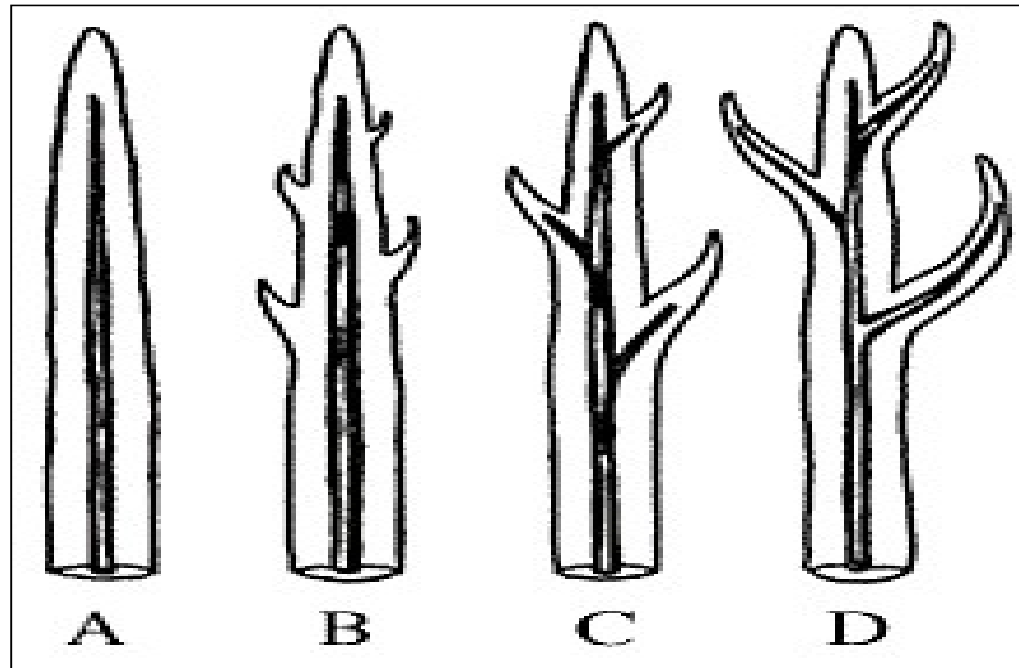


Lycopodiidae

- Enacije (nisu vaskularizovane ili jesu samo pri osnovi), mikrofilii
- Ligula
- Sporofili, trofofilii
- Bubrežaste sporangije
- Strobilusi, sporonosne zone
- Izospore (dvopolni gametofit), heterospore (jednopolni gametofit)
- Dihotomija, nejednaka dihotomija
- Adventini korjeni, bez korjenovih dlaka

Vaskularizacija kod *Zosterophyllum*, *Sawdonia*, *Asteroxylon* i *Leclercqia* (Kenrick i Crane, 1997).

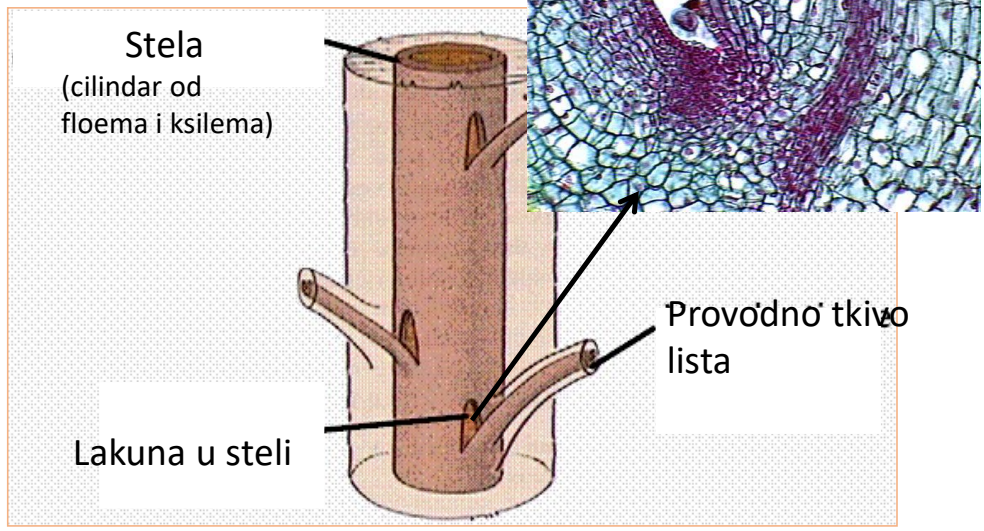
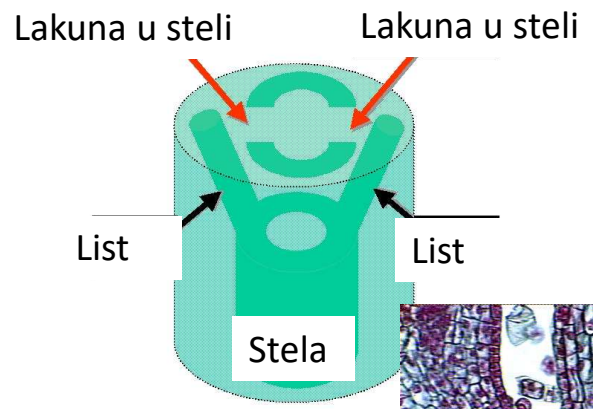
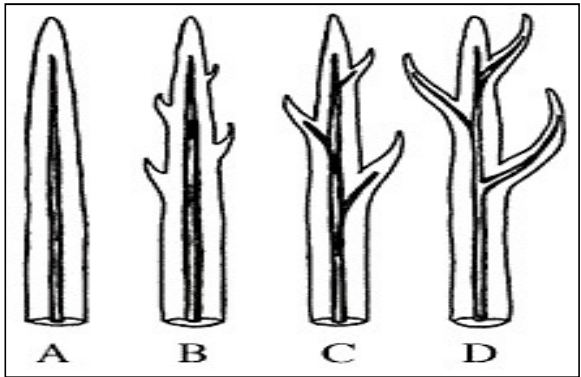
- (A) *Zosterophyllum* (gola osovina, ovalna protostela),
- (B) *Sawdonia* (enacije, bez provodnih elemenata)
- (C) *Asteroxylon* (enacije sa provodnim elementima koji zalaze u njenu osnovu),
- (D) *Leclercqia* (osovina sa vaskularizovanim mikrofilima).



