

### INTRODUCTION OF KY NATIVE PLANTS

#### The Plant Diversity of Kentucky

- 179 families of plants (not all herbaceous) represented in Kentucky
- 856 genera represented
- 2,172 Native species and lesser taxa (79.21% of Kentucky Flora)
- 570 Non-Native Species (20.79% of Kentucky Flora)
- 2742 Total Plant Species in Kentucky
  - 77 pteridophytes (ferns and fern allies)
  - 13 gymnosperms (conifers)
  - 1,909 dicots
  - 743 monocots

# How Does Kentucky Compare to Surrounding States?

TABLE 3
COMPARISON WITH TAXA TREATED
IN OTHER RECENT STATE FLORAS

	PENNSYLVANIA	Оню	KENTUCKY	TENNESSEE	Missouri
Families	179		179	167	
Genera	982		856	850	
Native species and lesser taxa	2,076	2,019	2,030	2,267	2,382
Non-native species and lesser taxa	1,242	979	570	518	820
Total species and lesser taxa	3,318	2,998	2,600	2,785	3,202

Sources: Pennsylvania (Rhoads & Klein 1993); Ohio (Cooperrider et al. 2001); Tennessee (Wofford & Kral 1993); Missouri (Yatskievych 1999).

#### Our Endemics (none of these)

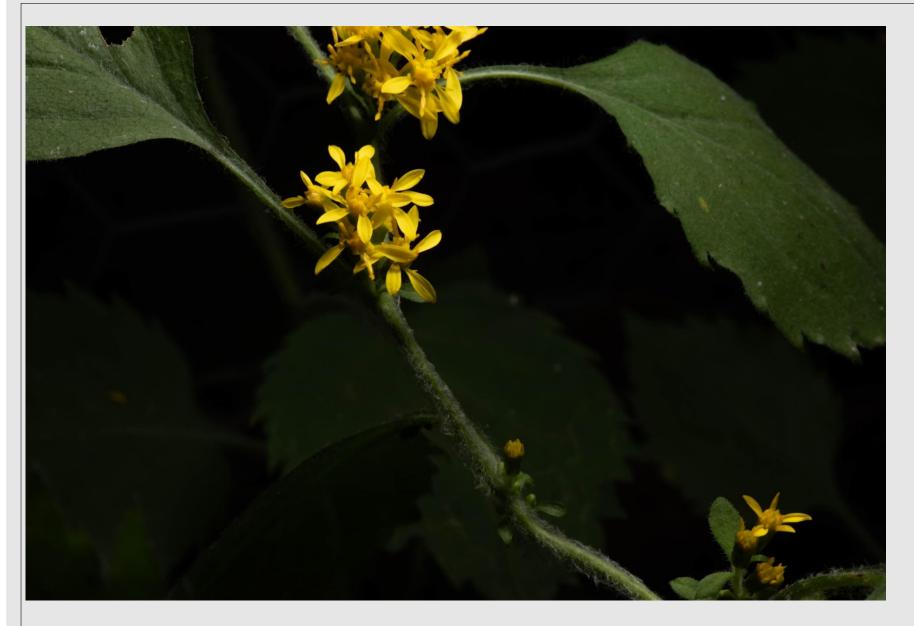
#### 3 Endemics to Kentucky

- Leavenworthia exigua var. lacinata (Kentucky glade cress)
- Solidago albopilosa (white-haired goldenrod)
- Trifolium kentuckiense (Kentucky clover)









- White-haired goldenrod (Solidago albopilosa)
- Found in Red River Gorge Area
- Behind the drip line in sandstone rock shelters
- Federally Endangered

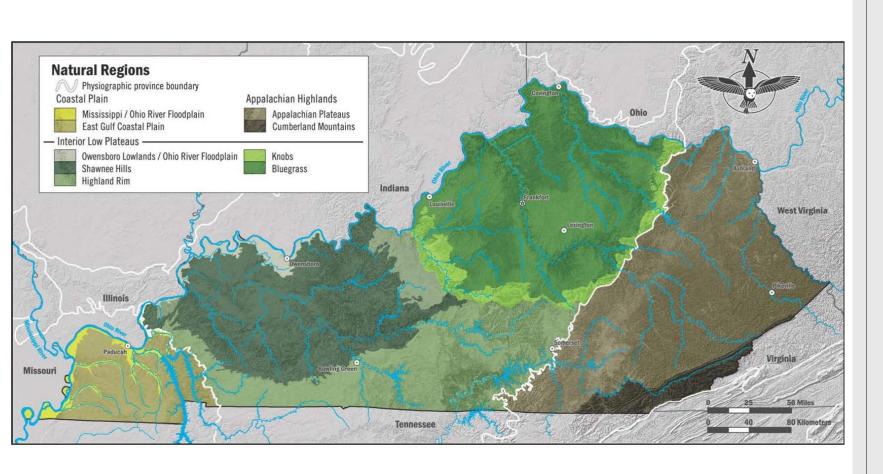


- Showy lady's slipper (Cypripedium reginae)
- Historic in Kentucky
- shade, sun; moist prairies, sedge meadows, calcareous fens

#### **Conservation Status of Native Plants**

- 1670 Native Plants are considered Secure (77%)
- 116 Native Plants are on a Watch List (5%)
- 53 Native Plants are listed as Special Concern (2%)
- 101 Native Plants are listed as Threatened
   (5%)
- 176 Native Plants are listed as Endangered
   (8%)
- 38 Native Plants are listed as Historic (2%)
- 18 Native Plants are listed as Extirpated
   (1%)





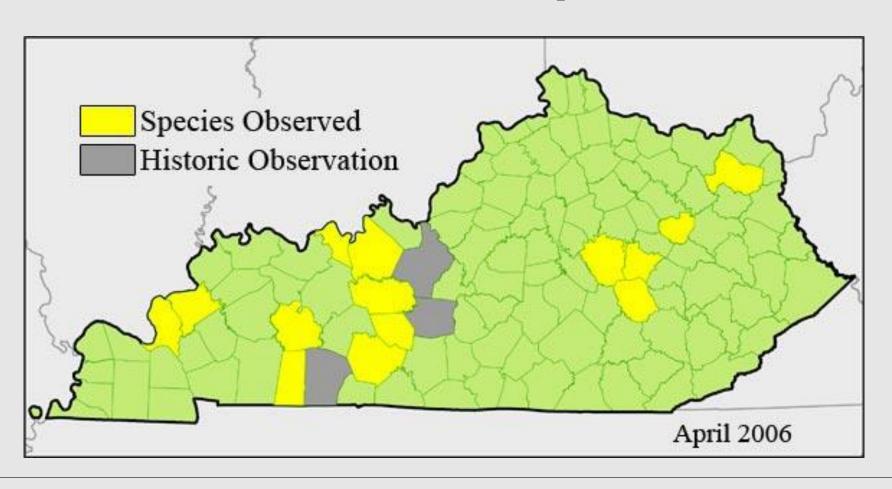
# Natural Regions of Kentucky

The Natural Regions of Kentucky and Physiographic Regions of Kentucky provide a framework of where we may find herbaceous plants.

