2025 Bobwhite Quail Whistling Cock Census

The Bobwhite Quail Whistling Cock Census was conducted for the 47th consecutive year in 2025. Seventy-three routes were sampled in 2025, resulting in seventy-one routes which yielded data comparable to the previous year. Approximate locations of survey routes are shown in Figure 1.

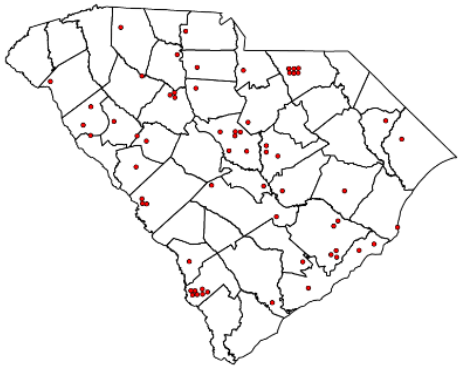

Figure 1. South Carolina Bobwhite Quail Whistling Cock Census route locations - 1979 - 2025.

Methods

Census routes are sampled between 15 June and 10 July, believed to be the period of maximum bobwhite whistling in the Southeast (Rosene 1969). Surveys began at official sunrise, with routes consisting of 12 stops at ½ mile intervals. The observer listened for 8 minutes at each stop and recorded the number of calling males heard. Weather conditions (i.e., cloud cover, wind speed, and temperature) were recorded at each stop. Operation of routes was discouraged on rainy or windy days. Number of calling males at each stop were summed to get a total for the route. Based on an extensive analysis of historical Whistling Cock Census data, the survey protocol was changed in 2003 from a two-day survey to a one-day survey. The afternoon listening period was also eliminated as an option in the survey protocol.

As in previous years, data were analyzed using a 2-tailed paired *t*-test for equal sample sizes (Steel and Torrie 1980). Between-year comparisons were conducted using all routes that were run in both 2025 and 2024. The 2025 average was also compared with the long-term average using a 2-tailed paired *t*-test.

Results and Discussion

Approximately fifty-three observers surveyed seventy-three routes in 2025. Seventy-one of these routes were used in year-to-year comparisons. A total of 318 whistling cocks were recorded on the seventy-one routes for an average of 4.5 (SE = 0.91) birds/route. For all routes sampled in 2025, a total of 323 whistling cocks were recorded with an average of 4.4 (SE = 0.89) calling birds birds/route (Table 1).

The 2025 average call count index did not significantly differ ($P > 0.05$) from the 2024 index. The 2025 index was significantly less than ($P < 0.05$) the long-term average for the 47 years of the census (12 birds/route, N=2466, Fig. 2).

Quail call counts in 2025 were higher on twenty-one routes (30 %) and lower on thirty routes (42 %) compared to 2024. Overall, forty-one routes recorded the same or increased male detections (58%) compared to 2024. Statewide, there were 31 less birds recorded in 2025 than were recorded on the same routes in 2024, a decrease of 8.9%.

Because of natural mortality, breeding populations of quail are never high relative to early fall populations. Extreme weather conditions during the nesting season and land-use changes can further depress quail numbers.

Whistling Cock Survey data document year-to-year and long-term population trends. These data are used in conjunction with Quail Brood Survey data, Quail Hunter Survey data, and Fall Covey Count data to assess the population status of quail statewide as well as the effects of land use change and other factors, such as weather.

Land-use changes surrounding routes are the most difficult variable to quantify. When routes for the Whistling Cock Census were established in 1979, cooperators were instructed to locate census lines in areas where good quail populations existed. Routes are not moved to new locations unless access is limited or noise disturbance (e.g., road traffic) makes counting calling birds impossible. Many routes which were established through mixed forest and farmlands are now surrounded by pine plantations. Therefore, a dramatic decrease in the suitability of the habitat surrounding survey routes is thought to have severely depressed the numbers of calling males on many routes. While large-scale (e.g. state level) habitat changes are obvious and easily documented, it is much more difficult to quantify habitat changes at the call count route or point level. Analysis of fine-scale habitat components along survey routes should be conducted to validate the effects of habitat change on local quail populations.

Continuation of the Bobwhite Quail Whistling Cock Census is recommended to monitor habitat changes as reflected in quail population index responses.

Table 1. Number of routes surveyed and average number of calling males heard for the South Carolina Bobwhite Quail Whistling Cock Survey Census, 1979-2025.

