

# NEPTUNE GRASS

*(posedonia oceanica)*



[http://www.flickr.com/photos/ezu/70925711\\_aegagropilae\\_egagropili](http://www.flickr.com/photos/ezu/70925711_aegagropilae_egagropili) taken from: [https://commons.wikimedia.org/wiki/File:Posidonia\\_oceanica\\_spheroid.jpg](https://commons.wikimedia.org/wiki/File:Posidonia_oceanica_spheroid.jpg)

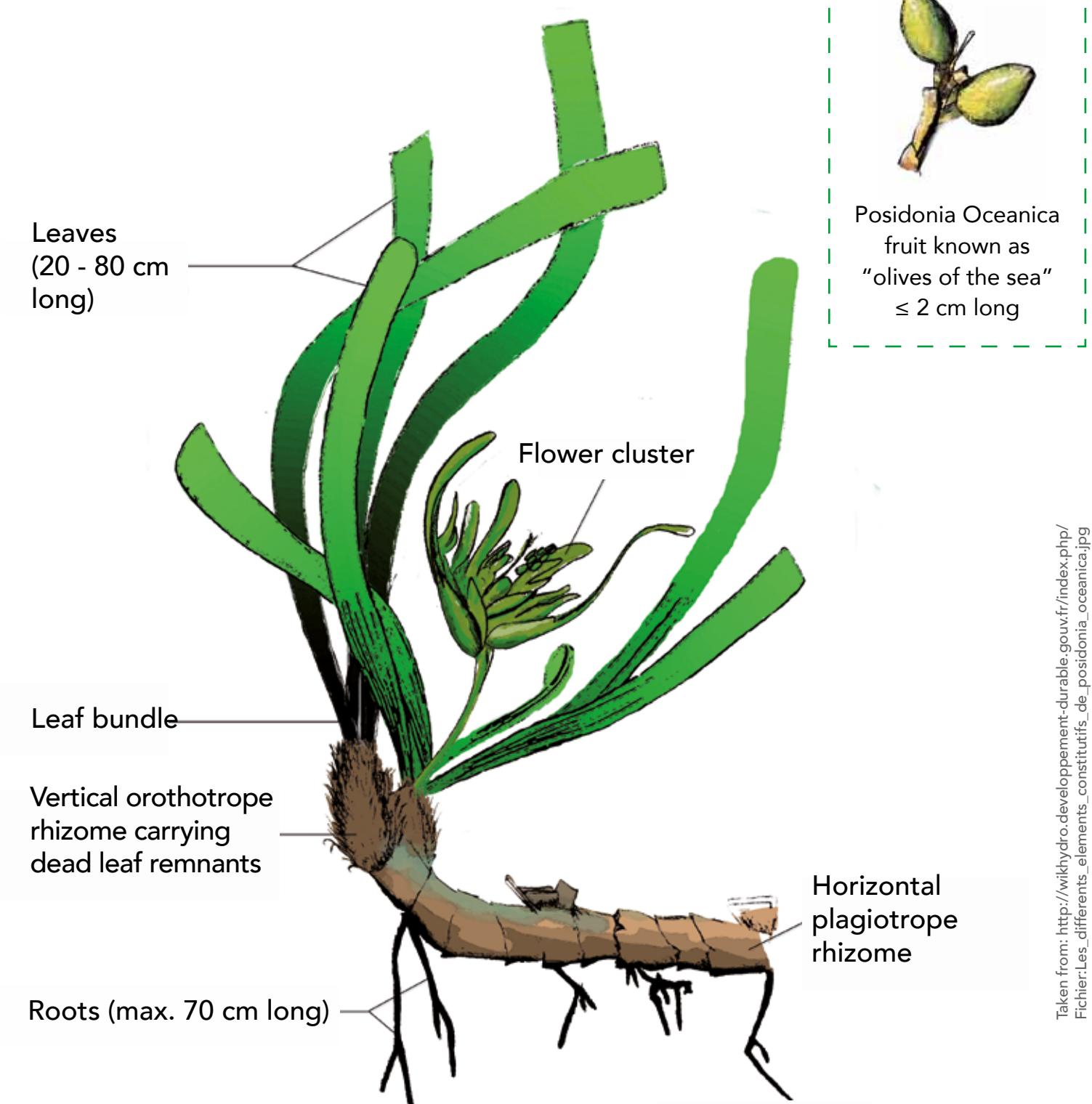
## WHAT IS IT?

- *Posidonia Oceanica* (or Neptune Grass) is a marine flowering sea-grass found in un- or little-polluted sheltered coastal regions at depths of 1-35 metres up to where the sunlight penetrates.
- One of the largest, slowest growing, and longest-lived plants, individual clones can spread up to 15km, and the oldest is estimated to be around 100,000 years old!

## WHY IS IT IMPORTANT?

- One metre squared can produce up to 20 litres of oxygen per day.
- It can absorb up to 48 litres per day of carbon dioxide, making it important for carbon sequestration – naturally helping to combat climate change.
- Its dense, matted meadows provide a habitat for a number of marine organisms – some of which are endangered.
- These meadows help stabilise the sea bed by helping to fix sediments and prevent coastal erosion, etc.

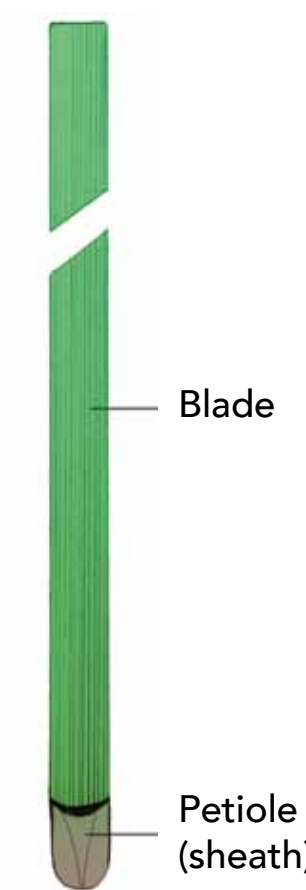
## POSITONIA OCEANICA



## WHERE DOES IT GROW?



## Adult leaf



- The green, 10mm wide, ribbon-like leaves grow up to 1.5m long in tufts of 6 or 7. As it grows, its rhizomes help it spread over the sandy seabed forming dense meadows which provide shelter for a wealth of marine organisms.

## IS IT ENDANGERED?

- Approximately 34% of the population has been lost in the last 50 years.
- The rate of decline is several 100x faster than the rate of growth, making recovery difficult.
- There is evidence to show that the greatest decline is in the western Mediterranean.



## WHY IS IT ENDANGERED?

- Posidonia Oceanica* is rapidly declining due to man-made factors:
- coastal development: coastal construction and boat-anchoring,
  - eutrophication (the increasing concentration of damaging chemical nutrients within an ecosystem),
  - fish farming,
  - mechanical trawling – especially illegal trawling of the bottom of the seabed,
  - alien-species invasion,
  - climate change: warming of the water and ocean acidification.

There is evidence, however, that some areas of the Mediterranean which are under protection have been recolonised.

## Destination of Organic Matter