Never forget the wise words of Jeff Goldblum in *Jurassic Park*, "Life finds a way."

#### French's Shooting Star

(Dodecatheon frenchii) Distribution Map



#### **Declining Factors**

- Habitat Loss
- Habitat Fragmentation
- Invasive exotic species
- Pollution
- People
- Overcollection

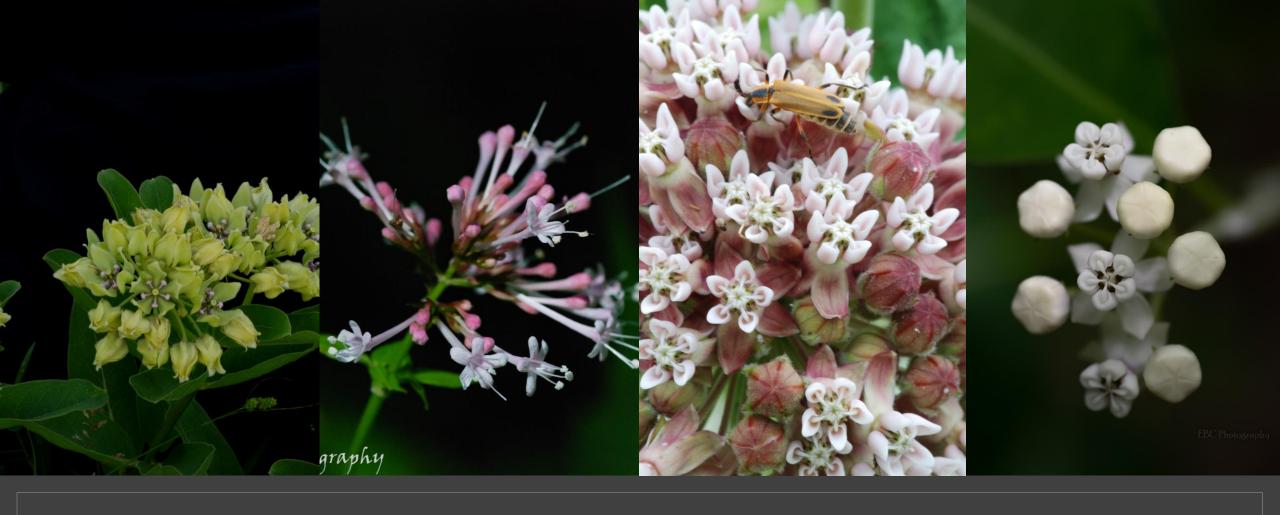




Barnes, White, and Evans; Rare Wildflowers of Kentucky, 2008



### KENTUCKY PLANT FAMILIES

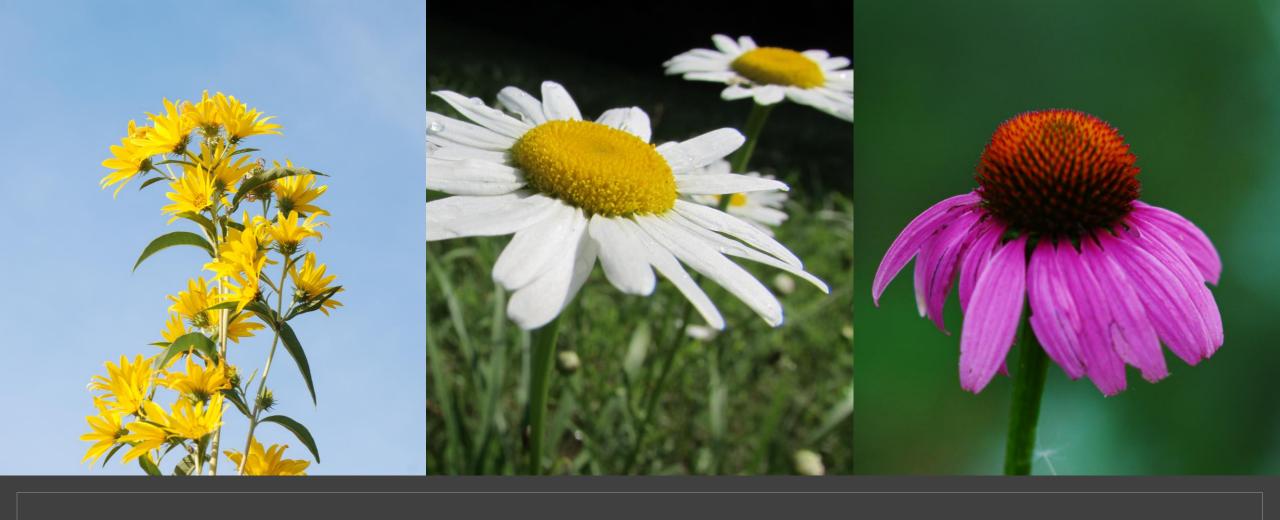


### ASCELPIADACEAE (MILKWEED FAMILY)



#### Asclepiadaceae (Milkweed Family)

- Perennial Herbs
- Umbel-like Clusters
- Milky sap
- Toxic to most animals
- Preferred by Monarch and other butterfly species.

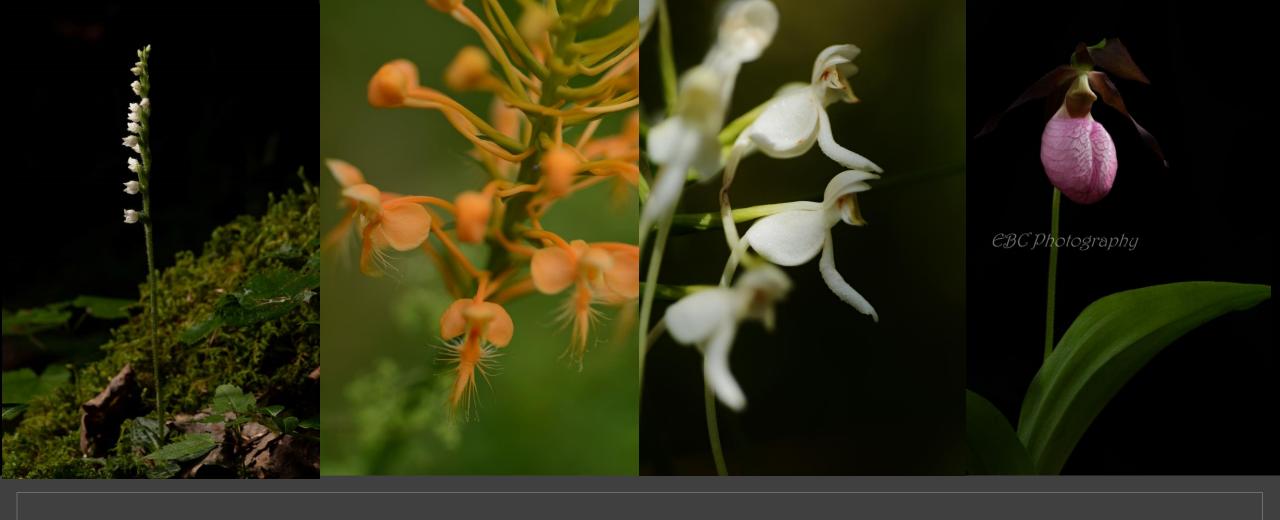


ASTERACEAE (ASTER FAMILY)

