

PHYLUM CNIDARIA, CLASS SCYPHOZOA

The commonly encountered members of the Class Scyphozoa are well known to the general public as "jellyfishes", and are often feared unreasonably. And it is fair to advise that any large medusa should be handled with due respect, for its stinging powers despite exaggerations in popular literature, may be formidable (cf. Hedgpeth, 1945).

Scyphozoan jellyfish are commonly large and conspicuous, with scalloped bell-margins and usually with long tentacles and/or mouth lobes. The attached or poly-poid stages are absent or inconspicuous; these "scyphistoma" stages (Plate 3, fig. 3) may occasionally be found on eelgrass, rocks, or timbers, or can be reared from larvae shed by medusae in the laboratory.

Members of the order Stauromedusae are easily distinguishable from other members of the Class in that they are sessile throughout their life cycle except for a brief period during development when a creeping, vermiform, nonciliated planula larva is produced. Two families have been designated, the Eleutherocarpidae, represented locally by Haliclystus, and the Cleistocarpidae, represented by Craterolophus. The latter group possesses "claustra", or membranes, which divide the gastric pockets (see figs. 162B, p. 502, and 165J, p. 510 in Hyman, The Invertebrates, Vol. I, for the distinction between the two families). Two stauromedusans are found locally early in the season (to the end of June) attached to Fucus at Nobska Point.

The synonymy of Scyphozoa is extensive, and most of the names used by Hargitt and by Mayer have been modified. In the keys below, the names in Kramp's synopsis (1961) have been used. For the key to attached scyphozoans we are indebted to Drs. G. F. Gwilliam and Kay Werner Petersen; the key to scyphomedusae has been derived from Mayer (1910). Figure references are to Plate 3.

KEY TO ATTACHED SCYPHOZOA OF THE VICINITY OF WOODS HOLE

- 1. Small (under 10 mm) soft individuals connected by stolons (fig. 3); up to 16 or more very long filiform tentacles; gastric cavity with 4 small radial septa "Scyphistoma" stages of various scyphozoan medusae
- 1. Larger (up to 30 mm); broadly bell shaped single individuals; 8 marginal clusters of short knobbed tentacles . . . Order STAUROMEDUSAE 2
- 2. Stalk comparable in length to depth of bell; with conspicuous marginal anchors (fig. 2) between tentacle-bearing arms Haliclystus auricula (Rathke, 1806)
- 2. Stalk much shorter than depth of bell; no marginal anchors (fig. 1) Craterolophus convolvulus (Johnston, 1835)

Note: If the stauromedusan was collected north of Cape Cod, consult the paper of Berrill (1961) before concluding an identification.

