Common Seaweeds of the Intertidal Zone

• This visual guide is intended to aid you in identifying fish commonly captured while seining on the beaches of Long Island.
• This guide does not list all possible species.
• Always take photographs of all captures, and use a comprehensive field guide when any species identification is debatable.
• When you discover living organisms, return them to the water after study.
Parts of an alga

- Holdfast
- Stipe
- Blade
- Gas Bladder or Float
- Frond
Ulva

This bright green algae is found in muddy areas of the lower intertidal zone, in protected coves and bays. May grow in flat leaves or narrow strands, depending upon habitat. When superabundant, is an indicator of excessive nitrogen in the water.

Figure 1a. Sea Lettuce, broad leaves  Ulva spp.

Figure 1b. Sea Lettuce, narrow strands  Ulva spp.

Codium

Pencil-thick stems, which split into a "Y" shape. Has a spongy feel, the stems are buoyant. Gets darker as it ages. Is a non-native species, arrived on Long Island in 1957. Holdfast is irregularly shaped, grows attached to any hard substrate.

Figure 2. Dead Man's Fingers  Codium fragile

Acrosiphonia

Forms rounded tufts, growing on rocks or on shells. Looks fluffy underwater. Only found during winter through spring in Long Island waters. Diameter of the tufts are usually 5 to 10 cm wide.

Figure 3. Green Pompoms  Acrosiphonia arcta
**Blidingia**

Very small, tubular, bright-green filaments. Width of each strand about the same as human hair. Grows on rocks below the high tide line, making them very slippery.

*Figure 4. Stone Hair  Blidingia minima*

**Chaetomorpha**


*Figure 5. Green Thread  Chaetomorpha linum*

**Cladophora**

Soft yellowish green to tan. Forms bright tufts growing on rocks or other algae. May break free and form floating mats. Looks fuzzy or cloudy when viewed in the water. Some branching on the individual stems.

*Figure 6. Green Hair  Cladophora sericea*

**Bryopsis**

Feathery branching fronds split from the main stem. Dark green to brownish. Individual fronds resemble ferns, as a mass look like spruce branches.

*Figure 7a. Green Sea Fern  Bryopsis plumosa*

*Figure 7b. Green Sea Fern  Bryopsis plumosa*
**Fucus**

Olive-green to brown. Flattened blades with air bladders within to provide floatation, often at the end of stems. Found in high-energy rocky areas in mid-intertidal zone, growing securely fastened to rocks. *F. spiralis* grows in open coast areas, *F. vesiculosus* in more sheltered habitat. One variant grows at the base of salt marsh grass in protected habitats.

**Ascophyllum**

Large, olive-green to brown alga. Grows in the same places as Fucus spp but in more sheltered pockets. Single firm bladders along the branches, small leaflets grow from main stems.

**Saccharina**

Very large brown-green to dark brown algae, thick blades, slippery feel. It forms a single, long, sturdy blade. Claw-like holdfast grabs onto stones.
**Sargassum**

A light-brown to yellowish alga with round, air-filled sacs. Grows attached to hard substrate and can form extensive beds along open coasts and exposed estuaries. Related to the famous algae of the Sargassum Sea, floating in dense mats in the open Atlantic.

![Figure 10a. Sargasso Weed Sargassum filipendula](image)

![Figure 10b. Sargasso Weed Sargassum filipendula](image)

**Laminaria**

Large green-brown alga, thick blades, slippery feel. Fronds split above the holdfast into compound hand-like blades. Claw-like holdfast grabs onto stones.

![Figure 12. Kelp Laminaria digitalis](image)

![Figure 13. Kelp holdfasts Laminaria digitalis](image)

**Desmarestia**

Light brown color, covered in fine hairs. Small disc-shaped holdfast. Grows at or below the low tide line. Desmarestia stores sulfuric and laic acid in its cells to thwart grazing snails. Not dangerous to handle.

![Figure 14. Sour Weed Desmarestia viridis](image)
Scytosiphon

An olive-brown shiny alga. Fronds are a hollow tube. A large number of fronds will grow from a single holdfast. Fronds are unbranched, up to 40 cm long.

Figure 15. Leather Tubeweed Scytosiphon lomentaria

Chorda

Brown to near black, firm, round and long. Resembles a cord or thick string. Diameter uniform throughout. Subtidal to 10 meters deep, growing in clumps. Similar to Halosiphon, below. Tubular shape is not hollow.

Figure 16. Cord Weed Chorda filum

Halosiphon

Yellow-brown alga. Long, thin fronds, covered in fuzzy hairs. Many individual fronds arise from a single holdfast.

Figure 17. Hairy Sea Whip Halosiphon tomentosus
**Grinnellia**
A small, thin, delicate blade, covered in tiny dots when reproductive. Pink. Thinner than Ulva.

![Grinnell's Pink Leaf](image)
Figure 18. Grinnell's Pink Leaf Grinnellia americana

**Porphyra**
Flat bladed plant, looks like brown Ulva. Slippery feel. Grows in the subtidal zone. Cultivated to produce sheets for sushi.

![Laver or Nori](image)
Figure 19. Laver or Nori Porphyra purpurea

**Chondrus**
Shrub-like, dense branching of flat blades, many forks. Colored red to purple, but bleaches white when exposed to sun. An extract from this alga is called carrageenan, used commercially as a thickener of ice cream and toothpaste.

![Irish Moss](image)
Figure 20. Irish Moss Chondrus crispus

**Rhodymenia**
A tiny red alga similar to Chondrus above, but with less branching and very thin. Often found growing on the stems of kelp in the subtidal zone.

![Rosy Fan Weed](image)
Figure 21. Rosy Fan Weed Rhodymenia pseudopalmata
**Agardhiella**

Dark red, slippery feel. Found growing in lower intertidal to subtidal zone. Common. Important habitat for small invertebrates, including young scallops.

![Figure 22. Agardhiella's Red Weed Agardhiella subulata](image)

**Gracilaria**

A red alga, quite slippery feeling. Very similar to Agardhiella, but lower stems are flattened, Agardhiella are always rounded.

![Figure 23. Graceful Red Weed Gracilaria tikvahiae](image)

**Dasya**

Feathery fronds on a long branching stem. Bright red.

![Figure 24. Chenille Weed Dasya baillouviana](image)

**Polysiphonia**

A reddish brown, bristly alga that grows most often attached to other algae, including Fucus and Ascophyllum. Finely branching, somewhat stiff and wiry.

![Figure 25a. Pollyweed Polysiphonia spp.](image)
Spermothamnion

Thin wiry filaments form dense tufts growing 5 to 10 cm across. Pinkish-red to red-brown in color. Lower intertidal, attached to rocks.

Figure 26. Red Tufts Spermothamnion repens

Eelgrass

Green grass blades to 1 meter long. Leaves 5 to 10 mm wide. Blades grow from runners beneath the sand. A keystone species for Long Island bays, the survival of many organisms are dependent upon the existence of healthy eelgrass beds. When healthy, eelgrass creates meadows of habitat across shallow bays amounting to thousands of acres.

Figure 27a. Eelgrass Zostera marina
Figure 27b. Eelgrass, closeup showing scallop Zostera marina, Acropecten irradians

Wigeongrass

Delicate thread-like blades grow alternating around a stem. The blade has a rounded tip with a sheath at the bottom. Produces large meadows, especially along the South Shore of Long Island, and sheltered bays and creeks in the Peconic Estuary system.

Figure 28a. Wigeon Grass Ruppia maritima
Figure 28b. Wigeon Grass Ruppia maritima with Blue Crab Callinectes sapidus