



The Santa Rita Experimental Range

BRETT BLUM

DIRECTOR, SOUTHERN ARIZONA EXPERIMENT STATION

BCB@ARIZONA.EDU



Grazing in the Arizona Territory

Cattle in Pima and Cochise Counties of Arizona
Tax Assessor Data , 1882 to 1905

— TA: Pima-Sta Cruz — TA: Cochise

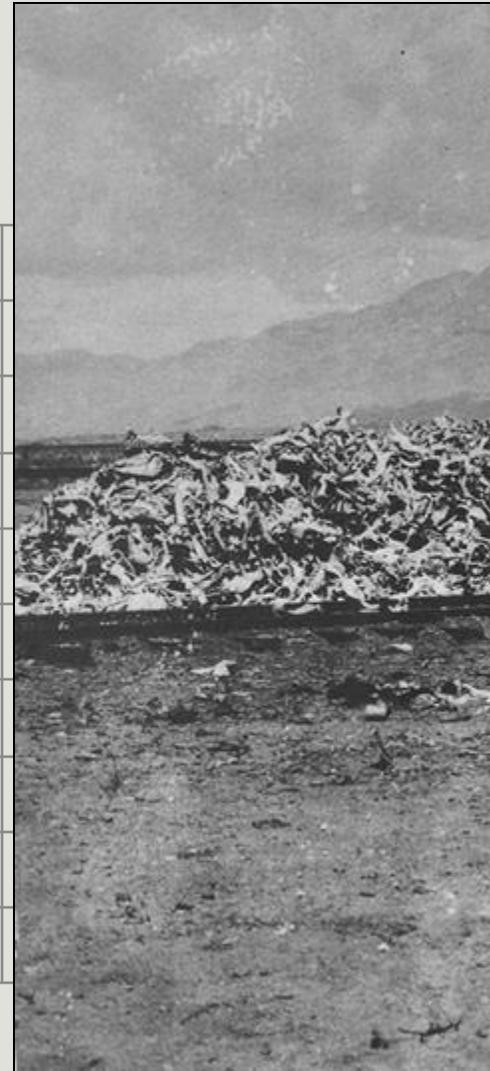
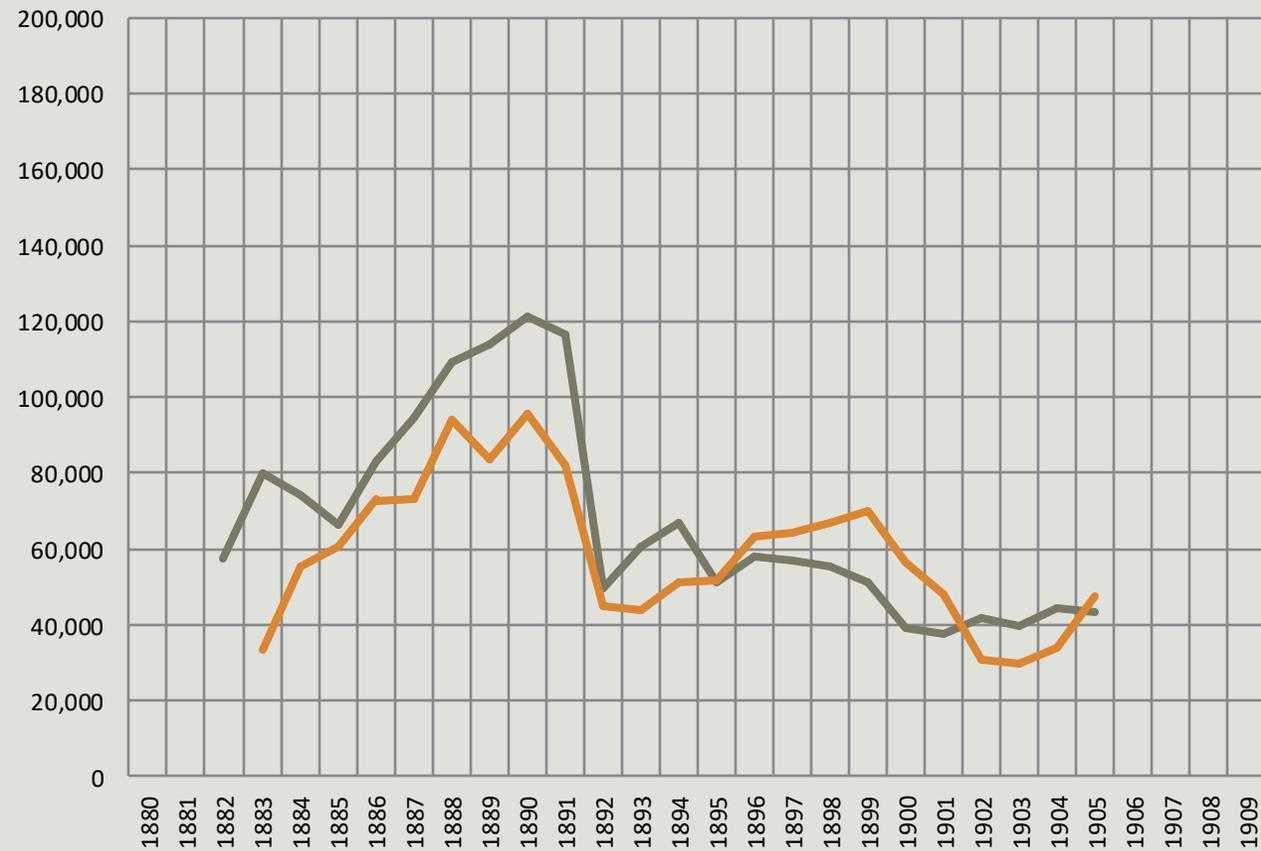


Figure 5.
Dead cattle near Arizona, Arizona, April 18,
1903. Photography D. A. Griffiths,
Courtesy of the National Archives, Washington, D.C.
(Photograph No. 823-FB-1701)

Robert H. Forbes

- Moved to Tucson in 1894
- Professor and Chemist
- U of A, Arizona Agricultural Experiment Station [Arizona Experiment Station]





Figure 5.
Dead cattle near Arivaca, Arizona, April 10,
1903. Photography D. A. Griffiths,
Courtesy of the National Archives, Washington, D.C.
(Photograph No. 833-FB-1701)





VIEW TAKEN IN A GLADE IN THE CAPITAN MOUNTAINS, NEW MEXICO, TEN MINUTES AFTER A SUMMER SHOWER, SHOWING THE WATER BREAKING THE SOD ON A CATTLE TRAIL, MAKING THE FIRST WASH OR CUT IN THE VALLEY.

Robert H. Forbes

“The ruinous methods which seem inevitable upon a public range, which, being everybody’s property, is nobody’s care...”

-Robert H. Forbes 1901



Forbes and Pinchot

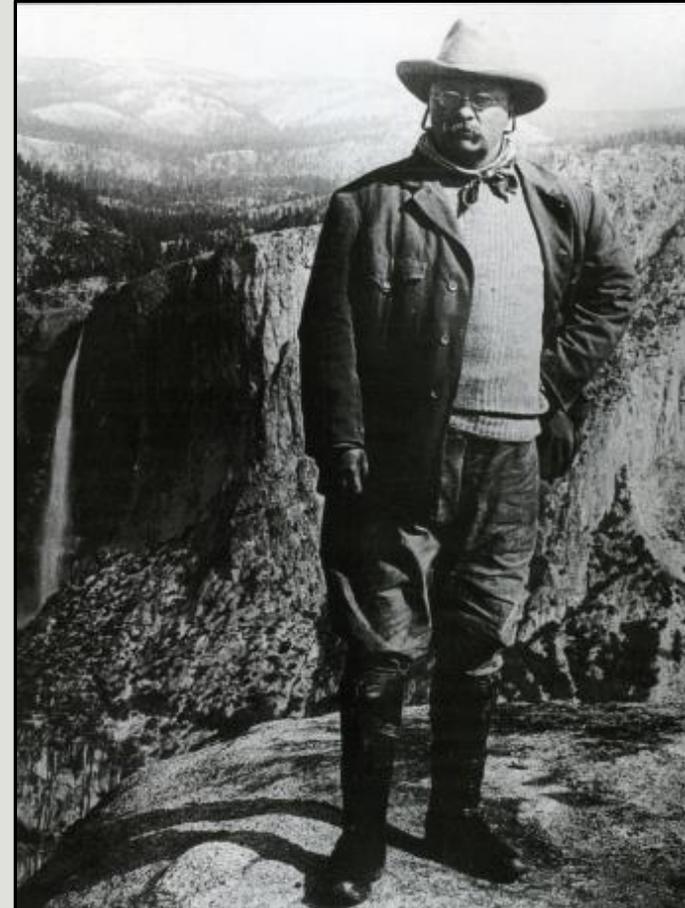
- In 1901 Forbes meets Gifford Pinchot in Denver, Colorado at the annual meeting of the American Forestry Association
- Forbes gives a presentation on the need to establish a large scale rangeland reserve to examine ecological interactions of livestock grazing and restoration practices
- The two continue the discussion following the presentation. Pinchot latches on to the idea and takes it with him back to D.C.



