Selaginella

- ***Selaginella*** is a genus of plants in the family Selaginellaceae, the **spikemosses**. Many workers still place the Selaginellales in the class Lycopodiopsida (often misconstructed as "Lycopsida"). This group of plants has for years been included in what, for convenience, was called "fern allies".

- This genus shows us two new phenomena

1. Heterospory = two types of spores.
   - Microspores are always produced in microsporangia and develop into male gametophytes
   - Megaspores are always produced in megasporangia and develop into female gametophytes
   - Gametophytes are always unisexual

2. Extreme Reduction of the Gametophyte

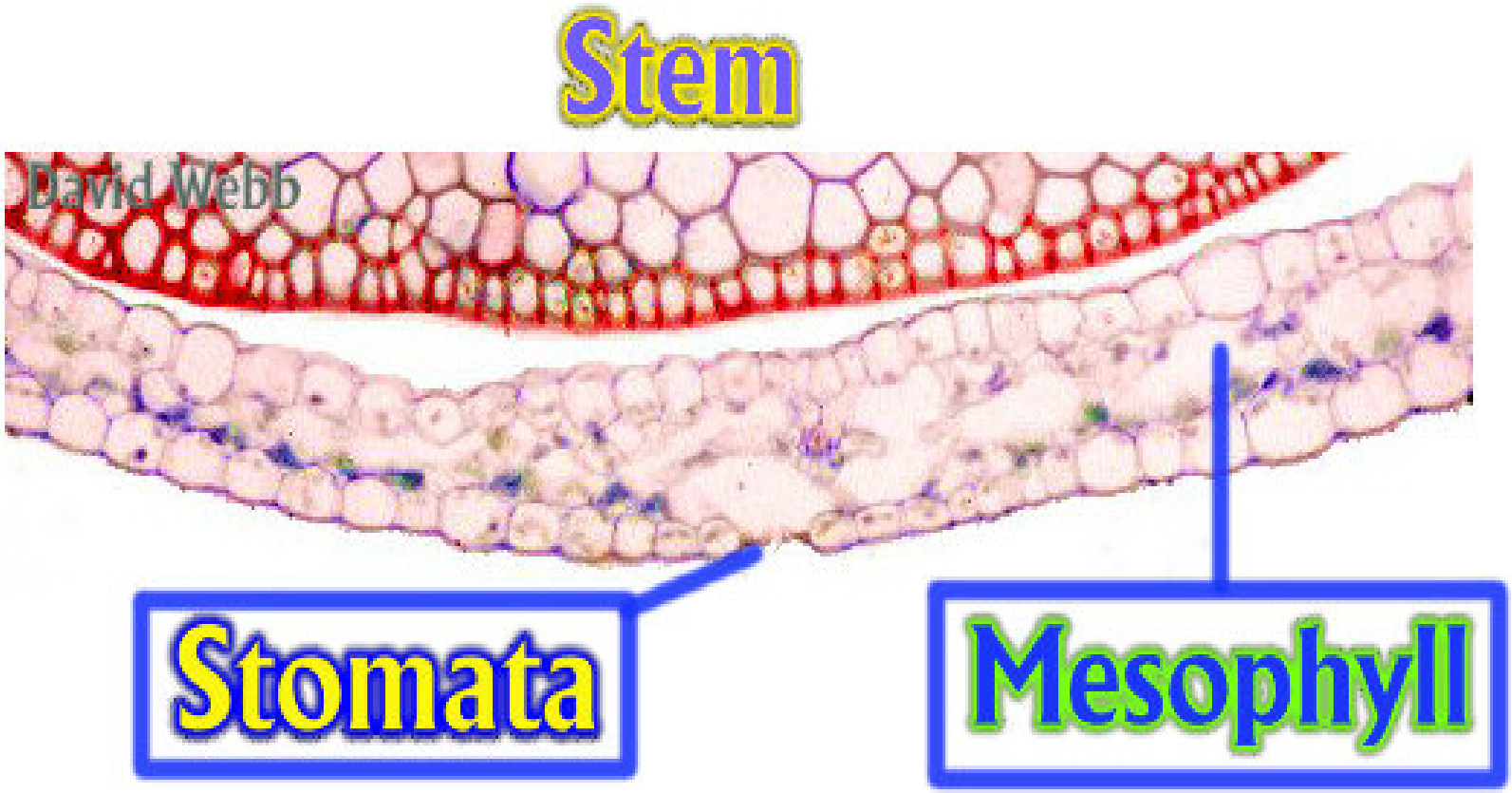
- Gametophytes stay in the spore wall and are therefore very small
- The male gametophyte is reduced to just an antheridium
- The female gametophyte produces archegonia and some storage tissue but little else.

