

2018 Wild Turkey Summer Survey



Wild Turkey Reproduction Continues on a Low, But Steady, Trend

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Annually since the early 1980's, the S.C. Department of Natural Resources (DNR) has conducted a Summer Turkey Survey to estimate reproduction and recruitment of wild turkeys in South Carolina. The survey involves agency wildlife biologists, technicians and conservation officers, as well as many volunteers from other natural resource agencies and the general public. This year approximately 220 observers recorded 1297 unique observations, seeing over 8,000 turkeys across the state in July and August.

Although wild turkeys nest primarily in April and May in South Carolina, the survey does not take place until late summer. Therefore, the survey statistics document poults (young turkeys) that actually survived and entered the fall population.

Reproduction in turkeys has generally been low for the last twelve years. This year, average brood size of 3.7 poults remained good, but the Total Recruitment Ratio (TRR) was 1.7, a less than desirable figure. Total Recruitment Ratio is a measure of young entering the population based on the number of hens in the population. The low TRR value was driven by a high percentage of hens (53%) that had no poults at all by late summer. TRR has averaged 1.6 over the last 5 years, keep in mind that 2.0 is somewhat of a break even mark. In fact, when turkey populations were expanding during the 1980's recruitment ratio averaged 3.5. Although this observed measure of reproduction was poor in most of the state and definitely lower than we would like to see, the Piedmont physiographic region was a small bright spot in the survey with a TRR of 2.0, average brood size of 4.0 and 50% hens without poults. Additionally, the overall gobbler to hen ratio during last summer's survey was 0.62 which is an acceptable value and slightly better than the 5 year average (0.56). Low gobbler to hen ratios can affect the quality of hunting because hens are extremely available which affects gobbling and responsiveness to calling by hunters.

Unlike deer, wild turkeys are much more susceptible to significant fluctuations in reproduction and recruitment. Lack of reproductive success is often associated with bad weather (cold and wet) during nesting and brood rearing season. However, there are a host of predators that take advantage of turkey nests and broods including: raccoons, opossums, skunks, armadillos, snakes, foxes, bobcats, and numerous avian predators. Coyotes which are not native but are now well established in the state can be added to the list of turkey predators. Additionally, feral hogs are expanding on the landscape and can be a significant nest predator. Turkeys naturally have high reproductive potential and are therefore able to maintain populations in spite of predation and other mortality factors.

Although we are not seeing an increase in these numbers and we are not where we need to be for widespread increases in the turkey population to occur in South Carolina, it is somewhat encouraging that the trend is at least stabilized and the downward trajectory of the population has stalled the last several years. It is possible that following restocking and restoration efforts and the tremendous population growth we experienced following those endeavors that we are now settling into a “new normal” of population levels, reproductive rates and harvest numbers. It is also worth noting that both short term and long term fluctuations up and down are not unexpected given the reproductive strategy of turkeys and the multiple factors that influence their success and survival. This inherent instability is the reason that annual monitoring is critical for this species.

Anyone interested in participating in the annual Summer Turkey Survey is encouraged to sign-up. The survey period is July 1-August 29 annually and those who participate typically spend a reasonable amount of time outdoors during that time period. Cooperators obviously must be able to identify wild turkeys and must be comfortable in telling the difference between hens, poults, and gobblers. If you would like to participate in the survey, contact Jay Cantrell at cantrellj@dnr.sc.gov. You will be added to the cooperator list and receive materials at the end of June annually. Those interested in the survey can also download instructions and survey forms at the following website: <http://www.dnr.sc.gov/wildlife/turkey/volunbroodsurvey.html>

Figure 1. Map of physiographic regions for 2018 Summer Turkey Survey.

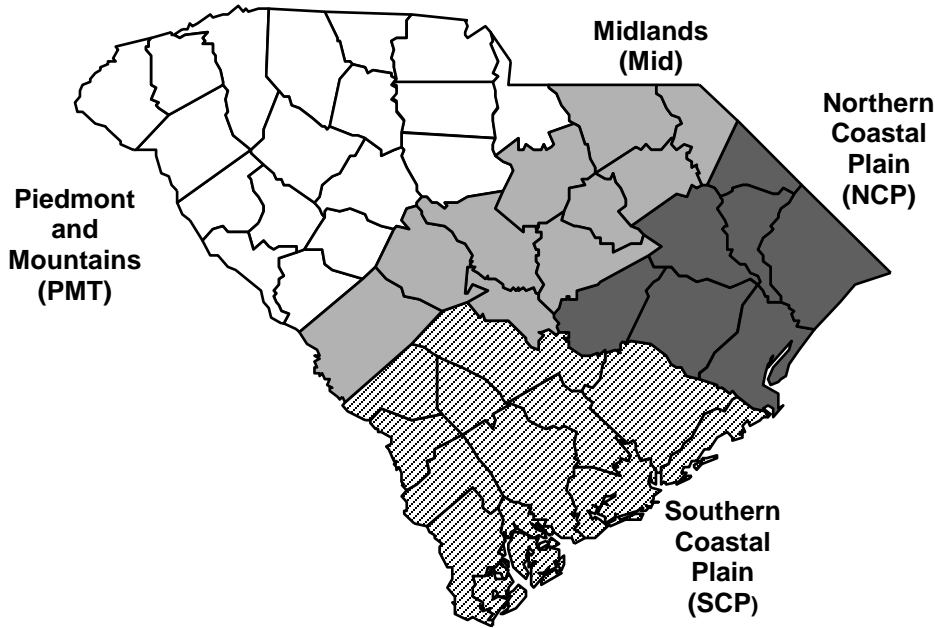


Table 1. Summary of reproductive data for 2018 Summer Turkey Survey by region.

