

Summer Wildlife Inquiry 2008

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Abstract

Surveys of nine species of summer wildlife made by rural residents in the five DNR administrative regions of the state of Wisconsin were compiled for 2008. On a statewide basis for the year of 2008 sightings have increased for three of the nine species; coyote, red fox, and skunk. Sightings remained the same compared to last year for three species; bobcat, white-tailed deer, and wild turkey. A decrease in sightings for the other three species; gray partridge, ring-necked pheasant, and ruffed grouse was not significant. In addition to statewide data, sightings are also tabulated for each of the five DNR administrative regions. Changes in reporting rates for the nine species were tested with χ^2 analysis. Analysis of variance was used to test for differences among years and regions for two species.

Methods

Originally, names and addresses for this survey were chosen from a master list compiled in the early 1980's with nonrespondents from previous years being systematically culled from the list. The size of the list, however, had become alarmingly small after the 1998 mailing. Consequently, an effort to increase the size of the mailing list was initiated in 1999. Landowners of 40 or more acres were selected from a mailing list from the University of Wisconsin Extension rural landowner list. Names and addresses were randomly drawn in proportion to ownership in each county. Active names from the previous master list were added to this new list, and nonrespondents are annually culled.

Questionnaires were mailed in early-August 2008 to 5,300 rural residents in the 5 DNR administrative regions in the state. Species reported include bobwhite quail, coyote, fox, gray partridge, ring-necked pheasant, ruffed grouse, skunk, white-tailed deer, and wild turkey. Species data were summarized using the Statistical Analysis System (SAS). Changes in annual (1988-2008) reporting rates of bobwhite quail, coyote, fox, gray partridge, ruffed grouse, skunk, and wild turkey were tested with χ^2 analysis. Analysis of variance was used to test for differences among years and regions in estimated numbers of pheasants and deer on rural properties.

Results

Responses were received from 1,369 rural Wisconsin landowners in 2008, representing a 26% return rate. Overall, during the past 21 years, 29,381 questionnaires have been returned. During 2008, the distribution of responses varied among DNR administrative regions accordingly:

Northern 17%	West Central 26%	Northeast 25%
South Central 20%	Southeast 12%	

Bobwhite Quail

The statewide percentage of farmers that saw or heard bobwhite quail on their property varied significantly during the past 21 years (Figure 1, $\chi^2 = 174.79$ 19 df, $\underline{P} < 0.0001$). Bobwhite quail are reported more frequently in the West Central and South Central regions than in the other regions; however, observations have declined 32% in the West Central region, and 58% in the South Central region during the past 21 years.

Coyote

The percentage of respondents reporting coyote sightings changed significantly during 1988-2008 (Figure 2, $\chi^2 = 1,470.85$, 19 df, $\underline{P} < 0.0001$). Between 1988 and 2008, coyote sightings have increased 3-to-5 fold in all but the Northern region. In the Northern region, sightings remained relatively stable from 1988-1999, and have generally increased from 2000-2008.

Fox

The percentage of respondents reporting fox sightings varied significantly during 1988-2007 (Figure 3, $\chi^2 = 440.09$, 19 df, $\underline{P} < 0.0001$). Generally, reported sighting rates have decreased since the inception of the survey. The statewide average number of litters reported for farms with foxes has remained relatively constant since 1988, averaging 1.4 fox litters per farm. The average number of litters per farm in 2008 was 1.8.

Gray Partridge

Statewide, reported sightings of gray partridge on rural farms have decreased fairly steadily from 23% in 1988 to 6% in 2007 (Figure 4, $\chi^2 = 549.11$, 19 df, $\underline{P} < 0.0001$). The decrease in gray partridge sightings has been greatest in the Northeast region where reported sightings have decreased 83% during the past 21 years. Gray partridge have generally been reported more frequently in the Northeast and South Central regions than in the other regions.

Ring-necked Pheasant

Landowners were asked to estimate the total number of ring-necked pheasants (adults and young) on their property (Figure 5). Differences among regional trends in estimated pheasant numbers were significant ($\underline{F} = 106.84$; 4, 25,101 df; $\underline{P} = < 0.0001$) with the highest numbers in the South Central region and the lowest numbers in the Southeast region. Pheasant sightings also were different among years ($\underline{F} = 11.38$; 120, 25,101 df; $\underline{P} = < 0.0001$). Mean pheasant sightings in 2008 decreased 13% on a statewide basis.

Ruffed Grouse

Statewide sightings of ruffed grouse have remained relatively stable since the beginning of the survey (Figure 6, $\chi^2 = 281.67$, 19 df, $\underline{P} < 0.0001$). In 2008, grouse sightings decreased on a statewide level, and remained the same or decreased in all regions except the Northern.

