

WILD TURKEY REPRODUCTION IN STATE POOR AGAIN THIS SUMMER

Based on a S.C. Department of Natural Resources survey, reproduction by wild turkeys was poor for the third year in a row, according to a state wildlife biologist.

Annually since the early 1980's, the S.C. Department of Natural Resources (DNR) conducts a Summer Turkey Brood Survey to estimate reproduction and recruitment of 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.

As was the case the last two years, it appears that wild turkey reproduction was poor to very poor in most regions and statewide, according to Charles Ruth, DNR Deer and Turkey Project supervisor. 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 population going into the fall. Although average brood size was good with hens averaging 3.6 poults, 58 percent of hens observed had no poults at all by late summer leading to a total recruitment ratio of 1.5. Recruitment ratio is a measure of young entering the population based on the number of hens in the population. Both of these statistics, hens without poults and recruitment ratio, were the worst that have ever been recorded since the survey began.

"In the Southeast," Ruth said, "Mother Nature often plays a big role in turkey populations with heavy rainfall coupled with cool temperatures during the spring nesting and brood rearing season leading to poor reproductive success." However, that does not appear to be the case in 2007. Although many hunters were concerned about the record cold event that the state experienced at Easter, Ruth said research in states that frequently have freezing temperatures during the nesting season did not find cold temperatures alone to be a big cause of mortality. Chilling of poults associated with wetting appears to be more important. Additionally, the timing of our late freeze was too early in the reproductive season to cause a significant problem.

On the other hand, the state is in the midst of an extreme drought and although dry conditions are typically good for turkey reproduction, there is likely a limit to what constitutes dry in terms of being beneficial to turkeys. Under the conditions that much of the state experienced this summer, food production in the form of seeds and insects could have been limited, as could the vegetative growth that is important brood rearing cover.

Finally, "Perhaps we have reached a point in time where the relationship between the turkey population and habitat is simply not as good as it was when turkeys were expanding across the state", said Ruth. We have seen a decline in the deer population in most areas in the last 6-8 years and this is linked to the amount of habitat in pine plantations that are greater than 10 years old. This type of habitat simply does not have high productivity and it may be playing a role in turkey reproduction.

What does poor reproduction by turkeys for three consecutive years mean for the spring turkey hunter? Ruth indicated, "With poor reproduction the last three years the number of mature gobblers (2 years and older) available during the spring of 2008 will likely be lower across most of the state. Not only is the number of adult gobblers expected to be down in 2008, the survey results indicate that the number of jakes (immature gobblers) will be low as well. This is significant because jakes can make up 25 percent of the spring harvest following years of good

reproduction.” On a positive note, the gobbler to hen ratio remains high in most areas with an average of 0.77 gobblers to each hen. Many experts believe that when gobbler to hen ratios get below 0.5, the quality of hunting can be impacted because hens are extremely available which affects gobbling and responsiveness to calling by hunters.

“The bottom line,” Ruth said, “is that it will likely take a couple of years of better reproduction to overcome poor reproduction the last three years.” That is the nice thing about turkeys; given the right conditions they can naturally bounce back in a short period of time.

Hunters often wonder why DNR does not promote or schedule a fall turkey season, and although there are a number of considerations, poor reproduction like that experienced the past three springs is a very important factor.

“Bear in mind that hunting turkeys in the fall differs drastically from spring gobbler hunting, which is familiar to most hunters,” Ruth said. “Not only do hunting and calling techniques differ, fall seasons typically allow hunters to take hens or gobblers. Although DNR monitors turkey reproduction annually, the information is not available until about the same time a fall turkey season would be underway, so it is too late to schedule a fall season based on reproductive success or sound biology. DNR could simply schedule a fall season without regard to reproductive data, but harvesting hens following a summer with poor reproduction would further depress the number of hens potentially leading to a rapid decline in turkeys.”

Approximately 45,000 hunters participate in the spring turkey season contributing around \$16 million to the state’s economy annually.

For more information on the Summer Turkey Brood Survey, see the following link on the DNR Web site: www.dnr.sc.gov/wildlife/turkey/2007BroodSurvey.html.

Figure 1. Map of physiographic regions for 2007 Summer Turkey Survey.

