

Rosid Eudicots, part 1

Rosids comprise a major clade of Angiosperms consisting of at least 100,000 species. As eudicots, they possess triaperturate pollen. Evolving out of the basal eudicot grade, the Rosids generally have tetra or pentamerous flowers with free petals and stamens numbering twice or more times the number of petals. We will survey the Rosids this semester in three parts, due to the large number of taxa we wish to study.

Table 1. FYI: Economically important members of the Rosids, part 1 (alphabetically by family).

- 1) **Fabaceae** includes a wide variety of horticulturally or agriculturally important genera: *Arachis* (peanut), *Phaseolus* (various beans), *Pisum* (peas), *Glycine* (soybeans), *Medicago* (alfalfa), *Cicer* (chickpeas), *Gleditsia* (honeylocust), *Cercis* (redbud), etc.
- 2) **Rosaceae** includes a wide variety of horticulturally or agriculturally important genera: *Rosa* (roses), *Malus* (apples), *Prunus* (plums, cherries, apricots, peaches, almonds, & nectarines), *Rubus* (raspberries & blackberries), *Fragaria* (strawberries), *Spiraea* (spiraea), etc.
- 3) **Violaceae** includes members of the genus *Viola*, the source violets and of horticulturally important pansy cultivars

I. Rosids Part 1**A. Families to Know on Sight****1. Rosaceae (rose family) - p. 615**

Diagnostic Summary: Woody plants with toothed, simple or compound leaves, or herbs with toothed, trifoliolate leaves; flowers regular with 5 clawed petals, 10 or more stamens, and hypanthium well developed; fruit various, but derived from multiple free or fused carpels.

Generalized Flora Formula: $Ca^{5} Ca^{5, \text{clawed}} A^{10 \text{ or many}} \underline{G}^{[1-5] \text{ or many}} \text{ or } \bar{G}^{[1-5]}$; Hypanthium

2. Fabaceae (legume or pea family) - p. 569

Diagnostic Summary: Woody or herbaceous plants with compound (simple) leaves, entire (rarely toothed) leaflets, and pulvini at ends of petioles and petiolules; flowers irregular (regular) with 5 petals, 10 stamens, and hypanthium; fruit a legume, derived from the 1 carpel of the flower.

Generalized Flora Formula:

Subfamily Faboideae: $Ca^{[5]} Ca^{1+2+[2], \text{ banner+wings+[keel]}, \text{ showy}} A^{[9]+1} \underline{G}^1$; Irregular

Subfamily Mimosoideae: $Ca^{[5]} Ca^{5, \text{ inconspicuous}} A^{10, \text{ showy}} \underline{G}^1$; Regular, In showy heads

Subfamily Caesalpinioideae: $Ca^{[5]} Ca^{5, \text{ showy}} A^{10} \underline{G}^1$; Regular or irregular

B. Genera to Know (you can write your own key to genera)

1. Rosaceae - p. 615

1. *Rosa* (shrubs)

2. *Malus* (trees)

3. *Prunus* (trees & shrubs)

4. *Rubus* (shrubs)

5. *Crataegus* (trees)

6. *Duchesnea* (herbs)

2. Fabaceae - p. 569

7. *Robinia* (trees)

8. *Coronilla* (herbs)

9. *Albizia* (trees)

10. *Cercis* (trees)

11. *Trifolium* (herbs)

3. Violaceae – p. 524

12. *Viola* (herbs)