### Orientation to the Ecology and Evolution of the Galapagos Finches

The Galapagos Finches are one of the most widely recognized examples of research in evolutionary biology. This introductory activity provides access to a variety of data resources that can be used to think about the causes and relationships underlying the distribution and other characteristics of the Galapagos Finches. The materials featured on this page come from an NSF funded educational project called Beagle Investigation Returns with Darwinian Data (BIRDD).

This lesson contains a packet of information (maps, tables, images, etc.) that should be supplied to each group of students. You will note that one of the maps of the archipelago has labels and the other is blank. I use materials like these to get the students to start looking at patterns in the data that might help them understand what is going on. Sometimes I give them acetate sheets with the blank maps printed on them and overhead pens so that they can represent a pattern from the data sheets directly onto the spatial representation of the islands.

I introduce the lesson by sharing the materials and then letting them know that they will have about 20 minutes to work in their groups to capture and represent some of the information provided in the data sheets. I encourage them to start by each taking a sheet and characterizing it for their group - what type of information does it contain? How is the information organized? How does their data connect with information from other data sheets?

I rotate around to the groups and check in to make sure that they are not frustrated. If groups are struggling to make progress I provide them some additional prompts such as:

* Do you see different types of patterns when you look at different scales or resolutions? For example, try dividing the archipelago into 4 quadrants and looking at the distributions within each. Or, try mapping genera instead of species. What does it look like if you make island categories of small, medium and large?
* Are there features that seem to correlate with the presence or absence of particular species? Which species are most likely to be found together?
* Find a phylogeny of the finches and see if that information is useful in explaining what you have observed.

After working for a while I have student groups share out their observations and questions that arose during their orientation to the Galapagos Finches.