



Southern Rocky Mountain TCN

ADBC Summit 2020

September 24th 2020

Ryan Allen

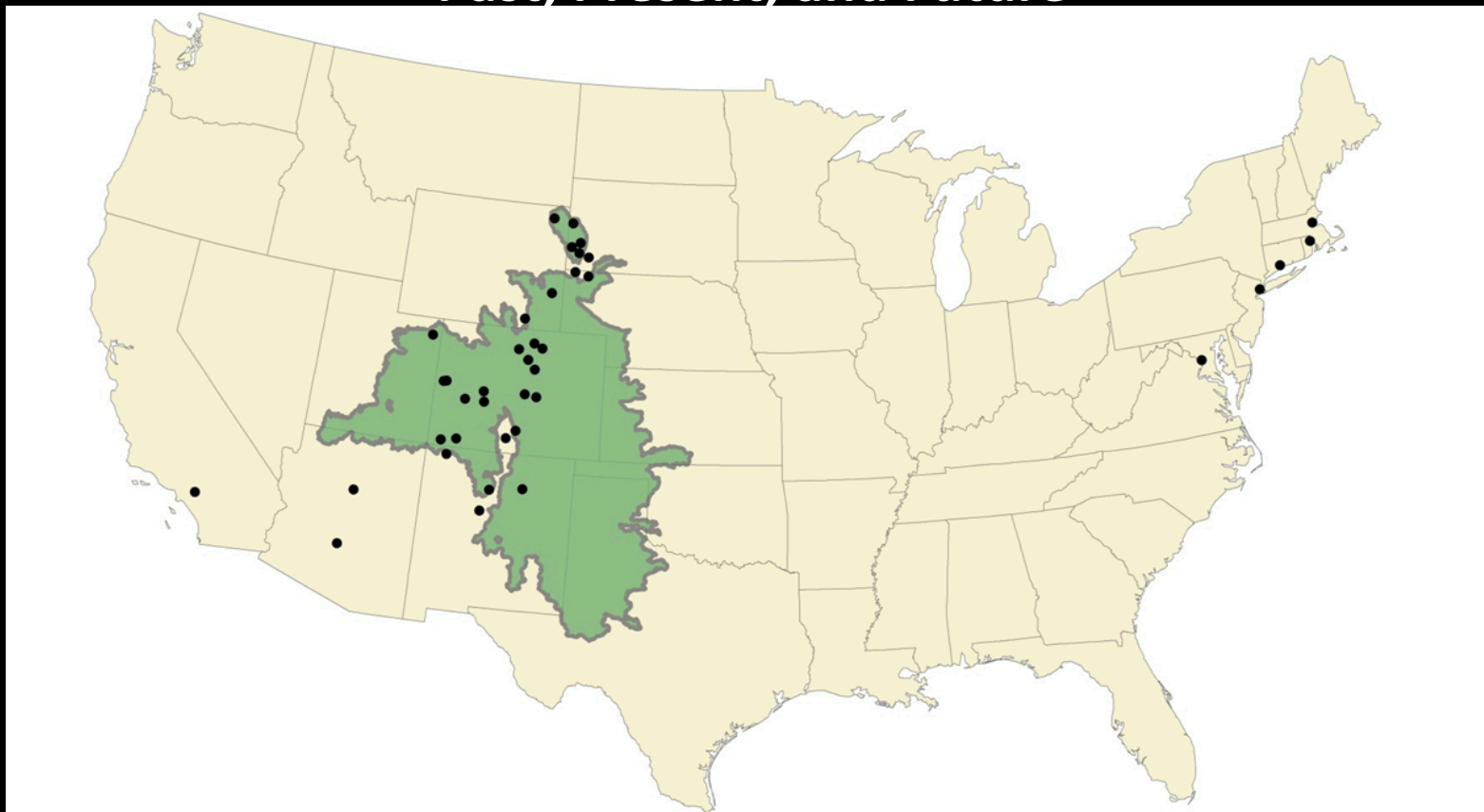
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Using Herbarium Data to Document Plant Niches in the High Peaks and High Plains of the Southern Rockies - Past, Present, and Future