❖Selaginellas are creeping or ascendant plants with simple, scale-like leaves on branching stems from which roots also arise.
❖The plants are heterosporous (megaspores and microspores), and have structures called ligules, scale-like outgrowths near the base of the upper surface of each microphyll and sporophyll.
❖Unusually for the lycopods, each microphyll contains a branching vascular trace.

This is a good example of *Anisophyllus* leaf production.

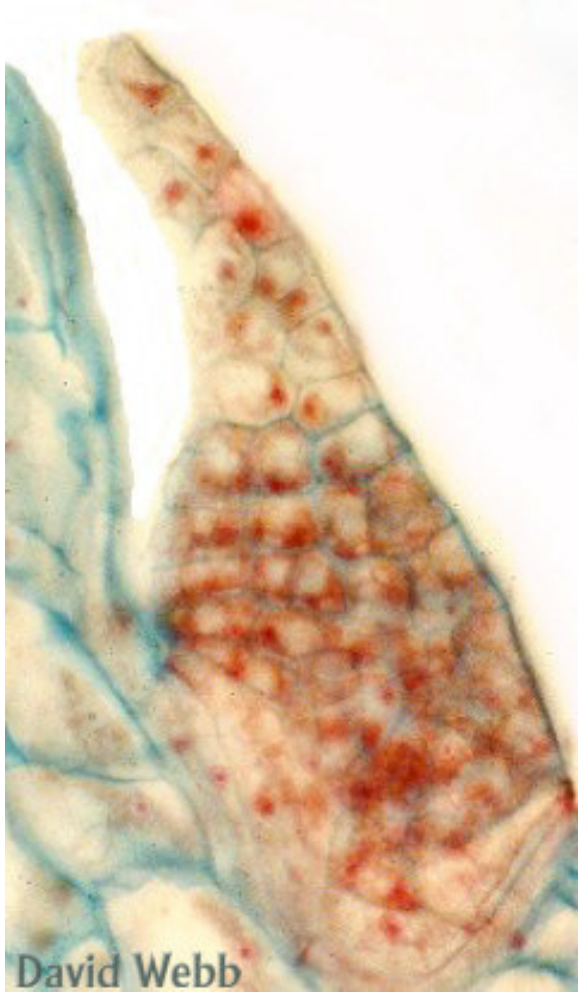
The Leaves are Microphylls. Vegetative Leaves are produced in four ranks.

In most cases the two ranks of Dorsal Leaves are small while the Ventral Leaves are relatively broad and are displayed laterally.

