State: Georgia
Grant Number: 08-953
Study Number: 6

#### LONG RANGE PERFORMANCE REPORT

Grant Title: State Funded Wildlife Survey

Period Covered: July 1, 2007 - June 30, 2008

Study Title: Wild Turkey Production and Population Indices

Study Objectives: 1. To determine annually an index of statewide turkey populations and production success in Georgia.

2. To organize data obtained in a form so that it can be used in sound management of turkeys in Georgia.

#### **Abstract**

Recent analysis of long-term production data indicated that a new production index, 'Poults+Hens' instead of 'Poults/Observer' was the better predictor for Hours Hunted/Turkey Seen. Thirty-one percent fewer Poults+Hens were observed in 2007 (4,005) versus 2006 (5,787) corresponding with the harvest season population index (Hours Hunted/Turkey Seen), which was 16% less in 2007 (1.9) than 2006 (1.6). With the new analysis an inverse correlation coefficient of r = -0.90 was obtained between the new production index and population indices for the entire survey period which began in 1978. Hunter success decreased slightly to 66.8% in 2008 from 67.9% in 2007. The average number of poults per hen was 1.1, which was down 31% from 2006 and is the lowest recorded since the inception of the survey in 1978.

### A. Activity:

Job A. <u>Turkey Production Index Survey</u> - This survey was conducted during the months of May through August from 1978 to 1991. Beginning in 1991, the survey period was shortened to June through August when statistical analysis of data indicated the shorter time period was adequate. Data collection and summary for the 2008 survey period is not complete.

Cooperators involved in data collection for this survey were field personnel of the Game Management Section, Fisheries Management Section, Non-Game Section, and Law Enforcement Section of the Wildlife Resources Division. We have also obtained cooperators from the Georgia Forestry Commission. Observations were made during the course of regular field duties. No special efforts were made to locate turkeys for the survey.

Records were maintained of all turkey broods and hens, with and without broods. Data were compiled on a statewide and physiographic region basis. Historically, the average number of poults seen per observer was the best index of production, however, recent analysis indicated this was not the case with data between 1987-2006. Currently, the best index of production data is estimated Total Poults+Hens.

# Job B. Turkey Hunting Population Index Survey –

The hunter cooperators participating in the survey were obtained from names of prospects submitted by WRD personnel and current cooperators. Cooperators were also solicited through newspaper and magazine requests and programs to interest groups. Randomly selected members of the Georgia Chapter of the National Wild Turkey Federation also were contacted to bring the total potential cooperating hunters to 2,000.

This survey is conducted during the regular spring gobbler-hunting season, which begins the first Saturday after March 19 and ends May 15. Specific information requested about each hunting trip was the date, hours hunted, county or physiographic region hunted, the number of turkeys seen, and the number of gobblers heard. Kill information was also requested, but was an optional item. Hunt record forms were supplied to all cooperators along with full instructions and a short newsletter on survey findings from previous years.

The number of turkeys observed per unit of hunting effort is used as an index of the hunting season population. The correlation between the population indices and the production indices are used in evaluating annual production and populations and in making comparisons for trends. Data were calculated on a statewide and physiographic region basis.

- B. Target Date for Achievement and Accomplishments:
  - Job A. Planned dates and dates of accomplishment coincide, June 30, 2008.
  - Job B. Planned dates and dates of accomplishment coincide, July 31, 2008.
- C. Significant Deviations:

Jobs A & B. None

- D. Finds:
  - Job A. In 2007, 336 broods were observed (Table 1). This total is substantially less than in 2006, when 426 broods were observed, but is still better than two years ago (2005) of 248 and close to what was observed three years ago (2004) of 354. The average brood size for 2007 was 6.3 poults 25% less than the 2006 average of 8.4, which was 16% less than 2005 (10). Thirty-one percent fewer Poults+Hens were observed in

2007 (4,005) versus 2006 (5,787; Table 6).

Regional examination of poults/observer revealed that statewide it too was less by 37% for 2007 (10) compared to 2006 (15.88;Table 3). Poults/observer was down in all physiographic regions from 2006, and decreases ranged from 12 to 66% across regions. The index for Upper and Lower Coastal Plain (UCP [IV] and LCP [V]) decreased greater than 63% from 2006.

The number of hens reported totaled 1,889 (Table 4). The percent of hens with poults (34%) was 19% less than the 2006 total (Table 5). The average number of poults per hen, 1.1, decreased by 31% from 2006 and therefore production was considered poor for 2007. Historically, with Georgia's expanding turkey population an average of 3 poults per hen was considered good, however, recent data with a more stable population indicates that productivity threshold of  $\geq$ 2.0 poults per hen may be an indicator of good reproductive levels.

