



Gracilaria gracilis

Common name: Slender wart weed.

Irish name: Feamainn gharta chaol.

Phylum: Rhodophyta
Class: Florideophyceae
Order: Gigartinales
Family: Gracilariaceae
Genus: Gracilaria
Species: G. gracilis



Fig 1. Individuals growing on sand-covered rocks.

Morphology

- Red alga with dark brown to purple-red colour, elongated with branched fronds, round and with tapered apices, attached by a disc-shaped holdfast. In summer the colour of the thalli may become yellow-translucent.
- This species has different growth forms, from branched and bushy to long and irregularly branched.
- The texture is cartilaginous with young plants being softer than older ones.
- The thalli can reach 60 cm in height and fronds 3 mm width in cross section.
- Identification of this species requires taxonomic expertise.
- Another very similar species in Ireland is *Agarophyton vermiculophyllum*. Only identified as present in recent years, it is a non-native species originally from the NW Pacific.

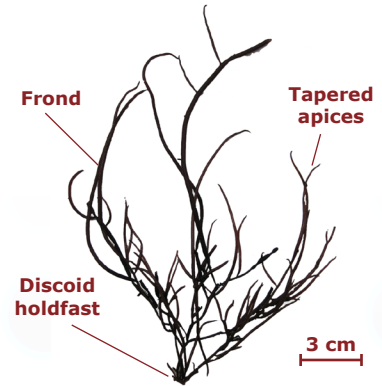


Fig 2. Morphology.

Reproduction

- *Gracilaria gracilis* has two macroscopic phases in their life-cycle (see LC1*). Male and female structures occur on different plants.

- ♀ Fertile female: bears wart-like structure of 0.5 to 1 mm in diameter.
- ♂ Fertile male: Structures not visible to the unaided eye.
- ⊕ Tetrasporophyte: tetrasporangia not visible to the unaided eye.

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



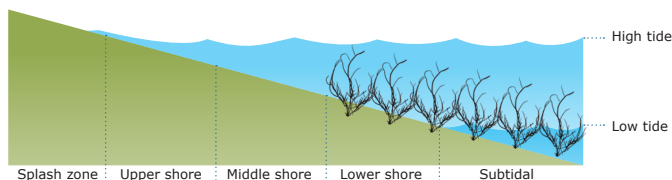
Fig 3. Fertile female thalli.



Gracilaria gracilis

Distribution and habitat

- This species occurs in NE and E Atlantic (Ireland to Canary Is. and W Africa); Records outside this area are dubious.
- It grows on rocky shores in sheltered locations, often in sandy areas, and can be found in up to 20 m depth.



Seasonality



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

Wild resource and cultivation



interesting facts

- Other species of *Gracilaria* are consumed as food in many Asian countries, and all species are known for their agar content.
- Agar is a gelatinous substance with a wide range of industrial applications. It is used as a thickener for soups, fruit-preserves, ice-cream, as a clarifying agent in brewing and for sizing paper and fabrics. In the food industry it is classified as food additive (E406).
- Agar is a solid substratum also used as culture medium in microbiological work. However the agar extracted from *Gelidium* species is the one used for this application.



- Annual global production is approximately 30,000 tons (dry weight), most of which comes from natural populations in Chile, Argentina, and Brazil.
- The genus *Gracilaria* contains more than 200 species. Some species are now cultivated on large scale in Chile, Taiwan, Vietnam, and parts of Thailand.

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