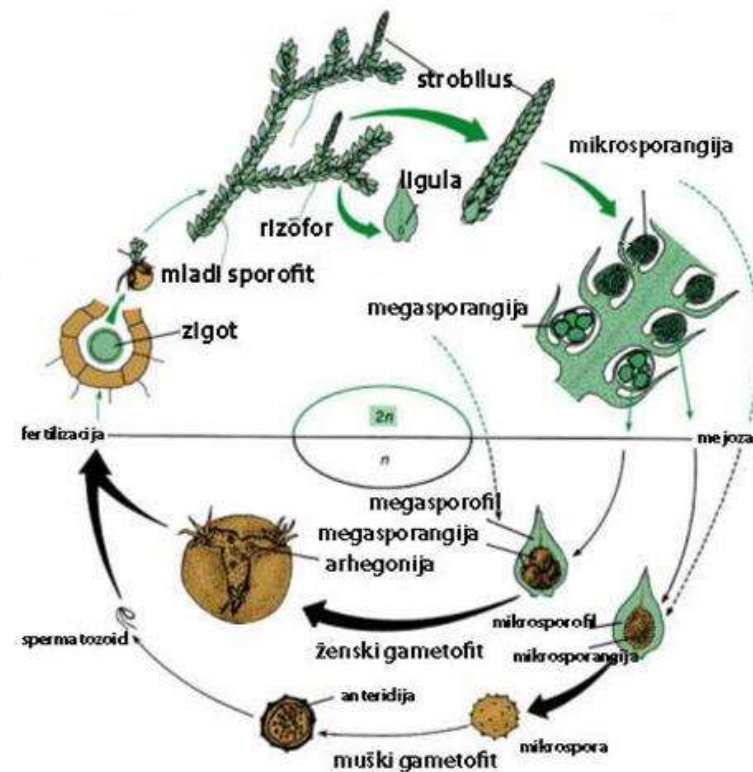
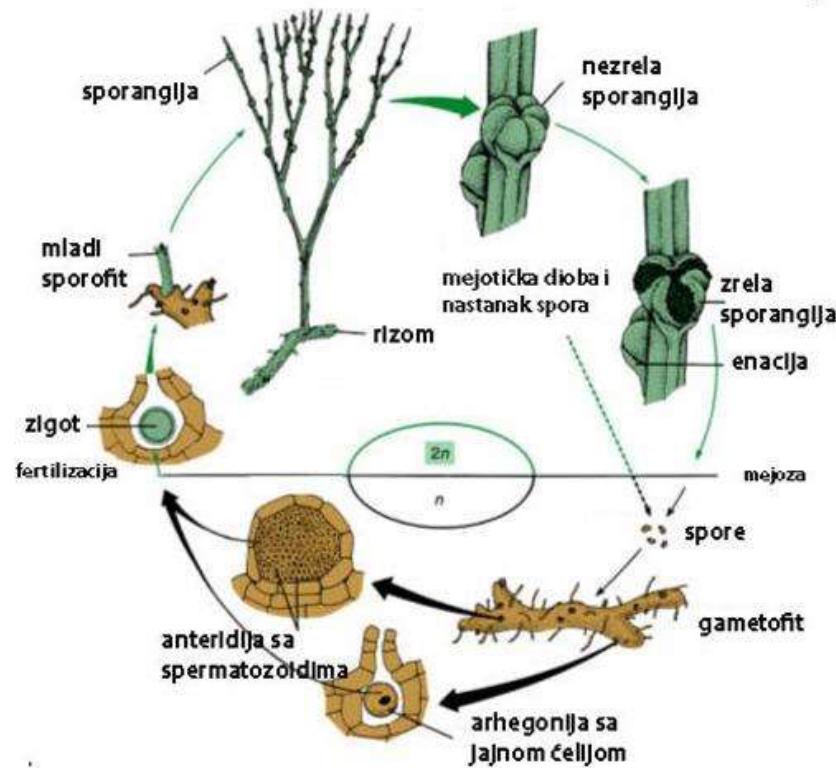
Enacije i mikrofilii- bez lakuna u steli

