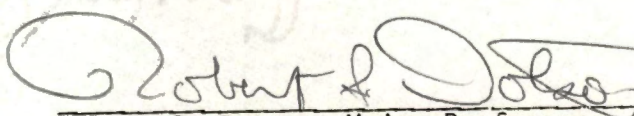
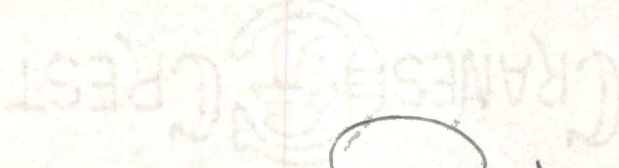


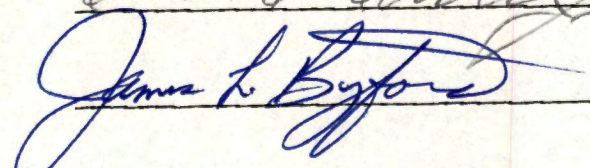
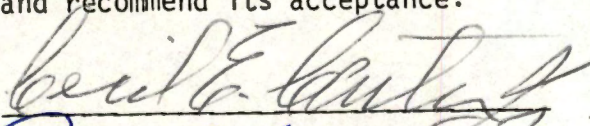
To the Graduate Council:

I am submitting herewith a thesis written by Carol E. Kounanis entitled "Analysis of Participant Characteristics and Program Evaluation Tennessee/Southern Region 4-H Fish and Wildlife Adult Leaders' Conference 29 April-3 May 1981." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.

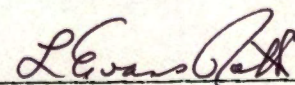


Robert S. Dotson, Major Professor

We have read this thesis
and recommend its acceptance:



Accepted for the Council:



Vice Chancellor
Graduate Studies and Research

ANALYSIS OF PARTICIPANT CHARACTERISTICS AND PROGRAM EVALUATION

TENNESSEE/SOUTHERN REGION 4-H FISH AND WILDLIFE

ADULT LEADERS' CONFERENCE

29 APRIL-3 MAY 1981

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee, Knoxville

Carol E. Kounanis

August 1982

3062972

DEDICATION

This thesis is dedicated to Mom and Dad, who have always been dedicated to me, and to my education.

ACKNOWLEDGMENTS

The author wishes to thank Dr. James L. Byford for the opportunity to evaluate his Conference. The author also wishes to thank him for his guidance, patience, help, and practical outlook throughout the writing of this thesis.

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ABSTRACT

Fifty-five participants from eight states attended the Tennessee/Southern Region 4-H Fish and Wildlife Adult Leaders' Conference. The Conference was held at the Clyde M. York Training Center near Crossville, Tennessee, from April 29 through May 3, 1981.

The purposes of this study were to determine the type of person that was attracted to the Conference; to determine the participants' improvement in subject matter knowledge; and to make recommendations for future conferences. A Leader Attendance Survey, Conference Evaluation, and Pre- and Post-tests were used in gathering the data presented in this study.

Responses on the Leader Attendance Survey were extremely varied. It was therefore concluded that it was not possible to determine a specific type of person that was attracted to the Conference. However, several generalized groups were noted.

In general, significant improvements in subject matter knowledge were noted, and it was concluded that subject matter knowledge did, in fact, improve as a result of the Conference. The average improvement was an increase of four points (17%).

On the whole, the Conference was considered a success. Most participants' comments were positive, and recommendations for future conferences were made on the basis of survey instrument results and participant comments as well as class leader suggestions.

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CHAPTER I

INTRODUCTION

Since its beginning, the 4-H Wildlife Project has continued to grow in popularity and scope throughout the nation. However, the amount of time that an Extension agent can spend on one particular project area is relatively limited, due to the variety and number of projects and programs offered by 4-H. Volunteer leaders are a valuable link between the Extension agent and youth.

In order for volunteer leaders to be effective teachers, they must have a knowledge of the 4-H organization and of their particular subject matter area. Prior to 1980, two 4-H Fish and Wildlife Adult Leaders' Conferences were planned, according to Colorado Extension Wildlife Specialist Del Benson in a personal conversation on January 20, 1982. One conference was to be a nationwide conference held in Colorado, and the other was to be a statewide conference for leaders in Colorado. Neither conference was carried out due to lack of response.

In June, 1980, Dr. James L. Byford, Extension Wildlife Specialist for the University of Tennessee, initiated a proposal for a 4-H Fish and Wildlife Adult Leaders' Conference. The proposal was submitted to the U. S. Fish and Wildlife Service, Extension Education Division, for federal assistance in funding the project.

Funding was granted, and planning for the Tennessee/Southern Region 4-H Fish and Wildlife Adult Leaders' Conference began. The

Conference was co-sponsored by the University of Tennessee Agricultural Extension Service and the U. S. Fish and Wildlife Service. It was planned for the spring of 1981.

A. BACKGROUND INFORMATION

Conference Objectives

The Conference was designed to train both Extension agents and volunteer leaders, with most of the emphasis being on leader training. Classes and activities were centered around the following objectives:

1. To teach leaders how to lead local 4-H fish and wildlife project groups
2. To provide leaders with fish and wildlife information
3. To teach leaders fun learning experiences that they could use with their own project groups
4. To teach leaders about 4-H fish and wildlife activities
5. To share 4-H fish and wildlife ideas with other counties/ states.

Location

The Conference was held at the Clyde M. York Training Center near Crossville, Tennessee. The Center is one of four modern camps owned and operated by the University of Tennessee, primarily for Extension functions. It is situated in a rural, forested setting on top of the Cumberland Plateau. The Center is 96 acres in size, and has a full time camp manager in charge of facilities, maintenance, and operation. It can accommodate up to 350 people in its modern,

heated cabins. The camp also has a fully-equipped kitchen and dining hall, recreation hall, several classrooms, a swimming pool, lighted ball field, rifle range, archery range, 6-acre lake with dock, 2-acre catfish lake, cookout/picnic site, and campfire area. Meals were prepared by the Center's cooks.

Conference Dates

The Conference was conducted from April 29 through May 3, 1981. The Conference was planned from Wednesday through Sunday rather than Monday through Friday so participants who worked would not need to take as much vacation time.

B. PURPOSE OF THE STUDY

The three purposes of this study were: to determine the type of person that was attracted to this Conference and interested in becoming a leader, based on a survey of leader characteristics, to more effectively recruit delegates for future conferences; to determine the delegates' improvement in subject matter knowledge as a result of the Conference, as evidenced by Pre-test, Post-test, and Improvement scores; and to make recommendations for future conferences based on the results of the Conference Evaluation completed by participants.

C. LIMITATIONS OF THE STUDY

This study was limited to contacts with participants during the Conference. No contacts by the author were made prior to

the Conference; nor were follow-up post-tests made at intervals after the Conference.

Time available for comparative analysis did not allow for a number of comparisons on the Conference Evaluation. Instead, simple numbers and percents were used.

CHAPTER II

REVIEW OF RELATED LITERATURE

The search for related literature was a difficult one. Only one study specifically pertaining to an Extension conservation program was located. In that study, Wilkins and McNeil stated that the major objective of Cooperative Extension in Conservation as in other programs was to change people's behavior in a given situation (14:43).^{*} However, numerous research reports of a related nature were also found and are presented below.

A. GENERAL BACKGROUND

According to Hounshell and Liggett, learning about the environment was one of the earliest forms of education (7:28). A knowledge and understanding of the environment were essential to the survival of early man. Later, emphasis was placed on other areas of education, and the indoor classroom was found to be better suited to those areas. Finally, in the 1970's, educators started to re-emphasize the importance of environmental education.

Environmental education and outdoor education differ somewhat. The outdoors can be used as a medium for learning, for developing increased conservation sensitivity and awareness, or for stimulating

^{*}Numbers in parentheses refer to alphabetically-listed references in the List of References; those after the colon refer to page numbers.

physical types of activity (4:21). Environmental education seems to have as its goal the increase of conservation sensitivity and awareness, coupled with an understanding of and desire to act on issues of environmental importance.

Morfoot and Blake stated that "understanding implies that the audience can grasp the implications of the topic for other objects or events they deem important (11:27)." Furthermore, they believe that understanding is not possible without information retention (11:25).

Hungerford et al. stated that no comprehensive research regarding the development and implementation of environmental education programs existed (9:42). For this reason, they felt that curriculum development to date had been largely intuitive in nature. They also said that it should not be necessary for each researcher to start essentially from "scratch"; that educators should learn from the mistakes of their predecessors.

B. ESTABLISHMENT OF OBJECTIVES

The goal of the program evaluated by Kidd et al. was to ". . . develop a fundamental philosophical attitude that views the environment as a total system that has as its major component a natural ecological system (10:12)."

Winn (15:141) stressed the need for specific, operational objectives in an environmental education program. These objectives should be directed toward a change in behavior. According to Winn, objectives should also stress problem solving and innovative approaches that stimulate intellectual curiosity and practical wisdom.

Hungerford et al. noted the difficulties in translating general goals into manageable, instructional objectives (9:43). They further stated that curriculum developers need a set of sub-goals which are more definitive than the general goals usually described for environmental education.

Pettus cited the objectives for an environmental education program as providing facts and information about the environment, developing environmental awareness and concern, and aiding participants in making appropriate environmental decisions (13:48).

Perdue and Warder shared the opinion that environmental education objectives should include exposure to knowledge concerning man's relationship to the environment, development of skills and abilities, and development of responsible and appreciative attitudes toward the environment (12:25).

Hounshell and Liggett drew two postulates from their study. The first postulate was that "a well-structured, well-planned approach to environmental education will yield positive attitudinal changes." The second postulate was that students with positive attitudes would be more inclined and motivated to learn (7:30).

C. PROGRAM DEVELOPMENT

In his article on teacher education in the environmental sciences field, Winn stated (15:40) ". . . there are few scientists who have a grasp of the difficulties of mounting an effective teacher training program." He indicated that environmental education training

would have to incorporate such departments as: education, biology, city planning and architecture, recreation, agriculture, sociology, etc. He also advocated the use of combined teams and visiting consultants to provide a broader base of ideas and experiences (15:141).

Through a survey of in-service training course descriptions, Henning determined that most training courses were devoted to subject matter (6:5-6). He felt that less emphasis should be placed on techniques and methods, and more exposure to a variety of environmental values should be provided.

He was also concerned with the values and interests of the person in charge of training participants. Henning stated that this person's ideas and judgments might receive too high a priority, rather than giving the participants the opportunity to make their own decisions and determine their own opinions.

Two different approaches to environmental education were noted by Arenstein and Supple (1:3). One faction of environmental educators advocated fun, activity-oriented programs, while the other faction stressed instructional integrity and accountability. Arenstein and Supple were of the opinion that both approaches were important to environmental education.

Because of these two different approaches, some curricula were just a series of activities while other curricula concentrated more on getting good pretest and posttest scores than on making environmental education an enjoyable and worthwhile activity for students. This split in environmental education has become much smaller in recent years, thanks to environmental education pioneers like Dr. Harold Hungerford (Southern Illinois University), Dr. William B. Stapp (University of Michigan). Dr. Harold McKenna (City College), and others

who realized that a combination of these various methods was not only possible but contributed to a better approach to environmental education.

They also felt that environmental education should be treated in an interdisciplinary manner, involving social, political, economic, etc. aspects in addition to science.

The key to effective environmental education is to extend the classroom, rather than depart from it entirely. Howie (8:35) defined an effective program as one that had four phases. The first phase would be teacher inservice training, followed by classroom work covering basic information. After receiving this information, the classes would be prepared for outdoor experiences. Finally, a follow-up session in the classroom would be used to summarize and strengthen the experiences learned in the field.

In addition, Howie felt that the primary goal of environmental education was to "provide more extensive in-service training for the classroom teachers who probably have the greatest potential for motivating students in the area of environmental education (8:35)."

The program evaluated by Kidd et al. was conducted in a camping atmosphere (10:12-13). Participants were in an isolated setting, away from media influences. Program features included illustrated evening lectures, role plays, field trips, and on-site practical demonstrations that provided hands-on experience for participants.

In his study comparing outdoor to indoor education, Howie determined that outdoor activities had a very positive effect on the students' outlook on education (8:34).

Wilkins and McNeil concluded from their study that 30 minutes was the minimum length of time for program presentation (14:45). They also suggested the use of printed handouts so participants would be more likely to retain knowledge.

Morfoot and Blake concluded that program planners

. . . cannot make the assumption that the more attention-provoking elements there are in a presentation, the more effective it is likely to be. At some point the inclusion of additional attention-provoking elements may show diminishing returns, due to "overloading" of the audience with too much information (11:24).

D. CONFERENCE EVALUATION METHODS

Doran noted that the major difficulty in evaluating environmental education programs is that it is a relatively young, interdisciplinary field (5:51).

One possible reason for the small number of environmental education studies is that researchers cannot agree on how to effectively evaluate programs, according to Morfoot and Blake (11:23). Most studies cited by Morfoot and Blake measured only short-term retention, typically less than an hour (11:24).

