

1981 ANNUAL REPORT

NONGAME WILDLIFE PROGRAM



ALASKA DEPARTMENT FISH AND GAME

ANNUAL REPORT - 1981

Nongame Wildlife Program

Game Division

Alaska Department of Fish and Game

February 1, 1982

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ABSTRACT

A Nongame Wildlife Program within the Game Division of the Alaska Department of Fish and Game was initiated in 1981 after money was appropriated in the 1980 Alaska State Legislature. First year emphasis has been: to get public participation by holding public meetings; to outline program goals and objectives by formulating a long-range plan; to initiate projects that inform the public about nongame wildlife and the Nongame Wildlife Program; and to initiate projects beneficial to nongame wildlife and their management. Projects that were accomplished include: an Anchorage workshop and public meetings in Fairbanks and Juneau; writing a draft Nongame Wildlife Program plan; writing legislation to supplement Program funds; initiating public information projects including Wildlife Watcher's Reports (pamphlets), a Nongame Wildlife Program Newsletter, Wildlife Watcher's Notebook (radio program), Wildlife Notebook Series pamphlets, magazine and newspaper articles, and a shorebird poster for hunter education; initiating wildlife monitoring programs including observation cards for species of interest and breeding bird surveys; contracting bibliographies on nongame wildlife; cosponsoring a new national nongame newsletters; and sponsoring a contest for students to design a logo for the Program. A brief summary of each of these accomplishments is included as well as samples of them. Nongame Wildlife Program staff resumes are included, as well as proposed future staffing needs and justifications.

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INTRODUCTION

In 1980, the Alaska State Legislature appropriated \$150,000 to establish the Nongame Wildlife Program within the Game Division of the Alaska Department of Fish and Game. So, in 1981, Alaska joined 43 other states which have recently begun programs to manage their nongame wildlife resources. Nongame wildlife includes those animals not ordinarily hunted, fished or trapped. Over 400 species of nongame wildlife occur in Alaska, including loons, swans, shorebirds, seabirds, hawks, owls, songbirds, small mammals, reptiles and amphibians, and some fish.

This new program was established to provide the public with information for the enjoyment of wildlife.

Nongame species are essential components of healthy ecosystems. They recycle nutrients, aerate and fertilize soils, prevent insect outbreaks, transport seeds, and provide food for other animals, including harvested game.

Nongame species are also important to people in other ways. Surveys have shown that a large portion of the public participates in nonconsumptive use of wildlife, including wildlife viewing, photography and other artwork, research, and teaching activities. A large proportion of tourists visiting Alaska come to view and/or photograph wildlife.

In Alaska, support for nongame management and information has been expressed by citizens and biologists since the mid-1960's. The Department of Fish and Game has set aside several areas (such as the McNeil River Brown Bear Sanctuary and Walrus Island Game Sanctuary) for nonconsumptive use of wildlife. Until now, no Alaska Department of Fish and Game biologists have worked specifically on nongame wildlife and for nonconsumptive uses of wildlife.

Unlike many other states, Alaska has the benefits of healthy populations of most nongame wildlife and has extensive areas of suitable wildlife habitat still available. Other states' Nongame Wildlife Programs are spending much time and money rehabilitating depleted or endangered wildlife populations and their habitats. Fortunately,

Alaska has the opportunity to obtain necessary baseline information to properly manage many nongame populations to avoid severe or irreversible population declines and to continue to provide residents and tourists with diverse opportunities to enjoy Alaska's wildlife.

The Alaska Nongame Wildlife Program began when a coordinator, Paul Arneson, was hired in January 1981. Two additional staff members, Susan E. Quinlan and Nancy G. Tankersley, were hired in April 1981.

Initial objectives of the Program was: to research projects and priorities of other state nongame programs to determine options for Alaska's program; to conduct public input meetings; to write a Program plan; and to initiate projects that benefit the nonconsumptive users of wildlife and facilitate the management of nongame wildlife.

The purpose of this report is to summarize current status and projects of this 1 year-old program.. It includes: accomplishments and projects for 1981/82 - including summaries of three public meetings, and resumes of Nongame Wildlife Program staff.

1981/82 ACCOMPLISHMENTS AND PROJECT STATUS

Many projects have been completed or are continuing this fiscal year. These projects are listed below:

Public Meetings

Anchorage Workshop: The first major public meeting was the Nongame Wildlife Program Workshop held June 8, 1981 at Alaska Pacific University in Anchorage. Invitations were sent to: State agencies (all ADF&G staff, Department of Natural Resources, Department of Environmental Conservation, Department of Public Safety, Division of Tourism, Advisory Committees and Fish and Game Board members); Federal agencies (Fish and Wildlife Service, Forest Service, Bureau of Land Management and National Park Service); educators (University of Alaska professors, high school and elementary school teachers); conservation groups; outdoor writers; artist and photographers; environmental

consultants; community service groups; travel and tourist agencies; native corporations; municipal government; outdoor groups; guides; and others outside Alaska who we thought could give us useful ideas. The workshop was also publicized on radio, in newspapers and in various other announcements.

Over 100 people attended the workshop. The proceedings of the meeting have been printed (Appendix I) and are available to anyone wishing a copy.

Speakers at the workshop included: David Cline, National Audubon Society; Susan E. Quinlan and Paul Arneson, Alaska Department of Fish and Game; John Torres, Colorado Division of Wildlife; Carrol Henderson, Minnesota Section of Wildlife; and Robert Weeden, University of Alaska, Fairbanks.

Presentations by these speakers provided a basis for discussion of Nongame Wildlife Program goals and objectives. Participants then broke into 6 working groups to establish priorities for the research and management, information and education functions of the Nongame Wildlife Program. Each working group generated a list of potential projects for the program and rated the priority of each. Working group leaders presented summaries of their group's priorities to the entire group when it reassembled. The reassembled group also discussed alternatives for funding the Nongame Wildlife Program based on a panel discussion by: William Martin, Federal Aid Coordinator, U.S. Fish and Wildlife Service; Robert Weeden, Professor, University of Alaska; and Robert Hinman, Deputy Director, Game Division, Alaska Department of Fish and Game.

Fairbanks Public Meeting: To exchange ideas from people in the Fairbanks vicinity, we held a public meeting in Fairbanks, 7 October 1981. Over 110 people participated in the meeting.

Presentations were given by the Nongame staff on nongame wildlife, possible program directions, current projects, and funding alterna-

tives. Participants filled out questionnaires on their own interests, their perceptions of nongame wildlife program directives, their opinions about current projects and funding alternatives. Participants expressed unanimous support for the Nongame Wildlife Program. Over 80 participants volunteered to assist in one or more Nongame Wildlife Program projects and 98 percent of those answering the funding questionnaire indicated they would be willing to contribute money to support the Program.

A summary of this meeting is available (Appendix II) to anyone requesting a copy.

Juneau Public Input Meeting: A public meeting identical to the Fairbanks meeting was held in Juneau, 17 November 1981. The assembly chambers were filled to capacity by 49 participants. Participants were enthusiastic about the Nongame Wildlife Program and emphasized the need for expansion of current staff to meet the needs of Southeast Alaska residents. Again, 94 percent indicated they would be willing to contribute money to support the program.

A summary of the Juneau meeting is available to anyone requesting it (Appendix III).

Summary: Workshop and Public Meetings: In our view, the three public meetings held this year were eminently successful. Attendance was good at all meetings and participants were enthusiastic and supportive of the program. Participants were from all walks of life. Unfortunately, few people from small communities were able to attend the meetings, but we have gotten good response from them through our Newsletter. People from 39 cities, towns and villages around the state have asked to be put on our mailing list (Appendix IV) and/or volunteered to assist in Nongame projects.

The projects given top priority by participants at these meetings are more than Nongame Wildlife Program can accomplish in the near future at current staff and budget levels. Based on the ratings of the

various projects at all three meetings, the following projects received the highest overall ratings (however, no projects received low ratings): [Rating scale: 5-top priority, 4-high priority, 3-a good project, 2-low priority, 1-don't include; average rating in parentheses]

Education:

Provide access to currently available materials
(4.2);

Organized a state wildlife week (3.9).

Information:

Develop staffed nature centers (4.0);

Cooperate with other agencies on news releases on weekly outdoor activities (4.0);

Develop weekly reports to the public on wildlife topics (4.0).

Management and Research:

Land Birds:

Conduct studies on the effects of agriculture, mining, logging and oil development on bird communities (4.4);

Increase publicity and public awareness of the values of nongame birds (4.1).

Water Birds:

Conduct research on species of special concern and develop criteria for management of these species and their habits (4.0).

Mammals:

Survey wildlife habitats near major cities on public and private lands to make sure local habitat areas are maintained (4.1).

Fish, Amphibians, and Reptiles:

Determine what information is available on nongame fish, amphibians and reptiles (4.0).

At least two things emerge from this rating of projects. First, participants of the meetings want us to gather currently available materials and have it accessible for their use. Secondly, there is great concern for nongame wildlife and deterioration of their habitat. The public wants the Nongame Wildlife Program to conduct research necessary to better manage nongame wildlife populations and their habitats.

During the two public meetings in Fairbanks and Juneau, participants were asked what our short- and long-term goals should be. At both meetings, participants indicated that all four functions should be included, but that Information/Education should be stressed in the short-term and Management/Research in the long-term. Based on this response, the Nongame Wildlife Program staff will spend 50 percent of their time on Information and Education projects in 1983, and about 30 percent of their time in subsequent years. Emphasis on Management/Research will be increased over the years and monitoring programs will be established to assess the population trends of nongame species.

Nongame Wildlife Program Plan: A Nongame Wildlife Program plan has been developed for review by Game Division supervisors (Appendix V). A draft presented to the Program Review Committee (PRC) in late October was revised based on suggestions of PRC participants. The current draft states the goals and objectives of the Nongame Wildlife Program and methods by which these objectives will be met. The plan reflects the priorities and needs of the public as expressed at the public input meetings and the collective opinions of the Nongame Wildlife Program staff. When a Game Division review is completed in March,

additions and corrections will be made, and a final draft prepared. The plan will be subject to revision as the need arises.

Tentative projects and priorities for Fiscal Year 1983 are listed in Table 1 and will also undergo Game Division review.

Legislation for Funding: To better define the responsibilities of the Department of Fish and Game in regard to unharvested wildlife species and to provide a means for all citizens to voluntarily contribute to the conservation of unharvested wildlife species, a draft proposal of regulation changes and additions was submitted to Game Division supervisory staff for review. Appendix VI is a copy of the original proposal. Subsequently, the Attorney General's office revised the proposal for submission to the State Legislature.

Table 1. Schedule of planned projects for Fiscal Year 1983.
Priorities and approximate costs are listed.

MANAGEMENT/RESEARCH	
Priority	Approx. Cost
1. Identify nongame species and their habitats in Southeast	5,000
Inventory habitats	
Determine restricted habitats	
Determine habitats subject to alteration	
Determine species of concern	
Determine concentration areas	
1. Population monitoring	1,000
Passerine birds	
Small mammals	
1. Observation Cards	1,500
2. Research projects (graduate students)	
Nongame habitat requirements - Southeast	10,000
Effects of agriculture on nongame	5,000
3. Begin to identify nongame and habitats in Central Region (as above)	1,000
Subtotal 23,500	
(continued)	

Table 1 (cont'd)

INFORMATION/EDUCATION		
Priority		Approx. Cost
1.	Wildlife Watcher Reports (brochures) Bird Photography Wildlife Watching Ethics Orphaned Wildlife Problems	4,000 +
1.	Wildlife Watcher's Notebook (radio program)	1,700 +
1.	Wildlife Week for schools (booklets, posters) Teacher In-service Days (travel)	10,000 + * 5,000
1.	Biennial Nongame meeting	1,000
1.	Staff Coordination meetings	1,000
2.	Slide/tape shows Bird feeding Bird houses Landscaping	 50 50 50
2.	Wildlife Notebook Series (15) (some paid by Public Communications Section)	est. 4,000 + *
2.	Interpretive Signs/Nature Centers	1,000
3.	Sounds of Alaska recordings Birds Mammals	 2,500 2,500
3.	Raptor Workshop	1,000
3.	Organize advisory council (travel: 8 members, each \$350)	2,800
3.	Fish Tales and Game Trails and newspaper articles	100
Subtotal		37,050
Overall Total		60,550

Wildlife Viewing Booklet: An outline and rough draft of one chapter of the Wildlife Viewing booklet has been developed (see Appendix VII). At present, we envision the booklet to be 75-100 pages long with color photos. We plan to contract the printing and distribution of the booklet. We budgeted \$40,000 for printing and hope to obtain additional funding through the Department of Tourism. The Director of Tourism has expressed interest and support, but has not yet made a monetary commitment. Other sources of funding and methods of publishing the booklet are being explored. If possible, the booklet will be sold to recoup printing costs. At present, staff are writing drafts of all chapters.

All ADFG staff have been requested to provide ideas for the booklet. Ideas also have been provided by state and federal managers of public lands, citizens at public meetings and in response to the newsletter. We plan to have a draft for Game Division staff review by mid-April, and a final draft to the printer by the end of May. Thus, the booklet should be available to the public by late June.

This booklet will provide useful information to Alaskans and tourists. Our contacts with the public through meetings, correspondence and direct contact indicate strong public support for the project. The booklet also will be an excellent way to create public awareness of the Nongame Wildlife Program, and will show that ADFG is aware of and concerned about nonconsumptive uses of wildlife.

Nothing similar is currently available, so it will fill a large gap in information on Alaska's wildlife.

Wildlife Watcher Reports: This brochure series is meant to meet the many public requests for information on nonconsumptive uses of wildlife. The first report, Winter Bird Feeding in Alaska, (Appendix VIII) was published in late fall. We are receiving many favorable comments about it.

The second report, Landscaping for Wildlife in Alaska is at the printer and will be available to the public by mid-March. A third report on building bird houses is being written and will be available in April.

Our intention is to complete three to four Wildlife Watcher Reports each year on a variety of topics including how-to's, issues, and guides to natural areas.

Nongame Wildlife Program Newsletter: The first Nongame Wildlife Program Newsletter was published in September (Appendix IX). These will be published biannually. They are meant to provide interested people with information on what the Program is about, projects they can be involved in, and an opportunity for input into the program priorities. People from all over Alaska have responded to our first newsletter, requested to be put on our mailing list, and volunteered to help with projects.

The second newsletter will be published in May to update the public on Program projects and activities.

Wildlife Watchers Notebook: Strong interest for a radio program on wildlife was shown at our workshop and public meetings. Therefore, we are producing a 3-5 minute radio spot on a variety of nongame wildlife topics. Programs have been aired biweekly since early November. Eight programs have been completed and 15 radio stations statewide subscribe to the radio program (Appendix X). We have received many favorable comments on the program, so we intend to continue it as long as money and time allow.

Observation Card Program: The distributions and abundances of many nongame species in Alaska are poorly known. The purposes of the observation card program are to: 1) have interested citizens assist Nongame Wildlife Program staff in collecting information on distributions and abundances of nongame wildlife and 2) create greater public awareness of the variety of nongame wildlife in Alaska. In

planning the project, other states were contacted to determine the best methods for setting up an observation cards system. Observation card are widely used by nongame programs in other states to obtain status and distribution records for nongame wildlife. Also, University of Alaska Museum personnel were contacted to determine which species needed to be included in each region of the state. At present an implementation plan for the observation card program has been written, instructions for submitting data prepared, species lists completed, and report form and codes designed; these have been sent out for review (Appendix XI). Following the review, corrections will be made, cards printed, and all volunteers will be mailed copies by mid-April.

Breeding Bird Survey: At present we have no information on the status and population trends of many nongame species in Alaska. Long-term monitoring programs are required to obtain such information. We plan to establish an Alaskan breeding bird survey program similar to the one conducted in other states during the past 14 years. Those methods are being adapted for Alaska. This spring, survey lines will be set up near Fairbanks, Anchorage and possibly Juneau. If feasible, breeding bird surveys will be expanded in future years to all areas where we can find qualified observers.

We plan to teach volunteer observers in the technique and identification of birds by sight and song, as necessary.

Wildlife Education Materials: Teachers all over the state have expressed a need for more and better educational materials on Alaska's wildlife. A preliminary survey of available educational materials has been conducted. An in-service day was held in Fairbanks to make teachers aware of wildlife materials currently available to them and to find out if an Alaskan Wildlife Week was desired. All teachers attending were in favor of an Alaska Wildlife Week. Currently 18 volunteer teachers and biologists are planning the first Alaska Wildlife Week to be held during May, 1983. Materials (written and audio/visual) will be sent to all teachers in the state (Appendix XII).

In-service days will be held to promote the Alaska Wildlife Week and to provide teachers access to currently available wildlife educational materials.

Urban Wildlife Demonstration Project: A landscaping project to demonstrate how wildlife habitat can be improved in urban areas is planned for Fairbanks. The necessary background information on wildlife habitat enhancement was gathered and summarized in Wildlife Watcher Report Vol. 1 No. 2. In late spring, 1982, volunteers are scheduled to help plant experimental plots and build bird feeders and nest boxes.

This demonstration project will be an educational aid to citizens and youth groups who wish to beautify areas around houses, businesses, schools, and hospitals in a way that will also attract birds and other wildlife.

We hope to have an additional demonstration enhancement site in Anchorage (for example - at a proposed Potter Marsh nature center), but no definite plans have been made. In addition, a booklet for youth groups on birds and bird habitat improvement for cities is being written and will be published in cooperation with the University of Alaska, Cooperative Extension Service.

Enhancement of urban wildlife habitat will be publicized in talks to garden clubs, in newspaper articles and radio programs.

Bibliographies: To obtain a list of relevant reference materials for staff use, we solicited volunteers to conduct literature searches on selected topics (Appendix XIII). We hoped students in Dr. Fred Dean's class on bibliographic searches at the University of Alaska, Fairbanks would volunteer to do their class bibliographies on subjects of interest to us. However, we did not get the response we expected; only five literature searches are being conducted for us this year.

We may try this approach again, but if unsuccessful, will abandon the

idea of using students. If volunteers cannot be found, we will do bibliographies ourselves or by contract when necessary.

Wildlife Notebook Series: At present, few Wildlife Notebook Series (WNS) are devoted to nongame wildlife. Since these are widely used by school teachers and the general public, inclusion of nongame species will increase public awareness of nongame species. Qualified volunteers have been solicited to write WNS on nongame species. To date, 5 have been completed, and 18 are being written (Appendix XIV). Unfortunately, ADF&G's Public Communications Section can not afford to print the number being written, so final publication has been delayed.

Fish Tales and Game Trails: ADF&G's magazine provides another vehicle to inform people about nongame wildlife and their habitats and to increase public awareness of the Nongame Wildlife Program. A Nongame article appeared in the summer 1981 issue. The winter 1982 issue is devoted primarily to nongame topics (Appendix XV). We intend to have articles in subsequent issues as time allows.

Logo contest: A logo contest was held to publicize the Nongame Wildlife Program, to get young people thinking about nongame wildlife, and to get a symbol for the Program to be used on Wildlife Watcher Certificates, bumper stickers and/or other Program items. The contest was advertised in all Alaskan schools and about 200 logos from kids in all parts of the state were submitted. In December, a 13-year old girl from Anchorage was selected the winner (Appendix XVI) by three judges: two wildlife artists and the Chief of ADF&G's Public Communications Section. Over 20 prizes donated by merchants and local Audubon Societies were awarded to the top contestants. The winning drawing of a loon on a nest will be modified by a professional artist to be suited for our logo.

National Nongame Newsletter: Nongame biologists from Minnesota and Colorado were invited to speak at the Alaska Nongame Wildlife Program workshop in June. During our discussions with them, we decided to initiate a national newsletter to keep nongame biologists better

informed of other state's nongame program activities. Alaska, Colorado and Minnesota wrote the first issue, and funded printing of the second issue (Appendix XVII). Nationwide support for the newsletter has been tremendous. It is published quarterly and will likely be available to subscribers after an organizational meeting is held at the North American Wildlife and Natural Resources Conference.

Interpretive Signs: We considered contracting professional artists to paint interpretive signs for a few exceptional state-owned wildlife viewing areas. Possible locations were Mendenhall Flats, Chilkat River, Potter Marsh and Creamer's Field. These plans were abandoned for several reasons. Public Communications Section provided signs for Mendenhall Flats; Division of Parks is planning to have a visitors center in Haines so it seems unnecessary to plan signs for that area; likewise, the Municipality of Anchorage is planning a nature center for Potter Marsh, and until their plans for interpretive materials are finalized, we will not consider signs for the area.

Miscellaneous Projects: Various other projects have been important parts of the Nongame Wildlife Program. These include: presenting talks to conservation groups, garden clubs, school classes, etc.; providing input to Habitat Division regarding nongame species; cooperating with other state, federal and local agencies on such things as nature centers, mutually beneficial research projects, etc.; answering questions from the public about nongame wildlife; maintaining a photograph file available for use by interested persons; initiating a file of wildlife vocalizations to be used on radio programs and for identification classes; participating in ADF&G's National Hunting and Fishing Day activities; producing a poster on snipe identification to reduce illegal shooting of shorebirds (Appendix XVIII); sponsoring a winning nongame entry in the Department's wildlife photo contest; and participating in necessary workshops and meetings.

PERSONNEL

Three people currently work in the Nongame Wildlife Program. Resumes of their education, experience, memberships and interests are presented here.

Coordinator: Paul D. Arneson

Education:

Master of Science. 1970. Utah State University. Major: Wildlife Biology. Thesis: An Evaluation of Molting Areas of Great Basin Canada Geese: Made ecological comparison of two molting areas for Canada Geese; Sampled aquatic and terrestrial vegetation, soils, water chemistry, aquatic invertebrates; banded and collared geese; censused all waterfowl; conducted breeding biology study of geese.

Bachelor of Science. 1967. University of Minnesota. Major: Wildlife Management. Special projects included: studying effects of weather on spring migration of waterfowl, ground squirrel trapping and marking, plant collections and waterfowl productivity study.

Career Experience:

January 1981 to Present: Nongame Wildlife Program Coordinator, Alaska Department of Fish and Game. Supervised two employees. Prepared budgets, ordered equipment, and worked with staff to develop plans for the Program. Reviewed materials produced by staff. Helped write articles and programs. Coordinated with other agencies and projects.

January 1980 to January 1981. Game Biologist, Alaska Department of Fish and Game. Conducted research on moose for Susitna Hydroelectric Environmental studies. Population identity study of moose below proposed dam site. Collared and monitored moose.

Browse analysis on river bottom plus determined habitat use by fecal plots.

September 1975 to January 1980. Game Biologist, Alaska Department of Fish and Game. Conducted study on marine birds for Outer Continental Shelf Environmental Assessment Program. Determined species composition, relative abundance and habitat use along coast of southern Alaska. Conducted aerial and boat bird surveys. Assessed populations at seabird colonies.

January 1972 to September 1975. Game Biologist, Alaska Department of Fish and Game. Kenai Moose Research Center. Assisted in research on enclosed and free-ranging moose. Assessed physiologic status of moose by hair and blood analysis and morphometric measurements. Conducted moose population identity study. Helped test new methods for moose management.

May 1970 to November 1971. Assistant Director, Research and Development, Wakefield Seafoods, Port Lions, Alaska. Tested new techniques for processing seafood. Conducted laboratory tests for product quality. Assessed processing techniques in six seafood processing plants.

Memberships:

The Wildlife Society, American Ornithologists Union, Pacific Seabird Group, Peregrine Fund, Trumpeter Swan Society, Laboratory of Ornithology, National Wildlife Federation and National Audubon Society.

Interests:

Wildlife photography, bird-watching, running, skiing, hiking, canoeing.

Biologist: Susan E. Quinlan

Education:

Master of Science. 1979. University of Alaska - Fairbanks, Major: Wildlife Biology. Thesis: "Breeding Biology of Storm-Petrels at Wooded Islands, Alaska. Conducted baseline studies on seabird populations. Conducted a research project to determine population size, nest site preferences, breeding phenology, food habits, nest success and the effects of predation on the breeding biology of 2 storm-petrel species. Also, conducted review on effects of introduced nongame birds on other birds in United States.

Bachelor of Science. 1975 Colorado State University. Major: Wildlife Biology. Emphasis: nongame management, botany, journalism. Special projects included: preparing study skins and live mounts of birds, assisting field research by making observations of Canada Geese and blackbirds, collecting fecal pellets and making bird counts; lab instructor for wildlife management techniques; behavioral research on sheep; study of effects of weather on bird mist-netting success.

Career Experience:

April 1980 to Present: Nongame Wildlife Biologist, Alaska Department of Fish and Game. Researched and wrote brochures and articles and radio programs on nongame wildlife. Prepared newsletter. Developed wildlife educational materials and gave teacher in-service day instruction. Organized urban wildlife demonstration project. Helped organize public meetings. Worked with Coordinator in Program planning, budgeting and coordination. Drafted legislation for funding bill. Researched and developed plans for observation card program and breeding bird survey. Coordinated volunteers for bibliographies, Wildlife Notebook Series and educational materials.

May 1980 to April 1981: Biologist. U.S. Fish and Wildlife Service. Conducted study of bird use of arctic habitats; obtained information on spring, molt and summer bird migration, bird species composition, habitat use, nesting densities and nesting success; mammal observations and plant collections were also made. Statistical and computer analysis was included.

May to August 1979 and May to October 1978. Biologist. U.S. Forest Service. Designed and conducted study of the effects of fire and forest succession on nongame birds and small mammals; censused songbird populations obtaining breeding bird density and diversity; small mammals were surveyed for species composition and relative densities; vegetation in study plots was quantified. Made recommendations for a Nongame Wildlife Program within Chugach National Forest.

December 1975 to May 1976. Naturalist. National Audubon society, Corkscrew Swamp Sanctuary. Informed visitors about birds, plants, reptiles, amphibians, mammals and general ecology of the bald cypress swamp. Assisted in woodstork breeding biology studies and fish sampling.

Memberships:

Cooper Ornithological Society, Wilson Ornithological Society, American Ornithologists Union, Pacific Seabird Group, Western Bird Banding Association, The Wildlife Society, National Audubon Society, Interior Alaska Trappers Association, National Wildlife Federation.

Interests:

Nature photography, bird painting and drawing, writing, reading, backpacking and bird-watching.

Technician: Nancy G. Tankersley

Education:

Master of Science. 1981. University of Alaska - Fairbanks. Major: Wildlife Management. Thesis: Mineral Lick Use by Moose in the Central Alaska Range. Other projects included: fall study on distribution of red foxes, coyotes and wolves in eastern Denali National Park; analysis of human impacts on bald eagles on the Chilkat River, Haines, AK; habitat evaluation for moose, snowshoe hare, ptarmigan and spruce grouse in different forest communities in interior AK.

Bachelor of Science. 1976. University of California, Berkeley. Major: Wildlife Biology. Special projects included: breeding biology study of cliff swallows; mammal trapping and specimen preparation; bird trapping and banding.

Career Experience:

April 1980 to Present: Nongame Technician, Alaska Department of Fish and Game. Produced radio programs on various wildlife topics, wrote and edited newspaper and magazine articles, program brochures and reports. Worked with other staff in program planning, observation card design and maintained and updated nongame photo file. Worked with Municipality to coordinate planning for Potter Marsh Nature Center. Helped organize public meetings.

Summer 1977: Small mammal collecting and bird nest censusing on the Seward Peninsula, Alaska. Museum of Vertebrate Zoology, University of California, Berkeley.

April to June 1977: Field assistant in breeding white-crowned sparrow study near San Francisco, CA. Trapped, banded, recorded song dialect, kept detailed behavioral observations, found nests and mapped breeding pair's territory. University of California, Riverside.

January to March 1977: Assistant mammal curator for Museum of Vertebrate Zoology, University of California, Berkeley. Also lab assistant in electrophoresis lab.

Membership: The Wildlife Society, The American Society of Mammalogists, National Audubon Society, National Wildlife Federation.

Interests: Nature photography and writing, birdwatching, skiing, hunting and hiking.

STAFFING NEEDS

These three positions are the only ones currently authorized for the Nongame Wildlife Program. Another nongame biologist stationed in Southeast Alaska is needed as soon as possible, because of the extensive habitat alterations in that region. At present, ADF&G has inadequate information on the effects of these alterations on nongame wildlife and opportunities for nonconsumptive use of wildlife. Also, information and education projects cannot be adequately provided to southeast Alaska citizens by Anchorage and Fairbanks based staff.

The demand for research, management, information and education on nongame wildlife is likely to expand in the future. To meet that demand, we foresee the need for a moderate growth in Nongame Wildlife Program staff as funding allows. The kinds of personnel needed and the relative order in which they will be needed is listed in Table 2. As shown in Table 2, two options are open. One is to have regional nongame biologists responsible for all aspects of nongame management, one is to have specialists in certain nongame animal groups. A third could be a combination of these.

Table 2. Options for Staffing the Nongame Wildlife Program

Option A

Anchorage:	Coordinator*	Order in which they are needed: 1. Biologist - Juneau 2. Data Manager 1/2/Computer programmer 1/2 -Fairbanks 3. Technician - Fairbanks 4. Biologist - Anchorage 5. Clerical - 1/2 -Anchorage 1/2 -Fairbanks 6. Technician - Juneau 7. Biologist - Nome 8. Biologist - Kodiak
	Biologist	
	Technician*	
	Clerical	
Fairbanks:	Biologist*	
	Technician	
	Data Manager/Computer Programmer	
	Clerical	
Juneau:	Biologist	
	Technician	
Nome:	Biologist	
Kodiak:	Biologist	

* already present

Option B

Anchorage:	Coordinator*	Order in which they are needed: 1. Ornithologist - Juneau 2. Data Manager/Programmer-Fairbanks 3. Technician - Fairbanks 4. I and E Specialist-Anchorage 5. Clerical 1/2 Anchorage; 1/2 Fairbanks 6. Mammalogist - Fairbanks 7. Urban Wildlife Specialist - Anchorage 8. Aquatic Ecologist -Juneau
	Urban Wildlife Specialist	
	I and E Specialist	
	Technician*	
	Clerical	
Fairbanks:	Ornithologist*	
	Mammalogist	
	Data Manager/Programmer	
	Technician	
	Clerical	
Juneau:	Ornithologist	
	Aquatic Ecologist	

* already present

SUMMARY

The mission of Alaska Department of Fish and Game's Nongame Wildlife Program is to maintain Alaska's healthy nongame populations, so that present and future generations will be able to enjoy them. We have solicited public comment and involvement in the Program, both in defining goals and participating in projects. Their response at our public meetings and through the Newsletter has been enthusiastic and supportive. We are currently providing the public with information about nongame species and how to view and enjoy them through brochures, articles, radio programs, and education materials for schools and youth groups. We are beginning projects to assess the status, distribution and habitat use of nongame species through our observation card program and breeding surveys.

In order to maintain healthy Nongame Wildlife populations in Alaska for the use and enjoyment of present and future generations, ADF&G's Nongame Wildlife Program must grow moderately in both staff and budget over the next 5-10 years. An additional biologist stationed in southeast Alaska is particularly needed. This growth will allow us to serve the public in a greater proportion of the State, and to conduct the research needed to wisely manage Alaska's nongame wildlife resources.

APPENDICES

APPENDIX I.

Anchorage Workshop Proceedings



**PROCEEDINGS OF
A WORKSHOP
ON
DIRECTIONS AND PRIORITIES FOR
ALASKA'S
NONGAME WILDLIFE PROGRAM**



**June 8, 1981
Anchorage, Alaska**

Alaska Department of Fish and Game

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PROCEEDINGS OF THE NONGAME WILDLIFE WORKSHOP

June 8, 1981
Anchorage, Alaska

The Alaska Department of Fish and Game's Nongame Wildlife Program originated in 1981 in response to public interest in nonconsumptive uses of wildlife (such as viewing and photography) and research and management of species that are not normally harvested.

These Proceedings are the results of a public workshop designed to gather project ideas and priorities for the Program's four functions: nongame wildlife research, management, education, and information. Invitation letters and brochures about the workshop were sent to individuals and organizations around the State including sportsmen, conservationists, educators, wildlife researchers, tourism groups, Native groups, and service clubs. In addition, newspaper ads and articles about the workshop were published in Anchorage and Fairbanks, and radio spots publicized the workshop on Anchorage radio stations.

Over 100 enthusiastic people attended the workshop. Their strong interest in the program was evident throughout the long hours of discussion and debate about the directions and priorities for the Nongame Wildlife Program.

Continued public interest, input, and support are prerequisites for the Program's success. Anyone interested in more information or with ideas or suggestions for the Program are encouraged to contact the Nongame staff:

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Nongame Wildlife Workshop
Alaska Department of Fish & Game
Monday, 8 June 1981
Alaska Pacific University
Anchorage, Alaska

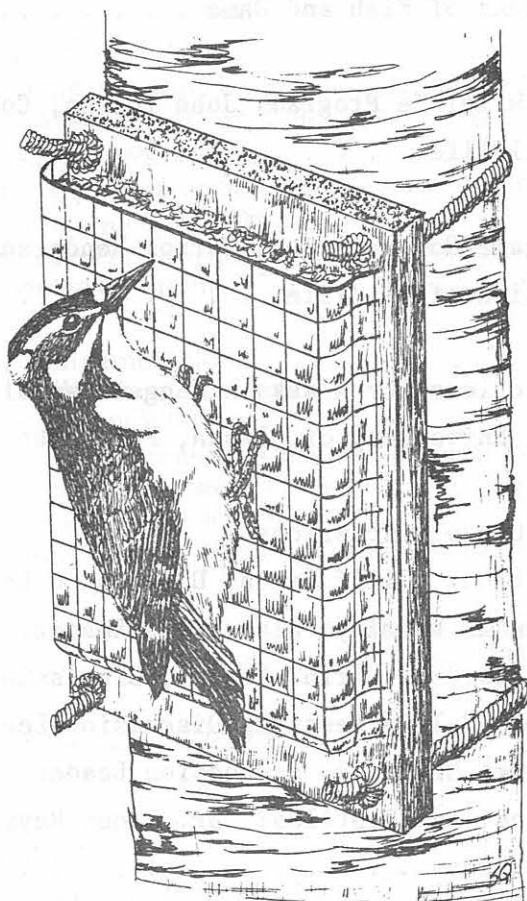
Tentative Schedule

- 8:00- 9:00 Registration
- 9:00- 9:20 Introduction
- 9:20- 9:40 Nongame Wildlife Resources and Their Use in Alaska-
Sue Quinlan, Alaska Nongame Wildlife Program
- 9:40-10:00 Nongame Programs Nationwide-
Paul Arneson, Coordinator, Alaska Nongame Wildlife Program
- 10:00-10:30 Colorado's Nongame Wildlife Program-
John Torres, Chief of Nongame and Endangered Species,
Colorado Division of Wildlife
- 10:30-10:45 Break
- 10:45-11:15 Minnesota's Nongame Wildlife-
Carrol Henderson, Nongame Supervisor,
Minnesota Section of Wildlife
- 11:15-11:45 Challenges and Directions for Alaska's Nongame Wildlife Program-
Dr. Robert Weeden, Professor of Resource Management,
University of Alaska, Fairbanks
- 11:45-12:00 Procedures and Goals for Working Groups- Paul Arneson
- 12:00- 1:00 Lunch
- 1:00- 1:30 Working Groups- Session I. What has been done?
- 1:30- 2:45 Working Groups- Session II. What can and should be done?
- 2:45- 3:00 Break
- 3:00- 4:00 Working Groups- Session III. Which projects should have priority?
- 4:00- 4:30 Future Funding Sources- Discussion
- 4:30- 5:30 Summary
- 5:30- 6:30 Social Hour (No Host)
- 6:30- 7:45 Dinner (barbeque outdoors if possible)
- 8:00- 9:30 Evening Program- Movies

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WELCOMING REMARKS

by
David R. Cline
Vice-President for Alaska
National Audubon Society



A warm and hearty welcome to all of you who have turned out on a rainy day to attend this Nongame Wildlife Workshop sponsored by the Alaska Department of Fish and Game (ADF&G). I very much appreciate this opportunity to offer a few brief introductory remarks at your historic workshop.

The National Audubon Society is proud to lend our continued support to development of what has the potential of becoming the finest State wildlife conservation program in the nation. Establishment of a nongame program in ADF&G is viewed as a major milestone toward this end.

It is important from the outset to recognize that a variety of State programs have already been contributing to nongame conservation in Alaska over the years. The Habitat Protection Division of the ADF&G benefits all who are interested in wildlife. The Department also has an active and effective public wildlife information program, has been working on statewide species management plans, and has greatly restricted hunting in Chugach State Park and Potter Marsh near Anchorage and on wildlife lands at Sheep Mountain, McNeil River, and the Walrus Islands. Furthermore, its excellent wildlife research program continues to gather information vital to enlightened management of our State's wildlife for their game and nongame values. Combined with research findings of the University of Alaska, U.S. Fish and Wildlife Service, and private industry, we already have a wealth of information on Alaska's nongame species.

It is very important for all of us to recognize that establishment of an Alaskan Nongame Wildlife Program did not happen overnight. Nor will it persist without our help and support!

As early as the 1960s, some farsighted ADF&G biologists recognized the need for a nongame program and even discussed the possibility of an Alaska Conservation Stamp Fund to pay for it. Throughout the 1970s, several attempts to establish a State Nongame Wildlife Program by the Department were thwarted, either by the legislature or the Governor. This demonstrated, I think, the lack of a coordinated action strategy involving the Department and its sleeping constituents.

Then in 1978, the Department sought professional advice from one of Alaska's foremost wildlife authorities, Dr. Robert Weeden of the University of Alaska in Fairbanks. Dr. Weeden's excellent report on preliminary concepts and priorities for a prospective nongame program published in 1979 provided the foundation on which to develop citizen action strategy.

Ms. Marilyn Sigman and a few other members of the Arctic Audubon Society and Alaska Conservation Society thereupon sought legislative

action. No big sums of money or highly paid lobbyists were involved--only grassroots commitment and courage to something they strongly believed in. Then with the help of a single legislator, Representative Sally Smith of Fairbanks, initial funding for a Nongame Wildlife Program in ADF&G was achieved in the 1980 session of the Alaska State Legislature.

If one university professor, a handful of citizen activists, and one State legislator could accomplish this after all previous attempts had failed, just think what opportunity all of us at this workshop--plus those to be recruited--can do to make our fledgling Alaska Nongame Wildlife Program grow and prosper.

All who are supportive of this exciting new program in wildlife conservation now have a major responsibility. We must become more involved in budget planning and appropriation processes of ADF&G. For without adequate annual appropriations, it will not be possible to attain Program objectives.

It really seems ironic that after many years of hard work by conservationists to attain passage of national nongame legislation, that the Reagan administration economics may well make it essentially inoperative over the next few years. But let us not be too discouraged by what is happening on the national political scene. Despite serious setbacks at the national level, a combination of factors provide Alaska the unique opportunity for developing a wildlife conservation program that could well serve as a model to the nation and the world. Basic reasons for this include:

1. Some of the last great wildlife and wildland spectacles remaining on the planet.
2. More habitat protected for wildlife than all of the other states combined.
3. Outspoken claims by State leaders that Alaska can and will do the best job of managing wildlife in both the State and national interest under State's rights doctrine. Now is their chance to prove it!
4. Overflowing State coffers offering opportunity for having the best funded wildlife program in the nation.
5. A citizenry more knowledgeable on, and concerned about, its wildlife than in any other state.
6. Increased national scrutiny by Americans concerned as to how some of the last of our great wildlife heritage is being protected in Alaska.

7. An increasing willingness on the part of many people to contribute financially to nongame programs.

8. Last, but not least, more professional wildlife expertise than anywhere else in the country.

Audubon is extremely pleased to see three such highly qualified wildlife biologists leading the Alaska Nongame Wildlife Program. Paul Arneson, Susan Quinlan, and Nancy Tankersley deserve all the help and support that we can give them.

I certainly agree with Dr. Durward Allen, one of this country's most renowned wildlife conservationists, that of all the benefits to humanity that we can claim for wildlife, the most significant is its great aesthetic value.

Today all the evidence indicates that a large majority of the public understands about wildlife and aesthetics. The environmental value of wildlife clearly stands above commercial and sporting benefits. This is not to say these latter uses do not have their place, for they do. But their importance must be put in clearer perspective and better balance in relation to the aesthetic, scientific, and education values of wildlife.

When we talk about nongame wildlife, I think that we really mean nonconsumptive use of wildlife. Our most highly prized hunting animals (game) are nongame for most of the year over all of the State, and nongame for all the year in parts of it (national parks and refuge areas closed to hunting). And the sportsman in the field alone after moose in October may be out with his family and camera in June.