President Theodore Roosevelt

- On April 11, 1902 President Roosevelt issued *Proclamations 467* and *468* establishing the San Isabel Forest Reserve of Colorado and the Santa Rita Forest Reserve (Santa Rita Experimental Range today) of Arizona
- Very first of the public lands designated and reserved under the presidency of Theodore Roosevelt
- *“its [SRER] purpose was expressly understood to be the study of grazing range problems with a view, if possible, to a demonstration on a large and convincing plan, of range restoration and control.”*

-JJ Thornber



SRER: *U of A*

The SRER was federally managed under the USDA Forest Service until 1988

The US Fish and Wildlife Service planned to establish a National Wildlife Refuge for the recovery of the masked bobwhite quail in Arizona

To do so required a land swap of Federal Land back to the State

Ownership of the SRER was transferred to the Arizona State Land Department and assigned to the U of A for purposes of rangeland and ecological research, education and outreach.



University of Arizona Bus at Box Canyon

Photographer unknown.
January 10, 1930.

Where is the SRER?



Tucson

Tanque Verde

Green Valley

HERE IT IS

Sierra Vista

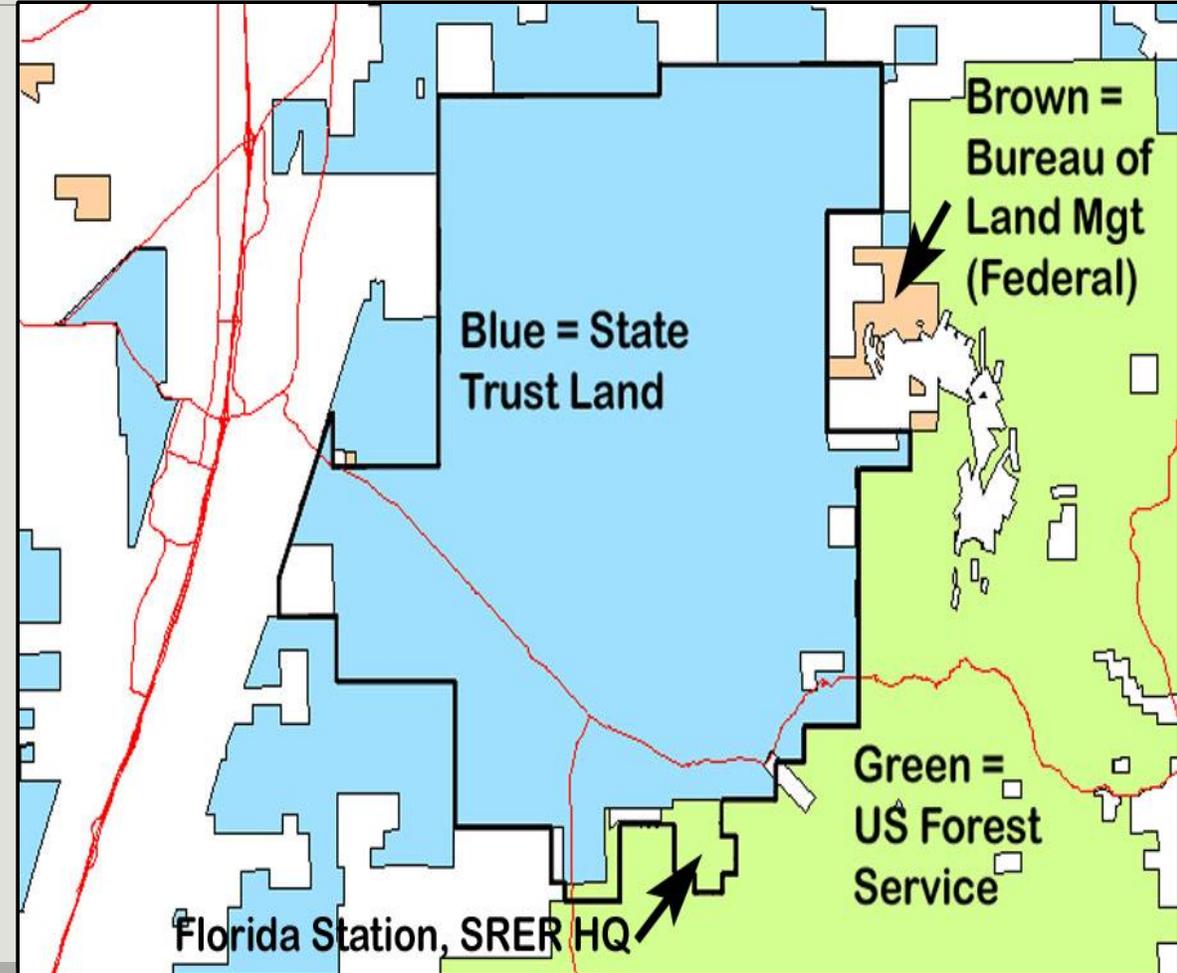
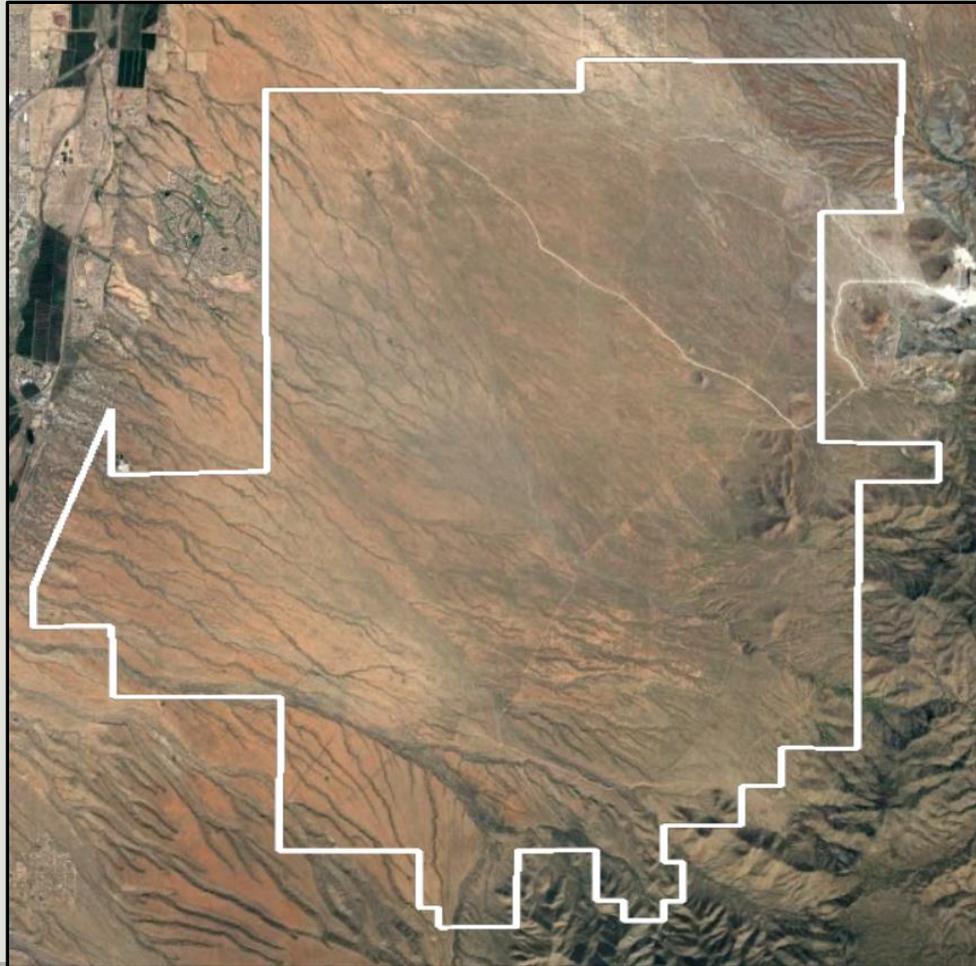
Image Landsat / Copernicus

