

## Seaweed Identification Challenge!

Take your camera and go exploring among the rocks in Clallam Bay.

Use this guide to identify common seaweeds and take a good picture of all of them.

Submit the pictures to the Olympic Coast Marine National Sanctuary.

Each year the best student pictures will replace the pictures currently in this guide.



<u>Name</u>: Sea Lettuce (*Ulva*) <u>How can you find it</u>: Looks like green lettuce. Leaf light green, thin and translucent. As big as a dinner plate.

Where can you find it: On rocks at low tide all year long. Very common.

**Tribal use and other uses**: You can eat sea lettuce in salads, soups or dried and sprinkled on food.



<u>Name</u>: Arctic Sea Moss (*Acrosiphonia*) <u>How can you find it</u>: Looks like dark green moss up to 8 inches tall. You can squeeze and wring it out like a sponge.

Where can you find it: On boulders and bedrock at low tide in protected to semi-exposed areas in the spring and summer.

Tribal use and other uses:

What would you use if for?



<u>Name</u>: Surf Grass (*Phyllospadix*) <u>How can you find it</u>: Looks like long green grass.

<u>Where can you find it</u>: All year long during low tide in exposed areas of the coast or in sand-scoured areas attached to rocks.

**Tribal use and other uses**: Tribes used sea grass to make rope and other woven items.



<u>Name</u>: Bladder Wrack/Rockweed (*Fucus distichus*) <u>How can you find it</u>: Yellow-brown algae with flattened leaves and air bladders at the tip of the leaves. Can grow to 20 inches tall.

<u>Where can you find it</u>: On rocks at mid-tide in estuaries to semi-exposed habitats all year long. Very common.

**Tribal use**: You can eat bladderwrack raw, stir-fried fresh, in soup, sauces, quiches or omelets, or dry for later use. Used to treat diseases such as goiter and to improve overall health.



### Name: Bull Kelp (Nereocystis luetkeana )

How can you find it: Very large brown kelp up to 100 ft. tall. Ends in a ball that floats at the surface with many leaves attached to the top. The leaves can be up to 33 ft. long.

<u>Where can you find it</u>: On rock in the low intertidal and subtidally to 100 ft. It prefers semi-exposed habitats or high current areas.

<u>**Tribal use and other uses</u>**: You can eat bull kelp raw, pickled or cut into strips and fried (both leaves and stems). You can make into flour or wrap around other foods to be cooked in hot coals. Tribes used the hollow bulbs to hold seal oil. During dramatic storytelling they placed the long hollow kelp stems under floors as speaking tubes to make the voices come from unexpected places.</u>



#### Name: Giant Kelp (Macrocystis pyrifera )

How can you find it: Very large golden brown kelp up to 99 ft. tall. The leaves are wrinkled and have a gas-filled bladder at their base that keeps the leaves at the surface.

Where can you find it: On rock in the very low intertidal and subtidally to 50 ft. It prefers semi-exposed habitats.

<u>**Tribal use and other uses</u>**: Giant kelp is harvested and used in many foods and cosmetics such as ice cream, toothpaste and cereals. Giant kelp has also been used to collect herring eggs.</u>



<u>Name</u>: Feather Boa Kelp (*Egregia menzisii*) <u>How can you find it</u>: Looks like a boa. Large dark brown to olive green kelp up to 15 ft. tall. Lots of small leaves and air bladders.

<u>Where can you find it</u>: On rock in the low intertidal. It prefers semi-exposed habitats.

<u>**Tribal use and other uses</u>**: Coastal farmers have used feather boa kelp as fertilizer. It is also used in detergents, medicine, cosmetics and food.</u>



#### <u>Name</u>: Ribbon Kelp (*Alaria marginata*)

How can you find it: Large brown kelp up to 11 ft. tall. The leaf is thin with a solid midrib.

Where can you find it: On rock in the mid to low intertidal from semi-protected (if there is sufficient current) to exposed habitats.

