To the Graduate Council:

I am submitting herewith a thesis written by April Lee Marion entitled "Perceived Benefits of the 4-H Junior High Wildlife Conference and the Differences in Attitude and Wildlife Knowledge Between 4-H Junior High Wildlife Conference Participants and Other 4-H Members." I have examined the final paper of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural and Extension Education.

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Vice Provost and Dean of Graduate Studies

PERCEIVED BENEFITS OF THE 4-H JUNIOR HIGH WILDLIFE CONFERENCE AND THE DIFFERENCES IN ATTITUDE AND WILDLIFE KNOWLEDGE BETWEEN 4-H JUNIOR HIGH WILDLIFE CONFERENCE PARTICIPANTS AND OTHER 4-H MEMBERS

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ABSTRACT

The Annual 4-H Junior High Wildlife Conference is a youth education program offered to 4-H members that participated in the 4-H Wildlife Project. The study identified three different sample groups to evaluate the benefits and knowledge gained between those who attended the annual 4-H Junior High Wildlife Conference from 1998 through 2000, those who participated in the 4-H Wildlife Project but did not attend the conference, and those who participated in 4-H yet were not involved in the Wildlife Project in any way. The purpose of the study was to look at demographic characteristics of the three different study groups, the perceived benefits of those who attended the wildlife conference, the knowledge of wildlife management and conservation gained from the participants that attended the wildlife conference when compared to the knowledge of the two study groups that did not attend the conference, attitudes concerning wildlife issues between the three study groups, and decisions on career choices. Two separate questionnaires were designed for the study. The questionnaires were mailed to individuals selected for the study. Findings indicated that the majority of individuals in the three respondent groups that participated in the study had very similar demographic characteristics. Most individuals that were involved in 4-H, regardless of their participation in wildlife, resided on a farm, planned to attend college, and were involved in 4-H for 5 or more years. Wildlife conference participants had a positive attitude concerning the wildlife conference. Conference participants perceived the wildlife conference to be an important incentive to be involved in the Wildlife Project and in 4-H. Conference participants felt that they benefited from the wildlife conference since all objectives were meet. Pretest and posttest score were compared over the past

three years to determine the difference in knowledge gained before and after participants attended the conference. Test scores from the past three years showed an increase in knowledge gained by participants that attended the wildlife conference. There was no difference between the three respondent groups regarding wildlife knowledge. The 4-H members that were involved in the Wildlife Project but did not attend the conference scored slightly higher on the knowledge test than did the other two groups. Wildlife conference participants in the study group had the second highest mean score. 4-H members with no involvement in the Wildlife Project scored the lowest on the knowledge test. All three respondent groups had similar views concerning wildlife issues. There were only three issues that the respondent groups differed significantly. The three issues that were significantly different concerned hunting, prescribed burning and predation. Wildlife conference participants and Wildlife Project participants that did not attend the conference were more likely to agree that hunting, prescribed burning, and predation are important components of wildlife management than those individuals with no involvement in the Wildlife Project. Wildlife conference participants and individuals that were involved in the Wildlife Project but did not attend the conference were no more likely to choose to enter a wildlife or wildlife related career than those with no involvement in the Wildlife Project. The 4-H Junior High Wildlife Conference should continue to be used as an education program for the benefit of those who attend. The 4-H Wildlife Project should be structured so that it involves nontraditional students with urban backgrounds. To increase knowledge gained by individuals that attend the conference the quiz bowl should continue to be the focal event of the conference. Through competition the quiz bowl created a greater desire for participants to learn more

from the conference. Based on these findings an additional study should be designed to determine how the Wildlife Project affects the attitudes of 4-H members regarding issues of hunting, prescribed burning and predation when compared to 4-H members with no involvement in the Wildlife Project. Additional follow-up studies should be conducted periodically to continue to evaluate the knowledge gained and benefits perceived from the 4-H Junior High Wildlife Conference. An additional study should be designed to evaluate life skills such as personal development, citizenship, and vocational skills gained by participating in the Wildlife Project and attending the 4-H Junior High Wildlife Conference. An additional study should be designed to determine if participation in the 4-H Junior High Wildlife Conference leads to participation in other areas of 4-H.

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CHAPTER I

INTRODUCTION

4-H developed from a progressive educational movement in the early 1900's in America. 4-H is the youth education branch of the Tennessee Cooperative Extension Service. Citizens in each county of Tennessee have access to a county Extension office for both youth and adult programs. "The basic purpose of 4-H is the development of boys and girls so that they may become responsible and capable citizens. This purpose is the reason why 4-H is used to train boys and girls in leadership, self-expression, cooperation, group participation, democratic action, and fair play" (Kelsey and Hearne, 1963).

The mission of 4-H is to provide opportunities for young individuals to obtain knowledge, develop and acquire life skills, and practice behavior that will enable them to become self motivated, productive, and contributing members of society. The 4-H program provides a service that strengthens families and communities, provides formal and non-formal empirical learning, develops skills useful throughout life, and encourages leadership and volunteerism (Wessel and Wessel, 1982).

4-H Conservation and Environment increases environmental awareness and educates participants by teaching wise conservation practices and efficient use of natural resources. Participants develop a greater appreciation for the social and economic values of natural resources, including wildlife. 4-H helps participants develop leadership and decision-making skills. 4-H also gives participants a better understanding of the

interaction between their day-to-day activities and the effect it has on the environment. Teaching good conservation practices and increasing environmental awareness will lead to a healthy environment (Neilson and Benson, 1992).

Environmental awareness is necessary to the conservation of the world's natural resources. Conservation of natural resources, which includes wildlife, is directed towards a practical use for today and the future. The Annual 4-H Junior High Wildlife Conference is an effective means of teaching participants different aspects of the environment with an emphasis on wildlife ecology and management. This provides 4-H participants an opportunity to learn about different wildlife species and management techniques that they would not be exposed to in their daily lives. The information provided in the 4-H wildlife program also gives participants a basis to explore potential career opportunities in natural resources management.

The Junior High 4-H Wildlife Conference gives participants an opportunity to develop awareness for wildlife through education and management programs. Wildlife ecology, and management is just a one of the subject area covered at the conference. The youth that attend the conference are rewarded for their hard work in the 4-H Wildlife program by the life skills and wildlife knowledge that they gain.

Statement of the Problem

The annual Tennessee 4-H Junior High Wildlife Conference has been conducted for the past 28 years This allows each county to send two 4-H students from the seventh and eighth grades that participate in the Wildlife Project.

There has been no study to determine if there is any perceived benefit and knowledge gain from those students who participate in the conference. There is a pre-test and a post-test given to evaluate the knowledge gained at the beginning and end of the conference. This only allows us to look at the gain of knowledge from the students that attend the conference. It does not show their total knowledge of wildlife conservation and management when compared to other 4-H members.

A comparison of the students that attend the conference with the students that are active in 4-H Wildlife Project but did not attend the conference would better represent how much benefit and knowledge was achieved from the conference. This would allow a better understanding of how beneficial the conference is and also how important the 4-H Wildlife Project is in general compared to other 4-H participants. The knowledge that students had at the end of the conference compared to the knowledge of students in the wildlife program would better represent the effectiveness of the wildlife conference.

Purpose of the Study

The study will identify three different sample groups to evaluate the benefits and knowledge gained between those who attended the annual 4-H Junior High Wildlife Conference from 1998 through 2000, those who participated in the 4-H Wildlife Project but did not attend, and those who participated in 4-H yet were not involved in the Wildlife Project in any way. Five different research objectives were developed to evaluate the three different study groups.

The study will identify demographic characteristics of the three different study groups. The perceived benefits of those who attended the wildlife conference will be

identified and evaluated. The knowledge of wildlife management and conservation gained from the participants that attended the wildlife conference will be evaluated and compared to the knowledge of the two study groups that did not attend the conference. Attitudes concerning wildlife issues also will be identified and evaluated to determine the differences between those who attended the conference and the two study groups who did not attend the conference. Decisions on career choices will be identified between the three study groups to determine if those involved in the Wildlife Project and those who attend the wildlife conference have a greater awareness of and consider entering wildlife or wildlife related careers.

Research Objectives

The five following research objectives were identified to accomplish the main purpose of the study:

1. To identify and describe demographic characteristics of the three study groups.
2. To identify the perceived benefits the participants acquired from the Annual 4-H Wildlife Conference.
3. To evaluate the difference in knowledge of wildlife practices between the three study groups.
4. To evaluate the difference in attitudes concerning wildlife issues between the three study groups.
5. To investigate the differences between the three study groups regarding planned career choices.

CHAPTER II

REVIEW OF LITERATURE

The Development of 4-H Youth Programs in Extension

The development of 4-H began at the turn of the century as a way of incorporating the knowledge of the land-grant university to include the rural youth. 4-H is part of the Cooperative Extension System that places research-based information into hands-on formats to be used by adults and older youth to teach life skills to other youth. The target audience includes youth from ages 5-19, their families, and other adult members of the community (Reck, 1951). 4-H was developed to help youth build life skills and develop their abilities in positive ways.

The 4-H program stemmed from progressive educators who started to emphasize the needs of young people. Schools and churches established boys' and girls' clubs to meet the needs of the young people. Clubs were organized outside the schools in most states. Rural parents acted as volunteer leaders and county Extension agents provided the materials (Wessel and Wessel, 1982).

Formal establishment of 4-H came about through Congressional appropriations to the state land-grant institutions beginning in 1912. This was for the development of early extension work within the states. The Smith-Lever Act, passed in 1914, established the Cooperative Extension System within the USDA, the state land-grant universities and the county extension offices (Wessel and Wessel, 1982).

The Cooperative Extension 4-H Youth Development program uses a hands-on, learn-by-doing approach to allow youth to develop the knowledge, attitudes, and skills they need to become confident, caring, and contributing citizens of the world. This goal is accomplished by using the knowledge and resources of the land-grant university system, along with involvement from concerned adults (Ladewig and Thomas, 1987).