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Google Earth

SRER: *present designation*

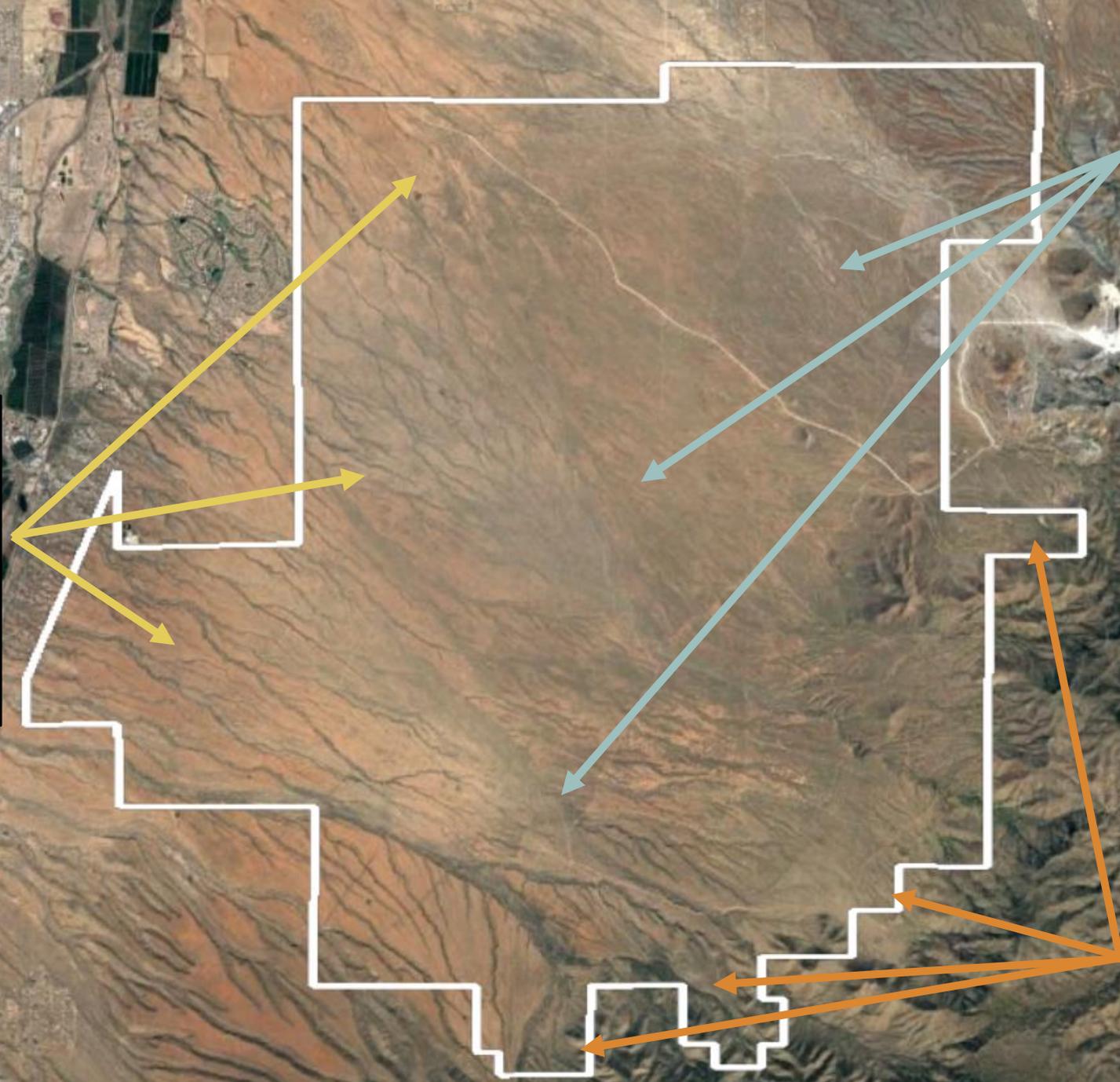




Mesquite Savanah
~975-1220m (3,100-4,000ft)



Sonoran Desert/Upland
~950m (3,100ft)



Oak Woodland
~1220-1350m (4000-4400ft)



SRER: *past*

SREER: *plant science, botany and phenology*





Branding Calves

Photographer unknown.
May 23, 1922.



Observing Grazing Behavior from a Truck

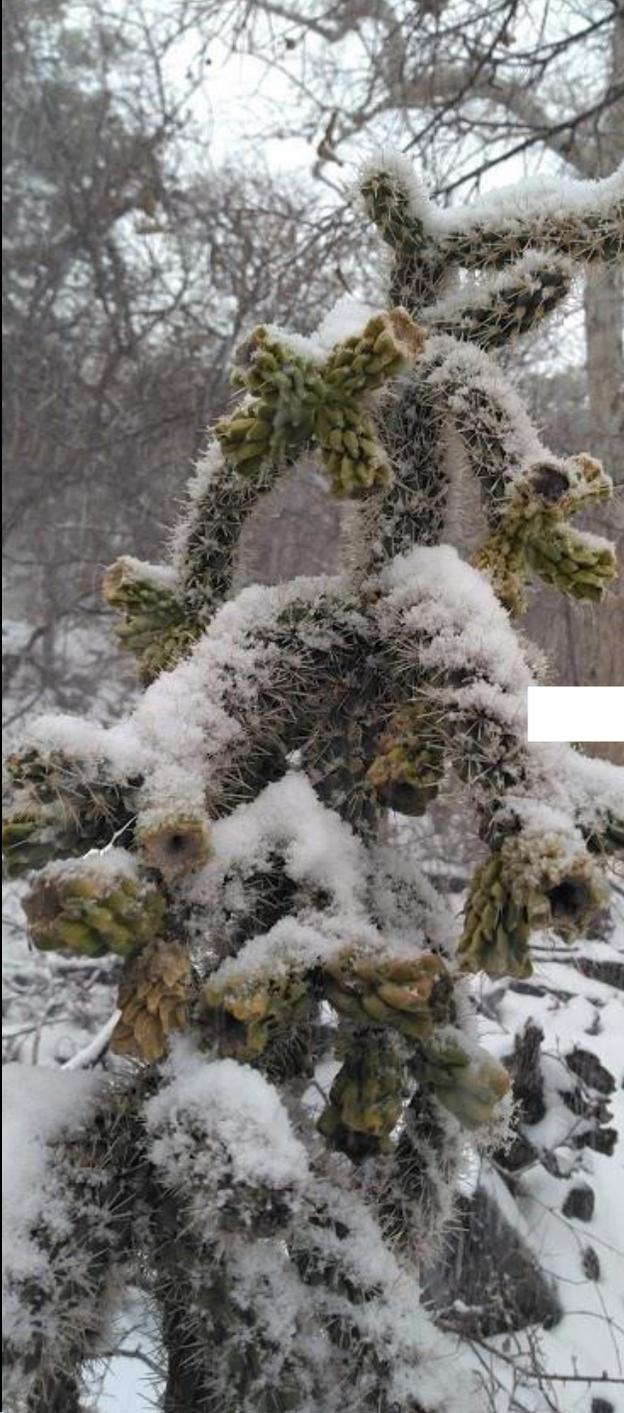
Photo by Matt Culley.
December 1937.

