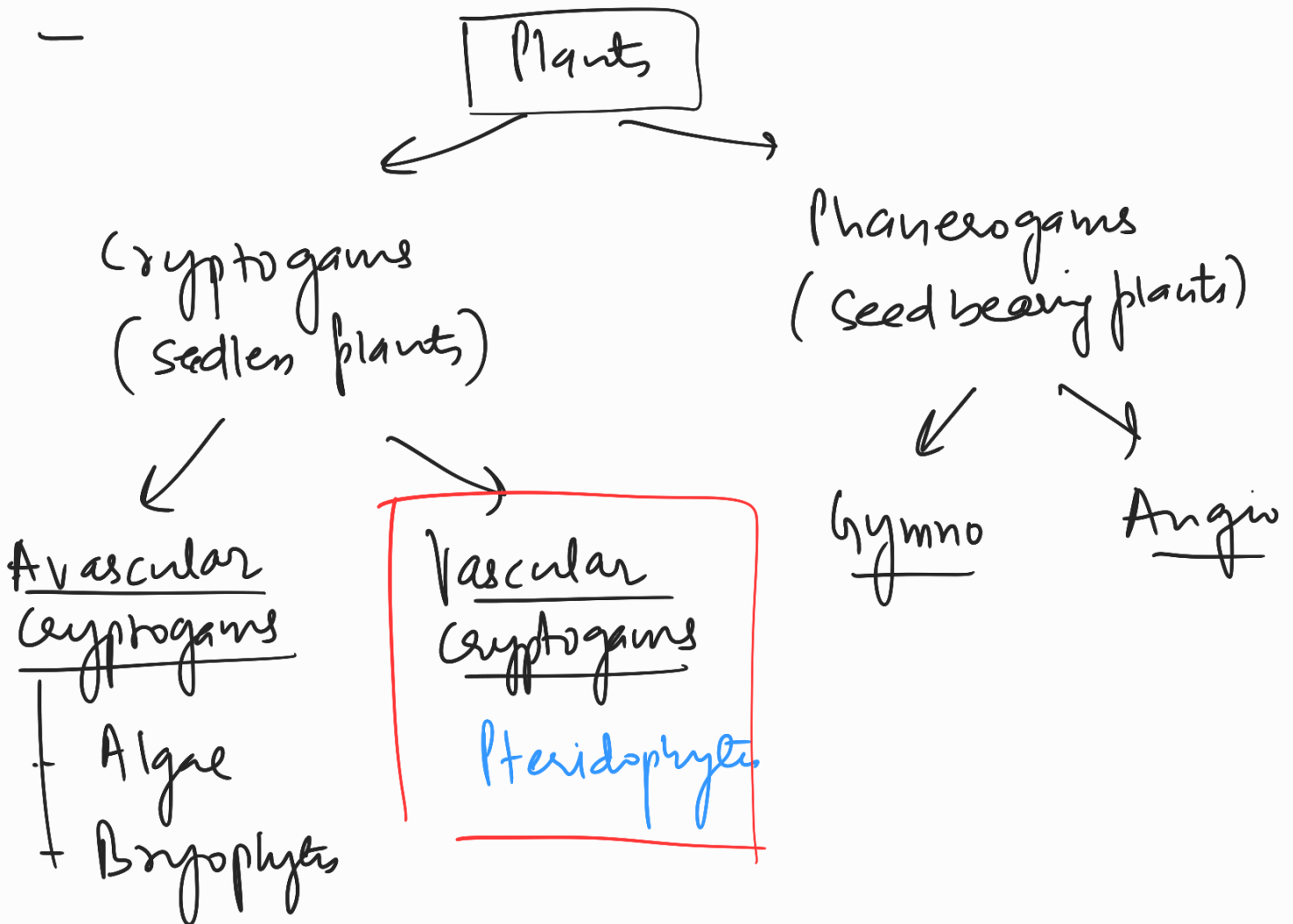


# Pteridophytes

(Botanical snakes)



