

**WILD TURKEY REPRODUCTION  
IN STATE POOR THIS SUMMER**

Based on a S.C. Department of Natural Resources survey, reproduction by wild turkeys was poor for the second 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 last year, 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 3.4 poults, 50 percent of hens observed had no poults at all by late summer leading to a total recruitment ratio of 1.7. Recruitment ratio is a measure of young entering the population based on the number of hens in the population.

"In the Southeast," Ruth said, "Mother Nature often plays a big role in turkey populations with heavy rainfall and/or 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 2006. Comparing climatic data from this year with historic data indicates that temperatures were at or above normal and rainfall was below normal during the nesting and brood rearing period. In other words, environmental conditions were such that reproduction in turkeys should have been better. "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.

According to the survey, the Northern Coastal Plain experienced the best reproduction in 2006, with counties including Berkeley, Clarendon, and Williamsburg fairing better than most other parts of the state.

What does poor reproduction by turkeys for two consecutive years mean for the spring turkey hunter? Ruth indicated, "With poor reproduction the last two years the number of mature gobblers (2 years and older) available during the spring of 2007 will likely be low across most of the state. Reproduction was good in 2004, but birds produced then have been subjected to two hunting seasons in addition to other mortality factors. Not only is the number of adult gobblers expected to be down in 2007, 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." The statewide turkey population is estimated at 90,000 birds which is good, but with two years of poor reproduction this figure is the lowest in recent years.

"The bottom line," Ruth said, "is that it will likely take a couple of years of better reproduction to overcome poor reproduction the last two years."

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 two 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/2006BroodSurvey.html](http://www.dnr.sc.gov/wildlife/turkey/2006BroodSurvey.html).

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Figure 1. Map of physiographic regions for 2006 Summer Turkey Survey.

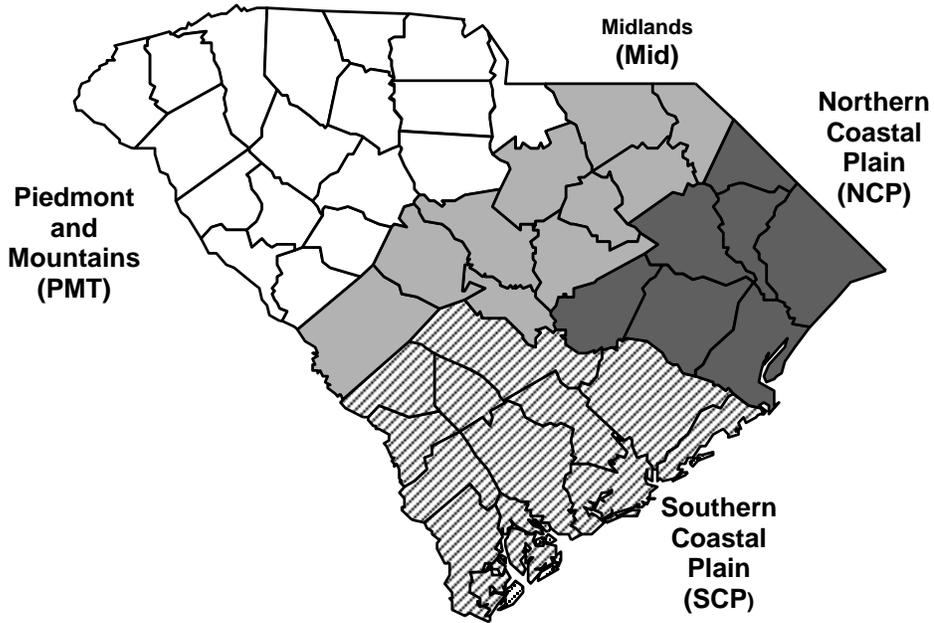


Table 1. Summary of reproductive data for 2006 Summer Turkey Survey by region.

| Region           | Gobbler Hen Ratio | No. Hens w/Poults | No. Hens w/o Poults (%) | No. Poults | Avg. Brood Size | Total Recruitment Ratio |
|------------------|-------------------|-------------------|-------------------------|------------|-----------------|-------------------------|
| Piedmont         | 0.43              | 377               | 346 (48)                | 1,183      | 3.1             | 1.6                     |
| Midlands         | 0.65              | 114               | 130 (53)                | 432        | 3.8             | 1.8                     |
| Northern Coastal | 0.71              | 197               | 164 (45)                | 751        | 3.8             | 2.1                     |
| Southern Coastal | 0.71              | 390               | 438 (53)                | 1,293      | 3.3             | 1.6                     |
| Statewide        | 0.61              | 1,078             | 1,078 (50)              | 3,659      | 3.4             | 1.7                     |

Table 2. Statewide Summer Turkey Survey reproductive data 2001-2006.

| Year    | Gobbler Hen Ratio | No. Hens w/Poults | No. Hens w/o Poults (%) | No. Poults | Avg. Brood Size | Total Recruitment Ratio |
|---------|-------------------|-------------------|-------------------------|------------|-----------------|-------------------------|
| 2001    | 0.62              | 2,027             | 965 (32)                | 8,236      | 3.9             | 2.8                     |
| 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                     |
| Average | 0.62              | 1,394             | 958 (41)                | 5,143      | 3.5             | 2.2                     |