Job B. Usable hunt data was supplied by 434 cooperators. Of these 406 came from the permanent cooperator list and 28 from the NWTF list which resulted in a reporting rate (after deleting wrong addresses, deceased, quit hunting, incorrect data collection, etc.) of 35.3% and 8.0% from the permanent and NWTF list cooperators, respectively. These cooperators reported spending a total of 15,026.1 hours hunting (Table 7). The average season hunter effort was 10.4 trips totaling 34.6 hours. They reported observing 7,873 turkeys and hearing 7609 gobblers. The statewide population index of 1.9 was 16% worse than last year (1.6 hrs hunted/turkey seen [the lower the number the greater the population]; Table 8). The effort per gobbler heard of 2.0 was slightly better than the 2007 season (2.1; Table 8). The least hunting effort per turkey seen occurred in the Ridge and Valley and Lower Coastal Plain. The effort per gobbler heard was least in Upper and Lower Coastal Plain and highest in the Blue Ridge Mountains.

Statewide peak gobbling activity, 2.6 gobblers heard per trip, occurred during the first weekend (March 22-23). The next highest periods recorded 1.8 gobblers heard per trip (March 24-28, March 29-30, April 14-18, and April 21-25). All other periods averaged between 1.1 and 1.7 gobblers per trip. For most of the state the greatest amount of gobbling activity was the first 10 days (Mar 22 – March 28; Table 9). Other peaks in gobbling occurred during the last weekend (May 10-11) for Region I and fourth weekend (April 12-13) for Region II.

The statewide gobbler harvest during the first seven days of the season amounted to 35% of the total season harvest, which was almost equal to 2007 (36%; Table 10). Peak harvest was generally seen within the first seven days of the season in all parts of the state (Tables 11 and 12).

Similar to previous seasons, the greatest number of trips were made during the first seven days of the season (Tables 13 and 14). Only minor variations in hunting effort measures have occurred over the years.

Hunter success decreased slightly to 66.8 % with 290 of 434 hunters reported taking or assisting in taking at least one gobbler (was 67.9% in 2007). Of the successful hunters, 113 (26.0 %) took or assisted in taking one bird, 74 (17.1 %) took or assisted in taking two birds, and 103 (23.7 %) took or assisted in taking three birds. Cooperators reported 186 gobblers killed by companions.

The predictive model analysis uses Poults+Hens of the reproductive season during the current year to predict the following years harvest season population index of Hours Hunted/Turkey Seen, where the predictor model (1978-2008) is:

### Constant + (Slope \*2007 Total Poults+Hens) = 2008 Hours Hunted/Turkey Seen

Therefore:

## 3.3335 + (-0.00034\*4,005) = 2.0 Hours Hunted/Turkey Seen in 2008.

The predicted value of 2.0 was nearly identical to the observed value of 1.9 (2008). A relatively high inverse correlation r = -0.90 was obtained from the comparison of the new nesting season population index versus the following years harvest season population index.

### Jobs A&B

In summary, 2007 reproduction was extremely poor. The Poults+Hens index was the lowest recorded since 1996; Poults per Hen was the lowest ever recorded; Percent Hens with Poults was the lowest ever recorded and Poults per Observer was the lowest recorded since 1981.

Based on the 2008 Turkey Hunter Population Index Survey this season was a mixture of good and bad. Hours hunted per Turkey Seen was the worst since 2002. Statewide Hours Hunted per Gobbler Heard was the best since 2004 and for the Lower Coastal Plain the best ever recorded, however in the Ridge and Valley it was the worst since 2002 and in the Blue Ridge Mountain region the worst since 2001. Hours Hunted per Gobbler Harvested was the best ever statewide. Overall, hunter success was equal to the five-year average.

So what does this all mean? Many people have commented that there are fewer turkeys out there, which is certainly the case. We have had several consecutive years of poor turkey reproduction; we have had weather extremes in the past few years (late frost in North Georgia and droughts statewide) and an ever-growing human population (some Georgia counties in the top 20 fastest growing counties in the country). We are outright losing turkey habitat and continuing to suffer wide-scale declines in quality of available turkey habitat, all of which are leading to an overall lower turkey population than occurred in the previous decade. It is becoming more

common to have local declines in populations in certain portions of the state while others are still seeing increasing populations, likely a direct result of changing habitat conditions. For these reasons it is critical that we continue to monitor turkey populations closely into the future.

Table 1. Turkey broods and poults observed statewide in Georgia, 1978-2007.