SRER: *stocking rate*

- David Griffith's was original full time researcher on SRER
- Tasked with establishing a standardized stocking rate for cattle across the American West
- This imperative highlights the inherent difficulty in ecological study
- *"in a region where the seasons, the altitude, the slope and the rainfall are so variable."* -David Griffith's, 1904







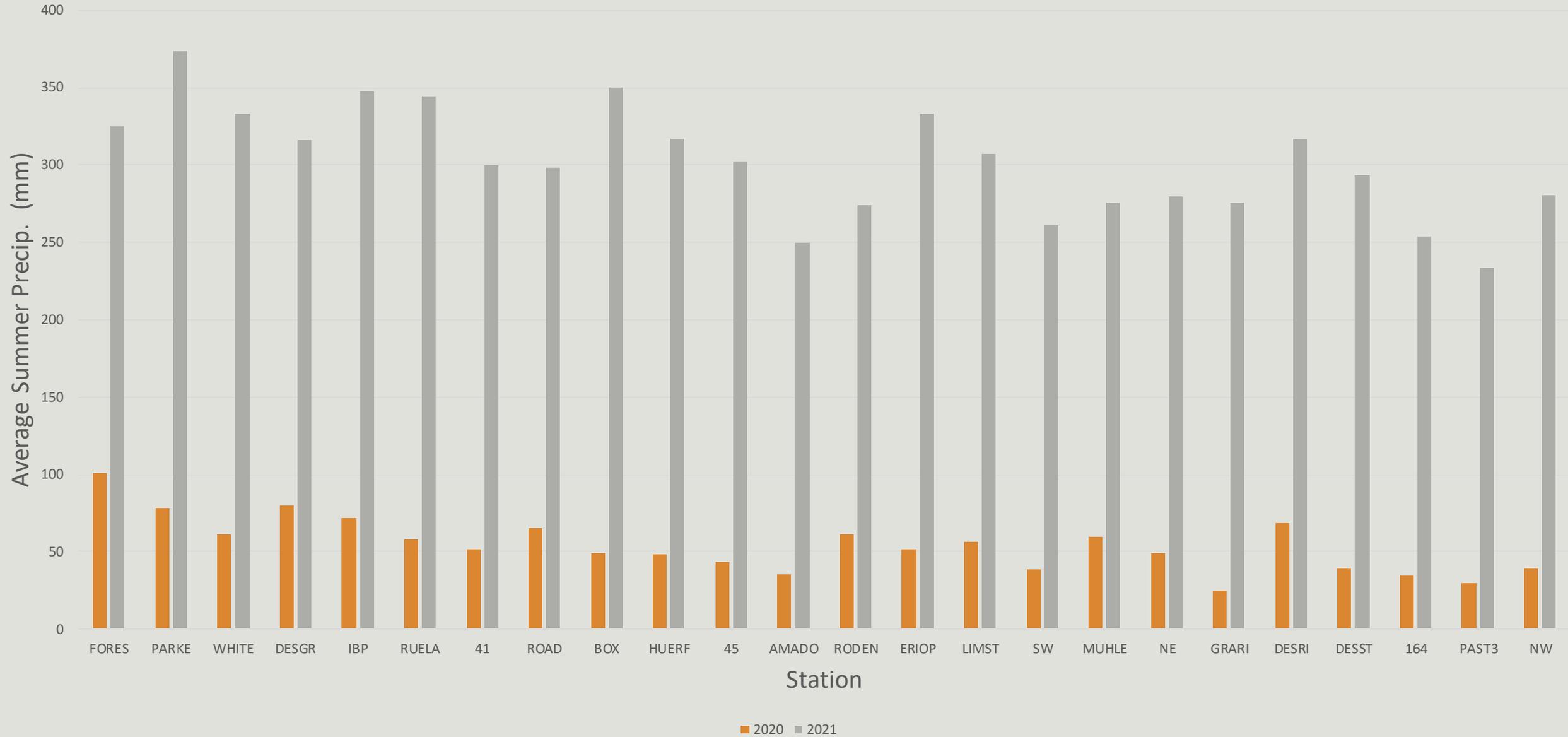
April 14, 2000



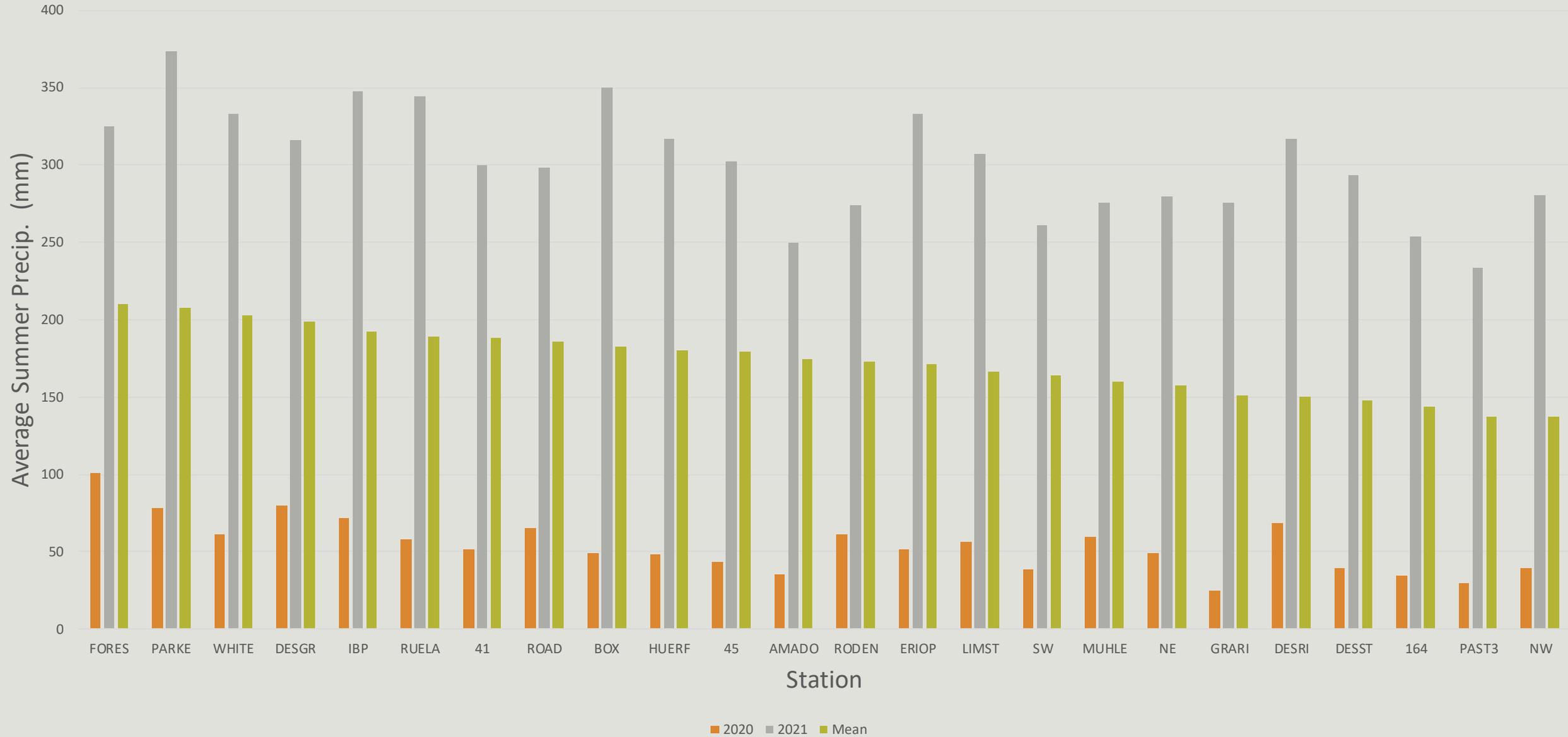
March 15, 2007



SRER Summer (May-Sept) Precipitation Values



SRER Summer (May-Sept) Precipitation Values



