Lycophyta- General Characters

Lycophyta- Club Moss or Spike Moss

- Plants of this class are known as club moss or spike moss
- The plant body of club mosses is differentiated into root, stems and root.
- Sporangia are formed on sporophylls.
- These sporophylls are not scattered on stem institute their present instead they are present in groups at tip of plant.

Habitat– Club Moss

- **Habitat and Habit**

  - Club mosses are small, creeping, terrestrial, epiphytic vascular plants and often inhabit moist places and shaded woodlands.

  - In arctic and temperate regions, club mosses are terrestrial; in the tropics they are mostly epiphytes near the tops of trees and seldom seen.

Habitat– Spike Moss

- **Habitat**
  - Most of the species inhabit damp and shaded forests of tropics, but some (e.g S. densa, S. rupestris, S. lepidophylla) grow in xerophytic habitats, such as exposed rock surfaces.

Lycophyta- general characters

❖This class has a long evolutionary history and is represented both by extant and extinct genera.

❖This group first originated during the Lower Devonian period of Palaeozoic Era.

❖The Lycophytes are the oldest of the seedless vascular plants that have living representatives.

❖Their structural features show convergence with taxa on the line leading to the flowering plants. Leaves, wood, trees, and reproductive structures that resemble seeds evolved in both lineages.

❖There are about 1,200 species today in three lycophyte families: Lycopodiaceae, Selaginellaceae, and Isoetaceae.

❖This class is represented by five living genera :

❖— *Lycopodium, Selaginella, Phylloglossum, Styhtes, and Isoete*

❖ and fourteen extinct genera

❖— *Asteroxylon, Baragwanathia, Lepidodendron, Sigillaria etc*.

General charactres

(a) The sporophyte plant body is differentiated into definite root, stem and leaves.

(b) The sporophytes are dichotomously branched.

(c) The leaves are usually small and microphyllous.

(d) The xylem in stem exarch.

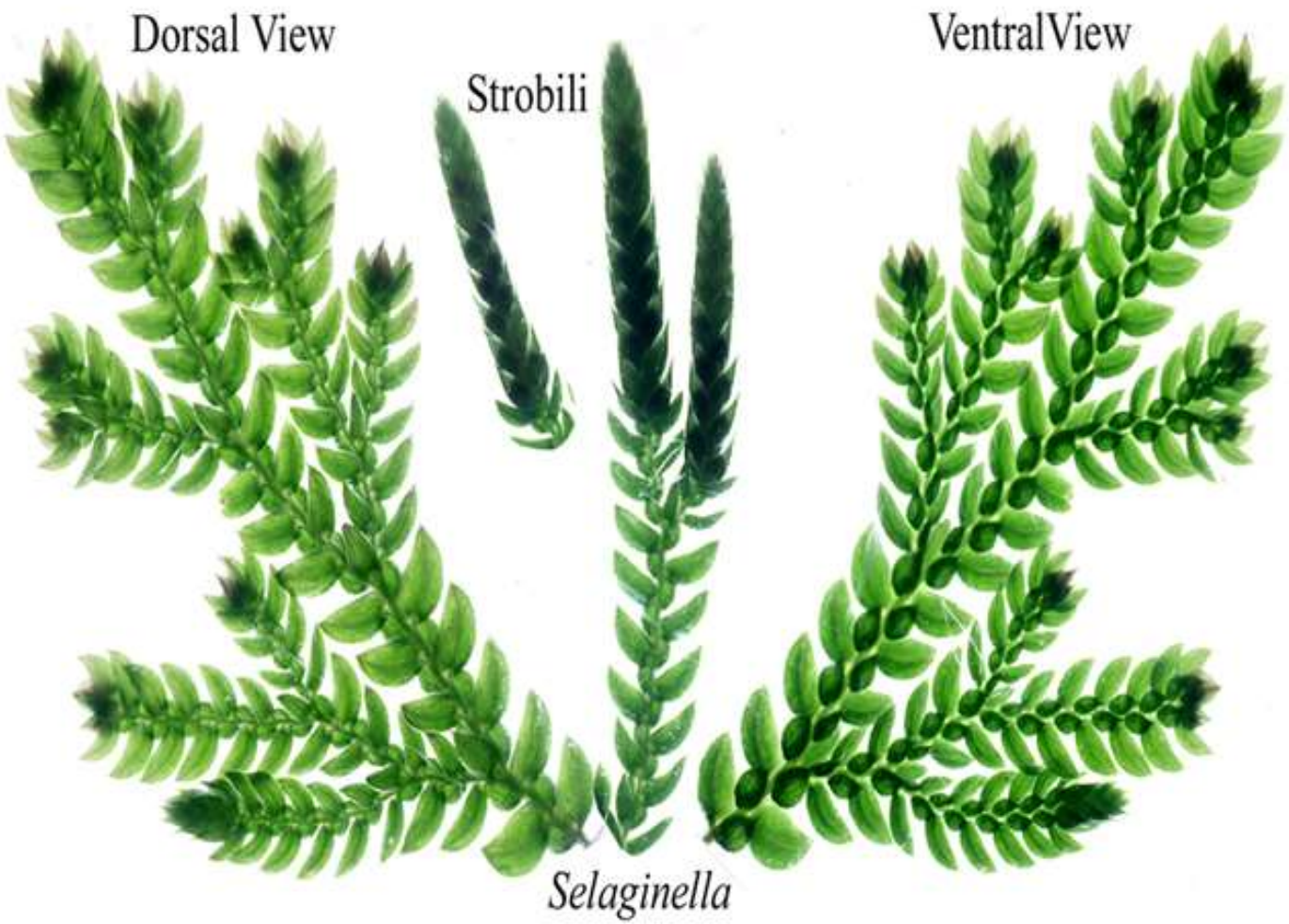
(e) Sporangia are borne singly on the adaxial (upper) surface of the sporophylls.