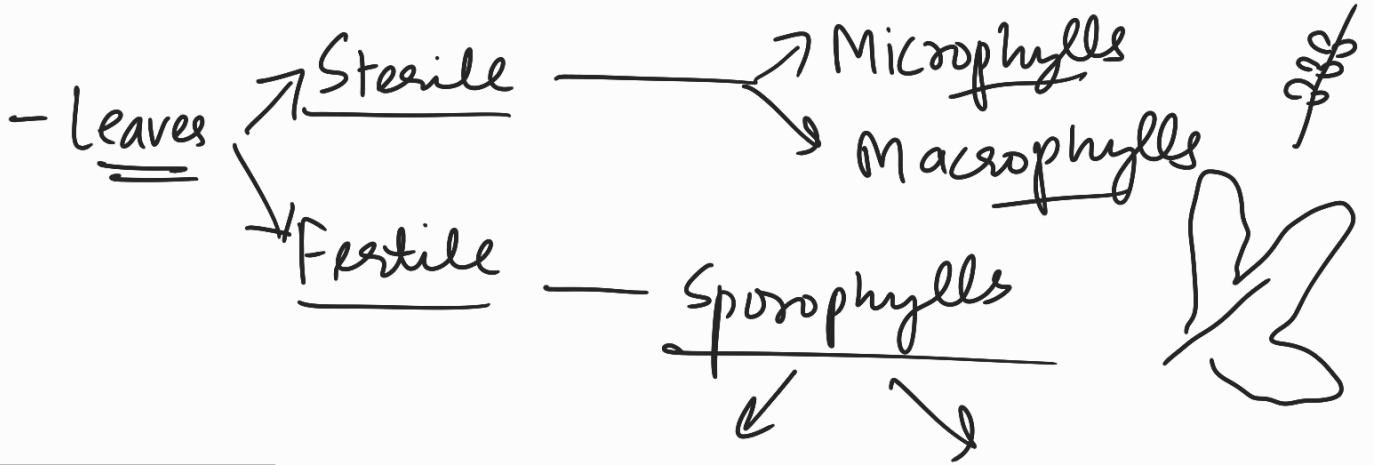
- Pteridophytes are vascular cryptogams.

↓  
possess vascular tissue  
(Xylem/Phloem)

Tracheids present  
but  
vessels absent

↓  
Companion cell  
present  
but  
Sieve tubes  
absent.

- Dominant phase is Sporophytic
- Plant body divisible into true root, stem & leaves.