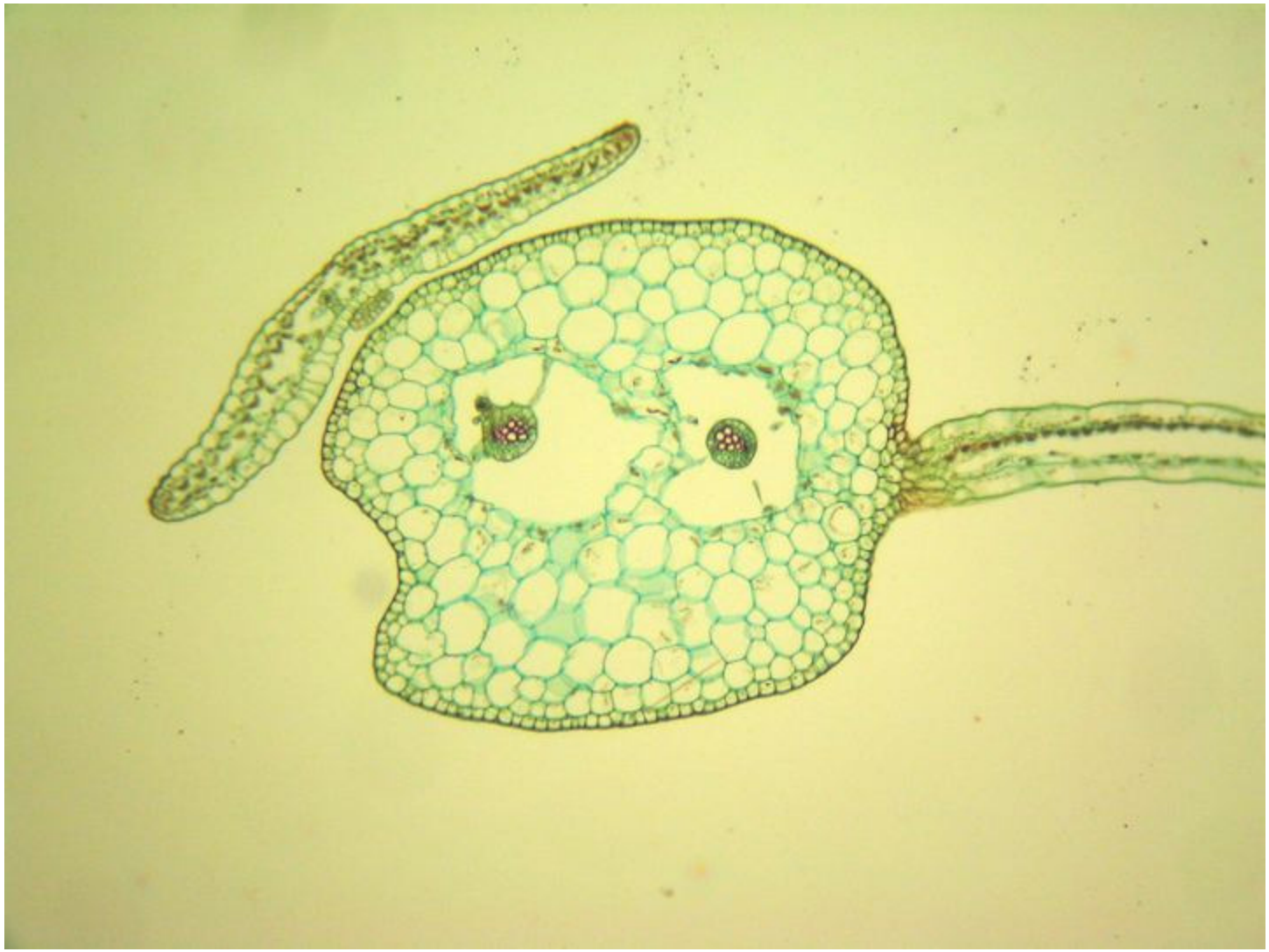


The Leaves are Microphylls and usually have one vein/leaf. A couple of species have branched venation

