

Pollination of *Echinacea angustifolia*:

Are some insects more efficient than others?



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Echinacea angustifolia

- Native Prairie Plant
- Aster Family
- Long-lived (17-44 years)
- Generalist Insect Pollinators
- Self-Incompatible



Pollinator Community:



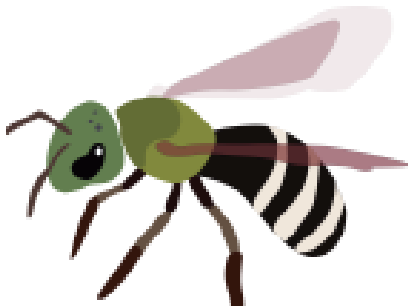
Andrena



Halictid



Melissodes

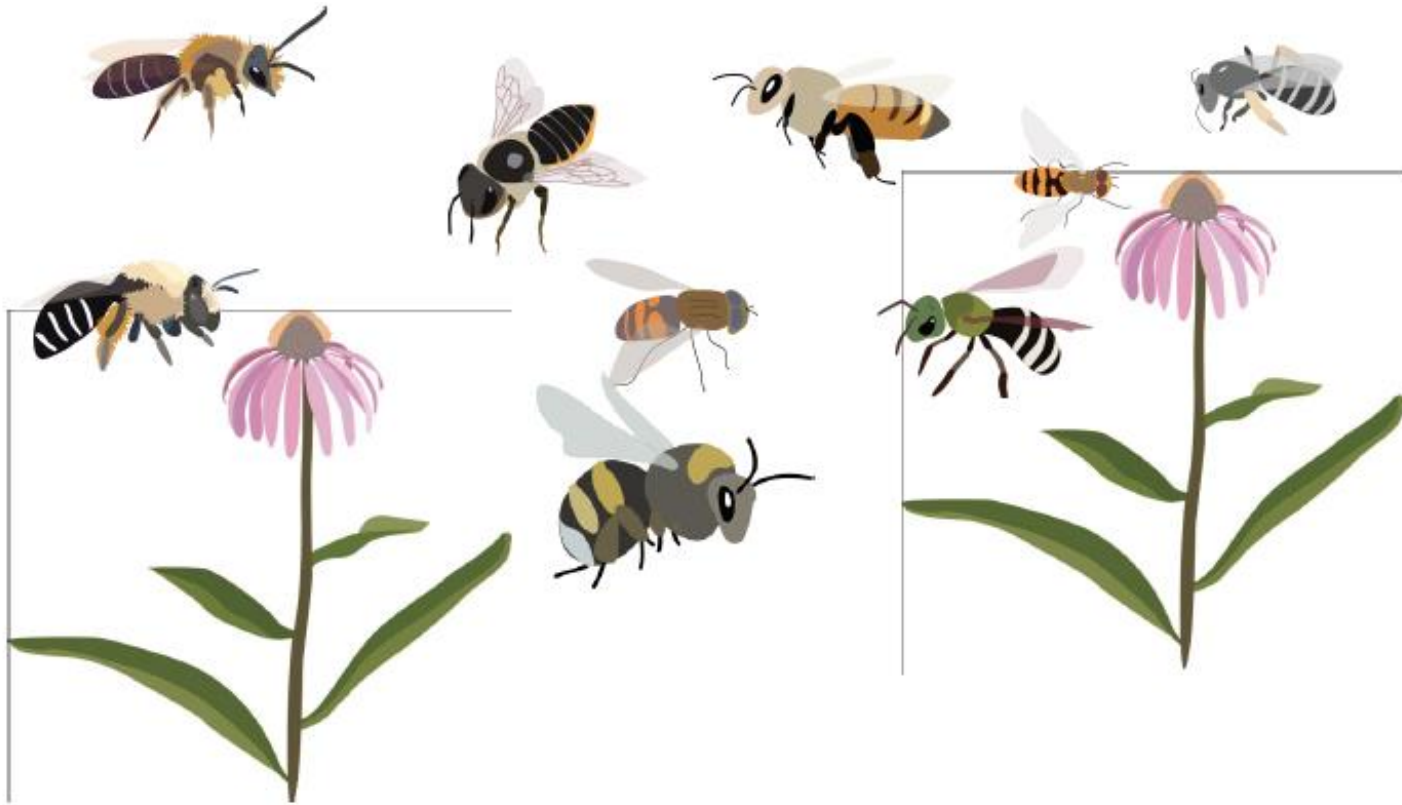


Agapostemon



Syrphidae

Are some pollinators more efficient than others?



