Konza Prairie LTER

Data Catalog

2018

Version 2018.06

[1]**Updated Jun, 2018**

INTRODUCTION

This catalog presents the archived documentation files for the datasets currently in the Konza Prairie LTER site database. These datasets are affiliated with LTER scientists associated with the Konza Prairie LTER research program from 1981 to current. The purpose of this catalog is to assist scientists in the analysis and synthesis of this database. In addition to this catalog, a detailed methods manual documents the procedures used in collecting these data sets.

The design of the current Konza Prairie LTER database is straightforward. All data sets are stored in our mysql database, sever, and online. The database is divided into subgroups. The subgroups correspond to the research groups that have developed on Konza or represent the data set. They are: Abiotic, Consumer, GIS, Nutrient, Producer, and Other. The extension of the file name represents the year of the data set. For example, the data set associated with prairie precipitation for 1986 (data set code APT01), is found in the subgroup abiotic under the file name of apt011.86. Data sets that do not conform to this naming procedure are listed in the abstract section of their corresponding data set code description. For the most part, these data sets involve data that comes from other sources than LTER investigators (e.g. USGS flow data or NADP). The subgroup woody contains the files of the dataset code PWV01.The subgroup other is reserved for datasets that do not conform to the naming procedures (for now, datasets from the water supplementation experiment (WAT01) are here).

To have consistent format of LTER data files, most LTER data sets have the first 6 columns of each line organized as:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	

Thus, each line has the data set code associated with it. Although, this was setup in the "days of computer cards" and it was important to have the data set code on each card, it is now useful to have this information in case of hardware failures (disk crashes, bad tapes, etc.) Under "Format" the letter "A" indicates alphabet so that, for example, A5 means 5 spaces for alphabet characters. The letter "I" indicates integer so that, for example, I2 means 2 spaces for integer characters. An "f" indicates decimal spaces so that f6.2 would mean 6 characters with a maximum of 2 decimal places. A "c" indicates comment so that c1 would mean one space for a comment character.

All quality control checks are managed by the principal investigator(s) associated with a data set. System backups are executed on a nightly basis on DAT 24 tape cartridges and twice a year on compact disks.

Data requests for data not available online simply require the following information:

1) Formal written request and a statement of intended use.
2) Approval of the investigator and/or the Konza Prairie LTER Principal Investigator.
3) Request must be filed with the Konza Prairie LTER information manager.
4) Release of data (following approval) should include a cover letter specifying that: The data are released for your use only and for the purposes outlined in your request.
5) Manuscripts using the data are to be provided to the Principal Investigator, LTER, Division of Biology, Ackert Hall, Kansas State University, Manhattan, KS 66506 so that he/she may notify the appropriate investigators.

6) Publicationof these data are allowed by the expressed permission of Konza Prairie LTER investigators named, who have primary responsibility for the data sets.
7) Acknowledgment should be made to recognize the contribution of data by Konza Prairie LTER. In addition, the format shown below is also to be included with the letter. Citation of a data set should use the following format: "Data from the Konza Prairie Biological Station were collected as part of the Konza Prairie LTER program (NSF grants DEB-1440484), Division of Biology, Kansas State University, Manhattan, KS. Data and supporting documentation are stored (Data Set Code(s)=_____) in the Konza Prairie Biological Station LTER Data Bank." Additionally, specific investigators might be cited for their contributions to the paper.

SITE DESCRIPTION

CLIMATE SYNOPSIS:

Temperate mid-continental climate, yearly mean temperature is 13C with a range of extremes from 6 to 19C. The January mean temperature is -3²C (range -9 to 3C) and the July mean is 27C (range 20 to 33C). Annual precipitation is 835 mm of which about 75% occurs in the growing season. Mean snowfall for January is 150 mm with an annual total of 521 mm. Mean annual windspeed is 5 meters per second from the south.

NARRATIVE:

Tallgrass or bluestem prairie is one of the major ecosystem types of the conterminous United States (exceeded in area only by eastern deciduous forest). Undisturbed examples of tallgrass prairie are rare because this ecosystem type has been extensively converted to agroecosystems.

Konza Prairie is representative of the Flints Hills, a dissected upland with hard chert- and flint-bearing limestone layers. The ridges are usually flat with shallow, rocky soils, whereas the larger and wider valleys have deep permeable soils. The steep-sided hills are characterized by exposed Permian limestone and shale strata that prevented cultivation.

When acquired in the 1970's, the majority of Konza Prairie was dominated by native prairie species, especially big bluestem, indian grass, little bluestem, and switchgrass. Lowland areas with deep soils now have patches of these and other tallgrasses that grow to 2 to 3 m by late summer. Gallery forests on lower Kings Creek are dominated by bur and chinquapin oaks with green ash, hackberry, elm, and black walnut often common. The KSU herbarium contains more than 450 species of vascular plants collected from Konza Prairie. Woody plants have been mapped according to species and size on some portions of the site. Species lists have also been developed for a number of animal groups including birds, mammals, reptiles, amphibians, and aquatic invertebrates.

Konza Prairie is managed to provide an array of burning and grazing (especially bison) treatments to facilitate research to evaluate the effects of fire and grazing on plant composition, primary production, consumer density and diversity, nutrient dynamics, soil chemistry, and hydrology (Fig. 1). This natural prairie also serves as a reference site from comparison to manipulated agricultural systems.

Fire started by both lightning and aboriginal man, influenced patterns and processes in the tallgrass prairie. To understand these effects, a series of spring burning treatments (primarily areas burned at 1, 2, 4, 10, and 20 year intervals) are maintained on watershed units. These experimental burns are conducted in April before the dominant warm-season grasses begin active growth. Treatment boundaries follow watershed divides to facilitate analysis of hydrologic and nutrient responses to fire and frequency of fire. An extensive soil water/ground water monitoring system has been installed by the USGS on one of these watersheds.

Bison were introduced into a fenced area of nearly 500 ha encompassing several different burn treatments in 1987. The area affected by bison will be enlarged to 1100 ha in 1991. Bison, free-ranging within the fenced area, are able to choose between burned and unburned prairie and among sites representing an array of topographic/physiographic conditions. Cattle grazing still occur sporadically on parts of Konza Prairie but not on the primary LTER research watersheds.

Table of Contents

Abiotic Data

Data Set Code--AET01

Title of Data Set: Konza prairie grass reference evapotranspiration

Abstract:

Estimated evapotranspiration from a hypothetical short grass with a height of 0.12 m, a surface resistance of 70 s m-1, and an albedo of 0.23 (no water stress)

Keywords that describe data set:

atmospheric processes, hydrologic processes, physiological processes, evapotranspiration, precipitation, respiration.

Date data commenced: 11/05/2000
Date data terminated: ongoing

Principle Investigator: Trisha Moore

RECORD TYPE 1: This record type contains daily total estimated evapotranspiration (AET011)

Data Format Specification:

Variable	Description	Columns	Format	Units
1. Datacode		1	A5	
2. Month		2	I2	
3. Day		3	I2	
4. Year		4	I2	
5. DailyET	Estimated Evapotranspiration	5	F5.1	
6. EstimET	Estimated Evapotranspiration	6	F5.1	

Data Set Code--AGW01

Title of Data Set: Long-term measurement of groundwater physical and chemical properties from wells on watershed N04D

Abstract:

In 1988 and 1990, the U.S. Geological Survey, Lawrence, KS, drilled 31 wells at 20 sites within the N04D watershed at the Konza Prairie Research Natural Area. The wells range in depth from about 2 to 13 meters, and are nested to include wells completed in alluvium/colluvium near the N04D drainage and in two Permian-aged limestone's. In 1997, Konza LTER drilled an additional 4 wells at 3 sites, that range in depth from about 12 m to 37 m. The sites comprise four transects running approximately east-west across the drainage, and occupy the lower one-quarter of the surface area of the watershed. The geology of the area is characterized by patchy, near-stream alluvium/colluvium which overlies bedrock that is composed of thin (1-2 meter) limestones alternating with thicker (2-4 meter) shales. Beginning in 1990, water levels were measured and water samples collected quarterly. Since 1991, water levels have been measured and water samples for inorganic chemical analysis have been collected every four to six weeks; sample collection is by bailing wells after removing 1-2 well volumes of groundwater. The groundwater is then filtered through 0.45µ membrane filters by gravity feed or using a peristaltic pump. One 250-mL LDPE bottle is filled with 250 mL of sample and 5 mL of concentrated HNO_3 for determination of major and minor cation concentrations. One 250-mL LDPE bottle is filled to the brim for anion determination by ion chromatography and alkalinity determination by titration with 0.02 N H_2SO_4. The bottles are stored on ice and later in a refrigerator.

Keywords that describe the data set:

water chemistry, dissolved nutrients, temperature, groundwater, low-temperature aqueous geochemistry, inorganic groundwater chemistry, chemical hydrogeology, geology, biogeochemistry.

Date data commenced: 01/19/1990
Date data terminated: ongoing

Principle Investigator: Gwendolyn Lee Macpherson

RECORD TYPE 1: Groundwater Chemistry and Physical Properties from Wells on N04D (AGW011)

Data Format Specification:

Variable	Units
1. DateCode	
2. Rectype	
3. Location	

4. Trans#
5. Plot#
6. Geology
7. Recyear
8. WLDate (Water level date)
9. Elevation (Water Level Elevation) — m amsl
10. SWDate (Chemistry Water Sample Date)
11. Na1 — mg/L
12. Na 2 — ppm
13. K1 — mg/L
14. K2 — ppm
15. Li — ppm
16. NH4_N — mg/L
17. Ca1 — mg/L
18. Ca2 — ppm
19. Mg1 — mg/L
20. Mg2 — ppm
21. Sr — ppm
22. Ba — ppm
23. SO4 — ppm
24. F — ppm
25. Cl — ppm
26. NO3_N — ppm
27. HPO4_P — ppm
28. Alkalinity — ppm as HCO3
29. pH1 (lab)
30. DDB (lab) pH at 13 °C
31. pH2 (field)
32. T (Temperature of field pH) — °C
33. Si1 — mg/L
34. Si2 — ppm
35. B — ppm
36. Conduct (Specific conductance, lab, at 20°C) — µS/cm

Codes used:

Well_loc

Name	Code Value
ow	observation well
1-4	Transects (1-4), the lowest number in nearest the concrete weir
1-6	Number unique to the well site (1 is nearest the steam; 3 is farthest from the stream on the east or northeast side. Well site numbers 4-6 are progressively further away from the stream on the west or southwest side of the stream.
Alpha chara.	Eis=Eiss Limestone Eis1=Lower Eiss Limestone Eis2=Upper Eiss Limestone Mor=Morril Limestone

Al=Alluvium-colluvium.

RECORD TYPE 2: Locations of Groundwater Wells on Watershed N04D (AGW012)

Data Format Specification:

Variable	Units
1. Loc (Name of Location)	
2. Trans# (Transect identity)	number
3. PlotID (Plot identity)	number
4. AbName (Abriage name of geology formation)	
5. FullName (Full name of geology formation)	
6. Elevation (Elevation of wells above sea level)	
7. Latitude (Latitude in geographic projection)	decimal degree
8. Longitude (Longitude in geographic projection)	decimal degree

Note: AGW012 Details and Data Geographic information for groundwater wells located on waterhed N04D

Data Set Code--AGW02

Title of Data Set: Measurement of groundwater physical and chemical properties from wells in contrasting land uses near Kings Creek

Abstract:

Wells were drilled in two sites on Konza Prairie Biological Station in April, 1993 approximately 100 m from Kings Creek. The two sites are located in a grassland and an agricultural area. The grassland site (K01A) is an old field that was planted with brome sometime prior to 1976. It has not been grazed for 25 years and is burned in spring every 1-2 years. The agricultural site is currently under a mix of cultivation and restoration plots. Historically, it was cultivated from sometime between 1939 and 1950 to the present. It is approximately 1 km downstream in an area geologically similar to K01A. The soil at both sites is mapped as Reading silt loam (fine, mixed, mesic Typic Arguidolls). Samples are taken monthly by PVC bailer following removal of 2 times the well volume. Samples are analyzed with same methods as used for LTER stream water chemistry.

Keywords that describe the data set:

groundwater, water chemistry, dissolved nutrients, organic and inorganic nitrogen and phosphorus, nitrate, ammonium, soluble reative phosphorus, dissolved organic carbon

Date data commenced: 05/17/1996
Date data terminated: ongoing

Principle Investigator: Walter Dodds

RECORD TYPE 1 (AGW021)

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. WellNumber	A1-A7, P1-P7	18-20	A3	
8. WellDepth		26-30	F4.1	ft
9. DepthToWater		32-36	F4.1	ft
10. NO_3	NO_3-N + NO_2-N	38-43	F6.1	ug/l
11. NH4	Ammonium-nitrogen	45-49	F5.1	ug/l
12. PO4	Soluble Reactive Phosphorus	51-54	F4.1	ug/l
13. TN	Total N	56-61	I6	ug/l
14. TP	Total P	63-67	F5.1	ug/l

15. DOC	Dissolved Organic Carbon	69-74	F6.2	mg/l
16. Comments		76-110	c35	

RECORD TYPE 2 (AGW022)

Data Format Specification:

Variable	Name	Columns	Format	Units
1. WellID	Well identifier			
2. Date	Date of sample collection			
3. Depth2wat	Water depth from ground			
4. isdry	Is well dry			
5. Na	Sodium concentration			ug/l
6. Na_error	Analytical error			ug/l
7. K	Potassium concentration			ug/l
8. K_error	Analytical error			ug/l
9. Ca	Calcium concentration			ug/l
10. Ca_error	Analytical error			ug/l
11. Mg	Magnesium concentration			ug/l
12. Mg_erro	Analytical error			ug/l
13. NH4_H	Ammonium-nitrogen concentration			ug/l
14. NH4_error	Analytical error			ug/l
15. SO4	Sulfate concentration			ug/l
16. SO4_error	Analytical error, based on precision of duplicate samples and accuracy of quality control samples			
16. F				

RECORD TYPE 3 (AGW023)

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Well Number	A1-A7, P1-P7	18-20	A3	
8. Well Depth		26-30	F4.1	ft
9. Depth to Water		32-36	F4.1	ft
10. NO_3	NO_3-N + NO_2-N	38-43	F6.1	ug/l
11. NH4	Ammonium-nitrogen	45-49	F5.1	ug/l
12. SRP	Soluble Reactive Phosphorus	51-54	F4.1	ug/l
13. TN	Total N	56-61	I6	ug/l
14. TP	Total P	63-67	F5.1	ug/l

15. DOC	Dissolved Organic Carbon	69-74	F6.2	mg/l
16. Comments		76-110	c35	

Data Set Code--AGW03

Title of Data Set: Konza Prairie Long-term high frequency groundwater level and temperature from wells on N04d

Abstract:

The objectives of this project are to quantify the seasonably variable timing among meteoric precipitation, groundwater recharge, and groundwater temperature. Hypotheses are: 1. Because of the karst-like characteristics of the aquifers in N04d (and by extension, the entire region), recharge will be rapid during moderately large precipitation events where fractures are enlarged by dissolution and therefore highly conductive, except during the most active part of the growing season. 2. The recharge efficiency of the aquifers will be spatially variable, with highest hydraulic conductivity (because of solution enlargement of fractures) near the riparian zone. 3. Groundwater temperature will vary continuously over the year and also demonstrate abrupt changes after recharge-effective precipitation events when the precipitation temperature is different from the groundwater temperature. Because the aquifers are merokarst and recharge is rapid, data are recorded at high frequency (5 minute intervals).

Keywords that describe the data set:

groundwater, water chemistry, dissolved nutrients, organic and inorganic nitrogen and phosphorus, nitrate, ammonium, soluble reative phosphorus, dissolved organic carbon

Date data commenced: 04/5/2004
Date data terminated: ongoing

Principle Investigator: Gwendolyn Lee Macpherson

RECORD TYPE 1 (AGW031)

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode				
2. Rectype				
3. Year				
4. WlDate		Date and time of measurement		
5. Wellname		each sensor location/well		
6. WL		groundwater elevation		
7. GWtemp		groundwater temperature		
8. BLtemp		the temperature recorded by the "Barologger", which sits in the observation well casing, 25.6 cm below ground level and 4 m above the highest measured groundwater level.		
9. Comments				

Data Set Code--AMC01

Title of Data Set: Growing season microclimate by topographic position for annually-burned and 4-yr burned watersheds at Konza Prairie

Abstract:

Dataset contains 30min averages of many variables used to record changes in microclimatic conditions. Microclimate sensor stations were arrayed in discrete topographic positions (upland, slope, lowland) in 4 watersheds: 1D, 1B, 4B, 4F. No microclimate sensor stations were present in upland-1D or lowland-4B because eddy flux towers are present in these locations. Similar microclimate data is available from these flux towers during the time period of this study.

Keywords that describe the data set:

microclimate, air temperature, relative humidity, soil moisture, soil temperature, topography, wind speed.

Date data commenced: 01/5/2010
Date data terminated: ongoing

Principle Investigator: Jesse Nippert

RECORD TYPE 1 (AMC011)

Data Format Specification:

Variable	Name	Columns	Format	Units
1.	RecYear	The year of data collected		
2.	Watershed	Watershed name, 4 watersheds: 1D, 1B, 4B, 4F		
3.	location	Microclimate sensor stations were established in 10 locations		
4.	doy	Day of year		
5.	hour_min	Time of day in 30 min intervals		
6.	T_air	Air temperature (degC)		
7.	Tsoil_5cm	Soil temperature at 5cm depth (degC)		
8.	Tsoil_15cm	Soil temperature at 15cm depth (degC)		
9.	RH_mv	Relative humidity (mv)		
10.	RH	Relative humidity (%)		
11.	SBTemp	IRT sensor body temp (degC)		
12.	ws_ms	Wind speed (m/s)		
13.	SBTemp_c	IRT target temp (degC)		
14.	swc1_soilmoisture	10cm depth soil moisture (wfv or m3-m-3)		
15.	swc1_conductivity_corrected	10cm depth electrical conductivity (S / m)		

16. swc1_Temp_C 10cm depth electrical conductivity (S / m)
17. swc1_Temp_F 10cm depth soil temperature (degF)
18. swc1_real_dialectric_permittivity_corrected 30cm dielectric permittivity (unitless)
19. swc2_soilmoisture 30cm depth soil moisture (wfv or m3-m-3)
20. swc2_conductivity_corrected 30cm depth electrical conductivity (S / m)
21. swc2_Temp_C 30cm depth soil temperature (degC)
22. swc2_Temp_F 30cm depth soil temperature (degF)
23. swc2_real_dialectric_permittivity_corrected 30cm dielectric permittivity (unitless)
24. swc3_soilmoisture 100cm depth soil moisture (wfv or m3-m-3)
25. swc3_conductivity_corrected 100cm depth electrical conductivity (S / m)
26. swc3_Temp_C 100cm depth soil temperature (degC)
27. swc3_Temp_F 100cm depth soil temperature (degF)
28. swc3_real_dialectric_permittivity_corrected 100cm dielectric permittivity (unitless)

Data Set Code--ANA01

Title of Data Set: Weekly measurement of precipitation volume and chemistry collected as part of the national atmospheric deposition program

Abstract:

Data set contains results of chemical analysis of wetfall on Konza Prairie. Analysis done by the Central Analytical Lab (CAL), Champaign, IL as part of the National Atmospheric Deposition Program (NADP). Data is coordinated by the NADP/NTN Coordination Office at Fort Collins, CO. Data products from that office include: Annual Data Summaries, Semiannual Data Reports, Annual and Seasonal Averages, Monthly Averages, and Weekly data. Konza Prairie LTER maintains the weekly data in electronic form (file name NADP in subdirectory nutrient) while other summaries are available via hard copy.

Keywords:

wetfall, precipitation, precipitation chemistry, NADP, Ca, Mg, K, Na, NH4, NO3, Cl, SO4, pH, conductance

Date data commenced: 08/17/1982
Date data terminated: ongoing

Principle Investigator: John M. Blair

Data Format Specification for NADP/NTN Weekly Data File, the following information comes from NADP/NTN office at Fort Collins, CO. *http://nadp.sws.uiuc.edu/*

RECORD TYPE 1

Data Format Specification:

Variable	Columns	Format
CAL Code	1-4	A4
Date On (mo/da/year)	7-16	I10
Date Off (mo/da/year)	18-27	I10
Limit of Detection symbol (<) for Ca	29	c1
Ca concentration	31-35	F5.3
Limit of Detection symbol (<) for Mg	37	c1
Mg concentration	39-43	F5.3
Limit of Detection symbol (<) for K	45	cl
K concentration	47-51	F5.3
Limit of Detection symbol (<) for Na	53	c1
Na concentration	55-59	F5.3
Limit of Detection symbol (<) for NH4	61	c1
NH4 concentration	63-67	F5.3
Limit of Detection symbol (<) for NO3	69	c1

NO3 concentration	71-75	F5.3
Limit of Detection symbol (<) for Cl	77	c1
Cl concentration	79-83	F5.3
Limit of Detection symbol (<) for SO4	85	c1
SO4 concentration	87-91	F5.3
Lab pH	94-97	F4.2
Field pH	100-103	F4.2
FV pH	105	A1
Lab conductance	108-112	F5.1
Field conductance	114-118	F5.1
FV conductance	120	A1
Sample volume	123-129	F7.1
Precipitation from rain gauge	132-137	F6.2
Sub ppt	139-145	F7.3
Lab type	147-148	A2
Valcode	152-153	A2
Invalcode	156-157	A2
Notes	160-161	A2

DESCRIPTION OF PARAMETERS INCLUDED IN NADP/NTN WEEKLY DATA FILES

Cal code

Alpha-numeric site identification code, first two characters of which are the abbreviation of the state in which the site is located (Konza Prairie Cal code is KS31)

Dates

On - Date sample bucket was installed on the collector, reported in Greenwich mean time (GMT), modayr.

Off - Data sample bucket was removed from the collector, reported in Greenwich mean time (GMT), modayr.

Ion concentrations

Concentrations of Ca, Mg, K, Na, NH4, NO3, Cl, and SO4 reported in mg/l. Concentrations which are below the detection limit of the analysis are indicated with a "<" preceding the value;the value reported is the actual limit of the detection. (In calculating weighted-mean concentrations and depositions NTN substitutes one-half the reported detection limit for concentrations below the limit of detection.)

pH

pH reported as the negative log of hydrogen ion concentration.

lab - pH of the precipitation sample as measured at CAL

field - pH of the precipitation sample as measured on site (Bushnell Hall), discontinued Jan, 2005.

FV - provides information about the validity of field pH.

Codes used 1992-2004:

– No field pH measurement for precipitation sample.

p Sample passes all screening criteria for field measurements.

f Sample fails to meet screening criteria for field measurements.

i Some or all information necessary to apply screening criteria is unavailable.

Conductivity

Conductivity reported in microsiemens/cm.

lab - conductivity of the precipitation sample as measured at CAL.
field - conductivity of the precipitation sample as measured on site (Bushnell Hall), discontinued Jan, 2005.
FV – provides information about the validity of field conductivity.
Codes used 1992-2004:
– No field pH measurement for precipitation sample.
p Sample passes all screening criteria for field measurements.
f Sample fails to meet screening criteria for field measurements.
i Some or all information necessary to apply screening criteria is unavailable.

Sample Volume (Svol)

Volume of sample captured by the sampler bucket in milliliters

Precipitation from Rain Gauge (RG ppt)

Precipitation amount as measured by the rain gauge in millimeters. Trace amounts are indicated by -7.00.

Sub ppt

Precipitation amount used by NADP/NTN in calculating weighted-mean concentrations, depositions and precipitation totals. In most cases, sub ppt equals the rain gauge reading. Where the rain gage reading is a trace amount, sup ppt is assigned a value of 0.127mm; in cases where the rain gauge is missing or invalid, sub ppt is calculated by converting the sample volume to its equivalent depth. (The area of the sampler bucket used for this conversion is 678.9 square centimeters.)

Lab type

A code indicating the condition of the sample upon arrival at CAL
w - sample volume of approximately 35 mL or more
wa - sample volume less than 35 mL; dilution was required
t - trace amount of less than approx. 10 mL; analyses are incomplete
da - dry sample
qa - quality assurance sample submitted in lieu of a wet-side sample bucket for a week during which no precipitation occurred

Valcode

A code which indicates whether a sample is considered valid according to NADP/NTN data validations rules. In the case of a valid sample, the code indicates how the sample is used in calculations of weighted-mean concentrations, depositions and data completeness estimates.
0 - invalid sample
t - valid trace sample
d - valid dry collection period
w - valid sample of lave type w
wa - valid samples of lab type wa
Only samples of w and wa are used by NADP/NTN in calculating weighted-mean concentrations.

Invalcode

A series of codes assigned to samples which are considered invalid by NADP/NTN for the purposes of computing weighted-mean concentrations, depositions and data completeness estimates. The codes indicate the reason for invalidation.

b - bulk sample (Collector was open continuously)
u - undefined sample (Collector was open for > 6 hours and less than the entire sampling period when no precipitation was occurring.
f - filed protocol departure
c - contaminated sample
v - inadequate volume for analysis
s - short sampling interval (< 6 days)
e - extended sampling interval (> 8 days)
l - lab error
i - incomplete chemical analysis
n - no sample collected
p - precipitation amount unknown
x - reasons other than described above

Notes

Coded summary of the CAL screening codes and remarks written on the Field Observer Report Form by field personnel, CAL staff, and Coordination Office Staff.
bu - bulk sample. Sample was continuously exposed to both wetfall and dryfall. (Collector was open continuously.)
na - Results are not yet available (predominantly dry samples).
nn - Information was never reported and will never be available.
ns - No chemistry data will be reported because of extreme contamination, undefined sampling protocol, leakage, loss in the mail, etc.
sp - Samples was collected at a nonapproved sampling site or with nonapproval equipment.

RECORD TYPE 2

Data Format Specification:

	Variable	Columns	Format
1.	SiteID		
2.	Season		
3.	RecYear		
4.	Crit1		
5.	Crit2		
6.	Crit3		
7.	Crit4		
8.	Ca		
9.	Mg		
10.	K		
11.	Na		
12.	NH4		
13.	NO3		
14.	Inorg_N		
15.	Cl		
16.	SO4		
17.	H_lab		
18.	H_field		

19. Svol
20. Ppt
21. Ppt_percent
22. Valid_L
23. Valid_F
24. Days
25. Start_date
26. End_date

Data Set Code--APT01

Title of Data Set: Daily precipitation amounts measured at multiple sites across konza prairie

Abstract:

Data set contains daily records of precipitation on 10 raingauges at 10 sites on Konza Prairie. Two sites (020A and 002C; SE) have 7-day clocks (one revolution per week), 7 have 24-hour clocks (one revolution per day), and the Headquarters raingauge generates daily data (15-minute data upon your request). The Headquarters raingauge generates data year round. The remaining raingauges are operated from April 1 to October 31. Precipitation amounts are recorded in mm. As of 2011, the HQ 1 (7-day clock) and HQ 2 (24-hour clock) raingauges have been discontinued and replaced with an Ott Pluvio2 rainguage that began data generation March 2010.

Keywords that describe data set:

Atmospheric Processes, Hydrologic Processes, Rain, Precipitation, Daily Precipitation Amounts

Date data commenced: 06/01/1982
Date data terminated: ongoing

Principle Investigator: Jesse Nippert

Comments: Headquarters raingauge 1 in operation continuously from June 1982 through 2010; prairie raingauges at 004B, 020B and 002C (south end) in operation since April 1983. Raingauges at N01B, N04D (flume), N04D (prairie chicken blind), and 020A in operation since 02 April 1986. Raingauge HQ2 has been in operation from 20 August 1986 through 2010. All raingauges except gauges at Headquarters are operated from April 1 to October 31 each year.

RECORD TYPE 1 – Daily Precipitation at all rain gauges

Data Format Specification:

Variable	Description	Columns	Format	Units
1. Datacode	Dataset code	1-5	A5	
2. Rectype	Record type	6	I1	
3. RecDate	Date of sample	7-8	I2	
4. watershed	watershed of collection	9-10	I2	
6. ppt	Precip at raingauges Ott Pluvio^2	16-20	F5.1	mm
7. Comments	Comments for the data			

Data Set Code--ASD02

Title of data set: Stream discharge meaured at the flume on watershed N04D

Abstract:

Stream discharge is measured on a catchment (N04D), with 4-year fire return interval and grazed by bison since 1992. Measurements are taken at 5 minute intervals at a triangular throated flume. The prairie streams are 3rd-order and are intermittent. Daily and stormflow discharge records are available.

Keywords that describe data set:

hydrology, hydrologic processes, streamflow, stream discharge

Date data commenced: 06/14/1985
Date data terminated: ongoing

Principle Investigator: Walter K. Dodds

Format for file names and documentation

There are two files for each watershed for each year. One is for daily stream flow and one is for storm flow.

RECORD TYPE 1: Storm flow. For stormflow discharge estimates, stage hight was recorded at 5 minute intervals. During non-stormflow periods, 3-hour intervals were used. (After 2004, this data is available if requested but is not online)

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5		
2. Rectype		6		
3. Year		7-8		
4. Month		9-10		
5. Day		11-12		
6. Watershed		13-16		
7. Day of year		19-22		
8. Hour (2400-hour format)		25-28		
9. Discharge		33-38		m3/sec
10. Stage height in centimeters		42-47		

RECORD TYPE 2: Daily flow. Five-minute stage height measurements were processed to provide mean daily discharge, maximum and minumum discharge and times these occurred, and total dicharge volume for the 24-hour period.

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5		
2. Rectype		6		
3. Year		7-8		
4. Month		9-10		
5. Day		11-12		
6. Watershed		13-16		
7. Day of year		19-22		
8. Mean discharge		28-32		m3/sec
9. Max discharge		36-42		m3/sec
10. Time of max discharge in 24-hour period		45-48		
11. Min discharge		52-56		
12. Time of min discharge in 24-hour period		59-62		
13. Volume		66-74		

Data Set Code--ASD04

Title of data set: Stream discharge meaured at the flume on watershed N20B

Abstract:

Stream discharge is measured on a catchment (N20B), with 4-year fire return interval and grazed by bison since 1992. Measurements are taken at 5 minute intervals at a triangular throated flume. The prairie streams are 3rd-order and are intermittent. Daily and stormflow discharge records are available.

Keywords that describe data set:

hydrology, hydrologic processes, streamflow, stream discharge

Date data commenced: 01/01/1987
Date data terminated: ongoing

Principle Investigator: Walter K. Dodds

Format for file names and documentation

There are two files for each watershed for each year. ASD042 is for daily stream flow, ASD041 is for storm flow.

RECORD TYPE 1: Storm flow- For stormflow discharge estimates, stage hight was recorded at 5 minute intervals. During non-stormflow periods, 3-hour intervals were used. (after 2004, this data is available if requested but is not online):

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5		
2. Rectype		6		
3. Year		7-8		
4. Month		9-10		
5. Day		11-12		
6. Watershed		13-16		
7. Day of year		19-22		
8. Hour (2400-hour format)		25-28		
9. Discharge		33-38		m3/sec
10. Stage height in centimeters		42-47		

RECORD TYPE 2: Daily flow - Five-minute stage height measurements were processed to provide mean daily discharge, maximum and minumum discharge and times these occurred, and total dicharge volume for the 24-hour period.

Data Format Specification:

Variable	Name	Columns	Format	Units

1. Datacode	1-5	
2. Rectype	6	
3. Year	7-8	
4. Month	9-10	
5. Day	11-12	
6. Watershed	13-16	
7. Day of year	19-22	
8. Mean discharge	28-32	m3/sec
9. Max discharge	36-42	m3/sec
10. Time of max discharge in 2400-hour format	45-48	
11. Min discharge	52-56	
12. Time of min discharge in 2400-hour format	59-62	
13. Volume	66-74	

Data Set Code--ASD05

Title of data set: Stream discharge meaured at the flume on watershed N01B

Abstract:

Stream discharge is measured on a catchment (N01B), with 4-year fire return interval and grazed by bison since 1992. Measurements are taken at 5 minute intervals at a triangular throated flume. The prairie streams are 3rd-order and are intermittent. Daily and stormflow discharge records are available.

Keywords that describe data set:

hydrology, hydrologic processes, streamflow, stream discharge

Date data commenced: 01/01/1987
Date data terminated: ongoing

Principle Investigator: Walter K. Dodds

Format for file names and documentation

There are two files for each watershed for each year. ASD052 is for daily stream flow, and ASD051 is for storm flow.

RECORD TYPE 1: Storm flow - For stormflow discharge estimates, stage hight was recorded at 5 minute intervals. During non-stormflow periods, 3-hour intervals were used. (After 2004, this data is available if requested but is not online):

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5		
2. Rectype		6		
3. Year		7-8		
4. Month		9-10		
5. Day		11-12		
6. Watershed		13-16		
7. Day of year		19-22		
8. Hour (2400-hour format)		25-28		
9. Discharge		33-38		m3/sec
10. Stage height in centimeters		42-47		
11. Comments				

RECORD TYPE 2: Daily flow - Five-minute stage height measurements were processed to provide mean daily discharge, maximum and minumum discharge and times these occurred, and total dicharge volume for the 24-hour period.

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5		
2. Rectype		6		
3. Year		7-8		
4. Month		9-10		
5. Day		11-12		
6. Watershed		13-16		
7. Day of year		19-22		
8. Mean discharge		28-32		m3/sec
9. Max discharge		36-42		m3/sec
10. Time of max discharge in 24-hour period		45-48		
11. Min discharge		52-56		
12. Time of min discharge in 24-hour period		59-62		
13. Volume		66-74		

Data Set Code--ASD06

Title of data set: Stream Discharge Meaured at the Flume on Watershed N02B

Abstract:

Stream discharge is measured on a catchment (N02B), with 4-year fire return interval and grazed by bison since 1992. Measurements are taken at 5 minute intervals at a triangular throated flume. The prairie streams are 3rd-order and are intermittent. Daily and stormflow discharge records are available.

Keywords that describe data set:

hydrology, hydrologic processes, streamflow, stream discharge

Date data commenced: 01/01/1987
Date data terminated: ongoing

Principle Investigator: Walter K. Dodds

Format for file names and documentation

There are two files for each watershed for each year. ASD062 is for daily stream flow, and ASD061 is for storm flow.

RECORD TYPE 1: Storm flow - For stormflow discharge estimates, stage hight was recorded at 5 minute intervals. During non-stormflow periods, 3-hour intervals were used. (After 2004, this data is available if requested but is not online):

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5		
2. Rectype		6		
3. Year		7-8		
4. Month		9-10		
5. Day		11-12		
6. Watershed		13-16		
7. Day of year		19-22		
8. Hour (2400-hour format)		25-28		
9. Discharge		33-38		m3/sec
10. Stage height in centimeters		42-47		

RECORD TYPE 2: Daily flow - Five-minute stage height measurements were processed to provide mean daily discharge, maximum and minumum discharge and times these occurred, and total dicharge volume for the 24-hour period.

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5		
2. Rectype		6		
3. Year		7-8		
4. Month		9-10		
5. Day		11-12		
6. Watershed		13-16		
7. Day of year		19-22		
8. Mean discharge		28-32		m3/sec
9. Max discharge		36-42		m3/sec
10. Time of max discharge in 24-hour period		45-48		
11. Min discharge		52-56		
12. Time of min discharge in 24-hour period		59-62		
13. Volume		66-74		

Data Set Code--ASM01

Title of data set: Soil Water Content Measured by Neutron Probe

Abstract:

Data set contains measurements of soil moisture (%volume) at various depths (25-200 cm) in deep (lowland) soils collected on LTER grazed and ungrazed watersheds burned at 1-, 4-, and 20-year intervalsersheds. Soil moisture measured by the neutron probe method

Keywords that describe data set:

soil moisture, neutron probe, stream, stream water, water quality, conductivity, dissolved oxygen

Date data commenced: 05/01/1983
Date data terminated: ongoing

Principle Investigator: Jesse Nippert

RECORD TYPE 1 Water Content Measured by Neutron Probe

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Tube #	Access tube number	21	I1	
8. D25	Value at 25 cm kg/m3	23-25	I3	kg/m3
9. D50	Value at 50 cm kg/m3	27-29	I3	kg/m3
10. D75	Value at 75 cm kg/m3	31-33	I3	kg/m3
11. D100	Value at 100 cm kg/m3	35-37	I3	kg/m3
12. D125	Value at 125 cm kg/m3	39-41	I3	kg/m3
13. D150	Value at 150 cm kg/m3	43-45	I3	kg/m3
14. D175	Value at 175 cm kg/m3	47-49	I3	kg/m3
15. D200	Value at 200 cm kg/m3	51-53	I3	kg/m3
16. cm h2o/Comments		55-80	c26	

Explanation of comments for ASM011

"no stopper" or "stopper missing": Access tubes are "closed" between reading events with a rubber stopper and a "metal top" (a pop can with the top removed). Occasionally, the rubber stopper will go missing, usually due to animal activity. For an unknown amount of time the access tube was open to the environment and rain or snow could have entered the access tube possibly effecting moisture readings. The stopper will be replaced during next session.

"Can off" or "can missing: All of the access tubes have a "metal top" (a pop can) covering the rubber stopper. This is to protect the stopper from the elements. Occasionally, the can will go missing, usually due to animal activity. As long as the rubber stopper remains, the access tube is not open to the environment. The can will be replaced during the next session.

"Ground", "bottom" or "hit bottom": The bottom of the access tube was hit sooner than expected.

"ants": Several sites are prone to ant nests being built under the protective can. Ants and eggs will be brushed away before readings are taken. If the infestation is especially bad, the outer protective can will be left off until the next session in hopes the ants will move away; stopper will be replaced.

"bison": Six of the access tubes are inside the bison area. If bison are in the area, readings will not be taken; this is for the safety of the technician.

Data Set Code--ASR01

Title of data set: Short-Term Assessment of Effects of Burning on Infiltration, Runoff and Sediment and Nutrient Loss on Tallgrass prairie using rainfall simulation.

Abstract:

Rainfall simulation and overland flow experiments were performed on four plots at a single site on Konza from May to August, 1989. Two plots were treated with a late spring burn and two plots were left unburned. Five simulations were performed on burned plots and three simulatons on unburned plots. Each simulation consisted of a "dry run" followed 24 hours later by a "wet run". The dry run consisted of rainfall applied at an intesity of approximately 60 mm/hour. The wet run was the same as a dry run, except when the rainfall was complete, overland flow was applied directly at the top of the plots to simulate run off coming from upslope. Measurements taken include overland flow velocity, water application rate, runoff, hydrograph, water flow depth, sediment content, nitrogen and phosphorus content and percent ground cover (See A.B. Duell, Effects of burning on infiltration, overland flow, and sediment loss on tallgrass prairie, M.S. thesis, Kansas State University, 82pp. for further details).

Keywords that describe data set:

Fire, rain, simulation, nitrogen, phosphorus, sediments, overland flow, infiltration, runoff, hydrologic processes, hydrology

Date data commenced: 05/17/1989
Date data terminated: 08/26/1989

Principle Investigator: Trisha Moore

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Plot	Burned or unburned	18	A1	
8. Runtype	Dry or wet run	20	A2	
9. Realtime	Time of simulation	22-26	F5.2	hours min.
10. Timesb	Time since beginning of initiation of rainfall	28-30	I3	minutes
11. Rainint	Rainfall intensity	32-34	I3	mm/hour
12. Cumrain	Cummulative rainfall	36-38	I3	mm
13. Rorate	Runoff rate	40-42	I3	mm/hour
14. Cumro	Cummulative runoff	44-46	I3	mm

15. Turbid	Turbidity of Runoff	48-49	I2	NTU
16. Tsolids	Total solids in Runoff (inorganic+organic)	51-54	I4	mg/l
17. Tfsolids	Total fixed solids in runoff (Inorganic solids)	56-59	I4	mg/l
18. Nitrate	Nitrate-n concentrations in runoff	61-63	I3	µg/l
19. Totaln	Total nitrogen concentrations in runoff	65-68	I4	µg/l
20. Totalp	Total phosphorus concentrations in runoff	70-74	F5.1	µg/l
21. Comments		77-80	A3	

RECORD TYPE 2-Nutrients in simulated rainfall (well water)

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Tsolids	Total solid (organic + inorganic)	18-20	I3	mg/l
8. Tfsolids	Total fixed solids (Inorganic)	23-25	I3	mg/l
9. Nitrate	Nitrate N concentration	28-30	I3	µg/l
10. Totaln	Total Nitrogen concentration	32-35	I4	µg/l
11. Totalp	Total Phosphorus concentration	37-40	F4.1	µg/l

Codes used:

Name	Value	Definition of code value
Plot	a	burned plot
	b	burned plot with overland flow
	c	Unburned plot with overland flow
	d	Unburned plot
Runtype	d	Dry run--application of rainfall to saturate soil
	w	Wet run--measure runoff from rain and overland flow

Data Set Code--ASS01

Title of data set: Suspended Sediments in Streams Impacted by Prescribed Buring, Grazing and Woody Vegetation Removal at Konza Prairie

Abstract:

To determine effects of rotational burning and riparian vegetation removal on suspended solid concentrations in streams. Two sites are burned with a frequency of 2 (N02B) and 4 (N04D) years and grazed by bison. In 2011, N02B will have woody riparian vegetation removed along the entire stream length. The Shane Creek site (SHAN) is currently ungrazed and burned most years. In 2011 the treatment will be switched to grazing and burning of 1/3 of the watershed every year. The data include before and during-treatment sampling for both experiments.

Keywords that describe data set:

stream, hydrologic properties, suspended solids, sediments, burning, grazing, woody vegetation

Date data commenced: 05/06/2009
Date data terminated: ongoing

Principle Investigator: Walter Dodds

RECORD TYPE 1 Suspended sediments in streams impacted by prescribed burning, grazing and woody vegetation removal on N02B.

Data Format Specification:

Variable	Columns	Format	Units
1. Datacode	1	A5	
2. Rectype	2	I1	
3. Year	4	A4	
4. Month	5		
5. Day	6		
6. Time	7	5	I4
7. Temp.	6	I3	C^o
8. Depth	7	I3	cm
9. Filter ID	8	A2	
10. Pre 1	9	f6.4	g
11. Pre 2	10	f6.4	g
12. Water	11	I4	mL
13. TSS 1	12	f6.4	g
14. TSS 2	13	f6.4	g
15. VS 1	14	f6.4	g
16. VS 2	15	f6.4	g
17. TSS			

18. VSS
19. Comments

RECORD TYPE 2 Suspended sediments in streams impacted by prescribed burning, grazing and woody vegetation removal on NO4D.

Data Format Specification:

Variable	Columns	Format	Units
1. Datacode	1	A5	
2. Rectype	2	I1	
3. Year	4	A4	
4. Month	5		
5. Day	6		
6. Time	7	5	I4
7. Temp.	6	I3	C^o
8. Depth	7	I3	cm
9. Filter ID	8	A2	
10. Pre 1	9	f6.4	g
11. Pre 2	10	f6.4	g
12. Water	11	I4	mL
13. TSS 1	12	f6.4	g
14. TSS 2	13	f6.4	g
15. VS 1	14	f6.4	g
16. VS 2	15	f6.4	g
17. TSS			
18. VSS			
19. Comments			

RECORD TYPE 3 Suspended sediments in streams impacted by prescribed burning, grazing and woody vegetation removal on Shane.