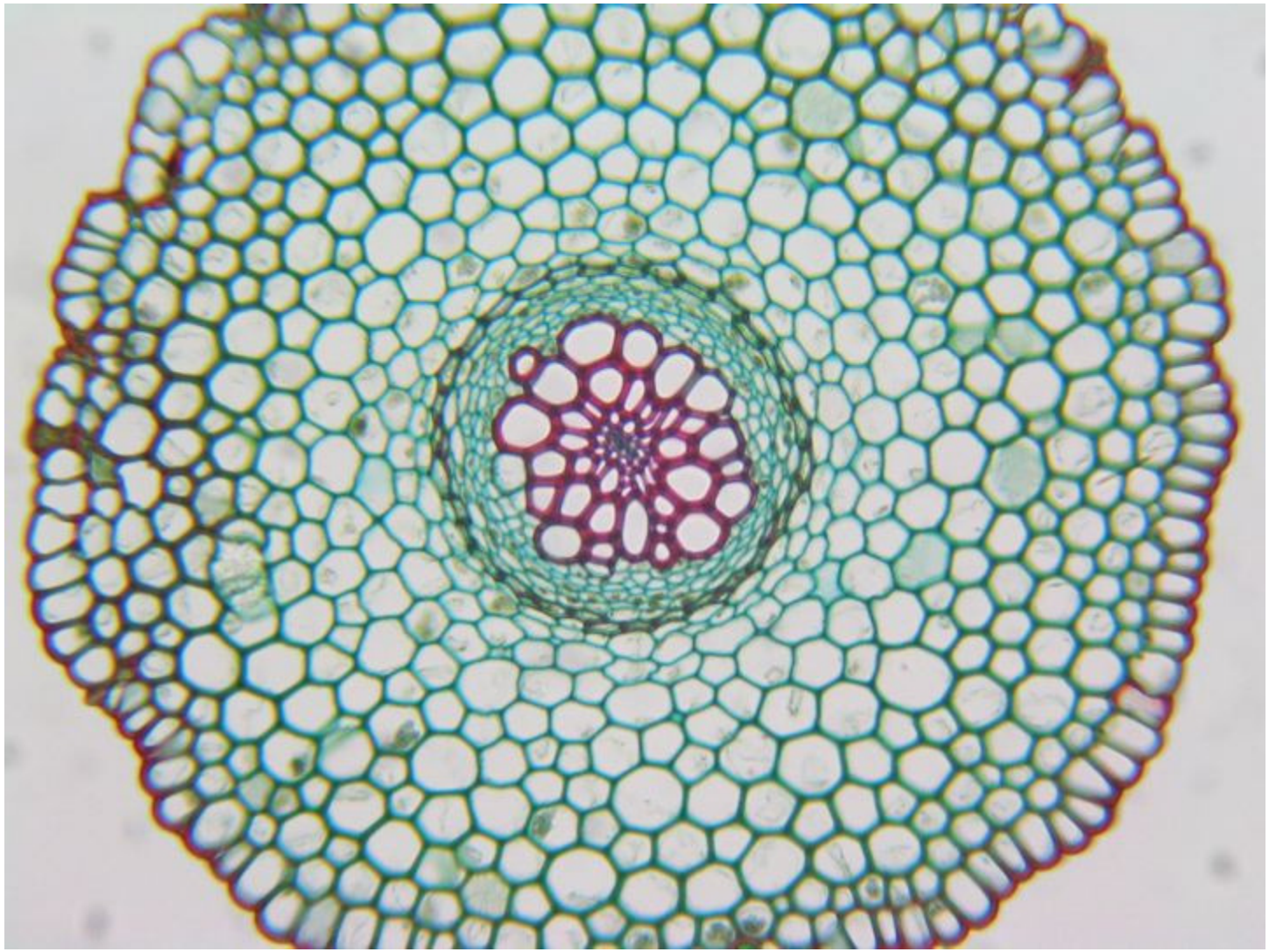
Selaginella has a Ligule.This is a distinctive trait. They are flask-like glandular structures that can be found at the base of each leaf.The appear to secrete mucilage which protects young leaves from drying as they expand.



