CHAPTER XIII

ANNELIDS AND MISCELLANEOUS WORMS

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POLYCHAETOUS ANNELIDS OF THE GULF OF MEXICO

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For the purpose of this article the area of the Gulf of Mexico is limited to the approximately ellipse-shaped enclosure that terminates at its eastern end in Cape Sable, southern Florida, and at its other extremity in Cabo Catoche, northern Yucatán Province, Mexico. I exclude the northwestern end of Cuba and the Florida Keys, both of which fringe the Gulf of Mexico at the far eastern end, since in their polychaete fauna these areas may be regarded as part of the West Indian zoogeographic region and thus differ from that of most of the Gulf of Mexico.

The physical features of the area under consideration favor the development of an invertebrate fauna dominant in sand and mud dwelling species. Such are the habitats of many groups of marine annelids which may be expected to occur in prodigious numbers but which have still remained largely unknown. Based on records in the writer's possession, it can now be stated that there is a large endemic population; this may have had its origin within the enclosure of the Gulf and possibly in its center or western half. Thus, there are unique genera, a surprising number of undescribed species and subspecies. Some of them show marked affinities with the annelids of eastern United States, particularly in its southern end; others are akin with those of the Gulf of California and southern California. Still others have affinities with those of Brazil and less so with those of New England. Some species may be regarded as circummundane or be widely dispersed, thus common also to the Mediterranean Sea and western Europe. The annelids of western Florida are clearly related to those of the West Indies except for those species which may have been swept eastward from the western half of the Gulf. The floating logs, weeds, and other pelagic or drifting objects support an annelid fauna like that of the West Indies. The sponge, ascidian, and oysterclump fauna appears to be similar throughout the Gulf.

The number of species which can be recorded from the literature is disappointingly small (less than 60). This number can be easily tripled when the records now in the writer's collections are published.² The records given below are based on species associated with a wide variety of habitats and only in a limited extent those from sand or mud flats. The last, however, should yield the richest fauna when the Gulf of Mexico will be more completely known.

The polychaetous annelids are summarized by family. The arabic number (1 to 59) preceding the name is consecutive. An asterisk preceding the name indicates that a change is newly made herein. The date following the original author's name is that of the erection of the species. The literature citations are listed at the end. A short appendix at the end summarizes ecological associations insofar as they are recorded.

Family POLYNOIDAE

*1. Lepidametria commensalis Webster, 1879.

As Lepidasthenia lactea Treadwell, 1939, pp. 3-4, figs. 13-15, from Galveston, Texas. Commensal in tubes of terebellid worms or free-living. Elsewhere known from eastern United States. The synonymy is here newly indicated.

*2. Lepidonotus sublevis Verrill, 1893.

As Lepidonotus pallidus Treadwell, 1939, p. 3, figs. 10-12, from Freeport, Texas, and as Lepidonotus squamatus Warren, 1942, p. 45, from Grand Isle, Louisiana. Occurs in crevices, in oyster clumps, in ascidian masses. Elsewhere known from eastern United States. The two synonymies are here newly indicated.

3. Lepidonotus variabilis Webster, 1879.

Reported by Warren, 1942, p. 45, from Grand Isle, Louisiana, and by Hartman, 1945, p. 10, from south-

¹ Contribution No. 120, from the Allan Hancock Foundation.

² See Hartman, O., 1951, The Littoral Marine Annelids of the Gulf of Mexico, in Pub. of the Institute of Marine Science 2 (1): 7-124, published since the preparation of this article.

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western Florida. Occurs in crevices, under stones, in ascidian and sponge masses. Elsewhere known from eastern United States.

4. Halosydna leucohyba Schmarda, 1861.

Recorded by Rioja, 1946, p. 193, from Veracruz, Mexico, from between calcareous algae and mollusk shells. Elsewhere known from the West Indies and Bermuda.

