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1. EICHLER’S CLASSIFICATION OF PLANTS

* Thallophyta: Phycotinae (Algae) , Mycotinae (Fungi)
* Bryophyte: Hepaticae (Liverworts), Musci (Mosses)
* Pteridophyta: Psilotinate (Psilotum) , Lycopodinae (Lycopodium, Selaginella) , Equisetinae (Horsetails) , Filicinae (Ferns)
* Spermatophyte: Gymnosperm (Gymnosperms) , Angiosperm (Angiosperms)

1. IMPORTANCE OF ALGAE TO MAN

* It serves as food for people
* The red algae provide agar and carrageen used for the preparation of various gels used for scientific research
* It’s contains high iodine content which prevents goiter
* It serves as thickening agents in ice cream and shampoo
* Alginic acid from the brown algae is used to stabilize emulsions and suspensions.

1. UNICELLULAR FORM OF ALGAE

* Chlamydomonas represents the unicellular and module forms of green algae. It’s found in stagnant water. It has the flagella which enables movement the cell is bounded by a cellulose cell wall The stigma is for photoreception

1. REPRODUCTION OF UNICELULLAR ALGAE

Reproduction can either be vegetative (asexual) or sexual. Vegetative results in the production of daughter cells in which the amount and quality of genetic material in the nucleus of the mother cell is maintained in the daughter cells. The amount of genetic material in the mother cell nucleus of n, the daughter cells also have n quantity of genetic material. The mitotic division maintains the quality and quantity of genetic material. Sexual reproduction involves union of sex cell, aggregation of cells in a colony occurs under favorable conditions. These cells pair by their posterior end. This pairing is said to be isogamous because the pairing cells (gametes) are morphologically identical.

1. DIFFERENCE BETWEEN VOLVOX AND PANDORINA

* Pandorina’s sexual reproduction is anisogamous while for Volvox, sexual reproduction is zoogamous
* Pandorina has Unicellular motile thallus while Volvox has multicellular motile thallus
* Pandorina is a genus of green algae while Volvox is complex form of Pandorina

1. FUCUS

* It’s a genus of the brown Algae whose species are found on rocks in the intertidal zones of the sea shores. The body of the plant is flattened, dichotomously-branched thallus with a mid rib, a vegetative apex and a multicellular disk with which plant is attached to rock surface. The body has air bladders which are believed to aid the plant to float on the water. It varies in size from a few centimeters to about 2 meters in length. Sexual reproduction is oogamous; sex cells are produced in conceptacles which have openings (ostioles) on the surface of the thallus. In the male conceptacles, one of the diploid cells from overgrowth of the wall of the conceptacles undergoes meiosis to give 64 cells. Each cell develops into a biflagellate sperm that swims through the ostiole and out of the conceptacle. The female is similar but instead produces 8 celled oogonium. The sperm and eggs form a zygote.