



# Cross-sectors

- 140 million years ago
- 500 years ago
- 200 years ago
- 22 years ago
- Fast-forward to the 2010's
- Fast-forward to today
  - o 3 million images
  - o 300,000 individuals

Pry apart data & do the same thing for bees





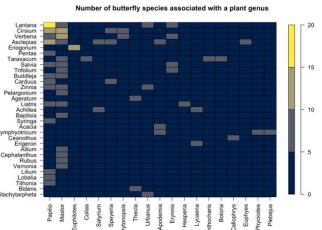
### Feedbutterflies.com

- 10,000+ entries
- data for all nectar-feeding US species
- nomenclature for both insect & plant
- USDA growing zones
- US states
- primary nectar plants
- Guide fellow naturalists
  - o generate more data
  - pursue missing links
  - o affirm them

#### Sample entry:

Danaus plexippus, the Monarch, can be found in every state, including Hawai but not in Alaska.
Favorite nectar plants include: Achillea, Ageratum, Allium, Apocynum, Asclepias, Baptisia, Bidens, Buddleja,
Carduus, Cephalanthus, Cirsium, Erigeron, Lantana, Liatris, Pelargonium, Pentas, Rubus, Salvia, Stachytarpheta,
Taraxacum, Tithonia, Verbena, Vernonia, and Zinnia

USDA Growing Zones for these plants include: 2,3,4,5,6,7,8,9,10,11



### Dr. Jeanine Becker:

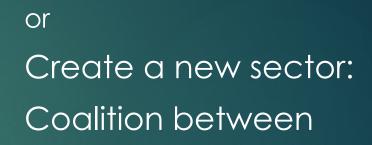
Complex problems can be solved only by coalitions that engage those outside the nonprofit sector.

## Expand alliance to include Nurserymen

Ask them to grow species in favored plant groups

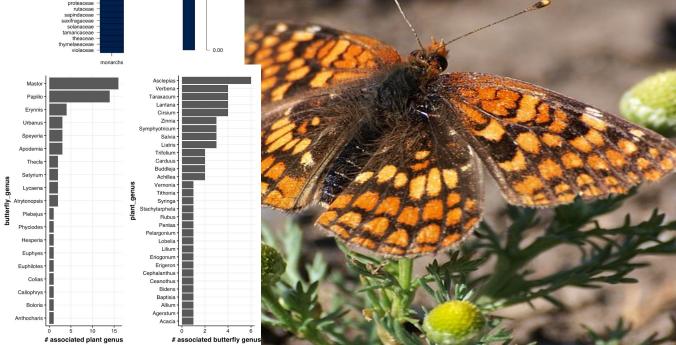
or

- add insect activity south of the US
- compile more data for underrepresented butterflies
- help botanists improve drought tolerance of favored plants



- Aggregators
- Growers
- Trained individuals
- Smart phones





Number of plant genus

compositae fabaceae lamiaceae verbenaceae apocynaceae boraginaceae polygonaceae caprifoliaceae rosaceae brassicaceae amaryllidaceae asparagaceae plantaginaceae acanthaceae apiaceae ericaceae liliaceae lythraceae malvaceae ranunculaceae scrophulariaceae alliaceae araliaceae bromeliaceae euphorbiaceae hydrangeaceae myrtaceae

nyctaginaceae oleaceae plumbaginaceae rhamnaceae adoxaceae alismataceae amaranthaceae

asphodelaceae begoniaceae berberidaceae bignoniaceae caryophyllaceae cleomaceae commelinaceae crassulaceae elaeagnaceae

escalloniaceae geraniaceae heliotropiaceae hydrophyllaceae iridaceae iteaceae malpighiaceae meliaceae

papaveraceae passifloraceae pittosporaceae polemoniaceae pontederiaceae



Your input is crucial to shape the future actions of our joint venture

- Expand database?
- Form new sectors?

Sustain our natural world and enrich the lives of those who appreciate its beauty