



## Grand Manan & White Head

# Sea Vegetables

**Dulse** (*Palmaria palmata*) - is a red seaweed that grows attached to rocks by a "holdfast" in the North Atlantic and Northwest Pacific. It is commonly used in Ireland and Atlantic Canada both as food and medicinally and is now shipped around the globe. Dulse is found in many health food stores or fish markets or can be ordered directly from local distributors.

Dulse grows from the mid tide portion of the intertidal zone (the area between the high tide and low tide) and into deep water. Fronds may vary from rose to reddish-purple, and range from about 20 to 40 cm (8" to 16"). From June through September, it is picked by hand at low water, brought to drying fields (or spreading grounds) and put through a shaker to remove shells pieces, etc. The fronds are spread thinly on netting and left to dry, turned once and rolled into large bales to be packaged or ground later.



Grand Manan is known for the **best dulse** because of the geography of the island. On the western side high cliffs shade the intertidal zone protecting dulse from bright sunlight during the morning. "Dark Harbour dulse" is darker, thicker and more flavourful than dulse growing elsewhere, including the eastern side of Grand Manan and the other islands in the Archipelago. Dulse grows quickly in the summer and the same shores may be picked every two weeks.

Sun-dried dulse is eaten as is or is ground to flakes or a powder. It can also be pan fried quickly (garlic butter optional) into tasty chips, baked in the oven covered with cheese then add salsa, or microwaved briefly for a crispy treat. It can also be used in soups, chowders, sandwiches and salads, or added to bread/pizza dough. Fresh dulse can be eaten directly off the rocks before sun-drying. A variety of dulse is cultivated in Nova Scotia and marketed as Sea Parsley, sold fresh in the produce section.

Dulse can be pressed in a plant press and mounted on cards or as a collage, mixed with other seaweeds or plants and flowers. The reddish translucent, dried plants make an attractive specimen. Protect from direct sunlight.

Dulse is a good source of dietary requirements. A handful will provide more than 100% of the

daily amount of Vitamin B6, 66% of Vitamin B12, a days supply of iron and fluoride (great for strong teeth), and it is relatively low in sodium and high in potassium. It contains the following:

<b>Element</b>	<b>Relative Percentage of Element</b>	<b>Amt of Element per 100 gms of Dulse</b>
Protein	25.3	21.5g/100g
Carbohydrate	44.2	44.6g/100g
Fat	3.8	1.7g/100g
Calories		264/100g
Mineral salts	26.7	
Sodium	0.47	1740mg/100g
Potassium	7.11	7820mg/100g
Calcium	2.5	213mg/100g
Iodine	0.008	5.2mg/100g
Iron	0.15	33.1mg/100g
Magnesium	0.22	271mg/100g
Copper	0.026	0.376mg/100g
Zinc	0.0041	2.86mg/100g
Nickel	0.0072	
Cobalt	0.000013	
Fluorine	0.0015	5.3mg/100g
Manganese		1.14mg/100g
Molybdenum	0.000031	

Silica	0.6	
Chromium	Trace	0.150mg/100g
Strontium, Vanadium, Titanium	Trace	
Vitamin A		663 I.U.
Vitamin B1 (Thiamine)		0.073mg/100g
Vitamin B2 (Riboflavin)		1.91mg/100g
Vitamin B3(Niacin)		1.89mg/100g
Vitamin B6 (Pyrodoxine)		8.99mg/100g
Vitamin B12 (Cyanocobalamin)		6.60mcg/100g
Vitamin C		6.34mg/100g
Vitamin E		1.71 I.U.

g = grams, mg = milligrams, mcg = micrograms, I.U. = International Units

[Roland's Sea Vegetables Main Page](#)  
[\(Roland's dulse recipes\)](#)

[Atlantic Mariculture](#)  
[\(more good dulse recipes\)](#)