**Tribal use and other uses**: You can eat ribbon kelp in stir-fries or use them as tortillas. Tribes use the kelp when cooking crabs in sandpits. They dig a pit, cover hot coals with kelp, place the crabs on top, cover them with kelp and sand. A few hours later the crabs are cooked.



<u>Name</u>: Sugar Kelp (*Saccharina latissima*) <u>How can you find it</u>: Very common light to medium brown kelp up to 11 ft. tall. The leaf is wavy and ruffled.

<u>Where can you find it</u>: On rock in the low intertidal and shallow subtidal in protected to semi-protected habitats.

**Tribal use and other uses**: You can eat sugar kelp in casseroles and other dishes. It is used as skin protection in cosmetics.



<u>Name</u>: Wooded-Stemmed Kelp (*Pterygophora california*) <u>How can you find it</u>: The brown kelp has a stiff, woody stem and smooth leaves. This tough kelp can be up to 7.5 ft. tall.

Where can you find it: On rock and cobble in the very low intertidal and subtidally to 50 ft. year round on exposed coasts. The broom-stick like stems are often washed up still attached to rocks.

Tribal use and other uses:

What would you use it for?



#### <u>Name</u>: Wireweed (Sargassum muticum)

**How can you find it:** Golden brown, wiry, and bushy algae reaching up to 9 ft. tall. The small leaves have small rounded floats that hold the plant up in the water.

<u>Where can you find it</u>: In the low intertidal and shallow subtidal of protected to semi-exposed habitats.

<u>**Tribal use and other uses</u>**: Wireweed is an invasive algae from Japan and it displaces native seaweeds and eelgrass. It is being explored for medical uses such as cancer treatment.</u>



<u>Name</u>: Splendid Iridescent Seaweed (*Mezzaella splendens*) <u>How can you find it</u>: The algae usually is brownish or purplish red with an oil-slick-looking iridescent sheen. The leaf is thin and very rubbery. The algae can be 12 inches or taller.

Where can you find it: On rock in the low intertidal of semiprotected to exposed habitats.

<u>**Tribal use and other uses</u>**: Used in many food such as ice cream to make it thicker.</u>



Name: Turkish Towel (*Chondracanthus exasperatus*) How can you find it: The algae has a thick somewhat rubbery, elongate leaf reaching up to 12 inches. The color is purplish to pale red and the leaf is covered with short, spiny papillae.

Where can you find it: On rock in the low intertidal of semiprotected to semi-exposed habitats.

<u>**Tribal use and other uses**</u>: Turkish towel is used as skin lotion and to improve overall health and fight off diseases.



<u>Name</u>: Coral Weed (*Corallina/Bossiella*) <u>How can you find it</u>: The algae is pink, stiff and chalky and can be up to 4 inches tall.

Where can you find it: On rock in the low intertidal of semiprotected to exposed habitats.

Tribal use and other uses:

What would you use it for?

<u>The Ocean Science Program</u> provides a hands-on experiential learning opportunity for school students along Washington's coast. The program includes a classroom visit focusing on intertidal monitoring, marine debris and watersheds, followed by a field trip to a local beach for exploration activities.

In the field student groups are provided with waterproof cameras to photo-document their investigations which include identification of kelp and algae. The identification is made into a challenge and a photo competition. This identification guide is provided to the student groups and the challenge is to find the kelp/algae in the guide and take a good picture. The best picture of each identified kelp/algae will replace the current picture in this guide.

A collaborative effort between Feiro Marine Life Center, Olympic Coast National Marine Sanctuary, and Seattle Aquarium. The Ocean Science Program is supported by North Pacific Coast, Grays Harbor, and Clallam Marine Resource Committees, and the NOAA Marine Debris Program. Clallam Marine Resources Committee provides funding for student transportation, the field guide, and co-teaches the program in Clallam Bay.

# Partners in the Ocean Science Program

