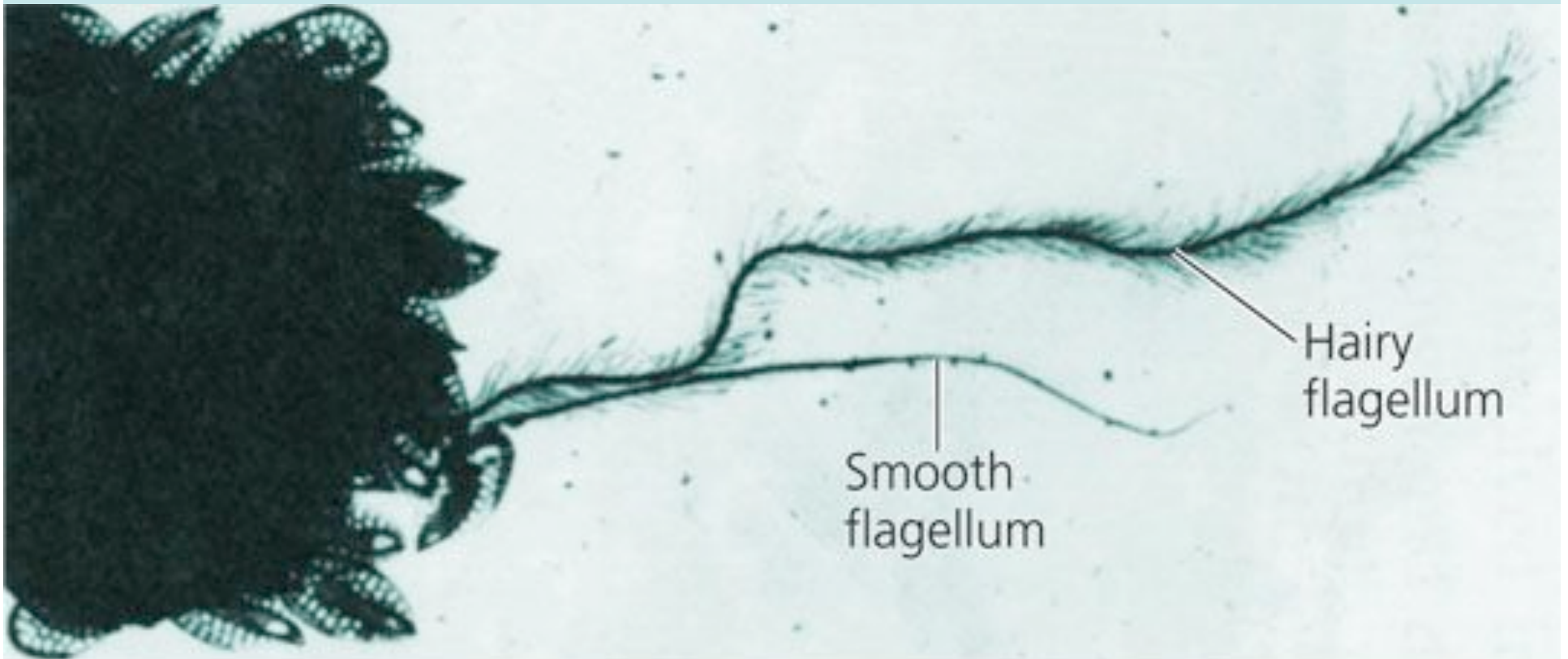
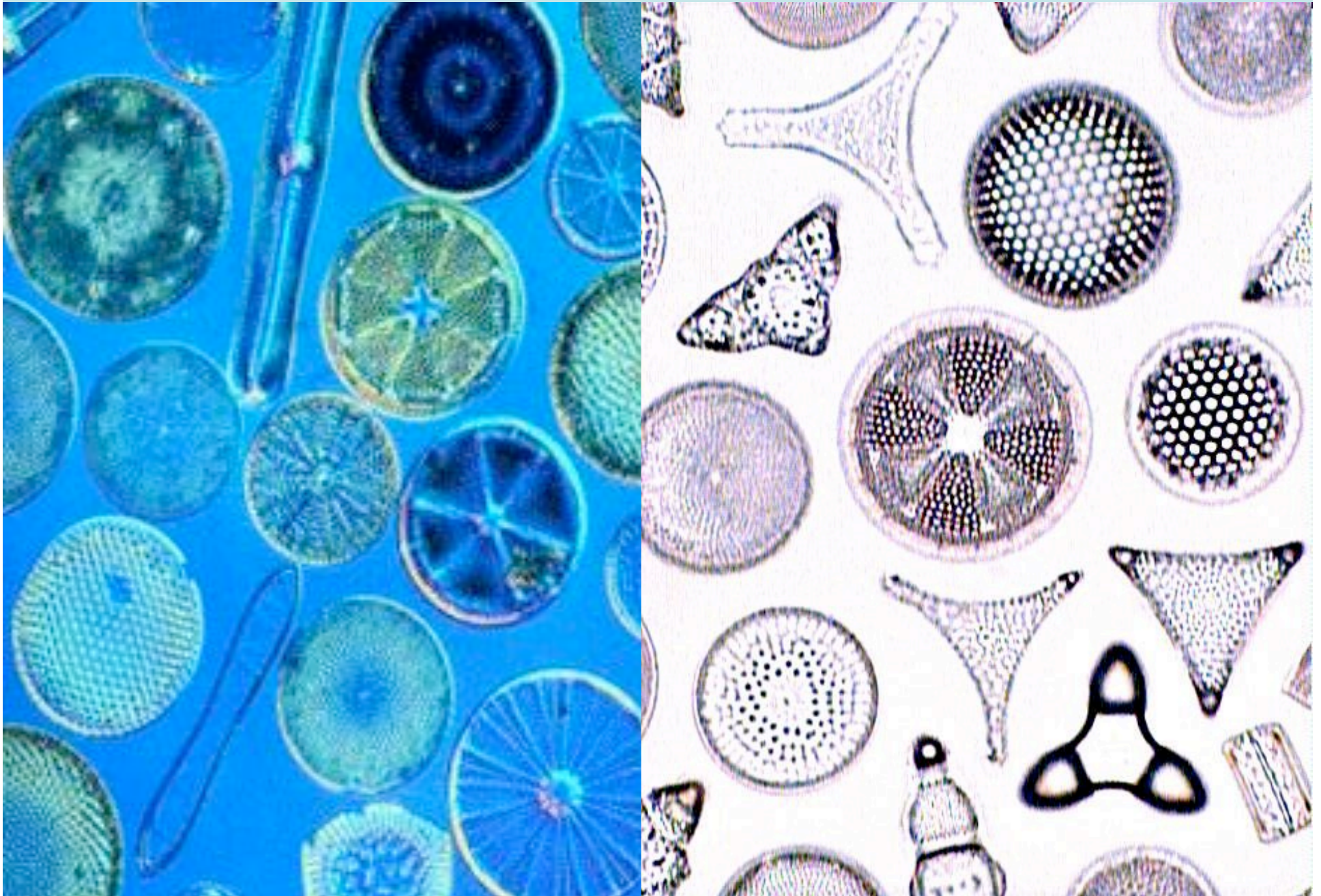


