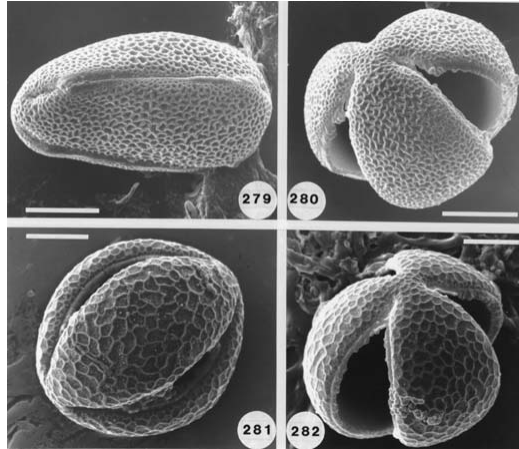


Basal Eudicots



Dicots in transition between Basal Grade (Dicot) Angiosperms & Core Eudicots

- Many stamens and, usu, carpels
- Perianth reduced in number, though still poorly differentiated
- Parts generally free (some with fusion in G)
- Triaperturate pollen.

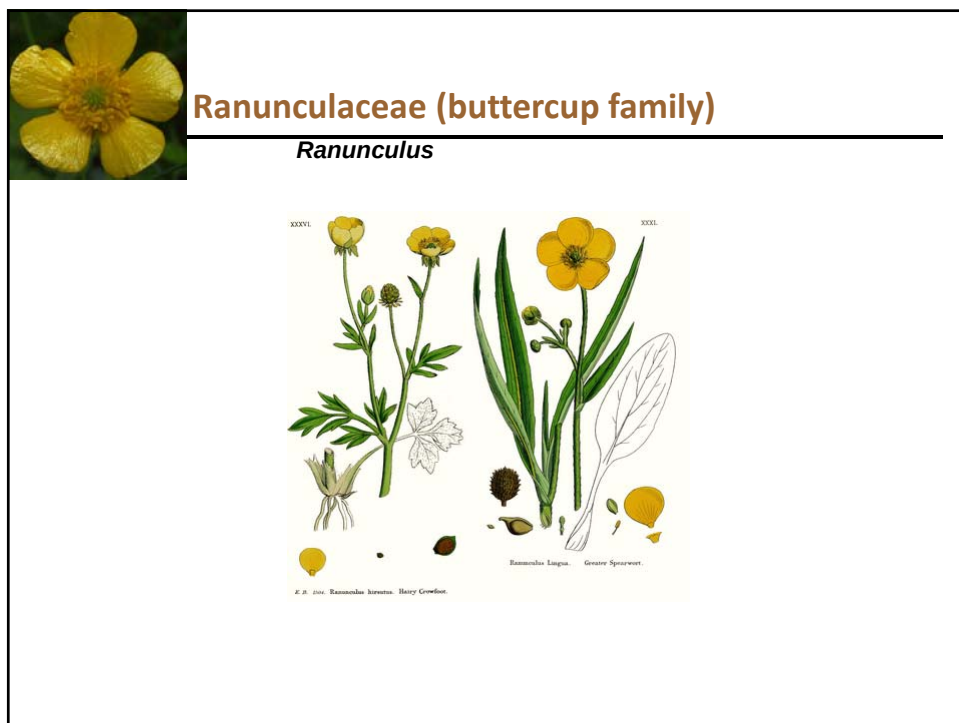
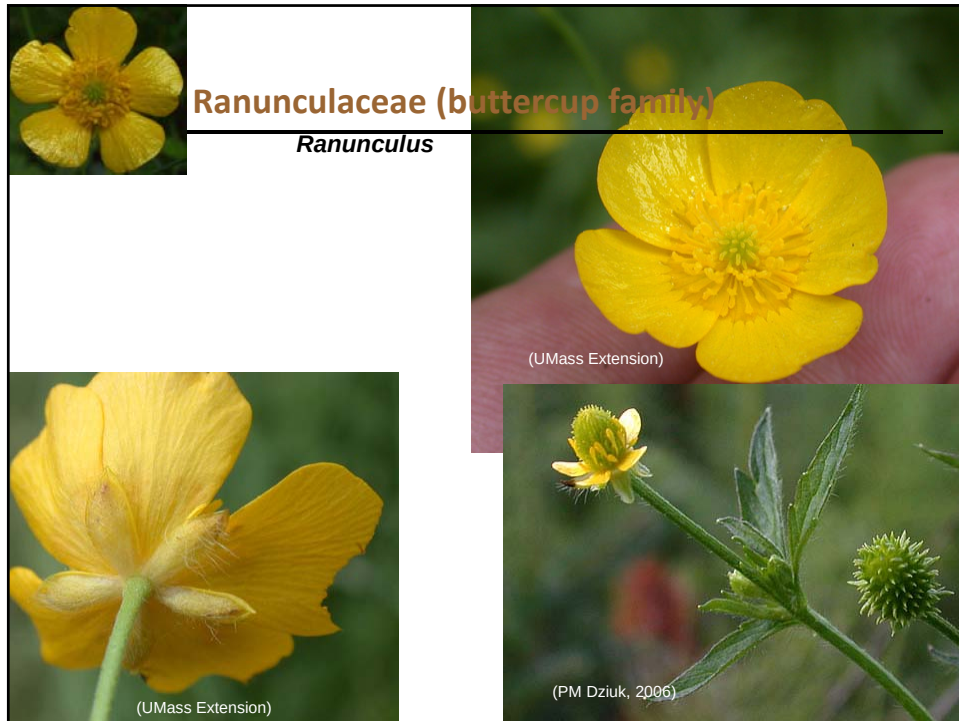


