



# Ascophyllum nodosum

**Common names:** Egg wrack, Knotted wrack, Sea yellow tang. **Irish name:** Feamainn bhuí.

**Phylum:** Ochrophyta  
**Class:** Phaeophyceae  
**Order:** Fucales  
**Family:** Fucaceae  
**Genus:** Ascophyllum  
**Species:** A. nodosum



Fig 1. *Ascophyllum nodosum* fronds showing air bladders.

## Morphology

- Brown alga with long, leathery, irregularly branched fronds carrying large egg-shaped, single air bladders at intervals along the main axis and branches.
- Growing up to 2 m long, with fronds up to 1 cm wide.
- Plants are attached to the substratum by a discoidal holdfast.
- The colouration ranges from olive-green to yellow-brown (depending on time of year and wave exposure), turning greenish black when dried.
- It should not be confused with *Fucus vesiculosus* which has pairs of bladders at intervals along the branches.

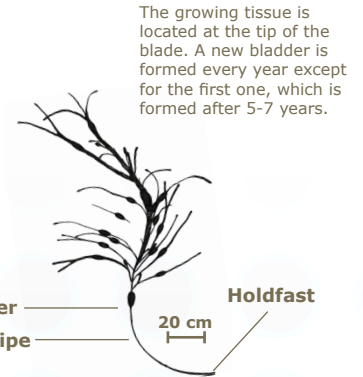


Fig 2. Morphology.

## Reproduction

- *Ascophyllum nodosum* has a direct life-cycle (see LC5\*).
- Male and female structures occur on different individuals. The reproductive structures known as receptacles grow out laterally from the sides of the fronds, usually in pairs.



Fertile female receptacles are green.



Fertile male receptacles are green to golden brown.

\*Note: Life-cycle 5 (LC5) on page 4.



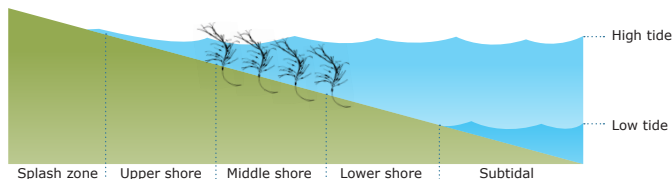
Fig 3. Detail of the reproductive receptacles (male).



## *Ascophyllum nodosum*

### Distribution and habitat

- It is found in the NE Atlantic (from the Arctic shores to Portugal) and NW Atlantic (from Arctic to New Jersey).
- It grows in the mid-littoral zone in wave sheltered rocky shores.



### Seasonality



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

### Wild resource and cultivation



## interesting facts

- Individual fronds can grow for up to 15 years before breakage. It has been suggested that some stands may be over 400 years old.
- Up to 25,000 wet tonnes are harvested sustainably in Ireland by hand each year.
- It is used as a livestock feed additive. It may make up to 5% of the diet for poultry, sheep, cattle, pigs and horses.



- In some areas it is used as packing material for shellfish transport.
- It is listed in France as a species allowed for human consumption, as a good source of vitamins and trace elements.
- It is known to have anti-coagulant, anti-thrombotic and anti-inflammatory properties.

© Pictures: Figs 1 & 3 by Michael D. Guiry and Fig 2 by Anna Soler-Vila.

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