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IN TWO PARTS—PART II

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A BIOLOGICAL SURVEY OF THE WATERS OF WOODS HOLE AND VICINITY

In Two Parts

PART II

?*Aglaophenia struthionoides* (Murray).

Verrill and Smith, 1873, p. 730 (*Aglaophenia arborea*); Nutting, 1900, p. 102.

"Shoals of Nantucket, 10 miles east of Sancati Head, 14 fathoms."—Desor, cited by Verrill. Prof. Verrill now thinks that this species was recorded through an error, probably caused by mixing labels, as the species has not been taken otherwise except on the Pacific coast (see Nutting, 1900).

Family PETASIDÆ.

Gonionemus murbachii Perkins.

Murbach, 1895 (*Gonionemus* sp.); Thompson, 1898 (*Gonionemus*); Nutting, 1901, p. 382 (*Gonionemus vertens*); Mayer, 1901, p. 5 (*Gonionemus murbachii*, nom. nov.)[a]; Perkins, 1902 (*Gonionema murbachii*); Hargitt, 1904, p. 53; Mayer, 1910, p. 343, 497.

Abundant at Woods Hole, particularly in the Eel Pond. Recorded also from Vineyard Sound and Hadley Harbor, by Murbach; from Vineyard Haven, by Hargitt, and from Muskeget Island, by R. L. Baird. Perkins calls attention to the fact that this now abundant species was first taken in 1894. Its more familiar habitat is among eelgrass, to which it clings by its tentacles.

Sexual season from July to October.—Murbach. Period of maximum sexual activity from the middle of July to the middle of August; eggs extruded at dusk.—Perkins. It has been shown by Perkins that an inconspicuous hydroid phase occurs in the life history of this species, during which asexual multiplication by budding occurs.

Locally this medusa has been an important object of experimental research. It survives transportation, and Dr. Perkins has kept specimens alive for six months in aquarium jars.

Family TRACHYNEMIDÆ.

Rhopalonema typicum (Maas).

Hargitt, 1904, p. 54; Mayer, 1910, p. 378 (*Rhopalonema velatum*).

"Fragments taken in the tow in Vineyard Sound."—Hargitt.

Family AGLAURIDÆ.

Aglantha digitalis (Müller).

Verrill and Smith, 873, p. 725, 454 (*Trachynema digitale*); Fewkes, 1881, p. 160 (*Trachynema digitale*); Nutting, 1901, p. 381 (*Trachynema digitale*); Hargitt, 1902a, p. 553 (*Trachynema digitale*); Hargitt, 1904, p. 55 (*Aglantha digitalis*); Mayer, 1910, p. 402 (*Aglantha digitale*).

"Woods Hole, July 1, young specimens."—Verrill. Woods Hole, March to May.—C. W. Hargitt. Mr. G. T. Hargitt found sexually mature specimens in abundance, from April 5 to 11, 1908.

Aglantha conica Hargitt.

Hargitt, 1902, p. 21 (sp. nov.); 1904, p. 56; 1908, p. 111.

Off Nantucket and off Chatham, in August, 1902; Woods Hole, April 25 to 30, 1906; taken towing in 12 to 20 fathoms, likewise at surface.—Hargitt.

Family GERYONIDÆ.

Liriope scutigera McCrady.

Fewkes, 1881, p. 162; Hargitt, 1904, p. 56; Mayer, 1910, p. 421.

Newport.—Fewkes.

Glossocodon tenuirostris (Agassiz).

Mayer, 1900, p. 165; Hargitt, 1904, p. 57; Mayer, 1910, p. 421 (*Liriope scutigera*).

Occasional at Newport.—Mayer.

Family CUNANTHIDÆ.

Cunina discoides Fewkes.

Fewkes, 1881, p. 161; Hargitt, 1904, p. 57.

Occasional at Newport.—Fewkes.

Family PORPITIDÆ.

Porpita linnæana Lesson.

Fewkes, 1880, p. 140; Hargitt, 1904, p. 59.

"Occasionally taken at Woods Hole, Vineyard Sound, Newport, R. I., etc."—Hargitt. Fewkes notes having received "a dried specimen [of '*Porpita*'] preserved on paper after the manner of a plant, taken by a sailor not far from Nantucket."

Family VELELLIDÆ.

Velella mutica Bosc.

Verrill and Smith, 1873, p. 737, 455; Hargitt, 1904, p. 59.

