



Maine Seaweeds

Maine is home to some of the world's most beautiful and versatile seaweeds. Seaweeds, or "macroalgae", live in the marine environment and derive energy from the sun through photosynthesis. Across the Maine coast, there are about 200 species of seaweed. These seaweeds play a critical role in our marine ecosystems by providing habitat, utilizing nutrients, and generating oxygen.

Maine seaweeds are a valuable resource from the sea, used in local foods, organic fertilizers, nutritional supplements, natural cosmetics, ocean-inspired art, and more. Maine leads the nation in seaweed production, with a heritage wild harvest fishery and growing seaweed farming industry that are key parts of the history and future of Maine's working waterfront.

How do I identify seaweeds?

1

Start by looking at the color. Seaweeds are classified into three color categories based on unique pigments that help them photosynthesize and grow underwater.

Red Seaweeds | Rhodophyta

The largest group of seaweeds worldwide, these complex seaweeds can have rosy red, deep purple-brown, or even blue hues.

Brown Seaweeds | Phaeophyceae

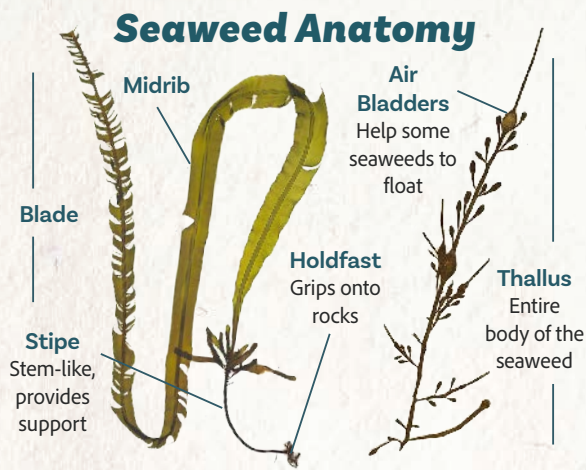
This group contains large, structurally advanced seaweeds like canopy-forming kelps, and can appear golden brown to dark olive.

Green Seaweeds | Chlorophyta

You'll find these bright green seaweeds in a wide range of habitats—they're more freshwater-tolerant than other seaweeds.

2

Examine the shape and size. Seaweed forms can be filaments, tubes, and blades, and can be branched or unbranched. It's important to know that seaweeds' shape and size are largely influenced by their habitat—even the same species can look dramatically different. Though seaweed ID can be challenging, it's also an exciting way to connect to our oceans.



FAQs

Are "kelp" and "seaweed" synonymous?

Not quite. Kelp refers to a well-known group of brown seaweeds. All kelps are seaweeds, but not all seaweeds are kelp.

Are all seaweeds edible?

While almost all seaweeds are technically edible, some are more consumed than others. Often called "sea vegetables," these tasty seaweeds are packed with vitamins, micronutrients, and trace minerals, and all have their own unique flavor.

Can I harvest my own seaweed?

Under Maine law, individuals may harvest less than 50lbs per day for non-commercial use. Harvesters must also be familiar with existing access/property rights and local water quality. Don't forget, you can always "forage" for high-quality Maine seaweeds in local health foods stores and markets!

Scan the QR code to learn more about marine science and Maine seaweeds.



Sea Grant
MAINE

THE UNIVERSITY OF
MAINE

seagrant.umaine.edu

All seaweeds in this field guide are scans of live samples in the University of Maine Herbarium, collected between 1962 and 2015.