The aesthetic experience of wildlife is with us year around, regardless of our field equipment: binoculars, camera, or a long-treasured double-barreled shotgun.

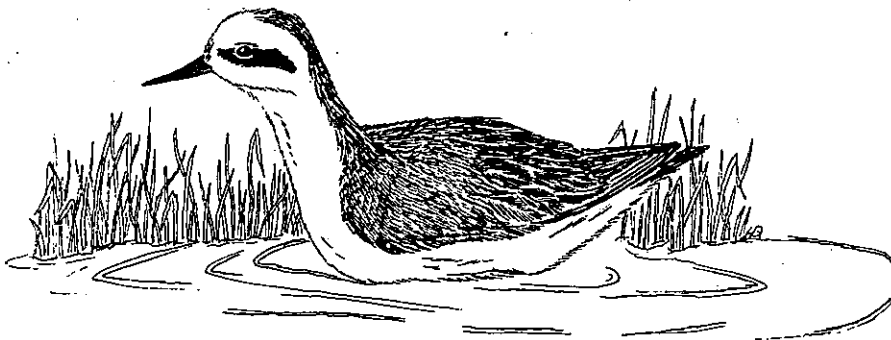
So it is my fervent hope that this dividing up of wildlife into game and nongame only represents a step forward in the evolution of a comprehensive and sophisticated State wildlife program that recognizes the value and role of all creatures in the natural ecosystem. I am convinced we are moving in that direction, albeit behind public needs and desires. Let's recognize that the ideal administrative unit for fish and wildlife conservation in the future will have every member of the staff concerned and interested in the welfare of every species of wildlife.

In summary, success of Alaska's nongame management program will depend on the ability of ADF&G to blend the old with the new. New alignments, programs, authorities, and sources of funds are needed. But by themselves, however, they will not be enough to overcome continuing massive losses of wildlife habitat caused by the resource demands of too many people living beyond their means.

Of course, we all realize that any wildlife program will only be successful with a strong political base. By adding all the people

interested in wildlife for a variety of nongame uses, to sport hunters and anglers, we should have a solid majority. Then, and only then, will we have a chance of slowing the massive destruction of wildlife habitat, and in fulfilling the public mandate as expressed in the Alaska Constitution that says; "...wildlife...[not just game, but wildlife] shall be utilized, developed, and maintained on the sustained yield principle [not necessarily maximum sustained yield], subject to preferences among beneficial uses."

On behalf of the National Audubon Society and its more than 1,600 members in Alaska, congratulations to all those who made the Alaska Nongame Wildlife Program possible. And please know that we want to help in every way possible to make your program as successful as it deserves to be.



NONGAME WILDLIFE RESOURCES AND THEIR USE IN ALASKA

by

Susan E. Quinlan
Nongame Biologist

Alaska Department of Fish and Game



Nearly every Alaskan could name at least one species of wildlife without stopping to think. But, asked to name a species of nongame, nearly everyone frowns, stammers, and then asks "What is nongame?"

This response is hardly surprising since the Alaska Department of Fish and Game (ADF&G) code defines "game" as any species of wildlife--bird or mammal, and the term "fish" includes amphibians. So legally there are no "nongame" species in Alaska. Further, in some areas nearly all wildlife is harvested by subsistence users. Thus, a snowy owl may be "game" on the Yukon Delta, and "nongame" in Anchorage. Additionally, in areas closed to hunting and fishing, brown bears, moose, salmon, and other game species are not legally harvested, so they could be classified as nongame.

Despite all this confusion, nongame may not be such a bad word because it tells you that this program is different from the game program. The Nongame Program is for wildlife and wildlife users, but for different wildlife species and different wildlife users than Fish and Game has traditionally been involved with.

The Nongame Program will deal mainly with those wildlife species that are not ordinarily hunted, fished, or trapped in Alaska. Most people have heard of the species that are harvested--moose, caribou, brown bear, spruce grouse, and king salmon--but Alaska's nongame wildlife species are less well known.

Over 380 species of birds, 100 species of mammals, 50 freshwater fish species, 7 amphibians, and 1 reptile occur in this State. Less than 10 percent of the birds and less than 40 percent of the mammals are hunted, fished, or trapped for sport, subsistence, or commercial purposes. The rest, over 400 species of wildlife, could correctly be called "nongame."

Whether a result of poor press coverage or their sometimes secretive habits, Alaska's nongame wildlife are not as well known as game animals, but nongame species are equally interesting and important. In hopes of familiarizing everyone here with a few of Alaska's unharvested wildlife, I'd like to show you a few slides of nongame species.

The giant Sitka spruce forests of Southeast Alaska are home to game species such as black bears and Sitka black-tailed deer. These forests also provide the necessities of life to many nongame species. The tiny ruby-crowned kinglet and secretive great gray owl are among the nongame birds. Rufous hummingbirds and brown creepers contribute to the beauty and life of the forest. The little brown bat is one of the small nongame mammals; water shrews and various vole species are other forest inhabitants.

Wood frogs and spotted frogs swim in freshwater ponds, while long-toed salamanders inhabit the undersides of logs. Indeed, southeast Alaska is the stronghold of most Alaskan amphibians.

Offshore of mainland Alaska, in Southeast, Prince William Sound, the Aleutians, and along the west and northern coast, Alaska's islands harbor game species such as seals, sea lions, and walrus. These islands also host countless millions of nongame animals--the seabirds. Varying from alcids like the brightly colored tufted puffin and clown-like crested auklet to the nocturnal, secretive fork-tailed storm-petrel, Alaska's seabirds are one of our most fascinating and fragile wildlife resources.

Alaska's jagged cliffs and windy alpine meadows are haven to mountain goats and Dall sheep, but these game species share their habitats with nongame species such as singing voles, water pipits, and golden eagles. Another alpine resident, the pika, is a close relative of hares and rabbits and, though little known, is one of Alaska's most interesting wildlife species. Wandering tattlers are just one of many shorebird species that nest high in the mountains.

Photos of northern Alaska remind most people of caribou, but literally millions of shorebirds migrate thousands of miles each year to nest on the wind-swept tundra. Among these are red phalaropes, golden plovers, dunlin, and ruddy turnstones. The coming of spring in Southcentral and Interior Alaska is marked by the migration of snow buntings--one of the first birds to arrive on the frozen tundra each year. Three species of jaegers, snowy owls, and short-eared owls are among the predatory species of the tundra. These raptors as well as game species such as arctic and red foxes depend on the small migrant birds and resident nongame species, such as lemmings, for survival.

Black spruce bogs are often assumed to be devoid of wildlife, but a variety of nongame species live amidst the crooked trees, sphagnum moss, and acidic waters of spruce bogs. Colorful Bohemian waxwings, hardy, year-round residents of Alaska, frequently nest in black spruce forests. Waxwings share their spruce woods with boreal chickadees, greater yellowlegs, hawk owls, and other species. The ponds and lakes that occur throughout the black and white spruce forests of Alaska are home to horned grebes and the symbol of wilderness, the common loon. Champion long-distance traveler, the arctic tern makes a 10,000-mile journey each year to Alaska from wintering grounds in South America and the Antarctic.

The white spruce, aspen, and birch forests that cover much of Southcentral and Interior Alaska are home not only to moose and bears, snowshoe hares, and spruce grouse; they are alive with nongame wildlife. Did you notice the harmonic buzz of varied thrushes, the trills of dark-eyed juncos, or the melodious song of hermit thrushes around the parking lot this morning? White-winged crossbills and Townsend's warblers are among the more colorful birds to be observed right around Anchorage. Most of you have probably heard the chattering of red squirrels or noticed a redbacked vole skitter across the forest floor. The porcupine is a well-known nongame species that can be a pest at times. At night, careful observers may be lucky enough to see a

northern flying squirrel or hear a boreal owl calling from the spruce forest. Given these few examples of the 400 plus nongame species in Alaska, most people realize that they are indeed familiar with nongame wildlife. The term is confusing, but clearly, much of the wildlife that inhabits Alaska could correctly be called nongame.

The reasons for conservation of all wildlife, game or nongame, are probably well-known to most people here. The ecologic values of nongame wildlife are not well measured, but biologists believe nongame wildlife are very important. Nongame species are consumers that transfer energy and nutrients through complex food webs. The intricate cycle of minerals and pathways of energy through food webs are the crux of ecosystem functioning. As nongame species are far more numerous and diverse than game species, there is no question that nongame wildlife play equally important roles in these ecosystem processes. Nongame birds and mammals also aid in seed dispersal and can enhance as well as reduce seedling regeneration. Small mammals such as voles, lemmings, and shrews are important for aerating and fertilizing the soil. And an increasing amount of research indicates that nongame birds such as woodpeckers may play a vital role in the prevention of insect outbreaks.

From the numbers and diversity of nongame species, one can surmise that Alaskan ecosystems would not be the same without them. In a very real sense, nongame and game wildlife species are interdependent. The continued abundance, diversity, and visibility of wildlife in Alaska depends upon conservation of both game and nongame species and their habitats.

In addition to the necessity of maintaining natural ecosystems, there are many other arguments in favor of wildlife conservation. Nongame birds have been called environmental barometers because they are often affected by pollution levels before man is visibly harmed. Just as miners used to carry canaries into mine shafts to detect gas fumes, today monitoring of nongame bird populations may forewarn us of serious contamination of our surroundings. The population declines and eggshell thinning of such species as the peregrine falcon first told scientists of the health dangers of DDT, DDE, and other pernicious pesticides. As agricultural and petrochemical development expand in Alaska, nongame species may become very valuable indicators.

Wildlife is also valuable for basic scientific research, for potential or undiscovered uses, and for aesthetic qualities. For these and other reasons, the wisdom of wildlife conservation seems clear. However, in our world, politics and economics are the factors which determine whether or not our governments take the wisest course of action. So, perhaps a more important task than defining nongame wildlife is to define nongame wildlife users, that is--"Who cares about nongame wildlife?"

Sportsmen--hunters, fishermen, and trappers--are the people who clearly benefit from wildlife; game harvest is a direct and visible benefit of wildlife. Whether by ethics or practicality, sportsmen must be, and are, concerned about nongame species as well. But, many people cannot think of any other people who use wildlife--can you?

There is another constituency interested in wildlife, and this group is well represented in this room. Those who observe, study, and enjoy wildlife while not necessarily harvesting wildlife for food or sport have been called nonconsumptive wildlife users. Nonconsumptive wildlife users are so diverse in interests, lifestyles, and attachments to wildlife, that an all inclusive group of nonconsumptive users does not exist. As a result, nonconsumptive users are often overlooked. Quite recently, a prominent member of the Game Boards stated that, "in Alaska, nonconsumptive users are either small in number or not very vocal."

Nonconsumptive wildlife users vary from birdwatchers to photographers; from teachers to art collectors; and from tourists to sportsmen. Because of this diversity, numbers are difficult to estimate. In 1975, the U.S. Fish and Wildlife Service estimated that 49,314,000 people in the U.S., or 27 percent of the population at that time, participated in wildlife observation.¹ No doubt, every one of us has seen, or been in, a traffic jam caused by people stopping to watch, photograph, and enjoy a moose standing by a road. Most of us have craned our necks to watch a bald eagle soar overhead. And I'll wager that most Alaskans enjoy the songs of birds in spring--whether or not they can identify the birds. There are active and passive onlookers, but I believe most Alaskans are "wildlife watchers."

One example of the prevalence of wildlife watching in Alaska is the records of visits to national wildlife refuges. According to the U.S. Fish and Wildlife Service, 45 percent of the use of the Kenai National Wildlife Refuge last year was for wildlife and wildland observation and photography.² In comparison, hunting and fishing made up only 24 percent of the use.

A specific type of wildlife watching--birding--is said to be one of the fastest growing sports in North America. According to Roger Tory Peterson, the numbers of birdwatchers nationwide has increased tenfold in the last decade alone. According to a recent study by Dr. Stephen Kellert at the Yale School of Forestry, 14 percent of the U.S. population are birdwatchers.³ I suspect the proportion in Alaska may be quite a bit higher. Some evidence of this is the fact that there are more members of the National Audubon Society, per capita, in Alaska than in any other state.

Bird feeding is another sort of wildlife watching. Studies by the U.S. Forest Service in the Lower 48 have shown that 15-43 percent of the American population maintain birdfeeders.⁴ That low 15 percent was in New York City--so it is easy to guess that the percentage in Alaska is toward the higher end of the range of values. In 1975, DeGraaf and Payne estimated that Americans spent \$200 million to buy birdseed, and another \$300 million to buy birdfeeders, field guides, and other bird-watching equipment.⁴ I tried to get a comparable figure for Alaska, but most stores did not maintain local records. The one store that released their information said they had sold over 1 ton last year. If other stores had even half as successful sales, over 10,000 pounds of bird seed, over \$11,000 worth, was sold last year in Anchorage alone. I suspect that many Alaskans who feed birds also build birdhouses.

Wildlife photography is another nonconsumptive use of wildlife. Many Alaskans are amateur wildlife photographers, and a few people even make a living at it. I have no estimate of the numbers of dollars spent on cameras, tripods, and film--but I know photographers who take whole rolls of film on a single animal in a single pose--so I have no doubt that, on the whole, wildlife photographers contribute quite a bit of cash to the economy. The photographer is an obvious nonconsumptive user, but those who buy the picture as a wall hanging from an ad, magazine, book, postcard, calendar, movie, or slide show are all nonconsumptive wildlife users. What would Alaska magazine use to attract readers if it weren't for wildlife photos?

Wildlife art is a similar nonconsumptive use of wildlife. In a somewhat unscientific study of art stores in Anchorage and Fairbanks, I found that 40-50 percent of the pictures on display were drawings, paintings, or batiks of wildlife. An even higher proportion, about 80 percent, of the sculptures used wildlife as a subject. Artists, art buyers, and art admirers are nonconsumptive wildlife users, and the prevalence of wildlife art in Alaska is a measure of the intensity of wildlife appreciation here.

Similarly, books, magazine articles, and movies about wildlife are other indirect uses. Those who write about and/or read about wildlife are among those who appreciate wild animals.

The astute teacher realized long ago that wildlife can be used as a key to a child's imagination and interest. Who doesn't remember their own excitement as a child upon noticing a wild animal--be it a moose or a robin. Children are often taught more about game species such as moose and Canada geese, but nongame species can be equally exciting. While showing a class of fifth graders a flock of ducks and geese, I was quite surprised that many of the children were more fascinated by a Lapland longspur than by the geese. Many teachers use children's innate sense of wonder to interest their classes in important--but to some children, less stimulating--topics of reading, writing, and arithmetic. Figuring out how far a duck flew may be infinitely more interesting than multiplying numbers without meaning. These teachers and their students may not be hunters and fishermen, but they are wildlife users.

Alaska's Native heritage is replete with information on the spiritual and mystical values of all wildlife species. The raven is an example of a nongame species highly respected by Native people. Those who treasure the history and culture of Alaska cannot fail to recognize wildlife as a part of Alaska's heritage--and hence of interest and value.

As a final group of nonconsumptive wildlife users, remember the tourists, the tour guides, and all those who benefit from tourists. According to the Alaska Division of Tourism, 595,000 tourists visited Alaska and spent \$369 million last year alone.⁵ A survey of these tourists by the Division of Tourism revealed that 50 percent visited the State because of its scenery and its feeling of wilderness.⁵ The survey did not ask about wildlife, but few people doubt that wildlife is an important drawing card. As Aldo Leopold said, "Wildlife is the difference

between rich country and mere land." The advertisers for Alaska didn't overlook that; few ads fail to portray caribou, bears, salmon, or bald eagles.

These then are the groups that use Alaskan wildlife resources. These groups include hunters and fishermen as well as those people who just like to observe wildlife. They, or perhaps I should say we, are concerned about all wildlife, nongame and game. Hence, a program for nonconsumptive users, such as this one, should be concerned with conservation of all wildlife species. In its education and information functions, the Nongame Program will be concerned with both nongame and game wildlife species.

Considering all the nongame species and their importance, and considering the impressive number and variety of people who use wildlife nonconsumptively, some of you may wonder why the Alaska Department of Fish and Game is just now starting a Nongame Program.

In the past, most state wildlife agencies (including ADF&G) developed programs that emphasized game for the simple reason that funding for resident wildlife programs comes directly from hunters and fishermen. Additionally, the earliest recognized threat to wildlife populations was unregulated harvest and market hunting.

Sportsmen's groups became aware of the need for hunting and fishing regulations and later for wildlife and habitat management. These groups, along with biologists, worked with legislators to pass laws for hunting regulations and to create special taxes earmarked for wildlife conservation. The two most important laws, the Pittman-Robertson and Dingell-Johnson Acts, established 11 percent and 10 percent taxes on arms, ammunition, and fishing equipment. Money collected from these taxes is redistributed to the states on a matching fund system. States provide most of their 25 percent matching funds from the sale of hunting and fishing licenses. Though sportsmen are interested and concerned about all wildlife species, the bulk of money raised by these taxes and license sales rightfully has gone to study and manage game species. Nongame species have often benefited indirectly from sportsmen's contributions. For example, Creamer's Field in Fairbanks was bought, in part, by Pittman-Robertson funds. Though snow buntings and flying squirrels may not have been the intended benefactors, they and other nongame species did benefit. Nonconsumptive users have also received attention. The McNeil River and Walrus Islands sanctuaries were also set aside and have been managed by sportsmen's money, though wildlife photographers are the major users.

As I mentioned before, another reason state wildlife agencies have concentrated on game species is that in the past the most serious threat to wildlife populations was unregulated hunting. But today, most hunting is carefully regulated and poses no threat to wildlife populations. Indeed, hunters are among the strongest proponents and supporters of wildlife conservation. Now threats to wildlife populations are diverse and affect all species, game and nongame. Habitat loss, pollution, encroaching development, and even overuse by unregulated nonconsumptive users are among the threats facing wildlife. Since the amount of money

raised by sportsmen is insufficient to deal with all species or all uses of wildlife, nongame species have been neglected by both State and Federal wildlife agencies. The distributions, abundances, life histories, and habitat requirements of nongame species remain poorly known; research and management techniques are ill-defined and often overlooked, and much of the public is unaware of the diversity and values of nongame wildlife resources.

Nonconsumptive users have also been neglected. Projects identifiably oriented to nonconsumptive wildlife users have not been well-advertised and have been few in comparison to projects for consumptive users. Hence, there has been a clear need for a program oriented toward nongame species and nonconsumptive wildlife uses, a need that has been recognized by conservationists and the Department for many years.

Thus, the General Fund appropriation by the legislature last year was timely and appropriate. Hopefully, in the future there will be an avenue for nonconsumptive users to directly contribute monies to support wildlife conservation.

In addition to nonconsumptive wildlife users, all wildlife user groups including hunters, fishermen, and trappers will benefit from the Nongame Wildlife Program and the broadened base of support for wildlife conservation programs in the State. Thus, ADF&G's Nongame Wildlife Program, in a sense, is for all wildlife and for all those who enjoy and appreciate the variety of birds, mammals, fish, and other animals of Alaska.

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NONGAME PROGRAMS IN THE UNITED STATES

by
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There is a common saying in Alaska "We don't give a damn how they do it on the Outside." A definition of "Outside" for our out-of-State guests is the Lower 48 states. I don't agree with that saying because we can learn from what has happened out there. We can steer clear of things that don't work on the "Outside" and repeat things that work well.

Because of this, I attempted to query all other states about their nongame wildlife programs when I began planning our nongame program. I found this to be a very interesting and useful exercise. Many states were very helpful in giving information that could be used by us in our program.

I began by calling most states that had viable programs in 1977 since I assumed that they had been in the nongame "business" long enough to know what works and what doesn't. I had a standard list of questions that I asked each state I called.

For those states that I didn't call, I modified the list of questions and sent them a questionnaire. After some begging, I got responses from all states, although not all states answered all questions and in the same manner. Therefore, the data that I am about to tell you about are not 100 percent accurate, but they are summarized to the best extent that I was able. It gives a good picture of what other states are doing.

Fig. 1 was rather interesting when I put it together. You can almost see the Mason-Dixon line. Most southeastern states do not have nongame programs. Maybe one of you has a reasonable and logical explanation for this, but I don't. In defense of Indiana, their legislature passed a bill establishing a nongame program in 1973. Their only problem is that no funds have been appropriated since that time. New Hampshire is just now organizing a nongame program. They are counting on Federal nongame funds from the Nongame Act of 1980, so I am not sure how far their program will go. More about that later.

The biggest surprises to me were Pennsylvania and Florida. I always thought that Pennsylvania had an active game management program, so I was amazed they hadn't begun a nongame wildlife program. Florida, of course, has such unique populations of nongame wildlife species that I thought they would have taken steps to learn (and teach) more about them. This is especially true since a large part of their population is retired citizens who frequently are great supporters of nongame wildlife.

The nation's smallest state, Rhode Island, apparently had the earliest nongame program, but this is likely more just a function of when they began doing something for nongame species and not when a permanent nongame program was established. (They have no full-time nongame biologists, and their annual budget is only \$35,000.) Other states, too, have been doing something for nongame species for many years but have had no formal program. The dates on Fig. 1 are largely when a specified program with definite employees was started.

The southwest and western states were essentially the earliest to establish nongame wildlife programs. Why this is, I am uncertain. Maybe some of you have the answer. Perhaps it was because they still had large expanses of habitat and viable populations--something left to view, study, and learn about. However, urban wildlife is frequently an important part of nongame programs, and one would have expected eastern states to be the leader in this regard.

In Fig. 2, you will notice a striking irruption of states establishing programs in 1973 and the succeeding few years. Much of this was because of the passage of the Endangered Species Act of 1973. Many states began endangered species programs then so that they could get the Federal matching money, and these programs were often tied in with other nongame wildlife projects. A similar increase would normally be expected for 1981 and years to follow because of the passage of the Nongame Act of 1980, but because of cutbacks in Federal spending, that increase likely will not be realized. After the initial rush of establishing programs, only a few programs have been organized in recent years. Alaska is the sole program begun so far in 1981. Appropriations were authorized in 1980 for Alaska, but the Program did not become functional until I began work in mid-January 1981. The first year of our Program is scheduled to be a planning year of which this workshop will play a major role.

Getting back to what other states are doing in their nongame wildlife programs, I thought it might be interesting to look at what other states are spending on nongame wildlife in comparison to what Alaska is spending. Ten states failed to answer the question on nongame budget size, and 11 states are not spending money specifically for nongame (Fig. 3). Fourteen states spend less than \$100,000, with most (9) spending \$10-50,000. Fifteen states spend more than \$100,000, with most (10) between \$100,000 and \$500,000. Three states spend over \$1 million on nongame wildlife. One of these is Missouri which spends \$25 million on wildlife conservation and management. They do not distinguish between game and nongame, and all biologists are responsible for working on nongame species, at least part-time. Alaska, with its current budget of \$150,000, sits about in the middle of those states with nongame wildlife programs.

When I contacted other states, I was also interested in learning how their nongame programs were funded. Four different sources of Federal money were used for nongame (Table 1). The most often used was endangered species money. Twenty-one states said they used this source.

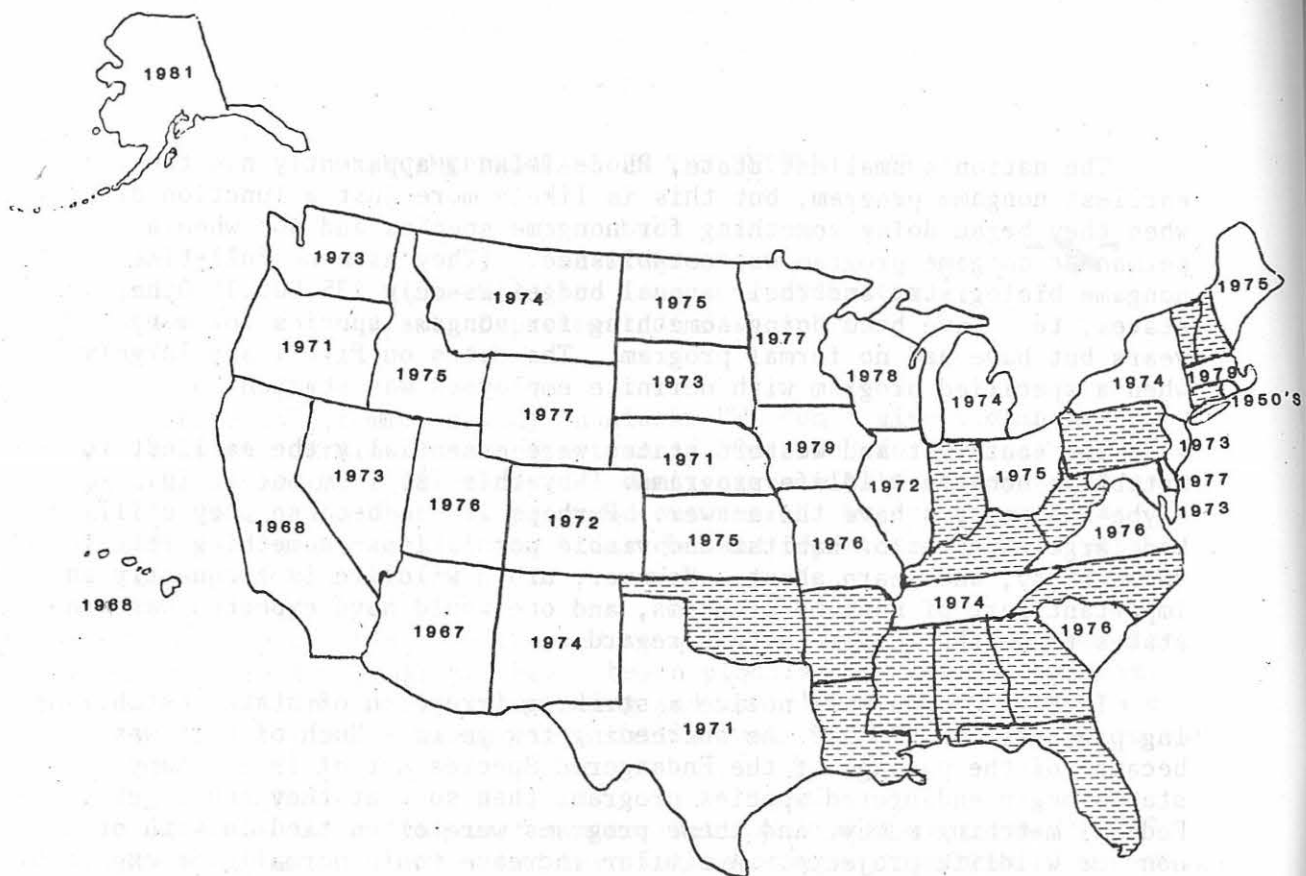


Fig. 1. Year in which each state began nongame wildlife programs. Shaded states do not have active nongame wildlife programs in 1981. (Compiled by Paul Arneson, ADF&G, Anchorage.)

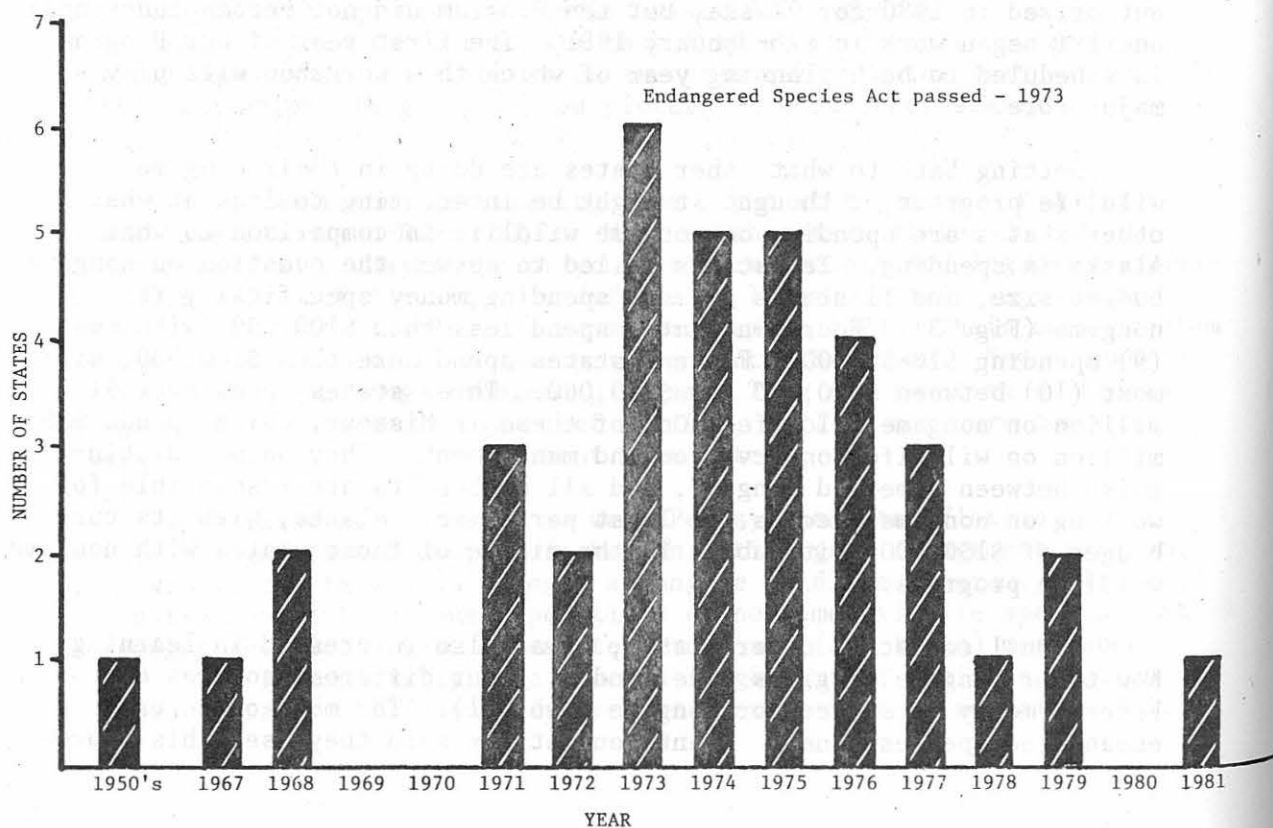


Fig. 2. Year in which 36 states initiated nongame wildlife programs. Fourteen states do not have programs. 1973 includes Indiana who voted in a nongame program but it has never been funded. (Compiled by Paul Arneson, ADF&G, Anchorage.)

Table 1.

Frequency of various federal, state and private funding sources used by states with nongame wildlife programs. (Data not complete--some states did not reply; compiled by Paul Arneson, ADF&G, Anchorage.)

<u>Funding Source</u>	<u>No. of States</u>
FEDERAL	
Pittman-Robertson	14
Endangered Species	21
Dingell-Johnson	5
Contracts	2
STATE	
License Fees	22
General Fund	15
Tax check-off	9 (11 trying)
License Plate	2
Sales Tax	1
Decals	3
PRIVATE	
Grants	3
Donations	3

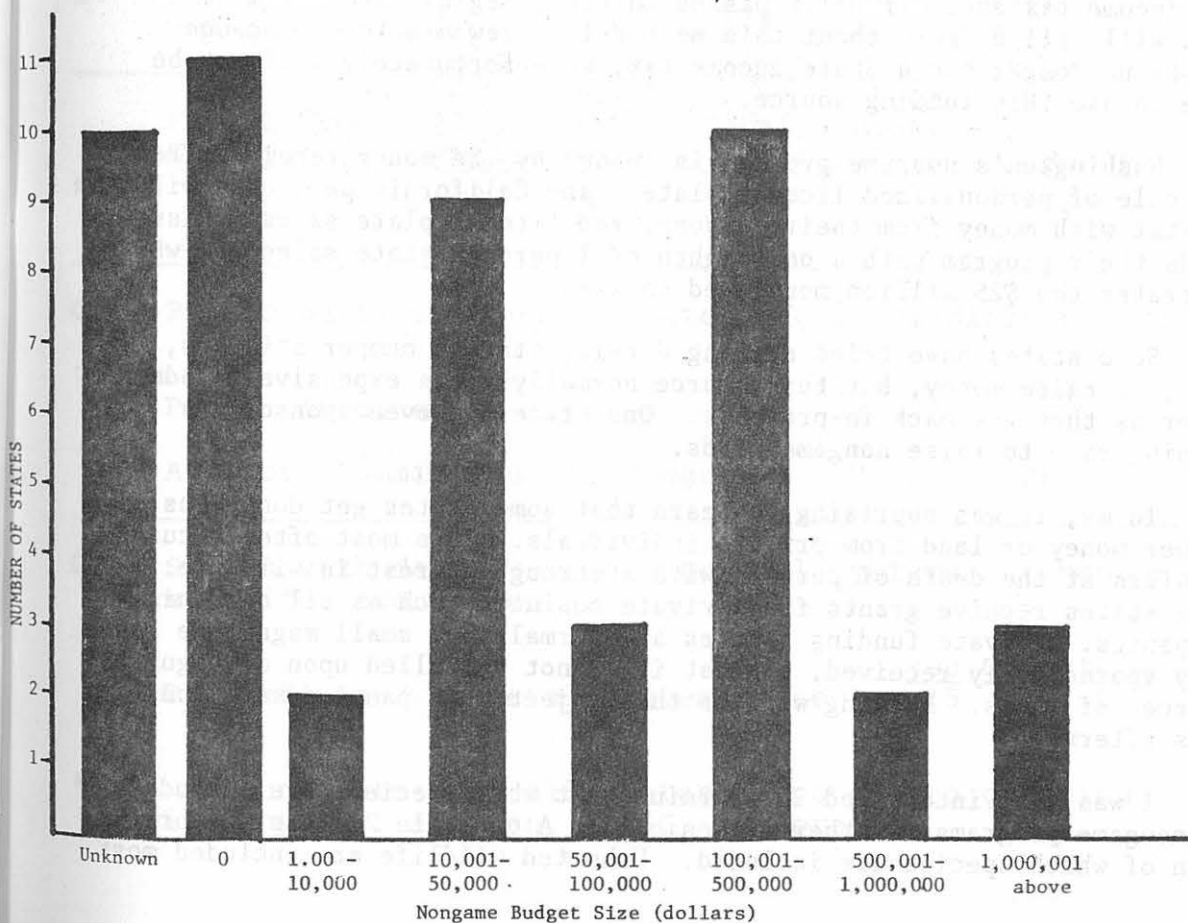


Fig. 3. Relative magnitude of nongame budgets for those states with nongame wildlife programs. (Data incomplete - some states did not reply; compiled by Paul Arneson, ADF&G, Anchorage.)

✓ Pittman-Robertson funds, although derived from an excise tax on the sale of sporting arms and ammunition, were also used for research and management of unhunted species. Most sportsmen are interested in all wildlife and don't object to their funds being spent for nongame since programs that benefit an unhunted species through habitat protection will normally benefit hunted species as well. Some states that include fish in their nongame programs use Dingell-Johnson money which is similar to P-R funds but is a tax on fishing supplies. Two states mentioned contracting directly with the Federal Government to conduct some nongame wildlife projects.

The first three sources of Federal money are matched by individual state money. The most frequently used source of state money was from the sale of hunting and fishing licenses. Again, it is a situation where the consumptive user of wildlife is paying for the research and management of species that are not hunted or fished. Fifteen states (including Alaska) use their General Fund money for their nongame programs. In some states, the hunting and fishing license fee money goes into their General Fund and that is why this source is used. At least with General Fund money, both consumptive and nonconsumptive users of wildlife are paying for the nongame program.

An increasingly popular method of funding nongame programs is to allow persons to donate a portion of their income tax refunds to nongame. The pioneer in this method is Colorado, and this tax checkoff system is currently being used in nine states. Eleven more states are trying to get income tax checkoff bills passed in their legislature. I'm sure John will tell us more about this method in a few minutes. Because Alaska no longer has a State income tax, we unfortunately will not be able to use this funding source.

Washington's nongame program is funded by the money received from the sale of personalized license plates, and California purchases wildlife habitat with money from their personalized license plate sales. Missouri funds their program with a one-eighth of 1 percent state sales tax which generates the \$25 million mentioned earlier.

Some states have tried selling decals, stamps, bumper stickers, etc., to raise money, but this source normally is as expensive to administer as they get back in proceeds. One state has even sponsored a running race to raise nongame funds.

To me, it was suprising to learn that some states get donations of either money or land from private individuals. This most often occurs in wills at the death of persons with a strong interest in wildlife. Some states receive grants from private business such as oil or mining companies. Private funding sources are normally of small magnitude and only sporadically received, so that it cannot be relied upon as regular sources of funds. Funding will be the subject of a panel discussion this afternoon.

I was also interested in learning just what species were included in nongame programs in other states. Part A of Table 2 gives the breakdown of which species are included. Unhunted wildlife are included most

Table 2. Characteristics of nongame programs in the United States.

A. Frequency that various species are included in state nongame wildlife programs.*

<u>Species</u>	<u>No. of States</u>
Unhunted Wildlife	36
Unhunted Game	7
Endangered Species	31
Fish	25
Amphibians	24
Reptiles	26
Molluscs/Crustaceans	14
Other Invertebrates	4
Plants	4

B. Mean staff size for 38 states with full or part-time employees working in their nongame wildlife programs.*

<u>Full Time Employees</u>	<u>Part Time Employees</u>	<u>Total Nongame Staff</u>	<u>Range</u>
4.0	2.8	6.8	1-49

C. Public participation in state nongame wildlife programs.*

	<u>Yes</u>	<u>No</u>
Public Involved in Program	23	10
Advisory Committees for Program	10	26

D. States with data storage/retrieval systems for nongame wildlife information.*

	<u>Yes</u>	<u>Computerized</u>	<u>No</u>
Data storage/retrieval system present	15	8	17

*Data not complete--not all states responded to question.
Compiled by Paul Arneson, ADF&G, Anchorage.

often in their nongame programs. Unhunted "game" species (e.g., caribou in Washington and elk in Minnesota) are included much less often. This is not really a fair comparison with Alaska's situation, however. Many populations of typical "game" species in other states are so small that hunting seasons are not allowed; they are not classified game and are under the jurisdiction of nongame programs. Other states normally don't have unique areas in state ownership such as our McNeil River State Game Sanctuary where a game species, brown bear, is protected. Therefore, these states wouldn't have unhunted game in their nongame program as Alaska will in its program.

Endangered species are also commonly included in the nongame programs. We have many fewer recognized endangered species in Alaska than in other states and therefore, they will be a smaller part of our program. Most frequently, the other species groups listed in the Table (fish, amphibians, reptiles, etc.) are included in the nongame programs because they are threatened or endangered either on Federal or state lists. Most states confine nongame programs to vertebrate animals except for endangered molluscs and crustaceans.

With one part-time and two full-time employees authorized for Alaska's Nongame Wildlife Program, I was curious to see how that staff size compared with other states. Some staffs only had one person working on nongame, while one state--Colorado--had 49 full- and part-time employees. The mean for all states with active nongame programs was four full-time employees (administrators, biologists, technicians, and clerical) and 2.8 part-time employees, for a total staff of 6.8 people.

Two other questions that I asked in the questionnaire that could easily be summarized in tabular form were, "How much is the public involved in your nongame program?" and, "Do you have a data storage/retrieval system?" The public was involved with most programs, but some states at this point are only concentrating on gathering status and distribution data on nongame species and are not involving the public in that process. Information and education responsibilities are often covered under other sections or divisions within their organization, so that their nongame section does not handle I&E. Only 10 states said they had advisory committees for their nongame programs. The makeup of these committees either included people from varied professional backgrounds or were all scientists. Some states avoid having advisory committees and recommended that Alaska do the same. The main reason for this was that some members of the committee may not have the expertise to adequately judge the merits of nongame projects, and unless there are terms of office on the committee, it is difficult to exchange unproductive members for those with sufficient expertise and motivation.

Another important aspect of nongame programs is that when much data are gathered on a variety of species, they must be stored in such a way as to be retrieved and used easily by those who have a need for the information. About as many states have data storage systems as don't have them. Half of the systems are computerized, and several more are intending to computerize theirs in the near future.

State nongame programs also told me what sort of activities they were carrying out. The basic functions were research, management, information, and education. Under research and management, the types of things other states are doing include:

1. Summarizing status, distribution, and habitat requirements of species not normally hunted. Getting this status information may tell biologists that a certain nongame population is in trouble and needs help. A type of system used for summarizing these data is the Latilong System that I believe Colorado started.
2. Enhancing habitat for nongame species including erecting artificial nest structures, influencing land use practices so that habitat is left for nongame, and in urban areas instructing people on what to plant in their yards to attract wildlife.
3. Collecting existing information on the life histories of nongame species and compiling annotated bibliographies for use by all interested people.