2

Hairy flagellum of stramenophile p. 558

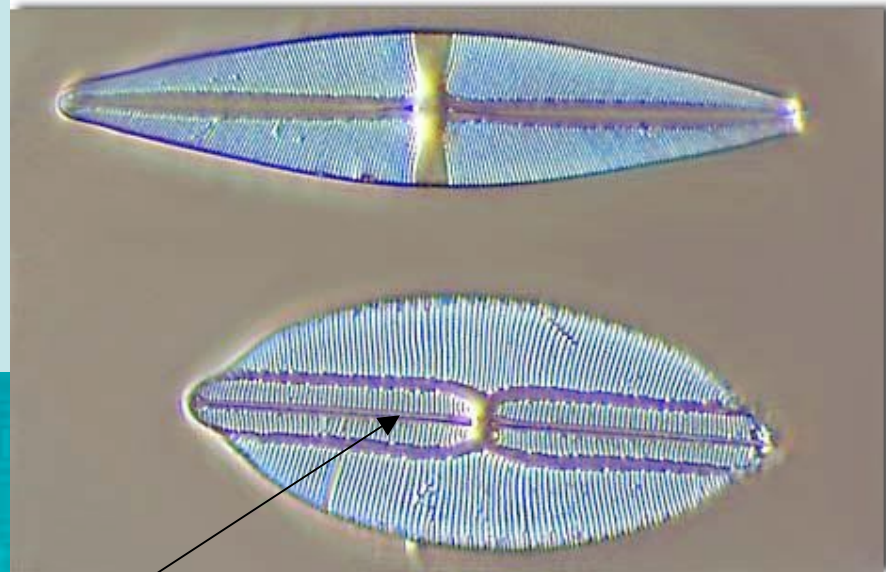


5 μm

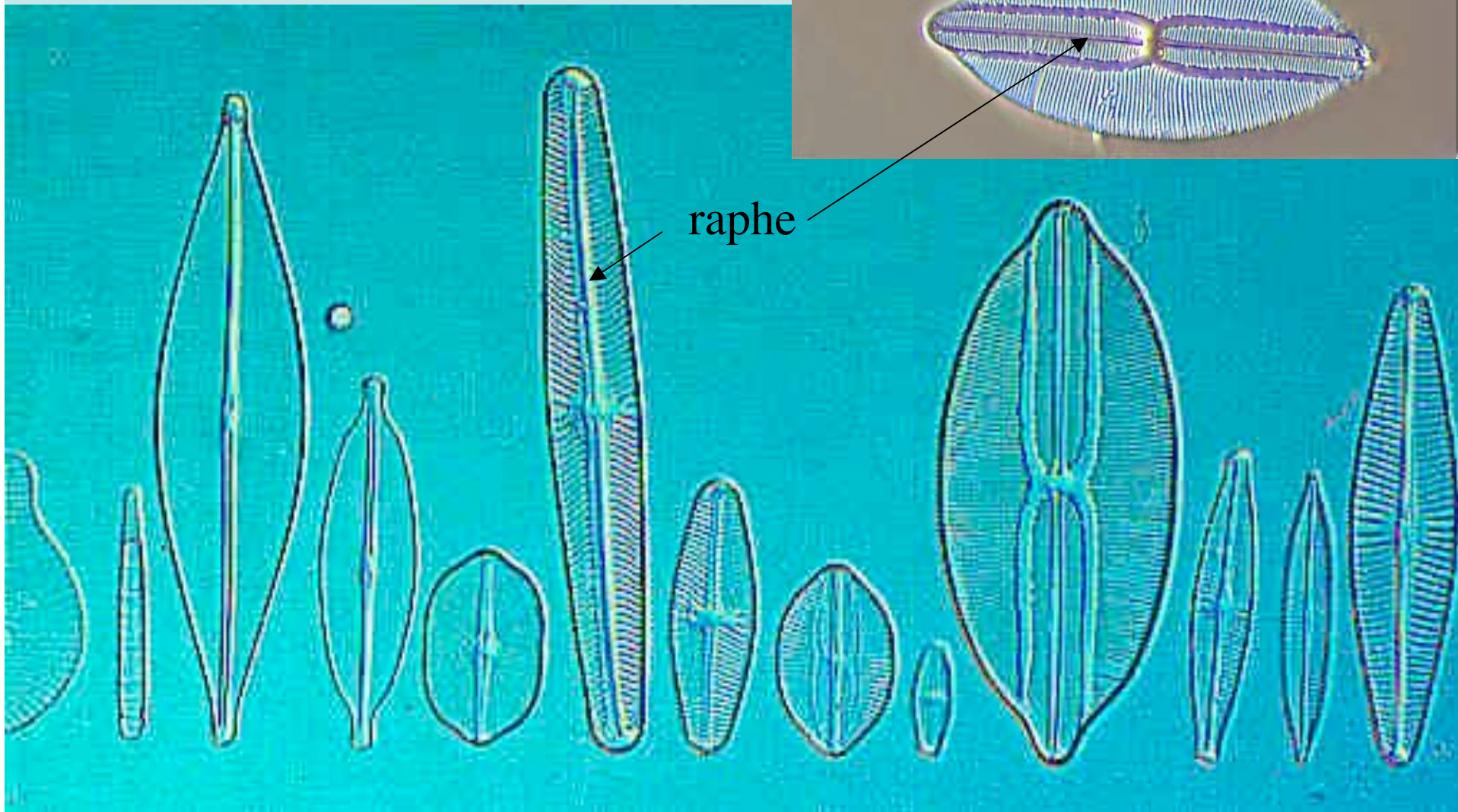


4

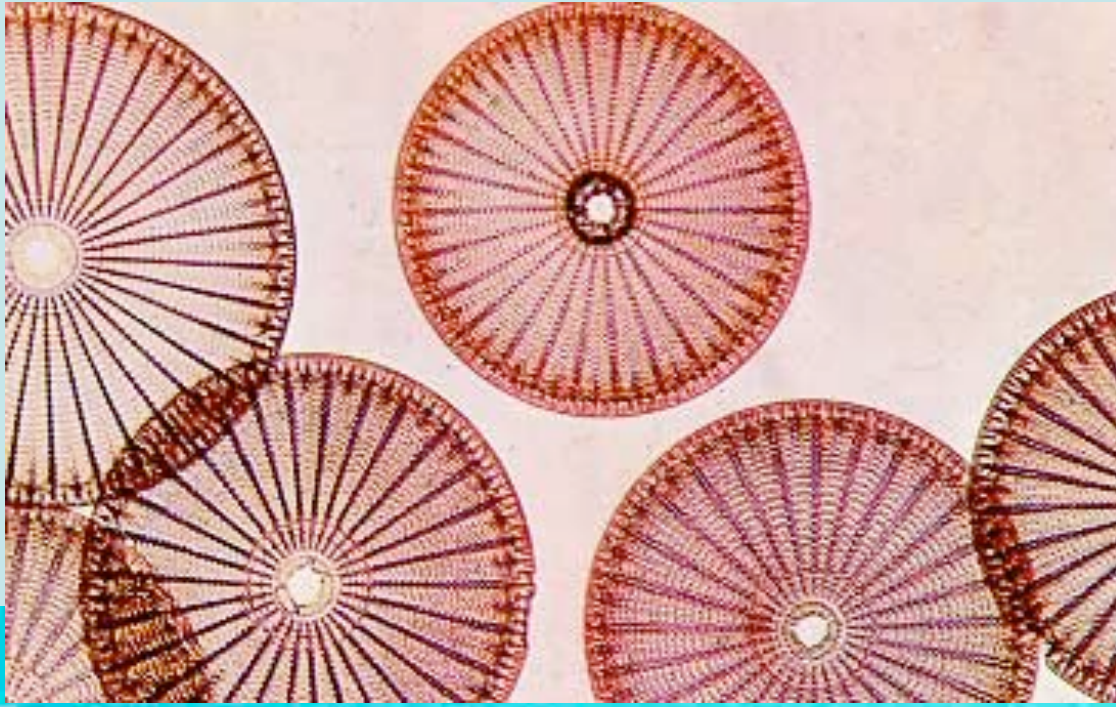
Pennate diatoms



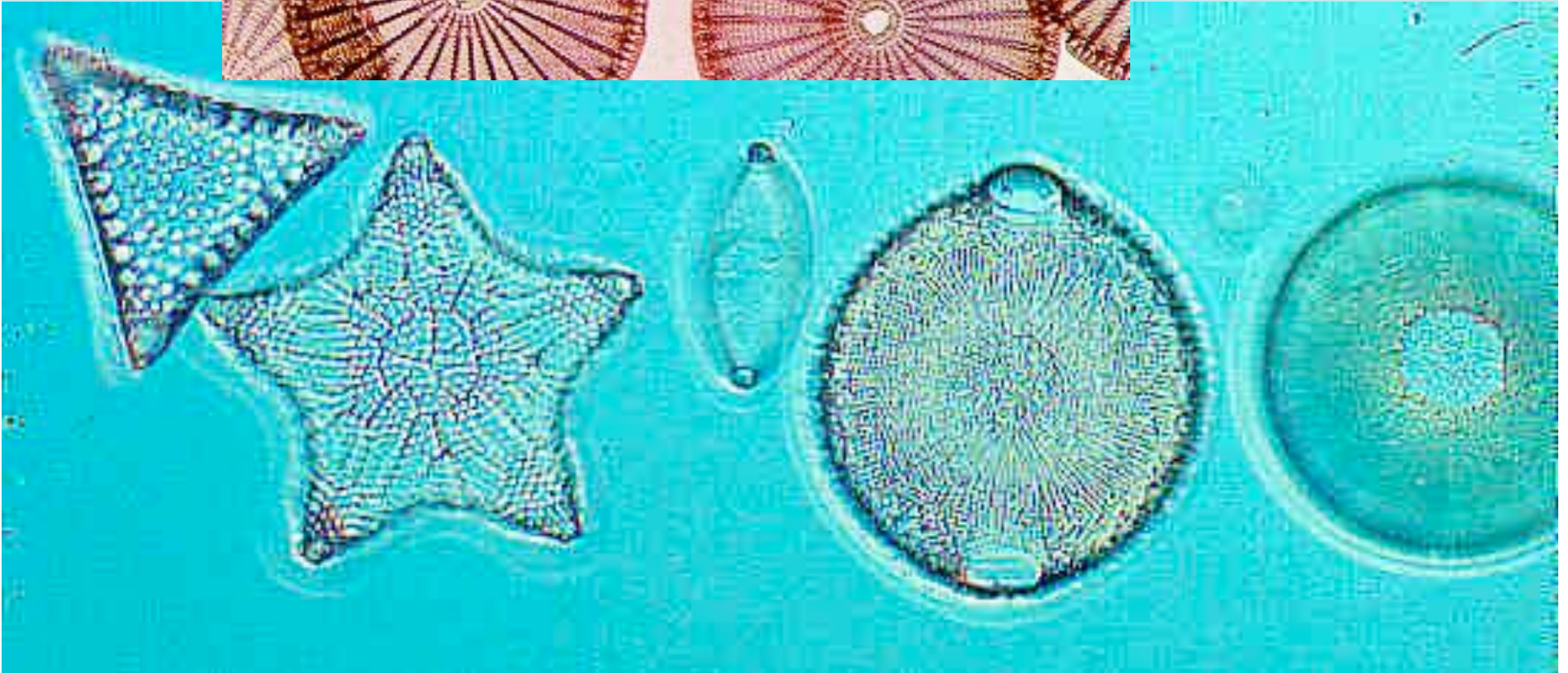
