

Regional Bobwhite Quail and Cottontail Rabbit Survey 2015

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Abstract

Wildlife managers and volunteers have been running bobwhite quail whistling counts for over sixty years in Western and Southern Wisconsin. Data on male bobwhite quail densities were collected biennially since 1991 in 15 counties comprising the species' primary range in Wisconsin. Populations showed a slight increase in 2015, with the overall trend a significant decline. The mean number of whistling males heard per stop was 0.016 in 2015, up from 0.015 whistles heard per stop in 2013. The number of cottontail rabbits seen per stop while running the quail survey was 0.29, an increase from 2013 level of 0.17.

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 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 2015 was 19, 5 less routes than in 2013 (24). The number of whistling males per stop was up slightly in 2015 at 0.016 whistles per stop, up from 0.015 in 2013 (Figure 2). The number of whistling males per stop remained well below the long-term average of 0.54.

Temperatures during the winter of 2013-14 were well below average and remained below average through the spring of 2014. Precipitation during the winter of 2013-14 was near average, but the amount of precipitation during the spring of 2014 was well above average. Hard winters and cool wet springs can have a negative impact on bobwhite quail populations in the state. Temperatures again fell well below average during the winter of 2014-15. Temperatures recovered to near normal in the spring of 2015. Precipitation during the winter of 2014-15 was well below average, but near normal during the spring of 2015. Springtime temperatures and rain fall is critical during the first weeks of brood rearing.

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.

Surveyors were also instructed to record all cottontail rabbits seen while on the survey route. The numbers of cottontail rabbits seen per transect increased 74%, from 3.4 in 2013 to 5.9 in 2015. This increase was higher than it has been in decades (Figure 3). The outlook for rabbits seems to be better than quail. The trend for rabbit numbers is stable in the long term.

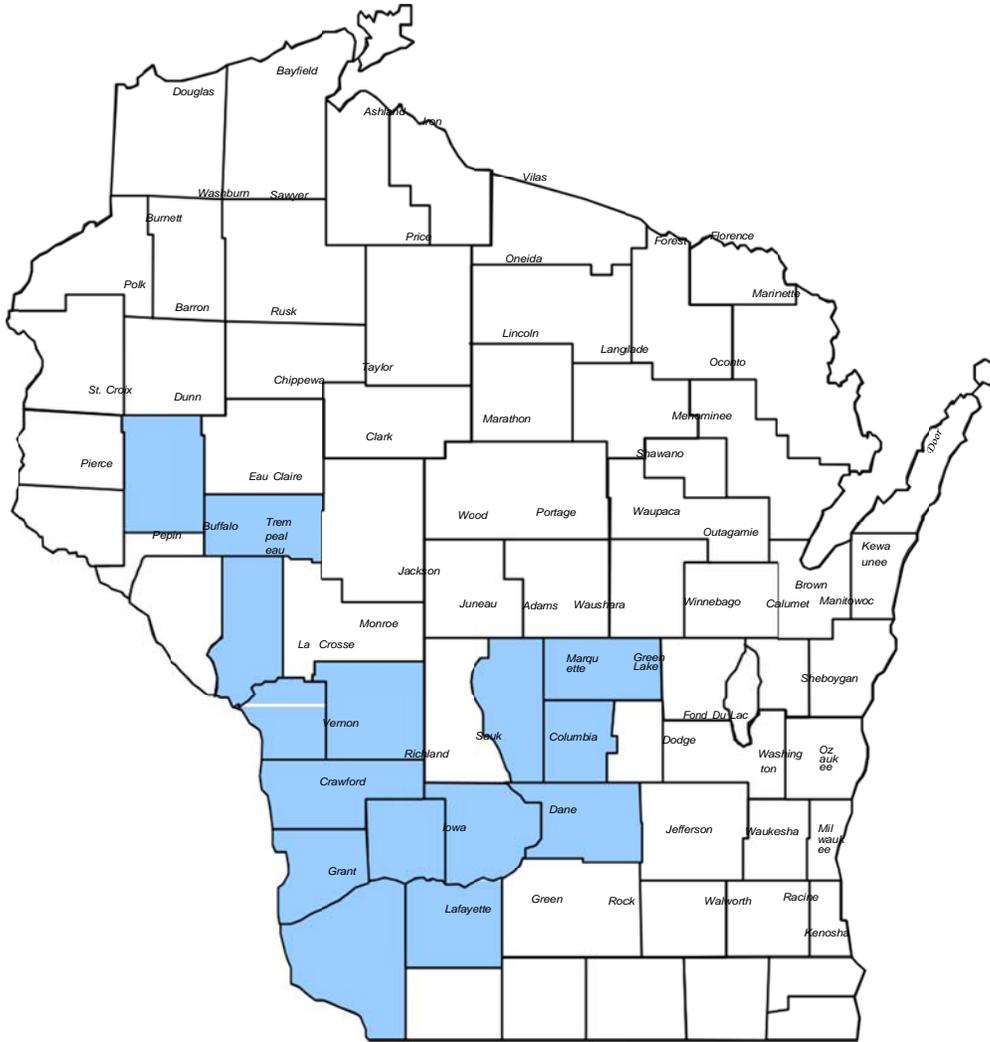


Figure 1. Shaded counties comprise Wisconsin's primary bobwhite quail range.