Year	•	Broods	Pouls	
	Total	Poult Counts	Brood Average	Est. Total
1978	123	82	8.6	1,058
1979	183	160	8.6	1,565
1980	176	169	8.4	1,479
1981	264	241	7.6	2,006
1982	260	218	7.7	2,002
1983	298	261	8.8	2,622
1984	293	247	6.8	1,992
1985	324	274	7.2	2,333
1986	430	377	9.4	4,042
1987	347	328	9.7	3,366
1988	347	321	7.9	2,741
1989	322	306	9.0	2,898
1990	459	278	7.6	3,488
1991	289	213	7.1	2,039
1992	298	274	6.8	2,027
1993	328	303	8.2	2,676
1994	341	316	9.4	3,209
1995	408	386	10.4	4,209
1996	271	239	7.5	2,033
1997	408	304	6.5	2,613
1998	595	534	7.0	4,185
1999	447	364	7.1	3,170
2000	393	358	7.2	2,809
2001	493	431	7.0	3,017
2002	648	618	6.0	3,894
2003	448	448	5.9	2,619
2004	354	354	10.6	3,733
2005	248	248	10.0	2,469
2006	426	426	8.4	3,579
2007	336	336	6.3	2,116

Table 2. Turkey brood observations by physiographic region and month in Georgia, 2007.

			1 0	<u> </u>	
		Region <sup>1</sup>	_	_	Total
I	II	III	IV	V	
15	19	39	25	6	104
32	20	37	23	5	117
32	38	26	10	9	115
79	77	102	58	20	336
	32 32	15 19 32 20 32 38	I         II         III           15         19         39           32         20         37           32         38         26	I         II         III         IV           15         19         39         25           32         20         37         23           32         38         26         10	I         II         III         IV         V           15         19         39         25         6           32         20         37         23         5           32         38         26         10         9

 $<sup>\</sup>overline{\ }^{\mathrm{I}}$ Roman numerals correspond to physiographic regions as follows:

I - Valley and Ridge Lookout Mountain Plateau

II - Blue Ridge Mountains

III - Piedmont

IV - Upper Coastal PlainV - Lower Coastal Plain

Table 3. Average number of turkey poults seen per observer (production index) in Georgia, 1978-2007

Physiographi	c															
Region	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
I	4.84	0	4.80	3.45	3.52	10.30	9.09	7.20	23.19	27.87	22.10	30.70	18.92	21.19	15.93	26.75
II	11.18	5.70	3.85	5.32	10.36	21.21	16.54	7.90	36.62	19.79	34.61	21.82	19.89	7.07	12.89	17.31
III	7.04	8.88	11.13	12.12	14.79	20.24	11.01	15.93	22.99	23.11	18.80	21.72	23.06	20.69	15.90	22.03
IV	3.86	5.16	5.23	7.15	11.44	9.42	8.78	15.03	23.03	11.54	12.01	12.72	10.83	7.71	7.84	14.91
V	6.28	7.36	3.63	8.89	5.37	5.19	6.37	10.93	13.74	6.60	9.32	8.12	20.10	5.27	10.32	11.15
Statewide	7.50	6.33	7.31	8.72	10.77	13.29	10.02	13.07	22.42	17.31	16.05	17.53	18.88	12.01	12.39	16.39

Table 3. Continued.

Physiograph	ic														
Region	19941	9951996	5 1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007		
I	38.68	66.3	32.3	20.8	42.9	30.3	33.6	48.8	47.3	40.27	34.65	28.96	52.27	30.73	
II	20.11	22.06	16.2	13.7	21.5	19.9	37.0	32.2	23.2	13.63	23.10	14.28	20.92	18.43	
Ш	25.22	48.99	26.9	26.6	29.5	18.2	22.5	24.4	28.8	14.94	19.11	12.66	15.14	13.00	
IV	19.17	21.0	16.5	14.1	22.6	21.2	17.4	18.9	21.7	8.55	16.18	12.10	14.62	5.30	
V	8.00	14.83	4.5	9.1	6.2	11.0	8.1	9.6	13.9	10.86	13.42	10.36	9.29	3.13	
Statewide	20.63	31.78	18.9	16.2	22.1	17.7	18.2	21.3	24.1	13.11	18.28	12.89	15.88	10.00	

Table 4. Turkey hens observed with poults, without poults, and uncertain of accompanying poults statewide in Georgia, 1978-2007

