



University of Northern Colorado McGlaughlin Lab Updates

Mit McGlaughlin, PhD
University of Northern Colorado
Mit.McGlaughlin@unco.edu

UNC McGlaughlin Lab Genetic Updates

- 2020 - Completed Projects
 - *Eriogonum brandegeii* – Genetics Report Issued
 - No current gene flow between Canyon City and Salida regions
 - Both regions should be treated as separate management units
 - Some genetic distinction between populations south and northwest of Salida
 - No concerns about inbreeding or low genetic diversity





Figure 3. Entire distribution of *E. brandegeei* in central CO. Black circles represent known herbarium occurrences (SEINet), while squares represent populations that were sampled for this project. Grey squares identify sampled populations near Salida, CO, and orange squares identify sampled populations north of Canon City, CO.

UNC McGlaughlin Lab Genetic Updates

- 2020 – Projects in Progress

- *Draba weberii*

- Limited genetic distinction from other local *Draba*'s -> additional taxonomic sampling required

- *Mimulus gemmiparus*

- Flowering plants observed in southern most populations (Corral Dome)
 - Hydrology shift at Guanella Pass, loss of patch closest to Road
 - Abundant on cliffs southwest of Geneva Basin (Discovered by M. Beardsley)

- *Corispermum navicula*

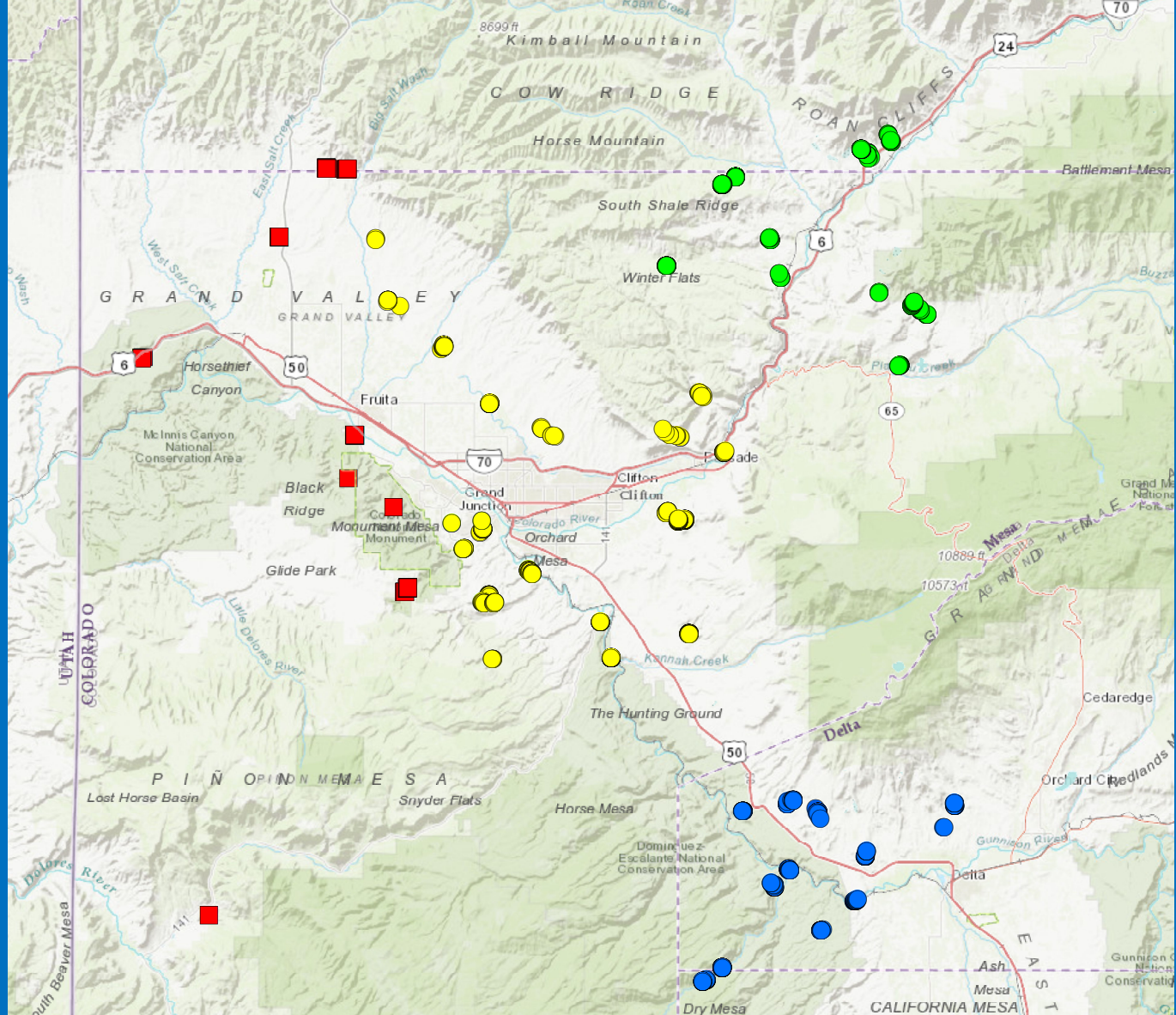
- Two morphologies 'small/early developing' or 'large/late developing' observed on the North Dunes and East Sand Hills
 - Do these morphologies represent different species?