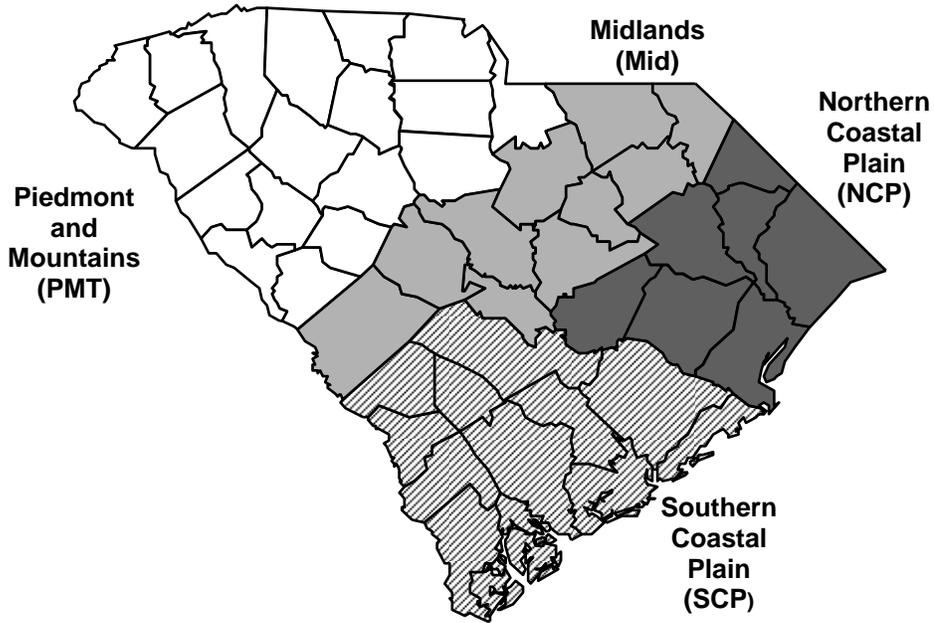


Table 1. Summary of reproductive data for 2007 Summer Turkey Survey by region.

Region	Gobbler Hen Ratio	No. Hens w/Poults	No. Hens w/o Poults (%)	No. Poults	Avg. Brood Size	Total Recruitment Ratio
Piedmont	0.41	353	317 (47)	1,163	3.3	1.7
Midlands	0.79	67	177 (53)	210	3.1	0.9
Northern Coastal	0.85	129	201 (45)	383	3.0	1.2
Southern Coastal	1.00	355	574 (53)	1,484	4.2	1.6
Statewide	0.77	904	1,269 (58)	3,240	3.6	1.5

Table 2. Statewide Summer Turkey Survey reproductive data 2002-2007.

Year	Gobbler Hen Ratio	No. Hens w/Poults	No. Hens w/o Poults (%)	No. Poults	Avg. Brood Size	Total Recruitment Ratio
2002	0.64	1,608	1,397 (46)	4,877	2.9	1.6
2003	0.63	933	994 (52)	3,253	3.3	1.7
2004	0.62	1,159	447 (28)	4,854	4.1	3.0
2005	0.77	936	989 (51)	3,066	3.3	1.6
2006	0.61	1,078	1,078 (50)	3,659	3.4	1.7
2007	0.77	904	1,269 (58)	3,240	3.6	1.5
Average	0.64	1,333	997 (43)	4,905	3.5	2.1

Table 3. 2007 Summer Turkey Survey Results.

County	No. Observ.	No. Poults	No. Hens w/ Poults	No. Hens w/o Poults	No. Hens	% Hens w/o Poults	No. Gobblers	No. Unid.	Total Turkeys
Abbeville	28	88	23	27	50	54	7	8	153
Aiken	106	65	30	136	166	82	125	29	385
Allendale	0	0	0	0	0		0	0	0
Anderson	12	35	29	30	59	51	16	11	121
Bamberg	29	156	38	34	72	47	79	23	330
Barnwell	201	66	28	265	293	90	223	38	620
Beaufort	15	54	16	14	30	47	25	4	113
Berkeley	195	652	164	167	331	50	486	50	1519
Calhoun	10	22	6	7	13	54	3	0	38
Charleston	24	86	18	16	34	47	31	5	156
Cherokee	6	53	12	7	19	37	4	0	76
Chester	5	1	1	11	12	92	8	0	21
Chesterfield	25	79	20	19	39	49	20	5	143
Clarendon	21	22	10	13	23	57	73	0	118
Colleton	20	110	24	20	44	45	1	7	162
Darlington	2	0	0	4	4	100	9	0	13
Dillon	2	16	5	0	5	0	0	0	21
Dorchester	10	41	7	5	12	42	31	0	84
Edgefield	30	81	36	9	45	20	11	3	140
Fairfield	33	133	36	22	58	38	24	17	232
Florence	22	66	13	55	68	81	18	0	152
Georgetown	64	86	48	84	132	64	96	2	316
Greenville	2	0	0	0	0		2	0	2
Greenwood	29	74	27	17	44	39	28	0	146
Hampton	45	187	35	34	69	49	36	15	307
Horry	8	11	7	12	19	63	11	13	54
Jasper	7	75	9	5	14	36	0	0	89
Kershaw	4	6	0	5	5	100	0	0	11
Lancaster	16	33	7	16	23	70	7	0	63
Laurens	8	26	6	5	11	45	5	17	59
Lee	2	6	1	0	1	0	4	5	16
Lexington	1	2	1	0	1	0	0	0	3
McCormick	47	64	16	27	43	63	26	56	189
Marion	17	42	8	19	27	70	13	12	94
Marlboro	1	16	4	0	4	0	0	0	20
Newberry	39	182	41	30	71	42	39	8	300
Oconee	18	47	15	16	31	52	16	8	102
Orangeburg	16	57	16	14	30	47	14	30	131
Pickens	25	81	30	19	49	39	39	2	171
Richland	9	10	3	1	4	25	27	18	59
Saluda	21	36	11	42	53	79	4	21	114
Spartanburg	22	61	14	23	37	62	18	8	124
Sumter	8	4	2	5	7	71	5	1	17
Union	42	168	49	16	65	25	21	0	254
Williamsburg	42	140	38	18	56	32	68	11	275
York	0	0	0	0	0		0	0	0
State Total	1,289	3,240	904	1,269	2,173	58.4	1673	427	7,513