

# CHLOROBIONTA LIFE CYCLE



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KBI BOTANI

# OUTLINE

The life cycle comparison  
among Chlorobionta



The Embryopytes life cycle

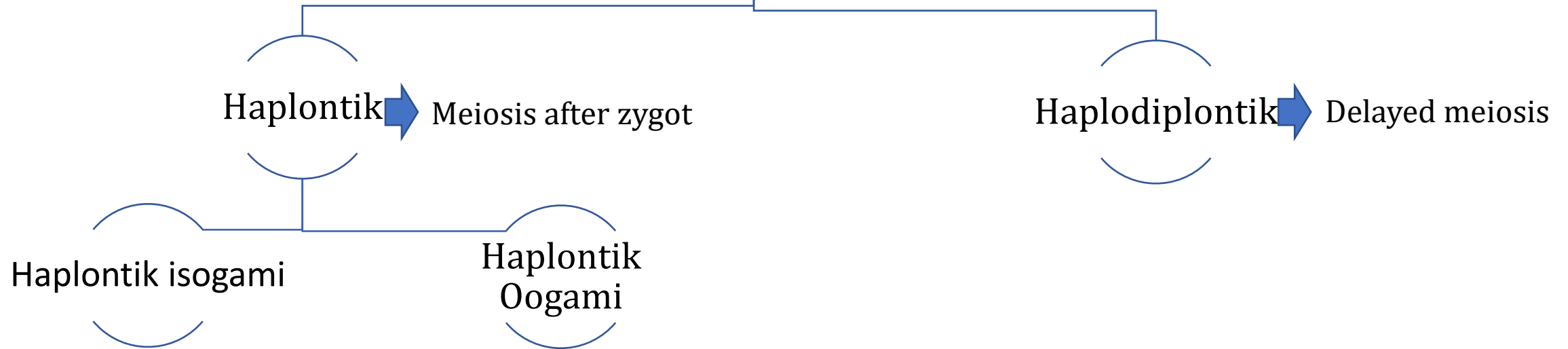


Bryophyte life cycle

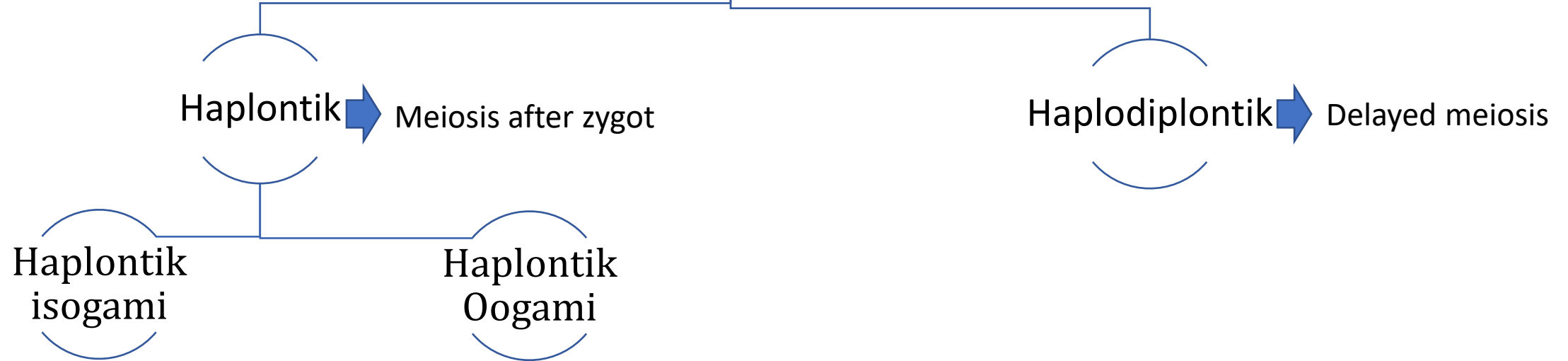


Pteridophyte life cycle

# Chlorobionta Life Cycle



# Chlorobionta Life Cycle



Isomorphic with  
flagellate gametes

Two gametes with different  
size and shape (egg and  
sperm cell)

