

# Halophytes:

1 % to 2 % of plants are halophytes.

*Halas* = Greek for Salt.

*phyton* = Greek for Plant.

“Plants adapted to living in salty areas, as opposed to Glycophytes”.

*Glyco* = Greek for Sugar.

There are:

1. Obligatory halophytes: need salty environment to grow, eg. Glasswort.
2. Facultative halophytes: can tolerate salt, but will thrive in non-salty conditions.
3. Hydro-halophytes: Need wet soil or salt-marsh.
4. Xero-halophytes: Grow in dry and salty soils, eg. deserts.

## Halophyte survival strategy:

1. Keep inside of the plant more salty than it's environment.
2. Excrete salt from it's glands. or
3. Shed leaves. or
4. Transport it back to the soil.

## Why are they of interest?

“Blue Carbon storage”

“Salt marshes can store carbon from the atmosphere 50x faster than tropical rainforests. They are havens for biodiversity.”

Quote from Euronews.

With the increase in sea levels farmers wont be able to keep salt at bay. Hence Saltwater Agriculture. (some halophytes are edible eg. Barley is a marginal Halophyte, as are Date palm, Sea Kale).

Glasswort:

Stace 2019: Names 7 species of Glasswort:

*“An extremely difficult genus, with great phenotypic plasticity. At least 20 “sorts” can be distinguished.”*



## Some Adaptations of Halophytes:

They tend to be succulents:

Stems and leaves fleshy and watery.

Water bearing cells which dilute the concentration of salt.

Small leaves.

Small surface area.

Sometimes waxy.

Some have low levels of chlorophyll hence a blueish hue.

Thick waxy seeds.

Roots which may project into the air.

### Common Cord-grass. *Sporobus anglicus*. (was *Spartina anglica*).

In the 1820s, Smooth Cord Grass (*S. alterniflora*) was introduced to England in the ballast of a ship from Eastern U.S.A.

By the 1870s it had hybridized with our native Small Cord Grass, *S. maritima*.

This produced two hybrids:

The sterile *S. Townsendii*,

and

the fertile *S. anglica*, Common Cord-Grass.

It is thought to be able to colonise lower parts of the salt marsh.

“A rapidly invasive species that colonises and destroys existing eco-systems”.

It traps sediment, increasing the height of the salt marsh mud.

This increases erosion on the seaward side.

Cord grass is negatively associated with macro invertebrate numbers and bird feeding areas.

