

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 SPTR Trapping

Principal Investigator(s): Paul Stapp

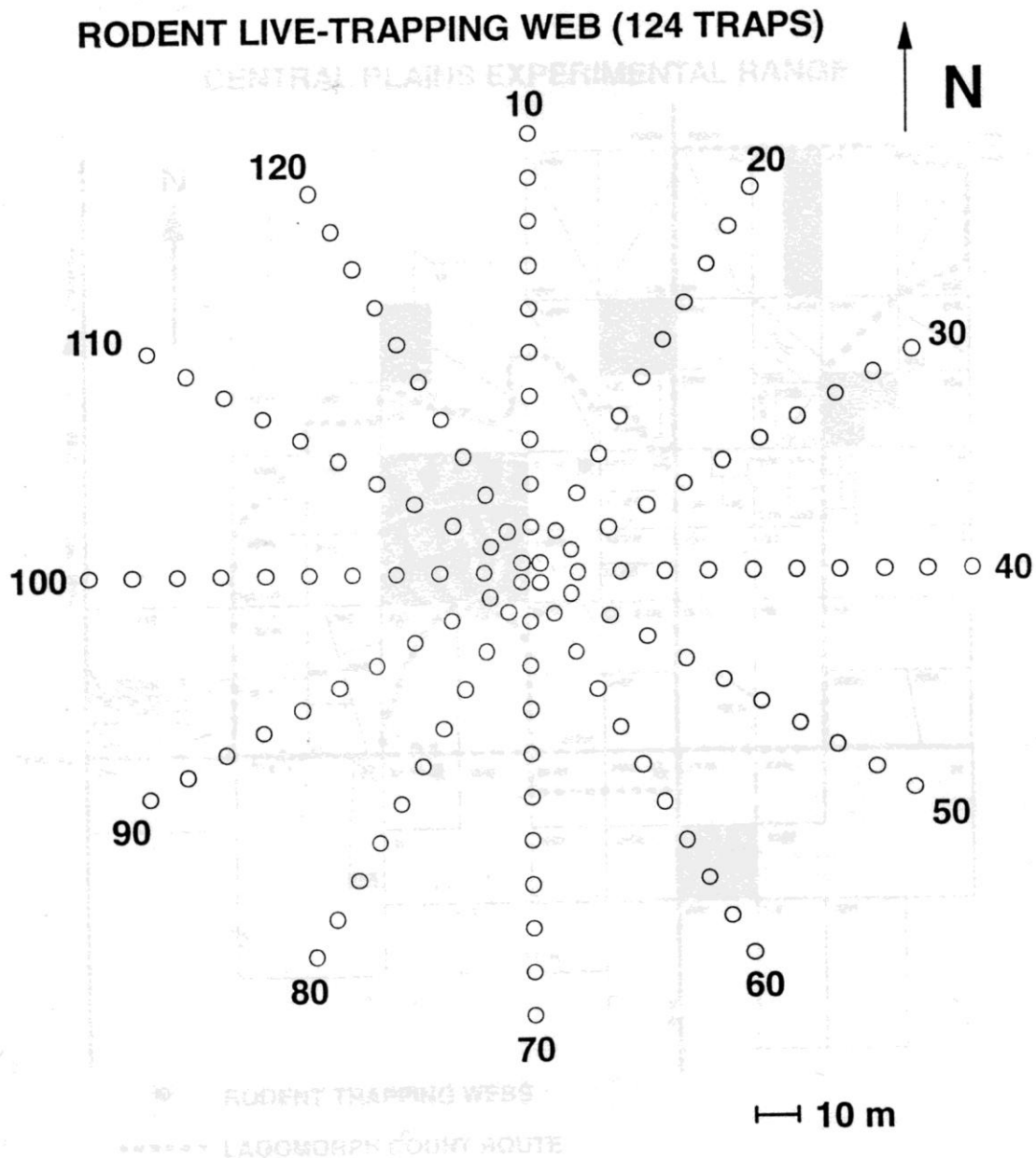
Study Objectives: (1) Assess spatial and temporal patterns of abundance and species composition of small mammals among representative prairie cover types; (2) Provide baseline information to aid future population and ecosystem-level studies on the site; (3) Establish a long-term database that could be used in comparative studies in association with data collected at other sites, including others in the LTER network.

