

**Flowers:  
Beauty, Biology, Color and Chemistry**

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## Objectives

- Identifying plants
- Floral biology
  - Basic structure
  - Variations on the plan
- Flower pigments



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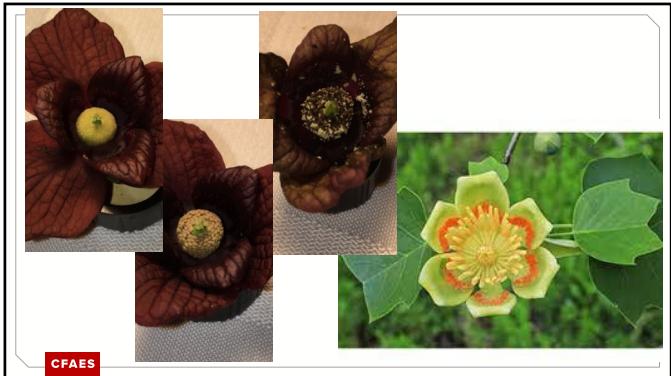
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**Plant identification**

- Ancient or modern flowers
- Unique shapes
- Flower parts in 3 or 4/5

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**Unique shapes**

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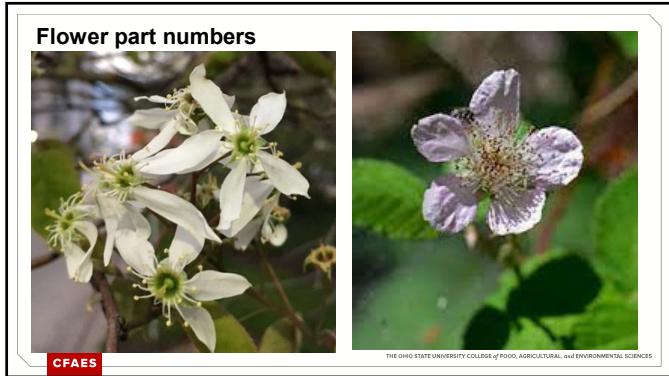
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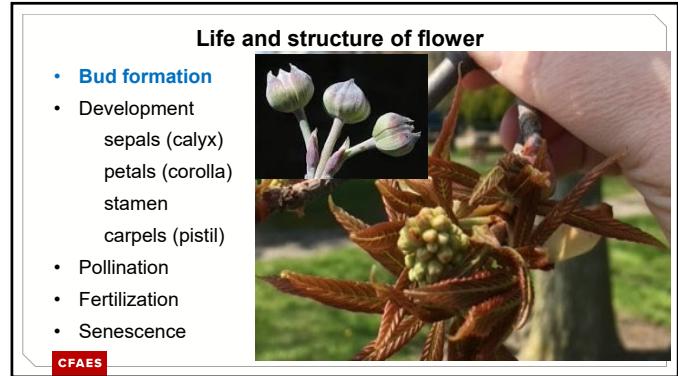
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**Life and structure of flower**

- Bud formation
- Development**
  - sepals (calyx)
  - petals (corolla)
  - stamen
  - carpels (pistil)
- Pollination
- Fertilization
- Senescence

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**Life and structure of flower**

- Pollination**
  - Pollen
  - Receptive stigma

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**Life and structure of flower**

- Pollination**
  - Pollen
  - Receptive stigma

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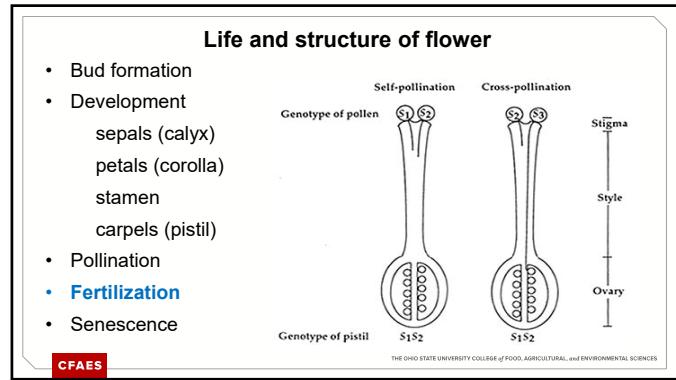
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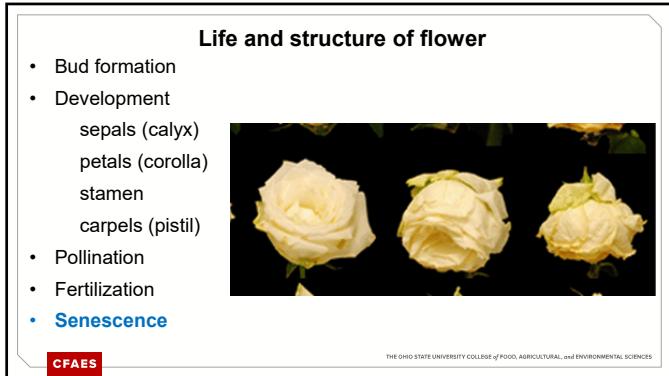
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### Floral terms