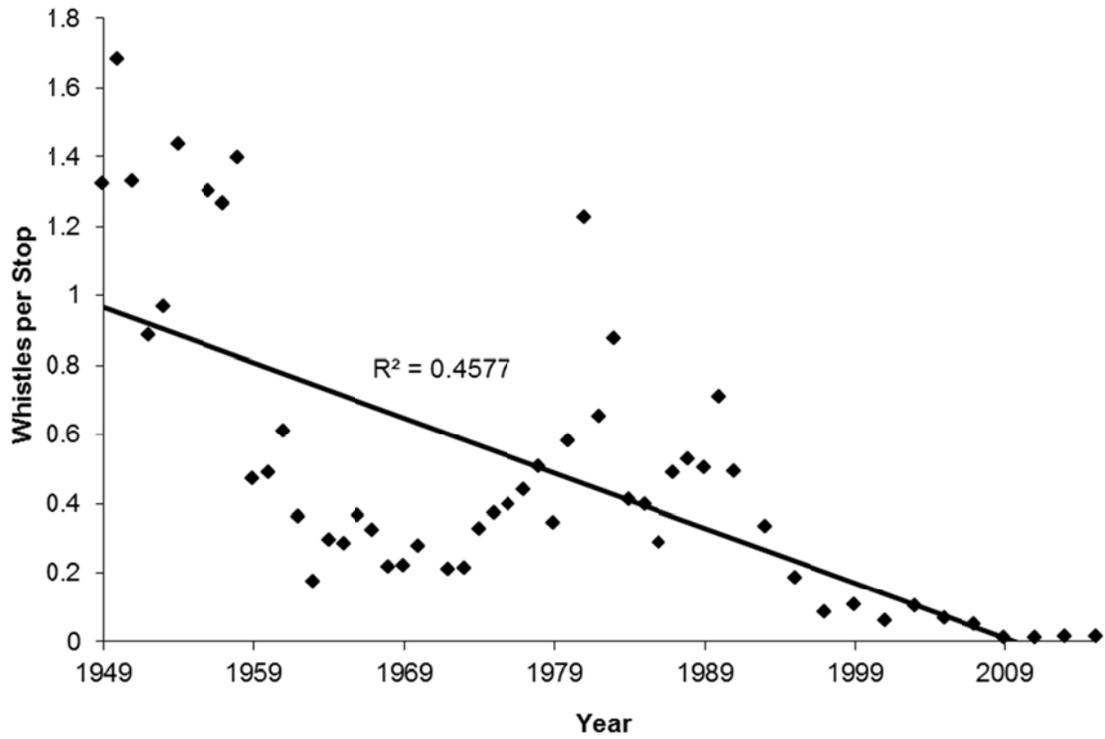


Figure 2. Mean number of whistling males heard per stop 1949-2015.

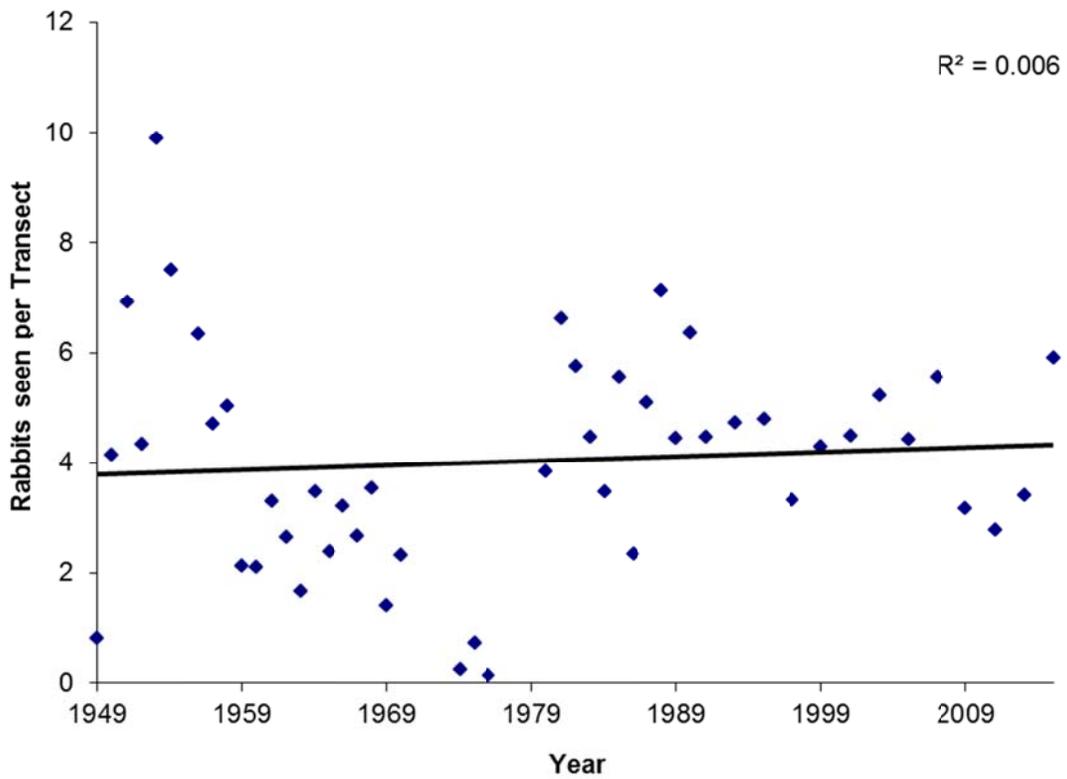


Figure 3. Number of rabbits seen per quail transect 1949-2015.