5. Harmothoë aculeata Andrews, 1891.

Reported by Hartman, 1945, p. 10, from Lemon Bay southwestern Florida, under stones, in crevices, and on piles. Elsewhere known from North Carolina and Maryland.

6. Harmothoë aculeata (Treadwell), 1924.

Recorded by Rioja, 1946, p. 193, from Tecolutla, Mexico, from mollusk shells. Otherwise known from Barbados and Antigua, West Indies.

Family SIGALIONIDAE

*7. Sthenelais ? articulata Kinberg, 1855.

As Eupholoe globosa Winternitz, 1936, p. 3, figs. 6-12, from Apalachicola, Florida. This is here newly referred to the genus *Sthenelais* and questionably to the species *articulata* Kinberg. As the latter, it is known also from Brazil and the West Indies.

Family AMPHINOMIDAE

8. Amphinome rostrata (Pallas), 1766.

Reported by Augener, 1922, p. 39, from Veracruz, Mexico, and Campeche Bank, Gulf of Mexico, on floating logs. Widely recorded from Brazil northward through the West Indies and Gulf Stream to North Carolina.

*9. Hipponoë multibranchiata (Treadwell), new combination.

As Metamphinome multibranchiata Treadwell, 1940, pp. 1-2, figs. 1-3, from Galveston, Texas, on a floating log. This species is clearly separable from the nearly related Hipponoë gaudichaudi Audouin and Milne Edwards, known from the Gulf Stream, for having branchiae that are continued far back.

Family PHYLLODOCIDAE

10. Eteone heteropoda Hartman, 1951. Pub. Inst. Mar. Sci.

From Biloxi, Mississippi, sandy mud flats, also western and northwestern Florida and southeastern Texas, in sandy flats in littoral zones. Not taken outside of the Gulf.

11. Nereiphylla fragilis (Webster), 1879.

Recorded by Hartman (1951, Pub. Inst. Sci.), from Lemon Bay, Florida, and Port Aransas, Texas, from oyster and ascidian clumps. *Phyllodoce unicirrata* Winternitz, 1936, pp. 1-3, figs. 3-5, from Apalachicola, Florida, may be the same. Otherwise known from eastern United States.

12. Eumida sanguinea (Oersted), 1843.

Recorded by Hartman (1951, Pub. Inst. Sci.). Among shells, stones, in circummundane littoral zones.

Family PILARGIIDAE

13. Ancistrosyllis bassi Hartman, 1945.

Reported from Englewood, Florida, by Hartman, 1945, p. 15, and described by Hartman, 1947, pp. 501-504, pl. 61, from the Gulf of Mexico, North Carolina, and San Francisco Bay, California, in low or subintertidal sand flats.

14. Loandalia americana Hartman, 1947.

Described by Hartman, 1947, pp. 506-509, pl. 63, from Biloxi, Mississippi, Grand Isle, Louisiana, and elsewhere off San José Light, Guatemala, Pacific Ocean; in sand, littoral.

Family SYLLIDAE

15. Autolytus brevicirrata Winternitz, 1936.

Known only through the original description, Winternitz, 1936, p. 1, figs. 1-2, from Apalachicola, Florida. Incompletely characterized.

16. Typosyllis corallicoides Augener, 1922.

As Syllis (Typosyllis) corallicoides Augener, 1922, pp-42-43, from Veracruz, Mexico, and not otherwise known.

Family NEREIDAE

17. Neanthes succinea (Frey and Leuckart), 1847.

Reported by Rioja, 1946, p. 194, and pp. 205–206, from Tecolutla and Veracruz, Mexico, from mangrove swamps associated with barnacles. Widely recorded from estuarine regions of temperate and subtropical regions of circummundane areas.

*18. Nereis largoensis Treadwell, 1931.