Telomni listovi- sa lakunama u steli

Enacije, mikrofilii- bez lakuna u steli



Ciklus razvića izo- i heterospornih prečica



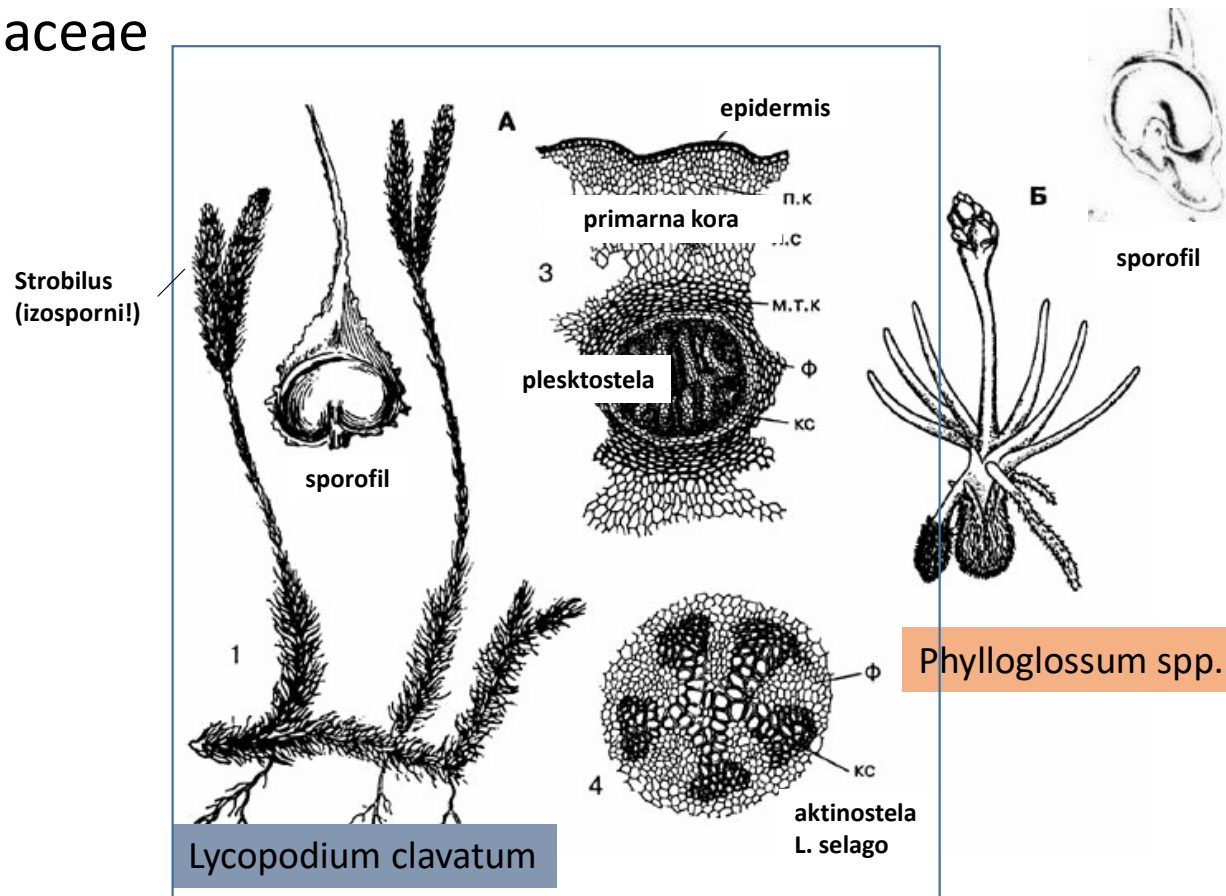
Jednodomo, jednopolno

Sporofit: Gametofit generacija:

