1414, pp. 1-6, figs. 1-9.
1954. Marine polychaete worms from Point Barrow, Alaska, with additional records from the North Atlantic and North Pacific. Proc. U. S. Natl. Mus., vol. 103, pp. 203-356, figs. 26-39.

PHILIPPI, A.

1844. Einige Bemerkungen über die Gattung *Serpula*, nebst Aufzählung der von mir im Mittelmeer mit dem Thiere beobachteten Arten. Arch. Naturgesch., vol. 10, no. 1, pp. 186-198, pl. 6.

PIXELL, HELEN L. M.

1913. Polychaeta of the Indian Ocean, together with some species from the Cape Verde Islands. The Serpulidae, with a classification of the genera *Hydroides* and *Eupomatus*. Trans. Linnean Soc. London, vol. 16, pp. 69-92, pls. 8, 9.

PRUVOT, G.

1930. Annélides polychètes de Nouvelle-Calédonie recueillies par M. François. Arch. Zool. Exp. Gén. Paris, vol. 70, pp. 1-94, 8 figs., 3 pls.

QUATREFAGES, ARMAND DE

1865. Histoire naturelle des annélés marins et d'eau douce. Annélides et géphyriens. Paris, Roret, vol. 2, pt. 2, pp. 337-794.

REIBISCH, JOHANNES

1893. Die Phyllodociden der Plankton-Expedition. Zool. Anz., vol. 16, pp. 248-255, 2 figs.
1895. Die pelagischen Phyllodociden und Typhloscoleciden der Plankton-Expedition. In Hensen, Victor (ed.), Ergebnisse der . . . Plankton-Expedition der Humboldt-Stiftung. Kiel and Leipzig, vol. 2H, pt. c, pp. 1-63, 5 pls., 3 charts.

REISH, DONALD JAMES

1950. Redescription of the polychaetous annelid *Typosyllis aciculata* Treadwell. Amer. Mus. Novitates, no. 1466, pp. 1-5, 8 figs.

RIOJA, ENRIQUE

1941. Datos para el conocimiento de la fauna de poliquetos de las costas del Pacífico de México. An. Inst. Biol. México, vol. 12, pp. 669-746, 11 pls.
- 1944a. Estudio de algunos poliquetos del Museo Argentino de ciencias naturales. *Ibid.*, vol. 15, pp. 115-138, 62 figs.
- 1944b. Observaciones acerca del operculo de *Hydroides crucigera* Mörch y descripción de un caso de duplicidad de este órgano. *Ibid.*, vol. 15, pp. 409-414, figs. 1-5.

ROSA, DANIELI

1908. Nouvelle espèce de Tomopteridi. Diagnosi preliminari. Boll. Mus. Zool. Anat. Comp. Torino, vol. 23, no. 588, p. 1.

RULLIER, FRANÇOIS

1954. Essai de révision du genre *Fabricia* (annélides polychètes). Bull. Soc. Zool. France, vol. 79, no. 1, pp. 14-29, figs. 1, 2.

SAVIGNY, JULES CÉSAR

1820. Système des annélides. In Description de l'Égypte. Paris, Panchouche, Histoire naturelle, vol. 1, pt. 3, pp. 1-128.

SCHMARDA, LUDWIG K.

1861. Neue wirbellose Thiere beobachtet und gesammelt auf einer Reise um die Erde 1853 bis 1857. Leipzig, vol. 1, pt. 2, pp. 1-164, 22 pls.

SEIDLER, HANS J.

1924. Beiträge zur Kenntnis der Polynoiden. Arch. Naturgesch., vol. 89A, no. 11, pp. 1-217, 22 figs.

SHAW, G.

1800. Descriptions of *Mus bursarius* and *Tubularia magnifica*, from drawings communicated by Major-General Thomas Davies, F.R.S. and L.S. Trans. Linnean Soc. London, vol. 5, pp. 227-229, 2 pls.