raphe



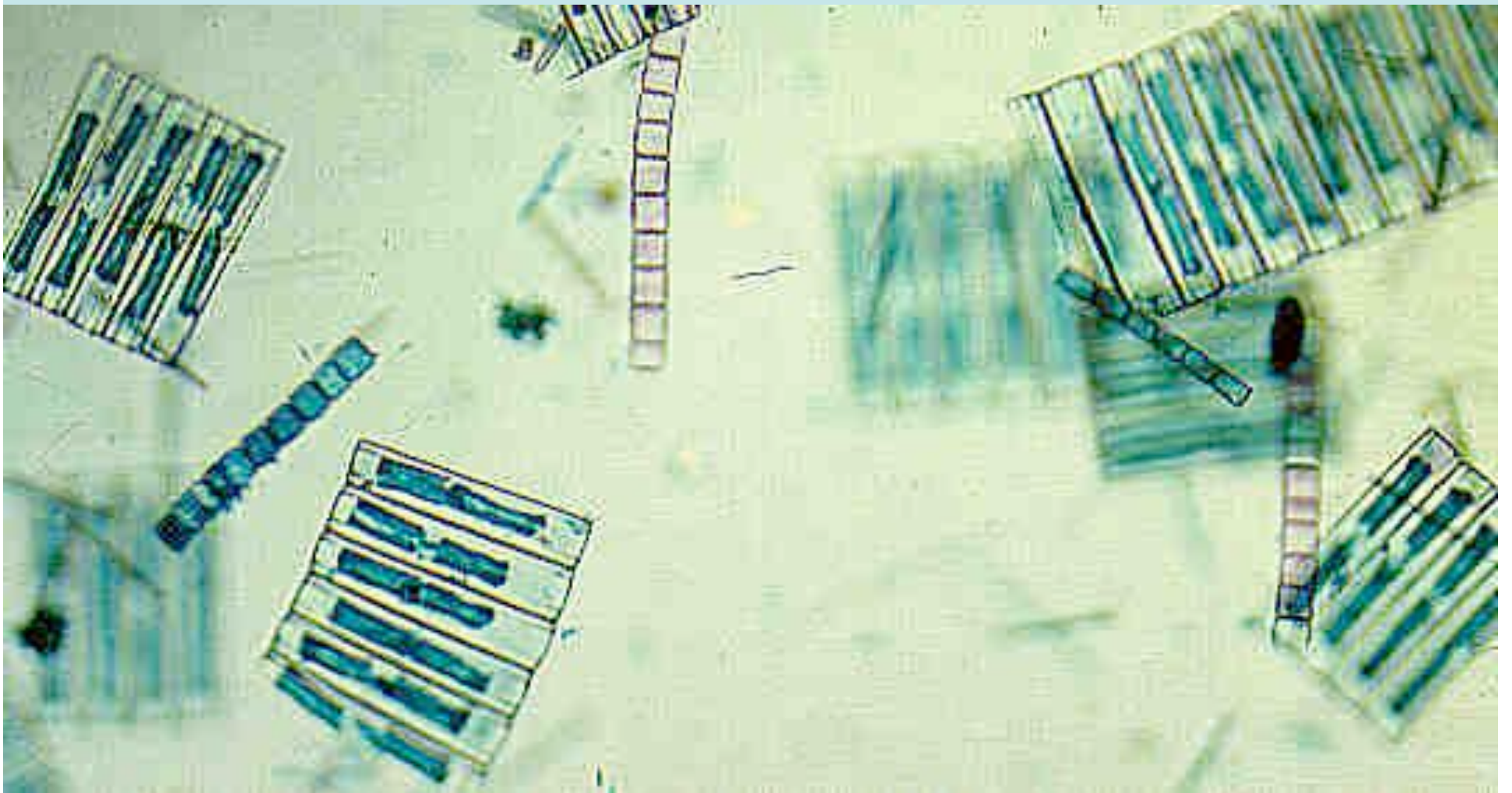
5

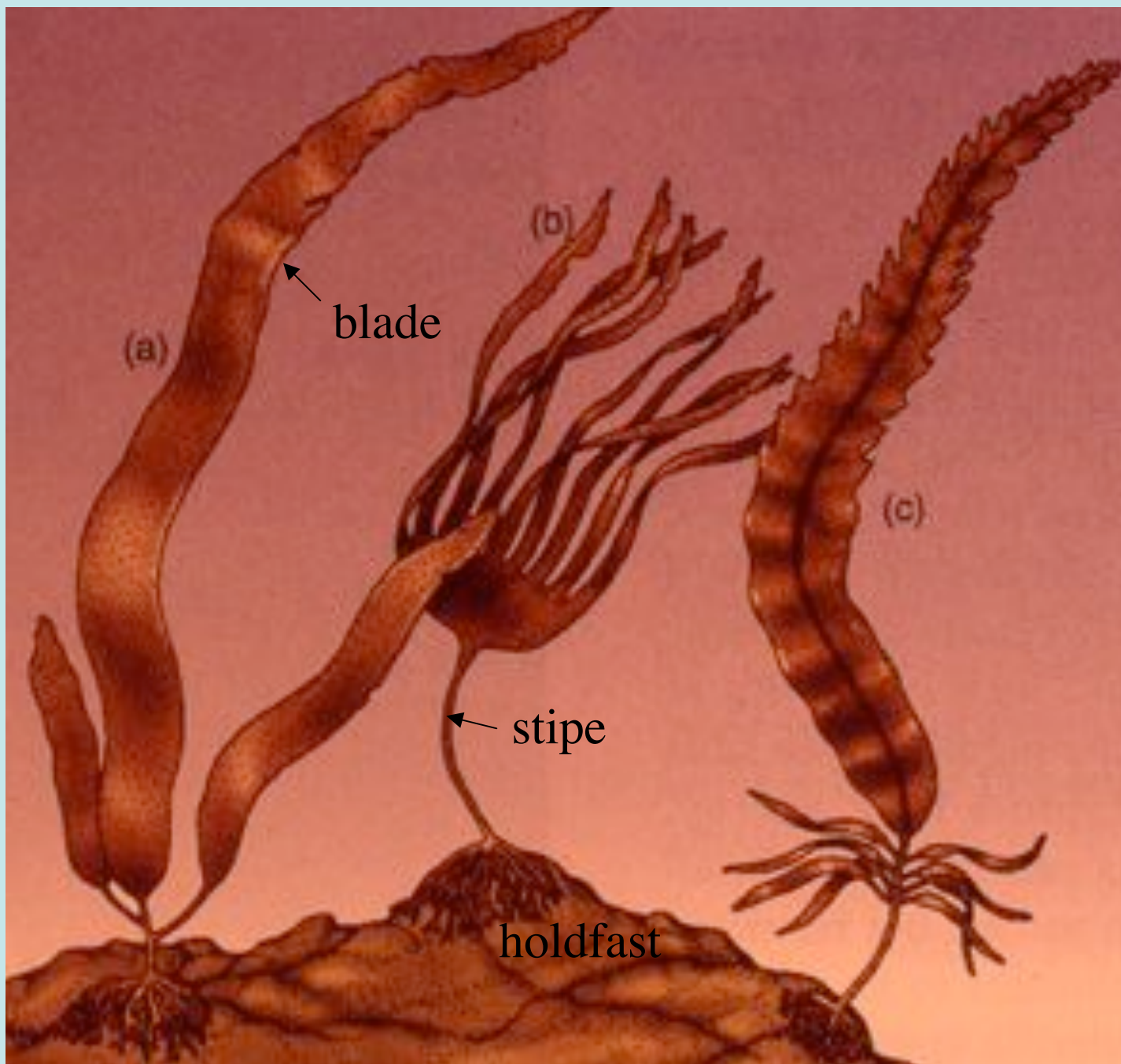


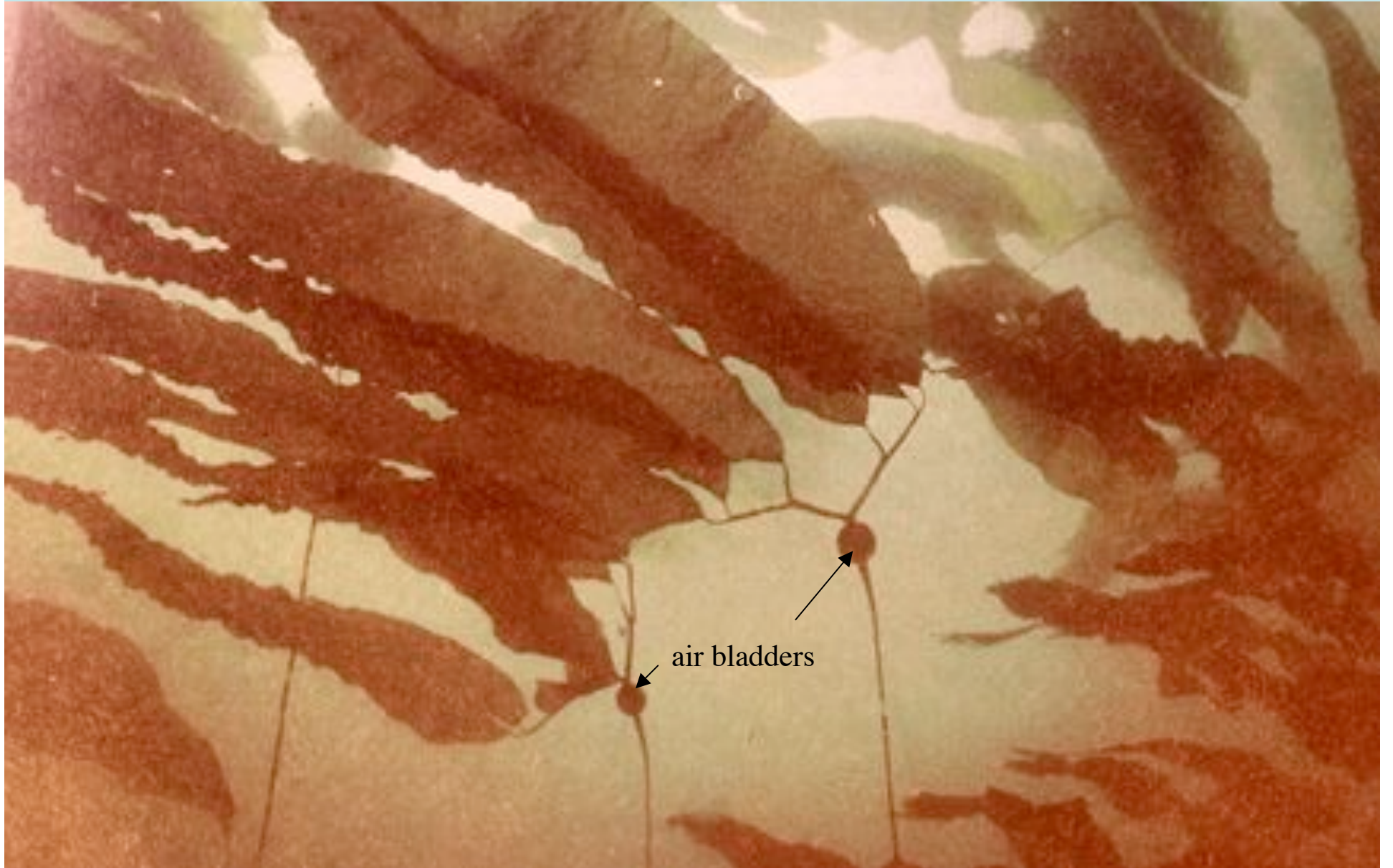
Centric diatoms



6







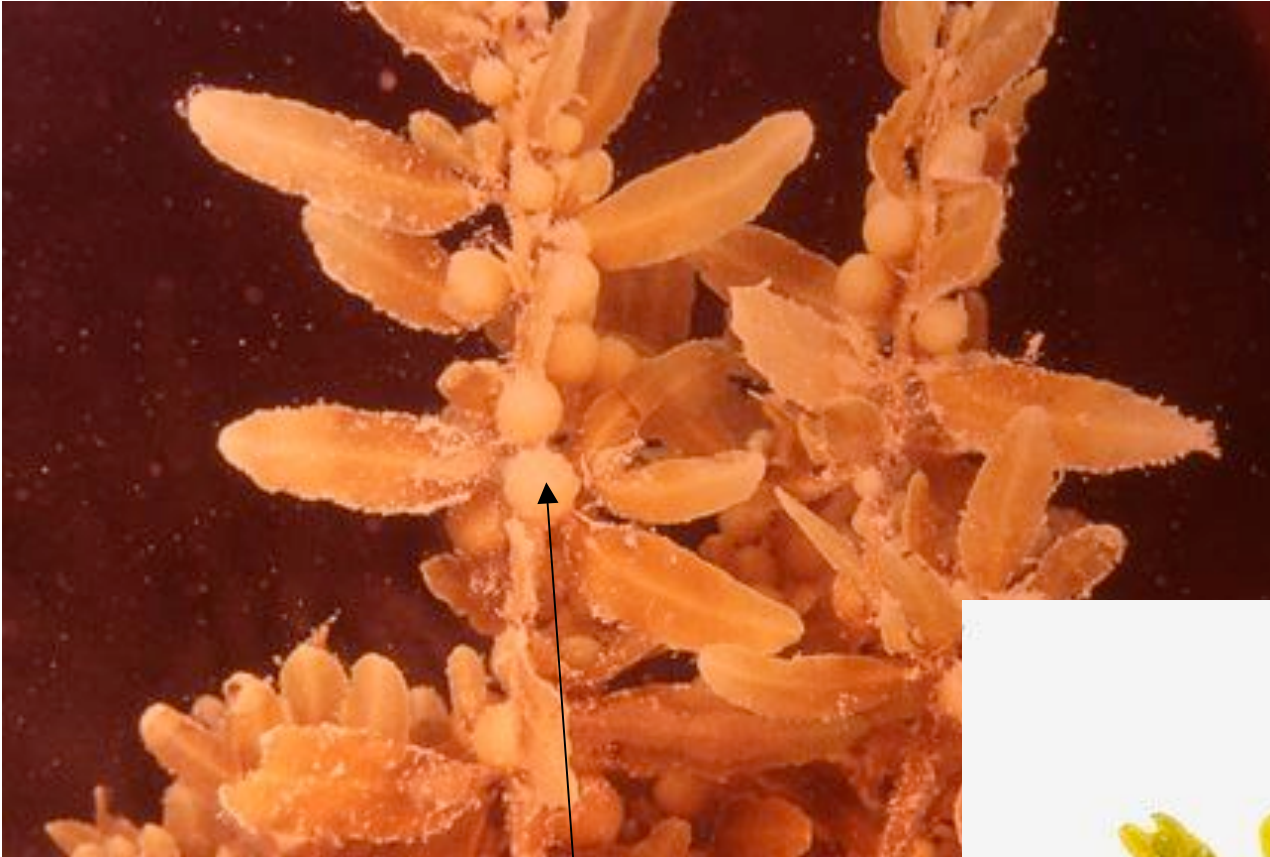
air bladders

9



10