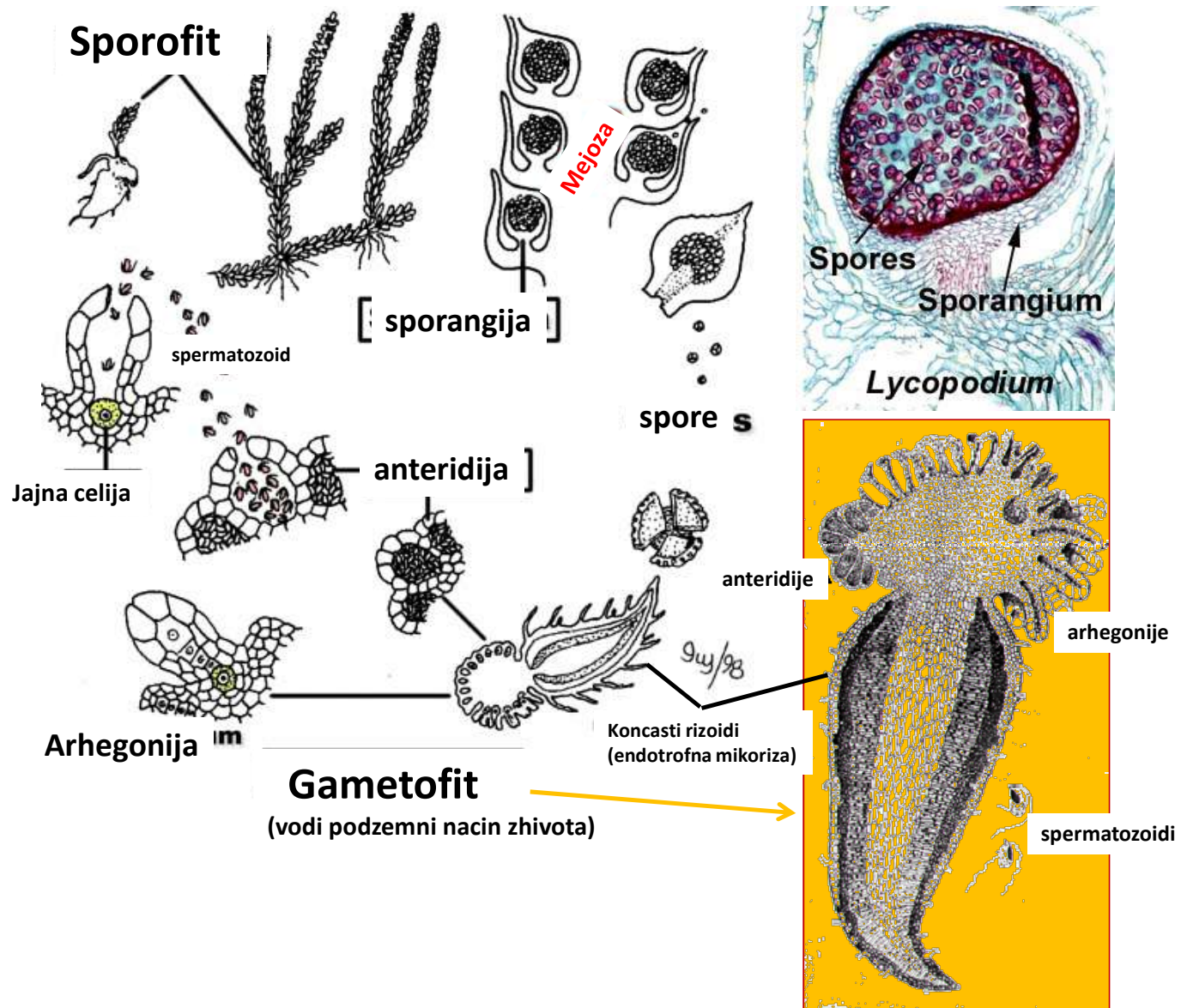
Recentni predstavnici

- o. Lycopodiales
- o. Selaginellales
- o. Isoetales

o. Lycopodiales
fam. Lycopodiaceae



Lycopodium (*Huperzia*, *Phlegmariurus*), *Phylloglossum* ...



