

## Silver-spotted Anemone *Aulactinia stella*

**Other Names** Gem anemone; formerly classified as *Bunodactis stella*.

**Description** The body is grayish-green to translucent or occasionally reddish. White lines radiate from the mouth of its oral disk, and a whitish ring is found on the 48–96 elongated tentacles. A white spot at is present at the base of each tapered tentacle, and sticky bumps are found on the column.

**Size** To 2" (5 cm) in diameter, 1.5" (4 cm) high.

**Habitat** Attached to rocks and buried in sand or sediments; low intertidal zone to shallow subtidal.

**Range** Nova Scotia to the Gulf of Maine.



**Notes** This elegant anemone usually has sand and shell fragments attached to its sticky column. This is best viewed when it is out of the water at low tide; however, it is often buried up to the edge of its disk in sand. The silver-spotted anemone broods its juveniles internally—an uncommon situation in the world of anemones. This species is preyed upon by the shag-rug nudibranch (see p. 88). In order for this predator to feed on this anemone and not become a meal itself, it secretes mucus for protection against the stinging tentacles of this anemone.



*This individual is out of water with tentacles retracted.*

## Short Plumose Anemone *Metridium senile*

**Other Names** Frilled anemone, plumose anemone, common sea anemone, northern anemone, sun anemone, white plumed anemone, plumed anemone, powder puff anemone, orange anemone, fluffy anemone, white plume anemone, sun anemone; formerly classified as *Metridium dianthus*.

**Description** This anemone's color may be white, yellow, orange, pink, or brown overall. Several lobes divide from the disk, and there may be a total of up to 100 very thin tentacles.

**Size** To 2" (5 cm) in diameter, 4" (10 cm) high.

**Habitat** On rocks or similar surfaces and wharf piles; low intertidal zone to depths of 98' (30 m).

**Range** Arctic to Delaware.

**Notes** The short plumose anemone may be viewed from a dock by peering at the creatures attached to the dock below the water's surface. This common species feeds primarily on plankton, and small, free-living marine organisms, and fish. It usually reproduces asexually: a new anemone can arise from each small piece of tissue left behind when this species moves to a new site. As a result, a clone is formed. This species also reproduces sexually and is capable of binary fission (dividing in half) as well. The short plumose anemone is common along the Pacific, the Mediterranean, and Atlantic European coasts as well as the northern and mid-Atlantic coasts of North America.

If disturbed, this species may discharge its acontia—thin, white threads on its column that contain nematocysts used as a defense against predators. When the tentacles of this species are retracted, as at low tide, its shape has been compared to everything from a bagel to a small volcano.



*This individual is under water.*



*This individual is out of water.*



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## Hydroids and Allies (Class Hydrozoa)

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Most hydroids are colonial animals with a life cycle that includes both the asexual polyp (a tube-like organism) and the sexual medusa (umbrella-shaped) stage. Medusae in this class have a muscular velum or veil-like ring that helps them move through water and an exoskeleton that is made of chitin or calcium carbonate. A few hydroids resemble true jellies but are smaller in size—up to 4" (10 cm) in diameter.

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### Zig-zag Wine-glass Hydroid *Obelia geniculata*

**Other Name** Knotted thread hydroid.

**Description** In this species, white stalks arise from the "knee" of each stalk, giving it a zig-zag appearance. Urn-shaped sheaths around the reproductive buds have collars.

**Size** Polyp colony to 1" (25 mm) high, 12" (30 cm) wide.

**Habitat** On rocks or seaweed and in tidepools; low intertidal zone to shallow subtidal depths.

**Range** Arctic to Florida and Texas.

**Notes** The characteristic shape of zig-zag wine-glass hydroid is very distinctive. This colonial creature contains many polyps, each of which feeds on a variety of tiny organisms captured with small tentacles. The polyp is also the reproductive form that produces small buds. Each bud develops into free-swimming medusa that produces fertilized eggs, which then develop into swimming planula (larvae), the next stage in the species' life cycle. These planula eventually settle on a hard surface, where they become attached and complete their life cycle.



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## Wine-glass Hydroids *Campanularia* spp.

**Description** These species are white overall with wine-glass shaped polyps and stems that lack a zig-zag shape.

**Size** Polyp colony to 10" (25 cm), high 6" (15 cm) wide.

**Habitat** On seaweeds, rocks, pilings, or similar objects; low intertidal zone to depths of 1,380' (420 m).

**Range** Labrador to Florida.

**Notes** The life cycle of the *Campanularia* clan is different from their *Obelia* (p. 35) cousins. The medusa of wine-glass hydroids *Campanularia* spp. are not free-swimming but rather remain inside the polyps to produce the eggs, sperm, and embryos that are also not free-swimming. A microscope is necessary to observe these differences.



