

Liverworts Continued...



CLICKER Q

WHICH STATEMENT IS TRUE?

- A. The calyptra is diploid.
- B. Each tracheophyte sporophyte bears one sporangium.
- C. The sporangium of bryophytes is the simplest of all embryophytes.
- D. Bryophyte sporophytes are parasitic on the gametophyte.
- E. Bryophytes are resistant to desiccation by storing water.

CLICKER Q

WHICH STATEMENT IS TRUE?

- A. In tracheophytes, the conduction of water and minerals is internal.
- B. In bryophytes, the conduction of water and minerals is external only.
- C. In bryophytes, the absorption of water and minerals is through the rhizoids.
- D. Bryophyte gametophytes have stomata.
- E. Bryophyte sporophytes lack cuticle.

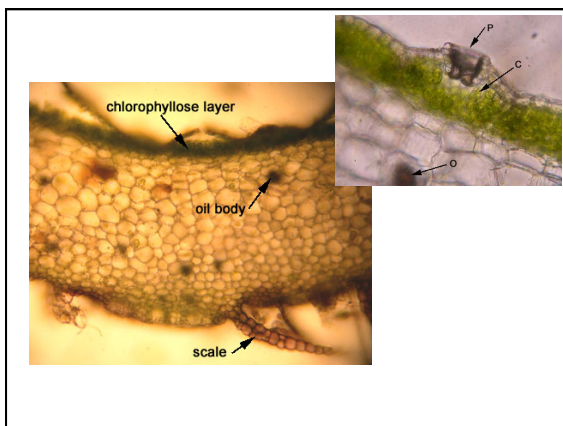
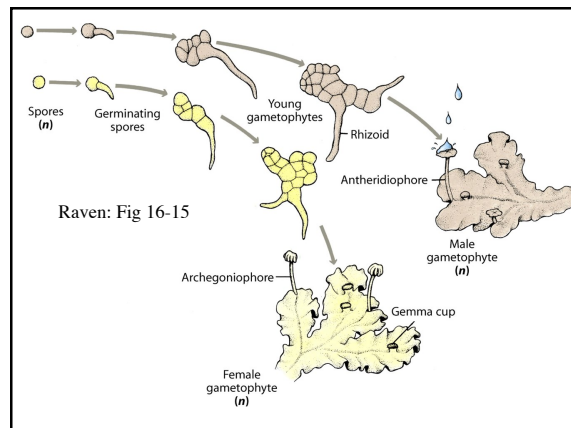
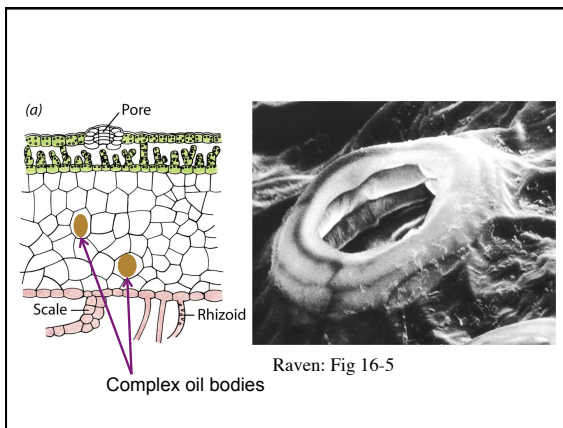
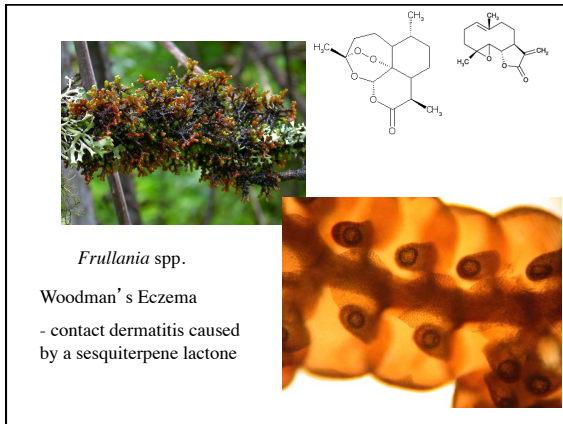
2-Minute Paper