When evaluating programs, the first step is to have valid, reliable, and relevant measurement devices, according to Doran (5:50). Before developing or selecting measurement tools, a clear statement of expected outcomes must be outlined.

Crompton and Sellars listed primary weaknesses in environmental education research studies: inadequate control or randomization procedures, lack of long term impact assessment, small and/or

unrepresentative samples, failure to test the validity and reliability of instruments, and biasing by researchers (4:28).

Arenstein and Supple expressed difficulty in evaluating programs that were composed solely of activities (1:3). They noted that a combination of enjoyable activities, worthwhile content, and valid evaluation were necessary if environmental attitudes and actions were to change.

Born and Wieters were concerned with the use of attitude tests and scales in evaluating environmental programs. They felt that individual value judgments could influence these instruments (2:41). They indicated that respondents could also perceive the researcher's expected answers from the questions given. They stated that this could be of serious concern to researchers that evaluated programs by means of pre- and post-tests.

Obviously, test questions should represent the material presented and stress the most relevant topics in the program (11:25). Morfoot and Blake cautioned that this could bias or affect the audience's retention of information.

Henning felt that it was not necessary to pay attention to participants' personal or professional values concerning change (6:4). He felt that a higher education level would not necessarily lead to different behavior concerning environmental issues.

In evaluating a specific environmental education program, Kidd et al. wanted to determine if the effect of the camp experience was significantly different from that of a normal summer week in changing

attitudes and knowledge. They utilized written objective pre- and post-tests to determine students' attitudes, conceptual knowledge, and factual knowledge. The instruments were designed to determine the degree and direction of change, if any. Because participants were isolated from the media, it was felt that any changes in attitudes or knowledge could be attributed to the various instructional experiences at the camp (10:13-15).

In addition to evaluating participants' knowledge of the environment and man's relationships to it, Hounshell and Liggett also evaluated participants' attitudes toward the environment (7:28).

Continual evaluation of the staff, development process, and program content was conducted by Arenstein and Supple to ensure that their final program included both activities and the dissemination of subject matter material (1:4). They developed programs with complete directions and information, rather than merely outlining activities, so that progress could be documented (1:5).

In addition to pre- and post-tests for quantitative evaluation, Arenstein and Supple used comments from teachers, students, and program staff to qualitatively evaluate and refine their program (1:7). The pre- and post-tests were designed according to instructional outcomes. In addition, the pre-test gave each participant a background review of the program.

Arenstein and Supple noted that participants unfamiliar with the subject area were able to answer some pre- and post-test questions

correctly simply by guessing (1:8). However, they felt theirs was a valid program due to the fact that their participants' post-test scores showed significant gains.

Cohen felt that in order for a program to meet the participants' needs, program planners needed to know what those needs were (3:30). Consequently, he developed a method of evaluation using student determined needs (3:28). The participants in a particular program were asked to make personal lists of expected outcomes of the program. The personal lists were then combined into a master list, and redistributed to participants. Participants next ranked their individual priorities from those on the master list, and those rankings were combined to make a master ranking. At the end of the program, the master list of priorities was ranked by each individual.

Cohen felt that this method of evaluation was very effective. He stated:

The problem of content-specific instruments is also overcome with this technique. When one uses instruments developed by others, the instruments may not fit the cognitive or affective structure of one's own program. With this technique, the goals of an individual program can fit the evaluation instrument (3:29).

Wilkins and McNeil noted that the participants had a favorable reaction to being tested (14:45). Names were not requested on the tests. There were no objections to allotting time to evaluation; in fact, many participants found the experience interesting.

They felt that the evidence of high pre-test scores indicated that most participants in their study started with a higher level of

subject matter knowledge than expected by the researchers. However, these test results were helpful in designing future programs.

Crompton and Sellar cited a study in which pre- and post-tests showed that an experimental group at a resident camp exhibited marked increases in test scores compared to a control group (4:22). Furthermore, a second post-test was conducted approximately three months after the experiment, and the difference between the two groups was even more evident.

Some of the ideas gained from this review of related literature were useful in development of methods for the present study. Time and circumstances would not permit the inclusion of others.

CHAPTER III

METHODS OF PROCEDURE

A. RECRUITMENT

Leaders from each of the 12 southern states were invited to attend the Conference. Additional incentives were provided in the form of scholarships for participants. The Conference was planned for a total of 124 delegates.

Leaders were recruited from Tennessee counties by writing county Extension agents explaining the program and encouraging them to recruit leaders for the Conference (see Appendix A). A sample suggested letter was sent--one from the agents to potential Conference delegates--encouraging them to attend. Five Conference brochures were also sent to help them recruit. A newspaper article and radio tape about the Conference were circulated among Tennessee newspapers and radio stations, respectively. Interested people were encouraged to contact their County Extension office for more information.

To recruit delegates from other southern states, all Extension wildlife, fisheries, and 4-H specialists from southern states were contacted (see Appendix B). Each was sent: (1) a letter explaining the Conference to them; (2) a sample suggested letter for them to send to their 4-H youth agents; (3) a sample suggested letter for 4-H youth agents to send to leaders who were potential Conference delegates; and (4) one 4-H specialist in each state was sent 200 copies of the brochure

explaining the Conference--to be sent to each county as recruiting aids. Specialists were invited to request more copies. Examples of all sample letters are given in the Appendix.

When initial response was found to be low, Dr. Byford made a phone call to every county Extension office in Tennessee--and to every southern state wildlife and fisheries specialist and the 4-H specialist in each state in charge of leader development and training. The Tennessee agents and all specialists were informed that scholarships to the Conference were still available. The Conference was explained in greater detail, and a short "sales pitch" was made, explaining how their programs would benefit from leaders attending the Conference. According to Dr. Byford, these phone calls were by far the most important recruitment tool. Typical responses were: "Oh, I didn't realize what the Conference was about--great idea--I'll get on it"; "I'm glad you called; I lost my letter"; "I just now thought of someone who might attend"; "You mean husband and wife can both come?"; "I didn't get a letter"; "I wondered what it was all about--was going to write for more information, but I ran out of time"; and "I thought we'd missed the deadline, so I didn't try." More emphasis was placed on recruitment in Tennessee, because it was felt that these leaders would be more likely to attend the Conference, due to its location.

B. EDUCATIONAL PROGRAM

The educational program consisted of six field classes, several optional activities, and special programs (Appendix C).

Field Classes

Six field classes were planned in accordance with the Conference's objectives. The classes were scheduled so that all participants had an opportunity to attend each class. The field classes are described below.

Dr. Byford and Carol Edwards co-taught the class "Steps in Organizing a County 4-H Wildlife Project Group." Mrs. Edwards, a volunteer leader from Davidson County, Tennessee, was a 1981 winner in the National 4-H Wildlife Leader Awards Program. The class discussed ideas for starting a 4-H wildlife project group and conducting 4-H wildlife project group meetings. Some specific points included: the teachable moment (proper location, atmosphere, surroundings, adventure, the element of surprise, and using a variety of teaching methods), keys of leadership (organizing, motivating, securing help from specialists, and taking action), wildlife activities (displays, games, tours, competition, demonstrations, game suppers), and sponsorship from local organizations.

The "Role of Leader, Agent, Specialist in 4-H" class was taught by Ruth Henderson. Miss Henderson, Extension 4-H Club specialist in the area of adult volunteer leadership, covered the differences and similarities in the three positions, and defined the responsibilities of each. She gave specific examples of problems, and who should solve them.

Oliver Cook, an Extension 4-H Club specialist in the area of camps and conferences, led the field class entitled "How to Mesh Wildlife with Other 4-H Projects." The main point of his class was

that virtually every project could be linked with wildlife in one way or another. He showed how projects such as photography, cooking, safety, and dog obedience could be adapted to include wildlife activities.

Dr. Thomas K. Hill, Extension Fisheries Specialist, taught the "Ecology of Farm Ponds" field class. Dr. Hill gave tips on pond construction (amount of watershed area needed, depth of pond edges to control weed growth), poisoning of wild fish with rotenone, stocking rates and suggested species of fish, amount and type of fertilization for increased production, and proper harvesting procedures to maintain fish populations.

The "Fish and Wildlife Management Methods" class was co-taught by Mr. Erland Juntunen, Fisheries Specialist with the U. S. Fish and Wildlife Service, Office of Extension Education, and Mr. Jim Miller, Wildlife Specialist with the Natural Resources Unit of the Extension Service. Their class covered management techniques such as trapping, food plots, caring for food fish, age determination and marking methods.

Dr. Michael R. Pelton, Wildlife Professor at the University of Tennessee, taught the "Wildlife Management Principles" class. Dr. Pelton discussed principles such as population dynamics, population estimates, census techniques, and reproduction rates. He contrasted bear and rabbit populations to illustrate his points.

Optional Activities

In addition to these field classes, a variety of optional activities were offered. Participants were free to join in as many activities as desired, but attendance at the activities was not mandatory.

An early morning bird walk was conducted at daybreak to familiarize participants with the sights and sounds of resident birds around the training center. A breakfast cookout over an open fire was another morning option.

In the afternoon, participants could choose to take a "Closer Look at Nature." The activity encouraged observation of micro-habitats and smaller life forms. A second activity, "Get to Know a Tree," involved studying one tree, sketching it, coloring the sketch using natural materials, writing a poem about the tree, and examining increment borings to see what growth rings can tell about the life of the tree.

In "Hello Pond, What Can You Tell Me Today?" the instructor had planned to let participants try their hand at fish seining. The purpose of the seining was to check the balance of fry and adult fish in the Pond. Due to inclement weather, this activity was cancelled. Interested Conference delegates had the opportunity to go fishing later on, in lieu of this activity. Participants could also choose to use the archery or rifle range in the afternoons.

On one afternoon, a program presented by Dr. Larry Beeman, TVA biologist, covered how to read and interpret different kinds of maps and aerial photographs. Ways to use these in habitat management and in teaching youngsters were discussed, as well as where maps could be obtained.

Wildlife films on a variety of topics were shown nightly. A Square Dance was also held one evening. Participants could attend the

"Night Sounds" hike to listen for owls, whip-poor-wills, and frogs, as well as take part in an activity called "Spider Sniffing," introduced by Pat Canakaris, a Conference delegate from Georgia. A "Snake Hunt" was also conducted; participants waded through ponds while shining flashlights, trying to catch snakes and frogs. Campfire singalongs were held each night, and were considered useful get-acquainted activity.

Special Programs

Five special programs were held during the Conference. These programs were attended by all delegates.

One special program entitled "How to Become a Member of the Snakebite Club" was given by Dr. Byford prior to the snake hunt. Participants were shown a slide program on poisonous and non-poisonous snakes, and were told how to handle snakes. After the slides and any questions, people were invited to join the Snakebite Club by reaching into a cloth bag, pulling out a snake, allowing the snake to bite them, and then returning the snake to the bag.

The Tennessee Wildlife Judging Contest was introduced, and participants were divided into teams to work through the activity, just as 4-H'ers would. The activity involved three parts: visiting a farm and listing which of 28 management practices (see Appendix D) were needed to improve the farm for each of 10 wildlife species (also listed on the scorecard), rating four aerial photographs in order of suitability for each of 10 wildlife species listed on the scorecard,

and matching 24 species of wildlife on the scorecard with several foods exhibited on a table.

Another program held during the banquet was entitled "Waste Not-Want Not." It was a program on resource conservation, during which original ballads dealing with conservation issues were sung.

In a fourth program, Fred Funte, a former Extension agent from Macon County, Tennessee, explained the 4-H FACE for Wildlife Contest. FACE is an acronym for Food and Cover Establishment. The contest is sponsored annually by the Tennessee Wildlife Resources Agency (TWRA). Contestants plant a mixture of seed according to guidelines set forth in a contest brochure. The seed is furnished free by the TWRA. Records must be kept by the 4-H member and the food plots are judged according to their suitability for wildlife. Judging also takes place at the regional and state levels. The top prize at the state level in 1981 was \$300.00, plus a trophy.

A. C. Clark, Extension District Supervisor, presented a special program entitled "Fur Harvest as a Means of Wildlife Management." In addition to his lecture, Mr. Clark had a display of traps that the Conference delegates could examine.

Finally, a wildlife quiz bowl was held, involving those individuals who had the highest scores on the Post-test. Questions from field classes and other Conference activities were asked of four teams of two people each, and trophies presented to the winners.

The Conference was planned carefully with low-level (i.e., introductory) activities at the beginning to acquaint participants with

one another, with class leaders and subject matter. This initial friendshipping helped to bond participants together so they would feel like a team; as a team they could help and encourage each other through the more demanding activities such as Wildlife Judging and the Snakebite Club. The Conference was designed to leave the participants on a high level of activity, full of enthusiasm, and ready to share their experiences with others at home.

Participants also needed time to learn that they could trust their leaders, before activities like the Night Sounds hike, the Snakebite Club, and the Snake Hunt could be attempted. Activities were flexible and could be changed according to interest and weather conditions. Participants knew that they could take any questions or problems to any of the class leaders, and that they would receive prompt attention.