(f) The spores may be of either one type i.e., homosporous (e.g., *Lycopodium*) or two types i.e., heterosporous (e.g., *Selaginella*).

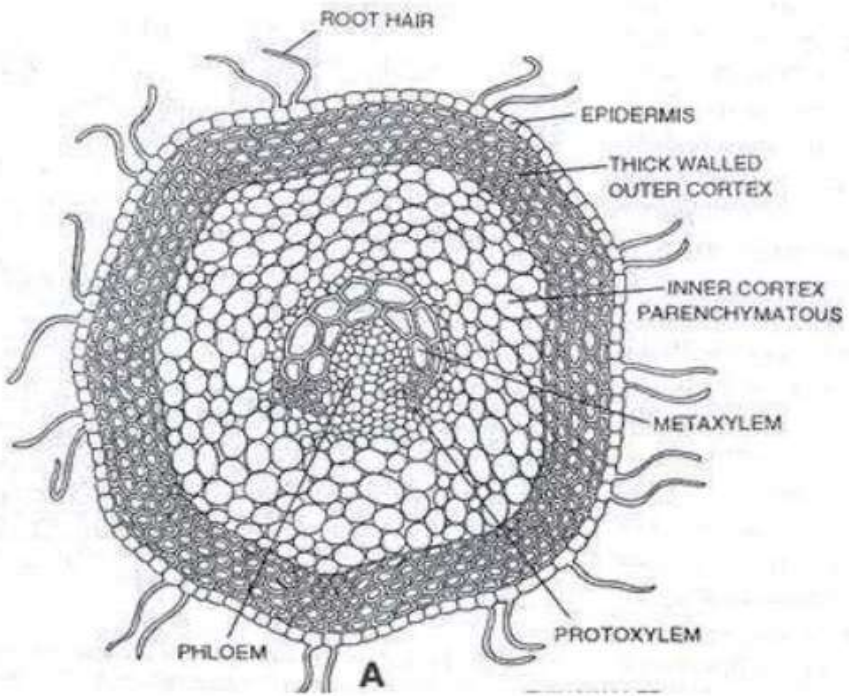
(g) The spores develop into independent gametophyte.