4-H camps provide positive youth develop through hands-on, learning programs. Yet, they are not the only mode of delivery. There are seven modes of delivery that serve different but equally important purposes. The seven modes of delivery are: organized 4-H clubs; special interest/short term programs/day camps; overnight camping programs; school enrichment programs; individual study/mentoring/family learning programs; school-aged child care education programs; and instructional television/video programs. Each delivery mode differs in duration and intensity, yet all are involved in learning through hands-on programs (Stout, 1992).

The Development of 4-H Environmental Programs

The first 4-H environmental programs started to appear in the 1960's. This came about as a result of increasing recognition of environmental degradation. Due to the lack of knowledge that school children had concerning environmental issues the efforts were intensified. The main goal of the environmental education programs is to create a sound appreciation of past, current, and future environmental issues (Christy and Byford, 1987).

Environmental Education in the Public School

During the 1960's most American views on the environment seemed to be based on confined factual awareness and understanding. Formal school programs that concentrated on wildlife and other natural resources became a major issue of more current environmental education efforts (Higginbotham, 1997). Due to the lack of knowledge by most Americans it was difficult to respond to current environmental problems. School children and the American public were not the only ones with limited knowledge, but teachers were also lacking knowledge in that general area. Teachers had minimal knowledge and training on environmental issues and concerns. This was the primary reason environmental education had not been taught in a more regular basis (Neilson and Benson, 1992).

The Tennessee 4-H Junior High Wildlife Conference

Every year, TWRA sponsors the 4-H Junior High Wildlife Conference. The Department of Forestry, Wildlife and Fisheries Department and 4-H Department work together to plan the conference. The 28th Annual 4-H Junior High Wildlife Conference was held in 2000. In the past, the annual conference has taken place at all four of the 4-H camps located in Crossville, Greeneville, Columbia and Milan. For the last several years, the conference has been rotated between the Clyde Austin 4-H Center in Greeneville, Tennessee and the Buford Ellington 4-H Center in Milan, Tennessee.

Each of the 95 counties located in Tennessee has the opportunity to send 2 delegates. The delegates are seventh and eighth graders that are currently participating in

the 4-H Wildlife Project. If a county does not participate or only sends one delegate, then other counties have the option to send more participants to fill the empty spaces.

The 4-H Junior High Wildlife Conference provides 4-H'ers with wildlife awareness, education and wildlife programs. The different subject areas covered in the conference include wildlife management and ecology, wildlife management methods, habitat management, backyard wildlife management, reptiles and amphibians, forest management, and fish management.

The wildlife conference has been held for the past 28 years, yet there has never been a study to compare knowledge gained from the participants' knowledge of non-participants. A similar study conducted by Sparks (1995) regarding benefits received and knowledge gained from the National 4-H Forestry Invitational found overall positive attitudes concerning the Invitational. Participants that attended the Invitational had a greater general knowledge of forestry practices than those who did not attend. Sparks recommended that planners should consider it appropriate to keep the Invitational as part of the 4-H education program.

Career Development in Wildlife Fields

The knowledge that is gained from the wildlife conference and years spent in the Wildlife Project can stimulate interest to pursue a career in natural resources. An Ohio study conducted by Matulis (1985) found that alumni felt that 4-H had an impact on their self-awareness, their general career awareness concerning recognition of interest and abilities leading to a career, and their knowledge of career exploration resources, career considerations and sense of need to make a career choice. The study also found that 4-H

had an influence on former members discovering the things they enjoyed doing and the things they did well.

Rose (1996) indicated in a study conducted in Tennessee on 4-H judging teams, that as the number of years of participation on judging teams increased so did the influence on the respondents' choice of a career. Yet, for even the individuals that participated for five or six years, there was only moderate influence on their choice of a career. In the study, respondents agreed that participating on the judging team influenced their knowledge of possible careers.

CHAPTER III

PROCUDURE AND METHODOLOGY

Population and Sample

The population was made up of all participants that attended the Tennessee 4-H Junior High Wildlife Conference from 1998 through the summer of 2000, 4-H members involved in the Wildlife Project but did not attend the conference, and 4-H members with no involvement in the Wildlife Project. The 95 counties throughout Tennessee had the opportunity to send 2 delegates in the Wildlife Project to represent their county. During the conference the delegates were in the seventh or eighth grade. The 556 4-H members that had participated in the conference during the past three years were identified as part of the population for this study. There were 202 females and 354 males that attended the conference over the past three years.

A random sample of the population was selected by assigning each individual an identification number. A generated random sample was conducted using a computer program to select the individuals. Of the 556 individuals in the population, 115 were randomly selected. The selected individuals were identified so that their names and addresses could be sent to the corresponding county agents for verification and accuracy (See Appendix A).

The agents were asked to identify names and addresses of individuals with similar characteristics to those listed. The two groups of individuals selected as comparison groups were active in the 4-H Wildlife Project but did not attend the conference and were

in 4-H but did not participate in the 4-H Wildlife Project. There were a total of 229 individuals selected from the random sample. There were 93 conference participants, 66 individuals that are participants in the Wildlife Project but did not attend the conference and 70 4-H members who have never participated in the Wildlife Project. The 93 conference participants were consisted of 25 females and 68 males. The 66 individuals that were participants in the Wildlife Project but did not attend the conference were consisted of 22 females and 44 males. The 70 4-H members who have never participated in the Wildlife Project were consisted of 45 females and 25 males. After all the individuals were identified to participate in the study, each was assigned an identification number. This sample size was adequate to achieve a 95 percent confidence interval in findings from this study.

Instrumentation

The delegates that attended the conference were given a pretest and a posttest to determine the degree of knowledge before and after the conference. Although the tests measured knowledge gained from those that participated in the conference, it did not measure the attitudes regarding wildlife issues and career choices. To evaluate attitudes and knowledge gained by the delegates and other 4-H members an instrument was designed from the objectives stated in the Tennessee 4-H Junior High Wildlife Conference Guide.

Two separate questionnaires were designed for the study. The first questionnaire was designed for those selected delegates that attended the wildlife conference from 1998

through 2000. The second questionnaire was designed for those who participated in the 4-H Wildlife Project but did not attended the conference and those who were in 4-H but were not involved in the Wildlife Project.

The questionnaire that was designed for participants that attended the conference was developed after reviewing a study on personal attitudes of National 4-H Forestry Invitational participants by Sparks, (1994). The questionnaire consisted of six sections. The first section of the questionnaire consisted of a semantic differential scale that used antonyms to measure the participants' attitudes. Responses that were positive were listed on the left while negative responses were listed on the right. The second section of the questionnaire consisted of a Likert-type scale to measure the participants' attitudes concerning incentives to be involved in the Wildlife Project and 4-H. The third section consisted of a Likert-type scale to measure the respondents' perceived benefits they acquired from participating in the conference. The objectives of the Tennessee 4-H Junior High Wildlife Conference were used to develop this part of the questionnaire The fourth section used a Likert-type scale to measure the respondents' attitudes regarding wildlife and habitat management issues. The fifth section contained a series of multiple-choice questions to measure wildlife knowledge. Questions were used from both the pretest and posttest given at the wildlife conference to create the knowledge test. The last section contained questions regarding demographic information and planned career choices.

The second questionnaire was designed for individuals who were in the Wildlife Project but did not attend the conference and those who were 4-H members with no

participation in the Wildlife Project. The first section of the questionnaire was a Likert-type scale used to measure the respondents' attitudes regarding wildlife and habitat management issues. This second section consisted of a multiple-choice knowledge test to measure wildlife knowledge. These sections were identical to the fifth and sixth sections of the questionnaire designed for conference participates. The third section was similar to the first questionnaire concerning demographic information and planned career choices.

A Kuder Richardson test score (KR_{20}) was calculated to determine how reliable the knowledge test was in the questionnaire. The knowledge test was identical for both questionnaires. A KR_{20} reliability coefficient of 0.66 was calculated for the knowledge test based on scores from all study participants. The calculated reliability coefficient was determined to be acceptable and the test was not altered.

Variable Descriptions

Following is a description of the independent, dependent and moderating variables identified in an effort to accomplish the stated objectives.

Independent Variables

The independent variable for the study was level of participation in the wildlife conference. The 3 levels of this variable were: 1) those who attended the Junior High 4-H Wildlife Conference; 2) those who participate in the 4-H Wildlife Project but did not attended the conference; and, 3) 4-H members who did not participate in the Wildlife Project in any way.

Dependent Variables

Each sample group was evaluated on their wildlife knowledge and attitudes pertaining to wildlife practices. The first dependent variable was wildlife knowledge measured by means of a general wildlife knowledge test that included 20 multiple-choice questions regarding a wide spectrum of general wildlife information. The second dependent variable was attitudes related to wildlife issues and practices such as species population and habitat management. The last dependent variable was planned career choice.

The sample group that attended the conference was asked additional questions to identify the perceived attitudes the participants acquired from the conference. This variable was be measured by using a semantic differential scale. Perceived benefits were also measured by using a Likert-type scale.

Procedures

A panel of experts was presented with the questionnaires to determine the validity and reliability of the content before the questionnaires were mailed. Minor changes were made to the questionnaires. The researchers' graduate committee then approved both the research proposal and the questionnaire. Before the questionnaires could be mailed, approval from the Human Subjects Committee had to be granted. A proposal to conduct the study was sent to the Human Subjects Committee. Once approval was granted from the committee to conduct the research, questionnaires were mailed to those individual 4-H members that were selected for the study.

