Update: Big Game Corridors

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New Mexico D

Stewart Liley Santa Fe, NM January 10, 2025



Big Game Migration Projects

18 herds mapped and published

Volumes 2, 3, 4 of: Ungulate Migrations of the Western US (USGS report)

Collaborative effort

> WEST (consulting for BLM projects), Navajo Nation, Santa Ana Pueblo, NMSU/USGS, Tesuque Pueblo

Herds mapped ➢ Mule deer: 10

- > Elk: 7
- Pronghorn: 1





Ungulate Migrations of the Western United States, Volume

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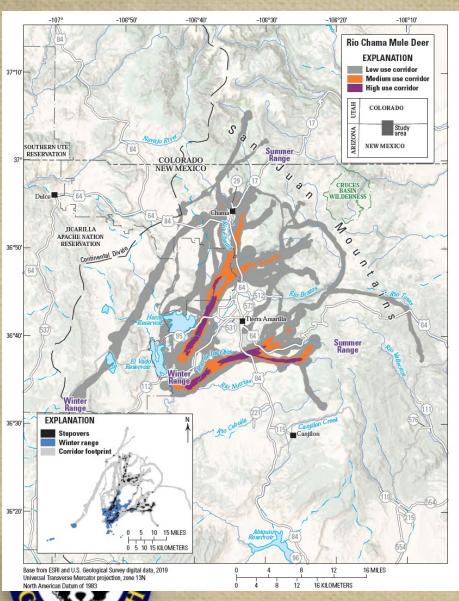
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Rio Chama (mule deer)

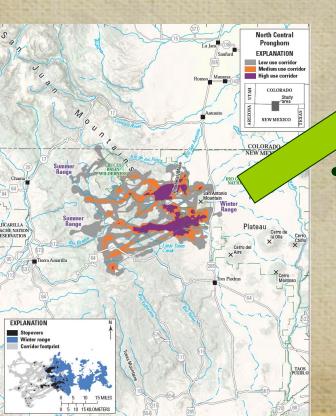
- Reported data
 - Migration pathway (timing, length)
 - Possible barriers
 - Stopover timing
 - Winter range summary

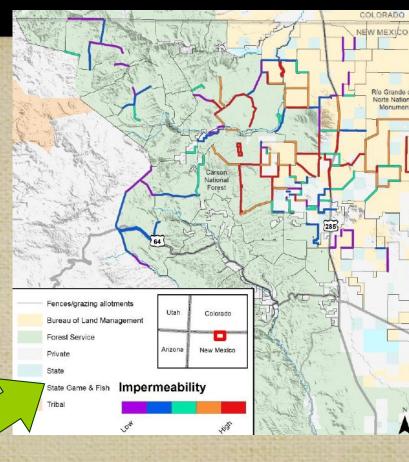


	New Mexico Mule Deer 53
Mexico Male Deer	Models derived from:
nama Mule Deer	 Migration: 160 sequences from 59 individuals (89 spring sequences, 27 fail sequences)
e Rio Chama mule deer herd hat one of the highest-	 Winter 116 sequences from 57 individuals
populations of any head in New Mexico. The head	Corridor and Dispower Summary
s from north-central New Mexico along the Continental	Migration start and end dates (median):
and through the San Juan Mountains, with some sals moving to summer ranges in southern Colorado	 Spring: April 23 to May 5
11,500 ft 12,399-3,505 mJ elevation: fig. 340. These	 Fall: October 27 to November 7
guest through a meanic of private, public, and Acardla	Average number of days migrating:
Nation Reservation lands. The herd winters south	 Spring: 15 days
t of Heron Reservoir and El Vado Reservoir in habitat na primerily of sambrush steppe, graeslands, piezon-	Fall: 7 days
ng primarity of capetoon cuppe, grannade, parjon- mens, and osk woodlands. The mule deer use two	Mirrorion corridor learth:
minution corndors. One corndor follows the Roo	- Miss: 8.02 mi (12.91 km)
	 Mean 18 21 mi (22 M km)
gloweys 84 and 64. The shorter consider initially follows	 Mex: 31.07 mi (50.01 km)
os Ojos hefore hunching into separate considors north th of U.S. Hathway 64, Interspersed agricultural lands	Minution corridor area.
a Rio Chama and U.S. Highways \$1 and 61 may serve	 202,285 acres (81,882 ha) (low use)
our sites for some make door during their spring mayn-	 31.672 acres (12.817 hs) (medium use)
ndeross pine, mixed conifer, and Popular seemaloider	 10.210 screet (4.132 ha) (high use)
g appea) forests characterize the corridors and stopovers aid-elevation inducators. As the Rio Chama male deer	 Stongerer area: 21.477 arres (8.691 ha)
and elevation and some per All the state Channa must deter	
montane meadows until reaching their high-elevation	Winter Range Summary
range, which country of mixed coulder and arpen for-	Winter start and end dates (median):
allenges the head faces include crossing U.S. Highways 54, increasing density of browing subdivisions in some	 November 11 to April 24
ng the routes, and Imcont, especially taller imcont that	- Winter length (mean) 163 days
ex caused paup.	 Winter range (30 percent contout) non: 38,991 acres (15,779 ha)
I Copture and Data Collection	
mple size: 67 adult female mule deer	Other Information
location frequency Approximately 2-12 boars	Project contact:
oject duration: 2020-2021 nalivnja	 Omin Davavaei (omin davavaei ()dgf nm gev), Deer Program Manager, New Mexico Department
	of Game and Fish
erridor, stopower, and winner range analysis: BBMM st and others, 2009); corridor analysis also used Fixed	Data analyst
Variance (see appendix 1 for further description)	 Croig Reddell, ODS Analyst, New Mexico State University
dimention of migration periods NSD (Bunnefeld ers. 2011)	
	Photograph Seen Journe Grein, New Mexico State University)
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Northcentral pronghorn





