

FYBSC Semester-I: Paper-I
Bo-111: Plant Life And Utilization I

INTRODUCTION

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INTRODUCTION 3 L

General outline of plant kingdom (Lower Cryptogams: Thallophytes- Algae, Fungi & Lichens; Higher Cryptogams: Bryophytes and Pteridophytes; Phanerogams: Gymnosperms and Angiosperms- Dicotyledons and Monocotyledons). Distinguishing characters of these groups and mention few common examples from each.

General outline of plant kingdom:

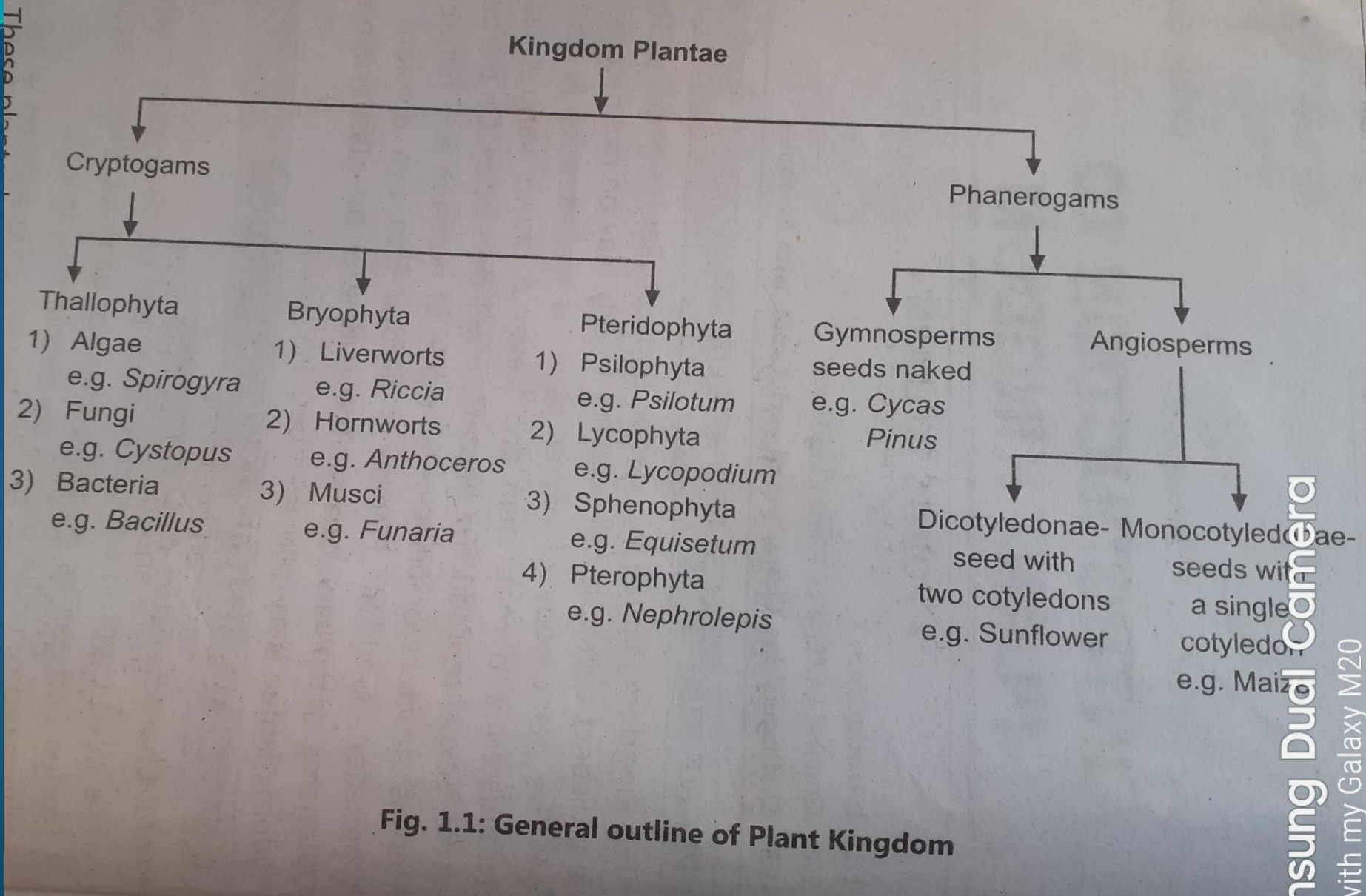


Fig. 1.1: General outline of Plant Kingdom

Lower Cryptogams-Thallophytes- Algae:

Plant body is thalloid, not differentiated into root, stem and leaves. It includes algae, fungi, lichens and bryophytes.

