

3

-2n multicellular

organism dominant

-meiosis produces gametes

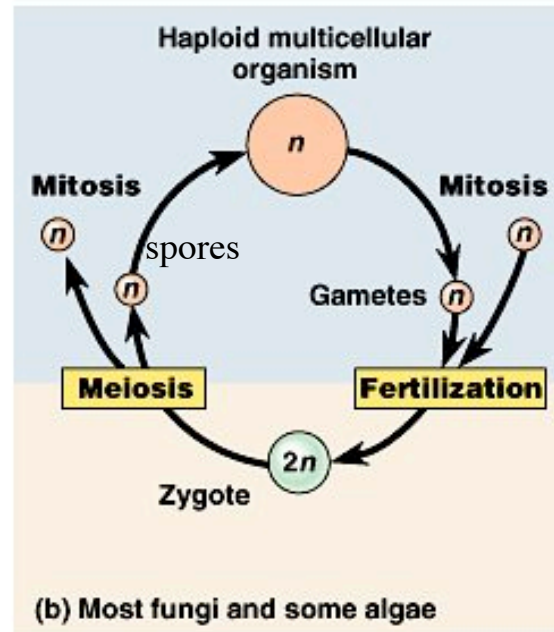
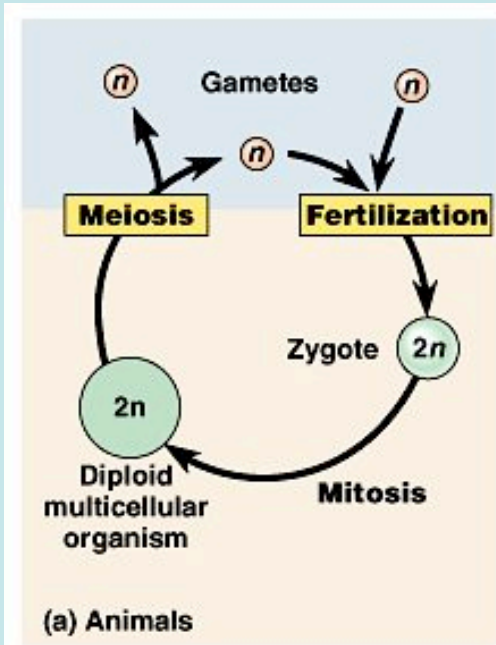
-meiosis occurs before fertilization

-alternation of gametophyte (n) and sporophyte (2n) generations-both multicellular

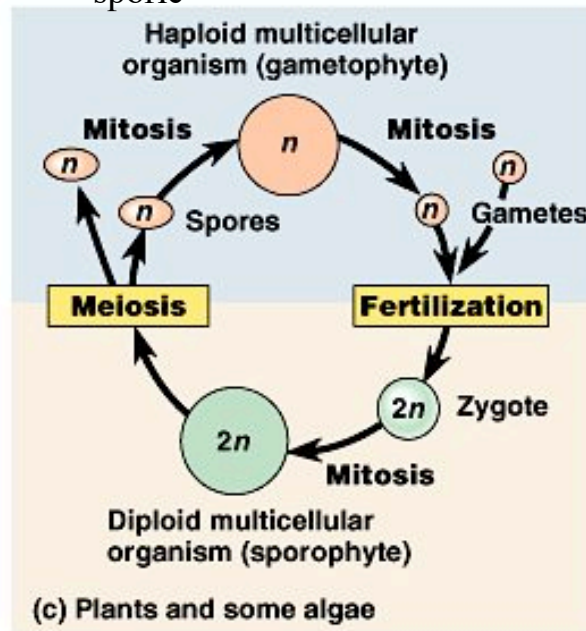
-spores may be of one kind-homospores or two kinds-heterospores

gametic

zygotic



sporic



□ Haploid
□ Diploid

-1n multicellular organism dominant

-meiosis produces spores

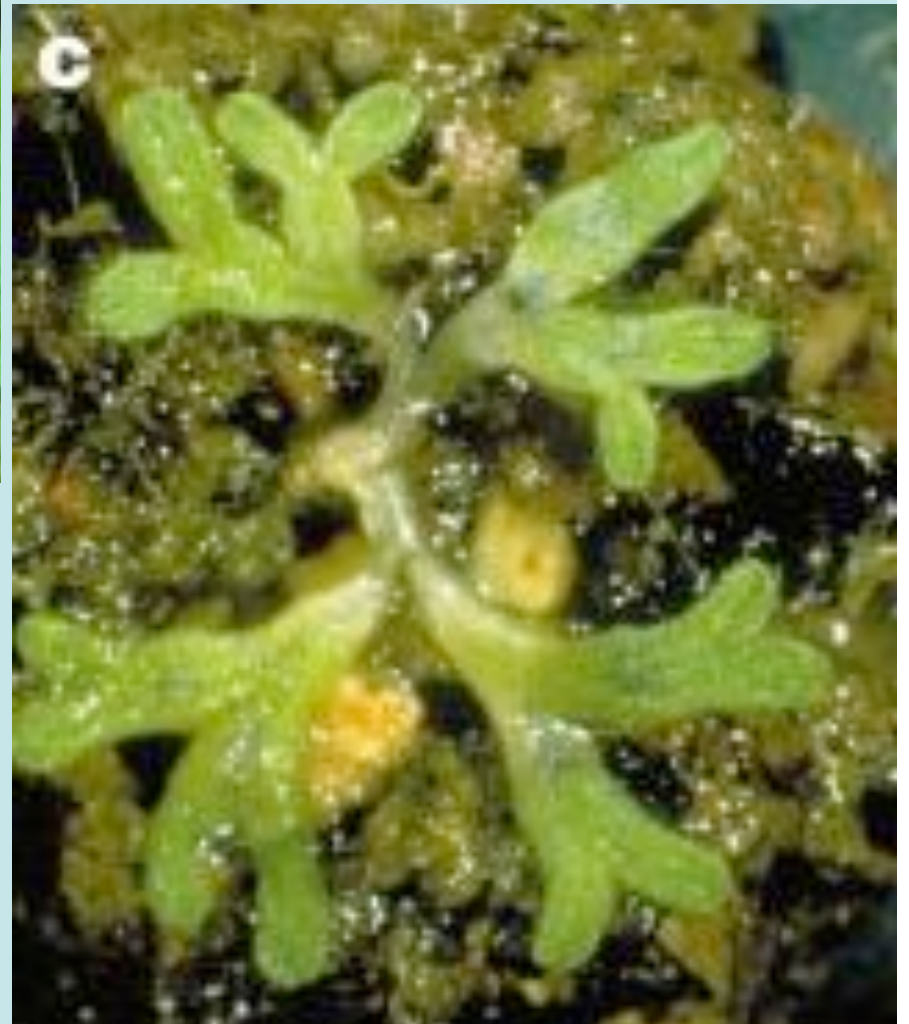
-meiosis occurs after fertilization

4

Phylum Hepatophyta-
liverworts



gemma
cups



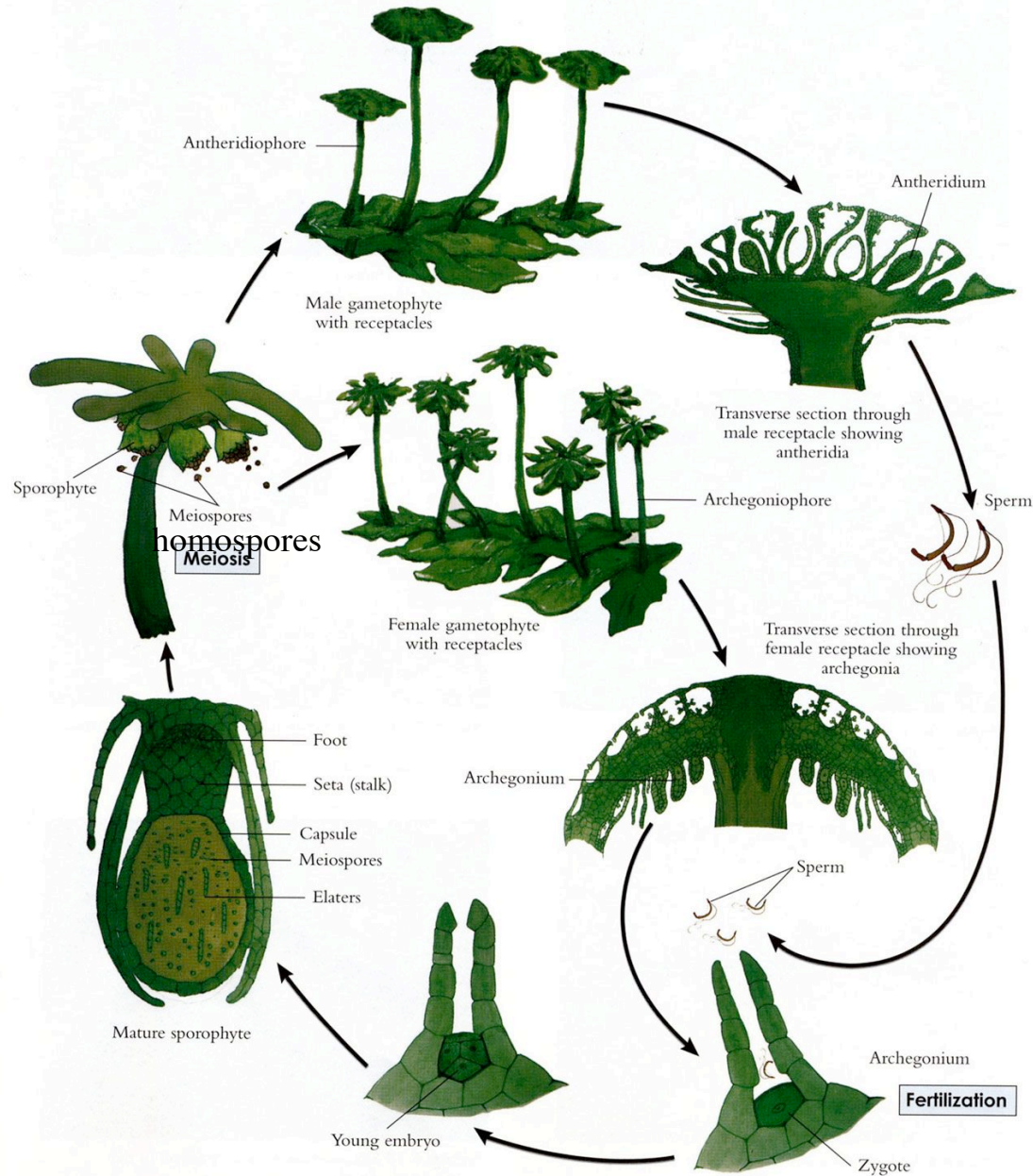
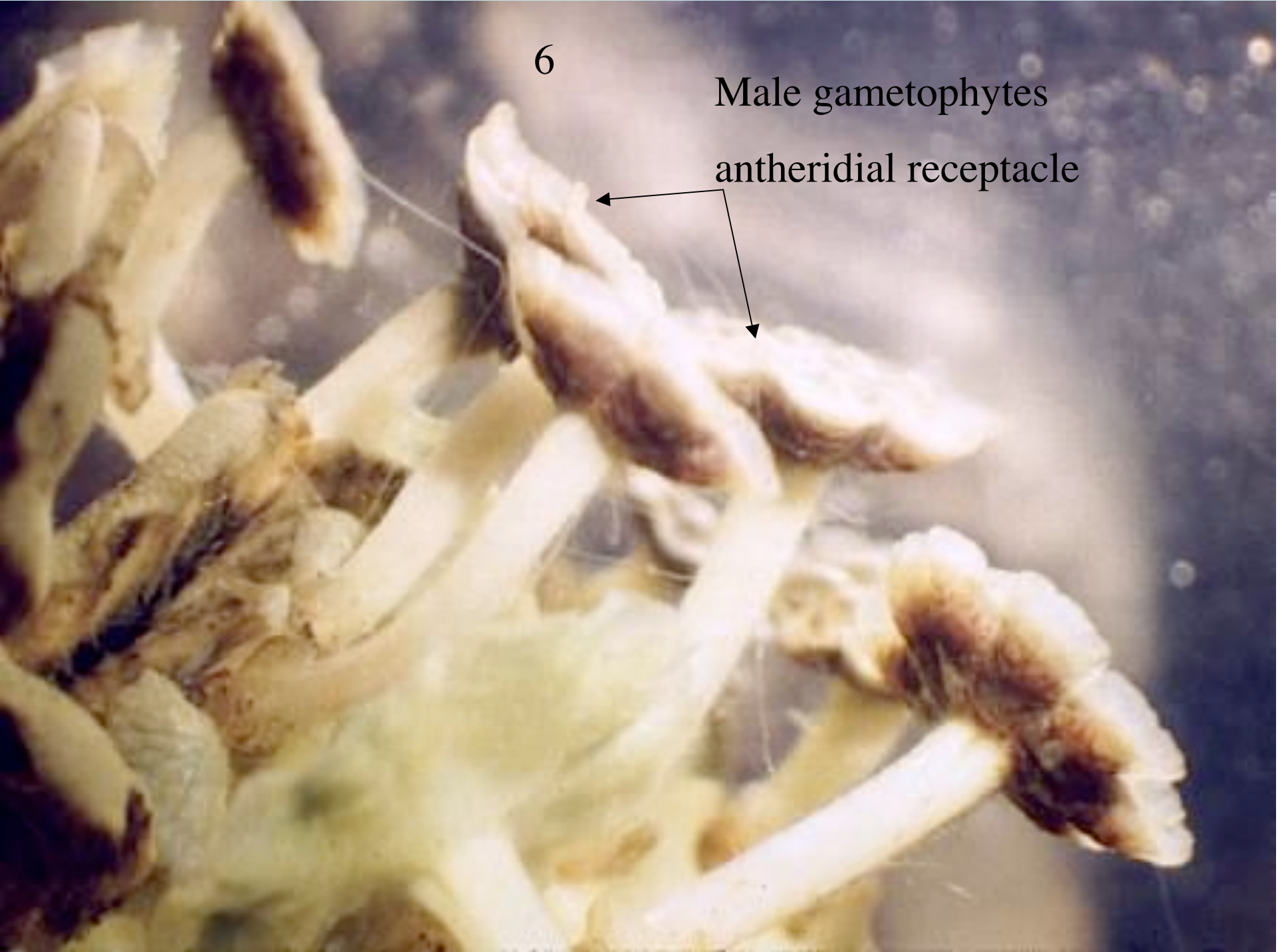