Sargassum

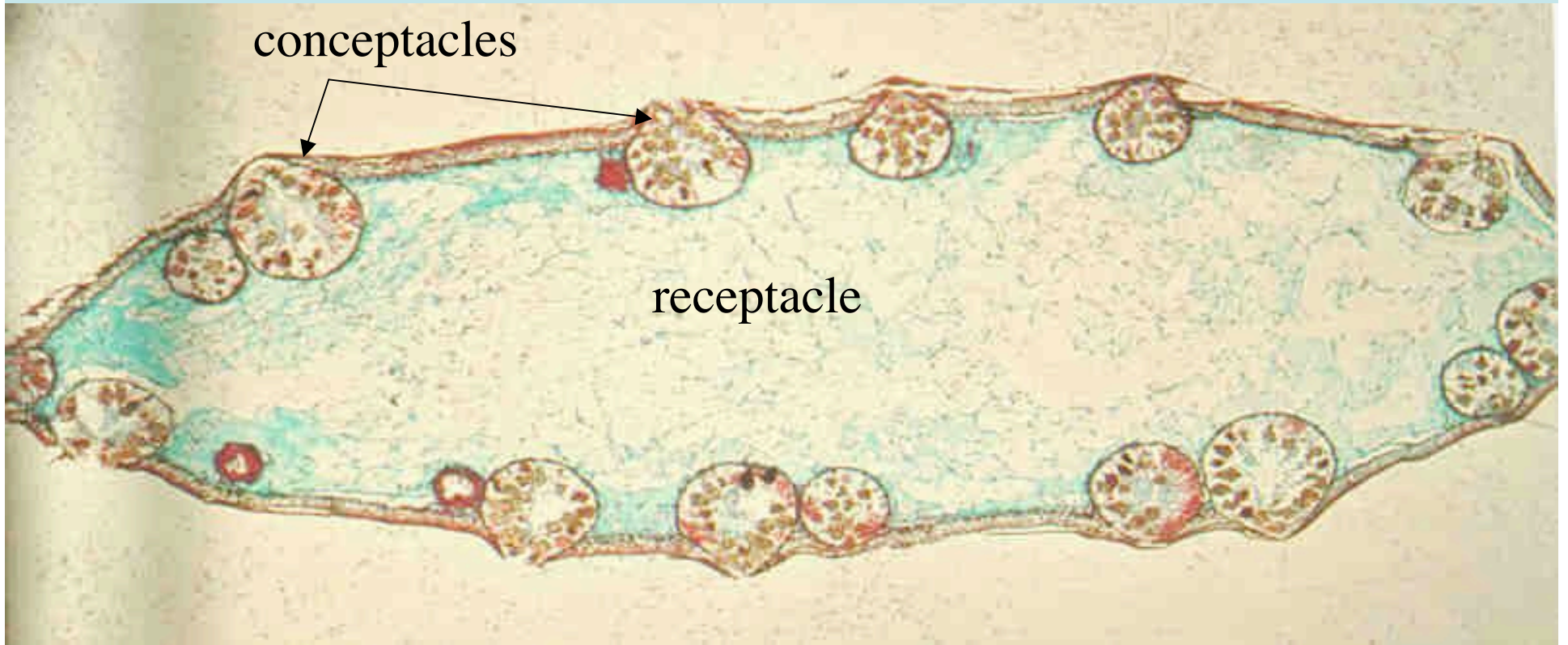


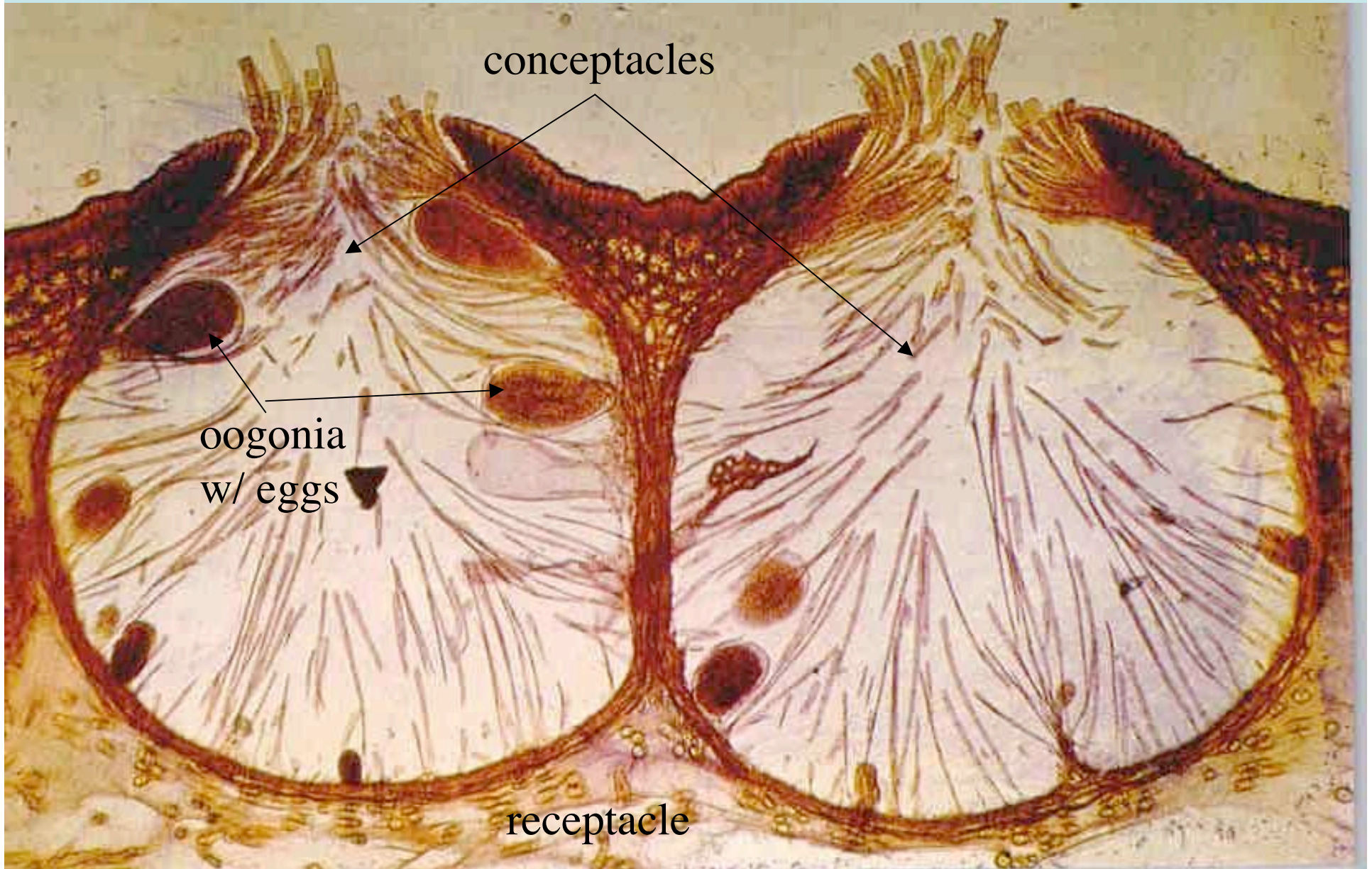
air bladders

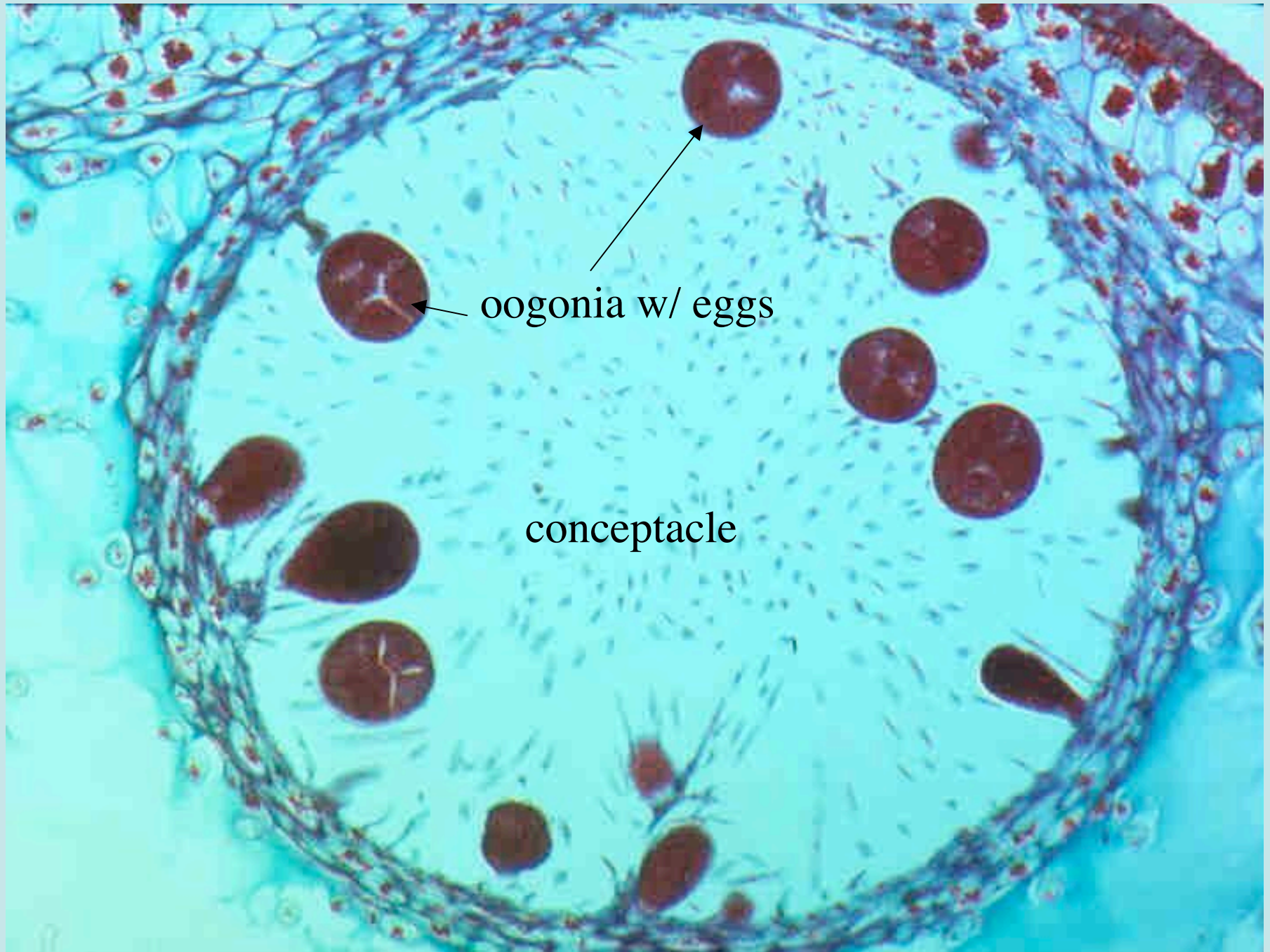


Fucus

11



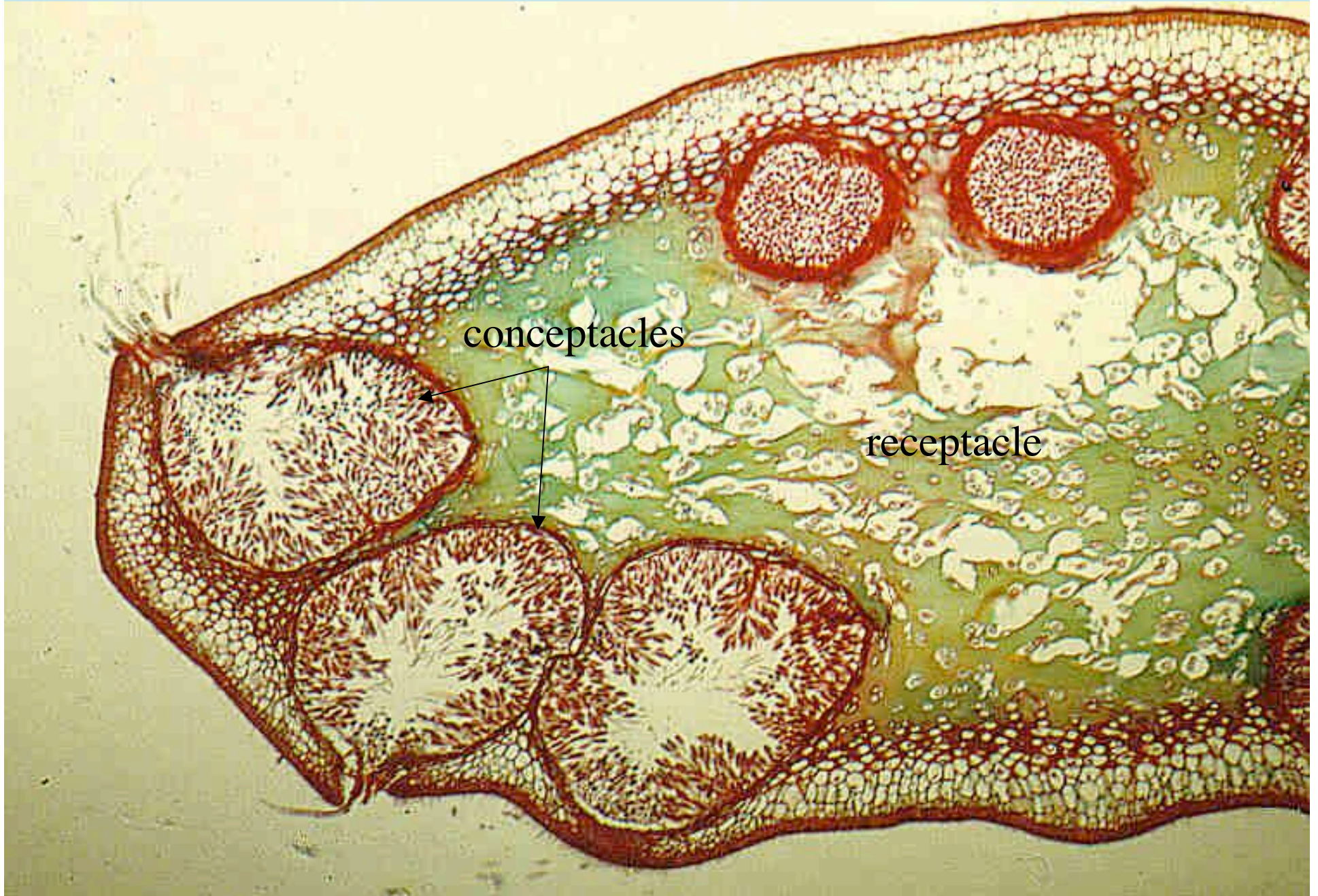


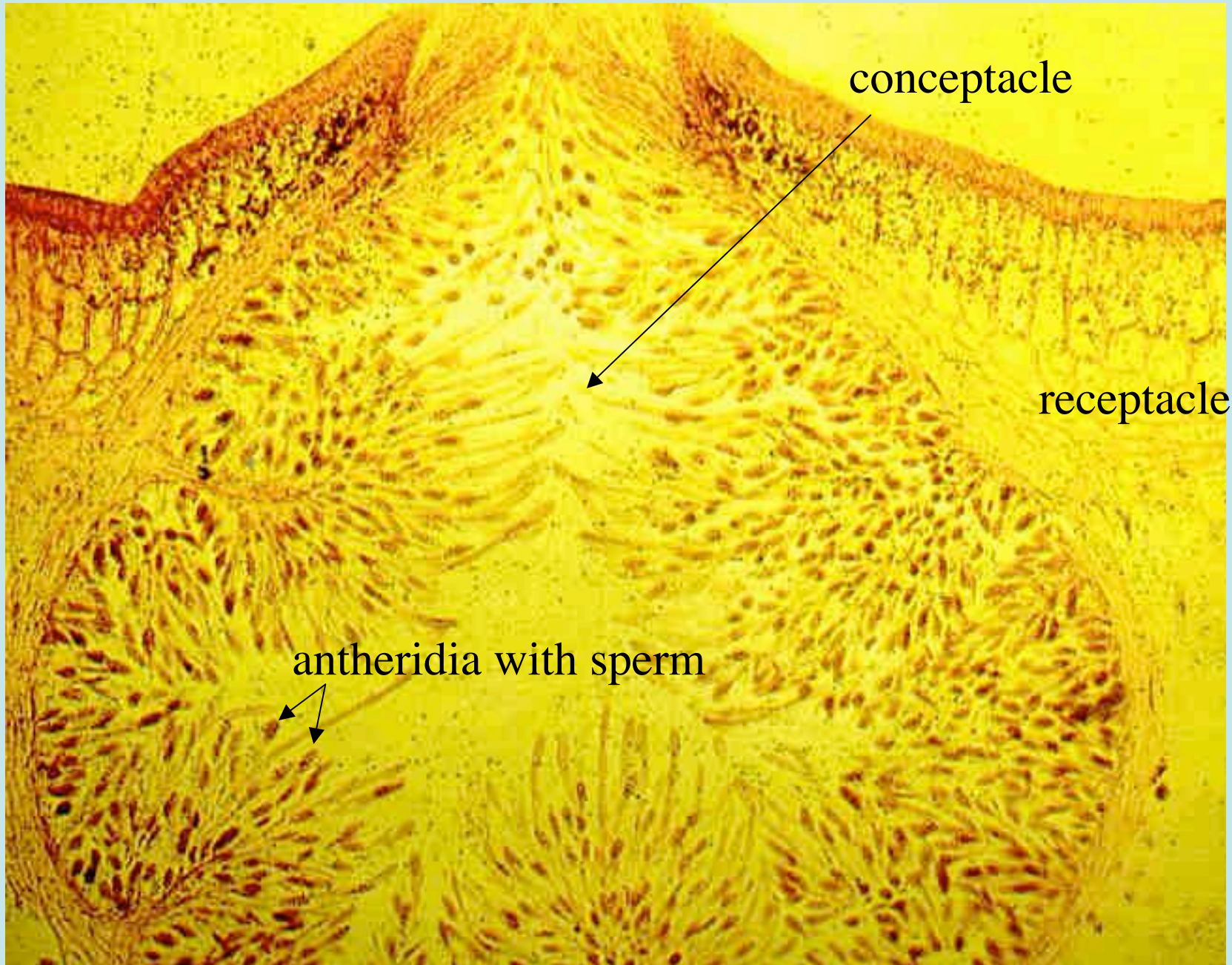


