CH2 Chunk removals

Heterospecific pollen were identified using a reference collection created of 38 species from surrounding sites in 2017 and 2018. This reference collection was photographed using Lumenera microscope camera at 100 x and 400x and the size of grains were measured using Infinity Analyze to aid identification. The digitized reference collection was uploaded to global pollen project (DOI) and the slides are in Lortie Lab at York University.

Interactions for pollinators between plants forms a continuum from competition to facilitation (Ratchke, 1983). During the flowering period of the focal plant it may not be possible to separate interactions for pollinators from those that do not require co-blooming. On the competition side, it may not be possible to separate competition due to parasitizing pollinator visits versus interference.

Chung et al removed the flowers from Rosa multiflora (2014), but found no effect on bee visitation rates to co-blooming annuals. While one study has tested for mechanistic differences (Jacobsen), this is a test for sequential mutualism. This is particularly true in arid ecosystems where facilitation of shared pollinators can be particularly important in deserts because harsh environmental conditions can lead to large spatial variation in floral abundances and pollinator populations (Rathcke, 1983).

Mean plant visits per hour. This is just the mean number of potential foraging bouts. ± the standard deviation.

|  |  |  |
| --- | --- | --- |
|  | Open | Shrub |
| Pre-blooming | 4.2955249 ± 4.621614 | 2.9976793 ± 3.134733 |
| Blooming | 1.2526164 ± 1.376179 | 0.9458532 ± 1.271302 |

Mean number of flowers visited per hour. ± standard deviation.

|  |  |  |
| --- | --- | --- |
|  | Open | Shrub |
| Pre-blooming | 5.758404 ± 7.547992 | 3.776575 ± 4.742340 |
| Blooming | 1.722185 ± 2.218946 | 1.268643 ± 2.047149 |

Stealing pollinators is parasitism.

Conclusions:

Conversely, Michener (cite) says synchorization of floral phenologies should increased specialization. The desert is home to many bee specialists.

Ambrosia dumosa increased seed set in annuals, however it is not possible to know if this was due to pollinator visits or a more direct sort of facilitation.