

# Introduction to Botany: BIOL 154

## Lab 8. Anatomy of leaves

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October 24th, 2010

### Preparation/reading:

1. Chapter 6, section 1
2. Leaf cross section—*Syringa* sp. (lilac). Procedure: prepared slide. Assignments:
  - (a) Draw overview of the entire leaf section.  
**Label:** upper epidermis, lower epidermis, palisade parenchyma, spongy parenchyma, vascular bundle, xylem, phloem, midrib, stoma.
  - (b) Draw detail of a leaf section, single to 3-lined.  
**Label:** palisade cell, spongy cell, mesophyll, epidermis, stoma, guard cells.
3. Sun and shade leaves cross section—*Sambucus canadensis* (elderberry). Procedure: prepared slide. Assignments:
  - (a) Draw details of two leaf sections, one from sun leaf, one from shade leaf.  
**Label:** number all differences between shade and sun leaves, then explain differences in *full sentences*.
4. Xerophyte leaves of succulent halophyte *Salsola kali*. Procedure: prepared slide. Assignments:
  - (a) Draw overview of entire leaf section.  
**Label:** number all specific features of succulent leaves, then explain them in *full sentences*.
5. Xerophyte leaves of sclerophyte *Pinus* sp. (pine tree). Procedure: prepared slide. Assignments:
  - (a) Draw overview of entire leaf section.  
**Label:** number all features specific to (a) sclerophytes and to (b) conifers, explain them in *full sentences*.