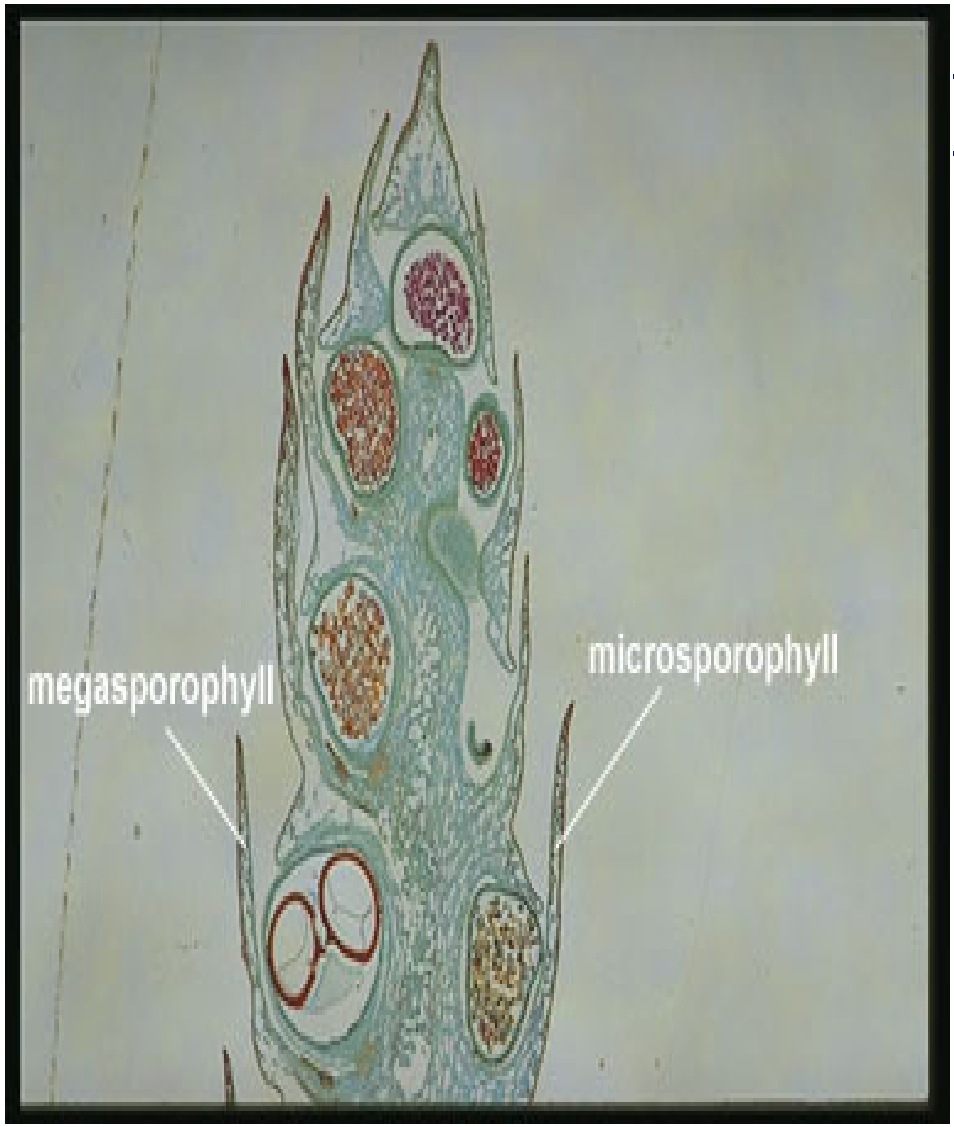
Stem



Selaginella rhizophore



Selaginella leaf



strobilus (plural strobili) is a structure present on many land plant species consisting of sporangia-bearing structures densely aggregated along a stem. Strobili are often called **cones**, but many botanists restrict the use of the term cone to the woody seed strobili of conifers. Strobili are characterized by a central axis (anatomically a stem) surrounded by spirally arranged or decussate structures that may be modified leaves or modified stems.

Selaginella life cycle