Data Format Specification:

Variable	Columns	Format	Units
1. Datacode	1	A5	
2. Rectype	2	I1	
3. Year	4	A4	
4. Month	5		
5. Day	6		
6. Time	7	5	I4
7. Temp.	6	I3	C^o
8. Depth	7	I3	cm
9. Filter ID	8	A2	
10. Pre 1	9	f6.4	g

11. Pre 2	10	f6.4	g
12. Water	11	I4	mL
13. TSS 1	12	f6.4	g
14. TSS 2	13	f6.4	g
15. VS 1	14	f6.4	g
16. VS 2	15	f6.4	g
17. TSS			
18. VSS			
19. Comments			

Data Set Code--AST01

Title of data set: Soil temperature measured in burned, burned-clipped, and unburned plots at Konza Prairie

Abstract:

Soil temperature was measured using temperature probes and dataloggers at selected depths in small plots that were either burned annually, burned and clipped to remove aboveground biomass, or left unburned. Raw data was summarized into hourly readings and daily minimum, maximum, and mean temperatures.

Keywords that describe data set:

soil, soil temperature, burned, unburned, physical properties

Date data commenced: 04/23/1987
Date data terminated: 10/01/1993

Principle Investigator: John M. Briggs

RECORD TYPE 1: Hourly soil temperatures in burned and unburned plots.

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Time		18-21	I4	
8. UB2	Unburned, 2cm depth	23-27	F4.2	deg C
9. UB10	Unburned, 25cm depth	29-33	F4.2	deg C
10. UB25	Unburned, 25cm depth	35-39	F4.2	deg C
11. B2	Burned, 2 cm depth	41-45	F4.2	deg C
12. B10	Burned, 10cm depth	47-51	F4.2	deg C
13. B25	Burned, 25cm depth	53-57	F4.2	deg C
14. Comment		59-80	C20	

RECORD TYPE 2-Maximun daily soil temperatures in burned and unburned plots

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	

5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Time		18-21	I4	
8. UB2	Unburned, 2cm depth	23-27	F4.2	deg C
9. UB10	Unburned, 25cm depth	29-33	F4.2	deg C
10. UB25	Unburned, 25cm depth	35-39	F4.2	deg C
11. B2	Burned, 2 cm depth	41-45	F4.2	deg C
12. B10	Burned, 10cm depth	47-51	F4.2	deg C
13. B25	Burned, 25cm depth	53-57	F4.2	deg C
14. Comments		59-80	A20	

RECORD TYPE 3: Minimun daily soil temperatures in burned and unburned plots

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Time		18-21	I4	
8. UB2	Unburned, 2cm depth	23-27	F4.2	deg C
9. UB10	Unburned, 25cm depth	29-33	F4.2	deg C
10. UB25	Unburned, 25cm depth	35-39	F4.2	deg C
11. B2	Burned, 2 cm depth	41-45	F4.2	deg C
12. B10	Burned, 10cm depth	47-51	F4.2	deg C
13. B25	Burned, 25cm depth	53-57	F4.2	deg C
14. Comments		59-80	A20	

RECORD TYPE 4: Average daily soil temperatures in burned and unburned plots

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Time		18-21	I4	
8. UB2	Unburned, 2cm depth	23-27	F4.2	deg C
9. UB10	Unburned, 25cm depth	29-33	F4.2	deg C
10. UB25	Unburned, 25cm depth	35-39	F4.2	deg C
11. B2	Burned, 2 cm depth	41-45	F4.2	deg C
12. B10	Burned, 10cm depth	47-51	F4.2	deg C
13. B25	Burned, 25cm depth	53-57	F4.2	deg C
14. Comments		59-80	A20	

Comments:

Only data from 1987 and 1988 are complete and error free for the entire time period. In 1989, the UB25 and B25 were dropped and a burned and clipped (to simulate grazing) were added. Variable number 10 became B2CL (burned and clipped with temperatue probe at 2 cm) and variable 13 became B10CL (burned and clipped with temperature probe at 10 cm). Clipped is done at investigator descrisson and in 1989 only two clipps were done. In 1990, the plots were clipped 5th and 19th of June, 18th of July and 13 August. In 1991, the probes in the clipped plots malfunctioned and no data was collected in these two treatments. In 1992, no data was collected on clipped plots.

Data Set Code--ASW01

Title of data set: Stream water quality at the flumes on watersheds N04D and N02B and at the Shane Creek crossing on watershed SA at Konza Prairie

Abstract:

Turbidity, dissolved oxygen, conductivity, temperature, and pH are measured on streams draining catchments with 2-year (N02B), 4-year (N04D), and rotational (SA, SB, and SC) burns. Measurements are taken at 10 minute intervals upstream of the flume or crossing. Water quality parameters are measured using Yellow Springs Instruments (YSI) multiparameter water quality sondes model 6600 or 6920. Turbidity and dissolved oxygen are measured using YSI 6136 optical turbidity probe and YSI 6150 ROX optical dissolved oxygen probe. Conductivity, temperature, and pH are measured with the YSI 6560 temperature and conductivity sensor. The prairie streams are 3rd-order and are intermittent. The period of record started in October, 2008 and missing records are explained by the YSI sondes being removed for data download or the stream being dry or frozen.

Keywords that describe data set:

stream, stream water, turbidity, dissolved oxygen, conductivity, water temperature, pH, water quality

Date data set commenced: 10/23/2008
Date data set terminated: 05/17/2010

Principle Investigator: Walter K. Dodds

RECORD TYPE 1-10 minute values for stream water chemistry and physical properties on watershed N02B

Data Format Specification:

Variable	Units
1. Datacode	
2. Rectype	
3. Date	mmddyyyy
4. Time	hh:mm:ss
5. Temp	°C
6. Specific conductance	mS/cm
7. Conductivity	mS/cm
8. Salinity	ppt
9. pH	
10. pHMv	mV
11. Turbidity	NTU
12. Dissolved oxygen saturation	%
13. Dissolved oxygen	mg/L
14. Battery	

15. Comments	volts

RECORD TYPE 2-10 minute values for stream water chemistry and physical properties on watershed N04D

Variable	Units
1. Datacode	
2. Rectype	
3. Date	mmddyyyy
4. Time	hh:mm:ss
5. Temp	°C
6. Specific conductance	mS/cm
7. Conductivity	mS/cm
8. Salinity	ppt
9. pH	
10. pHMv	mV
11. Turbidity	NTU
12. Dissolved oxygen saturation	%
13. Dissolved oxygen	mg/L
14. Battery	
15. Comments	

RECORD TYPE 3-10 minute values for stream water chemistry and physical properties on watersheds SHAN, SA, SB, SC

Variable	Units
1. Datacode	
2. Rectype	
3. Date	mmddyyyy
4. Time	hh:mm:ss
5. Temp	°C
6. Specific conductance	mS/cm
7. Conductivity	mS/cm
8. Salinity	ppt
9. pH	
10. pHMv	mV
11. Turbidity	NTU
12. Dissolved oxygen saturation	%
13. Dissolved oxygen	mg/L
14. Battery	
15. Comments	

when data commenced it was at 15 minute intervals but now the standard is 10 minute intervals

Data Set Code--AWE01

Title of data set: Meteorological data from the Konza Prairie headquarters weather station

Abstract:

The following weather data are included in this data set: hourly mean temperature, mean relative humidity, mean wind speed, total precipitation, total solar radiation, wind direction, max wind speed (sampled on the hour; record type 1); daily mean, maximum and minimum air temperature, relative humidity, total precipitation, total solar radiation; mean, maximum and minimum soil temperature, average wind speed (sampled at midnight; record type 2). These data are collected by a micrologger at headquarters on Konza Prairie.

Keywords that describe data set:

air temperature, soil temperature, relative humidity, wind speed, wind direction, solar radiation, precipitation

Date data commenced: 04/22/1982
Date data terminated: ongoing

Principle Investigator: Jesse Nippert

RECORD TYPE 1-Hourly weather data measured at Konza Prairie headquarters

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		9-10	I2	
4. Month		11-12	I2	
5. Day		13-14	I2	
6. Watershed		17-21	A4	
7. Hour		23-27	I4	hours
8. Tair	Air temperature	29-34	F6.2	°C
9. Rhum	Relative humidity	36-41	F5.2	%
10. Wspeed	Wind speed	43-48	F5.3	m/s
11. Wdir	Wind direction	50-55	F5.1	deg
12. Srad**	Solar Radiation	57-62	F5.2	Joules/cm^2
13. stemp	Soil Temperature at 25cm	64-70		°C
14. Wmax	Max wind speed (10 sec. execution interval)*	72-76		m/s

RECORD TYPE 2-Daily weather data measured at Konza Prairie headquarters

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	

2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		14-17	A4	
7. Day of Year		20-22		
8. Tmax	Maximum Air Temperature	24-30	F6.2	°C
9. Tmin	Minimum Air Temperat ure	32-38	F6.2	°C
10. Tave	Average Air Temperature	40-48	F6.2	°C
11. Dhumid	Average Relative Humidity	50-56	F4.1	%
12. Dsrad**	Total daily solar radiation	58-64	F6.1	Joules/cm^2
13. Dppt	Total Daily Precipitation	66-70	F6.1	mm
14. Smax	Maximum soil temp	72-79		°C
15. Smin	Minimum soil temp	81-88		°C
16. Save	Average soil temp	90-96		°C
17. Wave†	Average Wind Speed	98-102		m/s

*Program execution interval was changed from 60 seconds to 10 on 7/17/00. This change could significantly influence values reported for max wind speed. Caution should be used when comparing max wind speeds across this date.

**Solar radiation collected prior to 7/19/2000 was recorded in Langleys.

†Prior to 7/14/2000 this parameter was maximum daily wind speed.

Data Set Code--AWT01

Title of data set: Water temperature measured at irregular intervals (coincident with water sample collection) in Konza Prairie streams

Abstract:

Water temperature is measured in streams draining catchments with annual, 2-year, 4-year, and 20-year burn treatment. Measurements of water temperature (degrees C) are made on irregular basis, coincident with collection of water samples, in each of the four streams where discharge is continuously monitored (see data set ASD02 and AWT02).

Keywords that describe data set:

stream, stream water, water temperature, physical properties

Date data commenced: 04/24/1985
Date data terminated: 12/30/2006

Principle Investigator: Walter K. Dodds

RECORD TYPE 1 Discontinuous water temperatures in Konza Prairie streams

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Time	Central Standard Time	14-17	I4	CST
7. TempN1	Temperature at N01B flume	20-23	F4.1	deg C
8. TempN2	Temperature at N02B flume	26-29	F4.1	deg C
9. TempN4	Temperature at N04D flume	32-35	F4.1	deg C
10. TempNU	Temperature at N20B flume	38-41	F4.1	deg C
11. Comments		44-80	A34	

Comments: This data is not available online, but is available upon request.

Data Set Code--AWT02

Title of data set: Water temperature measured continuously in Konza Prairie streams

Abstract:

Water temperature is measured in streams draining catchments with annual, 2-year, 4-year, and 20-year burn treatments. Hourly measurements of water temperature (degrees C) are made in each of the four streams where discharge is continuously monitored (see data set ASD02).

Keywords that describe data set:

stream, stream water, water temperature, physical properties

Date data commenced: 04/10/1986
Date data terminated: 12/31/2000

Principle Investigator: Walter K. Dodds

RECORD TYPE 1 Continuously measured water temperatures in Konza Prairie streams

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed				
7. Tmean				Deg C
8. Tmin				Deg C
9 Tmax				Deg C

Consumer Data

Data Set Code--CBC01

Title of data set: Weekly record of bird species observed on Konza Prairie

Abstract:

Presence, including documented nesting, of all bird species recorded on Konza Prairie on a weekly basis throughout the year.

Keywords that describe data set:

consumers, birds, phenology, populations, nesting

Date data commenced: 01/01/1971
Date data terminated: 12/01/1996

Principle Investigator: Alice Boyle

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Species	4 character alphameric code unique for each species	8-11	A4
4. 2 Mar	Status (see codes below)	13	A1
5. 9 Mar		14	A1
6. 16 Mar		15	A1
7. 23 Mar		16	A1
8. 30 Mar		17	A1
9. 6 Apr		18	A1
10. 13 Apr		19	A1
11. 20 Apr		20	A1
12. 27 Apr		21	A1
13. 4 May		22	A1
14. 11 May		23	A1
15. 18 May		24	A1
16. 25 May		25	A1
17. 1 Jun		27	A1
18. 8 Jun		28	A1
19. 15 Jun		29	A1
20. 22 Jun		30	A1
21. 29 Jun		31	A1
22. 6 Jul		32	A1
23. 13 Jul		33	A1

24. 20 Jul		34	A1
25. 27 Jul		35	A1
26. 3 Aug		36	A1
27. 10 Aug		37	A1
28. 17 Aug		38	A1
29. 24 Aug		39	A1
30. 31 Aug		41	A1
31. 7 Sep		42	A1
32. 14 Sep	Status	43	A1
33. 21 Sep	Status	44	A1
34. 28 Sep		45	A1
35. 5 Oct		46	A1
36. 12 Oct		47	A1
37. 19 Oct		48	A1
38. 26 Oct		49	A1
39. 2 Nov		50	A1
40. 9 Nov		51	A1
41. 16 Nov		52	A1
42. 23 Nov		53	A1
43. 30 Nov		55	A1
44. 7 Dec		56	A1
45. 14 Dec		57	A1
46. 21 Dec		58	A1
47. 28 Dec		59	A1
48. 5 Jan		60	A1
49. 12 Jan		61	A1
50. 19 Jan		62	A1
51. 26 Jan		63	A1
52. 2 Feb		64	A1
53. 9 Feb		65	A1
54. 16 Feb		66	A1
55. 23 Feb	Status	67	A1

Codes used:

Status	0	not recorded
	x	recorded as present
	n	nesting

For list of Species codes used, see CBC011_bird_list.1971.1 in Appendix F.

* For data prior to and including the year 2000, species codes used are the pre-2001 codes. 2001-present are AOU Alpha Codes.

Data Set Code--CBD01

Title of data set: Date of occurrence for bird species observed on Konza Prairie

Abstract:

Dates of records of occurrence for all bird species reported on Konza Prairie.

Keywords that describe data set:

birds, consumer, phenology, populations, nesting Presence

Date data commenced: 01/01/1971
Date data terminated: 12/31/1992

Principle Investigator: Alice Boyle

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Species	Name of Bird,	7-10	A4
4. Date 1	6-digit year, month, day of record	12-17	I6
5. Date 2	6-digit year, month, day of record	19-24	I6
6. Date 3	6-digit year, month, day of record	26-31	I6
7. Date 4	6-digit year, month, day of record	33-38	I6
8. Date 5	6-digit year, month, day of record	40-45	I6
9. Date 6	6-digit year, month, day of record	47-52	I6
10. Date 7	6-digit year, month, day of record	54-59	I6
11. Date 8	6-digit year, month, day of record	61-66	I6
12. Date 9	6-digit year, month, day of record	68-73	I6
13. Date 10	6-digit year, month, day of record	75-80	I6

Codes used:

For list of Species codes used, see CBC011_bird_list.1971.1 in Appendix F.

Data Set Code--CBH01

Title of data set: Konza Prairie Bison Herd Information

Abstract:

This study is to monitor Long-term changes in individual animal mass. Dataset contains combined weight information of the entire Konza Prairie bison herd. In addition, a historical version of the data is hosted which reflects an experimental division of the herd in the years covered.

Keywords that describe data set:

Bison, Bison Herd, Consumers, Weight, Mass, Herbivores

Date data commenced: 11/08/1994
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1: This recordtype contains the number of male and female bison per age category

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1	A5
2. Rectype	Record type	2	I1
3. Year	Year of data collection	3	I4
4. Birthyear	Year of bison birth	4	I4
5. Age	Bison age	5	I2
6. Numoffemale	Number of female bison	6	I3
7. Numofmale	Number of male bison	7	I3

RECORD TYPE 2: This recordtype contains historical bison weight information for individual animals

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1	A5
2. Rectype	Record type	2	I1
3. Year	Year of data collection	3	I4
4. Month	Month of data collection	4	I2
5. Day	Day of data collection	5	I2
6. Animalcode	ID	6	I6
7. Animalsex	Sex of bison	7	I1
8. Animalweight	Total weight of animals in year	8	I6

Data Set Code--CBM01

Title of data set: Plains bison movement patterns in an experimental heterogeneous landscape at Konza Prairie

Abstract:

This GPS-collar data set was used to evaluate the factors that influence where bison choose to graze and how grazing and space use patterns affect ecosystem function and structure. Our objectives were to quantify space use and movement patterns of adult female Plains bison in the context of selection for specific prescribed burn frequencies and topographical features in the bison-grazed watersheds at Konza Prairie. We hypothesized bison would track post-prescribed burn forage productivity and we predicted watersheds burned for the first time in several years would be used to a greater extent than watersheds burned more frequently.

Keywords that describe data set:

Plains bison; fire frequency; grazing systems; Konza Prairie Biological Station; resource utilization; spring-burn grazing

Date data commenced: 11/01/2008
Date data terminated: 11/01/2013

Principle Investigator: Anthony Joern**,** Edward Raynor

RECORD TYPE 1

Data Format Specification:

Variable	Name
1. DataCode	DataSet Code
2. RecType	Record Type
3. Bison_ID	Ear tag number assigned to individual during first round-up after birth
4. RecDate	Record DateTime
5. RecTime	Record Time (Time in Central Standard Time)
6. UTM_E	Easting for UTM zone 14N
7. UTM_N	Northing for UTM zone 14N
8. RecDateTime	Concatenation of Date and Time

Data Set Code--CBN01

Title of data set: Records of breeding activities for birds on Konza

Abstract:

Dates by species of documented records of breeding, either nests or dependent, fledged young - with contents of nest, nest placement information and location on Konza Prairie recorded by grid square.

Keywords that describe data set:

birds, consumers, phenology, nest record, reproduction

Date data commenced: 01/01/1971
Date data terminated: 12/31/1992

Principle Investigator: Brett K. Sandercock

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Species	4 character alphameric	14-17	A4
7. GridX	KPRNA 200 m2 grid designations	19-20	A2
8. GridY	KPRNA 200 m2 grid designations	21-22	I2
9. Eggs	number of eggs in clutch	24-25	I2
10. Dbeggs	number of cowbird eggs in clutch	27-28	I2
11. Young	number of young in nest	30-31	I2
12. Cbyg	number of cowbird young in nest	33-34	I2
13. Comment	to indicate nest placement e.g 2m high in Ulmus americana	36-80	A45

Data Set Code--CBP01

Title of data set: Variable distance line-transect sampling of bird population numbers in different habitats on Konza Prairie.

Abstract:

Records of bird species based on line transect sampling, giving perpendicular distance of sighting from the transect line on 16 separate transects. Bird surveys were conducted 2-4 times per year in January, April, June, and October for a 29-year period from 1981 to 2009. Transects were designed to determine bird communities and population numbers associated with tallgrass prairie habitats with different experimental treatments (fire frequency, grazed by bison vs. ungrazed), riparian habitats on forest edge, and gallery forests dominated by oak woodland.

Keywords:

avian, birds, consumers, populations, relative abundance, species diversity

Publications based on the CBP01 dataset:

Collins, S.L. 2000. Disturbance frequency and community stability in native tallgrass prairie. American Naturalist 155:311-325.

Powell, A.F.L.A. 2006. Effects of prescribed burns and bison (*Bos bison*) grazing on breeding bird abundance in tallgrass prairie. Auk 123:183-197.

Zimmerman, J.L. 1983. The Birds of Konza: The Avian Ecology of the Tallgrass Prairie, University Press of Kansas, Lawrence, Kansas.

Date data commenced: 05/27/1981
Date data terminated: 06/17/2009

Principle Investigator: Alice Boyle

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode	Bird population surveys (CBP01)		A5	
2. Rectype	Record type (1)		I1	
3. Year	Year of survey (1981-2009)		I4	
4. Month	Month of survey (1-12)		I2	
5. Day	Day of survey (1-31)		I2	
6. Season	Round of survey (e.g., 1981-3)		A6	
7. Transnum	Transect number (1 to 18, not 7 or 11)		I2	
8. Watershed	Name of Konza LTER unit		A4	
9. Obsnum	Observation number		I3	
10. Specname	Code for bird species name recorded in field notes		A4	
11. AOUcode	Standardized 4-letter alpha code for bird name		A4	
12. Common name	Standardized common name of bird		A30	

13. Distance	Perpendicular distance to bird	I3	meters
14. Count	Number of birds detected (1 for all records)	I1	
15. Sex	Sex of bird	A1	
16. Status	Residency status of bird	A1	
17. Comments	Miscellaneous notes on natural history	A35	
18. Time	For obsnum=1, start and end time of survey (CT)	A26	
19. Duration	For obsnum=1, duration of survey	I2	minutes
20. Observer	For obsnum=1, person who conducted bird survey	A15	

Explanation of Codes for Variables:

Datacode: CBP01 for all records.

Year, Month, and Day: 1 to 4 digit integers. Range in years is 1981 to 2009. Range in months for four rounds of bird surveys: 1 (also 12 or 2), 4, 6 (also 5), and 10. Days range from 1-31.

Season: Season or round of LTER bird surveys. Observers conducted 2 to 4 rounds of transects each year, where each transect was conducted once in a round. The variable Season is coded with the year of survey, a hyphen, and then a numeric code for season from 1 to 4 where: 1 = Winter, 2 = Spring, 3 = Summer, and 4 =Autumn. Winter surveys were usually run in January, but sometimes December or February (n = 28 rounds, 1982 to 2009). Spring surveys were conducted in April for a 6-year period (n = 6 rounds, 1982 to 1987), but then discontinued. Summer surveys were usually run in June, with a few surveys in late May (n = 29 rounds, 1981 to 2009). Autumn surveys were conducted in October for a 6-year period (n = 6 rounds, 1981 to 1986), but then discontinued.

Transnum: A total of 18 unique bird survey transects were conducted at Konza Prairie. Transects 7 and 11 were conducted for the first three rounds of surveys (1981-3 to 1982-1), but then discontinued. Bird records from transects 7 and 11 are not included in the dataset. Transect 18 in N20B was not conducted in the first three rounds of surveys (1981-3 to 1982-1), but was then run for all remaining rounds of surveys (1982-2 to 2009-3). Transect 5 in 004D was conducted for a 15-year period from 1981 to 1995, but then discontinued. All remaining transects were conducted every round, with five cases where a single transect was missed in a round during 1994 to 1998. Complete list of transects, watersheds, and latitude/longitude of the approximate midpoint are given below (Table 1).

Watershed: Codes for watersheds follow the standardized names for the experimental units of the LTER experimental design (e.g., 001B, N04D, N20B). Three nonstandard codes include: G00A = north branch of upper King's Creek, L00A = lower King's Creek near Hokasen homestead, S00A = upper Shane Creek on the east side of Konza. Each watershed unit has a single bird transect with the exception of N01B which has two transects (No. 6 and 10). A map of transects and watersheds is given below (Figure 1).

Obsnum: Observation number of bird(s) detected on a survey transect. Bird detected on the transect were numbered consecutively as the observer walked along the line transect. The total

number of birds detected on a single transect could be zero and ranged up to 433 individual birds.

Specname: For bird surveys conducted in 1981 until 2000, Specname was based on a nonstandardized set of bird codes originally devised by J.L. Zimmerman to record bird data. The original codes have been retained in the CBP01 datafile to facilitate checking against the original datasheets but should not be used for analysis. Zimmerman codes were unique for most species but did overlap with AOU codes for two species: EWPW = Eastern Wood-Pewee for Zimmerman, but Eastern Whip-poor-will for AOU; TRES = American Tree Sparrow for Zimmerman, but Tree Swallow for AOU. For bird surveys conducted during 2001 until 2009, the standardized 4-letter alpha codes of the American Ornithologists' Union were used to record the bird detections on the datasheets in the field.

AOUCode: The standardized 4-letter alpha codes based on common names of bird and the checklist of the American Ornithologists' Union. See the Institute for Bird Populations for a master list of all 4-letter alpha codes (www.birdpop.org). The data file includes a handful of nonstandard codes: UNME = Western/Eastern Meadowlark, UNSP = sparrow sp., NONE = bird survey was conducted but no birds were detected, and VOID = no bird survey was conducted.

CommonName: The standardized common names of bird species detected on the bird survey transects. The standardized common names follow the checklist of the American Ornithologists' Union (www.americanornithology.org). If there have been changes in taxonomy or common names, the most current name has been updated in the file (e.g., Northern Harrier instead of Marsh Hawk, Baltimore Oriole instead of Northern Oriole). In early years of surveys, some records of meadowlarks were not identified to species: Western/Eastern Meadowlark. Based on singing males, most meadowlarks at Konza Prairie are Eastern Meadowlarks (>98%) and Western Meadowlarks occur only rarely (<2%). In 1998, the AOU checklist committee split Rufous-sided Towhee (RSTO) into Eastern Towhee (EATO) and Spotted Towhee (SPTO). The species complex is recorded as RSTO in the early years of bird surveys, unless field notes allowed the bird to be identified. At Konza Prairie, Eastern Towhees usually occur in summer, Spotted Towhees occur during winter, but either species can occur during migration.

Distance: Perpendicular distance of bird from survey transect. Birds were detected by sighting or by vocalizations. Transects were variable width but average perpendicular distance was ca. 35 m and up to 350 m. Transects were reflagged each year with markers and observers were able to see the line of the transect. Observers did not record whether the bird was on the left or right side of the transect. Birds were recorded only if detected within the boundaries of the watershed unit. For bird surveys conducted in 1981 until 2000, distance was estimated by the observer. For bird surveys conducted in 2001 to 2009, distance was estimated with a laser rangefinder (Bushnell, Yardage Pro 450).

Count: Each bird detected was recorded once and numbered consecutively on a separate line in the data file with a different obsnum for each bird. If a flock of three birds was observed, the observations were recorded over three lines with consecutive numbers, and the species name and perpendicular distance was repeated three times. Distance sampling usually requires perpendicular distances for clusters of single birds or flocks. In the CBP01 datafile, repeated

information recorded on consecutive lines would usually be birds in the same flock, but in some cases could also be separate clusters of birds.

Sex: M = Male, F = Female, U = Unknown. Recorded in early years of sampling from 1981 to 1990 but then discontinued.
Status: P = Year-round resident, S = Summer resident, W = Winter resident, T = Transient, U = Unknown residency status. Recorded in early years of sampling from 1981 to 1992 but then discontinued.

Comments: Miscellaneous notes on the natural history of the bird sighting.

Time: If obsnum=1, the start and end times for the bird survey transect. All surveys were conducted in morning hours in the Central Timezone (CT). Time could be either Central Standard Time (CST) or Central Daylight Time (CDT) depending on the month of survey. In some cases, the end time was not recorded for the survey (End=????), but duration was set to be the average survey time for that transect in a given season.

Duration: If obsnum=1, the duration of the bird survey transect in minutes.

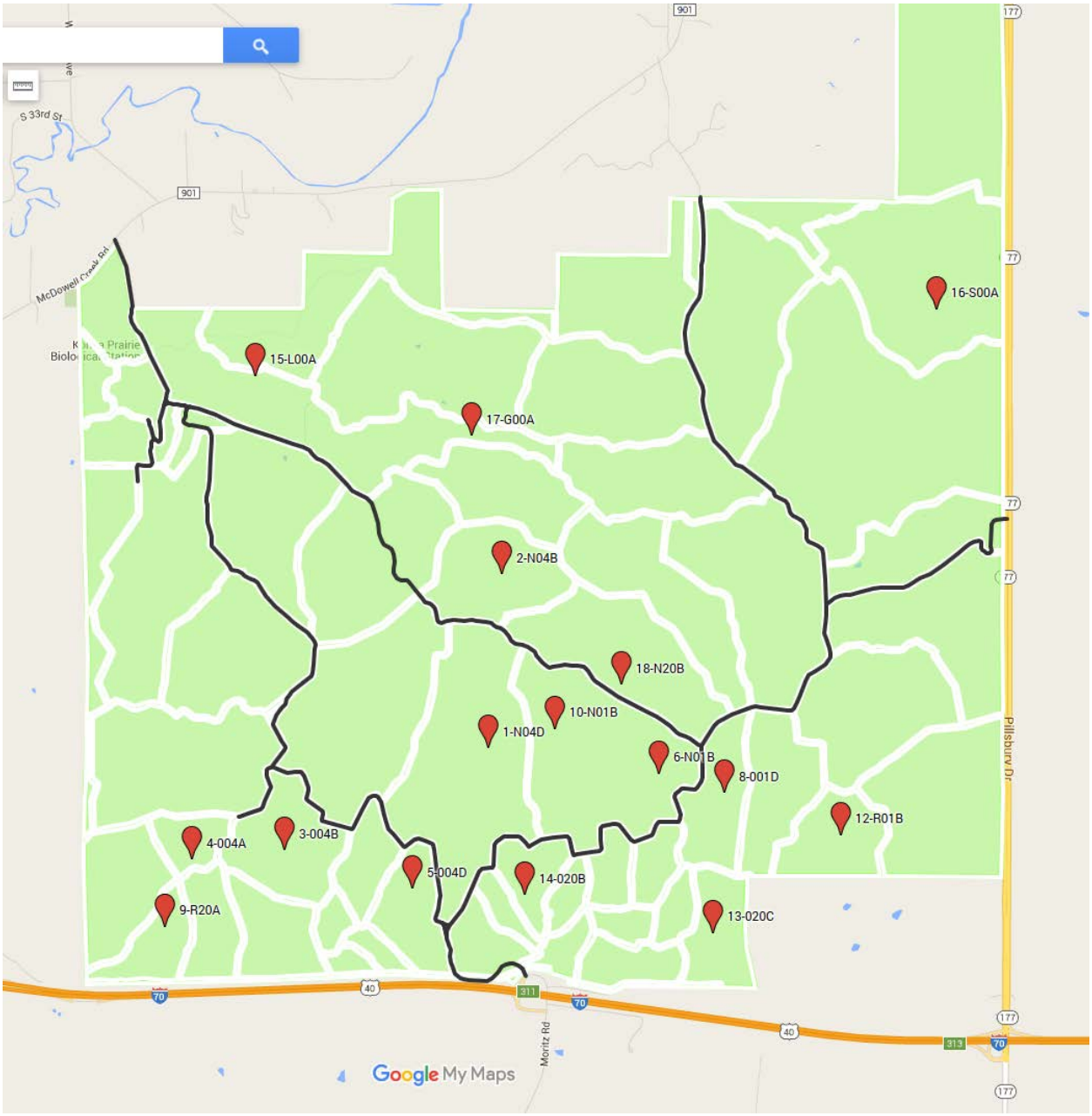
Observer: If obsnum=1, the name of the observer conducting the bird survey. Bird survey transects were conducted by four different observers over the 29-year period from 1981 to 2009: Elmer J. Finck (ca. 1981-1989, n = 430 surveys), John L. Zimmerman (ca. 1990-1997, n = 293 surveys), Christopher C. Smith (1998-2001, n = 105 surveys), and Brett K. Sandercock (2002-2009, n = 240 surveys).
Metadata revised: 06/26/2016

Table 1. List of bird survey transects at the Konza Prairie LTER, Kansas, 1981-2009. Each watershed had one transect, except N01B which had two transects (no. 6 and 10). Transects ranged from 375 m to 1.49 km in length. Transect` length was not standardized among units and usually followed the longest axis within an experimental unit. Survey transects followed different headings but most were relatively linear or at least broken-stick in layout. A few transects were nonlinear and followed hillsides to stay in the same watershed or habitat strata (e.g., L9 in R20A, L16 in S00A). The Latitude and Longitude are the geographic location of approximate midpoint for each transect line.

Transect	Watershed	Length	Latitude	Longitude
1	N04D	961	39.08148	-96.58116
2	N04B	778	39.09260	-96.58008
3	004B	902	39.07497	-96.59795
4	004A	375	39.07437	-96.60564
5	004D	408	39.07249	-96.58745
6	N01B	546	39.07986	-96.56709
8	001D	914	39.07861	-96.56163

9	R20A	666	39.07007	-96.60786
10	N01B	1091	39.08272	-96.57568
12	R01B	636	39.07591	-96.55205
13	020C	594	39.06966	-96.56263
14	020B	545	39.07211	-96.57812
15	L00A	882	39.10530	-96.60042
16	S00A	1300	39.10957	-96.54412
17	G00A	742	39.10149	-96.58256
18	N20B	1490	39.08556	-96.57020

Figure 1. Map of bird survey transects at the Konza Prairie LTER, Kansas, 1981-2009.



Data Set Code--CBS01

Title of dataset: Capture records of (mainly) Grasshopper Sparrows on Konza Prairie

Abstract:

This dataset includes captures of mainly Grasshopper Sparrows (GRSP), but includes other songbirds. Each row pertains to an individual captured on a certain day. Individuals can repeat. Most captures include data on age, sex, head-bill, tarsus, wind chord, molt score, fat score, and mass. In many cases, a single feather was collected from each Grasshopper Sparrow for isotopic analyses, and when available, results of those data are included. Some individuals were measured for body composition (fat mass, lean mass, and body water) using a mobile Quantitative Magnetic Resonance (QMR) machine. Most individuals were bled in the field within 5 min of capture. The blood was chilled, centrifuged the same day, and plasma stored frozen for analyses of metabolite concentrations. Red blood cells were stored in lysis buffer for genotyping. All birds were banded with a USFWS band and adults were individually marked using a unique combination of 3 plastic colored leg bands. Birds captured as independent young or nestlings banded prior to fledge were only marked with the USFWS bands. All birds were released at the location of capture.

Keywords that describe dataset:

Grasshopper Sparrow, *Ammodramus savannarum*, morphology, stable isotope, body composition

Date data commenced: April 2013
Date data commenced: ongoing

Principle Investigator: Alice Boyle

RECORD TYPE 1

Data Format Specification:

Variable	Description	Bounds	Units
CaptureID	Unique identification number for record		
CaptureDate	Date bird was captured	12-May-13 to 2-Aug-16	DD-MMM-YY
PlotName	Name of plot bird was captured on (KNZ codes)		
SpeciesCode	American Ornithologists' Union/American Ornithological Society species code		See 'Codes Used'
CaptureTime	Time bird captured	5:47 to 20:06	Military time i.e.: 13:00 not 1:00pm

CaptureMethod	How bird was captured	Hand (for nestlings) /Mist net	
Recap	TRUE if bird was previously captured	TRUE/FALSE	
BandPrfNum	First four numbers on Federal silver band		
BandSufNum	Last five numbers on Federal silver band		
Colorband	Unique 4 color leg-band pattern		
Age	Age of captured bird		See 'Codes Used'
HowAged	Basis for aging decision		See 'Codes Used'
Sex	Sex of captured bird		See 'Codes Used'
CP	Cloacal Protuberance Scale (males only)	0-5	See 'Codes Used'
BP	Brood Patch Scale (females only)	0-5	See 'Codes Used'
HowSexed	Basis for sexing decision		See 'Codes Used'
HeadBill	Distance from back of head to end tip of bill	16.8-39	mm
Tarsus	Length of tarsus	11.4-29.7	mm
WingChord	Length of (unflattened) wing chord	18.5-109	mm
FlatWing	Length of flattened wing	56.5-72	mm
P9	Length of the 9th primary feather	58.5-72	mm
MoltScore	Molt score	0-3	See 'Codes Used'
FatScore	Visible, subcutaneous furcular fat score	0-5	See 'Codes Used'
Blood	Was a blood sample taken?		TRUE/FALSE
Mass	Mass of bird	6.94-49.51	grams
HowWeighed	Instrument used to mass bird	DigitalScale/ Pesola	
Bander	Initials of person responsible for banding bird		See 'Codes Used'
Photos	TRUE if photos (head, wing) were taken of the bird	TRUE/FALSE	
Total	µl of whole blood collected	0-143	µl
Haematocrit	Percent of haematocrit to total blood amount (mm= µl)	40-89	µl
plasma	Amount of plasma after centrifuging (mm= µl)	0-79	mm
SampleID	Blood Sample ID	1-1743	

Notes			
Interpubic	Width of space between points on pubic bones as measured through skin on belly		mm
Culmen/Bill	Length of bill		mm
Feather	TRUE if a feather taken at capture	TRUE/FALSE	
FeatherColl	Which feather was collected? P = primary	P1-P9	
ConcTRIG	Concentration of triglycerides in plasma	0.155-14.63	mmol/L
TRIG	Was the CV over 20?	TRUE/FALSE	
ConcBUTY	Concentration of β-hydroxy Butyrate	0.306-3.7	mmol/L
BUTY	TRUE if CV was over 20%	TRUE/FALSE	
FatMass	Mass of fat as measured by QMR	0.04-2.23	g
LeanMass	Mass of muscle as measured by QMR	8.09-16.29	g
BodyWater	Mass of body water as measured by QMR	0.28-17.72	g
PositionReg	UTM Zone	14 S	
PositionX	Easting (latitude)	706367-714178	
PositionY	Northing (longitude)	4326889-4340953	

Codes Used:

Species Code:

Species Code	Common Name	Scientific Name
BHCO	Brown-headed Cowbird	*Molothrus ater*
GRSP	Grasshopper Sparrow	*Ammodramus savannarum*
HESP	Henslow Sparrow	*Ammodramus henslowii*

Color Band Color Abbreviations:

A	Gray	K	Black	S	Silver
B	Light Blue	O	Orange	W	White
D	Dark Blue	P	Pink	Y	Yellow
G	Green	R	Red		

Age:

NG	Nestling
HY	Hatch Year
AHY	After Hatch Year

SY	Second Year
ASY	After Second Year
TY	Third Year
ATY	After Third Year
U	Unknown

How aged or sexed:

Plumage	Young (hatch-year) birds have distinct plumage. Following their first year, GRSP cannot be sexed or aged by plumage
CP	Cloacal Protuberance present—indicates male in breeding condition
BP	Brood Patch present—if >0.5, indicates female in breeding condition (males only lose a few belly feathers)
OnNest	Nestlings found in nest = known age. Birds flushed from nest sexed as females
Song	Males observed singing prior to capture (females don't sing)
Display	Males observed displaying prior to capture (females don't display)
Molecular	Molecularly sexed post-hoc
Ossification	Young (< 4 mo) birds have incomplete ossification
Recap	If a bird was captured in a previous season, we can age precisely (if HY or NG at time for first capture), or know minimum age (if captured as AHY)

Sex:

M	Male
F	Female
U	Unknown

CP:

0	No evidence of swelling
1	Very slight thickening
2	Still longer than wide, but noticeably bulging
3	Resembling the drawing in the front of Pyle guide
4	Size of an unripe blueberry
5	Size and color of an ripe blueberry

BP:

1	Smooth feathers are dropped and some vascularization is evident, but most of the area is still rather smooth and dark red
2	Vascularization is evident, some wrinkles are present, and some fluid is present under the skin, giving the area a pale, opaque, pinkish color

3 Vascularization is at the maximum extent of the brood patch; the brood patch is thickly wrinkled, and much fluid is present under the skin
4 Wrinkled, vascularization and fluid is mostly gone, skin retains many thin, dry, contracted wrinkles
5 Molting with no vascularization or fluid, most wrinkles gone, and pinfeathers present only on breast with no other flight feather or body molt occurring

Molt:
0 No molt
1 Some pin feathers, adventitious flight feather molt, or very beginning stages of complete molt (i.e., dropped feathers but no new feathers grown in)
2 Moderate molt. Multiple feather tracts and/or flight feathers or retricies
3 Most tracts in molt including flight feathers and body

Fat:
0 No fat visible in furculum
1 A light covering or partial covering of fat on the inside of the furculum
2 >10% full and <~35% full
3 Roughly half full of fat
4 Furculum ~75% full, fat typically extending out of furcular area at the top and some visible fat in wing pits and lower belly
5 Furculum ~full-slightly bulging. Obvious fat reserves elsewhere on the body
6 Furculum very bulging. Extensive fat reserves elsewhere

Observers:

AB	W. Alice Boyle
AJH	Alex Henry
ANB	Allison Bays
BV	Bram Verheijen
CES	Chelsea Sink
CKP	Chyna Pei
DDH	Destiney Hett
DJS	Dylan Smith
EJW	Emily Williams
GW	Virginia Winder
HN	Hunter Nedland
JMG	Jackie Gehrt
JMS	Joseph Schmidt
KEG	Keil Garey
LTA	Lauren Angermeyer
MLG	Michaela Gustafson
SKW	Sarah Winnicki
SLD	Sarah Demadura
SVR	Suzy Replogle Curnutt

Note: This dataset is not online yet, but available upon request.

Data Set Code--CBS02

Title of dataset: Nests of Grasshopper Sparrows on Konza Prairie

Abstract:

This data set contains data describing Grasshopper Sparrow nests. These nests were primarily found by rope dragging but also on surveys (see RI Survey Data Set), flushing birds during other activities, and via behavioral observations. We described nest contents and monitored nest fate via visits every 2-3 day and by placing an iButton placed in the center of the nest flush with the bottom of the nest cup and comparing temperature traces to a second iButton placed outside of the nest to determine the timing of nest failure and other metrics of incubation/brooding behavior. We compiled counts of partial egg loss, partial brood loss, and estimated causes of nest failure, comparing the timing of these events with KNZ-collected meteorological data to determine the temporal association between rainstorms and nest abandonment.