Year	Igia, 1976-2007	Hens Rep	orted	
	With Poults	Without Poults	Uncertain of Poults	Total
1978	145	70	26	241
1979	176	131	39	346
1980	166	133	15	314
1981	276	116	66	458
1982	327	136	24	487
1983	361	211	72	644
1984	261	232	59	552
1985	475	251	81	807
1986	648	283	84	1,015
1987	519	230	52	801
1988	529	305	59	893
1989	459	261	48	768
1990	642	371	49	1,062
1991	321	399	59	779
1992	407	490	59	956
1993	374	292	41	707
1994	463	361	66	890
1995	606	301	83	990
1996	298	384	74	756
1997	560	618	271	1,449
1998	820	661	236	1,717
1999	560	753	344	1,657
2000	734	577	251	1,562
2001	634	589	337	1,560
2002	695	644	220	1,559
2003	795	1,113	296	2,204
2004	930	586	347	1,863
2005	611	772	257	1,640
2006	932	864	412	2,208
2007	645	928	316	1,889

Table 5. Percent of turkey hens accompanied by poults (2nd potential population index) and the average number of poults per hen statewide in Georgia, 1978-2007

Year	Percent Hens With Poults	Poults Per Hen		
1978	60	4.4		
1979	51	4.5		
.980	53	4.7		
981	60	4.4		
982	67	4.1		
983	56	4.1		
984	47	3.6		
985	59	3.6		
986	64	4.4		
987	65	4.2		
988	59	3.1		
989	60	3.8		
990	60	3.3		
991	41	2.6		
992	43	2.1		
993	56	3.8		
994	56	3.6		
995	61	4.3		
996	39	2.7		
997	39	1.8		
998	48	2.4		
999	34	1.9		
000	47	1.8		
001	41	2.2		
002	45	2.5		
003	36	1.2		
004	50	2.0		
005	37	1.5		
006	42	1.6		
2007	34	1.1		

Table 6. Estimated Total Poults + hens population indices in Georgia, 1978-2007

Population	Nesting	Statewide	
Index	Season	Poults+Hens	
	1978	1,299	
	1979	1,911	
	1980	1,793	
	1981	2,464	
	1982	2,489	
	1983	3,266	
	1984	2,544	
	1985	3,140	
	1986	5,057	
	1987	4,167	
	1988	3,634	
	1989	3,666	
	1990	4,550	
	1991	2,758	
	1992	2,983	
	1993	3,383	
	1994	4,099	
	1995	5,199	
	1996	2,789	
	1997	4,062	
	1998	5,902	
	1999	4,827	
	2000	4,371	
	2001	4,577	
	2002	5,453	
	2003	4,823	
	2004	5,596	
	2005	4,109	
	2006	5,787	
	2007	4,005	

Table 7. Summary of turkey hunter cooperator data in Georgia, 2008.

Item	Physiographic Region <sup>1</sup>										
	I	II	III	IV	V	Statewide					
Total Hunters	53	32	242	163	58	434**					
Total Hours	1,332	618.7	7,322.8	4,310.8	1,441.8	15,026.1					
Total Trips	398	158	2,011	1,414	530	4,511					
Avg. Hours	25.1	19.3	30.3	26.4	24.9	34.6					
Avg. Trips	7.5	4.9	8.3	8.7	9.1	10.4					
Avg. Hrs./Trip	3.3	3.9	3.6	3.0	2.7	3.3					
Total Turkeys Seen	1,082	278	3,381	2,230	902	7,873					
Hrs./Turkeys Seen	1.2	2.2	2.2	1.9	1.6	1.9					
Total Gobblers Heard	459	114	3,093	2,749	1,194	7,609					
Hrs./Gobbler Heard	2.9	5.4	2.4	1.7	1.2	2.0					
Total Kill*	68	16	245	232	109	670					
Companion Killed	18	5	47	85	31	186					
Hours/Kill	19.6	38.7	29.9	18.6	13.2	22.4					

<sup>&</sup>lt;sup>1</sup>Roman numerals correspond to physiographic regions as follows:

I - Ridge and Valley

II - Blue Ridge Mountains

III - Piedmont

IV - Upper Coastal Plain

V - Lower Coastal Plain

<sup>\*</sup>includes both gobblers taken and assisted in taking

<sup>\*\*</sup> less than Regions summed because some hunters hunted in more than one Region

Table 8. Turkey hunting population indices in Georgia, 1979-2008.