Mr. Andy Buhler, a 1982 winner in the National 4-H Wildlife Leader Awards Program and coach of the winning Wildlife Judging Team in Tennessee, gave pointers on coaching a wildlife judging team. He also assisted other Conference participants during the Wildlife Judging Activity.

The rifle range and hunter safety programs were conducted by Mr. Jim Barnes, TWRA Region III Coordinator of the Hunter Safety Program. A special display was set up for participants by Mr. Jim Delaney, Wildlife Chairman of the National Campers and Hikers Association.

C. POPULATION AND SAMPLE

The population was comprised of all people registered for the Conference, including participants, Conference resource people (class leaders, etc.), and observers. A total of 66 people comprised the population.

The sample for this study was comprised of all participants who completed all four survey instruments, the Leader Attendance Survey, Pre-test, Post-test, and Conference Evaluation. The total sample size was 55 people.

D. DEVELOPMENT AND ADMINISTRATION OF INSTRUMENTS

All four instruments (Appendix E) were developed by the author. In designing questions for the Leader Attendance Survey, factors distinguishing groups of people were listed. In addition, open-ended questions dealing with Conference objectives, and participants' priorities for the Conference. The Leader Attendance Survey was completed at the beginning of the Conference, shortly after opening remarks and orientation comments.

The Pre- and Post-tests were developed after consultation with field class leaders. Although field class leaders gave brief sketches of their class outlines, they were not informed of actual test questions prior to the field class sessions.

Each test had a total of 23 multiple choice questions. Although the Pre- and Post-tests were comprised of different questions, the degree of difficulty remained the same.

Participants worked individually on both tests, and they were not allowed to talk to one another during the testing sessions. Although there was no time limit set for the tests, most participants completed them within 30 minutes.

The Pre-test was administered at the beginning of the Conference along with the Leader Attendance Survey. It was given prior to the dissemination of any subject matter knowledge.

The Post-test was given in conjunction with the Conference Evaluation, after all participants had completed all six field classes.

E. ANALYSIS OF DATA

All questions were computer tabulated and analyzed with the exception of open-ended questions on the Leader Attendance Survey and the Conference Evaluation. The open-ended questions were tallied by hand, and percents were figured with a calculator.

The t-test was used to analyze relations between 11 selected characteristics and differences between Pre- and Post-test score means. The F-test was used to analyze relations between characteristic categories and Pre- and Post-test scores, while Chi-square was used for certain analyses relating characteristics and High and Low Improvement Groups.

High and Low Improvement Groups were determined by separating the total group of participants according to those with improvement scores above the mean improvement score (High Improvement Group, N=26) and those with improvement scores below the mean improvement score (Low Improvement Group, N=29). Improvement scores were calculated by

subtracting the Post-test score from the Pre-test score for each individual. Of course, improvement scores could be negative, positive, or zero.

The .05 level of confidence was used for this study. The .01 level of confidence was mentioned for items that were highly significant. In addition, the .10 level of confidence was mentioned to note items that approached significance.

The Conference Evaluation was administered near the close of the Conference, following the completion of all six field classes by all participants. It consisted of open-ended questions dealing with the Conference and suggestions for future conferences, as well as scale-type questions in which participants marked the degree to which individual items were helpful, appropriate, or adequate. The scale ranged from very to not at all helpful, appropriate, etc.

CHAPTER IV

RESULTS AND DISCUSSIONS

Results of the study will be presented below under the following major headings: (1) Participant Characteristics; (2) Pre-test, Post-test, and Improvement Scores; and, (3) General Conference Evaluation. All results presented in this chapter are based on a total of 55 respondents. A number of other people attended the Conference, but did not complete one or more of the survey instruments for various reasons. The 55 respondents completed the Pre-test, Post-test, Leader Attendance Survey, and Conference Evaluation. Some of the percentages were adjusted to account for those who did not respond to certain questions.

A. PARTICIPANT CHARACTERISTICS

The Leader Attendance Survey was conducted to determine the characteristics of people who might be attracted to this kind of conference. This survey was administered at the beginning of the Conference, prior to the dissemination of any information. The survey results are presented below.

Home State

The majority of Conference delegates came from Tennessee, as seen in Table I. More emphasis was placed on inviting leaders from Tennessee because it was felt that they would be more likely to attend

TABLE I

HOME STATES OF PARTICIPANTS IN THE 1981 TENNESSEE/SOUTHERN
REGION 4-H FISH AND WILDLIFE
ADULT LEADERS' CONFERENCE

State	Number	Percent
Tennessee	29	52.7
Georgia	8	14.5
Florida	4	7.3
South Carolina	4	7.3
Arkansas	3	5.5
Mississippi	3	5.5
Oklahoma	3	5.5
North Carolina	1	1.8
TOTAL	55	100.1*

*Percents do not add up to 100 due to rounding of numbers.

the Conference, due to its location. Tennessee had representatives from nineteen counties throughout the State: Blount, Carter, Cumberland, Davidson, Hamilton, Hardeman, Henry, Knox, Macon, Maury, Montgomery, Morgan, Overton, Scott, Sevier, Shelby, Warren, Weakley and Williamson. Shelby County, with four participants, and Maury, with three, had the largest numbers of people attending. In addition, participants came from seven other states, as seen in Figure 1.

Occupation

Leaders were surveyed to determine if their occupations had any apparent relation to their involvement in the 4-H Wildlife Project. As seen in Table II, a wide variety of occupations were listed by the participants, with Homemaker and Student each accounting for 16.4% of the total. People in natural resource-related fields accounted for 5.4%.

Sex

No special effort was made to recruit leaders according to sex. Sixty percent of the delegates were male, and 40% were female.

4-H Leader Status

Not all participants were 4-H leaders at the time of the Conference; 78% said that they already were leaders, and 22% said they were not. Of those who said they were leaders, the mean length of time that they had served as a leader was four years (see Table III).

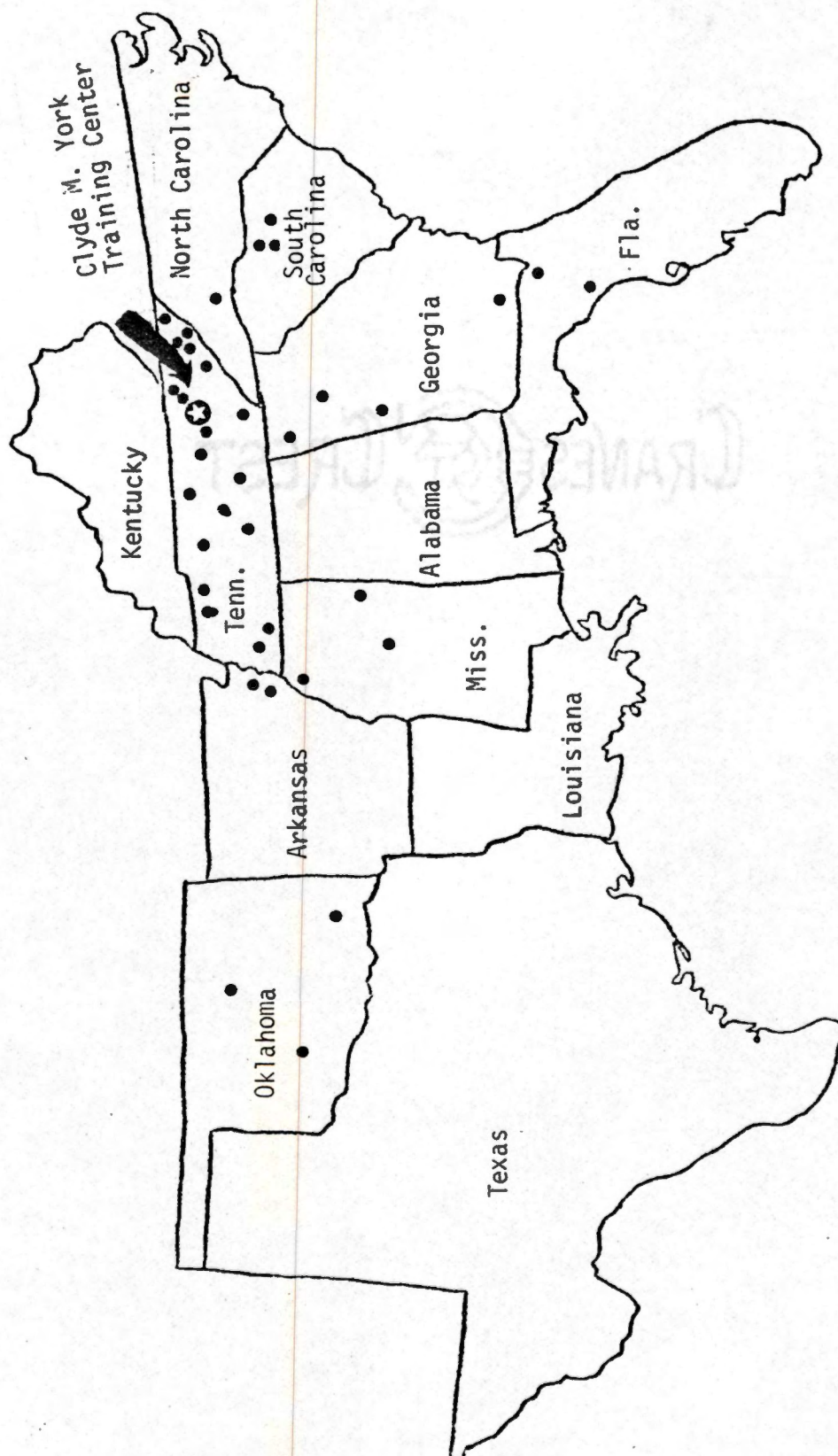


FIGURE 1: Locations of Home Counties of Participants in the 1981 Tennessee/Southern Region 4-H Fish and Wildlife Adult Leaders' Conference

TABLE II

OCCUPATIONS OF PARTICIPANTS IN THE 1981 TENNESSEE/SOUTHERN
REGION 4-H FISH AND WILDLIFE
ADULT LEADERS' CONFERENCE

Occupation	Number	Percent
Bank	1	1.8
Body Repairman	1	1.8
Carpenter	1	1.8
Chemist	2	3.6
Credit Manager	1	1.8
Data Processor	1	1.8
Electrical Engineer	1	1.8
Emergency Medical Technician	1	1.8
Extension Service	5	9.1
Farmer	1	1.8
Forester	2	3.6
Boys Ranch	1	1.8
Homemaker	9	16.4
Machinist	1	1.8
Police	1	1.8
Power Company Area Manager	1	1.8
Volunteer	1	1.8
Quality Control	1	1.8
Wildlife	1	1.8
Retired	3	5.5
Bus Driver	1	1.8
Student	9	16.4
Teacher	4	7.3
Technician	1	1.8
Water Purification Officer	1	1.8
Youth Court Counsellor	1	1.8
No Answer	2	3.6
TOTAL	55	100.0

TABLE III

NUMBER OF YEARS AS A LEADER FOR PARTICIPANTS IN THE
1981 TENNESSEE/SOUTHERN REGION 4-H FISH AND
WILDLIFE ADULT LEADERS' CONFERENCE

Number of Years as Leader	Number	Percent
1	10	18.2
2	7	12.7
3	7	12.7
4-5	6	11.0
6-12	6	11.0
15	1	1.8
22	1	1.8
None	17	30.8
TOTAL	55	100.0

When asked how they became a leader, nearly 42% said they had volunteered. Other respondents either said they were asked to be a leader, or they were not a leader but would be willing to be one. No one said they were unwilling to be a 4-H leader.

Age

Although the Conference was meant primarily for adult leaders, a few 4-H members also attended. These youth had either organized their own 4-H wildlife project group, or were teen leaders assisting a 4-H wildlife project group. As shown in Table IV, most participants were in the 28 to 47 age brackets. The estimated median was about 36 years of age.

Education

Participants were asked to indicate the highest level of education they had achieved. The one delegate whose highest level of education was elementary school was under the age of 18 and still attending school. More than one half listed high school as their highest level of education (see Table V).

Respondents who listed a Bachelor's degree or above were also asked to list their college major. A complete listing of college majors is given in Table VI. Wildlife majors accounted for 5.5% of the total.

Affiliation with 4-H

Untabled data showed that 61% of the participants said they were the parent of a 4-H member, and 39% said they were not. Of those

TABLE IV

AGE CATEGORIES OF PARTICIPANTS IN THE 1981 TENNESSEE/SOUTHERN
REGION 4-H FISH AND WILDLIFE
ADULT LEADERS' CONFERENCE

Age Category	Number	Percent
Under 18	3	5.5
18-27	11	20.0
28-37	17	30.9
38-47	19	34.5
48 and over	5	9.1
TOTAL	55	100.0

TABLE V

HIGHEST LEVEL OF EDUCATION FOR PARTICIPANTS IN THE 1981
TENNESSEE/SOUTHERN REGION 4-H FISH AND WILDLIFE
ADULT LEADERS' CONFERENCE

Education	Number	Percent
Elementary School	1	1.8
High School	30	54.5
Bachelor's Degree	17	30.8
Master's Degree	6	10.9
Doctorate	1	1.8
TOTAL	55	99.9*

*Percents do not add up to 100 due to rounding of numbers.

