

SOUTH CAROLINA RABBIT HUNTER SURVEY 2008-09

The Small Game Project, South Carolina Department of Natural Resources (DNR), implemented the South Carolina Rabbit Hunter Survey in the 1991-92 season. The survey was designed to provide reliable, quantitative information about rabbit numbers and rabbit hunter success across the state.

This report presents information from the latest survey and compares data collected for the past 10 years. Information is used to identify trends in rabbit populations and rabbit hunting activities in South Carolina.

METHODS

Individuals contacted for this rabbit hunter survey included respondents to last year's survey, persons who called, emailed or wrote requesting a survey form this past year, and respondents from a 1999-00 Responsive Management Telephone Survey. The Small Game Project staff presents a number of educational programs each year and solicits potential hunters.

A total of 164 individuals were provided with data sheets, instructions and self-addressed stamped envelopes prior to the start of the 2008-09 rabbit-hunting season. Cooperators were asked to keep accurate records of their hunting activities and to provide the following information about each individual hunt: date and county of hunt, number of hunters, number of hours hunted, number of rabbits jumped, number of rabbits harvested, quail coveys and woodcock flushed. Additional information requested includes the number and species of rabbits bagged during the season along with comments on dog performance and season quality. Information on food habits, diseases and general comments were also requested.

At the end of the hunting season, a reminder card was sent to each individual asking that the survey form be returned. A period of 60 days was allowed for hunters to respond. Data were analyzed by county, geographic region and statewide basis.

South Carolina is divided into four broad geographical regions (Fig. 1) based on habitat. The "Piedmont" encompasses about 1/3 of the state and includes the mountain and foothills area. The "Midlands" or "Sandhills" extend on a broad northeast/southwest axis across the middle part of the state. The "Pee Dee" region is located on the northern coastal plain and the "Low Country" is situated in the southern coastal plain.

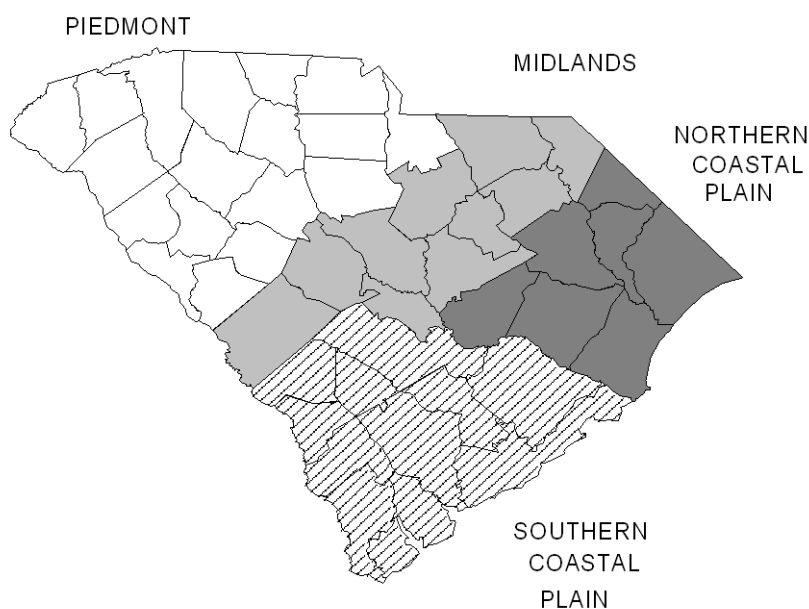


Figure 1. Physiographic regions of South Carolina.

RESULTS AND DISCUSSION

STATEWIDE

A total of 33 individuals responded (one stated he did not hunt this past season, one form had data but no name) to the survey with 32 providing usable data. This represents a 20% response from potential cooperators. Survey cooperators recorded 568 hunts and logged 2,457 hours in the field. Hunting parties averaged four individuals per trip and the average hunt length was 4.3 hours. Survey cooperators and their companions expended a minimum of 9,828 man-hours.