Skunk

Statewide, reported skunk sightings during the summer months have generally been decreasing since the beginning of the survey (Figure 7, $\chi^2 = 339.05$, 19 df, $\underline{P} < 0.0001$).

White-tailed Deer

Statewide, the percent of rural landowners reporting sightings of deer on their properties has varied significantly between 1988 and 2008 (Figure 8, $\chi^2 = 40.02$, 19 df, $P < 0.005$). The average number of deer observed per property was calculated from those respondents who indicated having deer on their land (Figure 9). The number of deer observed varied significantly among years ($F = 21.90$; 19, 25,069 df; $P < 0.0001$) and among regions ($F = 145.90$; 3, 25,069 df; $P < 0.0001$). Deer sightings were higher in the West Central Region than in the other 4 regions. The interaction of year and region effects was significant ($F = 3.07$; 79, 25,069 df; $P < 0.0001$). Mean deer sightings in 2008 decreased 3% on a statewide basis.

Wild Turkey

Statewide, the percentage of respondents reporting sightings of wild turkey on their property has increased fairly steadily between 1988 and 2008 (Figure 10, $\chi^2 = 5,675.95$, 19 df, $P < 0.0001$). Regionally, reported sightings of wild turkeys have generally increased, and have increased 20-fold in the Northern, Northeast, and Southeast regions.

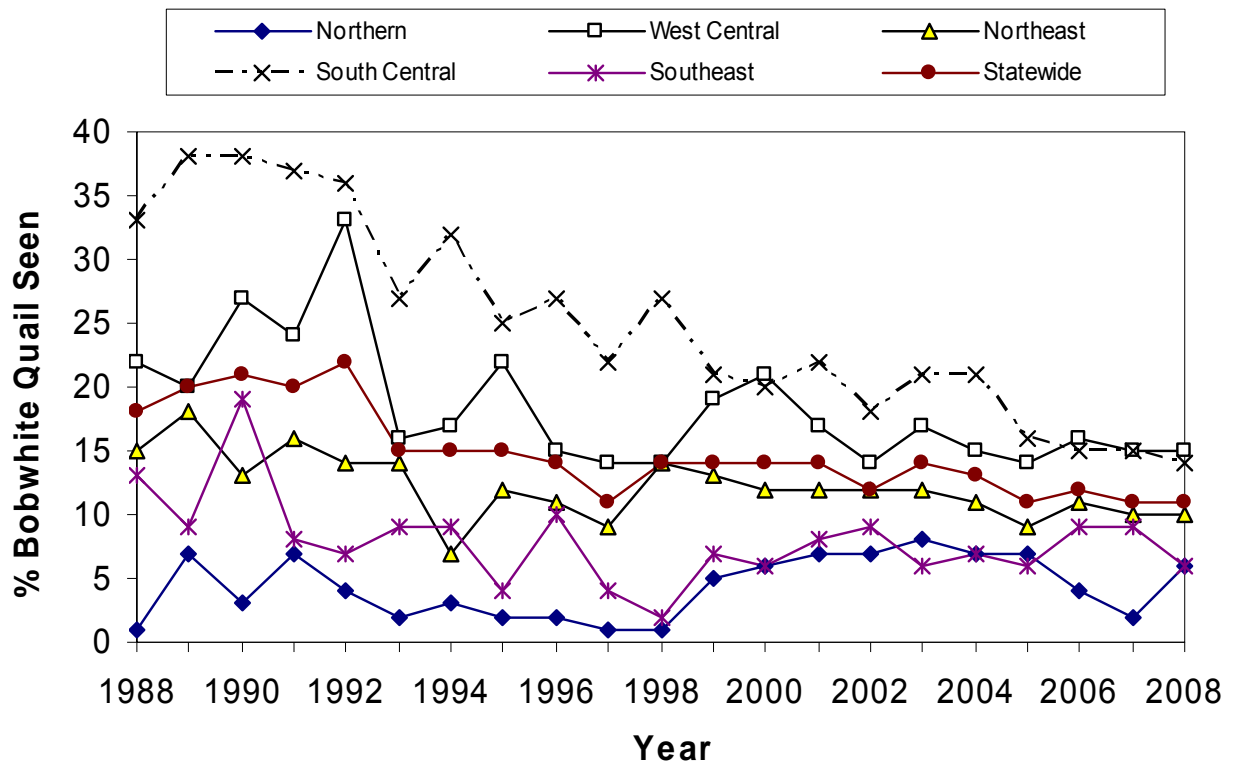


Figure 1. Percentage of respondents seeing or hearing bobwhite quail on their property during the summer months.