First described as Nereis brevicirrata Treadwell, 1929, pp. 3-4, figs. 1-4, from Key Largo, Florida (not Nereis brevicirrata Treadwell, 1920, pp. 467-468, figs. 1-4, from Santos, Brazil, which is, however, a species of Perinereis). This was later reported from Grand Isle, Louisiana, in sand, as Nereis gracilicirrata Warren, 1942, pp. 39-40, from a name taken from manuscript. The species is not known outside of the Gulf of Mexico and Florida Keys.

19. Nereis pelagica occidentalis Hartman, 1945.

First described from Beaufort, North Carolina, by Hartman, 1945, p. 20, pl. 4, figs. 1–6, and more widely recorded from the Gulf of Mexico from southwestern Florida to Louisiana, in sponge, oyster, and ascidian masses, from pilings, and from sandy shoals, in littoral zones. This may be the "Nereis pelagica" of Cary and Spaulding, 1909, p. 9, which comes from among oysters in Louisiana.

*20. Nereis oligonalina (Rioja), new combination.

Described as Neanthes oligohalina Rioja, 1946, pp. 207-210, pl. 1, figs. 4-6, pl. 2, figs. 13-19, from Tecolutla, Mexico, among roots of mangroves with barnacles. I refer the species to the genus Nereis since the notopodia have homogomph falcigers (Rioja, pl. 1, fig. 5). The species may be the same as Nereis pelagica occidentalis, above.

21. Nereis riisei Grube, 1856.

Recorded by Augener, 1922, p. 42, from Veracruz, Mexico, on corals and sponges. Elsewhere reported from both sides of subtropical and tropical America. *22. Laeonereis culveri (Webster), 1879.

Reported as Leptonereis nota Treadwell, 1941, pp. 1, 3, figs. 7-10, from Offats Bayou, Galveston, Texas, presumably in muddy sand, and from southern Florida by Hartman, 1945, p. 21. The species is more widely known from North Carolina south to Brazil and the West Indies, in muddy sand. The synonymy is newly indicated herein.

23. Lycastopsis tecolutlensis Rioja, 1946.

By Rioja, 1946, pp. 211-212, pl. 1, figs. 7-12, from Tecolutla, Mexico, from mangrove swamps.

*24. Platynereis dumerilii (Audouin and Edwards), 1833.

Described as Uncinereis trimaculosa Treadwell, 1940, p. 3, figs. 4-9, from Galveston, Texas, on a floating log. It is known elsewhere from circummundane littoral regions. The synonymy is here newly indicated.

25. Glycera americana Leidy, 1855.

By Warren, 1942, pp. 42–43, from Grand Isle, Louisiana, and by Rioja, 1946, p. 194, from Tecolutla, Mexico, in tidal tributaries, in mixed sand. More widely recorded from east and west coasts of the Americas, and from South Pacific regions.

Family ONUPHIDAE

26. Diopatra cuprea (Bosc), 1802.

By Cary and Spaulding, 1909, p. 9, from Louisiana, reporting tubes abundant on sandy shoals and sand flats, also by Warren, 1942, p. 44, from Grand Isle, Louisiana. The species is elsewhere known from tropical and subtropical eastern North and South America.

27. Eunice schemacephala Schmarda, 1861.

As Leodice fucata Warren, 1942, p. 45, from Grand Isle, Louisiana. This is the West Indian palolo worm, and more widely known in the Caribbean Sea.

28. Marphysa sanguinea (Montagu), 1815.

As Marphysa aransensis Treadwell, 1939, p. 5, figs. 16–17, from Aransas Pass, Texas, considered possibly the same as *M. sanguinea* in Hartman, 1944, p. 128. Occurs in hard packed mud or clay, in circummundane, warmwater regions.

29. Palola siciliensis (Grube), 1840.

Reported by Rioja, 1946, p. 194, from Veracruz, Mexico. Circummundane.

30. Lysidice ninetta Audouin and Edwards, 1833.

Reported by Rioja, 1946, p. 194, from Veracruz, Mexico, from among algae growing on tubes of Sabellastarte. Circummundane.