Keywords that describe dataset:

Grasshopper Sparrow, *Ammodramus savannarum*, nests, species, color banded birds, iButton, nest parasitism, measurements, partial brood loss, partial egg loss, nest failure, storm

Date data commenced: May 2014
Date data concluded: ongoing

Principle Investigator: Alice Boyle

RECORD TYPE 1

Data Format Specification:

Variable	Description	Bounds	Units
NestAutoID	Unique identification		
NestID	Unique name for nest with the pattern watershed-observer-number		
NestOrient	Bearing toward nest cup opening	0-360	Degrees
Watershed	Watershed where nest was found (KNZ codes)		
DateFound	Date of first nest check	13-May-14 to 30-Jul-16	DD-MMM-YY
FemaleBand	Unique 4 color leg-band pattern		See 'Codes Used'
MaleBand	Unique 4 color leg-band pattern		See 'Codes Used'
Observers	Unique code for technicians		See 'Codes

			Used’
Method	How nest was found		See ‘Codes Used’
Stage	Stage of nest when discovered		See ‘Codes Used’
iButton	TRUE if iButtons placed	TRUE/FALSE	
DateiBtnPlaced	Date iButtons were placed	17-May-14 to 2-Aug-16	DD-MMM-YY
TimeiBtnPlaced	Time iButtons were placed	5:35-17:35	Military time i.e.: 13:00 not 1:00pm
DateiBtnRetrieved	Date iButtons were retrieved	20-May-14 to 6-Aug-16	DD-MMM-YY
TimeiBtnRetrieved	Time iButtons were retrieved	5:50-18:17	Military time i.e.: 13:00 not 1:00pm
EggsMeasured	TRUE if eggs were measured	TRUE/FALSE	
EggID	Unique identifier for each egg measured	4-584	
EggDate	Date eggs measured	17-May-14 to 2-Aug-16	DD-MMM-YY
EggLength	Length of egg by calipers	16.6-22.7	Millimeter
EggWidth	Width of egg by calipers	13.3-25	Millimeter
EggMass	Mass of egg in tared weight boat on scale	0.66-3.32	Grams
NestlingMeasured	TRUE if nestlings measured	TRUE/FALSE	
NestlingMeasDate	Date when nestlings were measured, blank if not applicable	22-May-14 to 26-Jul-16	DD-MMM-YY
MaxNGRSP	Maximum number of grasshopper sparrows observed in clutch	0-6	
TotClutchSize	Total number of eggs in nest	0-7	
NCowbirds	Number of cowbird nestlings in nest	0-4	
BroodSize	Total number of nestlings	0-6	
NFledge	Number of GRSP nestlings fledged	0-6	
NCowbirdsFledge	Number of BHCO nestlings fledged	0-2	
DateHatch	Date of first egg hatched	15-May-14 to 3-Aug-16	DD-MMM-YY
HatchDayInferred	TRUE if hatch day is	TRUE/FALS	

	inferred	E	
Date1stEgg	Date of first egg layed	30-Apr-14 to 26-Jul-16	DD-MMM-YY
1stEggDayInferred	TRUE if egg data estimated	TRUE/FALSE	
1stEggDateUncertain	Level of uncertainty for 1st egg date: No of days +/- in estimate of first egg layed	0-5	
DateFledgeFail	Date of last nest check	19-May-14 to 6-Aug-16	DD-MMM-YY
InferredFateField	Fate of nest deduced in field		See 'Codes Used'
InferredFateLab	Fate of nest deduced after reviewing iButton data in the lab		See 'Codes Used'
NestFateDesc	Brief description of nest fate		
OtherNotes	Other pertinent details about nest		
ComplDayVerified	TRUE if nest fate can be verified by iButton data	TRUE/FALSE	
iBtnComplDate	Nest completion date as indicated by iButton data	19-May-14 to 4-Jul-16	DD-MMM-YY
iBtnComplTime	Nest completion time as indicated by iButton data	0:00-23:38	Military time i.e.: 13:00 not 1:00pm
PartialEggLoss	TRUE if some eggs disappear without reason and without complete nest failure	TRUE/FALSE	
DateChkBEggLoss	Nest check date before partial egg loss	13-May-14 to 15-Jun-16	DD-MMM-YY
TimeChkBEggLoss	Nest check time before partial egg loss	6:15-14:50	Military time i.e.: 13:00 not 1:00pm
DateChkAEggLoss	Nest check date after partial egg loss	16-May-14 to 17-Jun-16	DD-MMM-YY
TimeChkAEggLoss	Nest check time after partial egg loss	6:00-16:00	Military time i.e.: 13:00 not 1:00pm
PartialBroodLoss	TRUE if some nestlings disappear without reason and without complete nest failure	TRUE/FALSE	
DateChkBBroodLoss	Nest check date before partial brood loss	22-May-14 to 25-Jun-16	DD-MMM-YY
TimeChkBBroodLoss	Nest check time before partial brood loss	5:49-15:30	Military time i.e.: 13:00 not 1:00pm

DateChkABroodLoss	Nest check date after partial brood loss	24-May-14 to 27-Jun-16	DD-MMM-YY
TimeABroodLoss	Nest check time after partial brood loss	5:50-15:24	Military time i.e.: 13:00 not 1:00pm
FailTimeSinceStorm	Time between nest failure and nearest previous storm time	0-411	Hours
StormSevere	TRUE if most recent storm before nest failure was severe (>=11.65 mm per rain event)	TRUE/FALSE	
EggLossStorm	TRUE if partial egg loss was during a storm	TRUE/FALSE	
BroodLossStorm	TRUE if partial brood loss was during a storm	TRUE/FALSE	
PositionRegion	UTM zone	14 S	
PositionX	Easting (latitude)		in m, UTM system
PositionY	Northing (longitude)		in m, UTM system

Codes Used:

GRSP	Grasshopper Sparrow (*Ammodramus savannarum)*
BHCO	Brown-Headed Cowbird *(Molothrus ater)*
NOAA	National Oceanic and Atmospheric Administration

Color Band Color Abbreviations:

A	Gray	G	Green	S	Silver
B	(Light) Blue	K	Black	W	White
		O	Orange	Y	Yellow
D	Dark (Blue)	P	Pink		
		R	Red		

Observers:

AB	W. Alice Boyle	CES	Chelsea Sink	HN	Hunter Nedland
ADT	Alaina Thomas	CRW	Caitie Weichmann	JMG	Jackie Gehrt
AJH	Alex Henry	DDH	Destiney Hett	KRW	Kyle Wait
AMC	Amanda Charpinel	DJS	Dylan Smith	LTA	Lauren Angermeyer
BJR	Breyana Ramsey	EJH	Emily Hudson	MLG	Michaela Gustafson
BV	Bram Verheijen	EJW	Emily Williams	SKW	Sarah Winnicki

SVR Suzy Replogle Curnutt

Method:

BO	Behavioral Observation	RD	Rope Dragging
RW	Random Walking	OT	Other
		UN	Unknown

Stage:

BU	Building	NG	Nestlings
LAY	Laying	FL	Fledged/Fledglings
IB	Incubating		

Inferred Fate:

SU	Fledged ≥1 GRSP	TR	Trampled by livestock
SC	Fledged ≥1 GRSP and ≥1BHCO	WE	Nest flooded, nestlings died of exposure
CO	Fledged only BHCO or abandoned due to cowbird parasitism	HU	Suspected human-caused abandonment or destruction
PR	Nest contents eaten		
AB	Abandoned for no apparent reason		

Note: This dataset is not online yet, but available upon request.

Data Set Code--CBS03

Title of dataset: Grasshopper sparrow surveys: densities, reproductive index, and locations of marked individuals on Konza Prairie

Abstract:

Data on the location, identity, and reproductive index (Vickery, 1992 #5253) of Grasshopper Sparrows within 10-ha plots on 14 watersheds units on Konza and on 2 adjoining units on the Rannells Preserve. Each plot was surveyed every ~7-10 days. These surveys documented individual sparrow locations, and are used to calculate dispersal distances and territory densities.

Keywords that describe dataset:

Grasshopper Sparrow, *Ammodramus savannarum*, Reproductive Index Survey, species, distribution, color banded birds, phenology

Date data commenced: May 2013
Date data concluded: ongoing

Principle Investigator: Alice Boyle

RECORD TYPE 1

Data Format Specification:

Variable	Description	Bounds	Units
ReproIndexSurveyID	Unique identification		
SurveyDate	Date survey was conducted (D/M/Y)	7-Jun-13 to 28-Jul-16	DD-MMM-YY
Plot	Usually agrees with 'Watershed', not used for incidental observations (KNZ codes)		
Observer	Unique code for technicians		See 'Codes Used'
StartTime	Time at beginning of survey		Military time i.e.: 13:00 not 1:00pm
IncidentalObs	TRUE if bird was detected outside traditional survey, i.e.: off plot or during transport	TRUE/FALSE	
SearchDuration	Length of survey	20-410	Minutes
Temperature	Temperature at beginning of survey	4-40	Degrees Celsius
Wind	Category of wind based off Beaufort Scale	0-7	See 'Codes Used'
Cloud	Percent of sky covered by clouds	0-100	Percent

Precipitation	Categorical distinction of ambient moisture		See 'Codes Used'
NMaleGRSP	Number of territorial males on plot	0-24	
PositionRegion	UTM zone	14 S	
PositionX	Easting (latitude)		In m, UTM system
PositionY	Northing (longitude)		In m, UTM system
ReproIndexDataID	Unique identification		linking field between tables in original database
ColorBands	Unique 4 color leg-band pattern		
RI	Reproductive Index	1-5	See 'Codes Used'
Watershed	Usually agrees with 'Plot', used for incidental observations (KNZ codes)		When watershed is not = to plot, means bird was sighted incidentally in other location

Codes Used:

Observers:

AB	W. Alice Boyle	CES	Chelsea Sink	JN	Jessica Nyguyen
ADT	Alaina Thomas	CKP	Chyna Pei	LTA	Lauren Angermeyer
AJH	Alex Henry	CRW	Caitie Weichmann	MLG	Michaela Gustafson
AMC	Amanda Charpinel	DDH	Destiney Hett	MR	Mark Herse
ANB	Allison Bays	DJS	Dylan Smith	SKW	Sarah Winnicki
ASS	Amie Sommers	EJW	Emily Williams	SLD	Sarah Demadura
BJB	Brett Budach	HN	Hunter Nedland	SMM	Stephanie Munguia
BJR	Breyana Ramsey	ITW	Ian Waters	SVR	Suzy Replogle Curnutt
BV	Bram Verheijen	JMG	Jackie Gehrt	YVM	Yisel Marquez
BW	Blake Walter	JMS	Joseph Schmidt		

Wind:

0	Calm	Calm, smoke rises vertically
1	Light Air	Smoke drift indicates wind direction,
2	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	Moderate Breeze	Dust, leaves, and loose paper lifted, small tree branches move
5	Fresh Breeze	Small trees in leaf begin to sway
6	Strong Breeze	Larger tree branches moving, whistling in wires
7	Near Gale	Whole trees moving, resistance felt walking against wind

Precipitation:
None, mist, drizzle, light rain, heavy rain, snow, hail

Reproductive Index:

1	Territorial	Buzz song
1.5	Courtship	Alternate song
2	Paired	Two birds, no fight
3	Nest Building/Incubating	Carry grass, flush close, chips
4	Nestlings	Carry food; chips, little song
5	Fledglings	

Note: This dataset is not online yet, but available upon request.

Data Set Code--CBS04

Title of dataset: Sweep sample data: prey estimates for Grasshopper Sparrows on Konza Prairie

Abstract:

This data set includes data on the contents of sweep samples. We collected sweeps in 2014 monthly in May, June, and July in 3 locations on each of the focal watersheds. Sweeps were X m long and centered at veg points. Data consist of information about the sampling events, and sample wet mass, edible mass (combined mass of selected orders listed below). Additionally, the dataset includes the number of individuals in each of a series of size categories, total N, and mass (in grams) of the following groups: Tettigoniidae, Acrididae, other Orthoptera, Gryllidae, Odonata, Ephemeroptera, Coleoptera, Hymenoptera, Lepidoptera, Arachnida, Hemiptera, Neuroptera, Diptera, Phasmatidae, Mantidae, and "other".

Keywords that describe dataset:

Grasshopper Sparrow, *Ammodramus savannarum*, species individuals, diversity, arthropods, sweep sampling, phenology

Date data commenced: May 2014
Date data concluded: July 2015

Principle Investigator: Alice Boyle

RECORD TYPE 1

Data Format Specification:

Variable	Description	Bounds	Units
SweepSampleEventID	Unique ID for sweep sample events		
TransectID	Unique name for sweep sample point	BUG-1-1B to BUG-54-N2B	
DateSampled	Date of sweep sample	20-May-14 to 3-Aug-15	DD-MMM-YY
TimeSampled	Time of sweep sample	8:32-15:55	Military time i.e.: 13:00 not 1:00pm
SampledBy	Person who carried out sweep sample in field		See 'Codes Used'
ProcessedBy	Person who processed the sweep sample in lab		See 'Codes Used'
SweepNum	Each transects has two sweeps per DateSampled	1-2	
DateProcessed	Date sample was processed in	10/17/2014-	M/D/YYYY

	lab	10/16/2015	
InedibleMass	Mass of inedible insects as according to GRSP eating habits in one sweep	0-3.58	Grams
EdibleMass	Mass of edible insects as according to GRSP eating habits in one sweep	0.04-22.20	Grams
TotalWetMass	Total mass of insects in one sweep before drying in oven	0.07-22.22	Grams
OrthopteraOtherTotalN	Total number of Orthoptera individuals	0-6	
OrthopteraOther5mm	Orthoptera smaller than 5	0-2	mm
OrthopteraOther5-15mm	Orthoptera larger than 5 and less than or equal to 15	0-4	mm
OrthopteraOther15-25mm	Orthoptera larger than 15 and less than or equal to 25	0-2	mm
OrthopteraOther25-35mm	Orthoptera larger than 25 and less than or equal to 35	0-1	mm
OrthopteraOther35-45mm	Orthoptera larger than 35 and less than or equal to 45	0	mm
OrthopteraOther45mm	Orthoptera larger than 45	0	mm
TettigoniidaeTotalN	Total number of Tettigoniid individuals	0-65	
Tettigoniidae5mm	Tettigoniid smaller than 5	0-57	mm
Tettigoniidae5-15mm	Tettigoniid larger than 5 and less than or equal to 15	0-27	mm
Tettigoniidae15-25mm	Tettigoniid larger than 15 and less than or equal to 25	0-12	mm
Tettigoniidae25-35mm	Tettigoniid larger than 25 and less than or equal to 35	0-5	mm
Tettigoniidae35-45mm	Tettigoniid larger than 35 and less than or equal to 45	0-1	mm
Tettigoniidae45mm	Tettigoniid larger than 45	0-1	mm
AcrididaeTotalN	Total number of Adridid individuals	0-344	
Acrididae5mm	Adridid smaller than 5	0-143	mm
Acrididae5-15mm	Adridid larger than 5 and less than or equal to 15	0-166	mm
Acrididae15-25mm	Adridid larger than 15 and less than or equal to 25	0-166	mm
Acrididae25-35mm	Adridid larger than 25 and less than or equal to 35	0-17	mm
Acrididae35-45mm	Adridid larger than 35 and less than or equal to 45	0-4	mm
Acrididae45mm	Adridid larger than 45	0-6	mm
AcrididaeWetMass	Mass before drying	0.0-804.308	mg

GryllidaeTotalN	Total number of Gryllidae individuals	0-3	
Gryllidae5mm	Gryllidae smaller than 5	0-1	mm
Gryllidae5-15mm	Gryllidae larger than 5 and less than or equal to 15	0-2	mm
Gryllidae15-25mm	Gryllidae larger than 15 and less than or equal to 25	0-1	mm
Gryllidae25-35mm	Gryllidae larger than 25 and less than or equal to 35	0	mm
Gryllidae35-45 mm	Gryllidae larger than 35 and less than or equal to 45	0	mm
Gryllidae45mm	Gryllidae larger than 45	0	mm
OdonataTotalN	Total number of Odonata individuals	2	
Odonata5mm	Odonata smaller than 5	0	mm
Odonata5-15mm	Odonata larger than 5 and less than or equal to 15	0-2	mm
Odonata15-25mm	Odonata larger than 15 and less than or equal to 25	0-2	mm
Odonata25-35mm	Odonata larger than 25 and less than or equal to 35	0-1	mm
Odonata35-45mm	Odonata larger than 35 and less than or equal to 45	0	mm
Odonata45mm	Odonata larger than 45	0	mm
EphemeropteraTotalN	Total number of Ephemeroptera individuals	2	
Ephemeroptera5mm	Ephemeroptera smaller than 5	0	mm
Ephemeroptera5-15mm	Ephemeroptera larger than 5 and less than or equal to 15	2	mm
Ephemeroptera15-25mm	Ephemeroptera larger than 15 and less than or equal to 25	0	mm
Ephemeroptera25-35mm	Ephemeroptera larger than 25 and less than or equal to 35	0	mm
Ephemeroptera35-45mm	Ephemeroptera larger than 35 and less than or equal to 45	0	mm
Ephemeroptera45mm	Ephemeroptera larger than 45	0	mm
ColeopteraTotalN	Total number of Coleoptera individuals	0-497	
Coleoptera5mm	Coleoptera smaller than 5	0-496	mm
Coleoptera5-15mm	Coleoptera larger than 5 and less than or equal to 15	0-168	mm
Coleoptera15-25mm	Coleoptera larger than 15 and less than or equal to 25	0-2	mm
Coleoptera25-35mm	Coleoptera larger than 25 and less than or equal to 35	0	mm
Coleoptera35-45mm	Coleoptera larger than 35 and	0	mm

	less than or equal to 45		
Coleoptera45mm	Coleoptera larger than 45	0	mm
ColeopteraWetMass	Mass before drying	0.0-686.789	mg
HymenopteraTotalN	Total number of Hymenoptera individuals	0-136	
Hymenoptera5mm	Hymenoptera smaller than 5	0-135	mm
Hymenoptera5-15mm	Hymenoptera larger than 5 and less than or equal to 15	0-9	mm
Hymenoptera15-25mm	Hymenoptera larger than 15 and less than or equal to 25	0-2	mm
Hymenoptera25-35mm	Hymenoptera larger than 25 and less than or equal to 35	0	mm
Hymenoptera35-45mm	Hymenoptera larger than 35 and less than or equal to 45	0	mm
Hymenoptera45mm	Hymenoptera larger than 45	0	mm
LepidopteraTotalN	Total number of Lepidoptera individuals	0-18	
Lepidoptera5mm	Lepidoptera smaller than 5	0-14	mm
Lepidoptera5-15mm	Lepidoptera larger than 5 and less than or equal to 15	0-16	mm
Lepidoptera15-25mm	Lepidoptera larger than 15 and less than or equal to 25	0-4	mm
Lepidoptera25-35mm	Lepidoptera larger than 25 and less than or equal to 35	0-2	mm
Lepidoptera35-45mm	Lepidoptera larger than 35 and less than or equal to 45	0-1	mm
Lepidoptera45mm	Lepidoptera larger than 45	0-1	mm
LepidopteraWetMass	Mass before drying	0-82.0	mg
ArachnidaTotalN	Total number of Arachnid individuals	0-196	
Arachnida5mm	Arachnid smaller than 5	0-196	mm
Arachnida5-15mm	Arachnid larger than 5 and less than or equal to 15	0-16	mm
Arachnida15-25mm	Arachnid larger than 15 and less than or equal to 25	0-2	mm
Arachnida25-35mm	Arachnid larger than 25 and less than or equal to 35	0	mm
Arachnida35-45mm	Arachnid larger than 35 and less than or equal to 45	0	mm
Arachnida45mm	Arachnid larger than 45	0	mm
ArachnidaWetMass	Mass before drying	0-219.50	mg
HemipteraTotalN	Total number of Hemiptera individuals	0-396	
Hemiptera5mm	Hemiptera smaller than 5	0-396	mm
Hemiptera5-15mm	Hemiptera larger than 5 and less than or equal to 15	0-33	mm

Hemiptera15-25mm	Hemiptera larger than 15 and less than or equal to 25	0-6	mm
Hemiptera25-35mm	Hemiptera larger than 25 and less than or equal to 35	0	mm
Hemiptera35-45mm	Hemiptera larger than 35 and less than or equal to 45	0	mm
Hemiptera45mm	Hemiptera larger than 45	0	mm
HemipteraWetMass	Mass before drying	0.0-545.74	mg
NeuropteraTotalN	Total number of Neuroptera individuals	0-5	
Neuroptera5mm	Neuroptera smaller than 5	0-4	mm
Neuroptera5-15mm	Neuroptera larger than 5 and less than or equal to 15	0-20	mm
Neuroptera15-25mm	Neuroptera larger than 15 and less than or equal to 25	0-1	mm
Neuroptera25-35mm	Neuroptera larger than 25 and less than or equal to 35	0-1	mm
Neuroptera35-45mm	Neuroptera larger than 35 and less than or equal to 45	0	mm
Neuroptera45mm	Neuroptera larger than 45	0	mm
DipteraTotalN	Total number of Diptera individuals	0-62	
Diptera5mm	Diptera smaller than 5	0-61	mm
Diptera5-15mm	Diptera larger than 5 and less than or equal to 15	0-19	mm
Diptera15-25mm	Diptera larger than 15 and less than or equal to 25	0-1	mm
Diptera25-35mm	Diptera larger than 25 and less than or equal to 35	0	mm
Diptera35-45mm	Diptera larger than 35 and less than or equal to 45	0	mm
Diptera45mm	Diptera larger than 45	0	mm
PhasmatidaeTotalN	Total number of Phasmatid individuals	13	
Phasmatidae5mm	Phasmatid smaller than 5	0-2	mm
Phasmatidae5-15mm	Phasmatid larger than 5 and less than or equal to 15	0-2	mm
Phasmatidae15-25mm	Phasmatid larger than 15 and less than or equal to 25	0-4	mm
Phasmatidae25-35mm	Phasmatid larger than 25 and less than or equal to 35	0-6	mm
Phasmatidae35-45mm	Phasmatid larger than 35 and less than or equal to 45	0-4	mm
Phasmatidae45mm	Phasmatid larger than 45	0-5	mm
MantidaeTotalN	Total number of Mantid individuals	0-20	

Mantidae5mm	Mantid smaller than 5	0-8	mm
Mantidae5-15mm	Mantid larger than 5 and less than or equal to 15	0-15	mm
Mantidae15-25mm	Mantid larger than 15 and less than or equal to 25	0-4	mm
Mantidae25-35mm	Mantid larger than 25 and less than or equal to 35	0-1	mm
Mantidae35-45mm	Mantid larger than 35 and less than or equal to 45	0	mm
Mantidae45mm	Mantid larger than 45	0	mm
OtherOrderTotalN	Total number of individuals from other orders not catalogued	4	
OtherOrder5mm	individuals smaller than 5 from other orders not catalogued	0-4	mm
OtherOrder5-15mm	individuals larger than 5 and less than or equal to 15 from other orders not catalogued	0-3	mm
OtherOrder15-25mm	individuals larger than 15 and less than or equal to 25 from other orders not catalogued	0	mm
OtherOrder25-35mm	individuals larger than 25 and less than or equal to 35 from other orders not catalogued	0-1	mm
OtherOrder35-45mm	individuals larger than 35 and less than or equal to 45 from other orders not catalogued	0	mm
OtherOrder45mm	individuals larger than 45 from other orders not catalogued	0	mm
UnknownTotalN	Total number of individuals in unknown orders	1	
Unknown5mm	individuals smaller than 5 in unknown orders	0-1	mm
Unknown5-15mm	individuals larger than 5 and less than or equal to 15 in unknown orders	0-1	mm
Unknown15-25mm	individuals larger than 15 and less than or equal to 25 in unknown orders	0	mm
Unknown25-35mm	individuals larger than 25 and less than or equal to 35 in unknown orders	0	mm
Unknown35-45mm	individuals larger than 35 and less than or equal to 45 in	0	mm

Unknown45mm	unknown orders individuals larger than 45 in	0	mm
UnknownWetMass	unknown orders Mass before drying	0	mg

Codes Used:

Sampled by and Processed by:

ADT	Alaina Thomas	HN	Hunter Nedland
AJH	Alex Henry	JMG	Jackie Gehrt
ALL	Ashley Lysaught	JMM	Jerusha Matthews
AMC	Amanda Charpinel	JNB	Jordann Baker
ASS	Amie Sommers	LAG	Logan Green
BJR	Breyana Ramsey	LVO	Logan VanOverschelde
CES	Chelsea Sink	MMS	Meredith Schmidt
CRW	Caitie Weichmann	SVR	Suzy Replogle Curnutt
DJS	Dylan Smith	VTN	Valerie Nyguyen
EGS	Emily Samuel		
EJW	Emily Williams		

Note: This dataset is not online yet, but available upon request.

Data Set Code--CBS05

Title of dataset: Estimates of vegetation structure and composition collected on Konza Prairie watersheds and on the nearby Rannell's Preserve

Abstract:

Data set includes estimates of vegetation structure and composition collected during ~monthly sampling events on Konza Prairie watersheds and on the nearby Rannell's Preserve. Vegetation data were collected from three randomly-selected locations were chosen randomly on each watershed; two from outside the 10-ha plot (see project abstract) and one inside the plot. We sampled vegetation on each watershed once a month, during May, June, and July. Additional vegetation data were collected from Grasshopper Sparrow nest sites within ~3 days of nests failing. We used 5 sets of Daubenmire frame measures to determine percent cover of major plant functional groups (at the center of the plot and 5 m from center at the 4 cardinal directions). We estimated visual obstruction by placing a Robel Pole in the middle, and 5 m from the middle of the plot in each of the 4 cardinal directions. For each pole placement, we stood 4 m away with eye 1 m above the ground in each of 4 directions, and counting the highest 5-cm segment not completely obscured by vegetation. At nests, we also estimated the slope and aspect in the center of each plot.

Keywords that describe dataset:

Grasshopper Sparrow, *Ammodramus savannarum*, vegetation sampling, Robel Pole, visual obstruction, Daubenmire frame, percent cover

Date data commenced: May 2014
Date data concluded: ongoing

Principle Investigator: Alice Boyle

RECORD TYPE 1

Data Format Specification:

Variable	Description	Bounds	Units
VegID	Unique identification number		
PlotName	Watershed name (KNZ codes)		
Point	Should be same as 'WaypointName'		
Date	Date Vegetation Sampling Event occurred	23-May-14 to 10-Aug-16	DD-MMM-YY
Observer	Unique code for technicians		See 'Codes Used'
CenterRobel-N	Robel pole reading from 5m north of point	0-10	Decimeter
CenterRobel-E	Robel pole reading from 5m east of point	0-10	Decimeter
CenterRobel-S	Robel pole reading from 5m south of point	0-10	Decimeter

CenterRobel-W	Robel pole reading from 5m west of point	0-10	Decimeter
EdgeRobel-N	Robel pole reading from 5m north of CenterRobel-N point	0-10	Decimeter
EdgeRobel-E	Robel pole reading from 5m east of CenterRobel-E point	0-10	Decimeter
EdgeRobel-S	Robel pole reading from 5m south of CenterRobel-S point	0-10	Decimeter
EdgeRobel-W	Robel pole reading from 5m west of CenterRobel-W point	0-10	Decimeter
PlotShrub	Veg sampling area covered in shrubs	0-100	Percent
Plot%Tree	Veg sampling area covered by trees	0-100	Percent
Aspect	Aspect from nest toward lower elevation	0-360	Degrees
Slope	Slope that nest is on, measured by clinometer	0-25	Degrees
Notes	Additional notes about nest		
DaubenmireID	Unique number to each Daubenmire sample	1-3999	
VegPlotLoc	Location of Daubenmire frame at point		See ‘Codes Used’
LiveGrass	Percent cover of live grass inside Daubenmire frame	0-100	Percent
LiveForb	Percent cover of live forb inside Daubenmire frame	0-100	Percent
Shrub	Percent cover of shrub inside Daubenmire frame	0-100	Percent
DeadGrass	Percent cover of dead grass inside Daubenmire frame	0-100	Percent
OtherDead	Percent cover of other dead vegetation inside Daubenmire frame	0-100	Percent
Litter	Percent cover of litter inside Daubenmire frame	0-100	Percent
Bare	Percent cover of bare ground inside Daubenmire frame	0-100	Percent
Nest	Percent cover of ground the nest covers inside Daubenmire frame	0-100	Percent
WaypointName	Should be same as ‘Point’		
Position Region	UTM zone	14 S	
PositionX	Easting (latitude)		in m, UTM system
PositionY	Northing (longitude)		in m, UTM system

Codes Used:

Observers:

ADT	Alaina Thomas	AMC	Amanda Charpinel	BJR	Breyana Ramsey
AJH	Alex Henry	ASS	Amie Sommers	CES	Chelsea Sink

CRW	Caitie Weichmann	JMG	Jackie Gehrt	SKW	Sarah Winnicki
DDH	Destiney Hett	JMS	Joseph Schmidt	SVR	Suzy Replogle Curnutt
DJS	Dylan Smith	JN	Jessica Nyguyen		
EJW	Emily Williams	LTA	Lauren Angermeyer		
HN	Hunter Nedland	MLG	Michaela Gustafson		

VegPlotLocation:

Center	Center of point
N	North of point
E	East of point
S	South of point
W	West of point

Note: This dataset is not online yet, but available upon request.

Data Set Code--CFC01

Title of data set: Kings Creek long-term fish and crayfish community sampling at Konza at Konza Prairie

Abstract:

Prairie stream fish communities have been monitored seasonally at multiple sites within the Kings Creek watershed since 1995. The objective of this sampling is to evaluate how these communities respond to seasonal and annual variation in environmental conditions. Specifically, we are interesting in testing the resistance and resilience of stream communities in response to flood and drought disturbances. One site in a downstream perennial reach of the watershed has been sampled since 1995. Five sites have been sampled in smaller tributaries in the watershed, two were discontinued due to often lack of flow, two have been sampled since 1995 and one was added in 2008. Sampling is conducted with backpack electrofishing with at least one-person dip netting. At each site, multiple habitats (pools and riffles) are sampled. Length of all fish and crayfish are measured.

Keywords that describe data set:

fish, species diversity, abundance, population

Date data commenced: 05/16/1995
Date data terminated: ongoing

Principle Investigator: Keith B Gido

RECORD TYPE 1: This recordtype monitored seasonally fish communities at multiple sites

Data Format Specification:

Variable	Name	Columns	Format	Units
1.	DataCode			
2.	RecType			
3.	Date			
4.	RecYear			
5.	RecMonth			
6.	Site			
7.	Habitat			
8.	Rep			
9.	Species			
10.	Length			
11.	Count			
12.	Comments			

Data Set Code--CFP01

Title of data set: Fish population on selected watersheds at Konza Prairie

Abstract:

Fishes were collected by habitat (pool or riffle) at 6 sites in the Kings Creek watershed with a single-pass electrofishing survey with one person operating the electrofisher and two people dipnetting. Collections were made seasonally.

Keywords that describe data set:

fish, species diversity, abundance, population

Date data commenced: 05/16/1995
Date data terminated: 08/15/2007

Principle Investigator: Keith B Gido

RECORD TYPE 1: This recordtype contains historical Konza fish species list

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Rectype	record type	1	I1	
2. ListID	Id number in species list	2	I3	
3. AbName	Abbreviation of genus name	3	A6	
4. Commonname	Common Name	4	A6	
5. Sciencename	Scientific Name	5	A6	
6. Comments	Comments	6	C	

RECORD TYPE 2: This recordtype contains historical Konza fish population

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1		
2. Rectype	record type	2	int	number
3. Recdate	Date of record	3	datetime	yyy-mm-dd
4. Watershed	code of watershed	4	nvarchar	
5. Habitat	habitat type	5	nvarchar	
6. Replicate	Replicate of sampling	6	int	number
7. CAMANO	# of the CAMANO species	7	int	number
8. CATCOM	# of the CATCOM species	8	int	number
9. CYPLUT	# of the CYPLUT species	9	int	number
10. ETHNIG	# of the ETHNIG species	10	int	number
11. ETHSPE	# of the ETHSPE species	11	int	number
12. GAMAFF	# of the GAMAFF species	12	int	number
13. LEPCYA	# of the LEPCYA species	13	int	number

14. LEPHUM	# of the LEPHUM species	14	int		number
15. LEPMAC	# of the LEPMAC species	15	int		number
16. LEPMEG	# of the LEPMEG species	16	int		number
17. LUXCOR	# of the LUXCOR species	17	int		number
18. NOTEXI	# of the NOTEXI species	18	int		number
19. NOTSTR	# of the NOTSTR species	19	int		number
20. PHEMIR	# of the PHEMIR species	20	int		number
21. PHOERY	# of the PHOERY species		21	int	number
22. PIMNOT	# of the PIMNOT species	22	int		number
23. PIMPRO	# of the PIMPRO species	23	int		number
24. SEMATR	# of the SEMATR species	24	int		number
25. MOXMIC	# of the MOXMIC species	25	int		number
26. ORCNAI					
27. ORCNEG					

Data Set Code--CGP01

Title of data set: Gall-insect densities on slected plant speieis in watersheds with different fire frequencies

Abstract:

Long-term monitoring of gall-insect densities on Solidago canadensis, Vernonia baldwinii, and Ceanothus herbaceous. Gall abundances are censused in watersheds burned at one- to twenty- year intervals to asses the role of fire frequency and time since fire on gall-insect population dynamics. The data sets contain the following: Watershed fire frequency, number of growing seasons since last fire, plant species, number of galled stems, and number of censused stems. Censuses conducted for the 1989-1996 growing seasons except 1992 and 1994, next scheduled census is fall 1997. See methods manual pages 64-65 for further sampling details.

Keywords that describe data set:

Gall-insects, population dynamics, fire, Diptera, Lepidoptera Compositae, Rhamnaceae, Ceanothus, Solidago, Vernonia

Date data commenced: 10/1/88
Date data terminated: 4/30/1996

Principle Investigator: David C. Hartnett

RECORD TYPE 1

Data Format Specification:

	Variable	Columns	Format
1.	Datacode	1-5	A5
2.	Rectype	6	I1
3.	Year	7-8	I2
4.	Month		
5.	Day		
6.	Watershed	13-16	A4
7.	Fire Frequency	20-21	I2
8.	Last Fire	25-26	I2
9.	Last Wildfire	31-33	I2
10.	Species	40-50	A11
11.	Census Replicate	55-56	I2
12.	Galled Stems	64-67	I3
13.	# Sampled Stems	75-77	I3

Data Set Code--CGR01

Title of data set: Sweep Sampling of Grasshoppers on Konza Prairie LTER watersheds in 1981 only

Abstract:

Sweep samples for estimating grasshopper (Acrididae) composition and relative abundance at one site for each of 12 Konza Prairie LTER fire/grazing/soil treatment combinations (3 fire treatments x 2 soils x 2 grazing treatments). Samples were collected in June, August, and September. At each site on each occasion, 18 sets of 10 sweeps each (180 sweeps total) were taken. Stored data include for each site on each occasion: total number of each species (all instars combined) collected and total number for each instar for each species (180 sweeps combined).

Keywords that describe data set:

consumers, grasshoppers, Acrididae, insects, relative abundance, sweep sampling, species, species composition

Date data commenced: 04/01/1981
Date data terminated: 12/01/1981

Principle Investigator: Anthony Joern

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soiltype	Soil Type (Tully or Florence)	18-19	A2	
8. Time	Time sampling began	21-24	I4	Hours
9. Wind	Wind speed at start of sampling mean of 5 measurements at 30 second intervals 5' aboveground	26-29	F4.1	Km hr^{-1}
10. Temp	Air temp at start of sampling ground level in shade	31-34	F4.1	deg C
11. RelHum	Relative humidity at ground level in shade at outset of sampling; determined by wet/dry bulb psychrometer	36-37	I2	%
12. Cloudcov	% of Cloud cover directly overhead (estimated by eye)	39-41	I3	%

Codes used:

1. Soiltype	Tu	Tully soil
2. Soiltype	Fl	Florence soil

RECORD TYPE 2

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Soiltype	Soil Type (Tully or Florence)	18-19	A2
8. Spcode	Species Code	21-22	I2
9. Species*	Abbreviated Species Name	24-43	A20
10. S1	Number of individuals in sample 1	45-46	I2
11. S2	Number of individuals in sample 2	48-49	I2
12. S3	Number of individuals in sample 3	51-52	I2
13. S4	Number of individuals in sample 4	54-55	I2
14. S5	Number of individuals in sample 5	57-58	I2
15. S6	Number of individuals in sample 6	60-61	I2
16. S7	Number of individuals in sample 7	63-64	I2
17. S8	Number of individuals in sample 8	66-67	I2
18. S9	Number of individuals in sample 9	69-70	I2
19. S10	Number of individuals in sample 10	72-73	I2
21. Total	Total # of individuals all samples	76-79	I4

Codes used:

1. Soiltype	Tu	Tully soil
2. Soiltype	Fl	Florence soil

For list of Species codes used, see CGR011_species_list.1981.1 in Appendix F.

RECORD TYPE 3

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Soiltype	Soil type (Tully or Florence)	18-19	A2
8. Spcode	Species Code	21-22	I2
9. Species	Abbreviated species name	24-43	A20
10. S11	Number of individuals in sample 11	45-46	I2
11. S12	Number of individuals in sample 12	48-49	I2
12. S13	Number of individuals in sample 13	51-52	I2

13. S14	Number of individuals in sample 14	54-55	I2
14. S15	Number of individuals in sample 15	57-58	I2
15. S16	Number of individuals in sample 16	60-61	I2
16. S17	Number of individuals in sample 17	63-64	I2
17. S18	Number of individuals in sample 18	66-67	I2
18. Total	Total # of individuals/all samples	69-71	I3

Codes used: see record type 2

RECORD TYPE 4

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Soiltype	Soil Type (Florence or Tully)	18-19	A2
8. Spcode	Species code	21-22	I2
9. Species	Abbreviated species name	24-43	A20
10. First	# of individuals in first instar	45-47	I3
11. Second	# of individuals in second instar	49-51	I3
12. Third	# of individuals in third instar	53-55	I3
13. Fourth	# of individuals in fourth instar	57-59	I3
14. Fifth	# of individuals in fifth instar	61-63	I3
15. Adults	Total number of adults	65-67	I3
16. Total	Total # of individuals of all stages	69-72	I4

Codes used: See Record type 2

Data Set Code--CGR02

Title of data set: Sweep Sampling of Grasshoppers on Konza Prairie LTER watersheds (1982-present)

Abstract:

Sweep samples were taken for grasshoppers (Acrididae) at two sites for each of 14 Konza Prairie LTER watersheds. Samples are taken in late July to early August. At each site on each occasion, 10 sets of 20 sweeps (200 sweeps total) are taken. Stored data include for each site on each occasion: total number of each species (all instars combined) collected and total number for each instar for each species (200 sweeps combined).

Keywords that describe data set:

Consumers, grasshoppers, Acrididae, insects, relative abundance, sweep sampling, species, species composition

Date data commenced: 04/01/1982
Date data terminated: ongoing

Principle Investigator: Anthony Joern

RECORD TYPE 1

Data Format Specification:

Variable	Descripton	Units
1. Datacode		
2. Rectype		
3. Year		
4. Month		
5. Day		
6. Watershed		
7. Soiltype	Soil Type (Florence)	
8. Repsite	Replicate site for a treatment	
9. Time	Time sampling began	24-hour clock
10. W 1	1st wind speed	mph
11. W 2	2nd wind speed	mph
12. W 3	3rd wind speed	mph
13. W 4	4th wind speed	mph
14. W 5	5th wind speed	mph
15. MPH	Mean of 5 measurements	mph
16. KPH	Mean of 5 measurements	kph
17. F	Air temperature	Degrees Fahrenhiet
18. C	Air temperature	Degrees Celsius
19. Cloud	Cloud cover directly overhead	%

Codes used:

1. Soiltype	FL	Florence soil

2. Soiltype	TU	Tully soil
3. Repsite	A	Replicate site A for treatment
4. Repsite	B	Replicate site B for treatment

RECORD TYPE 2

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Soiltype	Soil type (Florence)	18-19	A2
8. Repsite	Replication site for a watershed/soil	21	A1
9. Spcode	Species Code	23-24	I2
10. Species	Abbreviated name of species	26-45	A20
11. S1	# of individuals in sample 1	47-48	I2
12. S2	# of individuals in sample 2	50-51	I2
13. S3	# of individuals in sample 3	53-54	I2
14. S4	# of individuals in sample 4	56-57	I2
15. S5	# of individuals in sample 5	59-60	I2
16. S6	# of individuals in sample 6	62-63	I2
17. S7	# of individuals in sample 7	65-66	I2
18. S8	# of individuals in sample 8	68-69	I2
19. S9	# of individuals in sample 9	71-72	I2
20. S10	# of individuals in sample 10	74-75	I2
21. Total	Total # of individuals/all samples	77-79	I3
22. Comments		81-	

Codes used:

1. Soiltype	FL	Florence soil
2. Soiltype	TU	Tully soil
3. Repsite	A	Replicate site A for treatment
4. Repsite	B	Replicate site B for treatment

Species lists:
Please note that some of the species codes have changed after 1991.
Files up to (and including) 1991 used the following codes:
CGR022-23_species_list.1982.1 in Appendix F/Archive_F.

After 1991, these codes were used:
CGR022-23_species_list.1991.1 in Appendix F/Archive_F.

Current Code used:
CGR022-23_species_list in Appendix F

RECORD TYPE 3

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Soiltype	Soil type (Tully or Florence)	18-19	A2
8. Repsite	Replication site for a treatment	21	A1
9. Spcode	Species code	23-24	I2
10. Species	Abbreviated species name	26-45	A20
11. First	# of individuals 1st instar	47-49	I3
12. Secthird	# of individuals 2nd & 3rd instars	51-53	I3
13. Forth	# of individuals 4th instar	55-57	I3
14. Fifth	# of individuals 5th instar	59-61	I3
15. Female*	# of individuals of adult females	63-65	I3
16. Male*	# of individuals of adult males	67-69	I3
17. Total	Total # of individuals/all samples	71-74	I4
18. Comments		76-	

Codes used: See record type 2.

*Until 2003 the male and female columns were not in the correct order on the data sheets. Starting with 2004, the columns on the data sheets were switched to reflect what was online. *C*-V2011.2

Data Set Code--CGR03

Title of Data Set: Effects of Spring Burning on Grasshopper Nymphs (1982)

Abstract:

Sweep samples were taken for grasshoppers (Arcididae) at two upland sites on 5 watersheds at approximately two week intervals, June-Sept 1982. At each site on each occasion, 20 sets of 20 sweeps (400 sweeps total) were taken. Stored data include for each site on each occasion: total number of each species (all instars combined) collected and total number for each instar for each species (400 sweeps combined).

Keywords that describe data set:

consumers, grasshoppers, Acrididae, insects, sweep sampling, relative abundance

Date data commenced: 06/01/1982
Date data terminated: 09/02/1982

Principle Investigator: Anthony Joern

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Repsite	Replicate site for a watershed	18	A1	
8. Time	Time sampling began	20-23	I4	Hours
9. Wind	Wind speed at start of sampling (mean of 5 measurements taken at 30 second intervals 5' above ground)	25-28	F4.1	Km/hr
10. Temp	Air temp at start of sampling	30-33	F4.1	(C)
11. Relhum	Relative humidity at ground level in shade at outset of sampling determined by wet/dry bulb psychrometer.	35-36	I2	%
12. Cloudcov	% Cloud cover directly overhead at start of sampling, estimated by eye. ground level in shade	38-40	I3	%
Codes used:				
Repsite	A	Replication site A for a treatment		
Repsite	B	Replication site B for a treatment		

RECORD TYPE 2

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Repsite	Replication site for watershed/soiltype	18	A1
8. Spcode	Species code	20-21	I2
9. Species	Abbreviated name of species	23-42	A20
10. S1	# of individuals in sample 1	44-45	I2
11. S2	# of individuals in sample 2	47-48	I2
12. S3	# of individuals in sample 3	50-51	I2
13. S4	# of individuals in sample 4	53-54	I2
14. S5	# of individuals in sample 5	56-57	I2
15. S6	# of individuals in sample 6	59-60	I2
16. S7	# of individuals in sample 7	62-63	I2
17. S8	# of individuals in sample 8	65-66	I2
18. S9	# of individuals in sample 8	68-69	I2
19. S10	# of individuals in sample 9	71-72	I2

Codes used:

Repsite	A	Replication site A for a treatment
Repsite	B	Replication site B for a treatment
Spcode	e.g. 01	e.g. Brachystola magna (See CGR02)

RECORD TYPE 3

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Repsite	Replication site for watershed/soil type	18	A1
8. Spcode	Species code	20-21	I2
9. Species	Abbreviated name of species	23-42	A20
10. S11	# of individuals in sample 11	44-45	I2
11. S12	# of individuals in sample 12	7-48	I2
12. S13	# of individuals in sample 13	50-51	I2
13. S14	# of individuals in sample 14	53-54	I2
14. S15	# of individuals in sample 15	56-57	I2
15. S16	# of individuals in sample 16	9-60	I2
16. S17	# of individuals in sample 17	62-63	I2
17. S18	# of individuals in sample 18	65-66	I2
18. S19	# of individuals in sample 19	68-69	I2
19. S20	# of individuals in sample 20	71-72	I2

20. Total	74-76	I3

Codes used: See CGR02

RECORD TYPE 4

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Repsite	Replication site for a treatment	18	A1
8. Spcode	Species code	20-21	I2
9. Species	Abbreviated species name	23-42	A20
10. First	# of individuals in 1st instar	44-46	I3
11. Second	# of individuals in 2nd instar	48-50	I3
12. Third	# of individuals in 3rd instar	52-54	I3
13. Fourth	# of individuals in 4th insta	56-58	I3
14. Fifth	# of individuals in 5th instar	60-62	I3
15. Females	# of individuals of adult females	64-66	I3
16. Males	# of individuals of adult males	68-70	I3
17. Total	Total # of ind./all stages 400 sweeps	72-75	I4

Codes used:

Repsite	A	Replication site A for a treatment
Repsite	B	Replication site B for a treatment
Spcode	e.g. 01	e.g. Brachystola magna (see CGR02)

Data Set Code--CGR05

Title of data set: Effects of fire frequency on composition of grasshopper assemblages (1983)

Abstract:

Sweep samples were taken for grasshoppers (Acrididae) at two sites for each of 14 Konza Prairie LTER watersheds. Samples are taken in late July to early August. At each site on each occasion, 10 sets of 20 sweeps (200 sweeps total) are taken. Stored data include for each site on each occasion: total number of each species (all instars combined) collected and total number for each instar for each species (200 sweeps combined).