TABLE VI

COLLEGE MAJORS OF PARTICIPANTS IN THE 1981 TENNESSEE/SOUTHERN
REGION 4-H FISH AND WILDLIFE
ADULT LEADERS' CONFERENCE

College Major	Number	Percent
Accounting	1	1.8
Agribusiness	1	1.8
Agriculture Education	1	1.8
Biology	2	3.6
Chemistry	2	3.6
Dairy	1	1.8
School Administration	1	1.8
English	1	1.8
Guidance	1	1.8
Home Economics	1	1.8
Industrial Arts	1	1.8
Industrial Management	1	1.8
Medical Technology	1	1.8
Music	1	1.8
Physical Education	1	1.8
Plant Science	1	1.8
Secondary Education	1	1.8
Spanish	1	1.8
Wildlife	3	5.5
Not Applicable	32	58.2
TOTAL	55	100.0

who were a parent of a 4-H'er, 63% said their child was enrolled in the 4-H Wildlife Project, and 37% said their child was enrolled in a 4-H project other than wildlife.

Delegates were also asked if they were in 4-H as a youth. Fifty-six percent said yes, and 44% said no. The mean length of time for those who were in 4-H as a youth was six years, and when you consider only those who were in 4-H as a youth, Table VII shows that 82.5% were considered active members. An active member in this case is defined as a person who was in 4-H for four years or more.

Wildlife Experience

Table VIII shows that the largest percentage of participants listed Hobby as their main form of wildlife experience. The next largest percentage marked No Experience. Those who marked Hobby as their type of experience listed their hobbies as hunting, fishing, camping, or hiking.

Membership in Wildlife Organizations

Delegates were also asked if they were a member of one or more wildlife-related organizations, such as National Wildlife Federation, National Audubon Society, etc. Only 24% said yes; 76% said they were not a member of any wildlife-related organization. A list of wildlife organization memberships by participants is given in Table IX.

TABLE VII

LENGTH OF TIME IN 4-H AS A YOUTH OF PARTICIPANTS IN THE 1981
TENNESSEE/SOUTHERN REGION 4-H FISH AND WILDLIFE
ADULT LEADERS' CONFERENCE

Years in 4-H as a Youth	Number	Percent
2	4	7.3
3	1	1.8
4	5	9.1
5	4	7.3
6	4	7.3
7	1	1.8
8	7	12.7
9 and over	3	5.5
Not applicable	26	47.3
TOTAL	55	100.0

TABLE VIII

LEVEL OF WILDLIFE EXPERIENCE OF PARTICIPANTS IN THE
1981 TENNESSEE/SOUTHERN REGION 4-H FISH AND
WILDLIFE ADULT LEADERS' CONFERENCE

Experience	Number	Percent
No experience	14	25.5
Hobby	24	43.6
Formal education	10	18.2
Other	6	10.9
No answer	1	1.8
TOTAL	55	100.0

TABLE IX

WILDLIFE ORGANIZATION MEMBERSHIPS OF PARTICIPANTS IN THE 1981
 TENNESSEE/SOUTHERN REGION 4-H FISH AND WILDLIFE
 ADULT LEADERS' CONFERENCE*

Wildlife Organization	Number (N=55)	Percent
National Wildlife Federation	7	12.7
National Audubon Society	3	5.5
Tennessee Conservation League	3	5.5
Ducks Unlimited	2	3.6
BASS	1	1.8
Georgia Conservancy	1	1.8
National Rifle Association	1	1.8
Nature Conservancy	1	1.8
SCS	1	1.8
The Wildlife Society	1	1.8
Whale Defense Fund	1	1.8
Wild Turkey Federation	1	1.8
None or No Response	43	78.2

*Numbers and percents do not necessarily add up to totals since some respondents gave more than one answer.

High and Low Improvement Groups

Data in Table X permit a comparison between numbers and percents of participants in the High Improvement Group (those with scores above the median of three points) and the Low Improvement Group (those with scores below the median) on eleven selected characteristics. The only characteristic in which a significant difference was noted was Member of Wildlife Organization, a higher percentage of the Low Improvement Group (35%) than of the High Group (8%) being a member of one or more wildlife organizations.

Significance was approached but not attained on Child in Wildlife Project. Here again, a higher percentage of said Low Group (67%) than the High Group (40%) having a child in said wildlife project.

The High Improvement Group appeared to have more participants in the older age category, though this was not significant. Study of Major Project as a Youth showed that higher percentages of the High Improvement Group listed projects other than Agriculture or Wildlife, while the reverse was true for the Low Improvement Group.

Furthermore, higher (but not significant) percentages of the High Improvement Group than the Low Improvement Group were recorded on five of six remaining characteristics, namely: (1) male sex; (2) were 4-H leaders; (3) did not have a college degree; (4) if college degree, majored in Agriculture; and, (5) were parents of

TABLE X

CHARACTERISTICS OF 1981 TENNESSEE/SOUTHERN REGION 4-H FISH AND
WILDLIFE ADULT LEADERS' CONFERENCE PARTICIPANTS ACCORDING
TO HIGH AND LOW IMPROVEMENT GROUPS AND TOTALS

Characteristic	Total Group		High Improvement Group		Low Improvement Group	
	No.	%	No.	%	No.	%
1. Sex						
a. Male	33	60	16	62	17	59
b. Female	22	40	10	38	12	41
c. TOTAL	55	100	26	100	29	100
2. 4-H Leader						
a. Yes	40	73	21	81	19	66
b. No	11	20	4	15	7	24
c. No response	4	7	1	4	3	10
d. TOTAL	55	100	26	100	29	100
3. Age						
a. 27 and under	14	25	6	23	8	28
b. 28 to 37	17	31	8	31	9	31
c. 38 and over	24	44	12	46	12	41
d. TOTAL	55	100	26	100	29	100
4. Education						
a. No College Degree	31	56	16	62	15	52
b. College Degree	24	44	10	38	14	48
c. TOTAL	55	100	26	100	29	100
5. College Major						
a. Agriculture	9	38	5	50	4	29
b. Other	14	58	5	50	9	64
c. No response	1	4	0	0	1	7
d. TOTAL	24	100	10	100	14	100
6. Parent of 4-Her						
a. Yes	30	55	15	58	15	52
b. No	21	38	9	34	12	41
c. No response	4	7	2	8	2	7
d. TOTAL	55	100	26	100	29	100

TABLE X (continued)

Characteristic	Total Group		High Improvement Group		Low Improvement Group	
	No.	%	No.	%	No.	%
7. Child in Wildlife Project ^b						
a. Yes	16	54	6	40	10	67
b. No	10	33	8	53	2	13
c. No response	4	13	1	7	3	20
d. TOTAL	30	100	15	100	15	100
8. In 4-H as a Youth						
a. Yes	29	53	10	38	19	66
b. No	25	45	15	58	10	34
c. No response	1	2	1	4	0	0
d. TOTAL	55	100	26	100	29	100
9. Active in 4-H as a Youth						
a. Active	24	83	7	70	17	89
b. Not active	5	17	3	30	2	11
c. TOTAL	29	100	10	100	19	100
10. Major Project as a Youth						
a. Agriculture	12	42	3	30	9	47
b. Wildlife	7	24	2	20	5	26
c. Other	7	24	4	40	3	16
d. No response	3	10	1	10	2	11
e. TOTAL	29	100	10	100	19	100
11. Member of Wildlife Organization ^a						
a. Yes	12	22	2	8	10	35
b. No	33	60	19	73	14	48
c. No response	10	18	5	19	5	17
d. TOTAL	55	100	26	100	29	100

^aChi-square significant at .05 level^bChi-square significant at .10 level

4-H'ers. A higher percentage of Low Improvement Group members than High Improvement Group members (66% versus 38%) were In 4-H as a Youth. Also, a higher percentage of Low Improvement Group members than those in the High Improvement Group (89% versus 70%) were Active in 4-H as a Yough.

It would appear that the Low Improvement Group had higher Pre-test scores and consequently did not start as low in knowledge--resulting in smaller improvement scores with Post-test scores at a higher level. At the same time, scores of High Improvement participants on the Pre-test appear to have been lower, thus leaving more room for improvement.

B. PRE-TEST, POST-TEST, and IMPROVEMENT SCORES

The Pre- and Post-test questions were selected from lecture material covered in the six mandatory field classes. Although different questions were asked on the Pre- and Post-tests, the degree of difficulty remained the same. The total number of multiple choice questions on each test was 23, randomly drawn from a total of 46 questions.

The Pre-test was administered in conjunction with the Leader Attendance Survey; the Post-test was given at the end of the Conference at the same time as the Conference Evaluation. Most participants completed the test within one half hour.

The mean score on the Pre-test was approximately 15 (65%) compared with the Post-test mean of approximately 19 (83%). All but four of the

participants showed improvement from their Pre-test to their Post-test scores.

Table XI shows that there was an obvious increase in the number of correct answers, for example whereas only two individuals (3.6%) scored 20 (87%) or more points on the Pre-test, over one half scored 20 or more points on the Post-test.

Data in Table XII include mean scores for Pre-tests, Post-tests and Improvement for the participants analyzed according to the eleven characteristics studied. cursory reference to the Improvement Scores shows that all were highly significant ($P < .01$) with the exception of other major Project as a Youth, which was significant ($P < .05$), and Not Active in 4-H as a Youth, which approached but did not attain significance ($P < .10$).

It is interesting to note that participants differed significantly on the Pre-test scores on five characteristics, namely: (1) Age, those in the 28 to 37 level having highest scores, (2) Education, those with college degree scoring higher; (3) Child in Wildlife Project, those having such a child scoring higher; (4) Major Project as a Youth, those listing Wildlife and Agriculture scoring higher; and, (5) Member of Wildlife Organization, those reporting such membership scoring higher. Those Active in 4-H as a Youth scored higher, approaching significance. Such differences indicate the extremes in knowledge that existed at the beginning of the Conference.

TABLE XI

NUMBERS OF CORRECT ANSWERS ON PRE-TEST AND POST-TEST ACCORDING
TO PERCENTS OF PARTICIPANTS IN THE 1981 TENNESSEE/SOUTHERN
REGION 4-H FISH AND WILDLIFE ADULT LEADERS' CONFERENCE

Correct Answers		Percent of Participants	
Number	Percent	Pre-Test (N=55)	Post-Test (N=55)
6	26	5.5	0.0
7	30	0.0	0.0
8	35	1.8	0.0
9	39	0.0	1.8
10	43	0.0	0.0
11	48	3.6	0.0
12	52	5.5	0.0
13	57	5.5	5.5
14	61	9.1	3.6
15	65	7.3	1.8
16	70	18.2	3.6
17	74	12.7	5.5
18	78	14.5	12.7
19	83	12.7	12.7
20	87	1.8	18.2
21	91	0.0	9.1
22	96	1.8	18.2
23	100	0.0	7.3

TABLE XII

PRE-TEST, POST-TEST, AND IMPROVEMENT SCORE MEANS OF PARTICIPANTS
IN THE 1981 TENNESSEE/SOUTHERN REGION 4-H FISH AND WILDLIFE
ADULT LEADERS' CONFERENCE BROKEN DOWN BY CHARACTERISTICS

Characteristic	Pre-test Score	Post-test Score	Improvement Score
	-----Mean-----		
1. Sex			
a. Male - 33*	16.1(70)**	19.7(86) ^f	3.7(16) ^a
b. Female - 22	14.6(63)	18.1(79) ^f	3.5(15) ^a
c. TOTAL - 55	15.5(45)	19.1(83) ^f	3.6(16)
2. 4-H Leader			
a. Yes - 40	15.1(66)	19.0(83)	3.9(17) ^a
b. No - 11	16.0(70)	19.1(83)	3.1(13) ^a
c. TOTAL - 51	15.3(67)	19.0(83)	3.7(16)
3. Age			
a. 27 and under - 14	16.4(71) ^d	19.6(85) ^e	3.1(13) ^a
b. 28 to 37 - 17	17.2(75) ^d	20.5(89) ^e	3.4(15) ^a
c. 38 and over - 24	13.7(60) ^d	17.8(77) ^e	4.1(18) ^a
d. TOTAL - 55	15.5(67) ^d	19.1(83) ^e	3.6(16)
4. Education			
a. No College Degree - 31	14.5(63) ^e	18.5(80) ^f	4.0(17) ^a
b. College Degree - 24	16.8(73) ^e	19.9(87) ^f	3.1(13) ^a
c. TOTAL - 55	15.5(67) ^e	19.1(83) ^f	3.6(16)
5. College Major			
a. Agriculture - 9	17.2(75)	21.0(91)	3.8(17) ^a
b. Other - 14	16.4(71)	19.1(83)	2.7(12) ^a
c. TOTAL - 23	16.7(73)	19.8(86)	3.1(13)
6. Parent of 4-Her			
a. Yes - 30	14.9(65)	18.7(81)	3.8(17) ^a
b. No - 21	16.4(71)	20.0(87)	3.6(16) ^a
c. TOTAL - 51	15.5(67)	19.2(83)	3.7(16)
7. Child in Wildlife Project			
a. Yes - 16	16.2(70) ^e	19.0(83)	2.8(12) ^a
b. No - 10	12.7(55) ^e	18.6(81)	5.9(26) ^a
c. TOTAL - 26	14.8(64) ^e	18.8(82)	4.0(17)

TABLE XII (continued)

Characteristic	Pre-test Score	Post-test Score	Improvement Score
	-----Mean-----		
8. In 4-H as a Youth			
a. Yes - 29	15.9(69)	18.8(82)	2.9(13) ^a
b. No - 25	15.4(67)	19.7(87)	4.3(19) ^a
c. TOTAL - 54	15.6(68)	19.2(83)	3.6(16)
9. Active in 4-H as a Youth			
a. Active - 24	16.3(71) ^f	18.9(82)	2.6(11) ^a
b. Not Active - 5	13.6(59) ^f	18.0(78)	4.4(19) ^c
c. TOTAL - 29	15.9(69) ^f	18.8(82)	2.9(13)
10. Major Project as a Youth			
a. Agriculture - 12	16.0(70) ^e	18.4(80)	2.4(10) ^a
b. Wildlife - 7	17.7(77) ^e	20.3(88)	2.6(11) ^a
c. Other - 7	13.7(60) ^e	17.7(77)	4.0(17) ^b
d. TOTAL - 26	15.8(69) ^e	18.7(81)	2.9(13)
11. Member of Wildlife Organization			
a. Yes - 12	18.1(79) ^d	20.6(90) ^e	2.5(11) ^a
b. No - 33	14.3(62) ^d	18.5(80) ^e	4.2(18) ^a
c. TOTAL - 45	15.3(67) ^d	19.1(83) ^e	3.8(17)

*Numbers after characteristics are the numbers of participants responding. Variations in numbers responding account for differences in totals.