Project Scope

- 40 Partners (including non-digitizing federal partners)
- 20 Partners Digitizing new records
- The original TCN plus RSA PEN
- ~1.8 million specimens from the Southern Rocky Mountain Region
- 546,000 new database entries
- 863,000 new specimen images
- 627,000 new georeferences





Funded Partners

- Adams State University
- Arizona State University
- Black Hills State University
- California Botanic Gardens
- Chadron State College
- Colorado College
- Colorado Mesa University
- Fort Lewis College
- Harvard University
- Navajo Nation Herbarium
- New York Botanical Garden
- Northern Arizona University
- Rocky Mountain Biological Laboratory Herbarium
- San Juan College
- University of Colorado
- University of New Mexico
- University of Northern Colorado
- University of Wyoming
- Western State Colorado University
- Yale University





Project Progress

2019

- 242,484 database entries completed (~48%)
- 753,843 specimens barcoded (~93%)
- 727,475 specimens imaged (~89%)
- 59,175 specimens georeferenced (~11%)





Project Progress

2020

End of July 2020

- 378,764 database entries completed (~68.6%)
- 932,576 specimens barcoded (~107.3%)
- 958,059 specimens imaged (~111.9%)
- 214,358 specimens georeferenced (~34.8%)

We will cross 1 million total specimen images this quarter!





UNIVERSITY OF COLORADO
 91816
 HERBARIUM



WESTERN MOUNTAIN
 COLORADO UNIVERSITY
 NATURAL & ENVIRONMENTAL SCIENCES

Cal. No. 48-010
 Fisher Scientific

0 1 2 3 4 5 6 7 8 9 10
 cm
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 NORTHERN ARIZONA UNIVERSITY
 ASC



Barcode
 ASC 00109764

Plants of Arizona
 Litaeae
Calochortus nuttallii Torr. & A. Gray
 USA, Arizona, Coconino County, 6 miles NE
 of Flagstaff and 0.5 mile south of the AZ-UJ
 state line.
 36° 48.800' N 112° 28.000' W
 Elev: 1050m (3200ft)
 Limestone woodland in sandy soil.
 G. Goodrich 5271 21 May 2015
 Northern Arizona University
 Denver Herbarium (ASC)

RMBL Herbarium
 Specimen # 04423c



Flora of Colorado
 Ranunculaceae
Pulsatilla ludoviciana A. Heller
 Det. by Williams, Charles F. 2015-07-30
 CO Flora W. Slope, 4th ed.
 USA, Colorado, Gamscoen County, One-half mile
 south Crested Butte
 Rocky ridge between tulgepole pine.
 Barclay, Harriet G. s.n.
 23 June 1919
 Rocky Mountain Biological Laboratory (RMBL)



Project Progress

- Second Georeferencing Workshop April of 2020 aimed at bringing collections up to speed on georeferenced process for SoRo.
- soroherbaria.org integrated into SEINet/Symbiota infrastructure
- All funded partners now have data in the Southern Rocky Mountain Portal and have submitted data to iDigBio
- Over 100 volunteers, undergraduate and graduate students have been trained in biodiversity informatics tasks under the project





Goals for year 4

- Georeferencing is going to be the biggest focus
- Integrate federal partner data
- Database and SEINet improvements
- Share with GBIF ~1/2 of collections are sending data, several more will start this project year





Lessons Learned

- Staggering start dates allows maximum contact time with new institutions (4 PI and 9 subawards started digitizing year one 5 subawards plus COLO collection started year two). Also splits collections into themes (small scope under 15,000 mid scope under 100,000 large scope over 100,000)
- Site visits are invaluable





Lessons Learned

- Do not take silence for “everything is okay”
- Pandemics are a good time to proof your data
- Start Georeferencing now!
- Skeletal and controlled data (dropdown menus) help to filter data, reduce keystroke errors and create a searchable database
- Students thrive when working on various tasks
- Equipment changes / backups / updates?





COVID

- All of the SoRo collections actively digitizing except for two closed in March 2020 due to COVID
- Most collections still have limited access
- Our backlog of images helped us to shift to remote work
- Several collections stopped volunteer programs and many digitizers opted to stop working rather than working remote
- We are not back to full capacity