Table 3. 2006 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    | 24          | 74         | 18                 | 13                  | 31       | 42                | 17           | 21        | 143           |
| Aiken        | 68          | 163        | 36                 | 46                  | 82       | 56                | 71           | 18        | 334           |
| Allendale    | 5           | 2          | 1                  | 3                   | 4        | 75                | 7            | 2         | 15            |
| Anderson     | 37          | 126        | 57                 | 61                  | 118      | 52                | 23           | 0         | 267           |
| Bamberg      | 34          | 169        | 46                 | 38                  | 84       | 45                | 25           | 9         | 287           |
| Barnwell     | 121         | 89         | 31                 | 88                  | 119      | 74                | 159          | 18        | 385           |
| Beaufort     | 8           | 46         | 10                 | 9                   | 19       | 47                | 11           | 0         | 76            |
| Berkeley     | 131         | 444        | 127                | 118                 | 245      | 48                | 233          | 35        | 957           |
| Calhoun      | 13          | 19         | 6                  | 14                  | 20       | 70                | 13           | 2         | 54            |
| Charleston   | 29          | 163        | 37                 | 15                  | 52       | 29                | 23           | 40        | 278           |
| Cherokee     | 15          | 54         | 11                 | 7                   | 18       | 39                | 12           | 0         | 84            |
| Chester      | 24          | 65         | 14                 | 20                  | 34       | 59                | 37           | 6         | 142           |
| Chesterfield | 33          | 82         | 25                 | 34                  | 59       | 58                | 29           | 7         | 177           |
| Clarendon    | 33          | 276        | 54                 | 13                  | 67       | 19                | 70           | 42        | 455           |
| Colleton     | 43          | 160        | 48                 | 46                  | 94       | 49                | 38           | 29        | 321           |
| Darlington   | 12          | 36         | 13                 | 12                  | 25       | 48                | 18           | 7         | 86            |
| Dillon       | 11          | 41         | 10                 | 3                   | 13       | 23                | 6            | 4         | 64            |
| Dorchester   | 16          | 0          | 1                  | 9                   | 10       | 90                | 22           | 2         | 34            |
| Edgefield    | 7           | 2          | 2                  | 1                   | 3        | 33                | 4            | 0         | 9             |
| Fairfield    | 43          | 104        | 34                 | 36                  | 70       | 51                | 18           | 1         | 193           |
| Florence     | 24          | 63         | 19                 | 22                  | 41       | 54                | 18           | 2         | 124           |
| Georgetown   | 60          | 156        | 50                 | 82                  | 132      | 62                | 83           | 86        | 457           |
| Greenville   | 5           | 25         | 4                  | 7                   | 11       | 64                | 5            | 5         | 46            |
| Greenwood    | 24          | 65         | 20                 | 20                  | 40       | 50                | 14           | 12        | 131           |
| Hampton      | 13          | 27         | 8                  | 23                  | 31       | 74                | 30           | 0         | 88            |
| Horry        | 11          | 30         | 7                  | 2                   | 9        | 22                | 8            | 38        | 85            |
| Jasper       | 7           | 30         | 6                  | 11                  | 17       | 65                | 9            | 0         | 56            |
| Kershaw      | 3           | 11         | 4                  | 0                   | 4        | 0                 | 3            | 0         | 18            |
| Lancaster    | 17          | 10         | 12                 | 21                  | 33       | 64                | 7            | 6         | 56            |
| Laurens      | 15          | 47         | 18                 | 8                   | 26       | 31                | 12           | 11        | 96            |
| Lee          | 2           | 11         | 2                  | 0                   | 2        | 0                 | 4            | 0         | 17            |
| Lexington    | 2           | 4          | 1                  | 4                   | 5        | 80                | 0            | 0         | 9             |
| McCormick    | 78          | 206        | 62                 | 56                  | 118      | 47                | 34           | 31        | 389           |
| Marion       | 27          | 60         | 30                 | 26                  | 56       | 46                | 56           | 0         | 172           |
| Marlboro     | 6           | 24         | 7                  | 1                   | 8        | 13                | 8            | 0         | 40            |
| Newberry     | 38          | 104        | 33                 | 19                  | 52       | 37                | 26           | 6         | 188           |
| Oconee       | 30          | 68         | 17                 | 16                  | 33       | 48                | 21           | 11        | 133           |
| Orangeburg   | 16          | 37         | 18                 | 17                  | 35       | 49                | 11           | 9         | 92            |
| Pickens      | 27          | 92         | 30                 | 23                  | 53       | 43                | 24           | 6         | 175           |
| Richland     | 14          | 48         | 10                 | 4                   | 14       | 29                | 12           | 0         | 74            |
| Saluda       | 18          | 46         | 21                 | 12                  | 33       | 36                | 5            | 39        | 123           |
| Spartanburg  | 11          | 36         | 9                  | 5                   | 14       | 36                | 2            | 10        | 62            |
| Sumter       | 14          | 34         | 10                 | 15                  | 25       | 60                | 1            | 0         | 60            |
| Union        | 56          | 140        | 50                 | 50                  | 100      | 50                | 64           | 73        | 377           |
| Williamsburg | 24          | 125        | 27                 | 16                  | 43       | 37                | 16           | 20        | 204           |
| York         | 22          | 45         | 22                 | 32                  | 54       | 59                | 10           | 0         | 109           |
| State Total  | 1271        | 3659       | 1078               | 1078                | 2156     | 50                | 1319         | 608       | 7742          |