Hunting parties jumped an average of 1.37 rabbits per hour and harvested 0.78 rabbits per hour. Based on these figures 57% of the rabbits jumped were harvested. Cottontails (*Sylvilagus floridanus*) were the predominant species reported harvested followed by marsh rabbits (*S. palustris*) and swamp rabbits (*S. aquaticus*), respectively (Fig. 2).

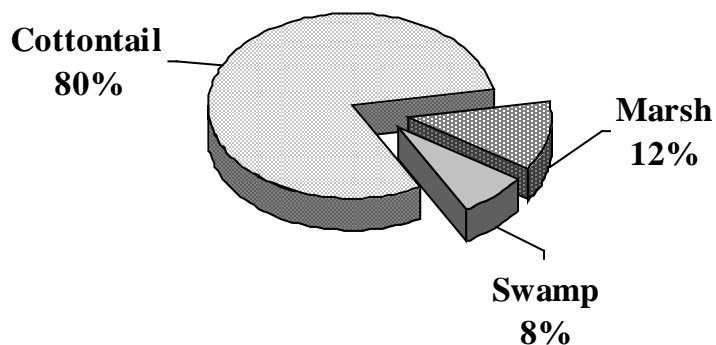
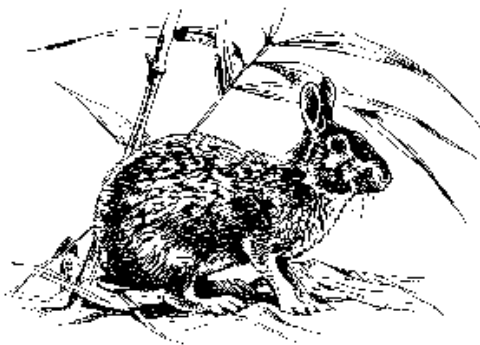


Figure 2. Reported species composition of rabbits harvested by cooperators, South Carolina Rabbit Hunter Survey, 2008-09.

Historically, swamp rabbits have been documented only in the Savannah River drainage of Oconee, Pickens and Anderson Counties (Webster et. al. 1985, Platt and Bunch 2000). It is possible that some marsh rabbits are mistakenly identified as swamp rabbits. Cooperators are provided with a fact sheet describing how to distinguish the three species of rabbits.



A majority (67%) of the rabbit hunting activity documented in South Carolina occurred in the Piedmont Region (381 hunts) and the least amount of activity occurred in the Pee Dee at 5% (31 hunts) (Fig. 3). The highest rabbit-jumping rate (1.43) was recorded in the Midlands (77 hunts). The Piedmont, Low Country, and Pee Dee recorded 1.40, 1.28, and 0.95 rabbits jumped per hour, respectively (Fig. 4). But the sample size in the Low Country (79 hunts) and the Pee Dee (31 hunts) were lower than in the Piedmont (381 hunts). (Fig. 4).

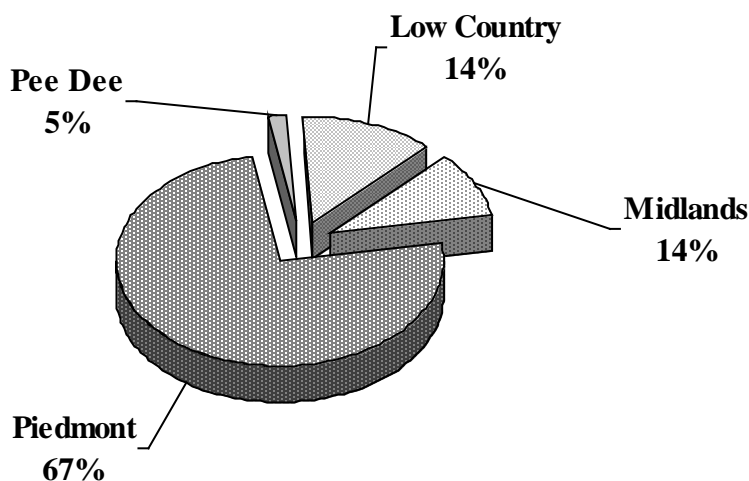


Figure 3. Percentage of expended hunting time by region, South Carolina Rabbit Hunter Survey, 2008-09.