Under information and education, projects include:

1. Providing brochures and booklets on the haunts and habits of nongame species. These summarize the data gathered by researchers and publish it in readable style for all groups. It is similar to ADF&G's Wildlife Notebook Series.
2. Develop slide shows and movies that inform the public and educate youngsters about wildlife to give them a greater appreciation for it.
3. Some states produce annotated maps and tour guides that tell people where to go to see wildlife and what they can expect to see when they get there.

I don't want to dwell on the types of projects that other states are doing because we will be hearing a lot more about it soon from John and Carol this afternoon in the sessions. But I am sure you get the idea.

I would like to close with suggestions, comments, and problems that I received from other states when I sent out the questionnaire. I think some are very applicable to Alaska's Nongame Wildlife Program and worth thinking about.

Don't try to bite off too much too soon! (Wyoming)

Don't try to build an empire; integrate it into existing department programs. (Wisconsin)

Get everyone involved, e.g., game biologists, public, staff, supervisors, etc. (South Dakota)

Set up a good, organized I&E program through which you can explain to the public what you are doing and why. (Nebraska)

Do not overload yourself with so many different projects that none can be done justice. (Nebraska)

We have been pushed in many directions but have been successful only when we picked a few objectives and stuck to them. (South Carolina)

You should be relatively insulated from "brush fire" types of short-term investigations which are frequently motivated by biopolitical crises. (Arizona)

Establish priorities and stick by them. (Nebraska)

A more holistic concept of wildlife management is evolving both among the public as well as within resource agencies charged with ultimate management authority. (Florida)

We believe that the distinction between "game" and "nongame" is quite artificial and unfortunate. We find that the distinction is often forced upon us and is counter [productive] to sound wildlife management [principles]. (Massachusetts)

Sportsmen have been understandably in favor of expanded nongame activities only insofar as they do not drain their funds and threaten financial stability of the existing game programs. (Massachusetts)

I guess my biggest single piece of advice is the focus of funding before anything else. Our biggest mistake has been to try to expand into specific nongame programs in response to public pressure without proper funds. Even the legislature has applied some pressure in this regard but has failed to provide the necessary monies. Yes, everybody seems to want a nongame program, but the public has not yet been provided with a means to contribute to such a program. (Massachusetts)

There is always someone who wants to raid the pot and there is not much money to go around. (Washington)

Avoid pet projects as much as possible and concentrate on finding out which species are most in need of, and would respond to, management. (South Carolina)

It is unwise and likely inefficient to try to be involved in too many species at once. Decide which ones can be efficiently studied with the resources available.
(Arizona)

We do not become involved with invertebrates and have resisted pressures to expand into this area.
(Massachusetts)

We have to resist spending all our time dealing with nuisance animals, assisting the public with identification problems, etc. These are necessary and legitimate activities, but they can easily become overwhelming. We are training our I&E people and law enforcement dispatchers to handle most requests for assistance and information on the telephone.
(South Carolina)

The nongame program has been a catchall for anything nobody else wants, e.g., animal control. (Maryland)

The Nongame Section gets from two to five requests each week asking for site-specific information where new power plants, airports, bridges, or right-of-ways are being considered and information about what native species the projects would affect. In practically all cases, we are not able to reply satisfactorily since we have no record of the species occurring at those areas.
(Illinois)

First of two objectives for Illinois' Nongame Program:
Assist in establishing a cooperative attitude among all conservationists.

Antithesis from South Dakota: If possible, stay away from the Feds and their red tape!

Finally from Ohio: Keep your sense of humor. If your budget and manpower are very limited, function on a loose opportunistic basis and bear in mind that the public generally likes eagles a whole lot more than they like bats.



COLORADO'S NONGAME WILDLIFE PROGRAM

by

John Torres

Chief of Nongame and Endangered Species

Colorado Division of Wildlife

[Note: This was the text of an accompanying slide show]



We are excited about the efforts in Colorado related to nongame. Colorado was deeply involved in nongame early on when there were many more problems than there are now. I'm very proud of Colorado's activities. I hope to work closely with Paul and his staff as they develop the Alaska program.

Colorado's nongame program started in 1972 and was a result of efforts by many concerned individuals including the Audubon Society, the Sierra Club, and even the legislature. Biologists in the Division of Wildlife had a deep concern for all wildlife. But, Colorado, like Alaska and many other states, spent all of their resources on sport game and sport fish. This was unfortunate, but most of the monies were coming from hunters and fishermen. So when our program first came about we had to indicate to the Division of Wildlife staff and the legislature that we had an overwhelming resource that was receiving absolutely no attention from the wildlife agency in Colorado. There are slightly over 780 species of nongame wildlife in the state of Colorado and only about 200 sport game. Three hundred and forty species are birds, some aquatic and some terrestrial. We also include 73 mammals in the nongame program and approximately 66 reptiles.

When I first mentioned the idea of managing and protecting reptiles in the state of Colorado, they thought I was out of my mind. Reptiles, like rattlesnakes, were frequently killed not only in Colorado but all over the country; this was a shame. Some real effort was necessary to convince people in Colorado's wildlife administration of the real need to protect these species, and that reptiles are an important part of our ecosystems. Another Colorado reptile, the collared lizard, is common in western Colorado. A colorful variety is found in Colorado National Monument. This particular creature eats over 200 pounds of insects a year. If one uses information like that when talking to people and explains that this is why reptiles are valuable, people generally go along with it. This is the type of approach we had to use in Colorado.

Fifteen amphibians are native to Colorado. Our program works only with species that are native; we do not address exotic species.

We also have an aquatic subprogram that includes nongame fish. The orange-throated darter, found in eastern plains of Colorado, is a close relative of the snail darter that caused the controversy at the Tellico Dam in Tennessee. We had some difficulties convincing the Division of Wildlife in Colorado that these species ought to be part of the nongame program. The argument used against us was "I don't think they should be because our sport fish eat them, trout eat them, and they should really

be part of the sport fish program." The sport fish program didn't manage them, however. With a little effort, we finally convinced the Division that some of these species needed management. Thus, we include about 48 species of fish and some 200 molluscs and crustaceans in Colorado's nongame program.

When the program first started in 1972, we had real problems getting going. We had absolutely no money. I was the first nongame biologist in Colorado in 1972, and my salary was funded entirely from revenue derived from the sale of hunting and fishing licenses. That was not enough money since it just paid my salary. I could not do anything with the resource. I became very concerned after the first year and tried everything to generate money for the program. The first thing I did in 1973 was to draft legislation that would allow Colorado to sell a conservation stamp for \$5.00 in hopes that I could generate money for the nongame program. The legislature passed the law, and it became effective in 1974. The first conservation stamp pictured the black-footed ferret, an endangered species nationwide. But this funding source was not successful. The first year we generated \$5,000. The nongame program needed \$200,000; and the conservation stamp wasn't doing the trick. Over a 5-year period, the stamp sales generated some \$30,000 which was nothing in relation to our needs.

In addition to the conservation stamp, we tried many other things. We worked with conservation groups, the National Wildlife Federation, and many local groups. They offered incentive awards to members who sold conservation stamps or who promoted the conservation stamp program. Still, we did not do well.

Next, we tried selling wildlife decanters. The bottle was supposed to be a black-footed ferret, but it had a raccoon face. I'm not sure if that was the reason the decanter program failed, or whether it was the quality of the contents of the bottle. However, while we didn't do too well, the decanter sales raised more money than the conservation stamp. This still wasn't enough money. I needed big money, so I tried something else.

I tried selling T-shirts, again through conservation groups. This worked better than the conservation stamp and the decanter put together, but it still didn't generate the money I needed.

In 1975, I tried a personalized license plate approach. I drafted a bill for our legislature, and we got the bill through the House. Our program was so well organized that we got the bill through the House of Representatives with tremendous support. Unfortunately, our sister agency, the state Highway Department, became envious of our efforts. They wondered why Colorado's Division of Wildlife was meddling with license plates and somehow convinced the Attorney General that perhaps it was unconstitutional for the Division of Wildlife to become involved with license plates. We had our promotional plan ready to go, but before I could get the bill into the Senate, the Attorney General came to me and said, "Mr. Torres, I'm afraid your effort is going to have to be stopped because I think it's unconstitutional for any agency other than the state Highway Department to become involved with license plates."

I think the Constitution says that all money generated from the sale of license plates has to go to the highway user's fund." Since then, I have looked through the Constitution and its articles, and to this day, I have not found any such restriction. But, how can you fight the Attorney General? So, I was back to square one, trying something else.

In Colorado, we have a nongame advisory council consisting of private citizens who are appointed by the Director of the Division of Wildlife. Their purpose is to give advice to our program on matters that relate to nongame. One evening, I called them together to talk about a funding approach. We were talking about all kinds of ideas: excise taxes on bird feed, feeders, photographic equipment, etc. Ideas were generated from all directions. One member said, "Could we try something like the checkoff box on the Federal income tax form?" Boy, this idea just turned on a green light for me. I said, "That's a fantastic idea." If it hadn't been almost 11:30 at night, I'd have gone right back to the office and drafted a bill, because I was an expert at drafting bills by that time.

The next morning at the crack of dawn, I was at the office drafting a bill. The bill placed a checkoff box on the state income tax form that would allow Colorado taxpayers to contribute a part of their income tax refund to the nongame program. At 8:00 a.m., I was down at the State House looking for my favorite legislator, a state representative from Boulder. When I explained the checkoff idea to her, she knew it had to be good because I was bubbling over with enthusiasm. She said, "I'll carry it." We went to the first committee a week later, and it passed unanimously. The checkoff is totally voluntary, so why shouldn't it have passed? Since it's no skin off any legislator's back, how could they dispute it? We had some individuals who were envious because they wished they had thought of it first. They wanted it for their own purposes, such as the Denver Symphony, the Girl Scouts, and other kinds of efforts that are probably good. But we beat them to it. We had the bill completely through the House in the first week. The next week it passed the Senate unanimously.

I didn't realize what we were doing then. But we set a precedent that was fantastic. The first year we generated \$350,000! I had been the biggest skeptic. I had told the legislature, "We'll make \$50,000 the first year. We've got to pass this program. Fifty thousand dollars is a lot of money." They looked down their noses at \$50,000 and said, "No way, John." So I was shocked--the whole world was shocked. In the first year, 1978, we generated \$350,000; in 1979 we generated \$501,000 (almost 40 percent more than the previous year); the next year (1980) we generated \$650,000; and in this current year of 1981, we already have raised \$750,000.

I use the money for many purposes. My total budget uses a lot of checkoff money and some General Fund money; I match these with Federal money. Right now, 45 percent of our total nongame budget in Colorado is checkoff funds. Another 45 percent are Federal funds in the form of Pittman-Robertson, Dingell-Johnson, and Endangered Species money. We also receive about 10 percent of our budget from General Funds, these are tax monies. About \$170,000 is General Fund money.

I thought I would tell you a little about the activities in which Colorado's nongame program is currently involved. We have three subprograms. The first subprogram, perhaps the one with the highest priority, is the threatened and endangered species program. There are several reasons for that. Threatened and endangered species are a motherhood item. There was a lot of public support and demand that we do something for threatened and endangered species. In addition, there has been Federal money available from the Endangered Species Act.

We have a "protected species" subprogram. This is the major part of our nongame program. We have developed a Latilong System for determining the distribution and abundance of species that are not classified as threatened or endangered. All we attempt to do with these is monitor populations. An approach we have developed in Colorado is called the indicator species-ecosystem management scheme. Through this, we try to manage indicator species with hopes that this management will include the needs of all other species. If we manage indicator species properly, we hopefully can accommodate the needs of all organisms in the ecosystem. The indicator-species approach is a very new idea, but we think it's going to work.

A third part of our program relates to nonconsumptive use. I will discuss this later.

Among our many projects have been several to recover or reintroduce populations of nongame wildlife that were extirpated from Colorado. The river otter was classified as extinct in Colorado. We investigated every major waterway in the state in hopes that we could find even one river otter. Once they were quite common in Colorado, though never abundant. Though we looked at every waterway, we were unable to find even one.

Since we were unable to find any otter, our approach was to reintroduce them into the state. We had hoped to find a variety comparable to the variety that used to be in Colorado. We couldn't find anything relatively close, so we went to Wisconsin and then to Canada. The province of Newfoundland provided otter for us, and we made our first release in 1976 in the Black Canyon of the Gunnison.

The river otters did reasonably well, but we couldn't track them down. Since otters can be really secretive creatures, we had to use a relatively new technique. We used a transmitter implanted into the heavy muscles of each otter's leg. The transmitter is small, 1 inch long perhaps, and emits a signal we picked up with a receiver. Using these, we have been able to locate the otters. Otters have become so well established in Colorado now that they are regularly having young. The first young otter is 4-5 years old now. Thus, we have otters back in the State of Colorado. That's our nongame program's whole purpose: to protect the resource and to recover them where possible.

The white pelican is another example. Prior to 1962, the white pelican did not exist in Colorado. Although we manage only native species, pelicans came to Colorado on their own, so we assume they are

native. Pelicans came to Riverside Reservoir in eastern Colorado near Greeley. They occupy one island approximately 2.5 acres in size. Pelicans came there to nest in 1962. The island is very beautiful and is occupied by many species besides the white pelican. After we discovered the white pelican in Colorado, we decided to develop a management plan. We had to obtain the type of biological information that you must obtain to properly manage any species.

First, we went to the island and banded the birds to determine where they were coming from and where they were going. When we first visited the island, we discovered varying age classes of young from pipped eggs to birds about a week old. Week-old chicks are the ugliest creatures in the world. A large adult pelican weighs about 30 pounds and has a wingspan of about 10 feet and is quite beautiful in flight. They can carry a lot of weight. One carp brought in to feed young weighed about 7 pounds; pelicans can actually carry more weight than a golden eagle.

When the chicks were two-thirds grown, we put a color band authorized by the U.S. Fish and Wildlife Service on the young in addition to the official aluminum band. We used our own band because it's more visible. The bands are even visible on a bird in flight if you have binoculars. We are getting some excellent reports on the movements. The pelicans were banded in the middle of the state, and some band returns indicated that birds moved north for one reason or another. Other birds have flown clear down into Acapulco, Mexico like a lot of American tourists. Others have gone clear to Florida. This is the kind of information one needs to manage any nongame species.


The peregrine falcon is up in the limelight all of the time. In the west in about 1960, the whole population of the peregrine falcon (Falco peregrinus anatum) took a tremendous drop. At the time, we really didn't know why. Of about 180 eyries in the West, only 30 were occupied in the 1960s. In Colorado, the stronghold of the peregrine falcon, we had 30 nesting eyries prior to the 1960s, but we only have six now. If something wasn't done to protect the peregrine, we realized we would lose that entire population. Peregrines are beautiful birds and play an important role in our ecosystem. Through research, we found that peregrine eggs had extremely thin shells. We later discovered this was caused by a persistent pesticide, a chlorinated hydrocarbon. The eggshell, because it was so thin, could not be incubated. When the adult attempted to incubate, the egg cracked and dessicated. Thus, peregrines were not able to produce. What happens when you do not have reproduction--not even one successful pair? The population declines to the point that it will become extinct in a matter of a few short years.

We knew we had to augment this poor natural reproduction, so we took eggs that would not produce in the wild and brought them into captivity for incubation. Colorado's nongame program is doing this with Peregrine West, Cornell University's Peregrine Fund project in Colorado, and with the United Peregrine Society directed by Richard Graham. In addition, using falconers' captive peregrines, native to the Colorado Rocky Mountain region, we produced eggs in captivity. These eggs were put in the nests of wild birds and successfully hatched since eggshell

thinning had not occurred. In turn, we took the wild eggs, put them in incubators, and produced our own young. These captive-hatched young were then placed under wild adults. The wild birds took care of them immediately, even though they hadn't hatched them. They fed and defended them like their own.

However, this was not enough. Over 50 years would be needed to recover the peregrine falcon even with this approach. So we decided we'd try "cross-fostering." We took young chicks and placed them under nesting birds of different species. The prairie falcon was one species that accepted the young and took care of them. However, we have had a little difficulty with the project. Though it still hasn't been perfected, I believe it is going to work. Carol Henderson from Minnesota was telling me that they're using the red-tailed hawk for similar purposes, though not for peregrine chicks. I am going to try using red-tailed hawks for peregrines when I go back. So we are assisting the peregrine falcon. I think it's only a matter of time before we will be able to take the peregrine falcon off Colorado's endangered species list and perhaps the list for the entire West.

Another part of the program, as I indicated earlier, is the nonconsumptive use portion. This is very new, and the demand is tremendous. You can generate your own demand, but we are not trying to do that. The public in Colorado is asking us right now to provide opportunities for nonconsumptive use. People want to go out to areas to observe wildlife, they want to conduct scientific and nature studies, they want to photograph, or they just want to know that the wildlife is there for aesthetic reasons. We are accommodating this need. We are not doing anything to increase our wildlife populations, because we have lots of wildlife in Colorado. But we are providing interpretive signs in many areas of the state. We have a tremendous amount of involvement. Many people will drive 200-300 miles to observe the booming of a sage grouse. They pay literally thousands of dollars in photographic equipment or optical equipment to observe wildlife. So, as I say, the demand is there. And these people are the constituency Colorado's nongame program serves. These are the people who are supporting us.



Help the State's Nongame Wildlife

What is nongame wildlife? A lot of things. Everything from songbirds and eagles to chipmunks and shrews falls into that category. And, so do the wolverine, river otter, peregrine falcon, greenback cutthroat trout — and the rest of the state's threatened and endangered species. In short, nongame wildlife includes everything that is not hunted or fished for — that's about 80 percent of all the wildlife species found in Colorado. You can help nongame wildlife by contributing a portion of your state income tax refund through a check-off box on the state tax form. Since it began in 1978, money raised by the check-off has elevated Colorado's nongame program to the most far-reaching and ambitious such program of any in the country. Your contribution this year will help keep that program going strong.

Remember: Your donation is tax-deductible next year.

PRIORITIES FOR NONGAME CONSERVATION

by
Carrol L. Henderson
Nongame Supervisor
Minnesota Department of Natural Resources

On behalf of the Minnesota Department of Natural Resources, I sincerely appreciate the opportunity to meet with you today and discuss priorities for nongame conservation.

This has truly been an exciting period for the nongame conservation movement. In 1980, Kansas, Utah, Minnesota, and Kentucky established funding for their respective state nongame programs. This year Idaho, Virginia, West Virginia, Alaska, and Oklahoma launched programs of their own.

It is a good idea that has finally come of age--and just in time. Drastic cutbacks are occurring in Federal programs for helping endangered species, and the long-awaited Federal nongame legislation has turned out to be a hollow promise. President Carter signed the Federal nongame bill into law last September, but the Reagan administration has failed to appropriate any money for supporting state nongame programs.

The implications are obvious in this time of economic stress. If the states are going to look after the welfare of their resident wildlife populations, they must do it themselves. Actually, that is not all that bad.

This year as we celebrated another anniversary of Earth Day, there were numerous comments made that the environmental decade of the 1970s was over, and that the new levels of environmental consciousness which were kindled during that decade were flickering out.

Don't believe it!

We learned a real lesson in Minnesota this year about the sincerity and intensity of the commitment which our citizens have for environmental quality in general and nongame wildlife in particular. They were allowed to donate one dollar or more from their state income tax refunds to a new fund called the "Nongame Wildlife Fund." About 10 percent of our taxpayers made donations. Donations are expected from nearly 215,000 Minnesota taxpayers! The total amount generated in our first year may approach \$700,000. The average donation was \$.34.

The significance of this checkoff is that it is a wonderful mandate from the public that they care about wildlife and are willing to pay for nongame conservation programs.

The next step is up to us. Whether we are funded by tax checkoffs or mineral leases, the public is counting on us to design nongame wildlife conservation programs they can be proud of--programs that will perpetuate the diversity and abundance of our nongame resources for future generations.

I believe that should be the foundation of our efforts: to preserve the diversity and abundance of nongame wildlife for future generations.

Before we delve too deeply into the strategy of this program, I believe it is important to review some basic assumptions and definitions.

First, nongame conservation is not new. Nongame conservation has always been intimately involved with wildlife conservation--or game conservation--for more than 40 years. A wetland that was saved for ducks and geese by sportsmen also benefited yellow-headed blackbirds, marsh wrens, swans, and grebes. Benefits to nongame were mainly incidental, but they were real.

Second, don't get too preoccupied with the concepts of "game" and "nongame." Those are just convenient terms. All wildlife shares habitats regardless of whether they are game or nongame. Therefore, we must design our wildlife management activities around total ecological communities.

Third, nongame conservation is not in competition with game management. Neither is it intended to replace game management. Rather, it should build upon the existing foundation of game management knowledge and complement current conservation efforts. Our goal should be a comprehensive program of wildlife management that objectively balances the conservation needs of all wildlife species.

Fourth, the concept of endangered species should be kept in perspective as it relates to nongame. In the past, it was necessary to allow nongame species to decline to the point that they became listed as threatened or endangered before you could help them. Then you could apply to the Federal Government for endangered species money to save them from extinction. That was not a very good conservation strategy--and it probably helps explain why there has been so much disenchantment with the Federal Endangered Species Program.

It is a much better conservation strategy to manage nongame populations so they never decline in the first place. It is probably cheaper too. This point more than any other justifies the need and importance of nongame conservation.

There are also several definitions which need to be reviewed to help prevent misunderstanding about what is nongame. Nongame includes all vertebrates--birds, mammals, reptiles, amphibians, and even fish if you wish.

There are perhaps six types of nongame:

1. Pure nongame. This includes species like the bluebird or great blue heron which are never hunted or harvested.
2. Past or potential game species for which there are no plans to establish hunting or harvesting seasons. In Minnesota this includes wolverine, elk, and prairie chicken, and occasional visitors like the pronghorn.

3. Past or potential game species for which there are plans to eventually establish hunting seasons. An example of this is the wild turkey which was stocked in southeastern Minnesota in the 1960s. The population was protected during the initial years. When the population became large enough, a hunting season was established.

The reason I mention these two latter categories is that some people seem suspicious that the nongame program is trying to increase some nongame populations to the point that hunting seasons can be established. They do not want nongame money spent on species which are later intended for game classification. I appreciate this concern, and as long as this source of potential criticism is acknowledged, I believe we can avoid that pitfall. Projects in category three should be funded from game sources.

4. Regional nongame species. This includes species that may be regular game species in one region and totally protected nongame species in another region. An example in Minnesota is the river otter. It is a protected nongame species in the southern half of the state. It is also extirpated from much of that region. One of our initial nongame projects has been to reintroduce otters on the Minnesota River system. Since last November, 10 otters have been live-trapped by experienced otter trappers in northern Minnesota and transferred to the release area. We paid the trappers \$150 apiece for each live, unhurt otter.
5. The fifth category is urban wildlife. Since virtually all wildlife is protected (and therefore becomes "nongame" in urban areas), urban wildlife includes both traditional game and nongame species. As such, urban wildlife offers some unique challenges and opportunities.
6. The last category is a somewhat awkward one: unregulated, unprotected species. Some of these may be nuisance species, and some may be actually harvested to some extent. Examples in Minnesota include the woodchuck, short-tailed weasel, striped skunk, and porcupine. The reason for including these species as nongame is that there is a need for assessing the distribution and status of these species and responding to management needs and problems just as there is for all other species.

On April 11 of this year, Minnesota had a priorities meeting for their state nongame program, and about 150 people attended. The sessions were intensive, productive, and helpful. I would like to share some ideas from that meeting.

The first part of the day was spent identifying nongame problems and the second part was spent discussing solutions to those problems. This was obviously not easy to do--conversations tended to wander at times. But the technique did work.

The sessions for identifying problems were comprised of two parts--species priorities and habitat priorities. Our first working groups discussed problems associated with birds, mammals, reptiles, amphibians, and fish. The long species list of birds was broken down into various groups to facilitate discussion--like raptors, prairie birds, colonial nesting waterbirds, and so forth.

Second, we broke into working groups to discuss problems of the various nongame habitats: forest, prairie and grassland, wetland, urban, and agricultural lands.

The problems which we discussed on April 11 and the various problems you will identify for your state will both likely have solutions that will fall into nine convenient categories. If you keep these categories in mind as you discuss nongame problems, it will help you to organize your thoughts as you ponder the overwhelming challenge of nongame conservation.

1. Planning: Comprehensive planning is a fundamental aspect of the early stages of the program.
2. Inventory: Inventory of the distribution, abundance, and status of nongame species.
3. Research: Research to help identify potential nongame problems and management opportunities.
4. Management: Habitat management for priority species and priority habitats where the need and opportunity exists.
5. Acquisition: Habitat preservation through fee acquisition, leases, or easements to protect critical limited habitats like heronries, bald eagle nesting or wintering areas, or prairie chicken booming grounds.
6. Restoration: Restoration of extirpated nongame species where and when feasible. In Minnesota, this involves the trumpeter swan, peregrine falcon, and river otter.
7. Rehabilitation: Raptor rehabilitation efforts at the University of Minnesota will be partially funded by our nongame wildlife checkoff.
8. Extension and Public Education: In order to establish both short-term and long-term public support for nongame conservation, an active program for public education is necessary.
9. Publicity: People generally enjoy hearing about many nongame species and appreciate knowing that conservation efforts are being made on their behalf. Don't be afraid to use some old-fashioned publicity--radio, television, and newspapers--to broaden your base of public support and let people know what you are doing.

I'd like to add several general considerations.

There is often a tendency to overlook the needs of our smaller vertebrates. For many small birds, mammals, reptiles, and amphibians, our initial need is better inventory and status information.

In addition, there is a value to working on the needs of some of the more showy, impressive, well-known nongame species--the bald eagle, loon, and trumpeter swan. Most people can accurately identify very few species of wildlife. They will likely be more interested and supportive of the program if they are familiar with some of the species benefiting from nongame work.

Do not underestimate the need and opportunity for volunteer citizen involvement. There is a vast reservoir of ability that can be tapped by allowing people to help in their own ways. In Minnesota, we have carried out volunteer observation card programs for sandhill cranes, loons, heron colonies, bird feeder surveys, and sightings of uncommon wildlife. People enjoy being involved with this type of program.

It is important to establish a good mailing list of nongame resource persons, contacts, and observers. By providing them with an occasional newsletter, it keeps them both involved and informed.

Finally, there needs to be a policy on exotic nongame species, such as the mute swan. If policies on such ecologically undesirable creatures can be established before the creatures become established, you can avoid some severe ecological consequences.

I sincerely appreciate the opportunity to be with you today on this historic occasion, and I look forward to watching your nongame program grow and prosper.

I brought along a slide show on Minnesota's nongame and nongame wildlife program. I hope this will give everyone an idea of the course Minnesota's program is taking and the reasons for concern about nongame species.

[The following is the text of the slide show presentation.]

Across the fields, forests, and wetlands of Minnesota are nearly 500 nongame wildlife species--these birds, mammals, reptiles, amphibians, and fish we do not harvest. Examples include the western grebe, which is known for its spectacular courtship displays; the pronghorn antelope which occasionally wander into our state from the Dakotas; the prairie chicken which still boom every spring in western Minnesota; and the painted turtle which is common in our lakes and rivers. Pine martens are a unique element of our northeastern coniferous forests, and sometimes we are visited by snowy owls--beautiful migrants from the North. Nongame wildlife comprise a vital part of our natural diversity and is an environmental indicator of the high quality of life known in Minnesota. For some species, we can take special pride. Minnesota has more nesting bald eagles and more nesting loons than any other state in the continental United States. Unfortunately, our wildlife also faces many problems:

population pressure, soil erosion, urban sprawl, water pollution, and accidental and illegal killing. This bald eagle was killed by flying into a power line.

Traditionally, our wildlife management programs have been directed at game species like the white-tailed deer and Canada goose. These programs have generally been very successful.

Sportsmen have been primarily responsible for this success. The money they paid for licenses and for excise taxes on sporting goods has funded most of these conservation efforts.

Fortunately, all wildlife, game and nongame, share habitats. Game conservation programs which preserved wetlands for ducks and geese have also helped some nongame wildlife species, including the Franklin's gull and eared grebe. They nest on the Agassiz National Wildlife Refuge and Thief Lake Wildlife Management Area in northwest Minnesota. Other species benefiting from wetland preservation are the marsh hawk, red-necked grebe, and western grebe. If you look closely at the western grebe chick, you will see a small bald spot on top of the chick's head. After the chick is fed, the spot is flesh-colored. When the chick is hungry, the spot turns red. That way the parent knows it is time to feed the chick.

Except for indirect benefits to nongame wildlife from game management, there has been very little money available to help nongame species. However, if a state allowed a species to decline to the point that it became threatened or endangered, then the state would apply to the Federal Government for Federal endangered species money to save the species from extinction. This was not a very good conservation strategy.

It is a much better strategy for the individual states to prevent our nongame wildlife from ever declining in the first place. It is probably cheaper too.

That is the goal of our state nongame wildlife program--to protect and preserve the abundance and diversity of nongame wildlife in Minnesota. The Department of Natural Resources initiated its nongame wildlife program in 1977. Funding was derived from the game and fish fund. That beginning allowed a closer look at the status and needs of our nongame wildlife.

In 1980, a new era began for wildlife conservation in Minnesota--an era balancing the needs for conservation of all wildlife. The legislature passed the Nongame Wildlife Checkoff. No longer was the opportunity to help wildlife limited primarily to sportsmen. The checkoff made it easy for all taxpayers to help wildlife. The Nongame Wildlife Checkoff is not like the political tax checkoff. It is not part of one's taxes. It is a voluntary donation.

The checkoff allows taxpayers to donate one dollar or more to the Nongame Wildlife Fund on their state income tax and property tax forms. The donation is tax-deductible on the following year's return.

If the taxpayer is due a refund, the donation is deducted from the tax refund. If a taxpayer does not receive a refund, the donation is added to the amount owed the state.

The checkoff began just in time. Federal aid to states for endangered species has been virtually eliminated. A Federal nongame bill was passed by the Carter administration in 1980, but subsequently, no money has been appropriated for that act. Clearly, if Minnesotans are to preserve their nongame wildlife heritage, they must do it themselves. The Nongame Wildlife Checkoff provides the means of achieving that goal. Since passage of the checkoff, many citizens have become proud and excited to be a part of such a grassroots conservation effort.

Money raised by the checkoff amounted to about \$700,000 in 1980 and represented donations by over 200,000 people. The average donation was about \$3.40.

Checkoff funds will be used for eight vital areas of conservation work: 1) planning, 2) inventory, 3) research, 4) habitat management, 5) acquisition, 6) raptor rehabilitation, 7) restoration of species, and 8) education.

First, a comprehensive plan will be prepared to identify the long-range goals of the nongame program.

Second, inventories will determine the distribution and status of our wildlife. Heron colonies, cormorant colonies, sandhill crane habitat, loon nesting areas, and bald eagle nests are just a few examples of areas to be inventoried. Specialized habitats used by marbled godwits, American avocets, smooth green snakes, Blanding's turtles, and other species will also be identified. Several of these surveys will involve citizen volunteers.

Research is the third category. Research initiated by our nongame program has already yielded substantial benefits to Minnesota wildlife. Studies at the Lac qui Parle Wildlife Refuge began in 1978 and resulted in the discovery that bald eagles were getting lead poisoning. They were eating dead ducks and geese that contained lead shot. Over 25 eagles were captured in 3 years by University of Minnesota graduate student Steve Hennes. Blood samples and X-rays verified moderate but nonfatal levels of lead poisoning in the eagles. During this project, waterfowl were discovered to be dying from lead poisoning. They were eating lead shot which lay in croplands where hunting was occurring. As many as 1,000 geese died from lead poisoning at Lac qui Parle in 1978 and 1979. As a result of the nongame research, nontoxic steel shot was required in that goose hunting zone in 1980. Not only was the area safer for bald eagles, but only one goose was found to have died from lead poisoning that fall.

Other research is planned to study loons, trumpeter swans, and great gray owls. This will help us learn how to manage and protect these species better.

The fourth category is habitat management. It is the backbone of the whole nongame program. More prescribed burning is needed on state-owned grasslands to benefit prairie chickens and upland sandpipers. This is a sandpiper chick searching for insects on a recent burn.

In agricultural areas, nongame habitat is provided largely by planting shelterbelts and managing roadsides.

In forests, buffer zones need to be provided around bald eagle and osprey nests on public lands to avoid untimely human disturbance or timber cutting.

Nongame habitat management considerations also need to be incorporated into forest management policies and practices on public lands.

Special emphasis is needed for managing our herd of about two dozen elk in northwest Minnesota. A combined program of prescribed burning and food plots appears necessary to benefit the elk and help protect local landowners from crop depredations by elk.

Piping plovers and common terns have become very rare in many portions of their range. One colony of 20 pairs of piping plovers in Lake of the Woods is the largest colony in the Great Lakes region. Efforts are underway to protect this existing habitat in Lake of the Woods and to create new habitat in the Duluth harbor.

Leases or easements are proposed for some areas where burrowing owls, herons, or bald eagles nest on private lands. Without such protection, some of these areas could be lost.

Land acquisition, the fifth category, is proposed only in limited circumstances to preserve areas like prairie chicken booming grounds or threatened heronries. The Howard Lake heronry near Forest Lake was the first area to be acquired with checkoff funds in 1981. This previously threatened area has over 400 nests of great blue herons, black-crowned night herons, great egrets, and double-crested cormorants. It is one of the largest heronries in the state and is now preserved as part of the Lamprey Pars Wildlife Management Area.

Sixth is public education. Children, landowners, young hunters, and other publics need to be identified and taught more about the protection and conservation of nongame. Bluebirds can benefit from citizens who build and maintain bluebird trails. Canoeists and boaters need to be advised not to approach loon nests or loon families. Loons need solitude during the nesting season.

Raptor rehabilitation at the University of Minnesota will also be supported by the Nongame Wildlife Checkoff. The work done by the clinic has become nationally known for its success in restoring injured birds of prey to the wild.

Finally, several species will be restored to their former range in the state. The trumpeter swan is the largest waterfowl in the world. Large individuals may weigh up to 38 pounds. This magnificent, graceful

bird once nested throughout much of Minnesota. The Nongame Wildlife Checkoff has finally provided us with the means of bringing back this beautiful species.

The peregrine falcon once nested along cliffs of the Mississippi River in southeast Minnesota and along Lake Superior's north shore. It is the fastest bird in the world, reaching speeds of up to 180 miles per hour when diving on its prey. Now they are being reintroduced by the nongame program.

Otters are a protected nongame species in southern Minnesota. They were eliminated from the upper Minnesota River system in the nineteenth century. Now they are being reintroduced. Prairie chickens have also been reintroduced to prairie habitat in westcentral Minnesota. In summary, we have a stewardship responsibility to consider the welfare of all wildlife species. Can we preserve our nongame wildlife for future generations? The Nongame Wildlife Checkoff makes that goal possible. This is your chance to help. The next time you file your state income tax forms and property tax forms, consider sharing a few dollars with a few close friends.

HERE'S HOW YOUR CONTRIBUTION WILL BE USED



**DO
SOMETHING
WILD!**

1. Loon surveys will help stimulate new efforts to protect our state bird.
2. Nesting bald eagles, herons, and egrets will be periodically checked and protected from disturbance.
3. Prairies in western Minnesota will be managed to help save prairie chickens and other grassland species.
4. River otters will be reintroduced to the Minnesota River after an absence of about 100 years.
5. Hearing Island in Duluth harbor will be developed as a nesting site for rare shorebirds.
6. Great gray owls and sandhill cranes will be studied so their survival can be assured.
7. The feasibility of reintroducing peregrine falcons, burrowing owls, and other species to Minnesota will be investigated.
8. Various other management and research projects will be carried out to provide habitat and help for nongame wildlife.

CHALLENGES AND DIRECTIONS FOR ALASKA'S NONGAME WILDLIFE PROGRAM*



by
Robert B. Weeden
Professor of Land and Resource Management
University of Alaska, Fairbanks

I'm truly pleased that Alaska is joining the growing ranks of states which have created a formal program for the conservation of the once-silent majority: nongame wildlife, those wild animals which until recently had no human advocates. An exciting prospect is opening up: for watchable wildlife which some day soon will not be orphans; for the thousands of people who enjoy and cherish all forms of wildlife; and for the Alaska Department of Fish and Game (ADF&G) which is en route to a fresh and modern image.

As usual, "exciting prospect" translates into lots of work for someone. Here are some of the challenges I see facing the Nongame Program people in ADF&G and those of us who are now cheering the new effort.

Perhaps the first challenge is to start the process of nestling into the Department as a whole. Nongame is the new youngster on the block. It needs to make friends, and in any facet of environmental stewardship that means 1) demonstrating the value of the new program in terms of political and public support as well as its ability to pay its own way from new sources of funds; 2) involving other Department people in the enjoyable and rewarding tasks of fact-finding, public education, and field research to the limits of their willingness to volunteer; and 3) approaching nongame conservation in a fully professional way.

Simultaneously, Nongame personnel in ADF&G will want to start connecting up with the many professional people in sister states and Federal agencies whose work affects nongame. It is a rich field. Not only are there many agencies to explore (the Bureau of Land Management and its OCS Office, the Forest Service, the National Park Service, the Department of Natural Resources, the Corps of Engineers, and the Alaska Department of Education are only a few), but also there is a tremendous storehouse of skilled human energy and ongoing, budgeted programs to tap. By its nature, a nongame program is diverse and broad. The only feasible role for a nongame program in ADF&G is as nerve center, coordinator, and catalyzer of external energies.

Connections must be made--and the sooner the better--with scientists and the whole array of people we can call nongame's constituency. This is the third immediate challenge for the new program staff in ADF&G. For a very long time to come, if not forever, the majority of research on nongame animals will be done outside of ADF&G. It will be done by nonresident biologists who come north seasonally, by U of A scientists in several departments and institutes, and by scientists in other resource agencies. A network of interconnections with this group would pay handsome dividends to ADF&G. "Network" is a key word to

describe the relationships with birdwatchers, teachers and other educators, nature interpreters, writers, and others who comprise the nongame constituency. Involve them in the Program, and they will go to bat for it. Ignore them, and the Program will wither.

Simply organizing to do the most with the money available will be a major task in this first year or two of the Program's life. There are so many things that could be done that setting priorities and buckling down to something tangible can be a problem. This workshop is a valuable step, but when Paul Arneson, Susan Quinlan, and Nancy Tankersley leave this auditorium, their heads will be spinning with possibilities. Their job is to make actualities out of them. They will have to start budgeting for FY83, build up cooperative links inside and outside the Department, organize information systems, develop advisory processes, and consider the always difficult problem of long-term program funding sources.

A word about advisory systems is offered here. Some states with nongame programs have formal nongame advisory boards, while others do not. There are arguments for each choice. My personal view is that it is too early--by a year or two--to establish such a group, if one is eventually felt valuable for Alaska. It would be hard for the Nongame Wildlife Program people to identify what kind of advice or interaction they want with representatives on nongame's various publics, how to structure a cost-effective advisory system, and who would contribute most. I have a feeling that it would be wise to try several less-than-pretentious, officially sanctioned advisory processes (one, for instance, covering research questions, another covering education needs, etc.) before going the more ceremonial route of a governor-appointed board or council.

It seems to me that in these early years the Department's Nongame personnel would do well to select projects which not only are worth doing in terms of the conservation of wildlife, but which also capture the public's interest. The program needs public visibility--of a positive kind, of course--for pure survival. The Nongame Program was created in recognition of a constituency, but that constituency is scattered and unorganized, needing to be welded together by pride in a good program. Early emphasis on improving community facilities using local nongame resources, on producing high-quality educational materials for school uses, and on participating in land use planning projects to preserve wildlife habitats would all help in that welding process.

Finally, I will note that with the initiation of the Nongame Program, ADF&G has, perhaps not even knowingly, taken a huge step toward a holistic, ecosystem-centered management system. There will always be a strong orientation toward particular species in any wildlife management program. There has to be because society will always ask for special care of this or that taxon. But, increasingly, these featured species will be recognized for what they are, simply one of hundreds or thousands of different life forms all connected on one web. This change in the whole

concept of management won't come overnight. It won't come if we don't welcome and try it on. But I am convinced that it will come. Today's young, applied ecologists in ADF&G are right on point; it is a wonderful prospect as well as a great challenge.

*The text provided is a summary provided by Robert Weeden. His actual remarks were not recorded due to a malfunctioning tape recorder.