SOUTHERN, ROWLAND

1911. Polychaeta of the coasts of Ireland. The Alciopinae, Tomopteridae and Typhloscolecidae. Fish. Ireland Sci. Invest., Dublin, no. 3, pp. 1-37, 3 pls.

STØP-BOWITZ, C.

1948. Polychaeta from the "Michael Sars" North Atlantic deep-sea expedition 1910. In Report on the scientific results of the "Michael Sars" North Atlantic deep-sea expedition 1910. Bergen, vol. 5, no. 8, pp. 1-91, 51 figs., 5 tables.
1951. Polychètes pélagiques de l'Expédition Suédoise Antarctique 1901-1903. In Further zoological results of the Swed-

- ish Antarctic Expedition 1901-1903. Stockholm, vol. 4, no. 7, pp. 1-14.
- TREADWELL, AARON LOUIS
1891. A preliminary note on the anatomy and histology of *Serpula dianthus* (Verrill). Zool. Anz., vol. 14, pp. 276-280, 2 pls.
1900. Lateral line organs in *Eunice auriculata* n. sp. Science, vol. 12, pp. 342-343, 2 figs.
- 1901a. The cytogeny of *Podarke obscura* (Verrill). A dissertation submitted to the faculties of the Graduate Schools of Arts, Literature, and Science, in candidacy for the degree of Doctor of Philosophy, the University of Chicago. Jour. Morph., vol. 17, pp. 399-486, 8 figs., 5 pls.
- 1901b. The polychaetous annelids of Porto Rico. Bull. U. S. Fish Comm., vol. 20, pp. 181-210, 81 figs.
1905. On the heteronereis stage of *Nereis kobsiensis* McIntosh. Biol. Bull., Woods Hole, vol. 9, pp. 226-231, 5 figs.
1906. Polychaetous annelids of the Hawaiian Islands, collected by the Steamer *Albatross* in 1902. Bull. U. S. Fish Comm., vol. 23, pp. 1145-1181, 81 figs.
1909. *Haplosyllis cephalata* as an ectoparasite. Bull. Amer. Mus. Nat. Hist., vol. 26, pp. 359-360, 2 figs.
1911. Polychaetous annelids from the Dry Tortugas, Florida. *Ibid.*, vol. 30, pp. 1-12, 29 figs.
- 1914a. Researches upon annelids at Tortugas. Yearbook Carnegie Inst. Washington, vol. 13, pp. 220-222.
- 1914b. Polychaetous annelids of the Pacific coast in the collection of the zoological museum of the University of California. Univ. California Publ. Zool., vol. 13, pp. 175-234, 2 pls.
- 1914c. New Syllidae from San Francisco Bay, collected by the U.S.S. *Albatross*. *Ibid.*, vol. 13, pp. 235-238, figs. 1-7.
- 1917a. A new species of polychaetous annelid from Panama, with notes on an Hawaiian form. Proc. U. S. Natl. Mus., vol. 52, pp. 427-430, 5 figs.
