# **Backyard Pollinators Research Project**

**Module 7: Data comparisons**

Now that you have completed some data analysis on the plant-pollinator interactions you observed across your five sites, think about what research questions and hypotheses you could test using a larger data set.

All of our class sites are located in Florida, but sites vary from urban to different types of suburban habitat. Think about what characteristics made your sites higher or lower quality pollinator habitat. What comparisons across sites might add additional information? Choose two parameters to examine more fully and generate research questions and associated hypotheses to evaluate using our class data.

For example:

* Small pink flowers in my suburban sites attracted the most diverse pollinators. Are large pink flowers also the most attractive to pollinators?
* Hypothesis: large pink flowers attract fewer pollinators because they require more specialization.

**Write your two additional research questions and hypotheses here.**

Part 1: Select your data.

1. Make a copy of our class data so that everyone is not editing it at once. (In the google sheet 🡪 File 🡪 Make a copy.) Rename it so that it is clear which sheet you are working in.
2. Delete the example data (highlighted in orange) and any empty rows. Delete the header row.
3. Sort the data by the parameter of interest by right clicking the column header where it is located, and 🡪 Sort sheet A-Z or Z-A. For the example above, to isolate data on pink flowers you would right click on column K (in the box where the K is located) to sort by color.
4. Select the data relevant for your two research questions and add those lines of data to your bipartite plot from module 6. For the example above, you could copy and paste the lines of data with “pink” flowers to a new sheet and then sort by size to isolate your variable of interest: large pink flowers.

Part 2: Add data to your bipartite plot.

1. Begin with the bipartite plot you created for module 6, and add any additional flower types that were not

in your own dataset.

1. Add lines as appropriate for the additional interactions represented in the new data.

**Questions:**

1. **Does your new bipartite plot support your hypotheses above, or not? How can you tell? Why do you think that might be? (short paragraph for each hypothesis)**
2. **What relationships became more or less clear when you added data?**
3. **How could this type of analysis be used specifically to address questions about conservation and biodiversity?**

**What two data subsets are you adding to your plot? (example: I will add all the data for pink flowers greater than 1 inch wide)**

**Copy and paste your new bipartite plot with added data here.**