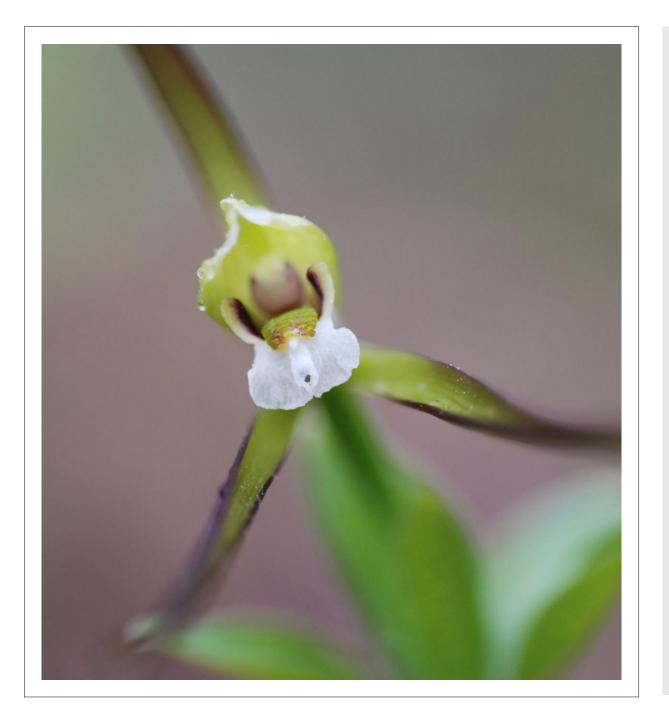


# Asteraceae (Aster Family)

- Annual to Perennial Herbs
- Disk florets (tubular corollas)
   and Ray Florets (ligulate corollas)
- Fruit an achene or cypsela
- Most members of this family have little value to wildlife.
- Large Family (~32,000)

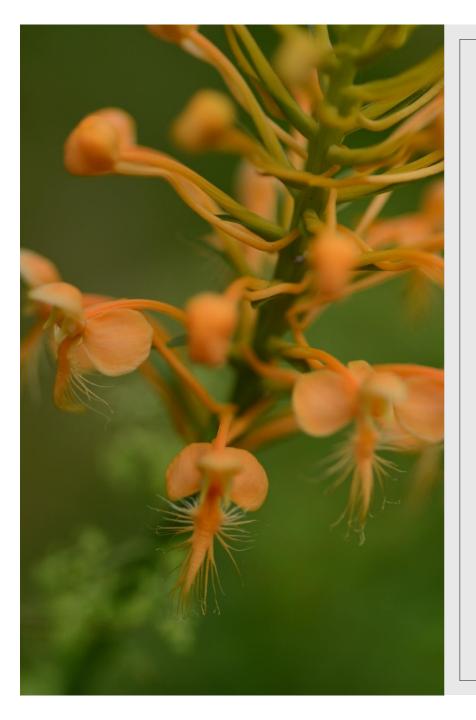


### ORCHIDACEAE (ORCHID FAMILY)



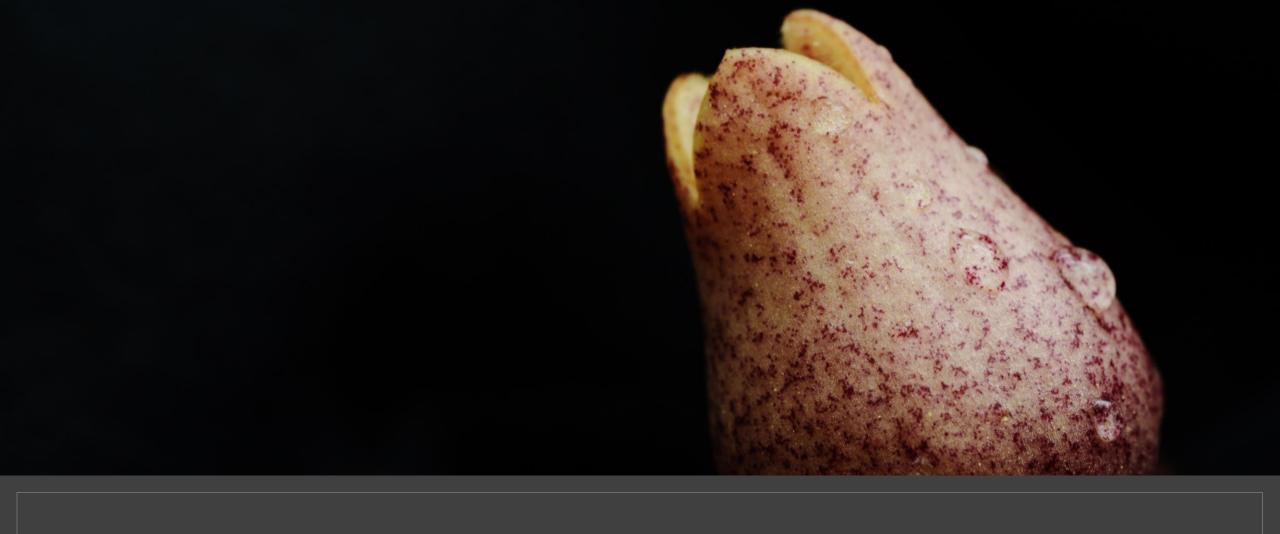
#### Orchidaceae (Orchid Family)

- Perennial herb (-ish)
- Monocot
- 2 Lateral Petals are similar with a 3rd petal being fused (forming lip or cup)
- Large family (~30,000 worldwide)

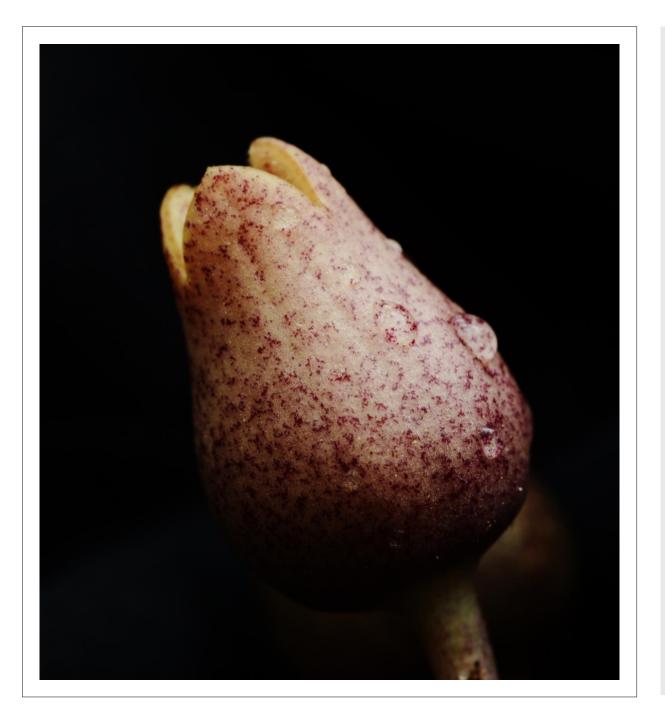


# Orchidaceae (Orchid Family)

- 43 different species found in KY (more than 50% are threatened or endangered)
- Specialized fungal relationship to survive.