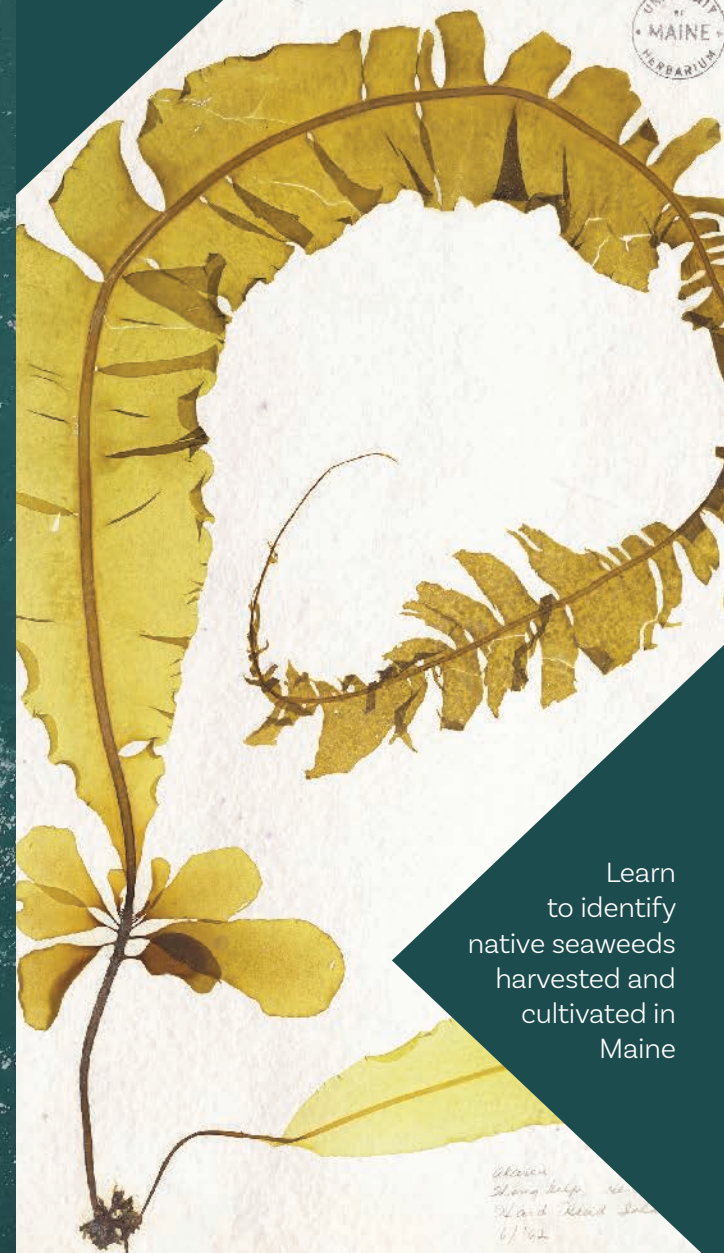
Written and designed by Jaclyn Robidoux, Maine Sea Grant

In complying with the letter and spirit of applicable laws and pursuing its own goals of diversity, the University of Maine System does not discriminate on the grounds of race, color, religion, sex, sexual orientation, transgender status, gender, gender identity or expression, ethnicity, national origin, citizenship status, familial status, ancestry, age, disability physical or mental, genetic information, or veterans or military status in employment, education, and all other programs and activities. The University provides reasonable accommodations to qualified individuals with disabilities upon request. The following person has been designated to handle inquiries regarding non-discrimination policies: Director of Equal Opportunity and Title IX Services, 5713 Chadbourne Hall, Room 412, University of Maine, Orono, ME 04469-5713, 207.581.1226, TTY 711 (Maine Relay System).

Seaweeds of Maine

Field Guide

Sea Grant
MAINE



Learn
to identify
native seaweeds
harvested and
cultivated in
Maine

Sugar Kelp

Saccharina latissima

Sugar kelp has a single, golden-brown blade, slender stipe, and a fibrous holdfast. It grows in subtidal beds down to 60 feet. Its shape can tell us a lot about its environment—wide, ruffled blades are adapted to uptake nutrients in low-energy areas, while smooth, narrow blades minimize drag in dynamic water. This nutritious kelp is farmed across Maine.

SEASON: Biennial or perennial, live 2+ years

SIZE: 4–16 feet long, 6–20 inches wide

ID TIP: If you don't plan to get in the water, look for this kelp under docks or in deep tidepools



Rockweed

Ascophyllum nodosum

This abundant seaweed forms dense beds across Maine's intertidal and varies in color from dark olive to golden brown. In spring you'll find small, gel-filled reproductive structures covering its branches. Nutrient-rich rockweed is harvested for use in organic fertilizers and natural supplements, and is steamed to add flavor to lobster bakes.

