

Technical Report No. 44  
COMPREHENSIVE NETWORK SITE DESCRIPTION  
OSAGE

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GRASSLANDS BIOME  
U. S. International Biological Program

I. *Site Name: Osage*

The OSAGE site is located on the Adams Ranch which is owned by Mr. K. S. Adams, formerly the president of Phillips Petroleum Company. This is a functioning beef ranch now operating under the direction of the manager, Mr. Dick Whetsell, Foraker, Oklahoma.

II. *Location and Size*

The OSAGE site is located in Osage County which is in the northeast corner of Oklahoma. The ranch is 35,000 acres in size, but the headquarters and study area are located 12 miles north and five miles east of Shidler, Oklahoma. The study area is accessible by hard surface road. Unless other arrangements are made, investigators may stay in Cedar Vale, Kansas, which is about 15 miles north of the site. Although there are no food facilities available on the ranch, there is a bunkhouse with showers. However, these are not available on a routine basis and their use should be negotiated with Mr. Whetsell prior to arrival. At the present time there is no laboratory space available although we will have a part of a building which can be used for tables, drying ovens, storage of equipment, etc.

Since this is a private ranch and we are using the area at the good will and graciousness of Mr. Adams and Mr. Whetsell, every effort must be made to assure their continued cooperation. Therefore, when sampling procedures and plans are finalized, I will present them to Mr. Whetsell so he will know when, what is being done.

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The experimental design consists of two areas. The ungrazed control is a 12.6 acre (500 ft x 1100 ft) rectangle which has been ungrazed (but probably mowed) for approximately 15 years. The grazed area is approximately 400 acres and is adjacent to the control area. Although there is some variability in the range use, the pastures are lightly to moderately grazed.

### III. *Elevation and Climate*

The OSAGE site is located at an elevation of 1250 ft on mostly rolling topography. The Weather Bureau data is from Pawhuska, Oklahoma, which is approximately 20 miles southeast of the ranch. The average January temperature is 36.9°F and the average July temperature is 81.8°F. The average annual precipitation is 36.6 inches with 25.0 inches during the April to September warm season. The growing season is 205 days.

### IV. *Soils*

The soil of the OSAGE SITE is a Brunizem of the Labette-Summit-Sogan association. These are dark colored soils mostly with clayey subsoils developed on shales, sandstones, and limestones under tall-grass. Specifically the control area is on a Labette soil with a dark silty clay A horizon 0-16". The B<sub>1</sub> is dark brown 16-23", the B<sub>2</sub> is reddish brown 23-32", the B<sub>3</sub> is a brown silty clay 32-42" and most of the bedrock is limestone at three to six feet. The soils of the ranch have been mapped by the Soil Conservation Service although the County Soil Report is not yet complete.

## V. *Common Species*

The common species of orthoptera, mammals, and plants which are likely to be found are listed below:

### Plants

Andropogon gerardi, A. scoparius  
Panicum virgatum, P. scribnerianum  
Bouteloua curtipendula, B. gracilis  
Sorghastrum nutans  
Sporobolus asper  
Leptoloma cognatum  
Aster ericoides  
Baptisia leucophaea  
Liatris punctata  
Petalostemum candidum

### Mammals

Peromyscus maniculatus  
Microtus ochrogaster ozarkiarum  
Signodon hispidus texianus  
Citellus tridecemlineatus texensis  
Onychomys leucogaster breviauritus  
Neotoma micropus micropus  
Lepus californicus melanotis

### Orthoptera

Diapheromera veltii  
Ceuthophilus selusius, C. pallidus, C. nodulosus  
Gryllotalpa major  
Amblycorypha huasteca, A. uhleri, A. parvipennis brachyptera  
Pediocetes haldemani  
Mermiria birittata  
Dichromorpha viridis  
Boopedon auriventris  
Arphia sulphurea  
Melanoplus beameri, M. fasciatus, M. inconspicuus, M. impudicus  
Trachyrhachis kiowa fuscifrons  
Tettigidea lateralis parvipennis

## VI. *Pertinent Literature*

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