Population	Hunt		Phys	iographic Re	egion		
Index	Season	I	II	III	IV	V	Statewide
Hours/Turkey	1979	20.5	3.5	2.9	3.1	2.8	3.0
Seen	1980	1.6	6.0	2.9	2.6	2.4	3.1
	1981	1.5	4.7	2.2	3.2	2.8	2.5
	1982	2.2	5.0	2.8	3.3	1.8	2.9
	1983	2.5	3.1	2.2	2.0	1.9	2.3
	1984	2.2	4.1	2.4	1.6	1.5	2.3
	1985	2.3	3.4	2.6	2.5	3.5	2.6
	1986	3.2	4.6	2.3	2.0	3.4	2.5
	1987	4.1	2.9	2.6	1.7	2.1	2.4
	1988	1.0	2.9	1.9	1.6	2.1	1.8
	1989	1.7	2.3	2.3	1.6	1.2	1.9
	1990	1.8	2.8	2.0	1.9	1.7	2.0
	1991	1.6	2.3	2.0	1.7	1.8	1.9
	1992	1.4	2.7	2.4	1.7	2.3	2.1
	1993	2.0	4.0	2.5	1.6	1.6	2.1
	1994	2.4	2.2	2.1	1.6	1.4	1.9
	1995	1.7	2.2	2.4	1.8	2.0	2.1
	1996	1.2	1.8	1.6	1.6	1.5	1.5
	1997	1.0	2.1	1.8	1.5	1.3	1.6
	1998	1.0	1.9	1.9	1.7	1.4	1.7
	1999	0.9	2.7	1.5	1.4	1.5	1.4
	2000	1.4	2.3	2.0	1.5	1.5	1.7
	2001	4.2	3.4	1.3	1.7	1.4	1.7
	2002	3.9	3.7	1.2	2.2	1.9	2.6
	2003	1.5	1.8	1.6	1.4	1.5	1.5
	2004	1.1	2.2	1.7	1.2	1.3	1.4
	2005	1.1	2.7	2.2	1.4	1.2	1.6
	2006	1.2	2.0	2.3	1.6	1.2	1.8
	2007	1.2	1.6	2.0	1.5	1.0	1.6
	2008	1.2	2.2	2.2	1.9	1.6	1.9

Table 8. Continued.