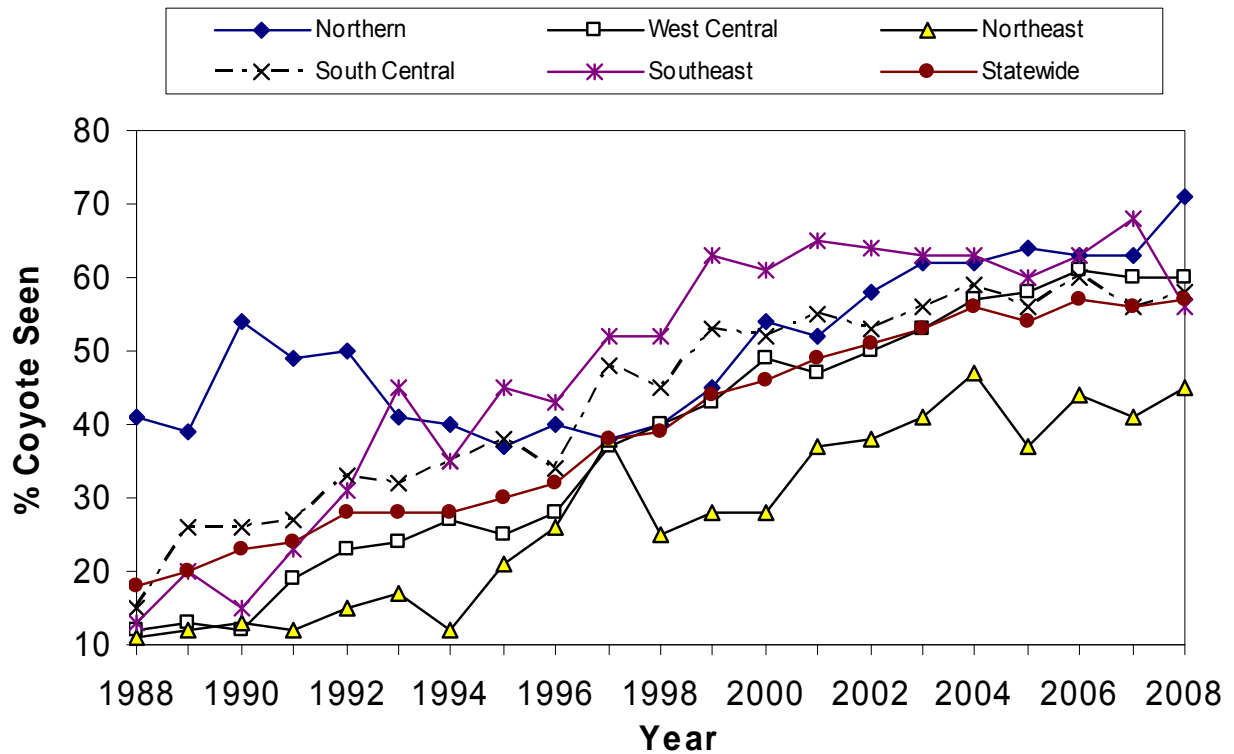


Figure 2. Percentage of respondents seeing coyotes on their property during the summer months.