Family LUMBRINERIDAE

31. Lumbrineris bassi Hartman, 1944.

By Hartman, 1944, pp. 150-151, pl. 10, figs. 217-223, from Lemon Bay, Florida. in sandy shoals. Not known elsewhere.

32. Lumbrineris parvapedata (Treadwell), 1901.

First described as Lumbriconereis parva-pedata Treadwell, 1901. p. 198, figs. 38-40, from Ensenada Honda, Culebra; later as Lumbrinereis elongata Treadwell, 1931, p. 3, fig. 2, from Grand Isle, Louisiana, and so reported by Warren, 1942, p. 45, from the same place; in sand. Not known elsewhere. 33. Lumbrineris inflata Moore, 1911.

By Hartman, 1944, p. 161, from the Gulf of Mexico, the Gulf of California, and the northeast Pacific Ocean; in sand.

Family LYSARETIDAE

34. Lysarete brasiliensis Kinberg, 1865.

As Oenone brevimaxillata Treadwell, 1931, pp. 1-3, figs. 4-9, from "Mexico," and tentatively relegated to Lysarete brasiliensis in Hartman, 1944, p. 185. Elsewhere known from the West Indies and eastern South America.

Family SPIONIDAE

35. Nerine agilis Verrill, 1873.

As Nerine minuta Treadwell, 1939, p. 5, figs. 18-20, from Port Aransas, Texas, in sand. The species is more widely known from eastern United States, and by Fauvel, 1950, p. 371, from French West Africa.

36. Polydora websteri Hartman, 1943.

As Polydora ciliata Kavanagh, 1940, pp. 31-34, and Kavanagh, 1941, p. 354, from Louisiana; also as P. websteri by S. Hopkins, 1947, bibliography, pp. 12-14, and Baughman, 1947, pp. 713-715. Penetrates commercial oyster shells and causes mud blisters. More widely known from eastern United States. The genus Polydora is reviewed by Stenzel and Turner, 1944, based on fossil records in eastern Texas.

Family CHAETOPTERIDAE

37. Chaetopterus variopedatus (Renier), 1847.

As C. pergamentaceus by Cary and Spaulding, 1909, p. 9, from Louisiana, on sand flats. Widely known from cosmopolitan areas in littoral zones.

Family ARENICOLIDAE

38. Arenicola cristata Stimpson, 1856.

By Warren, 1942, pp. 41–42, from Grand Isle, Louisiana, in sand. More extensively known from both sides of the Americas.

Family OPHELIIDAE

39. Polyophthalmus pictus (Dujardin), 1839.

By Rioja, 1946, p. 195, from Veracruz, Mexico, from encrusting algae. Considered cosmopolitan in distribution.

Family CAPITELLIDAE

*40. Capitellides teres Treadwell, 1939.

By Treadwell, 1939, p. 6, figs. 21-24, from Port Aransas, Texas. The single type specimen, examined by me, resembles a *Capitella*, but there are large genital hooks on the ninth setiger and large ova in the eleventh and twelfth segments, as in Capitellides. It departs from both these genera, however, in having setae, not hooks, in 8 anterior segments and in other respects. The species does not seem to fit any capitellid category (see Hartman, 1947, p. 400, for chart).

Family MALDANIDAE

41. Branchioasychis americana Hartman, 1945.

By Hartman, 1945, pp. 40-42, pl. 9, from Lemon Bay, southwestern Florida and more widely known from North Carolina. In fine sandy mud.

Family SABELLARIDAE

42. Sabellaria floridensis Hartman, 1944.

By Hartman, 1944, pp. 345-346, pl. 31, from southwestern Florida, and by Rioja, 1946, pp. 196-198, figs. 2-9, from Playa de Tecolutla, Mexico. Associated with shells. Not known elsewhere.