"Barrier behavior analysis"

- Used to identify which fence segments may be obstructing movement
- Will benefit other terrestrial species

Río Grande del Norte National Monument

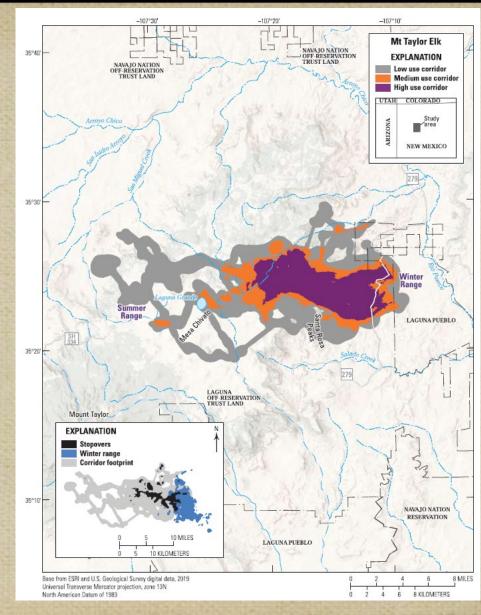
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Mt. Taylor elk







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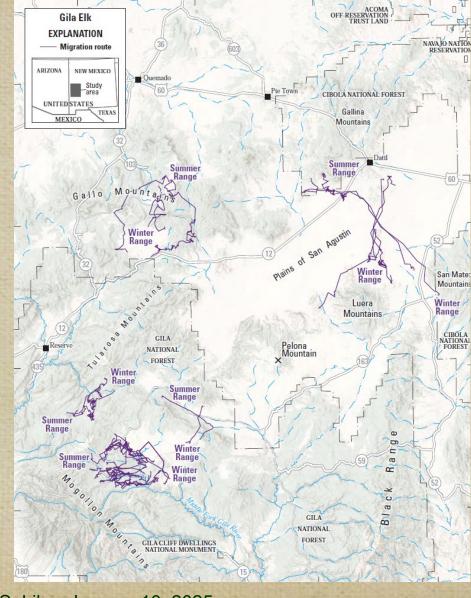
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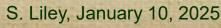
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Gila elk

- Not all herds migrate
 - Hundreds of collars on Gila elk
 - Mostly non-migratory
 - Only 3% of Gila elk migrated
 - Elk movement data can be used to target management efforts





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Ongoing work





• **NMDGF Goal:** target more arid regions where big game make important seasonal movements in response to precipitation patterns

Current & upcoming projects

- Mule deer
 - Southern Pecos, Mt. Taylor)
- Pronghorn movement
 - BLM/NMSU/NMDGF: Bootheel
 - DOD/NMDGF/NMSU: Southeastern NM
 - Wildlands/Tribal/NMDGF: pronghorn near solar development NW
- Sand conveyer project & deer movement response
 - Developer sponsoring work to identify changes in movement after installation

Key takeaways

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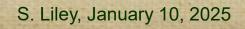
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Collaborative efforts key

- Many entities fund work and have data or expertise
 - BLM, NMSU, USGS, Tribal Nations, Consultants, DOD
- Future \$\$ available to expand work (WAFWA grant 2025-2027)
 - Benefits to other species
- More work to be done
 - No data DOES NOT mean migration is not occurring or an area is not important







Questions?



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