Lycophyta- Representative genera

Lycophyta- Representative genera



Lycophyta- internal structure



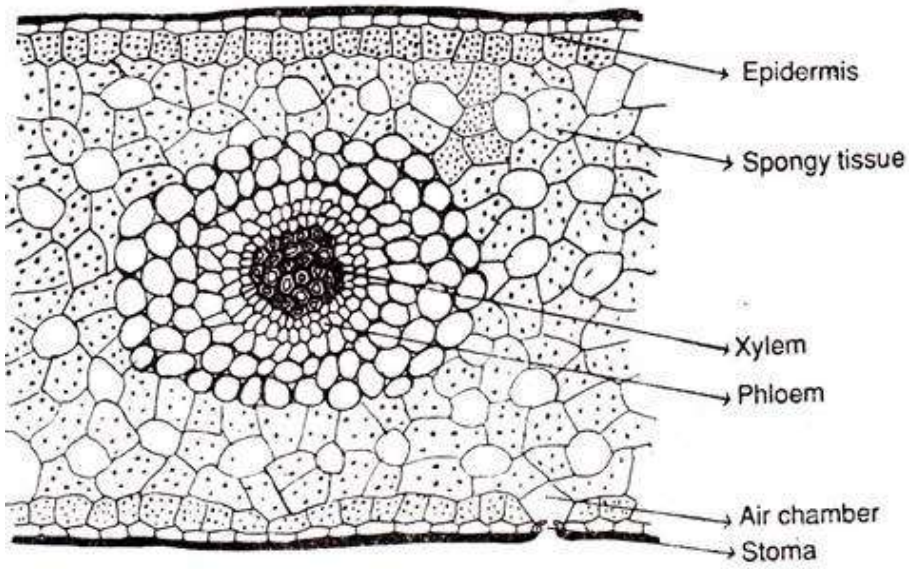
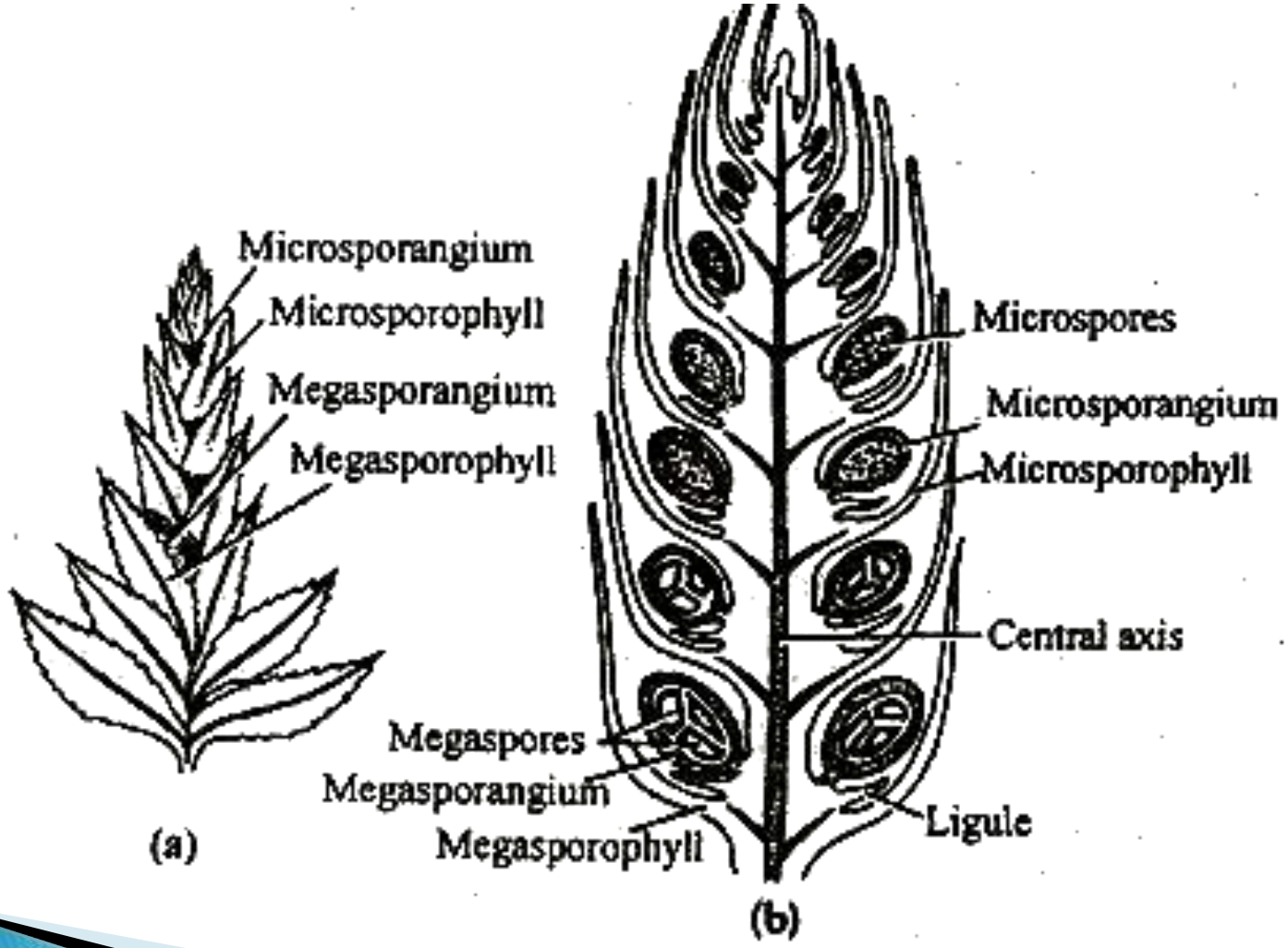