43. Sabellaria vulgaris beaufortensis Hartman, 1944.

Recorded by Rioja, 1946, pp. 195-196, fig. 1, from Tecolutla, Mexico, on mollusk shells, with the preceding species. This may be the *Sabellaria vulgaris* by Cary and Spaulding, 1909, p. 9, from Louisiana, on shells. Elsewhere known from North Carolina.

Family TEREBELLIDAE

44. Pista cristata (Müller), 1788.

Recorded by Rioja. 1946, p. 198, from Tecolutla, Mexico, on mollusk shells. Cosmopolitan in report.

45. Loimia medusa (Savigny), 1818.

Recorded by Hartman, 1945, p. 46, pl. 10, figs. 2, 3, from Lemon Bay, southwestern Florida, from large boulders in sand, below intertidal zones. Elsewhere known from all warm seas.

46. Thelepus setosus (Quatrefages), 1866.

Reported by Rioja, 1946, p. 198, from Veracruz, Mexico, in sandy tubes. Elsewhere known from cosmopolitan areas, in warm seas.

47. Terebellides stroemi Sars, 1835.

Recorded by Rioja, 1946, p. 198, from Veracruz, Mexico, in mud bottom from a few meters depth. Cosmopolitan in dredged depths.

Family SABELLIDAE

48. Megalomma bioculatum (Ehlers), 1887.

Recorded by Rioja, 1946, p. 199, from Veracruz, Mexico, from among algae. Elsewhere known from the West Indies.

49. Hypsicomus circumspiciens Ehlers, 1887.

By Rioja, 1946, p. 199, from Veracruz, Mexico, from mollusk shells. Common in West Indian seas and north of Venezuela.

50. Sabellastarte magnifica (Shaw), 1800.

By Augener, 1922, p. 48, from Veracruz, Mexico, and as Sabellastarte indica by Rioja, 1946, pp. 198–199, from Veracruz, Mexico. Reputedly circummundane in tropical seas.

51. Branchiomma bairdi (McIntosh), 1885.

As Dasychone bairdi Augener, 1922, p. 49, from Veracruz, Mexico. Elsewhere known from the West Indies and Bermuda.

Family SERPULIDAE

52. Eupomatus protulicola (Benedict), 1887.

Recorded by Rioja, 1946, pp. 199-200, figs. 10-13, from *Pinna* (mollusk) shells at Tecolutla, Mexico. More widely known from southeastern United States.

53. Pomatoceros minutus Rioja, 1941.

Reported by Rioja, 1946, pp. 201–202, from Veracruz, Mexico, on algae; elsewhere known from western Mexico.

54. Pomatoceros (Pomatoleios) caerulescens Augener, 1922. By Augener, 1922, p. 50, from Campeche Bank, Gulf of Mexico. Not otherwise known. 55. Eupomatus dianthoides Augener, 1922.

As Hydroides (Eupomatus) dianthoides Augener, 1922, pp. 49-50, from Veracruz, Mexico. Not otherwise known.

56. Vermiliopsis bermudensis (Bush), 1907.

As Vermilia bermudensis by Rioja, 1946, pp. 200–201, from Tecolutla, Mexico, on mollusk shells. More extensively known from Bermuda.

57. Vermiliopsis annulata (Schmarda), 1861.

By Rioja, 1946, p. 201, from Tecolutla, Mexico, on mollusk shells. Otherwise known from the West Indies and Colombia on the Atlantic side.

58. Salmacina dysteri (Huxley), 1855.

By Rioja, 1946, p. 202, from Veracruz, Mexico, on tubes of *Sabellastarte*. Possibly circummundane in distribution.

59. Mercierellopsis prietoi Rioja, 1945.

Described by Rioja, 1945, pp. 412-417, 2 pls., from Tecolutla, Mexico and vicinity, in brackish water from mangrove esteros. Not otherwise known.

APPENDIX ON SOME ECOLOGICAL ASSO-CIATIONS

Brackish or estuarine species:

Laeonereis culveri, Lycastopsis tecolutlensis, Neanthes succinea, Nereis pelagica occidentalis, Nereis oligohalina and Mercierellopsis prietoi.