Algae:

1. Plants are microscopic or macroscopic and flowerless.
2. Multicellular plant body may be simple without root, stem and leaves known as thallus.
3. Majority of plants have chlorophylls, so mode of nutrition is autotrophic.
4. Algae are usually aquatic either fresh water or marine and some are terrestrial.
5. Algae are Photoautotrophs.
6. Store food in the form of starch.

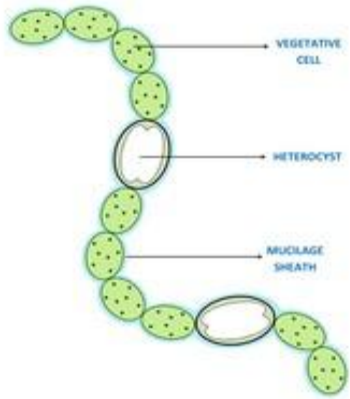
7.They reproduce either by vegetative,asexual or sexual methods.

8.Vegetative reproduction by fragmentation or by hormogonia.

9. Asexual by zoospore,aplanospores,hypnospore,akinetes.

10.Sexual by isogamous,anisogamous or oogamous.

Nostoc



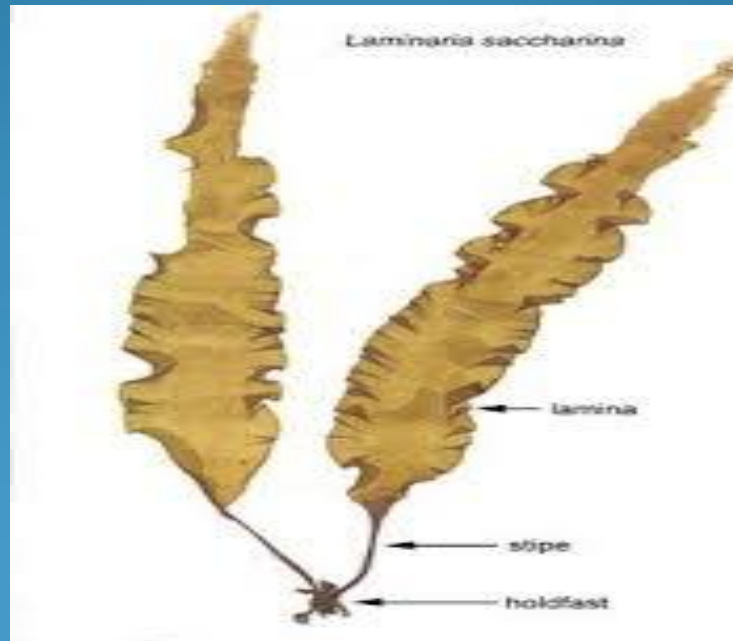
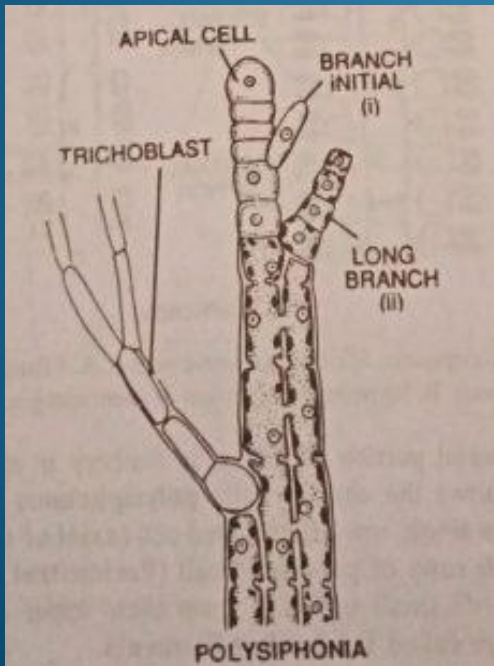
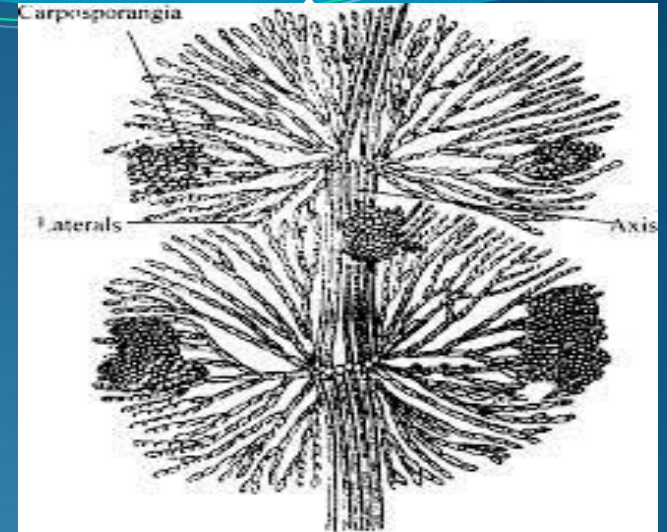
Nostoc