The 229 individual 4-H members selected for the study were each mailed a questionnaire. The individuals' identification numbers were placed in the top right corner of the questionnaire. Mailed with the questionnaire were a cover letter and a self-addressed envelope to return the completed questionnaire. The cover letter included instructions for completing the questionnaire, a promise of individual confidentiality, and contact phone numbers for individual questions or concerns (Appendix B). From the 229 questionnaires mailed, 98 were returned by the deadline. There were three questionnaires that were excluded because one was not completed and two respondents that were coded as 4-H non-participants had indicated that they had participated in the 4-H Wildlife Project for over one year. This left a total of 95 valid questionnaires.

Two weeks after the questionnaire was due a second mailing including the questionnaire, a different cover letter, and self-addressed envelope were sent (Appendix B). The second questionnaire was color coded to identify the difference between those who were early or late responders. There were 37 questionnaires returned in response to the second mailing. There were two questionnaires that were excluded because one was not completed and one respondent that was coded as 4-H non-participated indicated that he/she had participated in the 4-H Wildlife Project for more than two years. There were a total of 35 valid questionnaires.

There were a total of 130 questionnaires for a response rate of 57 percent. The 130 questionnaires were divided into 46 (35 percent) from 4-H Junior High Wildlife Conference participants, 39 (30 percent) from 4-H Wildlife Project participants who did

not attend the conference, and 45 (35 percent) from 4-H members who did not participant in the 4-H Wildlife Project.

Design

Since the study was conducted after the conference had taken place, it was an Expost facto study. A pretest was not possible for all of the sample groups. Although the researcher was unable to randomly assign participants to levels of the 3 participation groups, they were able to use random selection after the fact. Therefore, while all elements of randomization were not available, the design has some protection against the common threats to validity of findings. However the most accurate description of the design defined in Campbell and Stanley (1963) would be a variation of the static group comparison.

Data Analysis

The Statistical Package for the Social Sciences (SPSS 10.0) was used to analyze data obtained from the returned questionnaires. An alpha level of 0.05 was established for all probability tests. To determine if the groups were statistically different, the data were analyzed using Analysis of Variance and Chi-Square tests. If there was a statistically significant difference between the three groups, a Duncan's Multiple Range Test was used to determine which groups were different.

Response Bias Study Between Early and Late Responders

The 130 returned questionnaires included both early and late responders. There were 95 early responders and 35 late responders. Since late responders are quite similar to non-responders, a T-test was used to determine if there was a difference between early and late responders. Twenty-nine selected variables were analyzed to determine if there were any differences concerning early and late responders.

Five variables were significantly different. The first three variables only concerned those who attend the wildlife conference. The first variable was a scaled question regarding whether or not they thought the conference was enjoyable. The early responders had a slightly more positive attitude regarding the enjoyment of the wildlife conference. The second variable regarded the conference participants' level of agreement that the conference helped participants "gain new knowledge, skills, and attitudes through real life experiences." The early responders tended to agree more strongly than late responders. The third variable regarded the conference participants' level of agreement that the conference taught an "appreciation of nature for enjoyment." The early responders tended to agree more strongly than late responders. The last 2 variables included all three respondent groups. Late responders tended to agree more "wildlife is a natural resource we have learned to manage successfully" and "wildlife managers spent the majority of the twentieth century reestablishing wildlife populations into suitable habitats." Early responders were between agree and undecided on the issue.

With only five of 29 studied variables significantly different, there was little evidence to suggest the presence of response bias in this study. It was therefore concluded that findings from the study were generalized to the entire population from which it was drawn.

CHAPTER IV

PRESENTATION OF DATA AND FINDINGS

To Identify and Describe Demographic Characteristics of the Three Study Groups

The purpose of the first objective was to describe selected demographic characteristics including gender, the area where they lived, education level, and years of involvement in 4-H. Those who participated in the conference where also asked the year that they participated in the conference and what grade would they be in the fall of 2001.

Data in Table 1 describes demographic characteristics as reported by the respondents. The respondents were divided into three categories including conference participants, wildlife non-participants, and 4-H non-participants.

Gender

The respondent groups were divided into male and female responders. Conference participants and those who participated in the Wildlife Project but did not attend the conference had a greater percentage of males. Those who were in 4-H with no participation in Wildlife Project had a greater percentage of females. Conference participants had a return rate of 33 male responders (71.7 percent) and 13 female responders (28.3 percent). Wildlife non-participants had a return rate of 25 male responders (67.6 percent) and 12 female responders (32.4 percent). 4-H non-participants had a return rate of 14 males (31.1 percent) and 31 females (68.9 percent).

TABLE 1: Demographic Characteristics of the Three Respondent Groups.

	Respondent Group							
	Conference Participant		Wildlife non-participant		4-H non-participant		Total	
	n	%	n	%	n	%	n	%
Gender								
Male	33	71.7	25	67.6	14	31.1	72	56.3
Female	13	28.3	12	32.4	31	68.9	56	43.8
Total	46	100.0	37	100.0	45	100.0	128	100.0
Place of Residence								
Farm	18	39.1	22	59.5	18	40.0	58	45.3
Rural area	18	39.1	12	32.4	16	35.6	46	35.9
Town	9	19.6	2	5.4	5	11.1	16	12.5
Small city	1	2.2	1	2.7	5	11.1	7	5.5
Medium city	0.0	0.0	0.0	0.0	1	2.2	1	0.8
Total	46	100.0	37	100.0	45	100.0	128	100.0
Planned Education Level								
High school	0.0	0.0	1	2.9	1	2.2	2	1.6
Vocational school	6	13.0	2	5.7	0.0	0.0	8	6.3
College	30	65.2	19	54.3	28	62.2	77	61.1
Graduate school	10	21.8	13	37.1	16	35.6	39	31.0
Total	46	100.0	35	100.0	45	100.0	126	100.0
4-H								
1 Year	0.0	0.0	2	5.4	1	2.2	3	2.4
2 Years	0.0	0.0	1	2.7	1	2.2	2	1.6
3 Years	5	11.1	4	10.8	3	6.7	12	9.4
4 Years	6	13.3	8	21.6	4	8.9	18	14.2
5 Years	34	75.6	22	59.5	36	80.0	92	72.4
Total	45	100.0	37	100.0	45	100.0	127	100.0

Place of Residence

The place of residence was divided into farm, rural area, town, small city, medium city and large city. The majority of the three study groups lived on a farm or in a rural area. There were 18 conference participants who lived on a farm (39.1 percent), 18 lived in a rural area (39.1 percent), nine lived in a town (19.6 percent), and one lived in a small city (2.2 percent). There were 22 wildlife non-participants who lived on a farm (59.5 percent), 12 lived in a rural area (32.4 percent), two lived in a town (5.4 percent), and one lived in a small city (2.7 percent). There were 18 4-H non-participants who lived on a farm (40.0 percent), 16 lived in a rural area (35.6 percent), five lived in a town (11.1 percent), five lived in a small city (11.1 percent), and one lived in a medium city (2.2 percent). There were no conference participants or wildlife non-participants who lived in either a medium or large city. There were no 4-H non-participants who lived in a large city.

Planned Education Level

Education level was divided into high school, vocational school, college, and graduate school. The majority of the three study groups planned to attend college. There were six conference participants who planned to attend a vocational school after high school (13.0 percent), 30 planned to attend college (65.2 percent), and 10 planned to attend a graduate school (21.7 percent). There was one wildlife non-participant who only planned to graduate from high school, two planned to attend a vocational school after high school (5.7 percent), 19 planned to attend college (54.3 percent), and 13 planned to attend a graduate school (37.1 percent). There was one 4-H non-participant who only

planned to graduate high school, 28 planned to graduate from college (62.2 percent), and 16 planned to attend a graduate school (35.6 percent).

Length of Time in 4-H

The majority of the three study groups had been 4-H members for five or more years. There were five conference participants who had been 4-H members for three years (11.1 percent), six who had been 4-H members for four years (13.3 percent), and 34 who had been 4-H members for five or more years (75.6 percent). There were two wildlife non-participants who had been 4-H members for one year or less (5.4 percent), one who had been a 4-H member for two years (2.7 percent), four who had been 4-H members for three years (10.8 percent), eight who had been 4-H members for four years (21.6 percent), and 22 who had been 4-H members for five or more years (59.5 percent). There was one 4-H non-participant who had been a 4-H member for one year or less (2.2 percent), one who had been a 4-H member for two years (2.2 percent), three who had been 4-H members for three years (6.7 percent), four who had been 4-H members for four years (8.9 percent), and 36 who had been 4-H members for five or more years (80.0 percent).

To Identify the Perceived Benefits the Participants Acquired From the Annual Tennessee 4-H Junior High Wildlife Conference

Overall Attitude about the Tennessee 4-H Junior High Wildlife Conference

Conference participants were asked a series of questions to evaluate their perceived benefits gained from attending the conference. A semantic differential scale

TABLE 2: Wildlife Conference Participants' Overall Attitude about the Tennessee 4-H Junior High Wildlife Conference.

Objective	Respondents (n = 46) $\bar{x}$	sd
Overall attitude score regarding the Tennessee 4-H Junior High Wildlife Conference.	10.87	3.98

Range = 6-42; 6 = most positive, 42 = most negative

was used to measure the participants' general attitude about the Tennessee 4-H Junior High Wildlife Conference. The scale scores could range between 6 and 42. A score of 6 was the most positive and 42 were the most negative attitude. Table 2 shows that conference participants had an overall positive attitude score of 10.87 about their experience at the wildlife conference.

How the Tennessee 4-H Junior High Wildlife Conference Gave Participants Incentive to be Involved in 4-H

A Likert-type scale was used to evaluate if the Tennessee 4-H Junior High Wildlife Conference gave participants' the desire to be involved in 4-H. The values used for the scale included not at all = 1, somewhat = 3, and very = 5. Table 3 shows that the 46 conference participants thought the wildlife conference was a somewhat important incentive to be involved in the 4-H Wildlife Project ($\bar{x}$ = 3.24, sd = 1.54). The participants thought that the wildlife conference was between somewhat and a very important incentive to be involved in 4-H ($\bar{x}$ = 4.00, sd = 1.19).