Crevice dwellers, or on piles, or in oyster, ascidian, and sponge clumps:

Lepidonotus sublevis, Lepidonotus variabilis, Halosydna leucohyba, Harmothoë aculeata, Harmothoë trimaculata, Nereiphylla fragilis, Eumida sanguinea, Nereis riisei, Eunice spp.

Associated with algae:

Platynereis dumerilii, Lysidice ninetta, Eunice spp., Polyophthalmus pictus, Megalomma bioculatum and Pomatoceros minutus.

In sand or sandy mud or gravelly mud or mud and clay:

Sthenelais articulata, Eteone heteropoda, Ancistrosyllis bassi, Loandalia americana, Neanthes succinea, Nereis largoensis, Nereis pelagica occidentalis, Nereis oligohalina, Laeonereis culveri, Lycastopsis tecolutlensis, Glycera americana, Diopatra cuprea, Marphysa sanguinea, Lumbrineris bassi, Lumbrineris parvapedata. Lumbrineris inflata, Nerine agilis, Arenicola cristata, Branchioasychis americana, Terebellides stroemi and Mercierellopsis prietoi.

On mollusk shells:

Sabellaria floridensis, Sabellaria vulyaris beaufortensis, Pista cristata, Hypsicomus circumspiciens, Eupomatus protulicola, Vermiliopsis bermudensis, Vermiliopsis annulata.

From floating logs:

Amphinome rostrata and Hipponoë multibranchiata.

Commensal in tubes of worms:

Lepidametria commensalis.

Boring in calcareous shells:

Polydora websteri.

LITERATURE CITED

AUGENER, H.

1922. Ueber litorale Polychaeten von Westindien. Sitzber Ges. naturf. Freunde, Berlin, pp. 38-53.

BAUGHMAN, J. L.

1948. An annotated bibliography of oysters. Pub. by the Texas A. and M. Res. Foundation, Rockport, Texas, 794 pp.

CARY, L., and SPAULDING, H.

1909. Further contributions to the marine fauna of the Louisiana coast. Issued by the Louisiana State Board of Agriculture and Immigration. Independent Printing Co., Baton Rouge, La. 21 pp.

FAUVEL, P.

1950. Contribution à la Faune des Annélides Polychétes du Sénégal. Bull. Inst. français Afrique noire, 12 (2): 335-394, 3 pls.

GUNTER, G.

1942. Offat's Bayou, a locality with recurrent summer mortality of marine organisms. Amer. Midland Naturalist Notre Dame, 28: 631-633.

-----; SMITH, F. G. WALTON; and WILLIAMS, R. H. 1947. Mass mortality of marine animals on the lower west coast of Florida, November 1946. Science N. Y., 105: 256-257.

HARTMAN, O.

1944-47. Polychaetous annelids. Hancock Pacific Exped., 10, 523 pp., 63 pls.

1945. The marine annelids of North Carolina. Duke Univ. Marine Sta. Bull. 2, 54 pp., 10 pls., 2 charts. HOPKINS, S.

1947. See Baughman, 1947, bibliography, pp. 713-715. KAVANAGH, L. D.

1940. Mud blisters in Japanese oysters imported to Louisiana. La. Conserv. Rev., Autumn 1940, pp. 31-34.

1941. Reactions of American and imported oysters to an annelid worm. Jour. Tennessee Acad. Sci., 16, p. 354.

Rioja, E.

1945. Un nuevo genero de serpulido de agua salobre de Mexico. An. Inst. Biol. Mexico, 16 (2): 411-417, 2 pls. RIOJA, E.—Continued

- 1946. Observaciones sobre algunos poliquetos de las costas del Golfo de Mexico. Ibid., 17 (1): 193-203, 13 figs.
- 1946. Nereidos de agua salobre de los esteros del litoral del Golfo de Mexico. Ibid., 17 (1): 205-215, 2 pls.