SRER Pasture 3: June 2021



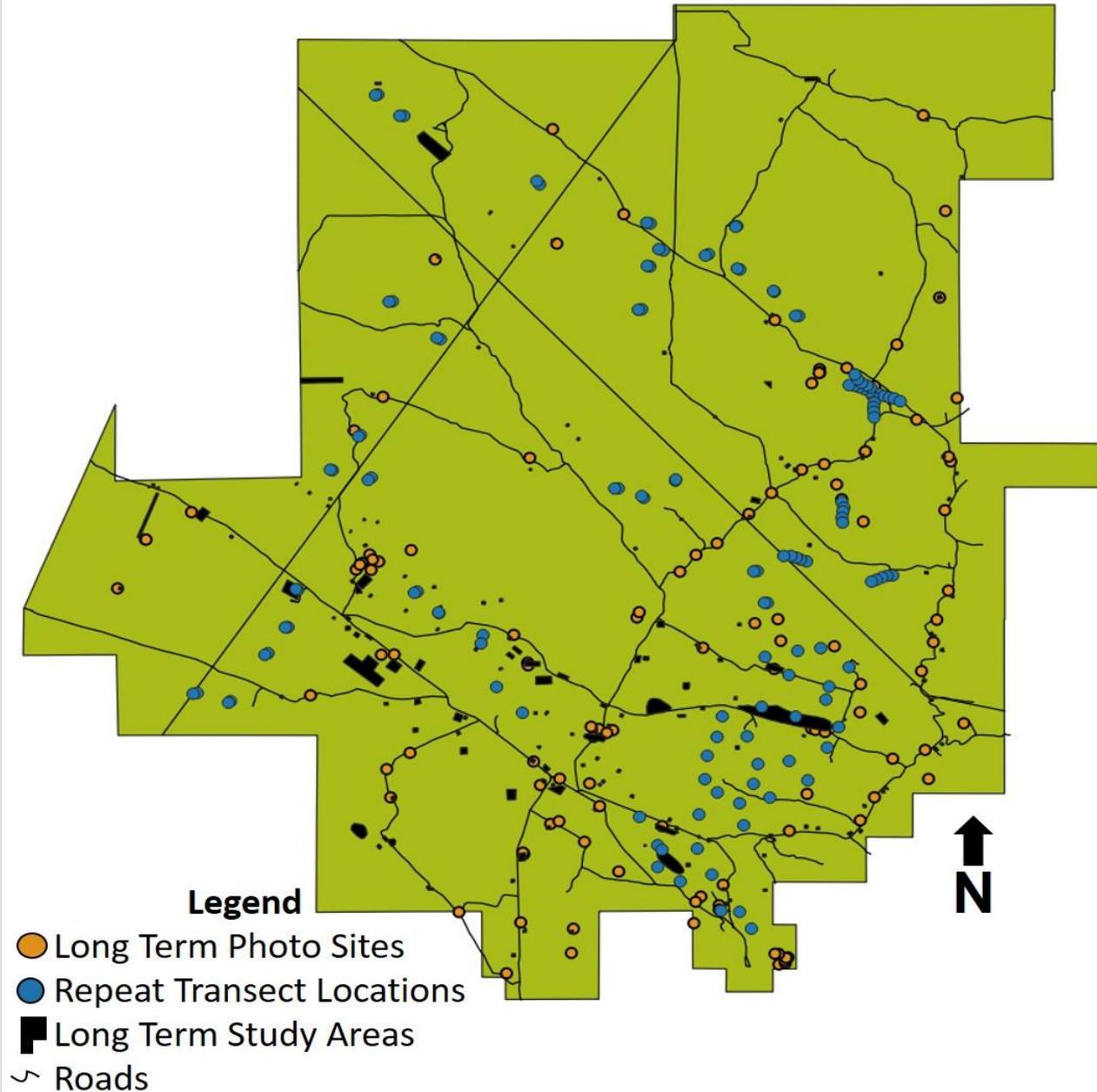
SRER Pasture 3: August 2021



SRER Research Legacy

- Foundational research on fundamental ecological principles related to semi-arid ecosystems
- Early implementation of ecological restoration practices
- Creation of point line intercept method
- Rest rotation grazing and livestock exclusion
- Working landscape and adaptive management

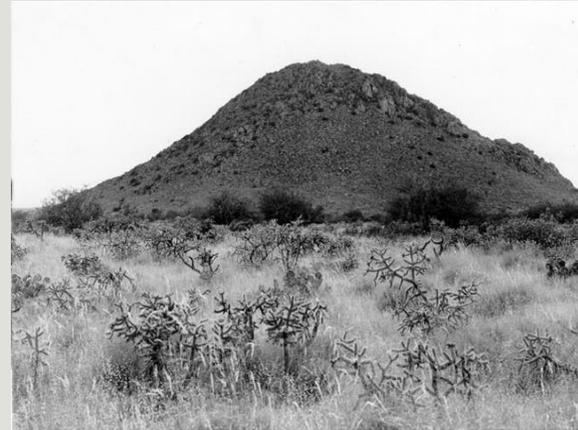
Santa Rita Experimental Range
Long Term Monitoring, Research and Transect Map



SRER Website and Data Portal

New SRER website can be found at:

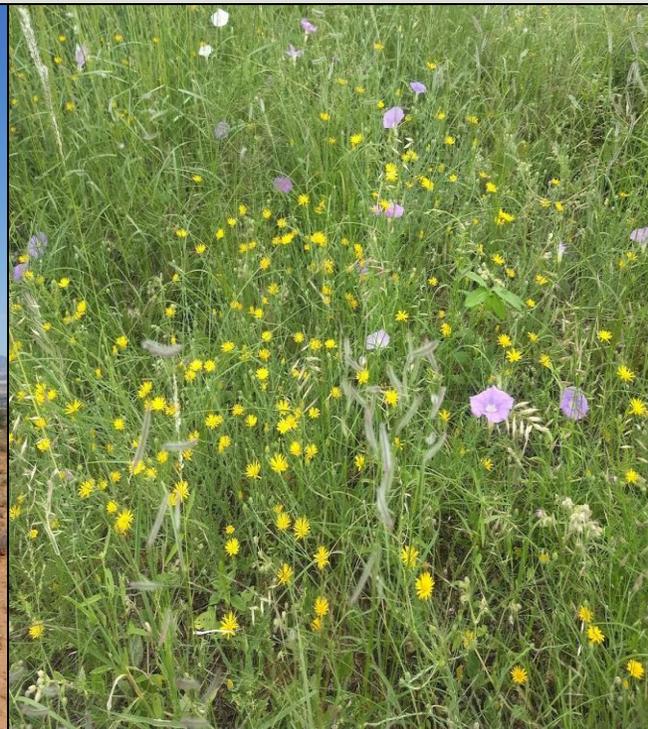
<https://cals.arizona.edu/srer/>

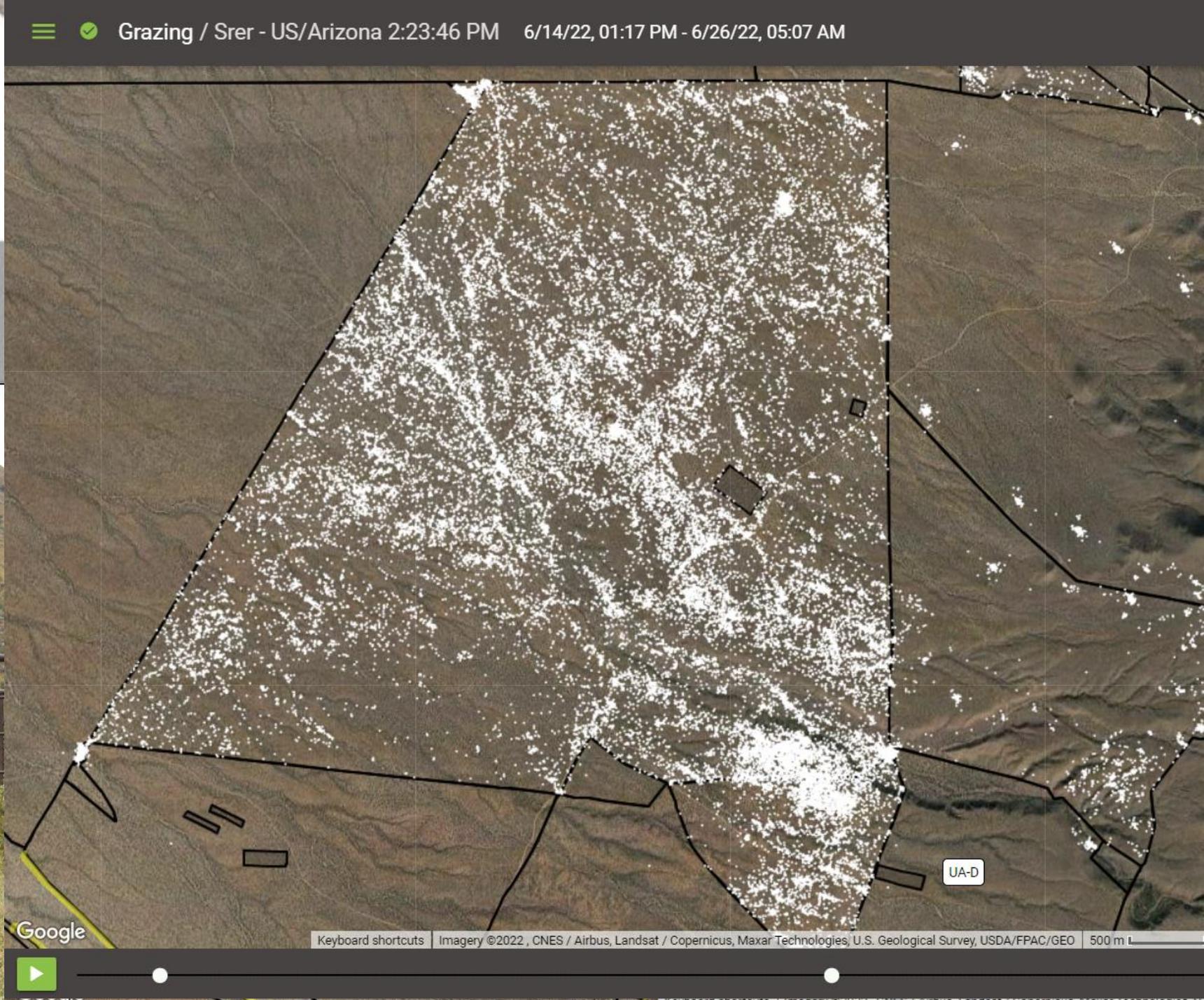
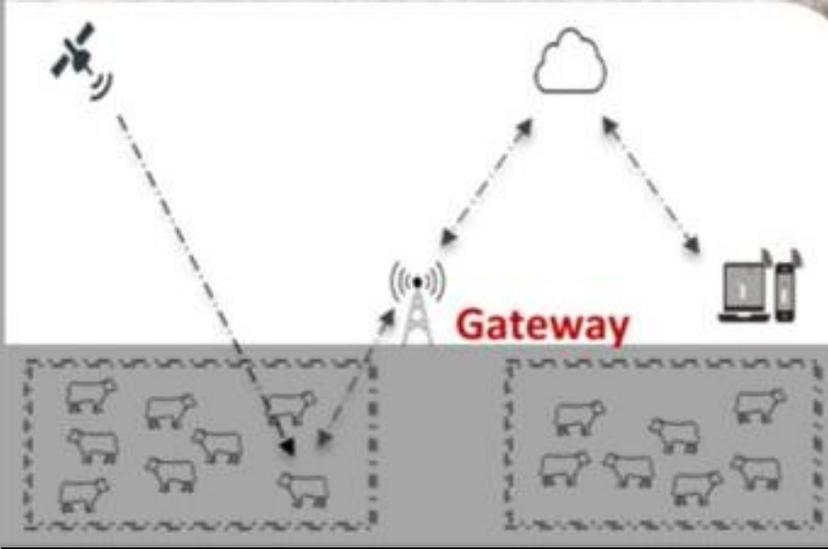


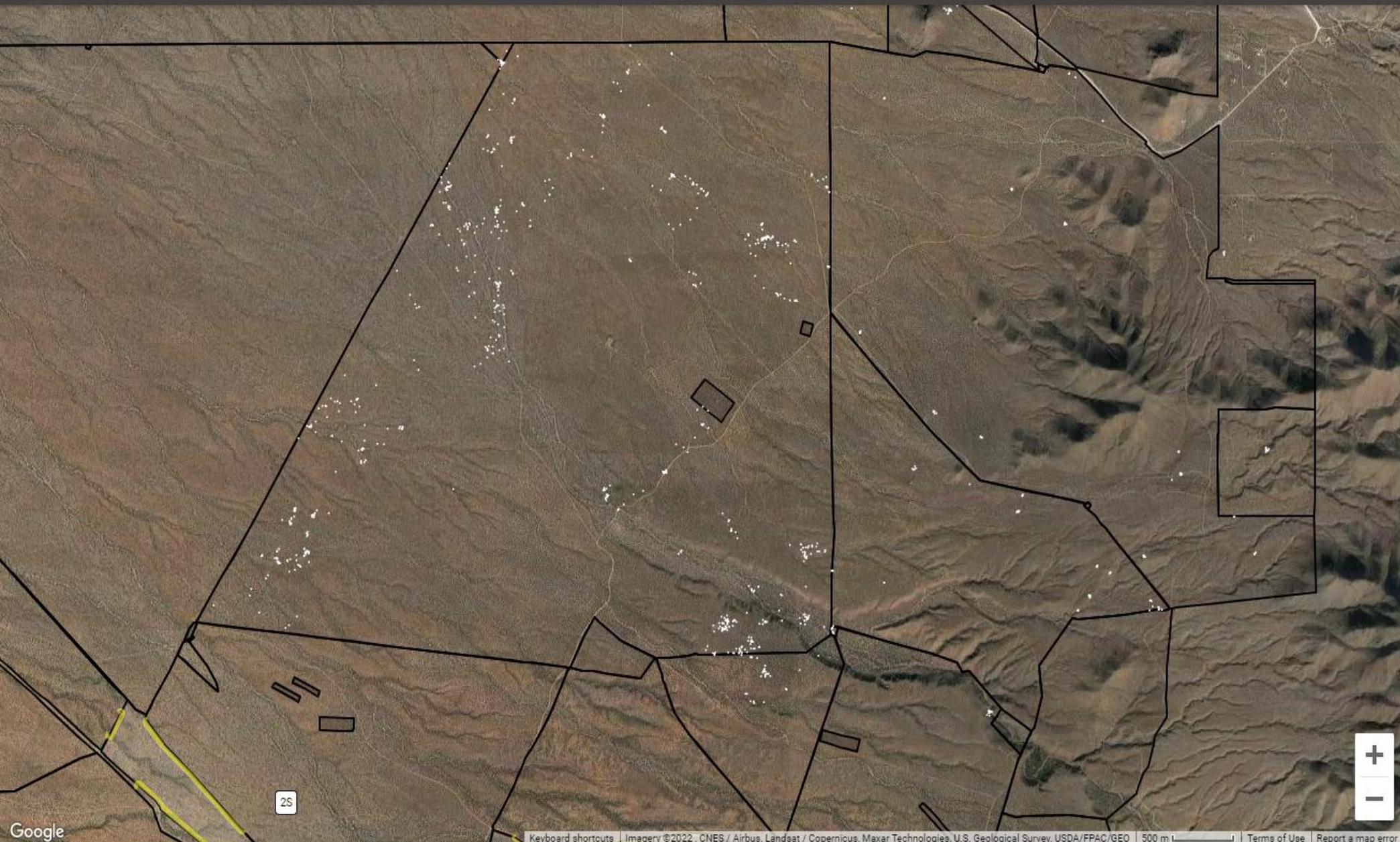
SREER: *present*

SRER: *ecological laboratory*

- >1,000 peer reviewed publications
- Average of 35 active research projects /year
- 10-12 new studies implemented annually
- Average of 10 long term studies (>5year)







 **Grazing Data**

- [SELECT GRAZING DATA](#)
- [SELECT COLLARS TO DISPLAY](#)