TABLE 3: Wildlife Conference Participants' Perceptions of How the Tennessee 4-H Junior-High Wildlife Conference Gave Them Incentive to be Involved in 4-H and the Wildlife Project.

Reason	Respondents (n = 46) $\bar{x}$	sd
The Tennessee 4-H Junior-High Wildlife Conference Gave Me a Reason to Be Involved In:		
4-H	4.00	1.19
4-H Wildlife Project	3.24	1.54

Score: 1 = Not at All; 3 = Somewhat; 5 = Very

Participants' Level of Agreement Concerning the Tennessee 4-H Junior High Wildlife Conference Objectives

Conference participants were given a list of statements regarding the objectives of the Tennessee 4-H Junior High Wildlife Conference. A Likert-type scale was used to indicate the participants' level of agreement concerning the objectives. The values used on the scale included strongly agree = 1, agree = 2, undecided = 3, disagree = 4, strongly disagree = 5.

The average scores as shown in Table 4 ranged from 1.41 to 2.11. Scores that ranged closer to one indicated that more participants' strongly agreed that the objective was a benefit acquired from the wildlife conference. The objective that most participants strongly agreed to be a benefit gained from the wildlife conference was "Gain knowledge, skills, and attitudes through real life experiences."

To Evaluate the Difference Between Knowledge of Wildlife Practices of the Three Study Groups

A pretest and posttest were given to participants before they attended the wildlife conference and once the conference was completed. Data in Table 5 shows the increase in knowledge gained before participants attended the conference and after the conference was completed. There was an increase in knowledge gained from those participants the attended the wildlife conference over the past three years. Participants that attended the conference in 1999 had a 29 percent gain in knowledge. Participants that attended the conference in 2000 had a 21 percent gain in knowledge. Participants that attended the conference in 2001 had a 53 percent gain in knowledge.

A series of 20 test questions were given to all three study groups to evaluate their knowledge of wildlife. There was only one correct answer to each question. The answers were scored zero for incorrect and one for correct. A Kuder-Richardson KR_{20} test was used to evaluate the reliability of the test. The highest possible score was 20 and the lowest possible score was zero.

An ANOVA was used to determine if there was a significant difference between the three respondent groups regarding wildlife knowledge. The data in Table 6 shows that there was no significant difference between those who attended the 4-H Junior High Wildlife Conference (12.70), those who were in the 4-H Wildlife Project but did not attend the conference (13.46), and those who are not involved in 4-H Wildlife Project (11.93) in any way ($f = 2.71$, $df = 2, 127$, $p = 0.071$).

TABLE 4: Wildlife Conference Participants' Level of Agreement Concerning the Objectives of the Tennessee 4-H Junior High Wildlife Conference.

The Tennessee 4-H Junior High Wildlife Conference Helps Young People:	Respondents (n = 46) $\bar{x}$	sd
Gain knowledge, skills, and attitudes through real life experiences.	1.41	0.62
Develop leadership talents and abilities.	2.00	0.92
Become better stewards of the earth.	1.80	0.7
Recognize value of environment.	1.50	0.72
Learn techniques concerning land use management.	1.50	0.62
Understand wildlife management.	1.59	0.78
Contribute to the economy and human welfare.	1.91	0.81
Appreciate nature for enjoyment.	1.43	0.62
Strengthen personal standards and citizenship ideals.	2.11	0.92
Apply conservation principles.	1.78	0.79
Cultivate desire and ability to cooperate with others.	1.80	0.83

Score: 1=Strongly Agree; 2=Agree; 3=Undecided; 4=Disagree; 5=Strongly Disagree

Table 5: Wildlife Conference Participants' Percent Increase in Knowledge Gained Between Pretest and Posttest Scores.

	Average Test Score		
Year of Participation in the Wildlife Conference	Average Pretest Score	Average Posttest Score	Percent Increase in Knowledge Gained
1999	47	66	29
2000	52	63	21
2001	45	69	53

To Evaluate the Difference Between Attitudes about Wildlife Issues of the Three Study Groups.

Respondents were asked to rate their level of agreement on ten specific issues related to wildlife. The respondents indicated on a Likert-type scale, with a range of one to five, whether they strongly agreed, agreed, were undecided, disagreed, or strongly disagreed with the statement about the issue. Analysis of variance was used to determine the level of significance. In Table 7 the ANOVA showed that out of the ten wildlife issues three were significantly different with regard to attitude. There were seven wildlife issues that the respondent groups tended to agree with.

Respondent Group and Issue Concerning Hunting as a Necessary Tool in Wildlife Management

Data in Table 7 presented findings concerning the relationship between respondent group and the issue of using hunting as a necessary tool in wildlife management. Analysis of variance (ANOVA) was used to determine the level of significance, and to determine which respondent group had a significant difference in

TABLE 6: Relationship Between Respondent Group and Their Knowledge of Wildlife Practices.

Respondent Group	n	$\bar{x}$	sd
Conference participant	46	12.70	3.35
Wildlife non-participant	39	13.46	2.79
4-H non-participant	45	11.93	2.80
Total	130	12.66	3.04

Statistical Test f = 2.71, df = 2, 127, P = 0.071

opinion on this issue. When the analysis of variance test produced a significant f, the Duncan's Multiple Range Test was used to determine which respondent groups were different.

The ANOVA showed that there was a significant difference between respondent group regarding using hunting as a wildlife management tool. As reported in Table 7, all three groups tended to agree with the statement. Members of the Wildlife Project that did not attend the conference agreed strongest with the statement. They differed significantly from the group of 4-H members with no involvement in the Wildlife Project. However, Wildlife Project members that did not attend the conference did not differ significantly from conference participants and conference participants did not differ significantly from 4-H members with no involvement in the Wildlife Project regarding their attitude about "hunting is a necessary tool in wildlife management."

TABLE 7: Relationship Between Respondent Group and Attitude Toward Selected Wildlife Issues.

Issue Respondent group	n	$\bar{x}$*	sd
Hunting is a necessary tool in wildlife management.			
Conference participant	46	1.83 A B	1.00
Wildlife non-participant	39	1.46 A	0.72
4-H non-participant	45	2.13 B	1.10
f = 5.10; df = 2, 127; p = .007			
Prescribed burning improves habitat for many species.			
Conference participant	46	2.17 A	1.04
Wildlife non-participant	38	2.08 A	1.00
4-H non-participant	45	2.84 B	1.13
f = 6.74; df = 2, 126; p = .002			
Predation maintains healthy wildlife populations.			
Conference participant	46	1.65 A	0.74
Wildlife non-participant	38	1.55 A	0.86
4-H non-participant	45	2.00 B	0.67
f = 4.15; df = 2, 126; p = .018			
Clearcutting creates needed early successional habitat.			
Conference participant	46	2.80	1.15
Wildlife non-participant	39	3.13	1.30
4-H non-participant	44	3.14	1.07
f = 1.16; df = 2, 126; p = .316			
Wildlife management insures species continuum.			
Conference participant	46	1.72	0.69
Wildlife non-participant	38	1.53	0.80
4-H non-participant	44	2.48	0.95
f = 1.48; df = 2, 126; p = .232			

Table 7. Continued

Issue Respondent group	n	$\bar{x}$*	sd
Wildlife is a natural resource we have learned to manage successfully.			
Conference participant	44	2.41	1.06
Wildlife non-participant	38	2.34	1.12
4-H non-participant	44	2.48	0.95
f = 0.17; df = 2, 123; p = .843			
Wildlife managers spent twentieth century reestablishing suitable wildlife habitats.			
Conference participant	45	2.18	0.78
Wildlife non-participant	39	2.33	0.77
4-H non-participant	44	2.32	0.83
f = 0.51; df = 2, 125; p = .603			
Individuals and institutions contribute to responsible management of wildlife.			
Conference participant	45	1.91	0.73
Wildlife non-participant	37	1.95	0.91
4-H non-participant	45	2.20	0.81
f = 1.64; df = 2, 124; p = .198			
Natural resources can be managed for multi-use without destruction.			
Conference participant	45	1.93	0.94
Wildlife non-participant	39	1.67	0.70
4-H non-participant	45	1.93	0.89
f = 1.32; df = 2, 126; p = .270			
Conservation is important for wildlife because all members are linked together.			
Conference participant	45	1.51	0.69
Wildlife non-participant	39	1.44	0.79
4-H non-participant	45	1.44	0.59
f = 0.16; df = 2, 126; p = .856			

* Means with different letters beside them are significantly different as determined by the Duncan's multiple range test.

Score: 1=Strongly Agree; 2=Agree; 3=Undecided; 4=Disagree; 5=Strongly Disagree

Respondent Group and Issue Concerning Use of Prescribed Fire to Improve Wildlife Habitat

Data in Table 7 presented findings concerning the relationship between respondent group and the issue of prescribed burning improves habitat for many species. Analysis of variance (ANOVA) was used to determine the level of significance, and to determine which respondent group had a significant difference in opinion on this issue. When the analysis of variance test produced a significant f, the Duncan's Multiple Range Test was used to determine which respondent groups were different.

The ANOVA showed that there was a significant difference between respondent groups regarding prescribed burning improves habitat for many species. As reported in Table 7, all three groups tended to agree with the statement. Members of the Wildlife Project that did not attend the conference agreed strongest with the statement. Wildlife Project members that did not attend the conference did not differ significantly from conference participants. However, Wildlife Project participants that did not attend the conference and conference participants differed significantly from the group of 4-H members with no involvement in the Wildlife Project regarding their attitude about "prescribed burning improves habitat for many species."