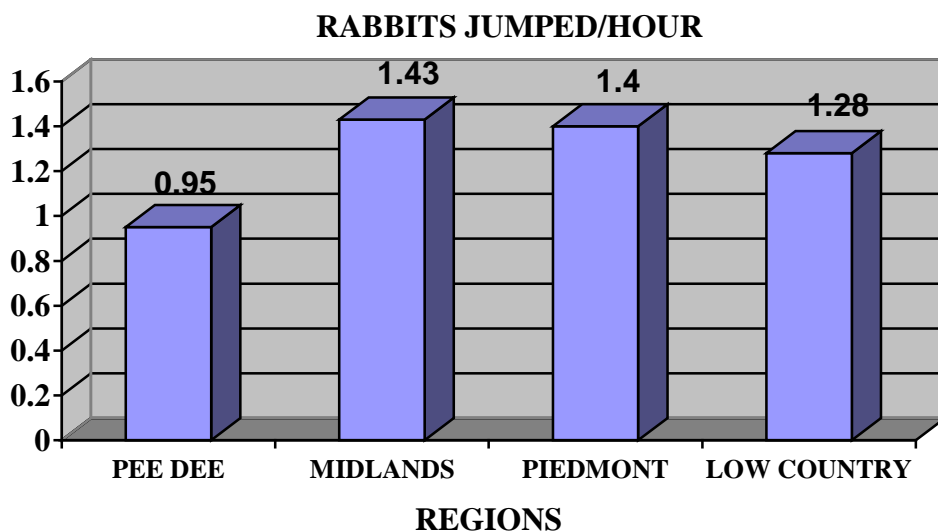


Figure 4. Average number of rabbits jumped per hour by region, South Carolina Rabbit Hunter Survey, 2008-09.

COUNTY RESULTS

Hunters from 37 of the 46 counties in South Carolina reported rabbit hunting activity during the 2008-2009 season. Abbeville County led the state in hunter effort (hours hunted) with hunters logging 273 hours in the field during 67 hunts. Following Abbeville in hunter effort were Chester (205 hours, 47 hunts) and Greenwood (175 hours, 42 hunts).

The top five counties, in terms of rabbits jumped per hour (based on a minimum of 25 hunts), were: Saluda (2.68), Lee (1.71), followed by Greenwood (1.44), Hampton (1.39) and Abbeville (1.27). Jumping rates may have variables affecting them such as shooting (or not shooting) on the initial jump, cover thickness delaying a killing shot during the chase, and letting the dogs run for exercise or training. However, jumping rates do give an index to the relative abundance of rabbits in a given area.

COMPARISON TO 2007-08 SURVEY

The number of individuals provided with data sheets increased from 153 to 164 but individuals responding decreased from 46 to 33 with a slight corresponding response rate decrease of 21% to 20%. Number of hunts (568) recorded by all hunting parties decreased from 684 with a decrease in total hours afield from 3,183 to 2,457 hours. Average hunt length decreased slightly from 4.7 hours to 4.3 hours. The minimum number of man-hours expended by rabbit hunters and their companions also decreased from 12,732 to 9,828.

Number of rabbits jumped per hour increased slightly from 1.35 in 2007-08 to 1.37 in 2008-09. Rabbits harvested per hour decreased from 0.83 to 0.78.

Statewide, quail flushes increased from 0.02 to 0.04 coveys per hour and the number of coveys flushed increased from 65 in 2007-08 to 72 in 2008-09. This was the 13th year data were collected on number of woodcocks flushed. Woodcocks flushed per hour increased from 0.06 to 0.10 and the number of woodcocks flushed also increased from 182 to 246 for 2008-09.