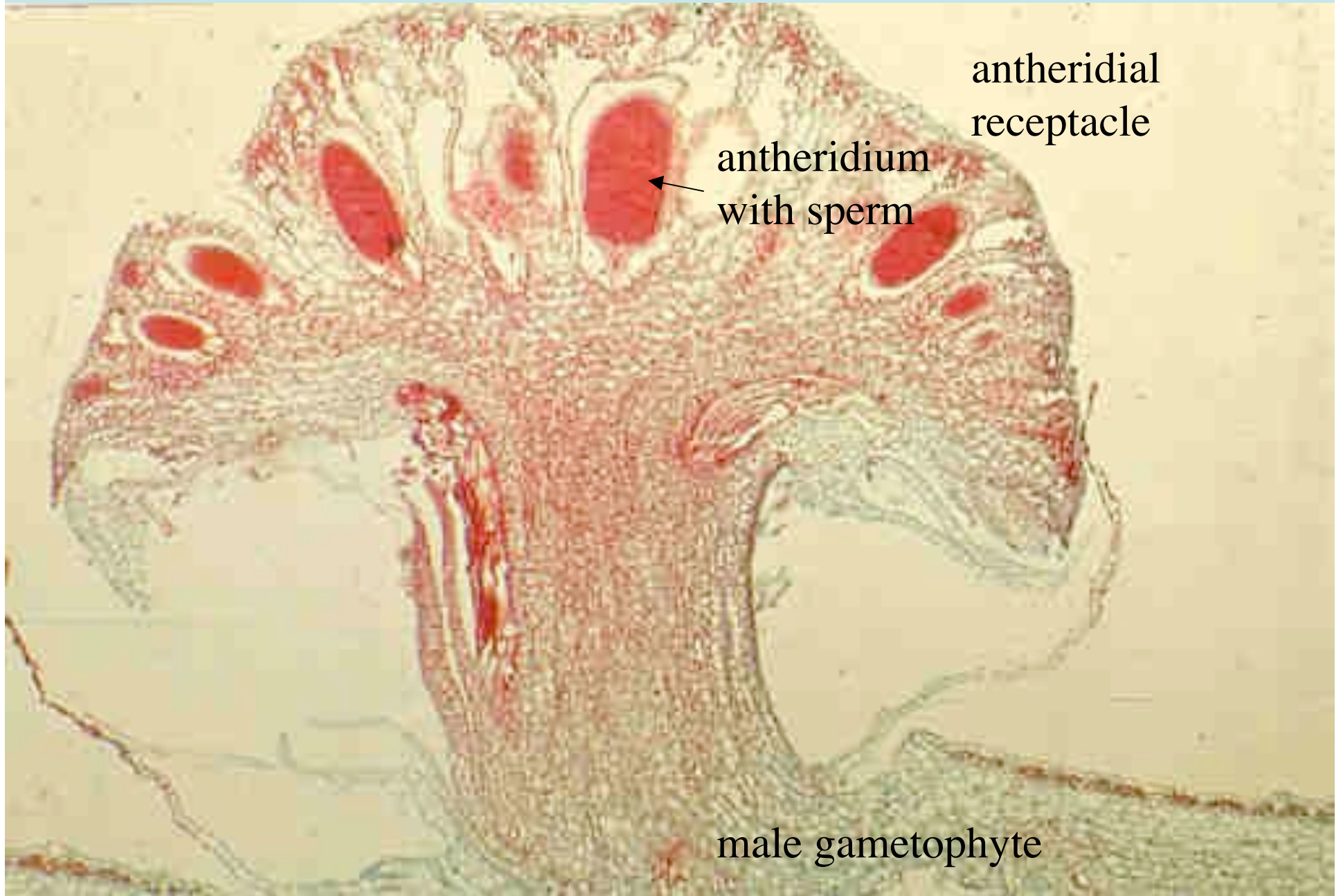
Figure 6.7 Life cycle of the thalloid liverwort, *Marchantia*.