**Numbers in parentheses are mean scores converted to percents.

^aHorizontal (t-test) significant at .01 level

^bHorizontal (t-test) significant at .05 level

^cHorizontal (t-test) significant at .10 level

^dVertical (F-test) significant at .01 level

^eVertical (F-test) significant at .05 level

^fVertical (F-test) significant at .10 level

Fewer differences were noted in Post-test Scores, with significance being noted only on Age, those in the 28-37 bracket again excelling, and Membership in Wildlife Organization, those belonging to a wildlife organization having higher scores. Significance was approached on Education, those with college degrees outperforming others, and Sex, males having higher scores.

All participants improved, but the differences in knowledge levels were much less striking at the end of the Conference. In brief summary, all but four participants improved and Improvement Scores in nearly every case were significant.

C. GENERAL CONFERENCE EVALUATION

The Conference Evaluation included open-ended, short-answer questions, as well as questions in which the respondent checked the degree to which objectives, classes, and activities were fulfilled. Data will be presented below under convenient headings included in the final survey.

Field Classes

Participants found all classes fairly to very helpful (untabed), and some participants could not choose one class that helped them more than the others. Table XIII shows the numbers and percents of participants that chose Helped Most and Helped Least classes. The Steps in Organizing a County 4-H Wildlife Project Group, How to Mesh

TABLE XIII

PERCENTS OF PARTICIPANTS IN THE 1981 TENNESSEE/SOUTHERN REGION
4-H FISH AND WILDLIFE ADULT LEADERS' CONFERENCE RATING
MOST AND LEAST HELPFUL FIELD CLASSES*

Field Class	Helped Most (N=55)	Helped Least (N=55)
	-----Percent-----	
Steps in Organizing a County 4-H Wildlife Project Group	17	2
Role of Leader, Agent, Specialist in 4-H	4	18
How to Mesh Wildlife with Other 4-H Projects	14	4
Ecology of Farm Ponds	8	15
Fish and Wildlife Management Methods	9	3
Wildlife Management Principles	13	0
None or No Response	7	25

*Percents do not necessarily add up to 100 since some respondents gave more than one answer.

Wildlife with Other 4-H Projects, and Wildlife Management Principles Classes were rated as being most helpful. Many did not list a least helpful field class. However, the Role of Leader, Agent, Specialist in 4-H and Ecology of Farm Ponds were rated as least helpful by those responding, and the Fish and Wildlife Management Methods class did not receive a majority of votes for either the Helped Most or Least ranking.

Optional Activities

Participants were also asked to choose the one activity that was most appropriate, and the one activity that was least appropriate. Untabled data show those listed as appropriate were: A Closer Look at Nature, Night Sounds, Snake Hunt, and Wildlife Films. The one listed as least appropriate was the Square Dance.

Objectives

When asked to mark the degree to which the Conference objectives had been accomplished, participants said that each objective was covered fairly to very adequately (untabled).

Participants were also asked if they had achieved their own personal goals for the Conference. Untabled data revealed that 93% of the participants said they achieved what they had hoped to learn; 7% said they achieved most of what they had hoped to learn. No one said they did not achieve their objectives at all.

Activities

Conference delegates were asked to list the area or areas (if any) in which they would have liked to spend more time. They were free to choose from all field classes and optional activities. The number and variety of requests are listed in Table XIV. It is interesting to note that the four field classes ranked highest in the Helped Most category of Table XIII were also listed here. The Rifle Range, Wildlife Judging Activity, Night Sounds Hike, and Wildlife Films were also highly requested.

Conference delegates were also asked to suggest new areas of study that were not included in the Conference. Table XV shows the subject matter areas that were requested. Most requests were for activities and "hands-on" experience, or for identification of and information on different wildlife species.

Additional Help

Participants were asked how their local Extension Office could better serve them in the future. The open-ended question brought forth a variety of answers, as seen in Table XVI. A majority of participants said they needed resource information and materials from their local Extension Offices.

Wildlife Appreciation

Conference delegates were asked if the Conference increased their awareness of and appreciation for wildlife and natural resources.

TABLE XIV

REQUESTS FOR MORE TIME TO BE SPENT IN VARIOUS ACTIVITIES SUGGESTED
BY PARTICIPANTS IN THE 1981 TENNESSEE/SOUTHERN REGION
4-H FISH AND WILDLIFE ADULT LEADERS' CONFERENCE*

Activity Requested	Number (N=55)	Percent
Wildlife Management Principles Class	13	23.6
Fish and Wildlife Management Method Class	9	16.4
Rifle Range	8	14.5
Steps in Organizing a County 4-H Wildlife Project Group Class	7	12.7
Wildlife Judging Activity	7	12.7
How to Mesh Wildlife with Other 4-H Projects Class	6	10.9
Night Sounds	5	9.1
Wildlife Films	5	9.1
Ecology of Farm Ponds Class	4	7.3
Archery	4	7.3
Snake Hunt	4	7.3
Square Dance	4	7.3
A Closer Look at Nature	3	5.5
Morning Bird Walk	3	5.5
Fishing	1	1.8
Get to Know a Tree	1	1.8
Morning Cookout	1	1.8
Overcome Fear of Snakes	1	1.8
Role of Leader, Agent, Specialist in 4-H Class	1	1.8
Volleyball	1	1.8
None or No Response	14	25.5

*Numbers and percents do not necessarily add up to totals since some respondents gave more than one answer.

TABLE XV

IDEAS FOR NEW SUBJECT AREAS SUGGESTED BY PARTICIPANTS IN THE
1981 TENNESSEE/SOUTHERN REGION 4-H FISH AND WILDLIFE
ADULT LEADERS' CONFERENCE*

Subject Area Suggested	Number (N=55)	Percent
"Hands-on" experience	4	7.3
Outdoor classes/field trips	3	5.5
Wildlife identification	3	5.5
Hunting, fishing information/techniques	2	3.6
Ideas for young people	2	3.6
Information on birds/birds of prey	2	3.6
Information on non-game species	2	3.6
Environmental awareness	1	1.8
Habitat/ecology	1	1.8
Handling live animals	1	1.8
How to lead activities	1	1.8
Lake and river ecology	1	1.8
Management techniques	1	1.8
Maps and habitat mapping	1	1.8
Other projects	1	1.8
Plant identification	1	1.8
Predators	1	1.8
Trees	1	1.8
Understanding youth	1	1.8
None or No Response	34	61.8

*Numbers and percents do not necessarily add up to totals since some respondents gave more than one answer.

TABLE XVI

AREAS IN WHICH HELP FROM LOCAL EXTENSION OFFICES WAS NEEDED
 ACCORDING TO PARTICIPANTS IN THE 1981 TENNESSEE/SOUTHERN
 REGION 4-H FISH AND WILDLIFE ADULT LEADERS' CONFERENCE*

Help Needed	Number (N=55)	Percent
Resource information and materials	31	56.4
Encouragement and support	11	20.0
Leader training/club organization	9	16.4
Locating interested youth	6	10.9
Information on how to become a leader	3	5.5
Contacting resource people for lectures and programs	2	3.6
Supplying awards for the program	2	3.6
Planning field trips out of the county	1	1.8
None or No Response	7	12.7

*Numbers and percents do not necessarily add up to totals since some respondents gave more than one answer.

Ninety-eight percent of the delegates said that the Conference did increase their awareness and appreciation; 2% said it did not (untabled).

Confidence as a 4-H Leader

Participants were asked if the Conference increased their self-confidence as a 4-H Wildlife Project Group Leader. Untabled data showed that 92% said that the Conference did increase their self-confidence, and 8% said it did not.

Additional Comments

Conference delegates were free to list any suggestions and comments that were not covered in the Conference Evaluation. The comments are listed in Table XVII. Nearly all of the comments were positive.

The Snake Bite Club

Untabled data showed that 20 Conference delegates (37%) joined the Snake Bite Club. The Snake Bite Club was an optional evening activity that gave Conference delegates the opportunity to handle a live snake.

Brief Summary

In brief summary, Conference delegates indicated a very positive response to the Conference as a whole. Participants indicated an interest in future conferences, and many also indicated new or revitalized interests in forming their own 4-H wildlife project groups.

TABLE XVII

MISCELLANEOUS COMMENTS OF PARTICIPANTS IN THE 1981
 TENNESSEE/SOUTHERN REGION 4-H FISH AND WILDLIFE
 ADULT LEADERS' CONFERENCE *

Comment	Number (N=55)	Percent
Great/No improvements	12	21.8
Enjoyed meeting people	4	7.3
Hope another conference is planned	3	5.5
Need more variety of spare-time activities	2	3.6
Didn't like Snakebite Club	1	1.8
Learned a lot	1	1.8
Need bags to hold handouts, etc.	1	1.8
Need more ideas/discussions with other states	1	1.8
Need more information prior to Conference	1	1.8
Provided fun as well as information	1	1.8
Very well organized	1	1.8
Wanted to swap mementos with people from different counties/states	1	1.8
None or No Response	32	58.2

*Numbers and percents do not necessarily add up to totals since some respondents gave more than one answer.

CHAPTER V

SUMMARY

The purposes of this study were: to determine the type of person that was attracted to this Conference, to more effectively recruit delegates for future conferences; to determine the delegates' improvement in subject matter knowledge as a result of the Conference; and to make recommendations for future conferences.

The Conference was designed to train both volunteer leaders and Extension agents, with most of the emphasis being on leader training. The objectives of the Conference dealt mainly with dissemination of wildlife subject matter information, and 4-H fish and wildlife project group information.

Data for this study were collected by means of four instruments; a Leader Attendance Survey to determine participants' characteristics; a Conference Evaluation to determine participants' response to the Conference; and a Pre-test and Post-test to determine levels of subject matter knowledge. The Leader Attendance Survey and the Pre-test were administered at the beginning of the Conference, and the Conference Evaluation and Post-test were given upon completion of all six field classes.

Data were tabulated and analyzed by computer, with the exception of some open-ended questions which were tallied by hand. The t-test, F-test, and Chi-square were used to determine significance where appropriate. The .05 level of confidence was used for the study.

A. SUMMARY OF MAJOR FINDINGS

A majority of the participants of the 1981 Southern Regional 4-H Wildlife Conference came from Tennessee. Other states that were represented were Arkansas, Florida, Georgia, Mississippi, North Carolina, Oklahoma, and South Carolina. Occupations of the participants were varied, with Homemaker and Student accounting for the highest percents. Of those that were 4-H leaders at the time of the Conference, the mean length of time that they had been leaders was four years. Over one-third of the participants were between the ages of 38 and 47, and over one-half listed High School as their highest level of education. Of those that did attend college, a wide variety of majors was exhibited. Nearly two-thirds of the participants were the parent of a 4-H'er, and over one-half had been in 4-H as a youth. A majority of the participants listed Hobby as their type of wildlife experience, and only one-fourth were members of one or more wildlife organization.

Conference participants were divided into High and Low Improvement Groups on the basis of the median improvement score, and were then compared according to eleven selected characteristics to determine if there were any characteristics that distinguished individuals with a large amount of improvement from those with little or no improvement. Member of Wildlife Organization was the only characteristic that was significant, but the Low Improvement Group had a higher percentage in that category than did the High Improvement Group. This might have been true because the Low group started with higher Pre-test scores than did the High group.

