How to use BioGeomancer Workbench for the Georeferencing Survey

1. Open the BioGeomancer Workbench (BG) before you start the survey: http://bg.berkeley.edu/latest/

2. Cut and paste the locality description from the survey question into the text box on BG. For example, the Survey says “Locality Description: Berkeley.”

3. Hit the Georeference Button on BG.
   a. The results will appear as balloons with letters on the map ( ). These letters correspond to localities listed on the left panel.
   b. Coordinates appear below the localities (i.e., Berkeley), complete with uncertainty in meters.
   c. The parentheses next to the locality name indicate the source that BG is referencing (i.e., GNIS: 78343428).

4. In the upper right corner are buttons that allow you to turn on and off different layers of data.
   a. You can turn on the satellite imagery or view a hybrid image of both the map and satellite image.
   b. The GADM button allows you to view administrative boundaries.
   c. The Topo button allows you to view USGS topographic maps.
   d. The Terrain button allows you to view topography.

5. Select the balloon that you think is the correct locality. This will open the Georeferencing option call out. You can choose to “delete other” georeferences, then "zoom in" and “edit uncertainty.” The uncertainty is the same as the Maximum Error Distance from the MaNIS/HerpNET/ORNIS Georeferencing Calculator (http://manisnet.org/gc2.html).
a. Adjust the location of the pointer by picking it up and dropping it. Note: you will need to close the Georeferencing Option window to move the pointer.

b. Choosing “edit uncertainty” will highlight the uncertainty area and allow you to increase or decrease the diameter by moving the yellow balloon (📍). Click on the yellow balloon again to finish editing.

6. When you have chosen the final georeference, copy the lines of text from the left hand frame of the BG window, and paste this into the survey box.

To learn more about how Biogeomancer works and what kind of locality descriptions it understands, click the Help button in the top right corner of BG.