

## GELATINOUS PLANKTON LIKELY TO OCCUR IN LONG ISLAND SOUND

### CTENOPHORES

#### 1) Common Southern Comb Jelly, Sea Walnut (*Mnemiopsis leidyi*)

These clear, colorless invertebrates aren't like jellyfish—they can't sting you because they don't have nematocysts (stinging cells). Some grow up to 4" (10 cm) long, but **the ones you will commonly see are 2-3"** (5-7.6 cm). They lose their tentacles as they grow up, but have two lobes that are attached near the top of their body and are longer than the body. They swim with their lobes outstretched then snap them closed when they encounter big prey, such as copepods. They have sticky cells that line the inside of their bodies (like fly paper) and help them capture small prey, such as the larvae of crabs and snails. These comb jellies produce a blue-green bioluminescent glow when disturbed. **They are likely to be found in Long Island Sound from May through December.**



#### 2) Sea Gooseberry (*Pleurobrachia pileus*)

These small ctenophores have a transparent, spherical body containing eight iridescent rows of cilia. **They grow up to 3/4"** (2 cm) in diameter. The cilia in each row form a stack of combs, also called comb plates; they are used for locomotion. Each sea gooseberry had two fringed tentacles that hang lower than the body and trap food. These comb jellies are found near the ocean's surface and in shallow water. **They are uncommon in coastal waters during the summer. They are likely only to be found in Long Island Sound during the winter months.**



#### 3) Other Ctenophores: Beroe sp. (ovata, cucumis) possible, but rare

*Beroe cucumis* is found worldwide; can be pinkish and up to fifteen centimeters (6in) long.

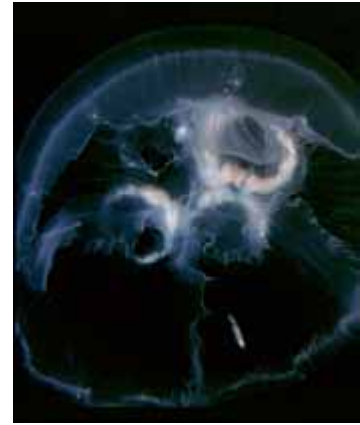


## SCYPHOZOA (true jellyfish)

The three most conspicuous scyphozoans of the region (*Aurelia aurita*, *Chrysaora quinquecirrha*, *Cyanea capillata*) are assigned to the **Semaeostomeae**. These species have tentacles along or beneath the margin of the umbrella, long, frilly oral arms hanging down from the mouth. A coronal groove on the exumbrella, as in Coronatae, is lacking.

### 1) Moon Jellyfish (*Aurelia aurita*)

These jellyfish are saucer shaped with a translucent, whitish or pinkish color. **They can reach 10" (25 cm) in diameter.** The moon jelly has a transparent, milky white bell rimmed with hundreds of short, hair-like tentacles. Its four oral arms, frilled along one edge, hang from the center of the bell. Four horseshoe shapes in the center of the bell are the gonads (sex organs), and they form a characteristic, very visible four leaf clover pattern on the center of the umbrella. In young moon jellies, the gonads are white, but in mature animals the gonads are tinged with color. The moon jelly is only slightly venomous. Contact can produce symptoms from immediate prickly sensations to mild burning. **They are most likely to be found in late spring.**



### 2) Lion's Mane Jellyfish (*Cyanea capillata*)

The "lion's mane". Mesohaline--euhaline. Two varieties occur locally, arguably representing different subspecies or even species. The boreal *Cyanea capillata* var. *arctica* seems to differ from the temperate *C. capillata* var. *fulva* in its larger maximum size, in color, in some minor morphological characters (e.g., in lacking exumbrellar papillae), and possibly in ecology including seasonality. The color of these jellies varies with their age, ranging from dark reddish-brown to pinkish-yellow. Juveniles are pink, turning red as they mature into reddish brown or purple adults. **In southern New England, they are usually 6-12" (15-30 cm) in diameter** but further north they can grow to 8' (2.5 m) in diameter. A tangle of reddish orange to tawny brown ruffled oral arms flow from the underside of the umbrella (the subumbrella) surrounding the mouth, and resemble a lion's mane. Pale white tentacles stream from the subumbrella in eight U-shaped groups. Its transparent bell, shaded in tones of pale pink and purple, ends in a scalloped rim.