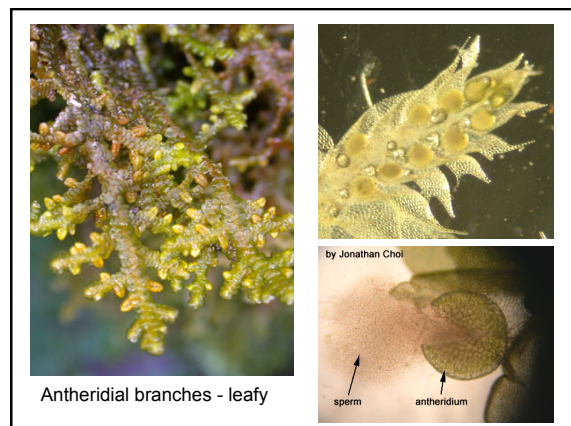
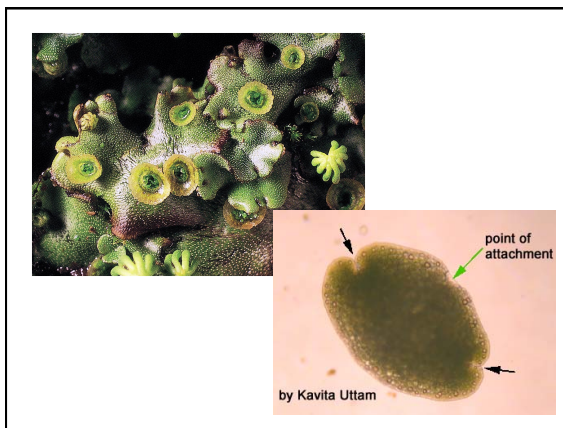
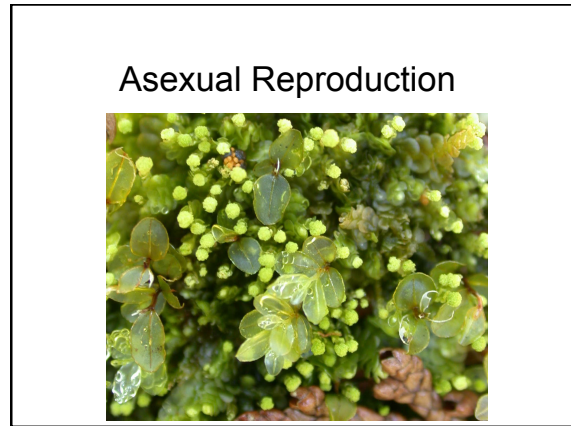
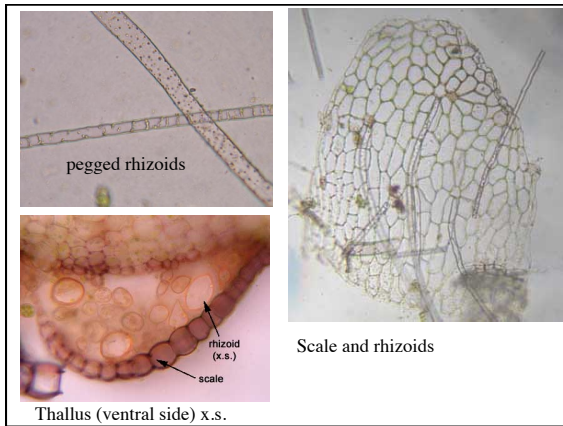
In your quest for a leafy liverwort where will you go to find one (habitat) and what are the main features you will be looking for?

Leafies

rhizoid
- unicellular



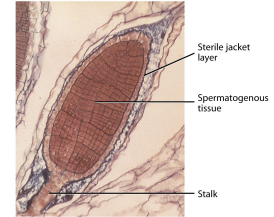
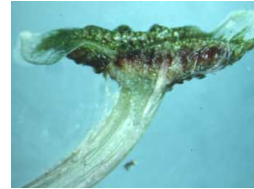
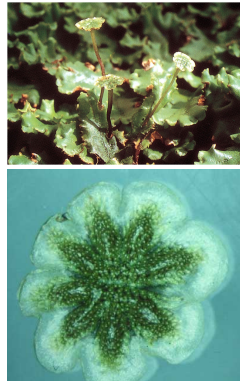




Marchantia
– complex thalloid

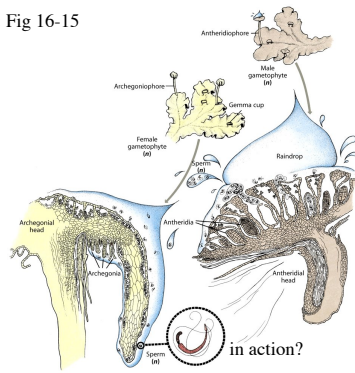


antheridiophores

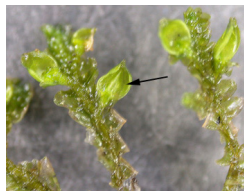


Raven: Fig 16-7 (a)

Raven: Fig 16-15

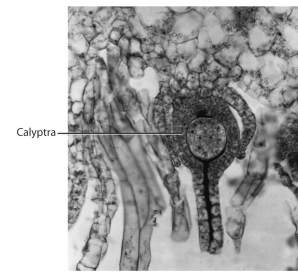
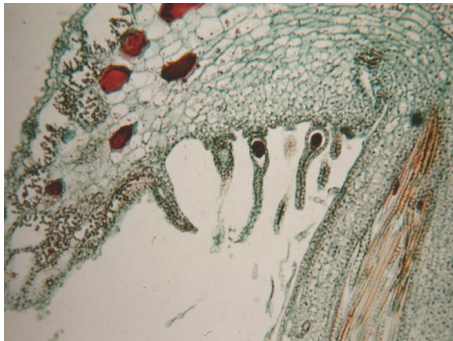