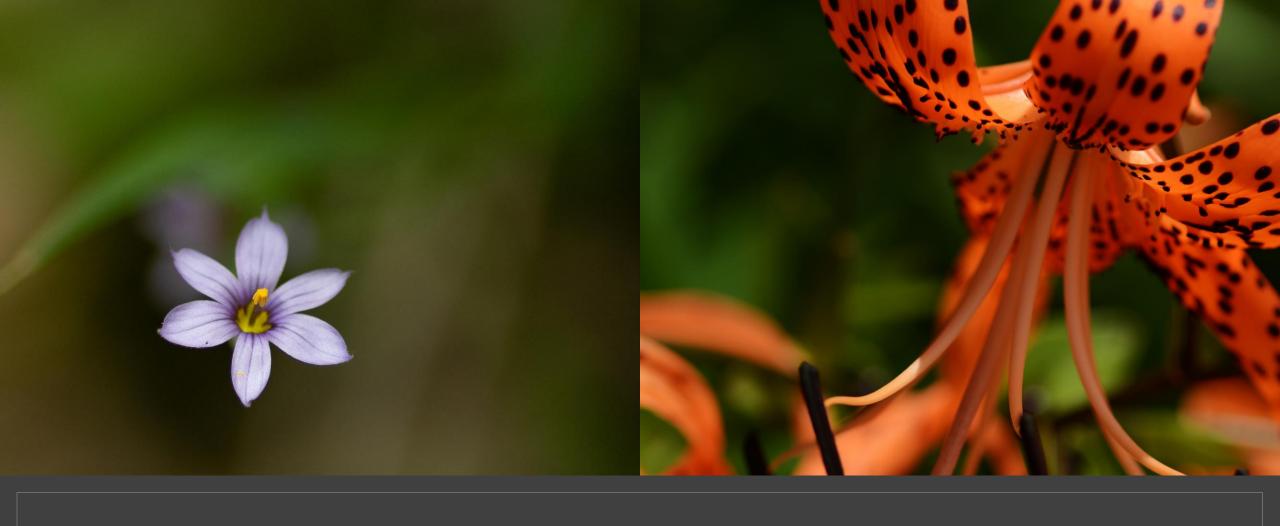


ARISTOLOCHIACEAE (BIRTHWORT FAMILY)

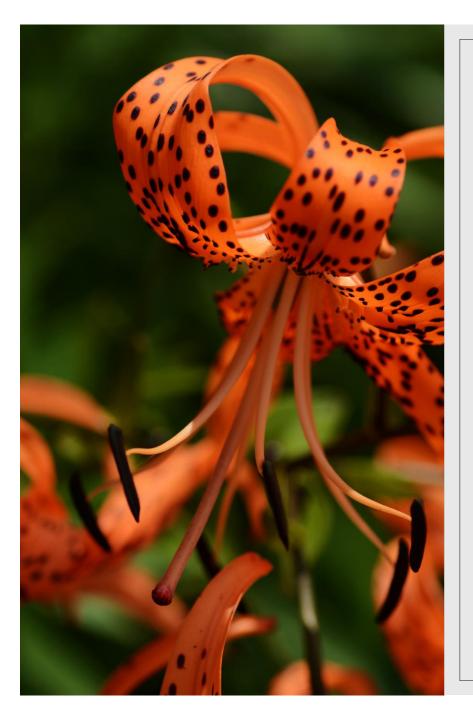


#### Aristolochiaceae (Birthwort Family)

- Paleoherbs (exhibits characteristics of dicots and monocots)
- Medicinal plants
- Wild Ginger (Asarum canadense)
- Woody vines and herbs

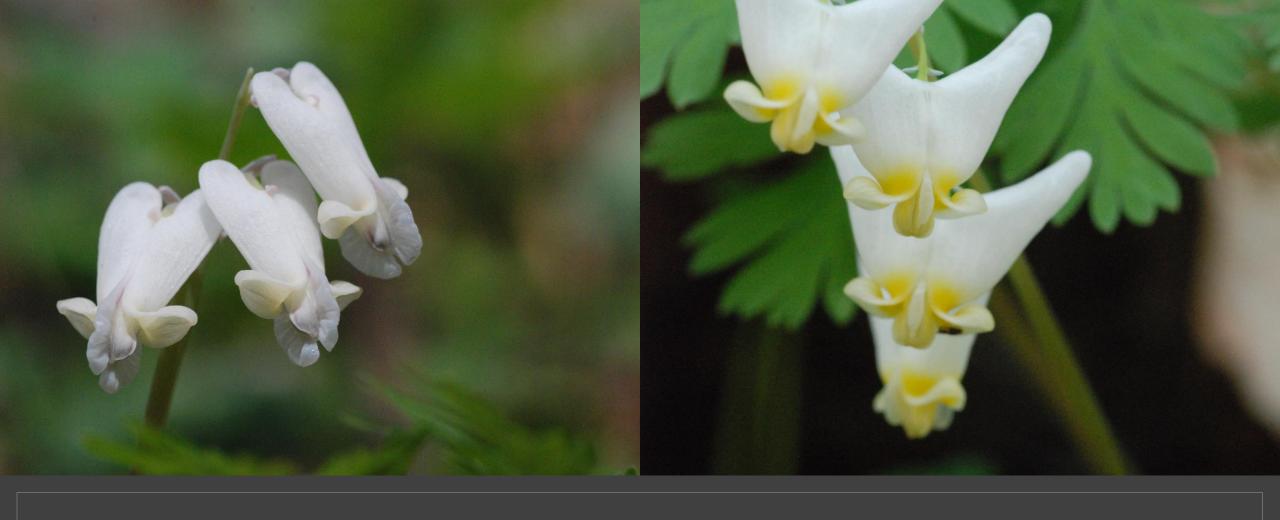


LILIACEAE (LILY FAMILY)



#### Liliaceae (Lily Family)

- Perennial Herb
- Parallel veined
- Fruit is a berry or a capsule
- Monocot
- Flowers in various terminal clusters