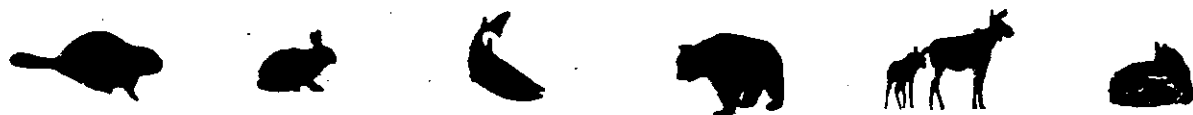


WORKING GROUP SESSIONS

In the afternoon session, participants of the workshop selected one of six working group meetings they wanted to attend. The six working groups were: public information; education; terrestrial birds; fish, amphibians, and reptiles; waterbirds; and mammals. All the groups met simultaneously and followed the same basic discussion format.

Tentative goals for each function of the Nongame Wildlife Program (see following page) were provided as a guideline for the discussions in each group. Group leaders kept the discussions on track and on time, ensuring that the working groups provided useful input. Groups first discussed past and ongoing projects so that all participants and Nongame Wildlife Program staff could become aware of past and current projects by other agencies and thus avoid duplicating efforts. Secondly, participants were asked to list all the projects they would like to see the Nongame Wildlife Program do. Finally, participants rated each of the projects on the list the group had developed. Rating was on a 5-point scale; projects meriting immediate attention were given 5 points, while those projects participants felt were less important were given lower scores.

A brief summary of what took place in the 3-hour sessions follows. Each project rating shown is the average score based on the ratings of each participant in the working group.



POSSIBLE GOALS FOR THE NONGAME PROGRAM

These are possible goals for the four functions of the Nongame Wildlife Program. Please take time to consider them and comment on their intent and/or wording--these are tentative goals only, subject to approval, rejection, or rewording.

Management: To maintain viable populations of all native species of nongame wildlife occurring in the State by maintaining adequate habitat, protecting populations from unsustainable losses, and, where necessary and feasible, enhancing or rehabilitating habitats and/or populations.

When and where individuals or populations of nongame species pose significant health and safety hazards, cause excessive property damage, or interfere with important human activities, the management goal will be to minimize the pest situation by population manipulation and/or habitat management.

Information: To promote wise, nonconsumptive use of wildlife when and wherever such use will not cause unsustainable losses to habitats or populations, to provide opportunities for nonconsumptive wildlife use, and to provide the public with sound biological information on Alaskan wildlife, their habitats, and interactions.

Education: To provide educators with sound biological information on Alaskan wildlife, their habitats, and interactions, and promote instruction of such information in the school system.

Research: To obtain sound information on the distributions, abundances, habitat requirements, life histories, and ecological roles of nongame species, and the functioning of ecosystems of which nongame species are a part, as necessary to meet management, education, and information goals.

Public Information Working Group

Discussion Leader: Cliff Eames, Alaska Representative, National
Wildlife Federation, Anchorage

Participants: Dave Allen, Anchorage
Sal Cuccarese, Anchorage
Arlan DeYong, Anchorage
Bob Dittrick, Anchorage
Toni Johnson, Anchorage
Julie Kelly, Anchorage
Gale Lazarus, Anchorage
William Martin, Anchorage
Dave Mills, Anchorage
Marilyn Morris, Anchorage
Catherine Nicholas, Anchorage
Dave Patterson, Anchorage
Penny Rennick, Anchorage
Cathy Rezabeck, Anchorage
Jim Shives, Anchorage
Marilyn Sigman, Fairbanks
Diann Stone, Anchorage
Nancy Tankersley, Anchorage
Jim Thiele, Anchorage
Bob Walker, Seward
Pat Wennekens, Anchorage

Summary: The main concern of this group was the need to educate the public about the value of wildlife resources in order to be able to protect wildlife habitat and manage Alaskan lands for wildlife. Of 29 projects suggested, two got top priority. One of these was to sponsor staffed nature centers at Creamer's Field, Potter Marsh, and Mendenhall Flats. The other project was to develop contacts with media personnel to set up wildlife information programs for the public. Many projects that were suggested stressed ecosystem concepts in informational materials.

The importance of determining the public's needs and desires for wildlife information was stressed. Building support for the Nongame Wildlife Program from public organizations was emphasized so that a constituency is developed to support legislative funding requests. Rapport with groups as diverse as Alaska Groundwater Association, Audubon Society, and Alaska Commercial Fishermen were suggested as possibly beneficial for various nongame projects. Several people suggested enlisting the aid of volunteers for projects sponsored by the Nongame Wildlife Program.

Suggested projects and average ratings by participants in the public information group:

<u>Project</u>	<u>Rating</u>
Develop contact list of media personnel	4.6
Establish staffed nature centers, especially at Creamer's Field, Potter Marsh, and Mendenhall Flats	4.6
Write weekly reports to public on wildlife topics (interagency)	4.3
Cooperate on interagency releases announcing weekly outdoor activities (e.g., nature walks, Audubon Society talks, etc.)	4.2
Identify wildlife user wants (questionnaires, etc.)	4.2
Combine fundraising with publicity	4.1
Develop information on effects of logging, fire, draining wetlands, and farming on wildlife	3.9
Keep habitat loss in public eye	3.9
Build nature trail signs with habitat and species information	3.8
Develop information about need to preserve critical habitat areas (e.g., mineral licks, raptor nests)	3.8
Keep agency information offices open on weekends	3.7
Establish interpretive services on tour ships, ferries, at airports	3.7
Develop city park projects with children and service groups (e.g., how to build nest boxes)	3.6
Compile summaries of ADF&G research for laymen	3.4
Teach public how to plan land use to benefit wildlife	3.3
Place more signs at roadside turnoffs	3.3
Develop more research on plant/animal relationships	3.3
Establish refuges that represent major habitats in the State	3.2
Encourage wildlife photography, artwork	3.2
Include habitat information in checklists	3.1
Supply wildlife information to <u>Milepost</u> staff	3.1
Get wildlife information on road maps	3.0

Place interpretive signs on bike trails	3.0
Provide information on gardening for wildlife	3.0
Put weekly wildlife information on code-a-phone	3.0
Make abbreviated checklists for most common species	3.0
Evaluate existing interpretive programs and displays	3.0
Establish "wildlife watch" phone number to report sightings	3.0
Develop more roadside turnoffs	2.9

Education Working Group

Discussion Leader: Dennis Bromley, Career Center, Anchorage District Schools

Participants: Roy Barnes, Anchorage
 Dave Brann, Homer
 Tony DeGange, Anchorage
 Nina Faust, Anchorage
 Bill Gabriel, Anchorage
 David Gilbertson, Anchorage
 Diane Goodboe, Girdwood
 Robert Hinman, Juneau
 Rick Johnston, Kenai
 Betty Magnuson, Fairbanks
 Belle Mickelson, Fairbanks
 Pete Mickelson, Fairbanks
 Allen Naydol, Elmendorf
 Martha Robus, Fairbanks
 John Torres, Colorado
 Larry Underwood, Anchorage
 Matt Weaver, Iditarod
 Robert Weeden, Fairbanks

Summary: Participants of this working group indicated that the Nongame Wildlife Program would be most helpful if it provided assistance to teachers. Participants rated development of educational materials as a high priority but stressed that the program should avoid duplicating materials. They felt direct involvement with school groups should be the lowest priority.

Of the nearly 50 projects suggested, sponsorship and coordination of a "wildlife week" for schools (similar to "Seaweed") was considered the best idea. Field instructions for teachers were also rated as a top priority.

Access to presently available materials seems to be a serious problem. Many teachers either are unaware of materials or do not know

how to, or can't, get them. Various methods of getting this information to teachers were suggested. Teacher in-service days and short courses (with credit) were rated as the best ways. A monthly natural resources newsletter was also suggested but was rated high only by teachers from outlying areas.

Although many materials are already available, localized information is scarce; most participants felt development of such materials should be a high priority.

Suggested projects and average ratings by participants:

<u>Project</u>	<u>Rating</u>
Organize a statewide "Wildlife Week"	4.4
Provide field instruction for teachers	4.3
Provide <u>access</u> to currently available materials	4.2
Provide localized instructional materials	4.1
Provide teacher short courses with credit	4.0
Participate in teacher training in-service days	3.8
Distribute materials to libraries	3.8
Provide wildlife apprenticeships for high school students	3.8
Coordinate input by ADF&G, USFWS, USFS, etc.	3.8
Give workshops for administrators and school boards	3.7
Develop a teacher's manual on wildlife	3.7
Encourage local conservation groups to assist teachers	3.7
Encourage reprinting of materials already developed, then charge for materials	3.6
Write articles that would be of use to teachers in <u>Fish Tales and Game Trails</u> magazine	3.5
Make funds available to teachers to develop and/or publish materials	3.5
Provide volunteers to assist teachers on field trips, etc.	3.4
Provide up-to-date scientifically valid information to teachers on wildlife-related issues that appear in newspapers	3.3

Actively work to make local areas (like Potter Marsh) safe for school groups	3.3
Pool agency resources to pay one resource person to travel to schools	3.3
Develop a natural resources newsletter	3.3
Encourage development of local nature trails	3.3
Coordinate efforts of all agencies with school districts	3.2
Provide regional nature centers	3.1
Develop a poster set explaining roles of various agencies	3.1
Develop movies on wildlife management	3.1
Develop movies on ecosystem functioning	3.1
Develop TV programs	3.1
Sponsor nature programs in areas where people congregate for fishing	3.1
"Connections" show on ecosystems	3.0
Sponsor contests to increase development of materials	3.0
Develop a book explaining how to write a nature-trail guidebook	2.9
Promote a regional family-wildlife camp	2.9
Develop materials for teachers to use at the class periods such as short games, coloring book drawings	2.8
Ship educational materials through the State Education Assoc.	2.6
Translate technical articles into more understandable form	2.6
Develop State museum kits to send out to rural schools	2.5*
Develop a game on ecosystem concepts	2.4
Encourage textbook companies to produce texts geared for Alaska	2.0
Develop yearlong research projects for schools to work on	1.9

[*Notably, teachers from rural areas thought this was the best thing the Nongame Wildlife Program could do. Those from major cities rated this project low.]

Other education projects suggested by individuals from other working groups, from interested people via letter, etc.:

Sponsor a telecommunications workshop for teachers

Develop a correspondence course on wildlife conservation

Set up local teaching collections of bird and small mammal specimens

Develop an urban habitat rehabilitation program

Fund a mobile classroom to visit outlying areas

Encourage classes to study wildlife areas or issues and present proposed changes in laws to the Board of Game

Discourage adoption of wild animals

Make a poster on adaptations of mammals to arctic environment

Develop curriculum materials for rural areas on the potential impacts of development activities

Develop species lists, identification keys, collecting and observing instructions for tidepool organisms

Develop getting-ready-for Potter Marsh packet

Terrestrial Birds Working Group

Discussion Leader: Dr. Brina Kessel, University of Alaska, Fairbanks

Participants: Michael Amaral, Anchorage
Peg Blackburn, Anchorage
Ron Clarke, Fairbanks
Helen Fisher, Anchorage
Herman Griesse, Anchorage
Rich Holmstrom, Anchorage
Barb Johnson, Anchorage
Steve Johnson, Anchorage
Bud Lehnhausen, Fairbanks
Jay Nelson, Anchorage
Nancy Scholl, McKinley Park
Vern Seifert, Anchorage
Roger Sleeper, Anchorage
Bill Tilton, Fairbanks
Lance Trasky, Anchorage
Robert Welch, Anchorage

Summary: The terrestrial bird working session concluded that research on the effects of agriculture, mining, logging, and oil development on bird communities is most important. Bird-habitat relationship research

was also rated high priority. Projects to increase public awareness of the ecological values of nongame birds were thought to be important, and several projects that involved public participation were suggested and received high ratings.

Long-term monitoring programs were brought up repeatedly, and a variety of monitoring projects were suggested. Originating and coordinating a Statewide project such as the breeding bird survey was considered a high priority. Such a project could also meet the desire for long-term studies near urban areas using volunteers.

The projects which received the lowest priority were determining the effects of man-caused mortality, testing USFWS and USFS wildlife-habitat models, and funding raptor rehabilitation centers.

Projects on terrestrial birds in order of priorities:

<u>Project</u>	<u>Rating</u>
Conduct studies on the effects of agriculture, mining, logging, and oil development on bird communities	4.3
Conduct research on the relationships between habitat type and bird communities	4.2
Increase publicity and public awareness of the values of nongame birds (especially raptors)	4.2
Coordinate statewide bird population monitoring studies	4.1
Identify habitat relationships of raptors	4.0
Conduct long-term studies near urban areas using volunteers	3.9
Define indicator species to monitor environmental change and health	3.6
Conduct annual meetings on nongame wildlife research and on the program	3.6
Determine sensitivity of birds (especially raptors) to disturbance	3.5
Coordinate and cooperate with other states along migration corridors	3.4
Determine the importance of birds in ecosystems	3.4
Conduct research on poorly known species such as owls	3.4
Operate a bird-banding station for long-term studies, I&E values	3.4

Expand the nest record card program in Alaska	3.2
Determine the role of woodpeckers in community ecology	3.1
Investigate relationships between raptors and other species	3.1
Determine the effects of man-caused mortality (excluding legal hunting)	2.8
Test the HEP and Wildlife-Habitat Relationship programs of USFWS and USFS	2.6
Provide funding for raptor rehabilitation	2.5

Other research management projects on terrestrial birds suggested by individuals from other working groups, from interested people via letter, etc.:

Identify critical habitats for nongame species

Provide Habitat Division with habitat requirements of nongame species and guidelines for permits

Inventory all birds by region using volunteers

Organize a hawk-watching day in Turnagain Arm area

Conduct research on the effects of firewood harvesting on nongame birds, especially cavity-nesting species

Provide scientific and educational assistance to Native and other private landowners in regards to nongame research and management

Set up a pest monitoring program in urban and rural areas

Determine bird use of reclaimed strip or open pit mining areas

Waterbirds Working Group

Discussion Leader: Dr. Calvin Lensink, U.S. Fish and Wildlife Service,
Anchorage

Participants: Ed Bailey, Anchorage
Laurel Bennett, Anchorage
Frank Bowers, Anchorage
Pam Bruce, Fairbanks
Rikki Fowler, Anchorage
Patrick Gould, Anchorage
Cecilia Kleinkauf, Anchorage

Lynne Krasnow, Anchorage
 Andrea Meyer, Anchorage
 Sam Patten, Fairbanks
 Gerald Sanger, Anchorage
 Claudia Slater, Anchorage

Summary: Although this group discussed research primarily, their priorities clearly indicated that public involvement and education is desirable. The most popular project was the identification and management of habitats near urban areas for wildlife and wildlife viewing. Research on species of concern (those of wide public interest and/or threatened by development) was considered the second most important activity. Providing opportunities for public involvement in research and management was stressed.

Development of management plans for species and guilds of species and their habitats was also considered a high priority. Research on the effects of all sorts of development was suggested and received high ratings by participants.

Research and management projects and average ratings suggested by the Waterbirds Working Group:

<u>Research Project</u>	<u>Rating</u>
Conduct research on species of special concern (those of wide public interest or threatened by development) and develop criteria for management of these species and their habitats	4.2
Conduct research that involves public participation (studies that require voluntary effort by individuals or organizations)	4.0
Study the direct and indirect effects of commercial fishing on seabirds; direct and indirect losses	3.9
Study the effects of land disposal and development programs (e.g., urban, recreational, and agricultural development on remote areas)	3.9
Conduct research on ecosystems focusing on understanding of small high visibility areas (e.g., Potter Marsh, Mendenhall Wetlands)	3.9
Study the effects of oil development on bird communities	3.8
Determine the distribution and abundance of waterbirds	3.6
Study life histories and habitat requirements of nongame waterbirds	3.6

Study the effects of water pollution (toxic chemicals, plastic) on waterbirds	3.5
Monitor species of high visibility that are unusually vulnerable to disturbance (loons, trumpeter swans, cranes, seabirds)	3.4
Identify and monitor potential indicator species of waterbirds	3.3
Study the effects of aircraft disturbance on seabird colonies	3.2
Study the effects on waterbirds of disturbance associated with tourism and public use	3.1
Determine the ecological values of waterbirds	3.1
Determine the effects of hydroelectric development on waterbirds	3.0
Determine the effects of coal and other mineral development on waterbirds	2.9
Evaluate the nature and importance of tidal and subtidal habitats and their potential vulnerability to pollution and/or development activities	2.9
Identify inland colonies of gulls, terns, and cormorants	2.7
Study the food requirements and trophic relationships of marine birds	2.6
<u>Management Project</u>	<u>Rating</u>
Identify and manage habitats near urban areas for wildlife viewing	4.3
Increase direct public participation in research and management programs	4.1
Develop management plans for species or guilds of species (habitats and populations to be maintained, critical habitats, etc.)	4.0
Identify critical areas and provide means for protection	3.9
Improve opportunities for wildlife viewing (photography blinds, nature trails)	3.7
Improve methods of preventing disturbance of wildlife on high use areas (regulations, signs, and effective enforcement)	3.5

Mammal Working Group

Discussion Leader: Herbert Melchior, Furbearer Biologist, Alaska
Department of Fish and Game, Fairbanks

Participants: Ted Bailey, Kenai
Richard Bishop, Fairbanks
Judy Blalock, Anchorage
Laun Buoy, Anchorage
Ron Burraychek, Anchorage
David Cline, Anchorage
Chip Dennerlein, Anchorage
Bruce Dinneford, Bethel
Charles Elliot, Fairbanks
Chuck Evans, Anchorage
Sheila Evans, Anchorage
David Gilbertson
Sally Kabisch, Anchorage
Allan Naydol, Elmendorf
Ann Rappaport, Anchorage
Martha Robus, Fairbanks
Tom Santistevan, Anchorage
Francis Singer, Anchorage
Roger Sleeper, Anchorage

Summary: This working group had a strong emphasis toward interpretation. The project receiving the highest rating was a user study to determine who the constituencies for the program are and what their views are. Interpretive centers near cities were emphasized (Potter Marsh, Mendenhall Wetlands, Eagle River). In terms of mammal research and management, this group indicated that preliminary work should include defining nongame species, surveying habitats near major cities, surveying past research, and developing management plans for mammals. Studies on the effects of various developments (forest practices, urbanization, stream disturbance, and prescribed burning) were also given high ratings.

Suggested projects and average rating by participants in Mammal Working Group:

<u>Project</u>	<u>Rating</u>
Identify nongame constituency and their values	4.9
Define nongame	4.8
Set up interpretive/viewing centers for species like the beaver near population centers	4.5
Develop Potter Marsh interpretive materials center	4.5

Survey wildlife habitats near major cities on public and private lands	4.3
Help with Eagle River interpretive materials on nongame	4.3
Identify species of interest to public	4.1
Develop wildlife management plans	4.1
Compile inventory of past small mammals research	3.9
Research effects of forest practices on small mammals	3.9
Investigate specific habitat requirements of particular species	3.8
Standardize methods of research	3.8
Investigate effects of urban development on small mammals	3.8
Develop Mendenhall Flats interpretive materials	3.8
Make list of "indicator species" for various habitats	3.7
Investigate effects of stream disturbance on small mammals	3.7
Develop people management plans	3.7
Investigate effects of agricultural development on small mammals	3.6
Investigate adaptability of species to wide range of habitats	3.5
Ascertain status of small mammal populations (e.g., relict, permanent, growing)	3.5
Study small mammal/plant community relationships	3.5
List values of species to humans with regard to location and seasons	3.5
Do precise survey of endemic species	3.5
Establish scientific reserves for environmental monitoring	3.3
Effects of prescribed burning on small mammals	3.2
Review ownership of wildlife statutes	3.2
Effects of petrochemical development (and factors like chlorinated hydrocarbons) on ecosystem and selected species	3.1
Study of density of small mammals and their food value to carnivores	3.0

Studies of parasite transmission among species	2.2
Studies of mortalities of mustelids and canids	2.1

Fish, Amphibians, and Reptile Working Group

Discussion Leader: Dr. James Reynolds, Alaska Cooperative Fisheries
Research Unit, Fairbanks

Participants: Lou Carufel, Anchorage
Dick Marshall, Anchorage
Mark Schwan, Juneau
Steve Strube, Big Lake
David Watsjold, Anchorage
Leslie Wenderoff, Anchorage
Bill Wilson, Anchorage

Summary: This working group advised that background work is needed before detailed research and management projects are undertaken. Nongame species of fish, amphibians, and reptiles must be identified and a preliminary study made of what information is available. From there, species of concern must be identified, and basic life histories and habitat preferences determined. Then, management plans can be developed to ensure maintenance of species populations and their habitats. Many specific research projects were also given high priority. Research projects on the effects of all sorts of development on nongame fish and amphibians were particularly emphasized.

In addition to research, participants in this working group felt that information and education projects on fish, amphibians, and particularly ecosystems are important. They suggested that public involvement in nongame research and management is also important. They further suggested developing a State aquarium and providing better opportunities for viewing wildlife.

Projects suggested by the Fish, Amphibians, and Reptile Working Group:

<u>Research/Management Project</u>	<u>Rating</u>
Identify nongame species of fish	4.6
Determine what information is available on nongame fish, amphibians, and reptiles	4.6
Conduct studies to determine the life history parameters and habitat preferences of species of concern	4.4
Develop management plans for species, groups of species, and/or habitats to be maintained	4.4

Establish regional monitoring programs	3.8
Determine the instream flow requirements of fish	3.8
Determine the effects of oil and gas development on fish and amphibians	3.8
Identify the interactions between nongame species and other organisms (ecosystem role)	3.8
Research the life histories of intertidal organisms	3.8
Determine trophic status of nongame fish species	3.6
Determine the effects of logging on fish and amphibians	3.6
Determine the effects of mining on fish and amphibians	3.6
Determine the effects of urbanization on fish and amphibians	3.6
Determine the effects of agricultural development on fish and amphibians	3.6
Determine the effects of hydroelectric development on fish and amphibians	3.6
Determine the potential for subsistence use of nongame species	3.4
Identify and use volunteers for data collection	3.4
Determine whether there are "indicator" species of fish or amphibians that would forewarn of environmental contamination	3.4
Determine the effects of toxic wastes on aquatic habitats	3.2
Determine the effects of transportation systems on aquatic habitats	3.2
Determine the effects of power boating on aquatic systems (effects of wave action, noise, contamination, erosion)	3.0
Determine the distribution and abundance of amphibians on a regional basis and publish an atlas	2.8
<u>Information/Education Project</u>	<u>Rating</u>
Develop community awareness and involvement in nongame fish, amphibians, and reptile management	3.8
Provide better opportunities for viewing nongame wildlife	3.8

Develop a State aquarium	3.8
Develop a slide file on nongame species	3.8
Develop video tapes for TV on nongame and its habitats	3.6
Develop checklists of nongame species	3.6
Include plants and invertebrates in long-range planning	3.4
Develop materials on aquatic invertebrates and plants	3.4
Develop public awareness of ecosystem concept	3.2

PANEL DISCUSSION:
FUNDING POSSIBILITIES AND PROBLEMS FOR THE
NONGAME WILDLIFE PROGRAM

Panel Members: William Martin, Federal Aid Coordinator, U.S. Fish and Wildlife Service, Anchorage

Robert Weeden, Professor of Resource Management,
University of Alaska, Fairbanks

Robert Hinman, Deputy Director, Game Division, Alaska
Department of Fish and Game, Juneau

Paul Arneson: It is already late afternoon so I am pleased to see so many dedicated people sitting through the entire workshop. Everyone has spent the afternoon generating many, many ideas for the Nongame Wildlife Program. Most of them are worthwhile, many critically important, and all of them require money.

As was mentioned this morning, funding for nongame programs is often difficult to obtain, despite public interest and concern. Our panel speakers are here to discuss alternatives for funding Alaska's program with you. This is meant to be a fairly informal session so ask questions and make comments when you desire. William Martin has prepared some introductory remarks on the Federal legislation passed last year to fund nongame programs.

William Martin: Where can we get more money to operate a nongame program? The traditional sources of Federal funds to a state fish and game department has been the Pittman-Robertson (P-R) Program or Wildlife Restoration Act and the Dingell-Johnson (D-J) Program or Fish Restoration Act. The P-R Act was passed in 1938, using a manufacturer's tax on sporting arms and ammunition. The D-J Act is funded from a manufacturer's tax on fishing tackle, rods, reels, etc. The money from both these programs has been used by the states, and I think rightly so, to fund consumptive use-oriented programs which benefit the hunters and fishermen who support fish and game departments through their license fees.

The Endangered Species Act, as many of you are aware, has had grant monies available that benefit nongame species. When funds were plentiful, both State- and Federal-listed endangered or threatened species were approved for funding. When money started getting tight, as in the past 2 years, the priorities shifted so that only Federal-listed species were approved for funding. At the present time, there are no grant funds scheduled in FY82 for endangered species.

That brings us to the recently passed Fish and Wildlife Conservation Act of 1980 which was designed to benefit nongame species. The purpose of the Act is to provide financial and technical assistance to the states; the Act authorized \$5 million a year from 1982 to 1985. Again, I am sure many of you are aware, there have been no funds appropriated in 1982. When and if funds are available, there is a formula designed to determine how much each state would receive. That formula is based on the size of the state and population of the state in comparison to

other states. The formula establishes that no state will receive less than 1/2 of 1 percent or more than 5 percent. In this case, Alaska would be eligible for the maximum amount along with Texas, New York, Colorado, and California. So, out of the \$5 million authorized, Alaska would be allocated \$250,000.

The Act does limit the species for which funding will be available; specifically, the eligible species are those that are:

1. Not ordinarily taken for sport, fur, or food in the state. In areas of the state where such take is prohibited, however, the species would be eligible (i.e., brown/grizzly bears in Chugach State Park).
2. Not Federal-listed endangered or threatened species.
3. Not marine mammals.
4. Not domestic feral species reverted to the wild.

Another restriction in the Act is cost sharing. From 1982 to 1984, there will be available 90 percent Federal funding for the development of conservation plans. From 1985 to 1991, the funding drops to 75 percent for plan development. To revise conservation plans, 75 percent funding is available from 1982 to 1991, and the funding drops to 50 percent after 1992. Funds available to implement the plans will be 75 percent from 1982 to 1991 and 50 percent thereafter.

Other limitations include that not more than 10 percent of project costs can be from revenues derived from the sale of hunting, fishing, or trapping licenses. Not more than 10 percent of the project costs shall be for law enforcement, and not more than 10 percent of the costs can be from in-kind contributions.

The Act also calls for a study to be conducted by March 1984 that provides recommendations for future funding of nongame programs. Some proposals include an excise tax on backpacking equipment, camping gear, or birdseed. The U.S. Fish and Wildlife Service is requesting administrative funds for 1982 to conduct this study and to prepare two model conservation plans that could be used by states as guidelines in preparing their conservation plans.

To answer the question of whether Federal funds will be available in 1982 or 1983, we just don't know at this time. There has been support by conservation organizations for acquiring funding in 1982, but at this point, we are still waiting. Our best chances for continued future funding will rest with implementing the recommendations of the Special Funding Study due in 1984.

[Please Note: Due to technical difficulties in the tape recording of the proceedings, much of the pertinent discussion after this point was lost. The text given here is derived from notes taken at the workshop. We regret the loss of valuable comments made by participants and the lack of continuity that it caused in the following discussion.]

Robert Weeden: Considering the monies necessary to complete the needed projects in the Nongame Wildlife Program, funding will probably never reach 5 percent of the amount required. I would put my hopes not only on legislation but also on other agencies and organizations. I would try to get as much money as possible through the legislature, but I would also go to school districts, BLM, Native corporations, and private sources. I'd go to the Audubon Society. I'd go everywhere to get the horsepower needed to get the program going.

By working with and through many groups and agencies, a large constituency for the program will be built. Excellent connections must be made, and the Nongame Wildlife Program people should act as catalysts to get everyone thinking nongame. What can't be done by one agency could possibly be done by another. A diversity of funding sources would be better than a single source.

Helen Fisher, workshop participant: I have an idea for funding the Nongame Wildlife Program. Why not request that a small percent of the money spent by the State on development projects be given to the Program. A recent Senate bill allocates \$500 million for energy projects. These and other similar State-financed projects alter habitat and create problems for wildlife. The money derived from this could be spent on surveys, management, habitat improvement, or acquisition--anything needed for wildlife conservation. This would be an ongoing type of funding and would ensure that wildlife would be getting at least a reasonable percentage of the money available. Perhaps part of the money could be made available for independent studies on wildlife by local citizens. All it takes to do this is one legislator and some committed local citizens, so let's try to nail down what we need and get going. We are going to have another election coming up in 1982; it would be a good chance to promote some legislation. Tenacity and guts are required for lobbying.

Participant (unidentified): Who can lobby for legislation? Would an advisory group be able to? I am concerned that this workshop will end today without having developed a formal means of lobbying or working through the legislative process to get funding for this program.

Robert Weeden: I don't think Sue or Paul should lobby because that is our job. This is where local support enters in. Time is needed to develop channels for funding through school districts and organizations.

Marilyn Sigman: How about a very low property tax?

Participant (unidentified): Alaskans generally don't like paying taxes, so I don't think any kind of tax would work.

Carrol Henderson: I suggest asking the [borough or municipality] to match funds to serve the purpose of getting local people involved.

Participant (unidentified): I think we should work for Federal funds. If we start trying to get the State involved, it will just become a political issue.

Robert Weeden: There are restrictions on the use of the Federal funds that may eventually be available. Many of the projects discussed today may not be fundable through Federal legislation. Consequently, we must look for State funds.

William Martin: I agree, Bob, even if Federal funding becomes available, State funding will still be needed. I encourage a search for State funds.

Robert Hinman: The status of the nongame budget at this time for FY82 is \$150,000 minus a 5 percent across-the-board cut of Fish and Game monies. However, it hasn't gone through the Senate and House Free Conference Committee. This is the same as last year, and essentially a continuation budget has been approved.

Carroll Henderson: Originally, the Federal legislation included funding through an excise tax on backpacking equipment or birdseed. But the National Backpackers Association opposed taxes on the equipment, and retired people on fixed incomes opposed the birdseed tax. It was also opposed by the National Chamber of Commerce. The backpackers felt that they were being singled out but were supportive generally. If we are seriously considering an excise tax again (like in the U.S. Fish and Wildlife Service's upcoming Federal Funding Study), we need to do a little homework to neutralize that kind of opposition or it might happen again.

William Martin: We may try to get a Federal tax checkoff, and that may work better than an excise tax.

Paul Arneson: Thank you all for your ideas and discussions. As I'm sure everyone has noticed, it's getting very late so we have to wrap things up. Please fill out and return the questionnaire on possible funding sources.

RESULTS OF QUESTIONNAIRE ON FUNDING SOURCES

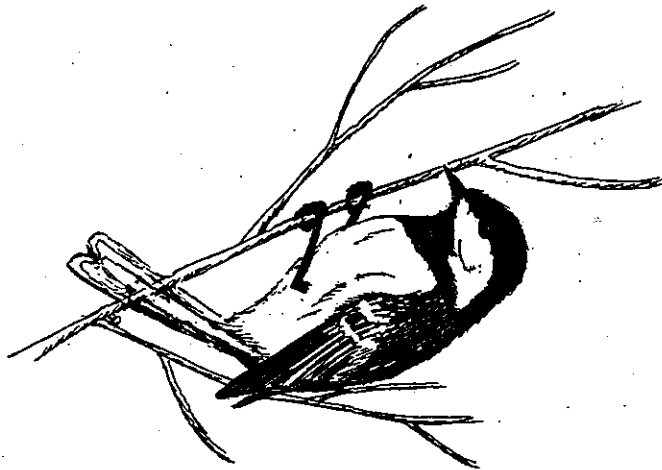
State, Federal, and private funding sources voted on by 39 conference participants:

<u>Suggested Funding Sources</u>	<u>Mean Rating</u>
Write-in ideas*	4.6
State General Fund	4.2
Donations	3.9
Federal Nongame Act of 1980	3.8
Private grants	3.6
Special State tax:	3.5
- sale of birdseed, birdhouses	3.2
- sale of wildlife art, photography	2.8
- sale of camping and backpacking equipment, binoculars	2.7
Pittman-Robertson or Dingell-Johnson funds	3.4
Personalized license plates	3.3
Sale of nongame stamps, decals, patches, T-shirts, etc.	3.1
Endangered Species Act	3.1
Federal contracts	2.8
Hunting and fishing license fees	2.8
Small fee for Alaskan tourists	2.4
Special birding "license" similar to hunting	2.1

* Top rating was given to a write-in space under State Funding Sources where 5 out of 10 participants who wrote in their own ideas suggested a Permanent Fund dividend checkoff, similar to other states' income tax

checkoff programs. Two others suggested a State income tax checkoff, if the tax is ever reinstated. Other write-in funding ideas included:

- fees for information brochures and use of visitor centers
- percent of State appropriations for development projects
- percent of Alaska's oil and gas royalties
- percent of profit from land sale that turns land from wildlife habitat into a developed area
- percent of every State capital expenditure
- State sales tax



CLOSING REMARKS

Chip Dennerlein: I would like to make a final comment. I hope this Nongame Wildlife Program will begin an era of agency cooperation. There are excellent opportunities for cooperation at Mendenhall Flats, Creamer's Field Migratory Waterfowl Refuge, Eagle River, and elsewhere. I'd like to see this workshop continued, but in a different atmosphere.

Many of the people here today are with agencies, and I'd like to see more general public participation. We should work to involve all the public constituencies and agencies. Let's develop some action-oriented recommendations. State aquariums, bigger budgets, more recognition of the importance of sport and commercial fishing in the State, outdoor education, etc., are all important goals we could work together on.

Paul Arneson: I appreciate Chip's comments about the need for inter-agency cooperation and that we will need to involve all the public and not just agencies for action-oriented projects. His comments sum up much of what I intended to say in closing the conference.

As you were made well aware in the working group sessions this afternoon, there is a multitude of projects that the Nongame Wildlife Program can be working on. But it is also obvious that our program will not have the time, money, or personnel to accomplish the suggested projects in a timely fashion. We will have to rely on people like yourselves for continued support. To meet our objectives, we will need interagency cooperation and public involvement. There will be times when we may need volunteers and other times when we need advice. It is people like you, who have shown an interest in "nongame" (for lack of a better word or phrase) by your presence here today, who may be called upon in the future for additional support to the Program.

We intend to keep our program public oriented and keep the public involved as much as possible in our planning processes. Hopefully, this was the first of several meetings where we get public opinion on what should be included in the Nongame Wildlife Program. Sue, Nancy, and I intend to have an open-door policy on allowing public input, so if you or your friends have further suggestions after the workshop or after reading the Proceedings that will follow, feel free to come in and talk them over with us.

We sincerely appreciate your help today. Thank you all for coming.



PARTICIPANT REGISTRATION

Name	Affiliation	City
Dave Allen	USDA-Forest Service	Anchorage
Michael Amaral	U.S. Fish and Wildlife	Anchorage
Paul Arneson	Dept. Fish and Game	Anchorage
Ed Bailey	U.S. Fish and Wildlife	Anchorage
Ted Bailey	U.S. Fish and Wildlife	Soldotna
Roy Barnes	Natl. Audubon Society	Anchorage
Robert Belous	Natl. Park Service	Anchorage
Laurel Bennett	Private Citizen	Anchorage
Richard Bishop	Dept. Fish and Game	Fairbanks
M. Blackburn	Private Citizen	Anchorage
Judy Blalock	Private Citizen	Anchorage
Frank Bowers	U.S. Fish and Wildlife	Anchorage
Dave Brann	Kenai Peninsula Schools	Ninilchik
Dennis Bromley	Career Center	Anchorage
Pam Bruce	Dept. Fish and Game	Fairbanks
Laun Buoy	Bureau of Land Mgmt.	Anchorage
Ron Burraychak	U.S. Forest Service	Anchorage
Louis Carufel	Bureau of Land Mgmt.	Anchorage
Ronald Clarke	Alaska Falconers Assoc.	Fairbanks
Dave Cline	Natl. Audubon Society	Anchorage
Sal Cuccarese	U of A - AEIDC	Anchorage
Tony DeGange	U.S. Fish and Wildlife	Anchorage
Arlan DeYong	Dept. Natural Resources	Anchorage
Chip Dennerlein	Dept. Natural Resources	Anchorage
Bruce Dinneford	Dept. Fish and Game	Bethel
Bob Dittrick	Private Citizen	Anchorage
Cliff Eames	Natl. Wildlife Federation	Anchorage
Charles Elliot	Agricultural Exp. Station	Fairbanks
Charles Evans	Private Citizen	Anchorage
Sheila Evans	Researcher	Anchorage
Nina Faust	Anchorage School District	Anchorage

Participant Registration (continued)

Name	Affiliation	City
Helen Fisher	Private Citizen	Anchorage
Rikki Fowler	Dept. of Environmental Cons.	Anchorage
Bill Gabriel	BLM/Anchorage Audubon	Anchorage
David Gilbertson	Private Citizen	---
Dianne Goodboe	Private Citizen	Girdwood
G. Goodboe	Private Citizen	Girdwood
Pat Gould	U.S. Fish and Wildlife	Anchorage
Herman Griese	Private Citizen	Eagle River
Carrol Henderson	Minnesota Div. of Wildlife	Minnesota
Robert Hinman	Dept. Fish and Game	Juneau
Mimi Hogan	U.S. Fish and Wildlife	Anchorage
Rich Holmstrom	Alaska Falconers Assoc.	Anchorage
Hadley Jenner	Planning Dept., Municipality	Anchorage
Barb and Steve Johnson	Private Citizen	Anchorage
Toni Johnson	NOAA/OCSEAP	Anchorage
Rick Johnston	U.S. Fish and Wildlife	Soldotna
Sally Kabisch	Sierra Club	Anchorage
Conny Katasse	Alaska Comm. College	Anchorage
Julie Kelly	Natl. Audubon Society	Anchorage
Brina Kessel	University of Alaska	Fairbanks
Cecilia Kleinkauf	Private Citizen	Anchorage
Larry Korkowski	Private Citizen	Anchorage
Ray Kramer	Dept. Fish and Game	Anchorage
Lynne Krasnow	U.S. Fish and Wildlife	Anchorage
Gale Lazarus	Alaska Zoo	Anchorage
Devony Lehner-Welch	Dept. Fish and Game	Anchorage
Bud Lehnhausen	Private Citizen	Fairbanks
Calvin Lensink	U.S. Fish and Wildlife	Anchorage
Betty Magnuson	NSBSD Alaska Studies	Fairbanks
Richard Marshall	Natl. Marine Fisheries	Anchorage
William Martin	U.S. Fish and Wildlife	Anchorage

Participant Registration (continued)

Name	Affiliation	City
Rosa Meehan	U.S. Fish and Wildlife	Fairbanks
Herbert Melchior	Dept. Fish and Game	Fairbanks
Andrea Meyer	Dept. Fish and Game	Anchorage
Belle Mickelson	Sea Grant	Fairbanks
Pete Mickelson	U of A - Wildlife & Fisheries	Fairbanks
Dave Mills	Division of Parks	Anchorage
Marilyn Morris	Dept. Natural Resources	Anchorage
Allan Naydol	U.S. Air Force	Elmendorf AFB
Jay Nelson	U.S. Fish and Wildlife	Anchorage
Catherine Nicolas	Anchorage Municipal Library	Anchorage
Sam Patten	U of A - NOAA	Fairbanks
Dave Patterson	U.S. Fish and Wildlife	Anchorage
Susan Quinlan	Dept. Fish and Game	Fairbanks
Ann Rappoport	U.S. Fish and Wildlife	Anchorage
Penny Rennick	Alaska Geographic	Anchorage
James Reynolds	University of Alaska	Fairbanks
Cathy Rezabeck	AK Natural History Assoc.	Anchorage
Martha Robus	Arctic Audubon Society	Fairbanks
Karen Ruud	Private Citizen	Anchorage
Gerry Sanger	U.S. Fish and Wildlife	Anchorage
Tomas Santistevan	Private Citizen	Anchorage
Nancy Scholl	Private Citizen	McKinley Park
Mark Schwan	Dept. Fish and Game	Juneau
Vern Seifert	Alaska Falconers Assoc.	Anchorage
Jim Shives	Natl. Park Service	Anchorage
Marilyn Sigman	Fbks. Environmental Center	Fairbanks
Francis Singer	Natl. Park Service	Anchorage
Claudia Slater	Dept. Fish and Game	Anchorage
Roger Sleeper	U.S. Forest Service/Chugach	Anchorage
Diann Stone	Private Citizen	Anchorage
Steve Strube	Dept. Natural Resources	Big Lake

Participant Registration (continued)

<u>Name</u>	<u>Affiliation</u>	<u>City</u>
Ted Swem	BIRS	Anchorage
Nancy Tankersley	Dept. Fish and Game	Anchorage
Jim Thiele	U of A - AEIDC	Anchorage
William Tilton	Alaska Falconers Assoc.	Fairbanks
John Torres	Colorado Div. of Wildlife	Colorado
Lance Trasky	Dept. Fish and Game	Anchorage
Dave Trudgen	U of A - AEIDC	Anchorage
Larry Underwood	U of A - AEIDC	Anchorage
Bob Walker	U.S. Forest Service	Seward
David Watsjold	Dept. Fish and Game	Anchorage
Matt Weaver	Iditarod Area Schools	McGrath
Robert Weeden	University of Alaska	Fairbanks
Robert Welch	Private Citizen	Anchorage
Leslie Wenderoff	Dept. Fish and Game	Anchorage
Pat Wennekens	U.S. Fish and Wildlife	Anchorage
Jack Wiles	Division of Parks	Anchorage
Bill Wilson	U of A - AEIDC	Anchorage
Barbara Winkley	Private Citizen	Anchorage

ACKNOWLEDGMENTS

We wish to thank the following people who contributed to the success of the workshop: all the speakers, especially those from out of state, John Torres, Colorado Division of Wildlife, and Carrol Henderson, Minnesota Department of Natural Resources; Cliff Eames, Dennis Bromley, Dr. Brina Kessel, Dr. James Reynolds, Dr. Calvin Lensink, and Herbert Melchior for chairing the working group sessions; Dr. Louis Nauman, Alaska Pacific University for help throughout the workshop; Marilyn Gardner, Martha Siebe, and Diann Stone, Anchorage Audubon Society for helping to register participants; Jim Thiele for taking photographs; Bud Lehnhausen, and Barb and Steve Johnson for help before, during, and after the workshop; Roy Barnes, National Audubon Society for providing the film "Last Stronghold of the Eagles"; Marianne See and friends for providing entertainment at the dinner; and finally, all the participants who contributed so much during the working group sessions.