STENZEL, H., and TURNER, F.

1944. A Miocene invertebrate fauna from Burkeville, Newton County, Texas. Am. Jour. Sci., New Haven, 242: 289–308, 1 pl., 1 fig.

SVERDRUP, H.; JOHNSON, M.; and FLEMING, R.

1942. The oceans. 1087 pp., 265 figs., 121 tab., 7 charts.

TREADWELL, A. L.

1901. The polychaetous annelids of Porto Rico. U. S. Fish Comm. Washington Bull., 20: 181-210, 81 figs.

- 1920. A new polychaetous annelid of the genus Nereis from Brazil. U. S. Nat. Mus., Proc., 58: 467-468, 4 figs.
- 1929. New species of polychaetous annelids in the collections of the American Museum of Natural History, from Porto Rico, Florida, Lower California and British Somaliland. Am. Mus. Novitates, 392, 13 pp., 36 figs.
- 1931. New species of polychaetous annelids from California, Mexico, Porto Rico, and Jamaica. Ibid., 482, 7 pp., 21 figs.
- 1939. New polychaetous annelids from New England, Texas and Puerto Rico. Ibid., 1023, 7 pp., 25 figs.
- 1940. A new genus and two new species of polychaetous annelids from Texas and one new species from the Philippine Islands. Ibid., 1089, 4 pp., 13 figs.
- 1941. New species of polychaetous annelids from the vicinity of Galveston, Texas. Ibid., 1139, 3 pp., 10 figs.
- WARREN, W.
 - 1942. A survey of the annelid worms of the Grand Isle region. Bios 13 (1): 39-46. Mt. Vernon, Iowa.

WINTERNITZ, J.

1936. New species of polychaetous annelids collected at Apalachicola, Florida, by Dr. A. S. Pearse, in 1935. Am. Mus. Novitates, 888, 3 pp., 12 figs.

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MISCELLANEOUS VERMES

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Phylum Echiurida

Information concerning this phylum in the Gulf of Mexico consists of two records for Thalassema philostracum Fisher (1947) which is known from the type locality, Thornton Island, near Englewood, Florida, and from a single specimen from Mustang Island, near Port Aransas, Texas, and a record of Th. mellita from Apalachicola Bay by Pearse and Wharton (1938). This latter record may actually refer to Th. philostracum which is also known from Beaufort, North Carolina. The Florida specimens were found in dead gastropod shells; the Texas specimen was found in a test of Mellita quinquiesperforata. The animal is rather small with a bright red body and a pale cream to white proboscis.

Phylum Sipunculida

Our knowledge of the Sipunculida of the Gulf of Mexico is based principally on collections in the vicinity of Key West and Tortugas, Florida. A total of 11 species is known to occur in the Gulf of Mexico, 10 of them from Key West or Tortugas. One of these is also recorded from Cedar Keys, and the eleventh has been collected from Caminada Bay near Grand Isle, Louisiana. The available published information on these sipunculids will be found in two papers: Gerould (1913) and Fisher (1947).

Examination of the known sipunculid fauna of the Gulf of Mexico reveals that two species, Golfingia (=Phascolosoma, vide infra) cinerea and Siphonomecus multicincta are so far known only from Key West, and one, Golfingia cylindrata, is known from Key West and Bermuda. The two species occurring in the more northern waters of the Gulf, Phascolion strombi (?) and Dendrostoma alutaceum, occur on the South Atlantic coast and are evidently eurythermal, especially the latter which occurs at Key West. The other species are widely distributed throughout the American tropical area. A curious anomaly is the absence of *Sipunculus nudus* from the northern Gulf coast in view of its wide distribution and occurrence at Key West. This may simply be an indication of inadequate collecting.