6

Male gametophytes
antheridial receptacle



7



antheridial
receptacle

antheridium
with sperm

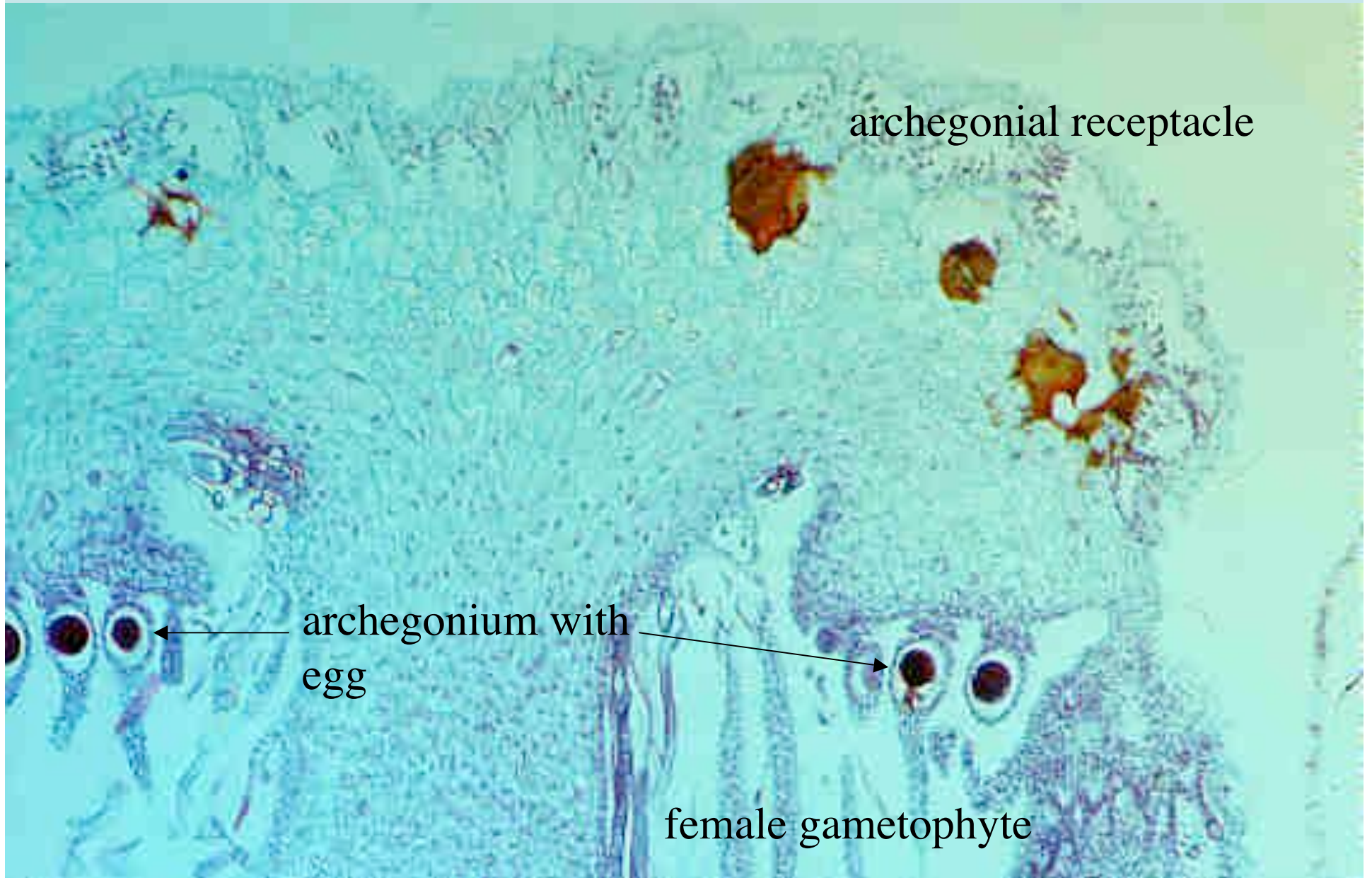
male gametophyte

8

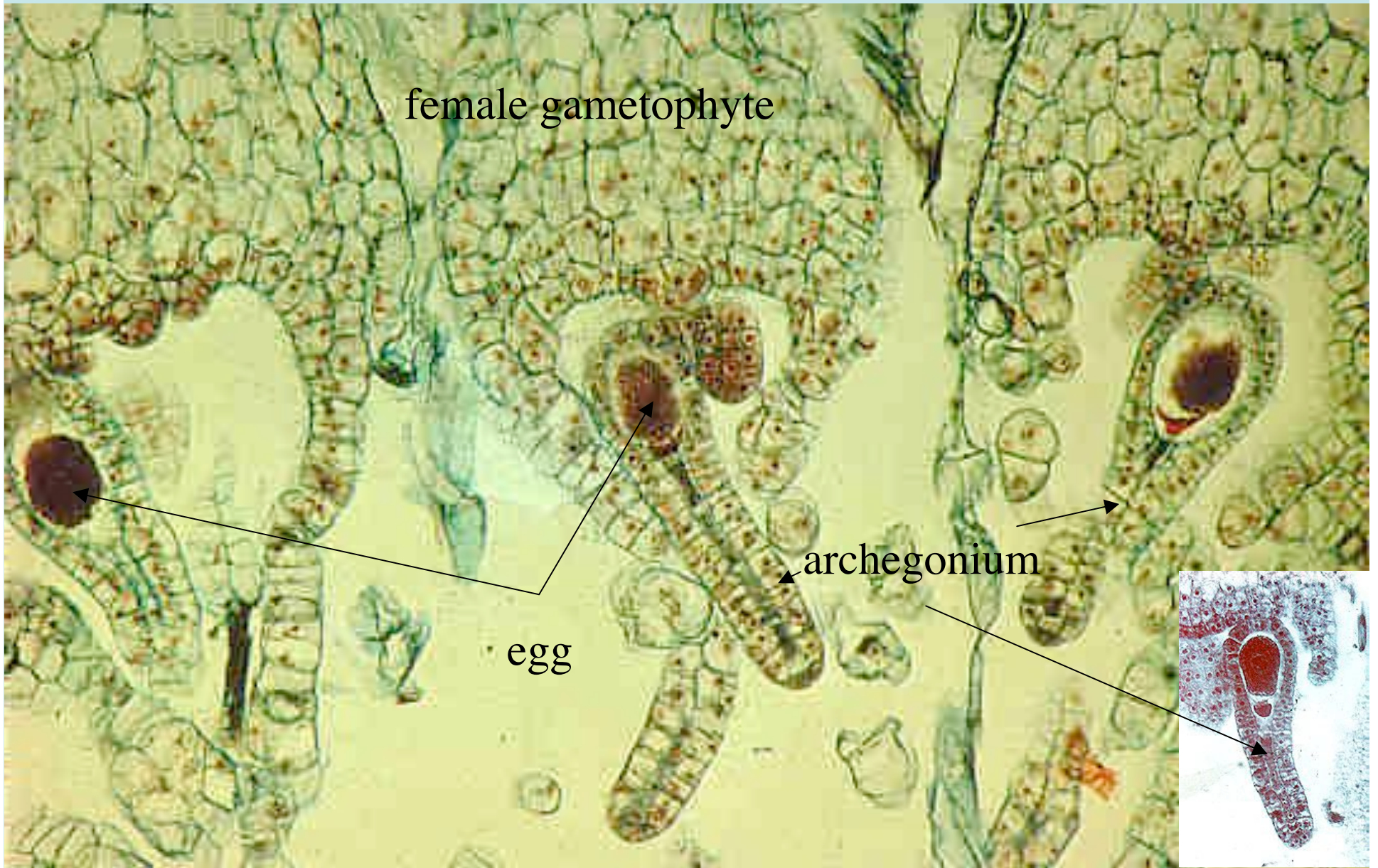


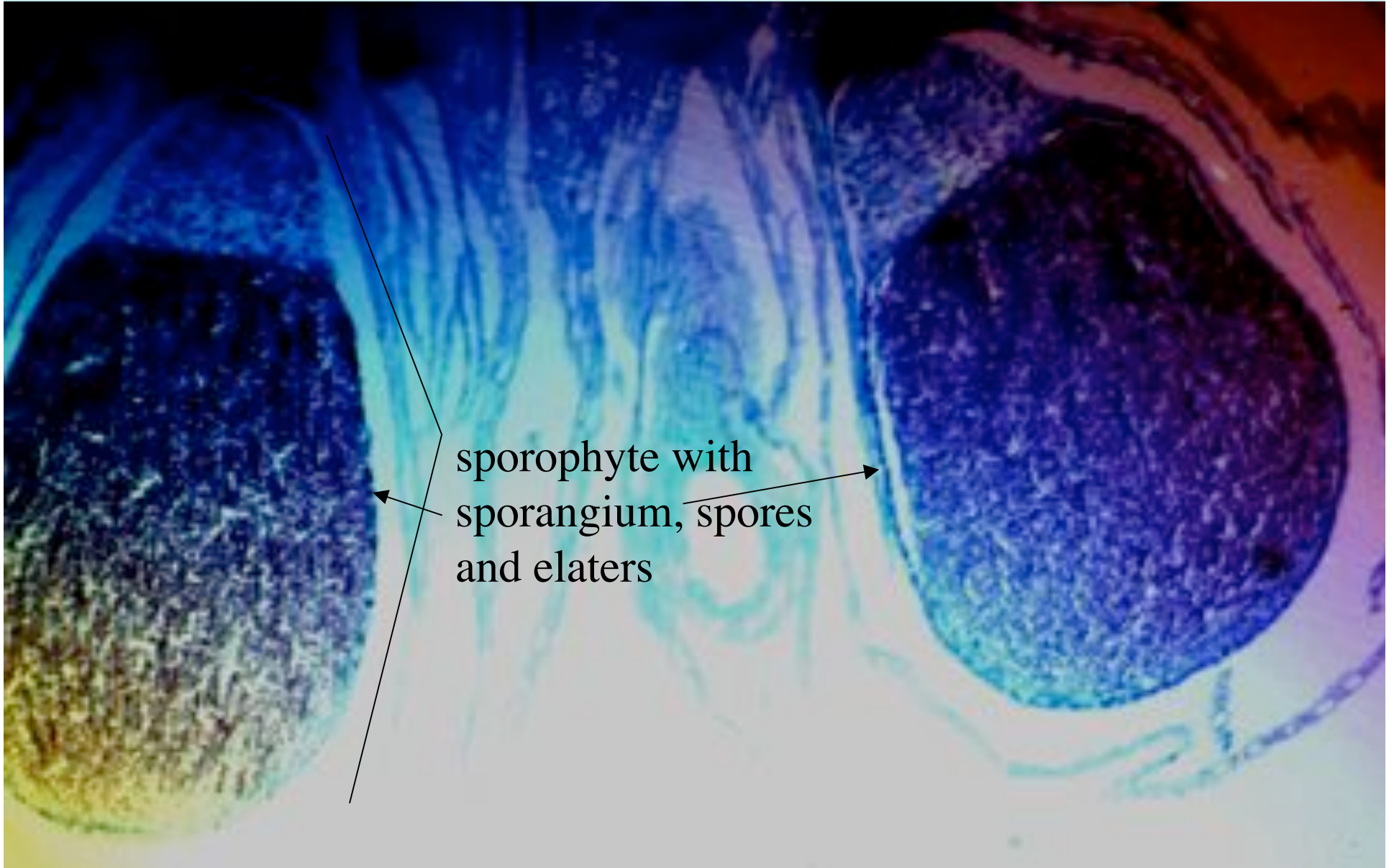