Respondent Group and Issue Concerning Importance of Predation in Maintaining Healthy Wildlife Populations

Data in Table 7 presented findings concerning the relationship between respondent group and the issue of predation being important in maintaining healthy wildlife populations. Analysis of variance (ANOVA) was used to determine the level of significance, and to determine which respondent group had a significant difference in

opinion on this issue. When the analysis of variance test produced a significant f, the Duncan's Multiple Range Test was used to determine which respondent groups were different.

The ANOVA showed that there was a significant difference between respondent groups regarding predation being important in maintaining healthy wildlife populations. As reported in Table 7, all three groups tended to agree with the statement. Members of the Wildlife Project that did not attend the conference agreed strongest with the statement. Wildlife Project members that did not attend the conference did not differ significantly from conference participants. However, Wildlife Project participants that did not attend the conference and conference participants differed significantly from the group of 4-H members with no involvement in the Wildlife Project regarding their attitude about "predation maintains healthy wildlife populations."

There were no significance difference between respondent group and the seven issues regarding:

- Clearcutting creates early successional habitat needed by many wildlife species.
- Wildlife management should insure the continuous of the species.
- Wildlife is a natural resource we have learned to manage successfully.
- Wildlife managers spent the majority of the twentieth century reestablishing wildlife populations into suitable habitats.
- Private individuals and institutions contribute to responsible management of wildlife resources.

- Natural resources can be managed so that people with different interests can use the same resources without depleting them.
- Conservation of wildlife resources is important because all members of the animal kingdom are linked together.

Conference participants (2.80), wildlife non-participants (3.13), and 4-H non-participants (3.14) tended to be undecided whether "Clearcutting creates early successional habitat needed by many wildlife species." Conference participants (1.72), wildlife non-participants (1.53) and 4-H non-participants (2.48) agreed "Wildlife management should insure the continuous of the species." Conference participants (2.41), wildlife non-participants (2.34), and 4-H non-participants (2.48) tended to be in between agree and undecided "Wildlife is a natural resource we have learned to manage successfully." Conference participants (2.18), wildlife non-participants (2.33), and 4-H non-participants (2.32) tended to be in between agree and undecided "Wildlife managers spent the majority of the twentieth century reestablishing wildlife populations into suitable habitats." Conference participants (1.91), wildlife non-participants (1.95), and 4-H non-participants (2.20) agreed "Private individuals and institutions contribute to responsible management of wildlife resources." Conference participants (1.93), wildlife non-participants (1.67), and 4-H non-participants (1.93) agreed "Natural resources can be managed so that people with different interests can use the same resources without depleting them." Conference participants (1.51), wildlife non-participants (1.44), and 4-H non-participants (1.44) agreed "Conservation of wildlife resources is important because all members of the animal kingdom are linked together."

To Investigate the Differences Between the Three Study Groups Regarding Planned Career Choices

Respondents were asked an open-ended question concerning their planned career choice. Each answer was coded as either wildlife career, wildlife related career, or other career. The relationship between respondent group and planned career choice was then tested using the Chi Square test. The first analysis failed to produce a valid test because too few respondents planned wildlife careers. Therefore, the categories of "wildlife career" and "wildlife related career" were combined and a second Chi Square test was calculated. The results of that analysis are reported in Table 8. Based upon the data in Table 8, there is no reason to conclude that there is a relationship between respondent type and planned career choice. All three groups were more likely to plan non wildlife related careers (Chi Square = 3.81, df = 2, p = 0.149).

TABLE 8: Relationship Between Respondent Group and Career Choice.

Career Choice	Respondent Group							
	Conference Participant		Wildlife non-participant		4-H non-participant		Total	
	n	%	n	%	n	%	n	%
Wildlife or wildlife related career	13	33.3	11	36.7	7	17.5	31	28.4
Other career	26	66.7	19	63.3	33	82.5	78	71.6
Total	39	100.0	30	100.0	40	100.0	109	100.0

Statistical Test Chi-Square = 3.81, df = 2, P = 0.149

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The study identified three different sample groups to evaluate the benefits and knowledge gained between those who attended the annual 4-H Junior High Wildlife Conference from 1998 through the year 2000, those who participated in the 4-H Wildlife Project but did not attend, and those who participated in 4-H yet are not involved in the Wildlife Project in any way. Five different research objectives were developed to evaluate the three different study groups.

The five specific objectives for the study were to:

1. To identify and describe demographic characteristics of the three study groups.
2. To identify the perceived benefits the participants acquired from the Annual 4-H Wildlife Conference.
3. To evaluate the difference between knowledge of wildlife practices of the three study groups.
4. To evaluate the difference between attitudes concerning wildlife issues of the three study groups.
5. To investigate the differences between the three study groups regarding planned career choices.

For the purpose of this study, 4-H members were categorized into three respondent groups. The first group consisted of 4-H members that were involved in the Wildlife Project and attend the 4-H Junior High Wildlife Conference. The second respondent group consisted of 4-H members who were involved in the 4-H Wildlife Project but did not attend the wildlife conference. The third respondent group consisted of 4-H members that have never been involved in the Wildlife Project.

A random sample of the population was selected by assigning each individual an identification number. The population was made up of 556 individuals. There were 202 females and 354 males that attended the conference over the past three years. The names and addresses of the 115 randomly selected wildlife conference participants were sent to their corresponding county agents for verification and accuracy. The agents were asked to identify names and addresses of individuals with similar characteristics to those listed. The two groups of individuals selected as comparison groups were active in the 4-H Wildlife Project but did not attend the conference and were in 4-H but did not participate in the 4-H Wildlife Project.

There were a total of 229 individuals selected as the random sample. There were 93 conference participants, 66 individuals that are participants in the Wildlife Project but did not attend the conference, and 70 4-H members who have never participated in the Wildlife Project. This sample size was adequate to achieve a 95 percent confidence interval in findings from this study.

Two separate questionnaires were designed for the study. The first questionnaire was designed for those delegates that attended the wildlife conference from 1998 through

2000 and were selected for the study. The second questionnaire was designed for those who participated in the 4-H Wildlife Project but did not attended the conference and those who are in 4-H but were not involved the in Wildlife Project.

The questionnaires were similar in that both questionnaires contained sections that measured the respondents' attitudes regarding wildlife and habitat management. Both questionnaires contained a series of multiple-choice questions to measure wildlife knowledge of the three respondent groups, and a section of questions regarding demographic information and planned career choices.

The questionnaire that was designed for wildlife conference participants contained sections to measure attitudes and perceived benefits gained from attending the wildlife conference. The first section of the questionnaire consisted of a semantic differential scale that used antonyms to measure the participants' attitudes concerning the wildlife conference. The second section of the questionnaire consisted of a Likert-type scale to measure the participants' attitudes concerning incentives to be involved in the Wildlife Project and in 4-H. The third section used objectives of the Tennessee 4-H Junior High Wildlife Conference to measure the respondents' perceived benefits acquired from the wildlife conference concerning the objectives of the conference.

The 229 individual 4-H members selected for the study were each mailed a questionnaire. From the 229 questionnaires mailed, there were a total of 95 valid questionnaires. Two weeks after the questionnaire was due a second mailing including the questionnaire, a different cover letter, and self-addressed envelope was sent. There were a total of 35 valid returned questionnaires from the second mailing.

There were a total of 130 questionnaires with a response rate of 57 percent. The 130 questionnaires were divided into 46 (35 percent) from 4-H Junior High Wildlife Conference participants, 39 (30 percent) from 4-H Wildlife Project participants who did not attend the conference, and 45 (35 percent) from 4-H members who did not participation in the 4-H Wildlife Project.

Major Findings

The findings that were determined from the study correspond with the research objectives designed for the study. Listed below is a summary of the objectives and findings from the study.

Research Objective 1: To identify and describe demographic characteristics of the three respondent groups.

The three respondent groups consisted of a range from those who attended the 4-H Junior High Wildlife Conference and were involved in the Wildlife Project, those who only participated in the Wildlife Project but did not attend the wildlife conference, and 4-H members with no involvement in the Wildlife Project. Although there was a diversity of 4-H members who participated in the study, their demographic characteristics were very similar.

The majority of the respondents from the three respondent groups resided on a farm or a rural area. There were no conference participants or wildlife non-participants who lived in either a medium or large city. There were no 4-H non-participants who lived in a large city. The majority of individuals in the three respondent groups planned to

further their education by attending college. Most individuals in the three respondent groups had been a 4-H member for five or more years.

Research Objective 2: To identify the perceived benefits the participants acquired from the Annual 4-H Wildlife Conference.

Findings concluded that wildlife conference participants had an overall positive attitude about the 4-H Junior High Wildlife Conference. The score could range from 6 to 42. The mean score for the wildlife participants was 10.87.

Conference participants perceived the wildlife conference was an important incentive to be involved in both the 4-H Wildlife Project and in 4-H. The 46 conference participants thought the wildlife conference was a somewhat important incentive to be involved in 4-H Wildlife Project ($\bar{x}$ = 3.24, sd = 1.54). The participants thought that the wildlife conference was between somewhat and a very important incentive to be involved in 4-H ($\bar{x}$ = 4.00, sd = 1.19). Results show that the wildlife conference gave a slightly more incentive to be involved in 4-H than the 4-H Wildlife Project.

Wildlife conference participants agreed that they benefited from the wildlife conference because they perceived all objectives were achieved. Scores could range from one being strongly agree to five being strongly disagree. The objective with the lowest average rating to be a benefit gained from the wildlife conference was "Gain knowledge, skills, and attitudes through real life experiences." The objective with the highest average rating to be a benefit gained from the wildlife conference was "Strengthen personal standards and citizenship ideals." Even the highest rating still shows that the 46 participants agreed that the wildlife conference achieved all the objectives stated in the list.

Research Objective 3: To evaluate the difference between knowledge of wildlife practices of the three respondent groups.

Pretest and posttest scores were compared over the past three years to determine the difference in knowledge gained before and after participants attended the conference. Test scores from the past three years showed an increase in knowledge gained by participants that attended the wildlife conference. The increase is test scores ranged from 21 percent to 53 percent over the past three years.

