

Regional Bobwhite Quail and Cottontail Rabbit Survey 2009

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Abstract

Wildlife managers and volunteers have been running bobwhite quail whistling counts for sixty years. Data on male bobwhite quail densities were collected biennially since 1991 in 15 counties comprising the species' primary range in Wisconsin. Populations showed a significant decrease ($p = <0.0001$) in 2009, with the overall trend a significant decline also. The mean number decreased from 0.05 in 2007 to 0.013 in 2009. The number of cottontail rabbits seen while running the quail survey was 0.16, a decrease from the 2007 level of 0.28.

Methods

Department personnel ran roadside surveys along predetermined transects in 15 counties across Wisconsin's primary bobwhite quail range. Annual surveys began in 1949, and have been run biennially since 1991. The surveys took place between 15 June and 5 July, beginning at sunrise on mornings with less than 40% cloud cover and winds less than 5mph. Surveyors made 20 stops approximately one mile apart, and recorded at each stop the number of whistling males heard during a two-minute period. The number of cottontail rabbits seen while running the transect was also recorded. The data were entered into the DNR UNIX production server and analyzed using the Statistical Analysis System (SAS).

Results

Whistling bobwhite quail routes have been conducted in Wisconsin's primary quail range (Figure 1) since the summer of 1949. The number of routes run in 2009 was 23, slightly down from 2007 (25). The number of whistling males per stop decreased 74%, from 0.05 in 2007 to 0.013 in 2009 (Figure 2.). The number of whistling males per stop remained well below the long-term average (0.60) as well.

Surveyors were also instructed to record all cottontail rabbits seen on the survey route. The numbers of cottontail rabbits seen per transect decreased 43%, from 5.6 in 2007 to 3.2 in 2009.

Winter temperatures for the 2007-2008 and 2008-09 season were below average, and above average precipitation was generally the norm for most of the winter. Also, the spring of 2008 had record levels of rain in the southern 1/3rd of the state right at the peak of hatching. These hard winters and loss of production in the summer of 2008 have had a negative impact on bobwhite quail populations in the state.

In general, the continued declines of bobwhite quail in Wisconsin and nation-wide reflect factors beyond weather conditions. Such causative factors are thought to include habitat deterioration, predation, and possibly pesticides. Continued losses of grasslands and changes in land use threaten the future of quail populations in Wisconsin.

The outlook for rabbits seems to be better than quail. The trend for rabbit numbers is stable in the long term. The numbers of rabbits seen in 2009 have decreased from their 2007 level when they were as high as they have been in 25 years (Figure 3.).

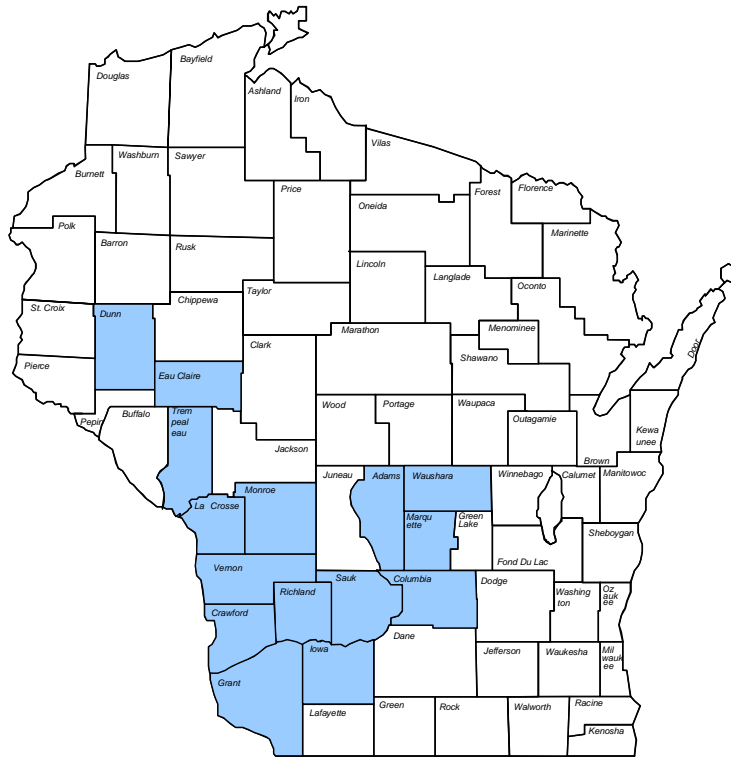


Figure 1. Shaded counties comprise Wisconsin's primary bobwhite quail range.