Keywords that describe data set:

community, consumer, relative abundance, grasshoppers, Acrididae, insects, sweep sampling

Date data commenced: 08/05/1983
Date data terminated: 08/10/1983

Principle Investigator: Anthony Joern

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Repsite	Replicate site for a watershed	18	I1
8. Spcode	Species Code	20-21	I2
9. Species	Abbreviaed species name	23-42	A20
10. S1	s1-s20 Number of individuals in sample	44-45	I2
11. S2	#1-20 (20 sweeps)	47-48	I2
12. S3		50-51	I2
13. S4		53-54	I2
14. S5		56-57	I2
15. S6		59-60	I2
16. S7		62-63	I2
17. S8		65-66	I2
18. S9		68_69	I2
19. S10		71-72	I2
30. Total	Total number of individuals in all samples combined (400 sweeps)		

Variable Code Specification Form

RECORD TYPE 2

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Repsite	Replicate site for a watershed	18	I1
8. Spcode	Species Code	20-21	I2
9. Species	Abbreviated species name	23-42	A20
10. S11	s1-s20 Number of individuals in sample	44-45	I2
11. S12	#1-20 (20 sweeps)	47-48	I2
12. S13		50-51	I2
13. S14		53-54	I2
14. S15		56-57	I2
15. S16		59-60	I2
16. S17		62-63	I2
17. S18		65-66	I2
18. S19		68-69	I2
19. S20		71-72	I2
20. Total	Total number of individuals in all samples	74-76	I3

RECORD TYPE 3

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Repsite	Replicate site for a treatment	18	A1
8. Spcode	Abbreviated species name	20-21	I2
9. Species	Species code	23-42	A20
10. First	# of individuals in 1st instar	44-46	I3
11. Second	# of individuals in 2nd instar	48-50	I3
12. Third	# of individuals in 3rd instar	52-54	I3
13. Fourth	# of individuals in 4th instar	56-58	I3
14. Fifth	# of individuals in 5th instar	60-62	I3
15. Female	# of individuals of adult female	64-66	I3
16. Males	# of individuals of adult males	68-70	I3
17. Total	Total # of ind/all stages-400 sweeps	72-75	I4

14. Fifth

Codes used:

Repsite	A	Replicate site A for a treatment
Repsite	B	Replicate site B for a treatment
Spcode	e.g. 01	e.g. Brachystola magna (see CGR02)

Data Set Code--CMY01

Title of Data Set: Mycorrhizal colonization and plant community responses to long-term suppression of mycorrhizal fungi

Abstract:

Twenty replicate permanent 2x2 m plots were established in early 1991 along a randomly located transect, with a 2m space between each plot, on the following watersheds: 1B, 1D, annually burned HQB, 10B, 20D and infrequently burned HQB. Ten of the plots were randomly assigned as long-term mycorrhizal suppression plots. In each of these plots, AM fungi were suppressed by the application of the fungicide benomyl as a soil drench (7.5 liters per plot) at the rate of 1.25 g/m^2 (active ingredient). The mycorrhizal suppression plots were treated bi-weekly throughout each growing season (April through October) beginning in 1991. The control plots each received no fungicide, but an equivalent volume of water (7.5 liters) was applied bi-weekly. To evaluate the effectiveness of the fungicide, three soil cores (2.5 cm diameter x 14 cm deep) were removed from both fungicide-treated and control plots each October throughout the study. Roots were extracted from the soil, washed free of soil, stained in trypan blue (Phillips and Hayman, 1970), and examined microscopically to assess percentage root colonization by mycorrhizal fungi using a Petri dish scored in 1-cm squares (Daniels et al. 1981).

The vegetation within all plots was sampled in May and September of 1991, 1993, and 1995. In each plot, the cover and frequency of each plant species was estimated using a modified point-frame method (Cook and Stubbendieck, 1986). A frame containing ten 1m long vertical pins arranged in parallel at 10 cm apart was placed systematically at 4 locations (each 25 cm apart) within the central 1 m^2 of the plot (4 frames=40 pins per plot). Every contact of the aboveground structures of each plant species with each pin was recorded. From the pin-contact data, the relative cover was calculated for each plant species (total number of pin-contacts mad by individual of species *x*/total number of pin-contacts of all species) for each of the two sample dates each year and for each species the maximum value attained between the two sample dates was retained for analysis. The frequency (percentage of the 10-pin frames in which species *x* was encountered) also was estimated for each plant species. The total number of pin contacts of all species was used as an index of total canopy density in each plot. Previous use of this pin-contact method on these tallgrass prairie sites showed that the total number of pin contacts of all species is also strongly correlated with total aboveground plant biomass (Hickman, 1996). Plant species richness (mean number of species per plot), species diversity (Shannon's H'), and evenness were calculated using both types of abundance data (frequency and cover).

Keywords that describe data set:

Mycorrhizae, fungi, roots, plant species composition, species diversity, species composition, community composition,

Data data commenced: 03/1/1991
Data data terminated: 10/30/1995

Principle Investigator: Gail W.T. Wilson

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	A1
3. Year		7-8	I2
4. Month		9-11	I2
5. Day		12-13	I2
6. Transect		14	
7. Burn	u or b u=infrequent b=annual	16	
8. Plot	1-20	18-19	
9. Fungicide	myc=control ben=fungicide	21-23	
10. Species#	species abbreviation code (see PVC011_species_list.1981.1)	25-27	
11. Form	growth form	29	
12. Sample	repeated measure 1-4	31	
13. Vegetative	# vegetative pin contacts	33-35	
14. Reproductive	# reproductive pin contacts	37-38	

Transects:
a=HQB
b=HQB
c=1B
d=10B
e=1D
f=20D

Data Set Code--CPC01

Title of data set: Annual census of greater prairie chickens on leks at Konza Prairie

Abstract:

Location of leks and number of birds per lek are censused during late April and early May across Konza Prairie to document year to year densities of greater prairie chickens.

Keywords that describe data set:

greater prairie chicken, birds, consumers, leks, adundance, populations

Date data commenced: 03/01/1981
Date data terminated: 05/02/2008

Principle Investigator: Alice Boyle

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Hour		17-20	I4
7. Numbirds	Number of birds	22-24	I3
8. Gridloc	Grid location of sighting	27-29	I3
9. Loctype	L=lek F=flush	32	A1
10. UTM1	first UTM number 07-	35-41	I7
11. UTM2	second UTM number 43-	43-49	I7
12. Watersheds		52-65	A4
13. Comments		67-	C13

Data Set Code--CPC02

Title of data set: Census of greater prairie chicken on leks at Konza Prairie

Abstract:

Location of leks and number of birds per lek are censused during late April and early May across Konza Prairie to document year to year densities of greater prairie chickens.

Keywords that describe data set:

greater prairie chicken, bird, leks

Date data commenced: 03/25/2000
Date data terminated: 04/26/2004

Principle Investigator: Alice Boyle

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Hour		15-28	A13
7. Numbirds	Number of birds	31-33	I3
8. Gridloc	Grid location of sighting	34-38	I3
9. Comments		41-80	A40

Data Set Code--CSA02

Title of data set: Soil Macroarthropod Densities and Biomass on annually burned and unburned watersheds

Abstract:

Belowground densities and biomass of macroarthropods were measured by hand-sorting techniques. Total herbivore biomass was greater in soils of annually burned sites, and was composed largely of white grubs (Scarabaeidae).

Keywords that describe data set:

soil invertebrates, consumers, insects, arthropods, herbivores, detritivores, predators, Scarabaeidae, Cicadidae

Date data commenced: 11/22/1981
Date data terminated: 04/01/1983

Principle Investigator: John Blair

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil		21	A1	
8. Trt		23-24	I2	
9. Scarb-L	# of Scarabaeidae beetle larvae	28-30	I3	#/.1m2
10. Scarb-A	# of Scarabaeidae beetle adults	32	I1	#/.1m2
11. C-larv	Chrysomelid, Weevil, misc herbivorous larvae	34-35	I2	#/.1m2
12. Cicada	# of Cicada nymphs	37-38	I2	#/.1m2
13. Wire	# of Wireworms	40	I1	#/.1m2
14. Pred-L	# of Predaceous beetle larvae,carabids, etc	42-43	I2	#/.1m2
15. Millpd	# of Millipedes	45-46	I2	#/.1m2
16. Centpd	# of Centipede	48	I1	#/.1m2
17. Meloid	# of Meloidae	50	I1	#/.1m2
18. Lep-L	# of Lepidoptera larvae	52	I1	#/.1m2
19. Sow	# of Sow bugs	54	I1	#/.1m2
20. Pred-A	# of Adult beetles (predators)	56	I1	#/.1m2
21. Other	# of other (cockroaches, etc.	58	I1	#/.1m2
22. Mherb	of Misc herbivores (e.g. adult chrysomelids) Start 1983	60	I1	#/.1m2

23. Mdet	# of Misc detritivores (e.g. Bibionidae larvae) Start 1983	62-63	I1	#/.1m2
24. Earth	# of Earthworms Start 1983	65-66	I1	#/.1m2

Codes Used:

Name	Value	Code Value
Soil	T	Tully
TRT	AB	Annually burned
	UB	Unburned
	1B	Burned once recently
	2B	Two year burn
	M3	Mowed 3 times a year
	M1	Mowed once a year

RECORD TYPE 2

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil		21	A1	
8. Trt		23-24	I2	
9. Bscarb-L	# of Scarabaedidae beetle larvae	29-31	I3	g/.1m2
10. Bscarb-A	Chrysomelid, Weevil, misc herbivorous larvae	33-34	I1	g/.1m2
11. Bc-larv	# of Scarabaedidae beetel adults	36-37	I2	g/.1m2
12. Bcicada	# of cicada nymphs	39-40	I2	g/.1m2
13. Bwire	# of wireworms	42-43	I2	g/.1m2
14. Bprep-L	# of predaceous beetle larvae (carabids, etc.)	45-46	I2	g/.1m2
15. Bmillpd	# of Millipedes	48-50	I3	g/.1m2
16. Bcentpd	# of Centipedes	52-53	I2	g/.1m2
17. Bmeloid	# of Meloidae	55-56	I2	g/.1m2
18. Blep-L	# of Lepidoptera larvae	58-59	I2	g/.1m2
19. Bsow	# of Sow bugs	61-62	I2	g/.1m2
20. Bpred-A	# of Adult beetles (predators)	64-66	I3	g/.1m2
21. Bother	# of Other (cockroaches, etc.)	68-69	I2	g/.1m2
22. Bmherb	# of Misc. herbivores (e.g. adult chrysomelids)	71-72	I2	g/.1m2
23. Bmdet	# of Misc detritivores (e.g. Bibionidae larvae)	74-75	I2	g/.1m2
24. Bearth	# of Earthworms	77-78	I2	g/.1m2

Codes used:

Name	Value	Code Value
Soil	T	Tully

TRT	AB	Annually burned
	UB	Unburned
	1B	Burned once recently
	2B	Two year burn
	M3	Mowed 3 times a year
	M1	Mowed once a year

Data Set Code--CSM01

Title of Data Set: Seasonal summary of numbers of small mammals on 14 LTER traplines in prairie habitats

Abstract:

Data set contains seasonal summaries (spring and autumn) of the number of individuals of each species of small mammal captured (relative abundance) on each grassland trapline. Each record contains year, season, trapline and number of individuals captured of each species. These live trap records are based on daily captures during two 4-day trapping periods in spring (late February to early April) and autumn (early October to mid-November) for each of 14 permanent traplines established on seven fire-grazing treatments (two traplines per treatment). These seven fire-grazing treatments include three sites that are grazed by bison (1 unburned, 1 annual burn and 1 4-year burn) and four sites that are not grazed by bison (1 unburned, 1 annual burn and 2 4-year burn).

Keywords that describe data set:

consumers, prairie, relative abundance, rodents, shrews, small mammals, spring fire, species composition, mammals

Date data commenced: 10/20/1981
Date data terminated: 12/30/2013

Principal Investigator: Donald W. Kaufman

RECORD TYPE 1

Data Format Specification:

Variable	Name
1. Datacode	CSM01
2. Rectype	
3. Year	4 digits (e.g., 1981)
4. Season	Sampling season
5. Trapline	Watershed and trapline
6. Pm	Relative abundance of *Peromyscus maniculatus*
7. Rmeg	Relative abundance of *Reithrodontomys megalotis*
8. Sh	Relative abundance of *Sigmodon hispidus*
9. Bh	Relative abundance of *Blarina hylophaga*
10. Rmon	Relative abundance of *Reithrodontomys montanus*
11. St	Relative abundance of *Spermophilus tridecemlineatus*
12. Mo	Relative abundance of *Microtus ochrogaster*
13. Pl	Relative abundance of *Peromyscus leucopus*
14. Ch	Relative abundance of *Chaetodipus hispidus*
15. Mm	Relative abundance of *Mus musculus*
16. Nf	Relative abundance of *Neotoma floridana*
17. Sc	Relative abundance of *Synaptomys cooperi*
18. Zh	Relative abundance of *Zapus hudsonius*

19. Cp	Relative abundance of *Cryptotis parva*
20. Mp	Relative abundance of *Microtus pinetorum*

Codes used

Season	AU	Autumn
	SP	Spring
Line	E	East
	W	West
	N	North
	S	South

Data Set Code--CSM02

Title of Data Set: Seasonal summary of numbers of small mammals on the four LTER gallery forest and limestone ledges traplines in wooded habitats at Konza Prairie

Abstract:

Data set contains seasonal summaries (spring, summer and autumn) of the number of individuals of each species of small mammal captured (relative abundance) on each woodland trapline. Each record contains year, season, trapline and number of individuals captured of each species. These live trap records are based on daily captures during a single 4-day trapping period in spring (early March to early April), summer (early July to late July) and autumn (mid-October to early December) for each of four permanent traplines established in two habitats (two traplines in gallery forest and two on limestone ledges). Bison did not graze any of the treatment units during the period of study.

Keywords that describe data set:

consumers, forest, gallery forest, relative abundance, rodents, shrews, small mammals, spring fire, wooded limestone ledges, mammals, specieis composition

Date data commenced: 12/01/1981
Date data terminated: 03/28/1988

Principal Investigator: Donald W. Kaufman

RECORD TYPE 1

Data Format Specification:

Variable	Name
1. Datacode	CSM02
2. Rectype	
3. Year	4 digits (e.g., 1981)
4. Season	Sampling season
5. Trapline	Watershed and trapline
6. Pm	Relative abundance of *Peromyscus maniculatus*
7. Rmeg	Relative abundance of *Reithrodontomys megalotis*
8. Sh	Relative abundance of *Sigmodon hispidus*
9. Bh	Relative abundance of *Blarina hylophaga*
10. Rmon	Relative abundance of *Reithrodontomys montanus*
11. St	Relative abundance of *Spermophilus tridecemlineatus*
12. Mo	Relative abundance of *Microtus ochrogaster*
13. Pl	Relative abundance of *Peromyscus leucopus*
14. Ch	Relative abundance of *Chaetodipus hispidus*
15. Mm	Relative abundance of *Mus musculus*
16. Nf	Relative abundance of *Neotoma floridana*
17. Sc	Relative abundance of *Synaptomys cooperi*
18. Zh	Relative abundance of *Zapus hudsonius*
19. Cp	Relative abundance of *Cryptotis parva*

20. Mp Relative abundance of *Microtus pinetorum*

Codes used

Season	AU	Autumn
	SP	Spring
	SU	Summer
Line	L1	L1 trapline on limestone ledge
	L2	L2 trapline on limestone ledge
	XP	XP trapline on forest grid
	G	G trapline on forest grid

Data Set Code--CSM03

Title of Data Set: Seasonal summary of numbers of small mammals on the two LTER traplines in planted grassland (Brome fields) habitats

Abstract:

Data set contains seasonal summaries (spring, summer and autumn) of the number of individuals of each species of small mammal captured (relative abundance) on each planted grassland (brome) trapline. Each record contains year, season, trapline and number of individuals captured of each species. These live trap records are based on daily captures during a single 4-day trapping period in spring (early March to mid-April), summer (early July to early August) and autumn (mid-October to mid-November) for each of two permanent traplines established in two sites (one trapline in each site). Bison did not graze either brome field during the period of study.

Keywords that describe data set:

brome, planted grasslands, relative abundance, rodents, shrews, small mammals, spring fire, mammals, consumers, species composition

Date data commenced: 11/06/1981
Date data terminated: 10/16/1986

Principal Investigator: Donald W. Kaufman

RECORD TYPE 1

Data Format Specification:

Variable	Name
1.Datacode	CSM03
2. Rectype	
3. Year	4 digits (e.g., 1981)
4. Season	Sampling season
5. Trapline	Watershed and trapline
6. Pm	Relative abundance of *Peromyscus maniculatus*
7. Rmeg	Relative abundance of *Reithrodontomys megalotis*
8. Sh	Relative abundance of *Sigmodon hispidus*
9. Bh	Relative abundance of *Blarina hylophaga*
10. Rmon	Relative abundance of *Reithrodontomys montanus*
11. St	Relative abundance of *Spermophilus tridecemlineatus*
12. Mo	Relative abundance of *Microtus ochrogaster*
13. Pl	Relative abundance of *Peromyscus leucopus*
14. Ch	Relative abundance of *Chaetodipus hispidus*
15. Mm	Relative abundance of *Mus musculus*
16. Nf	Relative abundance of *Neotoma floridana*
17. Sc	Relative abundance of *Synaptomys cooperi*
18. Zh	Relative abundance of *Zapus hudsonius*
19. Cp	Relative abundance of *Cryptotis parva*

Codes used

Season	AU	Autumn
	SP	Spring
	SU	Summer
Line	N	North
	S	South

Data Set Code--CSM04

Title of Data Set: Seasonal summary of numbers of small mammals on the eight LTER seasonal burn traplines in prairie habitats

Abstract:

Data set contains seasonal summaries (spring and autumn) of the number of individuals of each species of small mammal captured (relative abundance) on each prairie trapline. Each record contains year, season, trapline and number of individuals captured of each species. These live trap records are based on daily captures during a single 4-day trapping period in spring (early March to early April) and autumn (early October to early November) for each of eight permanent traplines established in four treatment types (two traplines per treatment). These four treatment types are either burned in autumn (2), in winter (2), in spring (2) or in summer (2). Bison do not graze any of the four treatment types.

Keywords that describe data set:

prairie, relative abundance, rodents, seasonal fires, shrews, small mammals, mammals, consumers, species composition

Date data commenced: 10/17/1994
Date data terminated: 12/30/2011

Principal Investigator: Donald W. Kaufman

RECORD TYPE 1

Data Format Specification:

Variable	Name
1. Datacode	CSM04
2. Rectype	
3. Year	4 digits (e.g., 1981)
4. Season	Sampling season
5. Trapline	Watershed and trapline
6. Pm	Relative abundance of *Peromyscus maniculatus*
7. Rmeg	Relative abundance of *Reithrodontomys megalotis*
8. Sh	Relative abundance of *Sigmodon hispidus*
9. Bh	Relative abundance of *Blarina hylophaga*
10. Rmon	Relative abundance of *Reithrodontomys montanus*
11. St	Relative abundance of *Spermophilus tridecemlineatus*
12. Mo	Relative abundance of *Microtus ochrogaster*
13. Pl	Relative abundance of *Peromyscus leucopus*
14. Ch	Relative abundance of *Chaetodipus hispidus*
15. Mm	Relative abundance of *Mus musculus*
16. Nf	Relative abundance of *Neotoma floridana*
17. Sc	Relative abundance of *Synaptomys cooperi*
18. Zh	Relative abundance of *Zapus hudsonius*

19. Cp	Relative abundance of *Cryptotis parva*	

Codes used

Season	AU	Autumn
	SP	Spring
Line	A	West
	B	East

Data Set Code--CSM05

Title of Data Set: Seasonal summary of numbers of small mammals on the six LTER traplines in prairie habitats on which fire regime has been reversed at Konza Prairie

Abstract:

Data set contains seasonal summaries (spring and autumn) of the number of individuals of each species of small mammal captured (relative abundance) on each grassland trapline. Each record contains year, season, trapline and number of individuals captured of each species. These live trap records are based on daily captures during a single 4-day trapping period in spring (mid-March to early April) and autumn (late October to early December) for each of six permanent traplines established on two fire treatments (three traplines per treatment). These two fire treatments include one treatment that was changed from a 20-year burn to an annual burn and one that was changed from an annual burn to 20 years between fires. Bison do not graze these two habitat types.

Keywords that describe data set:

prairie, relative abundance, reversal trapline, rodents, shrews, small mammals, spring fire, mammals, consumers, species composition

Date data commenced: 12/07/1999
Date data terminated: 12/30/2010

Principal Investigator: Donald W. Kaufman

RECORD TYPE 1

Data Format Specification:

Variable	Name
1. Datacode	CSM05
2. Rectype	
3. Year	4 digits (e.g., 1981)
4. Season	Sampling season
5. Trapline	Watershed and trapline
6. Pm	Relative abundance of *Peromyscus maniculatus*
7. Rmeg	Relative abundance of *Reithrodontomys megalotis*
8. Sh	Relative abundance of *Sigmodon hispidus*
9. Bh	Relative abundance of *Blarina hylophaga*
10. Rmon	Relative abundance of *Reithrodontomys montanus*
11. St	Relative abundance of *Spermophilus tridecemlineatus*
12. Mo	Relative abundance of *Microtus ochrogaster*
13. Pl	Relative abundance of *Peromyscus leucopus*
14. Ch	Relative abundance of *Chaetodipus hispidus*
15. Mm	Relative abundance of *Mus musculus*
16. Nf	Relative abundance of *Neotoma floridana*
17. Sc	Relative abundance of *Synaptomys cooperi*
18. Zh	Relative abundance of *Zapus hudsonius*

19. Cp	Relative abundance of *Cryptotis parva*	

Codes used

Season	AU	Autumn
	SP	Spring
Line	A	20-station trapline closest to shared fireguard
	B	20-station trapline farthest from shared fireguard
	C	10 station trapline

Data Set Code--CSM06

Title of Data Set: Seasonal summary of numbers of small mammals on miscellaneous traplines in prairie habitats that were trapped from 1 to 11 years at Konza Prairie

Abstract:

Data set contains seasonal summaries (spring, summer and autumn) of the number of individuals of each species of small mammal captured (relative abundance) on each prairie trapline. Each record contains year, season, trapline and number of individuals captured of each species. These live trap records are based on daily captures during 4-day trapping periods in spring (early March to early April), summer (late June to late July) and autumn (early October to mid-November) for each permanent trapline (two traplines per treatment). These treatments include annual burns, 2-year burns, 4-year burns and 10-year burns; none were grazed by bison. This data set includes 14 traplines sampled in autumn and spring and 30 traplines in summer.

Keywords that describe data set:

prairie, relative abundance, rodents, shrews, small mammals, spring fire, mammals, consumers, species composition

Date data commenced: 1981 Fall
Date data terminated: 1993 Spring

Principal Investigator: Donald W. Kaufman

RECORD TYPE 1

Data Format Specification:

Variable	Name
1. Datacode	CSM06
2. Rectype	
3. Year	4 digits (e.g., 1981)
4. Season	Sampling season
5. Trapline	Watershed and trapline
6. Pm	Relative abundance of *Peromyscus maniculatus*
7. Rmeg	Relative abundance of *Reithrodontomys megalotis*
8. Sh	Relative abundance of *Sigmodon hispidus*
9. Bh	Relative abundance of *Blarina hylophaga*
10. Rmon	Relative abundance of *Reithrodontomys montanus*
11. St	Relative abundance of *Spermophilus tridecemlineatus*
12. Mo	Relative abundance of *Microtus ochrogaster*
13. Pl	Relative abundance of *Peromyscus leucopus*
14. Ch	Relative abundance of *Chaetodipus hispidus*
15. Mm	Relative abundance of *Mus musculus*
16. Nf	Relative abundance of *Neotoma floridana*
17. Sc	Relative abundance of *Synaptomys cooperi*
18. Zh	Relative abundance of *Zapus hudsonius*

19. Cp	Relative abundance of *Cryptotis parva*	

Codes used

Season	AU	Autumn
	SP	Spring
	SU	Summer
Line	E	East
	W	West

Data Set Code--CSM08

Title of Data Set: Small mammal host-parasite sampling data for 16 linear trapping transects located in 8 LTER burn treatment watersheds at Konza Prairie.

Abstract:

Data set contains summaries (summer) of the number of individuals of each species of small mammal captured (relative abundance) on each transect. Each record contains date, treatment, transect, trap station, species, specimen number, recapture status, specimen disposition, external body measurements (where applicable), reproductive information, and miscellaneous associated comments. These sampling records are based on nightly captures during one 4-night trapping period in summer (June through August) for each of 16 permanent transects established on eight fire treatments (two transects per treatment). These treatments include two seasonal burn watersheds (SpB, SuB), two reversal burn watersheds (R1A, R20A), one annual burn watershed (1D), two 4-year burn watersheds (4B, 4F, and one 20-year burn watershed (20B). None of these treatments implement bison grazing.

Keywords that describe data set:

community turnover, consumers, fire, genetic resources, helminth, parasite, prairie, relative abundance, reversal, rodent, seasonal, shrew, shrub, small mammal, species composition, tick.

Date data commenced: 07/01/2016
Date data terminated: ongoing

Principal Investigator: Andrew G Hope

RECORD TYPE 1 Summaries of the number of individuals of small mammal captured (relative abundance) on each transect

Data Format Specification:

Variable	Name
1. Datacode	CSM08
2. Rectype	1
3. Date	dd-mon-yyyy (e.g., 07/01/2016)
4. Watershed	Watershed name (1D=annual burn replicate D; 4B=4-year burn replicate B; 4F=4-year burn replicate F; 20B=20-year burn replicate B; SpB=annual spring seasonal burn replicate B; SuB=annual or biennial summer seasonal burn replicate B; R1A=reversal burn schedule from 20-year to annual burn replicate A; R20A=reversal burn from annual to 20-year burn replicate A. Reversal treatments were initiated in 2000).
5. Transect	N, S, E, W; total transect length is 285m.
6. Trap Station	numbered 1-20 per linear transect; each trap station is spaced 15m apart; two traps are set concurrently at each trap station; station 1 is always northernmost, station 20 is always southernmost for each transect.

7. Species	PMMA=Peromyscus maniculatus; PMLE=Peromyscus leucopus; REME=Reithrodontomys megalotis; REMO=Reithrodontomys montanus; NEFL=Neotoma floridana; MIOC=Microtus ochrogaster; MIPI=Microtus pinetorum; SIHI=Sigmodon hispidus; CHHI=Chaetodipus hispidus; BLHA=Blarina hylophaga; CRPA=Cryptotis parva; SYFL=Sylvalagus floridanus; DIVI=Didelphis virginiana; ZAHU=Zapus hudsonius; ICTR=Ictidomys tridecemlineatus
8. Specimen Number 1	3-digit and 4-digit numbers correspond to ear tag numbers; NA=Not Applicable; generally assigned to escaped individuals.
9. Specimen Number 2	3-digit and 4-digit numbers correspond to ear tag numbers; used in the event of multiple ear tags, where the higher number is Specimen Number 2.
10. Voucher Number	6-digit number prefixed with NK (eg. NK123456) corresponds to specimen accession number for Museum of Southwestern Biology (University of New Mexico) where voucher specimen materials are being deposited.
11. Recapture Status	Y=Yes (recapture of same year); N=No (new individual); A=Annual (recapture from a previous year)
12. Disposition	R=Release (capture was released); V=Voucher (capture was collected and processed for museum archive); each treatment watershed has one catch-and-release transect (1D-E, 20B-E, 4B-W, 4F-W, R1A-S, R20A-W, SpB-S, SuB-E) and one specimen removal transect (1D-W, 20B-W, 4B-E, 4F-E, R1A-N, R20A-E, SpB-N, SuB-W); generally all specimens from catch-and-release transects are released unless they are found dead in trap or are otherwise collected for specimen voucher purposes; all specimens from removal transects become vouchers.
13. Total Length	measurement (mm) from tip of nose to tip of tail when specimen is laid flat on the back, not including tail tuft; brackets indicate inaccurate or incomplete measurement.
14. Tail Length	measurement (mm) from base to tip of tail when tail is perpendicular to body laid on stomach, not including tail tuft; brackets indicate inaccurate or incomplete measurement.
15. Hind Foot Length	measurement (mm) from heel to tip of longest toe nail on left hind foot.
16. Ear Length	measurement (mm) from ear notch to furthest edge of pinna.
17. Weight	measurement (g) of whole body mass.
18. Sex	M=Male; F=Female, M?=putative male, F?=putative female
19 Age	A= Adult; JUV= Juvenile; SA= Youth adult
20. Reproductive Condition	S=Scrotal male; NS=Non-scrotal male; C=vagina closed; O=vagina perforated; S=nipples small; E=nipples enlarged; N=non-lactating; L=lactating
21. Comments	relevant descriptive comments; OTB=old tail bob; NTB=new tail bob; other.

NB. Each line of data corresponds to a single capture event. Individuals may be captured multiple times resulting in multiple lines of data for the same individual small mammal. Multiple

captures are trackable through Specimen Number. Relative abundance should be considered by removing recaptured individuals (Recapture Status=Y).

RECORD TYPE 2 Georeferenced data

Data Format Specification:

Variable	Name
1. DataCode	CSM08
2. RecType	2
3. ID	ID
4. Watershed	Watershed name (1D=annual burn replicate D; 4B=4-year burn replicate B; 4F=4-year burn replicate F; 20B=20-year burn replicate B; SpB=annual spring seasonal burn replicate B; SuB=annual or biennial summer seasonal burn replicate B; R1A=reversal burn schedule from 20-year to annual burn replicate A; R20A=reversal burn from annual to 20-year burn replicate A. Reversal treatments were initiated in 2000).
5. Transect	N, S, E, W; total transect length is 285m.
6. Trap Station	numbered 1-20 per linear transect; each trap station is spaced 15m apart; two traps are set concurrently at each trap station; station 1 is always northernmost, station 20 is always southernmost for each transect.
7. Latitude	Latitude downloaded from GPS
8. Longitude	Longitude downloaded from GPS
9. Elevation	Elevation downloaded from GPS

GIS Data

Data Set Code--GIS00

Title of data set: GIS Coverages Defining the Site Boundary of Konza Prairie

Abstract:

This dataset contains the boundary polygon of the Konza Prairie Biological Station (KPBS). Data type one (GIS000) defines the original KPBS boundary used from 1977 until 1982, and type two contains the extended boundary used since 1982 (GIS001). These data are available as zipped (.zip) shapefiles (.shp).

Keywords that describe data set:

Prairie, Ecology, Environment, Boundaries, Grassland, Biota, Konza, GIS, Tallgrass, Geographic Information Systems, Grasses, Grasslands

Date data commenced: 1977/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Konza Prairie boundary between 1977 and 1982

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 Konza Prairie boundary after 1982

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS01

Title of data set: GIS Coverages Defining Internal Boundaries of Konza Prairie

Abstract:

This dataset defines the internal boundaries of the Konza Prairie Biological Station (KPBS). Data type one (GIS010) is a record of all fenced areas on KPBS with GIS011 providing locations for all gates and type of gate (exterior, bison, and cattle). Data type three (GIS012) represents various large-scale research areas on Konza including bison grazed, cattle grazed, fire reversal, etc. These data are available as zipped (.zip) shapefiles (.shp).

Keywords that describe data set:

Grazing, GIS, Grasslands, Geographic Information System, Humans, Boundaries, Biota, Environment

Date data commenced: 1977/01/01
Date data terminated: Ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Konza fences

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 Konza gates

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 3 Konza internal research areas

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS02

Title of data set: GIS Coverages Defining the Konza Prairie Experimental Watershed Treatments

Abstract:

This dataset defines the experimental watershed treatments for the Konza Prairie Biological Station (KPBS). These treatments have changed over time to represent changes in both physical boundaries as well as changes in watershed treatments. These data are available as zipped (.zip) shapefiles (.shp).

Keywords that describe data set:

Ecology, Grasses, GIS, Geographic Information Systems, Grasslands, Disturbance, Fires, Burning, Boundaries, Biota, Environment

Date data commenced: 1977/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Pre-1972 Konza land usage

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 Konza treatments in 1972

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 3 Konza treatments in 1978

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 4 Konza treatments in 1984

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 5 Konza treatments in 1988

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 Konza treatments in 1992

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 7 Konza treatments in 1994

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 8 Konza treatments in 2000

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 9 Konza treatments in 2001

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 10 Konza treatments in 2006

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 11 Konza treatments in 2010

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 12 Konza treatments in 2011

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS05

Title of data set: GIS Coverages Defining Konza Prairie Burn History: Planned, Prescribed Burns

Abstract:

This dataset contains a comprehensive record of planned, prescribed burns for the Konza Prairie Biological Station (KPBS) dating from 1972. Burn history data contains date burned, area burned and type of treatment (prescribed burns). Burn histories for supplemental burns, wildfires, and wildfire cleanup burns are available in dataset GIS13. These data are available as zipped (.zip) shapefiles (.shp).

Keywords that describe data set:

Grasslands, Ecology, Grasses, GIS, Geographic Information Systems, Burning, Fires, Boundaries, Biota, Environment

Date data commenced: 1972/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 1972 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 1973 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 3 1974 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 4 1975 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 5 1976 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 1977 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 7 1978 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 8 1979 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 9 1980 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 10 1981 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 11 1982 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 12 1983 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 13 1984 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 14 1985 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 15 1986 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 16 1987 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 17 1988 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 18 1989 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 19 1990 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 20 1991 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 21 1992 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 22 1993 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 23 1994 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 24 1995 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 25 1996 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 26 1997 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 27 1998 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 28 1999 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 29 2000 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 30 2001 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 31 2002 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 32 2003 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 33 2004 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 34 2005 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 35 2006 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 36 2007 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 37 2008 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 38 2009 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 39 2010 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 40 2011 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 41 2012 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 42 2013 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 43 2014 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 44 2015 Burn history

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 46 2016 Burn history

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS10

Title of data set: GIS Coverages Defining Roads in and around Konza Prairie

Abstract:

This dataset defines the roads in and around the Konza Prairie Biological Station (KPBS). The road data shows locations of Konza maintained and county/state/federal access roads as well as defining gravel or paved. Data type one (GIS170) defines roads within KPBS, and type two (GIS171) defines roads surrounding KPBS. These data are available as zipped (.zip) shapefiles (.shp).

Keywords that describe data set:

GIS, Geographic Information Systems, Roads, Humans, Boundaries, Biota, Environment

Date data commenced: 1977/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Konza roads

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 Major roads near Konza

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS11

Title of data set: A GIS Coverage Defining Nature Trails on Konza Prairie

Abstract:

This dataset defines the nature trails found at Konza Prairie Biological Station (KPBS). The trails data shows locations of the different Konza maintained walking trails including leg distances and loop names. These data are available as zipped (.zip) shapefiles (.shp).

Keywords that describe data set:

Grasses, Grasslands, GIS, Geographic Information Systems, Ecology

Date data commenced: 1982/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Konza trails

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS13

Title of data set: GIS Coverages Defining Konza Prairie Burn History: Wildfires and Supplementary Burns

Abstract:

This dataset contains a comprehensive record of supplemental burns, wildfires, wildfire cleanup burns for the Konza Prairie Biological Station (KPBS) dating from 1972. Burn history data contains date burned, area burned and type of treatment (wildfires, wildfire cleanup, and supplemental burns). Burn histories for planned, prescribed burns are available in dataset GIS05. These data are available as zipped (.zip) shapefiles (.shp).

Keywords that describe data set:

Grasslands, Ecology, Grasses, GIS, Geographic Information Systems, Burning, Fires, Boundaries, Biota, Environment

Date data commenced: 1972/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Wildfires and supplementary burns for 1973

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 Wildfires and supplementary burns for 1976

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 3 Wildfires and supplementary burns for 1978

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 4 Wildfires and supplementary burns for 1980

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 5 Wildfires and supplementary burns for 1983
Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 Wildfires and supplementary burns for 1984

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 7 Wildfires and supplementary burns for 1985

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 8 Wildfires and supplementary burns for 1986

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 9 Wildfires and supplementary burns for spring of 1991

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 10 Wildfires and supplementary burns for fall of 1991

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 11 Wildfires and supplementary burns for 1993

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 12 Wildfires and supplementary burns for 1994

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 13 Wildfires and supplementary burns for 1996

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 14 Wildfires and supplementary burns for 1997

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 15 Wildfires and supplementary burns for 2002

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 16 Wildfires and supplementary burns for 2004

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 17 Wildfires and supplementary burns for 2005

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 18 Wildfires and supplementary burns for 2008

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 19 Wildfires and supplementary burns for 2010

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 20 Wildfires and supplementary burns for 2011

Data Format Specification:

Data Set Code--GIS19

Title of data set: A GIS Coverage Defining Permanent Structures on Konza Prairie

Abstract:

This dataset defines the permanent structures located on the Konza Prairie Biological Station (KBPS). The structure data include building names and addresses. These data are available as zipped (.zip) shapefiles (.shp).

Keywords that describe data set:

grasslands, ecology, grasses, geographic information systems, GIS, buildings, humans, boundaries, biota, environment

Date data commenced: 1977/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Konza buildings

Data Format Specification:

Variable	Name	Column	Format

Data Set Code--GIS20

Title of data set: GIS Coverages Defining Konza Elevations

Abstract:

These data depict the elevation features of Konza Prairie. Record type 1 is a 2-meter resolution digital elevation model (DEM) of Konza Prairie, generated from 2006 LiDAR DEM data collected to standard USGS specifications (GIS200). Record type 3 is a 2010 10 meter (1/3 arc second) resolution National Elevation Dataset (NED) DEM of Konza Prairie (GIS202). Record type 4 is a 10-meter resolution NED DEM of Konza Prairie with a modified 3 kilometer buffer (GIS203). Record type 5 is a USGS topographic map of Konza Prairie (GIS204). These data are available as zipped (.zip) TIFF files (.tif). Data and metadata derived from DASC (record types 1 and 5), http://www.kansasgis.org/. Additional data and metadata derived from USGS (record types 3 and 4), http://www.nationalmap.gov/viewer.html.

Keywords that describe data set:

Grasslands, Ecology, Grasses, Geographic Information Systems, Digital Elevation Model, Elevation

Date data commenced: 01/02/2006
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Konza 2m LIDAR DEM

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 3 Konza 10m NED DEM

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 4 Konza 10m NED DEM with 3km buffer

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 5 Konza USGS Topographic Map

Data Format Specification:

Data Set Code--GIS21

Title of data set: GIS Coverages Defining Konza Water Types

Abstract:

This Coverage Contains the Locations of Streams (GIS210) and Waterbodies (GIS211) within the Konza Prairie Biological Station.

Keywords that describe data set:

Geographic Information Systems, Grasslands, Streams, Boundaries, Biota, Environment, Water

Date data commenced: 1/1/1972
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Konza streams

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 Konza Waterbodies

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS22

Title of data set: GIS Coverage Defining Soils (SSURGO) on Konza Prairie

Abstract:

The Konza Prairie soils dataset is derived from the USDA NRCS SSURGO soils definitions for Riley and Geary Counties (variant ca. 2012; http://soildatamart.nrcs.usda.gov/). The coverage contains MUSYM and Soil Names that correspond to the code. Additional and current SSURGO data is available at: http://soildatamart.nrcs.usda.gov/SSURGOMetadata.aspx.

Associated metadata derived from NRCS SSURGO Metadata for:
Riley County SSURGO Data -
http://soildatamart.nrcs.usda.gov/Metadata.aspx?Survey=KS161&UseState=KS
Geary County SSURGO Data -
http://soildatamart.nrcs.usda.gov/Metadata.aspx?Survey=KS061&UseState=KS

Keywords that describe data set:

Ecology, Soil, Geographic Information Systems, GIS, Grasslands

Date data commenced: 1982/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Konza Prairie SSURGO soils

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 Konza Prairie geomorphology (?)

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS23

Title of data set: GIS Coverages Defining the Global Fiducials Library Imagery of Konza Prairie

Abstract:

These raster data consist of aerial imagery of Konza Prairie. Konza Prairie was chosen as a reference site for study of land surface change as a part of the Global Fiducials Program. These data are available as zipped (.zip) TIFF files (.tif).

All data and metadata for this dataset derived from data and metadata available at: http://gfl.usgs.gov

Keywords that describe data set:

Ecology, Soil, Geographic Information Systems, GIS, Grasslands

Date data commenced: 2003/01/14
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Fiducial Image of Konza Prairie from 1/14/2003

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 Fiducial Image of Konza Prairie from 5/5/2003

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 3 Fiducial Image of Konza Prairie from 7/2/2003

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 4 Fiducial Image of Konza Prairie from 5/3/2004

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 5 Fiducial Image of Konza Prairie from 7/3/2004

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 Fiducial Image of Konza Prairie from 5/10/2005

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 7 Fiducial Image of Konza Prairie from 7/2/2005

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 8 Fiducial Image of Konza Prairie from 12/4/2005

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 9 Fiducial Image of Konza Prairie from 5/11/2006

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 10 Fiducial Image of Konza Prairie from 7/4/2006

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 11 Fiducial Image of Konza Prairie from 12/1/2006

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 12 Fiducial Image of Konza Prairie from 5/8/2007

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 13 Fiducial Image of Konza Prairie from 7/4/2007

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 14 Fiducial Image of Konza Prairie from 12/13/2007

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 15 Fiducial Image of Konza Prairie from 5/8/2008

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 16 Fiducial Image of Konza Prairie from 7/1/2008

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 17 Fiducial Image of Konza Prairie from 12/11/2008

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 18 Fiducial Image of Konza Prairie from 5/21/2009

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 19 Fiducial Image of Konza Prairie from 7/8/2009

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 20 Fiducial Image of Konza Prairie from 12/1/2009

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 21 Fiducial Image of Konza Prairie from 6/2/2010

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 22 Fiducial Image of Konza Prairie from 7/2/2010

Data Format Specification:

Variable	Name	Columns	Format

Note: This Data is not online yet, but available upon request.