oögonia w/ eggs

conceptacle

14

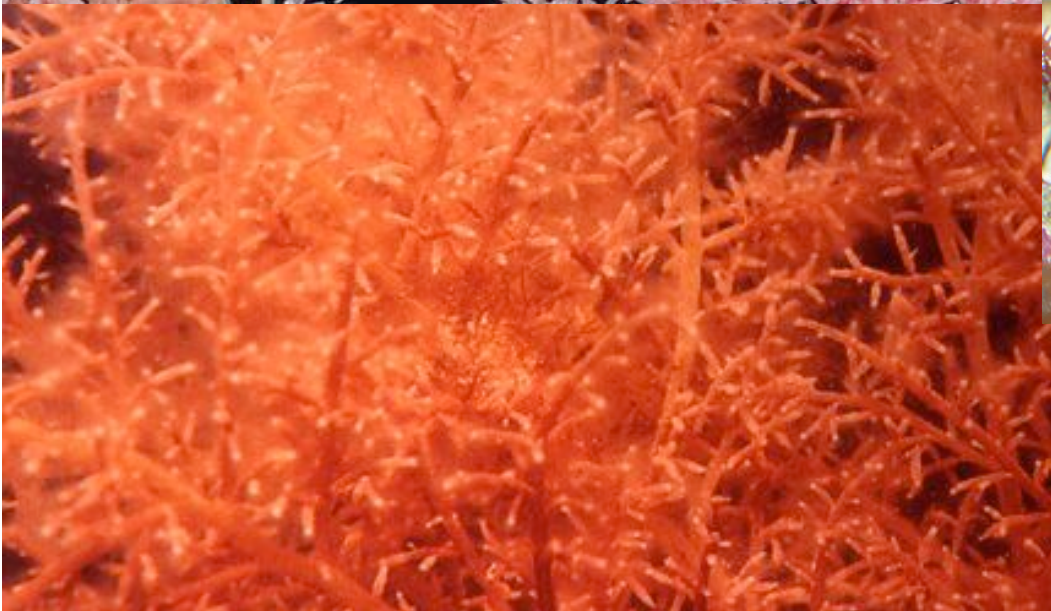


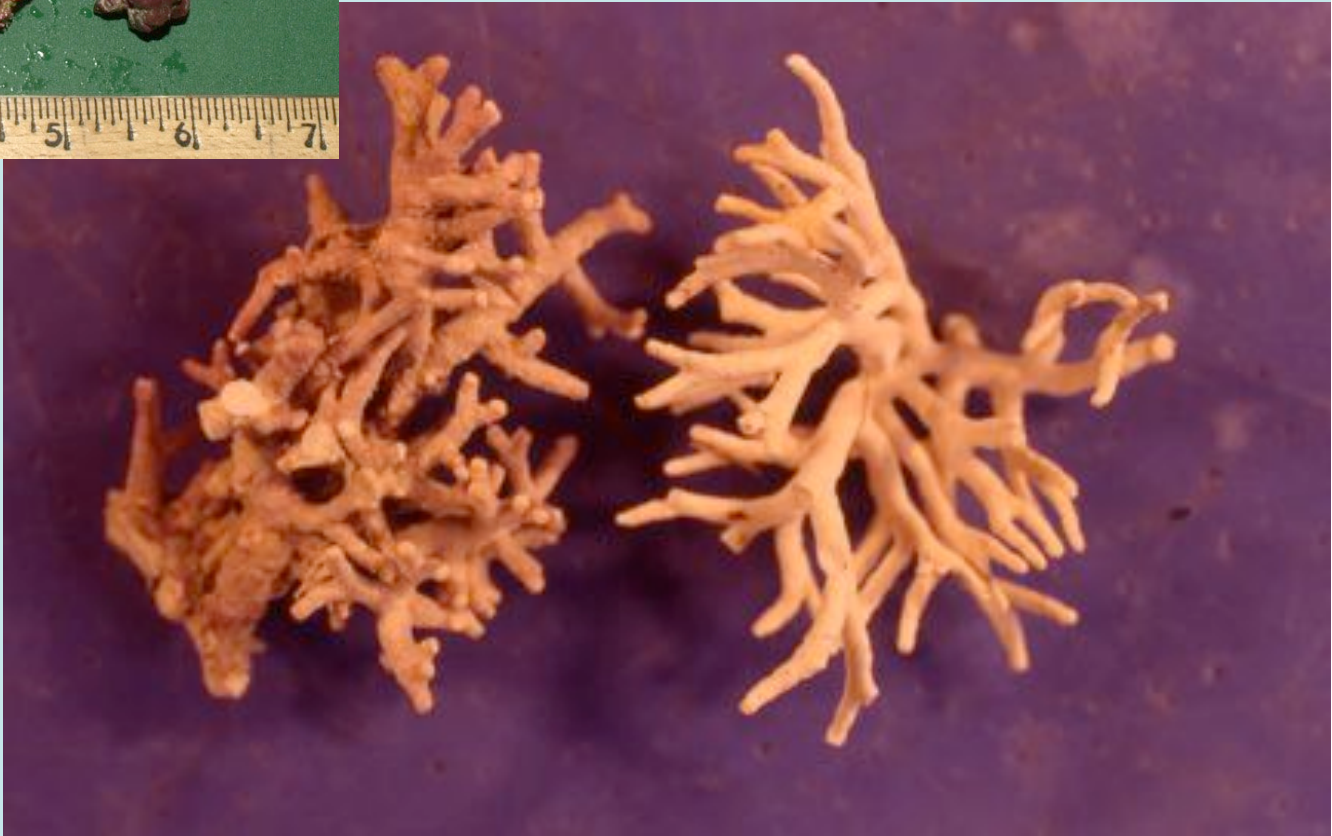


conceptacle

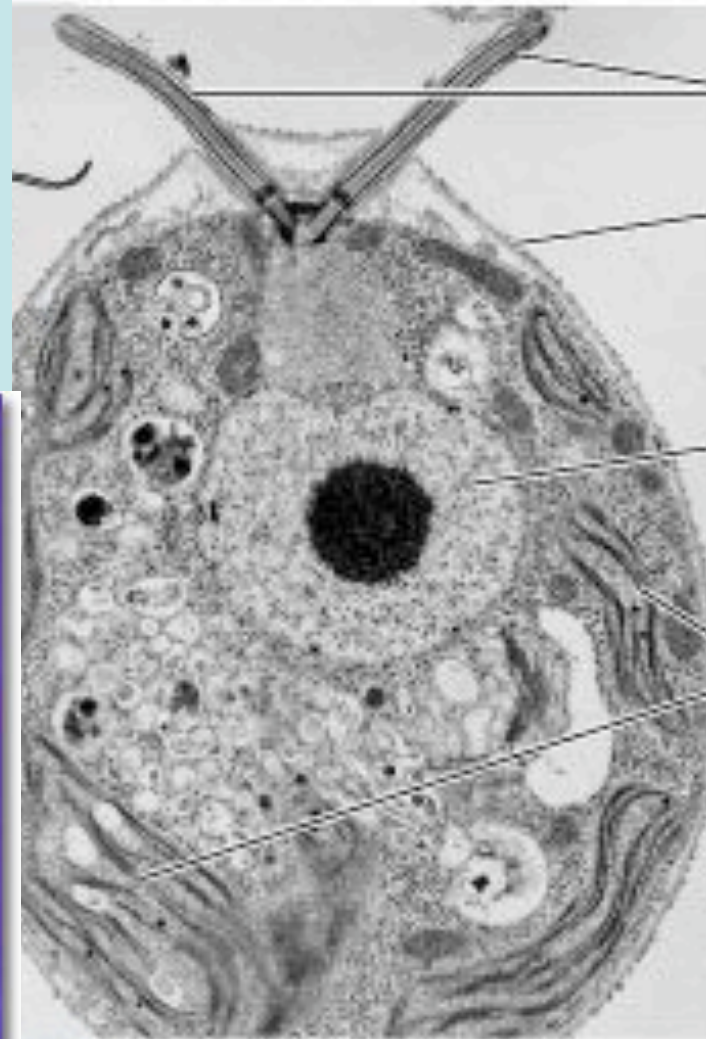
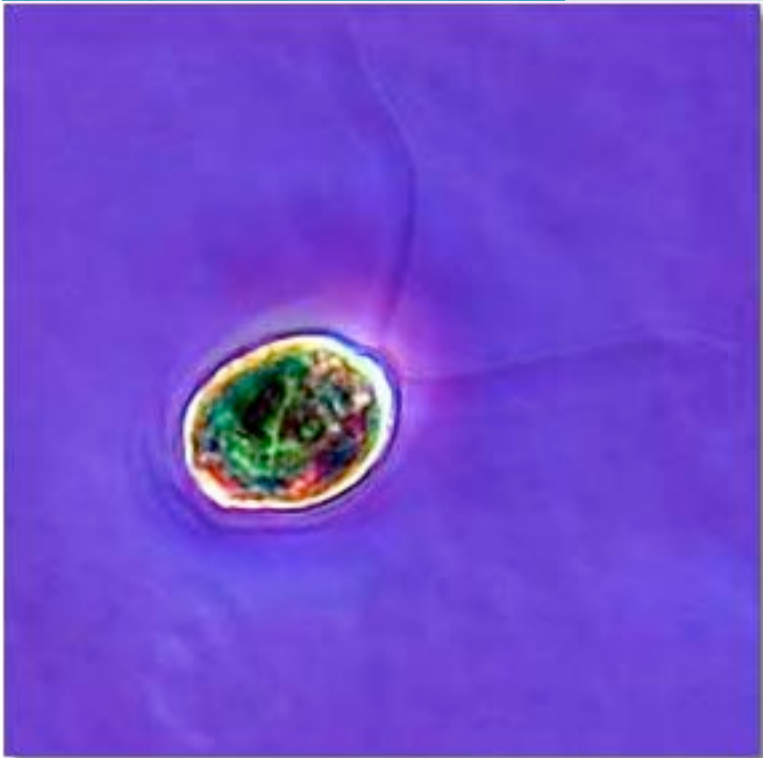
receptacle