Chlorobionta Life Cycle

Haplontik → Meiosis after zygot

Haplodiplontik → Delayed meiosis

Haplontik  
isogami

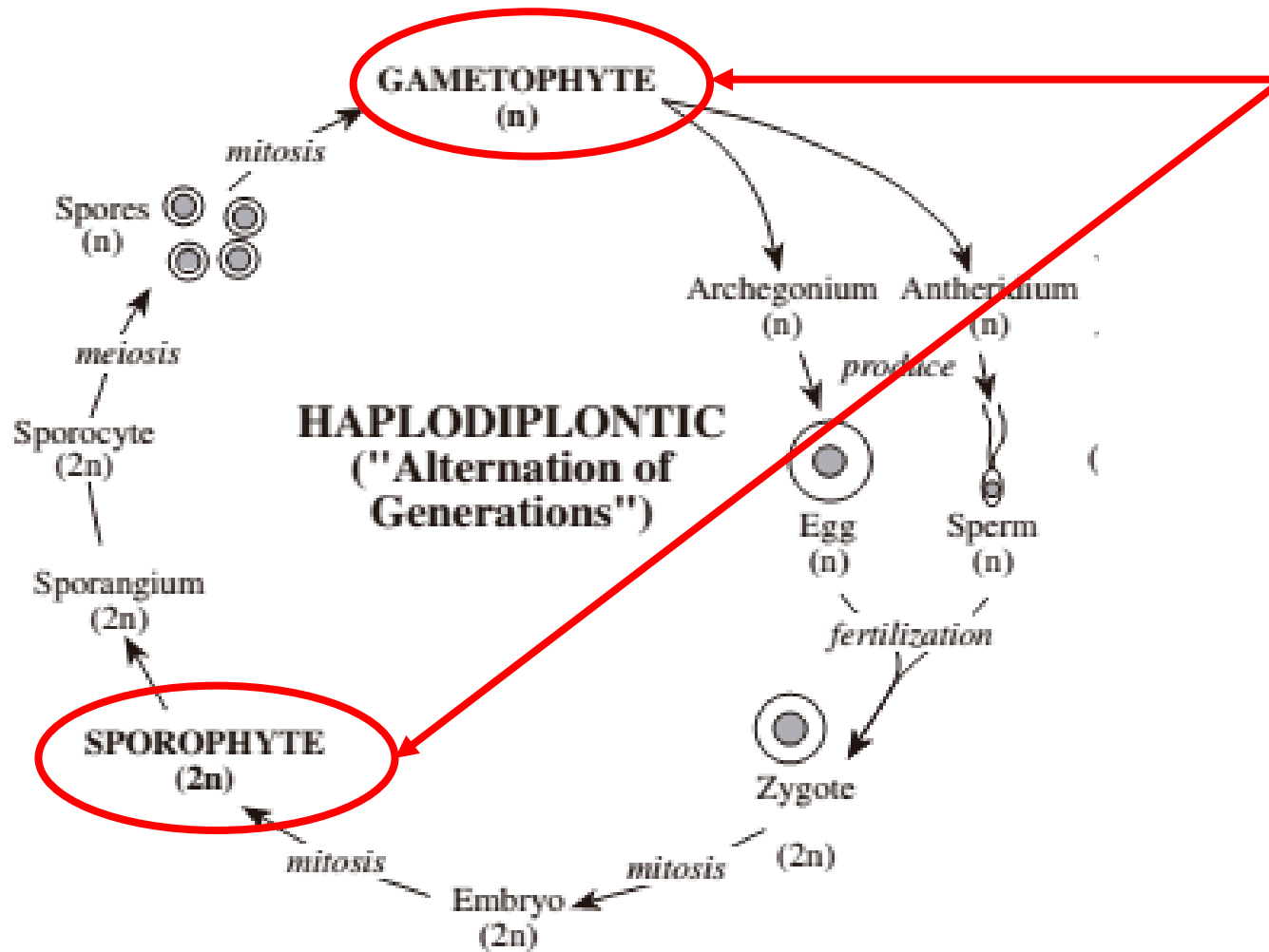
Haplontik  
Oogami

Green algae  
Chlorophyte

Green algae  
Streptophyte

Land plants

# HAPLODIPLONTIC LIFE CYCLE

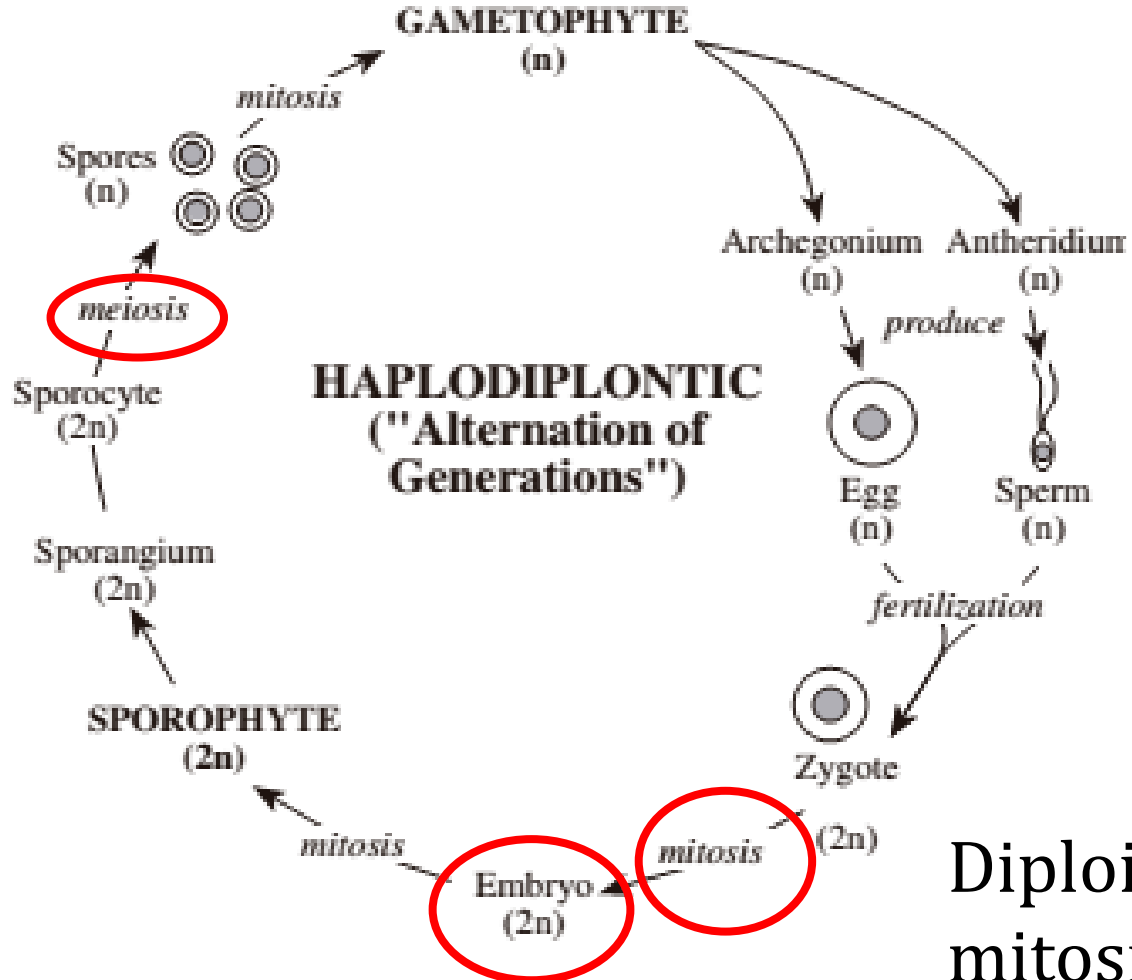


Alternation generation:

- Gametophyte (haploid)
- Sporophyte (diploid)