A knowledge test of 20 questions was used to determine if there was a significant difference between the three different respondent groups regarding their knowledge of wildlife. A Kuder-Richardson KR_{20} test determined that the test was acceptably reliable at 0.66. Findings show that there were no significant differences among the respondent groups regarding their knowledge of wildlife. There was no significant difference between respondent group and test score. Possible test scores could have ranged from zero to 20. The average mean score for all three respondent groups was 12.66.

Research Objective 4: To evaluate the difference between attitudes of wildlife issues of the three respondent groups.

The three respondent groups were asked to rate how they felt about certain wildlife issues. The answers could range from strongly agree, agree, were undecided, disagree and strongly disagree. There were three issues that were significantly different between respondent types. Those issues were hunting is a necessary tool in wildlife management, prescribed burning improves habitat for many species, and predations maintains healthy wildlife populations.

Findings showed that there was a significant difference between respondent group and the issue regarding using hunting as a wildlife management tool. Members of the Wildlife Project that did not attend the conference agreed strongest with the statement. They differed significantly from the group of 4-H members with no involvement in the Wildlife Project. However, Wildlife Project members that did not attend the conference did not differ significantly from conference participants and conference participants did not differ significantly from 4-H members with no involvement in the Wildlife Project regarding their attitude about "hunting is a necessary tool in wildlife management." Although there was a significant difference, all three groups tended to agree with the issue.

Findings showed that there was a significant difference between respondent group and the issue regarding prescribed fire for habitat improvement. The data indicated that those who attended the wildlife conference and those who were involved in the Wildlife Project but did not attend the wildlife conference were not significantly different. Yet, both were significantly different from those who were 4-H members with no involvement in the Wildlife Project. Although there was a significant difference, all three groups tended to agree with the issue.

Findings showed that there was a significant difference between respondent group and the issue regarding predation maintaining healthy wildlife populations. The data indicated that those who attended the wildlife conference and those who were involved in the Wildlife Project but did not attend the wildlife conference were not significantly different. Yet, both were significantly different from those who were 4-H

members with no involvement in the Wildlife Project. Although there was a significant difference, all three groups tended to agree with the issue.

Findings determined that there was no significant difference regarding issues that clearcutting creates early successional habitat needed by many wildlife species, wildlife management should insure the continuous of the species, wildlife is a natural resource we have learned to manage successfully, wildlife managers spent the majority of the twentieth century reestablishing wildlife populations into suitable habitats, private individuals and institutions contribute to responsible management of wildlife resources, natural resources can be managed so that people with different interests can use the same resources without depleting them, and conservation of wildlife resources is important because all members of the animal kingdom are linked together.

Respondent groups tended to be undecided that "Clearcutting creates early successional habitat needed by many wildlife species." Conference participants, wildlife non-participants and 4-H non-participants agreed that "Wildlife management should insure the continuous of the species."; "Natural resources can be managed so that people with different interests can use the same resources without depleting them."; "Conservation of wildlife resources is important because all members of the animal kingdom are linked together."; and "Private individuals and institutions contribute to responsible management of wildlife resources." Respondent groups tended to be in between agree and undecided that "Wildlife is a natural resource we have learned to manage successfully." and "Wildlife managers spent the majority of the twentieth century reestablishing wildlife populations into suitable habitats."

Research Objective 5: To investigate the differences between the three respondent groups regarding planned career choices.

There was no significant difference between respondent group and career choice. All three respondents were more likely to choose non-wildlife related careers regardless of their involvement in the Wildlife Project.

Conclusions and Recommendations

The three respondent groups that participated in the study had very similar demographic characteristics. Data showed that most individuals that were involved in 4-H, regardless of their participation in wildlife, resided on a farm or rural area, planned to attend college, and were involved in 4-H for 5 or more years. There were more male participants that attended the wildlife conference and were involved in the Wildlife Project but did not attend the wildlife conference than female participants by a three to two ratio. The 4-H Wildlife Project should be structured so that it involves nontraditional students with urban backgrounds.

It was determined that wildlife conference participants had a positive attitude concerning the wildlife conference. Conference participants perceived the wildlife conference to be an important incentive to be involved in the Wildlife Project and in 4-H. The wildlife conference is an incentive for youth to become involved in 4-H. Activities and conferences, such as the wildlife conference, encourage youth to become involved in 4-H. Conference participants came away from the wildlife conference with a positive feeling. The wildlife conference benefited conference participants in areas of personal growth, and environmental and wildlife awareness. Therefore, the 4-H Junior High

Wildlife Conference should continue to be used as an education program for the benefit of those who attend.

Findings determined that the wildlife conference had an impact on the amount of knowledge gained by participants that attended the conference. Individuals that attended the conference varied on their level of wildlife knowledge. Individuals that attended the conference ranged from those who were just getting started in the Wildlife Project to individuals that were active in the Wildlife Project for five or more years. Regardless of their level of wildlife knowledge, test scores showed that there was an increase in knowledge gained by all who participated in the wildlife conference.

The quiz bowl was the focal point at the end of the wildlife conference. It was used as a tool to create a desire for participants to learn while also having fun at the conference. Participants were paired off into teams that remained constant though out the conference. It encouraged them to apply themselves to strive to be the winners over the other teams. Through competition the quiz bowl was used to create a greater desire for participants to learn more from the conference.

Findings determined that there was no significant difference between the three respondent groups regarding their knowledge of wildlife. The 4-H members that were involved in the Wildlife Project but did not attend the conference had the highest mean score on the knowledge test. Wildlife conference participants had the second highest mean score. 4-H members with no involvement in the Wildlife Project scored the lowest on the knowledge test. Out of a possible score of 20, the average mean score for all three respondent groups was 12.66.

The demographics of the three respondent groups were considered an important factor as to why there was no significant difference between the three groups regarding their wildlife knowledge. All respondents involved in the study, regardless of their participation in the Wildlife Project, were very similar. Since most respondents were from a farm or rural area, their general knowledge of wildlife could have been an important reason for their mean score to not differ from the two respondent groups with involvement in the Wildlife Project and wildlife conference.

It was not surprising that the Wildlife Project respondents who did not attend the conference scored higher on the knowledge test. The majority of the group was made up of Wildlife Project individuals who were unable to attend the conference over the past three years, yet have been involved in the Wildlife Project for five or more years. The 4-H Junior High Wildlife Conference should still be considered a valuable educational source for young 4-H members that are interested in wildlife. The wildlife conference benefits 4-H members that are truly interested in furthering their knowledge of wildlife.

All three respondent groups had similar views concerning the majority of wildlife issues analyzed in the study. There were only three issues that the respondent groups differed significantly. The three issues that were significantly different concerned hunting, prescribed burning and predation. The two respondent groups were more likely to agree that hunting, prescribed burning, and predation are important components of wildlife management than those individuals with no involvement in the Wildlife Project. It can be concluded that 4-H members that were involved in the Wildlife Project and

those that attended the wildlife conference had a greater understanding of the dynamics related to the issues.

There was no significant difference between respondent type and career choice. The objective of the wildlife conference was not to persuade participants to enter a wildlife or wildlife related field. Yet, the wildlife conference does stimulate interest to pursue a career in a wildlife or wildlife related field.

Recommendations for the Conference

1. The 4-H Junior High Wildlife Conference should continue to be used as an education program for the benefit of those who attend.
2. The 4-H Wildlife Project should be structured so that it involves nontraditional students with urban backgrounds.
3. To increase knowledge gained by individuals that attend the conference the quiz bowl should continue to be the focal event of the conference. Through competition the quiz bowl created a greater desire for participants to learn more from the conference.

Recommendations for Further Study

Based on the findings and conclusion of this study, the following recommendations for further research are made.

1. An additional study should be designed to determine how the Wildlife Project affects the attitudes of 4-H members regarding issues of hunting, prescribed

burning and predation when compared to 4-H members with no involvement in the Wildlife Project.

2. Additional follow-up studies should be conducted periodically to continue to evaluate the knowledge gained and benefits perceived from the 4-H Junior High Wildlife Conference.
3. An additional study should be designed to evaluate life skills such as personal development, citizenship, and vocational skills gained by participating in the Wildlife Project and attending the 4-H Junior High Wildlife Conference.
4. An additional study should be designed to determine if participation in the 4-H Junior High Wildlife Conference leads to participation in other areas of 4-H.

LITERATURE CITED

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APPENDICES

APPENDIX A

Questionnaire for those who attended the
4-H Junior High Wildlife Conference.

4-H Questionnaire

I. The following is a list of adjective pairs, which indicate extreme opinions about the Tennessee 4-H Junior High Wildlife Conference. Please think about the Tennessee 4-H Junior High Wildlife Conference and place a check on each scale evaluating your general attitude about the camp. Please place your mark in the middle of a space:

Like This :____:____:____: Not Like This :____:____:____:

The Tennessee 4-H Junior High Wildlife Conference

1.	Important	____:____:____:____:____:____:____	Unimportant
2.	Competitive	____:____:____:____:____:____:____	Noncompetitive
3.	Enjoyable	____:____:____:____:____:____:____	Unenjoyable
4.	Beneficial	____:____:____:____:____:____:____	Not Beneficial
5.	Informative	____:____:____:____:____:____:____	Uninformative
6.	Practical	____:____:____:____:____:____:____	Impractical

II. We would like to know what has given you the desire to be involved in the Tennessee 4-H Junior High Wildlife Conference. Please answer the following statements by circling the appropriate number located to the right of each statement.

The Tennessee 4-H Junior High Wildlife Conference gave me a reason to be involved in:	**Not at All**		**Somewhat**		**Very**
1. The 4-H Club	1	2	3	4	5
2. The 4-H Wildlife Education Project	1	2	3	4	5

III. Below is a list of statements regarding the objectives of the Tennessee 4-H Junior High Wildlife Conference. Please indicate your level of agreement concerning these objectives by circling the appropriate number located to the right of each statement.