Data Set Code--GIS26

Title of data set: GIS Coverages Defining National Agriculture Imagery Program (NAIP) Imagery of Konza Prairie

Abstract:

These raster data consist of aerial imagery of Konza Prairie and a surrounding modified 3 kilometer buffer. Images from 1991 (GIS260 and GIS261) were taken by the U.S. Geological Survey. Images from 2002 (GIS262 and GIS263) were taken by the State of Kansas. Images from 2003 to 2012 (GIS264 to 277) were taken as part of the USDA's National Agriculture Imagery Program. These data are available as zipped (.zip) TIFF files (.tif).

All data and metadata for this dataset derived from data and metadata available at: http://www.kansasgis.com/

Keywords that describe data set:

Ecology, Soil, Geographic Information Systems, GIS, Grasslands

Date data commenced: 1991/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 1991 USGS DOQQ Image of Konza Prairie

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 1991 USGS DOQQ Image of Konza Prairie with 3km Buffer

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 3 2002 State of Kansas DOQQ Image of Konza Prairie

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 4 2002 State of Kansas DOQQ Image of Konza Prairie with 3km Buffer

Data Format Specification:

Variable Name Columns Format

RECORD TYPE 5 2003 NAIP Image of Konza Prairie

Data Format Specification:

Variable Name Columns Format

RECORD TYPE 6 2003 NAIP Image of Konza Prairie with 3km Buffer

Data Format Specification:

Variable Name Columns Format

RECORD TYPE 7 2004 NAIP Image of Konza Prairie

Data Format Specification:

Variable Name Columns Format

RECORD TYPE 8 2004 NAIP Image of Konza Prairie with 3km Buffer

Data Format Specification:

Variable Name Columns Format

RECORD TYPE 9 2005 NAIP Image of Konza Prairie

Data Format Specification:

Variable Name Columns Format

RECORD TYPE 10 2005 NAIP Image of Konza Prairie with 3km Buffer

Data Format Specification:

Variable Name Columns Format

RECORD TYPE 11 2006 NAIP Image of Konza Prairie

Data Format Specification:

Variable Name Columns Format

RECORD TYPE 12 2006 NAIP Image of Konza Prairie with 3km Buffer

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 13 2008 NAIP Image of Konza Prairie

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 14 2008 NAIP Image of Konza Prairie with 3km Buffer

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 15 2010 NAIP Image of Konza Prairie

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 16 2010 NAIP Image of Konza Prairie with 3km Buffer

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 17 2012 NAIP Image of Konza Prairie

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 18 2012 NAIP Image of Konza Prairie with 3km Buffer

Data Format Specification:

Variable	Name	Columns	Format

Note: This Data is not online yet, but available upon request.

Data Set Code--GIS29

Title of data set: GIS Coverages Defining National Land Cover Database Imagery of Konza Prairie

Abstract:

These raster data depict the National Land Cover Database coverages for Konza Prairie and a surrounding modified 3km buffer.

National Land Cover Dataset 1992 (GIS290 and GIS291) is a 21-class land cover classification scheme that has been applied consistently across the lower 48 United States at a spatial resolution of 30 meters. NLCD92 is based primarily on the unsupervised classification of Landsat Thematic Mapper (TM) circa 1990's satellite data. Other ancillary data sources used to generate these data included topography, census, and agricultural statistics, soil characteristics, and other types of land cover and wetland maps.

National Land Cover Database 2001 (GIS292 and GIS293) is a 16-class (additional four classes in Alaska only) land cover classification scheme that has been applied consistently across all 50 United States and Puerto Rico at a spatial resolution of 30 meters. NLCD2001 is based primarily on the unsupervised classification of Landsat Enhanced Thematic Mapper+ (ETM+) circa 2001 satellite data.

National Land Cover Database 2006 (GIS294 and GIS295) is a 16-class land cover classification scheme that has been applied consistently across the conterminous United States at a spatial resolution of 30 meters. NLCD2006 is based primarily on the unsupervised classification of Landsat Enhanced Thematic Mapper+ (ETM+) circa 2006 satellite data.

These data are available as zipped (.zip) TIFF files (.tif). All data and metadata for this dataset derived from data and metadata available at: http://www.mrlc.gov and http://seamless.usgs.gov/

Keywords that describe data set:

Maps, imagery, satellite imagery, aerial imagery, land cover, Ecology, Soil, Geographic information systems, Grasses, Grasslands, GIS

Date data commenced: 1991/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 1992 NLCD Image of Konza Prairie

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 1992 NLCD Image of Konza Prairie with 2km Buffer

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 3 2001 NLCD Image of Konza Prairie

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 4 2001 NLCD Image of Konza Prairie with 2km Buffer

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 5 2006 NLCD Image of Konza Prairie

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 2006 NLCD Image of Konza Prairie with 2km Buffer

Data Format Specification:

Variable	Name	Columns	Format

Note: This Data is not online yet, but available upon request.

Data Set Code--GIS30

Title of data set: GIS Coverage Defining Sample Locations for Abiotic Datasets on Konza Prairie

Abstract:

These data show sample locations for various abiotic data collected on Konza Prairie (rain gauges, soil moisture, and stream data). Included in these data are the locations for 12 rain gauges (GIS300) on Konza Prairie. The Konza headquarters weather station formerly consisted of two gauges which were operated year-round. The Konza headquarters weather station currently consists of one Otto-Pluvio2 gauge which is operated year-round. The remaining Konza-operated gauges run from April 1 to November 1. These data are to be used in conjunction with the APT01 (precipitation) dataset.

GIS305 defines the locations where measurements of soil moisture (%volume) are taken on Konza Prairie. These data are to be used in conjunction with the ASM01 (soil moisture) dataset.

GIS310 defines the locations within watershed N4D where samples are taken for analyzing the belowground water chemistry of the watershed. These data are to be used in conjunction with the AGW01 dataset.

GIS311 defines the locations of 14 wells at two sites along Kings Creek. Depth and nutrient content of groundwater is measured at these sites. These data are to be used in conjunction with the AGW02 dataset.

GIS315 defines the locations of stream gauging stations (including one operated by the USGS*) within multiple Konza watersheds. These data are to be used in conjunction with the APT, NWC, ASS, and ASW datasets.

(*http://waterdata.usgs.gov/nwis/nwisman/?site_no=06879650)

GIS320 defines the locations of the rainfall collectors used to collect the samples analyzed as a part of the National Atmospheric Deposition Program. These data are to be used in conjunction with the ANA01 dataset.

Keywords that describe data set:

Grasslands, Ecology, Grasses, Geographic Information Systems, GIS, Rain, Measurements, Precipitation, Boundaries, Biota, Environment, soil, soil water, soil water content, soil moisture, Water, Streams, Stream discharge, Stream flow, stream ecology, groundwater, water chemistry, dissolved nutrients

Date data commenced: 1972/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Rain gauge stations on Konza Prairie

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 Soil moisture collection sites at Konza Prairie

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 11 Wells in N4D

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 12 Wells in the Kings Creek watershed

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 16 Stream gauge stations along Kings Creek

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 21 National Atmospheric Deposition Program

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS35

Title of data set: GIS Coverages Defining Sample Locations for Belowground Datasets on Konza Prairie

Abstract:

These data show the locations of research conducted at the below ground plots near Konza Headquarters. Record type 1 (GIS350) describes the 64 belowground plots receiving a variety of nutrient, burn, and mowing treatments. Data for BMS01, BMS02, and BNS01 are collected on these plots. Record type 6 (GIS355) describes the locations of the Micro-Rhizotrons. Two spatial datasets lie on the belowground plots, but are classified separately. These are the Lysimeters on belowground plots (GIS455) and Aboveground biomass on belowground plots (GIS505) datasets. GIS505 may be used alongside the BGPVC dataset, because it shares sample locations with PBB01.

Keywords that describe data set:

Geographic Information Systems, GIS, Biota, Grasslands, Grasses, Environment, Ecology, Roots, Species Composition, Plant Species Composition, Plants, Boundaries, Biota, Environment

Date data commenced: 01/01/1989
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 BGPVC sampling sites

Data Format Specification:

Variable	Name	Column	Format

RECORD TYPE 6 Micro-Rhizotron locations

Data Format Specification:

Variable	Name	Column	Format

Data Set Code--GIS40

Title of data set: GIS Coverages Defining the Sample Locations of Konza Consumer Data

Abstract:

These data show the sampling locations for the consumer datasets at Konza Prairie. Record type 1 defines the starting points for sweep samples of grasshoppers across Konza Prairie (GIS400). These data may be used in conjunction with the sweep sample datasets (CGR02). Record type 2 defines the starting points for sweep samples of grasshoppers across Konza Prairie (GIS401), focusing on grazing impact. These data may be used in conjunction with the sweep sample datasets (CGR02Z). Record type 6 defines the trap locations for small mammal sampling across Konza Prairie (GIS405). These data may be used in conjunction with CSM0X. Record type 11 defines the stream stretches for fish sampling across Konza Prairie (GIS410). These data may be used in conjunction with CFC01.

Keywords that describe data set:

Measurements, Ecology, Grasses, Grasshoppers, Consumers, Grasslands, GIS, Geographic Information Systems, Mammals, Small Mammals, Trapping, Seasonality, Boundaries, Biota, Environment, Fish, Fishes, Communities, Community Composition, Community Dynamics, Community Patterns, Community Structure, Population and Community Properties

Date data commenced: 1982/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Sweep sample locations for Konza grasshoppers datasets

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 Sweep sample locations for bison grant grasshoppers datasets

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 Small mammal traplines in prairie habitats

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 11 Fish Communities in Konza Streams

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS45

Title of data set: GIS Coverages Defining the Konza Nutrient Data Sample Locations

Abstract:

These data show the sampling locations for the nutrient datasets at Konza Prairie. Record types 1 (GIS450) and 2 (GIS451) respectively contain the transect lines and sample locations at which the soil cores are sampled. These data may be used in conjunction with the Soil Chemistry and Bulk Density (NSC01) datasets. Record type 6 (GIS455) contains the locations of the lysimeters on the belowground plots, and may be used in conjunction with Belowgound Plot Experiment: Soil Water Chemistry from Lysimeters (NBS01) dataset. Record type 11 (GIS460) contains bulk precipitation sample locations, and may be used in conjunction with the Nitrogen and Phosphorus Bulk Precipitation at Konza Prairie (NBP01) datasets.

Keywords that describe data set:

Grasslands, Ecology, Grasses, Geographic Information Systems, GIS, Soil, Soil Bulk Density, Soil Chemistry, Soil Nutrients, Soil Organic Matter, Measurements, Precipitation, Bulk Deposition, Deposition, Rain, Lysimeter, Water Chemistry, Boundaries, Biota, Environment

Date data commenced: 1982/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Soil chemistry and bulk density transect lines

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 Soil chemistry and bulk density core sample locations

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 Lysimeters on belowground plots

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 11 Bulk precipitation

Data Format Specification:

Data Set Code--GIS50

Title of data set: GIS Coverages Defining the Konza Producer Data Sample Locations

Abstract:

These data show the sample locations for datasets pertaining to primary production at Konza Prairie. These data reference various treatments across Konza including varying burn frequencies, belowground plots, patch burn, exclosures, etc.
Record type one (GIS500) contains sample locations for estimated standing crop biomass in various burning-grazing treatments (PABXX).

Record type six (GIS505) contains sample locations for peak foliage biomass, and belowground species composition measured at the belowground plot experiments (PBB0X and BGPVC respectively).

Record type 11 and 12 contain the transect (GIS510) and plot (GIS511) locations for plots in the patch-burn experiments (PBGXX).

Record type 16 (GIS515) contains the locations of exclosures used to sample primary productivity in bison grazed watersheds (PEB01).

Record type 21 (GIS520) contains the locations of exclosures used to sample primary productivity in cattle grazed watersheds (PEB01_X).

Record type 26 (GIS525) contains the locations of sample sites for litterfall (PGLXX) collectors in the gallery forest.

Record type 31 (GIS530) contains species composition transects for Konza Prairie. These data may be used in conjunction species composition (PVC01 and PVC02), primary production in grazing exclosures (PEB01, PEB01_X), soil chemistry and bulk density (NSC01) and primary production (PAB01).

Keywords that describe data set:

Grasslands, Ecology, Grasses, Geographic Information Systems, GIS, Fires, Disturbance, Disturbances, Production, Aboveground Production, Boundaries, Biota, Environment, Burning, Humans, Measurements, Canopy Cover, Grazing, Litterfall, Forests, Riparian, Forest Floor, Diversity, Plant Species Composition, Forbs, Species Diversity, Species Richness

Date data commenced: 1982/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Aboveground primary production on fire frequency treatments

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 Aboveground biomass on belowground plots

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 11 Vegetation changes from patch burning grazed pastures

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 12 Vegetation changes from patch burning grazed pastures

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 16 Primary production in grazing exclosures

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 21 Primary production in cattle grazing exclosures

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 26 Gallery forest litterfall

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 31 Konza plant species transects

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS55

Title of data set: GIS coverages Defining the Konza HQ Irrigation System

Abstract:

These data show the components of the irrigation system near Konza Prairie HQ. Record types 1, 2, 3 and 4 demarcate the locations of the study plots heads (GIS550), transect lines (GIS551), irrigation lines (GIS552), and irrigation line joints (GIS553). Record types 5 and 6 describe the location of the storage piles (GIS554) and the irrigation reservoir (GIS555). This data may be used in conjunction with the Irrigation Transect Studies (WATXX) data.

Keywords that describe data set:

Grasslands, Ecology, Grasses, Geographic Information Systems, GIS, Irrigation, Canopy Cover, Species Composition, Production, Aboveground Production, Reproduction, Biomass, Aboveground Biomass, Boundaries, Biota, Environment

Date data commenced: 1982/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Irrigation transect points

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 2 Irrigation system transect lines

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 3 Irrigation system water lines

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 4 Irrigation line joints

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 5 Irrigation storage piles

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 Irrigation system reservoir

Data Format Specification:

Variable	Name	Columns	Format

Data Set Code--GIS60

Title of data set: GIS coverages defining other Konza sample and research areas

Abstract:

These data show locations of samples and research areas at Konza that do not fit under our standard classifications.
Record type 1 (GIS 600) contains the locations of the Hulbert plots on Konza Prairie.
Record type 6 (GIS605) contains locations for rainfall shelters, ramps, experimental streams, restoration plots, the weather station, grasshopper cages, the climate extremes project. Currently no associated LTER datasets exist for these locations.
Record type 11 (GIS 610) provides a record of the historic Konza gridded location system. Older datasets may reference these locations with a column letter and row number.
Record type 16 (GIS615) contains the location for the Clean Air Status and Trends Network (CASTNET) site on Konza Prairie. For more information, visit the following link: http://www.epa.gov/castnet/javaweb/site_pages/KNZ184.html.
Record type 21 (GIS620) contains the location for the USGS gauging station. These data may be used in conjunction with the Stream Discharge for Kings Creek Measured at USGS Gauging Station (ASD01) dataset. For more information, visit the following link: http://waterdata.usgs.gov/nwis/nwisman/?site_no=06879650.
Record types 31 (GIS630) and 36 (GIS635) contain the location and treatment information for two bison grant grazing experiments. Currently, no associated LTER datasets exist for these data.

Keywords that describe data set:

Grasslands, Ecology, Grasses, Geographic Information Systems, GIS, Irrigation, Canopy Cover, Species Composition, Production, Aboveground Production, Reproduction, Biomass, Aboveground Biomass, Boundaries, Biota, Environment

Date data commenced: 1982/01/01
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1 Konza Hulbert plots

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 6 Konza Additional research locations on Konza

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 11 Konza Prairie grid reference system

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 16 CASTNET

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 21 Konza USGS weather and stream gauging station

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 31 Bison Grant Bison Grazing Exclosure Experiment

Data Format Specification:

Variable	Name	Columns	Format

RECORD TYPE 36 Bison Grant Grazing Patch Size Experiment

Data Format Specification:

Variable	Name	Columns	Format

Nutrient Data

Data Set Code--NBC01

Title of data set: Belowground Plot Experiment: Soil Chemistry responses to experimental manipulations of fire, nutrients and mowing

Abstract:

To address the potential interactive effects of fire, aboveground biomass removal, and nutrient amendments on above- and belowground responses, a long-term field experiment was initiated in 1986 as part of the Konza Prairie Long-Term Ecological Research (LTER) program. The general goals of this experiment are: 1) to document both short- and long-term responses of plants and soils to fire, aboveground biomass removal (a surrogate for grazing in these small plots), and nutrient amendments (additions of N and/or P); and 2) to provide a better understanding of the mechanisms underlying tallgrass prairie responses to fire, aboveground biomass removal and nutrient enrichment. Effects of burning, mowing, and N + P additions on soil chemistry are measured on the 64 belowground plots at irregular intervals. Variables measured include P, NO3, NH4, Mn, Cu, K, Zn, Ca, Fe, Mg, Na, ph, Organic matter and Organic-N.

Keywords that describe data set:

nutrients, soil nutrients, soil chemistry, nitrate, ammonia, phosphorus, cations, belowground plots, soil properties, soil organic matter

Date data commenced: 06/01/1986
Date data terminated: 08/22/1990

Principle Investigator: John Blair

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. PN	Plot number	18-19	I2	
8. Suprplot	Super plot number (Block number)	21	A1	
9. Burn	Burned or unburned	23	A1	
10. Mow	Mowed or unmowed	25	A1	
11. Nutrient	Nutrient in Block	27	A1	

12. Depth	29-30	I2	cm
13. Nitrate	32-36	F5.1	
14. Ammonia	38-42	F5.1	
15. Phsphros	44-46	I3	
16. Total N	48-51	I4	
17. PH	53-55	F3.1	
18. Orgncmat	57-60	F4.1	
19. K	62-65	I4	
20. ZN	67-69	F3.1	
21. FE	71-73	I3	
22. Lime	75-78	I4	

.

Data Set Code--NBP01

Title of data set: Nitrogen and Phosphorus in Bulk Precipitation at Konza Prairie

Abstract:

Measurements include rainfall amounts, nitrate (NO3-N), ammonia (NH4-H), soluble reactive phosphate (SRP), and total nitrogen and phosphorus concentrations in bulk precipitation collected at multiple locations.

Keywords that describe data set:

precipitation, rain, chemistry, bulk deposition, nitrate, ammonia, soluble reactive phosphorus, phosphate, nitrogen, phosphorus, nurients

Date data commenced: 03/19/1982
Date data terminated: ongoing

Principle Investigator: John M. Blair

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7.Type		18	A1	
8. Amount	Rainfall amount	23-27	F5.1	mm
9. NO3	Conc. of nitrate-N ppb	29-35	F7.1	ppb(ug NO_3-N/l)
10.LimitNO3		36	A1	
11. NH4	Conc. of ammonia-N ppb Can. 12/85	37-42	F6.1	ppb(ugNH_4-N/l)
12. LimitNH4		43	A1	
13. TPN	Conc. of total nitrogen TKN 83/01	44-48	I5	ppb(ugNO_3-N/l)
14. LimitTPN		49	A1	
15. SRP	Conc. of soluble reactive phosphorus began 2/86	50-55	F6.1	ppb(ugPO_4-P/l)
16. LimitSRP		56	A1	
17. TPP	Conc. of Total Phosphorus	57-62	F6.1	
18. LimitTPP		63	A1	
19. Comment		64-80	C22	ppb(ugPO_4-P/l)

Codes used:

Type	B	Bulk precipitation collector

*Below limit of Detection
*Prior to 95 Bulk Precipitation was included with NTF012.
In the 1982, watershed location see comments.

Data Set Code--NBS01

Title of data set: Belowground Plot Experiment

Abstract:

To address the potential interactive effects of fire, aboveground biomass removal, and nutrient amendments on above- and belowground responses, a long-term field experiment was initiated in 1986 as part of the Konza Prairie Long-Term Ecological Research (LTER) program. The general goals of this experiment are: 1) to document both short- and long-term responses of plants and soils to fire, aboveground biomass removal (a surrogate for grazing in these small plots), and nutrient amendments (additions of N and/or P); and 2) to provide a better understanding of the mechanisms underlying tallgrass prairie responses to fire, aboveground biomass removal and nutrient enrichment. Soil water nitrogen composition is measured using porous cup lysimeters from samples from nitrogen fertilized and control plots. Measurements include nitrate, ammonium, phosphate, and organic nitrogen and phosphorus.

Keywords that describe data set:

Lysimeters, soil solution chemistry, nutrients, fertilizer, burning, nitrate, ammonium, phosphate, nitrogen, phosphorus, soil water

Date data commenced: 04/18/1997
Date data terminated: 9/ 3/1998

Principle Investigator: John Blair

RECORD TYPE 1

Data Format Specification:

Variable	Columns	Format
1. Datacode	1-5	A5
2. Rectype	6	I1
3. Year	7-8	I2
4. Month	9-10	I2
5. Day	11-12	I2
6. Watershed	13-16	A4
7. Plot #	18-19	I2
8. Volume	21-24	
9. NO_3	26-33	
10. NH_4	35-42	
11. TPN	44-51	
12. TPP	53-56	
13. PO_4	58-62	
14. Comments	64-80	

Data Set Code--NPL01

Title of data set: Litterfall inputs to soil surface in watersheds with different fire treatments

Abstract:

Litter falling to the soil surface of tallgrass prairie was measured using 5 cm x 100 cm litterfall troughs. Mass, nitrogen, and phosphorus content were measured monthly or seasonally. Variables of interest include burning frequency and soil type.

Keywords that describe data set:

litter, detritus, litterfall, nitrogen, phosphorus, organic matter, nutrients

Date data commenced: 07/01/1981
Date data terminated: 12/11/1990

Principle Investigator: John M. Blair

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil	Soil type	18-19	A2	
8. AD	Accumulation Day	21-23	I3	Days
9. Mass	Oven-dry mass	25-29	F5.2	G/0.5X
10. ID	Collector identification #	31-32	I2	
11. Comments		35-80		

Codes used:

Soil	TU	Tully
Soil	FL	Florence

RECORD TYPE 2

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	

6. Watershed		13-16	A4	
7. Soil	Soil type or slope	18-19	A2	
8. Day	Collection days	21-23	I3	Days
9. Mass	Oven-dry mass	25-29	F5.2	
10. N	Nitrogen content 1982;F4.2	31-35	F5.3	
11. P	Phosphorus content	37-41	F5.3	%X
12. Collect	Number of collectors composited	43-44	I2	
13. Rep	Ident. of sample groups w/chemistry Discon. 83	45	A1	
14. Comments		50-80	A31	
15. Block	Samples proc. togeth. w/=blk nos.	50	I1	

Codes used:

Soil	TU	Tully
Soil	FL	Florence

Data Set Code--NSC01

Title of data set: Chemistry and Physical Characteristics of Soils from Konza LTER Watersheds with different fire and grazing treatments

Abstract:

Soil chemical and physical characteristics are quantified on selected LTER watersheds adjacent to LTER vegetation sampling plots. Sampling was initiated in 1982, and is repeated every five years. A subset of variables (e.g., pH, Bray extractable P, total C, exchangeable cations) is measured on all sample dates, while additional specific variables (e.g., bulk density, soil texture, CaCO3 content, trace metals, extractable inorganic N) are measured less frequently. Methods for C and N analysis have changed over time. C content of samples from 1982, 1987 and 1997 was derived from Walkley-Black measurements of % soil organic matter (OM) content, using a conversion factor of 1.72 (%C = %OM / 1.72). Soil C content of samples from 1992, 2002 and later were determined by dry combustion and gas chromatography (i.e., Carlo-Erba C/N analyzer). N content of samples prior to 1992 was based on Kjeldahl digeston. N content of samples from 1992 on were determined by dry combustion and gas chromatography (i.e., Carlo-Erba C/N analyzer). Additional details regarding sampling protocols and analytical methods are available in the Konza LTER Methods Manual.

Keywords that describe data set:

soil, soil chemistry, bulk density, soil texture, nitrogen, carbon, cations, soil organic matter, phosphorus

Date data commenced: 10/01/1981
Date data terminated: ongoing

Principle Investigator: John Blair (initiated by Arthur P. Schwab)

RECORD TYPE 1

Data Format Specification:

Variable	Format	Units
1. Datacode	A5	
2. Rectype	I1	
3. Year	I2	
4. Month	I2	
5. Day	I2	
6. Watershed	A4	
7. Soil	A2	
8. Rep	A1	
9. Depth	I2	cm
10. pH	F3.1	
11. Available Phosphorus (P)*	F4.1	ppm
12. Sodium (Na)	I3	ppm

13. Potassium (K)	I4	ppm
14. Magnesium (Mg)	I3	ppm
15. Calcium (Ca)	I4	ppm
16. Total carbon (C)	F4.1	% dry wt.
17. Total nitrogen (N)	I4	% dry wt.
18. KCl-extractable ammonium (NH4-N)		ug N/g
19. KCl-extractable nitrate (NO3-N)		ug N/g
20. Cation exchange capacity (CEC)	F4.1	meq/100g
21. Calcium carbonate (CaCO3)	I4	ug/g
22. Sulfate (SO4-S)		ug S/g
23. Zinc (Zn)		ug/g
24. Copper (Cu)		ug/g
25. Iron (Fe)		ug/g
26. Manganese (Mn)		ug/g
27. Bulk density (BD)	F5.3	g/cm3
28. Gravimetric soil water content (%H2O)	F4.2	%
29. Texture: %sand	F4.1	%
30. Texture: %silt	F4.1	%
31. Texture: %clay	F4.1	%
32. Comments		

*1982-2002 used Bray 1, 2010 switched to Mehlich 3.

Data Set Code--NSW01

Title of data set: Soil Water Chemistry from porous cup lysimeters on watersheds with different fire treatments

Abstract:

Soil water nitrogen composition is measured using porous cup lysimeters. Measurements include nitrate, ammonia, phosphate, and organic nitrogen and phosphorus. Variables of interest are rainfall patterns, vegetation types, and time since burning.

Keywords that describe data set:

lysimeters, nitrogen, nitrate, ammonia, organic nitrogen, soil solution chemistry, soil water

Date data commenced: 03/01/1982
Date data terminated: 12/01/1990

Principle Investigator: John M. Blair (initiated by Tim Seastedt)

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Lysident	Lysimeter identification number	21-22	I2	
8. Depth	Depth of sample	24	I1	dm
9. Volume	Volume of sample	26-30	I5	ml
10. Nitrate	Nitrate-nitrogen	32-37	F6.1	µg/l
11. Ammonia	Ammonia-nitrogen End 12/83	39-43	F5.1	µg/l
12. TPN *	= Organic -N+NH4+N03 Int. 01/83	45-48	I4	µg/l
13. Kjeldahl	= Organic -N+NH4 End 12/82	50-53	I5	µg/l
14. PO4 *	 1986 only	56-60	F5. 1	µg/l
15. Comments		62-80	A25	

* = on monthly composite samples only micrograms/liter

Data Set Code--NTF01

Title of data set: Volume and Chemistry of Throughfall in tallgrass prairie

Abstract:

Amounts and nitrogen content of water passing through the canopy of tallgrass prairie are compared to similar measurements of bulk precipitation (which is available under NBP011). Measurements include nitrate, ammonia, phosphate and organic nitrogen and phosphorus content of throughfall. Variables of interest include vegetation type and amounts, time of year, and time since burning.

Keywords that describe data set:

biogeochemistry, nitrogen, phosphorus, precipitation, canopy, throughfall, interception

Date data commenced: 03/19/1982
Date data terminated: 10/17 /1995

Principle Investigator: John M. Blair (initiated by Tim Seastedt)

RECORD TYPE 1 volumes of precipitation and throughfall

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. ppt	Amount of rainfall	18-22	F5.1	mL
8. ID	Collector identification number	24-25	I2	
9. THR	Amount collected below canopy	27-31	F5.1	mL
10. Comments		34-80	A48	

RECORD TYPE 2 nitrogen and phosphorus concentrations of precipitation and throughfall

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Type		18	A1	T
8. ID	Collector identification number	20-21	I2	

9. Amount	Rainfall amount	23-27	F5.1	mm
10. NO3	Conc. of nitrate-N ppb	29-33	I5	ppb(ug NO_3-N/l)
11. NH4	Conc. of ammonia-N ppb Can. 12/85	35-39	I5	ppb(ugNH_4-N/l)
12. TPN	Conc. of Total nitrogen TKN 83/01	41-45	I5	ppb(ugNO_3-N/l)
13. PO4	Conc. of soluble reactive phosphorus began 2/86	47-51	I5	ppb(ugPO_4-P/l)
14. TPP	Conc. of Total Phosphorus	53-56	I4	
15. Comment		58-80	C28	

Codes used:

Type	T	Throughfall collector

Data Set Code--NWC01

Title of data set: Stream Water Chemistry for the King's Creek drainage basin on Konza Prairie

Abstract:

Nitrate, ammonium, total N, soluble reactive P, total P, and dissolved organic C are monitored in four streams draining watersheds with 1 (N01B), 2 (N02B), 4 (N04D), and 20 (N20B) year target burn frequencies. Bison have grazed these treatments since May 1992. The number of sites sampled has been expanded since 1992 to include sites that may reflect anthropogenic, groundwater, and bison influences on water chemistry. These sites include the south branch of Kings Creek as it leaves watershed N01A (tube), a site immediately below the NO4D weir at Konza Falls that is heavily influenced by groundwater (kzfl), the north fork of Kings Creek draining watersheds without bison (nfkc), the south fork of Kings Creek that drains the watersheds with bison (sfkc), Kings Creek below the USGS gauging station above the first agricultural field (hokn), a small creek that drains into Kings Creek after flowing past the bison handling facilities, two private residences, the site headquarters and an agricultural field (stck), a pristine prairie groundwater site (edlr), and Kings Creek at the bottom of Konza as it leaves the agricultural land in watershed AL (hikx). Early samples were preserved with phenyl mercuric acetate. Future plans to restore agricultural land to prairie may influence downstream nutrient concentrations.

Keywords that describe data set:

nitrate, ammonium, total nitrogen, soluble reactive phosphorus, total phosphorus, and dissolved organic carbon, stream, stream water, water chemistry, biogeochemistry, nitrogen, carbon, phosphorus

Date data commenced: 04/01/1983
Date data terminated: ongoing

Principle Investigator: Walter Dodds

RECORD TYPE 1

Data Format Specification:

Variable	Columns	Format	Units
1. Datacode	1-5	A5	
2. Rectype	6	I1	
3. Year	7-8	I2	
4. Month	9-10	I2	
5. Day	11-12	I2	
6. Watershed	13-16	A4	
7. Time	17-20	I4	CST
8. Preservative	21	A1	
9. NO3	22-28	F7.1	ug/l

10. NH4	30-35	F6.1	ug/l
11. TN	37-41	I5	ug/l
12. SRP	42-47	F6.1	ug/l
13 TP	49-54	F6.1	ug/l
14. DOC	56-61	F6.2	mg/l
15. Comments	63-80	C17	

Codes used:

Name	**Value**	**Code Value**
Sample site		see abstract above
Preserve	y	preservative added
Preserve	n	no preservative added
	*	below levels of detection

Data Set Code--NWC02

Title of data set: Stream Water Conductivity for the King's Creek drainage basin on Konza Prairie

Abstract:

Conductivity was monitored in four streams draining watersheds with 1 (N01B), 2 (N02B), 4 (N04D), and 20 (N20B) year target burn frequencies. Bison grazed these treatments since May 1992. Early samples were preserved with phenyl mercuric acetate.

Keywords that describe data set:

conductivity, salinity, stream, stream water, water chemistry

Date data commenced: 04/01/1983
Date data terminated: 06/21/1993

Principle Investigator: Walter Dodds

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Sample site		13-16	A4	
7. Type	Type of Sample	17	A1	
8. Timeint	Time interval between bottles	19-20	I2	min
9. Sampool	# of samples/ bottle	21-22	I2	
10. Time	Collection time last bottle	23-26	I4	CST
11. Estcode	e = time estimated	27	A1	
12. Preservative	preserve added	28	A1	
13. Conduct.	Specific conductance	29-31	I3	uS/cm
14. Comments		32-80	A48	

Codes used:

Name	**Value**	**Code Value**
Sample Site		See abstract above
Type	g	Grab sample
Type	I	Isco (automatic) sample
Estcode	blank	sample time unknown
Estcode	e	sample time estimated
Preserve	y	preservative added
Preserve	n	no preservative added

Producer Data

Data Set Code--PAB01

Title of data set: Aboveground net primary productivity of tallgrass prairie based on accumulated plant biomass on core LTER watersheds (001d, 004b, 020b)

Abstract:

Data set contains estimates of end-of-season standing crop biomass (grams per square meter) of live graminoids, forbs, woody plants, and previous year's dead vegetation for 2 soil types (shallow and deep) on three core LTER watersheds representing three fire frequency treatmentsthree treatments. Twenty quadrats (0.1 square meters) are harvested for each soil/treatment type. NOTE: Early (April) and mid-season (July) biomass was collected from 1983-1988, and these data are vailable by request.

Keywords that describe data set:

aboveground biomass, primary productivity, graminoids, grasses, forbs, woody, previous year's dead, net primary productivity, litter, standing crop, detritus, plant biomass, nitrogen, phosphorus

Date data commenced: 04/01/1984
Date data terminated: ongoing

Principle Investigator: John Blair, Jesse Nippert

RECORD TYPE 1- mass of aboveground plant samples

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil	Soil type Tully or Florence	21-22	A2	
8. Transect	Transect (A, B, C, and D)	24	A1	
9. Plotnum	Plot number (1-5)	27	A1	
10. Lvgrass	Mass of live grass	29-34	F6.2	$g/0.1m^2$
11. Forbs	Mass of forbs	36-41	F6.2	$g/0.1m^2$
12. Cuyrdead*	Mass of current year's dead	43-48	F6.2	$g/0.1m^2$
13. Pryrdead	Mass of previous year's dead	50-55	F6.2	$g/0.1m^2$
14. Woody	Mass of woody plants (As of 24 Aug 1992) Lead plant (Amorpha canescens Pursh) Wild rose (Rosa arkansana)	57-62	F6.2	

Smooth sumac (Rhus glabra L.)
New Jersey tea (Ceanothus herbaceous)
Dogwood (Cornus drummondii)
Buckbrush (Symphoricarpos orbiculatus Moench)

15. Comments 64- c17

* Due to wildfire in spring of 1991 Current Dead was included with Live Grass. Current Dead has also been included with Live Grass since 2002.

Codes used:

Soil	TU	Tully soil
Soil	Fl	Florence soil

Data Set Code--PAB02

Title of data set: Biweekly measurement of aboveground net primary productivity on an unburned and annually burned watershed

Abstract:

Data set contains estimates of standing crop biomass (grams per square meter) of live graminoids, forbs, woody plants, current year's dead, and previous year's dead vegetation. Twenty quadrats (0.1 square meters) are harvested for each watershed (001a and 020a) on each sample date.

Keywords that describe data set:

aboveground biomass, primary productivity, graminoids, grasses, forbs, woody, previous year's dead, net primary productivity, litter, standing crop, detritus, plant biomass

Date data commenced: 04/01/1984
Date data terminated: 09/19/2000

Principle Investigator: Alan K. Knapp

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil	Soil type Tully, or Irwin	21-22	A2	
8. Transect	Transect (X)	24	A1	
9. Plotnum	Plot number (1-20)	26-27	A2	
10. Lvgrass	Mass of live grass	29-34	F6.2	$g/0.1m^2$
11. Forbs	Mass of forbs	36-41	F6.2	$g/0.1m^2$
12. Cuyrdead	Mass of current year's dead	43-48	F6.2	$g/0.1m^2$
13. Pryrdead	Mass of previous year's dead	50-55	F6.2	$g/0.1m^2$
14. Woody	Mass of woody (As of 24 Aug 1992) Lead plant (Amorpha canescens Pursh) Wild rose (Rosa arkansana) Smooth sumac (Rhus glabra L.) New Jersey tea (Ceanothus herbaceous) Dogwood (Cornus drummondii) Buckbrush (Symphoricarpos orbiculatus Moench)	57-62	F6.2	
15. Comments		64-	c17	

Codes used:

Soil	TU	Tully soil
Soil	IR	Irwin soil

Data Set Code--PAB03

Title of data set: Aboveground net primary productivity of tallgrass prairie based on accumulated plant biomass on LTER watersheds burned at different seasons

Abstract:

Data set contains estimates of standing crop biomass (grams per square meter) of live graminoids, forbs, woody plants, and previous year's dead vegetation for 2 soil types (shallow and deep) with seasonal burning treatments (spring, summer, fall, winter).

Keywords that describe data set:

aboveground biomass, primary productivity, graminoids, grasses, forbs, woody, previous year's dead, net primary productivity, litter, standing crop, detritus, plant biomass

Date data commenced: 08/12/1994
Date data terminated: ongoing

Principle Investigator: John Blair, Jesse Nippert

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil	Soil type Tully or Florence	21-22	A2	
8. Transect	Transect (A, B, C, and D)	24	A1	
9. Plotnum	Plot number (1-5)	27	A1	
10. Lvgrass	Mass of live grass	29-34	F6.2	$g/0.1m^2$
11. Forbs	Mass of forbs	36-41	F6.2	$g/0.1m^2$
12. Cuyrdead*	Mass of current year's dead	43-48	F6.2	$g/0.1m^2$
13. Pryrdead	Mass of previous year's dead	50-55	F6.2	$g/0.1m^2$
14. Woody	Mass of woody (As of 24 Aug 1992) Lead plant (Amorpha canescens Pursh) Wild rose (Rosa arkansana) Smooth sumac (Rhus glabra L.) New Jersey tea (Ceanothus herbaceous) Dogwood (Cornus drummondii) Buckbrush (Symphoricarpos orbiculatus Moench)	57-62	F6.2	
15. Comments		64-	c17	

* Included with Live Grass since 2002. Codes used: See PAB011

Data Set Code--PAB04

Title of data set: Aboveground net primary productivity of tallgrass prairie based on accumulated plant biomass on miscellaneous LTER watersheds

Abstract:

Data set contains estimates of end-of-season standing crop biomass (grams per square meter) of live graminoids, forbs, woody plants, current year's dead, and previous year's dead vegetation for 2 soil types (shallow and deep) on watersheds of various burning-grazing treatments. Twenty quadrats (0.1 square meters) are harvested for each soil/treatment type. NOTE: Early (April) and mid-season (July) biomass was collected from 1983-1988, and these data are vailable by request.

Keywords that describe data set:

aboveground biomass, primary productivity, graminoids, grasses, forbs, woody, previous year's dead, net primary productivity, litter, standing crop, detritus, plant biomass

Date data commenced: 04/01/1984
Date data terminated: ongoing

Principle Investigator: Jesse Nippert

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil	Soil type Tully or Florence	21-22	A2	
8. Transect	Transect (A, B, C, and D)	24	A1	
9. Plotnum	Plot number (1-5)	27	A1	
10. Lvgrass	Mass of live grass	29-34	F6.2	$g/0.1m^2$
11. Forbs	Mass of forbs	36-41	F6.2	$g/0.1m^2$
12. Cuyrdead*	Mass of current year's dead	43-48	F6.2	$g/0.1m^2$
13. Pryrdead	Mass of previous year's dead	50-55	F6.2	$g/0.1m^2$
14. Woody	Mass of woody (As of 24 Aug 1992)	57-62	F6.2	
	Lead plant (Amorpha canescens Pursh)			
	Wild rose (Rosa arkansana)			
	Smooth sumac (Rhus glabra L.)			
	New Jersey tea (Ceanothus herbaceous)			
	Dogwood (Cornus drummondii)			
	Buckbrush (Symphoricarpos orbiculatus Moench)			
15. Comments		64-	c17	

* Due to wildfire in spring of 1991 Current Dead was included with Live Grass. Current Dead has also been included with Live Grass since 2002.
Codes used: See PAB011

Data Set Code--PAB05

Title of data set: Aboveground net primary productivity of tallgrass prairie based on accumulated plant biomass on the LTER Fire Reversal Experiment watersheds

Abstract:

Data set contains estimates of end-of-season standing crop biomass (grams per square meter) of live graminoids, forbs, woody plants, and previous year's dead vegetation for 2 soil types (shallow and deep) on the four Fire Reversal Experiment watersheds. This experiment is based on reversing fire treatments on four watersheds, two of which had a history of annual spring burning and two of which had a history of long-term fire suppression. The dataset includes both pre- and post-fire treatments.

Keywords that describe data set:

aboveground biomass, primary productivity, graminoids, grasses, forbs, woody, previous year's dead, net primary productivity, litter, standing crop, detritus, plant biomass

Date data commenced: 8/29 /1997
Date data terminated: ongoing

Principle Investigator: Jesse Nippert

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil	Soil type Tully or Florence	21-22	A2	
8. Transect	Transect (A, B, C, and D)	24	A1	
9. Plotnum	Plot number (1-5)	27	A1	
10. Lvgrass	Mass of live grass	29-34	F6.2	$g/0.1m^2$
11. Forbs	Mass of forbs	36-41	F6.2	$g/0.1m^2$
12. Cuyrdead*	Mass of current year's dead	43-48	F6.2	$g/0.1m^2$
13. Pryrdead	Mass of previous year's dead	50-55	F6.2	$g/0.1m^2$
14. Woody	Mass of woody (As of 24 Aug 1992) Lead plant (Amorpha canescens Pursh) Wild rose (Rosa arkansana) Smooth sumac (Rhus glabra L.) New Jersey tea (Ceanothus herbaceous) Dogwood (Cornus drummondii) Buckbrush (Symphoricarpos orbiculatus Moench)	57-62	F6.2	
15. Comments		64-	c17	

*Included with Live Grass since 2002.
Codes used: See PAB011

Data Set Code--PBB01

Title of data set: Belowground Plot Experiment: Aboveground net primary productivity of tallgrass prairie based on accumulated plant biomass

Abstract:

To address the potential interactive effects of fire, aboveground biomass removal, and nutrient amendments on above- and belowground responses, a long-term field experiment was initiated in 1986 as part of the Konza Prairie Long-Term Ecological Research (LTER) program. The general goals of this experiment are: 1) to document both short- and long-term responses of plants and soils to fire, aboveground biomass removal (a surrogate for grazing in these small plots), and nutrient amendments (additions of N and/or P); and 2) to provide a better understanding of the mechanisms underlying tallgrass prairie responses to fire, aboveground biomass removal and nutrient enrichment. Peak foliage biomass is measured annually in late fall (September to October) on the 64 belowground plots. Effects of burning, mowing and N + P additions on aboveground NPP are measured. Two 0.1m2 quadrats harvested per plot). 2003 was the last year the mowing treatment was implemented.

