Extension to Mapping Specimen Occurrence Data with QGIS

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INTRODUCTION

By completing *Mapping Specimen Occurrence Data with QGIS* (Bronson, 2021) and this extension activity, you will learn how to use QGIS to show the distributions of your species. At the end of this exercise, you will be able to:

- Use QGIS to create maps of georeferenced data
- Upload your project data into QGIS
- Create shapefiles of your project species data
- Locate basemap shapefiles to use with your project data

This assignment has two parts. Part 1 should be completed individually. Part 2 must be completed with your project group.

PART 1: INTRO TO QGIS ACTIVITY

First, complete the Mapping Specimen Occurrence Data with QGIS (Bronson, 2021) activity.

PART 2: QGIS OF PROJECT SPECIES DATA

In this activity you will:

1. Import your project's digital specimen data as a .csv into QGIS with your group
2. Convert specimen data to a shapefile
3. Retrieve basemap files from the internet to be used for your project
4. Symbolize the data in a meaningful way
5. Create a basic map of your data and export it as a jpg or pdf

Doan, T., Dewey, T., Carroll, J., & Alter, L. (2022). Distribution CURE: Exploring species distribution changes and their drivers. BCEENET- Biological Collections in Ecology & Evolution Network, QUBES Educational Resources. https://qubeshub.org/publications/2349/1

Importing your Project Data into QGIS

1. Part 2 must be completed as a group after you complete Part 1. For much of this activity you will copy the procedure you did with the beaver data. Follow the instructions above with your own data file to import your Final Master .csv file into QGIS.
2. Create a new Empty Project and follow all the procedures from Mapping Specimen Occurrence Data with QGIS.

   Note: Follow all the procedures to the end of the section of Symbolizing your Data. You will want to symbolize your data in a different way in the future, but you can use Basis for now or you can choose another column to symbolize your data.
3. You will need to download additional shapefiles to act as basemaps for your map. Some potential sites are:
   - Marine Regions
   - Natural Earth Data
4. When you locate a useful shapefile, download the zip file, and place it in the same folder as your QGIS projects.
5. To add the layer go to Layer → Add Layer → Add Vector Layer. Click on the three dots and select the zip file. Click Add at the bottom of the box. For some files, QGIS will add the layer immediately. For other files, it will ask you to select among several files—choose the .shp file and then Add.

   Note: This will only work for vector (.shp) files. If you want to add raster data (Ex. .tiff), please reference the QGIS training module on Raster data.
6. After you have added some useful basemaps, create a map of your data using the procedure from the Creating a Basic Map section.
7. For your homework assignment, you will submit both your beaver map (that you made alone) and a simple map of your project data (that you made as a group).

REFERENCES

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