THE TENNESSEE 4-H JUNIOR HIGH WILDLIFE CONFERENCE HELPS YOUNG PEOPLE:

(By circling "1", you are saying you strongly agree that 4-H Wildlife helps young people acquire self-confidence.)

	Strongly Agree	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
1. Gain new knowledge, skills, and a through" real life experiences"	1	2	3	4	5
2. Develop leadership talents and abilities.	1	2	3	4	5
3. Become betters stewards of the earth.	1	2	3	4	5
4. Recognize the value of the environment.	1	2	3	4	5

5. Learn techniques concerning land use management.	1	2	3	4	5
6. Understand how wildlife management.	1	2	3	4	5
7. Contributes to the economy and human welfare.	1	2	3	4	5
8. Appreciate nature for enjoyment.	1	2	3	4	5
9. Strengthen personal standards and citizenship ideals.	1	2	3	4	5
10. Apply conservation principles.	1	2	3	4	5
11. Cultivate desire and ability to cooperate with others.	1	2	3	4	5

IV. Below is a list of statements regarding wildlife issues. Please indicate your level of agreement concerning these objectives by circling the appropriate number located to the right of each statement.

	Strongly Agree	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
1. Hunting is a necessary tool in wildlife management.	1	2	3	4	5
2. Prescribed burning improves wildlife habitat for many species.	1	2	3	4	5
3. Predation is important in maintaining healthy wildlife population.	1	2	3	4	5
4. Clearcutting creates early successional habitat needed by many wildlife species.	1	2	3	4	5
5. Wildlife management should insure the continuum of the species.	1	2	3	4	5
6. Wildlife is a natural resource we Have learned to manage successfully.	1	2	3	4	5
7. Wildlife managers spent the majority of the twentieth century reestablishing wildlife populations into suitable habitats.	1	2	3	4	5
8. Private individuals and institutions contribute to responsible management of wildlife resources.	1	2	3	4	5
9. Natural resources can be managed so that people with different interests can use the same resources without depleting them.	1	2	3	4	5
10. Conservation of wildlife resources is important because all members of the animal kingdom are linked together.	1	2	3	4	5

V. The following is a series of questions that pertain to different areas of wildlife. Please answer each question to the best of your ability without looking up the answers. Please circle the one answer that best fits the following descriptions:

1. _____ is the number of animals that an area of land can support.
- A. Carrying capacity
- B. Density
- C. Limiting number
- D. Carrying range

2. The size of the wildlife population which a unit of habitat can support is _____.
- A. Unlimited
- B. Limited
- C. Large
- D. Small

3. European Starlings, house sparrows, pigeons, Norway rats, and house mice are protected by _____.
- A. US Fish and Wildlife Services
- B. TWRA
- C. Wildlife Services
- D. None of the above

4. Most non-migratory species in Tennessee are protected by _____.
- A. US Fish and Wildlife Services
- B. TWRA
- C. Wildlife Services
- D. Tennessee Department of Health

5. The_____ is a factor (food, cover, water, etc.) that is in shortest supply and thus controls the number of animals in an area.
- A. Limiting factor
- B. Carrying factor
- C. Succession Factor
- D. Manipulating factor

6. _____ are non-living compounds such as soil, water, air and rock.
- A. Food chains
- B. Abiotic substances
- C. Producers
- D. Biotic substances

7. The cottonmouth is found _____.
- A. only in the western part of the state
- B. all over Tennessee
- C. only in east Tennessee
- D. only in east and middle Tennessee

8. Energy is _____ in a food chain as it is passed from one link to another.
- A. lost
- B. built up
- C. originated
- D. of little importance

9. Herbivorous animals are _____.
- A. plant eaters
- B. meat eaters
- C. carrion eaters
- D. rodents

10. Of the 45 species and subspecies of snakes in Tennessee, only _____are poisonous.
- A. 6
- B. 4
- C. 3
- D. 15

11. Strategies to limit wildlife damage include _____.
- A. habitat modification and exclusion
- B. frightening and repellents
- C. trapping, toxicants, and shooting
- D. all of the above

12. The way to increase the carrying capacity of land is to _____.
- A. manipulate the habitat of environment in which an animal lives
- B. stock more animals
- C. kill predators
- D. put out feed and feeders

13. Predators _____ the abundance of a wildlife species in good quality habitat.
- A. drastically decrease
- B. drastically increase
- C. do not significantly affect
- D. change the composition and decrease

14. The majority of funding used to pay wildlife and fish managers and biologists comes from:
- A. environmental groups
- B. hunters and fishermen
- C. animal activists
- D. general public

15. The primary method of regulating and managing game populations is through:
- A. regulated hunting and trapping
- B. birth control
- C. feeding
- D. rehabilitation

16. Managing wildlife successfully starts with _____.
- A. Importing exotic wildlife
- B. Predator removal
- C. Hunting
- D. Hunting management

17. The most convenient place to observe wildlife is _____.
- A. Knoxville Zoo
- B. Great Smoky Mountains
- C. Your own backyard
- D. Milan 4-H center

18. Omnivorous animals eat _____.
- A. plants only
- B. both meat and plants
- C. meat only
- D. carrion only

19. Ponds are fertilized in order to supply nutrients for _____.
- A. Fish
- B. Plankton
- C. water weeds
- D. insects

20. The basic needs of all wildlife include _____.
- A. protection from predators
- B. being left alone
- C. food, cover, water, space
- D. time, money, relaxation

VI. We would like to know a little about you personally. This information will be used only for purposes of characterizing our respondents, and your personal responses will never be linked with your identity.

Please check one:

1. _____ Male _____ Female

2. What year did you participate in the Tennessee 4-H Junior High Wildlife Conference?
_____ 1998 _____1999 _____2000

3. What grade in school will you be in this fall?
_____8th _____9th _____10th _____11th _____12th

4. Which best describes where you live?

_____ A farm
_____ Rural area, but not on a farm
_____ Town (under 10,000)
_____ Small city (10,000 to 50,000 population)
_____ Medium size city (50,000 to 100,000 population)
_____ Large city or metropolis (over 100,000 population)

5. How far do you plan to go in your education? (check only one)

_____High School _____Vocational School _____College _____Graduate School

6. If you made a career choice right now, what career would you choose?

_____

7. How long have you participated in the 4-H Wildlife project?

_____0yr _____1 yr _____2yrs _____3yrs _____4yrs _____ 5 or more yrs

8. How long have you participated in 4-H?

_____0yr _____1 yr _____2yrs _____3yrs _____4yrs _____ 5 or more yrs

9. What other areas of competition have you been involved in 4-H?

_____ _____ _____
_____ _____ _____

10. In which areas have you been exposed to wildlife issues? (check all that apply)

_____Family _____School _____4-H _____Volunteer Work
_____Community Events _____Literature (newspaper, magazines, books)
_____Other: _____

Questionnaire for other 4-H members.

4-H Questionnaire

I. Below is a list of statements regarding wildlife issues. Please indicate your level of agreement concerning these objectives by circling the appropriate number located to the right of each statement.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. Hunting is a necessary tool in wildlife management.	1	2	3	4	5
2. Prescribed burning improves wildlife habitat for many species.	1	2	3	4	5
3. Predation is important in maintaining healthy wildlife population.	1	2	3	4	5
4. Clearcutting creates early successional habitat needed by many wildlife species.	1	2	3	4	5
5. Wildlife management should insure the continuum of the species.	1	2	3	4	5
6. Wildlife is a natural resource we Have learned to manage successfully.	1	2	3	4	5
7. Wildlife managers spent the majority of the twentieth century reestablishing wildlife populations into suitable habitats.	1	2	3	4	5
8. Private individuals and institutions contribute to responsible management of wildlife resources.	1	2	3	4	5
9. Natural resources can be managed so that people with different interests can use the same resources without depleting them.	1	2	3	4	5
10. Conservation of wildlife resources is important because all members of the animal kingdom are linked together.	1	2	3	4	5

II. The following is a series of questions that pertain to different areas of wildlife. Please answer each question to the best of your ability without looking up the answers. Please circle the one answer that best fits the following descriptions:

1. _____ is the number of animals that an area of land can support.

C. Carrying capacity
C. Limiting number
D. Density
D. Carrying range

2. The size of the wildlife population which a unit of habitat can support is _____.
   C. Unlimited C. Large
   D. Limited D. Small

3. European Starlings, house sparrows, pigeons, Norway rats, and house mice are protected by _____.
   C. US Fish and Wildlife Services C. Wildlife Services
   D. TWRA D. None of the above

4. Most non-migratory species in Tennessee are protected by _____.
   C. US Fish and Wildlife Services C. Wildlife Services
   D. TWRA D. Tennessee Department of Health

5. The_____ is a factor (food, cover, water, etc.) that is in shortest supply and thus controls the number of animals in an area.
   C. Limiting factor C. Succession Factor
   D. Carrying factor D. Manipulating factor

6. _____ are non-living compounds such as soil, water, air and rock.
   C. Food chains C. Producers
   D. Abiotic substances D. Biotic substances

7. The cottonmouth is found _____.
   C. only in the western part of the state C. only in east Tennessee
   D. all over Tennessee D. only in east and middle Tennessee

8. Energy is _____ in a food chain as it is passed from one link to another.
   C. lost C. originated
   D. built up D. of little importance

9. Herbivorous animals are _____.
   C. plant eaters C. carrion eaters
   D. meat eaters D. rodents

10. Of the 45 species and subspecies of snakes in Tennessee, only _____are poisonous.
    C. 6 C. 3
    D. 4 D. 15

11. Strategies to limit wildlife damage include _____.
    C. habitat modification and exclusion C. trapping, toxicants, and shooting
    D. frightening and repellents D. all of the above

12. The way to increase the carrying capacity of land is to _____.
    E. manipulate the habitat of environment in which an animal lives
    F. stock more animals
    G. kill predators
    H. put out feed and feeders

13. Predators _____ the abundance of a wildlife species in good quality habitat.
    C. drastically decrease C. do not significantly affect
    D. drastically increase D. change the composition and decrease

14. The majority of funding used to pay wildlife and fish managers and biologists comes from:
C. environmental groups C. animal activists
D. hunters and fishermen D. general public

15. The primary method of regulating and managing game populations is through:
C. regulated hunting and trapping C. feeding
D. birth control D. rehabilitation

16. Managing wildlife successfully starts with _____.
C. Importing exotic wildlife C. Hunting
D. Predator removal D. Hunting management

17. The most convenient place to observe wildlife is _____.
C. Knoxville Zoo C. Your own backyard
D. Great Smoky Mountains D. Milan 4-H center

18. Omnivorous animals eat _____.
C. plants only C. meat only
D. both meat and plants D. carrion only

19. Ponds are fertilized in order to supply nutrients for _____.
C. Fish C. water weeds
D. Plankton D. insects

20. The basic needs of all wildlife include _____.
C. protection from predators C. food, cover, water, space
D. being left alone D. time, money, relaxation

III. We would like to know a little about you personally. This information will be used only for purposes of characterizing our respondents, and your personal responses will never be linked with your identity.