SUMMARY OF THE FAIRBANKS INPUT MEETING
ON THE NONGAME WILDLIFE PROGRAM

The public input meeting on Alaska Department of Fish and Game's Nongame Wildlife Program held in Fairbanks October 7, 1981 attracted 110 participants. The meeting had been advertised by radio, TV, newspaper, and a mailing to all local organizations interested in wildlife or the outdoors. Those attending listened to presentations by Alaska Department of Fish and Game (ADF&G) staff on nongame wildlife, possible directions for the Program, current projects, and funding considerations. Following each presentation, participants filled out questionnaires about their interests, and their opinions on directions for the Program, current projects, and funding.

Participant Interests

The first questionnaire dealt with the backgrounds and interests of the participants. About 90 percent of the participants indicated they had some college education in biology and/or related subjects. Four percent had had no college or high school education related to biology. The professions of the participants varied widely, 27 percent were biologists, 26 percent students, 7 percent teachers, and 6 percent university professors. The remainder of the participants (33%) had a variety of professions including (among others) librarian, engineer, bus driver, secretary, dancer, housewife, janitor, homesteader, sales clerk, farmer, psychiatrist, reporter, beekeeper, fisherman, guide, lab tech, glaciologist, and cook. Average length of residency was 7 years (0.5 mos to over 30 years); age 31 years, (range < 20 to 61-70 years). Of the 104 respondents, 18 percent had never visited ADF&G, 20.3 percent had visited only once, 28 percent had visited ADF&G two to five times this year, and 34 percent more than five times. Interestingly, 49 percent of those attending were unfamiliar with the Fish and Game Advisory Boards, and only 22 percent had ever attended an Advisory Board meeting. About 58 percent did not read Alaska Fish Tales and Game Trails. However, about half of the people attending the meeting signed up to receive the magazine, so many people may not have been aware of the magazine.

Of the 104 people answering the questionnaires on their interests, 86 percent said they regularly participated in wildlife viewing. Over half the participants said they regularly enjoyed the following activities: hiking (82%), bird watching (81%), cross-country skiing (74%), nature study (69%), wildlife photography (65%), travel specifically to see wildlife (64%), fishing (61%), and canoeing (58%). Hunting (50%), gardening (50%), bird-feeding (41%), and plant collecting (31%) were also popular. Asked which three activities they enjoyed the most, 41 percent listed bird watching, 38 percent hiking, 27 percent wildlife photography, 27 percent skiing, 26 percent nature study, 21 percent wildlife viewing, and 19 percent hunting.

Of the 104 persons responding, 28 percent said they did not belong to any local outdoor-related organizations. However, other participants indicated memberships in 22 local organizations. The following were best represented: Arctic Audubon Society (36), Fairbanks Bird Club (27), Fairbanks Environmental Center (22), the Wildlife Society (24), Alaska Conservation Society (19), Friends of the University of Alaska Museum (14), Tanana-Yukon Chapter of Alaska Conservation Society (15), and the Interior Alaska Trappers Association (7). The other 14 clubs were represented by three or fewer people.

Twenty-five percent of the participants said they did not belong to any national conservation organizations. The other 75 percent, however, belonged to 37 different national organizations. Ten or more participants belonged to the following organizations: National Wildlife Federation (34%), National Audubon Society (41%), and the National Rifle Association (14%).

Potential Projects

The second questionnaire dealt with the goals for ADF&G's Nongame Wildlife Program. Though asked to identify which function was most important, many people listed two or more functions as most important. Over the short-term, information and education were given top priority by 41 percent and 36 percent of the participants, respectively. Management was rated most important by 23 percent, and research by 26 percent. Over the long-term, however, research was rated most important by 56 percent, management by 43 percent, education 28 percent, and information only 14 percent. The diversity of opinions expressed suggests ADF&G's Nongame Wildlife Program should conduct activities under all four functions, but with an initial emphasis on information and education.

Participants were asked to rate the importance of the projects suggested as top priorities at the Anchorage workshop: only the top three projects under each function were listed. The rating scale was 5 = top priority--should be done immediately; 4 = high priority--should be done in the next few years; 3 = a good project but need not be done immediately; 2 = should be a low priority; 1 = should not be included as a Nongame Wildlife Program project. After rating the projects, participants were asked to suggest other projects they'd like to see ADF&G's Nongame Wildlife Program conduct. Average scores for almost all listed projects were near 4, suggesting Fairbanks participants thought most of the projects were worthwhile and important enough that they should be conducted within the next few years.

Education

Under the education function, most felt that providing teachers access to currently available materials (4.1) was most important. Field instruction (3.8) was considered second most important, and a statewide wildlife week (3.7) least important. However, the average rating for each of the projects was 4.0 (as rounded off), indicating participants felt all three

should be done in the next few years. Forty-one people suggested additional projects (see Appendix I), though many suggestions were general. Several people suggested developing educational materials for use in and out of schools, and several people suggested making speakers available to schools and youth groups.

Information

Top-rated information projects (both 3.8) were: 1) developing a nature center at Creamer's Field, Potters Marsh, and Mendenhall Flats" and 2) "cooperating with other agencies on news releases about weekly outdoor activities (such as nature walks, talks, and courses)." Rated slightly lower (3.6) was "a weekly report to the public on radio, TV, and newspapers on wildlife topics." Forty people suggested more information projects (Appendix II). Several of these were suggestions to develop a community nature center at Creamer's Field--apparently indicating that a nature center should be for everyone, not just school children. Several suggested expanding ADF&G's Wildlife Notebook Series to include nongame wildlife. As was the case in Anchorage, many people wanted to become involved in the Program as volunteers.

Management/Research

This section was divided into four sections: terrestrial birds; waterbirds; mammals; and fish, amphibians, and reptiles.

Under the terrestrial bird section, "research on the effects of agriculture, mining, logging, and oil development on bird communities" was given top priority (4.5). This actually received the highest rating of any project listed under any category, perhaps reflecting the strong participant interest in birds. The second highest rated project was: "increasing public awareness of the values of nongame birds, especially hawks and owls" (4.0). "Conducting a statewide bird population monitoring program" and "conducting studies on bird habitat relationships" both received average ratings of 3.8.

Under the waterbirds section, "conducting studies that involved public participation" received top rating (3.7). "Conducting research on species of special concern and developing criteria for management of these species and their habitats" received a rating of 3.6. "Studying the effects of commercial fishing on waterbirds" was given the lowest priority (3.4). {This project, suggested by Anchorage workshop participants, was in reference mainly to commercial fishing of salmon in the Bering Sea by Japanese and Russian fleets; tens of thousands of seabirds are accidentally drowned each year when caught in the gillnets of this fishery.}

Under the mammal section, "surveying wildlife habitats near major cities on public and private lands to make sure local habitat areas are maintained" received top priority (4.2). This received the second highest rating of all projects under all categories. "Conducting studies to determine the life history parameters and habitat preferences of species of concern" received a rating of 3.8. "Setting up interpretive-viewing centers near population areas" received a low rating (3.3). This

seemed a bit contradictory since under other categories nature centers were rated a high priority. Perhaps, since a mammal viewing area is more difficult to identify, people felt that it would not be feasible. Alternatively, people may have felt that setting up a viewing area was not a justifiable research project.

Under fish, amphibians, and reptiles, the top-rated project (3.9) was "determining what information is available on nongame fish, amphibians and reptiles." The second rated project was (3.8), "conducting studies to determine life history parameters, and habitat preferences of species of concern." "Identifying species of nongame fish" was rated 3.4. Thirty-five people suggested additional research and management projects (Appendix III).

Current Projects

The third questionnaire asked people their opinions of current projects of the Nongame Wildlife Program and asked for volunteers to assist with various projects. Thirty-two participants thought developing wildlife education materials was the most beneficial project. The breeding bird survey program and observation card program were rated as most beneficial by 24 and 19 people, respectively. Overall, there was unanimous support for the Program, though individuals suggested some changes in current projects. Five people suggested that the Wildlife Viewing Booklet be left out, to avoid causing overuse of small areas. Twelve people said more research should be conducted by the Nongame Wildlife Program. Four people requested public seminars on nongame wildlife and habitats. (See Appendix IV for specific comments.)

Over 80 people volunteered to personally help on one or more of the projects. This affirms the strong public interest in being involved expressed both in Anchorage and Fairbanks.

Funding

Funding for ADF&G's Nongame Wildlife Program was discussed as the last portion of the meeting. A list of the kinds of funding used by other states and funding sources suggested in the past were discussed. Participants were then asked to rate which source they thought should be used to fund Alaska's Nongame Wildlife Program. Many participants did not complete this questionnaire, perhaps because it was getting late and many people were anxious to get home. The 54 people responding felt that private sources of funding such as donations or grants would be the best source of funds. Obtaining funds through the Federal Fish and Wildlife Conservation Act of 1980, when and if they are available, was rated as the second most preferable source. The State General Fund was rated third highest. The least popular funding suggestions were a "birding license" similar to a hunting license, and/or any sorts of taxes. Of the 54 people responding to the question, 52 (98%) said they'd be personally willing to make an annual contribution to support the Nongame Wildlife Program. The average amount people were willing to contribute was \$14.48 (range \$1 to \$30).

Appendix I. Education projects suggested by participants of the
October 7, 1981 public meeting in Fairbanks.

Learn to teach, then go around to schools for special presentations.

Develop slides and slide-tape programs. Improve the Wildlife Notebook Series.

Have a flora or fauna of the week series in the paper, TV, and radio.

Develop slideshows to be loaned out to schools.

Develop a "Naturalists in the Schools' Program" similar to the State Arts Council "Artists in Schools."

Have professionals serve as an "in class" resource person that teachers can tap to help with their classes.

Stress nonconsumptive use of wildlife to children.

Keep the main focus on assisting teachers with information and materials.
Do guest lectures.

Emphasize the aesthetic value of all wildlife.

Develop, in cooperation with schools, a Jr-Sr. High natural resources curriculum. Develop programs for elementary school kids.

Education

Incorporate wildlife into other subjects.

Develop materials that can be used both in and outside of schools.

Expand Wildlife Notebook Series.

Make good speakers available to schools.

Send visiting programs around to the schools.

Assist school districts in developing outdoor education programs.

Get teachers and students involved in nongame projects.

Get permanent telescopes mounted at wildlife viewing areas.

Sub-contract experts to provide field instruction for teachers.

Strongly support Alaska Wildlife Week Idea.

Teacher workshops.

Appendix I. (continued)

Work closely with the Native corporations.

Encourage University of Alaska to offer course in Nongame Wildlife Management.

Develop field guides to nongame wildlife that could be used in school curricula.

Work closely with elementary schools to stimulate interest in wildlife.

Stress the interrelationships of all living things.

Teach the teachers.

Have classes help monitor populations each year.

Provide field instruction to anyone who is interested.

Work with the Science Curriculum Committee to develop wildlife education as part of the regular program.

Work as a clearinghouse for all outdoor education in the State.

Develop weekly reader on wildlife for kids.

Adapt existing materials to Alaska, by region, especially for rural schools.

Develop and make available to teachers information on the basic terms of wildlife ecology.

Develop materials for teachers and youth groups.

Coordinate a resource center for teachers and others involved in outdoor education.

Develop classroom materials.

Provide guest lecturers to schools.

Develop and sell attractive posters that impart a knowledge of the ecological interrelationships and vulnerability of systems to man's disturbances.

Get young children more exposed to biology, ecology, and science.

Appendix II. Information projects suggested by participants of the
October 7, 1981 public meeting in Fairbanks.

Weekly newspaper articles and radio broadcasts (4 people)

Short visual media programs

How to see nongame species, habitats, and habits

Keep public informed of legislation affecting wildlife so we
can inform legislators of our opinions.

Put terrarium displays of nongame animals around schools and
State buildings

Establish a volunteer program to send speakers to schools to
talk about wildlife

Develop research projects that volunteers can do

Get wildlife viewing and information centers set up throughout
the State

Develop a Nongame Wildlife Checklist

Emphasize the ecological values of nongame species

Put more money into signs on wildlife to be put up along the
highways and in parks and reserves

Develop more brochures, booklets, trail guides, etc. on wildlife

Inform the public of ecological and aesthetic values of wildlife

Summer, spring, fall, and winter "open houses" at Fish and Game

Keep public aware of seasonal opportunities for wildlife viewing

Put out the newsletter, bimonthly

Revise Wildlife Notebook Series to include nongame

Have a weekend exhibit and talk on the importance of nongame at the
Fairbanks Alaska Department of Fish and Game office

Put on low-cost, informative public seminars and courses

Make outdoor education an integral part of the educational curriculum

Obtain slides, reports, etc., to be used in educational packets

Appendix II. (continued)

Help establish a Fairbanks Nature Center

Develop research projects kids could help on

Hold more public meetings to provide public access to current information and projects

Get a nature center established at Creamer's Field

Develop a Pack Creek bear observation area in cooperation with the U.S. Forest Service

Get a nongame biologist for Southeast Alaska, too

Wholesale dispersal of information is wasted on uninterested people--provide what those who are genuinely interested want

Develop a children's museum at Creamer's Barn

Use volunteers from University, Trappers Assoc., and interested general public

Start a "Don't shoot raptors campaign"

Don't publish more brochures

Get a community nature center going

Provide weekly updates on Federal legislation affecting Alaska's wildlife

Provide hand-outs on all the State wildlife areas

Man information booths at State wildlife areas during peak times

Prepare brochures geared to tourists

Set up wildlife viewing areas

An informative checklist for entomologists

Develop a notebook series on nongame wildlife

Appendix III. Research projects suggested by participants of the
October 7, 1981 public meeting in Fairbanks

Population and ecology studies of selected species and habitats

Determine how industry can be developed and still protect wildlife

Determine what would happen if a species disappeared from an area

Preserve wetland habitats near urban areas since they are used by many people

Set up a bird rehabilitation center especially for raptors, owls, and ravens

Study effects of man on the environment and learn about all species
Don't wait until a species is endangered before conducting studies.

How about a nongame biologist in Southeast

Effects of development on wetlands

Research the value of nongame animals as agents of biological control

Study waterbirds as indicators of environmental quality

Effects of habitat loss on nongame mammals

Get public participation

Minimize impacts of development and get statewide mitigation of impacts

Nongame and game species should be given equal consideration in
ADF&G management

Work on critical habitat designations by State for peregrine falcon
nesting and hunting areas

Synthesize existing information on nongame for areas where development
impacts are anticipated

Comment on existing land use documents with regard to nongame wildlife,
particularly the North Slope Borough draft comprehensive plan

Be careful not to reveal nesting locations of raptors

Cooperate, whenever possible, with other agencies. Stop the insane
State program of disposing of prime wildlife lands

Determine the effects of subdivision development and fire-wood cutting
on bird populations

Appendix III. (continued)

Research the status of wolves in Alaska for photographic and aesthetic purposes

Maintain a bibliography and clearinghouse for all nongame scientific work in Alaska

Initiate a nesting colony record program

Initiate an Alaska breeding bird survey program

Get public assistance in waterbird habitat protection, population censuses, bird banding, etc.

Identify areas near Fairbanks where people regularly view wildlife so that the heritage of wildlife on our doorsteps continues in Alaska

Determine effects on wildlife of intensive nonconsumptive use

Determine how to minimize problems of gulls at dumps

Focus on the effects of habitat alteration especially pollution, major construction projects, etc.

Determine the impacts of placer mining on fish

Study habitat requirements of small mammals

Identify areas of concern to wildlife watchers and protect them from destruction and damage. Deadman Slough is an example of an area used by nongame and people, but it is being filled in and blocked at several locations

Study effects of stream alteration on fish

Study effects of agriculture and develop agricultural methods that minimize adverse impacts

Conduct cooperative research on nongame species where they are critical for a game species

Appendix IV. Projects that were left out that individuals thought should be included within the first year of the Nongame Wildlife Program.

Develop a list of ongoing research or rehabilitation projects in the State indicating those which accept volunteer workers

None of the pressing research topics have been addressed. If you are genuinely concerned about effects of mining, logging, etc., research should be started immediately, as answers will not come quickly

More emphasis on management of habitats and nongame;
less emphasis on public relations

More habitat identification and evaluation

Do more research

Small research projects--either funded or volunteered on nongame species, in urban areas especially

Develop a program to mend and rehabilitate injured birds

Assess the effects on wildlife of increased wildlife viewing in intensive use areas

Sponsor complete 8-hour plus seminars on nongame management, research, and observation techniques

Get more hired help

Put more money into animals other than birds

Rehabilitating disturbed areas is more important

Survey and inventory nongame species

Plan for potential use of Creamer's buildings as a nature center

Give seminars on particular species or habitats;
maybe a talk series at the library or something

Get more education programs telling the public about the overall idea of program, as well as additional projects

Appendix IV. (continued)

Give evening slide shows and talks for adults, one per month, or every other month

Identify critical habitats for sensitive nongame species and develop management objectives

Habitat monitoring should be emphasized

Indicator species research is needed

Identify habitats and manage nongame

Need more research projects especially on mammals

Include specimens of nongame mammals in the education program

Appendix III

SUMMARY OF THE JUNEAU INPUT MEETING
ON THE NONGAME WILDLIFE PROGRAM

On 17 November 1981, a public input meeting was held in Juneau by the Nongame Wildlife Program of the Department of Fish and Game. The meeting had been advertised on TV and radio, in the newspaper and by a mailout to interested groups, agencies and individuals. Forty-nine participants registered at the meeting. The three nongame staff members presented slideshows and other materials on possible directions of the Program, current projects and funding considerations. Following each presentation, participants were asked to fill out questionnaires about their interests, their backgrounds, their opinions on directions for the Program, current projects and funding.

Participant Backgrounds and Interests

The first questionnaire dealt with the backgrounds and interests of the participants. All but one (98 percent), of the respondents had taken a biology course in high school or in college. Over 60 percent had also taken ecology or botany courses in college, over 50 percent had taken an ornithology course and almost 50 percent had taken mammalogy and conservation courses in college. Professions varied widely, but 39 percent were biologists or technicians and 8 percent park rangers or naturalists. The remaining 53 percent included such professions as: waitress, fisherman, photographer, legislative staff, housewife, hydrologist, nurse, teacher, carpenter, secretary and others.

Participants have lived in Alaska from less than 1 year to 30 years, but most (32%) have resided for 1-4 years and 24 percent from 5-10 years. The median age bracket was 31-40 years old; most (32%) of the rest were 21-30 years old. Sixty-three percent of the participants were male, 43 percent had children and most (36%) made between \$21,000-40,000.

Ten percent of the participants had never visited a Fish and Game

office and 10 percent had visited only once. Most (72%) had visited two or more times this year. Although most (65%) had heard of the Fish and Game Boards and 50 percent knew of the Advisory Committees, only 39 percent and 32 percent, respectively, had attended meetings of these two regulatory bodies. Fish and Game's magazine, Fish Tales and Game Trails was read by 68 percent of the participants.

Among the 41 participants answering the questionnaire, hiking was the preferred outdoor activity. Ninety percent said they participated in that sport. Other very popular activities included opportunistic wildlife watching (85%) and birdwatching (80%). Over half the participants also said they took part in the following activities: cross country-skiing, nature study, fishing, feeding wild birds, gardening, wildlife photography, and traveling to view wildlife. Motor boating (39%) and hunting (37%) were the next most popular activities. Asked which three activities they enjoyed the most, 66 percent listed hiking, 46 percent birdwatching, 34 percent fishing, 27 percent wildlife watching, 24 percent wildlife photography and 22 percent for both hunting and nature study.

Participants were asked which local and national organizations they belonged to, and 15 and 18 organizations, respectively, were listed. The most popular local group was the Juneau Audubon Society (27%), but others included Alaska Conservation Society (15%), SEACC (12%), Sierra Club, Juneau Group (12%) and Territorial Sportsmen (7%).

About 37 percent of the participants said they did not belong to national organizations, but of those that did, most (39%) were members of the National Audubon Society followed closely by the Wildlife Society (34%). Other groups included the National Wildlife Federation (24%), the Nature Conservancy (12%) and the National Rifle Association (7%).

Potential Projects

The second questionnaire explained the four goals of ADF&G's Nongame

Wildlife Program and asked participants to rank them in order of importance over the short-term and long-term. On the short-term, 40 percent of the participants selected Information first followed by Management (39%), Research (33%) and Education (29%). However, when the first and second ranks were added together, Education was tops with 66 percent, next was Information (60%), followed by Management and Research at 53 percent. In the long-term, Management was ranked highest (51%) followed by Research (31%), Information (26%), and Education (25%). When the top two rankings were combined, the preferences were Management - 62 percent, Research - 61 percent, Education - 56 percent and Information - 47 percent. It was apparent from the rankings and the verbal comments on the questionnaire that there needs to be a balance of all four functions, but initially, Information and Education should be emphasized.

Participants were asked to rate the importance of the top three projects under each function that were suggested at the Anchorage workshop. The rating scale was 5 = top priority - should be done immediately; 4 = high priority - should be done in the next few years; 3 = a good project, but need not be done immediately; 2 = should be low priority; 1 = should not be included as a Nongame Wildlife Program project. In addition, participants were asked to suggest other projects that they felt should be done by the Nongame Wildlife Program. The scores for each project were then averaged.

Education

Of the three projects under the education function, providing access to currently available materials was rated highest (4.4). Field instruction for teachers was ranked second (3.9) and developing a statewide "Wildlife Week" was third (3.7). Many excellent suggestions for additional projects were given by participants (Appendix I). Developing slideshows on nongame wildlife and providing an in-service program for teachers rated highly.

Information

Two projects - developing weekly radio, TV and newspaper reports to the public on wildlife topics and cooperating with other agencies on news releases on weekly outdoor activities - rated 4.1. The third project - developing nature centers at Mendenhall Flats, Potter's Marsh and Creamer's Field was given an average rating of 3.7. Additional comments and suggestions for information projects are listed in Appendix II. It was obvious from the comments that the Juneau public wants more information about nongame wildlife and the habitats they use, and we shouldn't shy away from informing the public about controversial issues.

Management/Research

This section was divided into four sections: Terrestrial Birds; Waterbirds; Mammals; and Fish, Amphibians and Reptiles.

The project overwhelmingly given the top rating under Terrestrial Birds was "conduct studies on the effects of agriculture, mining, logging and oil development on bird communities" (4.4). This ties for top ranking for all projects and likely reflects the concern participants have for birds and changes to the bird's environment. "To increase publicity and public awareness of the values of nongame birds" was rated second highest (4.0). "To coordinate statewide bird population monitoring studies" and "to conduct studies on the relationships between habitat types and bird communities" were rated 3.9 and 3.7, respectively.

Under Waterbirds, the top ranking (4.2) was for "conduct research on species of special concern and develop criteria for management of these species and their habitats." "Conducting research that involves public participation" rated 3.8 and "studying the direct and indirect effects of commercial fishing on seabirds" rated 3.7. The latter project, as suggested at the Anchorage workshop, refers to the large loss of seabirds accidentally drowned each year in salmon gillnets of

Japanese and Russian fleets fishing in the Bering Sea.

Ratings under the Mammal and Fish, Amphibian and Reptile Sections were lower than for the other sections. There were more 1 and 2 ratings given for projects under these two sections than for the first four mentioned. Either participants of the meeting were biased toward birds or they misunderstood and thought we meant to do work on previously studied game mammals and fish. The project receiving the highest rating for Mammals was "surveying wildlife habitat near major cities on public and private lands to make sure local habitat areas are maintained" (3.9). Next was "identify species of interest to the public and develop management plans" (3.6), followed by "set up interpretive/viewing centers near population areas" (3.1). This low score likely meant that either an interpretive/viewing center was not a research function or such centers for mammals are not practical.

Scoring highest (3.6) under the Fish, Amphibian, Reptile Section was to "determine what information is available on nongame fish, amphibians and reptiles." "Conducting studies to determine life history parameters and habitat preferences of species of concern" and "identifying nongame species of fish" were rated 3.4 and 3.1, respectively.

Many other worthwhile suggestions and comments about Management and Research projects were listed by participants of the meeting. These are summarized in Appendix III.

Current Projects

In the third questionnaire, participants were asked to comment on the current projects of the Nongame Wildlife Program. When asked whether they thought the projects planned for 1981-82 were worthwhile and appropriate, 93 percent said, "yes," and 7 percent abstained. None said "no." They were then asked to list which of the projects they thought were most beneficial. The two projects receiving the most support (37%) were the wildlife viewing booklet and developing wildlife educational materials. These were followed by the observation

card program (30%), the Wildlife Watcher's reports (23%) and breeding bird survey (23%). All of the eight projects received support.

Participants were then asked what projects should be included that were not on the list. Four people thought we should identify critical habitats for nongame species. Two people each said that we should determine interrelationships between nongame wildlife, their habitats and other animals, and to rewrite the Wildlife Notebook Series to 3rd grade level so that they could be used in grade schools. Four other projects were suggested once: slant bibliographies toward habitat needs and the ecosystem approach; offer U of A credit for nongame observation, study, writing and research; produce kits that scouts could use to earn badges, and inventory important wildlife sites.

A final question asked which of the projects that the Nongame Wildlife Program was planning would the participants leave out. Two people were concerned that the Wildlife Viewing Booklet would put too much human pressure on certain wildlife areas. One person each suggested dropping the breeding bird survey, the observation card program and the urban wildlife project. One other person suggested spending less time on, but not dropping, the observation card program and breeding bird surveys.

Ninety percent of the participants volunteered to personally help out in one or more of the projects. This follows the trend of wide public support shown in both Anchorage and Fairbanks.

Funding

The final questionnaire of the meeting listed possible funding sources for a Nongame Wildlife Program and asked participants to rate each one on a 1-5 scale (see Appendix IV for details). Most of the funding sources listed were those used to fund nongame programs in other states. Under Federal sources, funds from the Nongame Act of 1980 was rated highest (4.3). These funds are not currently available. Money from the General Fund was rated highest (4.9) for State sources. The

Nongame Wildlife Program is currently funded solely through the General Fund. Private grants and donations both rated highly (4.3 and 4.4, respectively). People were also allowed to write-in possible sources and the largest number selected "contributions from industry (oil, timber, etc.) as mitigation" (4.8) and "individual donations from Permanent Fund dividend checks" (5.0).

Participants were also asked whether they would be willing to make an annual contribution to support the Nongame Wildlife Program, and if so, how much. Ninety-four percent said they would contribute, and the average contribution was \$15.88. This is a clear indication of public support for nongame wildlife.

APPENDIX I. Educational projects and comments suggested by participants of the 17 November 1981 meeting in Juneau.

Develop wildlife films and slide shows on species and their habitats for classroom use.

Provide an in-service program for teachers, University summer courses and high school programs.

Traveling libraries.

Writing, poster and speech contests.

Scholarship fund and foundation awards.

Newspaper flyers on events.

Photo and art activities.

Develop and help pay student materials to add to and enhance "seaweeek".

Provide suggested field trips that ADF&G personnel could use with children.

Provide field instructions for politicians and contractors.

Seaweeek locally has begun to worry me because of concentrations of humans on small habitats, taking specimens and momentos, etc.

The public needs to be educated about wildlife in general to provide a strong basis of support and to develop a conscientious attitude towards wildlife species and the whole ecosystem.

Set up a "wildlife seminar" program that would be a regular part of the curriculum throughout the school year.

Include public volunteers on research and field work possible for university credit.

Public education via radio, television spots, workshops, seminars and field trips.

Develop community adult education programs.

Some of the more conspicuous invertebrates should be included. Tidepool critter and insects should be covered in at least the education/information functions.

Get together with contractors, right-of-way people, Alaska light and power people, electric association people before they devastate areas needlessly. Help them to see what's there and what can be spared by their caring.

Create curriculum for Fish and Game personnel to use with kids.

Pay for ADF&G personnel time and materials to use with kids.

Develop slide shows on natural history, etc. for self education for teachers and students in schools.

Educate the educators and let them help you "spread the word".

Incorporate environmental education topics and techniques in teacher's education classes.

In-class presentations - guest lecturing - pull from all Divisions of ADF&G.

Expand Wildlife Notebook Series.

Provide more materials such as "For Young Alaskans" (from Fish Tales and Game Trails) and Wildlife Notebook Series to school-agers.

Expand production of films and slideshows.

Develop education materials unique to Alaskan species for use by teachers in Alaskan communities.

APPENDIX II. Information projects and comments suggested by participants of the 17 November 1981 meeting in Juneau.

Monthly television program on Alaska wildlife.

Upgrade Fish Tales and Game Trails - It should be a topnotch nationwide publication with good quality educational material.

I like the idea of nature/environmental education centers in Alaska - high priority but will need time for proper planning and funding.

To what extent might natural areas (through nature centers) be overwhelmed, radically or significantly altered and diminished by becoming more for tourists (in big and smelly buses) than residents?

Provide field information, bird areas, mammal areas, etc - ie. Field Guide to Alaska Wildlife Seeker.

Have some "guts" or meaning to newspaper and radio reports - not always niceties - some issue oriented.

Must stress the need for intact habitat that wildlife needs - that we all need in one way or another.

Publication for tourists/travellers on nongame species throughout Alaska, where to find them, etc.

I'd like to see our Alaska governor and other top officials recognize the value of our flora and fauna and so express their recognition.

Develop something like the Wildlife Notebook Series but in a form more useable in the field - maybe a series of brochures, booklets.

Wildlife information display at shopping centers.

Weekly reports in newspapers should include controversial development projects.

Annual report on this program.

Coordinate with ongoing programs.

Contribute to or provide more impetus to improving the ADF&G's information and education department ie. better magazine, more publications, better public relations.

APPENDIX III. Research and management projects and comments suggested by participants of the 17 November 1981 public meeting in Juneau.

Study effects of wildfires on nongame wildlife.

Old growth forest/bird relationships - high priority.

Low personnel use now - use all voluntary support.

Coordinate and cooperate with other agencies and individuals.

The amphibians and reptile populations are so limited in the number of species that work with them could be a lesser priority than fish.

Stress community studies rather than individual species studies.

Research is a very important aspect of nongame and should be well considered due to fast changing economic conditions.

Timber and mining effects on birds and nongame mammal populations.

How to minimize human impact on habitat.

Quantitative analysis of nongame populations.

I am concerned at the diminished puffin numbers.

Provide grants for persons doing research on specific nongame wildlife.

Money should be spent in more important areas, for example, poaching of game and nongame species.

Protect habitats from needless destruction. Take a look at the shame-

ful way our Juneau area creeks, streams and wetlands are being devastated.

In order to do research, there has to be an understanding by the public as to why the money needs to be spent on this.

Where do Canada geese spend their winters in southeast and why?

Develop closer coordination, especially with federal resource agencies.

Develop legal measures to protect resident fishes and other nongame species and their habitat.

Concentrate on species that need the help and monitor those that don't. Let Game take care of game.

The key task seems to be the evaluation of the status of nongame to animals of importance in themselves rather than as predators or food items for game species.

Statewide status of all species.

Investigate established, populated habitats and protect.

Establish more game farms or help those who would like to do this work get into it.

I would like to stress ecosystem non-management (preservation) to create native places for wildlife interactions to occur naturally.

Fish, amphibians and reptiles are important components of ecosystems where they occur, but generally not as visible and therefore less urgency in the public eye to identify/manage.

Survey Mendenhall Refuge for small mammals and nongame fish.

APPENDIX IV. Summary of the questionnaire on possible funding sources for the Nongame Wildlife Program, 17 November 1981, Juneau, Alaska. Rating is average value based on 5-point rating system (5 = high, 1 = low). (n) is the sample size for the rating.

<u>Rating (n)</u>	<u>Federal</u>
4.3 (26)	1. Fish and Wildlife Conservation Act of 1980 (Non-game Act).
3.5 (24)	2. Endangered Species Act.
3.5 (25)	3. Pittman-Robertson and Dingell-Johnson.
3.5 (20)	4. Contracts.
5.0 (1)	*5. Federal excise on equipment used in wildlife watching.
	<u>State</u>
4.9 (31)	1. General Fund.
3.6 (28)	2. License Fee (hunting and fishing).
3.1 (19)	3. Special Tax.
2.3 (21)	a. birdseed, birdhouses.
2.4 (20)	b. camping and backpacking equipment, binoculars.
2.3 (20)	c. wildlife art/photography.
2.2 (25)	4. Small fee for Alaskan tourists.
3.0 (26)	5. Personalized license plates.
3.1 (29)	6. Sale of nongame stamps, decals, arm patches, T-shirts, etc.
2.5 (25)	7. Special birding "license" similar to hunting.
5.0 (3)	*8. Individual donation from Permanent Fund dividend check.
4.0 (1)	*9. Tax on fill areas, gravel, stumpage.
5.0 (2)	*10. Sales tax.
4.0 (1)	*11. Membership in Nature Centers.

Private

- 4.3 (25) 1. Grants.
- 4.4 (27) 2. Donations (money and land).
- 4.8 (4) *3. Industry (oil, timber) mitigation.
- 5.0 (1) *4. Fines for violations.
- 5.0 (1) *5. Private non-profit organization board members include Nongame staff.

* Funding sources suggested by participants

Would you be willing to make an annual contribution to support the Nongame Wildlife Program?

94% - Yes

6% - No

How much?	\$1 - 2	\$10 - 10	\$15 - 5	\$25 - 4	\$30 - 4
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Average Donation: \$15.88.

APPENDIX IV. List of areas in the state as of 1 February 1982 where people have requested information from or asked to be put on the mailing list of the Nongame Wildlife Program.

Adak	Haines
Anchorage	Homer
Bettles	Juneau
Big Lake	Ketchikan
Chugiak	King Salmon
Cooper Landing	Kodiak
Copper Center	Kotzebue
Cordova	Manley Hot Springs
Craig	McGrath
Delta Junction	McKinley
Dillingham	Ninilchik
Eagle River	North Pole
Eielson AFB	Palmer
Elmendorf AFB	Seward
Ester	Sitka
Fairbanks	Soldotna
Fort Wainwright	Sterling
Girdwood	Valdez
Glennallen	Wrangell
Gustavas	

Appendix V

DRAFT

March 1, 1982

NONGAME WILDLIFE PROGRAM PLAN

Alaska Department of Fish and Game

MANAGEMENT

Goal: To maintain Alaska's nongame wildlife for the benefit of present and future generations

I. To maintain optimum sustainable populations of all native species of nongame wildlife in each region of the State.

A. Ensure adequate habitat is maintained for optimum sustainable populations of all nongame wildlife .

1. Make recommendations to Habitat Division, other state, federal or local agencies, or landowners for protection of restricted habitats, critical habitats for species of concern, species concentration areas and maintenance of adequate habitat of each type occurring in each region.

2. Propose recreational use guidelines to Boards of Fisheries and Game, other state, federal or local agencies, or landowners for maintaining the quality of restricted habitats, critical habitats for species of concern, species concentration areas and adequate habitat of each type occurring in each region.

3. Enhance or rehabilitate disturbed areas giving priority to restricted habitats, critical habitats for species of concern, and species concentration areas in each region.

B. Protect nongame populations from significant or unsustainable losses.

1. Make recommendations to appropriate agencies, groups or individuals to reduce or mitigate losses to populations.

2. Take appropriate management steps (predator control, revegetation, nest boxes, mitigation).

II. Maintain and enhance opportunities for use and enjoyment of non-game wildlife near population centers and transportation corridors in each region.

A. Maintain sufficient areas of each existing habitat type, species concentration areas, and habitats for species that have high public interest.

1. As necessary, propose protective land status to the Habitat Division, other state, federal or local agencies, or landowners.

2. As necessary, propose recreational use guidelines to Boards of Fisheries and Game, other state, federal, or local agencies, or landowners.

B. Where possible, enhance or rehabilitate areas near population centers giving priority to restricted habitat types, habitats for species of high public interest, and species concentration areas.

1. Rehabilitate disturbed areas.

2. Enhance through improved access, supplying interpretive materials, cleanup, etc.

C. When necessary, reintroduce extirpated nongame wildlife to areas near population centers or transportation corridors where they can be used and enjoyed by people.

RESEARCH (Management)

Goal: To obtain necessary information on nongame wildlife and habitats to support management objectives.

I. Determine methods of maintaining optimum sustainable populations of all native species of nongame wildlife.

A. Identify adequate habitats for nongame species in each region and type of protection needed to maintain optimum sustainable populations.

1. Identify adequate habitats.

a. Identify restricted habitats.

(1) Inventory all habitats in each region, to determine restricted habitats and habitats subject to major human alteration.

(2) Determine nongame species that are dependent on the most restricted habitats or habitats subject to major human alteration for all or part of their life cycle and the amount of that habitat required to maintain optimum sustainable populations.

b. Identify habitats used by species of concern in each region.

c. Identify species concentration areas.

2. Determine types of protection needed to maintain habitat for optimum sustainable nongame populations.

3. Identify areas needing rehabilitation or enhancement to maintain habitat for optimum sustainable nongame populations.
 4. Determine best methods for rehabilitating or enhancing disturbed habitats to maintain optimum sustainable populations.
- B. Determine significant or unsustainable losses to nongame populations.
1. Monitor populations to determine trends.
 - a. Research causes of any detected population declines.
 - b. Research methods of reversing population declines.
 2. Research factors suspected to adversely affect nongame populations to determine if they are causing significant losses (exotic species, environmental contaminants, harassment, etc).
- II. Identify opportunities for use and enjoyment of nongame wildlife near population centers or transportation corridors in each region.
- A. Identify existing areas of nongame habitat.
1. Identify areas of each habitat type.
 2. Identify species concentration areas.
 3. Identify species of high public interest and their habitats.

- B. Determine types of protection needed to provide opportunities for use and enjoyment.
- C. Identify areas near population centers for habitat enhancement and rehabilitation to allow use and enjoyment.
- D. Determine methods for rehabilitating or enhancing areas for human use and enjoyment.
- E. Identify extirpated species and determine desirability and methods for reintroduction.

INFORMATION AND EDUCATION

Goal: To provide the public with information on Alaskan wildlife, especially nongame species, and to provide opportunities for enjoyment of them, while ensuring minimal detrimental impact on the resource.

I. Provide information on wildlife, their habitats and methods of enjoyment, including these topics:

- A. Natural history of wildlife, with an emphasis on nongame species, including species of concern and species of high public interest.
- B. Wildlife/habitat relationships, including information on restricted and critical habitats within each region.
- C. Ecological roles of nongame species.
- D. Value of wildlife to people.
- E. Opportunities to enjoy wildlife including methods and ethics.

II. Use various methods to disseminate information to the general public in urban and rural areas, including cooperating with other government agencies, private organizations and individuals.

- A. Publish brochures, guidebooks and checklists.
- B. Produce programs using audio-visual media (radio, TV, slide shows, movies).
- C. Write articles for newspapers, magazines and newsletters.
- D. Sponsor or facilitate courses and workshops.