antheridia with sperm





18



Flagella

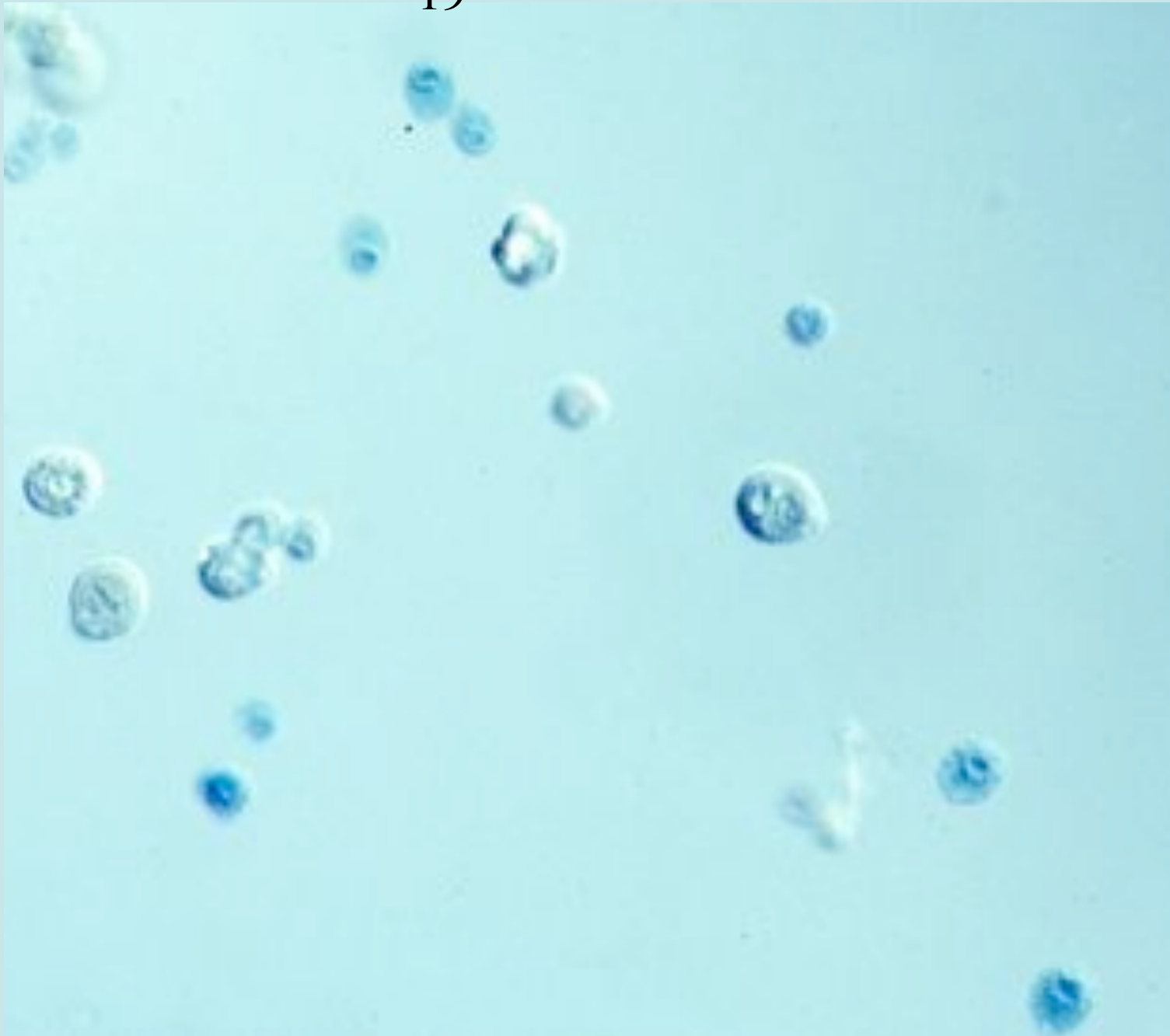
Cell wall

Nucleus

**Regions of
single
chloroplast**

1 μm

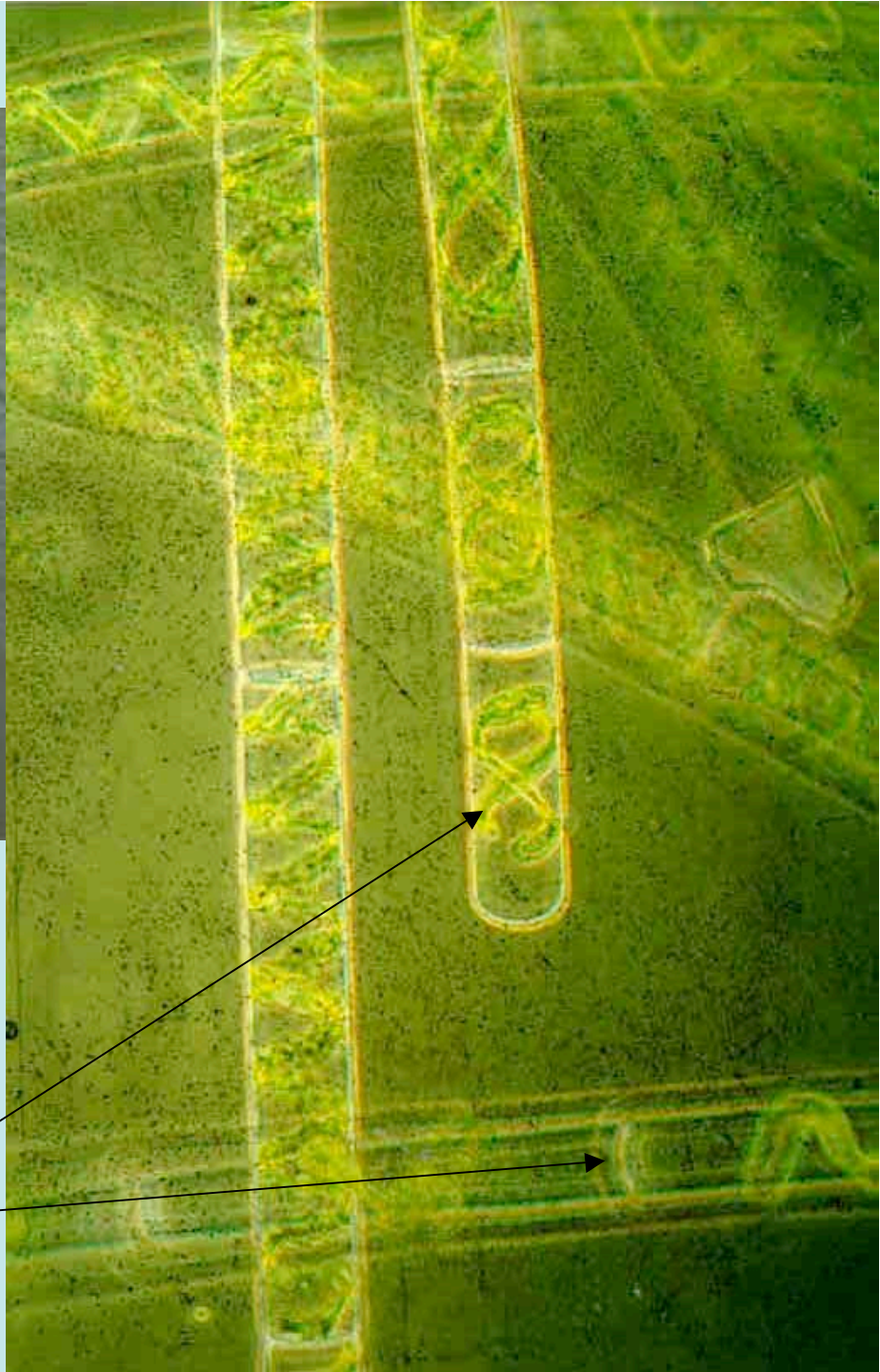
19





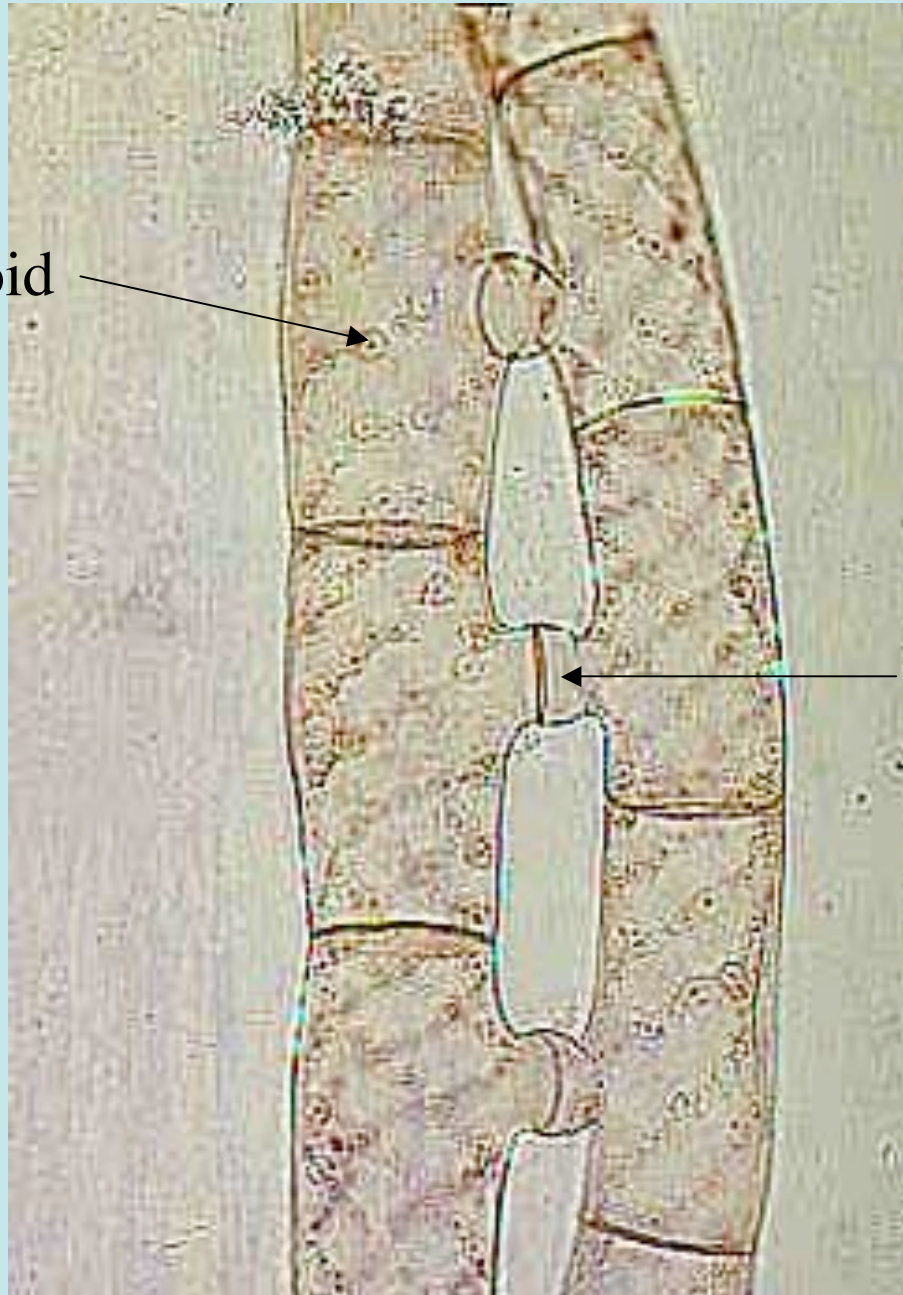
Spirogyra mat

chloroplasts