Please check one:

1. _____ Male _____ Female

2. Which best describes where you live?
_____ A farm
_____ Rural area, but not on a farm
_____ Town (under 10,000)
_____ Small city (10,000 to 50,000 population)
_____ Medium size city (50,000 to 100,000 population)
_____ Large city or metropolis (over 100,000 population)

3. How far do you plan to go in your education? (check only one)
_____High School _____Vocational School _____College _____Graduate School

4. If you made a career choice right now, what career would you choose?
_____

5. How long have you participated in the 4-H Wildlife project?
_____0yr _____1 yr _____2yrs _____3yrs _____4yrs _____ 5 or more yrs

6. How long have you participated in 4-H?

_____0yr _____1 yr _____2yrs _____3yrs _____4yrs _____ 5 or more yrs

7. What other areas of competition have you been involved in 4-H?

_____ _____ _____

_____ _____ _____

8. In which areas have you been exposed to wildlife issues? (check all that apply)

_____Family _____School _____4-H _____Volunteer Work

_____Community Events _____Literature (newspaper, magazines, books)

_____Other: _____

APPENDIX B

Dear Extension Leader:

As you know, attending the 4-H Junior High Wildlife Conference is a culmination of a lot of hard work for members in the 4-H Wildlife program. Over the past 28 years, nearly 6,000 4-H members have participated in this important educational event. We have developed a survey designed to determine the impact of the 4-H Junior High Wildlife Conference and other components of the 4-H wildlife education program upon those young people who have participated over the years.

The reason we are writing you are to solicit your help in our study. We would greatly appreciate it if you would take a look at the names and addresses on the attached list and verify that they are indeed those individuals who participated in the 4-H Junior High Wildlife Conference within the last three years. Please make any corrections, which are necessary and then return the list to us using the enclosed self-addressed stamped envelope by April 1, 2001. Do not be concerned if all of your teams from the past three years are not listed, since those identified represent only a random sample.

We also ask that you help us identify the names and addresses of two other kinds of 4-H members in your area who would be willing to participate in our study. First, we would like to identify a few of your 4-H wildlife education program members who have not attended the Wildlife Conference. Next, we would like to identify a few 4-H members who have not participated in the 4-H wildlife program in any way. Please list the requested names and addresses in the spaces indicated on the following pages. (For example, if you have two Conference participants, we would like two wildlife program participants who have never attended the Conference and two 4-H members who have never participated in the wildlife program at all.)

All three groups of young people will receive a short questionnaire at the same time within the next month. The groups of non-participants will serve as comparison groups for our study so that we can learn more about the specific benefits of participating in the Wildlife Conference and the 4-H wildlife program. **Once you have verified the participants' names and addresses and identified the names and addresses of the other 4-H members to serve in our comparison groups, simply return the lists to us in the enclosed self-addresses stamped envelope.**

Since other phases of the research cannot be completed until we receive your confirmed list of names and addresses, we appreciate your prompt attention to our request by April 1, 2001. Please do not hesitate to call either Ms. April Marion or Dr. Randol Waters at (865) 974-7371, if you have any questions or concerns about our study. We will be happy to provide you with a summary of our study if you desire. Simply indicate you'd like a copy when you return the list of names.

Sincerely,

Dr. Randol Waters, Professor
Agriculture and Extension Education Department
Department

April Marion, Graduate Research Assistant
Agriculture and Extension Education

4-H Junior High Wildlife Conference Study Participants
_____ County

Make any necessary corrections to names and addresses on the lines immediately under each piece of existing information. (Please print)

Invitational Participant	Yr. Participated	Address	Check if correct
1. NAME	1998	555 Gatlin Dr. Gatlinburg, TN 37738 _____ _____	
2. NAME	1998	111 Meadow Creek Dr Seymour, TN 37865 _____ _____	
3. NAME	2000	888 Franklin Dr. Gatlinburg, TN 37738 _____ _____	

(Please list the other requested names and addresses in the spaces indicated on the following pages.)

Names and addresses of 4-H members who have participated in your 4-H wildlife education program but who have not attended the wildlife conference.

Name	Address
1._____	_____ _____
2._____	_____ _____
3._____	_____ _____

Names and addresses of 4-H members who have not participated in your 4-H wildlife education program in any way.

Name	Address
1._____	_____ _____
2._____	_____ _____
3._____	_____ _____

Dear Wildlife Conference Participant:

As a former wildlife conference participant, you have been identified to help us in a statewide study regarding the impact of the Junior High 4-H Wildlife Conference upon 4-H members. Please take the time necessary to complete the enclosed questionnaire. Then, return it to us in the postage-paid envelope, which is included in this mailing.

First, we want to know exactly what you thought of your experiences during the conference. Then, we want to ask you some questions about wildlife and wildlife related topics in order to see how answers to these questions from a large group of conference participants compare to from a similar group of young people who have not participated in the 4-H Wildlife program. Please read each question and answer it to the best of your ability. You should answer each question from memory. This is not a test. Please answer the questions without help from other references such as parents or teachers. Simply answer each question to the best of your ability and return the questionnaire to us in the enclosed envelope.

Thank you for taking time to read this letter. Feel free to call either Ms. April Marion, or Dr. Randol Waters, (865)974-7371, if you have any questions or concerns. We would greatly appreciate your participation in our study and the return of your completed questionnaire constitutes your consent to participate. However, your participation is completely voluntarily and the survey answers will be strictly confidential. Your name will never be linked to your individual responses. We have selected only a small number of people for this study, so your participation is very important to us.

Sincerely,

Dr. Randol Waters, Professor
Agriculture and Extension Education Department

April Marion, Graduate Research Assistant
Agriculture and Extension Education Department

Dear 4-H Member:

Your name and address was given to use by a member of the extension service in your county as someone who may be willing to help us in a statewide study to learn more about young people such as you and what you know about wildlife and related wildlife issues. It is not necessary that you have previously participated in the 4-H wildlife education program to participate in the study. Please take the time necessary to complete the enclosed questionnaire. Then, return it to us in the postage-paid envelope, which is included in this mailing.

Please read each question and answer it to the best of your ability. You should answer each question from memory. This is not a test. Please answer the questions without help from other references such as parents or teachers. Your individual responses will be used to compare your knowledge and attitudes about wildlife issues with other 4-H members. Simply answer each question to the best of your ability and return the questionnaire to us in the enclosed envelope.

Thank you for taking time to read this letter. Feel free to call either Ms. April Marion, or Dr. Randol Waters, (865)974-7371, if you have any questions or concerns. We would greatly appreciate your participation in our study and the return of your completed questionnaire constitutes your consent to participate. However, your participation is completely voluntarily and the survey answers will be strictly confidential. Your name will never be linked to your individual responses. We have selected only a small number of people for this study, so your participation is very important to us.

Sincerely,

Dr. Randol Waters, Professor
Agriculture and Extension Education
Department

April Marion, Graduate Research Assistant
Agriculture and Extension Education Department

Dear 4-H Member:

Approximately two weeks ago, you should have received a questionnaire regarding wildlife issues. We are sending the questionnaire again to those whose response we have not received. **If you have not mailed the questionnaire, we would greatly appreciate your prompt completion and return of the questionnaire in the envelope provided by July 13, 2001**. It is not necessary that you have previously participated in the 4-H wildlife education program to participate in the study.

Please read each question and answer it to the best of your ability. You should answer each question from memory. This is not a test. Please answer the questions without help from other references such as parents or teachers. Your individual responses will be used to compare your knowledge and attitudes about wildlife issues with other 4-H members. Simply answer each question to the best of your ability and return the questionnaire to us in the enclosed envelope.

Thank you for taking time to read this letter. Feel free to call either Ms. April Marion, or Dr. Randol Waters, (865)974-7371, if you have any questions or concerns. We would greatly appreciate your participation in our study and the return of your completed questionnaire. However, your participation is completely voluntarily and the survey answers will be strictly confidential. Your name will never be linked to your individual responses. **We have selected only a small number of people for this study, so your participation is very important to us.**

Sincerely,

Dr. Randol Waters, Professor
Agriculture and Extension Education Department

April Marion, Graduate Research Assistant
Agriculture and Extension Education Department

VITA

April Marion was born in Greeneville, TN on September 4, 1977. She was raised in Chuckey, TN were she attended Chuckey Elementary School and Chuckey-Doak High School. She then attended the University of Tennessee, Knoxville and received a B.A. in Wildlife And Fisheries Science in 1999 and a M.A. in Agricultural and Extension Education in 2001.

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