What to know before you start sampling:

- ✓ ***You have been given a trapping vest and it is stocked with all the necessary equipment***
- ✓ ***You can identify different species of small mammals, as well as its sex, age and reproductive status***

- ✓ *You are familiar with codes used to record the data about each animal*
- ✓ *You have been instructed on how to handle and mark animals*
- ✓ *You are familiar with the web locations and very familiar with the design and trap numbers*
- ✓ *You are familiar with when and how to euthanize an animal (see Mark)*

Study Area Locations and Design: 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. ***Note that arthropods and vegetation are also sampled on the rodent live-trapping webs. Traps 121, 122, 123 and 124 are in the center of the web.***



Sampling Protocol:

EQUIPMENT: 190 Sherman large live traps, peanut butter/oats balls in wax paper (ca. 500), loose peanut butter/oats mixture, wool, (3) each of blue/green Sharpies marking pens, data sheets, 3 pesola scales (100-300g each), (3) 6" rulers, (2) boxes of 1-ga ziplock bags, 3-4 technicians (depending on experience), a pair of dikes, pencils.

PERMITS: Annual reports and trapping permit renewal from Colorado Division of Wildlife; Renewal of permission from CSU Animal Care and Use Committee;

Annual reports to CPER/LTER.

1. Each web trapped for four consecutive days in late-May and in late-July. Three webs are trapped concurrently, with both upland and lowland webs represented in each period.
2. Prior to the trapping sessions, all missing flags at odd numbered trap stations should be replaced and re-marked. A single trap is placed at every other station and two traps are placed in the center ring (62 traps per station). Traps are covered with cardboard shades with nails or tent stakes and oriented so that the trap is shaded throughout the day. Bait balls are placed at the backs of trap doors before setting, and a small (ca. 1.5" dia) ball of wool is placed at the rear of the trap. Once set, a small pinch of loose bait mixture "chum" is placed on the open door. Begin setting traps at 06:30.
3. Check traps at 10 am, with technicians working in pairs (one person handling and one recording). Record weather, using temperature at LTER headquarters. Grab animal by nape of neck and mark throat and chest thoroughly with marking pen (each web in a given trapping period will use a different color mark). If an animal has already been captured and marked, always re-mark. Record age, sex, reproductive status, and identify animal to species (see codes), then release at capture location. Weigh bag and remaining contents, and calculate mass by subtraction. Wash traps, re-bait, and replace wool at head quarters.
4. Make sure that all traps are closed. All traps should be closed by 12:00-13:00 and re-opened again at 06:00 with re-bait "chum" on the doors.
5. On the fourth day, pick up all traps and move to other webs. After all webs have been trapped, remove bait balls and store cleaned traps in garage at LTER headquarters.
6. To be recorded at start:
 - DATE (day-month-year) WEB #
 - NIGHT (1,2,3,4) OBSERVERS (initials)
 - CLOUD (% cloud cover)
 - PRECIP (D=dry, R=rain, S=snow, F=fog, L=light rain/drizzle)
 - TEMP (in C degrees)
 - WIND (use approx. mph or LTER codes)
 - COLOR (if using web mark color)
 - #SPRUNG (#traps closed but empty that morning)
7. To be recorded at capture stations:
 - TRAP # (01-124, starting with N line; 4 traps at center are all recorded as 124)
 - CAPT history (N = first capture, R = recapture,)
 - SPECIES (see list of codes)
 - AGE (A=adult, S=subadult, J=juvenile; see list of codes)
 - SEX (M=male, F=female)

REPR (R=reproductive, N=non-reproductive; see list of codes)

WEIGHT (to nearest 0.5 g)

COMMENTS (total mass - mass of bag/contents, any unusual marks, injuries, etc.)

QAQC Instructions: Write down the numbers of traps containing animals. Report those trap numbers to Mark, so he can record them on the data sheet immediately. Process the animals in the traps assigned to you and be sure to write down the trap number with the other data from the animal. Hold the animals firmly to not let them get aware or bite you. Be sure to record the data as you collect it from the animal before you let it go. Before you leave the web or bring the dirty traps back to the truck, report the trap numbers for the animals you processed along with the data. Mark must check off the list of traps containing animals in order to be sure NO animals are left in the traps to bake in the hot sun. As you visit the traps during this study also check that the sun shade over the trap is in good shape and angled to protect the animal inside effectively. Collate data sheets together for a signal web and deliver them to the information manager.