- 1917b. Polychaetous annelids from Florida, Porto Rico, Bermuda and the Bahamas. Publ. Carnegie Inst. Washington, no. 251, pp. 255-272, 3 pls.
- 1920a. Polychaetous annelids collected by the United States Fisheries steamer *Albatross* in the waters adjacent to the Philippine Islands in 1907-1910. Bull. U. S. Natl. Mus., vol. 100, pp. 589-602, 8 figs.
- 1920b. A new polychaetous annelid of the genus *Nereis* from Brazil. Proc. U. S. Natl. Mus., vol. 58, pp. 467-468, 4 figs.
- 1921a. Polychaetous annelids collected at St. Paul de Loanda by the American Museum Belgian Congo Expedition. Amer. Mus. Novitates, no. 8, pp. 1-3.
- 1921b. Report on the annelids of Puget Sound, Fiji and Samoa. Yearbook Carnegie Inst. Washington, no. 19, pp. 199-200.
- 1921c. *Nereis (Ceratoneis) alaskensis*, a new polychaetous annelid from Alaska. Proc. U. S. Natl. Mus., vol. 60, art. 2, pp. 1-3, 4 figs.
- 1921d. Leodidae of the West Indian region. Publ. Carnegie Inst. Washington, no. 293, pp. 1-131, 467 figs., 9 pls.
- 1922a. Leodidae from Fiji and Samoa. *Ibid.*, no. 312, pp. 127-170, 168 figs., 8 pls.
- 1922b. Polychaetous annelids collected at Friday Harbor, State of Washington, in February and March, 1920. *Ibid.*, no. 312, pp. 171-181, 37 figs.
- 1923a. Two new species of polychaetous annelids of the genus *Nereis* from Brazil. Rev. Mus. Paulista, vol. 13, pp. 1-10, 15 figs.
- 1923b. Polychaetous annelids from Lower California with description of new species. Amer. Mus. Novitates, no. 74, pp. 1-11, 8 figs.
- 1923c. The heteronereis phase of a new species of polychaetous annelid from Uruguay. Proc. U. S. Natl. Mus., vol. 64, art. 9, pp. 1-3, 1 pl.
- 1924a. A new marine annelid from Chile. *Ibid.*, vol. 65, art. 23, pp. 1-3, 4 figs.
- 1924b. *Dasychonopsis arenosa*, a new species of polychaetous annelid from Porto Rico. Amer. Mus. Novitates, no. 107, pp. 1-2, 4 figs.
- 1924c. Polychaetous annelids, collected by the Barbados-Antigua expedition from the University of Iowa in 1918. Univ. Iowa Studies, vol. 10, no. 4, pp. 1-23, 2 pls.
- 1925a. A new species of polychaetous annelid from Uruguay, *Aphrodita magna*. Proc. U. S. Natl. Mus., vol. 67, art. 12, pp. 1-3, 3 figs.
- 1925b. A list of the annelids collected by Capt. R. A. Bartlett in Alaska, in 1924, with description of a new species. *Ibid.*, vol. 67, art. 29, pp. 1-3, 4 figs.
- 1925c. Polychaetous annelids of tropical central Pacific. Bull. Bernice P. Bishop Mus.,