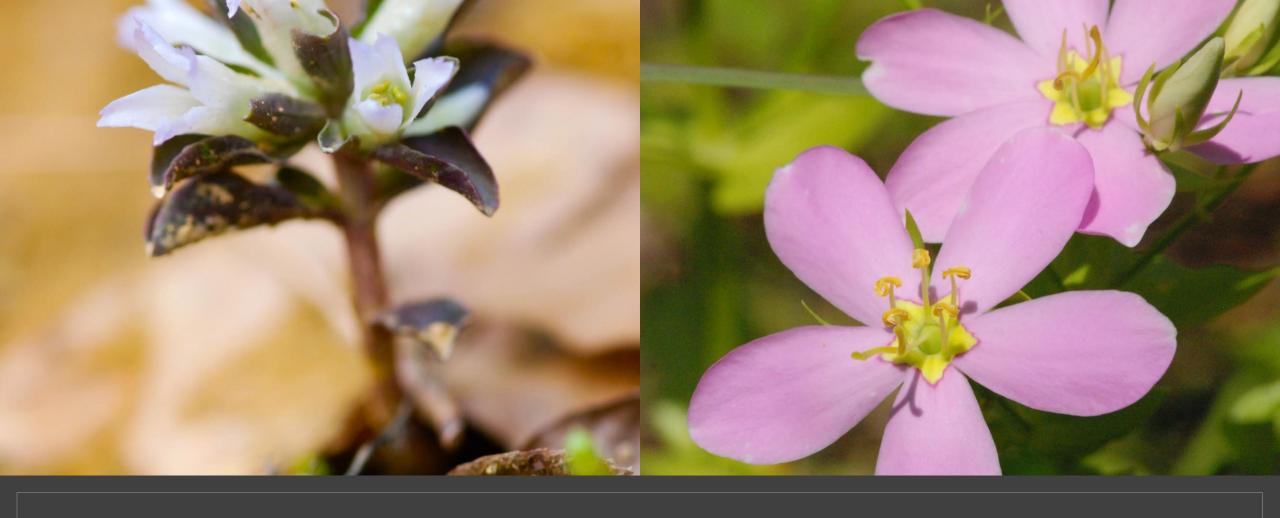


FUMARIACEAE (FUMITORY FAMILY)



#### Fumariaceae (Fumitory Family)

- Annual, Biennial, or Perennial Herbs
- Alkaloid family, closely related to Papaveraceae
- All species should be considered poisonous
- Fruit is a capsule
- Flower in racemes or panicles

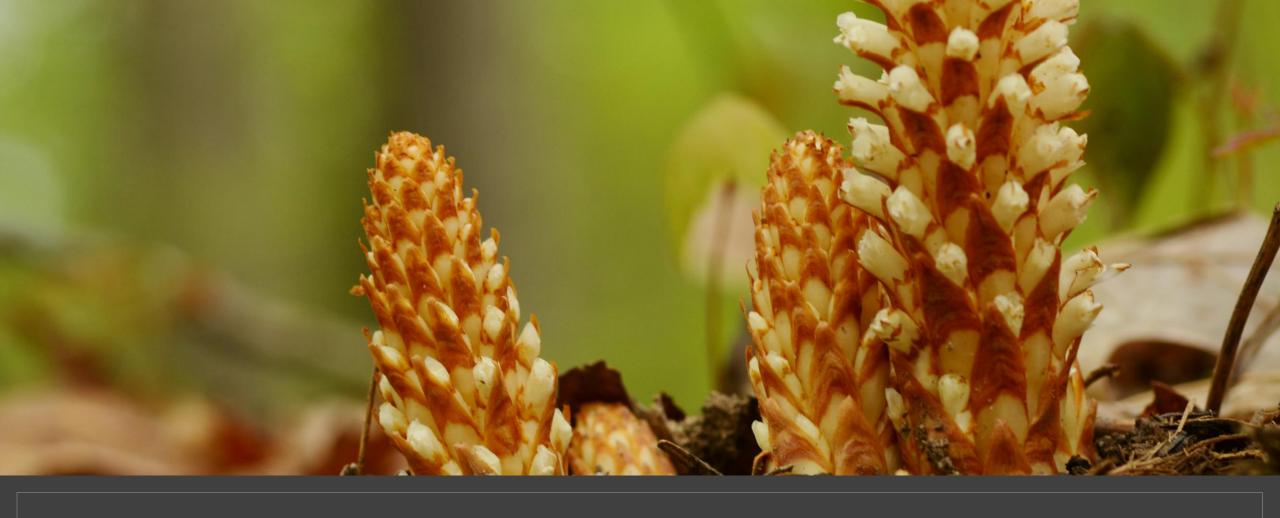


GENTIANACEAE (GENTIAN FAMILY)



#### Gentianaceae (Gentian Family)

- Annual, Biennial, or Perennial Herb
- Leaves mostly opposite or whorled
- Flowers in various clusters
- Fruit a capsule

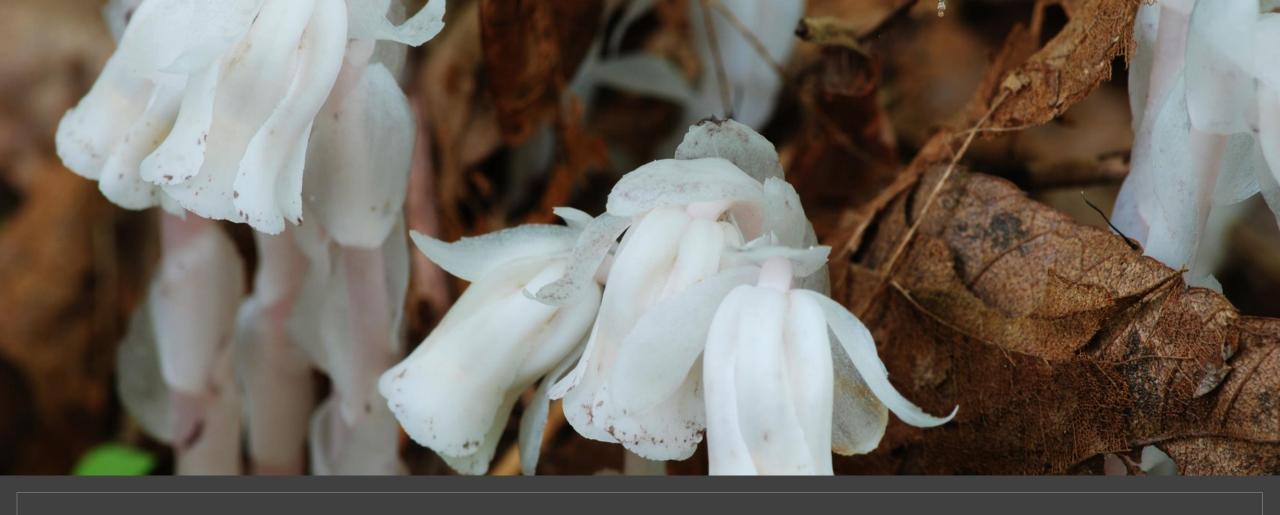


OROBACHACEAE (BROOMRAPE FAMILY)