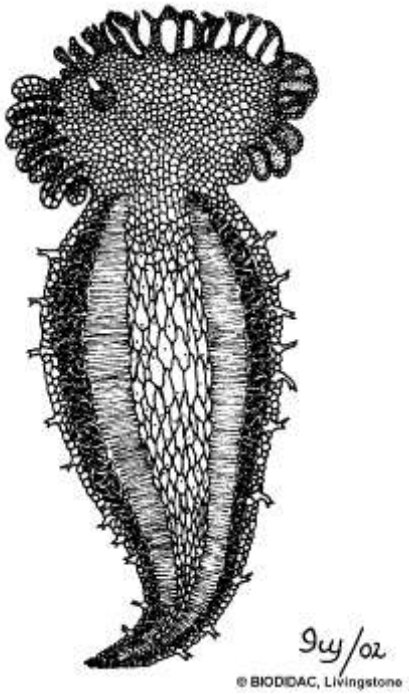
Fig. 39. *Lycopodium* : Internal Structure of Leaf (*L. phlegmaria*)

Lycophyta- Structure of strobilus



obilus showing compactly arranged sporophylls (b) L.S. through strobilus

Lycophyta- Gametophyte



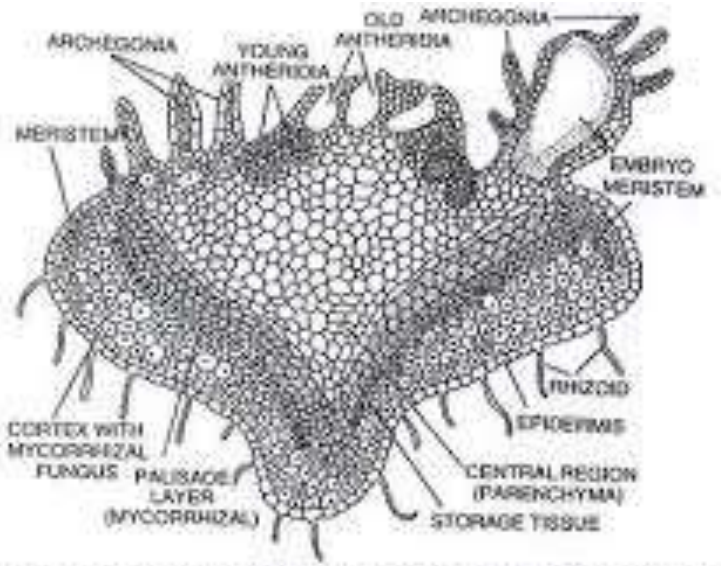