Style Persistence in *Echinacea angustifolia*

- When styles receives compatible pollen they will shrivel in 24-48 hours.
- If un-pollinated, styles will persist for up to 9 days.











Day 1: Exclude Pollinators



48 Hours Later: Observe Single Pollinator Visit



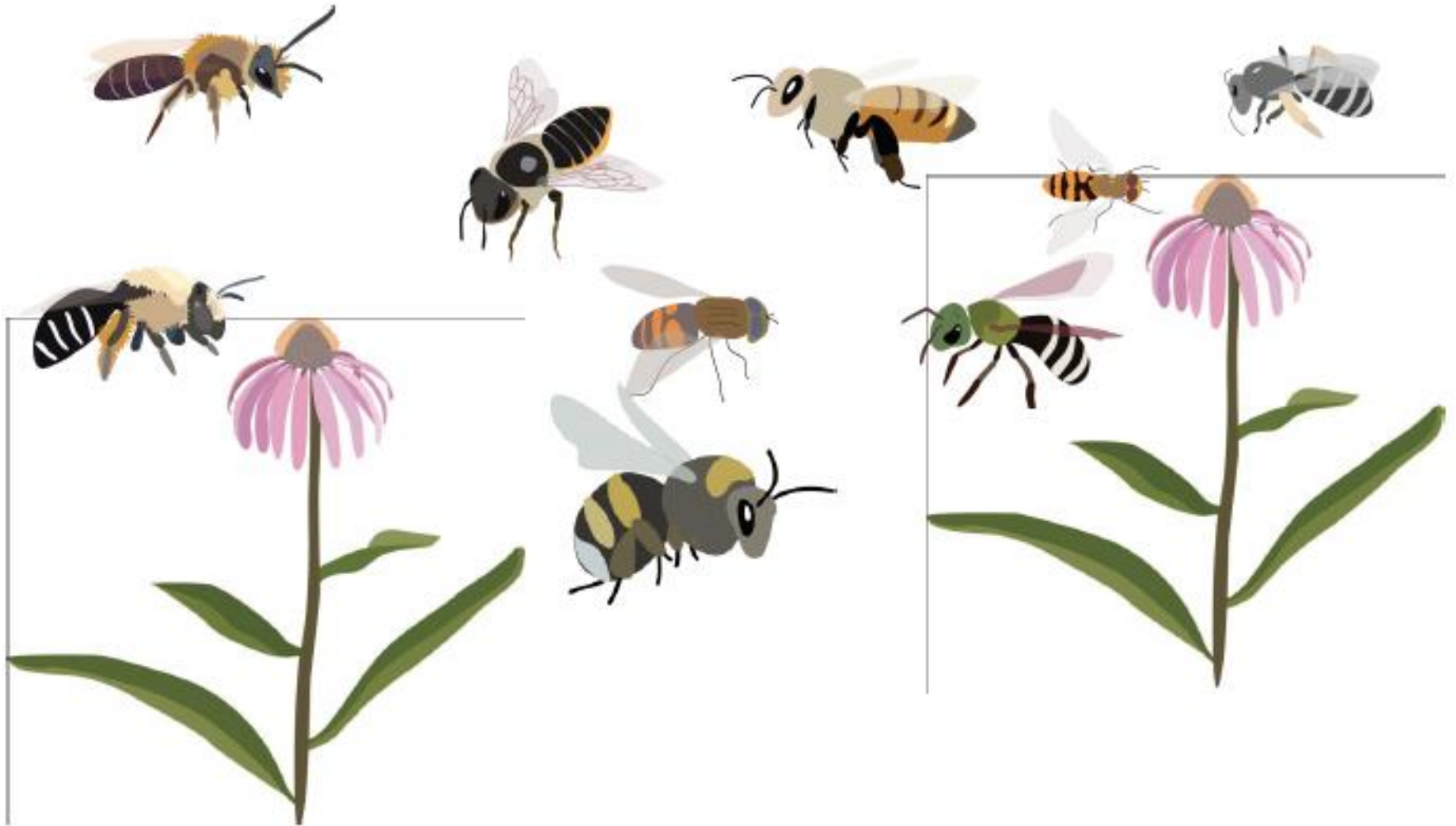


48 Hours Later: Assess Shriveling

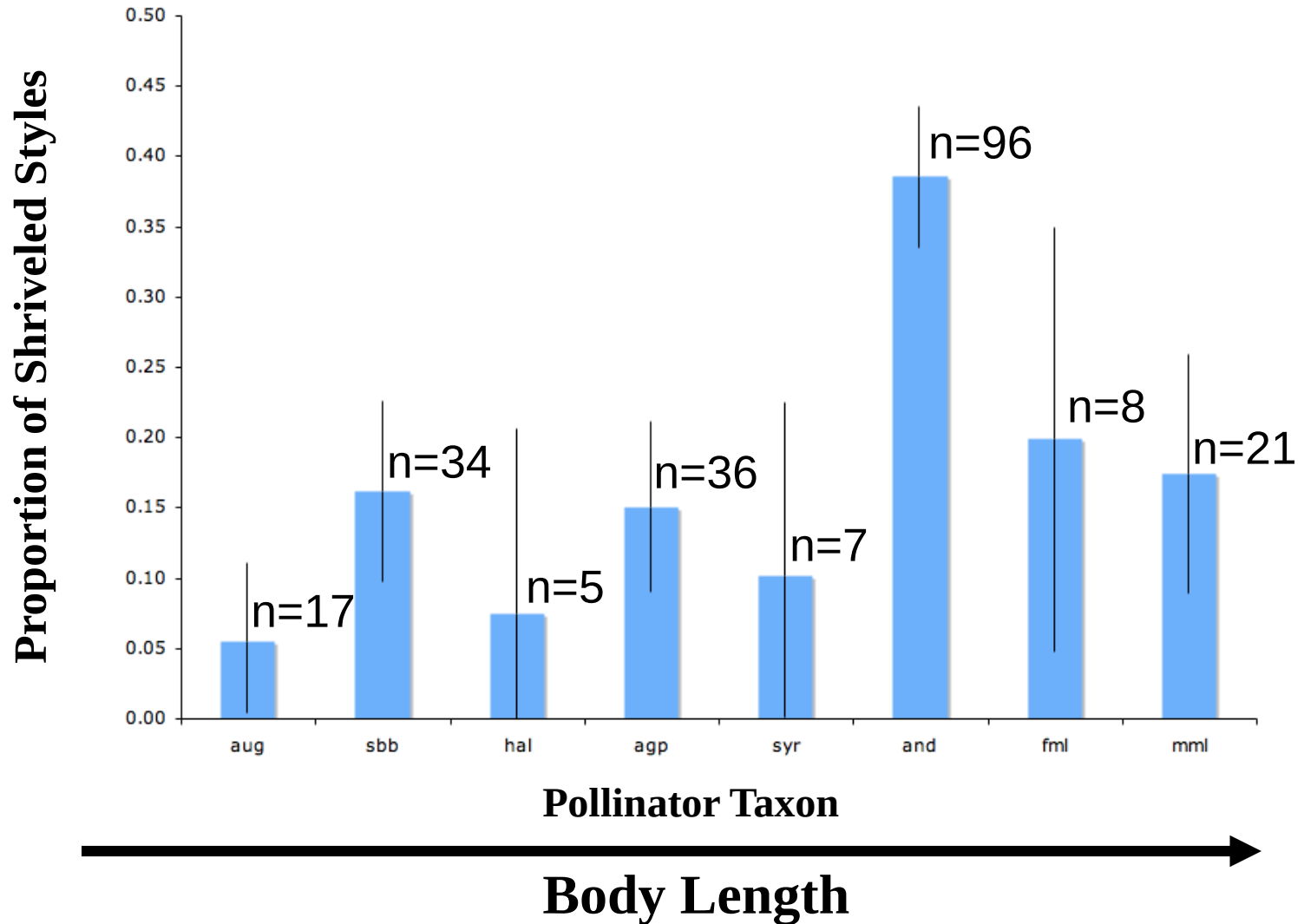




Are some pollinators more efficient than others?



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Results

- Taxon influences pollinator efficiency
- *Andrena sp.* is the most efficient pollinator



Further Questions

- Does the genetic diversity of pollen carried vary by pollinator?
- Do different pollinators move pollen different distances?
- Can the presence of certain pollinators earlier or later in the flowering season influence seed set in late and early flowering plants?

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