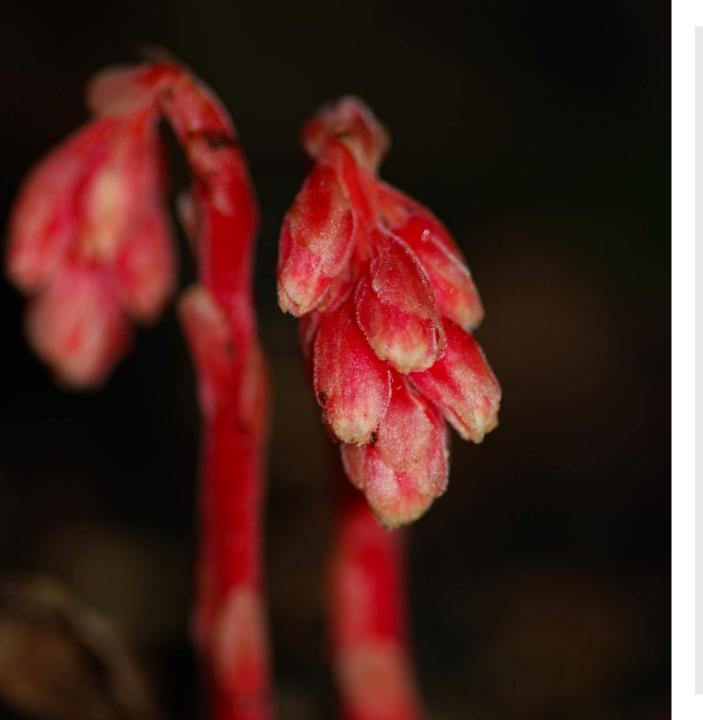


#### Orobachaceae (Broomrape Family)

- Nongreen, root-parasitic, perennial herbs
- Leaves alternate or densely overlapping; scalelike
- Flowers solitary or in spikes
- Fruit a capsule

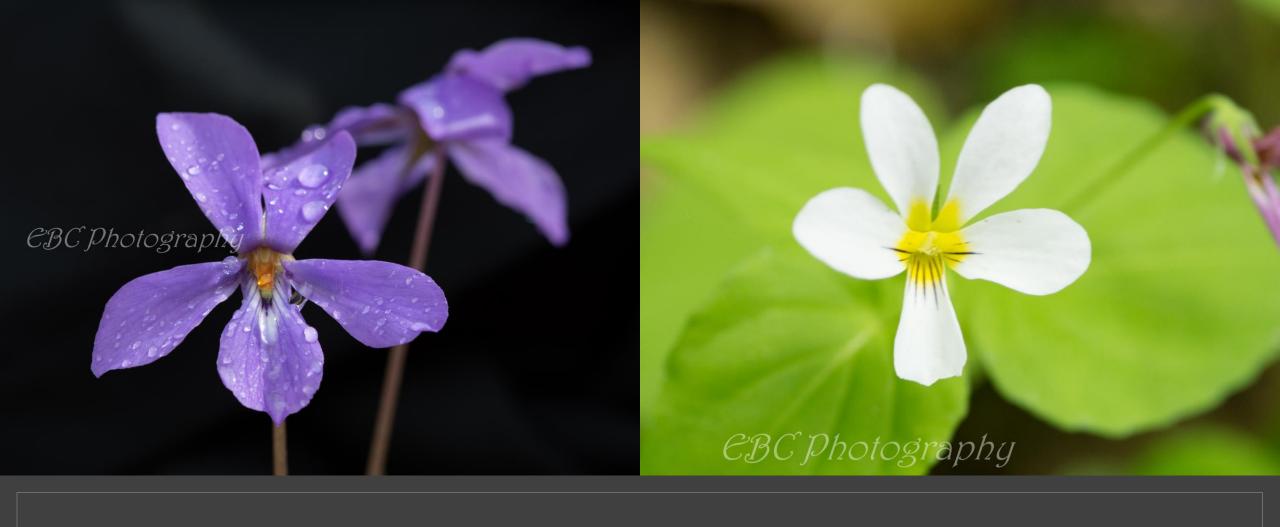


MONOTROPACEAE (INDIAN PIPE FAMILY)

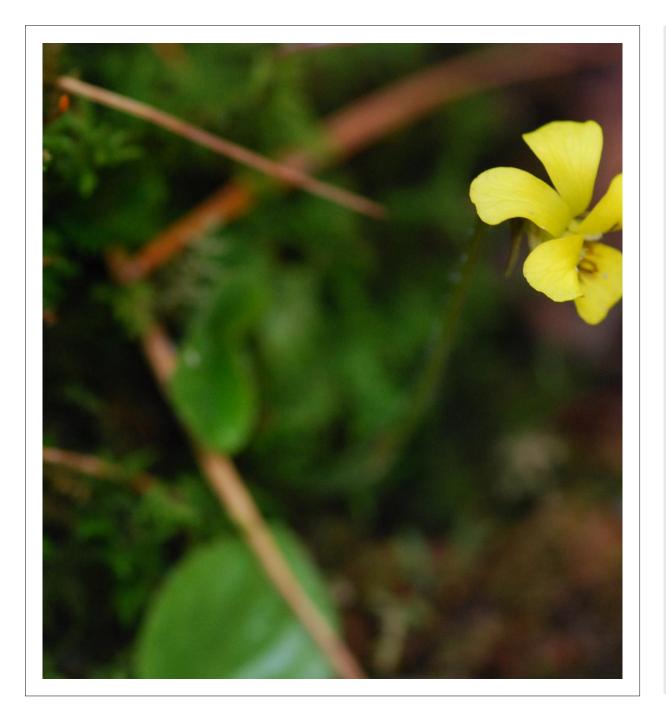


#### Monotropaceae (Indian Pipe Family)

- Non-green, herbaceous perennials
- Leaves alternate; scale-like
- Flowers are solitary or in spikes
- Fruit a capsule or a berry
- Mycotrophic plants

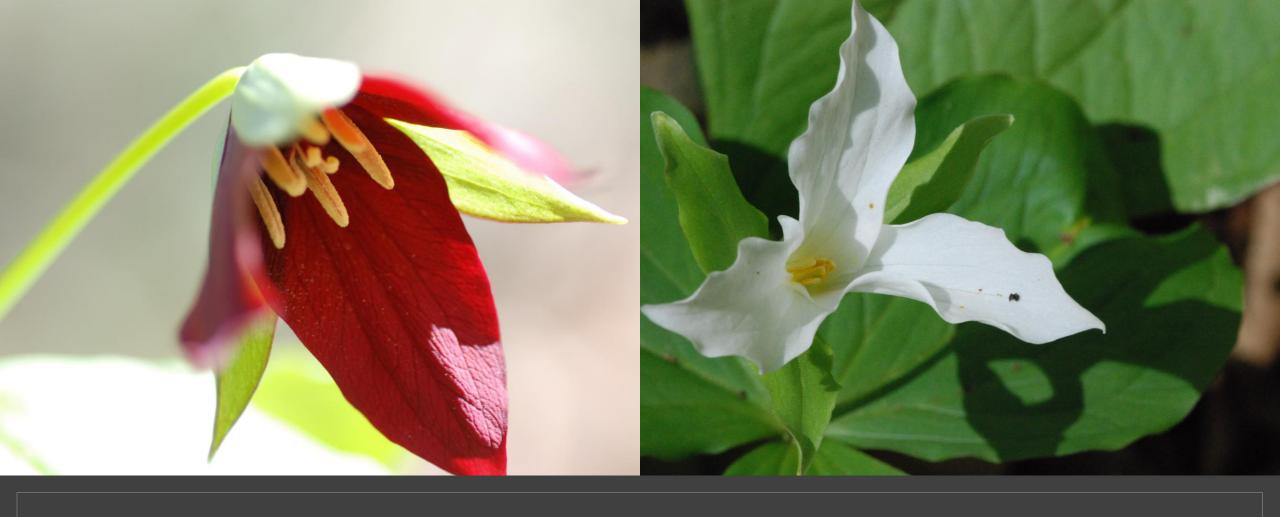


### VIOLACEAE (VIOLET FAMILY)



### Violaceae (Violet Family)

- Annual or Perennial Herbs
- Solitary flowers
- Fruit a capsule
- Easily escapes