Heard       1980       2.9       4.7       3.4       2.9       9.1         1981       2.9       4.4       3.0       2.3       2.0         1982       3.1       3.6       3.0       2.3       2.3         1983       4.4       2.8       3.3       2.0       2.4         1984       3.1       5.2       3.3       1.8       1.4         1985       2.4       4.2       2.9       1.8       3.0         1986       2.6       3.4       2.1       1.3       1.6         1987       2.2       5.2       2.4       1.7       2.0         1988       1.5       2.6       2.7       1.4       1.6         1989       2.1       2.1       2.1       1.5       2.1         1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2	
Heard  1980  2.9  4.7  3.4  2.9  9.1  1981  2.9  4.4  3.0  2.3  2.0  1982  3.1  3.6  3.0  2.3  2.3  1983  4.4  2.8  3.3  2.0  2.4  1984  3.1  5.2  3.3  1.8  1.4  1985  2.4  4.2  2.9  1.8  3.0  1986  2.6  3.4  2.1  1.3  1.6  1987  2.2  5.2  2.4  1.7  2.0  1988  1.5  2.6  2.7  1.4  1.6  1989  2.1  2.1  2.1  1.5  2.1  1990  2.3  4.2  2.5  1.7  1.7  1991  2.7  5.5  2.7  2.0  2.9  1992  2.4  4.2  2.9  1.8  1.6  1993  3.2  6.3  3.6  2.1  2.7  1994  3.4  6.1  3.5  1.9  2.2  1995  2.0  3.3  3.5  2.7  2.0  2.1  1996  3.3  3.5  2.7  2.0  2.1  1996  3.3  3.5  2.7  2.0  2.1  1997  2.3  5.6  2.2  1.6  2.2  1998  2.5  4.1  2.7  1999  2.7  3.7  2.8  1.7  2.0  2.0  2.0  2.0  2.0  2.0  2.1  1999  2.7  3.7  2.8  1.7  2.0  2.0  2.0  2.0  2.1  1999  2.7  3.7  2.8  1.7  2.0  2.0  2.0  2.0  2.1  1999  2.7  3.7  2.8  1.7  2.0  2.0  2.0  2.0  2.1  1999  2.7  3.7  2.8  1.7  2.0  2.0  2.0  2.1  1999  2.7  3.7  2.8  1.7  2.0  2.0  2.0  2.1  1999  2.7  3.7  2.8  1.8  1.8  2.0  1.8  1.8	e
1981       2.9       4.4       3.0       2.3       2.0         1982       3.1       3.6       3.0       2.3       2.3         1983       4.4       2.8       3.3       2.0       2.4         1984       3.1       5.2       3.3       1.8       1.4         1985       2.4       4.2       2.9       1.8       3.0         1986       2.6       3.4       2.1       1.3       1.6         1987       2.2       5.2       2.4       1.7       2.0         1988       1.5       2.6       2.7       1.4       1.6         1989       2.1       2.1       2.1       1.5       2.1         1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996<	3.2
1982       3.1       3.6       3.0       2.3       2.3         1983       4.4       2.8       3.3       2.0       2.4         1984       3.1       5.2       3.3       1.8       1.4         1985       2.4       4.2       2.9       1.8       3.0         1986       2.6       3.4       2.1       1.3       1.6         1987       2.2       5.2       2.4       1.7       2.0         1988       1.5       2.6       2.7       1.4       1.6         1989       2.1       2.1       2.1       1.5       2.1         1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1998<	3.4
1983       4.4       2.8       3.3       2.0       2.4         1984       3.1       5.2       3.3       1.8       1.4         1985       2.4       4.2       2.9       1.8       3.0         1986       2.6       3.4       2.1       1.3       1.6         1987       2.2       5.2       2.4       1.7       2.0         1988       1.5       2.6       2.7       1.4       1.6         1989       2.1       2.1       2.1       1.5       2.1         1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998<	2.9
1984       3.1       5.2       3.3       1.8       1.4         1985       2.4       4.2       2.9       1.8       3.0         1986       2.6       3.4       2.1       1.3       1.6         1987       2.2       5.2       2.4       1.7       2.0         1988       1.5       2.6       2.7       1.4       1.6         1989       2.1       2.1       2.1       1.5       2.1         1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999<	2.9
1985       2.4       4.2       2.9       1.8       3.0         1986       2.6       3.4       2.1       1.3       1.6         1987       2.2       5.2       2.4       1.7       2.0         1988       1.5       2.6       2.7       1.4       1.6         1989       2.1       2.1       2.1       1.5       2.1         1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000<	2.8
1986       2.6       3.4       2.1       1.3       1.6         1987       2.2       5.2       2.4       1.7       2.0         1988       1.5       2.6       2.7       1.4       1.6         1989       2.1       2.1       2.1       1.5       2.1         1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001<	3.0
1987       2.2       5.2       2.4       1.7       2.0         1988       1.5       2.6       2.7       1.4       1.6         1989       2.1       2.1       2.1       1.5       2.1         1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001       4.8       5.4       1.8       2.4       2.7	2.6
1988       1.5       2.6       2.7       1.4       1.6         1989       2.1       2.1       2.1       1.5       2.1         1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001       4.8       5.4       1.8       2.4       2.7	2.0
1989       2.1       2.1       2.1       1.5       2.1         1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001       4.8       5.4       1.8       2.4       2.7	2.4
1990       2.3       4.2       2.5       1.7       1.7         1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001       4.8       5.4       1.8       2.4       2.7	2.2
1991       2.7       5.5       2.7       2.0       2.9         1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001       4.8       5.4       1.8       2.4       2.7	.9
1992       2.4       4.2       2.9       1.8       1.6         1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001       4.8       5.4       1.8       2.4       2.7	2.2
1993       3.2       6.3       3.6       2.1       2.7         1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001       4.8       5.4       1.8       2.4       2.7	2.7
1994       3.4       6.1       3.5       1.9       2.2         1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001       4.8       5.4       1.8       2.4       2.7	2.6
1995       2.0       3.3       2.5       1.9       2.1         1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001       4.8       5.4       1.8       2.4       2.7	3.1
1996       3.3       3.5       2.7       2.0       2.1         1997       2.3       5.6       2.2       1.6       2.2         1998       2.5       4.1       2.7       1.9       2.1         1999       2.7       3.7       2.8       1.7       2.0         2000       2.1       3.8       2.2       1.8       1.8         2001       4.8       5.4       1.8       2.4       2.7	2.9
1997     2.3     5.6     2.2     1.6     2.2       1998     2.5     4.1     2.7     1.9     2.1       1999     2.7     3.7     2.8     1.7     2.0       2000     2.1     3.8     2.2     1.8     1.8       2001     4.8     5.4     1.8     2.4     2.7	2.3
1998     2.5     4.1     2.7     1.9     2.1       1999     2.7     3.7     2.8     1.7     2.0       2000     2.1     3.8     2.2     1.8     1.8       2001     4.8     5.4     1.8     2.4     2.7	2.5
1999     2.7     3.7     2.8     1.7     2.0       2000     2.1     3.8     2.2     1.8     1.8       2001     4.8     5.4     1.8     2.4     2.7	2.2
2000 2.1 3.8 2.2 1.8 1.8 2001 4.8 5.4 1.8 2.4 2.7	2.4
2001 4.8 5.4 1.8 2.4 2.7	2.4
	2.1
	2.4
	3.2
	.9
	2.0
	2.4
	2.3
	2.1
2008 2.9 5.4 2.4 1.7 1.2	2.0

Table 8. Continued.