The mean score on the Pre-test was approximately 15, compared with the Post-test mean of approximately 19. All but four of the participants showed improvement from their Pre-test to their Post-test scores. Statistical analyses (F-test) of Pre- and Post-test score means revealed that significant differences were exhibited according to Age, Education, Child in Wildlife Project, Major Project as a Youth, and Member in Wildlife Organization.

The overall response to the Conference was positive. All six field classes were rated as being fairly to very helpful, and some of the most appropriate optional activities listed were: A Closer Look at Nature, Night Sounds, Snake Hunt, and Wildlife Films. Most participants said that the Conference increased their awareness of and appreciation for wildlife, and also increased their self-confidence as a 4-H Wildlife Project Group Leader.

B. CONCLUSIONS

According to this study, a "typical" 4-H fish and wildlife project group leader could not readily be characterized. Responses to most characteristics were so varied that even gross generalizations were difficult in some cases. It was therefore concluded that it was not possible to determine a specific type of person that was attracted to the Conference and interested in becoming a leader. However, a number of different generalized groups were able to be characterized, and are presented in the recommendations section.

Significant improvements in subject matter knowledge were noted according to all eleven leader characteristics studied, with the exception of the sub-category Not Active in 4-H as a Youth, which approached significance. It should be noted that this sub-category had a relatively high improvement score, and would have probably achieved significance had the sample size been larger. The overall conclusion was that subject matter knowledge did, in fact, improve as a result of the Conference.

As previously stated, most comments about the Conference were positive in nature. Recommendations for future conferences are presented in the next section.

C. RECOMMENDATIONS

The following recommendations have been made on the basis of the results of the Leader Attendance Survey, Pre- and Post-tests, and Conference Evaluation. In addition, participant comments and class leader suggestions were also used to formulate recommendations.

When selecting people to be invited to future conferences, it is suggested that conference leaders consider the following audiences for recruitment of 4-H fish and wildlife project group leaders:

- (1) parents of 4-H members, especially a parent whose child is enrolled in the wildlife project;
- (2) other already-existing 4-H leaders, regardless of their experience in the area of wildlife; and,
- (3) people with wildlife experience and an interest in youth, but not necessarily with previous 4-H experience.

The continuation of mandatory, rather than optional, field classes is recommended, so that all conference delegates will be exposed to the background information that is necessary for the organization of a 4-H fish and wildlife project group.

Judging from test scores and requests from Conference participants, it is suggested that future conferences include more subject matter classes, especially those dealing with plant and animal identification, and basic ecological principles.

As a result of personal observations and suggestions from Conference delegates, it is recommended that more outdoor classes and classes that allow "hands-on" experience be offered in the future. Adults need to be comfortable with wildlife management techniques and wildlife activities before they can be effective as leaders.

While the "Role of Leader, Agent, Specialist in 4-H" class received an overall Very Helpful rating, it was ranked as the class that helped Conference delegates the least. The scores in this area were not significantly lower than those in other areas, indicating that the class material was not above the participants' level. Reasons for this low ranking were unclear; the low ranking could be due to lack of interest in the subject, or method of presentation. Indications as to the importance of Conference objectives, and requests on the Conference Evaluation suggest that participants were not as interested in this area as they were in areas relating to wildlife subject matter.

To remedy this, it is recommended that a different class be offered in place of the "Role of Leader, Agent, Specialist in 4-H" class.

A class on acclimatization activities, or one on how to motivate and work with youth might be viable alternatives. If a class that is more 4-H oriented is desired, perhaps a workshop on record books, demonstrations, and 4-H club meetings could be offered.

The "Ecology of Farm Ponds" class also received a Very Helpful rating, while ranking next to the lowest in terms of helpfulness. Unlike the "Role of Leader . . ." class, test scores indicated that Conference delegates were lacking in knowledge of fisheries management principles more than any other area included on the tests. It was not known why this class received a low ranking. In addition to the reasons listed in the previous recommendation, it is also possible that the lecture material was not at the proper level for the participants.

The area of fisheries management is an important part of the total 4-H wildlife project program. Rather than eliminate this class, it is suggested that the class be restructured so that it will be of more interest to future conference delegates.

Even though participants ranked the Square Dance as one of the least appropriate activities, it was still a popular and a highly-requested one among some delegates. The Conference was a very intensive and concentrated training session, and recreational activities were essential for relaxation, strengthening of friendships, and personal enjoyment. It is recommended that a variety of recreational activities be offered each evening so the participants can be free to choose the one they are most interested in.

Finally, when selecting class leaders for future conferences, it is important to remember to select individuals with energy, enthusiasm, and a genuine interest in people, coupled with a good understanding of the subject matter involved. It appears that the overall success of the Tennessee/Southern Region 4-H Fish and Wildlife Adult Leaders' Conference may have been due mainly to this one factor.

LIST OF REFERENCES



LIST OF REFERENCES

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APPENDIXES

APPENDIX A
LETTERS TO COUNTY AGENTS





Agricultural Extension Service
University of Tennessee Institute of Agriculture

P. O. Box 1071
Knoxville, Tennessee 37901

DATE: 5 March, 1981

TO : All 4-H Agents with Responsibilities in Wildlife and Fisheries

FROM: Jim Byford

RE : Tennessee/Southern Region 4-H Fish and Wildlife Adult Leaders
Conference

Dear Co-Workers:

For the first time, we now have the opportunity to send adult volunteer leaders to a conference where they can be trained to help with 4-H fish and wildlife activities in your county. This conference is sponsored by a grant from the U. S. Fish and Wildlife Service. As 4-H continues to grow and expand, I am sure you are feeling the pinch of not having enough time to conduct all the activities for which you are responsible. This is an opportunity to receive some help.

Tennessee will receive 73 paid scholarships to this conference. The other 13 southern states will receive a total of 52 paid scholarships (4 per state). Since some states will probably not use all their scholarships, Tennessee may receive additional scholarships. At any rate, if we have more leaders interested than there are scholarships available, these leaders will be allowed to attend the conference at a cost of \$50.00 for room and board. Travel expenses must be borne by the delegates. In some cases, carpooling may be in order. We are sending you three copies of a brochure outlining the conference, along with three application blanks and a sample letter for you to use in contacting your leaders. Please distribute these to one or more leaders in your county who are already assisting with the fish and wildlife project group, or ones you think would be a good candidate to do so. Please note that these application forms should be sent directly to: Dr. James L. Byford, Associate Head, Dept. of Forestry, Wildlife and Fisheries, Univ. of Tennessee, Box 1071, Knoxville, TN 37901, no later than April 10, 1981. If you need additional brochures, please let me know.

This is a golden opportunity to get some help in your county! Please don't overlook any good potential leaders. This conference should motivate them, as well as show them how to become a leader. This might be a good opportunity to involve your wildlife officer or a member of the local sportsmen's club.

JB/mh

Encls.

cc: Ruth Henderson
Gary Schneider
Assoc. District Supervisors

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THE UNIVERSITY OF TENNESSEE AND THE U.S. DEPARTMENT OF AGRICULTURE COOPERATING

SAMPLE LETTER (Tennessee)

(4-H agent to adult volunteer leaders)

Dear Mr./Ms.

It has just been brought to our attention that there will be a conference for adult 4-H volunteer leaders who are either helping conduct fish and wildlife project activities or who may be interested in doing so in the future. This seems to be a 4-H activity for which there is significant interest in our county, and I would like to give you the opportunity to apply to attend this conference. As you know, 4-H adult volunteer leaders are an important part of the 4-H system. Without your help, it is difficult to carry on the many activities in the many project areas of the 4-H educational program.

I have enclosed a brochure which outlines this conference, along with an application blank. There will be 73 scholarships available for the state of Tennessee. There is a good chance that you might receive one of these scholarships. If you are at all interested, I would encourage you to apply. If you are not selected to receive a scholarship, you still may choose to attend by paying the \$50.00 tuition fee.

The conference looks exciting! It promises to provide you an insight into activities in the 4-H fish and wildlife project area, teach you some things about wildlife, allow you to exchange ideas with people from other states, and teach you how to organize or work effectively with a 4-H fish and wildlife project group in our county.

Please note that the application should be sent before April 10 directly to Dr. James L. Byford, Associate Head, Dept. of Forestry, Wildlife and Fisheries, Univ. of Tennessee, Box 1071, Knoxville, TN 37901. Also, please give a phone call or drop me a line to let me know that you have applied.

Sincerely,

Encls.



APPENDIX B
LETTERS TO EXTENSION SPECIALISTS





Agricultural Extension Service
University of Tennessee Institute of Agriculture

P. O. Box 1071
Knoxville, Tennessee 37901

5 March, 1981

TO: All Wildlife and Fisheries Specialists in Southern States

Dear Co-Workers:

In a few days, you will be receiving a notice about our upcoming 4-H Fish and Wildlife Adult Leaders Conference. The letter explains that each of the southern states is invited to send, scholarship-free, four leaders and/or agents. Please be on the lookout for this letter and help us recruit leaders and agents from your state!

At the conference, we will be providing each of the 125 delegates a set of regional literature. We will also be providing each delegate a copy of the Tennessee Literature. If you would like your state literature to be provided to these delegates, please send me 125 copies. If you can't spare that many, please send me at least one set, so that we can display it for them to view.

Again, I urge your support for this effort. You will be getting a more detailed letter in just a few days telling you all about the conference, with enough brochures for you to send out to your agents and leaders. I think a conference such as this could do more to stimulate an interest in 4-H fish and wildlife projects--along with our regional set of literature--than anything we could do. Thanks for your support.

Sincerely,

James L. Byford
Associate Head
Dept. Forestry, Wildlife,
and Fisheries

JLB/mh

cc. Ruth Henderson

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THE UNIVERSITY OF TENNESSEE AND THE U.S. DEPARTMENT OF AGRICULTURE COOPERATING



Agricultural Extension Service
University of Tennessee Institute of Agriculture

P. O. Box 1071
Knoxville, Tennessee 37901

5 March, 1981

TO : 4-H Specialists and Wildlife and Fisheries Specialists, Southern States

FROM: James L. Byford, Associate Head, Department Forestry, Wildlife, and Fisheries

RE : Tennessee/Southern Region 4-H Fish and Wildlife Adult Leaders Conference

Dear Co-Workers:

We recently received a grant from the U. S. Fish and Wildlife Service to conduct a conference for adult leaders in the 4-H fish and wildlife project area. As you can see from the enclosed program, this conference will be conducted in Crossville, Tennessee, 29 April through 3 May. The objectives of the conference are:

- a. To teach volunteer adult leaders:
 - (1) How to lead local 4-H fish and wildlife clubs.
 - (2) Fish and wildlife information.
 - (3) Fun-learning experiences they can use with their 4-H fish and wildlife clubs back home.
 - (4) 4-H fish and wildlife activities.
- b. To give volunteer adult leaders an opportunity to share 4-H fish and wildlife ideas from their county/state.

Our goal is to not only re-stimulate adult volunteer leaders who are now working in the fish and wildlife project area, but also to motivate potential adult volunteer leaders in this area. So, if your agents have someone who might be interested in leading a 4-H fish and wildlife project group, these would be candidates to send to this conference.

The grant will cover enough money to provide scholarships for up to four agents or leaders from each of the 12 southern states. (Travel is not provided.) However, more can be accepted to the conference if they pay their own room and board (\$50/per person). We recommend that you send the attached letter out over your signature to the agents, and that the agents send another attached letter (the one addressed to leaders) to all those in the county they suspect might be interested in this program. Upon receiving application blanks from the leaders, we will inform you who has applied from your state.

(Over)

The Agricultural Extension Service offers its programs to all eligible persons regardless of race, color, national origin, sex, or handicap and is an Equal Opportunity Employer.

THE UNIVERSITY OF TENNESSEE AND THE U.S. DEPARTMENT OF AGRICULTURE COOPERATING

We suspect that some states will not have leaders to use their four scholarships to the conference. In this case, these scholarships will be redistributed among other states. For example, if you have more than four people apply, some of them, if not all of them, may receive scholarships also. We urge you to encourage as many as possible to apply. In cases where we receive more applications than we have available scholarships, we will seek your input for selection of those to receive scholarships.

As you probably know, the National 4-H Council is seeking national sponsorship for the 4-H fish and wildlife project. We should have this sponsorship money sometime this year. When this happens, we should have an upsurge of interest in the fish and wildlife project, and we will need leader support in our counties.

Also, as you know, we have a complete set of regional literature now available from the National 4-H Council for these leaders to use in working with 4-H fish and wildlife project groups. (Each leader who attends the conference will receive a set of this literature.)

This is an excellent opportunity! We urge you to promote it in your state and we look forward to receiving applications from interested leaders. If I can answer any other questions, please let me know.

Sincerely,

James L. Byford
Associate Head
Dept. Forestry, Wildlife,
and Fisheries

JLB/mh

Encls.

