

International Code of Botanical Nomenclature  
1950-

# PSILOPHYTA

- 1) Sporophyte differentiated into rhizoid bearing subterranean rhizome & an <sup>branched</sup> aerial portion.
- 2) Aerial portion is branched.
- 3) Vascular System is protostele.
- 4) Leaf gaps are absent from vascular cylinder.
- 5) Terminal sporangia borne singly at tip of branches.
- 6) Gametophyte is colourless & subterranean.
- 7) Homosporous. (8) Antherozoids are multiciliate.

## 2 classes -

### I) Psilophytopsida

- 1) True roots absent
- 2) Sporangia borne at tips of erect branches
- 3) Plants found only as fossils

### order - Bilophytales

- Sporophyte dichotomously branched
- Sporangia borne singly

### Family: Rhynchosaceae

- ~~Ax~~ is branched
- ~~Scale leaves small & minute~~

eg. + Rhynchosia

\* Horneophyton

### II) Psilotopsida

- 1) True roots absent
- 2) Sporangia borne in axil of scaly appendages or foliage leaves
- 3) Plants are living.

### Psilotales

- Sporophyte dichotomously branched
- Sporangia borne singly

### Psilotaceae

- Unicellular rhizoids on rhizomes  
Aerial portion leafless.

### Family: Psilotaceae

- Ax is branched
- Scale leaves small & minute

eg. Psilotum

- 1.) Sporophyte differentiated into stem, roots & leaves.
- 2.) Leaves microphyllous with a single vein
- 3.) Steles may be protostelic, Siphonostelic or Polystelic
- 4.) Leaf gaps are always absent
- 5.) Sporophylls produce a single Sporangium on adaxial side near its base.
- 6.) Sporophylls are borne in strobili (cluster)
- 7.) ~~Both~~ may be homosporous or heterosporous
- 8.) Antherozoids are biflagellate or multiciliate.

Classes:  
~~Order~~



# Arthrophyta (Sphenophyta)

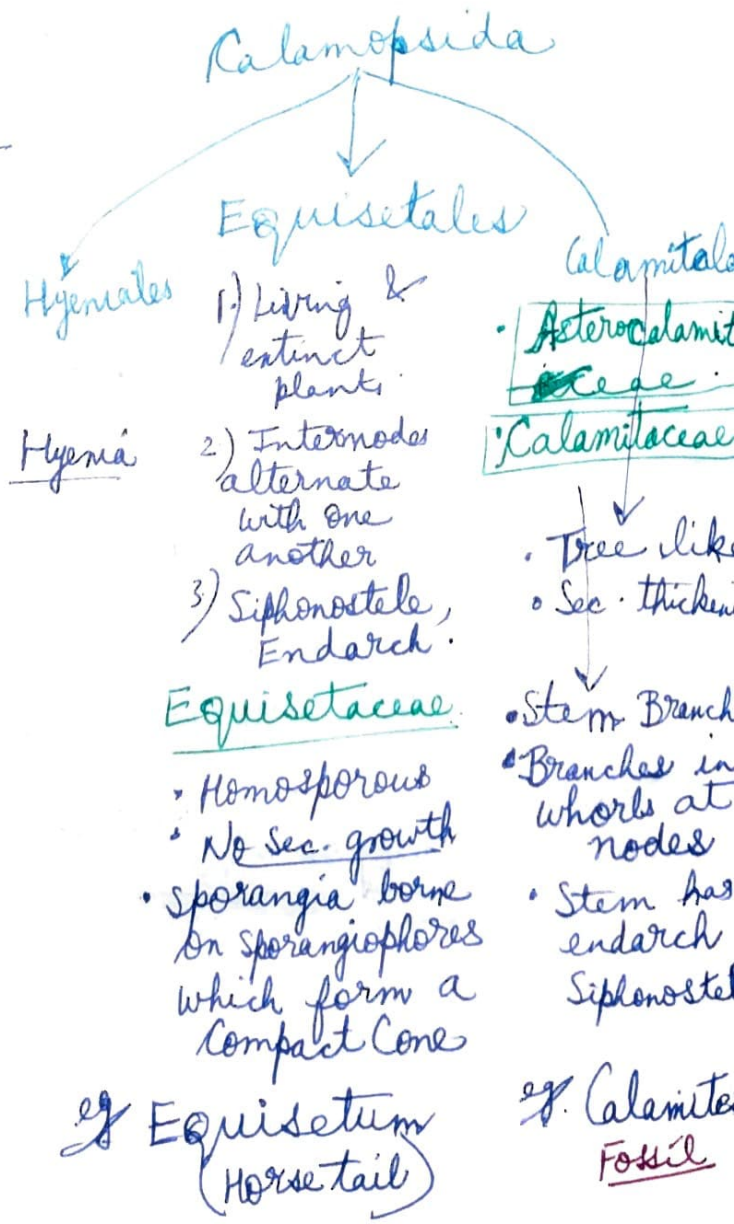
- 1) Sporophyte differentiated into stem, roots & leaves.
- 2) Stem possesses ridges & furrows. ✓
- 3) Foliage leaves are borne in transverse whorls.
- 4) Vascular cylinder is protostelic or siphonostelic
- 5) Leaf gaps absent.
- 6) Sporangia are produced on sporangiophores present at apex of stem.
- 7) Antherozoids multiciliate.
- 8) Homosporous

Classes: Sphenophyllopsida  
 Represented by fossils only

Order: Sphenophyllales

Family: Sphenophyllaceae

Genus: Single genus  
 Sphenophyllum



# Filicophyta -

- 1) Sporophyte differentiated into stem, leaves & roots.
- 2) Siphonostelic forms possess leaf gaps in V.B.
- 3) Leaves macrophyllous.
- 4) Leaf bears many Sporangia <sup>in sori</sup> on either side of the margin on abaxial (lower) face of leaf lamina.
- 5) Homosporous (6) Multiciliate antherozoids.
- 7) Sex organs are found on ventral surface of heart shaped prothallus.

## Class I Eusporangiate

- 1) Sporangium develops from a group of initials.
- 2) Sporangial jacket is more than one cell thick.
- 3) Large no. of spores within Sporangium.

### Order 1 Ophioglossales

- 1) Sporangia borne on special str. called SPIKE

Ophioglossum

### Order 2 Marattiales

Leaves with flesh stipules

Angiopteris, Marattia

## Class 2 Leptosporangiate

- 1) Sporangium develops from a single initial cell.
- 2) Sporangial jacket is one cell in thickness.
- 3) Definite no. of spores.

### Order 1 Filicales

Homosporous

Pteris, Dryopteris, Polypodium

### Order 2

Marsileales

- Members heterosporous
- sporangia within sporocarp

Marsilea

### Order 3

Salviniales

- Heterosporous
- sporangia within sporocarp

Salvinia, Azolla