Population	Hunt	Physiographic Region								
Index	Season	I	$\mathbf{II}$	III	IV	V	Statewide			
Hours/Gobbl	er 1979	96.5	79.8	35.1	27.5	23.3	35.7			
Killed	1980	13.2	35.7	39.6	35.8	19.1	35.9			
	1981	10.7	29.5	31.0	29.9	23.0	30.7			
	1982	25.5	90.3	29.7	30.0	19.0	31.3			
	1983	30.9	29.7	27.8	28.3	22.6	27.4			
	1984	31.1	45.8	35.3	31.4	12.8	34.0			
	1985	22.2	48.2	38.7	24.0	32.4	33.6			
	1986	23.0	42.1	28.6	21.9	16.0	26.7			
	1987	35.4	68.3	30.4	25.8	32.1	32.1			
	1988	17.6	25.3	35.9	18.9	18.7	28.0			
	1989	22.6	41.4	29.8	17.0	21.1	24.8			
	1990	29.8	55.2	29.3	26.4	16.3	28.3			
	1991	42.7	48.4	36.9	24.7	23.2	33.9			
	1992	44.9	49.4	45.3	20.9	22.0	36.7			
	1993	32.2	46.5	46.0	19.8	38.7	34.9			
	1994	36.2	42.0	36.9	20.9	18.7	30.1			
	1995	25.4	29.9	25.3	18.6	18.7	22.7			
	1996	28.9	34.1	29.3	25.9	26.0	26.8			
	1997	28.7	38.8	31.9	19.6	20.7	27.7			
	1998	29.2	35.8	29.2	23.3	19.0	26.3			
	1999	28.0	50.6	33.6	19.1	24.2	27.8			
	2000	27.8	34.0	28.5	22.9	23.0	26.4			
	2001	60.6	48.3	22.6	25.7	23.2	27.9			
	2002	59.7	43.6	21.1	27.6	19.2	34.2			
	2003	21.6	22.8	26.7	26.4	25.4	25.7			
	2004	21.5	44.6	27.4	18.5	21.2	23.4			
	2005	26.3	42.3	31.0	18.0	18.1	24.4			
	2006	20.8	40.2	31.0	21.6	16.9	25.1			
	2007	27.0	33.4	29.9	17.8	14.5	23.1			
	2008	19.6	38.7	29.9	18.6	13.2	22.4			

Table 9. Number of gobblers heard per hunting trip in Georgia, 2008.

Da	ate		Physiographic Region							
Weekend	Weekday	I	П	III	IV	V				
3/22-3/23		1.7	0.5	2.3	3.0	3.6	2.6			
	3/24-3/28	1.2	0.3	1.8	1.8	2.9	1.8			
3/29-3/30		0.8	0.1	1.6	2.4	2.2	1.8			
	3/31-4/04	1.2	0.4	1.4	2.1	2.4	1.7			
4/05-4/06		1.1	0.9	1.3	2.0	1.5	1.5			
	4/07-4/11	1.0	0.6	1.5	1.4	1.6	1.4			
4/12-4/13		0.8	1.8	1.4	1.8	2.7	1.6			
	4/14-4/18	0.9	0.9	1.4	2.3	2.2	1.8			
4/19-4/20		1.2	1.6	1.3	1.6	2.1	1.5			
	4/21-4/25	1.4	0.9	1.7	2.1	2.1	1.8			
4/26-4/27		0.8	1.5	1.3	2.0	2.4	1.6			
	4/28-5/02	0.8	1.0	1.0	1.6	1.8	1.3			
5/03-5/04		0.6	0.5	1.2	1.8	2.6	1.5			
	5/05-5/09	1.2	1.5	0.8	1.5	1.0	1.1			
5/10-5/11		2.7	0.3	1.0	1.6	0.6	1.4			
	5/12-5/15	1.6	0.3	1.3	1.1	1.1	1.2			
Season		1.2	1.4	1.5	1.9	2.3	1.7			

Table 10. Chronological summary of gobbler harvest in Georgia, 2008.

Date		Gobblers	% of Seas	son Kill*
Weekend	Weekday	Killed	Date	Cumulative
3/22-3/23		129	19	19
3/22 3/23	3/24-3/28	109	16	35
3/29-3/30	0,2:0,20	51	8	43
	3/31-4/04	64	10	53
4/05-4/06		27	4	57
	4/07-4/11	45	7	64
4/12-4/13		30	5	69
	4/14-4/18	39	6	75
4/19-4/20		27	4	79
	4/21-4/25	34	5	84
4/26-4/27		23	3	87
	4/28-5/02	17	3	90
5/03-5/04		19	3	93
	5/05-5/09	13	2	95
5/10-5/11		22	3	98
	5/12-5/15	21	3	101
Total		670	101	101

<sup>\*</sup>over 100% because of rounding

Table 11. Chronological distribution of gobbler harvest by physiographic region in Georgia, 2008.