# HAPLODIPLONTIC LIFE CYCLE

Diploid sporocyte undergoes meiosis → haploid spores



Diploid zygote undergoes mitosis → embryo

Embryo stage in the life cycle

# Gametophyte

## Bryophyte



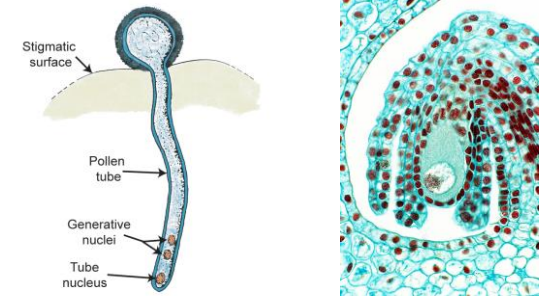
## Pteridophyte



## Gymnosperm



## Angiosperm



Gametophyte  
dominant

Short lifetime of Gametophyte



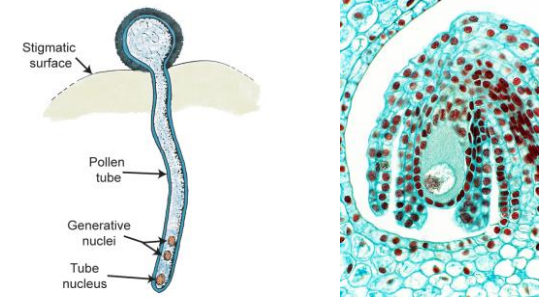
# Reproductive organ

Bryophyte

Pteridophyte

Gymnosperm

Angiosperm



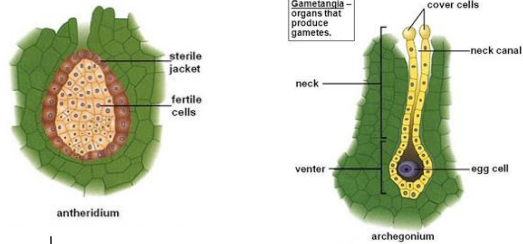
Antheridia

Archegonia

Antheridia

Archegonia

Antheridia and Archegonia reduced or absent



- Male Strobilus
- Female Strobilus

- Androecium (stamen)
- Gynoecium (Pistil)