Tricolpate pollen from the Lamiales
(USDA Pollen Lab)



Ranunculaceae (buttercup family)

- ☐ Herbs to vines or woody vines
- ☐ Lvs simple, compound, to dissected, all with sheathing bases & membranous margins.
- ☐ Perianth whorls poorly differentiated
- ☐ **Ca**^{4-5-many} **Co**^{4-5-many} **A**^{many} **G**^{several-many on convex receptacle}





Ranunculaceae (buttercup family)





USDA Plants Database

Clematis



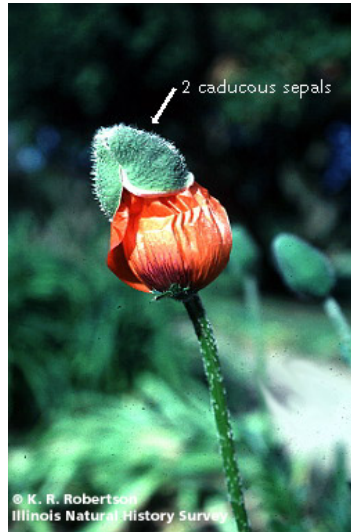
Papaveraceae (poppy family)

- ☐ Herbs (shrubs) often with milky or colored latex.
- ☐ Lvs simple to pinnate to pinnately much dissected with or without sheathing base with membranous margins.
- ☐ Perianth whorls well differentiated between 2 caducous sepals and 4-8 showy petals.
- ☐ **Ca**_{2, caducous} **Co**₄₋₈ **A**_{many or 6} **G**_{[2-many], short to absent style}



Papaveraceae (poppy family)

☐ *Papaver orientale*



2 caducous sepals

© K. R. Robertson
Illinois Natural History Survey



Papaveraceae (poppy family)

☐ *Papaver somniferum*



2

M. Papaveraceae.



Papaveraceae (poppy family)

