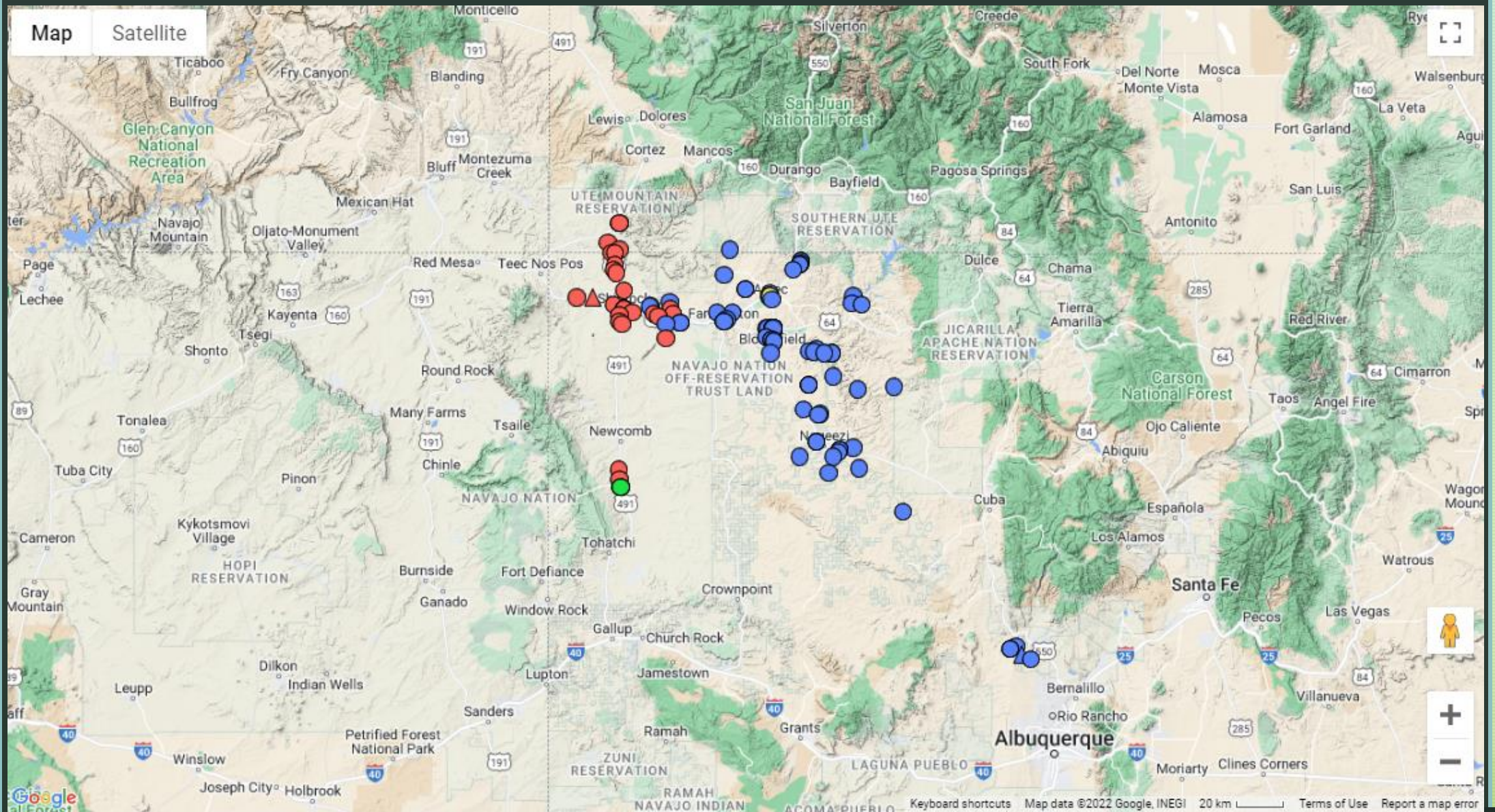




DESERT  
BOTANICAL  
*garden*

## Conserving and Augmenting *Sclerocactus* in the Southwest (2022-2027) Progress Report

Steve Blackwell  
Conservation Collections Manager  
Desert Botanical Garden



Legend

- = *Sclerocactus mesae-verdae*
- = *Sclerocactus cloverae*
- = *Sclerocactus cloverae* subsp. *brackii*
- = various taxa