 **Vences**

- [CREATE VENCE](#)
- [SELECT VENCES TO DISPLAY](#)

 **Calendar**

- [SHOW CALENDAR](#)

 **Landmarks**

- [CREATE LANDMARK](#)
- [SELECT LANDMARKS TO DISPLAY](#)

 **Map**

- [MAP OPTIONS](#)





Florida Station











FIELD OFFICE
SANTA RITA EXPERIMENTAL RANGE







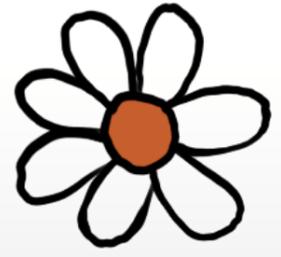
SREER: *student engagement*

The University of Arizona



American Fisheries and
Wildlife Society

University of Arizona
Ecological Restoration Club











*SRER Research
in the 1940's...*

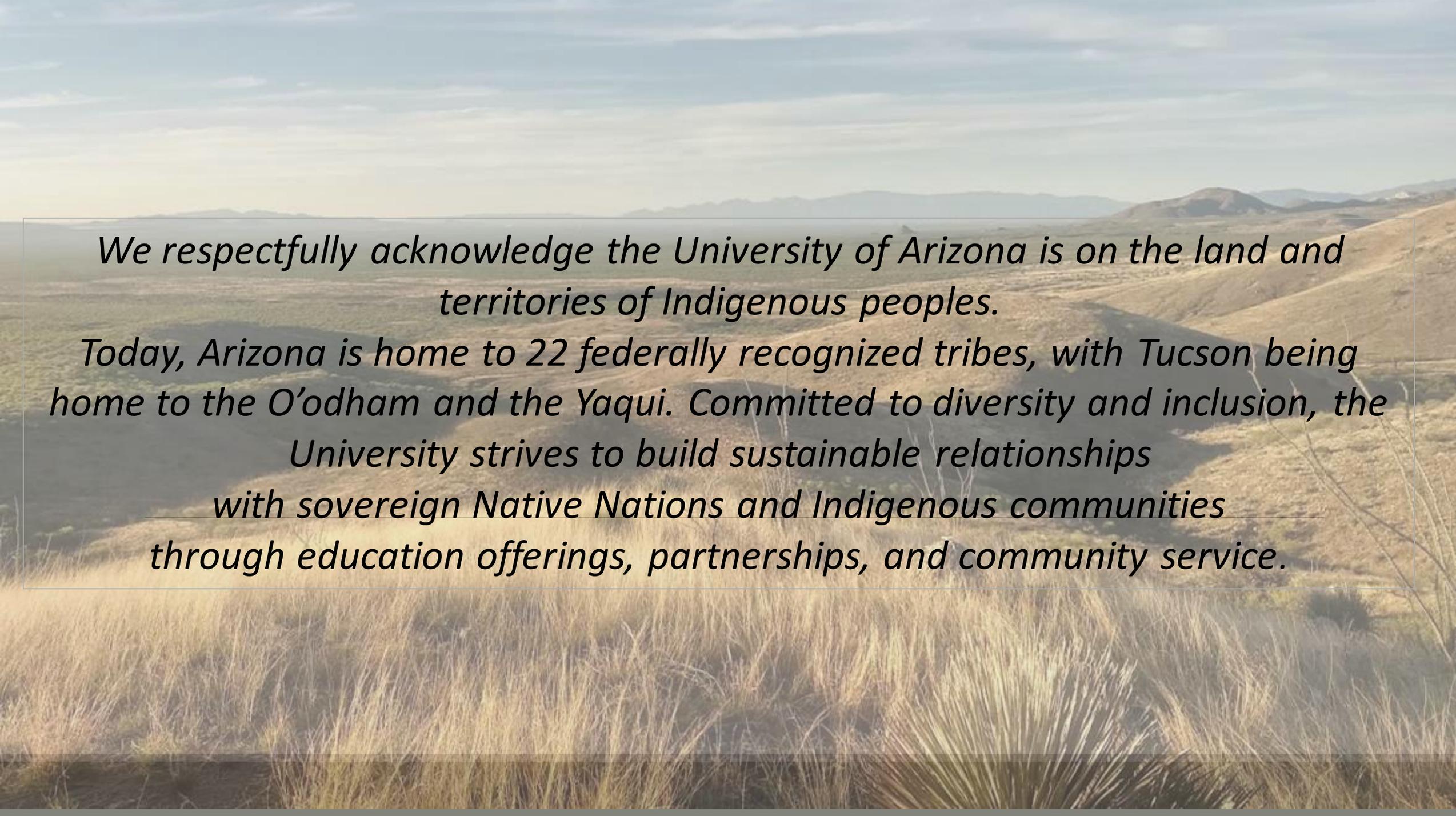


County Agents View an Introduced Lovegrass

Photographer unknown.
January 1940.

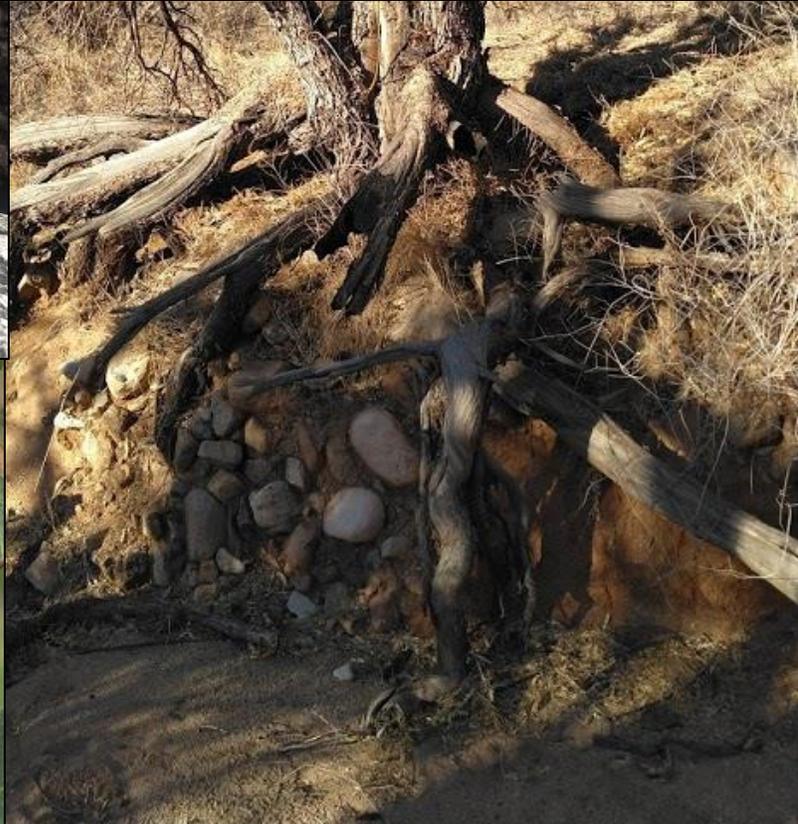
*Majority of SRER
research is now
women led*





We respectfully acknowledge the University of Arizona is on the land and territories of Indigenous peoples.