UNC McGlaughlin Lab Genetic Updates

- 2020 – New Genetic Projects
 - *Penstemon yampaensis/acaulis*
 - *Penstemon grahamii*
 - *Penstemon scariosus var. albifluvis*
 - *Penstemon penlandii*
 - *Astragalus osterhoutii*
 - *Eutrema penlandii*
 - *Eriogonum pelinophilum*

Sclerocactus glaucus updates

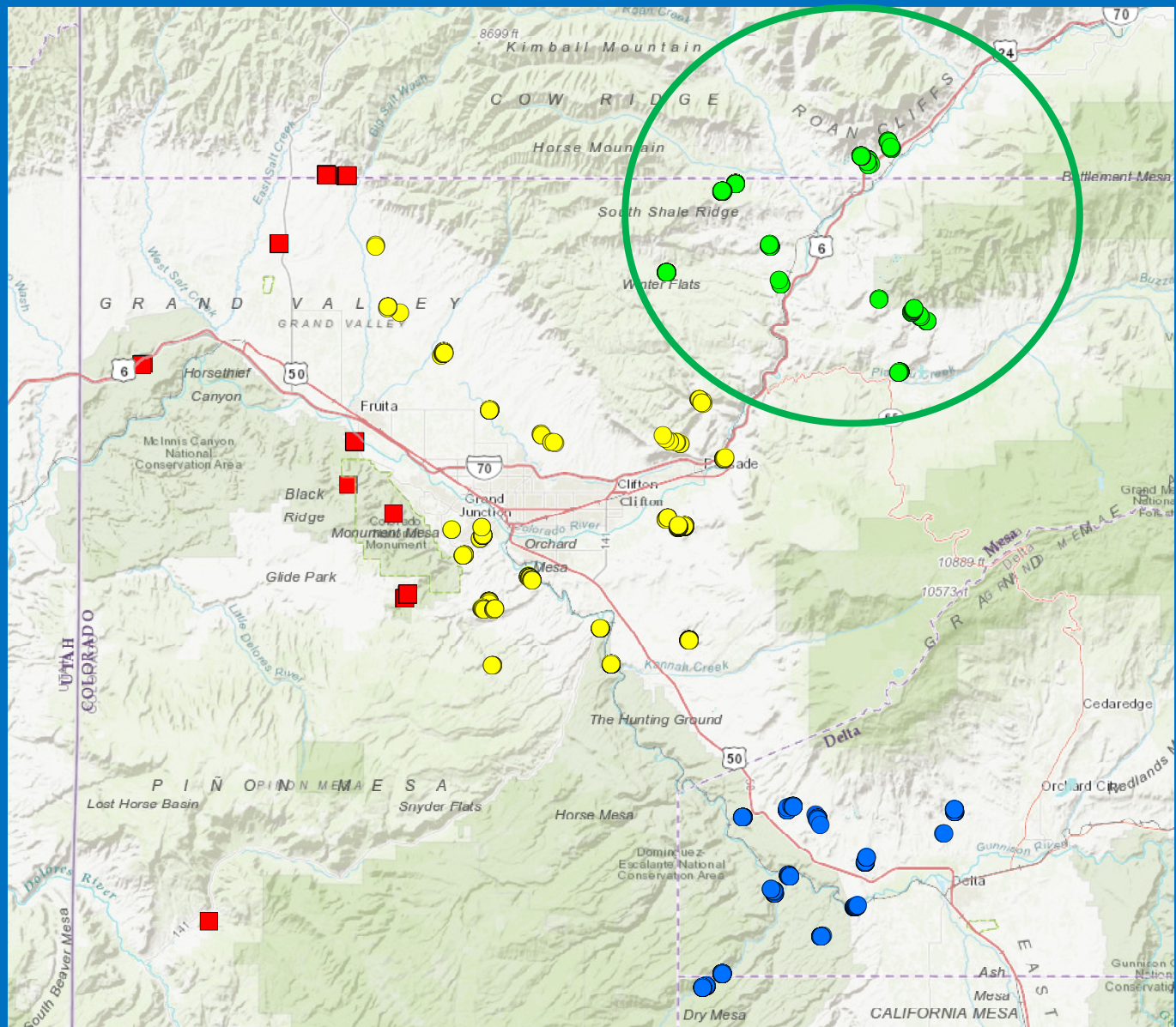
- - *S. parviflorus*
- - *S. glaucus* Grand Valley
- - *S. glaucus* Gunnison River
- - *S. glaucus* North