- = Collection
- △ = Observation

Add Point of Reference

Latitude decimal:  eg: 34.57

Longitude decimal:  eg: -112.38

[Enter in D:M:S format](#)

Marker Name:

# Project Goals



SITE VISITS AND  
SCOUTING NEW  
POPULATIONS



SEED AND PLANT  
COLLECTIONS



SEED  
GERMINATION  
TESTING



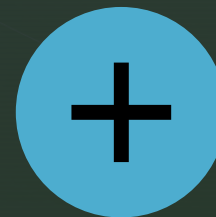
TISSUE CULTURE



GROWTH AND  
CULTIVATION



SEED  
AMPLIFICATION



REINTRODUCTION

# Timeline

ACTIVITY	DATE
Initial <i>Sclerocactus cloverae</i> and <i>S. mesae-verdae</i> site visits	October 2022
Collection and transplant of <i>S. mesae-verdae</i> at DBG	October 2022
Site visits and scouting	May 2023-2026
4 years of seed collection	July 2023-2026
Initiation of seed germination tissue culture trials	Summer 2023
Plant reintroduction	September 2026
Plant monitoring site visit Spring 2027	March 2027
Final Report	October 2027

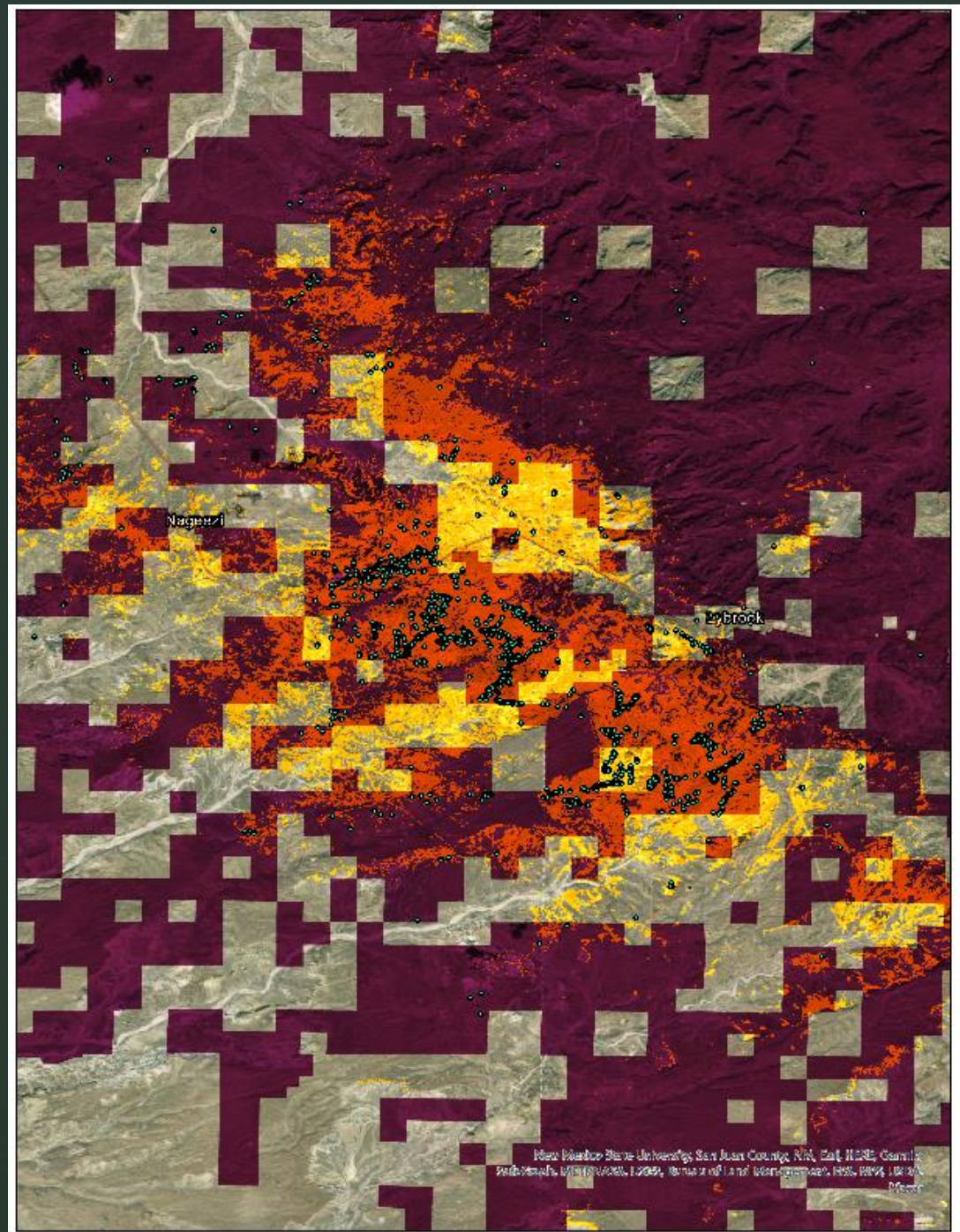
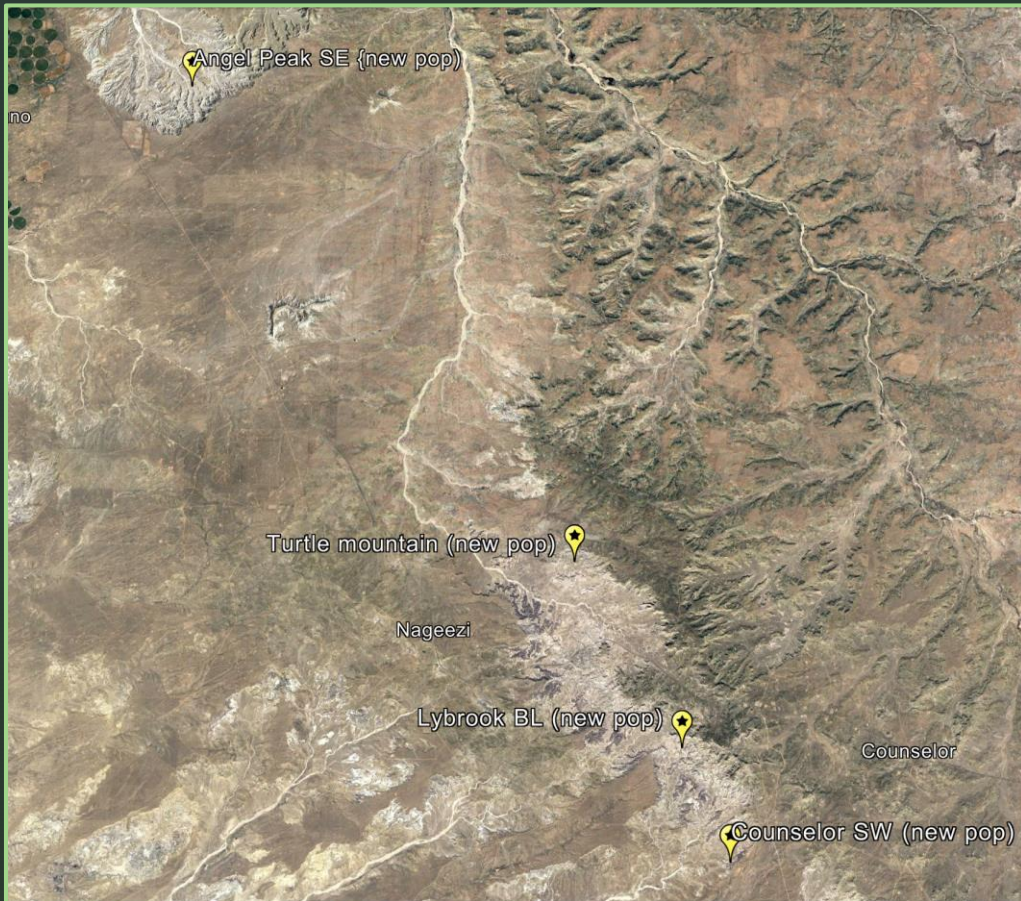
# *Sclerocactus* initial site visits (October 2022)

