



Chondrus crispus

Common names: Carrageen moss, Carrageen, Irish moss, Jelly moss.

Irish name: Carraigín.

Phylum: Rhodophyta
Class: Florideophyceae
Order: Gigartinales
Family: Gigartinaceae
Genus: Chondrus
Species: C. crispus



Fig 1. Fronds of *Chondrus crispus*.

Morphology

- Red alga with cartilaginous, smooth regular flat and dichotomously branching fronds. It has a roughly fan-like shape. Some variants can exhibit thick narrow fronds.
- The colour varies from deep purple, red, yellow and green tones. When underwater the branched tips of the female gametophytes show a blue-violet iridescence.
- Low-lying bushy plant, < 15 cm high often with a blue iridescence.
- Often confused with *Mastocarpus stellatus*. This latter species has a channelled thallus with thickened edges, and reproductive structures formed in surface papillae.

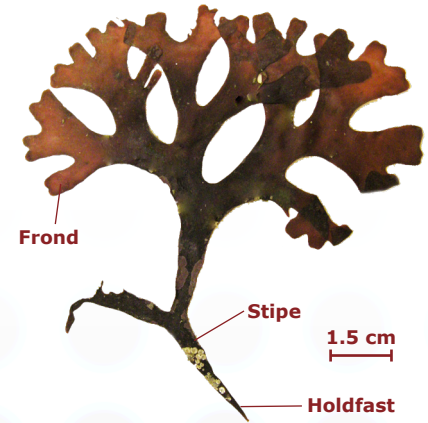


Fig 2. Morphology.

Reproduction

- *Chondrus crispus* has two morphologically similar macroscopic phases in their life-cycle (see LC1*).
- ♀ Fertile female: swollen oval sori, often found in pairs at the tip of the frond (Fig 3B).
- ♂ Fertile male: Not visible to the unaided eye, and difficult to identify.
- ⊕ Tetrasporophytes: tetrasporangial sori protrude only slightly from the thallus, with an oval or linear shape. Found on the upper part of the frond and abundantly in young individuals (Fig 3A).

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

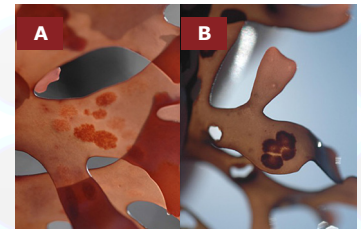


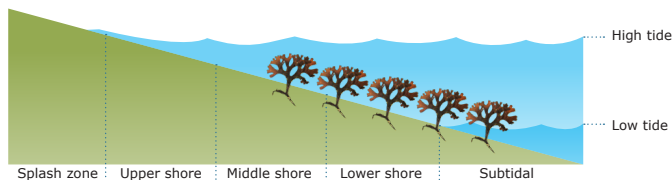
Fig 3. (A) Individuals showing tetrasporangial sori and (B) sunken cystocarps.



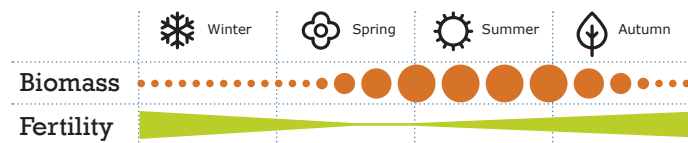
Chondrus crispus

Distribution and habitat

- This species is found on both sides of the N Atlantic.
- It is typically attached to rocks or stones in the mid to lower intertidal in sheltered areas but also confined to low intertidal in exposed areas.



Seasonality



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

Wild resource and cultivation



interesting facts

- *Chondrus crispus* produces large amounts of sulphated polysaccharides with gelling properties, known as carrageenans.
- The name carrageenan is probably derived from a place name in Co. Donegal, Ireland, viz Carrigan Head.
- Known usages include: food purposes

(desserts, jellies, blancmanges, aspics and puddings, food thickener, beer production), folk remedy (cough, colds, bronchitis and asthma), leather-curing, soap-making, shampoos, lubricants and paper and linen production.



- In the food industry, carrageenan is classified as a food additive, E407.

© Pictures: Figs 1 & 3 by Michael D. Guiry and Fig 2 by Svenja Heesch.

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