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Volvox



Batrachospermum



Fungi:

Today more than 100000 sp. Of fungi including about 13500-1700 sp of lichens are known. These fungi may be free living as well as those associated with living organism.

1. These are non chlorophyllous plants.
2. Plant body is very simple cellular or mycelial, megascopic or microscopic .Hypae are septate or non septate.
3. Cells are eukaryotic with cell wall composed of chitin or fungal cellulose.
4. Mode of nutrition is heterotropic ie saprophytic or parasitic.
5. Stored food is in the form of glycogen and oil drops.
6. Asexual reproduction is very common,takes place by formation of various kinds of spores such as aplanospore, zoospore, chlamydospore, oidia, conidia etc.

7. Sex organs are reduced or absent. In true fungi male sex organ is known as antheridium and female sex organ is known as oogonium.

8. Zygote does not develop into embryo. It divides meiotically and develops the sexual spore known as meiospore or ascospores or basidiospores.

9. Ascospores develop in a bag called as ascus while basidiospores develop inside or on the basidium.

E.g.

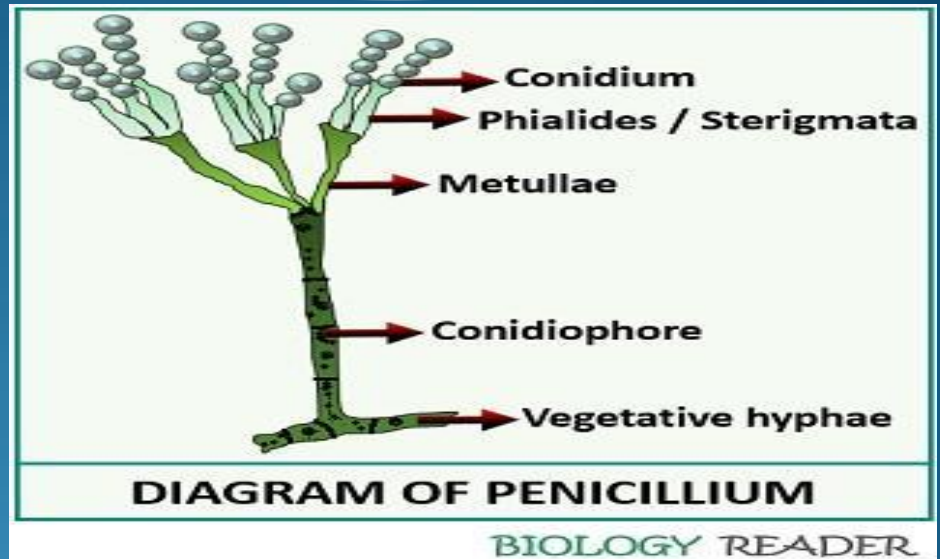
Rhizopus, Penicillium, Yeast, Morchella, Agaricus, Puccinia, Ustilago, Lycoperdon etc.

Rhizopus



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Penicillium



Thank you