"Coming northward in the Gulf Stream as far as Nantucket," recorded for August.—Verrill. "Occasionally taken in Vineyard Sound, Buzzards Bay, and off Newport."—Hargitt.

[a] The species was only named in this paper, in a footnote. No description was given. Mayer (1910) now credits the first real description to Perkins.

Family MONOPHYIDÆ.

Sphæronectes gracilis (Claus).
Fewkes, 1881, p. 143; Hargitt, 1904, p. 61.
Newport.—Fewkes.

Family DIPHYIDÆ.

Diphyes bipartita Costa.
Hargitt, 1904, p. 59.
Often taken at Newport.—Mayer. "Not infrequently drifts into the bays of the region from the Gulf Stream."—Hargitt.

Diphyopsis campanulifera Eschscholtz.
Hargitt, 1904, p. 60.
"Frequently taken in the deeper tows, particularly south of Marthas Vineyard and in the region of Nantucket."

Family AGALMIDÆ.

Cupulita cara Agassiz).
A. Agassiz, 1865, p. 200 (*Nanomia cara*); Fewkes, 1881, p. 163 (*Agalma elegans*); Hargitt, 1904, p. 60.
Newport.—A. Agassiz.

Family ANTHOPHYSIDÆ.

? *Anthophysa formosa* (Fewkes).
Hargitt, 1904, p. 60.
A single specimen taken "south of Marthas Vineyard" in the summer of 1902 (beyond limits of region?).

Family PHYSALIDÆ.

Physalia pelagica Bosc.—Portuguese man-of-war.
A. Agassiz, 1865, p. 214 (*Physalia arethusa*); Verrill and Smith, 1873, p. 737, 450; Hargitt, 1904, p. 25, 61.
Taken nearly every summer in Vineyard Sound, sometimes in considerable numbers, occasionally drifting into Woods Hole Harbor. On July 7, 1904, Mr. John J. Veeder collected 78 specimens in the Sound. During some summers, on the contrary, none are observed. It is probable that the abundance of this species varies directly with the quantity of material which is blown to our shores from the Gulf Stream. *Physalia* has been observed locally in July, August, and September.

Class SCYPHOZOA.

Family CHARYBDEIDÆ.

Charybdea verrucosa Hargitt.
Hargitt, 1902 a, p. 559, 560 (sp. nov.); Hargitt, 1904, p. 65.
Great Harbor, Woods Hole; North Falmouth; several specimens, August 13 and 14, 1901.

Family EPHYRIDÆ.

? *Bathyluca solaris* Mayer.[a]
Mayer, 1900, p. 2 (sp. nov.); Hargitt, 1904, p. 66.
Narragansett Bay; a single specimen found July 27, 1896. Latter "much torn and battered . . . may prove to be a deep-sea form."—Mayer.

Family ULMARIDÆ.

Aurelia flavidula Peron & Lesueur.
Verrill and Smith, 1873, p. 723, 449, etc.; Fewkes, 1881, p. 172; Bumpus, 1898, p. 487; Hargitt, 1904, p. 67; Mayer, 1910, p. 623 (*Aurellia aurita*).
Common throughout local waters during spring and summer. Young stages recorded by several observers as early as March; adults found as late as September. According to Mr. Edwards, *Aurelia* appears in the tow most frequently in May. Dr. Hargitt thinks it likely that sexual reproduction occurs in summer, the resulting scyphistoma larvæ remaining in that condition till the following spring, when ephyræ are produced.

Family CYANEIDÆ.

Cyanea arctica Peron & Lesueur.
A. Agassiz, 1865, p. 44 (*Cyanea arctica*), p. 46 (*Cyanea fulva*); Verrill and Smith, 1873, p. 723, 449, etc.; Fewkes, 1881, p. 166; Bumpus, 1898, p. 487; 1898a; Mead, 1898, p. 705; Hargitt, 1904, p. 68; Mayer, 1910, p. 597 (*Cyanea capillata*, var. *arctica*).
Very common throughout the region during the spring and summer. Both Mr. Edwards and Mr. Gray report the occurrence of this species from March till September. About a dozen specimens, several inches in diameter, were taken in a fyke net by Mr. Edwards, February 28, 1908. Ripe eggs reported by Bumpus in May and early June, by Hargitt in July. The early stages may readily be reared in aquaria. Verrill and Mead note the occurrence of ephyræ in April.

[a] Mayer (1910, p. 585) now thinks that the type of this species (?) was probably a "damaged and regenerating specimen" of *Dactylometra quinquecirra*.