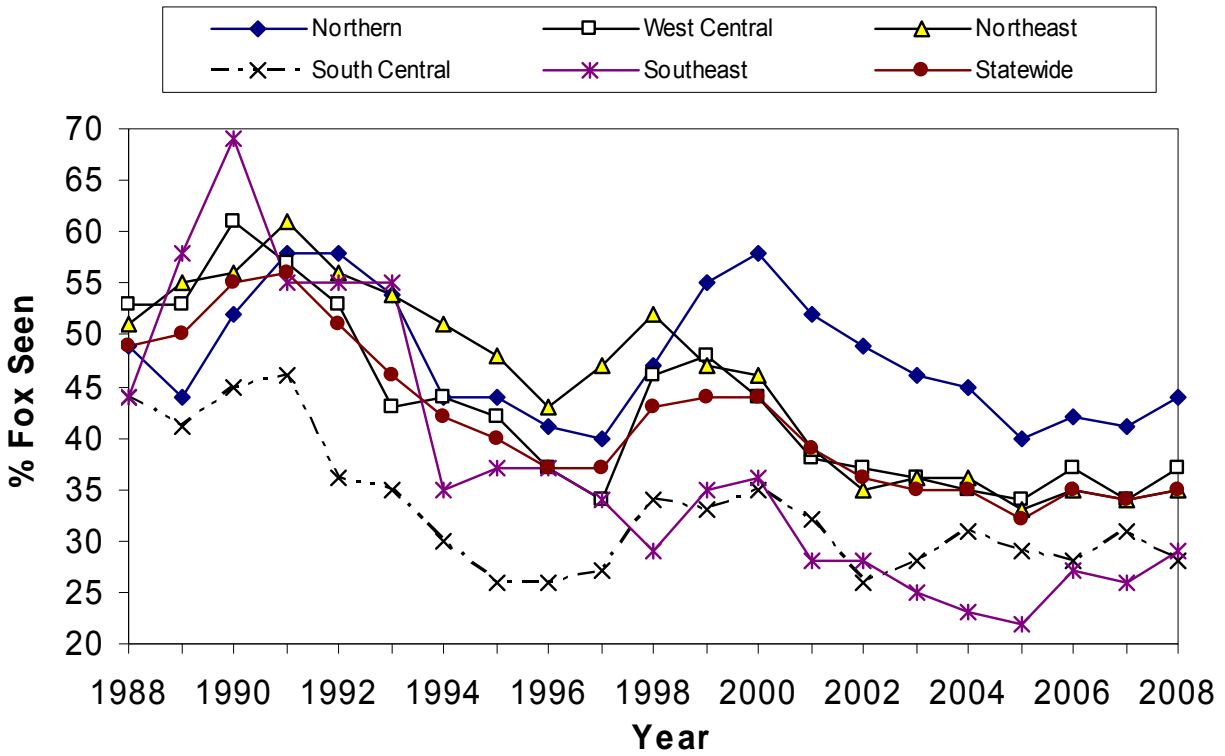


Figure 3. Percentage of respondents seeing fox on their property since May 1.

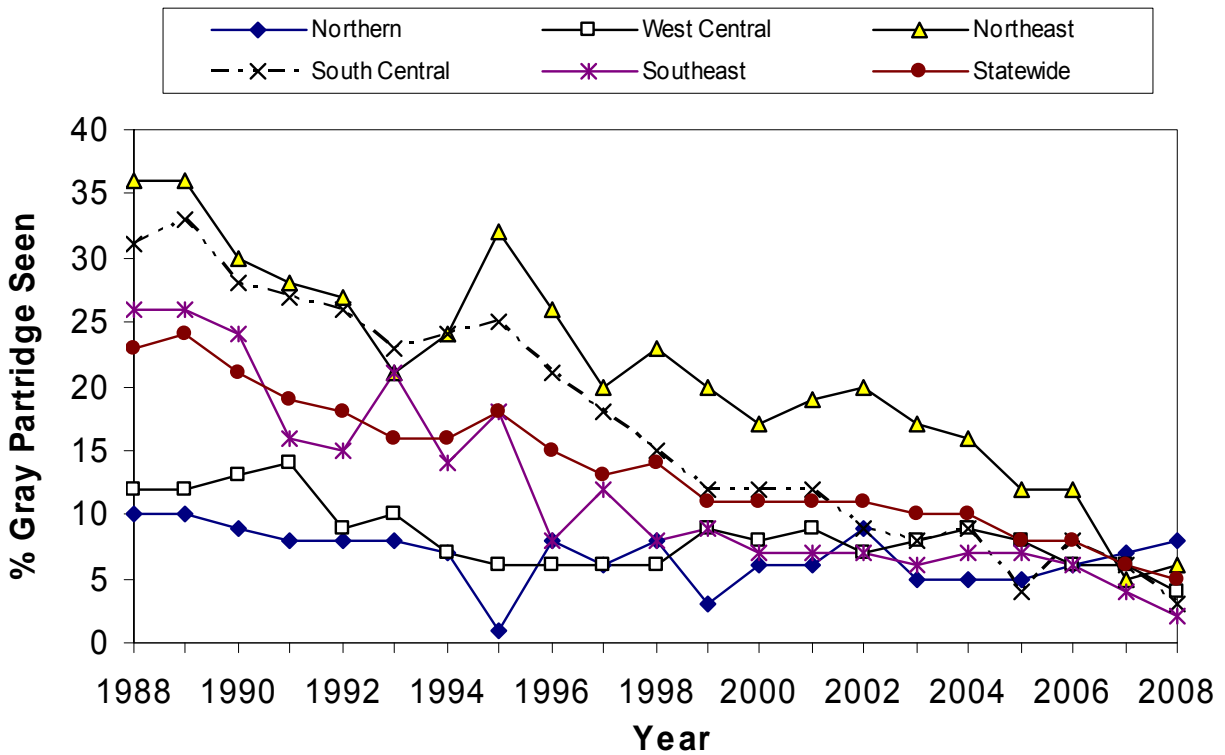


Figure 4. Percentage of respondents seeing gray partridge on their property since May 1.