Female
gametophyte

archegonial
receptacle



10

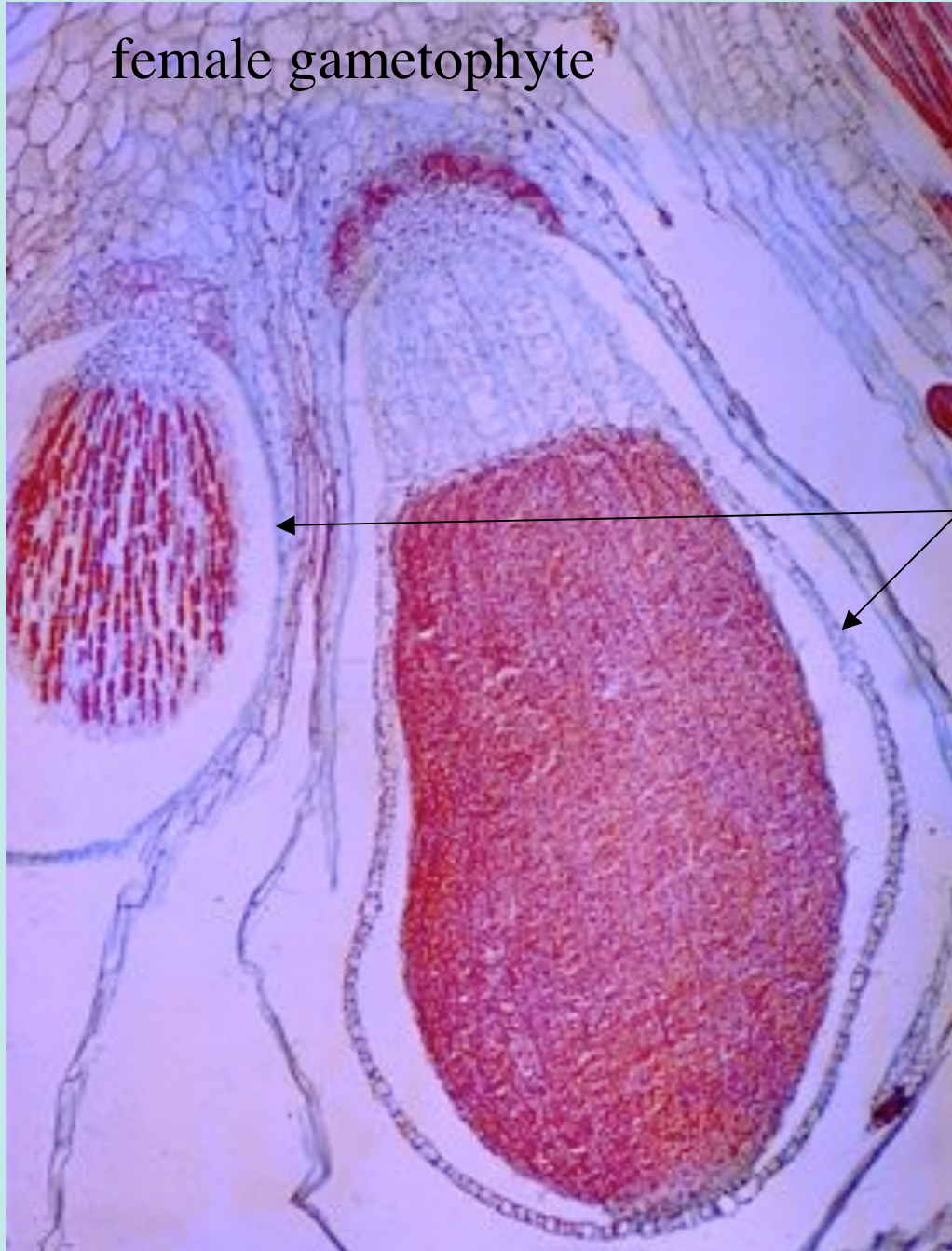




sporophyte with
sporangium, spores
and elaters

12

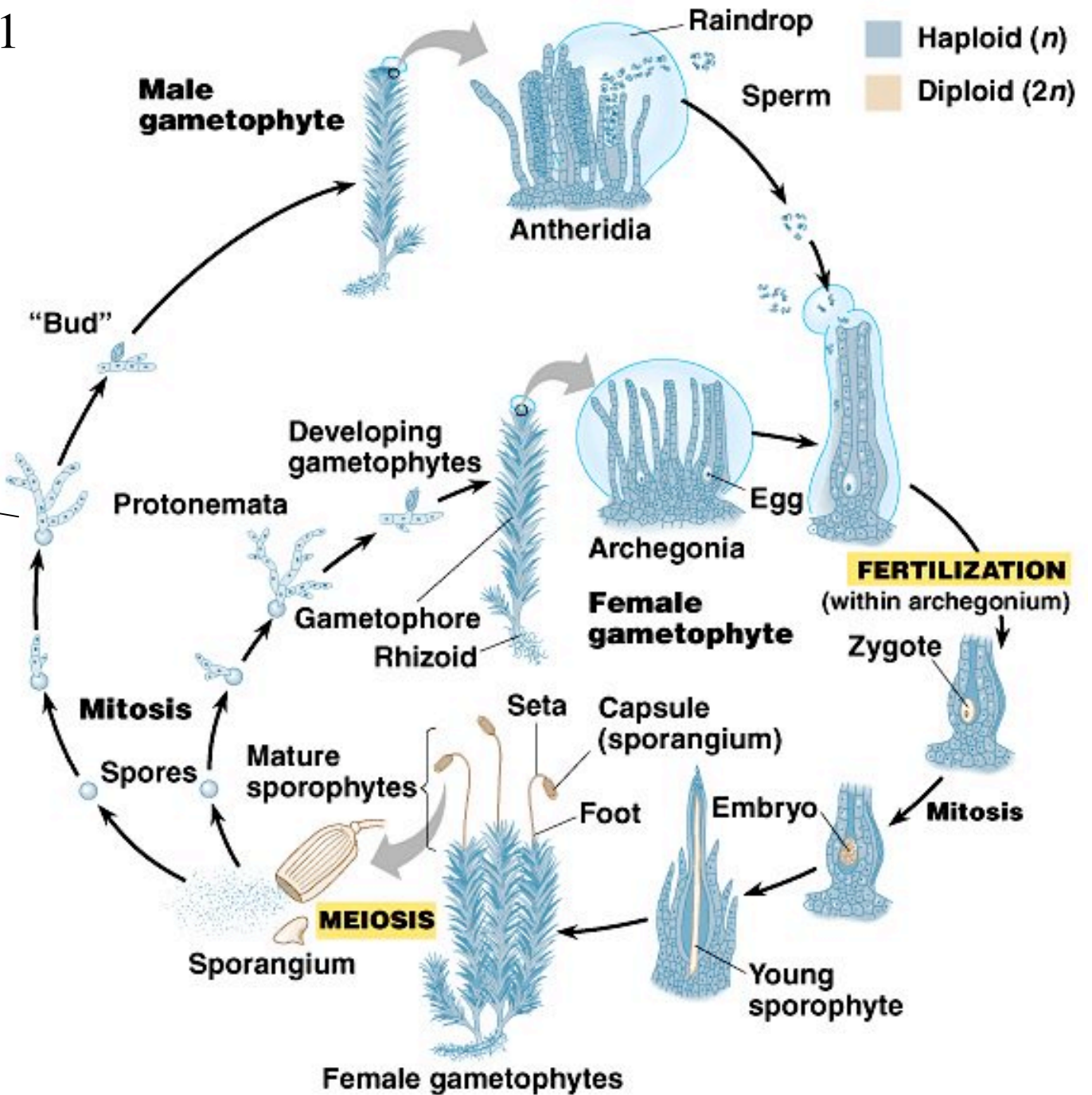
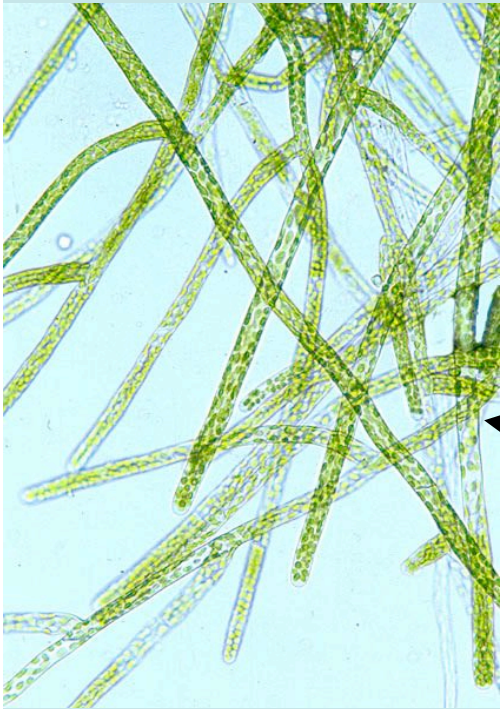
female gametophyte