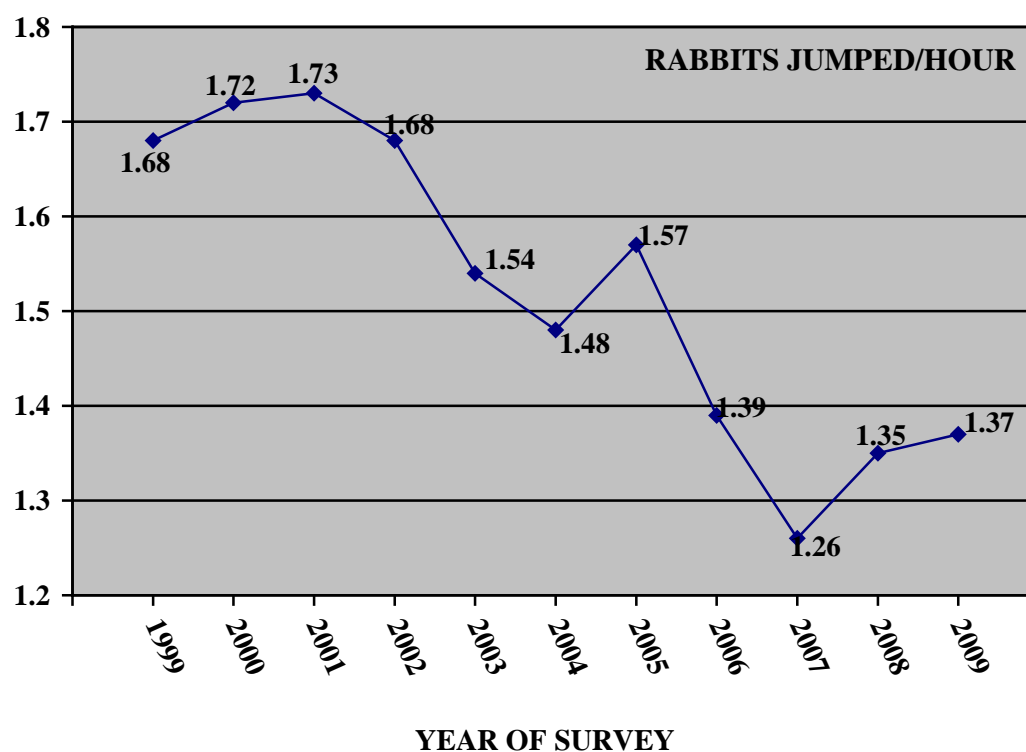
The number of counties reporting rabbit hunting activity increased for the third year from 35 to 37 this past season. In 2008-09 Abbeville, Chester, and Greenwood Counties were first, second and third, respectively, in hunter effort (hours hunted), followed by Hampton and Laurens Counties. In terms of rabbits jumped per hour (minimum of 25 hunts), Saluda, Lee, Greenwood, Hampton, and Abbeville were the top five counties.

Table 3 summarizes the data collected for the past 10 years of the survey and Figure 5 shows the general trend in rabbits jumped per hour. Both Table 3 and Figure 5 show an upward trend in number of rabbits jumped per hour from 1999 through 2001 with a decrease from the 2002 through the 2003-04 seasons. The 2004-05 season showed an increase in the number of rabbits jumped per hour of 1.57 with a significant decrease in 2005-06 (1.39) and in 2006-07 (1.26). An increase occurred in 2007-08 season (1.35) and 2008-09 (1.37).

Table 3. Statewide results, South Carolina Rabbit Hunter Survey, 1999-2009.

YEAR OF SURVEY	RABBITS JUMPED PER HOUR	RABBITS HARVESTED PER HOUR	QUAIL COVEYS FLUSHED PER HOUR
1998-99	1.68*	0.93*	0.04
1999-00	1.72	0.98	0.03
2000-01	1.73	1.00*	0.03
2001-02	1.68	1.00	0.04
2002-03	1.54*	0.92*	0.03
2003-04	1.48*	0.90	0.04
2004-05	1.57*	0.98*	0.05
2005-06	1.39*	0.84*	0.04
2006-07	1.26*	0.77*	0.03
2007-08	1.35*	0.83*	0.02
2008-09	1.37	0.78*	0.04

*Significantly different from the previous year ($P < 0.05$)

**Figure 5. Rabbits jumped per hour, South Carolina Rabbit Hunter Survey, 1999-2009.**

COOPERATOR COMMENTS

As a whole, most cooperators rated the 2008-09 rabbit-hunting season as good or fair with 15% rating the season as poor (Fig. 6). Cooperators rated the performance of their dogs as good or fair with a poor rating of only 5% (Fig. 7).