- Honolulu, vol. 27, pp. 113-119.
- 1926a. Polychaetous annelids from Fiji, Samoa, China and Japan. *Proc. U. S. Natl. Mus.*, vol. 69, art. 15, pp. 1-26, pls. 1-2.
- 1926b. Contributions to the zoology of the Philippine Archipelago and adjacent regions. Additions to the polychaetous annelids collected by the U.S. fishery steamer *Albatross*. *Bull. U. S. Natl. Mus.*, vol. 100, art. 6, pp. 183-193, 20 figs.
- 1926c. A new polychaetous annelid from Kartabo, British Guiana, genus *Namonereis*. *Zoologica*, vol. 7, pp. 101-104, 1 fig.
- 1926d. Polychaetous annelids collected by Captain R. A. Bartlett in Alaska in 1924, with descriptions of new species. *Amer. Mus. Novitates*, no. 223, pp. 1-8, 17 figs.
- 1928a. Polychaetous annelids from the *Arcturus* oceanographic expedition. *Zoologica*, vol. 8, pp. 449-489, 3 figs.
- 1928b. A new polychaetous annelid of the genus *Phyllodoce* from the west coast of Costa Rica. *Proc. U. S. Natl. Mus.*, vol. 74, pp. 1-3, 5 figs.
- 1929a. Two new species of polychaetous annelids from the Argentina coast. *Ibid.*, vol. 75, art. 26, pp. 1-5, 6 figs.
- 1929b. *Lumbrinereis bicirrata*, a new polychaetous annelid from Puget Sound. *Amer. Mus. Novitates*, no. 338, pp. 1-3, 7 figs.
- 1929c. *Acoetes magnifica*, a new species of polychaetous annelid from Montego Bay, Jamaica, British West Indies. *Ibid.*, no. 355, pp. 1-4, 7 figs.
- 1929d. New species of polychaetous annelids in the collections of the American Museum of Natural History, from Porto Rico, Florida, Lower California, and British Somaliland. *Ibid.*, no. 392, pp. 1-13, 36 figs.
- 1931a. Contributions to the biology of the Philippine Archipelago and adjacent regions. Four new species of polychaetous annelids collected by the United States fisheries steamer *Albatross* during the Philippine Expedition of 1907-1910. *Bull. U. S. Natl. Mus.*, vol. 100, pp. 313-321, 4 figs.
- 1931b. Three new species of polychaetous annelids from Chesapeake Bay. *Proc. U. S. Natl. Mus.*, vol. 79, art. 1, pp. 1-5, 3 figs.
- 1931c. Three new species of polychaetous annelids in the collections of the United States National Museum. *Ibid.*, vol. 80, art. 2, pp. 1-5, 3 figs.
- 1931d. New species of polychaetous annelids from California, Mexico, Porto Rico, and Jamaica. *Amer. Mus. Novitates*, no. 482, pp. 1-7, 21 figs.
- 1931e. New trebellid annelids, *Thelepus haitiensis* and *Terebella hiata*. *Zoologica*, vol. 12, pp. 79-81, 1 fig.
- 1931f. A new West Indian polychaetous annelid. *Amer. Mus. Novitates*, no. 461, 2 pp., 3 figs.
- 1932a. *Haplobranchus atlanticus*, a new species of polychaetous annelid from St. Andrews, N. B. Contrib. Canadian Biol., Toronto, new ser., vol. 7, pp. 277-281, 8 figs.
- 1932b. New species of polychaetous annelids from Ilha de São Sebastião, together with a list of other annelids determined from Brasil. *Rev. Mus. Paulista*, vol. 17, art. 2, pp. 1-20, 1 pl.
- 1934a. New polychaetous annelids. *Smithsonian Misc. Coll.*, vol. 91, no. 8, pp. 1-9, 2 pls.
- 1934b. *Sphaeropomatus miamiensis*, a new genus and species of serpulid polychaete. *Jour. Washington Acad. Sci.*, vol. 24, pp. 338-341, 9 figs.
- 1936a. Polychaetous annelids from Amoy, China. *Proc. U. S. Natl. Mus.*, vol. 83, pp. 261-279, figs. 18-20.
- 1936b. Polychaetous annelids from the vicinity of Nonsuch Island, Bermuda. *Zoologica*, vol. 21, pp. 49-68, 3 pls.
- 1937a. Polychaetous annelids collected by Captain Robert A. Bartlett in Greenland, Fox Basin and Labrador. *Jour. Washington Acad. Sci.*, vol. 27, pp. 23-26, 16 figs.
- 1937b. The Templeton Crocker Expedition. Polychaetous annelids from the west coast of Lower California, the Gulf of California and Clarion Island. *Zoologica*, vol. 22, pp. 139-160, 2 pls.
- 1937c. *Hemipodia canadensis*, a new polychaetous annelid from Nova Scotia. *Jour. Biol. Board Canada*, Toronto, vol. 3, pt. 4, pp. 348-349, 3 figs.
- 1939a. New polychaetous annelids from New England, Texas and Puerto Rico. *Amer. Mus. Novitates*, no. 1023, pp. 1-7, 25 figs.
- 1939b. Polychaetous annelids of Porto Rico and vicinity. Scientific survey of Porto Rico and the Virgin Islands. *New York, New York Academy of Sciences*, vol. 16, pt. 2, pp. 151-318, 118 figs.
- 1939c. New species of polychaete worms of the genus *Euphrosyne*, with notes on