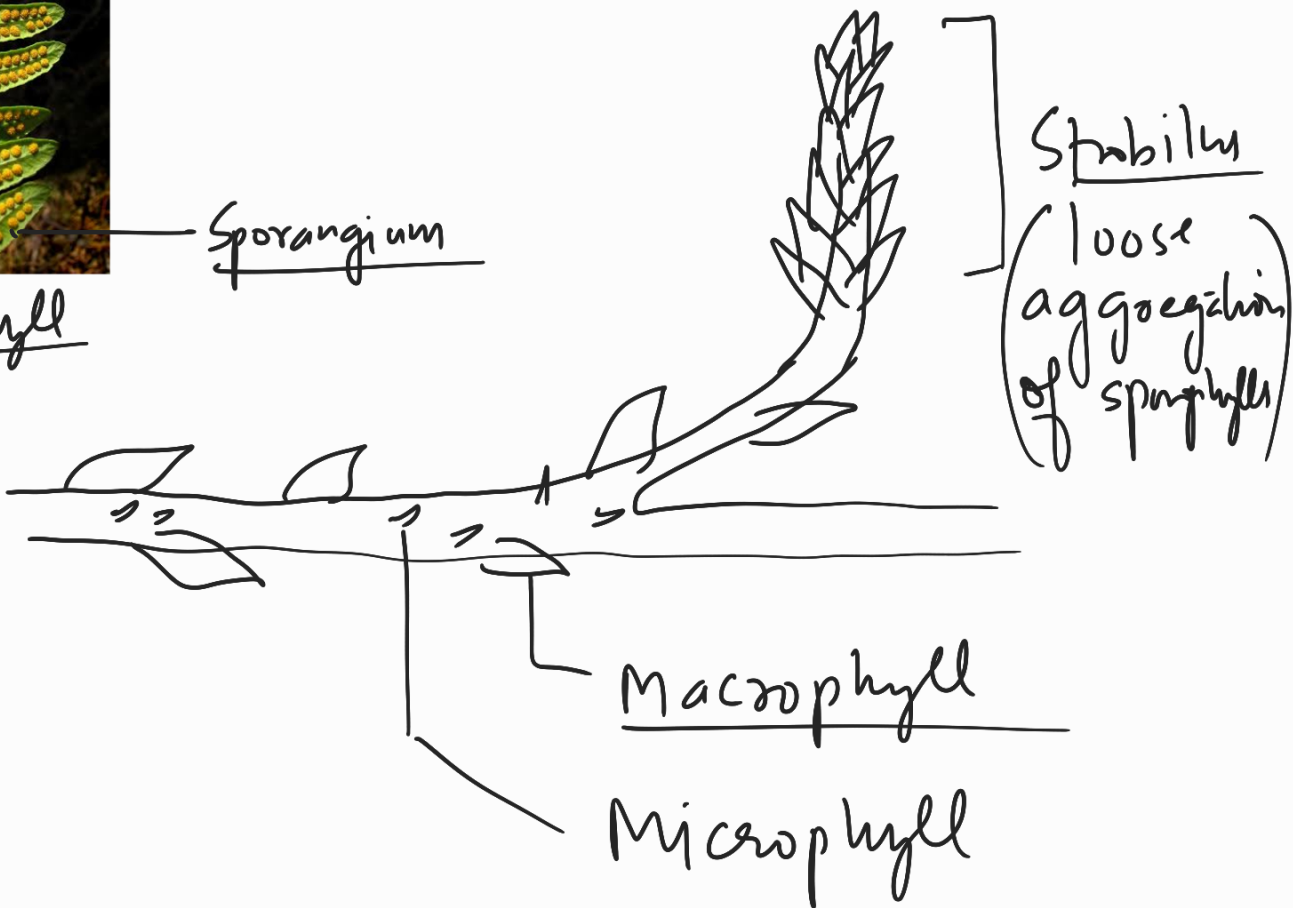


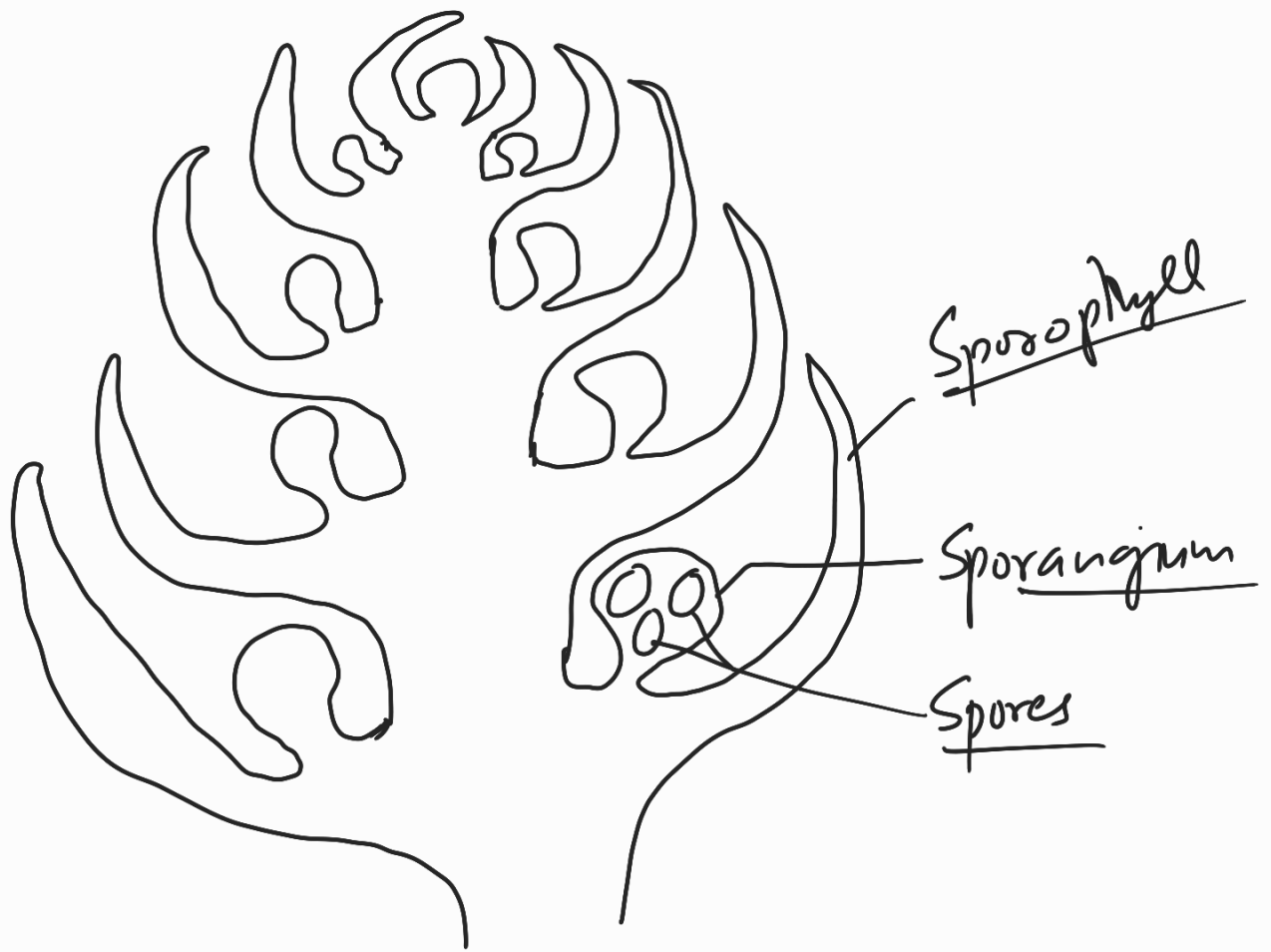
Sporophyll

Sporangium

Microsporophylls  
(contain  