## TRILLIACEAE (TRILLIUM FAMILY)

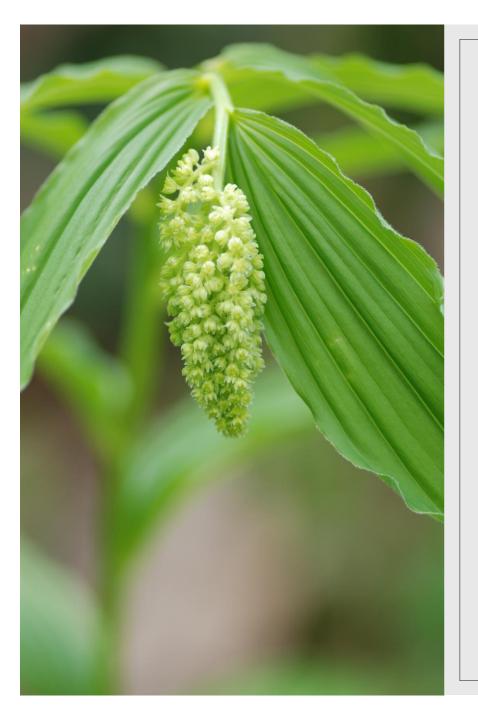


# Trilliaceae (Trillium Family)

- Perennial herbs
- Berrylike fruit
- Solitary flower
- Rhizomes can cause digestive problems and vomiting
- Special relationship with ants

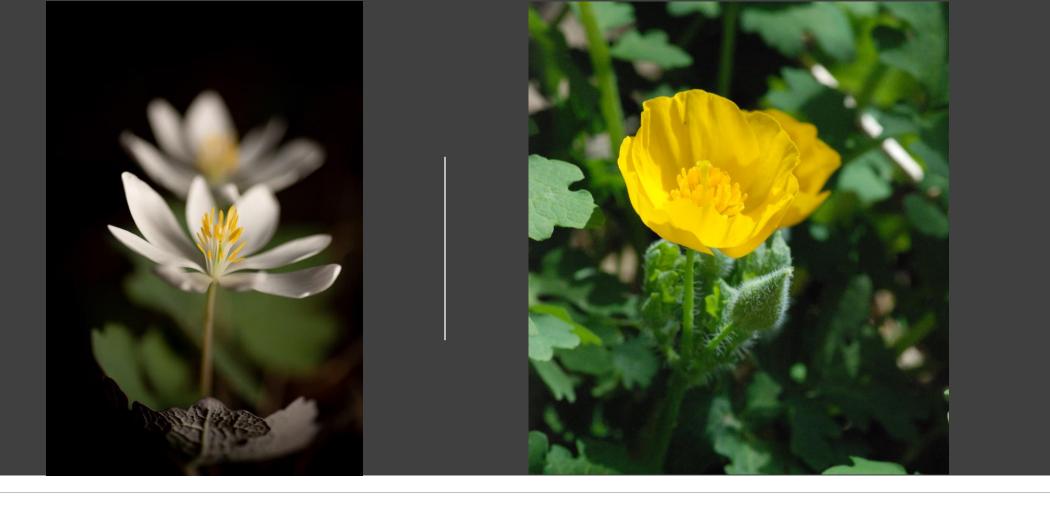
CONVALLARIACEAE (LILY-OF-THE-VALLEY FAMILY)



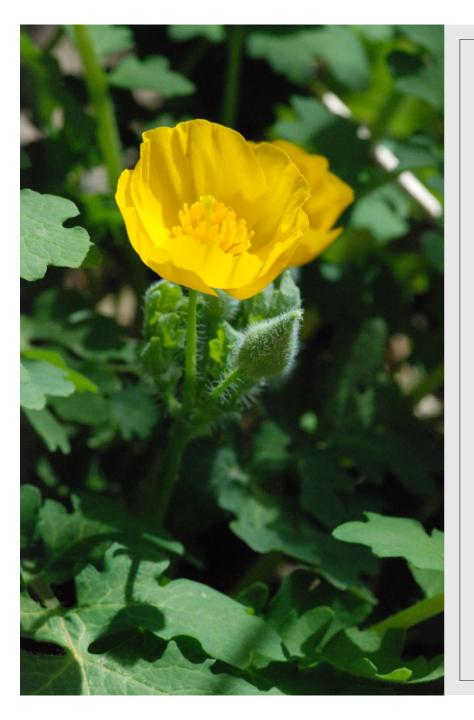


### Convallariaceae (Lilyof-the-Valley Family)

- Perennial Herb from rhizomes
- Monocot
- Terminal panicles or racemes
- Fruit a berry
- Rhizomes were used for food and medicines