E. Develop or facilitate establishment of community nature centers.

F. Develop interpretive displays in viewing areas and other public facilities.

III. Use various methods to provide information to educators and youth group leaders in urban and rural areas.

A. Provide access to currently available materials.

1. Conduct in-service day instruction showing samples of available materials.

2. Supply lists of available materials for each region.

B. Develop additional materials as necessary.

1. Pamphlets.

2. Audio/visual programs.

3. Multi media kits or displays.

C. Provide instruction including field training on wildlife and their habitats.

1. In-service days.

2. Credit courses.

3. Workshops.

D. Promote inclusion or expansion of wildlife studies in school and youth group activities.

IV. Provide opportunities for public participation in research, management and information projects on nongame wildlife and developing projects and priorities of Nongame Wildlife Program.

- A. Encourage volunteers to participate in various projects including population monitoring, collection of status and distribution data, habitat enhancement and rehabilitation and developing interpretive materials.
- B. Encourage individuals and groups to organize research projects and other activities to supplement Nongame Wildlife Program activities.
- C. Solicit public comments through newsletters, biennial public meetings and the establishment of an advisory council.

RESEARCH (Information and Education)

Goal: To obtain necessary information on nongame wildlife and habitats to support information and education objectives.

- I. Gather and evaluate available interpretive materials on Alaskan wildlife, their habitats and methods of enjoyment.
- II. Identify and prioritize needs for additional interpretive and educational materials and facilities based on surveys of public attitudes and interest, and ADF&G assessment.
- III. Conduct literature reviews and research needed for interpretive and educational materials and facilities.

SCHEDULE AND JUSTIFICATION

Nongame Wildlife Program Plan

Background: Below is a brief summary of how, when, where and why we intend to implement the Nongame Wildlife Program Plan. We felt it was inappropriate to develop a specific year by year long-term plan because of uncertainties about funding, staffing and priorities. In a general way, the following paragraphs explain what the nongame staff felt the priorities should be for the next 5 years. If funding and staffing increase, the schedule can be advanced and more can be accomplished in a shorter period of time. Table 1 in the 1981 Annual Report is a more specific schedule of what we hope to accomplish in Fiscal Year 1983. An approximate time schedule for the next 5 years is shown in Table 1 of this plan. It is estimated that 50% of staff time will be devoted to Management/Research projects and 50% to Information/Education projects in 1983. In succeeding years approximately 70% of staff time will be devoted to Management/Research projects with the remaining time used for Information/Education projects.

[In the following discussion, the number and letter combinations refer to sections in the Nongame Wildlife Program Plan outline.]

Table 1. Tentative 5-year schedule for implementing Nongame Wildlife Plan. The year the project will be conducted is marked with an "X". Letters and numbers at left designate where projects are found in Nongame Wildlife Plan.

Project	Fiscal Year				
	1983	1984	1985	1986	1987
<u>MANAGEMENT/Research</u>					
<u>Habitat Monitoring</u>	Southeast	Central Southeast	Southcoastal Central Southeast	Western Southcoastal Central Southeast	Northern Western South- coastal Central Southeast
(Management and Research IA 1 and 2)					
<u>Pop. Monitoring</u> (continuing)					
Breeding bird (passerines)	x	x	x	x	x
Mammals	x	x	x	x	x
Seabirds		x	x	x	x
Owls		x	x	x	x
(Mgmt. IB 1 & 2) (Res. IB 1 & 2)					
<u>Obsevation Cards</u> (I & E IV. A)					
	x	x	x	x	x
<u>Research Projects</u>					
SE birds & mammals	x	x	x	x	
Marbled Murrelet-SE		x	x	x	
Agriculture/nongame	x	x	x		
Fire/succession		x	x	x	
Disturbance-swans/loons		x	x	x	
Disturbance-seabirds				x	x
Logging debris effects				x	x
(Management and Research IA 1 and 2)					

} review
by
PRC

} Review by
PRC

} Review
by PRC

Table 1 (cont'd)

Project	Fiscal Year				
	1983	1984	1985	1986	1987
INFORMATION AND EDUCATION					
Wildl. Watcher Reports (3-4/yr)	x	x	x	x	x
Wildl. Watcher Notebooks (bi-weekly)	x	x	x	x	x
Newsletters (2/year)	x	x	x	x	x
Wildlife Notebook Series	x	x	x	x	x
National Newsletter	x	x	x	x	x
FTGT articles	x	x	x	x	x
Newspaper articles	x	x	x	x	x
Slide/tape shows	x	x	x	x	x
Wildlife Week	x	x	x	x	x
Interpretive Signs	x	x	x	x	x
In Service Days	x	x	x	x	x
Biennial Meeting	x		x		x
Observation Card Report	x	x	x	x	x
Annual Report	x	x	x	x	x

MANAGEMENT and RESEARCH PROJECTS

Management IA 1 and 2; Research (Management) IA 1 and 2

Beginning next year in Southeast, and for the next 5 years or more in other regions, we plan to inventory habitats and nongame species to identify restricted habitats, species of concern and their habitats, nongame species concentration areas, and species dependent on habitats subject to human alteration so that we can make recommendations to Habitat Division of Fisheries and/or Game or other agencies, and present use guidelines to the Boards or other agencies that will ensure maintenance of adequate habitat for nongame species.

This process will begin in Southeast Alaska (1983), followed by Central Alaska (1983 or 84) and Southcoastal Alaska (1985). Priorities for other regions of the state will be determined at a later date. After 2 years of intensive work in a region, the process will become one of annual or biennial monitoring.

Research projects needed to provide specific information on nongame species habitat requirements will be conducted by staff, graduate students or through contracts. Over the next 5 years, we foresee research projects on: habitat requirements of forest birds and small mammals in Southeast Alaska (1983-85); effects of agriculture on selected nongame species (1983-85) marbled murrelet nesting habitat (1984-86); effects of fire and forest succession on nongame birds and mammals (1984-86); effects of disturbance and urbanization on loons and trumpeter swans (1984-86); effects of disturbance on seabird colonies (1986-87); effects of logging debris on wintering seabirds (1985-87); northern flying squirrel habitat requirements in Southeast Alaska; plus several others.

Justification: Habitat alteration is the single most important factor affecting nongame populations in Alaska. Logging and agriculture are altering the largest quantities of habitat at present. These pose the most immediate potential threats to healthy nongame wildlife

populations. Until we have more information on the habitat requirements of nongame species and the effects of these habitat alterations, we cannot make recommendations for minimizing or mitigating any adverse impacts. Staff and/or graduate student research projects on various ecological topics mentioned above would greatly increase the amount of information available on nongame species in Alaska and improve management and maintenance of their populations.

The habitat approach was used for several reasons: 1) it is likely the only feasible way of managing more than 400 nongame species; 2) habitat characteristics can be inventoried more easily than the animals themselves; 3) habitat controls the abundance and distribution of nongame wildlife.

Research (Management) IA 3 and 4

At this time we do not foresee a need to enhance or rehabilitate habitat for the purpose of maintaining optimum sustainable populations.

Management IB 1 and 2; Research (Management) IB 1

Over the next 5 years we plan to establish population monitoring programs for songbirds (1982), small mammals (1983), seabirds (1984), and owls (1984). Other species groups may be added in the future if necessary. These monitoring programs will be conducted by staff and volunteers. It is unlikely that any population trends will be detected until several years of data have been collected.

Justification: We feel that this type of monitoring program is the only feasible and reliable means to obtain baseline information on population sizes, trends and habitat use. With sufficient long-term data we should be able to detect adverse impacts to the populations.

Management IB 1 and 2; Research (Management) IB 2

During the next 5 years we plan to identify factors suspected of

causing losses to nongame populations, and if necessary conduct research to determine if the losses are significant. Management action will be implemented if research indicates the losses are significant.

Justification: Besides habitat alteration, other factors (e.g. air or water pollution, introduction of exotic species, pesticides) may be adversely affecting nongame populations. If any population losses are significant, the causes of the declines should be identified and corrected.

Management II A and B; Research (Management) II A, B, C and D

During the next 5 years, we plan to identify opportunities for wildlife enjoyment near population centers and transportation corridors throughout the state, with particular emphasis on Anchorage, Fairbanks and Juneau. If necessary, we will make recommendations for land protection, recreational use guidelines or habitat rehabilitation and enhancement. In some cases, we may find it desirable to contribute time or money for enhancement or rehabilitation.

Justification: Many areas near population centers and transportation corridors provide residents and visitors with opportunities to enjoy, learn about and use Alaska's nongame wildlife. We plan to ensure that opportunities for nonconsumptive wildlife use are maintained in these areas. Also, in some cases, we may find it desirable to enhance or rehabilitate areas to improve opportunities for human use and enjoyment of wildlife.

Management II C; Research (Management) II E

We do not foresee any need for reintroductions in the next 5 years.

INFORMATION and EDUCATION PROJECTS

Information and Education I A-E; Research (I and E) I

We plan to disseminate information on the subjects outlined in these sections of the plan. Specific topics may vary according to program activities and priorities. Nongame staff will spend 30% to 50% of their time on information and education projects.

Justification: The public has expressed a clear desire for more information about nongame wildlife, their roles in the environment and their values to man. Projects of this nature scored high rankings on our questionnaires at public meetings. Therefore, we feel obligated to provide quality information of this sort.

Information and Education II A-F: Research (I and E) II

We plan to publish 3 or 4 Alaska Wildlife Watcher Reports per year (1981-1987), a statewide guide to wildlife viewing (1982), and local guides to wildlife viewing as appropriate. We plan to continue our biweekly radio program "Wildlife Watcher's Notebook" (1981-?). In 1983-84 we plan to contract the collection of quality recordings of bird and mammal vocalizations for use in audio/visual programs (radio, slide/tapes, video and TV). Staff will assist where needed to develop nature centers at Potter Marsh, Creamers Field and Mendenhall Flats.

Staff will write articles, sponsor or facilitate courses and workshops, and develop interpretive displays as appropriate for their regions. Potential sites for cooperative displays are: Chena Lakes Recreation Area (Fairbanks - 1984); Fort Richardson (1983-84), Chilkat River (1983-84).

Justification: Response we have received about both our Wildlife Watcher Reports (brochures) and Wildlife Watchers Notebook (radio programs) has been very favorable.

We feel that these are an excellent means of getting timely and useful material to the public. Using bird and mammal vocalization greatly enhances the quality of radio programs and will likewise enhance slide/tape shows.

Writing timely articles, conducting courses and providing interpretive materials are proven methods of providing information to the public. We intend to continue these activities as time and money allow.

Information and Education: III A-D; Research (I and E) III

Over the next 5 years, staff will gather wildlife educational materials and provide educators and youth group leaders access to these by developing regional lists of materials and sources, and giving in-service days to teachers.

One major project is to develop a statewide Alaska Wildlife Week. This project includes developing posters, activity guides, and background materials and lists of supplemental material on Alaska wildlife (nongame and game) from other sources to be combined as a packet for distribution to urban and rural teachers. Also, supplementary slide-shows and videotapes will be distributed to all school districts. The Alaska Wildlife Week theme will vary from year to year (in fiscal year 1983 the theme will be Alaska's wildlife habitats). Volunteer teachers and biologists are assisting in developing the packet and videotape. The packet will be supplemented by in-service day training at urban and rural school districts.

Justification: All the teachers we have talked with about the Nongame Wildlife Program have expressed the need and desire to get more information about Alaska's wildlife to their students. The Alaska Wildlife Week materials will help educators teach students greater appreciation for Alaska's wildlife, and related biological concepts. Instructing teachers about wildlife at in-service days may help alleviate the need for Fish and Game biologists to repeatedly visit schools to give talks for 1 or 2 classes at a time.

Information and Education IV A

Population monitoring: Volunteers will be encouraged to run surveys along roads, trails, coastlines and rivers through Alaska. The surveys will be conducted by qualified amateur or professional biologists. Anyone with a strong interest can attend training workshops and participate as trainees until they have gained the identification proficiency necessary to conduct surveys on their own. See Management (Research) I.B.1. for more survey information or monitoring program schedules.

Status and Distribution Information: Observers will be encouraged to send in observations of selected nongame species on printed forms for each region beginning in 1982 and continuing as long as useful information is provided. Observations will be evaluated by a review committee of biologists to ensure accuracy; then sorted and filed. A summary report will be compiled each year and sent to participants. In 1984, we plan to expand the program by having a data management specialist set up and run a computerized mapping and data retrieval system and to incorporate literature information. Thus, we can document occurrence, distribution and habitat use of nongame species throughout the state.

We need information on the distribution abundance, and habitats used by nongame wildlife to manage nongame species and to provide information to the public on when and where they can enjoy wildlife. By using volunteers, we will be able to obtain much more information at a small cost. Also, we are providing an opportunity for public involvement in nongame projects which was a desire expressed at our public meetings.

These methods have been used successfully by other states. They increase the quantity of data generated, and improve and maintain good public relations.

Information and Education: IV A-C

We plan to continue to encourage volunteer participation in writing Wildlife Notebook Series, developing wildlife educational materials, and rehabilitation or enhancement projects (1982 on). We plan to encourage youth groups to undertake landscaping for wildlife projects and to encourage groups to assist in identifying opportunities for wildlife enjoyment.

In 1984, we plan to initiate a program to provide small ~~grants~~ ^{contract} to individuals or groups wishing to conduct small scale studies that relate to Nongame Program priorities. Up to \$2,000 would be set aside for this grant program each year.

We plan to continue involving the public in developing program projects and priorities by publishing a newsletter twice each year, holding biennial meetings (next in spring 1983) and by establishing a nongame advisory council (1983-84).

Justification: Using volunteers to as great extent as possible is beneficial for several reasons. It allows staff to spend more time and money on other projects, and to tap outside expertise. It keeps the public involved and interested in the program. This may be particularly important if we try to supplement Nongame Wildlife Program funds with donations. People will be more likely to donate to the program if they have a personal involvement in it.

This same reasoning applies to the small grants for research program. The Nongame Wildlife Program will have research accomplished at a low cost, and will benefit from the increased public interest.

A biennial meeting will keep the public and other agency personnel informed on nongame research in Alaska and allow public input for planning future studies and projects. The advisory council, made up of persons with specific knowledge of nongame needs, will guide the implementation of the Nongame Wildlife Program plan, and be a valuable liaison to the general public.

NONGAME WILDLIFE CONSERVATION ACT

Introduction and Purposes:

Wild animals and their habitats are treasured by Alaskans and used for many activities including hunting, fishing, trapping, photographing, and viewing as well as learning and teaching. Though all these uses are beneficial in economic, conservation, cultural, and aesthetic terms, only the former uses (hunting, fishing, and trapping) have been recognized fully and reflected in management programs by the Alaska Department of Fish and Game. Wildlife species used for hunting, fishing, and trapping have received nearly all the research and management attention of the Department, while unharvested wildlife have received very little.

This situation does not arise from disinterest by Fish and Game biologists or the general public but results from funding constraints. At present, Sport Fish and Game programs are funded primarily by sportsmen's license fees and matching Federal funds derived from taxes on hunting and fishing equipment. The problems facing harvested wildlife populations as well as the needs and desires of sportsmen require the annual expenditure of these monies on research and management of big game, small game, furbearers, and sport fish. In 1981 these monies amounted to millions of dollars.

In recognition of both the many beneficial uses of wildlife other than hunting and fishing and the wide variety and abundance of unharvested wildlife, the 1980 legislature appropriated \$150,000 to fund a "Nongame

Wildlife Program." This program was set up to "provide the Department of Fish and Game a better means of serving the nonconsumptive user groups of Alaska's fish and wildlife." The attached legislation proposal is to further define the responsibilities of the Department of Fish and Game in regard to these user groups and unharvested wildlife species. It also provides a means for wildlife users, other than sportsmen, to support the Department's nongame wildlife conservation program.

A recent survey of Alaskans by Stephen Kellert of Yale School of Forestry and Environmental Studies revealed that Alaskans, in general, have an "exceptional knowledge, ecological appreciation, and interest in wildlife" in comparison with other Americans. A U.S. Fish and Wildlife Service survey of users of the Kenai National Wildlife Refuge (formerly Kenai National Moose Range) indicated that 45 percent of the use last year was for wildlife and wildland observation and photography. In comparison, hunting and fishing made up 24 percent of the use.

Despite this widespread interest and concern for Alaska's wildlife, there is no adequate means for all citizens to contribute to the State wildlife conservation program to ensure attention to their needs and desires and the needs of nonharvested wildlife.

Current status, distribution, abundance, and habitat requirements of most wildlife in Alaska are poorly known. Less than 10 percent of Alaskan bird species and 40 percent of Alaskan mammals presently are

harvested, yet these species receive the bulk of the Department of Fish and Game's attention. In order to ensure the continued abundance, diversity, and visibility of nongame wildlife in the State, research and management are sorely needed. Because of the interrelationships of game and nongame species and the dependence of all wildlife on adequate habitat, conservation of nongame species will also benefit game species.

Other states have faced similar problems in obtaining monetary support for nongame wildlife management and programs for nonconsumptive users. A wide variety of techniques for obtaining this support has been tried including sales of nongame stamps, T-shirts, personalized license plates, and sales taxes. The most successful method has been a voluntary tax refund checkoff program. Through this program, taxpayers eligible for a refund may indicate on their tax form that they wish to contribute part of their refund to nongame wildlife conservation. Colorado was the first state to attempt this checkoff. In the first year \$350,000 was contributed, in the second \$500,000, and this past year \$740,000. In 1981, the first year of Minnesota's tax checkoff program, its citizens contributed nearly \$700,000. These results indicate the concern and interest of the public, as a whole, in wildlife and suggest that a similar program of voluntary contributions might also generate funds for an Alaskan program.

As Alaskans no longer pay State income taxes, the tax refund checkoff is not a possibility. However, the Permanent Fund dividend would allow a similar, easily administered means of allowing citizens to contribute

to a wildlife conservation program directed towards the aesthetic and educational values of wildlife. The anticipated total amount of money would be less than generated in other states because of the lower population in Alaska. However, a higher proportion of Alaskans might be expected to contribute, and in larger amounts.

Funding for the Nongame Wildlife Program might also be sought from Alaska tourists. The opportunity to view Alaska wildlife is a major drawing card for tourists. This large group of nonconsumptive users places a high value on wildlife and might be willing to contribute money to the State for the purposes of wildlife conservation. A voluntary "Alaskan Wildlife Watcher ^{Certificate} ~~License~~" certifying the bearer's contribution to wildlife conservation in Alaska could be sold to tourists. Since the license would not be mandatory, it would not affect tourism nor create problems of enforcement. However, the license would allow nonresidents and tourists, who do not receive Permanent Fund dividends, to demonstrate their interest and concern for Alaska wildlife in a positive manner.

The attached draft legislation establishes the Permanent Fund dividend checkoff and the voluntary "Alaskan Wildlife Watcher ^{Certificate} ~~License~~." Additionally, it defines the terms "nongame" and "nonconsumptive user."

Passage of a bill such as the attached legislation would result in a more widely supported, better funded, and more effective wildlife conservation program in Alaska.

AN ACT

Relating to nongame wildlife and nonconsumptive uses of wildlife

Be it enacted by the Legislature of the State of Alaska:

[Underlined material indicates text that is being added to the law and bracketed material in capital letters indicates deletions from the law; completely new text or material repealed and re-enacted is identified in the introductory line of each bill section.]

*Section 1 A.S. 16.05.050(8) is amended to read:

(8) provide public facilities where necessary or proper to facilitate the taking and/or nonconsumptive use of fish and game and enter into cooperative agreements with any person to effect them.

*Section 2 A.S. 16.05 is amended by adding a new paragraph.

16.05.055(1) Voluntary Nongame Wildlife Dividend Checkoff.

A voluntary checkoff designation will be provided on individual Permanent Fund dividend application forms as follows:

Alaska Nongame Wildlife Program. Check [] if you wish to designate \$5, \$10, \$25, or \$_____ (fill in amount) of your Permanent Fund dividend to this program.

rewrite

(2) Each individual Alaskan filing a Permanent Fund dividend application may designate, by placing an X in the appropriate box and circling the desired amount on the Permanent Fund dividend application form, that their contribution shall be credited to said program through the Fish and Game Fund.

*Section 3 16.05.110 is amended by adding a new paragraph:

(7) money received from the Permanent Fund dividend checkoff

*Section 4 16.05.130. is amended to read:

16.05.130. Diversion of funds prohibited. (1) No funds accruing to the state from sport fishing and hunting licenses or permit fees may be diverted to a purpose other than the protection, propagation, investigation, and restoration of sport fish and game resources and the expenses of administering the sport fish and game divisions of the department.

(2) No funds accruing from the Permanent Fund dividend checkoff or the wildlife watcher's ^{certificate} license may be diverted to a purpose other than the protection, propagation, investigation, and restoration of nongame wildlife, providing for public enjoyment and nonconsumptive uses of fish and game, and the expenses of administering the Nongame Wildlife Program within the Game Division.

*Section 5 16.05.255(3) is amended to read:

(3) establishment of the means and methods employed in the pursuit, capture, transport, and nonconsumptive uses of game.

*Section 6 16.05.340 is amended by adding a new paragraph:

(f) A wildlife watcher's ^{certificate} ~~license~~ will be made available to the public for the purpose of providing a means for nonconsumptive users, particularly visitors and nonresidents, to contribute monies to the Fish and Game Fund for the purposes of conservation of nongame wildlife, providing for public enjoyment and nonconsumptive uses of fish and game, and the expenses of administering the Nongame Wildlife Program within the Game Division. This ^{certificate} ~~"license"~~ is voluntary only and is not required for nonconsumptive use of wildlife. The annual contribution to receive a "Wildlife Watcher's ^{certificate} ~~License~~" shall be \$2.50 for Alaska residents and \$5.00 for nonresidents and visitors.

Section 7 A.S. 16.05.940 is amended by adding the following paragraphs:

(26) nongame wildlife - a classification of game and fish which includes those species which are not ordinarily hunted, fished, or trapped, and harvested species in areas where nonconsumptive use is the primary beneficial use. Fish and game shall be classified as nongame wildlife by the Board of Game and Board of Fish based on recommendations by the Department.

(27) nonconsumptive uses - any use of fish, game, plants, or invertebrates for human enjoyment, education, art, or science, that does not include harvest of fish and game for sport, subsistence, or commercial purposes, including, but not limited to, photography, viewing, teaching, tourism specifically for wildlife viewing, and research.

*Section 8 A.S. 16.05.940(g) is amended to read:

(9) "game" means any species of bird, mammal, reptile, including a feral domestic animal, found or introduced in the State except domestic birds, mammals or reptiles; and game may be classified by regulation as big game, small game, furbearers, nongame wildlife, or other categories considered essential for carrying out the intention and purposes of this chapter;

APPENDIX VII. Draft Plan - Wildlife Viewing Booklet.

Outline: A Guide to Alaska Wildlife Viewing

Authors: Nongame Wildlife Program Staff, Alaska Department of Fish and Game.

I. Introduction

II. Wildlife Watching Techniques

- A. Where (edges, indicating importance of habitats, etc.)
- B. When (time of day, season - refers to calendar)
- C. How (quiet, use all senses, animal sign, sounds)
- D. Equipment (binoculars, spotting scopes, cameras, field guides, suitable clothes, etc.)

III. Ethics of Wildlife Watching and Photography (landowners, examples of bad and good photos, signs of animal wariness, nesting birds, young animals, aircraft, snowmachines, dogs, etc.)

IV. Alaska's Wildlife Habitats (overview - map)

- A. Coastal spruce-hemlock (clearcut, second growth, old growth)
- B. Spruce-hardwood (see Example #1 format)
- C. Open spruce forest (forest, bog)
- D. Dry tundra
- E. Wet tundra
- F. Alpine tundra
- G. Ice and snow
- H. Coastal lagoon/barrier island systems
- I. Freshwater (riparian, stream banks, lakes)
- J. Oceanic islands (Pribilofs, Aleutians) - Salt water
- K. Coastal wetlands - river deltas
- L. Man-made (cities, roadcuts, dumps, gravel pits, agricultural fields)

*V. Wildlife Viewing Calendar (see Example #2)

*VI. Special Areas (see Example #3)

A. State

1. Alaska Department of Fish and Game

2. Parks

B. Borough

C. Federal

1. Refuges

2. Parks

3. BLM

4. Forest Service

VII. Index to Animal Viewing (cross-referenced by region and habitat)

A. Mammals

B. Birds

C. Fish

D. Amphibians

E. Reptiles

Example #1

IV. Alaska's Wildlife Habitats

B. Spruce-hardwood

1. Habitat description (effects of fire and patterns of succession)
 - a. Recent burn
 - (1). Use by mammals
 - (2). Use by birds
 - b. Shrub-sapling
 - (1). Use by mammals
 - (2). Use by birds
 - c. Young forest
 - (1). Use by mammals
 - (2). Use by birds
 - d. Mature old-growth forest
 - (1) Use by mammals
 - (2) Use by birds
2. Access and special areas
3. Special viewing opportunities (season of events of interest and special places to visit)
4. Cautions

EXAMPLE #2 (Wildlife Viewing Calendar)

Northern Region

<u>Month</u>	<u>Coastal Lagoon</u>	<u>Wet Tundra</u>	<u>Dry Tundra</u>
January			
February			
March			
April	Bowhead whale migration Eider migration begins		
May	Snow buntings singing Shorebirds arrive		
June	Beluga whale migration Foxes get summer coat	Shorebirds singing and nesting Loons calling	
July	Drake eider migration Eiders on nests Red phalaropes staging	Pectoral sandpipers staging Young fledging	Postcalving caribou aggregations Muskoxen on the coastal plain?
August	Arctic terns staging Female eider migration	Loons fledge	
September	Loon migration Oldsquaw migration		Caribou migration?
October			
November			
December	?Polar bears come in to coast?		

Example #3 Special Wildlife Viewing Areas and Opportunities

Name: _____

Location: _____

Agency (name, address, phone, and contact person): _____

Size: _____

Habitat: _____

Open for visitors: _____

Unique wildlife viewing opportunities: _____

Access: _____

Facilities: _____

Trails: _____

Camping: _____

Permits required: _____

APPENDIX VIII.

Wildlife Watcher Report (Vol. 1, No. 1)

WINTER BIRD-FEEDING IN ALASKA

Winter is a quiet season for birds in Alaska. Most migrate south to wintering areas in the Lower 48, Mexico, South America, and Polynesia. But, some species remain in Alaska through the winter.

Even in the northernmost regions of Alaska, some ravens, snowy owls, and gyrfalcons remain, and off-shore, murre and a few gulls linger near openings in the pack ice.

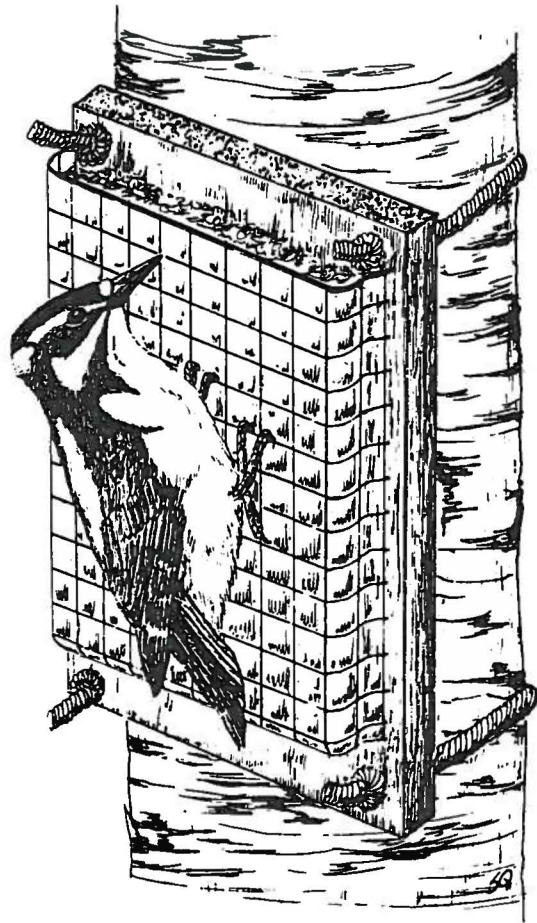
Over 25 species endure the harsh winters of interior and western Alaska, and over 100 stay through the milder coastal winters of southcoastal and southeastern Alaska.

Diverse in form, colors and habits, Alaska's winter birds fascinate observers. However, low numbers of birds, their secretive habits, and the short winter days make bird-watching difficult. Cold binoculars and frozen fingers don't help matters, either!

Bird-feeding is a popular way of attracting some winter birds to areas where their beauty and activities can be enjoyed. This hobby is a rewarding way to learn more about birds and other wildlife. The success of a bird-feeding station is determined by the time it is operated, the types of food offered, and the placement of feeders. The following information is meant to help you operate a feeding station that will attract a variety of birds. More information on bird-feeding and on bird identification can be found at your local library or bookstore.

WHEN TO FEED BIRDS: Some birds will visit feeders year-round once they are familiar with the location of a dependable food supply. Birds are most easily attracted in winter, however, because natural food supplies are least abundant then. Feeders should be set up in late summer or early fall, then maintained through the winter and spring until natural food sources are again abundant.

Once you begin feeding birds in the fall, you have made a commitment. A feeder often attracts more birds to an area than natural food sources can support. Thus, if you stopped feeding them, the birds might not be able to find enough food to survive. So, if you plan a vacation, be sure to have someone restock your feeder regularly while you are gone.



Vol. 1 No. 1

ALASKA WILDLIFE WATCHER'S REPORT

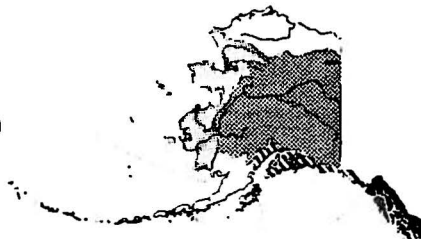
ALASKA DEPARTMENT OF FISH AND GAME — NONGAME WILDLIFE PROGRAM

WINTER ABUNDANCES OF BIRDS THAT OFTEN COME TO FEEDERS IN ALASKA

(c-common; u-uncommon; r-rare). The species visiting your feeder will depend on the region you are in and the local habitat (open or forested area; forest type; and coastal or inland site).

Species	No*	Ce	We	Sw	Sc	Se	Preferred Foods**
Yellow-bellied Sapsucker						r	1
Downy Woodpecker		u	r	r	u	u	1
Hairy Woodpecker		u			u	u	1
Northern Three-toed Woodpecker		u	u	u	r	u	1
Black-backed Three-toed Woodpecker		r					1
Steller's Jay					c	c	1, 2, 5
Gray Jay		c	u	u	r	r	1, 5
Common Raven	u	c	c	c	c	c	1, 5
Black-billed Magpie		c	r	c	c	c	1, 5
Gray-headed Chickadee		r	r				1, 2
Black-capped Chickadee		c	u	u	u	u	1, 2
Boreal Chickadee		c	u	u	r		1, 2
Chestnut-backed Chickadee					c	c	1, 2
Red-breasted Nuthatch		r		r	r		1, 2
Winter Wren				c	u	c	1
Pine Grosbeak		u	u	u	u	c	2, 6
Gray-crowned Rosy Finch				c	r	r	3, 4
Hoary Redpoll		c	c	c	r	r	3, 4
Common Redpoll		c	c	c	c	c	3, 4
Pine Siskin					u	c	4
Red Crossbill					r	c	2, 4
White-winged Crossbill		u	u	u	u	c	2, 4
Dark-eyed Junco		r		r	u	u	3, 4
Tree Sparrow				r	r	u	3, 4
White-crowned Sparrow					r	r	3, 4
Golden-crowned Sparrow					r		3, 4
Fox Sparrow					r	r	3, 4
Snow Bunting		r	u	c	r	u	

- *
 - No — Northern
 - Ce — Central
 - We — Western
 - Sw — Southwestern
 - Sc — Southcoastal
 - Se — Southeastern



- ** 1 Suet and other fats
 2 Sunflower seeds (unsalted; w/shells)
 3 Cracked peanuts, millet, and/or mixed grains
 4 Thistle seeds
 5 Kitchen scraps
 6 Berries

*Distribution information from R. H. Armstrong, 1980. *A Guide to the Birds of Alaska*. Alaska Northwest Publishing Co.

OTHER WILDLIFE ATTRACTED TO FEEDERS: Visits by squirrels can be a reward or the bane of bird feeding, depending on your outlook. RED SQUIRRELS visit feeders during the day and eat seeds, suet, and food scraps. Although many people enjoy their antics, their chittering, gnawing, and tendency to hog the feeder, irritates others. Ingenuity is required if you wish to keep them away from your feeders.

NORTHERN FLYING SQUIRRELS are active only at night so most people are unaware of these fascinating creatures. Those who discover flying squirrels visiting their feeders are usually too interested in them to dislike their nighttime noises. Flying squirrels are particularly attracted to suet and sunflower seeds.

HAWKS, OWLS, AND SHRIKES are sometimes attracted to feeders by the bird activity around them. Sharp-shinned hawks, boreal and saw-whet owls, and northern shrikes sometimes prey on chickadees, sparrows, and other birds visiting a bird feeder. Their presence may affect numbers of birds visiting your feeder, but the chance to closely observe these uncommon and secretive birds should compensate for that. Predatory birds should not be harrassed or killed; all species are protected by both state and federal laws.

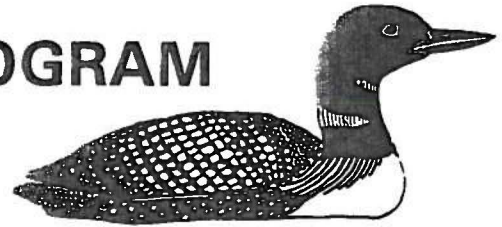
Written and illustrated by Susan E. Quinlan, Nongame Biologist, Alaska Department of Fish and Game, 1981.

APPENDIX IX.

Nongame Wildlife Newsletter

ALASKA DEPARTMENT OF FISH AND GAME

NONGAME WILDLIFE PROGRAM NEWSLETTER



VOL. 1 NO. 1

SEPTEMBER 1981

THE ALASKA DEPARTMENT OF FISH AND GAME NONGAME WILDLIFE PROGRAM 1981-1982

This new program originated in response to public interest in a state wildlife program concerned with wildlife appreciation and focusing attention on Alaska's unharvested species. Thus, the Nongame Wildlife Program is for photographers, bird watchers, tourists, artists, teachers, scientists, writers, outdoor enthusiasts, conservationists, sportsmen, and probably you!

"Nongame wildlife" includes those species that usually are not hunted, fished, or trapped such as seabirds, shorebirds, owls, and small mammals. Game species also may be considered "nongame," or "watchable wildlife," where wildlife viewing is a primary use (for example, brown bears at McNeil River and waterfowl at Creamer's Field).

Based on public input at a planning workshop in Anchorage, June 1981, the Nongame Wildlife Program has begun several projects. Whether you are an amateur naturalist, a scientist, or just interested in wildlife, the Nongame Wildlife Program needs your help. We need volunteer assistance and your ideas, opinions, and knowledge as we continue to plan the program's future. Read about our current and potential projects and how you can help inside. Use the form on the back page to send us your comments and/or volunteer to help us.

The Nongame Wildlife Program is currently funded by a General Fund appropriation from the legislature. Its future depends upon citizen support and interest. As you know, most Alaska Department of Fish and Game monies come from sportsmen, and most of it goes to support research and management of harvested species. We hope to have a means of funding the Nongame Wildlife Program through contributions from all wildlife users.

In other states, nongame wildlife programs are funded by state income tax checkoffs, whereby citizens can contribute part of their refund to the program. This past year, Coloradoans contributed \$740,000 and in Minnesota taxpayers contributed \$700,000 to support state nongame programs. ADF&G hopes to develop a similar avenue for contributions in Alaska, though it must be an innovative one as we no longer pay State income taxes. We are open to suggestions.

Alaskans are said to have a higher interest and knowledge of wildlife and their habitats than any other group of Americans—excepting those with graduate degrees. If that exceptional regard for our natural world can be translated into support for ADF&G's Nongame Wildlife Program, the Alaska Department of Fish and Game may develop one of the finest state nongame wildlife programs in the nation. It's up to you.

1981-1982 PROJECTS — CAN YOU HELP?

1. **A Statewide Guide to Alaska Wildlife Viewing:** where, when, and how to see Alaska's unique wildlife. Tips on how you can find wildlife anywhere in Alaska as well as information on unique viewing areas. Where and when can you see over a million shorebirds migrating? A brown bear fishing for salmon? A tufted puffin?

Needed: Wildlife photos and information on 1) places to see wildlife, 2) people or organizations who lead wildlife viewing trips, and 3) accommodations in remote areas.

2. **Observation Card Program:** Little is known of the distribution, abundances, and status of nongame birds, mammals, amphibians, and reptiles in Alaska. Amateurs can contribute significantly to our knowledge of many of Alaska's wildlife species. If you can identify a boreal toad, a great blue heron, or an arctic tern, you can help. Regional lists of information needs are being prepared along with observation cards to report sightings and will be available on request.

Needed: Wildlife observations from urban, suburban, rural, and wild areas.

3. **Wildlife Watcher Reports:** This series of reports will cover topics of interest to anyone who enjoys wildlife. Information on feeding birds, landscaping yards for wildlife, building bird houses, watching and photographing wildlife without disturbing the animals as well as naturalist's guides to State wildlife refuges and special wildlife areas are among the upcoming topics.

Needed: Your desires — what do you want to know about wildlife, wildlife habitats, and wildlife viewing in Alaska?

4. **Urban Wildlife Demonstration Project:** To demonstrate how to attract wild birds and mammals. Special areas in Fairbanks and possibly Anchorage will be landscaped with native plants to supply food and cover for wildlife. Bird houses and bird feeders of various designs will also be displayed. A **Wildlife Watcher Report** on this topic will supply information on landscaping for wildlife throughout the State—seed sources, planting instructions, and wildlife you can expect to attract.

Needed: Gardeners — to provide information on how to cultivate wild plants and assist in planning.
Youth Groups — to assist in planting, building bird houses, and construction.
Landscapers — to assist in design.
Students — to monitor use by wildlife for school projects.
Homeowners — to learn from the project and enhance their own property.

5. **Breeding Bird Survey:** We have virtually no information on the population trends of Alaska's nongame birds. Only by organizing volunteers throughout the State to conduct annual bird surveys along road and trail systems, can we hope to monitor bird populations. Information from these surveys will help forewarn of declining populations, indicate expanding populations, and help us understand erratic fluctuations in numbers of species such as crossbills.

Needed: Experienced bird watchers, and individuals wishing to become experienced.

6. **Wildlife Education Materials:** Teachers have often complained that there are few teaching aids available that deal specifically with Alaskan wildlife. We plan to work with teachers who are interested in wildlife to develop teaching materials, provide in-service day instruction, and develop credit courses for teachers to learn about wildlife conservation.

Needed: Teachers interested in helping us plan and develop teaching aids on Alaskan wildlife. All grade levels.

7. **Wildlife Notebook Series:** The Alaska Department of Fish and Game publishes a series of short reports on Alaskan wildlife. The Wildlife Notebook Series are widely used by teachers, authors, and the general public. Though a few nongame species such as pika and hawks have been covered, more reports on nongame species are needed. Staff biologists will be writing many, but we would appreciate assistance from individuals with special knowledge or interest in a nongame species or group.

Needed: Volunteers with special knowledge of a nongame species or group to write or assist in writing a **Wildlife Notebook Series** report and suggestions as to which species you want more information about.

8. **Bibliographies:** Before conducting our own research projects we need to know what has been done already. Students at the University of Alaska will be compiling bibliographies of published studies on Alaskan birds and mammals.

Needed: Volunteers to do bibliographies are welcome.

POTENTIAL FUTURE PROJECTS

1. Citizens identified a strong need for local nature centers in each of Alaska's major cities. We are exploring alternatives for nature centers in Anchorage and Fairbanks.
 2. Identification of critical habitats for nongame species such as loons, trumpeter swans, and mountain bluebirds.
 3. Determining the interrelationships between nongame wildlife, their habitats, and other animals, and the effects of habitat loss and disturbance.
 4. Developing slideshows or films on Alaskan wildlife and their habitats for use in schools, and by youth and adult groups.
 5. Rehabilitating disturbed areas such as gravel pits and urban areas for wildlife.
 6. Setting up local bird-banding stations using volunteers to assist in operations.
 7. Monitoring small mammal and seabird populations at selected sites.
-

Please fill out this form and send it to one of the addresses given below, or call the Alaska Department of Fish and Game, if you are interested in being a volunteer, have comments or suggestions, or just want to be kept informed.