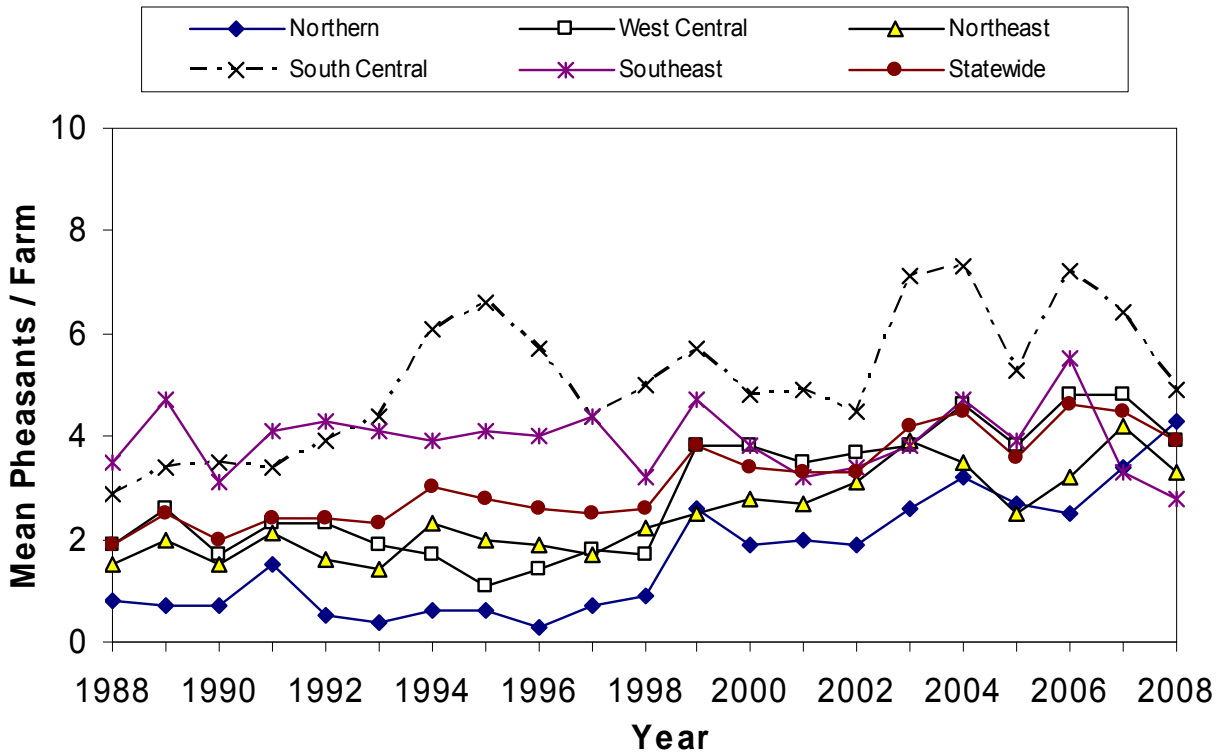


Figure 5. Mean number of ring-necked pheasants (adults and young) estimated to be present on farm, includes farms with no pheasants.