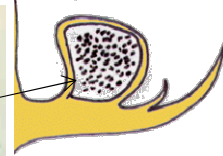
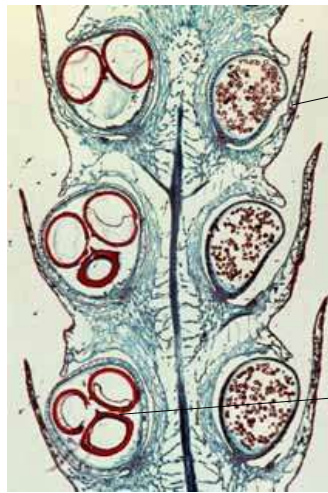
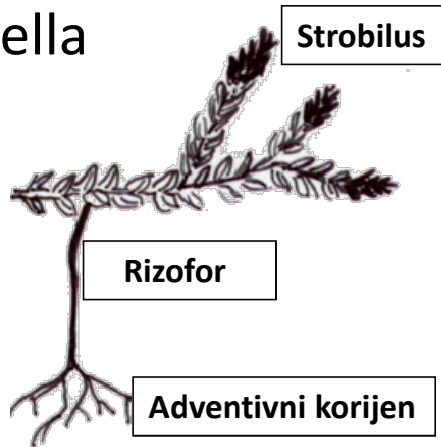


Huperzia selago (syn. *Lycopodium selago*)

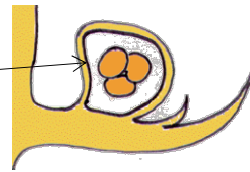


Lycopodium annotinum

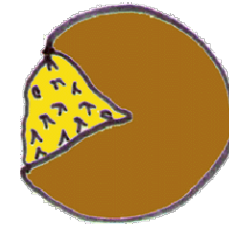
o. Selaginellales
 fam. Selaginellaceae
 g. Selaginella



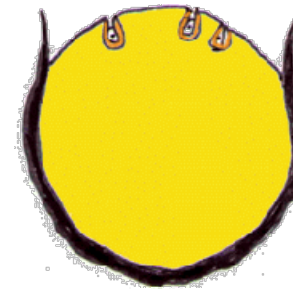
mikrosporangija



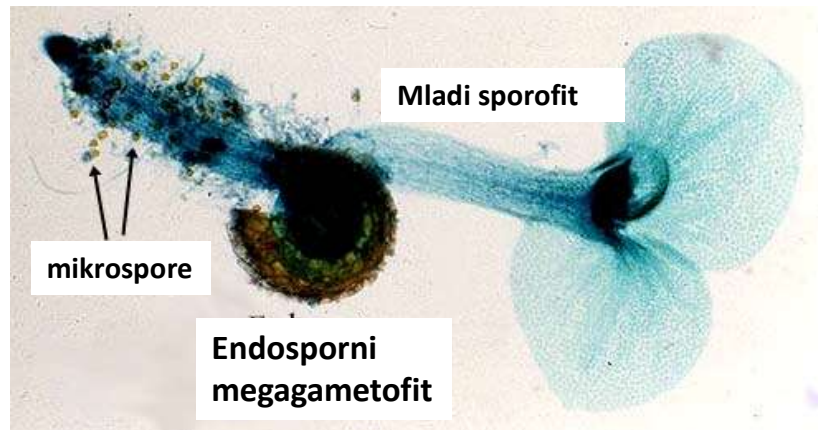
megasporangija



Mikrospore kojoj
 nastaje 128 ili 256
 miliona
 spermatozoida

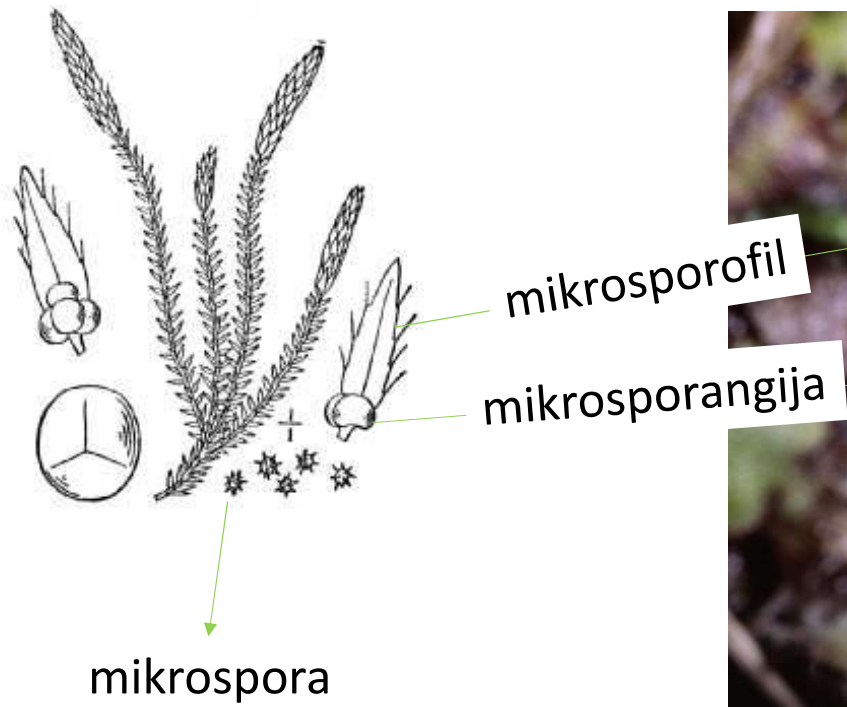


Megaspore sa
 megagametofitom
 (protalijum sa
 arhegonijama)

