BIOL 325 – Plants Systematics
Lab 07 - Rosids, part 2

I. Families to Know on Sight (no keying allowed for lab quizzes or final)
1. Fagaceae (beeches, oaks, chestnuts) – p. 597
   Summary: Trees with simple, toothed lvs and cupuled nuts.
   - Trees (shrubs).
   - Lvs alternate, simple, typically with teeth or lobes, lateral veins extending to margin.
   - Fls and infls unisexual, very small with perianth wanting.
   - Male catkins.
   - Fr a nut(s, 1-2) subtended by and sometimes enveloped by cupule.

2. Juglandaceae (walnuts, hickories, pecan) – p. 607
   Summary: Trees with pinnate lvs and normal or modified drupes known as walnuts and hickories, respectively.
   - Trees.
   - Lvs alternate, pinnate.
   - Fls and infls unisexual, very small with perianth wanting.
   - Male catkins.
   - Fr a drupe (walnut) or modified drupe (with dehiscent exocarp/mesocarp).

II. Genera to Know (you can write your own key to genera and use on lab final)
A. Hamamelidaceae (p. 487) E. Altingiaceae (p. 487)
   1) Hamamelis
B. Fagaceae (p. 597) F. Anacardiaceae (p. 703)
   2) Fagus
   3) Quercus
C. Juglandaceae (p. 607) G. Simaroubaceae (p. 703)
   4) Juglans
   5) Carya
D. Betulaceae (p. 609) H. Sapindaceae (p. 707)
   6) Betula
   7) Liquidambar
   8) Rhus
   9) Toxicodendron

III. Some Economic Botany
   - Hamamelidaceae includes the genus *Hamamelis*, the source of the ornamental witch-hazel shrub and the medicinal witch hazel extract from its stems.
   - Fagaceae includes edible nuts from *Castanea* (chestnuts), *Fagus* (beechnuts) and, when prepared properly, *Quercus* (acorns). Additionally, the oaks in particular are economically important for their wood, and all genera are valued as ornamental trees.
   - Juglandaceae includes edible nuts from *Juglans* (walnuts) and *Carya* (hickory nuts, pecans). Both genera are valued for their wood and as ornamental trees.
   - Betulaceae is the source of birch trees (*Betula*) of ornamental and essential oil importance, as well hazelnuts (*Corylus*).
   - Anacardiaceae is the source of cashews (*Anacardium*), pistachios (*Pistacia*), mangoes (*Mangifera*), as well as poison-ivy and poison-sumac (*Toxicodendron*).
   - Sapindaceae is the source of maples (*Acer*) of horticultural and agricultural (syrup) importance.