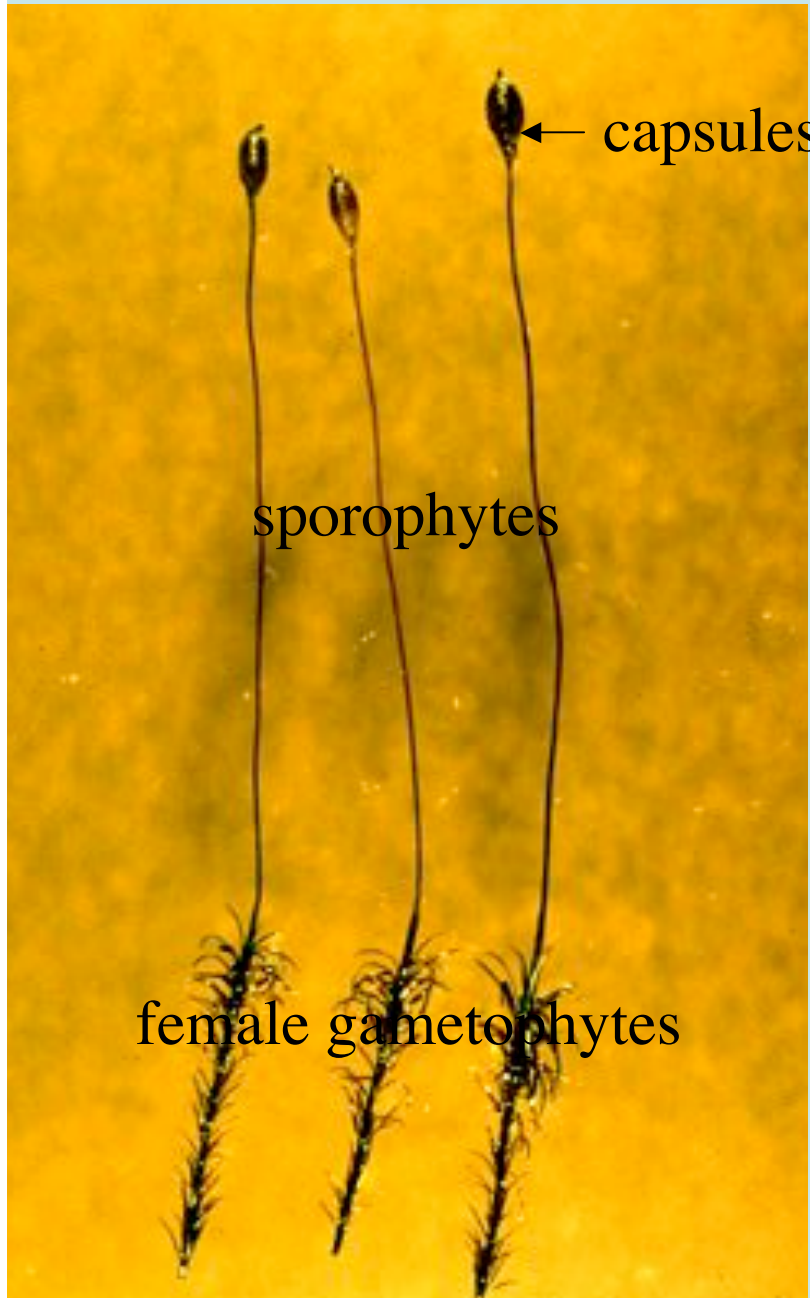


sporophyte

13 Phylum Bryophyta- mosses







← capsules

sporophytes

female gametophytes



→

Benjamin
Cummings

16

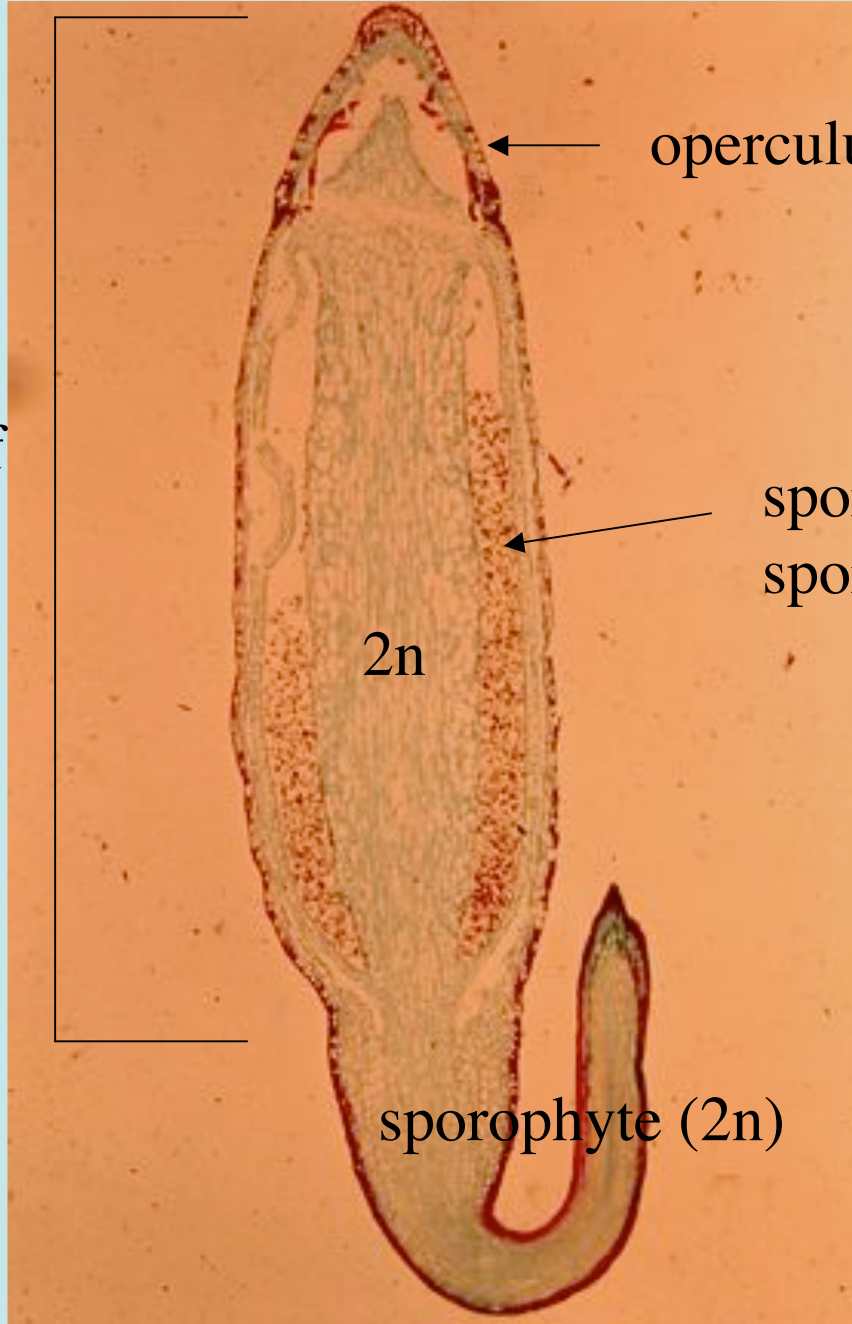
section of capsule

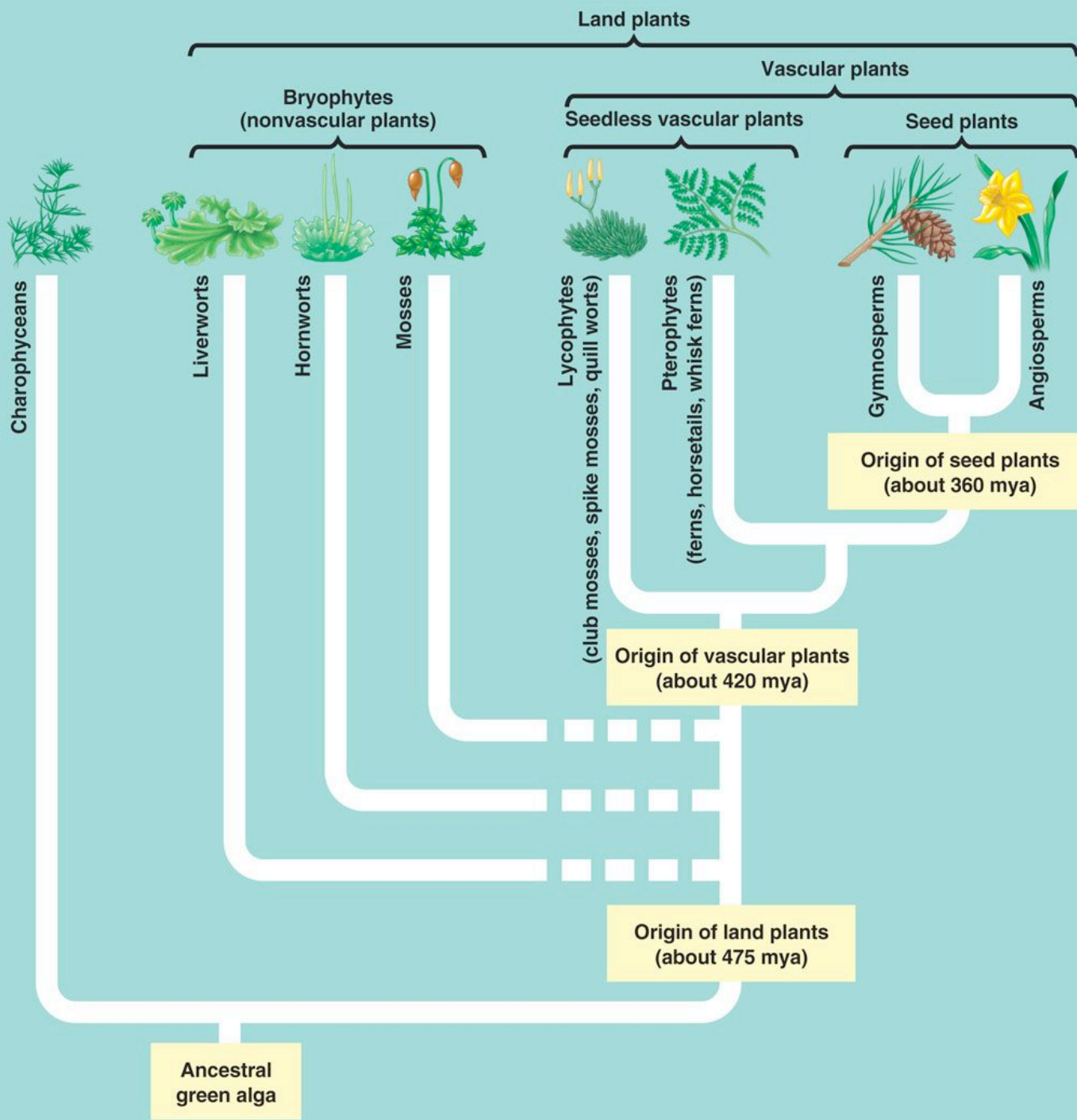
operculum

spores (n) in sporangium

2n

sporophyte (2n)







strobili

microphylls



strobili

microphylls

18

strobili



Sporangia with spores (some species have homospores, some have heterospores)