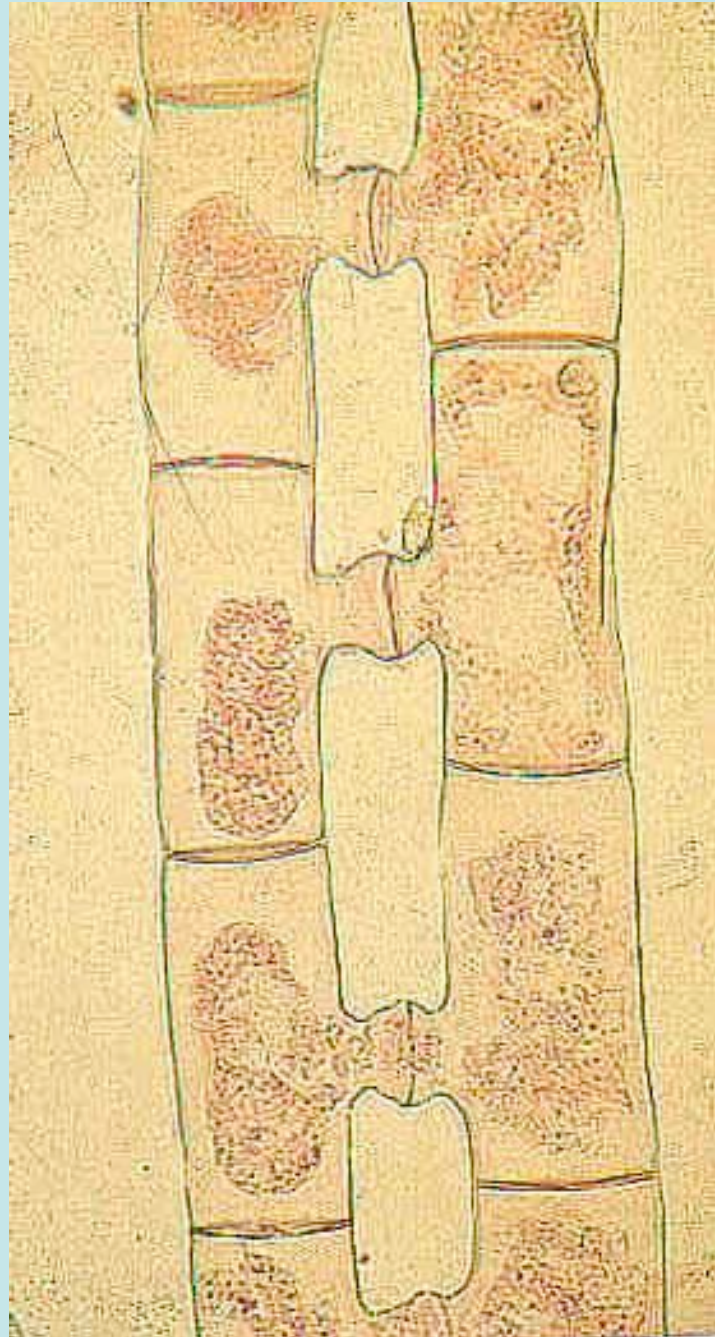


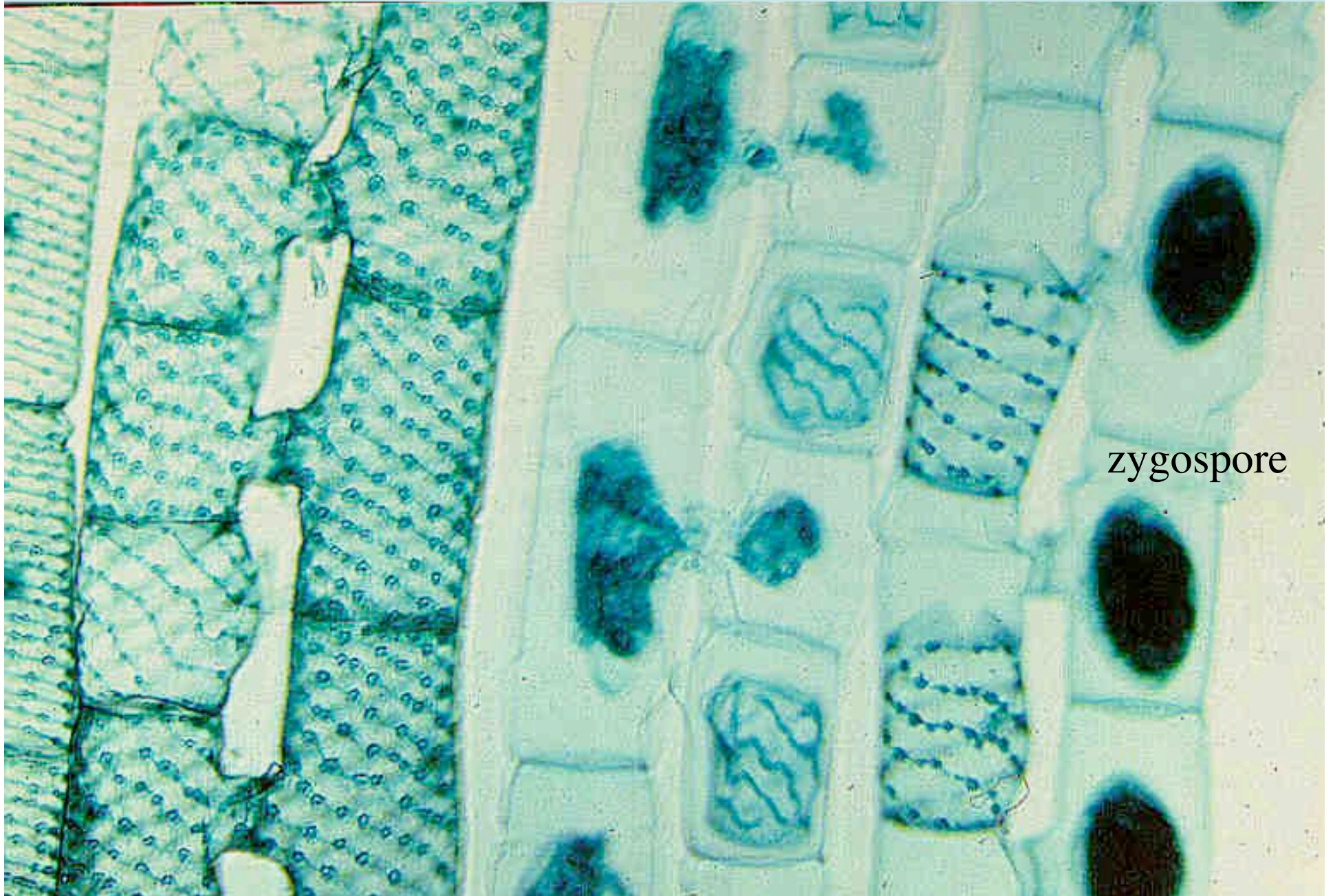
21

pyrenoid

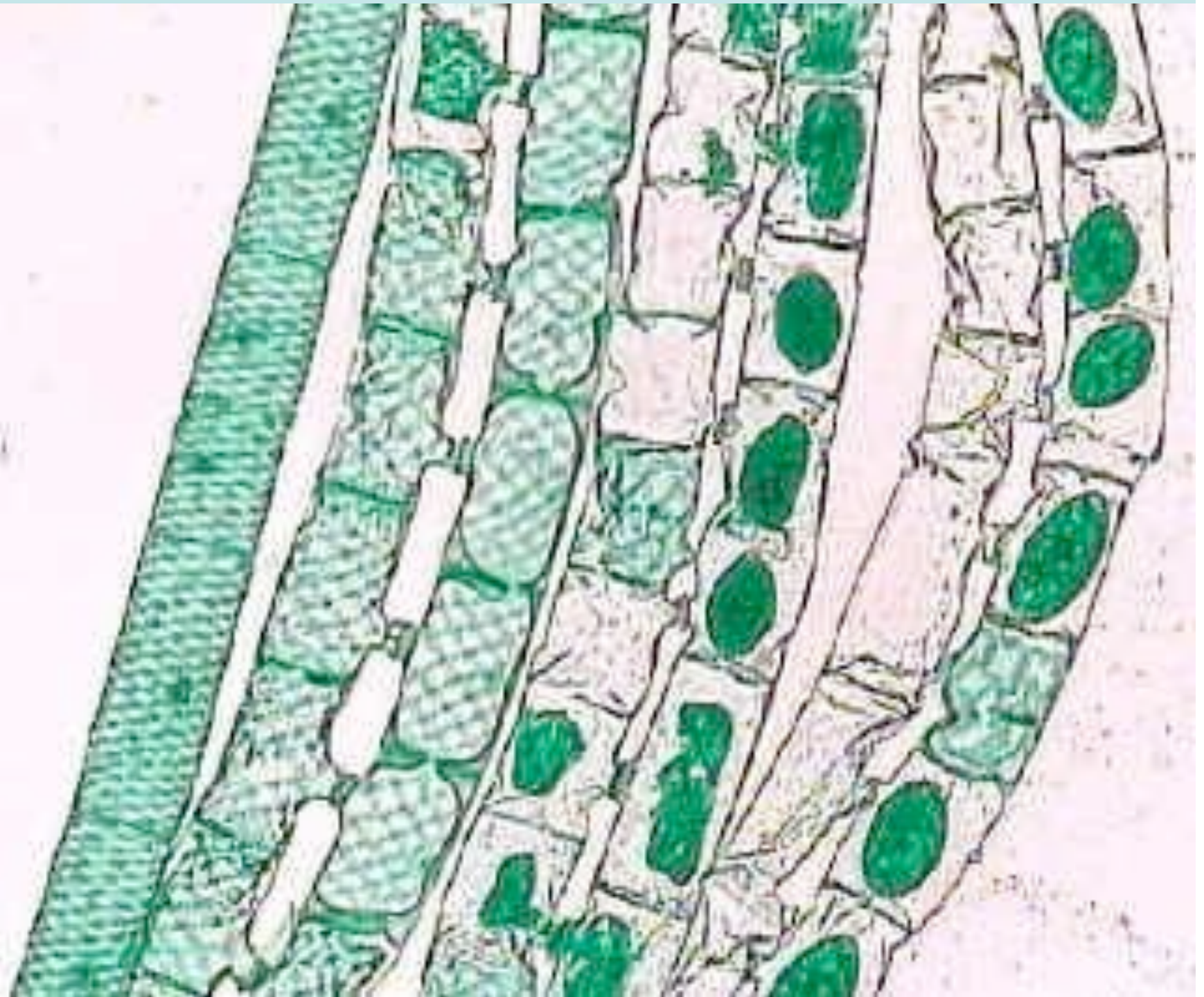


conjugation tube

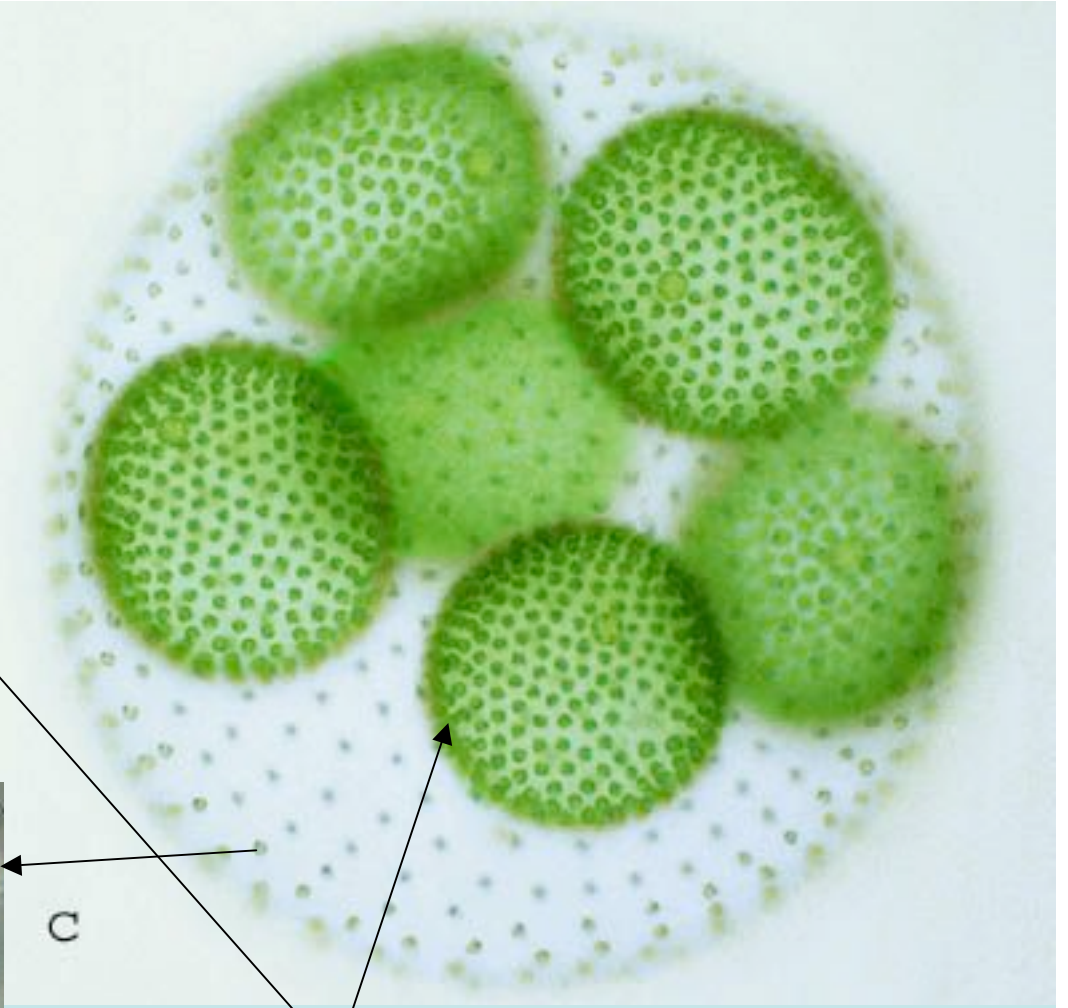
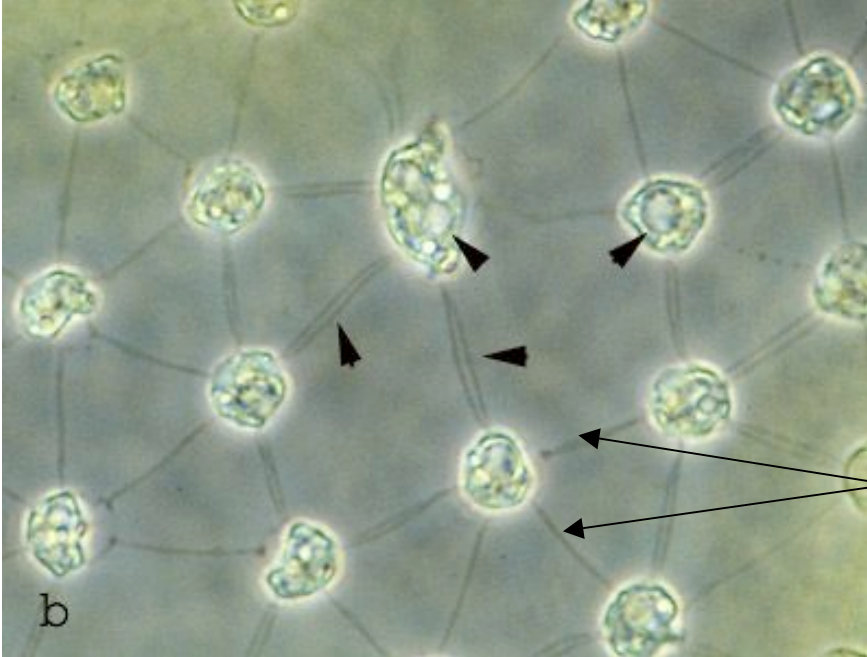
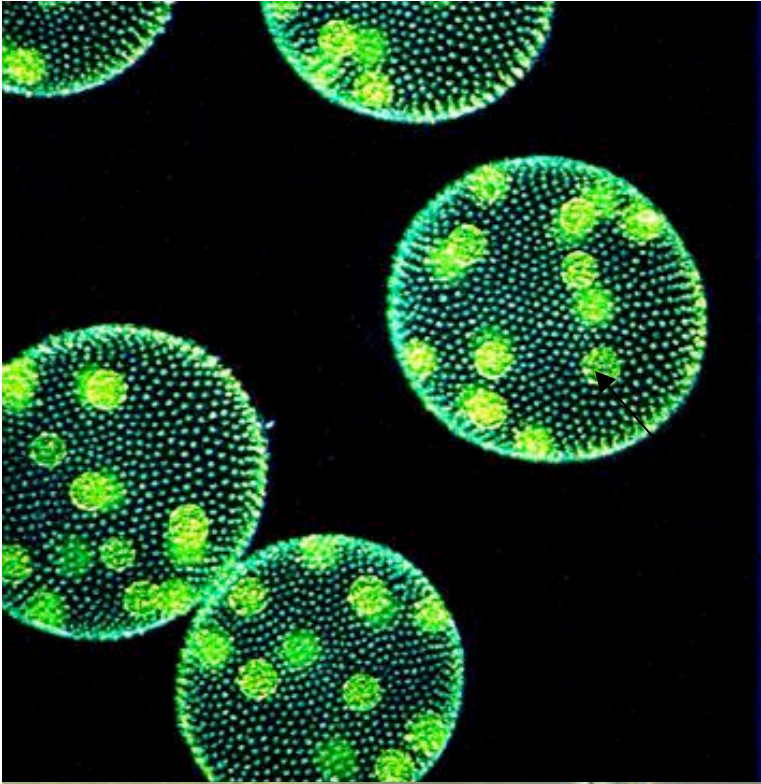