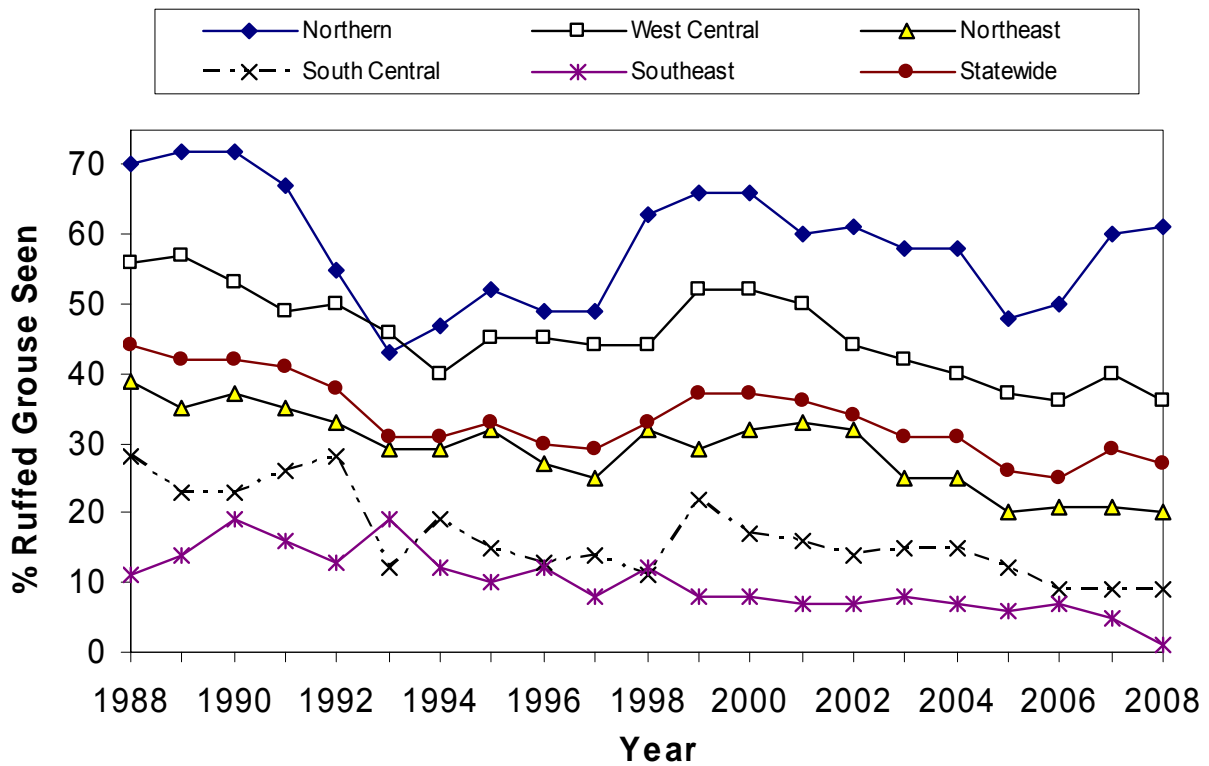


Figure 6. Percentage of respondents seeing ruffed grouse on their property since May 1.

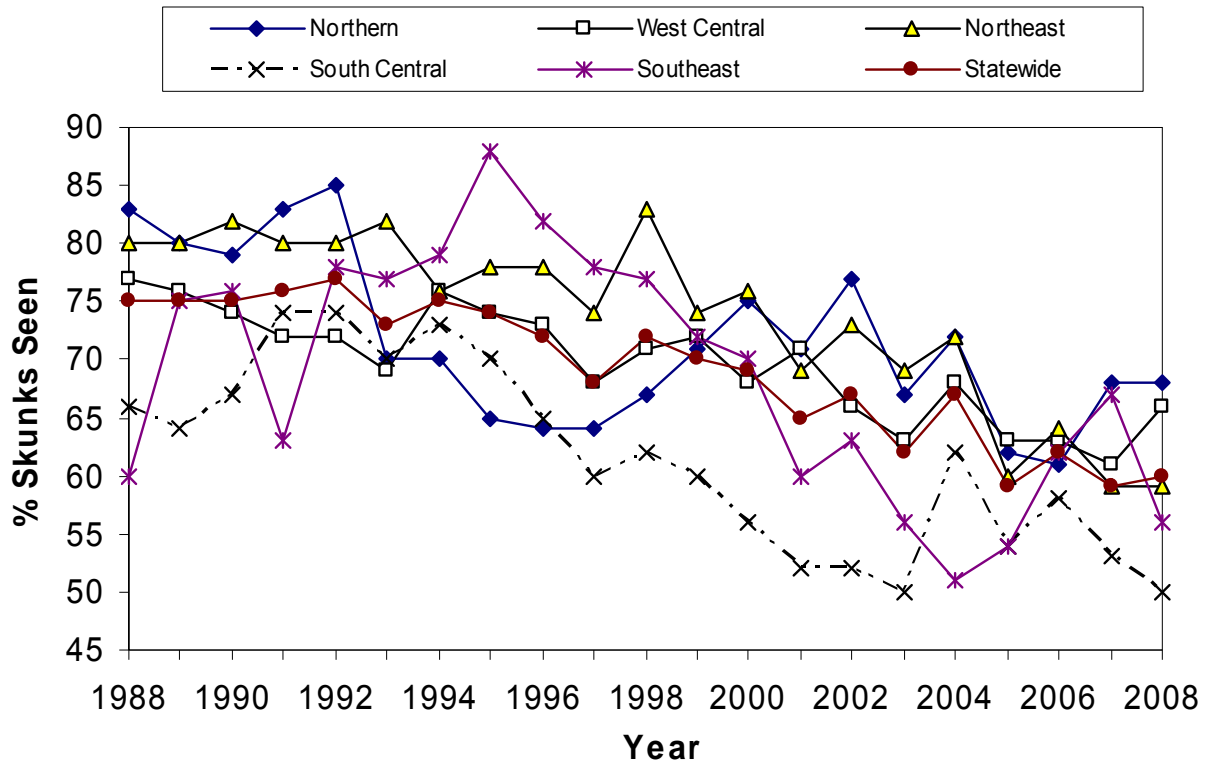


Figure 7. Percentage of respondents seeing skunks on their property during the year.