Archegonia - leafy

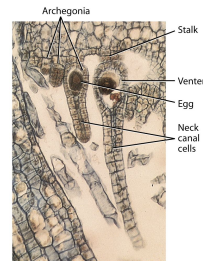


Complex Thalloid
Female reproductive
structures:
archegoniophore

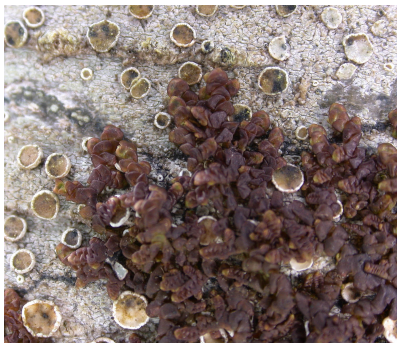




Raven: 16-8



Raven: 16-7

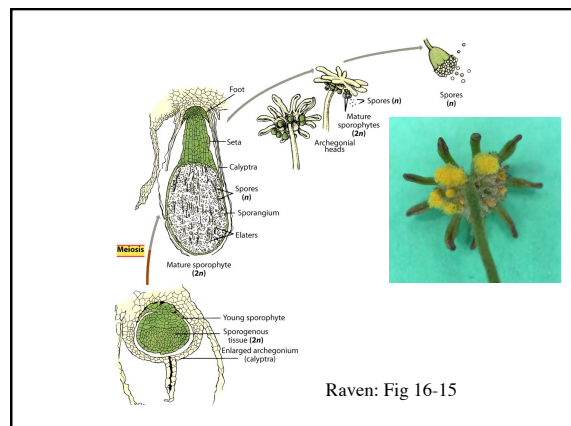
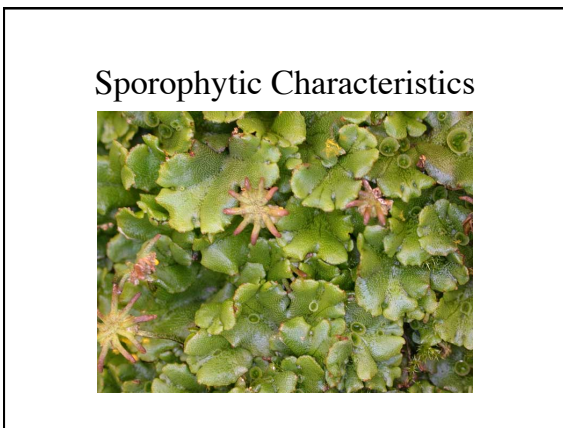
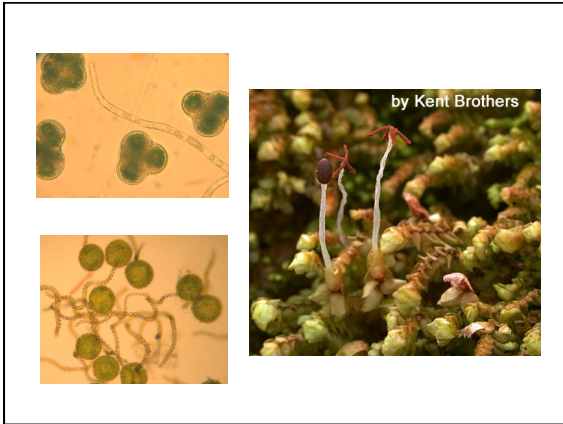


SPOROPHYTE



l.s.

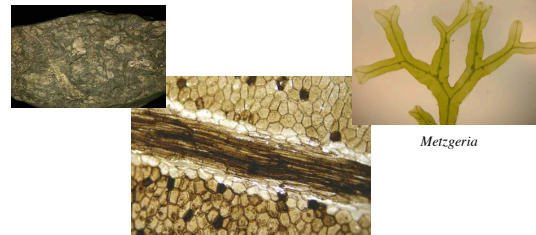




Compare the thallus of *Pellia* (simple thalloid) and *Marchantia* (complex thalloid)



Simple Thalloids - ancestral



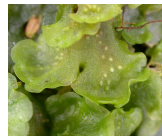
Metzgeriothallus (350-360 MYA)

Metzgeria

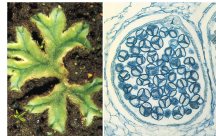
Thalloid Phylogeny

So...the "simple" features of *Pellia* vs. *Riccia*?

Primitive
(ancestral)



Reduction
(derived)



Raven 16-11