SEASON: Perennial, found year-round

SIZE: 2–5 feet or longer

ID TIP: Rockweed can be identified by single, interspersed air bladders on long branches



Dulse

Palmaria palmata

Dulse is a deep-red to purplish seaweed that's the shape and size of a hand, with fronds that segment into finger-like lobes. It flourishes on shaded rocky outcroppings, in reversing falls areas, and anywhere there's good current. Dulse is a savory, nutrient-dense superfood, long used by North Atlantic cultures as food and medicine. Try it in a grilled cheese!

SEASON: Perennial or aseasonal annual

SIZE: Up to 20 inches long, 4–6 inches wide

ID TIP: Look on rock faces—it will have a luminous red sheen against other seaweeds



Winged Kelp

Alaria esculenta

This honey-olive kelp grows just below low tide on the wave exposed peninsulas and outer islands of the Maine coast. It has a delicate, ruffled blade and a sturdy central midrib that helps it survive strong tides and waves. Paddle-like reproductive blades called sporophylls occur at the base of the stipe. Winged kelp is known for its delicate flavor.

SEASON: Biennial or perennial, peaks in April

SIZE: 3–5 feet or longer

ID TIP: This is the only Maine kelp with a midrib—look for this and the sporophylls



Bladderwrack

Fucus vesiculosus

Bladderwrack is an intertidal seaweed that's common to coast and estuaries and is often found near rockweed. Olive-brown fronds are leathery and strap-shaped, with a central midrib and air bladders paired on either side. You might see gel-filled tips at the end of the frond. These contain the spores and the gel is known for its natural skincare properties.

SEASON: Perennial, summer growth peak

SIZE: 8–35 inches long

ID TIP: Look for the midrib and paired air bladders to distinguish this from rockweed



Nori, Laver

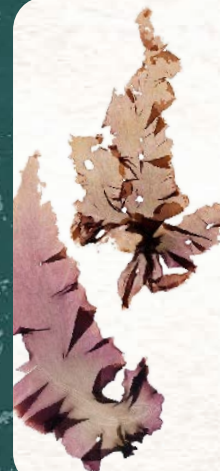
Porphyra spp., etc.

There are at least 8 varieties of this delicious red seaweed found along the Maine coast, which have a wide range in color—from dark brownish purple to bright rose pink and light brown. Nori lacks a stipe and has a single blade originating from a tiny holdfast. This ruffled blade appears delicate but is elastic despite being only 1–2 layers of cells thick.

SEASON: Annuals, peak in spring–summer

SIZE: Differs by species, between 2–14 inches

ID TIP: When the tide's out, keep an eye open for shiny, slick-looking dark patches on rocks



Horsetail Kelp

Laminaria digitata

Horsetail kelp has a broad, deep-brown blade that splits into narrow ribbons—an adaptation for survival in the high-energy, subtidal zones it inhabits. Though dense beds are below the surface, look for this kelp washed up after storms, which cause high natural mortality for this species. When dried, this tough kelp is excellent in soup stocks and broths.

SEASON: Biennial, recruitment peaks in fall

SIZE: 1–5 feet long and 2–4 feet wide

ID TIP: Blades are thicker than other kelps and should feel rubbery or slippery to the touch



Sea Lettuce

Ulva fenestrata, Ulva spp.

This is a common seaweed with translucent green blades that are sheet-like and ruffled. It thrives in a wide range of habitats—you'll find this attached to rocks near the low-tide mark on the coast as well as free-floating in brackish-water estuaries. Sea lettuce is fast-growing and opportunistic, forming "green tides" in areas with high nutrients.

SEASON: Aseasonal annual, found all year

SIZE: Up to 18 inches long, often shorter

ID TIP: In addition to distinctive green color, these blades have a waxy texture



Irish Moss

Chondrus crispus

This bushy red seaweed has crisp, branched fronds and grows in dense carpets on coastal ledges. Its condensed size helps it survive in intertidal and subtidal zones with fast currents, strong waves, and ice scour. Irish moss is well known for the production of carrageenan, a thickening agent widely used in milk, ice cream, and more.

SEASON: Perennial, lives 2 years or longer

SIZE: 2–6 inches long

ID TIP: Colors vary from purplish-red to pale green—look for blue iridescence underwater