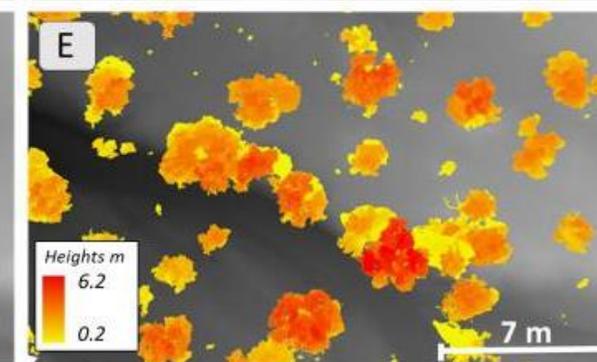
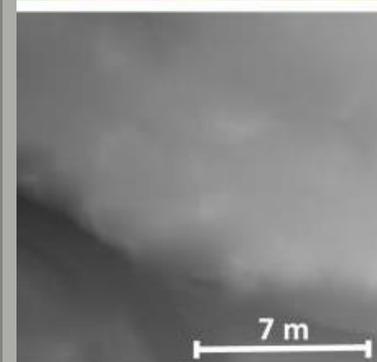
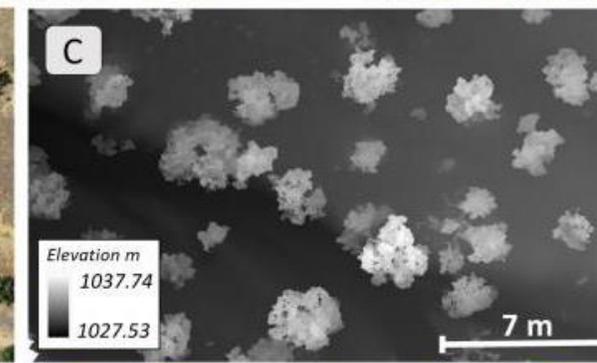
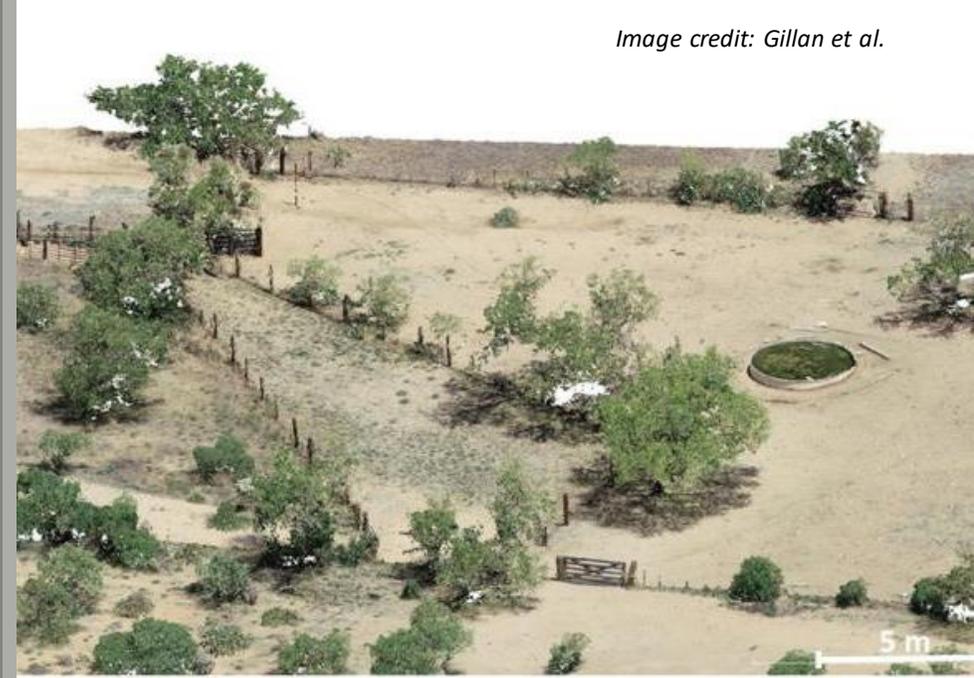
Today, Arizona is home to 22 federally recognized tribes, with Tucson being home to the O'odham and the Yaqui. Committed to diversity and inclusion, the University strives to build sustainable relationships with sovereign Native Nations and Indigenous communities through education offerings, partnerships, and community service.





SRER: *future*

- Synthesis of SRER data into research ready tool kits
- Continued development and outreach with focus on inclusion, public engagement and STEAM driven education opportunities
- Long term predictive modeling for climate and precipitation
- Incorporation of additional remote environmental monitoring technologies
- Ecological restoration and broadening of traditional ecological practices
- Multi platform, multi spectrum imaging and remote sensing
- Recreation management
- Human/wildlife interaction



SRER: *research, change, and perspective*

“A science of land health need, first of all, a base datum of normality, a picture of how healthy land maintains itself as an organism” -Aldo Leopold, *A Sand County Almanac [Wilderness as a Laboratory]*

1918



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2000



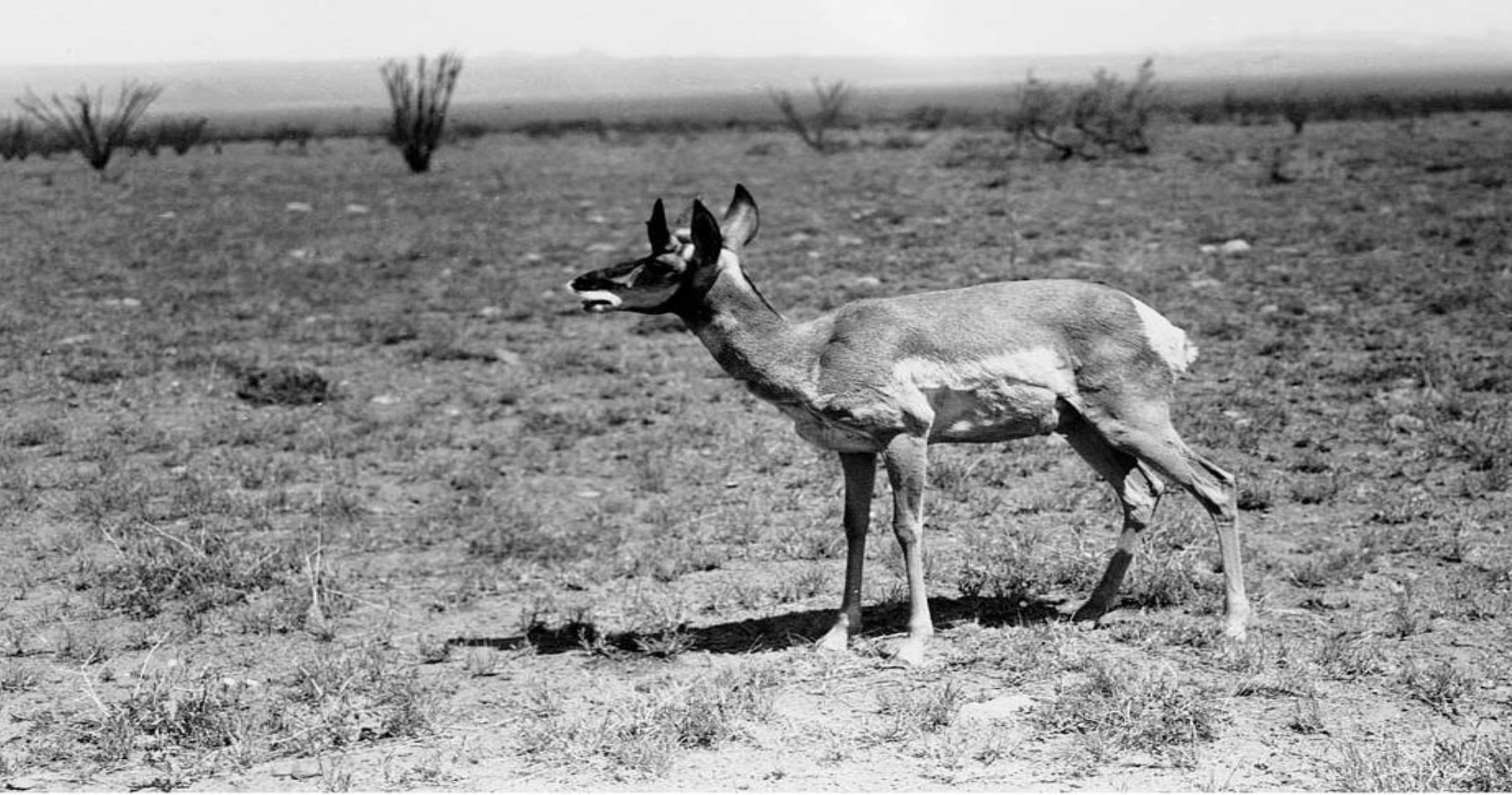
Questions?

Brett Blum

bcb@email.arizona.edu

<https://cals.arizona.edu/srer/>





"Photo of 'Skippy' at Station No. 126." 7/14/37



Organization of Biological Field Stations

*Supporting environmental research, education, and
public understanding*