Year	Number of Routes	Calling Males/Route (Average)
1979	18	33.6
1980	19	30.5
1981	26	33.8
1982	28	32.0
1983	27	40.1
1984	28	29.3
1985	28	31.6
1986	29	28.6
1987	27	33.1
1988	27	30.9
1989	37	21.5

1990	38	21.2
1991	39	16.8
1992	42	18.2
1993	42	18.0
1994	46	15.8
1995	51	15.1
1996	51	17.3
1997	51	13.4
1998	52	13.7
1999	55	10.1
2000	56	9.2
2001	57	10.9
2002	59	12.6
2003	60	10.3
2004	61	11.6
2005	64	12.5
2006	65	11.7
2007	66	7.9
2008	66	8.6
2009	69	9.6
2010	70	9.2
2011	71	8.5
2012	67	8.3
2013	61	7.9
2014	50	5.1
2015	62	3.7
2016	66	4.5
2017	65	5.3
2018	70	6.3
2019	73	5.4
2020	67	6.2
2021	74	6.7
2022	74	5.9
2023	68	5.9
2024	76	4.8
2025	73	4.4
47-year Average	**53**	**15.0**

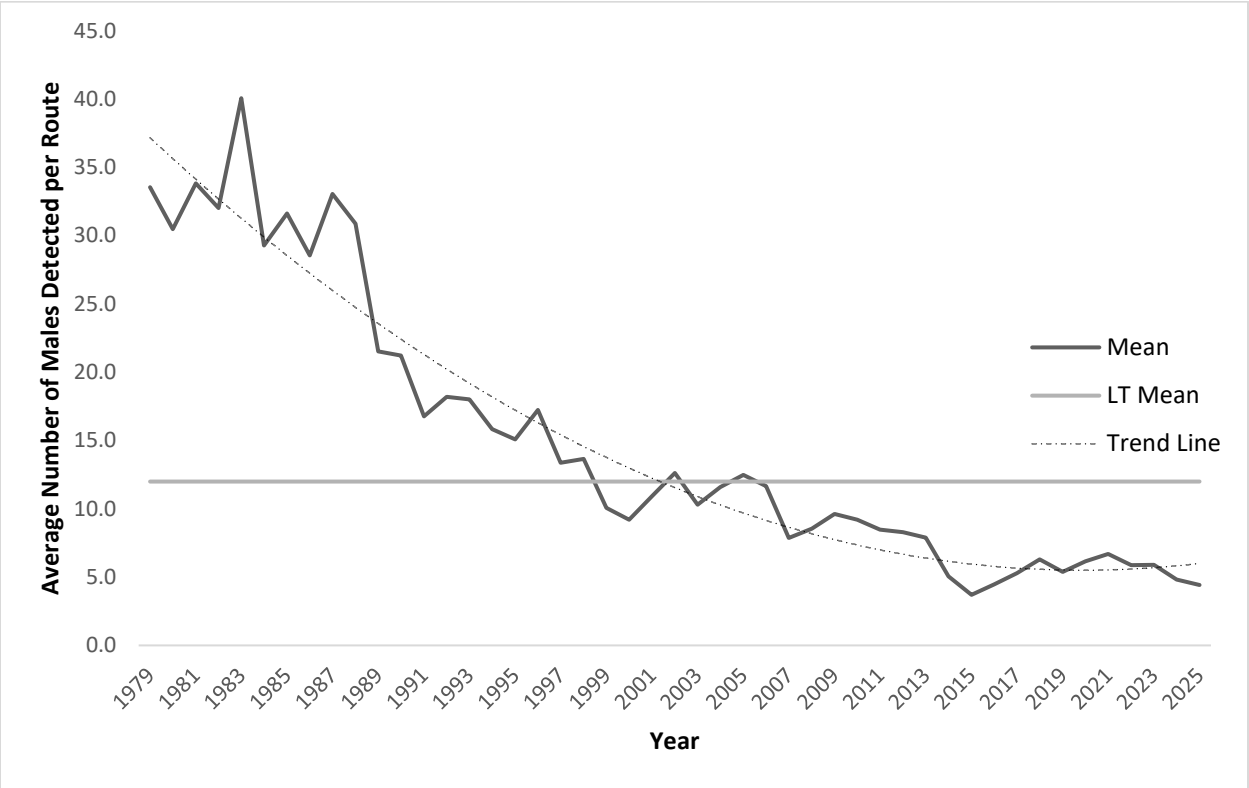

Figure 2. Average Bobwhite Quail Whistling Cock Census call count (birds/route) in South Carolina 1979-2025, trendline, and long-term average for the period.

Literature Cited

Rosene, W., Jr. 1969. The Bobwhite Quail: Its life and management. Rutgers University Press, New Brunswick, N. J. 418 pp.

Steel, R. G. D. and J. H. Torrie. 1980. Principles and procedures of statistics: A biometrical approach. McGraw Hill Book Company, New York. 633 pp.