



## Mapping Coordinates of Localities for Archival and Analytical Purposes

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- I. The uses of digitizing locality coordinates
  - a. Creates a redundant archive of field data
  - b. Results in a file that can be linked or referred to by many relational databases
  - c. Can share with collaborative researchers
  - d. Presents a visual perspective of fieldwork over time
  - e. Can be imported into analytical software such as ArcGIS for research of the localities and the specimens they yield

- II. Digitally archiving your locality data
  - a. Google Maps <https://www.google.com/maps/>
  - b. Sign up or log in
  - c. Click search bar and select My Maps
  - d. Click Create
  - e. Select Base Map
  - f. Name Map – Field Season
  - g. Enter a set of coordinates (decimal longitude/latitude)
    - i. Convert Geographic Units by Montana State University  
<http://www.rcn.montana.edu/resources/converter.aspx>
    - ii. Enter GPS coordinates in original format
    - iii. Click convert
    - iv. Copy longitude, paste in maps
    - v. [space][,]
    - vi. Copy latitude, paste in maps
    - vii. Hit enter
  - h. Add point to map
  - i. Rename point – field number
  - j. Fake data used for demonstration:

Field Number	GPS Coordinates of Locality
15ACS2-16-1	30°N 19.135' 100°W 17.73'
15ACS2-17-1	30°N 18.77' 100°W 16.05'
15ACS2-18-1	30°N 18.52' 100°W 15.75'
15ACS2-18-2	30°N 18.61' 100°W 16.83'

- k. Share online or export data file and save as \*.kmz
- III. Using the data with other programs
  - a. Collections Database
  - b. Google Earth
  - c. ArcGIS – Data Analysis
    - i. ArcMap
    - ii. Add baselayer
    - iii. Convert/import \*.kmz file
    - iv. Attribute table
      1. Link table with several specimens per locality to this table for analyses

## Appendix 1: Useful Links

- Finished example from video:  
[https://www.google.com/maps/d/edit?mid=zFxm3HFR9Ok4.knuPi\\_jG7u2A](https://www.google.com/maps/d/edit?mid=zFxm3HFR9Ok4.knuPi_jG7u2A)
- Google Maps: <https://www.google.com/maps/@32.7870682,-96.8083168,15z>
- Google Earth: <https://www.google.com/earth/>
- Convert Geographic Units by Montana State University:  
<http://www.rcn.montana.edu/resources/converter.aspx>