Name _____

Address _____

Phone _____ (evenings) _____ (days)

I am interested in assisting ADF&G's Nongame Program _____ Yes _____ No

Please let me know how I can help with project # _____

I am willing to:

Please send me observation cards and report forms for the circled areas:

Northern Western Southwestern Southcoastal Interior Southeastern

These are my thoughts about the Nongame Program's projects:

I'd like to be kept informed of the ADF&G's Nongame Program activities.

Please add me to your mailing list _____ Yes _____ No

Mail form to:

Nongame Wildlife Program
Alaska Department of Fish and Game
333 Raspberry Road
Anchorage, AK 99502

or

Nongame Wildlife Program
Alaska Department of Fish and Game
1300 College Road
Fairbanks, AK 99701

Appendix X. Wildlife Watchers' Notebook is a short radio program on various wildlife educational topics. It is broadcast on 14 public and commercial stations:

<u>Station</u>	<u>Location</u>
KSKA	Anchorage
KABN	Big Lake
KLAM	Cordova
KHNS	Haines
KBBI	Homer
KJNO	Juneau
KTOO	Juneau
KOTZ	Kotzebue
KSKO	McGrath
KICY	Nome
KJNP	North Pole
KCAW	Sitka
KSRM/KQOK	Soldotna
KSTK	Wrangell

<u>Topic of Radio Program</u>	<u>Aired Week of</u>
How to Feed Wild Birds	November 16, 1981
Bald Eagles at Chilkat River	November 30, 1981
Red Squirrels and Northern Flying Squirrels	December 14, 1981
How Wildlife Copes with Winter	December 28, 1981
Hibernation of Arctic Ground Squirrel	January 11, 1982
The Raven	January 25, 1982
Winter Waterfowl Watching	February 8, 1982
Alaska's Storm-petrels	February 22, 1982
Boreal Owls	March 8, 1982
Nongame Wildlife Program	March 22, 1982

Appendix XI

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APPENDIX XII. Alaska Wildlife Week Plan.

Alaska Department of Fish and Game
Nongame Wildlife Program

January 1982

ALASKA WILDLIFE WEEK PACKET : (to be provided to every teacher)

1. Color poster depicting Alaska's wildlife and habitats / or the concept.
2. Concise supplementary information for the teacher explaining the term "habitat," and brief descriptions of Alaska's wildlife habitats and the wildlife typical of each.
3. Teacher Activity Guide--Short, easy activities that a teacher could use in the classroom to convey the concepts relating to wildlife habitat. Separate activities may be provided for primary, upper elementary, junior high, and senior high teachers. Language arts, social studies, math, art, and music activities would be provided in addition to science.
4. A guide to additional resource material available in Alaska that teachers could obtain to supplement the Alaska Wildlife Week materials.

SUPPLEMENTARY MATERIALS: (To be provided to each school or school district)

1. A slideshow or videotape on Alaska's wildlife and wildlife habitats.
2. If possible, information on possible field trips in each area.

METHOD OF DISTRIBUTION:

Alternatives:

1. Make available only to teachers attending an inservice day on the Alaska Wildlife Week Packet.
2. Mail to all teachers and provide prior inservice day instruction for those interested.
3. Mail an announcement letter to all teachers and send packet to those requesting one. Supplement with inservice day instruction.

ADDITIONAL COORDINATED ACTIVITIES:

Wherever possible, coordinate community involvement in the Alaska Wildlife Week through newspaper and radio articles on the event, special displays at museums, ADF&G and other agency offices, evening programs for the community, and by involving businesses. These coordinated activities would have to be organized by local ADF&G staff or volunteers, so they would not be feasible in every community in the first few years.

Alaska Department of Fish and Game
Nongame Wildlife Program

ALASKA WILDLIFE WEEK--

Tentative goals:

1. To create a greater teacher and student awareness and appreciation of Alaska's wildlife.
2. To create better teacher and student understanding of the term "wildlife habitat" and better awareness of the habitat types and wildlife in their own region.

Concepts to be stressed:

1. Alaska has a wide variety of abundant wildlife because of the wide variety and extent of habitats in the State.
(Different animals live in different habitats.)
 2. Good wildlife habitat provides the necessities of life: air, food, cover, water, and space, in the proper arrangement.
(Habitat includes living and non-living features of the environment.)
 3. Every species of animal has specific air, food, water, cover, space, and arrangement requirements. Thus, different animals live in different habitats. Some animals may use more than one habitat during their life cycle.
 4. Every habitat area has a carrying capacity for each species using it. Carrying capacity is set by the requirement (air, food, water, cover, space, arrangement) in shortest supply relative to each animal's needs. This requirement is called a limiting factor. Carrying capacity may vary seasonally, daily, or over time.
 5. Wildlife population levels are determined by the quantity and quality of available habitat.
 6. All animals interact with other organisms (plants and animals) and with the physical environment. All habitats are interconnected.
-

By the end of the Alaska Wildlife Week, a primary student should be able to:

By the end of the Alaska Wildlife Week, an upper elementary student should be able to:

By the end of the Alaska Wildlife Week, a junior high student should be able to:

By the end of the Alaska Wildlife Week, a senior high student should be able

ALASKA'S WILDLIFE HABITATS:

1. Coastal Spruce-Hemlock Forest (southeast and southcoastal Alaska)
2. Spruce-Hardwood Forest (central, southcoastal)
3. Open Black Spruce Forest (central)
4. Tundra
 - Alpine (throughout Alaska)
 - Coastal (northern, western, southwestern)
 - Dry
 - Wet
5. Riparian (streams, rivers, and the adjoining vegetation)
 - Forested (central, southcoastal, southeastern)
 - Tall Shrub (northern, western, southwestern)
6. Coastal Wetlands (along the coasts)
 - includes river deltas, saltmarshes, mudflats, estuaries)
7. Lagoon-barrier island systems
8. Oceanic (coastal Alaska)
 - includes coastal waters, offshore waters, oceanic islands)
9. Glaciers (most of Alaska)
10. Man-made (throughout Alaska)
 - cities, garbage dumps, industrial areas, farms.

APPENDIX XIII. BIBLIOGRAPHIES NEEDED BY THE NONGAME WILDLIFE PROGRAM

ALASKA DEPARTMENT OF FISH AND GAME

Requirements

Include ongoing research from AEIDC reports.

Document references searched and key words used in each search.

Annotate references on the species or topic when the research was conducted in Alaska (except as indicated). Annotation should include location in Alaska, methods used, major findings, and author or funding agency.

Type accurately and have references in alphabetical order (except where otherwise specified) in the Journal of Wildlife Management style.

Prefer Famulus-processed bibliographies. Those which are not should be cross-referenced.

Include references giving distribution records for Alaska.

Payment will be made for bibliographies which meet these requirements to ADF&G satisfaction.

Students must sign up for the bibliography they plan to do to avoid duplication. The payment for each reflects the difficulty of doing the bibliography and our priority for it.

Those bibliographies for 20 years may be divided between two students. Students may sign up for more than one of the \$100 small mammal bibliographies (if all students in the class who wish to sign up have done so).

Topics in order of preference

1. Effects of logging and silvicultural practices in coniferous forest on nongame birds and/or mammals. 1970-80
2. Studies of small mammals in Alaska and northwestern Canada. (All studies on populations, distributions, life histories, identification, taxonomy, habitat use; all annotated; circumpolar search for one genera; Famulus-processed or ordered by family) 1960 on

3. Studies of birds in Alaska and northwestern Canada. (All studies of bird populations, distributions, life histories, identification, taxonomy, habitat use; all annotated; circumpolar search for one genera; Famulus-processed or ordered by family) 1960 on
4. Ecological values of nongame birds. (Possible values include insect control, seed dispersal, soil aeration, soil fertilization, as food for "game" animals, barometers, indicators of pollution effects, pollination, etc.) 1970 on
5. Ecological values of nongame mammals. (Possible values include insect control, seed dispersal, soil aeration, soil fertilization, as food for "game" animals, barometers, indicators of pollution effects, pollination, etc.) 1970 on
6. Ecological values of nongame fish, amphibians, and garter snakes.
7. Values of nongame wildlife to humans. Information and philosophies of nongame wildlife conservation; any studies indicating the values of nongame wildlife to humans, the importance of nonconsumptive uses of wildlife, the percentage of the population involved in nonconsumptive activities. (Aesthetics, economics, surveys of public attitudes, essays on values, nonconsumptive uses, wildlife photography, bird watching, nature study) 1970 on
8. Techniques for the study and management of small mammals. (Trapping, sexing, aging, censusing, population control, quantifying habitat use, habitat enhancement) 1970 on
9. Studies on the following genera (Alaskan species only): Sorex, Myotis, Lasionycteris, Eptesicus, Ochotona, Marmota, Spermophilus, Tamiasciurus, Peromyscus, Neotoma, Microtus, Zapus; circumpolar and nationwide. 1970 on

10. Studies on the following groups
(Alaskan species only):

nationwide,
1970 on

- a. woodpeckers
- b. warblers
- c. owls
- d. crossbills
- e. swallows
- f. corvids (except
ravens)

(cross-referenced)

11. Effects of surface mining on nongame
birds and mammals.
12. Effects of hydroelectric development
on nongame birds and mammals.

Topics for each bibliography will be further clarified by discussion
between the student, Dr. Dean, and ADF&G.

Appendix XIV. Wildlife Notebook Series written by volunteers and
edited by the Nongame Wildlife Program staff.

In Progress

Loons
Sandhill Cranes
Weasels
Sparrows
Small Gulls
Large Gulls
Accipiters (hawks)
Eagles
Arctic Ground Squirrels
Dippers
Flying Squirrels
Shorebirds
Diurnal Owls
Kingfishers
Chickadees
Grebes
Ravens
Deer Mice

Completed

Woodpeckers
Swans
Osprey
Woodchuck/Marmot revision
Storm-petrels



non-game / *noun*: describing the newest program at ADF&G

By Paul Arneson

The term "nongame" is confusing to many people. Biologists and others have tried to find a term that is more appropriate but have had little success. "Watchable wildlife," used by some states, suggests what nongame is but is not entirely satisfactory. A basic definition of nongame is "wildlife not taken for sport, fur, food or commercial purposes." In addition, the definition could include game species in situations or localities where they aren't harvested.

This new program was initiated to reach a broader spectrum of the public that is interested in wildlife. Many nongame wildlife species have been neglected in research, management, and educational programs primarily because no funds were available to gather the necessary information on those species. Now that a nongame program has started, the Department hopes to fill the data gap and provide information on all wildlife.

Nongame species have been around a long time, but it has only been recently that support for and interest in nongame has grown. Since the early 1970's the national mood has been to swing more to an ecosystem approach to wildlife management. In essence, this approach considers the relative importance of all wildlife species within a given geographic location and not just a singular species such as the predominant game animal. Persons and groups that supported this approach and showed a concern about the welfare of nongame populations lobbied Congress to pass legislation that would provide money for nongame wildlife. It wasn't until September, 1980, that the Fish and Wildlife Conservation Act of 1980 ("Nongame Act") passed both houses of Congress and was signed into law by President Carter.

The battle to get into the nongame "business" within Alaska has also been long and frustrating, but the nongame wildlife program is here to stay. Interest in establishing a nongame program within the Department began in the mid-1960's when several biologists began talking about the establishment of an Alaska Conservation Stamp Fund that would have provided money for studying nongame species.

Unfortunately, the project never got beyond the initial planning stages.

The concern for nongame never died within the state. As in many states in the Lower 48, nongame-type programs were carried out with money from hunting and fishing revenues. Pittman-Robertson monies are from a federal excise tax on sporting arms and ammunition and Dingell-Johnson monies from a tax on sport fishing gear.

These funds are "matched" with state monies from the sale of hunting and fishing licenses and tags. Sportsmen have generally been supportive of the use of "their" money for nongame projects because most sportsmen have a concern for all wildlife and not just game species. Also, any help given to nongame species

generally is beneficial to game species.

(Continued on next page)

Some of the projects supported by fish and game fund monies in Alaska were raptor research in the Interior, the re-establishment of sea otters to former parts of their range, and the establishment of refuges to protect the habitat of both game and nongame species of wildlife. Also, the establishment of sanctuaries where game species are not hunted was done with sportsmen's monies. Examples of these areas are the McNeil River Brown Bear Sanctuary and the Walrus Islands. Public use of these sanctuaries is restricted to photography, observation and scientific study.

Interest in establishing a permanent nongame program with the Alaska Department of Fish and Game remained high in the minds of several biologists both within and outside of the Department. Several times during the mid to late 1970's, unsuccessful attempts were made to establish positions with nongame wildlife management responsibilities within the Department. Not discouraged by these setbacks, in 1978, the Department contracted Dr. Robert Weeden, a professor at the University of Alaska, to develop preliminary concepts and priorities for a prospective "nongame fish and wildlife" program within the Department. His final report summarized what interested persons suggested as possible projects that should be included in the program and possibilities for funding it.

Lack of a reliable source of funds has been the bane of nongame programs in several other states. Various sources have been used including the fees from the sale of personalized license plates and special conservation stamps, percentage receipts from a State sales tax and, most recently, a checkoff on the State income tax form whereby a person can donate a portion of his or her refund to the State's nongame program. More and more states are initiating this voluntary checkoff system and some generate a great deal of money with it.

Alaska's nongame program is presently funded by a special appropriation of General Fund money. Fairbanks Representative Sally Smith submitted a bill in the 1980 legislature to hire two full-time nongame biologists and one part-time technician for the program. Paul Arneson was chosen to coordinate the nongame program and began duties in mid-January 1981. Susan Quinlan was selected to fill the biologist's position in Fairbanks. The technician position will be filled shortly and stationed in Anchorage.

The first year of the nongame program will be devoted to planning the functions of the program, various projects to be conducted, and setting priorities for the implementation of each project. Basically there will be four functions: information and education, research, management and habitat protection.

Under Information and Education a variety of projects will be initiated. These may include producing pamphlets, conducting slide shows, or gathering nongame data for storage in a centralized location. Research projects could include life history studies of nongame wildlife species or the determination of the effects of habitat alteration projects on nongame wildlife. This research could be conducted by the staff, contracted to other researchers or granted to support a graduate student's research. Management projects may include conducting surveys and inventories of

nongame wildlife to determine their status and distribution or helping to restore and rehabilitate depleted nongame wildlife populations. As the name implies, the habitat protection function will be to ensure that sufficient habitat is available for those species needing protection and determining habitat requirements of species in places of concern.

These are only a few examples of the types of projects the nongame program will undertake. If members of the public would like to contribute their ideas and suggestions for nongame projects, they are urged to submit them to the Nongame Wildlife Program, Alaska Department of Fish and Game, 333 Raspberry Road, Anchorage, AK 99502. ●

APPENDIX XVI. Logo Contest Winners.

STATE OF ALASKA
DEPARTMENT OF FISH AND GAME
Ronald O. Skoog, Commissioner

Southcentral Region
333 Raspberry Road
Anchorage, Alaska 99502

Ronald J. Somerville, Director
Division of Game

Contact: Nancy Tankersley
Nongame Technician
Anchorage 344-0541

IMMEDIATE RELEASE

December 21, 1981

WILDLIFE LOGO CONTEST WINNERS ANNOUNCED

ANCHORAGE - Jennifer Kernak, a 13 year-old from Anchorage, has won the contest to design a logo representing the Nongame Wildlife Program of the Alaska Department of Fish and Game. The Nongame Wildlife Program is responsible for the research & management of more than 400 unharvested species of birds, mammals and other wildlife. The winning entry depicts a nesting common loon with other birds flying overhead.

Jennifer's entry was chosen from more than 200 entries by Alaskan youngsters under 16 years old. She received a pair of 7x35 Bushnell binoculars, donated by Mountain View Sports Center of Anchorage. Second place was awarded to Jay Riski, 13 years old, also of Anchorage who received an autographed Guide to the Birds of Alaska donated by the Anchorage Audubon Society. Three youngsters tied for third place, Kimberly Tomseth of Fairbanks, Steve Eneix of Douglas and Mike Huff of Anchorage. They received a Birds of Alaska Coloring Book donated by Arctic Audubon Society. Fourteen other honorable mention prizes were awarded. The top 19 entrants received a meal coupon from Burger King.

Judges for the contest were, John Pitcher, a wildlife artist from Anchorage; Gretchen Walker, a wildlife artist from Tok; and Dolores Moulton, Chief of the Public Communications Section, Alaska Department of Fish and Game.

The top 5 winning entries will be displayed at the main Anchorage office during January 18-22, at the Fairbanks office January 25-29, and at the Juneau headquarters office February 1-5.

Girl wins logo contest

A 13-year-old Anchorage girl has won the contest to design a logo representing the non-game wildlife program of the Alaska Department of Fish and Game.

Jennifer Kernak's entry, chosen from more than 200 submitted by Alaska youngsters under 16 years of age, depicts a nesting common loon with other birds flying overhead. For her efforts, Jennifer received a pair of binoculars.

Second place was awarded to Jay Riski, 13, also of Anchorage, who won an autographed "Guide to the Birds of Alaska." Three youngsters tied for third place: Kimberly Tomseth of Fairbanks, Steve Eneix of Douglas and Mike Huff of Anchorage. They received a "Birds of Alaska Coloring Book."

Judges for the contest for John Pilcher, a wildlife artist from Anchorage; Gretchen Walker, a wildlife artist from Tok; and Dolores Moulton, chief of the public communications section of the Alaska Department of Fish and Game.

The top five entries were displayed in Anchorage and Fairbanks earlier this month and will be at the Juneau headquarters Monday through Friday.



The logo designed by Jennifer Kernak for the non-game wildlife program

APPENDIX XVII.

National Nongame Newsletter (Nos. 1 and 2)

**Published by a coalition of state
nongame wildlife programs**



This newsletter is a fledgling messenger pigeon hatched by three enthusiastic nongame wildlife programs — Colorado, Minnesota, and Alaska. The idea grew out of a recent interchange of ideas at which Colorado's John Torres and Minnesota's Carrol Henderson contributed ideas, support, the wisdom of experience, and the inspiration of success to Alaska's recently appointed nongame staff. The gathering benefited participants so much that we felt better communication between more states would help everyone.

- To stimulate and facilitate a continuous exchange of ideas, methods, and experiences among the nongame staffs of all 36 state agencies which have nongame programs.

- To announce meetings, seminars, conferences, and publications of interest to nongame biologists.
- To provide up-to-date information on the status, funding, personnel, and leaders

Whether this fledgling newsletter survives its first winter will depend on the care and feeding it receives from other states. How can you help? Read on . . .

In the future, each issue will feature a comprehensive story on the nongame program in one specific state; that story (and photographs) will be contributed by the featured state. We'll give you plenty of warning and make the complete circle of states, then start over.

The rest of the newsletter will be devoted to stories of general interest to nongame biologists and staffers. A specific topic to focus on will be designated for each issue (that topic will always be announced in the

Short articles on other topics will be welcomed as well. In addition, there will be space to announce meetings, publications and other events of interest.

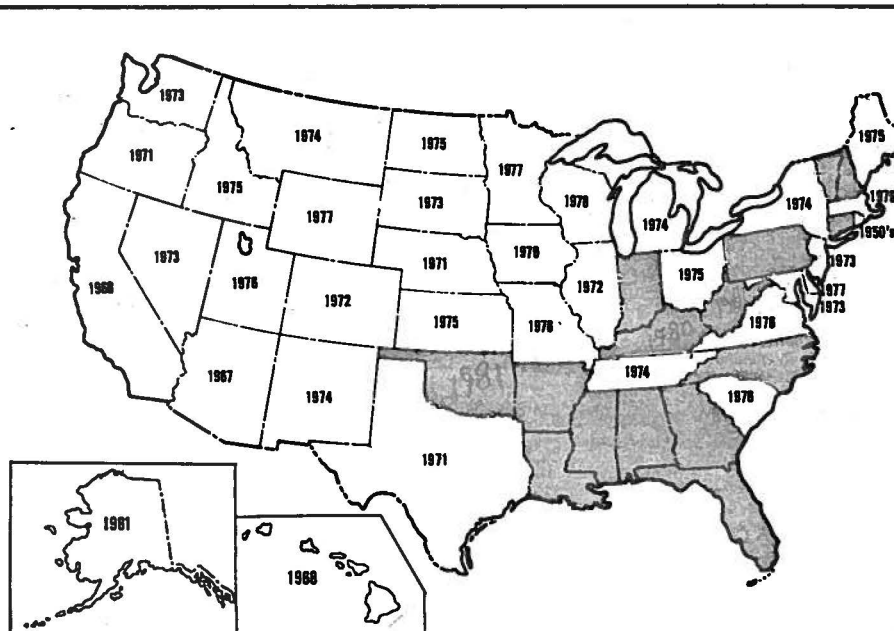
As you may have gathered, contributions heavily — in fact, entirely — on the staffs of the various states. Colorado will assume responsibility for getting contributions set into type, putting the newsletter together, having it printed, and mailing out. All 36 states with nongame programs have received enough copies of this issue for each member of their staff, and they will get copies of the next issue. After that, copies will go only to participating states (We'll set up some kind of annual dues pay publication costs.)

Nongame wildlife management is a field of largely unbroken ground. The need for continuous, informal exchange of both practical and technical information is acute. We hope this newsletter helps fill that need.

This Issue features the nongame programs of Minnesota and Alaska, plus a few miscellaneous items of interest. The state featured in the next issue will be Colorado. After that, the featured state will be the first one to volunteer (do that by telephone, please).

Other contributions for the next issue are hereby solicited. Keep articles short and to the point, type them, be sure your information is accurate, and submit them by November 1. Check the box on the back page for the topic to be the focal point of the next issue. Photographs are welcomed. They should be good, sharp black and white prints; however, we can have black and white photos made from color slides if need be.

Send contributions to: Nongame Section, Colorado Division of Wildlife, 6060 Broadway, Denver, CO 80216. Telephone calls should be directed to either John Torres or Jim Hekkers at (303) 825-1192.



According to a survey conducted by Paul Arneson, nongame wildlife coordinator in Alaska, 3 states had active nongame wildlife programs in early 1981. The map shows the year in which each state began its nongame program. Shaded states did not have active programs at the time the survey was taken.

People involved in planning state nongame programs

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Dept. of Conservation
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Fish Commission
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Wildlife Division
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Howard C. Nowell, Chief
Game Management and Research
Fish and Game Department
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Joan Galli
Bureau of Wildlife Management
Division of Fish, Game
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P.O. Box 1809
Trenton, New Jersey 08625
(609) 292-6685

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New Mexico Department of Game
and Fish
State Capitol
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Robert L. Miller
New York Department of
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Wildlife Resources Center
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Harold Atkinson, Chief
Division of Game
Wildlife Resources Commission
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James Chadwick
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Status report: Alaska's nongame wildlife program

The Alaska Department of Fish and Game officially began a Nongame Wildlife Program this year, following a legislative appropriation of \$150,000. Previously, ADF&G staff and private citizens had been discussing needs for a nongame program for 20 years. In 1979, ADF&G contracted with the University of Alaska to undertake a study on opportunities and choices for an Alaskan nongame program. This study laid the groundwork for citizen action prompting a Fairbanks legislator, Sally Smith, to work for the appropriation. Three staff members were hired in 1981.

"Nongame" is difficult to define in Alaska as all wildlife is classified as "game" or "fish." Additionally, subsistence users in some areas of the state harvest nearly all species of wildlife. However, over 400 species of birds, mammals, fish, and amphibians—are not ordinarily hunted, fished, or trapped—and could be called "nongame."

Basic problems are the same as elsewhere: scant information on distributions, abundances, and habitat requirements of nongame species. Unlike other states, Alaska is fortunate to have few endangered



The snow bunting is one of more than 400 species classified as nongame wildlife in Alaska.

discuss Alaska's Nongame Program. Interest ran high in projects involving volunteers such as song bird monitoring,

beached-bird surveys, bird-banding stations, and nature centers. Emphasis was placed on the need for public education on nongame wildlife and ecology. There was also strong support for studies on the effects of logging, oil and gas development, water pollution, and urban expansion.

Alaska's program will have four functions: research, management, information, and education. In addition to long-term planning and a search for a more reliable funding source, this year's projects include: literature reviews to determine current knowledge on Alaska's nongame wildlife, a guide to wildlife viewing, an urban wildlife demonstration project, a breeding bird survey program, and an observation card program for uncommon species' sightings.

We look forward to hearing about the activities of other states and learning from their experiences.

—Sue Quinlan
Nongame Biologist
Alaska



Paul Arneson, Alaska Nongame Wildlife Program Coordinator addresses over 100 participants at a public meeting in Anchorage.

species. Peregrine Falcon, Aleutian Canada Goose, Eskimo Curlew, and Short-tailed Albatross are the only federally-endangered species also endangered in Alaska. Also to our advantage is a better than average understanding and appreciation of wildlife and the outdoors (S. Kellert, 1979, USFWS publication).

As a first step, a public workshop was held to plan directions and priorities for Alaska's program. Over 100 people, including private citizens and representatives of conservation groups, other agencies, and schools, attended.

After discussing the program's history and Alaska's nongame resources, participants listened to talks by John Torres and Carrol Henderson. These speakers' discussions of the success of voluntary tax checkoffs in their states and their current and past projects gave enthusiastic participants the inspiration of success. Since Alaska no longer has a state tax, a check-off program will not be feasible.

Participants divided into groups to

Close call in Colorado legislature points out potential future peril for check-off programs

A close call early this year in the Colorado Legislature points out a peril which may threaten other states which rely on a state income tax check-off box to fund nongame wildlife management. A legislative proposal which would have divided the revenue from Colorado's check-off program between the Division of Wildlife's nongame program and the Colorado Division of Parks and Outdoor Recreation was considered and finally killed by a legislative committee, but only after the proposal gathered some key support.

In committee hearings on the bill and in conversations with legislators about the proposal, Division of Wildlife officials were told that many special interest groups eye the check-off box with envy. Questions raised by legislators are significant since the law which enacted the check-off in 1977 expires (sunset) at the end of 1984, unless the legislature takes action to eliminate the sunset provision or extend the effective date.

The clamor may become more significant in light of the current national political climate which is seeing massive cuts of federal funding for a variety of worthwhile causes. Most likely, pressure on state legislators would result in the elimination of all check-offs rather than an almost endless list of check-off boxes on state tax forms.

One potentially strong argument favoring a check-off for wildlife as opposed to check-offs for other worthwhile causes is this: Programs which are now being cut may be refunded in the future, depending on changes in the political mood. The cuts in



those programs represent temporary setbacks. Wildlife, on the other hand, is something which cannot afford temporary setbacks. In the case of threatened and endangered wildlife, there is no such thing as a temporary setback; once a species disappears, it cannot be recalled when a new source of funding is found.

Hopefully, other strong arguments in favor of check-off boxes for nongame wildlife will emerge. Since the threat may grow stronger in the future and pop up in more states, other nongame staffs are encouraged to share their ideas, comments, and arguments through this newsletter.

Nongame Newsletter

6060 Broadway, Denver, CO 80216

Status report: Minnesota's nongame program

Minnesota's Nongame Wildlife Program began in February of 1977 with the appointment of Carrol Henderson as Nongame Wildlife Supervisor. From that time until 1981 he mostly worked alone with a game and fish fund budget under \$30,000 per year.

Initial program efforts included research on secondary lead poisoning in bald eagles which were eating crippled waterfowl, and statewide volunteer surveys of colonial waterbirds, sandhill cranes, common loons, and uncommon wildlife.

In 1980, the Nongame Wildlife Check-off was passed by the state legislature. This enabled taxpayers to donate \$1.00 or more of their state income tax or property tax refunds to the Nongame Wildlife Fund. There are 1,775,000 income tax forms and 900,000 property tax forms filed annually.

The response by Minnesota's citizens was overwhelming. About 10.2 percent of the taxpayers donated an average of \$3.40 on income tax forms. About 4.2 percent of the



Carrol Henderson
Minnesota
Nongame Wildlife
Supervisor

property tax forms had donations averaging \$2.87. The projected income is \$722,000 for our first year, and it represents donations from over 215,000 people. Not a single call or letter has yet been received by the DNR in opposition to the check-off.

The 1981 legislature approved creation of eight nongame positions and amended the nongame bill to allow persons to make donations to the nongame wildlife fund if they do not receive a refund. They will be

able to do this by adding to the amount they owe the state.

The NWP will have nine main activities: 1) comprehensive planning; 2) inventory; 3) research; 4) habitat management; 5) land acquisition; 6) raptor rehabilitation; 7) restoration of extirpated species; 8) extension and education; and 9) administration.

Among species receiving initial attention are the sandhill crane, eastern bluebird, prairie chicken, common loon, great gray owl, trumpeter swan, bald eagle, merlin, burrowing owl, American elk (we only have about two dozen), piping plover, great blue heron, peregrine falcon, and river otter.

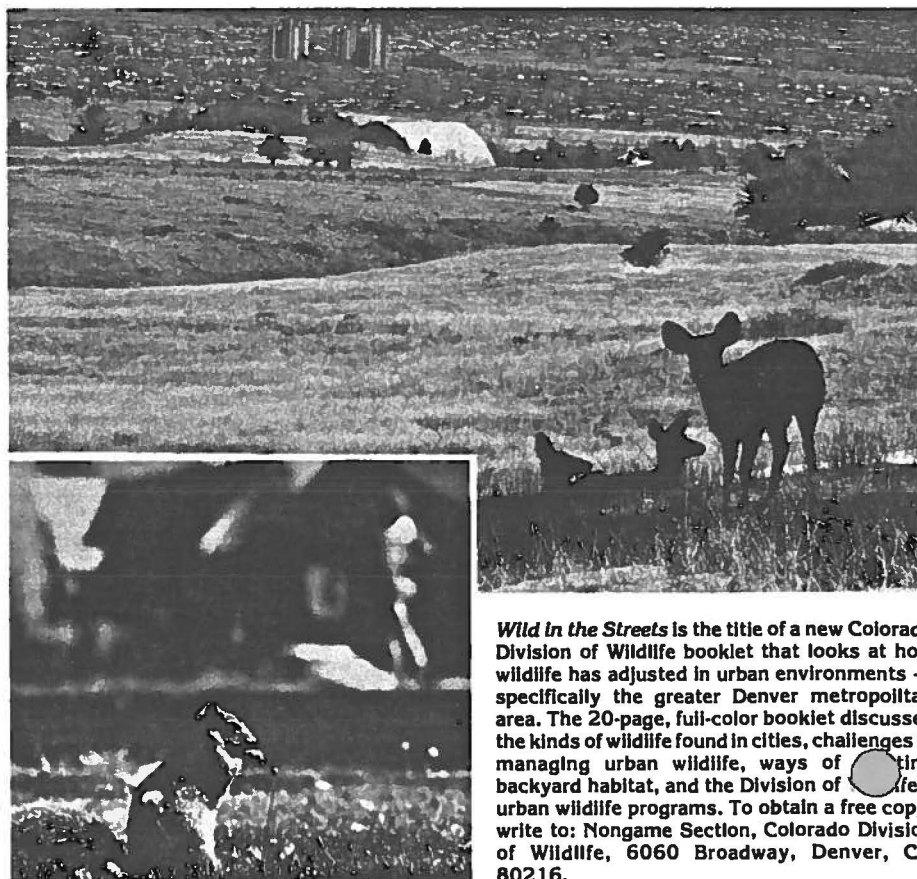
The NWP has made final arrangements to acquire the Howard Lake heronry near Forest Lake. The 200-acre area has about 415 nests of great blue herons, great egrets, black-crowned night herons, and double-crested cormorants. The area had been proposed for development as a recreational vehicle park. Other acquisition efforts are under way for an area containing two prairie chicken booming grounds and an island containing a piping plover colony.

For the next issue: Focus is on funding

Nongame Newsletter would like to publish a short report on the success of the various nongame wildlife state income tax check-offs in the next issue. Please send a short statistical summary of check-off results for 1981 to: Jim Hekkers, Colorado Division of Wildlife, 6060 Broadway, Denver, CO 80216.

Try to include at least the following information: amount contributed; number of taxpayers in the state entitled to refunds; percentage who contributed; average contribution. The past success of states which already have check-off programs might help those states just starting check-offs better estimate how much they might expect to raise.

The featured topic in the next issue of the newsletter will be funding programs, i.e., how do the various states raise money to fund nongame wildlife management, and how do they convince state legislatures, or the federal government, to provide funds. Any and all contributions are welcome. Send them to Nongame Section, Colorado Division of Wildlife, 6060 Broadway, Denver, CO 80216. Deadline is November 1 for a December 1 publication date.



Wild in the Streets is the title of a new Colorado Division of Wildlife booklet that looks at how wildlife has adjusted in urban environments - specifically the greater Denver metropolitan area. The 20-page, full-color booklet discusses the kinds of wildlife found in cities, challenges in managing urban wildlife, ways of utilizing backyard habitat, and the Division of Wildlife's urban wildlife programs. To obtain a free copy, write to: Nongame Section, Colorado Division of Wildlife, 6060 Broadway, Denver, CO 80216.

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nongame wildlife programs



First issue successful; now it's time for next step

The response of nongame biologists to the first issue of *Nongame Newsletter* was, to say the least, gratifying. In fact, so many timely and worthwhile contributions were received that this issue is twice as large as the first.

The focal point of this issue is funding, and articles in this second edition of *Nongame Newsletter* explain funding successes and failures in several states. Colorado's nongame program is also featured.

Speaking of funding — and Colorado — the first issue of the newsletter was paid for entirely by Colorado. This issue is being funded equally by Colorado, Alaska, and Minnesota. Since this issue is twice as large as the first, printing and production costs increased, so we are sending fewer copies to each state agency. We also tried to cut a few other minor cost corners.

Total cost for printing and mailing the first issue of *Nongame Newsletter* was about \$320. The total cost of this issue should be about \$450.

Money from more states is needed to keep the newsletter going. However, instead

of soliciting an annual contribution at this point, we would like to propose instead the formation of a nationwide association of nongame wildlife biologists. Certainly, such an association is inevitable sooner or later. It might as well be sooner.

The North American Wildlife and Natural Resources Conference has agreed to put formation of such an association on the agenda for the March 26-31 conference in Portland, Oregon. Organizing an association can be done by nongame biologists who attend that meeting. Once formed, the association can assume publication of the newsletter.

The spring issue of *Nongame Newsletter* will provide more details about that organizational meeting. Meanwhile, the newsletter can continue with relatively small contributions from interested states. Judging by the number of state agencies expressing interest, the next issue could be published and distributed if each of those states contributed \$10.

The money will be deposited in a special Colorado Division of Wildlife account and will be used only for printing and mailing the newsletter. Any money left over will be

turned over to the association once it formed.

We would like to send the next issue to a 50 states. In addition, quite a number of non-agency people all over the country have seen the newsletter and asked to receive copies. Rather than set up a subscription rate and policy now, we would like to send copy to anyone who wants one for the time being and let the nongame association consider a subscription policy as part of its organization.

If you can squeeze \$10 out of your budget, please send it to the attention of John Torres, Colorado Division of Wildlife, 6060 Broadway, Denver, CO 80216. (Make checks payable to the Colorado Division of Wildlife.) A strict accounting will be kept.

To all of the people in state agencies all over the country who contributed material, ideas, praise, and encouragement, a sincere thank you. Judging from the response so far, the *Nongame Newsletter* has tremendous potential for meeting the urgent need for communication between and among wildlife biologists. —Jim Hekkers

Colorado

Corrections to who's who list in the first issue

The first issue of *Nongame Newsletter* was intended as a starting point to pull together information from state nongame staffs so that each state might draw upon the experiences of others. The information included in that first issue was the best available. Some of it, however, was in error. Here are assorted corrections and clarifications received from newsletter readers. (Incidentally, the newsletter policy will be to print any and all corrections and clarifications.)

From Utah . . . Bob Walters was listed as the chief of nongame management in that state. Bob was thrilled by his apparent promotion, but the real chief of nongame management is Albert W. Heggen.

From West Virginia . . . The nongame staff in West Virginia includes: Peter E. Zurbuch, assistant chief, Division of Wildlife Resources, and James M. Morash, nongame wildlife program project leader. The address is: Wildlife Resources Division, West Virginia Department of Natural Resources, P.O. Box 67, Elkins, West Virginia 26241. Telephone: (304) 636-1767.

From New Jersey . . . The nongame wildlife contact for New Jersey should be listed as: JoAnn Frier, project leader, Endangered and Nongame Species Project, Division of Fish, Game and Wildlife, CN 400, Trenton, NJ 08625. Telephone: (609) 292-9400.

From Kentucky . . . The map on page one of the first newsletter showed Kentucky as one of the states which had no active nongame wildlife program in early 1981. Not only does that state now have a nongame program, it also has an income tax check-off to fund it. The check-off was passed by the Kentucky Legislature in 1980; funds from it are split equally between the Department of Fish and Wildlife Resources (for nongame fish and wildlife management) and the Nature Preserves Commission. In September of 1981 John MacGregor was hired as nongame biologist assigned to the agency's environmental section under the supervision of its chief, Lauren Schaaf. Nongame contacts in Kentucky are either MacGregor or Schaaf at #1 Game Farm Road, Frankfort, Kentucky 40601.

From Mississippi . . . While the State of Mississippi has no "official" nongame wildlife program as such, the foundation for one exists in the form of the Mississippi Natural Heritage Program. A plan for nongame and endangered wildlife management exists but has not yet been acted upon by the Department of Wildlife Conservation. Joseph W. Jacob, Jr., is the program coordinator-curator for the Mississippi Natural Heritage Program. His address is: Mississippi Museum of Natural Science, The Fannye A. Cook Memorial, 111 N. Jefferson St., Jackson, Mississippi 39202. Telephone: (601) 354-7303.

From Kansas . . . The address and telephone number for Marvin Schwilling, who heads that state's nongame project, was listed incorrectly. The correct address is: 832 E. 6th, Emporia, Kansas 67801. Telephone: (316) 342-0658.

From Georgia . . . The nongame contact in Georgia is Ron Odom, Georgia Game and Fish Division, Nongame-Endangered Species Program, Route 2, Box 119A,

Continued on page 8

How the states fund nongame wildlife programs

Editor's note: What follows is a summary of a report on "Funding Considerations and Alternatives for State Nongame Programs" presented at a nongame-endangered wildlife symposium held in Athens, Georgia, in August. The report and chart on the next page were prepared by Ron Odom, who heads the nongame and endangered wildlife program for the Game and Fish Division of the Georgia Department of Natural Resources.

The field of wildlife management is undergoing a transition from that of traditional game management to a much broadened program which emphasizes management of *all wildlife* (game and nongame). Nongame wildlife includes everything from songbirds to chipmunks and shrews. Also included are alligators, bald eagles, peregrine falcons, loggerhead sea turtles, and cougars — and the rest of Georgia's endangered and threatened species. In short nongame wildlife includes everything that is not hunted or fished for — about 90% of the wildlife species found in Georgia.

Nationwide less than 10% of the wildlife species (game species) receive over 90% of the available funding. Several factors may shift emphasis from consumptive to non-consumptive activities in the future, including: a) continued urbanization of the population; b) the ever greater difficulty of finding open waters and lands; c) a growing scarcity of high quality sport; d) the concentration of fishermen and hunters; and e) increasing interest in other forms of recreation.

Surveys reveal that 49 states now carry on some sort of a nongame program. Some characteristics of these programs include: a) half of the states included endangered species as part of their programs; b) average cost to operate a nongame program was \$212,216; c) ninety-eight percent of the states had law enforcement programs; d) sixty-seven percent of the states reported

Half of the states include endangered species in their nongame programs

they had purchased lands identified as critical habitat for nongame species (average number of acres = 788); e) sixty-five percent of states with programs indicated they would expand their programs if funding was available; f) the major problems encountered by states with nongame programs was lack of funds (70%); g) only 3 states (6%) indicated a lack of public support; and h) twenty-two percent felt that new state programs should give top priority to establishing legislation to assure funding continuity.

Endangered species management is tremendously expensive and not always successful. A nongame program that provides for continuing monitoring of the resource is by far the best endangered species

The most successful nongame programs do not rely completely on federal funds.

program a state can have. Species problems can be identified at an earlier, less critical stage, where odds for recovery are high and costs for treatment are reasonable.

State nongame programs are funded in a variety of ways. Programs that are most successful are those that are not totally dependent on federal funds. Georgia's nongame program may be terminated as of October 1, 1981 because of federal funding cuts. The program has been very successful and has wide public support. State funds will be required to maintain future nongame efforts.