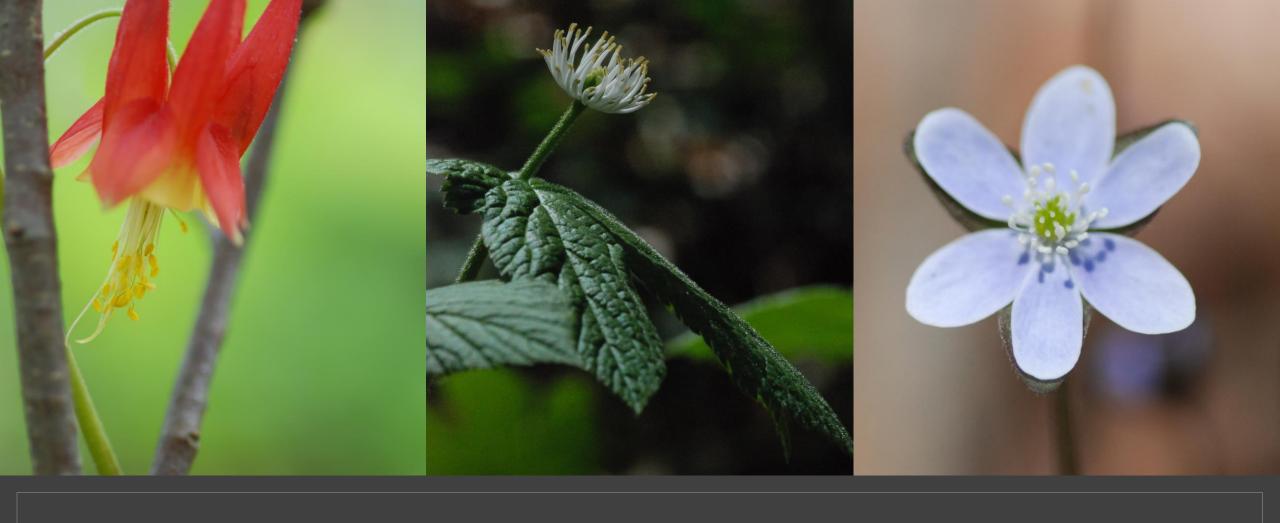


### PAPAVERACEAE (POPPY FAMILY)



## Papaveraceae (Poppy Family)

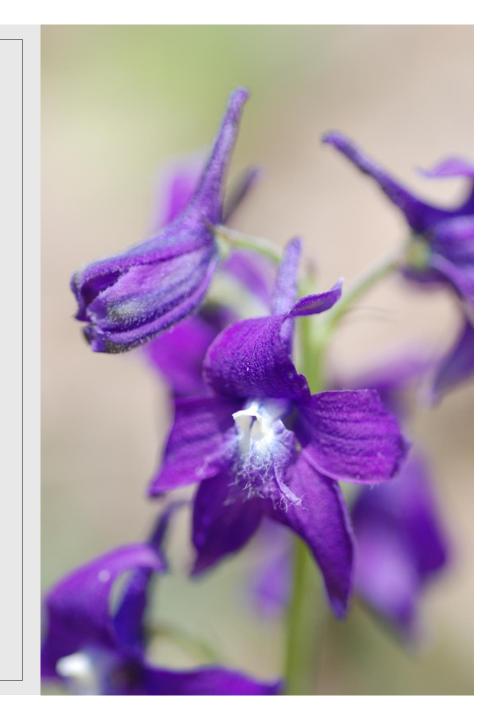
- Annual, biennial, or perennial herbs
- Colored or milky sap
- Solitary flowers
- Capsule dehiscent by valves or pores



RANUNCULACEAE (BUTTERCUP FAMILY)

# Ranunculaceae (Buttercup Family)

- Annual or Perennial Herb, Woody Vines, or Shrubs
- Various Clusters
- Fruit is frequently a follicle or achene
- Medicinal herbs (goldenseal) and poisonous plants (baneberry)



### Designing with Native Plants

- Adaptability to local soil and climate conditions
- Maintaining food plants and shelter for local wildlife and pollinators
- The conservation and propagation of local flora types
- Creating a sense of place unique to your state

https://extension.misstate.edu/designing-native-plants-and-naturalistic-landscapes

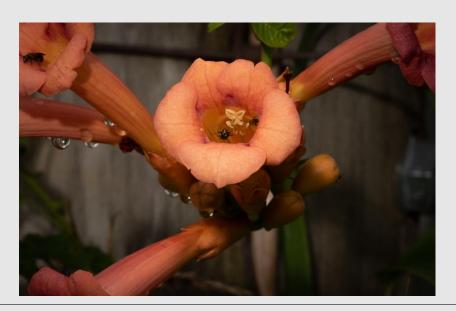
Rescued plants in a home garden (Jim Fowler).

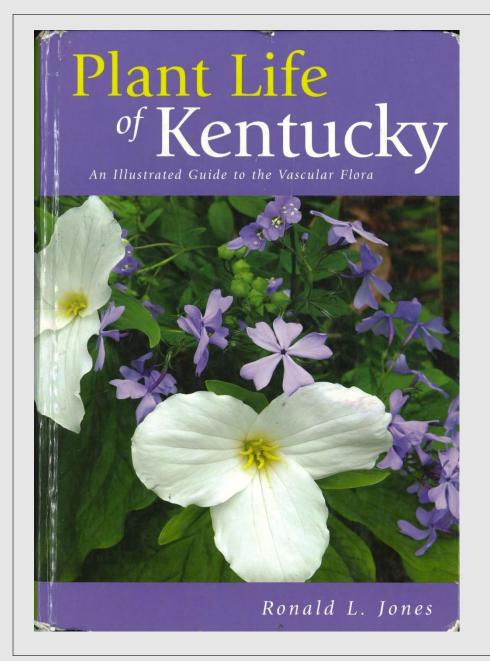


#### Additional Publications and Books

- Deborah Pinto (MG Volunteer) and Meredith Melendez (Horticulture Consultant) "Incorporating Native Plants in Your Residential Landscape" Rutgers University; Fact Sheet FS1140.
  - Organizing your approach to a residential garden. Great step-by-step informational publication.
- Tom Barnes "Wild About Wildflowers" University of Kentucky;
  - General information about wildflowers with some helpful information about cost of gardening and the benefits.

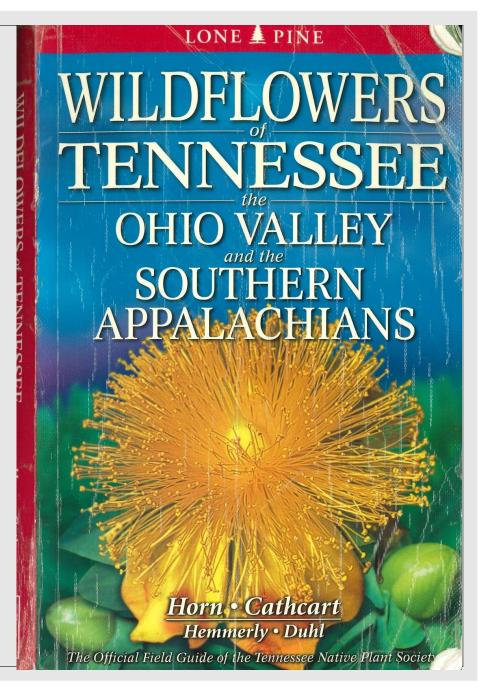


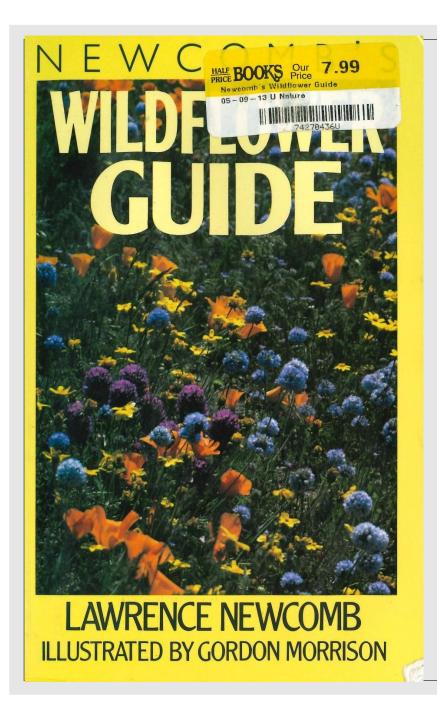




- This is an intense, dichotomous key
- Several initial chapters on the natural history of Kentucky
- Art work is fantastic, but, if you are a photograph person, this may be a challenge.

- Great guide with beautiful images and some compact, complete information
- Great natural history, medicinal, etymology, and just cool facts about plants.
- Set up in families





- Great dichotomous key
- Compact. Not as much information about the other interest points with herbaceous plants.
- Set up in colors and by some characteristics

- Great images
- Information is somewhat limited in the images.
- Family information in the back of the guide is good.
- Set up in color and season.