Phylum Pterophyta

19

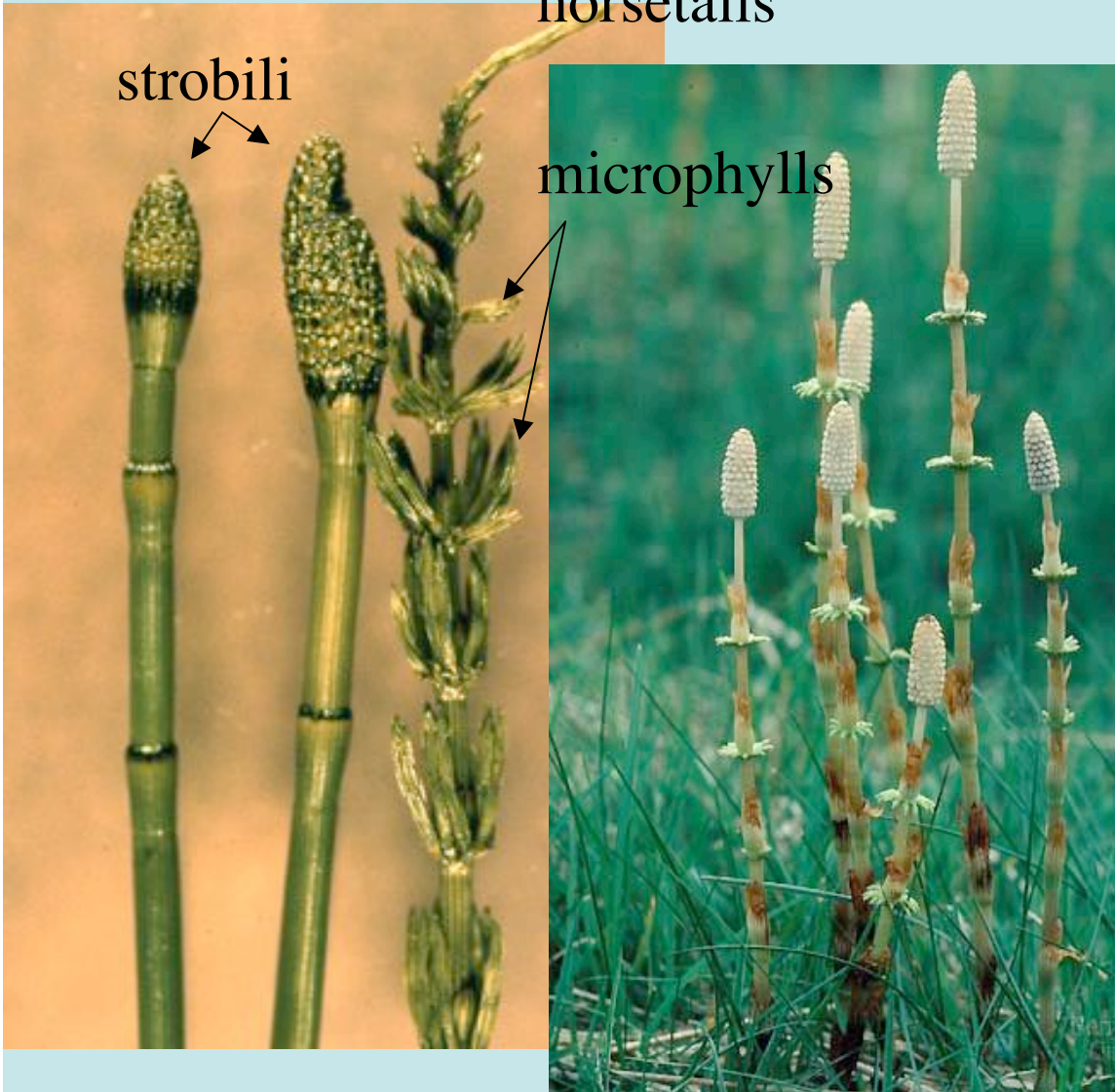
horsetails

whisk ferns

strobili

microphylls

sporangia



homospores only

true stems only; no strobili

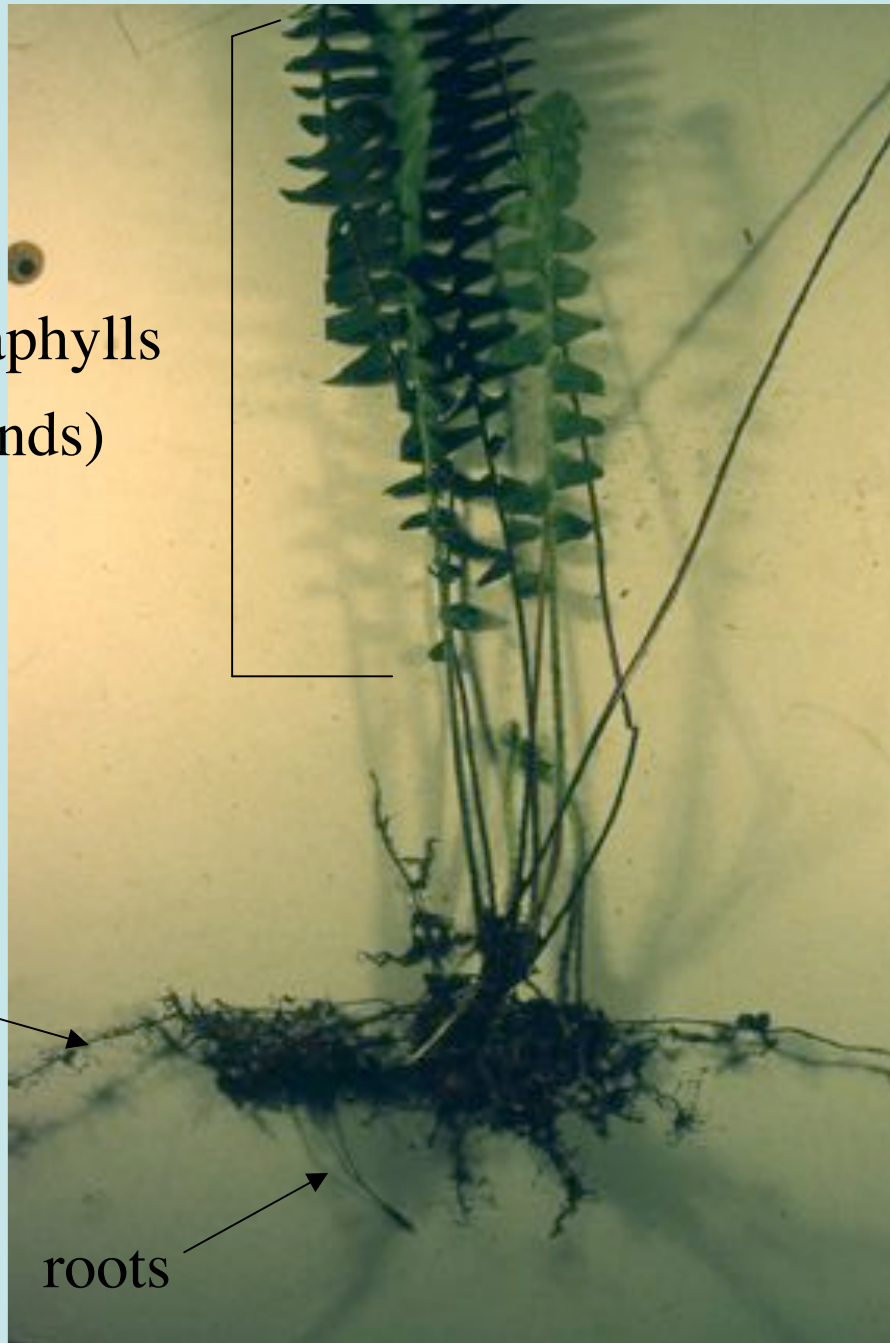
Ferns

20

megaphylls
(fronds)

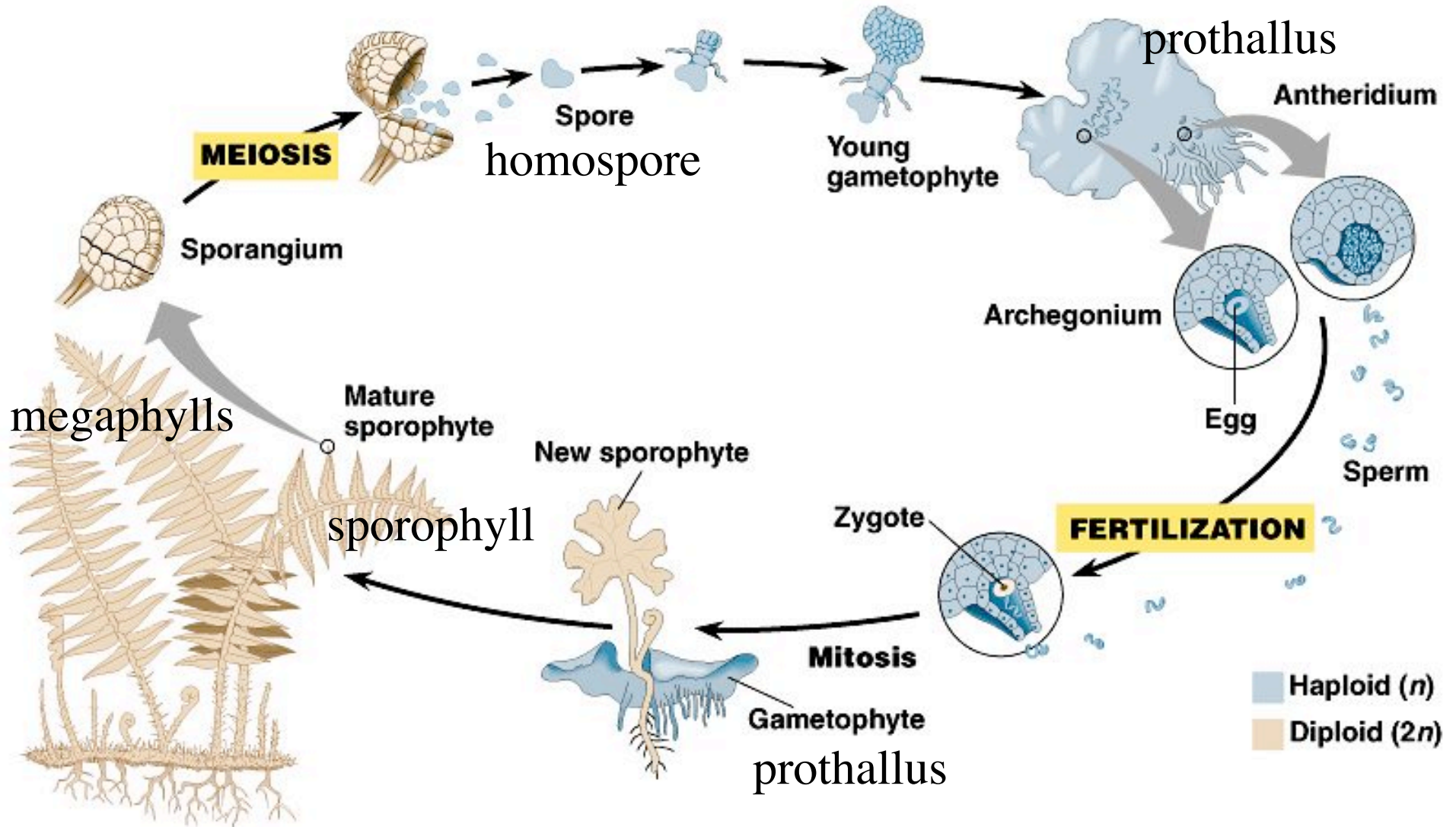
rhizome
(horizontal
stem)