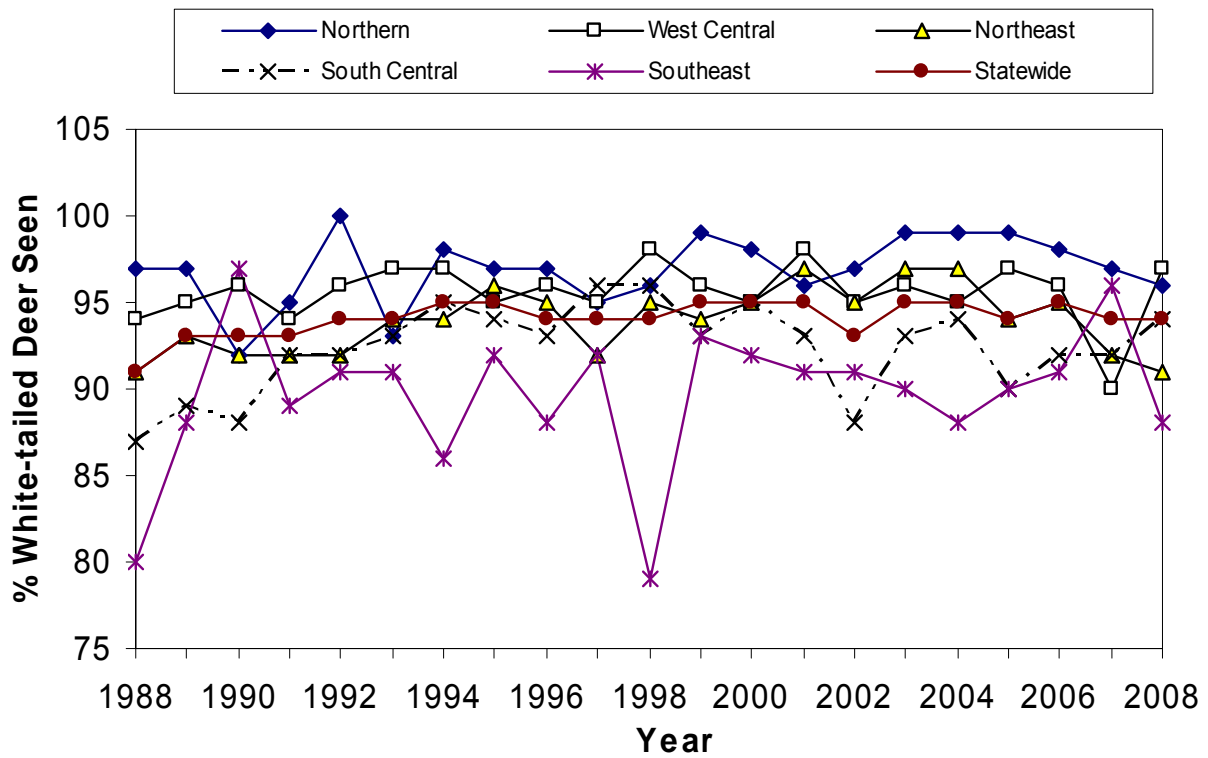


Figure 8. Percentage of respondents seeing white-tailed deer on their property during the summer.