Microspores)

Megasporophylls  
(contain  
Megaspores)



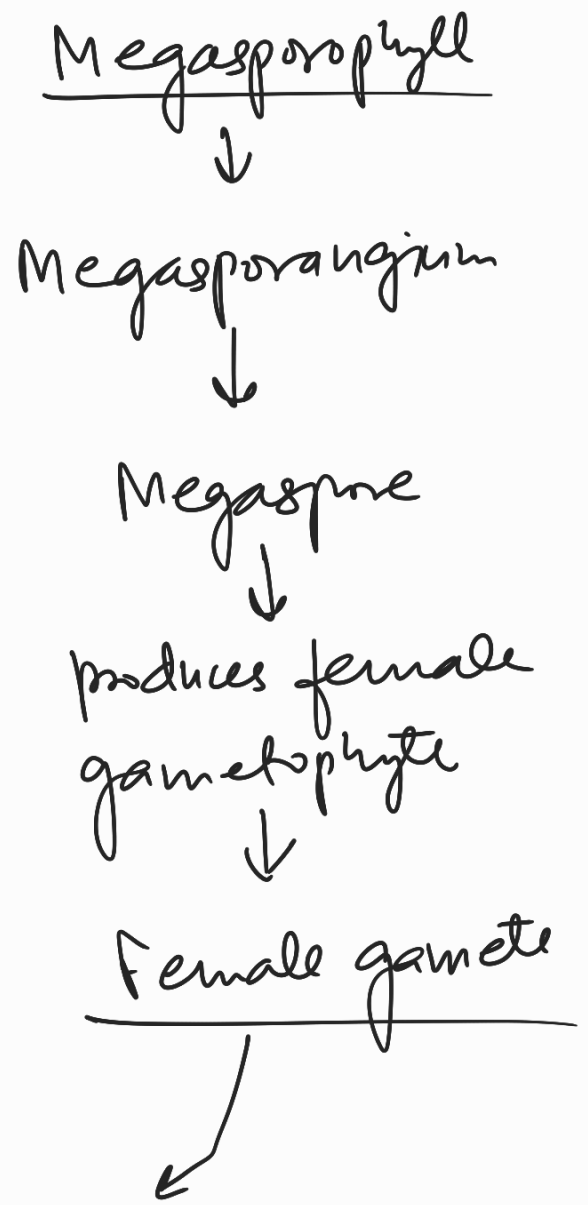
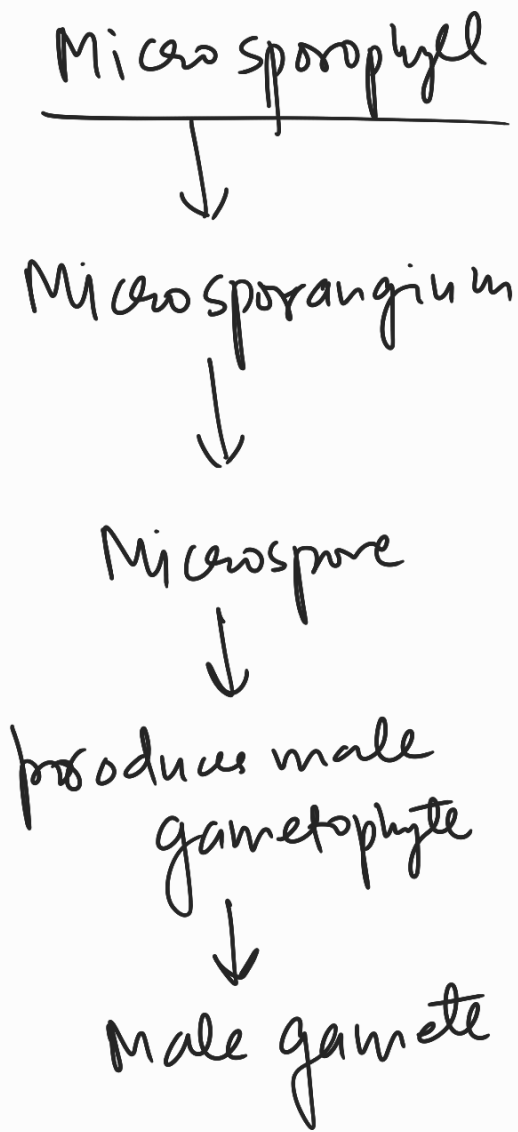