Genus GOLFINGIA Lankester

(Phascolosoma auct. nec Leuckart)

This best known of sipunculid genera is one of those victims of nomenclatural confusion which is a sadder aspect of taxonomic procedure. Fisher (1950) has reluctantly determined that the available name which must be used is Lankester's *Golfingia*, a name coined in commemoration of an excursion on the golf links with Professor Mac-Intosh at St. Andrews. Furthermore, *Phascolosoma* is actually the valid name for the species which have been hitherto included under *Physcosoma* by most recent authors.

Golfingia cylindrata (Keferstein).

Gerould, pp. 382–383, pl. 58, fig. 2.

A small (less than 1 inch long) species known from Key West and Bermuda.

Golfingia cinerea (Gerould).

Gerould, pp. 396-398, figs. 6-7.

Known only from a single specimen collected south of Key West in 45 fathoms.

Genus PHASCOLION Théel

Phascolion strombi (Montagu).

Gerould, pp. 403-416, figs. 9-11, pl. 60, figs. 10-13.

Specimens, apparently of this widely spread and variable species, have been found inhabiting shells of *Nassarius vibex* in Caminada Bay, Louisiana. They are small, and the identification is tentative.

Genus DENROSTOMA Grube

Dendrostoma alutaceum Grube.

Gerould, pp. 417-418, fig. 12, pl. 59, fig. 9.

This species is known from off Cape Hatteras, Key West, Tortugas, and Cedar Keys.

Genus PHASCOLOSOMA Leuckart

(Physcosoma Selenka)

Phascolosoma varians Keferstein. Gerould, pp. 419-420, pl. 62, fig. 18.

According to Gerould, this species is abundant in the Key West-Tortugas vicinity, and is also found on the southern coast of Florida. It occurs at Bermuda, Bahamas, and "among the West Indies," and at Ascension Island.

Phascolosoma antillarum Grube and Oersted. Gerould, pp. 420-421, pl. 62, figs. 19-20.

Found at Key West in cavities in rocks, this species evidently occurs throughout the West Indian-Caribbean area, and has been taken on the Pacific side at Costa Rica, and on the coast of Chile.

Genus ASPIDOSIPHON Grube

Aspidosiphon speciosus Gerould.

Gerould, pp. 426-427, fig. 16, pl. 62, fig. 22.

Described from 3 specimens, 1 (the type) from Key West, another off Havana in 157 fathoms, and the third off the Brazilian coast at about 7° S in 20 fathoms.

Genus SIPUNCULUS Linnaeus

Sipunculus nudus Linnaeus. Gerould, p. 428.

A widely distributed, cosmopolitan species, reported from Key West by Gerould (a single specimen). Sipunculus polymyotus Fisher. Fisher, pp. 354–358, fig. 54, pl. 10.

The species is based on two specimens from Key West. Another was collected off Long Bay, South Carolina.

Genus SIPHONOSOMA Spengel

Siphonosoma cumanense (Keferstein).

Gerould, pp. 432-435, pl. 60, fig. 14.

This species occurs in Oyster Bay, Florida, among oyster shells, and at Key West from sand along shore. It is also known from Venezuela and the West Indies.

Genus SIPHONOMECUS Fisher

Siphonomecus multicinctus Fisher.

Fisher, pp. 363-366, pl. 13.

Known from a single specimen collected at Key West.

LITERATURE CITED

FISHER, W. K.

- 1947. New genera and species of echiuroid and sipunculoid worms. Proc. U. S. Nat. Mus. 97: 351-372, pls. 8-15.
- 1950. The sipunculid genus *Phascolosoma*. Ann. & Mag. Nat. Hist. (12) 3 (30): 547-552.

GEROULD, J. H.

1913. The sipunculids of the eastern coast of North America. Proc. U. S. Nat. Mus. 44: 373-437, 16 figs., pls. 58-62.

PEARSE, A. S., and WHARTON, G. W.

1938. The oyster "leech," Stylochus inimicus Palombi, associated with oysters on the coasts of Florida. Ecol. Monogr. 8: 605-655, 37 figs.

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