Keywords that describe data set:

mowing, nitrogen, phosphorus, belowground plots, aboveground biomass, primary productivity, graminoids, grasses, forbs, woody, previous year's dead, net primary productivity, litter, standing crop, detritus, plant biomass, fertilizer

Date data commenced: 11/15/1986
Date data terminated: ongoing

Principle Investigator: John M. Blair (initiated by Tim Seastedt), Lydia Zeglin

RECORD TYPE 1: plant biomass data

Data Format Specification:

Variable	Name		Columns		Format
1. Datacode			1-5		A5
2. Rectype			6		A1
3. Year			7-8		I2
4. Month			9-11		I2
5. Day			12-13		I2
6. Plot #	Plot number (1-64)		18-19		I2
7. Replicate	Code A or B		21		A1
8. Burn	Burned treatment	25		A1	
9. Mow	Mow treatment	27		A1	
10. Nutrient	Nutrient treatment		29		A1
11. Lvgrass	Live grass (g/0.1m^2)		31-36		F6.2
12. Forbs	Forbs (g/0.1m^2)		38-43		F6.2
13. Cuyrdd*	Current year's dead (g/0.1m^2)		45-50		F6.2

14. Pryrdd	Previous years dead (g/0.1m^2)	52-57	F6.2
15. Woody	(As of 24 Aug 1992) lead plant-Amorpha canescens rose-Rosa arkansas (smooth) sumac-Rhus glabra New Jersey tea-Ceanothus ovatus dogwood-Cornus drummondi buck brush-symphoricarpos orbiculatus	59-64	F6.2
16 Comments	Comments	66-80	A14

Codes Used:

Name	Value	Code Value
Replicate	A,B	Code A or B
Plot	1-64	Plot number
Burn treatment	U: B	U=Unburn B=Burn
Mow treatment	U;M	U=unmowed M=mowed
Nutrient treatment	C,N,P,B	C=control, N=nitrogen P=Phosphorus B=Both

*16. Current year's dead no longer separated. It is left in the live grass

RECORD TYPE 2

Data Format Specification: nitrogen and phosphorus concentrations of selected plant samples

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Replicate		18	A1	
8. Plotnum		20-21	A2	
9. Type	(lv, cd, pd, fb)	24-25	A2	
10. Mass	Mass of sample	28-33	F6.2	g/0.1m^2
11. Nitrogen	Percent Nitrogen	36-40	F5.3	%
12. Phosphor	Percent Phosphorous	43-47	F5.3	%
13. Box Number		50-58	A9	
14. Comments		60-80	A16	

Codes used:

Name	Value	Code Value
Type	lv	Live grass
	cd	Current Dead
	pd	Previous dead
	fb	Forbs

As of 2000, samples were no longer ground for analysis.

Data Set Code--PBB02

Title of data set: Belowground Plot Experiment: Biomass and nutrient content of Rhizomes

Abstract:

To address the potential interactive effects of fire, aboveground biomass removal, and nutrient amendments on above- and belowground responses, a long-term field experiment was initiated in 1986 as part of the Konza Prairie Long-Term Ecological Research (LTER) program. The general goals of this experiment are: 1) to document both short- and long-term responses of plants and soils to fire, aboveground biomass removal (a surrogate for grazing in these small plots), and nutrient amendments (additions of N and/or P); and 2) to provide a better understanding of the mechanisms underlying tallgrass prairie responses to fire, aboveground biomass removal and nutrient enrichment. Standing crops of live and dead rhizomes (0.1 sq. m2 * 20cm deep samples) are taken in late summer periodically from 64 belowground plots. N & P content are determined on live and dead rhizomes. N& P for forb rhizomes are available for some plots in some years. **See archived rawdata files in Rm 215 Bushnell.

Keywords that describe data set:

Rhizomes, Belowground Plots, Nitrogen, Phosphorus, nutrients

Date data commenced: 11/15/1986
Date data terminated: 10/10/1994

Principle Investigator: Charles W. Rice, Lydia Zeglin

RECORD TYPE 1:

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Plot	Plot Number (1-64)	18-19	A2
8. Live Rhizomes	Mass of Sample	22-26	F2.2
9. % Nitrogen	% N of Live Rhizomes	29-33	F1.3
10. % Phosphorous	% P of Live Rhizomes	35-39	F1.3
11. Dead Rhizomes	Mass of Sample	42-46	F2.2
12. % Nitrogen	% N of Dead Rhizomes	49-53	F1.3
13. % Phosphorous	% P of Dead Rhizomes	55-59	F1.3
14. Live Forbs	Mass of Sample	62-66	F2.2
15. % Nitrogen	% N of Forbs	69-73	F1.3
16. % Phosphorous	% P of Forbs	75-79	F1.3

Data Set Code--PBB03

Title of data set: Belowground Plot Experiment: Biomass and nutrient content of Roots.

Abstract:

To address the potential interactive effects of fire, aboveground biomass removal, and nutrient amendments on above- and belowground responses, a long-term field experiment was initiated in 1986 as part of the Konza Prairie Long-Term Ecological Research (LTER) program. The general goals of this experiment are: 1) to document both short- and long-term responses of plants and soils to fire, aboveground biomass removal (a surrogate for grazing in these small plots), and nutrient amendments (additions of N and/or P); and 2) to provide a better understanding of the mechanisms underlying tallgrass prairie responses to fire, aboveground biomass removal and nutrient enrichment. Standing crops of live and dead grass roots (0.1 sq. m2 * 20cm deep samples) are taken in late summer periodically from 64 belowground plots. N&P content are determined on live and dead grass roots. N & P concentrations for forb roots are available for some plots in some years. **See archived rawdata files in Rm 215 Bushnell.

Keywords that describe data set:

Roots, Belowground Plots, Nitrogen, Phosphorus, nutrients

Date data commenced: 11/15/1986
Date data terminated: 11/14 /1994

Principle Investigator: Charles W. Rice, Lydia Zeglin

RECORD TYPE 1

Data Format Specification:

Variable	Columns	Format
1. Datacode	1-5	A5
2. Rectype	6	I1
3. Year	7-8	I2
4. Month	9-10	I2
5. Day	11-12	I2
6. Watershed	13-16	A4
7. Plot	18-19	A2
8. Live Roots	22-26	F2.2
9. % Nitrogen	29-33	F1.3
10. % Phosphorous	35-39	F1.3
11. Dead Roots	42-46	F2.2
12. % Nitrogen	49-53	F1.3
13. % Phosphorous	55-59	F1.3
14. Live Forbs	62-66	F2.2
15. % Nitrogen	69-73	F1.3
16. % Phosphorous	75-73	F1.3

Data Set Code--PEB01

Title of data set: Aboveground net primary productivity of tallgrass prairie based on accumulated plant biomass in grazing exclosures on bison-grazed watersheds

Abstract:

Data set contains estimates of end-of-season standing crop biomass (grams per square meter) of live graminoids, forbs, woody plants, and previous year's dead vegetation in grazing exclosures. Date from exclosures is used to determine long-term effects of bison grazing on aboveground net primary productivity.

Keywords that describe data set:

aboveground biomass, primary productivity, graminoids, grasses, forbs, woody, previous year's dead, net primary productivity, litter, standing crop, detritus, plant biomass

Date data commenced: 8/20/1992
Date data terminated: ongoing

Principle Investigator: David Hartnett

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Treatment	g=grazed, u=ungrazed	21	A2	
8. Cage	1-32	23-24	A2	
9. Plotnum	Plot number	26-27	A2	
10. Lvgrass	Mass of live grass	30-34	F6.2	$g/0.1m^2$
11. Forbs	Mass of forbs	37-41	F6.2	$g/0.1m^2$
12. Cuyrdead*	Mass of current year's dead	44-48	F6.2	$g/0.1m^2$
13. Pryrdead	Mass of previous year's dead	50-55	F6.2	$g/0.1m^2$
14. Woody	Mass of woody	58-62	F6.2	$g/0.1m^2$
15. Comments		63-80	C18	

* Included with Live Grass since 2002.

Data Set Code--PFS01

Title of data set: Reproductive effort of Big Bluestem, Indiangrass, and Little Bluestem on Belowground Plots

Abstract:

Data collected to assess the effects of burning, mowing and fertilizer treatments in the Belowground Plot Experiment upon flowering stem height and density of big bluestem (Andropogon gerardii), little bluestem (A. scoparious) and Indian grass (Sorghastrum nutans), and total aboveground net primary productivity.

Keywords that describe data set:

flowering, stems, flower stem height, big bluestem, little bluestem, indiangrass, belowground plot experiment, reproduction, graminoids, grasses,

Date data commenced: 07/01/1986
Date data terminated: 10/15/1988

Principle Investigator: David C. Hartnett

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	A1	
3. Year		7-8	I2	
4. Month		9-11	I2	
5. Day		12-13	I2	
6. Watershed		13-16	A4	
7. Plot	Plot number (1-64)	18-19	I2	
8. Subplot		21	A1	
9. Burn	Burn treatment	23	A1	
10. Mow	Mow treatment	25	A1	
11. Nutrient	Nutrient treatment	27	A1	
12. Species	Species name	29-32	A4	
13. Fstemht	Flower stem height	34-37	F4.2	meters
14. Fsdnsity	Flower density 0.25m squared	39-41	I3	#/M

Codes Used:

Name	Value	Code Value
Plot	1-64	Plot number
Burn treatment	U: B	U=Unburn B=Burn
Mow treatment	U;M	U=unmowed M=mowed
Nutrient treatment	C,N,P,B	C=control, N=Nitrogen

		P=Phosphorus B=Both
Species	Ange	Ange=Andropogon gerardii
Species	ANSC	ANSC=Andropogon scoparius
Species	SONU	SONU=Sorgastrum nutans

Data Set Code--PGL01

Title of data set: Litterfall collection in riparian gallery forest at Konza Prairie

Abstract:

Litterfall is collected monthly (more frequently during peak litterfall in October and November) at permanent sampling sites in the mixed deciduous gallery forest located along the lower reaches of Kings Creek at the Konza Prairie Biological Station. Thirty litterfall traps, 50 x 50 cm (.25 m^2) are located along the north fork of Kings Creek, and two are located on the south fork of Kings Creek. The north fork boxes are numbered 31 to 60 and the south fork boxes are numbered 1 and 2. Originally, the south fork also had boxes 3 to 30 but these samplers were terminated in 1993 due to repeated damage by bison. (Boxes 1 and 2 are located just outside the bison area.) Samples are sorted in the lab, and mass of wood, seeds, and foliage are recorded separately.

Keywords that describe data set:

forest, leaf litter, litter, litterfall, wood, woody debris, riparian, seed

Date data commenced: 10/06/1981
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Branch	Branch of Kings Creek	18	A1
7. ID	Identification number	20-21	I2
8. Mass	Total (include wood & seed)	23-29	F7.2
9. Wood	Woody mass	31-37	F7.2
10. Seed	Seed mass (include husks, hulls	39-44	F6.2
11. Comment*		46-80	A35

*For 1992 and part of 1994 comments include leaf/foliage weights

Codes used:

Name	Value	Code Value
Branch	N	North branch of Kings Creek
	S	South branch of Kings Creek

Data Set Code--PPH01

Title of data set: Phenology of selected plant species at Konza Prairie

Abstract:

Twenty-nine selected species of grasses, forbs, and woody vegetation characteristic of a variety of habitats on Konza Prairie are used for phenological measurements. These species are observed weekly for the entire growing season and changes in their phenological states are recorded. The following phenological states are used for this survey: (1) initiation of growth, (2) first anthesis, (3) duration of anthesis, (4) fruits mature, (5) leaves more than 90% dry.

Keywords that describe data set:

plant phenology, phenology, reproduction, senescence, flowering

Date data commenced: 06/13/1981
Date data terminated: 10/31/1987

Principle Investigator: Jesse Nippert

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Site	Soil type of other site code	21-22	A2
8. Burn	Burned or unburned	24	A1
9. Specode*	Species code	26-28	I3
10. Genus	6-character abbreviation of genus	30-36	A6
11. Species	5-character abbreviation of species	37-41	A5
12. Variety	4-character abbreviation of variety	43-46	A4
13. Growth	% of plants that have inititated growth	48	I1
14. Anthesis	% of plants that have newly opened	50	I1
15. Fruit	% of plants that have mature fruit	52	I1
16. Lvsdry	% of plants that have leaves > 90%	54	I1
17. Comments		56-80	A25

Codes used:

Name	Value	Code Value
Site	Fl	Florence soil
Site	Tu	Tully soil
Site	Dw	Dwight soil

Site	Rs	Rocky slope
Site	Gf	Gallery forest (Kings Creek)
Site	Hq	Northeast of Headquarters
Site	SE	South end
Burn	B	Burned
Burn	U	Unburned
Growth	1	0-5% plants initiated growth
Growth	2	5-20% plants initiated growth
Growth	3	> 20% plants inititated growth
Anthesis	1	0-5% plants w/new open flower
Anthesis	2	5-20% plants w/new open flower
Anthesis	3	0-5% plants have mature fruit
Fruit	2	5-20% plants have mature fruit
Fruit	3	> 20% plants have mature fruit
Lvsdry	1	0-5% plants leaves > 90% dry
Lvsdry	2	5-20% plants leaves > 90% dry
Lvsdry	3	> 20% plants leaves > 90% dry

For list of Species codes used, see PPH011_species_list.1981.1 in Appendix F.

Data Set Code--PPL01

Title of data set: Konza Prairie Long-Term Phosphorus Plots Study

Abstract:

Increased nutrient inputs is one of many global change factors predicted to affect the composition and ecosystem function of plant communities. In general, nitrogen deposition decreases diversity and increases productivity. The effects of phosphorus addition have received less attention, however, and the interactive effect of both nutrients is likely to exacerbate diversity loss over time. Here we addressed whether chronic nutrient additions changed community structure and ecosystem productivity of a native tallgrass prairie. This study took place in an ungrazed watershed that is burned every two years. Two N treatments, 0 and 10 g m^{-2}, and four P treatments, 0, 2.5, 5 and 10 g m^{-2} were crossed in a fully factorial experimental design. The experiment was initiated in 2002 and starting in 2003 nutrients were added at the beginning of each growing season. Plant species composition was surveyed both in the spring and late summer each year, and aboveground biomass was harvested at the end of each summer to estimate aboveground net primary productivity (ANPP).

Keywords that describe data set:

Popultations, Primary Production, Inorganic Nutrients, plant species composition, biodiversity, ANPP, aboveground biomass, community composition

Date data commenced: 05/01/2002
Date data terminated: ongoing

Principle Investigators: Meghan Avolio, Sally Koerner, Kimberly La Peirre, Kevin Wilcox

RECORD TYPE 1

Data Format Specification:

Variable	Name	Units
1. Datacode	Data set code	
2. Rectype	Record type	
3. RecYear	Year of record	
4. Treatment	Treatment code	
5. PlotID	Plot number	
6. Genus	Genus	
7. Species	Species	
8. Abundance	Plant abundance	

RECORD TYPE 2. Plant ANPP for phosphorus plots study

Data Format Specification:

Variable	Name	Units

1. Datacode	Data set code	
2. Rectype	Record type	
3. RecYear	Year of record	
4. PlotID	Plot number	
5. Treatment	Treatment code	
6. ANPP	ANPP	gram/m2

Data Set Code--PRE02

Title of data set: Reproductive effort of Big Bluestem, Indiangrass and Little Bluestem on selected Konza Prairie LTER watersheds

Abstract:

This data set focuses on seed production, flowering stem mass, height, and population densities of three dominant prairie grasses: Andropogon gerardii (ANGE), Sorgastrum nutans (SONU), and Schizachyrium scoparium (ANSC) in selected Konza Prairie LTER watersheds. Data set includes measurements of flowering stem height (m), density (no. per sq. m) and production (grams per sq. m) and total seed weight (grams) and production (grams per sq. m) on 2 soil types (shallow and deep) in watersheds representing 6 different burning-grazing treatment combinations. Specific watersheds sampled have varied over time. Current watersheds include: 001d, R01a, R01b, 002c, 002d, 004a, 004b, 020b, R20a, R20b, 0SpA, 0SpB, 0SuA, 0SuB, 00FA, 00FB, 00WA and 00WB Sampling is done once a year in October/November (end of growing season). (Sampling design slightly altered from PRE01.)

Keywords that describe data set:

seed weight, flowering, stems, flower stem density, flower stem height, big bluestem, little bluestem, indiangrass, grasses, graminoid, reproduction

Date data commenced: 10/01/1982
Date data terminated: ongoing

Principle Investigator: David C. Hartnett

RECORD TYPE 1 Flowering stem height and seed weight and number (for years 1982-1993)

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil	Soil type (Florence or Tully)	18-19	A2	
8. Species	Species name	21-24	A4	
9. Transect	Transect (A, B, C, D)	26	A1	
10. Point	Point number (1-20)	28-29	I2	#
11. Flwstht	Flowering stalk height	31-34	F4.2	Meters
14. Comments*		36-80	C35	

*Includes Seed Weight and Number of Seeds for years 1982-1993.

Codes used:

Name	Value	Code Value
Species	ANGE	Andropogon gerardii
Species	ANSC	Schizachyrium scoparius
Species	SONU	Sorgastrum nutans
Soil	TU	Tully soil
Soil	FL	Florence soil

RECORD TYPE 2

Data Format Specification: (Flowering stem densities and mass)

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil	Soil type (Fl or Tu)	18-19	A2	
8. Species	Species name	21-24	A4	
9. Transect	Transect (A,B,C,D)	26	A1	
10. Plot	Quadrat number	28-29	I1	
11. Stalk	Number of flowering stalks/0.25 sq. m	31-33	I3	#/.25 m^2
12. Flwstht	Flowering stalk weight/0.25 sq m	35-40	P6.2	g/.25 m^2
13. Comments		42-80	A40	

Codes Used:

Name	Value	Code Value
Species	ANGE	Andropogon gerardii
Species	ANSC	Schizachyrium scoparius
Species	SONU	Sorgastrum nutans
Soil	TU	Tully soil
Soil	FL	Florence soil

Data Set Code--PRP01

Title of data set: Konza prairie long term restoration study of aboveground annual net primary productivity (ANPP)

Abstract:

The experiment is a randomized complete block design with four whole plot hetereogeneity treatments replicated within each of four blocks (n=16 whole plots). The whole plot treatments were created using different combinations of soil depth and nutrient manipulations. The control plots contained no depth or nutrient manipulations. The "maximum hetereogeneity" plots contained three 2 m x 8 m vertical strips assigned to ambient, enriched and reduced N treatments and four 2 m x 6 m horizontal strips assigned to deep and shallow soil to result in six treatment combinations. The maximum heterogeneity plots are a split-block design. Each plot contained 12 subplots (2 m x 2 m) for sampling. All of the plots had surface soil temporarily removed to a depth of approximately 25 cm and natural limestone slabs were laid in strips assigned to the shallow soil treatment. The soil from all plots was then replaced, leveled, and disked (2-3 cm deep). In February 1998, we incorporated sawdust (49% C; C:N ratio=122) into the strips assigned to the reduced-N treatment. The average C concentration and bulk density in the surface 15 cm following long-term cultivation was 1.5% and 1.2 g cm-3, respectively. Sawdust was tilled into the soil at a rate of 5.5 kg dry wt./m2 to achieve a C concentration representative of native prairie soil (approx. 3% C). Surface applications of granular sugar were initiated in 2004 at a rate of 200 g sucrose m-2 (84.22 g C/m2) 3-4 times each growing season. Strips assigned to the enriched-N treatment were fertilized with 5 g N m2/y (applied as ammonium-nitrate) in July of the first growing season and early June of each subsequent year.

Keywords that describe data set:

Nutrients; primary productivity, restoration, heterogeneity, aboveground biomass

Date data commenced: 02/02/1998
Date data terminated: ongoing

Principle Investigators: Sara G. Baer, John M. Blair, Scott L. Collins

RECORD TYPE 1: Restoration study of aboveground annual net primary productivity.

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode				
2. RecType	Record type			
3. RecYear	Data record Year			
4. Treatment				
5. Block				

6. plot
7. SubPlot
8. WPHetTrt
9. Depth
10. Nutrient
11. ANPP
12. Comments

Comments: Data available from this procedure include the root lengths measured on specific dates, and the estimates of new lengths and decomposed lengths for each quadrat (see methods manual for details on how these estimates were derived). The original data (the mylar sheets) is stored for each window for each year. The pre-LTER sheets have been archived, but the pre-LTER encoded data is not available.

Data Set Code--PRW01

Title of data set: Fine root density and turnover based on root window observations

Abstract:

Eight root windows (40cm X 40cm) were used to measure fine root production and decay over three years in a 2 factor-factorial experiment (Burning, Mowing). Root lengths were traced every two weeks during the growing season. Production, disappearance and standing crops (lengths) were calculated by 10 cm increments.

Keywords that describe data set:

fine roots, root lengths, root growth, root, root decomposition, belowground

Date data commenced: 02/01/1986
Date data terminated: 10/03/1989

Principle Investigator: John M. Blair

RECORD TYPE 1: Root windows on a burning and mowing experiment. Mowing treatment was added in the experiment from 1987.

Data Format Specification:

Variable	Name	Columns	Format	Units
1. RecType	Record type			
2. RecYear	Data record Year			
3. RecMonth	Data record Month			
4. Recday	Data record Date			
5. Window	Window number			
6. Depth	Depth to bottom of square(incremented by 10cm)			cm
7. Total	Total root length in the window			cm
8. New	New root length in the window			cm
9. Disappear	Disappeared root length in the window			cm

Comments: Data available from this procedure include the root lengths measured on specific dates, and the estimates of new lengths and decomposed lengths for each quadrat (see methods manual for details on how these estimates were derived). The original data (the mylar sheets) is stored for each window for each year. The pre-LTER sheets have been archived, but the pre-LTER encoded data is not available.

Data Set Code--PTN01

Title of data set: Aboveground net primary productivity along transects spanning topographic gradients on an annually burned and unburned watershed at Konza Prairie

Abstract:

In 1989, single transects spanning upland-lowland-upland topographic positions were established in a long-term unburned (0020B) and an annually burned (001D) watershed. Standing crop biomass data were collected in late season at 11 sites along each transect and sorted into live graminoids, forbs and woody plants, current year's dead, and previous years' dead vegetation. Four 0.1 m2 quadrats were harvested at each of the 11 sites per watershed and all data except previous years' dead were combined to provide an estimate of aboveground NPP. In 1993, soil moisture measurements began along each transect at 15 and 30 cm depths (where possible) with a Time Domain Reflectomerty (TDR) system. Measurements were made twice a month from March - October and intermittently during the winter months.

Keywords that describe the data set:

aboveground biomass, primary productivity, graminoids, grasses, forbs, woody, previous year's dead, net primary productivity, litter, standing crop, detritus, plant biomass, topography, landscape, soil moisture.

Date data commenced: 08/15/1989
Date data terminated: 09/26/1997

Principle Investigator: John Blair

RECORD TYPE 1 Aboveground biomass

Data Format Specification-1989-1997

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
8. Transect	Transect (1-11)	23-24	I2	
9. Plotnum	Plot number (a,b,c,d)	27	A1	
10. Lvgrass	Mass of live grass	29-34	F6.2	$g/0.1m^2$
11. Forbs	Mass of forbs	36-41	F6.2	$g/0.1m^2$
12. Cuyrdead	Mass of current year's dead	43-48	F6.2	$g/0.1m^2$
13. Pryrdead	Mass of previous year's dead	50-55	F6.2	$g/0.1m^2$
14. Woody	(As of 24 Aug 1992) lead plant-Amorpha canescens rose-Rosa arkansas	57-62	A23	

(smooth) sumac-Rhus glabra
New Jersey tea-Ceanothus ovatus
dogwood-Cornus drummondi
buckbrush-Symphoricarpos orbiculatus

15. Comments* 64-80

* The comments section of PTN011.90 contains in this order: Standard Error of LiveGrass, Standard Error of Forbs, Standard Error of Current Year Dead, Standard Error of Previous Year Dead, Total (LiveGrass+Forbs+Current Years Dead), and Standard Error of Total.

RECORD TYPE 2 Aboveground biomass with live graminoids, forbs, current year's dead, previous year's dead vegetation, and their standard errors for 1990

Data Format Specification:

Variable	Name	Columns	Format	
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Transect	Transect (1-11)	23-24	I2	
8. Lvgrass	Mass of live grass	29-34	F6.2	$g/0.1m^2$
9. Lvgrse	standard error of live grass			
10. Forbs	Mass of forbs	36-41	F6.2	$g/0.1m^2$
11. Forbse	standard error of forbs			
12. Cuyrdead	Mass of current year's dead	43-48	F6.2	$g/0.1m^2$
13. Cuyrdese	standard error of currents years dead			
14. Pryrdead	Mass of previous year's dead	50-55	F6.2	$g/0.1m^2$
15. Pryrdese	standard error of previous years dead			
16. Total	total aboveground biomass (livegrass + forbs + current years dead)			$g/0.1m^2$
17. Totalse	standard error of total aboveground biomass			

RECORD TYPE 3 Soil water content at 15-cm and 30-cm depth from 1993 to 1996

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode			
2. Rectype			
3. Year			
4. Month			
5. Day			
6. Watershed			
7. Depth	Soil depth to collect data		
8. Tag#	Tag number		
9. Reading	Reading from TDR		
10. H2O	% volumetric H2O based on the TOPP equation		
11. Comments	Comments		

Data Set Code--PVC01

Title of data set: Plant species composition on selected watersheds at Konza Prairie (1981 only)

Abstract:

Canopy coverage and frequency of plant species were estimated visually in 20 circular 10 sq m plots. Six treatments were sampled, three ungrazed and three to be grazed (in the future) by native grazers (bison). In each case, one of the three watersheds was unburned, another burned annually in April, and the third burned every four years in April. In each treatment two soils were sampled: a lower slope deep fertile non-rocky soil (Tully silty clay loam) and a shallow rocky soil (Florence cherty silt loam) on level to gently sloping ridges.

Keywords that describe data set:

plant cover, species, canopy coverage, plant species composition, biodiversity

Date data commenced: 04/01/1981
Date data terminated: 09/29/1981

Principle Investigator: David C. Hartnett

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil	Soil type	18	A1	
8. Specode	Species code	20-22	I3	
9. Genus	Abbreviation of genus	24-29	A6	*
10. Speci	Abbreviation of species	31-35	A5	*
11. Vari	Abbreviation of variety	37-40	A4	*
12. Plot 1-20	Plot 1-20 Cover class for plots 1-20	42-80 (even)	I20	

Codes used:

Name	Value	Code Value
Soil	F	Florence
	T	Tully
Spcode	1	Agropyron smithii (see attached list)
	etc.	
Plot 1-20	1	0-1% Cover

2	2-5% Cover
3	5-25% Cover
4	25-50% Cover
5	50-75% Cover
6	75-95% Cover
7	95-100% Cover

For list of Species codes used, see PVC011_species_list.1981.1 in Appendix F

Data Set Code--PVC02

Title of data set: Plant Species Composition on selected watersheds at Konza Prairie

Abstract:

Canopy coverage and frequency were recorded in 20 circular 10 sq m plots. Six treatments were sampled, three ungrazed and three to grazed by native grazers. In each case one of the three watersheds was unburned, another burned annually in April, the third burned every four years in April. In each treatment two soils were sampled: a lower-slope deep fertile nonrocky soil (tully silty clay loam), and a shallow rocky soil (florence cherty silt loam) on level to gently sloping ridges. In 1983 another ungrazed annual burn area (1c) was added (both tully and florence soils) because original area (1d) appeared aberrant.

Keywords that describe data set:

Plant cover, species, canopy coverage, plant species composition, biodiversity, ANPP, aboveground biomass, community composition

Date data commenced: 06/29/1983
Date data terminated: ongoing

Principle Investigators: David C. Hartnett/Scott L. Collins

RECORD TYPE 1.

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode	Data set code	1-5	A5	
2. Rectype	Record type	6	I1	
3. RecYear	Year of record	7-8	I2	
4. RecMonth	Month of record	9-10	I2	
5. RecDay	Day of record	11-12	I2	
6. Watershed	Watershed of treatment	13-16	A4	
7. SoilType	Soil type in which data were collected (Florence or Tully)	18	A1	
8. Transect	Transect of A-E			
9. Plot	Plot number 1-5			
10. SpeCode	Species code		I3	
11. AB_genus	Abbreviation of genus		A6	
12. AB_species	Abbreviation of species		A5	
13. Cover	Cover class		I1	
14. Pid	Personnel id who collected the data		I1	
15. Comments	Comments		I1	

Vegetation species composition from 1983. The transects were permanently layed out in the current format of 4 transects (A-D), each with 5 plots. Transect E only occurred on watershed N20B florence in 1986 and 1987. This transect is the same as the current transect D for this watershed and soil type. The old transect D was abandoned in 1987 prior to bison reintroduction.

Seven cover classes were used to estimate species canopy coverage. 1 - 0-1% cover; 2 - 2-5% cover; 3 - 5-25% cover; 4 - 25-50% cover; 5 - 50-75%; 6 - 75-95% cover; 7 - 95-100% cover. (Note: for the watershed r20b, no data were collected in the transect A & B in the fall of 2011 due to wildfire occurred.)

*Transect 'E' occurred only on the N20b florence site in 1986 and 1987 and was renamed the new 'D' transect in 1988. The old 'D' transect was sampled from 1983 to 1987 and then abandoned when the bison fence was constructed. Thus, plots d1-d5 from 1983-1987 are NOT the same d1-d5 plots in subsequent years.

Codes used in the data set:

t = tully (lowland) soil
f = florence (upland) soil
s = slopes

A value of 1 to 7 in plots a1-d5 indicates the estimated cover class value for the species. Blank values indicate that the plant was not observed in the plot.

Cover class	Canopy cover
1	<1%
2	1-5%
3	5-25%
4	25-50%
5	50-75%
6	75-95%
7	95-100%

Data Set Code--PWV01

Title of data set: Cover of woody vegetation at Konza Prairie

Abstract:

This data set relates effects of soil, grazing intensity and burning treatments on the establishment and subsequent expansion of woody plants in prairie communities. The locations of woody vegetation are marked on a mylar overlay of an aerial photograph of the area being surveyed with a unique symbol for each species and a number for the size. For trees, size is the height to the nearest meter. For shrubs, the number of stems is recorded as a measure of size if the number is less than 25. For large patches of shrubs, the diameter is recorded and the shape of the patch is drawn on the overlay. Files are named according to the name of the watershed and year the data was collected (e.g. 004b86.one = first data file for 004b in 1986). For 1986, the files also exist as coverages in PC ARC/INFO files.

Keywords that describe data set:

woody plant cover, shrubs, trees, plant cover

Date data set commenced: 06/01/1981
Date data set terminated: 06/01/1986

Principle Investigator: Jesse Nippert

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. RecYear			
2. Specode	6-digit code representing species		
3. Watershed	or watershed boundary	1-6	A5
4. x	x coordinate	8-12	I5
5. y	y coordinate	14-18	I5
6. height	Height of tree to nearest meter*	21-22	I2
7. Comments			
8. Comments2			

Codes used: For list of Species codes used, see PWV011_species_list.1981.1 in Appendix F

* Height	99	Used to mark beginning and end of shrub patches

Data Set Code--PWV02

Title of data set: Importance values of gallery forest vegetation at Konza Prairie, 1983

Abstract:

Eighteen gallery forest stands, representing nearly all of the nondisturbed forests on Konza Prairie, were sampled during the 1983 growing season. The point-quarter method at 20 sample points was used to sample overstory vegetation. Species names and diameter were recorded for the four sampled trees in each plot. From these data frequency, density and dominance were calculated to derive importance values for each species in a stand.

Keywords that describe data set:

importance value, gallery forests, point-quarter method, ordination

Date data set commenced: 05/23/1983
Date data set terminated: 08/17/1983

Principle Investigator: John M. Briggs

RECORD TYPE 1

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode	6-digit code representing species		
2. Rectype	or watershed boundary	1-6	A5
3. Recyear	x coordinate	8-12	I5
4. Recmonth	y coordinate	14-18	I5
5. Recday	Height of tree to nearest meter*	21-22	I2
6. Stand	stand identificaiton number		
7. Point			
8. Quadrant			
9. Speccode			
10. Genus			
11. Species			
12. Variety			
13. Distance			
14. Diameter			
15. Age			
16. Comments			

Codes used: For list of Species codes used, see PWV011_species_list.1981.1 in Appendix F

* height	99	Used to mark beginning and end of shrub patches

Other Data

Data Set Code--BGPVC

Title of data set: Plant Species Composition in the Belowground Plot Experiment at Konza Prairie

Abstract:

Two permanent plant composition plots were marked with conduit in each of the 64 plots. Canopy cover was recorded in a 5 m^2 circular area surrounding each of the plots. At approximately 5-year intervals, coverage is assessed in late July, using visual estimates of cover by species, based on a modified Daubenmire scale. NOTE: In 1989, sampling was done once in early July after mowing using one 10 m^2 plot placed randomly in the approximate center of each plot. In 1994, plant composition sampling was done in early June in the unmowed plots; sampling in the mowed plots occurred in August. In 1999, two permanent conduits were placed in each plot, and sampling was conducted in June, before mowing, and again in August using 5 m^2 plot sizes. In 2005 and afterward, sampling was reduced to one time in late July. Sampling occurred once every five years until 2015. Plots have been sampled annually since 2016.

Keywords that describe data set:

canopy cover, plant species, plant species composition, plant communities, community composition, biodiversity, Belowground Plot Experiment

Date data commenced: 1989
Date data terminated: ongoing

Principle Investigator: John Blair

RECORD TYPE 1: Vegetation species composition for below ground plots

Data Format Specification:

Variable	Name
1. Datacode	
2. RecYear	
3. RecMonth	
4. RecDay	
5. RepSite*	Replicate A or B for RecType 2
6. SpeciesCode	Species code
7. Ab_genus	Abbreviation of genus
8. Ab_species	Abbreviation of species
9. Plot	
10. CoverClass	Estimated cover class

11. Comments

*Subplots a and b were added in 1999 and are 5 meter square plots that are in a different location from the 10 meter square plots that were sampled previously.

For list of Species codes used, see Konza species list at:
http://lter.konza.ksu.edu/sites/default/files/species_list_pvc02.pdf

A value of 1 to 7 indicates the estimated cover class value for the species.

Cover class	Canopy cover
1	<1%
2	1-5%
3	5-25%
4	25-50%
5	50-75%
6	75-95%
7	95-100%

Data Set Code--BMS01

Title of data set: Mycorrhizae spore density and composition in the Belowground Plot Experiment at Konza Prairie

Abstract:

Spore densities of 14 groups (13 species + unknown) were measured on the 64 belowground plots (record type 1). Effects of burning, mowing, and N+P additions on spore densities (an index of AM fungi infection rates). Community indices and percent root colonization (record type 2). Effects of burning, mowing, and N+ P additions on mycorrhizal community composition and root colonization.

Keywords that describe data set:

mycorrhizae, spores, burning, mowing, nitrogen, phosphorus, Belowground Plot Experiment

Date data commenced: 06/11/1987
Date data terminated: 12/31/1987

Principle Investigator: David C. Hartnett

RECORD TYPE 1 (spore densities)

Data Format Specification:

Variable	Name	Columns	Format
1. DATACODE		1	A5
2. RECTYPE		2	I1
3. YEAR		3	I2
4. MONTH		4	I2
5. DAY		5	I2
6. BELO		6	A4
7. PLOT	Belowground Plot id (1-64)	7	I2
8. BLOCK	Super Plot (block) H A	8	A1
9. BURN	Burn Treatment	9	A1
10. MOW	Mow Treatment	10	A1
11. NUTRIENT	Nutrient Treatment	11	A1
12. AGGREGAT	# spores Glomus aggregatum	12	I3
13. FUSCICDA	# spores Glomus fuscicdatum	13	I3
14. MOSSEAL	# spores Glomus mosseal	14	I3
15. CLAROIDE	# spores Glomus claroideum	15	I2
16. CONSTRIC	# spores Glomus constrictum	16	I2
17. TORTUOSU	# spores Glomus tortuosum	17	I2
18. ALBIDUM	# spores Glomus albidum	18	I2
19. ETUNICAT	# spores Glomus etunicatum	19	I2
20. UNIDENT	# unidntfd glomus spp.	20	I2
21. GIGPELLU	# spores Gigaspora pellucida	21	I2
22. GIGGIGAU	# spores Gigaspora gigautea	22	I2

23. GIGCALOS	# spores Gaspora calospira	23	I2
24. SCLCOROM	# spores scler. corom	24	I2
25. ENTOFRAP	# spores entoph. freques	25	I2

Codes Used:

Name	Value	Code Value
Plot	1-64	Plot number
Burn treatment	U: B	U=Unburn B=Burn
Mow treatment	U; M	U=unmowed M=mowed
Nutrient treatment	C, N, P, B	C=control, N=nitrogen P=Phosphorus B=Both

RECORD TYPE 2 (community indices)

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1	A5
2. Rectype		2	A1
3. Year		3	I2
4. Month		4	I2
5. Day		5	I2
6. Watershed		6	A4
7. Plot	Plot number (1-64)	7	I2
8. Subplot	Sub plot	8	A1
9. Burn	Burned treatment	9	A1
10. Mow	Mow treatment	10	A1
11. Nutrient	Nutrient treatment	11	A1
12. Myc. spore species richness		12	I2
13. Myc. Spore species eveness		13	F1.3
14. Myc. Spore species diversity		14	F1.3
15. Myc.Spore species total number		15	I4
16. Myc. Root Colonization (%)		16	I2

Codes Used:

Name	Value	Code Value
Plot	1-64	Plot number
Burn treatment	U: B	U=Unburn B=Burn
Mow treatment	U; M	U=unmowed M=mowed
Nutrient treatment	C, N, P, B	C=control, N=nitrogen P=Phosphorus B=Both

Data Set Code--BNS01

Title of data set: Nematodes density and composition in the Belowground Plot Experiment at Konza Prairie

Abstract:

The effects of burning, mowing, and nitrogen (N) and phosphorus (P) fertilization on the trophic structure of a tallgrass prairie nematode community were examined in a long-term field experiment established in 1986. Nematode densities and trophic composition were determined in October of 1987, 1989, and 1994 following 2, 4, and 9 years of treatment, respectively.

Keywords that describe data set:

nematodes, trophic structure, soil invertebrates, mowing, nitrogen, phosphorus, Belowground Plot Experiment

Date data commenced: 1987
Date data terminated: 1994

Principle Investigator: Timothy C. Todd

RECORD TYPE 1

Data Format Specification:

Variable	Columns
1. Observation number	1-6
2. Year	9-10
3. Burn	15
4. Mow	20
5. N	24
6. P	27
7. Block	31
8. Herbivores	34-44
9. Fungivores	46-56
10. Microbivores	58-68
11. Omnivorous/predators	70-80
12. Total	82-93

Data Set Code--CCE01

Title of data set: The Climate Extremes Experiment (CEE): Assessing ecosystem resistance and resilience to repeated climate extremes at Konza Prairie

Abstract:

Climate extremes, such as drought, are increasing in frequency and intensity, and the ecological consequences of these extreme events can be substantial and widespread. Yet, little is known about the factors that determine recovery (or resilience) of ecosystem function post-drought. Such knowledge is particularly important because post-drought recovery periods can be protracted depending on drought legacy effects (e.g., loss key plant populations, altered community structure and/or biogeochemical processes). These drought legacies may alter ecosystem function for many years post-drought and may impact future sensitivity (both resistance and resilience) to climate extremes. With forecasts of more frequent drought, there is an imperative to understand whether and how post-drought legacies will affect ecosystem response to future drought events. To address this knowledge gap, we experimentally imposed over an eight year period two extreme growing season droughts, each two years in duration followed by a two-year recovery period, in annually burned tallgrass prairie.

Keywords that describe data set:
Konza Prairie, ANPP, climate, climate change, drought, extreme events, nitrogen, soil moisture, temperature, rainfall manipulation, precipitation

Date data commenced: 1/4/2010
Date data terminated: ongoing

Principle Investigators: Dr. Melinda D. Smith, Dr. Alan K. Knapp

RECORD TYPE 1 Treatments Table CEE011

Data Format Specification:

Variable	Name	units
1.	DataCode	Data set code
2.	Rectype	Record type
3.	Plot	match with treatments, spcomp, stemdensity, ANPP tables
4.	heat	treatment designations (1 = control, 2 = level 2, 3 = level 3, 4 = level 4)
5.	precip	treatment designations (1 = control, 2 = drought)
6.	subject	number 1-40
7.	rep	match with spcomp, stemdensity, ANPP tables

RECORD TYPE 2 Species Composition CEE012

Data Format Specification:

Variable	Name	units
1. DataCode	Data set code	
2. Rectype	Record type	
3. Year		
4. Plot	match to treatments, spcomp, stemdensity, ANPP	
5. Spnum2	Species number from Konza taxa list	
6. Cover	percent cover of taxa (0-100)	

RECORD TYPE 3 Stemdensity CEE013

Data Format Specification:

Variable	Name	units
1. Datacode	Data set code	
2. Rectype	Record type	
3. Season	early (spring) or late (fall) stem density value	
4. Year	year stem density was collected	
5. Plot	match with spcomp, stemdensity, ANPP tables	
6. Sample	number 1-40	
7. AndroL	number of live stems of Andropogon gerardii	
8. AndroD	number of dead stems of Andropogon gerardii	
9. AndroT	total number of stems of Andropogon gerardii	
10. SorgL	number of live stems of Sorghastrum nutans	
11. SorgD	number of dead stems of Sorghastrum nutans	
12. SorgT	total number of stems of Sorghastrum nutans	
13. SolidagoL	number of live stems of Solidago canadensis	
14. SolidgoD	number of ldead stems of Solidago canadensis	
15. SolidagoT	total number of stems of Solidago canadensis	
16. GrassL	number of live other grass stems	
17. GrassD	number of dead other grass stems	
18. GrassT	total number of other grass stems	
19. ForbL	number of live forb stems	
20. ForbD	number of dead forb stems	
21. ForbT	total number of forb stems	
22. WoodL	number of live woody stems	
23. WoodD	number of dead woody stems	
24. WoodT	total number of woody stems	
25. Total	total number of all stems	

RECORD TYPE 4 ANPP CEE014

Data Format Specification:

Variable	Name
1. Datacode	Data set code
2. Rectype	Record type
3. Year	year anpp was collected
4. Plot	match with spcomp, stemdensity, ANPP tables
5. Andro	dried mass of Andropogon gerardii in grams per 1m2
6. Sorg	dried mass of Sorghastrum nutans in grams per 1m2
7. Grass	dried mass of other grass in grams per 1m2
8. Solidago	dried mass of Solidago canadensis in grams per 1m2
9. Forbs	dried mass of other forbsi in grams per 1m2
10. Woody	dried mass of woody taxa in grams per 1m2
11. Grass_Lit	dried mass of grass litter in grams per 1m2
12. Other_Lit	dried mass of other litter in grams per 1m2
13. Total	total dried mass in grams per 1m2
14. Tgrass	total dried mass of grass in grams per 1m2
15. Tother	total dried mass of other in grams per 1m2

Data Set Code--EJR01

Title of data set: Foraging decisions underlying restricted space-use: effects of fire and forage maturation on large herbivore nutrient uptake on Konza Prairie

Abstract:

Recent models suggest that herbivores optimize nutrient intake by selecting patches of low to intermediate vegetation biomass. We assessed the application of this hypothesis to plains bison (Bison bison) in an experimental grassland managed with fire by estimating daily rates of nutrient intake in relation to grass biomass and by measuring patch selection in experimental watersheds in which grass biomass was manipulated by prescribed burning. Digestible crude protein content of grass declined linearly with increasing biomass, and the mean digestible protein content relative to grass biomass was greater in burned watersheds than watersheds not burned that spring (intercept; $F_{1,251} = 50.57$, $P < 0.0001$). Linking these values to published functional response parameters, ad libitum protein intake, and protein expenditure parameters, Fryxell's (Am. Nat., 1991, 138, 478) model predicted that the daily rate of protein intake should be highest when bison feed in grasslands with 400–600 kg/ha. In burned grassland sites, where bison spend most of their time, availability of grass biomass ranged between 40 and 3650 kg/ha, bison selected foraging areas of roughly 690 kg/ha, close to the value for protein intake maximization predicted by the model. The seasonal net protein intake predicted for large grazers in this study suggest feeding in burned grassland can be more beneficial for nutrient uptake relative to unburned grassland as long as grass regrowth is possible. Foraging site selection for grass patches of low to intermediate biomass help explain patterns of uniform space use reported previously for large grazers in fire-prone systems.

