Family Characters Review

Exam III

Berberidaceae

* Unicarpellate
* Biseriate calyx
* 5 nectariferous petals

Papaveraceae

* Uniseriate and caducous calyx
* Biseriate corolla; 2+2 or 3+3
* 2 to many carpellate ovary but always 1-locular
* Stamens diadelphous (3+3) or many and then not diadelphous

Ranunculaceae

* Calyx of 5 petaloid sepals (except for the Genus *Ranunculus*)
* Corolla absent (except for Genus *Ranunculus* where corolla = 5)
* Androecium of numerous stamens arranged spirally on receptacle
* Apocarpous gynoecium

Rosaceae

* Alternate leaves
* 5 sepals; 5 petals; numerous whorled stamens
* Hypanthium

1. *Rosoideae*

-Compound leaves

-Superior ovary

-Numerous distinct carpels (i.e. apocarpous)

1. *Spiraeoideae*

-Simple leaves

-Superior ovary

-5 distinct carpels

1. *Amygdaloideae*

-Simple leaves

-Superior ovary

-1 carpel (i.e. drupe)

1. *Maloideae*

-Simple leaves

-Inferior ovary (occasionally half inferior)

-5 fused carpels

Fabaceae

* Alternate, compound leaves with entire leaflets and pulvini
* Unicarpellate gynoecium
* 5 sepals; 5 petals (2 occasionally fused)
* Fruit: Legume or Loment

1. *Faboideae*

-Leaves pinnately or ternately compound

-Zygomorphic corolla with banner, wings and keel

-10 stamens (monodelphous or diadelphous)

1. *Caesalpinioideae*

-Leaves pinnately compound

-Slightly zygomorphic corolla with distinct, but unequal petals

-10 or fewer stamens

1. *Mimosoideae*

-Leaves bi-pinnately compound

-Actinomorphic connate corolla

-10 or more showy stamens

Euphorbiaceae

* Simple, alternate leaves with milky sap
* Cymose inflorescences with terminal (central) 3-carpellate pistillate flower
* Flowers imperfect
* Cyathium (specific to the Genus Euphorbia) – a much condensed cyme of a central 3-carpellate pistillate flower surrounded by numerous staminate flowers, all subtended by showy, colorful bracts, the whole structure superficially resembling a perfect flower.

Brassicaceae

* Leaves alternate
* 4 sepals; 4 petals with cross-like appearance (hence the old family name: Cruciferae)
* 6 stamens in two ranks (4 + 2) = tetradynamous
* 2 carpellate gynoecium forming a silique or silicle

Ericaceae

* Corolla campanulate (e.g*. Rhododendron*) or urceolate (e.g. *Vaccinium*)
* Stamens with distal, poricidally dehiscent anthers
* Syncarpous gynoecium of 5 (rarely 4) carpels

Cornaceae

* Leaves simple and opposite with thickened vessel elements (i.e. fibrous strings present upon tearing leaf width-wise)
* 4 sepals; 4 petals; 4 stamens
* Ovary 2 carpellate and inferior
* Occasionally with showy bracts subtending inflorescences

Caprifoliaceae

* Leaves simple and opposite
* 5 sepals; 5 petals; 5 epipetalous stamens
* Corolla bilabiate
* Ovary 2 carpellate and inferior

Poaceae

* Leaves simple, parallel veined and with ligule at junction of blade and sheath
* Flowers (florets) in spikelets subtended by two glumes (bracts)
* Florets usually perfect and incompletely enclosed within lemma and palea
* Stems terete (rounded) in cross section

Cyperaceae (specifically the genus Carex)

* Leaves simple and parallel veined
* Flowers imperfect
* Pistillate flowers completely enclosed by Perigynium
* Stems triangular in cross section

Asteraceae

* Inflorescences usually of showy sterile ray florets and fertile non-showy disc florets; occasionally with only ray or disc florets but inflorescence always a head
* 5 syngenesious stamens (i.e. fused by their anthers)
* Sepals reduced to bristles or scales or sometimes absent
* Ovary 2-carpellate and inferior

Solanaceae

* 5 sepals; 5 petals; 5 stamens; 5 carpels
* Anthers connivent
* Ovary superior but occasionally appearing inferior

Rubiaceae

* Leaves alternate or whorled
* Inflorescence always determinate
* 4-5 sepals; 4-5 petals; 4-5 stamens (flowers always 4, 4, 4 or 5,5,5)
* Corolla salverform or rotate
* Ovary 2-carpellate and inferior

Lamiaceae

* Leaves opposite on square stems
* 5 sepals; 5 petals
* Bilabiate corolla
* 2 or 4 epipetalous stamens
* Flowers in paired axillary cymes (Verticils)
* 2 carpellate ovary with 4 single seeded locules and gynobasic style
* 1 large asymmetric nectary