**Lab 3**

# Phaeophyta (Brown algae)

## General Characteristics of phaeophyta

* 1. Unlike the chlorophyta and cyanophyta which are mainly freshwater forms, the brown algae are almost exclusively **marine**.
  2. Presence of a golden brown xanthophylls pigments (**fucoxanthin**).
  3. **Mannitol** and **laminarin** are the reserve photosynthetic products.
  4. Motile reproductive cells are pyriform or spindle-shaped and biflagellate (heterokont).
* Division: Phaeophyta
  + 1. Class : Isogenerateae Order :Ectocarpales Family: Ectocarpaceae Genus: ***Ectocarpus***
    2. Class: Heterogenerateae Order : Laminariales Family: Laminariaceae Genus: ***Laminaria***
    3. Class: Cyclosporae Order: Fucales

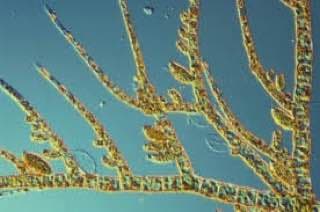
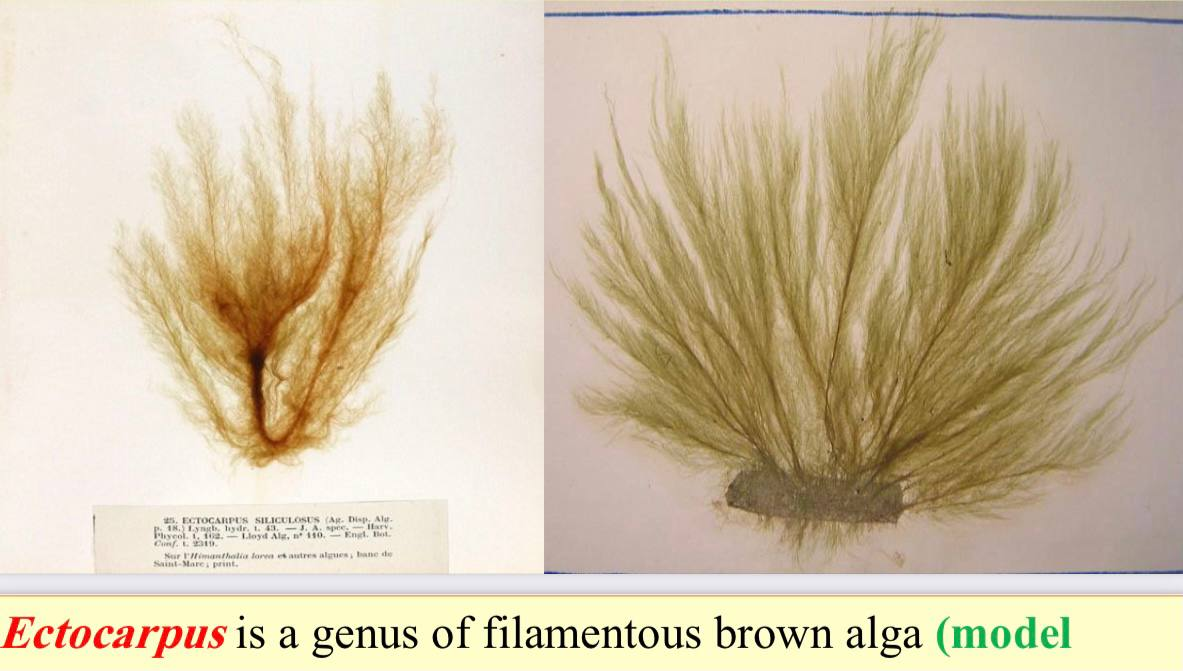
Family: Fucaceae Genus: ***Fucus***

# Microscopic identification

# Order :Ectocarpales

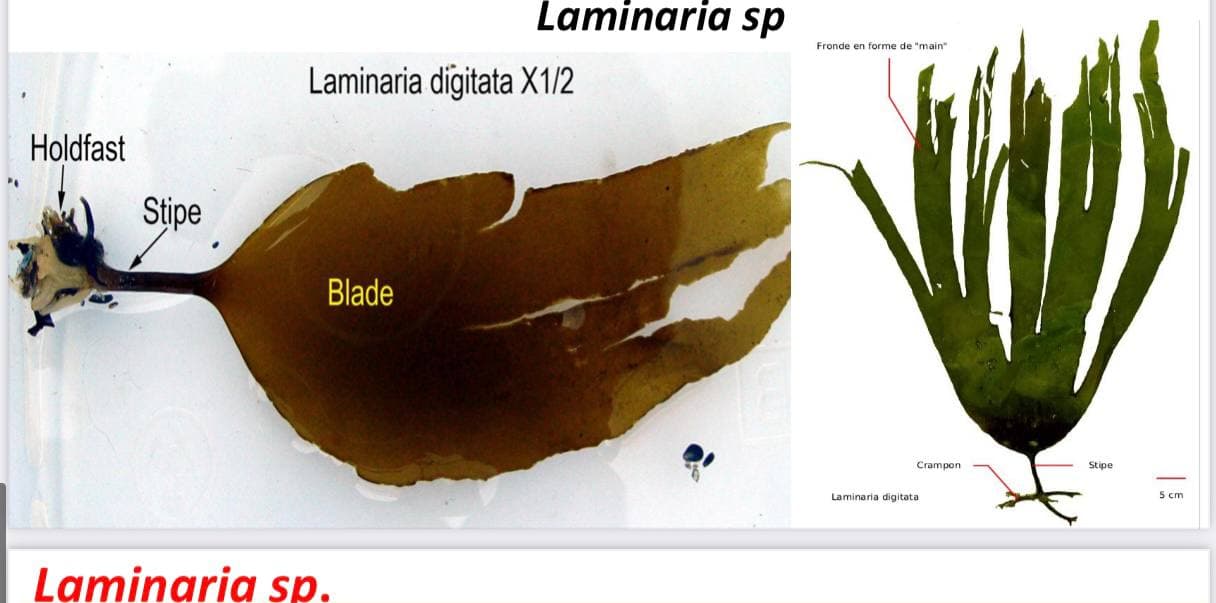
Genus: ***Ectocarpus*:**

* + - 1. Branched filamentous thalli, forming generally bushy plants reach to 15 cm. in length.
      2. Cells have band- shaped chloroplast.



Genus: ***Laminaria*** :

1. The common name of these algae is the **kelps**.
2. Cross section through the blade of sporophyte appears three different regions: **epidermis**, **cortex** and **central medulla**.



Genus: ***Fucus***:

1. The thallus of these algae is leathery, flattened and dichotomously branched, supported by a short narrow stalk that is attached to a discoid hold fast.
2. The common name is **rock weed**.
3. The life cycle is **cyclosporae**, because the gametophyte reduced into only male and female gametes (antheridia and oogonia) within sporophyte itself.