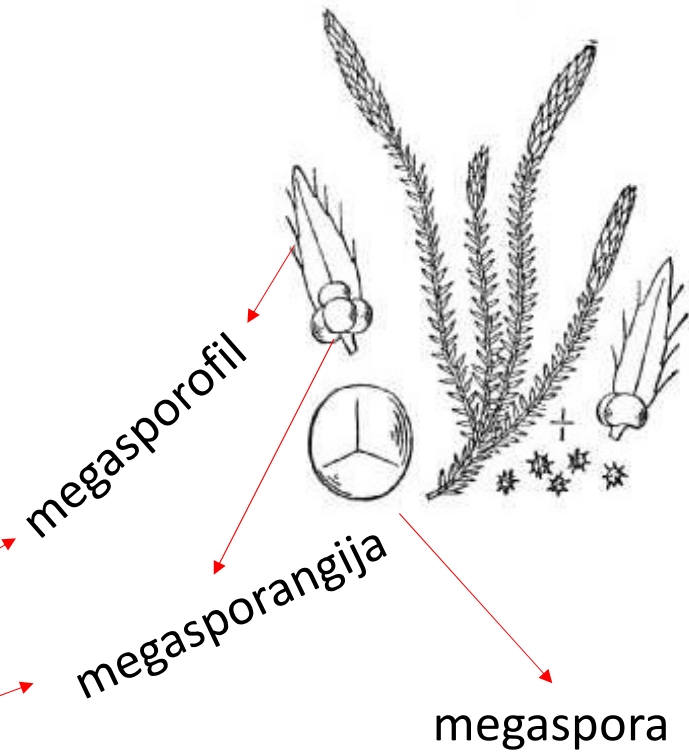


Selaginella denticulata

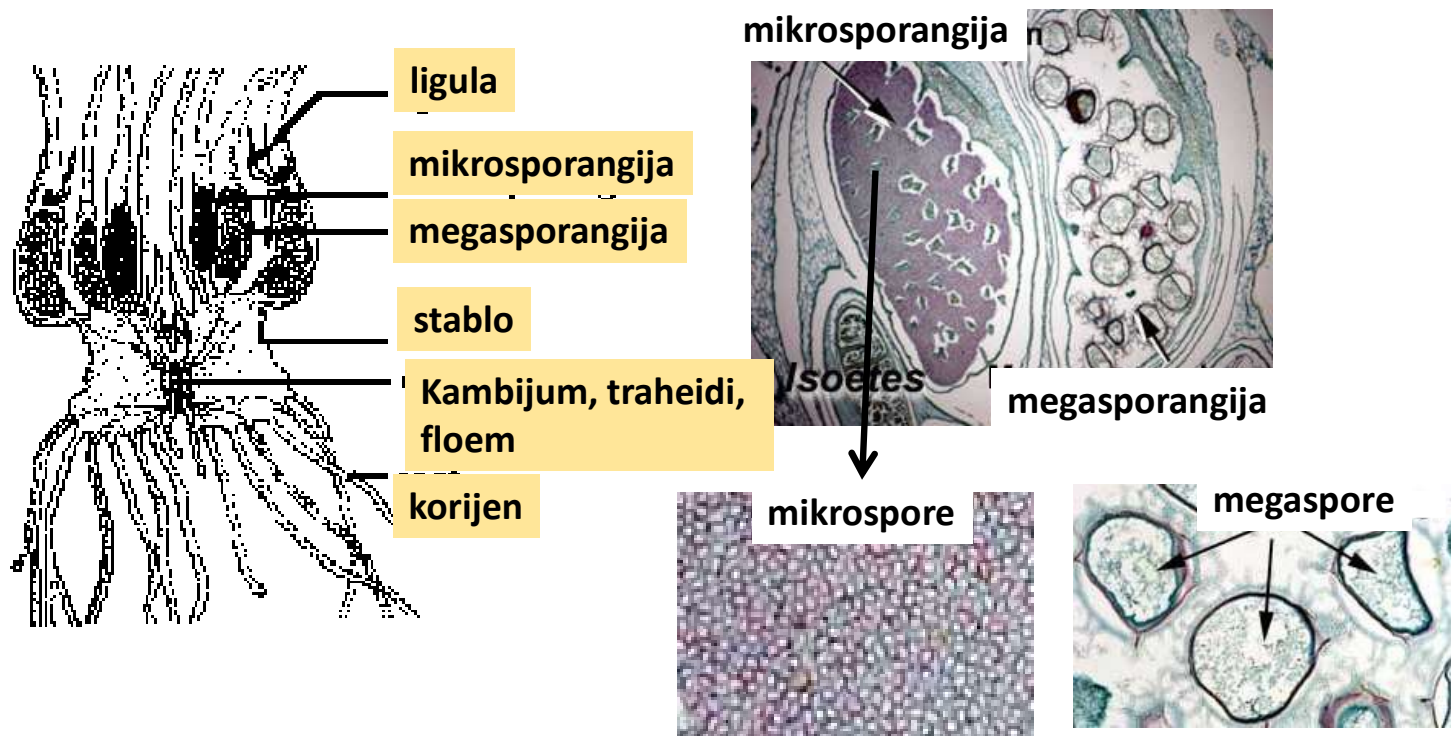




Selaginella selaginoides



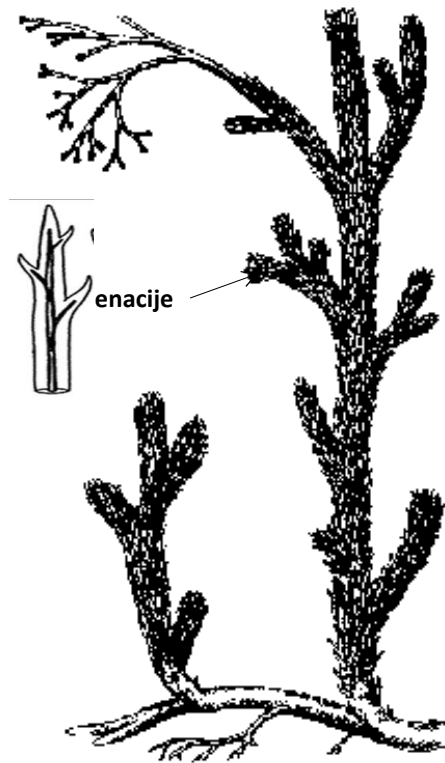
o. Isoetales
fam. Isoetaceae
g. Isoetes



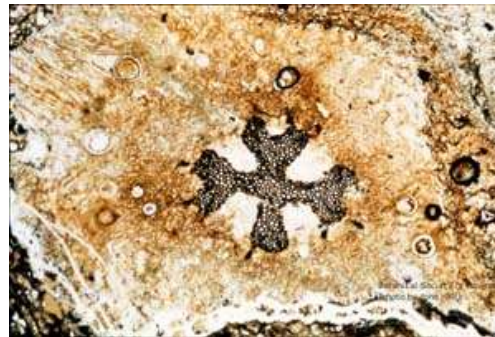
Fosilni predstavnici

- o. Asteroxylales (†)