## By-the-wind Sailor *Verella verella*

**Other Names** Sail jellyfish, purple sailing jellyfish; formerly classified as *V. lata*.

**Description** The float is a bright blue with a transparent triangular sail on the dorsal side.

**Size** To 2.3" (6 cm) long.

**Habitat** Normally on the ocean's surface but often found stranded on shore.

**Range** Temperate and tropical oceans worldwide.

**Notes** By-the-wind sailor is a floating hydroid that occasionally washes ashore by the hundreds in late spring and early summer. Its colorful base is made up of a float, which is comprised of gas-filled pockets. Its common name originates from the prominent sail that arises from the float. Although there are several tentacles that

surround this "jelly's" outer rim, they are harmless to man. This cosmopolitan species feeds on small fish eggs, copepods, and other marine life.



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## True Jellies (Class Scyphozoa)

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The rhythmic pulses of jellies are intriguing to observe—indeed, their fluid movements have a near-hypnotic effect. The purpose of this movement is probably to keep the animal near the surface of the water. Its seemingly random wanderings are influenced and aided by water currents.

Jellies date back to Precambrian times: one Australian fossil has been aged at 750 million years. There are a thousand known species of these primitive carnivores, which feed primarily on zooplankton. The jelly has two distinct stages in its life cycle: it begins life as a polyp (a tube-like organism with a mouth and tentacles) and eventually transforms into a medusa (umbrella-shaped organism). A jelly captures its food and then lifts it to its mouth to eat. The medusae in the Class Scyphozoa differ from those of hydrozoans because true jellies lack a velum or veil-like ring under their bell.

Jellies are composed of as much as 96 percent water, but several species are consumed as food in various cultures where they are eaten boiled, dried, or raw.

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### Whitecross Hydromedusa *Staurophora mertensi*

**Other Name** Whitecross jellyfish.

**Description** The transparent flattened bell has a white cross along with many tentacles around its edge.

**Size** Medusa to 12" (30 cm) in diameter, 2" (51 mm) high.

**Habitat** Normally in the ocean but often found stranded.

**Range** Arctic to Rhode Island.

**Notes** Whitecross hydromedusa lives deeper during the daylight hours, rising near the surface at night. The bell-shaped medusa is a carnivore that dines on other medusa and crustaceans. The four radial canals have white gonads attached to them. More research on this common species is needed; little is known about its life cycle.



## Atlantic Moon Jelly *Aurelia aurita*

**Other Names** Moon jelly, white jellyfish.

**Description** The translucent white dome encloses the round or horse-shoe-shaped gonads (reproductive organs). Adult gonads are yellowish, brownish, pink, or purple, and immature gonads are white.

**Size** To 20" (50 cm) in diameter.

**Habitat** On or near the surface of the ocean near shore.

**Range** Arctic to Florida and Mexico.

**Notes** Atlantic moon jelly is often found washed up on the beach after a storm or merely after high tide. This species is mildly toxic; those who encounter it in the water might get a rash that itches for a few hours. The rhythmic pulsations of this species moving in the water may be easily viewed from a dock under quiet conditions. Atlantic moon jellies are carnivorous, feeding on plankton, including the larvae of mollusks, crustaceans, tunicates, and others. They have also been observed eating small jellies and comb jellies.



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## Lion's Mane *Cyanea capillata*

**Other Names** Lion's mane jelly, sea blubber, sea nettle, red jelly, sun jellyfish.

**Description** The smooth, flat-topped bell is pink, yellowish, or reddish-brown. Trailing tentacles are in 8 clusters located between the 16 lobes of the bell's margin. There are 70–150 tentacles in each cluster. Suspended beneath the bell lies a shaggy mass containing the feeding tube, lips, and ribbon-like gonads.

**Size** Normally to 20" (50 cm) in diameter, with tentacles to 10' (3m) long; rarely to 8' (2.5 m) in diameter and tentacles to 119' (36 m) long.

**Habitat** Usually found floating near the surface of the water and occasionally stranded on the beach.

**Range** Arctic to Florida and Mexico.



**Notes** Lion's mane is the largest jelly in the world. The color of this species varies greatly; older individuals are typically darker than young ones. This predator feeds on small fish, crustaceans, and other animals. Some species of fish find that the lower portion of the bell provides refuge from their enemies.

Contact with the tentacles of this toxic species produces a burning sensation. Exercise caution, even

with a jelly stranded on the beach. All jellies are toxic to some degree, and human reactions vary from a mild rash to blistering and, occasionally, death. If you are stung by this species, try meat tenderizer or wet sand as an antidote.

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