

Plants 2

- send answer to iClicker Question 12A now.
- Life-cycle review
- Mosses
 - description & life-cycle
- Ferns
 - description & life-cycle
- iClicker Question 12B

Due in lab **next** week:

⇒ Plant Diversity pre-lab (Lab Manual p 87 and on-line)

⇒ Eukaryotic Cells lab report

Start thinking about the Phylogenetic Collection Lab (16 phyla)
(see Lab Manual and Plants 1 handout for details)

Reminders

mitosis : diploid → more diploid ; haploid → more haploid (drum)

meiosis : diploid → haploid (clap)

fertilization 2 haploids → diploid (snap)

* remember what they do

gametophyte makes gametes; all cells haploid
gamete plant

Sporophyte makes spores; all cells diploid
spore plant

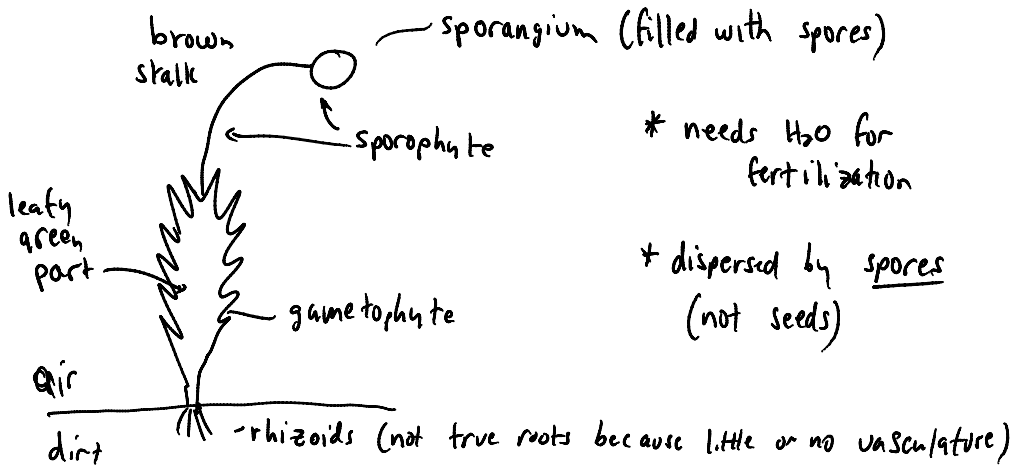
Moss - phylum bryophyta - most ancestral type of land plant

