III. Rosids Part 3

A. Families to Know on Sight

1. Vitaceae - p. 500
   Diagnostic Summary: Woody vines (lianas) with simple, palmately-veined leaves or palmately compound leaves, and woody tendrils. Fruit a thin-walled berry.
   Generalized Flora Formula: \( Ca^{[4-5]} Co^{4-5} A^{4-5} G^{[2]} \); Berry

2. Cucurbitaceae - p. 566
   Diagnostic Summary: Herbaceous vines or scrambling herbs with simple, palmately-veined leaves and herbaceous, highly-coiled tendrils. Fruit a thick-walled berry (pepo), capsule or achene.
   Generalized Flora Formula: Unisexual: \( Ca^{[5]} Co^{[5]} A^{[5]} G^{[3]} \), parietal placentation; pepo, capsule, achene

3. Malvaceae – p. 695
   Diagnostic Summary: Herbs, shrubs or trees with simple, palmately veined leaves with stellate trichomes beneath. Flowers bisexual, 5-merous, typically with many monadelphous stamens. Fruit a capsule, schizocarp or berry.
   Generalized Flora Formula: \( Ca^{[5]} Co^{5} A^{[\text{many}]} G^{[3-\text{many}]} \); Epicalyx sometimes present

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

1. Vitaceae – p. 500
   1. Vitis (lianas)
   2. Parthenocissus (lianas)

2. Cucurbitaceae – p. 566
   3. Echinocystis (vines)
   4. Sicyos (vines)

3. Cannabaceae – p. 659
   5. Celtis (trees & shrubs)

4. Moraceae – p. 661
   6. Morus (trees & shrubs)

5. Urticaceae – p. 663
   7. Urtica (herbs)

6. Malvaceae – p. 695
   8. Hibiscus (herbs to shrubs)
   9. Abutilon (herbs)
   10. Tilia (trees)

7. Oxalidaceae – p. 564
   11. Oxalis (herbs)

8. Brassicaceae – p. 668
   12. Alliaria (herbs)
   13. Brassica (herbs)

C. Economic Botany

1) Cucurbitaceae includes many edible or ornamental gourds, squashes and melons, such as: *Cucurbita* (squashes generally, incl. pumpkins, zucchini, acorn squash, etc.), *Cucumis* (melons generally, incl. honeydew, cantelope, & cucumber), *Citrus* (watermelon). Loofah sponges come from the fibrous pericarp of *Luffa* spp.

2) Vitaceae includes the cultivated table and wine grapes of the genus *Vitis*.  

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3) Malvaceae is the source of *Hibiscus* of primarily horticultural importance, of *Theobroma* (cacao, from which chocolate), *Cola* (the historical source of seeds used to flavor and caffeinate cola beverages), *Ochroma* (balsa), *Abelmoschus* (okra), and *Althaea officinalis* (the source of the mucilaginous root extract used since Egyptian antiquity to make marshmallow, the honey-sweetened confection used to treat sore throats).