

PENNSYLVANIA GAME COMMISSION
BUREAU OF WILDLIFE MANAGEMENT
RESEARCH DIVISION
PROJECT ANNUAL JOB REPORT

PROJECT CODE NO.: 06210

TITLE: White-tailed Deer Research/Management

PROJECT JOB NO.: 21009

TITLE: Evaluation of Biological Effects and Social Acceptance of New Antler Restrictions for White-tailed Deer Hunting Season in Pennsylvania

PERIOD COVERED: 1 July 2006 through 30 June 2007

COOPERATING AGENCIES: Pennsylvania Cooperative Fish and Wildlife Research Unit, The Pennsylvania State University

WORK LOCATION(S): Centre and Armstrong counties and statewide

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Abstract: This research was designed to estimate survival and monitor movements of male white-tailed deer from 6 to 30 months of age, and to evaluate hunter acceptance and satisfaction with antler point restrictions. Wallingford et al. (2006) reported on survival and movements of bucks, and provided some preliminary analyses of hunter satisfaction. Final analyses on deer hunter surveys need to be conducted to complete the final objective. A final report is expected in 2008.

OBJECTIVES

1. To estimate survival and identify mortality causes of male white-tailed deer from 6 to 30 months of age.

2. To monitor movements of male white-tailed deer from 6 to 30 months of age. Some males are expected to disperse between 10 and 30 months of age. Information related to dispersal (distance, timing, and rates) may explain differences in behavior among deer populations occupying different landscapes. These movement data may be used to develop spatially explicit population models and may assist in developing transmission of disease models.

3. To evaluate hunter acceptance and satisfaction with antler restrictions. We anticipate hunter attitudes and satisfaction will change as hunter expectations change from an altered sex- and age-ratio in the pre-hunt deer herd. This information will provide insight about hunter acceptance and satisfaction of future changes in Pennsylvania's deer management program.

METHODS

Objectives 1 and 2 were completed in 2005-06. Objective 3 is the only objective that remains to be finished.

The deer hunter survey conducted in 2002-2005 included a panel of hunters who agreed to respond to all 6 deer hunter surveys over a 3-year period. This panel component was designed to monitor changes in attitudes and opinions over time. One critical component of the analysis of panel members is to determine if there is a bias between panel members who completed all 6 surveys and those who dropped out. We conducted a final survey in Fall 2005 to panel members who did not complete all 6 surveys.

Summary statistics were conducted on 44 selected questions for the first 6 surveys from the randomly selected group of hunters. A Likert scale response (strongly agree, agree, neither agree or disagree, disagree, strongly disagree) was recorded for each question. We then lumped those in agreement (agree or strongly agree) and those who disagree (disagree or strongly disagree). This preliminary analysis was designed to show a trend across the past 3 years of hunting with the current antler point restrictions. Log-linear modeling (Agresti 1984) will be used for data analysis of deer hunter surveys.

RESULTS

No final analyses on hunter survey data were conducted in 2006-07. Final results of Objectives 1 and 2 and preliminary results of Objective 3, the deer hunter survey, can be found in Wallingford et al. (2006).

RECOMMENDATIONS

1. Conduct data analyses of panel members who dropped out after the first survey. This is to determine if there are differences between hunters who were dropped from the panel and those who completed all 6 surveys.
2. Complete data analysis of hunter satisfaction surveys.
3. Write final report.

LITERATURE CITED

- Agresti, A. 1984. Analysis of ordinal categorical data. John Wiley and Sons, Inc. New York, New York, USA.
- Wallingford, B. D., C. S. Rosenberry, and E. S. Long. 2006. Evaluation of Biological Effects and Social Acceptance of New Antler Restrictions for White-tailed Deer Hunting Season in Pennsylvania. Annual Job Report. Pennsylvania Game Commission, Harrisburg, Pennsylvania, USA.