Basic Georeferencing Workflows
Blaine Marchant
University of Florida
iDigBio RA

Species: *Polypodium californicum*
State: CA
County: Marin
Locality: Marin Municipal Water District Lands: Mount Tamalpais. Middle Peak Rd. culvert RT-3

Georeference: a numerical description of a place that can be mapped and that describes the spatial extent and associated uncertainty of the locale

37.930, -122.587
1. Data Acquisition
   - Digitized data aggregators
   - Specimen data

2. Data Cleaning & Preparation
   - Excel
   - Scripts
   - Google Refine

3. Georeferencing
   - Geolocate
   - Google Maps
   - Other sites

4. Visualize
   - GPS Visualizer
   - Google Earth
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<table>
<thead>
<tr>
<th>Locality</th>
<th>Country</th>
<th>State</th>
<th>County</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Correction Status</th>
<th>Precision</th>
<th>Error Polygon</th>
<th>Multiple Results ID</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Along north side of State Highway 246</td>
<td>USA</td>
<td>CA</td>
<td>Santa Barbara County</td>
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<td>198b232b-8ff7-4cbf-b846-28fd2f572bba</td>
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<tr>
<td>U.C. Blodgett Forest Research Station</td>
<td>USA</td>
<td>CA</td>
<td>El Dorado</td>
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<td>19e8be9e-3fd0-4f8e-893b-809f84444de7</td>
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<td>San Francisco, Bayview Hills</td>
<td>USA</td>
<td>CA</td>
<td>San Francisco County</td>
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<td></td>
<td></td>
<td>18d41762-e352-4710-bba6-a486be9e87f1</td>
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<td>Wrightwood at Wright Lake</td>
<td>USA</td>
<td>CA</td>
<td>San Bernardino</td>
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<td></td>
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<td>53454739-7f6f-469c-9f9b-86dec30c6d4c</td>
<td></td>
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<tr>
<td>1.0 mi n 55 degrees ne Cabin Creek cor</td>
<td>USA</td>
<td>CA</td>
<td>Mono</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>54090d71-e155-4769-947f-d72d6f76e9f3</td>
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<td>Lake County: Walker Ridge. Picnic Area</td>
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<td>CA</td>
<td>Lake</td>
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<td>2b09ec0-5dc4-482c-b51b-6146f187299f</td>
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<tr>
<td>1/4 mi from rear gate of Calif. Polytech</td>
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<td>CA</td>
<td>San Luis Obispo</td>
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<td></td>
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<td></td>
<td>07fdad67-49c5-4ed3-ba6d-9730d45fa83d</td>
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<td>San Bernardino Mountains Big Meadow</td>
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<td>San Bernardino</td>
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<td></td>
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<td>Grissom Road, West Hartford</td>
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<td>CT</td>
<td>Hartford County</td>
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<tr>
<td>Between Creston &amp; Shandon along Hw</td>
<td>USA</td>
<td>CA</td>
<td>San Luis Obispo</td>
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<tr>
<td>Warbler Road south of route 604, Mio</td>
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<td>MI</td>
<td>Oscoda County</td>
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<td>Northern Sierra Nevada Mtns Sierra-at</td>
<td>USA</td>
<td>CA</td>
<td>El Dorado</td>
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<tr>
<td>El Dorado County: South Lake Tahoe, B</td>
<td>USA</td>
<td>CA</td>
<td>El Dorado</td>
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<td>Tremblor Range and the Western San J</td>
<td>USA</td>
<td>CA</td>
<td>San Luis Obispo</td>
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<tr>
<td>0.15 mi. from west intersection with St</td>
<td>USA</td>
<td>CA</td>
<td>Contra Costa</td>
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<td></td>
</tr>
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Core Features

GEOLocate Web Application

1 possible location found.

Locality String: Hays Creek, 3 mi. n of Franklinton on hwy. 25

Country: United States of America
State: La
County: Washington

Lat: 30.88792
Long: -90.190633
Uncertainty: 90 meters

Parse pattern: HAYS CREEK AT HWY 25
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Additional Resources

• **Digitized Data**
  – iDigBio (www.idigbio.org)
  – GBIF (www.gbif.org)
  – BISON (http://bison.usgs.orl.gov/)

• **Data Cleaning and Preparation**
  – Google Refine (http://openrefine.org/)

• **Georeferencing**
  – GeoLocate (http://www.museum.tulane.edu/geolocate/)
  – Google Maps (www.maps.google.com)
  – Falling Rain (www.fallingrain.com)
    • Hard to find localities worldwide
    • Historic or alternative locality names worldwide
  – JRC Fuzzy Gazetteer (http://dma.jrc.it/services/fuzzyg/)
    • Worldwide gazetteer for bad spelling

• **Links with links**
  – HerpNet (http://herpnet.org/Gazetteer/GeorefResources.htm)
  – Canadensys (http://www.canadensys.net/georeferencing)