They have stinging cells (nematocysts) that are mildly toxic. *Cyanea* are generally considered moderate stingers. Symptoms are similar to those of the moon jelly; pain is relatively mild and often described as burning rather than stinging. **This jellyfish is very common in local waters in the summer; also likely in winter and spring**

### 3) Sea Nettle (*Chrysaora quinquecirrha*)

The "sea nettle". Oligohaline--euhaline. Common to abundant in Northeast region during the summer, especially in estuarine waters. Venomous. It occurs from Cape Cod south along the U.S. East Coast, Caribbean and Gulf of Mexico, yet it abounds in Chesapeake Bay in numbers unequaled elsewhere. Its bell can grow to 25 cm (10 inches) across. Tentacles are attached to the margin of the umbrella in eight groups of 3-5 tentacles. Easily recognized, it is usually a pure white, but sometimes the white is marked by brilliant red lines flowing from the center of the bell to the edge. Fine reddish tentacles trailing from the bell are instant death to small fish or crabs who brush up against them. The East Coast sea nettle prefers water less salty than open ocean water. So even though it is common in the open ocean along the coast, it flourishes in the brackish waters (10-20 psu) of estuaries and bays where it is white in color. In higher salinities it often has the red/maroon markings on the long central tentacles and on the swimming bell. It has an annoying sting, but is not dangerous to swimmers.



4) *Pelagia noctiluca* (see key at end of document for image) The "oceanic jelly". Euhaline. An oceanic species infrequently carried inshore in gyres of the Gulf Stream. The umbrella has prominent warts, is hemispherical, and has eight solitary tentacles extending from its margin. Venomous.

### 5) *Aequorea* spp.

This is a hydrozoan. They have clear or pink colored umbrella-shaped bodies. They have ribbed structures called radial canals that go around their bodies and fine tentacles extending from their bodies. They can grow up to 7" (18 cm) in diameter. They are usually found offshore but may stray nearshore in the summer and fall.



6) The **Rhizostomeae** have no marginal tentacles, and their oral arms are fused and bear numerous small mouth openings. Two temperate-water rhizostome species (*Rhopilema verrillii*, *Stomolophus meleagris*) have been reported as far north as Long Island Sound in the western

North Atlantic but not as far north as the Woods Hole region. **They are likely to be rare in Long Island Sound.**

#### Cannonball Jelly (*Stomolophus meleagris*)

Also known as jellyballs, these jellyfish are the most common in South Carolina waters, where, during the **summer and fall**, large numbers appear near the coast and in the mouths of estuaries. They are considered to be pests by commercial trawl fishermen because they clog and damage nets and slow sorting and trawl times. Fortunately, while the cannonball may be abundant in some areas, it is also one of the least venomous. Cannonballs can be identified by their hemispherical white bells decorated with rich, chocolate brown bands. They have no tentacles but a gristle-like feeding apparatus formed by the joining of the oral arms. **Cannonballs rarely grow larger than 8 inches in diameter.**



Cannonball Jelly

#### Mushroom Jelly (*Rhopilema verrilli*) (no image)

The mushroom jelly is often mistaken for the cannonball jelly, but it differs in many ways. The larger mushroom jelly, growing to 20 inches in diameter, lacks the brown bands associated with the cannonball and is much flatter and softer. Like the cannonball, the mushroom has no tentacles, however, it possesses long finger-like appendages hanging from the feeding apparatus. The mushroom jelly does not represent a hazard to humans.

#### HANDLING

Primary first aid for any jellyfish sting should be to minimize the number of nematocysts discharging into the skin and to reduce the harmful effects of the venom. If stung by a jellyfish, the victim should carefully remove the tentacles that adhere to the skin by using sand, clothing, towels, seaweed or other available materials. As long as tentacles remain on the skin, they will continue to discharge venom.

Be careful when handling any jellyfish, even if you suspect they are dead. Although they may be dead, they may still be capable of inflicting stings. Even just small pieces of tentacles containing nematocysts can still cause stings. None of the species you are likely to encounter in LIS are highly toxic, but the stings still hurt. Of particular importance is understanding that flying pieces, that might occur from the shaking of a net for example, can get into an eye and cause particular discomfort. Avoid vigorous shaking of nets and wear eye protection when working around plankton nets. Remember to take precautions when removing tentacles after contact or additional stings may result.

Internet References May, 2002:

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updated by Dale R. Calder; *from*: The Biological Bulletin; The Marine Biological Laboratory at Woods Hole

**PHYLUM CNIDARIA: CLASS SCYPHOZOA**  
**Keys to Scyphozoa of the Woods Hole Region (TEXT key)**

1.	Planktonic Scyphozoa; medusoid in form; velum lacking	2
	Benthic Scyphozoa; medusoid or polypoid in form	benthic form; key not included
2	Tentacles on subumbrella, in eight U-shaped groups	<i>Cyanea capillata</i>
	Tentacles restricted to umbrella margin	3
3	Umbrella flat, plate-shaped; tentacles short, numerous; gonads four, horseshoe-shaped	<i>Aurelia aurita</i>
	Umbrella saucer-shaped to hemispherical; tentacles long	4
4.	Umbrella lacking prominent warts, flatter than a hemisphere; margin with eight groups of 3-5 tentacles	<i>Chrysaora quinquecirrha</i>
	Umbrella with prominent warts, hemispherical; margin with eight solitary tentacles	<i>Pelagia noctiluca</i>

Visual Key to the Planktonic Scyphozoa