- o. Protolepidodendrales (†)
- o. Lepidodendrales (†)

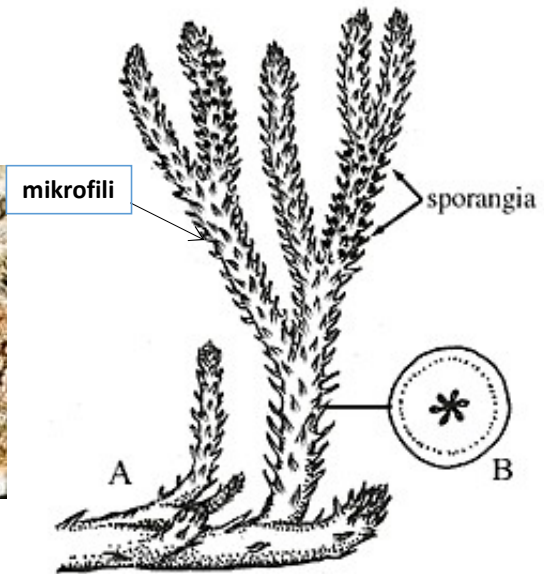
o. Asteroxylales (†)



Asteroxylon sp.



Presjek kroz stablo
(zvjezdasti ksilem, drvo).

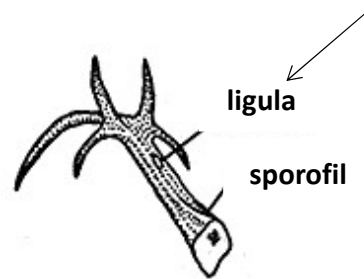


Drephanohycus sp.

o. Protolepidodendrales (†) (viljuškasti listovi)



Protolepidodendron sp.