* little or no vascular (circulatory) system

∴ hard to transport H_2O , minerals, etc throughout plant

∴ ☉ must remain wet

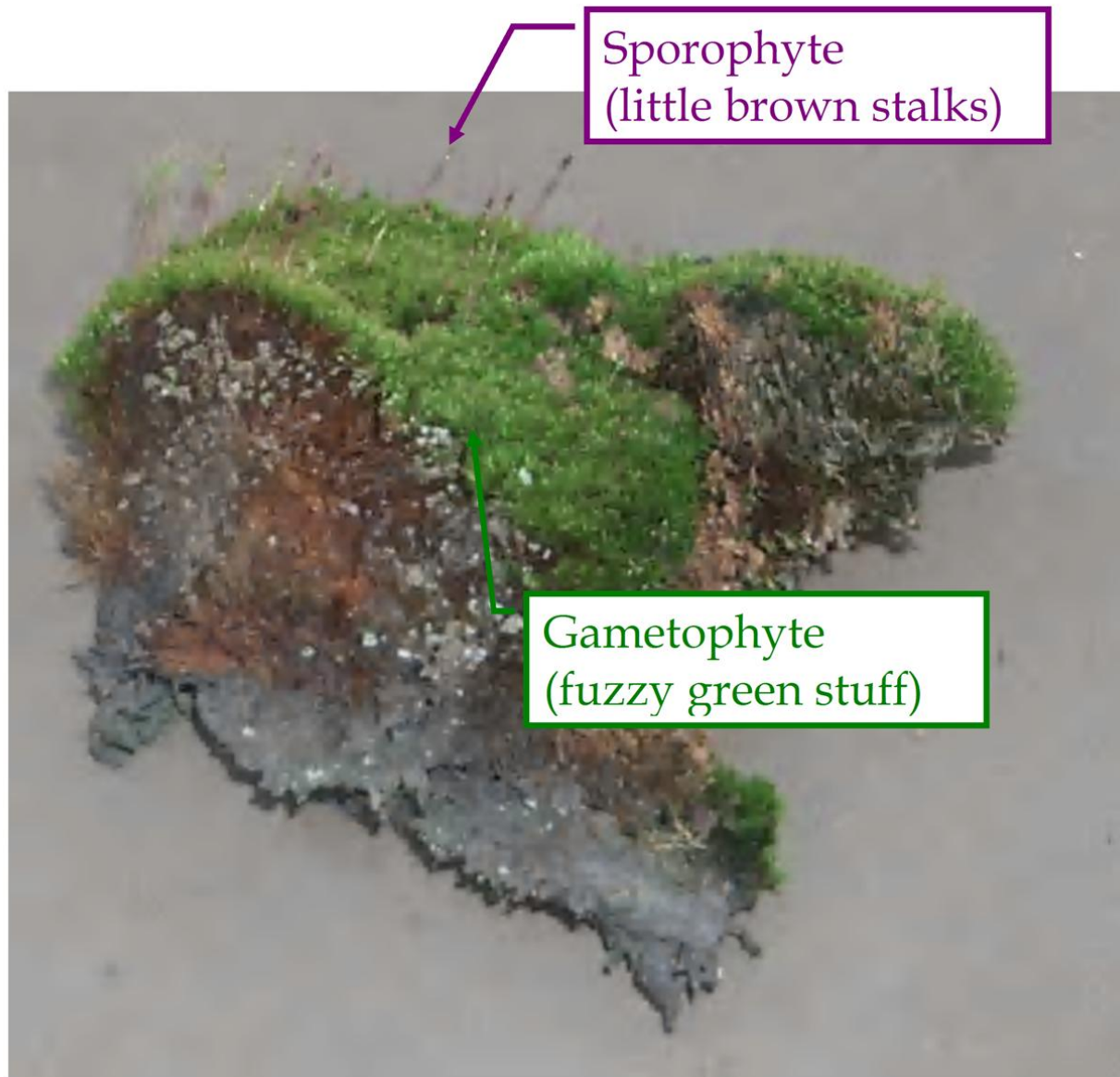
② can't get too tall



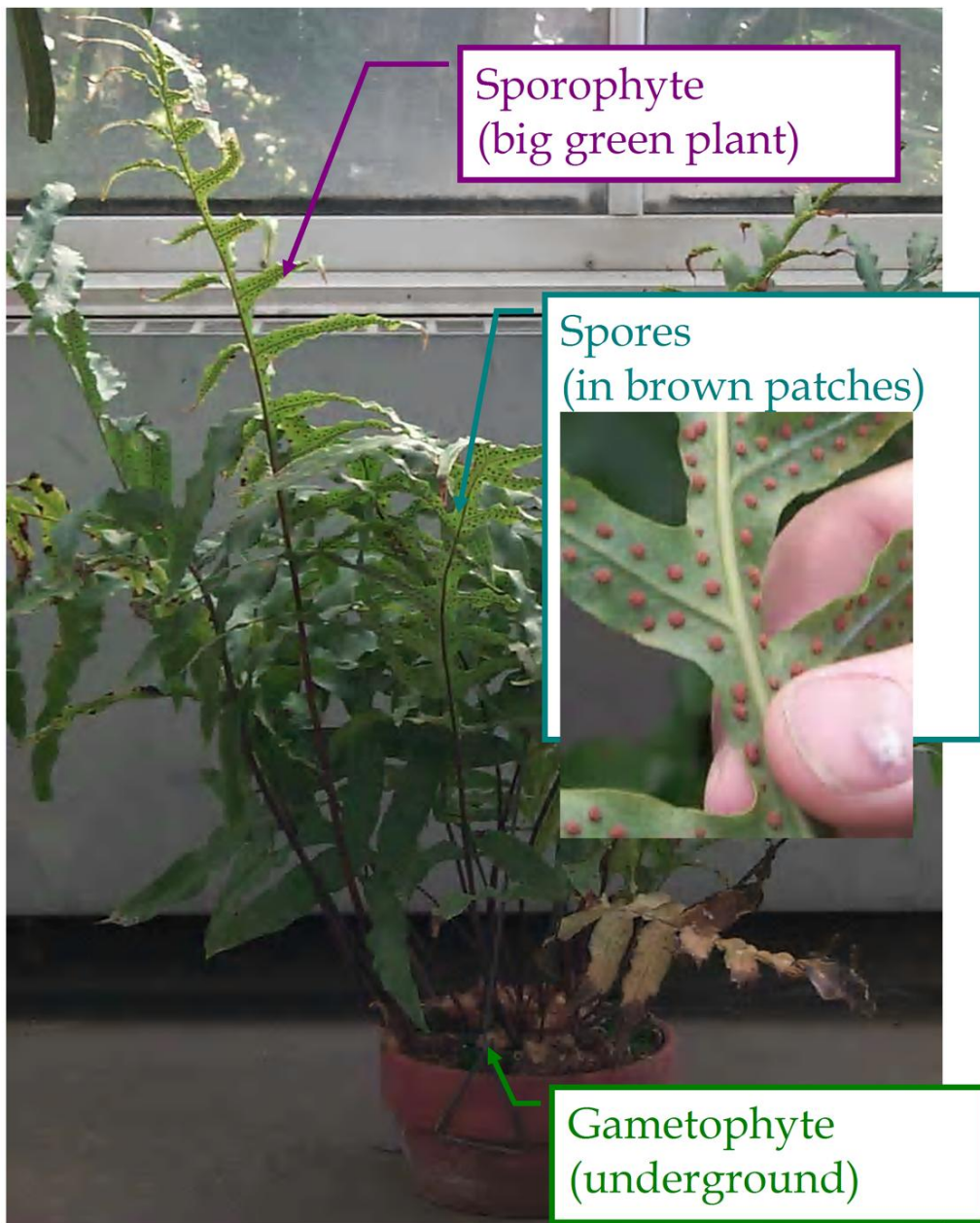
* needs H₂O for fertilization

* dispersed by spores
(not seeds)

Moss



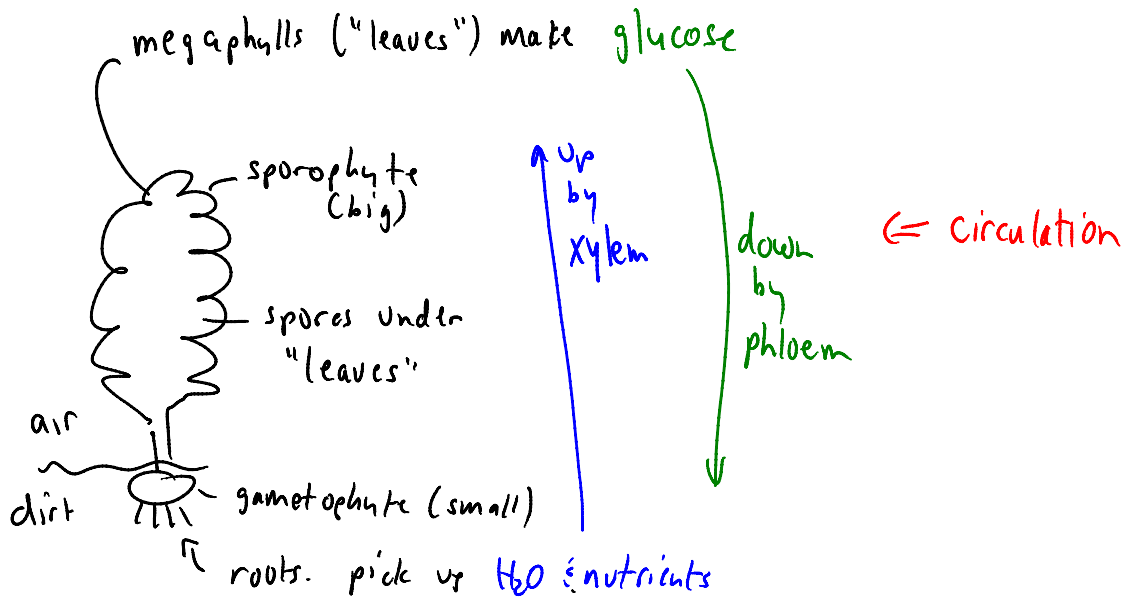
Fern



Ferns : phylum pterophyta
(there are other related "fern allies")
- evolved from moss-like ancestors

New "feature" : vascular system allows transport of H_2O , nutrients, &

sugars all over plant



advantages

- can grow taller (shadow competitors)
- can live in dryer environments

other details

- need H_2O for fertilization
- dispersed by spores not seeds
- coal is mostly dead ferns from ~350 ma
- in some ferns, gametophytes are either male or female
in others male or hermaphrodite ♀♂
male + female in one plant
makes both eggs & sperm
- hormones cause more ♀♂ when population density is low