roots



21







24



sporophyll

sori



sporophyll

sori



26

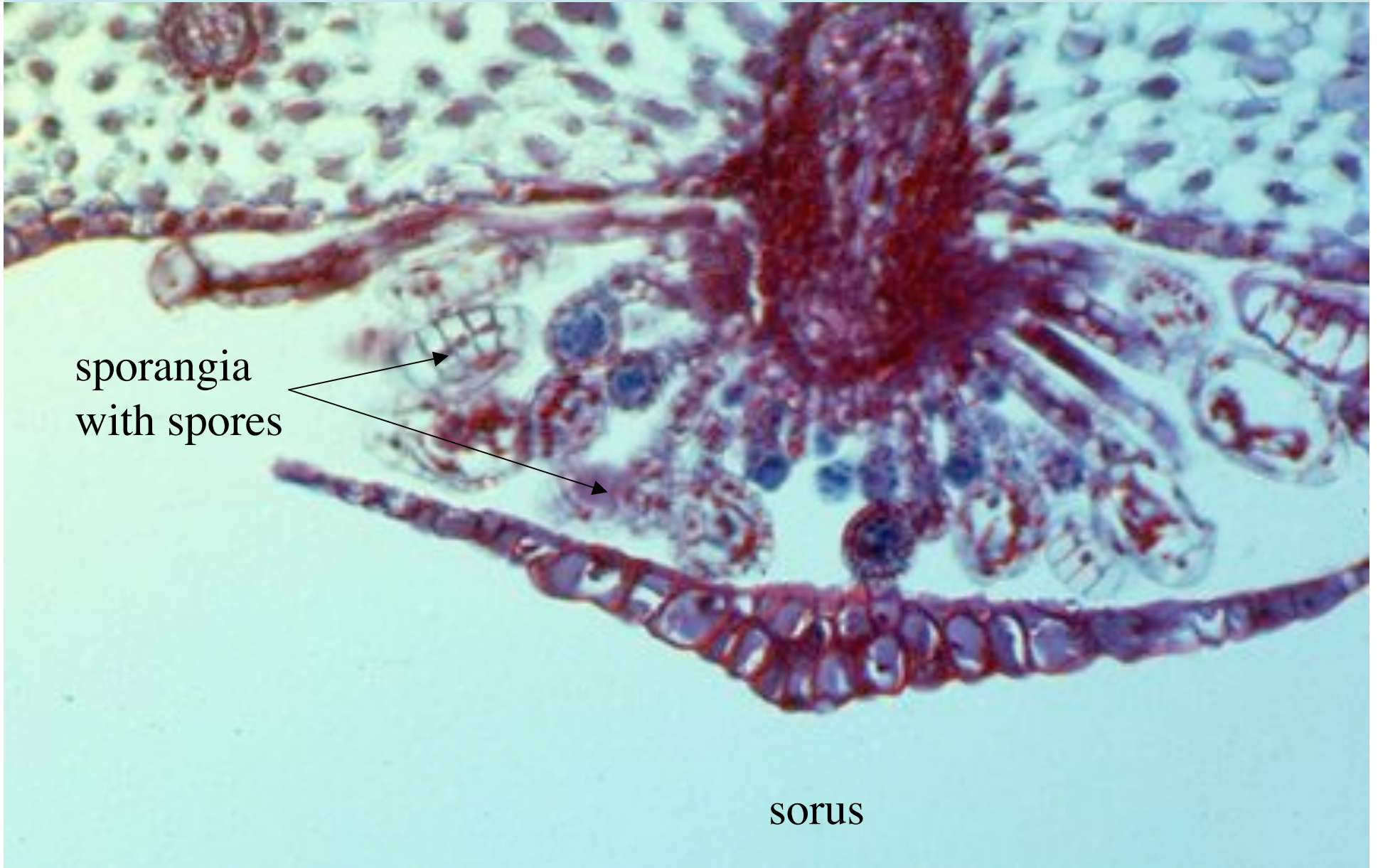


sporophyll

sporangia
with spores

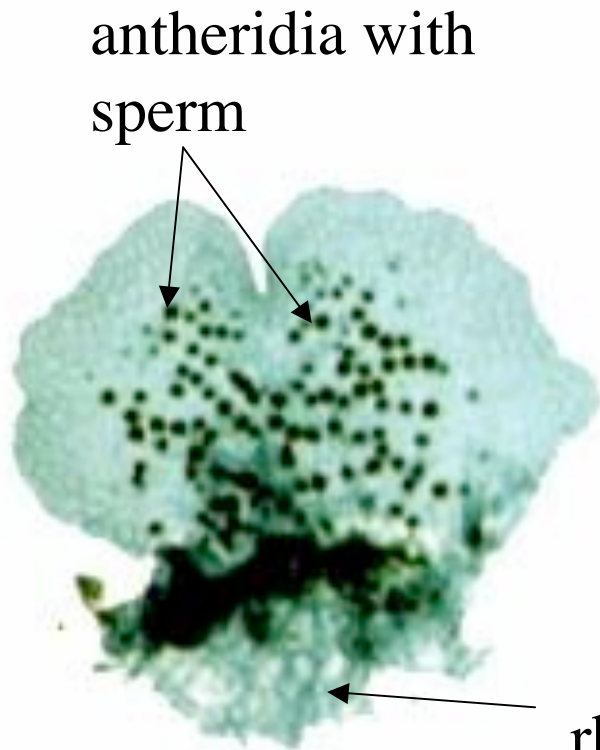
sorus

sorus



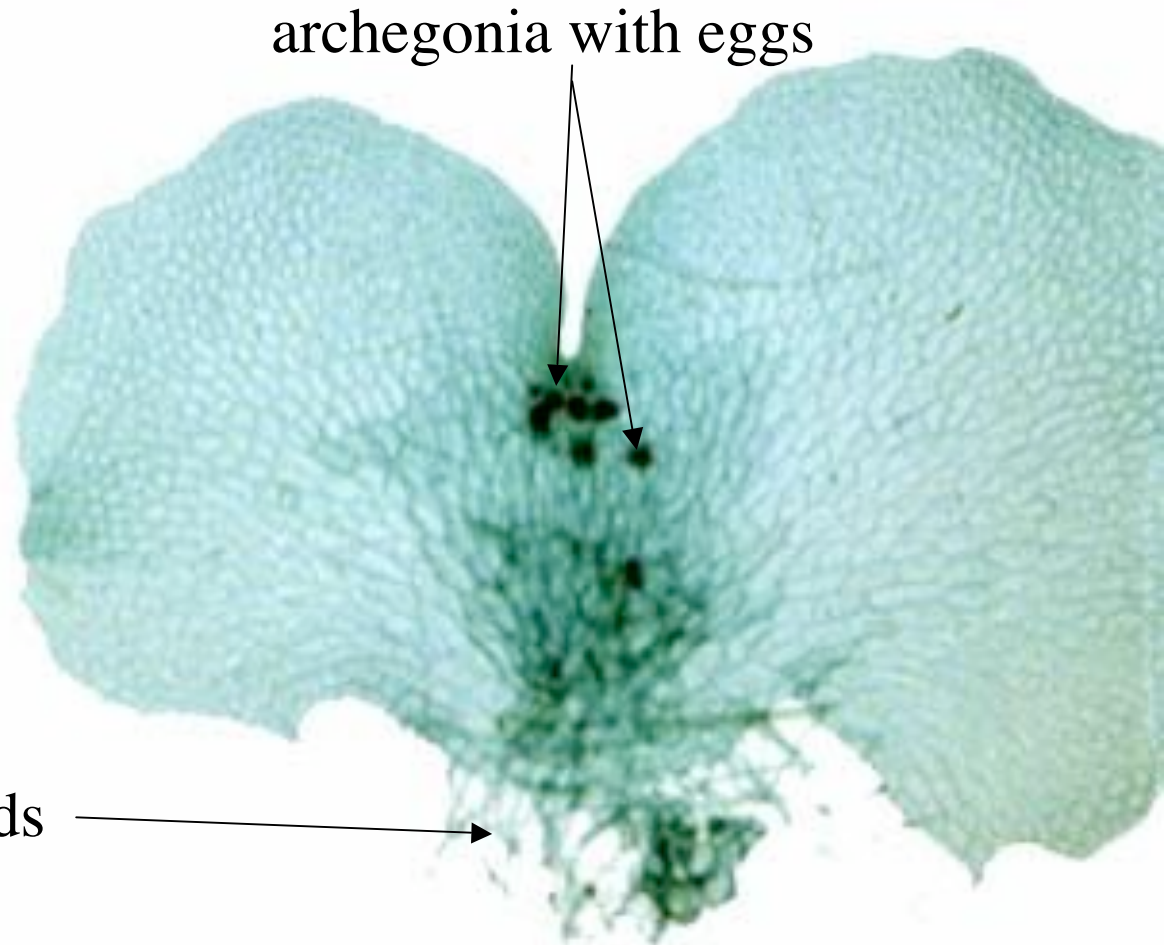
sporangia
with spores

sorus



antheridia with
sperm

male gametophyte
or prothallus



archegonia with eggs