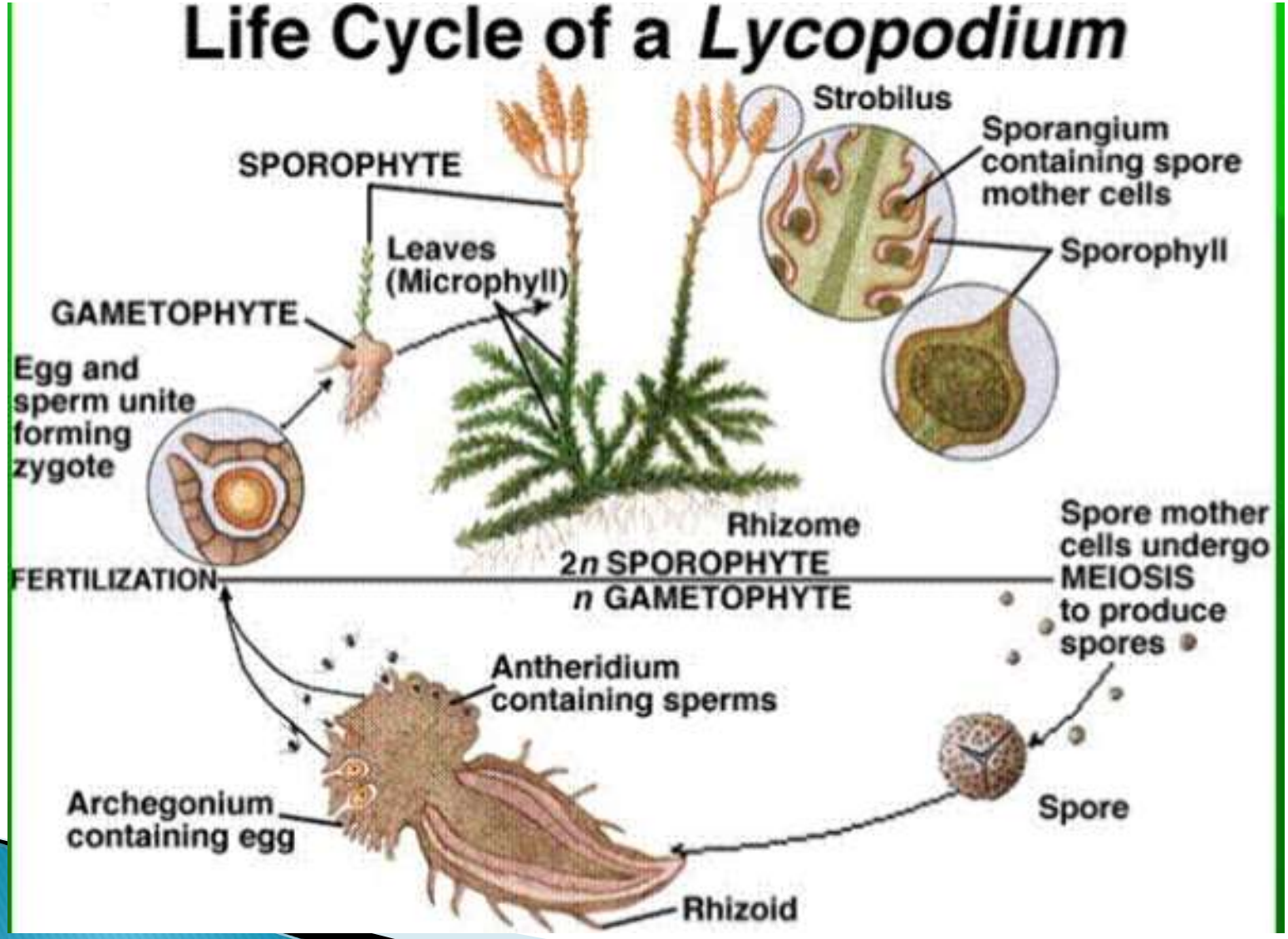


Fig. 27.16 (a). Lycopodium clavatum. Gametophyte; median vertical section through a mature prothallus showing mycorrhizal zone, archegonia, antheridia, embryo, etc.

Life cycle of homosporous genera



Life cycle of heterosporous genera