- Worked with SWCA to salvage 216 plants from Lybrook BL
- Currently testing different substrates to test performance
- Testing different light preferences
- Hand pollination tests Spring 2023
- Soil analysis (highly variable)
  
- Site visit to *S. mesae-verdae* sites



# Sclerocactus site visits and scouting (May 2023)

- Used USGS/BLM predictive model to identify *S. cloverae* hotspots
- Visited 4 new *S. cloverae* populations
- Visited 4 known *S. mesae-verdae* sites





October 2022



May 2023







# *Sclerocactus* seed collections (July 2023)

- 7,498 *S. cloverae* seeds from 4 populations
- 944 *S. mesae-verdae* seeds from 4 populations



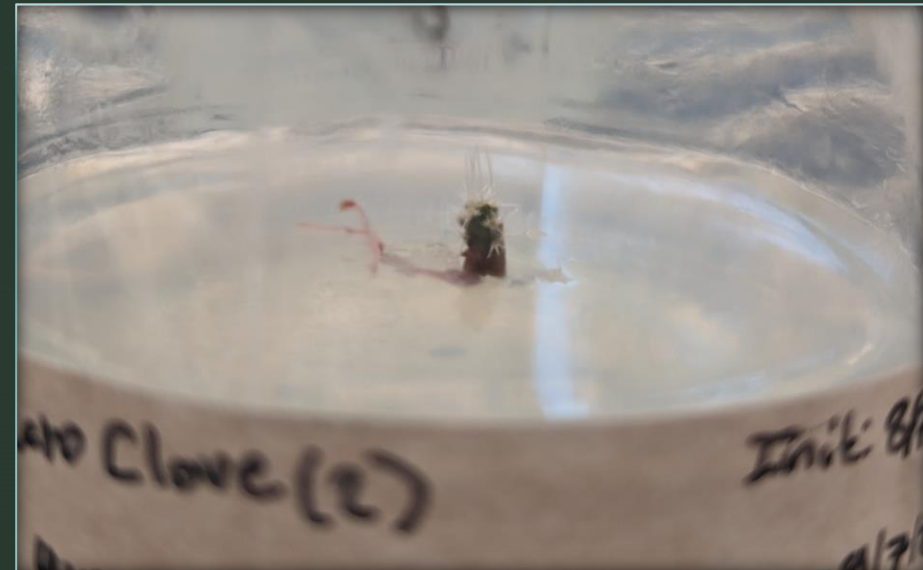
SCLEROCACTUS CLOVERAE  
2023-0605-10-0

2MM



# Germination tests and micropropagation

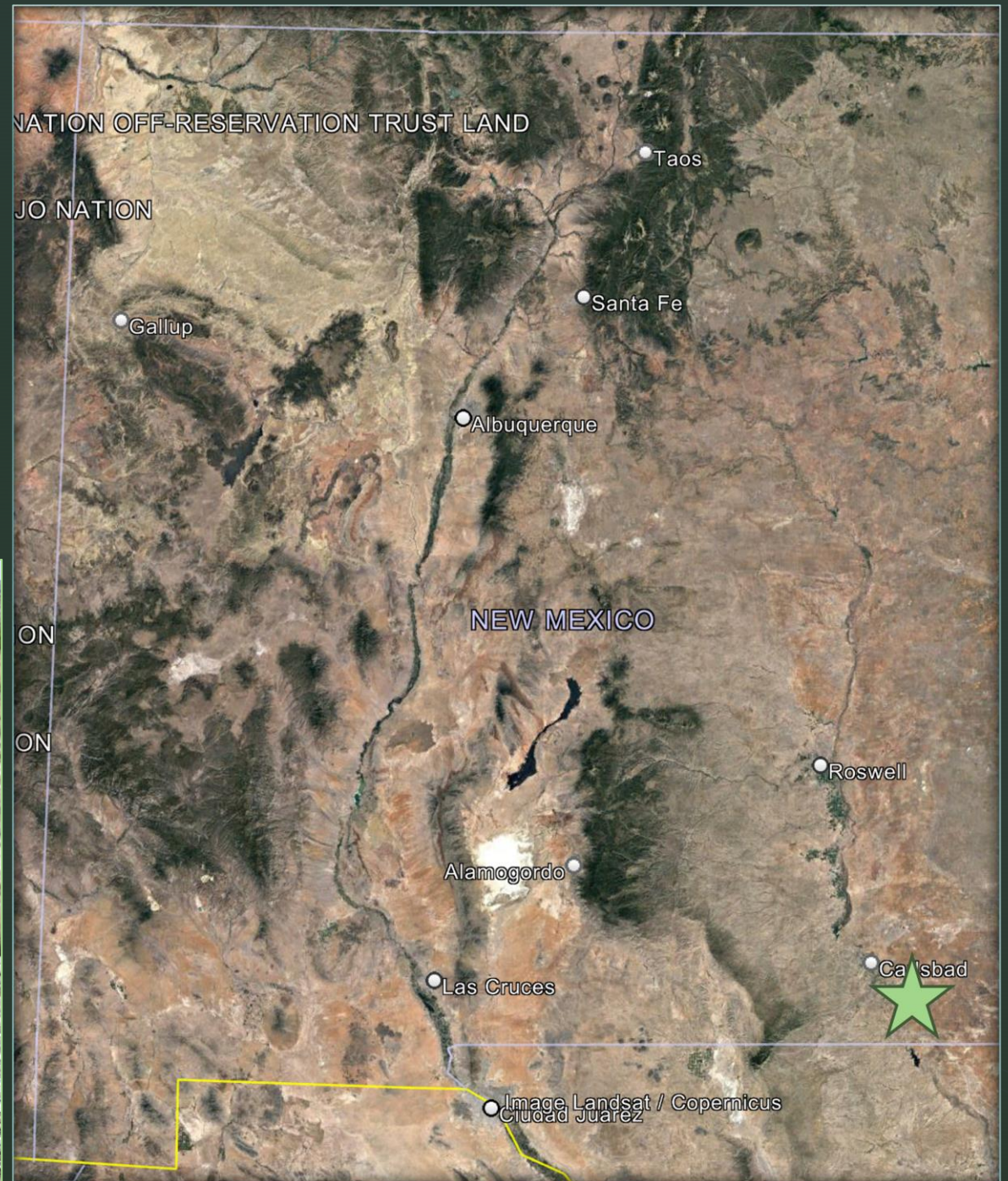
- Low initial germination in both *S. cloverae* and *S. mesae-verdae*
- Extracting seedling from seed coat helps
- Test: After-ripening, hormones, light, acid scarification



# *Amsonia tharpaii*

## Yeso Hills

- Seed collections for CPC seed longevity study
- 1100 seeds banked from Yeso Hills
- Donated plants to ABQ BioPark



# Upcoming



Luis Romero

ACTIVITY	DATE
Initial <i>Sclerocactus cloverae</i> and <i>S. mesae-verdae</i> site visits	October 2022
Collection and transplant of <i>S. mesae-verdae</i> at DBG	October 2022
<b>Site visits and scouting</b>	May 2023-2026
<b>4 years of seed collection</b>	July 2023-2026
<b>Initiation of seed germination tissue culture trials</b>	Summer 2023-2026
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e m n r d



CENTER FOR PLANT  
CONSERVATION