Gametophyte stages

Sporophyte stages

# Gamet's cells

Bryophyte



Pteridophyte



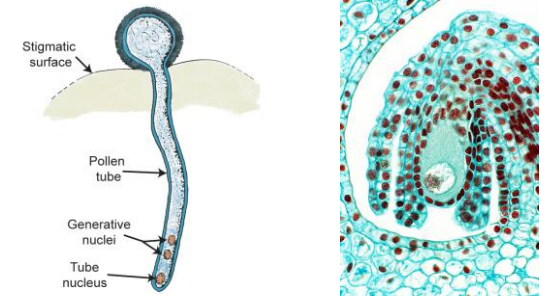
Gymnosperm



Cycadophyta

- Conifers
- Gnetales

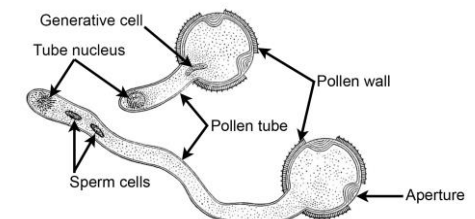
Angiosperm

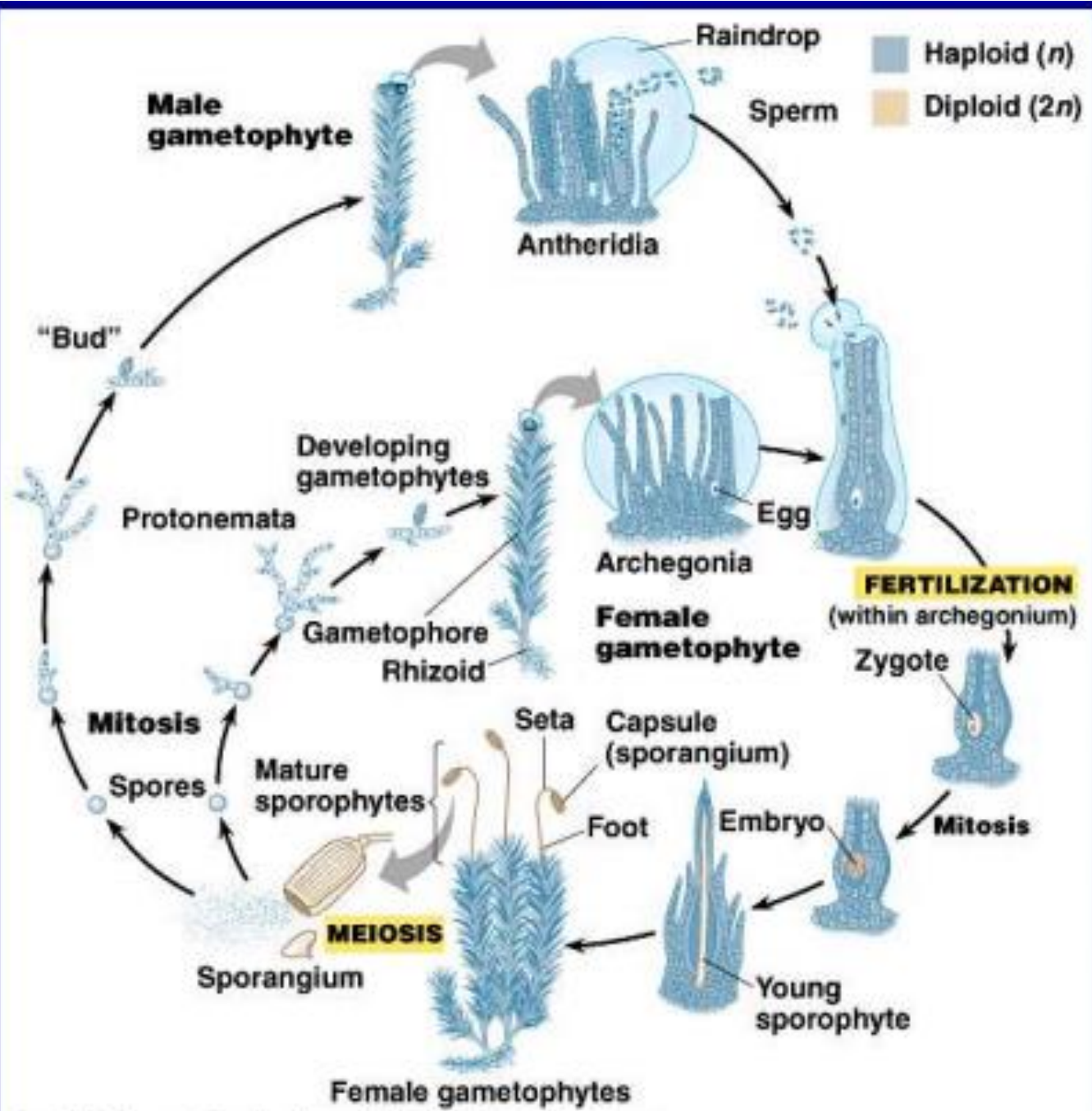


Flagellate sperm cells → spermatozoid

