

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	$CA^5 CO^0 A^{10} \underline{G}^{(5+)}$ -berry	[raceme; sometimes apocarpic]
Caryophyllaceae	$CA^{(5)} CO^5 A^{5,10} \underline{G}^{(2-5)}$ -capsule	[dichasium; free-central]
Portulacaceae	$CA^2 CO^5 A^{5+} \underline{G}^{(2-3)}$ -capsule	[few basal ovules; capsule or pyxis]
Cactaceae	$CA^\infty CO^\infty A^\infty \underline{G}^{(4)}$ -berry	[no betalains; parietal]
Amaranthaceae/ Chenopodiaceae	$CA^{3-5} CO^0 A^5 \underline{G}^{(2-3)}$ -achene	[unsexual flowers; one ovule; achene or utricle]

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

Saxifragaceae	$CA^5 CO^5 A^{5 \text{ or } 10} \underline{G}^{(2)}$ -follicles
Crassulaceae	$CA^{4-6} CO^{4-6} A^{8-12} \underline{G}^{(4-6)}$ -follicles

Rosales - don't need to know order

Rosaceae	$CA^5 CO^5 A^\infty \underline{G}^\infty$ -follicles	Spiraeoideae			
\underline{G}^∞ -achenes	Rosoideae	\underline{G}^1 -drupe	Prunoideae	$\underline{G}^{(5)}$ -pome	Maloideae
Ulmaceae	$CA^{4-8} CO^0 A^{4-8} \underline{G}^{(2)}$ -1 seeded samara				

Fabales - don't need to know order

Fabaceae CA⁵ COZ⁵ A^{⑨+1} G¹ -legume Faboideae

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

Violaceae CA⁵ COZ⁵ A⁵ G^③ -capsule

Salicaceae CA⁰ CO⁰ A[∞] G^② -capsule [unisexual flowers]

Euphorbiaceae CA⁰ CO⁰ A¹ G^③ -capsule [unisexual flowers, cyathium]

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

CA³⁻⁶ CO⁰ A[∞] G^{②-3} -nut [unisexual]

Myrtales - internal phloem, vestured pits, well developed hypanthium

Onagraceae CA⁴ CO⁴ A^{4,8} G^④

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

Anacardiaceae CA⁵ CO⁵ A^{5,10} G^③ -drupe [bisexual or unisexual]

Sapindaceae CA⁴⁻⁵ CO^{0,4-5} A⁴⁻¹⁰ G^② -samara, schizocarp [bisexual or unisexual]
[Aceraceae]

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

Malvaceae CA⁵ CO⁵ A[∞] G^{⑤-∞} -capsule

Brassicales or Capparales - mustard oils

Brassicaceae CA⁴ CO⁴ A⁴⁺² G^② -silique, silicle