P. S. Under separate cover we are sending your state a supply of brochures and application blanks. These will be sent to the 4-H staff person responsible for volunteer leader development. Please contact this person for coordination in mailing to county 4-H agents.

cc: Ruth Henderson
Gary Schneider

SAMPLE LETTER

(To 4-H agents under your letterhead and over your signature)

DATE:

TO : All 4-H Agents with Responsibilities in Wildlife and Fisheries

FROM: (You)

RE : Tennessee/Southern Region 4-H Fish and Wildlife Adult Leaders Conference

Dear Co-Workers:

For the first time, we now have the opportunity to send adult volunteer leaders to a conference where they can be trained to help with 4-H fish and wildlife activities in your county. This conference is supported by a grant from the U. S. Fish and Wildlife Service. As 4-H continues to grow and expand, I am sure you are feeling the pinch of not having enough time to conduct all the activities for which you are responsible. This is an opportunity to receive some help. In some cases, you may want to attend the conference yourself.

(State) will receive four paid scholarships to this conference. Since some states will probably not use all their scholarships, (state) may receive additional scholarships. At any rate, if we have more leaders interested than there are scholarships available, these leaders will be allowed to attend the conference at a cost of \$50.00 for room and board. Travel expenses must be borne by the delegates. In some cases carpooling may be in order. We are sending you three copies of a brochure outlining the conference, along with three application blanks and a sample letter for you to use in contacting your leaders. Please distribute these to one or more leaders in your county who are already assisting with the fish and wildlife project group, or ones you think would be a good candidate to do so. Please note that these application forms should be sent directly to: Dr. James L. Byford, Associate Head, Dept. of Forestry, Wildlife and Fisheries, Univ. of Tennessee, Knoxville, TN 37901, no later than April 10, 1981. If you need additional brochures, please let me know.

This is a golden opportunity to get some help in your county. Please don't overlook any good potential leaders. This conference should motivate them, as well as show them how to become a leader.

Sincerely,

Encls.

SAMPLE LETTER (Southern States)

(4-H agent to adult volunteer leaders)

Dear Mr./Ms.

:

It has just been brought to our attention that there will be a conference for adult 4-H volunteer leaders who are either helping conduct fish and wildlife project activities or who may be interested in doing so in the future. This seems to be a 4-H activity for which there is significant interest in our county, and I would like to give you the opportunity to apply to attend this conference. As you know, 4-H adult volunteer leaders are an important part of the 4-H system. Without your help, it is difficult to carry on the many activities in the many project areas of the 4-H educational program.

I have enclosed a brochure which outlines this conference, along with an application blank. There will be four scholarships available for the state of _____. There is a good chance that you might receive one of these scholarships. If you are at all interested, I would encourage you to apply. If you are not selected to receive a scholarship, you still may choose to attend by paying the \$50.00 tuition fee.

The conference looks exciting! It promises to provide you an insight into activities in the 4-H fish and wildlife project area, teach you some things about wildlife, allow you to exchange ideas with people from other states, and teach you how to organize or work efficiently with a 4-H fish and wildlife project group in our county.

Please note that the application should be sent before April 10 directly to Dr. James L. Byford, Associate Head, Dept. of Forestry, Wildlife and Fisheries, Univ. of Tennessee, Box 1071, Knoxville, TN 37901. Also, please give me a phone call or drop me a line to let me know that you have applied. Thanking you, I am

Sincerely,

Encls.



APPENDIX C
CONFERENCE SCHEDULE

CONFERENCE SCHEDULE

Wednesday, April 29

- 3:00-6:00 Registration
- 6:00-7:00 Dinner
- 7:00-8:00 Welcome and Orientation
A. Welcome
B. Orientation (give out materials, introduce teachers, etc.)
- 8:00-9:00 Program: What is the 4-H Wildlife Project?
A. Finding out what we know (30 min.)
B. From a 4-H Leader's point of view (15 min.)
C. From a 4-H'ers point of view (15 min.)
- 9:00-10:30 Getting to know each other
A. New games
B. Other
- 10:30-11:30 Campfire and sing-along (optional)

Thursday, April 30

- 6:00-8:00 Morning cookout (optional)
- 6:00-7:30 Bird walk (optional)
- 7:30-8:30 Breakfast
- 8:30-10:00 Field classes
- 10:00-10:30 Break
- 10:30-12:00 Field classes
- 12:00-1:30 Lunch
- 1:30-3:00 Field classes
- 3:00-4:00 Break
- 4:00-6:00 Optional afternoon activities
- 6:00-7:30 Dinner (Speaker--"Talkin' Turkey")

Thursday, April 30(con'd.)

7:30-9:00 Program
A. Regional literature review (30 min.)
B. Wildlife Awards Program for 4-H'ers and leaders (15 min.)
C. 4-H Food Plot Contest (30 min.)

9:00-11:30 Optional evening activities

10:30-11:30 Campfire and sing-along (optional)

Friday, May 1

6:00-8:00 Morning cookout (optional)

6:00-7:30 Bird Walk (optional)

7:30-8:30 Breakfast

8:30-10:00 Field classes

10:00-10:30 Break

10:30-12:00 Field Classes

12:00-1:30 Lunch

1:30-3:00 Field classes

3:00-4:00 Break

4:00-6:00 Optional afternoon activities

6:00-7:30 Dinner

7:30-8:30 Program: "How to Become a Member of the Snakebite Club"

8:30-11:30 Optional evening activities

10:30-11:30 Campfire and sing-along (optional)

Saturday, May 2

6:00-8:00 Morning cookout (optional)

6:00-7:00 Bird walk (optional)

7:30-8:30 Breakfast

Saturday, May 2 (cont'd.)

8:30-10:00 Wildlife judging

10:00-10:30 Break

10:30-12:00 Wildlife judging

12:00-1:30 Lunch

1:30-2:30 How much did we learn?

2:30-3:00 Break

3:00-5:00 Write and share individual plans for Wildlife Project Group

5:00-6:00 Free

6:00-7:30 Dinner (speaker)

7:30-8:30 Wildlife Bowl

8:30-11:30 Optional evening activities

10:30-11:30 Campfire and sing-along (optional)

Sunday, May 3

6:00-6:30 Sunrise service

7:00-8:00 Breakfast

8:00- Pack and farewell

Tennessee/Southern Region
4-H Fish and Wildlife Adult Leaders Conference
Crossville, Tenn.
April 29-May 3

Group Color	Thursday			Friday		
	8:30-10:00	10:30-12:00	1:30-3:00	8:30-10:00	10:30-12:00	1:30-3:00
Green	SOWPG	EPF	FWMM	RLAS	MWOP	WMP
Blue	SOWPG	EPF	FWMM	RLAS	MWOP	WMP
Yellow	FWMM	RLAS	MWOP	WMP	SOWPG	EFP
White	FWMM	RLAS	MWOP	WMP	SOWPG	EFP
Orange	MWOP	WMP	SOWPG	EFP	FWMM	RLAS
Pink	MWOP	WMP	SOWPG	EFP	FWMM	RLAS

Steps of Organizing County 4-H Wildlife Project Group-----SOWPG

Role of Leader, Agent, Specialist in 4-H-----RLAS

How to Mesh Wildlife With Other 4-H Projects-----MWOP

Ecology of Farm Ponds-----EFP

Fish and Wildlife Management Methods-----FWMM

Wildlife Management Principles-----WMP



APPENDIX D

WILDLIFE JUDGING CONTEST INFORMATION

4-H WILDLIFE JUDGING SCORECARD

Part I. ON-SITE HABITAT MANAGEMENT RECOMMENDATIONS

(50 points)

Instructions: For each species, list the number of every WMP which is needed to improve this area for that species. Consider each species separately. Do not consider cost or other land management objectives. Assume that 1) all species listed are present on the area (except aquatic species if streams, ponds or lakes are absent), and 2) this area is large enough to support all listed species.

Species	Wildlife Management Practices (WMP)
_____ a. Turkey	1. Controlled Burning (annually)
_____ b. Deer	2. Controlled Burning (3 year intervals)
_____ c. Squirrel	3. Bush hogging
_____ d. Rabbit	4. Plant 1/8 to 1/4 acre annual food strips
	5. Plant 1/8 to 1/4 acre perennial food strips
	6. Plant one acre fields of grass and clover
	7. Clear-cut timber management (50 acres or less blocks or strips)
_____ e. Quail	8. Selective-cut timber management
	9. Put up nesting boxes in woods
_____ f. Dove (feeding habitat only)	10. Put up nesting boxes in open
	11. Plant shrubs
_____ g. Bluebird	12. Plant mast trees
	13. Pile brush piles
_____ h. Bass	14. Fencing
	15. Fertilize pond
_____ i. Bluegill	16. Deepen pond edges
	17. Harvest more
_____ j. Wood Duck	18. Harvest less
	19. Restock pond
	20. Clear muddy water
	21. Reseed watershed
	22. Stop pond leaks
	23. Repair spillway
	24. Diversion ditch
	25. Remove trees from around pond
	26. Shallow dike with water control structure
	27. No WMP's needed
	28. No WMP applicable due to lack of streams, ponds or lakes

Part II. HABITAT EVALUATION FROM AERIAL PHOTOGRAPH

(35 points)

Instructions: For each species, rate the areas outlined in red as to their habitat value. List the four areas in order from left to right, starting with the best. Do not consider potential of the area — only present quality. Also, don't consider surrounding areas — only areas circled in red. If there is no difference between areas, so indicate with the symbol () over the area numbers. For example (3, 4).

-
- | | |
|-------------------|--------------------------------------|
| _____ a. Turkey | _____ f. Dove (feeding habitat only) |
| _____ b. Deer | _____ g. Bluebird |
| _____ c. Squirrel | _____ h. Bass and Bluegill |
| _____ d. Rabbit | _____ i. Wood Duck |
| _____ e. Quail | |
-

Part III. WILDLIFE FOODS

(15 points)

Instructions: For the wildlife species below, list all items shown which might occur in their diet. Some wildlife species listed will not eat any of the food items shown. Leave blanks vacant.

-
- | | |
|--------------------|----------------------|
| _____ a. Turkey | _____ m. Beaver |
| _____ b. Deer | _____ n. Owls |
| _____ c. Squirrel | _____ o. Shrews |
| _____ d. Rabbit | _____ p. Snakes |
| _____ e. Quail | _____ q. Woodpeckers |
| _____ f. Dove | _____ r. Moles |
| _____ g. Bluebird | _____ s. Bats |
| _____ h. Bass | _____ t. Otter |
| _____ i. Bluegill | _____ u. Turtles |
| _____ j. Wood Duck | _____ v. Salamanders |
| _____ k. Hawks | _____ w. Lizards |
| _____ l. Foxes | _____ x. Frogs |
-

APPENDIX E
SURVEY INSTRUMENTS



Leader Attendance Survey

We are conducting a survey to help improve the quality of future Adult Leader Conferences. Please take a moment to answer the questions fully.

Social Security Number _____ - _____ - _____

By using your Social Security Number, we can assure you of confidentiality while still permitting us to match this survey with other information later.

State _____ County _____

Occupation _____

Check here if you are an Extension Agent _____

Sex: Male _____ Female _____

Are you a 4-H leader? _____ If so, how long? _____

Check your age level: 18-27 _____ 28-37 _____ 38-47 _____ 48+ _____

Highest level of education: Elementary school _____ High school _____

Bachelor's _____ Master's _____ Doctorate _____

List your major _____

Are you the parent of a 4-Her? _____ If so, is one or more of your children enrolled in the Wildlife Project? _____

Choose the one statement that best describes you:

_____ I volunteered to be a leader for a 4-H Wildlife Project group

_____ I was asked to be a leader for a 4-H Wildlife Project group

_____ I am not currently involved in the 4-H Wildlife Project, but would consider becoming a leader for a 4-H Wildlife Project

_____ I do not intend to become a leader for a 4-H Wildlife Project group

_____ Other (please explain) _____

Were you in 4-H as a youth? _____ How many years? _____

What was your major project? _____

Check your level of wildlife experience:

_____ No experience

_____ Hobby (list hobby & no. of years) _____

_____ Formal education

_____ Other (please list) _____

Are you a member of a wildlife-related organization (such as National Wildlife Federation, National Audubon Society, etc.?) _____
 If so, please list _____

Why did you choose to attend the Conference? _____

What do you expect to learn/accomplish? _____

Listed below are our objectives for the Conference. Please mark the degree to which these objectives are important to you.

	very important	somewhat important	not very important	not at all important
To learn how to lead local 4-H Fish and Wildlife clubs	_____	_____	_____	_____
To learn information about fish and wildlife	_____	_____	_____	_____
To learn fun, educational experiences that can be used with 4-H clubs	_____	_____	_____	_____
To learn 4-H Fish and Wildlife activities	_____	_____	_____	_____
To share 4-H Fish and Wildlife ideas from different counties/states	_____	_____	_____	_____

Please select the most appropriate answer and place the letter of the answer in the blank at the beginning of the question.

