THE ANGIOSPERMS

Introduction

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1.1. Introduction.

What is the position that the position the Angiosperms occupy in the Plant Kingdom and how are they distinguished from the other major divisions? (Fig. 1).
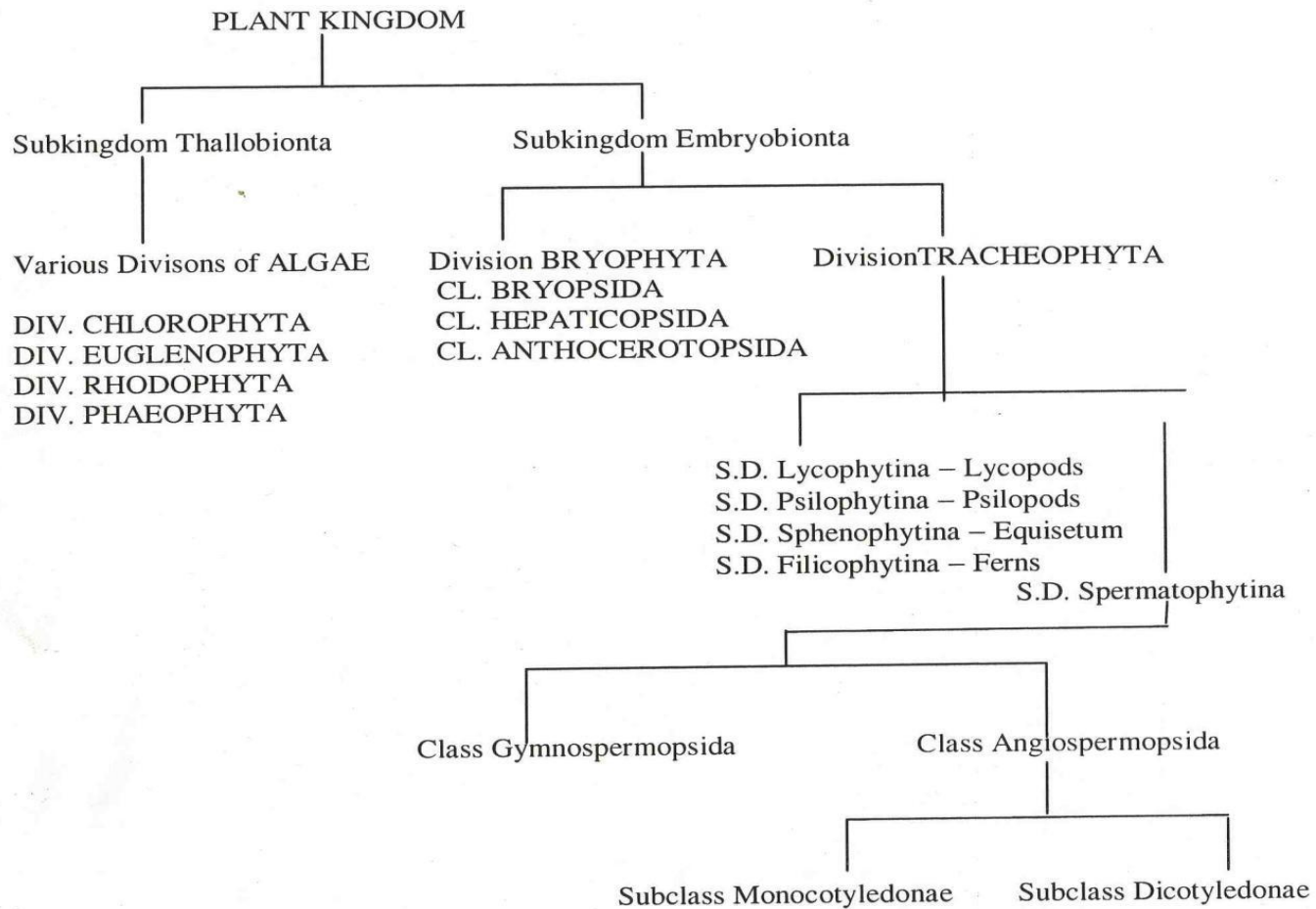
PLANT KINGDOM

Subkingdom Thallobionta

Subkingdom Embryobionta

Various Divisons of ALGAE

DIV. CHLOROPHYTA
DIV. EUGLENOPHYTA
DIV. RHODOPHYTA
DIV. PHAEOPHYTA

Division BRYOPHYTA
CL. BRYOPSIDA
CL. HEPATICOPSIDA
CL. ANTHOCEROTOPSIDA

DivisionTRACHEOPHYTA

S.D. Lycophytina – Lycopods
S.D. Psilophytina – Psilopods
S.D. Sphenophytina – Equisetum
S.D. Filicophytina – Ferns

S.D. Spermatophytina

Class Gymnospermopsida

Class Angiospermopsida

Subclass Monocotyledonae

Subclass Dicotyledonae

Fig. 1. The Classification of the Plant Kingdom

The Angiosperms

- ✓ The **angiosperms** with over **300,000** living species are the larger component of the earth's vegetation.

- ✓ They are nevertheless recent in their evolution and their dominance is comparatively recent.

Class Angiospermopsida: Angiosperms

- Ovules enclosed in an ovary usually crowned by a style and stigma, the style receiving the pollen grains (microspores) mainly by insects, or wind when much reduced.

- Wood consisting true vessels.

   Trees, shrubs and herbs, more recent than gymnosperms.

- Flowers bisexual or unisexual.

- The Class **Angiospermopsida** is further subdivided into two classes: **Dicotyledonaeae** and **Monocotyledonae.**

Subclass Dicotyledonae

A. Dicotyledones

- Embryonic plants with

    2 cotyledons (seed leaves).

- Vascular bundles of the stem usually

  arranged in a circle (<u>except</u> few

  genera in herbaceous families with

    scattered vascular bundles

    e.g. *Piper* in Piperaceae).

- Leaves typically net veined, opposite or

  alternate.

- Flowers usually 5 or 4 merous

Erythrina caffra

i. **Archichlamydeae**: Groups of plants with petals free from each other ----- **Polypetalae**

✓ petals absent   **Apetalae**

✓ rarely united at the base

ii. **Metachlamydeae**: Groups of plants with petals united into a tube ----- **Gamopetalae/Sympetalae**

iii. **Monochlamydeae**: Groups of plants where petals are not differentiated into petals and sepals.

ⅰ. **Subclass Monocotyledonae**

Monocotyledones:

✓ Flowers usually trimerous.

✓ Embryonic plant with 1 cotyledone (seed leaf).

✓ Vascular bundles of the stem closed or scattered.

✓ Leaves typically parallel nerved (veined) and alternate.

CURRENT CLASSIFICATION

- Classification based on Molecular characters

CURRENT CLASSIFICATION

- **Angisperm Phylogeny Group (1998)**

- **Angiosperm Phylogeny Group I (2001)**

- **Angisperm Phylogeny Group II (2003)**

- **Angiosperm Phylogeny Group III (2009)**

- **Angiosperm Phylogeny Group IV (2016)**