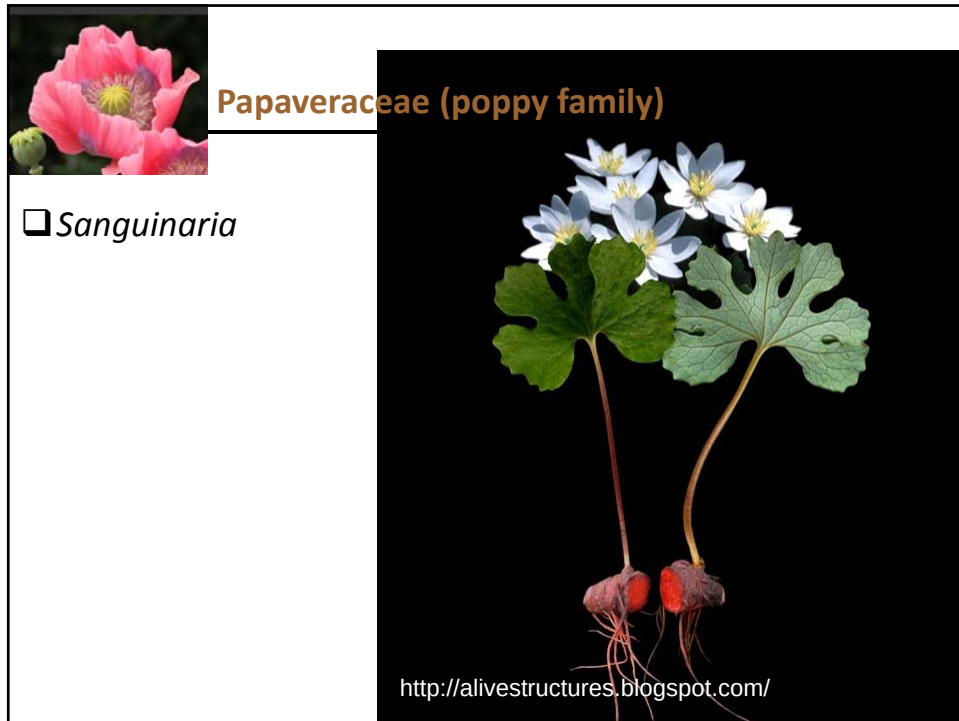
☐ *Papaver somniferum*



Papaveraceae (poppy family)

☐ *Chelidonium* (celandine poppy)







Caryophyllid Eudicots



Caryophyllids are Eudicots

- Triaperturate pollen.

Caryophyllid Eudicots



Caryophyllids are Eudicots

- Triaperturate pollen.

Caryophyllid-specific characters

- Herbs (shrubs & trees)
- Many succulents
- Flowers variable, often with numerous parts and poorly differentiated whorls.
- Anthocyanin-derived **betalain** pigments



Cactaceae (cactus family)

- ☐ Stem-succulent herbs to shrubs
- ☐ Lacking lvs with expanded blades
- ☐ Axillary buds (areoles) with clustered spines
- ☐ Fls large, showy

Generalized Flora Formula: fl regular or irregular:

Ca⁰ **Co**^{many, spiral} **A**^{many} **$\bar{G}$** ^[many]

Cereus sensu lato



Cereus sensu lato



Cereus sensu lato



Cereus fence in Aruba



Opuntia



Opuntia



Opuntia



Opuntia



Opuntia



*Opuntia
humifusa*



*Hylocereus
(dragon fruit)*



Photo ©L.Waltermyer on NatureAtlas



Photo ©B.Inaglory

Hylocereus
(dragon fruit)



Photo ©S.Masters

Schlumbergera
(Thanksgiving or Christmas Cactus)



Schlumbergera
(Thanksgiving or Christmas Cactus)



Melocactus
(Turk's cap cactus)



Melocactus
(Turk's cap cactus)



Polygonaceae (Buckwheat family)

- ☐ Herbs or vines (shrubs to small trees)
- ☐ Ocreae (singular form: ocrea)
- ☐ Nodes swollen, stems jointed in appearance
- ☐ Fls small

Generalized Flora Formula:

fl regular: $\text{Ca}^{[4-5] \text{ or } [3+3]}$ A^{3-9} $\underline{\text{G}}^{[2-3]}$, lenticular or trigonal nut or achene enveloped by persistent Ca

Persicaria maculosa



Persicaria perfoliata
Mile-a-minute



Polygonum
(knotweed)



Fagopyrum



Fagopyrum



Buckwheat field in Bhutan



***Coccoloba*
(sea-grape)**



Coccoloba
(sea-grape)



Coccoloba
(sea-grape)