This data set was used to test the forage maturation hypothesis in the Konza Prairie bison enclosure from 2012-2013. Our objectives were to quantify foraging site selection of Plains bison in order to determine if bison in a fire-prone grassland selected sites of low-to-intermediate forage biomass as posited by Fryxell's (1991) forage maturation hypothesis. Additionally, to understand how foraging patterns shifted when grass regrowth was not possible, we quantified the annual diet of four GPS-collared bison via stable isotope analysis of tail hair plucked during roundup.

Keywords that describe data set:

Konza Prairie, graduate student research, isotope, biomass, Bison, Consumers, Fire, Herbivores

Date data commenced: 4/1/2012
Date data terminated: 12/30/2013

Principle Investigators: Edward Raynor, Anthony Joern

RECORD TYPE 1 Foraging site vegetation data EJR011

Data Format Specification:

Variable	Name	units
7. DataCode		
8. Rectype		
9. RecMonth	Month that data collected	
10. RecDate	Date that data was collected	
11. DaysSinceMay1	The number of days since 1 May of that year	
12. Strata	sample group	
13. Status	On for grazed site, Off for site not grazer during observation	
14. Biomass	Dried biomass(averaged across three sub-plots) of all vegetation in 0.1 m2 clipping extrapolated to g/m2	
15. CP	Graminoid crude protein content derived from NIRS analysis, percentage	
16. DCP	Graminoid adjusted crude protein content derived from NIRS analysis	
17. Watershed	Name of bison watershed that sample was collected	
18. Green	Percentage of green of all vegetation in plot (averaged)	
19. Grass	Percentage of grass in plot (averaged).	
20. Forbs	Percentage of forbs in plot (averaged).	
21. Litter	Percentage of litter in plot (averaged)	
22. Burn	Whether or not watershed burned that spring	

RECORD TYPE 2 Bison tail hair stable isotope data (EJR012)

Data Format Specification:

Variable	Name	units
1. Datacode		
2. RecType		
3. RecYear	Year that data was collected	
4. Animal	animal ear tag number	
5. d13C	Value of d13C from the segement analyzed.	

Data Set Code--ESM01

Title of data set: Fire and grazing modulate the structure and resistance of plant–floral visitor networks in a tallgrass prairie

Abstract:

Data from the study: Welti, E.A.R. and Joern, A. 2017. Fire and Grazing modulate the structure and resistance of plant-floral visitor networks in a tallgrass prairie. Oecologia 186: 447-458.

EMS011 dataset contains counts of blooming inflorescences of plant species on 12 Konza watersheds in June-July of 2014; ESM012 dataset contains associations between flower-visiting insects and insect-pollinated flowering plants on 12 Konza watersheds collected in May-July of 2014; ESM013 dataset describes insects belonging to the orders of Coleoptera, Diptera, Lepidoptera and Hymenoptera collected in pantrap transects on 12 Konza watersheds collected in June-July of 2014.

Keywords that describe data set:

Konza Prairie, Konza Prairie Biological Station, pollinator, pollination, flower visitor, ecological network, Consumers, insects

Date data commenced: 2014-5-29
Date data terminated: 2014-07-30

Principle Investigators: Ellen Welti, Anthony Joern

RECORD TYPE 1 Inflorescence counts of insect-pollinated plants on 12 Konza watersheds in 2014 ESM011

Data Format Specification:

Variable	Name
1. Datacode	Data set code
2. Rectype	Record type
3. Watershed	Watershed
4. Date	Date of sample collection
5. Plant	Plant genus and species
6. InflorescenceCT	Number of blooming inflorescences of a plant species within a transect
7. Comments	Comments on data collection

RECORD TYPE 2 Insect flower-visitor and plant associations on 12 Konza watersheds in 2014 ESM012

Data Format Specification:

Variable	Name
1. Datacode	Data set code
2. Rectype	Record type
3. Watershed	Watershed
4. Date	Date of sample collection
5. Plant	Plant genus and species on which insect was collected
6. PollinatorOrder	Order of collected flower-visiting insectComments
7. PollinatorID	Lowest taxonomic level flower-visiting insect was identified to
8. PollinatorAbundance	number of individual flowering-visiting insects collected on a given flowering plant species
9. Comments	Comments on data collection

RECORD TYPE 3 Insects collected in pantraps on 12 Konza watersheds in 2014
ESM013

Data Format Specification:

Variable	Name
1. Datacode	Data set code
2. Rectype	Record type
3. Watershed	Watershed
4. Date	Date of sample collection
5. InsectOrder	Order of collected insect
6. InsectID	Lowest taxonomic level insect was identified to
7. InsectAbundance	Number of insects collected in a transect
8. Comments	Comments on data collection

Data Set Code--FWE01

Title of data set: Effects of Browsing and Fire on Woody Encroachment at Konza Prairie

Abstract:

Woody encroachment into grasslands, savannas, and steppes have become a management and conservation concern worldwide because of the ability of woody plants to change ecosystems through decreases in biodiversity, alterations in water and nutrient cycles as well as decreases in forage production and quality. In grasslands, woody encroachment can be categorized into two groups: non-resprouting species that can be killed with fire and resprouting species that cannot be killed with fire. Resprouting species require additional active management strategies to remove them from encroached grasslands. In this study we investigate physiological, population and community effects of continuous browsing and fire on Cornus drummondii, a resprouting woody species. Through monitoring the shrub's physiology, population and the surrounding plant community composition within these treatments we hope to understand how to best prescribe restoration methods for restoring the tallgrass prairie.

Keywords that describe data set:

Konza Prairie, graduate student research,

Date data commenced:
Date data terminated:

Principle Investigators: Jesse Nippert, Rory O'Connor

RECORD TYPE

Data Format Specification:

Note: This dataset is not online yet, but available upon request.

Data Set Code--GFE01

Title of data set: Ghost Fire (formerly known as Carbon Addition Experiment): an experimental manipulation of fire effects on multi-trophic community dynamics in the ungrazed uplands of unburned and annually burned watersheds of Konza Prairie

Abstract:

Frequent burning is a common land practice in many grasslands worldwide, and this land use strategy has large impacts on a wide variety of ecosystem functions and services. Fire in tallgrass prairie, in the absence of grazing, alters plant community composition, decreases richness, and increases plant production. Proposed mechanisms for the changes in community composition and function are that fire decreases N availability (through volatilization) and removes litter (thereby increasing light availability and decreasing soil moisture). However, few experiments explicitly test these mechanisms, and those that do monitor short-term effects. Yet, the strength of these mechanisms likely differ over longer time scales, as other ecosystem attributes (e.g., plant community composition) change through time. Ghost Fire aims to determine the mechanisms behind community and ecosystem differences between annually burned grassland and 20-year burned grassland (hereafter called unburned) by experimentally manipulating N availability and litter. We impose litter and N conditions found in unburned grassland onto annually burned grassland, and litter and N conditions typically found in annually burned grassland onto unburned grassland. Importantly, Ghost Fire monitors both below- and above-ground plant community and ecosystem dynamics as well other dimensions of the ecosystem including microbial and mycorrhizal communities and insect community composition and biomass.

Keywords that describe data set:

Konza Prairie, Fire, Biodiversity, Disturbance, Populations, Primary production

Date data commenced: 4/1/2014
Date data terminated: ongoing

Principle Investigators: Lydia Zeglin, Sally Koerner, Meghan Avolio, Kim La Pierre, Kevin Wilcox, Dave Hoover, Melinda Smith.

RECORD TYPE 1

Data Format Specification:

Variable	Name	units
1. DataCode	Dataset Code	
2. RecType	Record Type	
3. RecYear	Record Year	
4. SoilResins	Soil (Resins)	
5. SOM	Soil Organic Matter	
6. SEA	Soil Enzyme Activity	

7. MRC Mycorrhizal Root Colonization
8. Code Watershed code
9. Comments Comments

*Fire type code:
PP- prescriptive planned; PU- prescriptive unplanned; WP- wildplanned; WU- wild unplanned

Note: This dataset is not online yet, but available upon request.

Data Set Code--HRE01

Title of data set: Environmental Heterogeneity Restoration Experiment at Konza Prairie

Abstract:

We manipulated key resources that influence plant diversity in tallgrass prairie (i.e., soil depth and nitrogen availability) to increase environmental heterogeneity prior to sowing native prairie species into a former agricultural field. We compared variability in nutrient availability, aboveground annual net primary productivity (ANPP), and the composition of species between replicate plots containing soil heterogeneity manipulations and plots with no resource manipulations (n = 4 per treatment) during the first 15 yr of community assembly as a test of the "environmental heterogeneity hypothesis."

Keywords that describe data set:

Date data commenced: 4/1/2014
Date data terminated: ongoing

Principle Investigators: Sara G. Baer

RECORD TYPE 1 For subplot

Data Format Specification:

Variable	Name	units
RecYear	Year of record	
BLOCK	The experiment contained 4 blocks	
PLOT	The experiment consisted of 16 plots; plots 1, 3, 6, 8, 9, 10, 14 and 15 were used in this study.	
SUBPLOT	Each plot contained 12 subplots.	
WPTRT	Whole-plot heterogeneity treatment (maxhet and control)	
DEPTH	Two soil depth treatments were deep (=1) and shallow (=2).	
NUTRIENT	Three soil nutrient treatments were ambient (=1), enriched (=2), and reduced (=3).	
TRTCOMB	Indicates treatment combination resulting from the combination of soil depth and nutrient manipulations (deep soil at ambient N = control, deep soil enriched with N = N; deep soil with reduced N = C; shallow soil at ambient N = stone shallow soil enriched with N = stoneN, and shallow soil with reduced N = stoneC).	
RESTORE_YR	Growing season since restored from agriculture	
ANPP	Aboveground annual net primary productivity (g/m2/y).	
RESIN_NO3	Resin collected nitrate over the growing season (µg/bag). Values represent the average of two bags/subplot; a period indicates missing data	
H	Average subplot diversity (Shannon's index); values are unit-less.	
R	Average subplot richness (number of species/0.5 m2)	
ANGE	Andropogon gerardii Vitman	
SCSC	Schizachyrium scoparium (Michx.) Nash (Michx.) Nash	

BOCU	Bouteloua curtipendula (Michx.) Torr.
KOMA	Koeleria macrantha (Ledeb.) Schult.
PAV12	Panicum virgatum L.
SONU2	Sorghastrum nutans (L.) Nash
AMCA6	Amorpha canescens Pursh
ARLU	Artemisia ludoviciana Nutt
ASVE	Asclepias verticillata L.
BAAU	Baptisia australis (L.) R. Br.
BABR2	Baptisia bracteata Muhl. ex Elliott
CAIN2	Callirhoe involucrata (Torr. & A. Gray) A. Gray
DACA7	Dalea candida Michx. ex Willd.
DAPU5	Dalea purpurea Vent.
DEIL	Desmanthus illinoensis (Michx.) MacMill. ex B.L. Rob. & Fernald
BREU	Brickellia eupatorioides (L.) Shinners
LEDE	Lepidium densiflorum Schrad
LECA8	Lespedeza capitata Michx
LIPU	Liatris punctata Hook
OEMA	Oenothera macrocarpa Nutt
PSTE5	Psoralidium tenuiflorum (Pursh) Rydb
RACO3	Ratibida columnifera (Nutt.) Woot. & Standl
ROAR3	Rosa arkansana Porter
RUHU	Ruellia humilis Nutt
SAAZ	Salvia azurea Michx. ex Lam
MINU6	Mimosa nuttallii (DC. ex Britton & Rose) B.L. Turner
SPAS	Sporobolus asper (P. Beauv.) Kunth
VEFA2	Vernonia fasciculata Michx
UNWD	Unidentified woody species
UNLEG	Unidentified legume
UNFB1	Unidentified forb 1 (annual/perennial not known)
UNFB2	Unidentified forb 2 (annual/perennial not known)
UNGR	Unidentified grass (C3/C4, annual/perennial unknown)
MANE	Malva neglecta Wallr
ABTH	Abutilon theophrasti Medik
AMRE	Amaranthus retroflexus L
AMTU	Amaranthus tuberculatus (Moq.) Sauer
AMPS	Ambrosia psilostachyia DC
CHAL7	Chenopodium album L
CUFO	Cucurbita foetidissima Kunth
COCA5	Conyza canadensis (L.) Cronquist
BASC5	Bassia scoparia (L.) A.J. Scott
MEOF	Melilotus officinalis (L.) Lam
GAAP2	Galium aparine L
PHV15	Physalis virginiana Mill
PHAM4	Phytolacca americana L
SORO	Solanum rostratum Dunal
SYOR	Symphoricarpos orbiculatus Moench

VIAM	Vicia americana Muhl. ex Willd
BRIN2	Bromus inermis Leyss
CYDA	Cynodon dactylon (L.) Pers
DISA	Digitaria sanguinalis (L.) Scop
ECMU2	Echinochloa muricata (P. Beauv.) Fernald
ELIN3	Eleusine indica (L.) Gaertn
ERCI	Eragrosti cilianensis (All.) Vign. ex Janchen
UNFZG	Unknown grass (described fuzzy)
PACA6	Panicum capillare L.
PADI	Panicum dichotomiflorum Michx
UNPAN	Panicum spp. (unidentified)
SEFA	Setaria faberi Herrm
SEPU8	Setaria pumila (Poir.) Roem. & Schult
UNSET	Setaria spp. (unidentified)
UNC4G	Unknown C4 grass
ASTU	Asclepias tuberosa L.
HEHE5	Heliopsis helianthoides (L.) Sweet
MOFI	Monarda fistulosa L.
ACMI2	Achillea millefolium L.
SYLA3	Symphyotrichum laeve (L.) Á. Löve & D. Löve
DEIL2	Desmodium illinoense A. Gray
EUAL3	Eupatorium altissimum L.
TECA3	Teucrium canadense L.
TRBR	Tradescantia bracteata Small
UNSD	Unknown seedling
UNUC	Unknown unclassified
ASSY	Asclepias syriaca L.
UNMAL	Unknown nightshade (Malvaceae)
UNFRAG	Fragaria spp. (unidentified)
MESA	Medicago sativa L.
TAOF	Taraxacum officinale F.H. Wigg.
TRRE3	Trifolium repens L.

RECORD TYPE 2 for whole plot

Data Format Specification:

Variable	Name	units
RecYear	Year samples were taken	
BLOCK	The experiment contained 4 blocks	
WPTRT	Whole-plot heterogeneity treatment (maxhet and control	
RESTORE_YR	Growing season since restored from agriculture	
PLOT	The experiment consisted of 16 plots; plots 1, 3, 6, 8, 9, 10, 14 and 15 were used in this study	
CVNO3	Whole-plot coefficient of variation in resin collected nitrate over the growing season (%).	
CVANPP	Whole-plot coefficient of variation in ANPP (%)	

WP_H	Shannon's diversity (H') at the whole-plot scale calculated from the average cover of each species using all subplots; measurement is unit-less
WP_R	Whole-plot richness; number of species observed from all 0.25 m2 sampling quadrats within a plot
ANGE	Andropogon gerardii Vitman
SCSC	Schizachyrium scoparium (Michx.) Nash (Michx.) Nash
BOCU	Bouteloua curtipendula (Michx.) Torr
KOMA	Koeleria macrantha (Ledeb.) Schult
PAV12	Panicum virgatum L.
SONU2	Sorghastrum nutans (L.) Nash
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UNFRAG	Fragaria spp. (unidentified)
MESA	Medicago sativa L.
TAOF	Taraxacum officinale F.H. Wigg
TRRE3	Trifolium repens L.

Data Set Code--KFH01

Title of data set: Konza Prairie Fire History

Abstract:

The Konza burn history database is downloadable by year. Watershed names and codes listed in downloaded file are the current watershed designations (2010). Please note that several watershed designations have changed over the history of Konza. This is inevitable due to changes in research objectives but is problematic for those wanting to discover the full burn history of a given area. In some cases, watersheds have simply been renamed to reflect changes in experimental burn treatments (e.g. R20A was formerly 1A). In other cases, watersheds have been subdivided or aggregated from smaller watersheds (eg. in 1994 3B3UA was added to 20A (currently R1A) to form a larger watershed). In a few cases watershed names have been moved to new areas (e.g. 1D was moved from its original location in 1978 after the acquisition of new property. The original 1D watershed is now part of WB and 20C). Investigators should consult the proper watershed map for a given year to see watershed designations at the time of burning. Maps with watershed treatments for different time periods are available on the KNZ spatial data portal (http://www.konza.ksu.edu/knz/map/index.html).

Keywords that describe data set:

Konza Prairie, Fire History, Biodiversity, burning, cattle

Date data commenced: 4/23/1972
Date data terminated: ongoing

Principle Investigator: John M. Briggs

RECORD TYPE 1

Data Format Specification:

Variable	Name	units
1. Watershed	Watershed code	
2. HName	History of watershed name	
3. Hectares	Burning area in hectares	ha
4. Acres	Burning area in Acres	km²
5. Date	Buring Date	
6. Type	Fire type code	
7. Year	Buring Year	
8. Code	Watershed code	
9. Comments	Comments	

*Fire type code:
PP- prescriptive planned; PU- prescriptive unplanned; WP- wildplanned; WU- wild unplanned

Data Set Code--KIC01

Title of data set: Konza Prairie Terrestrial Arthropods Species List

Abstract:

Konza Prairie Terrestrial Arthropods Species List. This species list has been modified since 1977, last modified by Ellen Welti and Anthony Joern in 2014.

Keywords that describe data set:

Terrestrial, Arthropods, Insects, Pinned-specimens, Species List

Date data set commenced: 1977
Date data set terminated: ongoing

Principle Investigator: Anthony Joern

RECORD TYPE 1-- Konza Prairie Terrestrial Arthropods Species List

Data Format Specification:

Variable	Columns	Format
1. Phylum	1-24	
2. Class	25-49	
3. Subclass	50-74	
4. Byorder	75-99	
5. Family	100-124	
6. Subfamily	125-149	
7. Tribe	150-174	
8. Genus	175-199	
9. Species	200-224	
10. Subspecies	225-249	
11. # specimens	250-274	
12. Describer		
13. Source		
14. Comments		

Data Set Code--KKE01

Title of data set: The Konza-Kruger Experiment: A cross-continental fire and grazing experiment at Konza Prairie

Abstract:

For more than a decade, we have compared responses of mesic (subhumid) savanna grasslands (>500 mm MAP in the tropics and >600 mm MAP outside the tropics) in North America and South Africa to alterations in both fire and grazing regimes. The long-term, comparative experiment that forms the centerpiece of this cross-continental research program is located in tallgrass prairie at the Konza Prairie Biological Station (Kansas, USA) and in knob-thorn marula savanna at the Kruger National Park (Limpopo and Mpumalanga provinces, South Africa). We refer to this study as the Konza-Kruger (K-K) Experiment. At both sites, we have been manipulating grazing by removing all large herbivores (>5 kg) from research plots with permanent exclosures (each with a paired plot that grazers can freely access). These exclosures were established in replicated fire frequency experiments ongoing at each site (treatments range from >25-50 yrs of annual burning, burning every 3-4 yrs, or complete fire exclusion).

Keywords that describe data set:

Konza Prairie, Konza Prairie Biological Station, ANPP, Fire, grazing

Date data commenced: 2006-01-01
Date data terminated: 2013-12-30

Principle Investigators: Melinda D. Smith, Sally Koerner

RECORD TYPE 1 plant species composition and ANPP KKE011

Data Format Specification:

Variable	Name
1. Datacode	Data set code
2. Rectype	Record type
3. Recyear	Year of the cover data was collected
4. Fire	Fire treatments (1, 4, 20)
5. Watershed	Watershed
6. Block	Blocks per fire treatment (A, B, C)
7. Treatment	Grazing treatments per block (grazed, ungrazed)
8. Plot	plots per treatment (126 total plots)
9. Sppcode	Species code
10. Species	Species genus and species name
11. Cover	Cover
12. Comments	Comments on data collection

Data Set Code--NGE01

Title of data set: Chronic Addition of Nitrogen Gradient Experiment (ChANGE): Assessing threshold responses of plant community composition and ecosystem processes at Konza Prairie

Abstract:

Chronic nutrient additions can lead to drastic shifts in the plant community through time, both within tallgrass prairie in other grassland ecosystems worldwide. Nutrient addition experiments have answered many questions about patterns of diversity loss and community shifts; however, the level of nutrients which must be added to cause community shifts is unknown. To date, all nitrogen (N) addition experiments at Konza have added 10 g m-2 (e.g., NutNet Plots; Phosphorus (P) Plots; Belowground Plots), yet current rates of N deposition are one-tenth of that level. Even predicted rates of future N deposition in grasslands are not expected to exceed 5 g m-2 by the year 2050 and will likely be around 2 g m-2 for most of the US. This mismatch begs the question will 10 g/m2 affect grasslands the same way 2 or 5 g m-2 will? There are two main goals for this long-term experiment (1) to identify the nutrient threshold needed to drive plant community change with nutrient additions, and (2) to determine what factors underlie those threshold responses (build up of nutrients, mycorrhizal loss, invertebrate herbivory). Konza ChANGE is part of a multi-site experiment spanning grasslands on two different continents: North America – tallgrass prairie (KNZ) and shortgrass steppe (SGS), and China – three sites in Inner Mongolia. By including multiple grasslands, we expand our ability to make generalizations about how grasslands are affected by N additions, and whether thresholds, if they exist, vary with precipitation, natural nutrient availability, and species identity/composition. Research Questions: (1) Do ecosystems have N tolerance thresholds above which community composition will change, and does that differ between grassland types (i.e. mesic and xeric grasslands)? (2) Does adding a large amount of nutrients in one season result in an equivalent community change as adding a small amount over multiple years? (For example does 5 g m-2 for 6 years create the same community change as 30 g m-2 for 1 year or 15 g m-2 for 2 years?) (3) Will predicted levels of N deposition (2.5 g m-2 or 5 g m-2) elicit a community change? (4) Are there different thresholds for different plant functional types? For example, does a small amount of nutrients cause a decrease in N-fixing forb composition, while a larger amount of nutrients are necessary to reduce the abundance of the dominant C4 grasses? At what point does the community change state from a perennial grassland to the predicted annual forb community? Is it a gradual linear change or an abrupt transition? (5) Is decreased light availability due to increased ANPP the primary determinant leading to community shifts (like it is for species loss), or do other factors determine when nutrients cause a shift in community composition and structure such as interactions with invertebrate herbivory or loss of mycorrhizal symbionts.

Keywords that describe data set:

Konza Prairie, Konza Prairie Biological Station, fertilization, insect herbivory, nitrogen, nitrogen enrichment, primary productivity, species composition

Date data commenced: 2013-01-01
Date data terminated: 2016-12-30

Principle Investigators: Melinda D. Smith, Sally Koerner

RECORD TYPE ANPP NGE011

Data Format Specification:

Variable	Name
1. Datacode	Data set code
2. Rectype	Record type
3. Recyear	RecYear ANPP was collected
4. Block	block designation: A-F
5. Plot	plot designation: 1-48
6. grass	dried mass of grass taxa in grams per 1m2
7. forb	dried mass of forb taxa in grams per 1m2
8. woody	dried mass of woody taxa in grams per 1m2
9. trt	nitrogen addition treatment designation: amount of nitrogen added in g N per m2 in eight levels (1-8 trt: 0; 2.5; 5; 7.5; 10; 15; 20; 30)

Data Set Code--NUT01

Title of data set: Nutrient Network: Investigating the roles of nutrient availability and vertebrate herbivory on grassland structure and function at Konza Prairie

Abstract:

The goals and focal research questions are copied below from the Nutrient Network website. More information can be found at nutnet.org.

NutNet focal research questions:

(1) How general is our current understanding of productivity-diversity relationships?

(2) To what extent are plant production and diversity co-limited by multiple nutrients in herbacoues-dominated communities?

(3) Under what conditions do grazers or fertilization control plant biomass, diversity, and composition?

NutNet goals:

(1) To collect data from a broad range of sites in a consistent manner to allow direct comparisons of environment-productivity-diversity relationships among systems around the world. This is currently occurring at each site in the network and, when these data are compiled, will allow us to provide new insights into several important, unanswered questions in ecology.

(2) To implement a cross-site experiment requiring only nominal investment of time and resources by each investigator, but quantifying community and ecosystem responses in a wide range of herbaceous-dominated ecosystems (i.e., desert grasslands to arctic tundra).

Keywords that describe data set:

populations, primary production, inorganic nutrients, nitrogen, phosphorus, potassium, herbivory

Date data commenced: 5/1/2007
Date data terminated: ongoing

Principle Investigator: Kimberly La Pierre, Melinda Smith

RECORD TYPE 1: Plant Species Composition

Data Format Specification:

Variable	Name	Units
1. Datacode		
2. Rectype		
3. RecYear	The year of data were collected	
4. Season	The season of data were collected	
5. Date	The date of data were collected	
6. Site	Site name	
7. Block	Block number	

8. Plot	Plot number
9. Subplot	Subplot letter (A-Z), default value is 'A'. Other values may not be unique between sites.
10. Sppnum	Species number from NUT species list
11. Taxa	Taxa associated with cover value
12. Cover	Percent cover of taxa (0-100)
13. Comments	Comments on data

RECORD TYPE 2: Aboveground Standing Crop (Biomass)

Data Format Specification:

Variable	Name	Units
1. Datacode		
2. Rectype		
3. RecYear	The year of data were collected	
4. Site	Site name	
5. Plot	Plot number	
6. Subplot	Subplot letter (A-Z), default value is 'A'. Other values may not be unique between sites.	
7. Lvgrass	Dried lvgrass biomass of taxa in grams per m2	
8. Forbs	Dried forbs biomass of taxa in grams per m2	
9. Woody	Dried woody biomass of taxa in grams per m2	
10. Pryrdead	Dried pryrdead biomass of taxa in grams per m2	
11. Total	Dried total biomass of taxa in grams per m2	
12. Comments	Comments on data	

RECORD TYPE 3: Plant Species Composition

Data Format Specification:

Variable	Name	Units
1. Datacode		
2. Rectype		
3. RecYear	The year of data were collected	
5. Date	The date of data were collected	
6. RecMonth	The month of data were collected	
7. Site	Site name	
8. Block	Block number	
9. Plot	Plot number	
10. Subplot	Subplot letter (A-Z), default value is 'A'. Other values may not be unique between sites.	
11. Replicate	Replicate measurement of 2	
12. Ground	PAR in mmol m-2 s-1 at ground level	

13. Above	PAR in mmol m-2 s-1 above the canopy
14. Par	ground/above
15. Comments	Comments on data

Data Set Code--OMB01

Title of data set: Microbial biomass in the Belowground Plot Experiment at Konza Prairie (1989-1999)

Abstract:

The purpose of this data set is to monitor long-term changes in microbial biomass on the belowground plots due to the effect on annual burning, mowing and nitrogen and phosphorus fertilization.

Keywords that describe data set:

microbial biomass, inorganic N, microbial biomass C and N, soil water content, nitrogen flush

Data data commenced: 04/15/1989
Data data terminated: 10/2/1999

Principle Investigator: Dr. Charles W. Rice

RECORD TYPE 1
Data Format Specification:

Variable	Columns	Format	Units
1. Datacode	1-5	A5	
2. Rectype	6	I1	
3. Year	7-8	I2	
4. Month	9-10	I2	
5. Day	11-12	I2	
6. Watershed	13-16	A4	
7. Plot #	19-20	I2	
8. Depth	23	I1	
9. Burn	26	A1	
10. Mow	29	A1	
11. Nutrient	32	A1	
12. Soil H_2O	37-42	I6	g/g
13. C flush	45-52	I8	mg C/Kg
14. BMC	56-63	I8	mg C/Kg
15. N flush	67-74	I8	mg C/Kg
16. BMN	77-84	I8	mg N/Kg
17. Total Inorganic N	87-93	I7	

Codes Used:

Name	Value	Code Value
Plot	1-64	Plot number
Depth	1,2,3	1=0-5, 2=5-15, 3=15-30
Burn treatment	U: B	U=Unburn B=Burn
Mow treatment	U;M	U=unmowed M=mowed
Nutrient treatment	C,N,P,B	C=control, N=nitrogen P=Phosphorus B=Both

Data Set Code--OPD01

Title of data set: Konza Prairie standing dead and litter decomposition (1981-1983)

Abstract:

Standing dead and litter decomposition of big bluestem foliage and flowering stems were measured for two years using litterbag methods. Mass, nitrogen and phosphorus content were measured.

Keywords that describe data set:

standing dead, nitrogen, phosphorus, litterbag, decomposition

Date data commenced: 10/31/1981
Date data terminated: 10/26/1983

Principle Investigator: John. M. Blair

RECORD TYPE 1 Foliage and stem weight

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Year		6-9	I2	
3. Month		9-10	I2	
4. Day		11-12	I2	
5. Watershed		13-16	A4	
6. Age	Length of time spent in field-days	21-23	I3	Days
7. IFWT	Initial foliage weight	25-28	F4.2	gX
8. FFWT	Final foliage weight	30-33	F4.2	gX
9. ISWT	Initial stem weight	35-39	F5.2	gX
10. FSWT	Final stem weight	41-45	F5.2	gX
11. Type	Organic matter type (standing dead, or litter)	47	A1	

RECORD TYPE 2: Decomposition of bluestem foliage and flowering stems

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	

7. Soil				
8. Age	Length of time spent in field- days	21-24	I3	Days
9. Type	Dead matter typ e	26	A1	
10. Foln	% nitrogen in foliage	28-32	F5.3	%
11. Folp	% phosphorus in foliage	34-38	F5.3	%
12. Stmn	% nitrogen in stem	40-44	F5.3	%
13. Stmp	% phosphorus in stem	46-50	F5.3	%
14. Ifwt	Initial foliage weight	52-55	F4.2	g
15. Ffwt	Final foliage weight	57-60	F4.2	g
16. Iswt	Initial stem weight	62-65	F4.2	g
17. Fswt	Final stem weight	67-70	F4.2	g
18. ID		72-74	I3	

Codes used:

Name	Value	Code Value
Type	L	Litter
	S	Standing dead

Data Set Code--PBG01

Title of data set: Plant species composition in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated PVC021x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This data set includes canopy cover of all plant species is recorded in 20 circular 10 m^2 plots in watersheds of the patch-burn grazing experiment. Plots are arranged in 4 transects (A-D) of 5 plots each.

Keywords that describe the data set:

grazing, cattle, herbivory, plant species composition, patch-burn grazing

Date data commenced: 5/1/2008
Date data terminated: ongoing

*Pre-treatment data was collected in 2008 from all units except C1SB (a, b, c, d), C03A(c, d) and C03C (a, b). Data was collected all units in 2009. Cattle grazing started in 2010 in C03A/C03B/C03C and C01A and in 2011 in C3SA/C3SB/C3SC and C1SB.

Principle Investigator: Anthony Joern

RECORD TYPE 1:

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1

3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Soil	Soil type (FL)	18-19	A1	
8. Specode	Species code	20-22	I3	
9. Genus	Abbreviation of genus	24-29	A6	
10. Speci	Abbreviation of species	31-35	A5	
11. Vari	Abbreviation of variety	37-40	A4	
12. A1-A5	Cover class for plots in transect A	42-50	I1	
13. B1-B5	Cover class for plots in transect B	52-60	I1	
14. C1-C5	Cover class for plots in transect C	62-70	I1	
15. D1-D5	Cover class for plots in transect D	72-80	I1	

For list of species codes used, see PVC021_species_list
lter.konza.ksu.edu/sites/default/files/species_list_pvc02.pdf
A value of 1 to 7 in plots a1-d5 is the estimated cover class value for the species. Blank values indicate that the plant was not observed in the plot.

Cover class	Canopy cover
1	<1%
2	1-5%
3	5-25%
4	25-50%
5	50-75%
6	75-95%
7	95-100%

Data Set Code--PBG02

Title of data set: Aboveground primary productivity within permanent and rotating grazing exclosures in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated PEB011x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This data set includes measurement of aboveground net primary productivity based upon end-of-season standing crop biomass (grams per square meter) of live graminoids, forbs, woody plants, and previous year's dead vegetation within permanent ("ungrazed") and rotating ("grazed) sections of grazing exclosures to determine long term effects of bison grazing on aboveground primary production. The permanent section of the exclosure is fixed, while the movable section is rotated every 6 years among the four possible compass coordinates relative to the fixed section.

Exclosures were erected in 2010 in all PBG watersheds. However, C3SA/C3SB/C3SC did not have a history of grazing, and sampling did not begin in those watersheds until 2012. Therefore, the "grazing" treatments in those watersheds were not previously, and should be interpreted as reference data until the movable sections are rotated into grazed areas in 2015.

Keywords that describe the data set:

aboveground biomass, grazing, cattle, herbivory, patch-burn grazing, primary productivity, plant community

Date data commenced: 5/1/2010
Date data terminated: ongoing

Principle Investigators: David Hartnett

RECORD TYPE 1:

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	
3. Year		7-8	I2	
4. Month		9-10	I2	
5. Day		11-12	I2	
6. Watershed		13-16	A4	
7. Treatment	u=ungrazed, g#=grazed, #=yrs since last grazed	21-22	A2	
8. Cage	1-32	23-24	A2	
9. Plotnum	Plot number1-5	26-27	A2	
10. Lvgrass	Mass of live grass	29-34	F6.2	$g/.1m^2$
11. Forbs	Mass of forbs	36-41	F6.2	$g/.1m^2$
12. Cuyrdead	Mass of current year's dead	41-49	F6.2	$g/.1m^2$
13. Pryrdead	Mass of previous year's dead	50-55	F6.2	$g/.1m^2$
14. Woody	Mass of woody plants	57-62	F6.2	$g/.1m^2$
15. Comments		63-80	C18	

*See PEB01 illustration 1 in Appendix M.
*Sampling methods are identical to PAB01 except five $0.1m^2$ plots randomly located within each section, grazed vs. ungrazed; total of 10 samples per exclosure. Grazed and ungrazed sides of the exclosure are clipped at the same time. The plant biomass for each clipped plot is bagged, dried at 60^o C and weighed.
*Samples are not kept for further analysis. Maps available in Appendix M.

Data Set Code--PBG03

Title of data set: Disk pasture meter measurements to estimate plant standing biomass in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated PPM011x and PPM012x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This dataset includes both the annual calibration data for the disk pasture meter measurements (PBG031) and the actual disk pasture meter measurements in the PBG experiment (PBG032). Measurements were taken at a total of 64 transects (8 watersheds x 4 sites per watershed x 2 pasture meter transects per site). Each cattle-grazed watershed (designated as of May 2011 C3A, C3B, C3C, and C1A) and the four Shane cattle-grazed watersheds (C1B, C3SA, C3SB, and C3SC) includes 4 plant composition sampling transects (A-D). Pasture meter measurements were taken along two transects adjacent and parallel to the plant composition transects in each of these watersheds. Standing biomass samples for pasture meter calibration were also collected near the plant composition transects in the same 8 watersheds.

Keywords that describe data set:

Standing plant biomass, vegetation structure, disk pasture meter, patch-burn grazing

Date data commenced: 1/05/2011
Date data terminated: ongoing

Principle Investigators: Tony Joern

RECORD TYPE 1: Data used to calibrate the disk pasture meter to estimate plant standing biomass in the patch-burn grazing experiment at Konza Prairie (PBG031)

Data Format Specification:

Variable	Description	Column	Format	Units
1. Datacode		1	A5	
2. Rectype		2	I1	
3. Year		3	I4	
4. Month		4	I2	
5. Day		5	I2	
6. Sample Number	Sample number (1-35)	6	I2	
7. Lvgrass	Mass of live grass	7	A5	$g/0.1m^2$
8. Forbs	Mass of forbs	8	A5	$g/0.1m^2$
9. Pryrdead	Mass of previous year's dead	9	A5	$g/0.1m^2$
10. Woody	Mass of woody plants	10	A5	$g/0.1m^2$
12. Disk Height	Disk Height	11	A5	cm
13. Comments				

* To calibrate the pasture meter, standing biomass was collected at 1-35 different locations across multiple watersheds
* Starting 2013, data was standardized; 2011-2012 data was measured differently, those sample plots might be different from 2013.

RECORD TYPE 2: Disk pasture meter measurements used to estimate plant standing biomass in the patch-burn grazing experiment at Konza Prairie (PBG032)

Data Format Specification:

Variable	Description	Column	Format	Units
1. Datacode		1	A5	
2. Rectype		2	I1	
3. Year		3	I4	
4. Month		4	I2	
5. Day		5	I2	
6. Watershed	watershed name	7	A4	
7. Transect	A, B	8	A1	
8. Plot Number	Plot number	9	I2	
9. A Disk Height	Height for A	10	I2	cm
10. B Disk Height	Height for B	12	I2	cm
11. Comments				

Data Set Code--PBG04

Title of data set: Reproductive effort of Big Bluestem, Indiangrass and Little Bluestem in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated PRE021x and PRE022x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.
PBG041 includes data on flowering stem height (m) of three dominant prairie grasses: *Andropogon gerardii* (ANGE), *Sorghastrum nutans* (SONU), and *Schizachyrium scoparium* (ANSC). PBG042 includes flowering stem density (no. per sq. m) and mass (grams per sq. m) for the same grass species.

Keywords that describe data set:

seed weight, flowering, stems, flower stem density, flower stem height, big bluestem, little bluestem, indiangrass, grasses, graminoid, reproduction

Date data commenced: 5/01/2011
Date data terminated: ongoing

Principle Investigators: David C. Hartnett

RECORD TYPE 1: Flowering stem height on the Patch-Burn Grazed watersheds at Konza Prairie (PBG041)

Data Format Specification:

Variable	Name	Columns	Format	Units
1. Datacode		1-5	A5	
2. Rectype		6	I1	

3. Year			7-8	I2	
4. Month			9-10	I2	
5. Day			11-12	I2	
6. Watershed			13-16	A4	
7. Soil	Soil type (FL)	18-19	A2		
8. Species	Species name		21-24	A4	
9. Transect	Transect (A,B,C,D)		26	A1	
10. Point	Point number (1-25)		28-29	I2	#
11. Flwstht	Flowering stalk height		31-34	F4.2	Meters
12. Comments			36-80	C35	

Codes used:

Name	Value	Code Value
Species	ANGE	Andropogon gerardii
Species	ANSC	Schizachyrium scoparius
Species	SONU	Sorghastrum nutans
Soil	FL	Florence soil

RECORD TYPE 2: Flowering stem densities and mass on the Patch-Burn Grazed watersheds at Konza Prairie (PBG042)

Data Format Specification:

Variable	Name		Columns	Format	Units
1. Datacode			1-5	A5	
2. Rectype			6	I1	
3. Year			7-8	I2	
4. Month			9-10	I2	
5. Day			11-12	I2	
6. Watershed			13-16	A4	
7. Soil	Soil type (FL)	18-19	A2		
8. Species	Species name		21-24	A4	
9. Transect	Transect (A,B,C,D)		26	A1	
10. Plot	Quadrat number		28-29	I1	
11. Stalk	Number of flowering stalks/0.25 sq. m		31-33	I3	#/.25
12. Flwstwt	Flowering stalk weight/0.25 sq m		35-40	P6.2	G/.25
13. Comments			42-80	A40	

Codes Used:

Name	Value	Code Value
Species	ANGE	Andropogon gerardii
Species	ANSC	Schizachyrium scoparius
Species	SONU	Sorghastrum nutans
Soil	FL	Florence soil

*for more info, please check PRE02

Data Set Code--PBG05

Title of data set: Response of bird abundance to the Patch-Burn Grazing experiment at Konza Prairie (formerly designated CBS01_x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This data set focuses on variation in avian abundance, diversity, and nesting activity between patch-burned and uniformly-burned pastures at Konza Prairie Biological Station. Three watershed units (C3A, C3B, C3C) constitute "patches" that are alternately burned in a 3-year rotation within a single, fenced pasture (i.e., patch-burn grazing). Two additional watersheds serve as controls: a grazed, annually/uniformly-burned watershed (C1A) and an ungrazed, annually/uniformly-burned watershed (1D). Eight, 300-m line transects were established in each watershed from which observers record the numbers of individuals per bird species and the perpendicular distance of individual birds from each transect. Three visits are made to each watershed between the last week in May through the end of June, where two "core" transects per watershed are sampled each visit. Six additional transects per watershed are sampled, but only once in a given year (two peripheral transects are sampled per watershed, per visit). The survey data will allow estimates of relative abundance, absolute density (determined from distance sampling), and species composition and diversity among the patch-burned and control watersheds. Vegetation structure is sampled along survey transects to characterize management-specific variation in physical attributes of avian habitat. Nest data are collected through systematic searches of nests throughout watersheds or from inclusion of nests found haphazardly by observers. Nest data are being analyzed for variation in daily nest survival and levels of brood parasitism of various species among the watershed units.

Keywords that describe data set:

avian abundance, birds, consumers, survey, patch-burn grazing, population dynamics

Date data commenced: 05/23/2011
Date data terminated: ongoing

Principle Investigators: Brett K. Sandercock, William E. Jensen

RECORD TYPE 1 Bird survey data in the Patch-Burn Grazing study (PBG051)

Data Format Specification:

Variable	Description	Column	Format	Units
1. Year		1	I4	
2. Watershed		2	A4	
3. Transect		3	A8	
4. Direction	Direction started from	4	A5	
5. DayofYear	Julian calendar day	5	I3	
6. StartTime	Start of transect observations	6	I4	
7. EndTime	End of transect observations	7	I4	
8. Obs	Observer's initials	8	A3	
9. Sky	Weather conditions	9	I2	
10. Wind	Average wind speed*	10	F4.1	KPH
11. Temp	Temperature	11	F4.1	^{o}C
12. Species	Species code	12	A4	
13. Sex	Sexes present	13	A2	
14. Vdetection	Visual detection	14	I1	
15. Sdetection	Song detection	15	I1	
16. Cdetection	Alarm call detection	16	I1	
17. Fly	Flying over habitat	17	I1	
18. Flush	Flushed by observer	18	I1	
19. Distance	Distance when detected	19	I3	m
20. Groupsize		20	I2	
21. NumOf Male	Number of Males	21	I2	
22. NumOfFemale	Number of Females	22	I2	
23. Comments		23		

Codes used:

Name	Value	Definition of code value
Sky	0	Clear, few clouds
	1	Partly cloudy, scattered or variable sky
	2	Cloudy, broken, or overcast
	3	Rain
	4	Light fog/smoke
	5	Fog/smoke
	6	Dense fog/smoke
	7	Snow
	8	Showers (intermittent rain)
	9	Light rain or drizzle
	10	Tree leaf drip
Sex	M	Male
	F	Female
	MF	Male and female

	U	Unknown

*May use the codes listed below instead of an average speed.

