

Ethnobotany Lab 8.

Plant organs under microscope

April 7th, 2011

Background

Three types of plant organs are used widely as medicines: root (medicinal Latin name: *radix*), stem (*caulon*) and leaf (*folio*). Since pharmacies often have these organs dried and melted, it is important to recognize them under microscope.

Assignment

The goals of today's lab are:

1. Using microscope, observe 6 plant organs: monocot (liliid) root, "dicot" (rosid/asterid) root, monocot stem, "dicot" stem, leaf of tree (*Ginkgo*) and grass (*Poa*).
To understand better what you see, please consult "A Photographic Atlas for the Botany Laboratory" (5th ed. pp. 129–144, there are also other editions).
2. Summarize differences between stem, root and leaf in two ways:
 - Provide short description: how to distinguish between stem, root and leaf under microscope?
 - Draw three generalized schemes of microscopic structure of root, stem and leaf; emphasize differences.