KEY TO LARGE AND COMMON FREE-SWIMMING SCYPHOMEDUSAE

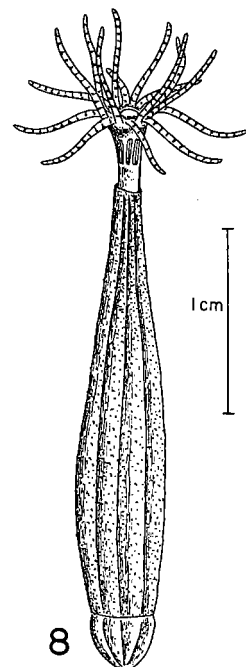
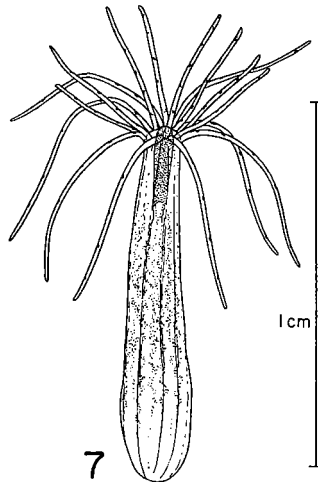
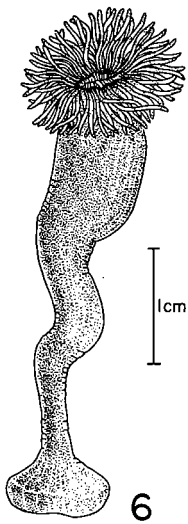
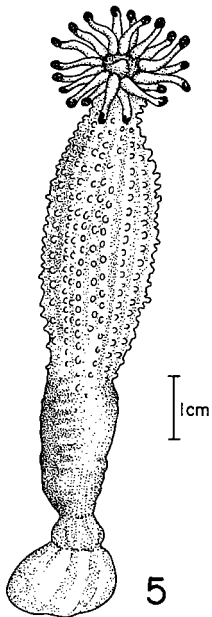
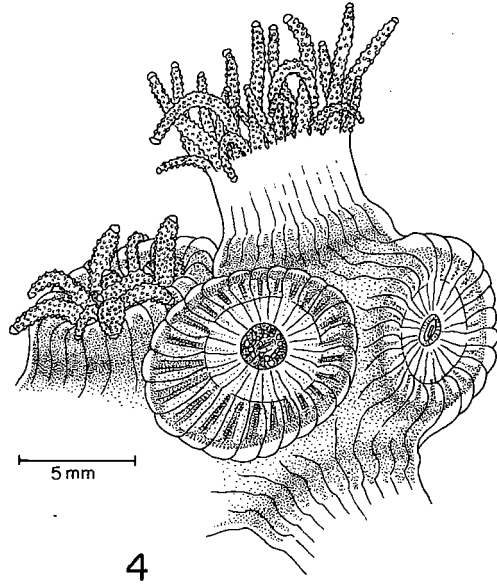
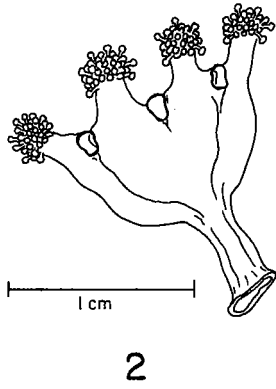
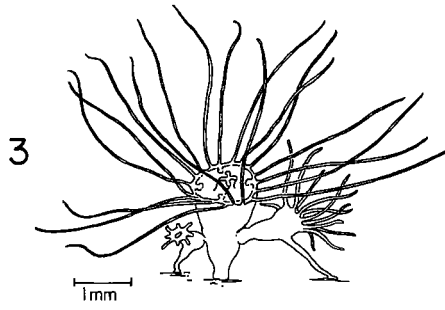
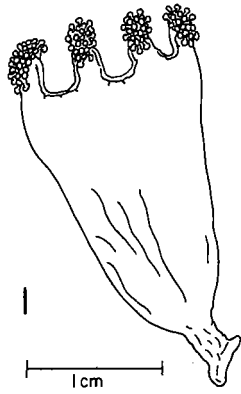
- 1. Bell flat, translucent grayish, with 4 horeshoe shaped gonads; marginal tentacles very short and numerous Aurelia aurita (Linnaeus, 1758)
- 1. Bell deep and usually colored; marginal tentacles long 2
- 2. Marginal tentacles long and numerous, arranged in 8 clusters, each of several rows Cyanea capillata (Linnaeus, 1758)
- 2. Marginal tentacles single 3

Plate 3

SCYPHOZOA AND ANTHOZOA

- Fig. 1. Craterolophus convolulus, from a preserved specimen; bar is 1 cm.
2. Haliclystus auricula, from a preserved specimen; bar is 1 cm.
 3. Scyphistoma stage of Aurelia aurita, grown in laboratory and sketched from life by Dr. Louise Bush. Scale is about 1 millimeter.
 4. Astrangia danae, a small section of living colony, sketched from life by Bruce Shearer. Scale is 5 mm.
 5. Haloclava producta, after Hargitt; this and following 3 figures redrawn by Mrs. Emily Reid. Scale bars of figures 5-8 approximately 1 cm long.
 6. Sagartia modesta, after Hargitt.
 7. Nematostella vectensis, after Crowell.
 8. Edwardsia elegans, after Hargitt.

Plate 3



3. Eight marginal tentacles; 16 marginal lappets; bell with numerous nematocyst bearing warts
 Pelagia noctiluca (Forskål, 1775)
3. Up to 40 marginal tentacles; about 48 marginal lappets
 Chrysaora quinquecirrha (Desor, 1848)

REFERENCES ON SCYPHOZOA

- Berrill, M., 1962. The biology of three New England Stauromedusae, with a description of a new species. *Canad. J. Zool.*, 41: 1249-1262.
- Hargitt, C. W., 1905. The medusae of the Woods Hole Region. *Bull. U. S. Bur. Fish.* 1904, 24: 21-79.
- Hedgpeth, J. W., 1945. Re-examination of the Adventure of the Lion's Mane. *Sci. Monthly*, 60: 227-232.
- Kramp, P. L., 1961. Synopsis of the medusae of the world. *J. Mar. Biol. Assoc. U. K.*, 40: 7-469.
- Mayer, A. G., 1910. Medusae of the World. Vol III, The Scyphomedusae. Carnegie Inst. of Washington, Publ. no. 109.