

Notes Regarding the History and Current Status of the Lesser Prairie Chicken in Oklahoma¹

FARRELL P. COPELIN, Oklahoma Cooperative Wildlife Research Unit,²
Stillwater

The lesser prairie chicken population in Oklahoma has been considered in danger of extinction for virtually half a century. According to Duck and Fletcher (1944), Theodore Roosevelt, William T. Hornaday, and F. S. Barde, all prominent in game conservation, expressed alarm at the rapidly decreasing number of lesser prairie chickens in Oklahoma as early as 1909. After some forty-seven years of greater or lesser concern about the declining number of this species, we still wonder what its status really is.

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A review of the events that reflect lesser prairie chicken population trends, population surveys, and of apparent associated factors, may help us better understand the status of this bird.

Land-Use Practices and Legal Hunting Seasons

Permanent cattle ranches were first established in western Oklahoma about 1870 (Duck and Fletcher, 1944). The portion of the state which includes the lesser prairie chicken range was officially opened to settlement by white man during the period from 1890 to 1896; "No Man's Land" in 1890, Cheyenne-Arapahoe territory in 1892, the Cherokee Strip in 1893, and Greer County in 1896 (Harlow, 1949). During the years following, especially during the first decade of the 20th century, cultivation of native grassland presumably brought about wide-spread destruction of lesser prairie chicken habitat (Duck and Fletcher, 1944).

In 1890 the First Territorial Legislature passed a law which restricted hunting of lesser prairie chicken to a period from September 1 to December 31 of each year (Statutes of Oklahoma, 1890). The open season was changed in 1895 to a period from November 1 to February 1 of the following year (Oklahoma (Terr.) Session, 1899); and in 1899 it was changed to September 1 to January 1 of the following year (Oklahoma (Terr.) Session, 1899). In 1909, two years after statehood, the open season was set for September 1 to November 1, except no hunting was allowed on Sundays. The first bag limit was set in 1909. It was fifteen birds per day, or one hundred per season (Oklahoma Session, 1909). Hunting continued under these restrictions until 1915, when the legislature passed a law prohibiting prairie chicken hunting at any time (Oklahoma Session, 1915).

Further destruction of lesser prairie chicken habitat was brought about by the additional breaking of new land during the World War I era (Duck and Fletcher, 1944).

During the 1920's the population apparently increased somewhat. In 1929 the Oklahoma Legislature passed a law which gave the Oklahoma Game and Fish Commission authority to open the season on prairie chicken when they became so numerous as to endanger private property or farm crops (Oklahoma Session, 1929). The commission permitted open seasons in 1929, 1931 and 1933 (Duck and Fletcher, 1944).

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The next open season was a one-day hunt in 1950. It was reported that there were a few more prairie chickens than usual (Anon., 1950). The total kill of the one-day hunt was estimated to be between 600 to 1,000 greater and lesser prairie chickens combined, and these were taken by approximately 6,000 hunters (Anon., 1951).

The most recent open season on lesser prairie chicken in Oklahoma was in 1951. A three-day season was set, although according to the opinion of some biologists there was a "slight decrease in the lesser species' production . . . this nesting and brooding season" (Temple, 1951).

Apparently a large decrease in lesser prairie chicken numbers followed these two open seasons. From 1952 to 1956, some of the most severe drought years on record characterized the prairie chicken range in western Oklahoma. Also, overgrazing reportedly was more severe than usual. Farmers and ranchers report that during these drought years few broods of lesser prairie chicken were seen. However, despite continued severe drought conditions, reproductive success appeared to be satisfactory in two areas surveyed in Ellis County in 1956.

Population Surveys

Verne E. Davison (1940) censused lesser prairie chickens in a four-mile square area (16 sections) south of Arnett, Oklahoma in a type of vegetation dominated by shinny oak, *Quercus havardii* Rydb., from 1932 to 1939, excepting 1937. The census was continued on the same area in 1940 by L. G. Duck (1942) and in 1946 by Oklahoma Game and Fish Department personnel (Anon., 1946). In 1947 only 10 sections of land were surveyed, most of which were in the above mentioned area (Jones, 1947). During the current study a two-mile square area (4 sections) adjoining the west side of the four-mile square area used by Davison was censused in 1956. These censuses were counts of males on the spring courtship or booming grounds. A comparison is made in Figure I on the average number of males per square mile of area censused. It is recognized that these data, which were not taken from the same plot, are not entirely comparable. They are presented here, however, for the general trend they suggest.