- _____ 1. To prevent the growth of water weeds around the edge of a pond, the water at the pond's edge should be:
- a. seeded with grass seed
 - b. very shallow and sandy
 - c. at least two feet deep
 - d. treated with herbicides
- _____ 2. Which item does not cause game to be scarce?
- a. predation
 - b. erosion and poor land management
 - c. natural loss of habitat
 - d. man's development of the land
- _____ 3. A source of help for a 4-H Wildlife Project Leader could be:
- a. a state fish and game officer
 - b. farmers in the community
 - c. a local sportsmen's group
 - d. all of the above
- _____ 4. Rotenone is used for:
- a. killing weeds in fish ponds by breaking down chlorophyll
 - b. stimulating fish growth
 - c. killing fish by restricting passage of red blood corpuscles so fish can no longer absorb oxygen through their gills
 - d. making male fish sterile so they can't reproduce
- _____ 5. Carrying capacity is:
- a. the number of acorns a squirrel can stuff in its cheeks
 - b. the number of animals that an area of land can support
 - c. the number of eggs that a bird's nest can hold
 - d. the number of hunters that can safely hunt in one area at the same time

- _____ 6. The role of the Extension Wildlife Specialist is to:
- a. research problems and disseminate knowledge
 - b. provide the only materials that are approved for instructional use
 - c. recruit volunteer leaders to lead wildlife projects
 - d. trap snakes to use in instruction
- _____ 7. Which bass should be returned to the pond?
- a. one with dull, cloudy scales
 - b. one that is between 2 and 5 pounds in weight
 - c. one that is too thin
 - d. one that is under 12 inches in length
- _____ 8. Without predators, a population of deer would:
- a. increase, eat most of their food, then starve
 - b. continue to increase
 - c. increase, then level off at a high level
 - d. stay the same
- _____ 9. People will retain knowledge better if they learn:
- a. by seeing
 - b. by doing
 - c. by hearing
 - d. by reading
- _____ 10. Fertilized ponds produce about _____ pounds of fish as unfertilized ponds.
- a. 8 times as many
 - b. the same number of
 - c. 3 times as many
 - d. 20 times as many
- _____ 11. Niche is an ecological term defined as:
- a. the place where an animal lives and sleeps
 - b. the role an organism plays in an ecosystem
 - c. a storage place for food only
 - d. a small crevice that an animal may use to hide from a predator

- _____ 12. It is the County Extension Agent's responsibility:
- a. to train volunteer leaders and help them when necessary
 - b. to give a demonstration at every 4-H Wildlife Project meeting
 - c. to distribute information from the Extension Wildlife Specialist to the volunteer leader
 - d. both a & c
 - e. both b & c
- _____ 13. _____ is defined as microscopic plants and animals.
- a. Micro-life
 - b. No-see-ums
 - c. Plankton
 - d. Coelocanth
- _____ 14. The basic function of predation is to:
- a. remove population surpluses
 - b. control overabundant plant growth
 - c. eat carnivores
 - d. control predators
- _____ 15. The boy or girl enrolled in the Wildlife Project and other projects will find that:
- a. projects compete for time
 - b. the projects often supplement each other
 - c. the projects conflict with one another
 - d. it is confusing
- _____ 16. Balanced bass-bream ponds contain _____ unbalanced bass-bream ponds.
- a. about the same number of pounds of fish as
 - b. more pounds of fish than
 - c. fewer pounds of fish than
 - d. more tadpoles than
- _____ 17. _____ is that factor (food, cover, water, etc.) that is in shortest supply and thus controls the number of animals in an area.
- a. Manipulating factor
 - b. Succession factor
 - c. Carrying factor
 - d. Limiting factor

- _____ 18. A good companion to the 4-H Wildlife Project would be:
- a. the Photography Project
 - b. the Citizenship Project
 - c. the Food Preservation Project
 - d. the Forestry Project
 - e. all of the above
- _____ 19. Fertilization of ponds helps to control _____ water weeds.
- a. submerged
 - b. emerged
 - c. floating
 - d. both b & c
- _____ 20. Most wildlife will be found _____ a field.
- a. throughout
 - b. near the edge of
 - c. near the center of
 - d. nowhere near
- _____ 21. The top priority goal for 4-H is:
- a. developing a competitive attitude
 - b. developing a well-rounded individual
 - c. learning technical, detailed information related to the Wildlife Project
 - d. none of the above
- _____ 22. Fertilizer should be applied to a pond anytime a white disc on the end of a stick can be seen _____ inches deep or deeper.
- a. 3
 - b. 48
 - c. 18
 - d. 8
- _____ 23. Which agency is sponsoring this Conference?
- a. the U.S. Forest Service
 - b. the University of Kentucky
 - c. the U.S. Fish and Wildlife Service
 - d. the Tennessee Wildlife Resources Agency

Conference Evaluation

We would appreciate your comments to help us plan future Adult Leader Conferences. Please take a minute to answer the questions completely.

Social Security Number _____ - _____ - _____
By using your Social Security Number, we can assure you of confidentiality while still permitting us to match this evaluation with other information we have already collected.

Field Classes

Please mark the degree to which you feel these subjects will be helpful.

	very helpful	fairly helpful	not very helpful	not at all helpful
Steps in Organizing a County 4-H Wildlife Project Group (Jim Byford)	_____	_____	_____	_____
Role of Leader, Agent, Specialist in 4-H (Ruth Henderson)	_____	_____	_____	_____
How to Mesh Wildlife With Other 4-H Projects (Oliver Cook)	_____	_____	_____	_____
Ecology of Farm Ponds (Tom Hill)	_____	_____	_____	_____
Fish and Wildlife Management Methods (Erland Juntunen and Jim Miller)	_____	_____	_____	_____
Wildlife Management Principles (Mike Pelton)	_____	_____	_____	_____

Which one field class helped you most? _____

Which one field class helped you least? _____

Optional Activities

Please evaluate how appropriate you feel these activities were for this Conference.

	very appropriate	fairly appropriate	not at all appropriate	did not attend
Morning bird walk	_____	_____	_____	_____
Early morning cookout	_____	_____	_____	_____
A Closer Look at Nature	_____	_____	_____	_____
Get to Know a Tree	_____	_____	_____	_____
Hello Pond, What Can You Tell Me Today?	_____	_____	_____	_____
Archery	_____	_____	_____	_____
Rifle Range	_____	_____	_____	_____
Campfire and sing-along	_____	_____	_____	_____

	very appropriate	fairly appropriate	not at all appropriate	did not attend
Slide-tape presentation: Endangered Species	_____	_____	_____	_____
Square Dance	_____	_____	_____	_____
Night Sounds	_____	_____	_____	_____
Snake Hunt	_____	_____	_____	_____
Wildlife Films	_____	_____	_____	_____

Which one activity was most appropriate? _____

Which one activity was least appropriate? _____

Listed below are our objectives for the Conference. Please mark the degree to which you feel these objectives were accomplished.

	very adequate	fairly adequate	not very adequate	not at all adequate
To learn how to lead local 4-H Fish and Wildlife clubs	_____	_____	_____	_____
To learn information about fish and wildlife	_____	_____	_____	_____
To learn fun, educational experiences that can be used with 4-H clubs	_____	_____	_____	_____
To learn 4-H Fish and Wildlife activities	_____	_____	_____	_____
To share 4-H Fish and Wildlife ideas from different counties/ states	_____	_____	_____	_____

Do you feel that you achieved what you had hoped to learn? Explain.

Please list the areas (if any) in which you would have liked to spend more time. Choose from the list of field classes and optional activities.

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Are there any subject areas that you would have liked to study that were not offered? If so, please list. _____

How can your County Extension office help you in your role as a leader?

If you are already a 4-H Wildlife Project leader, what are the two or three most important problems you have encountered? _____

Did your attendance at this Conference increase your awareness of and appreciation for wildlife and natural resources?

- ☐ Yes, very much.
- ☐ Yes, somewhat.
- ☐ No, not very much.
- ☐ No, not at all.

Did this Conference help increase your self-confidence as a 4-H Wildlife Project group leader?

- ☐ Yes, very much.
- ☐ Yes, somewhat.
- ☐ No, not very much.
- ☐ No, not at all.

Please feel free to use the remaining space to make any other comments about the Conference that you feel would be helpful.

Please select the most appropriate answer and place the letter of the answer in the blank at the beginning of the question.

- _____ 1. Which animal is a natural predator of deer?
- a. wild boar
 - b. wolf
 - c. eagle
 - d. lemming
- _____ 2. What is the most important characteristic of a good 4-H leader?
- a. knowledge
 - b. experience
 - c. enthusiasm
 - d. patience
- _____ 3. The feathers of a bird may be used to determine:
- a. the bird's species
 - b. the sex of the bird
 - c. the age of the bird
 - d. all of the above
 - e. only a & b
- _____ 4. An example of predation would be:
- a. a rabbit eating clover
 - b. a fox eating a mouse
 - c. a bison that has starved to death
 - d. a turkey vulture feeding on an animal carcass
- _____ 5. Which agency is sponsoring this Conference?
- a. the U.S. Fish and Wildlife Service
 - b. the University of Georgia
 - c. the Tennessee Wildlife Resources Agency
 - d. the U.S. Forest Service
- _____ 6. Which of the following cannot be used to determine the age of the animal?
- a. the amount of tooth wear on a moose
 - b. the number of annual tooth growth rings on an elk
 - c. the number of ridges on the horn of a mountain goat
 - d. the number of points on the antlers of a deer

- _____ 7. Which is not defined as a wildlife species?
- a. a tree frog
 - b. a honey bee
 - c. a garter snake
 - d. a rainbow trout
- _____ 8. _____ projects make good companion projects for the Wildlife Project.
- a. Very few
 - b. Most
 - c. Only Animal Science
 - d. Only Leadership
- _____ 9. Which tool may be used to either destroy or restore wildlife habitat?
- a. axe
 - b. fire
 - c. farming
 - d. all of the above
 - e. none of the above
- _____ 10. Ecology is:
- a. the study of plants and animals and their relation to each other and to their environment
 - b. the study of pollution and the effects of littering
 - c. the study of predators and why they prey on animals
 - d. the study of preserving endangered plant and animal species
- _____ 11. A good 4-H Wildlife leader is someone who:
- a. is an avid hunter
 - b. is an experienced camper and hiker
 - c. enjoys helping children
 - d. is devoted to an environmental cause
- _____ 12. The way to increase the carrying capacity of the land is to:
- a. manage the habitat or environment in which the animal lives
 - b. stock more animals
 - c. kill predators
 - d. put out feed and feeders

- _____ 13. _____ is the orderly change of vegetation on an area if it is left alone.
- a. Plant adaptation
 - b. Plant succession
 - c. Plant evolution
 - d. Plant growth
- _____ 14. Youth are most likely to follow a 4-H leader that:
- a. teaches them what he knows best
 - b. teaches them what they ought to know regardless of their interests
 - c. teaches them what they are interested in
 - d. doesn't care at all about teaching; just wants to be a "good pal"
- _____ 15. _____ of the animal can be determined by weighing the eye lens of the animal.
- a. Sex
 - b. Condition
 - c. Age
 - d. Approximate weight
- _____ 16. A _____ is an aggregate of all populations within a given area.
- a. school
 - b. community
 - c. herd
 - d. pack
- _____ 17. Using a variety of teaching methods encourages:
- a. participation by all project members
 - b. the student to keep thinking
 - c. greater retention of learned knowledge
 - d. all of the above
 - e. only a & c
- _____ 18. A pond with a wooded watershed needs _____ a pond with a pastureland watershed.
- a. the same watershed per acre of pond as
 - b. less watershed per acre of pond than
 - c. more watershed per acre of pond than
 - d. to be near

- _____ 19. The size wildlife population which a unit of habitat can support is:
- a. unlimited
 - b. limited
 - c. large
 - d. small
- _____ 20. The role of a 4-H volunteer leader is to:
- a. fill out a record book for each project member
 - b. help project members find answers to questions
 - c. provide interesting and educational activities
 - d. all of the above
 - e. only b & c
- _____ 21. The trap and mark method is used to determine:
- a. an animal's preference for different foods used as bait
 - b. the total population of a species in a certain area
 - c. an estimate of the total population of a species in a certain area
 - d. the overall condition of a species
- _____ 22. Predators _____ the abundance of a wildlife species in good quality habitat.
- a. drastically decrease
 - b. drastically increase
 - c. change the composition and decrease
 - d. do not significantly affect
- _____ 23. The _____ net has been used successfully in recent years to capture waterfowl, turkeys, and deer.
- a. cannon
 - b. fish
 - c. jet
 - d. trawler

VITA

Carol E. Kounanis was born in Brookline, Massachusetts on February 9, 1957. She is the daughter of James K. and Dorothea Kounanis. She was raised in the Chicago, Illinois area, and was graduated from Anthony Wayne High School in Whitehouse, Ohio, in May of 1974. The following August she entered Purdue University, and in May of 1978, she received a Bachelor of Science degree in Wildlife Science from the School of Agriculture.

In September, 1980, she began her study toward a Master of Science degree in Agricultural Extension at The University of Tennessee, Knoxville. This degree was awarded in June of 1982.

The author is a member of Gamma Sigma Delta and Phi Delta Kappa.