

## PLANT DISTRIBUTION ON A CENTRAL OKLAHOMA PRAIRIE\*

(Abstract)

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This study of the ecological structure of a central Oklahoma prairie area located in northeastern McClain county, Oklahoma, was conducted during July and August, 1934. The tract used was the "Johnson's Pasture," a cattle range area which has been somewhat heavily overgrazed during past years and is burned nearly every spring. The range pasture has never been plowed, however, and probably presents a slightly disturbed approach to original conditions. Methods of observation included note-taking and the making of seventy-two quadrats. A portion of the quadrats were made with a quadratoscope, a camera-like device with the lens directed downwards. The image of the quadrat beneath the tripod was reflected on a translucent paper supported by a transparent glass placed in the location of the usual frosted glass of a plate camera. Little essential difference was found between the results obtained statistically by the quadrat method and the notes obtained by cruising and observation.

Sheet erosion together with the natural physiognomy of the rolling prairie seemed to be the more important factors limiting the distribution of the vegetation of the area studied. The community studied was an *Andropogon scoparius* - *Panicum oligosanthes* community with faciations dependant on edaphic factors. Most intolerant of all of the important plants to sheet erosion was *Manisuris* (*Roetbellia*) *cylindrica*, although *A. scoparius* was absent in the severely denuded areas. The community structure may be thus expressed with reference to the dominants and sub-dominants during the serotinal aspect:

*Stipa* - *Koeleria* ASSOCIATION

*Andropogon scoparius* - *Panicum oligosanthes* LOCIATION

—*Andropogon scoparius* HIGH PRAIRIE FACIATION

+*Bouteloua gracilis* HIGH PRAIRIE FACIATION

+*Manisuris cylindrica* SLOPING PRAIRIE FACIATION

+*Andropogon furcatus* - *Manisuris cylindrica* LOW UPLAND  
PRAIRIE FACIATION

+*Bouteloua hirsuta* - *Amphiacris dracunculoides* EROSION  
FACIES