Wind (if used)	0	<1mph, smoke rises vertically
	1	1-3mph, wind direction shown by smoke drift
	2	4-7mph, wind felt on face, leaves rustle
	3	8-12mph, leaves, twigs in constant motion
	4	13-18mph, raises dust and loose paper, branches sway
	5	>18mph, trunks of small trees in leaf sway

RECORD TYPE 2 Song Bird nest data in the Patch-Burn Grazing study (PBG052)

Data Format Specification:

Variable	Name
1. **Flag**	Whether nest information was complete (when marked "Okay")
2. **Year**	Year collected (2011-2016)
3. **Nest ID**	Unique nest ID, but no consistency between years
4. **Species**	4-digit AOU (now AOS) approved bird species code
5. **Unit**	Konza watershed
6. **Graze**	Grazed by cattle (Y or N)
7. **Burn**	Years since last prescribed burn (0, 1, 2)
8. **Patch**	Effective management regime and year since burn, includes patch-burn grazing (PBG0-2), annually burning and grazing (ABG), and annually burning but no grazing (ABN)
9. **Treatment**	Effective management regime, includes patch-burn grazing (PBG), annually burning and grazing (ABG), and annually burning but no grazing (ABN)
10. **UTM1**	East/West coordinate
11. **UTM2**	North/South coordinate
12. Method	Method that was used to first locate the nest
13. **StageFound**	At what stage the nest was first located (Building, Laying, Incubation, or Brooding)
14. **Surv_Till_Incub**	Whether the nest survived until at least one egg hatched (Y or N)
15. **DateFirstFound**	The date on which the nest was first located
16. **DateLastPresent**	The last date on which a nest was still considered active
17. **DateLastChecked**	The final date a nest was visited and nest fate was determined
18. **FirstFound**	The Julian date on which the nest was first located
19. **LastPresent**	The last Julian date on which a nest was still considered active
20. **LastChecked**	The final Julian date a nest was visited and nest fate was determined
21. **NestFate**	The final fate of the nest, includes Successful (S), Failed (F), or Unknown (U)
22. **Fate**	The numerical final fate of the nest for nest survival analyses, includes Successful (0), Failed (1), or Unknown (2)
23. **Cause**	Whether a nest was successful or not, and lists the cause of failure if the nest was not successful. A failed nest could have been Abandoned, Depredated, Trampled, or have an Unknown cause of failure
24. **Parasitized**	Whether a nest was parasitized by Brown-headed Cowbirds (*Molothrus ater*) or not

25. **Max host eggs** The maximum number of host eggs present in the nest cup at one time
26. **Max BHCO eggs** The maximum number of parasitic eggs present in the nest cup at one time
27. **Host hatched** The total number of host eggs that successfully hatched
28. **BHCO hatched** The total number of parasitic eggs that successfully hatched
29. **Max host young** The maximum number of host young present in the nest cup at one time
30. **Max BHCO young** The maximum number of parasitic young present in the nest cup at one time
31. **Host fledged** The total number of host young that successfully fledged from the nest
32. **BHCO fledged** The total number of parasitic young that successfully fledged from the nest

RECORD TYPE 3 Bird habitat data in the Patch-Burn Grazing study (PBG053)

Data Format Specification:

Variable	Description	Column	Format	Units
1. Year		1	I4	
2. Date	Julian calendar day	2	I3	
3. Observer	Observer's initials	3	A3	
4. Watershed		4	A3	
5. TransectID	Transect code	5		
6. Point	Point in transect (1-5)	6	I1	
7. UTM_X	GPS coordinates (UTM; x)	7	I6	
8. UTM_Y	GPS coordinates (UTM; y)	8	I7	
9. FramePoint	1-12	9	I2	
10. PCTgrass	Grass coverage	10	F4.1	%
11. PCTforb	Forb coverage	11	F4.1	%
12. PCTshrub	Shrub coverage	12	F4.1	%
13. PCTlitter	Litter coverage	13	F4.1	%
14. litDepth	Litter depth	14	F3.1	cm
15. vorPT	VOR point (1-4)	15	I1	
16. VOR	Visual Obstruction Reading	16	I2	dm
17. Elevation		17	F5.1	m
18.Aspect	Cardinal direction	18	A2	

Data Set Code--PBG06

Title of data set: Cattle grazing and cattle performance in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated CCC01_x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This data set focuses on monitoring (1) the dynamics of cattle grazing on each of two sets of three pastures burned each year on a rotating basis and (2) cattle performance including cow weight gain, body condition, and reproductive performance and calf weight gains.

Keywords that describe data set:

cattle, calf weight gain, cow weight gain, reproduction, cattle grazing, patch-burn grazing

Date data commenced: 04/01/2010
Date data terminated: ongoing

Principle Investigator: KC Olson

RECORD TYPE 1: Grazing intensity in the Patch-Burn Grazing experiment (PBG061)

Data Format Specification:

Variable	Description	Column	Format
1. Site		1	A6
2. Landscape Unit	1 or 2	2	I1
3. Watershed		3	A4
4. Date	MM/DD/YYYY	4	A10
5. Grazing Intensity	1 – 5	5	I1

6. Grazing		6	I1
7. Burning		7	I1
8. Count 1 – 80	0 – 3	8 – 87	I1

RECORD TYPE 2: Cow Performance in the Patch-Burn Grazed experiment at Konza Prairie (PBG062)

Variable	Description	Column	units
1. ID	Cow ID	1	
2. Breeding Pasture	Breeding Pasture	2	
3. Treatment	Treatment	3	
4. BW1	Cow body weight on 12/17/2009	4	lbs
5. BCS1	Cow body condition score (1 to 9)	5	
6. BW2	Cow body weight at Calving	6	lbs
7. BCS2	Cow body condition score at Calving	7	
8. Calf ID	Calf ID	8	
9. Calving Date	Date the calve was born	9	
10. Calf Sex	Calf Sex	10	
11. BW3	Cow body weight on 6/16	11	lbs
12. BCS3	Cow body condition score on 6/7	12	
13. BW4	Cow body weight on 7/28	13	lbs
14. BCS4	Cow body condition score (1 to 9)	14	
15. AI Pregnancy	artificial insemination pregnancy	15	
16. BW5	Cow body weight on 9/29	16	lbs
17. BCS5	Cow body condition score	17	
18. FPregnancy	Final Pregnancy	18	
19. ADG_PCC	Cow ADG Preg Check-Calving	19	lbs
20. ADG_CP	Cow ADG Calving-Prebreeding	20	lbs
21. ADG_PAIPC	Cow ADG Prebreeding-AI Preg Check	21	lbs
22. ADG_AIPCW	Cow ADG AI Preg Check –Weaning	22	lbs
23. ADG_CW	Cow ADG Calving-Weaning	23	lbs
24. BW_PCC	Cow BW Change Preg-Check-Calving	24	lbs
25. BW_CP	Cow BW Change Calving-Prebreeding	25	lbs
26. BW_PAIPC	Cow BW Change Prebreeding-AI Preg Check	26	lbs
27. BW_AIPCW	Cow BW Change AI Preg Check –Weaning	27	lbs
28. BW _CW	Cow BW Change Calving-Weaning	28	lbs
29. BCS_PCC	Cow BCS Change Preg-Check-Calving	29	lbs
30. BCS_CP	Cow BCS Change Calving-Prebreeding	30	lbs
31. BCS_PAIPC	Cow BCS Change Prebreeding-AI Preg Check	31	lbs
32. BCS_AIPC W	Cow BCS Change AI Preg Check –Weaning	32	bs
33. BCS_CW	Cow BCS Change Calving-Weaning	33	lbs

Sampling:
Cow BCS is assigned (1 to 9 scale; 1 = emaciated, 9 = morbidly obese) by 3 trained observers that are blinded to treatment; the average of 3 scores is recorded. Calf BW 1s recorded at birth, at the time of fixed-time AI, and at weaning

RECORD TYPE 3: Calf Performance in the Patch-Burn Grazed experiment at Konza Prairie (PBG063)

Variable	Description	Column	units
1. ID	Calf ID	1	
2. Breeding Pasture	Breeding Pasture	2	
3. Treatment	Treatment	3	
4. Calf Sex	Calf Sex	4	
5. Birth Date	Calf Birth Date	5	
6. JBirth Date	Julian Birth Date	6	
7. BirthWeight	Calf Birth Weight	7	lbs
8. BW1	Calf body weight on 6/16	8	lbs
9. BW2	Calf body weight on 7/28	9	lbs
10. BW3	Calf body weight on 10/5	10	lbs
11. Age	Calf Age at Weaning	11	days
12. ADG_BP	Calf ADG Birth-Prebreeding	12	lbs
13. ADG_PAIPC	Calf ADG Prebreeding-AI Preg Check	13	lbs
14. ADG_AIPCW	Calf ADG AI Preg Check –Weaning	14	lbs
15. ADG_BW	Calf ADG Birth-Weaning	15	lbs
16. ABW	Adjusted 205-d BW	16	lbs

Change logs:
2010: South Unit initiated along with adjacent control plot (watersheds C3A, C3B C3C and C1A).
Spring 2011: North Unit initiated (watersheds C3SA, C3SB, C3SC and C1SB).

Note: This dataset is not online yet, but available upon request.

Data Set Code--PBG07

Title of data set: Grasshopper species abundances in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated CRG02_x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This data set focuses on determining grasshopper density on upland topographic locations in the following patch-burn grazing plots: C3A, C3B, C3C, C1A, C3SA, C3SB, C3SC, C1B. Samples are taken in four sites per watershed, and each site has four transects. Samples are taken once in late fall. Grasshopper densities are sampled using the ring count method.

Keywords that describe data set:

Consumers, grasshoppers, Acrididae, insects, relative abundance, sweep sampling, species, species composition, patch-burn grazing

Date data commenced: 5/08/2011
Date data terminated: ongoing

Principle Investigator: Tony Joern

RECORD TYPE1: Weather conditions at the time of grasshopper sampling in the Patch-Burn Grazing experiment (PBG071, formerly CGR021x)

Data Format Specification:

Variable	Description	Units
1. Datacode		
2. Rectype		

3. Year		
4. Month		
5. Day		
6. Watershed		
7. Soiltype	Soil Type (Florence)	
8. Repsite	Replicate site for a treatment	
9. Time	Time sampling began	24-hour clock
10. W 1	1st wind speed	mph
11. W 2	2nd wind speed	mph
12. W 3	3rd wind speed	mph
13. W 4	4th wind speed	mph
14. W 5	5th wind speed	mph
15. MPH	Mean of 5 measurements	mph
16. KPH	Mean of 5 measurements	kph
17. AirtempF	Air temperature	Degrees Fahrenhiet
18. AirtempC	Air temperature	Degrees Celsius
19. Cloudcov	Cloud cover directly overhead	%
20. Comments		

Codes used:

1. Soiltype	FL	Florence soil
2. Soiltype	TU	Tully soil
3. Repsite	A	Replicate site A for treatment
4. Repsite	B	Replicate site B for treatment

RECORD TYPE 2: Relative abundance of grasshoppers in the Patch-Burn Grazing experiment estimated by sweep netting (PBG072, formerly CGR022x)

Data Format Specification:

Variable	Description	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Repsite	Replication site for a watershed/soil	21	A1
8. Spcode	Species Code	23-24	I2
9. Genus	Abbreviated genus name	26-35	A10
10.Species	Abbreviated species name	37-45	A9
11. S1	# of individuals in sample 1	47-48	I2
12. S2	# of individuals in sample 2	50-51	I2
13. S3	# of individuals in sample 3	53-54	I2
14. S4	# of individuals in sample 4	56-57	I2
15. S5	# of individuals in sample 5	59-60	I2
16. S6	# of individuals in sample 6	62-63	I2
17. S7	# of individuals in sample 7	65-66	I2
18. S8	# of individuals in sample 8	68-69	I2

19. S9	# of individuals in sample 9	71-72	I2
20. S10	# of individuals in sample 10	74-75	I2
21. Total	Total # of individuals/all samples	77-79	I3
22. Comments		81-	

Codes used:

1. Repsite	A	Replicate site A for treatment
2. Repsite	B	Replicate site B for treatment
3. Repsite	C	Replicate site C for treatment
4. Repsite	D	Replicate site D for treatment

Species lists:
Current Code used:
See CGR022-23_species_list

RECORD TYPE 3: Species composition and age structure of grasshoppers in the Patch-Burn Grazing experiment estimated by sweep netting (PBG073, formerly CGR023x)

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5
2. Rectype		6	I1
3. Year		7-8	I2
4. Month		9-10	I2
5. Day		11-12	I2
6. Watershed		13-16	A4
7. Repsite	Replication site for a treatment	21	A1
8. Spcode	Species code	23-24	I2
9. Genus	Abbreviated genus name	26-35	A10
10. Species	Abbreviated species name	37-45	A9
11. First	# of individuals 1st instar	47-49	I3
12. Secthird	# of individuals 2nd & 3rd instars	51-53	I3
13. Forth	# of individuals 4th instar	55-57	I3
14. Fifth	# of individuals 5th instar	59-61	I3
15. Female	# of individuals of adult females	63-65	I3
16. Male	# of individuals of adult males	67-69	I3
17. Total	Total # of individuals/all samples	71-74	I4
18. Comments		76-	

Current Code used: See CGR022-23_species_list

Data Set Code--PBG08

Title of data set: Grasshopper density survey in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated CPR011x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This data set focuses on measuring grasshopper density using ring count method (Onsager 1977*) at watersheds C03A, C03B, C03C, C01A, C3SA, C3SB, C3SC, and C01B. Grazing intensity is estimated (Joern 2005) at each site at time of density measurements to model how grasshopper populations respond to grazing.

Keywords that describe data set:

Consumers, grasshoppers, Acrididae, insects, relative abundance, sweep sampling, species, species composition, patch-burn grazing, grasshopper density, grazing intensity

Date data commenced: 08/01/2010
Date data terminated: ongoing

Principle Investigator: Tony Joern

RECORD TYPE 1: Grasshopper density in the Patch-Burn Grazing experiment estimated using ring count method

Data Format Specification:

Variable	Description	Column	Format
1. Datacode		1	A5
2. Rectype		2	I1
3. Recyear		3	I2

4. Recmonth		4	I2
5. Recday		5	I2
6. recorded ws		6	
7. Watershed		7	A4
8. Site	A-D	8	A1
9. Grazing Intensity	0-5	9	I1
10. Ring	1-80	10	I2
11. Count		11	I1

Codes used:

Grazing Intensity	0	Ungrazed
	5	Highly grazed

Data Set Code--PBG09

Title of data set: Responses of small mammals in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated CSM011x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This data set focuses on detecting population and community level responses of small mammals to patch-burn grazing. Grids are trapped for 3 consecutive nights approximately monthly. Watersheds include C1A, C3A, C3B, C3C, & KIB (formerly K4A).

Keywords that describe data set:

patch-burn grazing, consumers, small mammals, fire, grazing, demography, population dynamics

Date data commenced: 11/06/2011
Date data terminated: ongoing

Principle Investigators: B. K. Sandercock, A. M. Ricketts

RECORD TYPE 1: Data from small mammal trapping grids (formerly CSM011x)

Data Format Specification:

Variable	Description	Column	Units
1. Species	species name	1	
2. Rectype		2	
3. Recyear		3	
4. Recmonth		4	

5. Recday	5	
6. recap	6	
7. PIT_tag	7	
8. Ear_tag	8	
9. Grid	9	
10. Station	10	
11. Mass	11	g
12. Age	12	
13. Sex	13	
14. Rep_cond	14	
15. Preg	15	
16. Tail_snip	16	
17. Blood_drawn	17	
18. Disposition	18	
19. Comments	19	

Note: This dataset is not online yet, but available upon request.

Data Set Code--PBG10

Title of data set: Soil physical and chemical characteristics in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated NSC011x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This data set focuses on measuring bulk density, soil organic matter, pH, cation exchange capacity, soil cations (Ca++, Mg++, Na+), phosphorous and total Kjeldahl nitrogen of soils at the vegetation transects in C3SA, C3SB, C3SC. C1SB, C3A, C3B, C3C, and C1A.

Keywords that describe data set:

bulk density, soil organic matter, pH, cation exchange capacity, soil cations (Ca++, Mg++, Na+), phosphorous, total nitrogen, patch-burn grazing, grazing intensity

Date data commenced: 10/06/2010
Date data terminated: ongoing

Principle Investigators:

RECORD TYPE 1: Physical and Chemical Characteristics of Soil

Data Format Specification:

Variable	Format	Units
1. Datacode	A5	
2. Rectype	I1	
3. Year	I2	
4. Month	I2	

5. Day	I2	
6. Watershed	A4	
7. Soil	A2	
8. Rep	A1	
9. Depth	I2	cm
10. pH	F3.1	
11. Available Phosphorus (P)*	F4.1	ppm
12. Sodium (Na)	I3	ppm
13. Potassium (K)	I4	ppm
14. Magnesium (Mg)	I3	ppm
15. Calcium (Ca)	I4	ppm
16. Total carbon (C)	F4.1	% dry wt.
17. Total nitrogen (N)	I4	% dry wt.
18. KCl-extractable ammonium (NH4-N)		ug N/g
19. KCl-extractable nitrate (NO3-N)		ug N/g
20. Cation exchange capacity (CEC)	F4.1	meq/100g
21. Calcium carbonate (CaCO3)	I4	ug/g
22. Sulfate (SO4-S)		ug S/g
23. Zinc (Zn)		ug/g
24. Copper (Cu)		ug/g
25. Iron (Fe)		ug/g
26. Manganese (Mn)		ug/g
27. Bulk density (BD)	F5.3	g/cm3
28. Gravimetric soil water content (%H2O)	F4.2	%
29. Texture: %sand	F4.1	%
30. Texture: %silt	F4.1	%
31. Texture: %clay	F4.1	%
32. Comments		

Note: This dataset is not online yet, but available upon request.

Data Set Code--PBG11

Title of data set: Stream Water Chemistry for the Shane Creek drainage basin in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated NWC011x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This data set focuses on measuring Nitrate, ammonium, total N, soluble reactive P, total P, and dissolved organic C in four streams draining watersheds with 1 (N01B), 2 (N02B), 4 (N04D), and 20 (N20B) year target burn frequencies.

Keywords that describe data set:

nitrate, ammonium, total nitrogen, soluble reactive phosphorus, total phosphorus, dissolved organic carbon, stream, stream water, water chemistry, biogeochemistry, nitrogen, carbon, phosphorus, patch-burn grazing, grazing intensity

Date data commenced: 06/01/2010
Date data terminated: ongoing

Principle Investigator: Walter Dodds

RECORD TYPE 1:

Data Format Specification:

Variable	Columns	Format	Units
1. Datacode	1-5	A5	
2. Rectype	6	I1	
3. Year	7-8	I2	
4. Month	9-10	I2	

5. Day	11-12	I2	
6. Watershed	13-16	A4	
7. Time	17-20	I4	CST
8. Preservative	21	A1	
9. NO3	22-28	F7.1	ug/l
10.LimitNO3	29	A1	
11. NH4	30-35	F6.1	ug/l
12.LimitNH4	36	A1	
13. TN	37-41	I5	ug/l
14. SRP	42-47	F6.1	ug/l
15. LimitSRP	48	A1	
16. TP	49-54	F6.1	ug/l
17.LimitTP	55	A1	
18. DOC	56-61	F6.2	mg/l
19. Comments	63-80	C17	

Codes used:

Name	Value	Code Value
Sample site		see abstract above
Preserve	y	preservative added
Preserve	n	no preservative added

*below levels of detection

Note: This dataset is not online yet, but available upon request.

Data Set Code--PBG12

Title of data set: Konza Stream Geomorphology in the Patch-Burn Grazing experiment at Konza Prairie (formerly designated ASG011x)

Abstract:

'PBG' datasets are associated with a long-term, large-scale study that is addressing the effects of fire-grazing interactions in the context of a Patch-Burn Grazing management system designed to promote grassland heterogeneity. Effects of patch-burn grazing management on plant and animal diversity and the nature and variety of wildlife habitat are being assessed in two replicate management units, each consisting of three pastures (watersheds) designated C03A/C03B/C03C and C3SA/C3SB/C3SC. In each patch-burn grazing unit, one watershed is burned and two that are left unburned in a given year. The burning treatments are rotated annually so that each pasture is burned every third year. Each patch-burn grazing unit is paired with an annually-burned pasture for comparison with traditional grazing systems (C01A and C1SB). All grazing units are stocked with cow/calf pairs from approximately 1 May until 1 Oct at a stocking density equal to 3.2 ha per cow/calf. To examine the impact of patch burning and grazing in all 8 units, we monitor changes in plant species composition, residual biomass, grassland bird populations, insect populations, small mammal populations, soil nutrients, and stream water quality[1] ([1]C3SA/C3SB/C3SC unit only). The KSU Department of Animal Science monitors cattle performance, including weight gain and body condition to assess the economic feasibility of using patch-burn management on a widespread basis.

This data set focuses on measuring Cattle grazing direct influence on stream morphology due to their summer grazing habits. Cattle graze near riparian vegetation due to water and food availability. Experimental grazing treatments at the Konza Prairie LTER represent an excellent opportunity to study stream channel response to grazing impacts. Seventeen watersheds were evaluated in a paired watershed geomorphological assessment, with 4 grazed by native bison, 5 grazed by cattle, and 8 ungrazed watersheds, to enable cross-watershed comparative analysis to quantify how do stream morphology vary between ungrazed, cattle-grazed and bison-grazed watersheds.

Keywords that describe data set:

Grazing, stream, bank, geomorphology, cattle, bison, Consumers, species, species composition, patch-burn grazing, grasshopper density, grazing intensity

Date data commenced: 06/01/2010
Date data terminated: ongoing

Principle Investigators: Bartosz Grudzinski and Dr. Melinda D. Daniels

RECORD TYPE 1:

Data Format Specification:

Variable	Description	Column	Format

1. Datacode	1	A5
2. Rectype	2	I1
3. Recyear	3	I2
4. Recmonth	4	I2
5. Recday	5	I2

Codes used:

TOB Top of bank
LB left bank
RB right bank
XS cross section
EOW edge of water

Note: This dataset is not online yet, but available upon request.

Data Set Code--RCS01

Title of data set: Recovery and relative influence of root, microbial, and structural properties of soil on physically sequestered carbon stocks in restored grassland at Konza Prairie

Abstract:

Managing soil to sequester C can help mitigate increasing CO2 in the atmosphere. To maximize this ecosystem service, more knowledge of factors influencing C sequestration is needed. The objectives of this study were to (i) quantify recovery of the roots, microbial biomass and composition, and soil structure across a chronosequence of grassland restorations and (ii) use a structural equation model to develop a data-based hypothesis on the relative influence of physical and biological soil properties on the soil C aggregate fraction diagnostic of sequestered C. We hypothesized measured variables would recover with restoration age. Belowground plant biomass and tissue quality (C/N ratio), soil microbial biomass C, phospholipid fatty acid (PLFA) concentrations, soil structure, and soil C stocks in the bulk soil and each aggregate fraction were quantified from a cultivated field, prairies restored for 1 to 35-yr (n = 6), and a never-cultivated (native) prairie. Root biomass, microbial biomass C, arbuscular mycorrhizal fungi (AMF) PLFA biomass across the chronosequence increase to resemble native prairie following 35 yr of restoration. Many aspects of soil structure (i.e., bulk density, proportional mass of aggregate fractions, and aggregate mean weighted diameter) and the distribution C among soil fractions, including C in the micro-within-macro aggregate fraction (sequestered C), also became representative of native prairie within 35 yr of restoration. Total soil C stock and physically protected C increased at a similar rate (23 and 27 g C m-2 yr-1) respectively, across the chronosequence. After 35 yr of restoration, 50% of the total C pool was physically protected. The structural equation modeling developed by these data hypothesizes that microbial biomass C and AMF biomass (microbial composition) have the strongest causal influence on physically protected C. This model needs to be tested using independent sites to achieve greater inference.

Keywords that describe data set:

Konza Prairie, Konza Prairie Biological Station, aggregates, arbuscular mycorrhizal fungi, belowground plots, graduate student research, microbial biomass, phospholipid fatty acid profiles, root, Soil C sequestration, structural equation modeling

Date data commenced: 2013-08-01
Date data terminated: 2017-01-31

Principle Investigators: Drew Scott, Sara G. Baer, John M. Blair

RECORD TYPE 1 Belowground Biomass and Tissue Quality RCS011

Data Format Specification:

Variable	Name
1. Datacode	Data set code
2. Rectype	Record type
3. Age	Restoration age (number of growing seasons) of the field
4. Plot	Plot number- Each field contained 4 plots
5. Biomass	Belowground plant biomass, i.e. roots and rhizomes (g/m2)
6. Quality	C:N ratio of belowground plant biomass
7. MBC	Microbial biomass C
8. Surrogate	Surrogate recovery for correcting PLFA concentrations (%)
9. PLFA	Total PLFA biomass (nmol/g soil)
10. AMF	Arbuscular mycorrhizal fungi PLFA biomass (nmol/g soil)
11. FB	PLFA fungi:bacteria biomass ratio
12. Comments	Comments for the data

RECORD TYPE 2 Bulk Density, Aggregate Structure, and Soil C Stocks RCS012

Data Format Specification:

Variable	Name
1. Datacode	Data set code
2. Rectype	Record type
3. Age	Restoration age (number of growing seasons) of the field
4. Plot	Plot number- Each field contained 4 plots
5. pLgMacro	Percent large macroaggregates (> 200 μm) by mass
6. pSmMacro	Percent small macroaggregates (> 150-200 μm) by mass
7. pMacro	Percent combined macroaggregates (> 150 μm) by mass
8. CMacro	C stock of macroaggregates (g/m2)
9. pCMacro	Percent total C in macroaggregates
10. pMicro	Percent microaggregates (50-150 μm) by mass
11. CMicro	C stock of microaggregates (g/m2)
12. pCMicro	Percent total C in microaggregates
13. pSC	Percent silt/clay (< 50 μm) by mass
14. CSC	C stock of silt/clay (g/m2)
15. pCSC	Percent total C in silt/clay
16. piCPOM	Percent intra-aggregate CPOM by mass
17. CiCPOM	C stock of intra-aggregate CPOM (g/m2)
18. pCiCPOM	Percent total C in intra-aggregate CPOM
19. piSC	Percent intra-aggregate silt/clay by mass
20. CiSC	C stock of intra-aggregate silt/clay (g/m2)
21. pCiSC	Percent total C in intra-aggregate silt/clay
22. piMicro	Percent intra-aggregate microaggregates by mass
23. CiMicro	C stock of intra-aggregate microaggregates (g/m2)
24. pCiMicro	Percent total C in intra-aggregate microaggregates
25. Comments	Comments for the data

RECORD TYPE 3 Phospholipid Fatty Acid Biomass and Microbial Biomass C - RCS013

Data Format Specification:

Variable	Name
1. Datacode	Data set code
2. Rectype	Record type
3. Age	Restoration age (number of growing seasons) of the field
4. Plot	Plot number- Each field contained 4 plots
5. iCPOMQual	C:N ratio of intra-aggregate CPOM
6. MWD	Aggregate mean-weight diameter (cm)
7. BD	Soil bulk density (g/m3)
8. CTotal	Total C of whole soil (g/m2)
9. Comments	Comments for the data

Data Set Code--RMP01

Title of data set: Rainfall manipulation plot study at Konza Prairie

Abstract:

Rainfall Manipulation Plots facility (RaMPs) is a unique experimental infrastructure that allows us to manipulate precipitation events and temperature, and assess population community, and ecosystem responses in native grassland. This facility allows us to manipulate the amount and timing of individual precipitation events in replicated field plots at the Konza Prairie Long-Term Ecological Research (LTER) site.

We used data from a unique 15-year long rainfall manipulation experiment at the Konza Prairie Biological Station in northeastern Kansas, USA, to determine how altered precipitation patterns (fewer, larger events) impacted plant species composition and structure in an annually burned, ungrazed, native tallgrass prairie. We tested two hypotheses. First, based on the HRF, we predicted that directional change in grass and forb cover and richness and community composition would eventually occur after a lag period under the altered precipitation treatment. Second, we predicted that change in cover and composition under altered precipitation would be driven by the response of forbs more so than grasses because the dominant grasses are reported to be buffered against precipitation variability1,44 and changes in the cover and richness of forbs contribute disproportionately to community responses to other drivers in this grassland.

Keywords that describe data set:

Date data commenced: 01/01/1997
Date data terminated: 12/30/2012

Principle Investigators: Melinda D. Smith, Scott L. Collins, John M. Blair

RECORD TYPE 1: Annual aboveground net primary productivity (ANPP)

Data Format Specification:

1.	RecYear	The calendar year during which the biomass was collected
2.	Season	Season (S or F)
3.	RampNo	Ramp number (1-15)
4.	Species	Plant species name
5.	A	Plot A
6.	B	Plot B
7.	C	Plot C
8.	D	Plot D
9.	Average	Average of plots
10.	Date	Date/Time, Date was collected

Data Set Code--SPR01

Title of data set: Sequential Prairie Restoration Experiment at Konza Prairie

Abstract:

Annual aboveground net primary productivity (ANPP) from the Sequential Prairie Restoration Experiment at the Konza Prairie Long-Term Ecological Research site in Manhattan, KS USA. The data include ANPP from the first three years of restoration in each of three restoration sequences initiated in different years. Data correspond to subplot and whole-plot analyses. The Sequential Prairie Restoration Experiment is a block design with 4 subplots (labeled A - D) within 4 main plots (numbered 1 – 4) sequentially replicated in three blocks (Sequences 1, 2 and 3), with the restoration in each block initiated in a different year (Sequence 1 initiated in 2010, Sequence 2 initiated in 2012, and Sequence 3 initiated in 2014). 'NO-COLL' indicates that variable was not measured, A period in the dataset indicates missing data.

Keywords that describe data set:

aboveground biomass, ANPP, primary productivity, restoration, primary productivity, Konza Prairie

Date data commenced: 01/01/2016
Date data terminated: ongoing

Principle Investigators: Sara Baer, George Manning

RECORD TYPE 1: Annual aboveground net primary productivity (ANPP) from the Sequential Prairie Restoration Experiment.

Data Format Specification:

11. RecYear — The calendar year during which the biomass was collected
12. Sequence — Restoration sequence number (1-3)
13. Age — The number of years since initiation of the restoration (Year 1=first growing season)
14. Plot — The plot from which the biomass was collected (1-4)
15. Subplot — The subplot (located in each plot) from which the biomass was collected (A-D); In subplots with deer exclosures, EX=samples collected with exclosures and NON=samples collected outside of exclosures.
16. Quad — The quadrat, within a subplot, from which the biomass was collected
17. NP — Non-planted or volunteer species (species not included in the original seed mix) biomass
18. P — Planted species (species included in the original seed mix) biomass
19. Total — The summation of non-planted and planted species biomass
20. Litter — Dead plant material from the current or previous year

Data Set Code--VIR01

Title of data set: Effects of invertebate and vertebrate herbivory on tallgrass prairie plant community composition and biomass, Konza Prairie LTER

Abstract:

The effects of herbivores and their interactions with nutrient availability on primary production and plant community composition in grassland systems is expected to vary with herbivore type. Although nutrient additions are known to affect plant species diversity and primary productivity, the role of herbivores in mediating the strength of these effects also remains unclear. Herbivores may alter plant responses to nutrient additions in several ways. First, herbivores can alter the plant community response to nutrient additions by either selectively feeding on particular groups of species (e.g. grasses versus forbs) or by generally opening up space, allowing for species turnover and immigration. Second, feeding by herbivores may reduce the production response to nutrient additions if the plants cannot compensate for tissue lost to herbivory. As the functional effects of vertebrate and invertebrate herbivores on plant community composition and production may vary, the interactive effects of vertebrate versus invertebrate herbivores with nutrient additions may also vary. Here we are experimentally assessing the independent and interactive effects of removing vertebrate and invertebrate herbivores on aboveground biomass and plant community composition in native tallgrass prairie. Further, we are examining whether the removal of vertebrate and invertebrate herbivores interacts with nutrient availability. By doing this, we address three related questions: 1) what is the relative strength of the effects of invertebrate versus vertebrate herbivory in a grassland system; 2) how does herbivory (invertebrate and/or vertebrate) affect the relative abundances of grasses and forbs, the two dominant plant functional types within the ecosystem; and 3) what are the consequences of these changes in composition for aboveground net primary productivity, an important ecosystem function?
NutNet focal research questions:
(1) How general is our current understanding of productivity-diversity relationships?
(2) To what extent are plant production and diversity co-limited by multiple nutrients in herbacoues-dominated communities?
(3) Under what conditions do grazers or fertilization control plant biomass, diversity, and composition?

Keywords that describe data set:

populations, primary production, inorganic nutrients, nitrogen, phosphorus, potassium, herbivory

Date data commenced: 05/01/2007
Date data terminated: ongoing

Principle Investigators: Kimberly La Pierre and Melinda Smith

RECORD TYPE 1: Plant Cover Data

Data Format Specification:

	Variable	Name	Units
1.	Variable	Name	Units
2.	Datacode		
3.	Rectype		
4.	RecYear	The year of data were collected	
5.	RecSeason	The season of data were collected	
6.	Block	Block number	
7.	Plot	Plot number	
8.	Subplot	Subplot letter	
9.	Specode	Species number from NUT species list	
10.	Ab_genus		
11.	AB_species	Taxa associated with cover value	
12.	Cover	Percent cover of taxa (0-100)	
13.	Comments	Comments on data	

RECORD TYPE 2: Aboveground biomass for each plot at a site.

Data Format Specification:

	Variable	Name	Units
1.	Variable	Name	Units
2.	Datacode		
3.	Rectype		
4.	RecYear	The year of data were collected	
5.	RecSeason	The season of data were collected	
6.	Plot	Plot number	
7.	Subplot		
8.	Lvgrass		
9.	Pryrdead		
10.	Woody		
11.	Comments		

Data Set Code--WAT01

Title of data set: Konza Prairie Long-Term Irrigation Transect Study

Abstract:

In 1991, an irrigation transect experiment was established near the Konza Prairie HQ to assess the effects of supplemental water on ecological processes in tallgrass prairie. The site is burned annually in the spring. The transect spans upland, hillside and lowland topographic positions with irrigation and sampling points (12) located at 10 m intervals. Adjacent control transects are marked on both sides of the irrigation transect. Irrigation is scheduled according to estimates of actual evapotranspiration and measures of plant water status. In 1992, an additional 4 irrigation sprinklers were added to the transect (2 at each end). In 1993, a second line of sprinklers and control plots was added (#16-31). At the time of peak aboveground biomass (late August to October), six 0.1 m2 quadrats are harvested at each of the 30 sites (no #9 due to rock outcrop) for the irrigated and control/non-irrigated lines. Biomass is separated into live grass, forb and woody. As of 2006, c.dead is no longer separated from live grass. Vegetative species composition was initially measured in 1991 at each site, and continues to be measured at midseason by using a modified Daubenmire canopy coverage technique in a 10 m2 circular plot. At approximately 10 day intervals, predawn and midday plant water potentials are measured in Andropogon gerardii at each site in both irrigated and control transects. Since 1992, reproductive effort of the dominant grasses Andropogon gerardii (ANGE), Sorghastrum nutans (SONU), Schizachyrium scoparius (ANSC) has been assessed in irrigated and control transects by measuring heights (n=9) and densities (n=4) of flowering stalks. In 1993, soil moisture measurements at 15 and 30 cm depths were begun with a Time Domain Reflectometry system. Data set also includes measured natural precipitation and supplemental water added to the site.

Keywords that describe data set:

Irrigation, water stress, aboveground biomass, ANPP, graminoids, forbs, current year dead, primary productivity, plant species composition, reproductive effort, soil water, soil water content, plant water potential.

Date data set commenced: 06/01/1991
Date data set terminated: ongoing

Principle Investigator: John Blair

RECORD TYPE 1--Natural Precipitation and supplemental water added (Including 1991 and 1992). In 1991 and 1992 only one transect was established. The irrigations in 1991 and 1992 can be used for both the upper and lower portionsof the transect because the entire transect was irrigated at the same time.)

Data Format Specification:

Variable	Name	Units

1. RecYear		
2. RecMonth		
3. RecDay		
4. Julian		
5. Rain		mm
6. IrrigU		mm
7. IrrigL		mm
8. RIU		mm
9. RIL		mm
10. AccumR		mm

RECORD TYPE 2: Plant species composition for irrigation transect studies

Data Format Specification:

Variable	Name
1. Datacode	
2. Rectype	
3. RecYear	
4. RecMonth	
5. RecDay	
6. Watershed	Always HQ
9. Transect	i or c
10. Plot *	1-31, no plot #9
10. Species Number	Species code**
11. Genus	abbreviated genus
12. Species	abbreviated specific epithet
14. Cover	1-7***
*1991&1992	12 sampling locations, no plot 9

**For list of Species codes used, see konza species list at:
http://lter.konza.ksu.edu/sites/default/files/species_list_pvc02.pdf

***A value of 1 to 7 indicates the estimated cover class value for the species.

Cover class	Canopy cover
1	<1%
2	1-5%
3	5-25%
4	25-50%
5	50-75%
6	75-95%
7	95-100%

RECORD TYPE 3: Aboveground biomass for irrigation transect studies

Data Format Specification:

Variable	Name	Columns	Format
1. Datacode		1-5	A5

2. Rectype				6		I1	
3. RecYear					7-8		I2
4. RecMonth				9-10		I2	
5. RecDay					11-12		I2
6. Watershed	Always HQ			13-16		A2	
7. Transect	I (irrigated) or C(control)			18-19		A1	
8. Plot	(1-8)(10-31)	(1993-on)		21-22		I2	
	(1-8)(10-13)	(1991&1992)					
9. Replicate	a-f		25		A1		
10. Livegrass	Mass of live grass			27-32		F6.2	
11. Forbs	Mass of forbs			34-39		F6.2	
12. CurrentDead*	Mass of current year's dead				42-47		F6.2
13. PreviousDead	Mass of previous year's dead				49-54		F6.2
	(no p. dead, plots burned annually)						
14. Woody	Mass of Woody(As of 24 Aug 1992)			56-61		F6.2	
	lead plant-Amorpha canescens						
	rose-Rosa arkansas						
	(smooth) sumac-Rhus glabra						
	New Jersey tea-Ceanothus ovatus						
	dogwood-Cornus drummondi						
	buckbrush-Symphoricarpos orbiculatus						
15. Comments				63-80		C18	

* Included with Live Grass since 2006.

RECORD TYPE 4--Water Potential Measurements of Big Bluestem (1991-1998)

Data Format Specification:

Variable	Name	Columns		Format	
1. Datacode		1-5		A5	
2. Rectype		6		I1	
3. RecYear			7-8		I2
4. RecMonth		9-10		I2	
5. RecDay			11-12		I2
6. Watershed	Always HQ	13-14		A2	
7. Treatment	i or c	18		A1	
8. Transect	1 or 2	20		A1	
9. Location	up or lw	22-23		I2	
10. Plot	1 or 2	25		I6	
11. TimeAP	Always p	27		I5	
12. Rep1		29-33		I5	
13. Rep2		35-39		I5	
14. Rep3		41-45		I5	
15. Rep4		47-51		I5	
16. Rep5		53-57		I5	
17. Rep6		59-63		I5	
18. Rep7		65-69		I5	
19. Rep8		71-75		I5	
20. Comments					

Codes used:

Name	Value	Code Value
Treatment	i	irrigated
	c	control
Transect	1	first transect
	2	second transect
Location	up	upland
	lw	lowaland
Plot	1	first plot sampled
	2	second plot sampled
Time	a	AM
	p	PM

RECORD TYPE 5--Reproductive Effort of Three Grasses

Data Format Specification:

Variable	Name		Columns	Format	Units
1. Datacode			1-5	A5	
2. Rectype			6	I1	
3. RecYear			7-8	I2	
4. RecMonth			9-10	I2	
5. RecDay			11-12	I2	
6. Watershed	Always HQ		13-16	A4	
7. Transect	i or c		18	A1	
8. Plot	(1-8)(10-13) skip #9	(1991&1992)	20-21	I2	
	(1-8)(10-31) skip #9	(1993-on)			
9. Quadrant	(1-4)		24	I1	
10. Species			26-29	A4	
11. NumberofStalks	Number of Flowering Stalks		31-32	I2	
12. Height1			34-37	I4	meters
13. Height2			39-42	I4	
14. Height3			44-47	I4	
15. Height4			49-52	I4	
16. Height5			54-57	I4	
17. Height6			59-62	I4	
18. Height7			64-67	I4	
19. Height8			69-72	I4	
20. Height9			74-77	I4	
21. Comments			79-		

Codes used:

Name	Value	Code Value
Species	ANGE	Andropogon gerardii
Species	ANSC	Schizachyrium scoparius
Species	SONU	Sorgastrum nutans

RECORD TYPE 6 -- Soil Chemistry

Data Format Specification:

Variable		Format	Units
1. Datacode		A5	
2. Rectype		I1	
3. RecYear		I2	
4. RecMonth		I2	
5. RecDay		I2	
6. Watershed		A4	
7. Treatment		A1	
8. Location		A2	
9. Depth		I2	cm
10.CEC	Cation exchange capacity	F4.1	meq/100g
11. pH		F3.1	
12. P	Available Phosphorus	F4.1	ppm
13. Na	Sodium	I3	ppm
14. K	Potassium	I4	ppm
15. Mg	Magnesium	I3	ppm
16. Ca	Calcium	I4	ppm
17. C	Total carbon	F4.1	% dry wt.
18. N	Total nitrogen	I4	% dry wt.
19. NH4	KCl-extractable ammonium		ug N/g
20. NO3	KCl-extractable nitrate		ug N/g
21. SO4	Sulfate		ug S/g
22. HO2	Gravimetric soil water content	F4.2	%
23. Sand	Texture of % Sand	F4.1	%
24. TSilt	Texture of % silt	F4.1	%
25. Clay	Texture of %clay	F4.1	%
26. Comments			

Note on revision of Catalog:

1. KPL01 - removed December 7, 2011
2. Added: AET01, ASD04, ASD05, ASD06, CBH01, CFP01, KFH01
3. Changed XNS01→ BNS01
4. Updated all the contents based on Catalog2012_JB5.doc
5. Added PBG02-PBG12 on May 2017
6. Added CFC011 on May 2017
7. BMS02 – Changed to BMS012, on July 2017
8. CAA01, CAA02, CAA03 removed from DC on July 2017
9. CSM07 removed from DC, on July 2017
10. CSM10 removed from DC, on July 2017
11. OGD01 removed from DC, on July 2017
12. CGR04 removed from DC, on July 2017
13. Removed Apt02 from DC, on July 2017
14. Removed ASD01from DC, on July 2017
15. Removed CSA01 from DC, on July 2017

16. Add PPL01 on Feb 2017
17. Add AGW03 on Feb 2017
18. Added CSM08 on Jun 2017
19. Added CBS01 – CBS05 Mar 2017
20. Added GIS00 – GIS65 18 projects in 2017
21. Added VIR01 on Mar 2017
22. Added NUT01 on Jul 2017
23. Added GFE01 on Jul 2017
24. Moved all the dataset from Belowground to Other, and removed Belowground category from DC on Jul 2017
25. Added EJR01 on Jul 2017
26. Added RMP01 on Aug 2017
27. Added CBM01 on Aug 2017
28. Added HRE01 on Aug 2017
29. Added SPR01 on Aug 2017
30. Added AMC01 on Aug 2017
31. Added FWE01 on Aug 2017
32. Added KKE01 on Sep 2017
33. Added CEE01 on Nov 2017
34. Added ESM01 on Mar 2018
35. Added NGE01 on Mar 2018
36. Added RCS01 on Mar 2018