Duck and Fletcher (1944) calculated the total lesser prairie chicken population in Oklahoma in 1940 at 14,914 birds. This was based on censuses of male birds on ten two-mile square plots.

Notes on the Current Status

After making a late winter and spring survey in 1956, Summers (1956) estimated that there were between 2,500 and 3,000 lesser prairie chickens in Oklahoma. His estimate is based on farmer, rancher, and sportsmen reports, and counts of males on booming grounds. He reported that lesser prairie chickens were well distributed throughout northwest Oklahoma, with the majority of birds in Beaver, Harper and Ellis Counties. During the current study lesser prairie chickens were found throughout Ellis County in grassland areas.

Results of the current study indicate that the highest density of lesser prairie chickens, 6.5 males per square mile of censused area, is in the mixed grass type of vegetation; 4.0 males per square mile were tallied for the shinny oak type, and 1.75 for the sand sagebrush, *Artemisia filifolia* Torr., type. This is based on censuses of two-mile square (4 section) areas. Summers' (1956) findings also indicate a higher density in the mixed grass type than in the shinny oak or sand sagebrush type. In the 1930's and early 1940's it was said that the highest density of lesser prairie chickens was in the shinny oak type (Davison, 1935; Duck and Fletcher, 1944). Further investigation is needed in order to gain a better understanding of the comparative density of lesser prairie chickens in each of the different types, and the factors responsible for these relative densities.

Duck and Fletcher noted in 1944 that "The decreasing chicken supply fairly well correlates with the periods of human influx and farm land development"; and "Much of this land is returning to grassland . . . [so] we can expect . . . a return of lesser prairie chicken numbers". They recognized also the importance of "moderate and intelligent grazing use". The practice of returning cultivated lands to grassland apparently has continued since 1944, but, overgrazing reportedly was more severe in western Oklahoma in recent years than ever before. Prairie chicken numbers seem still to be declining.

The future of the lesser prairie chicken as a game bird, even as a part of our native fauna, is uncertain. While this species still is present in reasonable numbers, and the population is rather widely scattered, every effort should be made to gain an increasingly more complete knowledge of its ecology, especially with respect to current land-use practices. Perhaps this knowledge will make possible the preservation, and even an increase in numbers, of this species.

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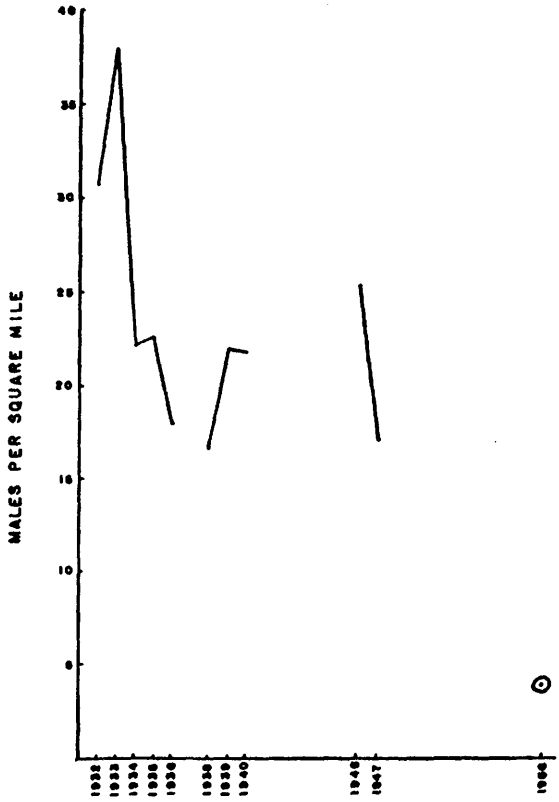


FIGURE I. Census of male lesser prairie chickens on booming grounds in Ellis County, Oklahoma, 1932 to 1956. The census was taken by Davison from 1932 to 1939, by Duck in 1940, by Oklahoma Game and Fish Department personnel in 1946, by Jones in 1947, and by Copelin in 1956.