zygospore

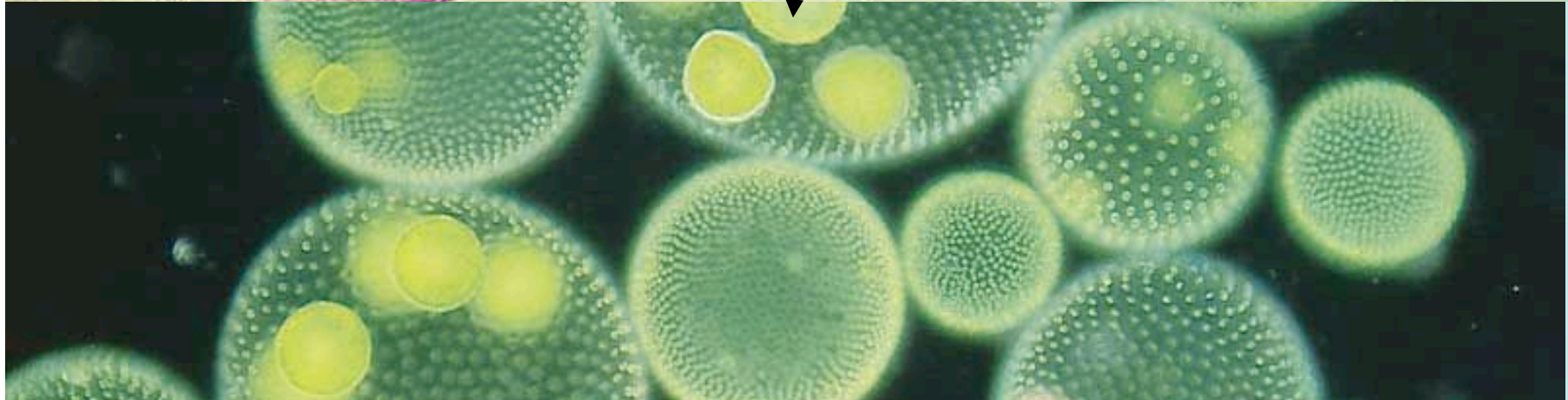
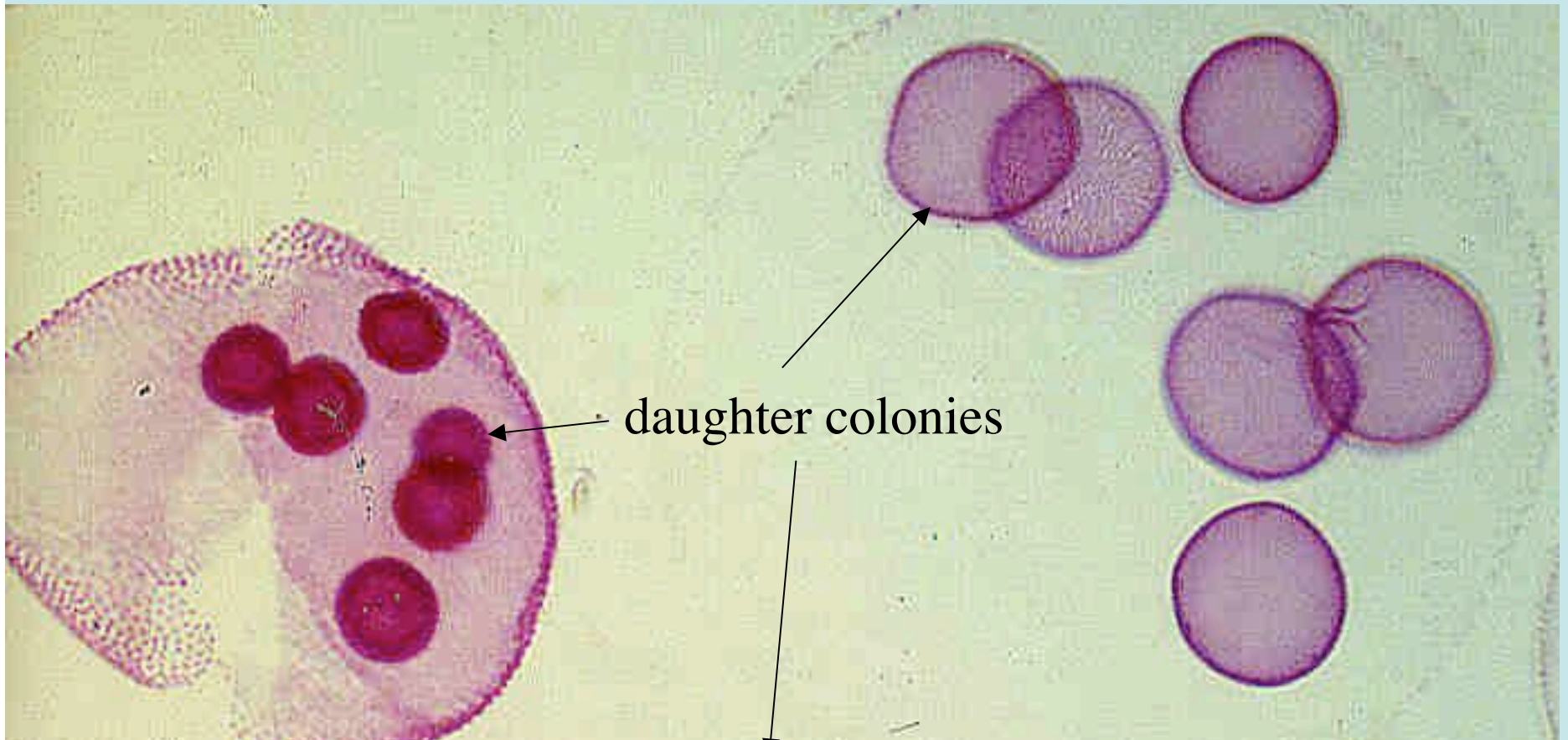


25



daughter colonies

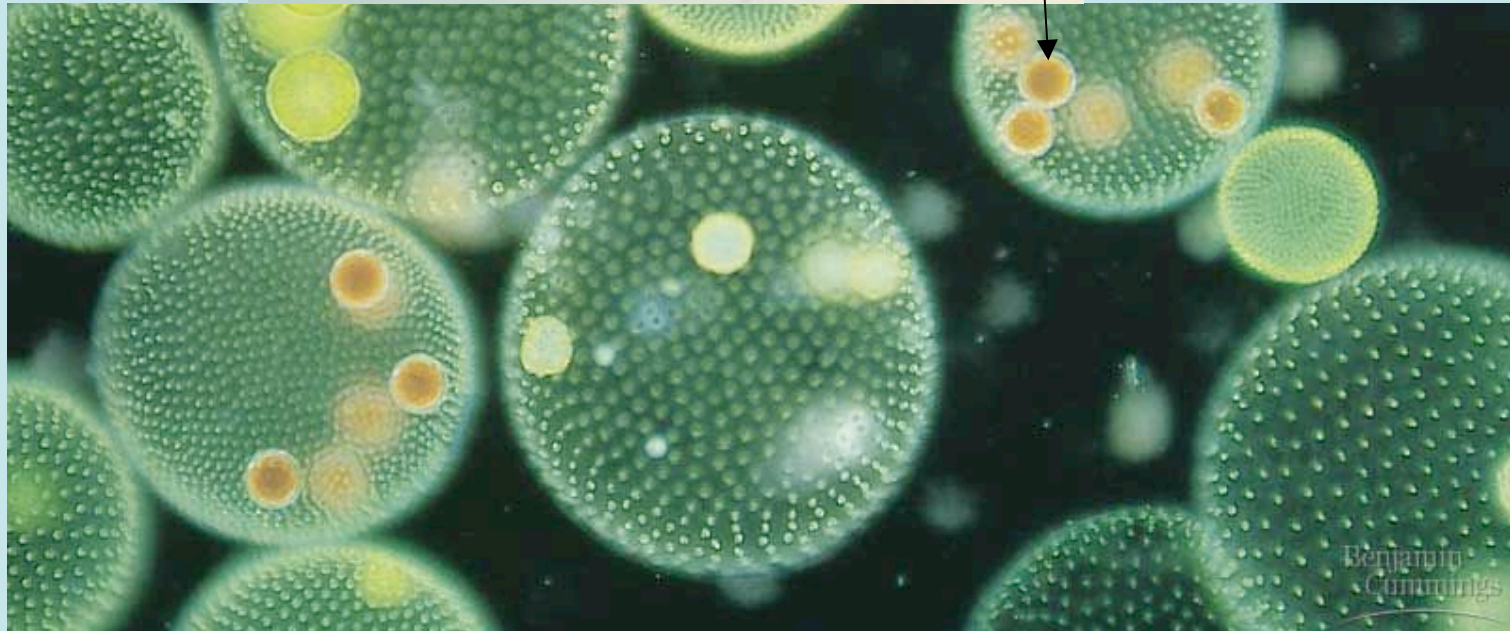
plasmodesmata



27



zygotes



Benjamin
Comings





30

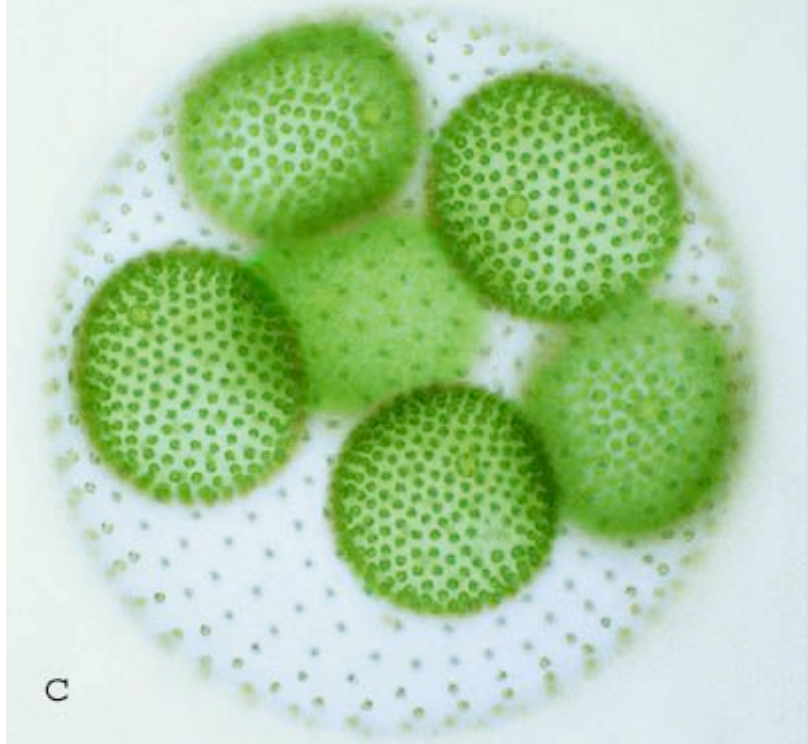
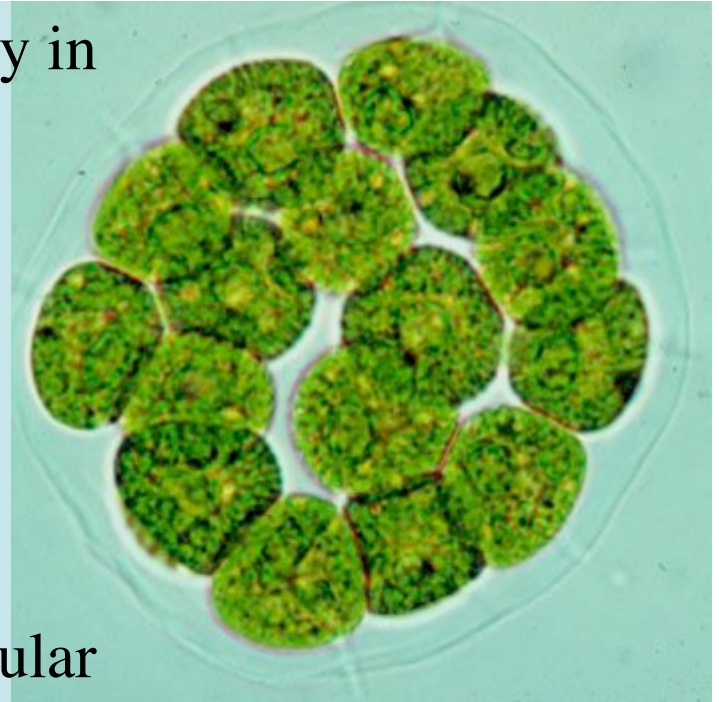
Unicellularity to multicellularity in Chlorophyta

unicellular

colonial

colonial

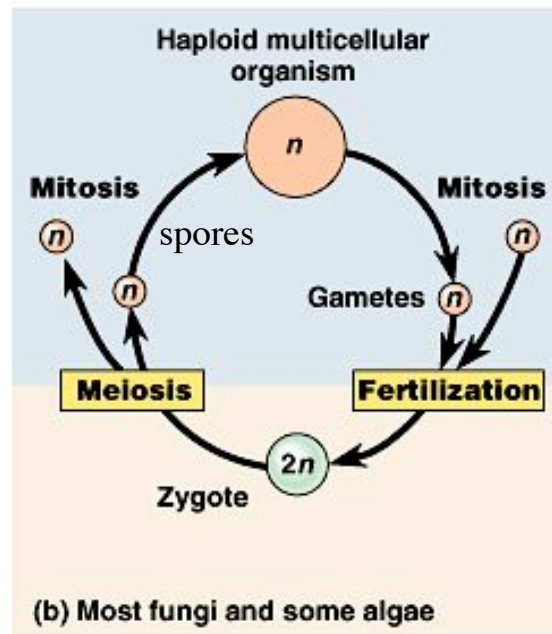
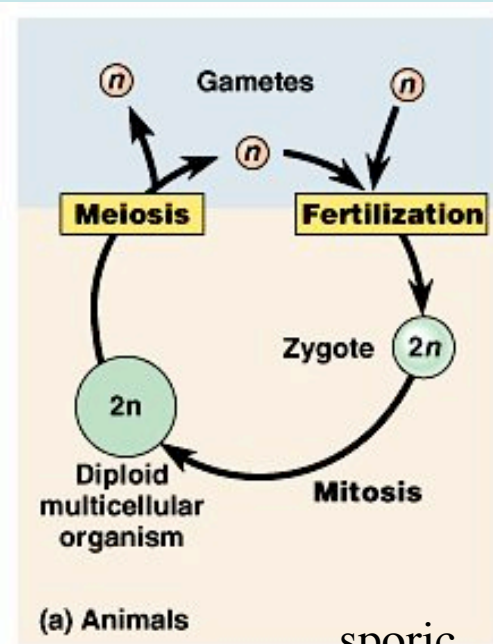
multicellular



gametic

zygotic

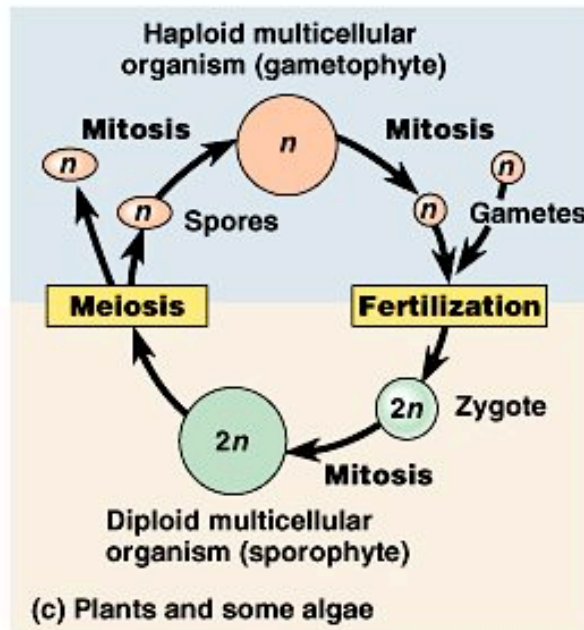
- 2n multicellular organism dominant
- meiosis produces gametes
- meiosis occurs before fertilization



- 1n multicellular organism dominant
- meiosis produces spores
- meiosis occurs after fertilization

sporic

- alternation of gametophyte (n) and sporophyte (2n) generations-both multicellular
- spores may be of one kind-homospores or two kinds-heterospores



□ Haploid
□ Diploid

Three Types of Sexual Life Cycles- p. 242