



Palmaria palmata

Common name: Dulse.

Irish names: Dillisk, Duilleasc, Creathnach.

Phylum: Rhodophyta
Class: Florideophyceae
Order: Palmariales
Family: Palmariaceae
Genus: Palmaria
Species: P. palmata



Fig 1. *Palmaria palmata* plants.

Morphology

- Red alga with smooth, leathery fronds that are palmate (hand-like). Fronds can change over the year from deep red/purple in autumn and winter, to greenish-yellow in the summer when sun-bleached.
- The holdfast is small and disc-like. The stipe is short, approximately 1-2 cm in length.
- Older or damaged individuals produce small blades from the edge of the main frond.
- The size of the seaweed depends on the growing conditions, but generally, individuals reach a maximum length of 30-40 cm. The larger plants are found in semi-wave-exposed areas.
- *P. palmata* is the only species of this genus in Ireland.

Meristematic tissue

The meristem is located at the tips of the plant, from where the new tissue will be formed.

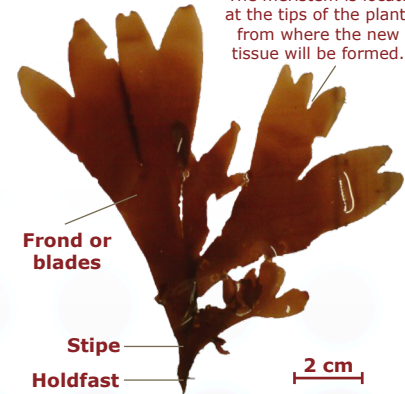


Fig 2. Morphology.

Reproduction

- *Palmaria palmata* plants seen on the shore are either male or tetrasporophytes (see LC1*).
- ♀ Female individuals form microscopic crusts and have yet to be found in the wild.
- ⊕ Tetrasporophyte: when fertile spores are held in dark patches. The tetrasporophyte thallus overgrows the fertilised female.
- ♂ Male fertile: thallus with spermatia held in the smooth lighter areas on the frond.

*Note: Life-cycle 1 (LC1) on page 3.

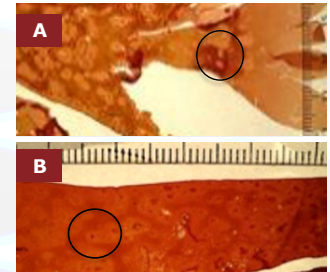


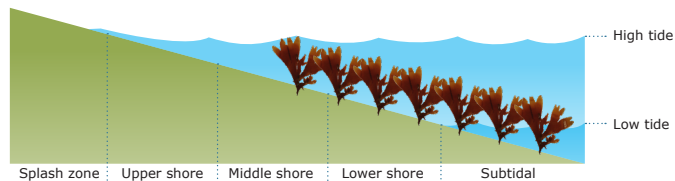
Fig. 3(A) Fertile tetrasporophyte; (B) Fertile male thallus.



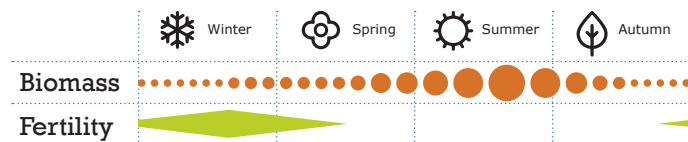
Palmaria palmata

Distribution and habitat

- It grows in the NE Atlantic (from Norway to Atlantic Spain and Portugal, and Azores), and in the NW Atlantic.
- Found mainly in moderately exposed to exposed shores and in areas subjected to tidal currents rather than waves. Plants can be found growing directly on rocks/boulders or on other seaweeds such as wrack (*Fucus* species) and kelps (*Laminaria hyperborea*).



Seasonality



Note: These seasonal characteristics may vary slightly from year to year.

Wild resource and cultivation



interesting facts

- The earliest written record of this species is of monks harvesting it in the 12th century.
- Commonly used in Ireland, Scotland, Iceland, Norway, France, Atlantic Canada, and New England (US).
- Most commonly eaten as a dried snack, but can also be eaten, pan-fried quickly into chips, baked in the oven, or simply incorporated in dough.
- It is rich in vitamins, minerals, and has a high protein content. It also contains a significant amount of iodine.



- It has been successfully cultivated on long-lines and tanks in Europe.

© Pictures: Fig 1 by Anna Soler-Vila and Figs 2 & 3 (A and B) by Maeve Edwards.

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