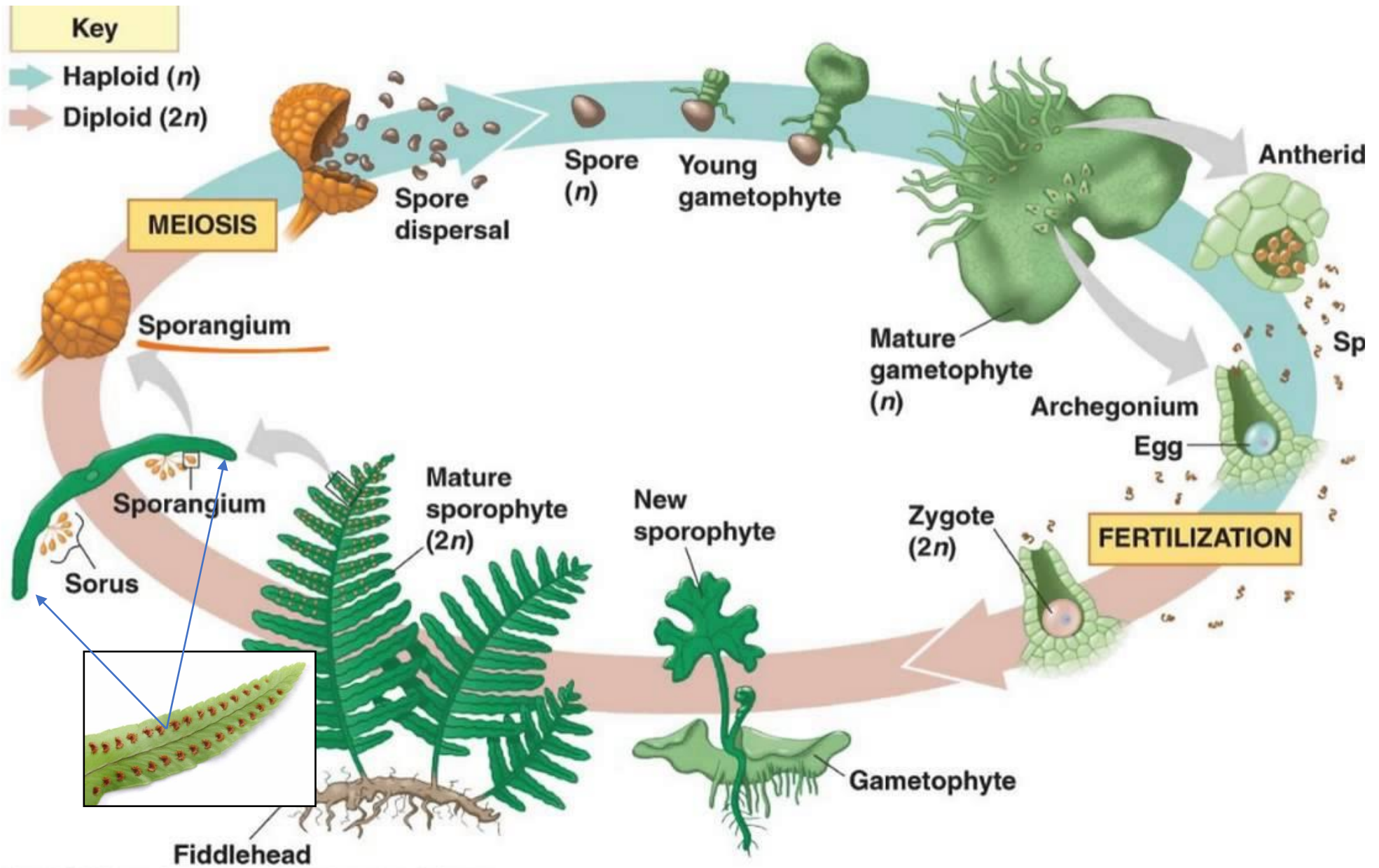


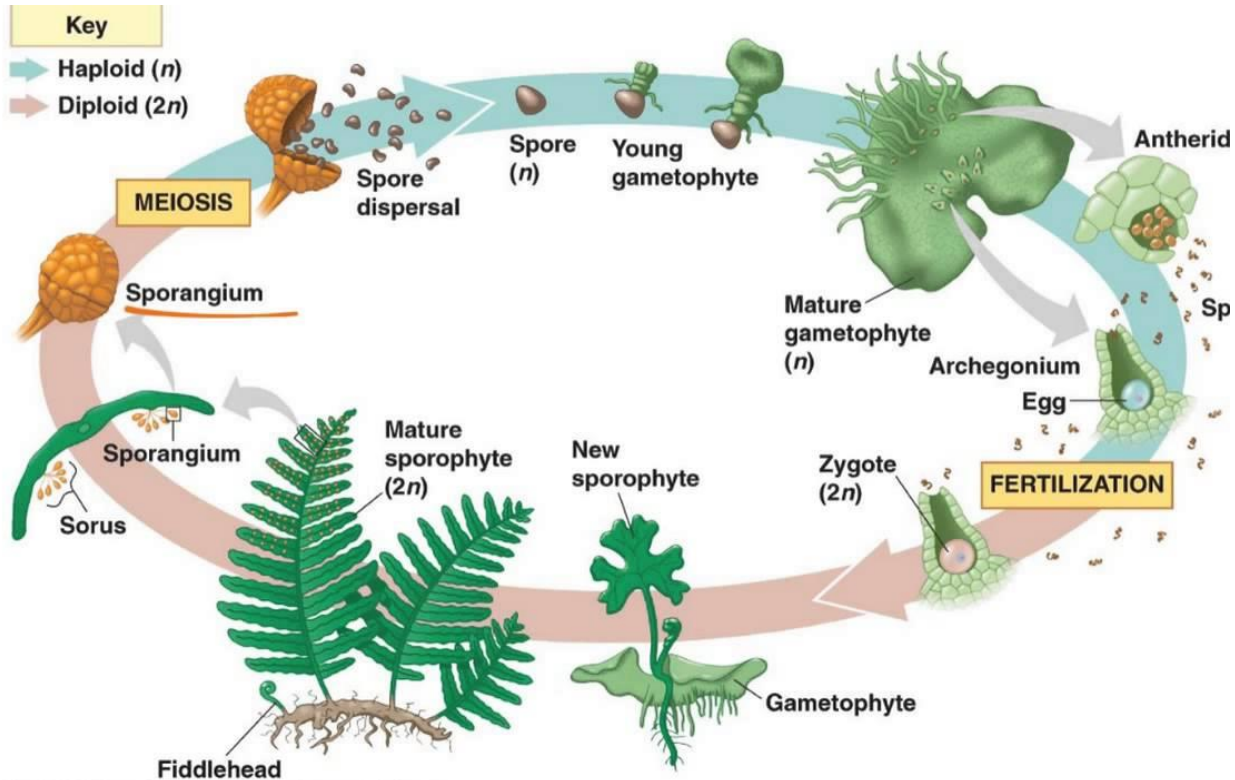
Non-flagellate sperm cells → modified into pollen tube





