

Rosid Eudicots, Part 2

We study the rosids this semester in three parts due to the large number of taxa we wish to study.

I. Rosids Part 2**A. Families to Know on Sight**

1. Fagaceae – p. 597

Diagnostic Summary: Trees (shrubs) with simple, often toothed or lobed lvs with veins extending to margin; Plants monoecious; Fls and infls unisexual, very small with perianth wanting, male fls in catkins; Fr a nut(s, 1-2) subtended by or enveloped by a cupule.

Generalized Flora Formula: Male: $P^{4-6} A^{4-20}$; In catkins
Female: $P^{4-6} G^{[3-6], 3-6 \text{ styles}}$; Infl subtended / enveloped by cupule

2. Juglandaceae – p. 607

Diagnostic Summary: Trees with pinnate lvs; Plants monoecious; Fls and infls unisexual, very small and perianth wanting, male fls in catkins; Fr a drupe (walnut) or modified drupe (*Carya*, with dehiscent exocarp/mesocarp).

Generalized Flora Formula: Male: $P^{(0)[3-6]} A^{3\text{-many}}$; In catkins
Female: $P^{[4]} G^{[2-3], 2-3 \text{ styles}}$

B. Genera to Know (you can write your own key to genera)**Hamamelidaceae - p. 487**1. *Hamamelis* (shrubs)**Fagaceae - p. 597**2. *Fagus* (trees)3. *Quercus* (trees)**Juglandaceae - p. 607**4. *Juglans* (trees)5. *Carya* (trees)**Betulaceae - p. 609**6. *Betula* (shrubs to trees)**Altingiaceae - p. 487**7. *Liquidambar* (trees)**Anacardiaceae - p. 703**8. *Rhus* (shrubs to trees)9. *Toxicodendron* (shrubs or lianas)**Simaroubaceae - p. 703**10. *Ailanthus* (trees)**Sapindaceae - p. 707**11. *Acer* (trees)**C. Economic Botany (FYI)**

1. Anacardiaceae is the source of cashews (*Anacardium*), pistachios (*Pistacia*), mangoes (*Mangifera*), as well as poison-ivy and poison-sumac (*Toxicodendron*).
2. Betulaceae is the source of birch trees (*Betula*) of ornamental and essential oil importance, as well hazelnuts (*Corylus*).
3. Hamamelidaceae includes the genus *Hamamelis*, the source of the ornamental witch-hazel shrub and the medicinal witch hazel extract from its stems.
4. 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.
5. Juglandaceae includes edible nuts from *Juglans* (walnuts) and *Carya* (hickory nuts, pecans). Both genera are valued for their wood and as ornamental trees.
6. Sapindaceae is the source of maples (*Acer*) of horticultural and agricultural (syrup) importance.

Economic Botany Supplement: On the table in the Refugium are products from plants of the Juglandaceae, Anacardiaceae, and Hamamelidaceae. Complete the table below and answer the questions that follow.

Anacardiaceae		Hamamelidaceae		Juglandaceae	
The _____ family		The _____ family		The _____ family	
Product Vernacular	Species	Product Vernacular	Species	Product Vernacular	Species

Questions:

1. Name the genera above that serve as the types for their respective families:
2. Which edible seed above is actually a type of hickory?
3. Which of the economically important species above is native to Pennsylvania and flowers in the fall?