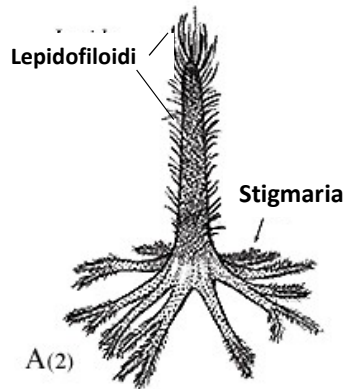
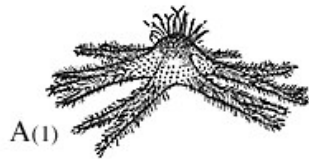
Kod recentnih prečica iz
klase Lycopodiopsida
ligula ne postoji!!!

Mikrofil *Leclercqia* sp.,
sporangija se nalazi
adaksijalno tačno ispod
jezička **ligule**.

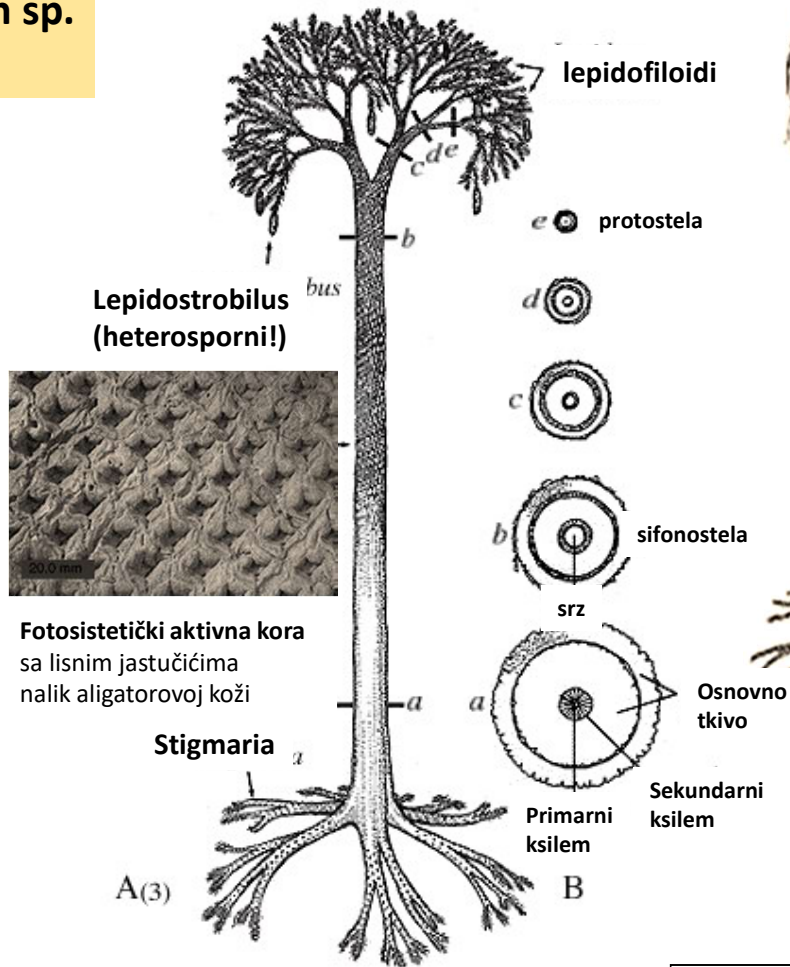
Archaeosigillaria- još jedna izosporna prečica sa
ligulom!

o. Lepidodendrales (†)

Lepidodendron sp. (razviće)

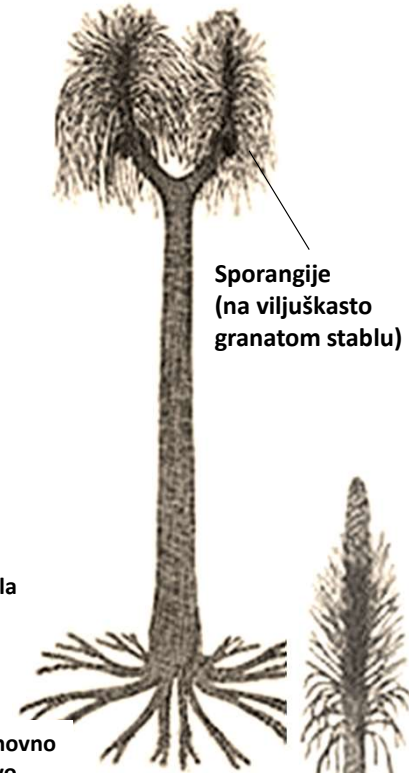


„korasto drveće“



Monokarpne biljke!!!

Sigillaria sp.



Pleuromeia sp.