Region	Gobbler Hen Ratio	No. Hens w/Poults	No. Hens w/o Poults (%)	No. Poults	Avg. Brood Size	Total Recruitment Ratio
Piedmont	0.39	442	450 (50)	1,747	4.0	2.0
Midlands	0.70	104	94 (47)	274	2.6	1.4
Northern Coastal	0.73	219	301 (58)	819	3.7	1.6
Southern Coastal	0.82	311	361 (54)	1,108	3.6	1.6
Statewide	0.62	1,076	1,206 (53)	3,948	3.7	1.7

Table 2. Statewide Summer Turkey Survey reproductive data 2014-2018.

Year	Gobbler Hen Ratio	No. Hens w/Poults	No. Hens w/o Poults (%)	No. Poults	Avg. Brood Size	Total Recruitment Ratio
2014	0.60	983	1,403 (59)	3,834	3.9	1.6
2015	0.50	1,077	1,543 (59)	3,829	3.6	1.5
2016	0.48	893	1,003 (53)	3,370	3.8	1.8
2017	0.58	1,409	1,737 (55)	4,832	3.4	1.5
2018	0.62	1,076	1,206 (53)	3,948	3.7	1.7
Average	0.56	1,088	1,378 (56)	3,963	3.6	1.6

Table 3 . 2018 Summer Turkey Survey Results by County.

County	No. Observ.	No. Poults	Hens w/ Poults	No. Hens w/o Poults	Tot. Hens	% Hens w/o Poults	No. Gobblers	No. Unid.	Total Turkeys
Abbeville	25	85	20	14	34	41	11	1	131
Aiken	10	11	3	17	20	85	2	0	33
Allendale	47	46	12	72	84	86	48	89	267
Anderson	7	26	5	11	16	69	0	0	42
Bamberg	18	65	14	16	30	53	18	0	113
Barnwell	4	9	2	5	7	71	0	0	16
Beaufort	35	95	20	14	34	41	45	0	174
Berkeley	137	409	96	93	189	49	200	49	847
Calhoun	2	11	3	0	3	0	0	0	14
Charleston	70	162	79	60	139	43	84	15	400
Cherokee	0	0	0	0	0	0	0	0	0
Chester	41	180	46	37	83	45	26	10	299
Chesterfield	3	19	4	10	14	71	0	0	33
Clarendon	20	92	18	22	40	55	19	1	152
Colleton	28	131	31	12	43	28	15	6	195
Darlington	15	47	11	10	21	48	8	0	76
Dillon	3	12	2	2	4	50	0	1	17
Dorchester	21	48	17	17	34	50	37	0	119
Edgefield	9	6	3	13	16	81	7	0	29
Fairfield	57	241	62	51	113	45	44	15	413
Florence	12	34	7	8	15	53	5	20	74
Georgetown	59	175	62	84	146	58	33	17	371
Greenville	2	0	0	0	0	0	11	0	11
Greenwood	18	44	13	21	34	62	17	0	95
Hampton	63	75	23	57	80	71	100	28	283
Horry	11	54	20	2	22	9	10	9	95
Jasper	8	25	7	2	9	22	5	0	39
Kershaw	17	25	8	20	28	71	5	3	61
Lancaster	18	50	16	57	73	78	10	2	135
Laurens	20	47	13	8	21	38	20	7	95
Lee	3	10	4	3	7	43	1	0	18
Lexington	5	19	4	4	8	50	4	0	31
Marion	18	117	29	33	62	53	69	0	248
Marlboro	2	0	0	4	4	100	0	0	4
McCormick	28	78	20	12	32	38	22	0	132

County	No. Observ.	No. Poults	Hens w/ Poults	No. Hens w/o Poults	Tot. Hens	% Hens w/o Poults	No. Gobblers	No. Unid.	Total Turkeys
Newberry	46	167	43	37	80	46	31	18	296
Oconee	15	14	3	8	11	73	10	2	37
Orangeburg	7	17	5	2	7	29	0	8	32
Pickens	74	225	57	59	116	51	51	4	396
Richland	58	129	63	19	82	23	115	6	332
Saluda	18	36	13	9	22	41	15	0	73
Spartanburg	40	174	43	29	72	40	20	38	304
Sumter	4	3	4	7	11	64	4	6	24
Union	86	371	80	87	167	52	52	13	603
Williamsburg	107	335	81	150	231	65	243	30	839
York	6	29	10	8	18	44	0	5	52
Total	1297	3948	1076	1206	2282	53	1417	403	8050