L.S. of Strobilus/Cone

↓  
loose  
 Aggregation  
 of sporophylls

↓  
Compact  
 aggregation  
 of  
 Sporophyll

- Depending upon types of spores produced, pteridophytes can be homosporous (produce one type of spores) and heterosporous [produce male (microspores) and female spores (megaspores)]

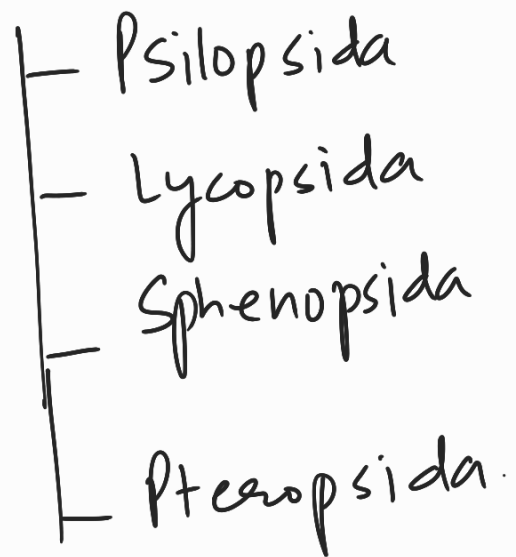


It is retained on  
Sporophytic plant even after  
fertilization for variable  
period of time.

↓

leads to seed habit

## - 4 classes of Pteridophytes



### ① Psilopsida

- ✓ Oldest land inhabiting plants
- ✓ Roots absent
- ✓ Rhizoids present
- ✓ Homosporous
- ✓ Most members are fossils
- ✓ eg Rhynia

## ② Lycopsidea

- ✓ Also called club mosses / spike mosses
- ✓ Root / Stem / Leaves present
- ✓ Microphylls are found
- ✓ Homosporous / Heterosporous
- ✓ Lycopodium, Selaginella.

## ③ Sphenopsida

- ✓ Jointed stem appearance
- ✓ At nodes, whorls of leaf present
- ✓ Silica deposition give rough texture
- ✓ Always homosporous
- ✓ eg. Equisetum



(4)

# Pteropsida (Filicophyta)

- ✓ Most advanced
- ✓ Both living & extinct members
- ✓ Fan like leaves
- ✓ Stem as rhizome
- ✓ Homosporous (Pteris)
- ✓ Heterosporous (Maesilea)

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