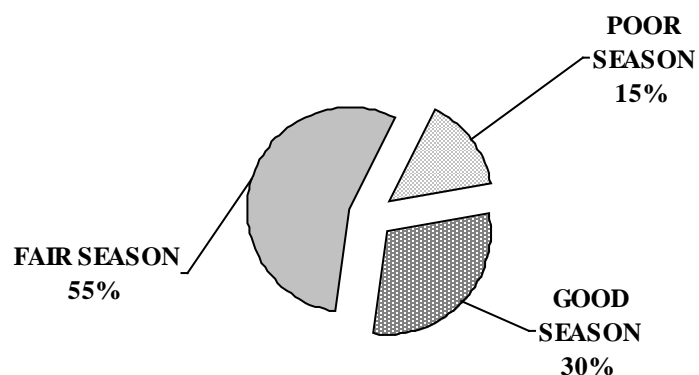


Figure 6. Rating of season quality by cooperators, South Carolina Rabbit Hunter Survey, 2008-2009.

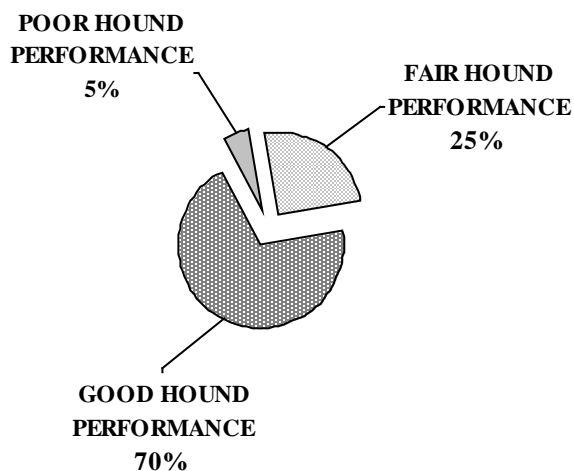


Figure 7. Rating of hound performance by cooperators, South Carolina Rabbit Hunter Survey, 2008-2009.

Cooperators reported dry, warm days as well as cold, wet days as having a negative influence (fewer days in the field, scent conditions, etc.) on hunting this past year. Two cooperators expressed concern about the availability of public lands decreasing and private lands being taken over by deer hunters. One cooperator stated that feral hogs were rooting up prime habitat. A few cooperators stated that rabbit numbers had increased where there was suitable habitat. A majority of the cooperators reported rabbits appeared to be in good physical condition. One cooperator stated "Season was very good compared to 07-08 and the dogs were super." Another cooperator stated "No diseased rabbits, population is great, tough hunting is reason for low harvest but for us it's more about the hound music..."

SUMMARY

The 2008-09 Rabbit Hunter Survey marked the 18th year of building a database on rabbit populations and rabbit hunter success in South Carolina. Plans are to continue this survey during the 2009-2010 season. Additional efforts will be made to increase cooperator response as well as reporting accuracy.

If you are aware of someone who hunts rabbits but does not participate in this survey, please encourage them to do so. Ask them to contact Small Game Project at 803-734-3609 or castinep@dnr.sc.gov.

A reminder for next year: Data cannot be entered without hunter name and address or if all hunts are submitted as one entry.

LITERATURE CITED

Webster, W. D., J. F. Parnell, Jr. and W. C. Biggs, Jr. 1985. Mammals of the Carolinas, Virginia and Maryland. The University of North Carolina Press.

Platt, Steven G., and Mary Bunch. 2000. Distribution and Status of the Swamp Rabbit in South Carolina. Proc Annual Conference, Southeast Association Fish and Wildlife Agencies 54:407-413.