## ***OTHER USEFUL SEAWEEDS:***

<p><b>Sea Lettuce (<i>Ulva lactuca</i>)</b>          - eaten fresh or added to salads, the bright green sea lettuce is a tasty addition.          Sea lettuce grows in thin sheets up to 30cm (or 1') attached by a "holdfast" to exposed rocks or detached in tide pools. Unfortunately, it thrives in moderate pollution so picking areas should be scutinized.          Sea lettuce can be pressed in a plant press and mounted on cards or as a collage , mixed with other seaweeds or plants and flowers. The</p>	<p><b>Laver or Nori (<i>Porphyra</i>) -</b>          eaten fresh or sun-dried, laver can also be dry roasted and crumbled into soups, grains, popcorn, salads, made into laver bread (soaked, mixed with oats and fried), sauteed with vegetables, or cultivated "Asian" nori processed into sheets for sushi wrap.          Laver can be pressed in a plant press and mounted on cards or as a collage, mixed with other seaweeds or plants and flowers. The translucent, dried plants make an attractive</p>
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<p>green translucent, dried plants make an attractive specimen. Protect from direct sunlight.</p>	<p>specimen. Protect from direct sunlight. Laver or nori grows in thin sheets on rocky shores, attached by a "holdfast" and is found from mid to low tide in the intertidal zone. Colour varies depending on the species and the amount of exposure to sun but most are a reddish hue. Harvesting is best during mid-summer.</p>
<p><b>Irish Moss (<i>Chondrus crispus</i>)</b> - has long been a popular food, used most frequently to prepare blancmange. Irish moss is over 60% carrageenin, which is extracted and used as a gel in industry, pharmacy and as a thickener in soups and dairy products. Irish moss is found on rocky shores attached by a "holdfast" in the lower intertidal area, growing to 17 to 25 cm (7 to 10"). The blades are flattened and forked repeatedly ranging from a dark purplish red to brown, green, yellow or white, depending on the exposure to sunlight. With some arranging and trimming, Irish moss can be pressed in a plant press and mounted on cards or as a collage, mixed with other seaweeds or plants and flowers. The dried plants make an attractive specimen. Protect from direct sunlight.</p> <div style="text-align: center;">  <p><b>Irish Moss</b></p> </div>	<p><b>Kelp or hollow-stem kelp (<i>Laminaria longicruris</i>)</b> - is sliced and added to soups, beans or stews but unlike Japanese kombu it cooks quickly and should be added during the last 20 minutes of cooking. Pan-fried crispy chips, dry roasted flakes or pickled in vinegar are other possibilities. Kelp typically grows along rocky shores below the low water mark, attached by a "holdfast" and reaching lengths of 4.5 to 11 m (or 15 to 36'). They are best harvested in early spring before they sporulate and are grazed by periwinkles and sea urchins. The blade is long and unbranched with an indentation before the stem begins. The stem is hollow above the holdfast.</p>
<p><b>Alaria or edible kelp (<i>Alaria esculenta</i>)</b> - is perfect for soups, delicious raw in salads (presoaked or marinated), very similar to Japanese wakame. The kelp fronds grow to 3 m (10') and are typically found along rocky shores below the low water mark, attached by a "holdfast". The blade is frayed with bladelets along the stalk. The stalk is solid.</p>	<p><b>Rock Weed or Bladder Wrack (<i>Fucus spp.</i>)</b> - is also a common brown seaweed growing attached to rocks with "holdfasts", completely carpeting boulders, not to be confused with knotted wrack (<i>Ascophyllum nodosum</i>) - see above. The forked blades may grow up to 0.9 m (3') in length. Air bladders and fruiting bodies are present on the ends or along the blades. Rocks entirely covered with either</p>



bladder wrack or knotted wrack provide a cool, moist environment underneath when the tide goes out, protecting such things as crabs, periwinkles and whelks until the tide returns. Bladder wrack may also form mats of floating seaweed when torn from the rocks during storms and come ashore forming tide lines along the beach. The biological breakdown of rockweed tide lines returns nutrients to the intertidal zone. Bladder wrack is collected in the fall and spread on gardens as a mulch. It can be tilled into the garden in the spring.

## Rock Weed or Knotted Wrack (*Ascophyllum*

*nodosum*) - is a common brown seaweed growing attached to rocks with "holdfasts", completely carpeting boulders, not to be confused with another common rock weed, bladder wrack (*Fucus sp.*). The fronds grow to 60cm to 3m (2 to 7'). Knots or air bladders along the narrow branches suspend the seaweed when the tide comes in. During spring and summer forked reproductive nodules form on the tips of branches. Knotted wrack becomes detached from rocks in storms and forms floating mats or seaweed patches that drift offshore. When the patches are carried on shore, they accumulate along the high water mark, gradually breaking down, releasing nutrients back into the intertidal area.

Knotted wrack is cut from rocks while the plants are suspended using small boats and cutting rakes to minimize the disturbance of the plants. A portion of the plant remains attached to the rock for further growth. The plants are used in animal and human feed supplements, as a component of industrial products, and as organic fertilizers. Small scale collecting, grinding and spreading of raw seaweed on fields and gardens has been a traditional practise for hundreds of years. The commercial harvest allows this source of organic fertilizer to inland areas. A compound called alginate is also derived from the seaweed and used in a variety of applications.



Photo - Laurie Murison

The commercial rockweed harvest has been common place in Nova Scotia for thirty or more years and has recently been expanded to New Brunswick as a response to the increased demand for products. The expanded harvest is controversial with many disagreeing with the practise because of the potential impact on larval fish, periwinkles, etc. The Canadian Department of Fisheries and Oceans states "It is clear careful management of the harvest is needed not only for renewal of the resource but also to keep disturbance in the habitat to a level the ecosystem as a whole can absorb."

**Have a Question? E-Mail us at: [info@grandmanannb.com](mailto:info@grandmanannb.com)**