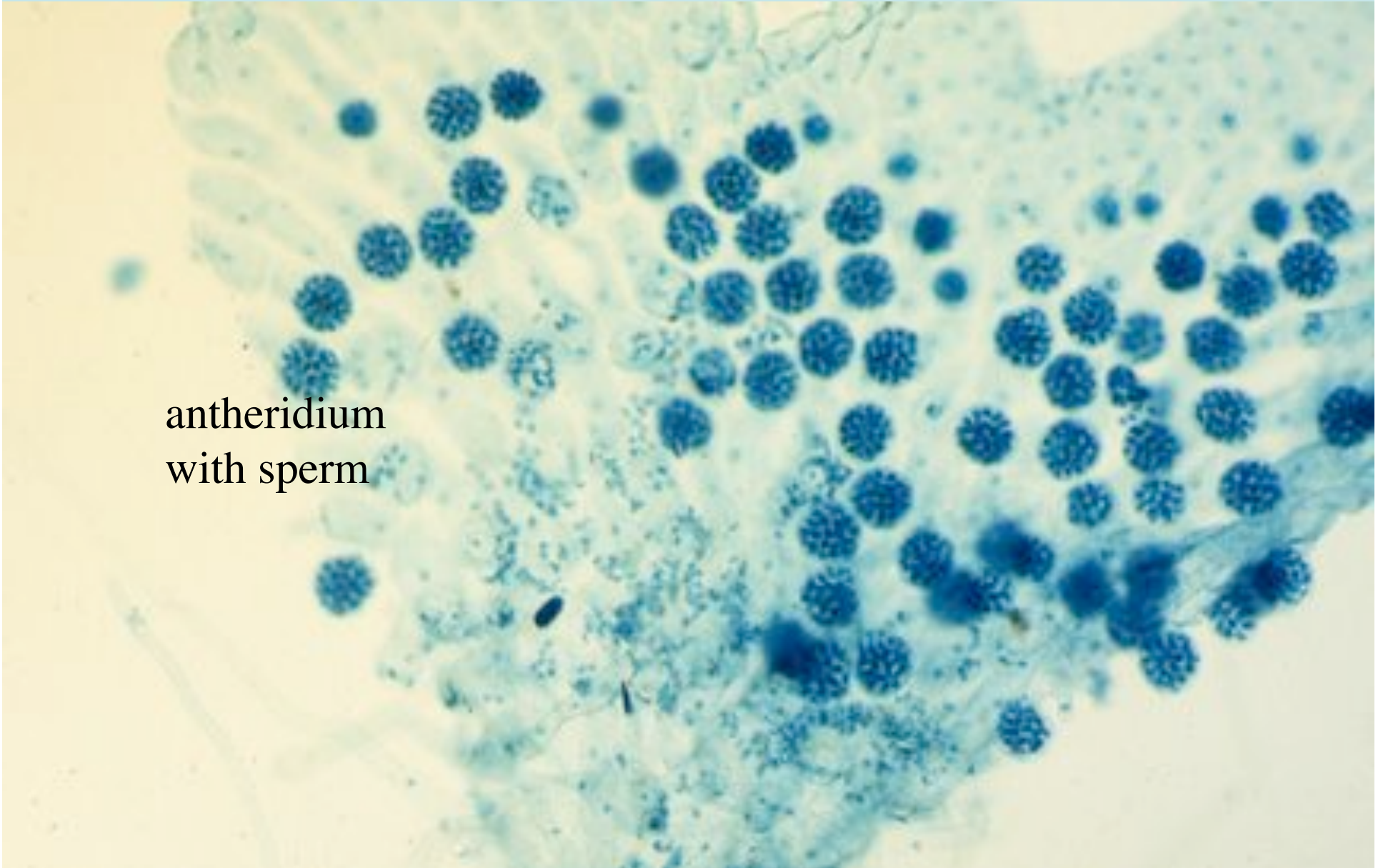
rhizoids

female gametophyte or prothallus

29

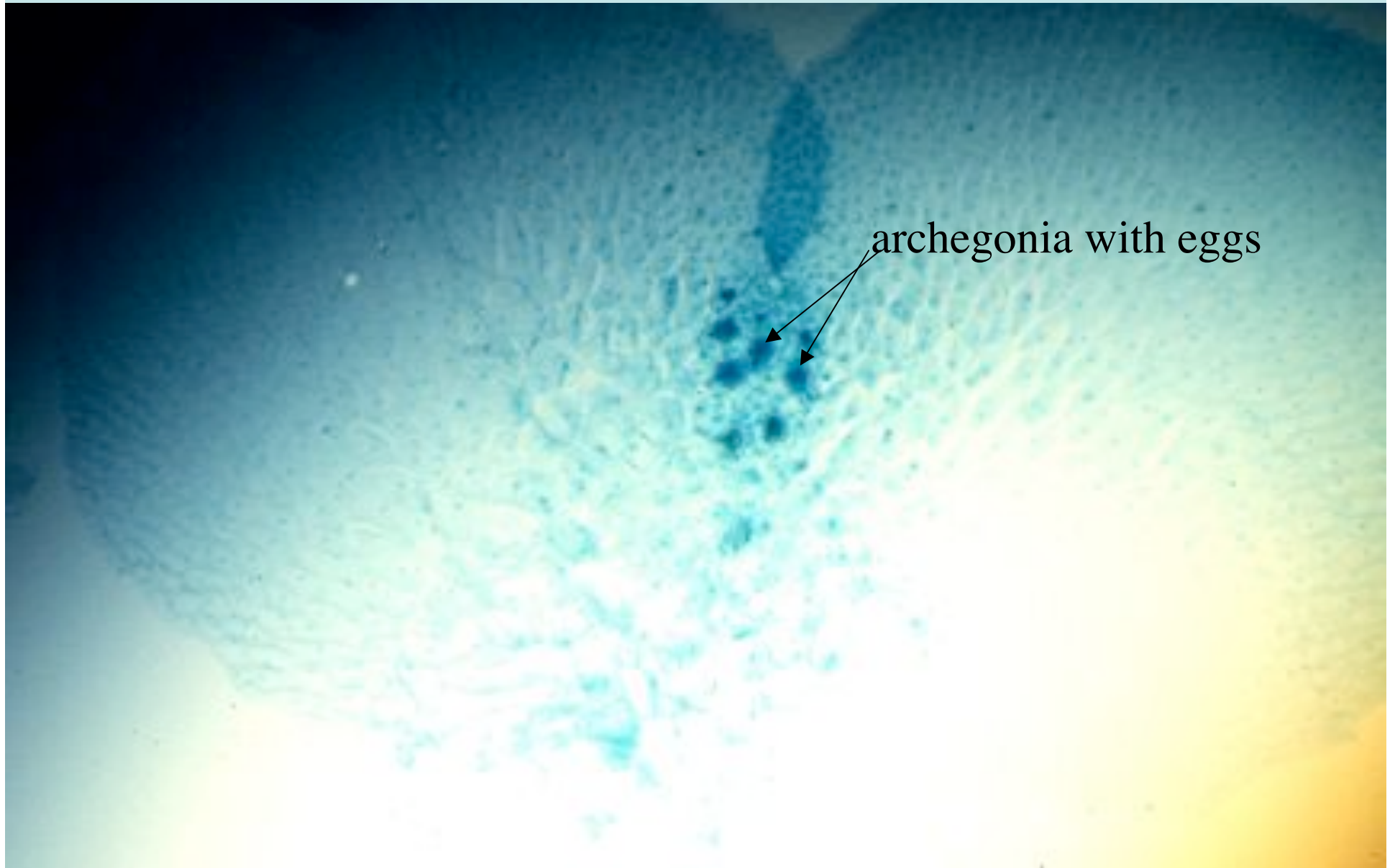
prothallus or gametophyte (male)

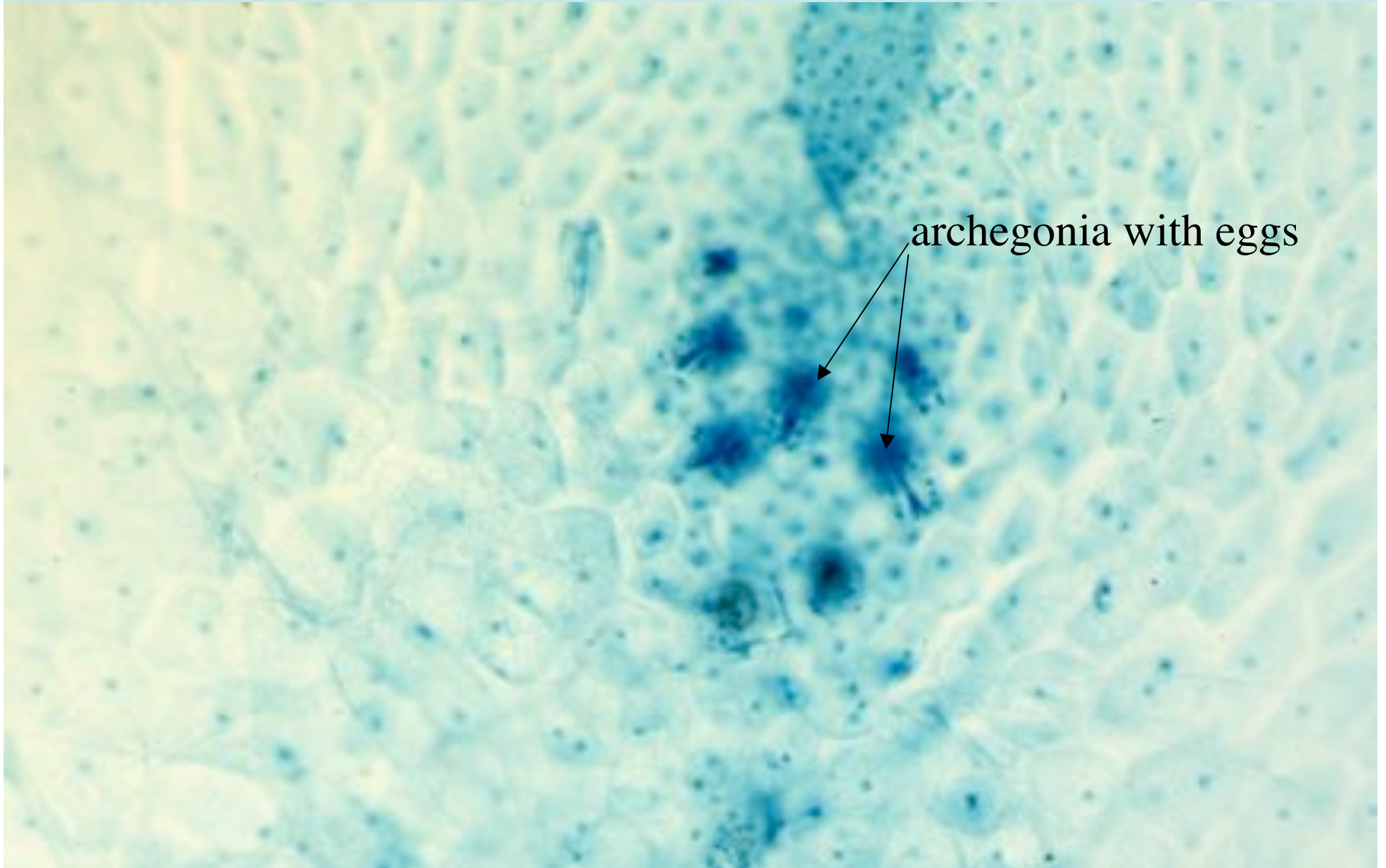
antheridium
with sperm



30

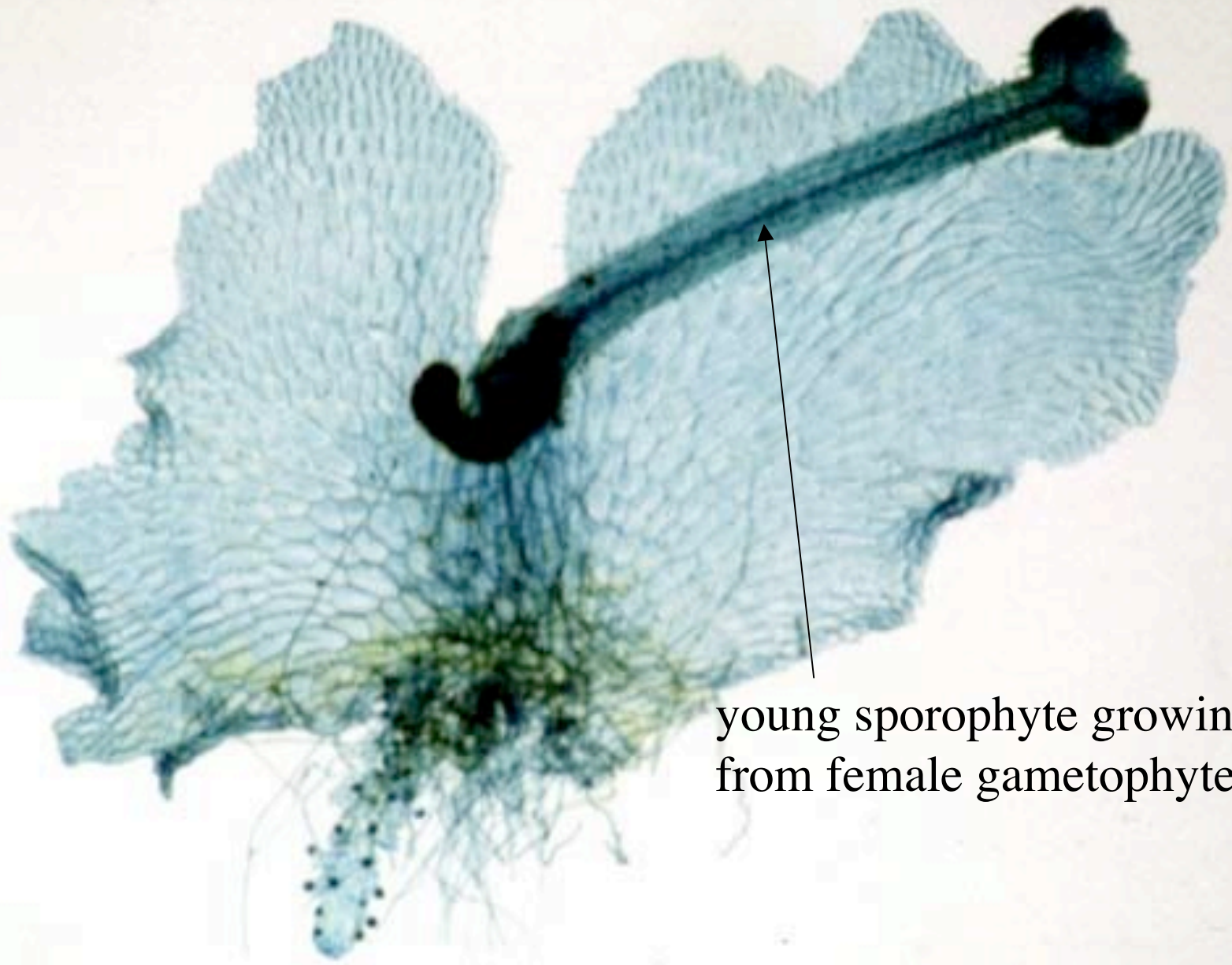
prothallus or gametophyte (female)





archegonia with eggs

32



young sporophyte growing
from female gametophyte