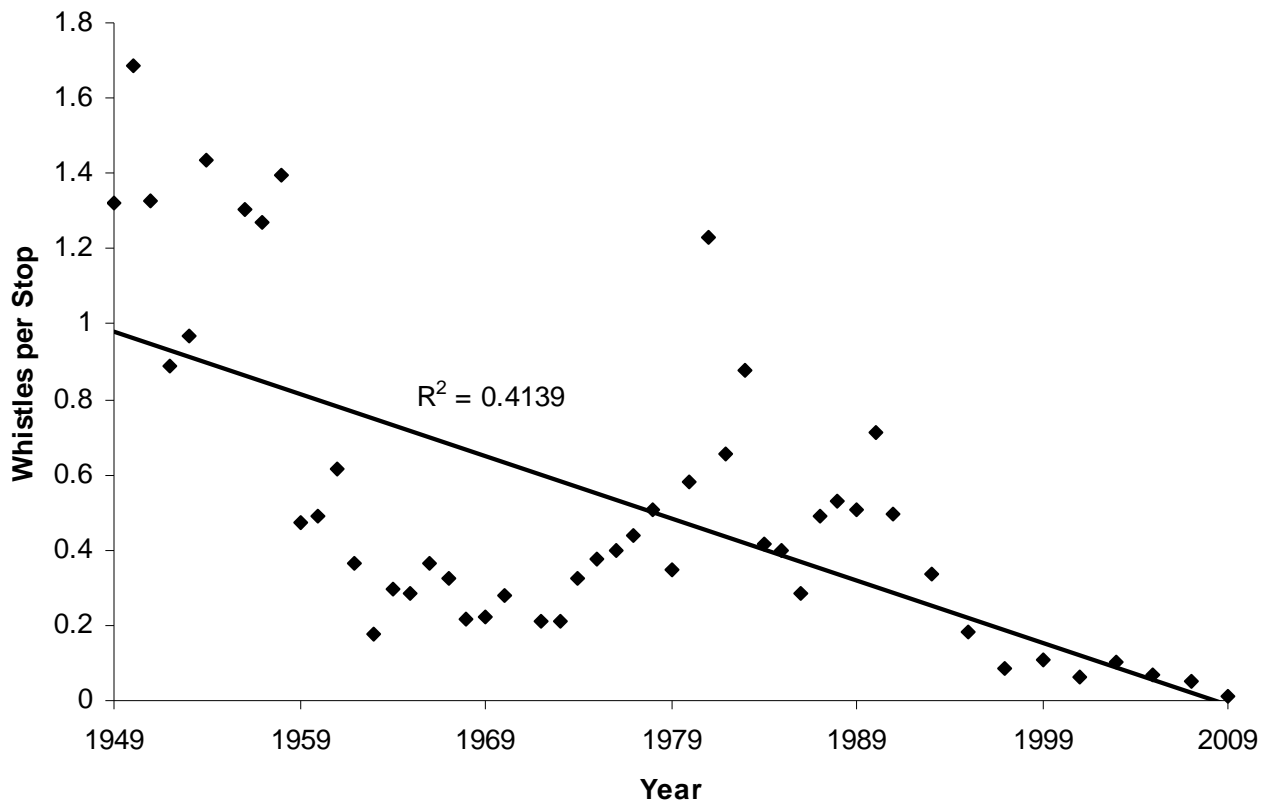


Figure 2. Mean number of whistling males heard per stop 1949-2009.

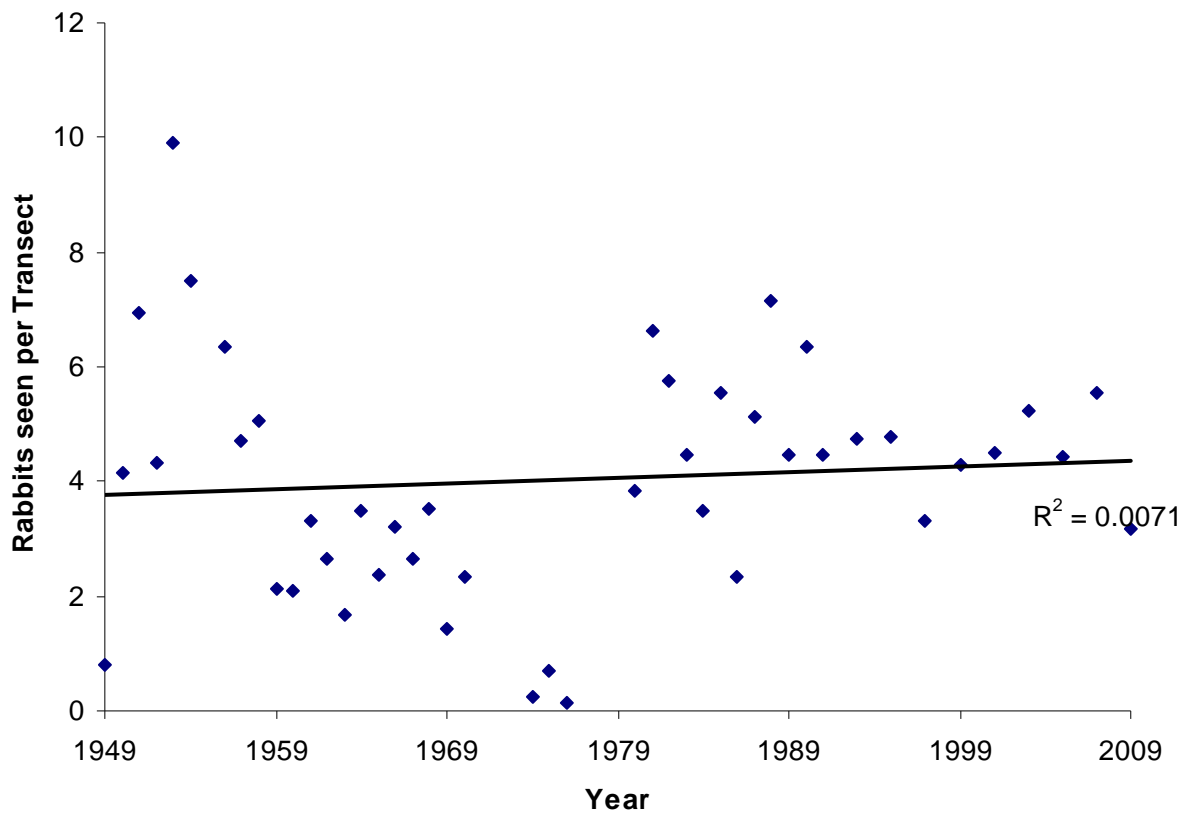


Figure 3. *Number of rabbits seen per quail transect 1949-2009.*