

This data package was produced by researchers working on the Shortgrass Steppe Long Term Ecological Research Project. This project was supported by National Science Foundation from 1982-2014. This data package includes one or more tab-delimited data tables, tab-delimited files (named \_var) that denote header definitions and data types for each column, and detailed metadata within an Ecological Metadata Language document (i.e. XML). Example image files of plots, digital datasheets, or schematics of the experimental design may also be included when applicable.

Background information on the SGS-LTER project is contained in related series of objects within the Digital Collections of Colorado and the Colorado State University archives. Together data packages and other background information, including items such as images, proposals, and reports contribute to a comprehensive SGS-LTER collection.

The data tables and associated EML documents represent components of a PASTA (Provenance Aware Synthesis and Tracking Architecture) congruent LTER data package, which may be discovered and accessed through secondary repositories serving specific ecosystem science domains (e.g. LTER Network Information System, DataONE, or The Knowledge Network for BioComplexity).

The following information was obtained from the SGS-LTER Field Crew Manual:

### **ARS #99 Lagomorph Count**

**Principal Investigator:** Paul Stapp

**Study Objectives:** to track temporal changes in the relative abundance of these important species on the study area. Please see directions for CPER Study Sites in Appendix.

#### ***What to know before you start sampling:***

- ✓ **Are you familiar with the 3 species of rabbit**
- ✓ **Are you prepared with warm clothes**
- ✓ **Do you have back-up lights and a measuring tape**
- ✓ **Have people been trained on the range finder**

**Study Area Locations and Design:** see transect map across CPER for lagomorph and scat counts

#### **Sampling Protocol:**

***EQUIPMENT:*** *Truck with functional tripometer, two "Q-beam" spotlights plus one spare, data sheets, range finder, back-up 50-m tape, one driver and 4+ observers.*

1. Route driven on one night in January, April, July, and October during the period of the new moon (between last and first quarter-moons).
2. Start at dark at the cattle guard at the fenceline road near the driveway to site manager's house in 21SE.
3. Three observers in back of truck, two with spotlights. The spotlights should sweep out from the road to a 45 degree angle as you drive along. The third observer watches for rabbits and measures the distance of animals from the road with the range finder. The driver or another observer watches for rabbits, especially in the road at the 0 distance and records data.

When an animal is spotted, one observer spotlights animal to make sure that it is not recorded later as a new observation, and the other observer spotlights the spot on the ground where the animal was first sighted. The driver moves the truck so that the bed is perpendicular to where the rabbit(s) were originally spotted. The third observer uses the rangefinder to measure the perpendicular distance from the side of the truck bed to where the animal was sighted.

4. The observers in the truck record the data. Data to be recorded at each sighting:

**SPECIES:**

SYAU	desert cottontails ( <i>Sylvilagus audubonii</i> )
LECA	black-tailed jackrabbits ( <i>Lepus californicus</i> )
LETO	white-tailed jackrabbits ( <i>Lepus townsendii</i> )

**ODOMETER READING (to nearest 0.05 mi)**

**PERPENDICULAR DISTANCE TO ANIMAL (to nearest 0.5 m)**

**NUMBER OF ANIMALS AT THAT DISTANCE (for animals in groups)**

**TIME (military 24hr, hhmm)**

**APPROXIMATE DIRECTION FROM VEHICLE (N,S,E,W)**

**TOPOGRAPHY (use codes provided)**

**VEGETATION (use codes provided)**

**COMMENTS (anything unusual or interesting; record nearby cattle guards, tanks, windmills, enclosures, etc.)**

5. Record sightings and odometer readings for other animals on a separate record on the data sheet. Do not record direction, topography or vegetation. Do record the time, mileage and number of animals. For cells on the datasheet left blank enter a dash.

**MISCELLANEOUS SPECIES:**

CALA	coyote	VUVE	swift fox
TATA	badger	MEME	striped skunk

MUFR  
GHOW

long-tailed weasel  
great-horned owl

DIOR  
BAOW

kangaroo rat  
barn owl

**QAQC Instructions:**

Make sure to fill in all of the information on the header of each and every datasheet, including page \_\_ of \_\_\_\_. Record the time and starting and ending mileage immediately at each location. Record any changes in the weather or weather events over the past 24 hours. Make sure record and report scat tallies on the data sheet. Clip data sheets together for each night.