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the G

Sclerocactus glaucus updates

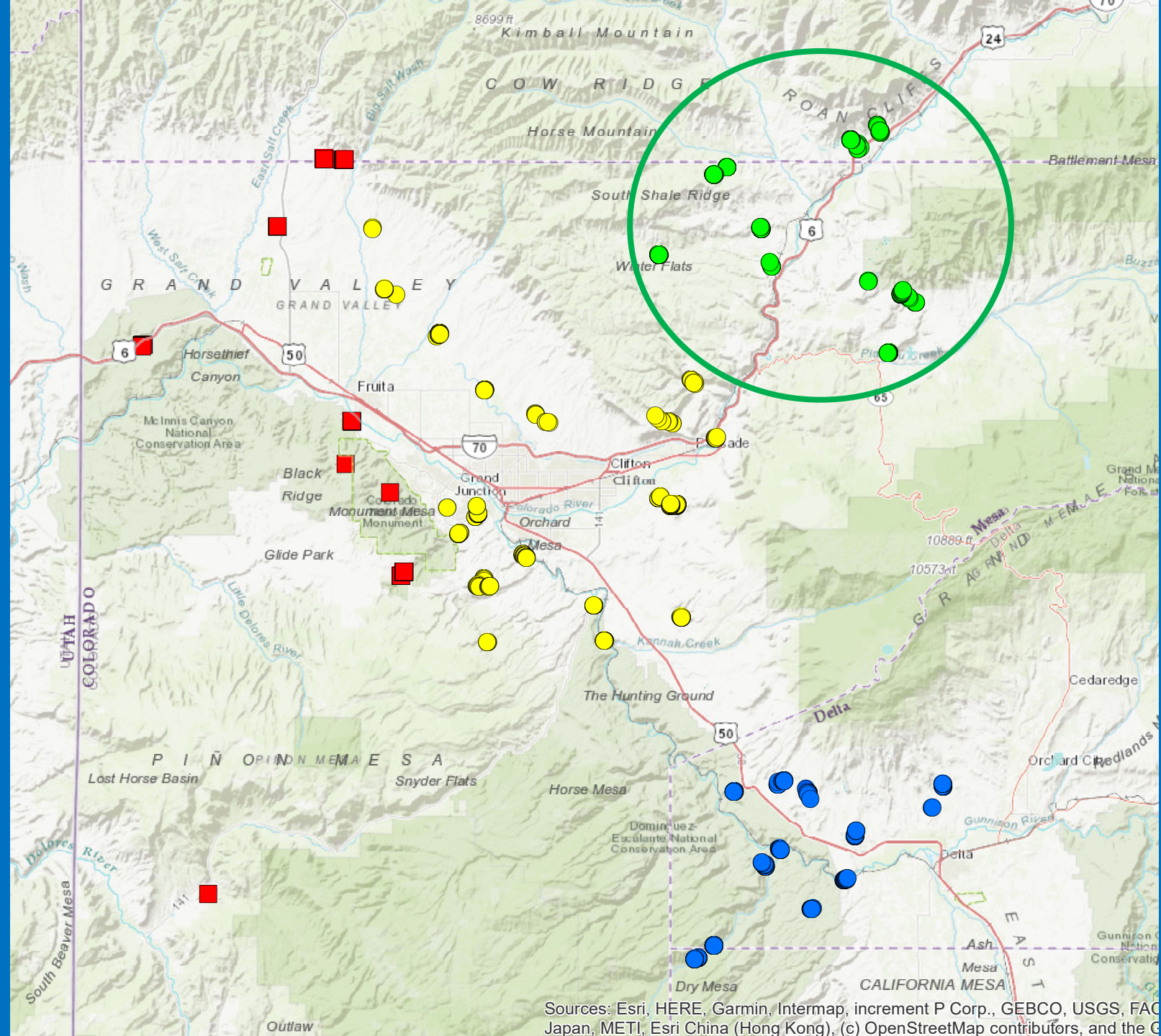
- - *S. parviflorus*
- - *S. glaucus* Grand Valley
- - *S. glaucus* Gunnison River
- - *S. glaucus* North



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, Japan, METI, Esri China (Hong Kong). (c) OpenStreetMap contributors, and the G

New Treatment

- - *S. parviflorus*
- - *S. glaucus* Grand Valley
- - *S. glaucus* Gunnison River
- - *Sclerocactus Dawsonii*



Mit McGlaughlin, Ph.D.
Professor, Director
School of Biological Sciences



UNIVERSITY OF
NORTHERN
COLORADO

Ross Hall 2480c | Campus Box 92 | Greeley, CO 80639
O: 970-351-2139 | Mit.McGlaughlin@unco.edu

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the G