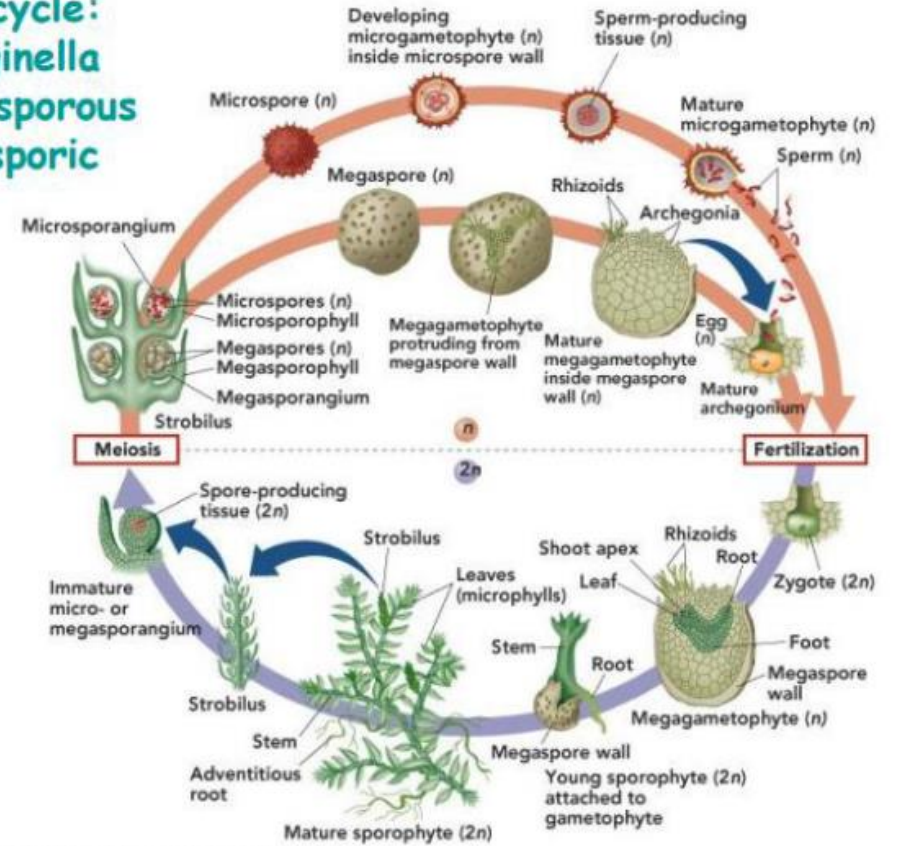






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## Life cycle: Selaginella Heterosporous endosporic



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Thank  
 you