Dates			Phys	Statewide			
Weekend	Weekday	I	II	III	IV	V	
3/22-3/23		9	1	62	41	16	129
	3/24-3/28	14	1	43	31	20	109
3/29-3/30		5	2	18	15	11	51
	3/31-4/04	9	3	14	25	13	64
4/05-4/06		3	1	7	13	3	27
	4/07-4/11	3	1	23	13	5	45
4/12-4/13		7	0	8	8	7	30
	4/14-4/18	1	1	12	17	8	39
4/19-4/20		0	1	14	7	5	27
	4/21-4/25	3	3	8	14	6	34
4/26-4/27		2	0	13	8	0	23
	4/28-5/02	0	0	3	8	6	17
5/03-5/04		3	0	6	9	1	19
	5/05-5/09	1	2	3	5	2	13
5/10-5/11		3	0	4	13	2	22
	5/12-5/15	5	0	7	5	4	21
Season		68	16	245	232	109	670

Table 12. Chronological distribution of gobbler harvest (%) by physiographic region in Georgia, 2008.

Date			Physiographic Region			Statewide	
Weekend	Weekday	I	II	Ш	IV	V	
3/22-3/23		13	6	25	18	15	19
	3/24-3/28	21	6	18	13	18	16
3/29-3/30		7	1	7	6	10	8
	3/31-4/04	13	2	6	11	12	10
4/05-4/06		4	6	3	6	3	4
	4/07-4/11	4	6	9	6	5	7
4/12-4/13		10	0	3	3	6	5
	4/14-4/18	1	6	5	7	7	6
4/20-4/21		0	6	6	3	5	4
	4/22-4/25	4	2	3	6	6	5
4/26-4/27		3	0	5	3	0	5
	4/28-5/02	0	0	1	3	6	3
5/03-5/04		4	0	2	4	1	3
	5/05-5/09	1	1	1	2	2	2
5/10-5/11		4	0	2	6	2	3
	5/12-5/15	7	0	3	2	4	3

Table 13. Chronological distribution of turkey hunting trips by physiographic region in Georgia, 2008.

Dates			Phy	siographic Reg		Statewide	
Weekend	Weekday	I	II	III	IV	V	
3/22-3/23		38	13	243	138	53	485
	3/24-3/28	46	24	280	172	68	590
3/29-3/30		27	8	120	97	47	299
	3/31-4/04	45	17	152	114	55	383
4/05-4/06		24	8	103	74	37	246
	4/07-4/11	33	14	205	133	48	433
4/12-4/13		23	6	92	78	23	222
	4/14-4/18	27	11	154	103	40	335
4/19-4/20		20	5	97	53	21	196
	4/21-4/25	26	16	134	83	39	298
4/26-4/27		13	6	92	61	12	184
	4/28-5/02	20	9	93	72	27	221
5/03-5/04		12	6	69	53	15	155
	5/05-5/09	16	8	77	66	23	190
5/10-5/11		10	31	43	45	10	111
	5/12-5/15	18	4	57	72	12	163
Season		398	158	2,011	1,414	530	4,511

Table 14. Chronological distribution of turkey hunting trips (%) by physiographic region in Georgia, 2008.

Dates			Physiographic Region			Statewide	
Weekend	Weekday	I	П	III	IV	V	
3/22-3/23		10	8	12	12	10	11
	3/24-3/28	12	15	14	12	13	13
3/29-3/30		7	5	6	7	9	7
	3/31-4/04	11	11	8	8	10	8
4/05-4/06		6	5	5	5	7	5
	4/07-4/11	8	9	10	9	9	10
4/12-4/13		6	4	5	6	4	5
	4/14-4/18	7	7	8	7	8	7
4/19-4/20		5	3	5	4	4	4
	4/21-4/25	7	10	7	6	7	7
4/26-4/27		3	4	5	4	2	4
	4/28-5/02	5	6	5	5	5	5
5/03-5/04		3	4	3	4	3	3
	5/05-5/09	4	5	4	4	4	4
5/10-5/11		3	2	2	3	2	2
	5/12-5/15	5	3	3	5	2	4

Table 15. Turkey hunter success, 1979-2008.

Harvest	Statewide	
Season	Hunter Success	
1979	56	
1980	63	
1981	57	
1982	61	
1983	66	
1984	65	
1985	64	
1986	73	
1987		
1988		
1989		
1990		
1991		
1992	63	
1993		
1994		
1995	70	
1996	70	
1997	70	
1998	70	
1999	67	
2000	66	
2001	47	
2002	74	
2003	68	
2004	69	
2005	65	
2006	69	
2007	68	
2008	67	