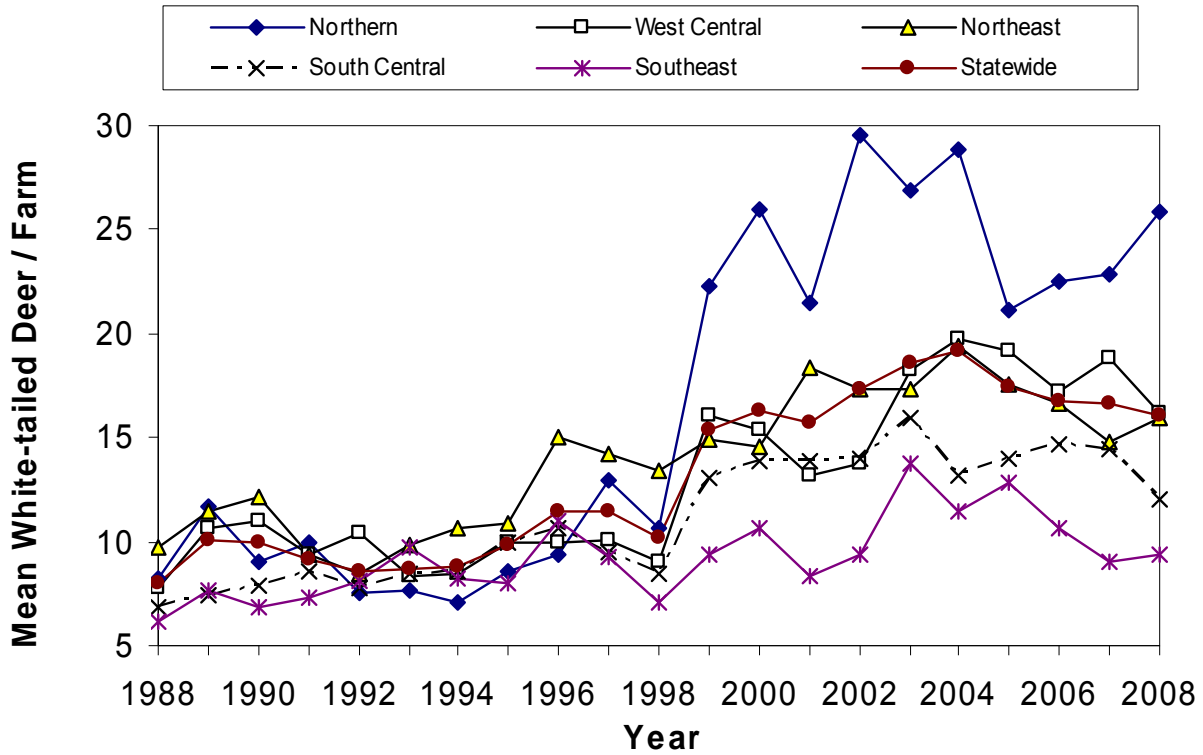


Figure 9. Average number of white-tailed deer seen by respondents on their property during the summer.

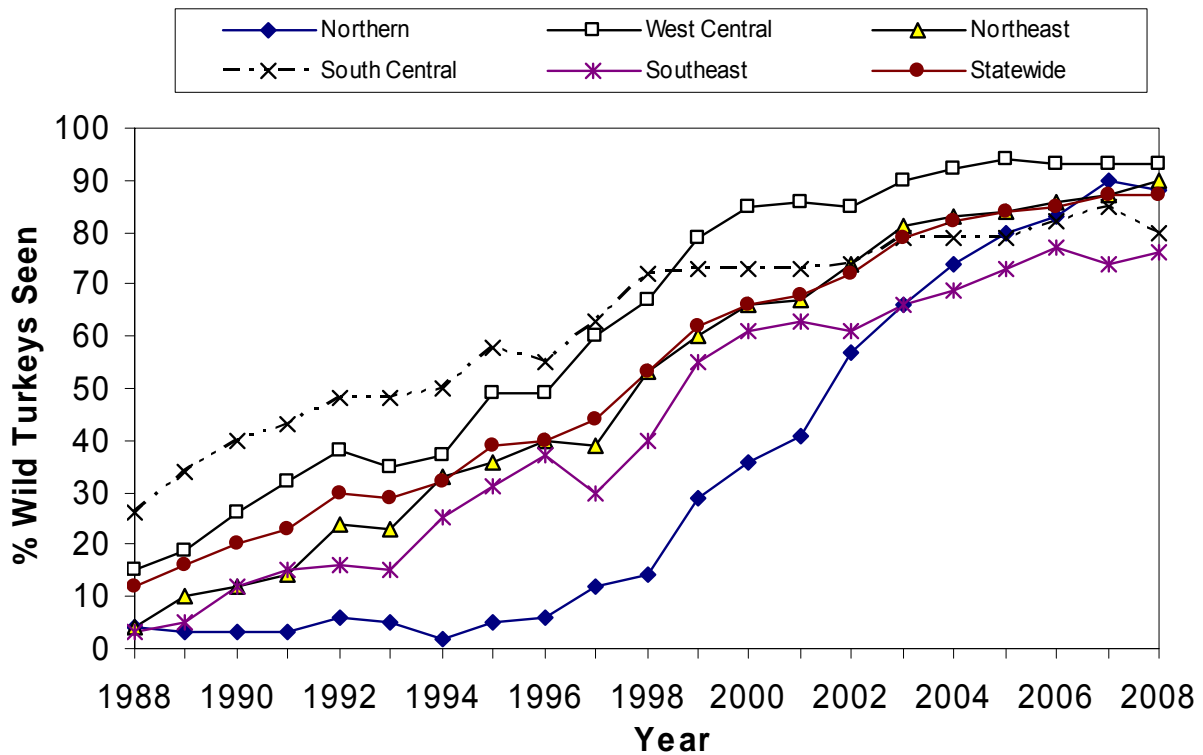


Figure 10. Percentage of respondents seeing turkey on their property since January 1.