**Complete** having all four floral whorls

**Incomplete** missing at least one whorl

**Perfect** having both functional male and female reproductive structures present

**Imperfect** bears only one sexual reproductive organ – either male or female.

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## Reproductive strategies to insure cross pollination

### Floral terms

**Dioecious** male and female reproductive organs in separate individuals. (2 houses)

**Monecious** having pistillate and staminate flowers on the same plant. (1 house)

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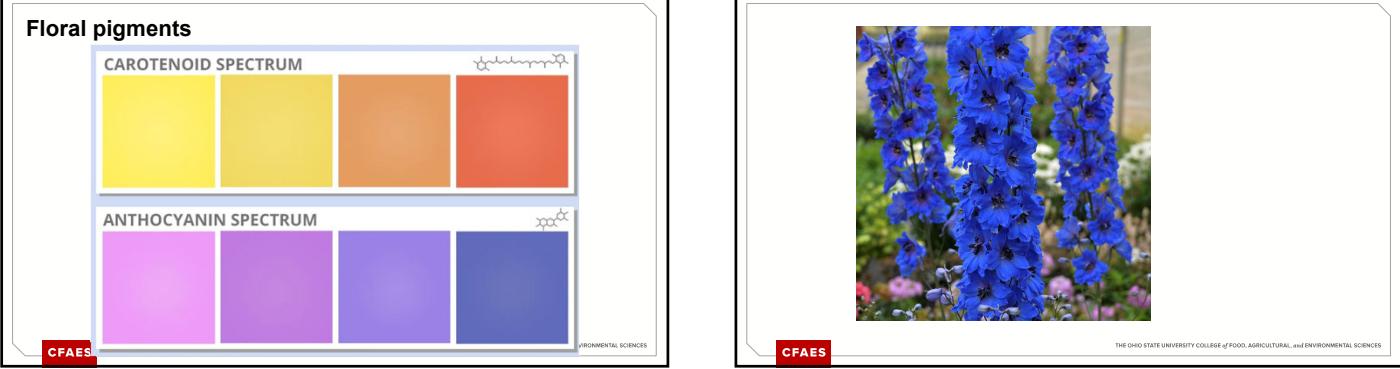
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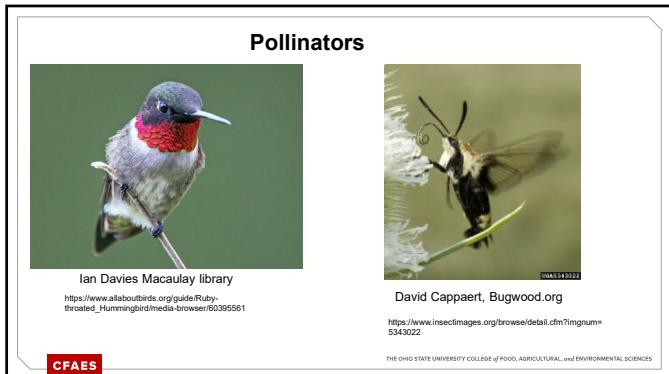
### Why plants fail to bloom?

- Juvenility
- Alternate bearing
- Temperature
- Light (Photoperiod)
- Nutrition
- Improper pruning

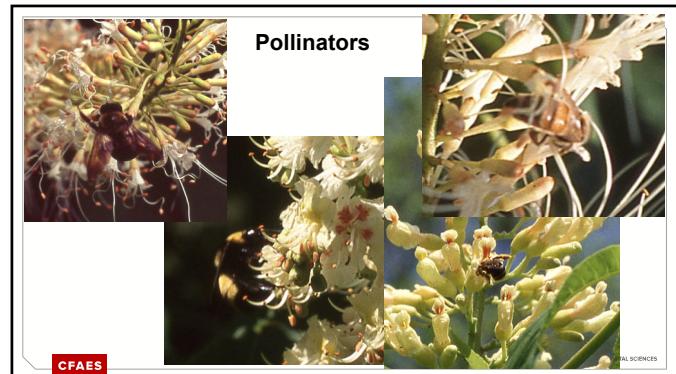
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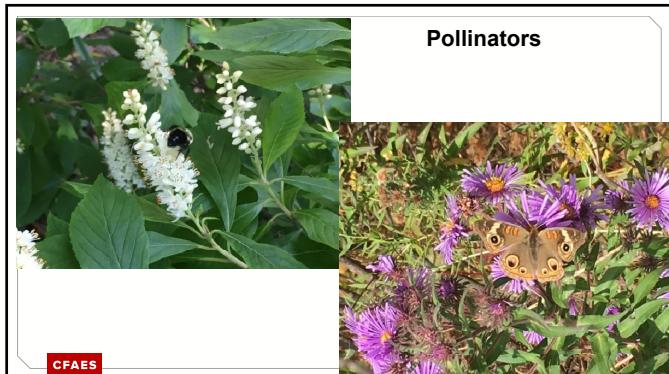
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