

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#118 Vegetation on the Small Mammal Trapping Webs

Principal Investigator(s): Paul Stapp

Study Objectives: to detect differences between years in vegetation percent cover and vegetation height and structure.

What to know before you start sampling:

- ✓ ***You can identify plants to species***
- ✓ ***You are familiar with the sampling methodologies***
- ✓ ***You are familiar with the study sites and web layout***

Study Area Locations and Design: Each year the structure of the vegetation is measured on all 6 small mammal trapping webs. The small mammal trapping webs are located in quarter sections in three shrubland sites (13NW, 13SW, and 24NE) three upland grassland sites (25NE, 26NW, and 27NE). Each web must be recorded with the section number and quarter-section direction on the data sheet.

Sampling Protocol:

Items Needed:

1. Pin Flags (60-80)

2. Meter Sticks
3. Daubenmire Rectangles
4. Meter Tapes (2x60 meters)

Procedures:

1. Generate random #5 trap stations (5,15,25,35,45,55.....) and random bearings, then choose 3 of each.
2. Establish transects. Run the tapes in that random bearing direction fifty meters from the #5 trap station and then for fifty meters 180 degrees, in the opposite direction.
3. Sample at each 10m interval point along the transect tape. (Ten points per transect tape will be sampled. Thirty points per web.)
4. Place flag at right or left of the transect tape at each sampling point.
5. Within 3-m radius of sampling point, record:
 - number of ATCA (include only those rooted within plot)
 - number of half shrubs rooted within 1 m (CHVI, GUSA, ARFR, EREF) of the point
 - number of gopher mounds (those with center in plot and have recently mounded soil)
 - number of active ant mounds (those with center in plot)
 - number of burrows (≥ 3 cm in diameter) note larger burrows, like badgers or fox dens
6. At each random point, measure distance to and dimensions of the nearest ATCA, ant mound and gopher mound:
 - dimensions (L X W X H, in cm) of nearest ATCA
 - dimensions (L X W, in cm) of nearest ant mound
 - dimensions (L X W, in m) of nearest gopher mound

Do your best to find the closest one but don't wander more than 30 m. If there isn't one present, write a ".".

7. Record the percent canopy cover in quadrat frame by species (will require multiple rows on the data sheet). Round cover percent to the nearest 5%. Use 1% to describe the presence of an individual of a thin growing species. Also record the percentage of bare ground and litter in quadrat. (Note: You may record the percentage cover of different species and then subtract from 100 to get bare ground, litter, or a dominant species like Bogr.)

8. Throw the pin flag randomly over your shoulder and then record the maximum height (in cm) of the nearest forb, shrub or half-shrub, and grass species. (Carex may be categorized as a grass).

QAQC Instructions: Be sure to complete all the information required at the top of the data sheet on each and every data sheet. Record the web code with the pasture number and the quarter-section direction. Before you leave the site double-check that data were collected from all ten points along all 3 transects. Collate the data sheets for a single small mammal trapping web. Be sure other people can read your handwriting.