- Euphrosyne borealis* Oersted. Proc. U. S. Natl. Mus., vol. 86, pp. 169-173, 1 fig.
1940. A new genus and two new species of polychaetous annelids from Texas and one new species from the Philippine Islands. Amer. Mus. Novitates, no. 1089, pp. 1-4, 13 figs.
- 1941a. Polychaetous annelids from the New England region, Porto Rico and Brazil. *Ibid.*, no. 1138, pp. 1-4, 12 figs.
- 1941b. New species of polychaetous annelids from the vicinity of Galveston, Texas. *Ibid.*, no. 1139, pp. 1-3, 10 figs.
- 1941c. Eastern Pacific expeditions of the New York Zoological Society. Polychaetous annelids from the west coast of Mexico and Central America. Zoologica, vol. 26, pp. 17-24, 21 figs.
- 1941d. Plankton of the Bermuda oceanographic expeditions. Polychaetous annelids from Bermuda plankton, with eight shore species and four from Haiti. *Ibid.*, vol. 26, pp. 25-30, 9 figs.
1942. Polychaetous annelids from Lower California and the Philippine Islands in the collections of the American Museum of Natural History. Amer. Mus. Novitates, no. 1172, pp. 1-5, 15 figs.
- 1943a. Polychaetous annelids from the Philippine Islands in the collections of the American Museum of Natural History. *Ibid.*, no. 1220, pp. 1-4, 7 figs.
- 1943b. Biological results of the last cruise of the *Carnegie*. Polychaetous annelids. In Scientific results of Cruise VII of the *Carnegie* during 1928-1929 under command of Captain J. P. Ault. Washington, pp. 30-59, 1 pl., 4 maps, table.
- 1943c. Polychaetous annelids from Africa in the collections of the American Museum of Natural History. Amer. Mus. Novitates, no. 1221, pp. 1-6, 25 figs.
- 1943d. New species of polychaetous annelids from Hawaii. *Ibid.*, no. 1233, pp. 1-4, 17 figs.
- 1943e. *Neosabellides alaskensis*, a new species of polychaetous annelid from Alaska. *Ibid.*, no. 1235, pp. 1-2, 5 figs.
1945. New species of polychaetous annelids from Massachusetts and California. *Ibid.*, no. 1280, pp. 1-3, 8 figs.
1948. Polychaeta. Canadian Atlantic Fauna, Toronto, no. 9b, pp. 1-69, 49 figs.
- VERRILL, ADDISON EMERY
1873. Report upon the invertebrate animals of Vineyard Sound and the adjacent waters, with an account of the physical characters of the region. Rept. U. S. Fish Comm., pp. 295-778.
1900. Additions to the Turbellaria, Nemertina and Annelida of the Bermudas, with revisions of some New England genera and species. Trans. Connecticut Acad. Sci., vol. 10, pp. 595-671, 1 pl.
- VIGUIER, CAMILLE
1886. Études sur les animaux inférieurs de la Baie d'Alger. Recherches sur les annélides pelagiques. Arch. Zool. Exp. Gén. Paris, ser. 2, vol. 4, pp. 347-442, pls. 21-27.
- WEBSTER, HARRISON EDWIN
1884. Annelida from Bermuda. Bull. U. S. Natl. Mus., no. 25, pp. 305-327, pls. 7-12.
- WESENBERG-LUND, ELISE
1949. Polychaetes of the Iranian Gulf. In Jessen, Knud, and Ragnar Spärck (eds.), Danish scientific investigations in Iran. Copenhagen, pt. 4, pp. 247-400, 47 figs., 3 maps, 3 tables.
- WILLEY, ARTHUR
1905. Report on the Polychaeta collected by Professor Herdman, at Ceylon, in 1902. In Herdman, W. A., Report to the government of Ceylon on the pearl oyster fisheries of the Gulf of Manaar. London, Royal Society, pt. 4, pp. 243-324, pls. 1-8.
- WIRÉN, AXEL
1883. Chaetopoder fran Sibiriska Ishafvet och Berings haf, insamlade under Vega-expeditionen 1878-1879. In Nordenskiöld, A. E., Vega-expeditionens vetenskapliga iakttagelser. Stockholm, pp. 381-428, pls. 27-32.
- WRIGLEY, ARTHUR
1951. Some Eocene serpulids. Proc. Geol. Assoc. London, vol. 62, pt. 3, pp. 177-202, 66 figs.