

# Orders and families to know for Botany 400 2nd lecture exam

\*Caryophyllales - betalains, dichasium inflorescence, free-central or derived (basal) placentation; petals often lacking

- \*Phytolaccaceae      CA<sup>5</sup> CO<sup>0</sup> A<sup>10</sup> G<sup>(5+)</sup>-berry      [raceme; sometimes apocarpic]
- \*Caryophyllaceae      CA<sup>5</sup> CO<sup>5</sup> A<sup>5,10</sup> G<sup>(2-5)</sup>-capsule      [dichasium; free-central]
- \*Portulacaceae      CA<sup>2</sup> CO<sup>5</sup> A<sup>5+</sup> G<sup>(2-3)</sup>-capsule      [few basal ovules; capsule or pyxis]
- \*Cactaceae      CA<sup>∞</sup> CO<sup>∞</sup> A<sup>∞</sup> G<sup>(4)</sup>-berry      [parietal]
- \*Amaranthaceae      CA<sup>3-5</sup> CO<sup>0</sup> A<sup>5</sup> G<sup>(2-3)</sup>-achene      [unisexual flowers; one ovule; achene or utricle]

\*Saxifragales - intermediate between ranunculids and rosids; usually 2-6 carpels that are only slightly fused at base

- \*Saxifragaceae      CA<sup>5</sup> CO<sup>5</sup> A<sup>5 or 10</sup> G<sup>(2)</sup>-follicles
- \*Crassulaceae      CA<sup>4-6</sup> CO<sup>4-6</sup> A<sup>8-12</sup> G<sup>(4-6)</sup>-follicles

\*Rosales - Nitrogen fixing, loss of corolla, glandular leaf serrations

- \*Rosaceae      CA<sup>5</sup> CO<sup>5</sup> A<sup>∞</sup> G<sup>∞</sup>-follicles      Spiraeoideae
- G<sup>∞</sup>-achenes      Rosoideae      G<sup>1</sup>-drupe      Prunoideae      G<sup>(5)</sup>-pome      Maloideae
- \*Ulmaceae      CA<sup>4-8</sup> CO<sup>0</sup> A<sup>4-8</sup> G<sup>(2)</sup>-1 seeded samara
- \*Moraceae      [unisexual, multiple fruit (syconium) of 1 seeded units]

\*Fabales - see family features

\*Fabaceae                      CA<sup>5</sup> COZ<sup>5</sup> A<sup>(9)+1</sup> G<sup>1</sup> -legume                      Faboideae

\*Malpighiales - parietal placentation, capsules often, many shifts to wind pollination

\*Violaceae                      CA<sup>5</sup> COZ<sup>5</sup> A<sup>5</sup> G<sup>(3)</sup> -capsule

\*Salicaceae                      CA<sup>0</sup> CO<sup>0</sup> A<sup>∞</sup> G<sup>(2)</sup> -capsule                      [unisexual flowers]

\*Euphorbiaceae                      CA<sup>0</sup> CO<sup>0</sup> A<sup>1</sup> G<sup>(3)</sup> -capsule                      [unisexual flowers, cyathium]

\*Fagales - wind pollination, trees, aments, inferior ovary, nut fruit

CA<sup>3-6</sup> CO<sup>0</sup> A<sup>∞</sup> G<sup>(2-3)</sup> -nut                      [unisexual]

\*Fagaceae, \*Juglandaceae, \*Betulaceae - separated based on leaves, fruits

\*Myrtales - internal phloem, vestured pits, well developed hypanthium

\*Onagraceae                      CA<sup>4</sup> CO<sup>4</sup> A<sup>4,8</sup> G<sup>(4)</sup>

\*Sapindales - woody, compound leaves, 1-2 seeded ovary, disk well developed

\*Anacardiaceae                      CA<sup>5</sup> CO<sup>5</sup> A<sup>5,10</sup> G<sup>(3)</sup> -drupe                      [bisexual or unisexual]

\*Sapindaceae                      CA<sup>4-5</sup> CO<sup>0,4-5</sup> A<sup>4-10</sup> G<sup>(2)</sup> -samara, schizocarp                      [bisexual or unisexual]

\*Malvales - palmate venation, stellate hairs, fused A, valvate sepals

\*Malvaceae                      CA<sup>5</sup> CO<sup>5</sup> A<sup>(∞)</sup> G<sup>(5-∞)</sup> -capsule

\*Brassicales or Capparales - mustard oils

Brassicaceae                      CA<sup>4</sup> CO<sup>4</sup> A<sup>4+2</sup> G<sup>(2)</sup> -silique, silicle