A brief review of current and potential funding sources follows:

- *The Fish and Wildlife Conservation Act of 1980 (Nongame Bill).* Its primary purpose is to provide financial and technical assistance to the states for the development, revision, and implementation of conservation plans and programs for nongame fish and wildlife, and to encourage and promote conservation of nongame fish and wildlife. Congress authorized not more than \$5,000,000 for each of fiscal years 1982, 1983, 1984, and 1985. The President's proposed FY 82 budget does not include funding for implementation of this act.

- *Endangered Species Act of 1973.* Section 6 of this act provides funding for state/federal endangered species cooperative programs on a 2/3 to 1/3 matching basis. This legislation enabled Georgia and many other states to expand their program to include nongame and endangered wildlife. In Georgia we've been able to do status investigation work on approximately 200 species of nongame vertebrates using these funds. The President's FY 82 budget eliminated grant-in-aid funding to the states for continuation of this program.

- *State sales tax.* Missouri passed a constitutional amendment in 1976 which increased its sales tax by 1/8 of 1 percent. The funds (\$30.3 million in 1981) go to its Department of Conservation, with a substantial amount (\$2,000,000) going to its nongame program. (John Wylie, Missouri Department of Conservation, pers. comm., 1981.)

- *Sales of stamps and/or other items.* The sales of wildlife stamps, patches, t-shirts and other miscellaneous items have been tried in several states without much success.

They do not generate enough revenue to finance a meaningful nongame program (National Wildlife Federation 1980).

- *Sales of personalized auto tags.* The sale of personalized auto tags raised \$500,000 for Washington states' nongame program in 1981. (Tom Owens, Washington Department of Game, pers. comm., 1981.)

- *Other taxes.* Other types of state taxes that could be considered include a severance tax, real estate transfer tax, sales and use taxes, tobacco tax, alcohol tax, or a soft drink tax. At the federal level, excise taxes on bird seed, cameras, camping equipment, etc. have been considered for years. Considering the mood of the nation and the widespread efforts to reduce taxes, additional taxes at either state or federal level probably are not feasible at this time.

- *Pittman/Robertson (P/R) funds.* Although P/R funds can and are being used for nongame wildlife, there are two factors which discourage their use: First, they are limited to work on birds and mammals; second, their use would directly compete with the game management budgets.

- *General appropriations.* A 1980 telephone survey by the National Wildlife Federation indicated 19 of 50 (38%) of the states polled conducted nongame efforts supported with state dollars. Only 13 (26%) reported using any revenues from hunting and fishing sales directly for nongame purposes. The survey also indicated, as one might expect, that most states favored putting the burden of nongame funding on non-consumptive or "appreciative" users (hikers, campers, birdwatchers) rather than hunters.

- *Voluntary nongame income tax-checkoff system.* This system was originated four years ago by the state of Colorado and has raised a lot of eyebrows all over the country. Under the checkoff system there is a place in the state income tax form where taxpayers can check off the amount they wish to contribute to the state's nongame

Fourteen states now generate nongame funds through an income tax check-off

program. If a refund is due, the amount indicated will be subtracted from the total refund and funneled to the nongame fund. Fourteen states currently generate funds through the checkoff system. Included are Colorado, Kansas, Kentucky, Idaho, Minnesota, New Jersey, Oklahoma, Oregon, Utah, Virginia, West Virginia, Illinois, South Carolina, and New Mexico. Six states have been unsuccessful in passing legislation including Nebraska, Wisconsin,

Continued on page 8

Summary of state nongame wildlife programs

(As of 8-1-81)

State	Number Species Present	Nongame Program ^{1/}	Funding Sources	Approx. Level of Funding ^{2/}	Est. Funding Needs 1978 - 1983 (Thousands) ^{3/}
Alabama	825	No	-	-	940.0
Alaska	577	Yes	general funds	\$ 197,000	1320.0
Arizona	808	Yes	license fees	50,000	1398.0
Arkansas	695	Yes	Endangered Species Act	70,000	-
California	1554	Yes	license funds, gen. funds, Endangered Species Act	1,000,000	875.0
Colorado	682	Yes	tax checkoff	744,000 ^{4/}	3000.0
Connecticut	375	No	-	-	120.0
Delaware	621	Yes	Endangered Species Act	15,000	2252.0
Florida	2248	Yes	general funds	480,000	1620.0
Georgia	1130	Yes	Endangered Species Act	250,000	1575.0
Hawaii	788	Yes	license fees	-	923.0
Idaho	524	Yes	tax checkoff	40,000 ^{4/}	600.0
Illinois	688	Yes	tax checkoff	350,000 ^{4/}	700.0
Indiana	627	No	-	-	2425.0
Iowa	406	Yes	Nongame certificate	50,000	1980.0
Kansas	642	Yes	tax checkoff	134,000 ^{4/}	390.0
Kentucky	672	Yes	tax checkoff	62,000 ^{4/}	709.0
Louisiana	796	No	-	-	1410.0
Maine	413	Developing	Endangered Species Act	125,000	450.0
Maryland	921	Yes	general funds, Endangered Species Act	150,000	1372.0
Massachusetts	489	Yes	license fees	35,000	1000.0
Michigan	616	Yes	license fees, Endangered Species Act	1,000,000	2720.0
Minnesota	605	Yes	tax checkoff	722,000 ^{4/}	720.0
Mississippi	669	Yes	general funds	57,000	501.0
Missouri	776	Yes	license fees, sales tax	300,000	7040.0
Montana	558	Yes	license revenues	45,000	1448.3
Nebraska	636	Yes	general funds	168,000	924.5
Nevada	610	Yes	general funds, license fees	123,000	670.0
New Hampshire	512	Yes	Endangered Species Act, donations	37,000	150.0
New Jersey	722	Yes	tax checkoff, general funds	400,000 ^{4/}	1590.0
New Mexico	805	Yes	license fees, tax checkoff	30,000 ^{4/}	3100.0
New York	826	Yes	Endangered Species Act, general funds, license fees	483,000	20720.0
North Carolina	959	Yes	Endangered Species Act, general funds	422,400	3800.0
North Dakota	509	Yes	license fees	-	1350.0
Ohio	576	Yes	license fees, fines	50,000	1067.0
Oklahoma	739	Yes	tax checkoff	75,000 ^{4/}	399.0
Oregon	973	Yes	tax checkoff	1,457,000 ^{4/}	5695.0
Pennsylvania	690	Yes	sale of wildlife stamp/patches	72,000	930.0
Rhode Island	474	Yes	Endangered Species Act, license fees	30,000	2000.0
South Carolina	822	Yes	Endangered Species Act, general funds, tax checkoff	200,000 ^{4/}	780.0
South Dakota	554	Yes	license fees	50,000	1098.5
Tennessee	762	Yes	license fees, general funds	264,000	480.0
Texas	1075	Yes	general funds	131,000	635.0
Utah	593	Yes	tax checkoff	200,000 ^{4/}	1160.0
Vermont	350	No	-	-	130.0
Virginia	831	Yes	tax checkoff	250,000 ^{4/}	-
Washington	640	Yes	sale of personalized auto tags	500,000	5598.0
West Virginia	566	Yes	tax checkoff	108,000 ^{4/}	787.0
Wisconsin	643	Yes	license fees, general funds	90,000	323.5
Wyoming	552	Yes	Endangered Species Act license fees	200,000	1106.5

^{1/} Includes Endangered Species Program.

^{3/} From Subcommittee on Resource Protection.

^{2/} Funding estimates include nongame & endangered species budgets. ^{4/} Amount of Funding indicated, generated by tax checkoff.

Nongame wildlife funding reports from the states —

Kansas

In its first year — 1981 — the income tax check-off in Kansas raised approximately \$126,600. About 25,000 people contributed. Of that number, some 21,000 donated part of their tax refund. The rest contributed by adding to the tax they paid — the Kansas program allows taxpayers who don't receive refunds to donate by adding a contribution to their tax total.

About 3.5 percent of the Kansas taxpayers entitled to refunds contributed an average of \$5 through the check-off. There are 1.5 million taxpayers in the state.

Washington

The Washington Nongame Wildlife Program is funded through the sale of personalized license plates. In 1973 more than twenty different conservation groups organized to enact a personalized license plate bill to fund a nongame program. The bill passed overwhelmingly in both the House and Senate. The Governor vetoed the bill, not wishing to have the funds earmarked for special purposes. Nevertheless, the legislature placed a referendum which would be voted on by the people. It passed overwhelmingly.

Cost of the license plates is initially \$30, and \$20 for yearly renewals. The fees are considered a voluntary contribution for nongame wildlife and, therefore, may be deducted from income tax. Prior to 1981, 20,000 license plates had been sold.

Revenue

1974 - \$42,000
1975 - \$65,000
1976 - \$109,807
July 1977 - June 30, 1981 - \$722,078.

Utah

Here are the results of Utah's nongame wildlife check-off through September 30, 1981.

Total donated	\$216,594.74
Refunds issued	345,035
Contributors	55,366
Average contribution	3.91
Percent participation	16%

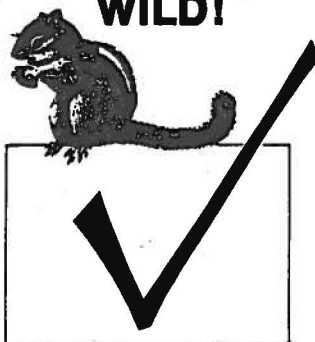
New York

New York currently has legislation in the mill to provide a tax checkoff for contributions to our Conservation Fund. This fund, however, is not restricted to nongame wildlife programs, but may be used for all Division of Fish and Wildlife programs. Its fate should be decided in the session of the legislature which began this month (December).

West Virginia

The West Virginia program is just getting off-the-ground. Our first income from tax check-offs will be in 1982. We are concentrating our information and education efforts in providing information in the 1981 West Virginia State Tax Booklets. This includes use of a logo in the printed forms

**DO
SOMETHING
WILD!**



**Make a tax deductible
contribution to help
West Virginia's
Nongame Wildlife.**

and instructions wherever the nongame program is mentioned. Additionally, a printed card explaining the program will be stapled in each tax booklet.

West Virginia has 415,000 taxpayers that have refunds each year. Their refunds average \$82.20. We hope to collect \$108,000 or more in our first year's effort.

Georgia

Georgia's nongame and threatened and endangered species program has relied almost entirely on federal funds. When those funds ended October 1, 1981, the nongame program in Georgia was cut back to a bare minimum, operating mostly on carryover money in the bank. Funds are available to operate the program at a minimal level (the nongame staff includes four people) for two years, during which time an alternative source of funding will be sought.

Kentucky

During its regular 1980 session, the Kentucky General Assembly passed a nongame tax check-off bill permitting persons receiving a state income tax refund to contribute \$1, \$5, \$10, or more to the nongame fish and wildlife fund. Kentuckians had their first opportunity to contribute during the 1981 tax season. To date, the nongame fish and wildlife fund has received \$85,503.68.

The check-off legislation passed specifies that funds so generated be divided equally between the Department of Fish and Wildlife Resources and the Nature Preserves Commission. The Department of Fish and Wildlife Resources is mandated to expend its share for "the purpose of protecting and preserving nongame fish and wildlife and their habitat." The Nature Preserves Commission is to expend its share "for the acquisition of land or interests in land ... and for the protection, maintenance, and use of the land, and for no other purpose." Each agency was very busy during 1980 publicizing and planning the new program.

Montana

Montana is one state whose efforts to institute a nongame income tax check-off have not been successful. In both the 1979 and 1981 legislative sessions, a tax check-off bill was defeated. During the 1981 session, in fact, some lawmakers labeled the bill "one of the most dangerous pieces of legislation to be submitted during this session." The livestock industry was so effective in its lobbying efforts that even some of the bill's sponsors voted against it. Right now we are back at the drawing board trying to decide what to do next.

Our current nongame program is funded as a Pittman-Robertson project, with a \$45,000 budget for FY 1982. In addition, we are devoting \$16,000 towards peregrine recovery using section 6 funds and a grant from Exxon. We are actively seeking a grant to pursue bald eagle studies as well.

Michigan

Michigan does not have an income tax check-off law as yet but such a bill has been introduced in the legislature. Last year a similar bill was defeated on the Senate floor after passing through the House and the Senate Finance Committee. This year we are hoping for better things. We guess an income tax check-off donations for nongame would net Michigan one million dollars or more annually. Even if it passes, however, it would be 1983 before funds were available.

Funding programs — Last year (October 1, 1980 through September 30, 1981) Michigan was allotted about \$500,000 in federal endangered species funds. This current fiscal year there are no federal funds except for about \$15,000 in carryover money. Our total nongame budget has dropped

from about \$600,000 last year to \$100,000 this year because of the cutoff of federal funding. This year's funding comes from three sources: 1) Michigan's Fish and Game Protection Fund (sale of hunting and fishing licenses), \$62,000; 2) Living Resources Program (sale of T-shirts, wildlife painting or photographs, calendars, etc.), \$25,000; and 3) federal funds (carryover from last year), \$15,000.

The drastic reduction in funding has resulted in the loss of one and one-half wildlife biologist positions, leaving two biologists and a secretary in the nongame unit. We can see down the road to a brighter future and are hopeful that future will begin by 1983.

Colorado

Here are the results of Colorado's Income tax check-off for 1981, the fourth year of the program.

Amount contributed	\$740,744
Contributors	139,850
Taxpayers who got refunds	1,097,110
% of those who contributed	12.7
Average contribution	\$5.30

The following table compares year-by-year check-off results since Colorado's program began in 1978:

Year	Total	Contributors	% Contributing	Average Contribution
1978	\$350,000	90,000	9%	\$3.89
1979	\$501,000	118,600	12%	\$4.22
1980	\$647,200	129,300	11.9%	\$5.00
1981	\$740,700	139,850	12.7%	\$5.30

In California, the federal fund well has run dry

California's nongame and endangered species management programs have depended heavily on federal funding from the beginning. And now that reliance may prove to be the state's downfall.

In 1968 Pittman-Robertson (P-R) funds were used to establish our first nongame wildlife project. With a budget of approximately \$50,000, two wildlife biologists directed and conducted research and management projects for a handful of birds and mammals facing varying degrees of threat. The species receiving the most attention were the California condor and the peregrine falcon.

Enactment of endangered species legislation by the California Legislature in 1970, and the Congress in 1973, reflected a growing public recognition of the need to do more on behalf of endangered and rare species. Despite the growing need for a larger research and management effort, the Department of Fish and Game was unwilling to augment its program to meet an increasing workload. It was not until 1977, following the receipt of Federal Endangered Species Act (Section 6) grant-in-aid funds, that the Department was able to significantly increase its efforts for endangered species.

A separate Endangered Species Project staff consisting of 3.5 wildlife biologists was added in the Wildlife Management Branch to complement its ongoing P-R Nongame Wildlife Investigations Project, while the Inland Fisheries Branch added two herpetologists, an invertebrate biologist, and 2.5 fishery biologists to its staff, which was given responsibility for both officially-listed endangered species as well as all nongame (nonlisted) species. In addition, Section 6 grant funds were used to support two biologists in regional field offices to coordinate field studies and management activities.

State legislation in 1977 created a program in the Department for endangered and rare native plants. Unlike the earlier "endangered wildlife" legislation, however, the

Legislature appropriated funds for this project sufficient to employ two plant ecologists. But it soon became apparent that the project was underfunded. Therefore, in 1979 we returned to the well to augment the project with Endangered Species Act Section 6 funds.

Combined with a project agreement for the southern sea otter (administered by the Marine Resources Branch) and another project agreement for habitat acquisition, California's Section 6 grant has been the largest among the states receiving these funds. But now the well has gone dry; Congress has failed to appropriate additional Section 6 grant funds for 1981-82, and California stands to be the biggest loser as a result.

When we learned last January that President Reagan's revised budget would not include a request for new state grant funds, we put a freeze on filling vacant positions and began reducing expenditures. In August the Department decided to transfer permanent staff from the Endangered Species Project to other units. In addition, the Sea Otter project was transferred to Marine Mammal Act funding, but that source is expected to be available for only the current fiscal year. The result has been to generate enough savings in our 1980-81 budget to support a much reduced program through June 1982. An amendment to extend the Department's 1980-81 unencumbered federal allocation through the current federal fiscal year has been approved by the FWS.

There was some indication earlier that P-R funds also would be reduced in 1981-82; however, the Nongame Wildlife Investigations Project has received its full allocation. Although not directly affected by Section 6 cutbacks, this project will be forced to take up some of the workload of the reduced Endangered Species Project.

Because of the uncertainty of future federal Section 6 appropriations and the limitations imposed by FWS priorities on how such funds may be spent, we are

seeking full state funding for our Endangered Species Project beginning with the 1982-83 budget. We have also come to realize during the first five years of our program, that a species management approach may not be the most effective means of preventing the endangerment and extinction of species. During the coming months we will be undergoing a comprehensive reevaluation and possible reorganization that may result in placing greater emphasis on the preventive (habitat protection) rather than the curative (species management) aspects of conservation biology.

Obtaining state funding for its Endangered Species Project is the Department's top priority objective for 1982-83. We have asked for an appropriation from the personalized license plate fund. However, the need to tap into the state treasury couldn't have come at a worse time. Thanks to Proposition 13 and the bail out of local governments by the state, California is facing a serious projected shortfall of revenues during the current year and, exacerbated by unbudgeted Medfly control expenditures, could end up with a deficit next July.

Until now the Department has been reluctant to propose an income tax checkoff as a means of raising needed revenues for its nongame and endangered species programs, but the current state budget woes may leave us with no choice. If the Legislature fails to provide an appropriation from the personalized license plate fund, we may be calling on those states with a tax checkoff program for information and support for our own effort before the Legislature. But even if we were successful it would be some years before revenue from a tax checkoff source would be forthcoming. In the meantime we would be faced with the problem of keeping our program together with no visible means of support. Any suggestions would be welcome.

—Steve Nicola and Bob Mallette
California

Establishing a check-off: New Jersey's experience

In recent months, five northeastern states have been looking at tax check-off legislation as a source of revenue for their endangered and nongame species programs. After eighteen months of planning and working with major conservation groups, New Jersey recently had such a bill signed into law. A brief rundown of the chain of events may be of interest to those now experiencing the process or anticipating introducing this legislation.

The New Jersey Endangered and Nongame Species Conservation Act was passed unanimously by the legislature in 1973 and established New Jersey's Endangered and Nongame Species Project. The bill provided \$100,000 for the first year; however, in subsequent years no more than \$50,000 a year has been appropriated. The program survived for seven years with this amount, supplemented by Federal Aid to Endangered Species. It became increasingly apparent that other funding sources would be necessary just to keep up with inflation. However, the recent Reagan budget cuts made it obvious that the Project could not exist without supplementary income, much less accomplish goals and objectives.

The Citizens' Advisory Committee appointed to advise the Project had been considering various approaches to the problem for three years. In January, 1980, when the funding situation seemed the worst, the committee decided that the best approach would be tax check-off legislation similar to Colorado's successful program. Initial committee contacts with legislators were enthusiastically received, and these provided the positive response we needed to pursue the idea.

Knowing that the "system" takes considerable time, the Committee spent March contacting legislators in an attempt to get sponsors and co-sponsors for the bill. All the contacts were eager, and the bills ended up with four Senate sponsors and thirteen Assembly sponsors. In addition, the Committee distributed a fact sheet to major nature organizations and wrote explanatory letters to the Commissioner of the DEP and to Governor Byrne.

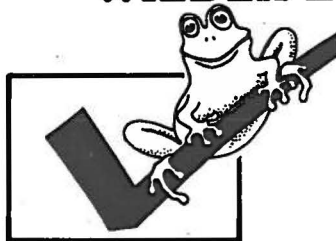
During April, identical Assembly and Senate bills were drafted by legislative aides. They were introduced in both houses in late June. By this time, the results of an Eagleton Institute poll, contracted by the Project, showed that the public overwhelmingly supported endangered and nongame species work and that seventy-six percent would contribute to the fund. The bill was not sponsored by the Department of Environmental Protection, but the New Jersey Audubon Society became the public sponsor of the bill, and they then coordinated with Assemblywoman McConnell and Senator Foran, the primary sponsors, in all phases of legislative process.

Realizing the need for strong support from organized special interest groups, the Committee, the New Jersey Audubon

Society, and Project staff organized a meeting with these groups' leaders. Ten major groups with statewide or national connections were represented. In July, 1980, these groups urged their members and others to write supporting letters to their legislators, the appropriate Assembly and Senate committee members, and the Governor and Commissioner.

The support of these ten groups and twenty-five other conservation groups was instrumental in gaining legislative approval of the bill. The advisory committee continued to personally contact conservation groups through the fall of 1980, requesting letters of support. By the end of November, the bills had passed out of their respective committees.

GO WILD FOR WILDLIFE



During the time of committee review, the only major opponent was the representative for the Department of Treasury. The Treasury objected to the bill because they felt it set a precedent and would be followed by other similar bills. They objected to the administration of handling a dedicated fund and stated that it would cost approximately \$250,000 to administer the collection and credit for the donations. The Division was able to refute these claims based on the experiences of the states of Colorado and Oregon which had ongoing programs. The legislative committees continued to review the bills with a positive attitude. However, the objections did receive attention from the DEP's Commissioner, who did not actively support the bill.

In January, the Senate bill passed in the Senate by 28 to 1. Following this action, the Senate version was substituted for the Assembly version and had to be passed by the Assembly.

Supportive letters were solicited by the Citizen's Advisory Committee members and the New Jersey Audubon throughout early 1981 while awaiting action in the Assembly. The Speaker repeatedly avoided bringing it on the floor. Further pressure was applied by supporters directly to him, and when the bill finally came up in May, it passed in the Assembly 63 to 1.

At this point, it was unclear whether the governor would respond to the opposition of the State Treasurer to sign the bill. The

State Treasurer's objection to the bill had been refuted on all points in the committees, but these objections were further submitted in writing to the Governor. The points were again refuted in writing by the Division. Concurrently, outdoor writers, conservation and sportsmen's groups, and other institutional supporters were contacted with information about the bill. They were urged to write again and send mailgrams to the Governor.

For six weeks rumors of the Governor's intentions to sign or not sign were flying. Our best information indicated that he intended to let the bill die without signature. Unexpectedly, on June 18, word came to us that he intended to sign that afternoon, which he did. The Committee and the Project immediately wrote to all supporters including legislators, aides, and the Governor to thank them for their support.

In July, moving rapidly, the committee and project had developed a logo and made sure that the check-off was on the new draft income tax form. Paul D. McLain, Deputy Director of New Jersey Division of Fish, Game and Wildlife, made a trip to Colorado to gain details of their successful tax check-off and the all-important public promotion program. He returned with information and ideas on the promotion program and future possibilities for Project staffing.

In July 1981, the New Jersey Resident Income Tax Return form A-1040 was printed with line 33 allowing people getting refunds to donate \$2, \$5, or \$10 to the Endangered and Nongame Species of Wildlife Conservation Fund. With proper promotion, the Fund should receive \$200,000 to \$500,000 the first year. A full time promotion specialist has been hired to promote the check-off and is currently developing a brochure, a poster, a mailing insert, and public service TV & radio announcements to distribute between now and April 15, 1982.

In summary, our agency took an approach to this legislation which can be outlined in seven steps:

1. Lay the groundwork and formulate a plan;
2. Do a survey to quantify public response;
3. Present the idea to conservation groups, and create a single sponsoring group;
4. Assist sponsor groups in contacting legislators and assist legislators in writing the bills;
5. Keep the bills constantly at the forefront of all public contacts, requesting support at all times;
6. Once passed, actively promote the check-off and have an expanded program ready to present in the promotional campaign;
7. Coordinate with Treasury to set up accounting procedures.

—JoAnn Frier
New Jersey

Status report: Colorado's nongame wildlife program

The Landsat satellite — launched by NASA in 1972 — takes photographic images from some 590 miles above the Earth. In Colorado, those Landsat images are contributing to the battle to save several of the state's endangered and threatened prairie grouse. The images help the Colorado Division of Wildlife pinpoint the relatively few remaining areas of short and tall grass prairie, habitat for the greater and lesser prairie chickens and the prairie sharp-tailed grouse. Areas identified by the satellite are being evaluated as potential transplant sites for the fast-disappearing birds.

Besides a useful wildlife management tool, the Landsat-satellite — and the space-age technology it represents — is a graphic symbol of just how far the management of nongame wildlife species has come in Colorado.

Once a seemingly orphan child of Colorado's wildlife management activities, nongame wildlife is now the beneficiary of a million dollar plus annual budget, made possible largely by Colorado's state income tax check-off program, which has raised

more than \$2.2 million for nongame wildlife since its inception in 1978. In 1981, Colorado taxpayers donated nearly \$750,000 through the check-off.

Colorado's nongame program started unceremoniously in 1972 when John Torres was appointed the Division's nongame wildlife supervisor. He was the Division's sole nongame biologist and his budget was practically nil, yet his province covered some 783 species of wildlife — about 80 percent of the total wildlife species found in the state.

Torres' appointment, however, was an opening wedge. The nongame program grew slowly at first, and then, with the birth of the check-off, exploded. Torres' 1981 nongame staff includes 14 full-time and 21 part-time employees. The nongame program has its own research staff, and regional nongame biologists now work throughout the state.

Colorado's nongame program has three main goals: reversing the decline of the more than 25 threatened and endangered species in the state; keeping other nongame species from sliding into the threatened and endangered categories; and encouraging nonconsumptive uses of wildlife like bird-watching, wildlife observation and nature study, and photography.

The program concentrated almost exclusively on the first of those goals in its early years, and much of the work was basic — obtaining and analyzing as much information as possible about Colorado's threatened birds, mammals, amphibians, and fish. Gradually, saving threatened and endangered wildlife became an active endeavor. For instance, more than 55 river otters have been obtained from other states since 1976 and released in suitable Colorado waters. The river otter now appears to have regained a foothold in Colorado where it had all but disappeared entirely. Endangered peregrine falcons have been hatched in captivity and placed in nests in the wild. The greenback cutthroat trout was the subject of an intensive transplant and rearing program which proved so successful that the species was eventually reclassified from endangered to threatened status.

While the successes of the thrust to save endangered wildlife have been rewarding, the realities of the overall task are sobering. Many species classified as endangered in the state may already be gone entirely or be so close to the edge that all efforts to save them may be futile. Species like the grizzly bear, the wolverine, the wolf, the black-footed ferret, and the bonytail chub fall into that category. The continued and steady loss of habitat for those and other wildlife species brought on by rapid and intense development is making the job of saving imperiled wildlife more difficult literally by the day. The prairie sharp-tailed grouse, for example, was once plentiful in Colorado's



John Torres
Colorado
Nongame
Program
Manager

prairie land. Gradually, though, the conversion of grasslands to croplands and overgrazing reduced the birds to a population of an estimated 200 which live precariously close to the state's evolving megapolis along the Front Range of the Rocky Mountains.

It has only been in the past two or three years that Colorado's nongame program has been able to devote much energy to its other two goals — managing species not yet threatened or endangered and encouraging nonconsumptive use. Efforts to reach the former goal have focused on a number of wildlife species, including birds like the great blue heron and osprey; the 16 species of bats found in Colorado; small mammals like the pocket mouse and wood rat; and a number of reptiles and amphibians. The great blue heron study is trying to pinpoint the effects of human disturbance on the herons' nesting behavior and success. Part of that project involves working with developers to institute buffer zones between heronries and new construction sites.

The effort to encourage nonconsumptive use is relatively new ground for Torres and the nongame staff. Besides promoting and fostering nonconsumptive activities, the program includes efforts to take advantage of a curious spin-off borne of rapid population growth in the state. As wildlife habitat in once wild places has fallen under bulldozers and heavy equipment, urban wildlife habitat has increased. And, many wildlife species are carving out places for themselves in the state's urbanized areas particularly along the Front Range. The Division is trying to work with homeowners planners, park and recreation officials, and environmental groups to see that a place remains in Colorado cities for wildlife species which can cope with urban life. The presence of wildlife in or near urban areas also offers tremendous educational potential to teach city youngsters about the concepts of wildlife conservation and management.

—Jim Hekkers
Colorado



Bringing river otters to Colorado from other states has been one of the most successful endangered species management programs undertaken in Colorado. An offshoot of the project is the start of a reading program in the Denver Public Schools concentrating on the otter and attempts to restore it in Colorado.

Nongame Newsletter

6060 Broadway, Denver, CO 80216

How nongame programs are funded in the states

Continued from page 2

Indiana, Michigan, Maryland, and Alabama. Reasons given for these legislative failures include: competition for checkoff by other state agencies; protests by state revenue departments which were concerned that the checkoff would cause them more work and also further complicate an already complicated tax return; vetoes by two governors as setting bad precedents; inadequate public relations programs; and petty political maneuvering, i.e., attaching "riders" to checkoff bills to serve special interest groups.

The advantages of the checkoff system are very straightforward and simple:

- *It works.* The lowest estimated income in our survey was Idaho. Project income

Competition for funds is the major stumbling block to a check-off

there was estimated to approach \$40,000 — probably a very conservative estimate. Colorado anticipates nearly \$750,000 generated this year, their fourth. The Colorado program has grown each year, as have other programs, as the checkoff has become better known. As revenues have increased in Colorado, unsuccessful attempts have been made to dip into the funds by other agencies. The wildlife agency in Kentucky shares its revenues with the state's Natural Reserves Commission (Bill Graves, Kentucky Department of Fish and Wildlife Resources, pers. comm., 1981.) Average rate of participation for all state programs is 10% with the average donation \$4.23.

- *It's voluntary.* As compared to a tax system, the contributions are purely optional. Those people wanting to do something for nongame may, while those who choose not to are free to ignore it. No one is offended except other agencies that jealously watch the expression of public support for the nongame effort. The public apparently does not see contributing to nongame programs as a burden during these austere times (Witter, et. al. 1981).

- *It shifts the burden of nongame management to nonconsumptive users.* The checkoff provides a mechanism by which appreciative users can express their support for nongame management. We've been preaching for years the need for users to pay their own way. This system allows just that.

- *It does not financially impact game management programs.* Hunters' and fishermen's dollars contributed through license revenues can be utilized as they were intended — to produce better hunting and fishing conditions. This has been a major argument for years against states expanding their wildlife efforts to include nongame. Administrators will continue to be reluctant to spend hunting and fishing license monies on the nongame resource.

- *It ultimately benefits the state wildlife department and game animal resource.* Broadening the base has allowed agencies to expand their activities and has given visibility to their program. Indirectly, nongame management programs will be beneficial to game species where management needs between game and nongame overlap. Lands acquired through nongame programs can be useful to hunters for managed hunting of game species.

- *It unites hunters, non-hunters, and anti-hunters in a common cause.* Management of the nongame resource will pull together the hunting and anti-hunting factions for a common cause. Setting aside animosities between the two groups for the benefit of

nongame can only serve to improve understanding on both sides. Participation in nongame management by wildlife agencies can only enhance their credibility with the anti-hunting public and may serve to moderate anti-hunting pressures in future years. Conflicts between non-hunters and hunters can and must be resolved by broadening wildlife programs to include the conservation of all wildlife populations (Advisory Committee on Non-game Wildlife Policy 1974). Wildlife agencies should remember that hunters represent less than 10% of the American public and it will be in the best interest of hunters to eliminate or reduce friction between groups.

The major stumbling block faced by states initiating nongame checkoff programs appears to be competition for funds. A cursory look at the checkoff system could lead one to believe (particularly other state agencies) that it could be an easy mechanism for generating monies for any number of "beneficial" programs. Other agencies, therefore, may insist on similar checkoffs. However, it is highly doubtful that any of the other programs would enjoy the broad base of support that nongame does. The checkoff itself will not be effective unless it is established for a program or cause that the public views as important or beneficial. Administrators should keep in mind that *it is the program (nongame) that makes the checkoff successful, rather than the checkoff system making the program successful.* Nongame is viewed as extremely important and useful by the public and they have clearly indicated their willingness to pay for it.

Planning, staffing topic of next issue

The focus of the next issue of *Nongame Newsletter* will be on planning, organizing, and staffing a nongame wildlife management program. Hopefully, the topic will be particularly timely since many states are now going through the very early stages of putting together their nongame programs.

Contributions are solicited on any and all aspects of those topics. Contributions are also sought on any other topic you think might be interesting to nongame biologists in other states.

The deadline for the next issue of *Nongame Newsletter* is January 29, 1981. We hope to get the spring issue out by March 1, 1982, in order to provide information about organizing an association of nongame biologists at the North American Wildlife and Natural Resources Conference scheduled later that month.

Corrections, etc.

Continued from page 1

Social Circle, Georgia 30279. Telephone: (404) 557-2532.

From Montana . . . The telephone number for Dennis Flath, nongame biologist for the Montana Department of Fish and Game has been changed to (406) 994-3285.

If there are any other corrections to addresses or information included in the list of people responsible for nongame wildlife programs appearing in the first issue of *Nongame Newsletter* please send them to Jim Hekkers, Colorado Division of Wildlife, 6060 Broadway, Denver, CO 80216. A complete, corrected list will appear in the next issue of the newsletter — spring, 1982.

APPENDIX XVIII.

Shorebird Poster

(original poster size: 12"x17")

SNIPE HUNTERS

KNOW THESE BIRDS BEFORE YOU SHOOT

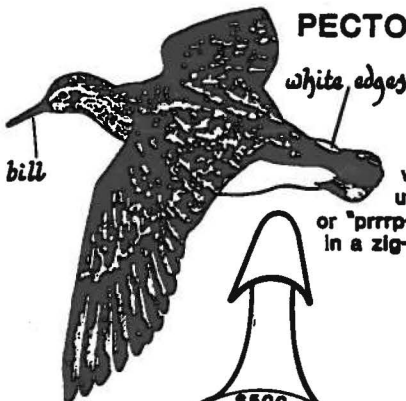


SNIPE

10 - 11" long;
no white on back or tail;
 brown rump; orange tail;
 plump dark body;
 distinctly striped head; long bill.
Usually solitary.
Stays hidden in marsh vegetation until disturbed.
 When flushed, makes a low, raspy
 "kzrrt" or "scalp" call &
 flies in a rapid zig-zag manner.

LEGAL

LEGAL TO HUNT DURING DUCK SEASON
 BAG LIMIT - 8 PER DAY, 16 TOTAL IN POSSESSION




PECTORAL SANDPIPER

8 - 9 1/2" long;
 back is dark except for
white edges of rump;
short bill; shorter body than snipe.
Acts much like snipe
 when flushed from grassy swamp,
 uttering a low, chirping "krrik-krrik"
 or "prrrp-prrrp" & flying a short distance
 in a zig-zag pattern.

DOWITCHER

10 - 12" long;
white rump & back;
 plump body; long bill.
 Its call when flushed is a
 metallic, 3-note whistle "tu-tu-tu" or
 single thin peeping note, "keek".
 Probes for food by a rapid
 sewing-machine manner
in open mud flats;
often seen in flocks.

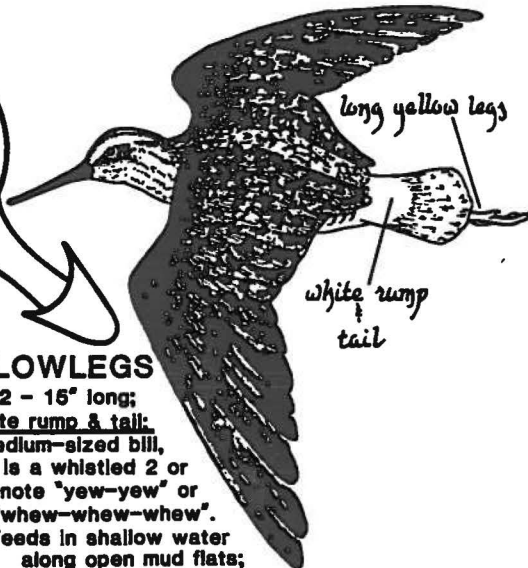


ILLEGAL TO SHOOT

UP TO \$500 FINE
 6 MONTHS IN JAIL

YELLOWLEGS

9 1/2 - 15" long;
white rump & tail;
 medium-sized bill,
 its call is a whistled 2 or
 3-note "yew-yew" or
 "whew-whew-whew".
 Feeds in shallow water
 along open mud flats;
 often seen flying with long
yellow legs extending well behind slender body.



REMEMBER: If a bird has a white rump or short bill - Don't shoot!

Alaska Department of Fish & Game - Nongame Wildlife Program



APPENDIX XIX.

Press Coverage Examples

REST STOP—Sandhill cranes make use of grain planted in the Creamers Field bird sanctuary to stop over on their spring migration to nesting

grounds farther north. Cranes and other non-game wildlife are subjects of a new Alaska Department of Fish and Game program aimed

at the majority of birds, fish and mammals that are not hunted.

(Staff photo)

Aimed at vast majority of wildlife

New ADF&G program covers non-game

By FRED PRATT
Staff Writer

The hunters and trappers who walk in and out of the state Fish and Game Department office on College Road might find some interesting company in the future—birdwatchers, wildlife photographers and artists.

Generally, state fish and game departments focus on management of birds and animals that come under the heading of "game," species that are hunted and whose management is paid for by funds that come from hunting license fees.

The Alaska Fish and Game Depart-

ment now has a non-game program aimed toward the vast majority of wildlife that is not hunted, fished or trapped.

Sue Quinlan, the program's assistant coordinator and its representative in the Fairbanks Fish and Game office, said the main goal of the program this summer is to find out what people expect from its services. A recent conference in Anchorage drew more than 100 people to the first public meeting on the program, and a similar meeting will be held in Fairbanks this fall.

The program was established with a

\$150,000 appropriation last year and it employs three people. The coordinator is Paul Arneson of Anchorage.

Only 10 per cent of the birds in Alaska are hunted, Quinlan pointed out in a recent interview, and fewer than 40 per cent of the mammals interest the state's hunters.

"The program covers 350 bird species, 53 mammals, eight fish, 7 amphibians and the state's one reptile, a garter snake found only in Southeastern," Quinlan said.

Examples of animals in the program would include pika squirrels, lemmings and porcupines, Quinlan said.

The state already has several popular wildlife viewing areas established, like the McNeil River area popular with bear photographers, Creamers Field in Fairbanks, Potter's Marsh in Anchorage and Walrus Island.

Already a few Alaskan hunting guides make an off-season income by leading tours of birdwatchers and photographers.

Quinlan expects the primary interest in the program will be from birdwatchers, teachers, tourists, photographers, artists and writers.

While she is inviting suggestions on what the program can tackle, Quinlan

said some ideas offered so far include workshops, printed guides to wildlife viewing areas, materials on Alaskan wildlife for teachers, and research directed toward non-game animals.

The Anchorage conference drew suggestions of holding wildlife weeks in schools, setting up bird-banding stations, doing more research on wildlife ecosystems and studying the interaction of non-game animals with game species.

"There has not been a lot of research on these species in the past," she explained.

Daily News-Miner, Fairbanks, Alaska, Thursday September 24, 1981.

Nongame program to be introduced

A public meeting will formally introduce the new nongame program in the Department of Fish and Game in Fairbanks Oct. 7.

The nongame program began this year with an appropriation in the current state budget secured after several years of pressing by Alaskan conservation groups. It has a two-person staff, coordinator Paul Arneson in the Anchorage Fish and Game office and nongame biologist Sue Quinlan at the Fairbanks office.

The program focuses on the vast majority of wildlife that are not game species. Traditionally fish and game management has been financed primarily by fees charged to hunters and fishermen and has emphasized management of game animals.

Pressure for a nongame program has grown along with the state's development of special wildlife viewing areas, information programs and its habitat protection division.

A day-long workshop was held in Anchorage in June to chart the new program's course, and the meeting here Oct. 7 is the first major public session here.

The meeting is to begin at 7 p.m. at Noel Wien Library. It will feature a slide program on nongame wildlife, a review of current projects and a period for citizen comments.

"Over 400 species of Alaskan wildlife could be called 'nongame', including owls, puffins, chickadees, flying squirrels and lemmings," Quinlan said. "This program is for these wildlife and for birdwatchers, wildlife photographers, sportsmen, teachers, artists, tourists and everyone else who appreciates Alaska's wildlife."

"We need to know what the public wants and expects from this program," she said.

Possible activities of the program are providing the public with information on watching wildlife, developing educational materials on wildlife for teachers and conducting research and management programs on nongame species, she said.

Key to nongame program public support, ADF&G says

Public participation is a key in many projects proposed for the new Nongame Wildlife Program being introduced in Fairbanks by the Department of Fish and Game next week.

A public meeting on program is set for 7 p.m. Oct. 7 in the Noel Wien Library. It will feature a slide program on nongame wildlife, a review of current projects and a period for citizen comments.

The nongame program began this year with an appropriation in the

current state budget secured after several years of lobbying by Alaskan conservation groups. Most of the projects outlined so far include public participation in reporting wildlife sightings, aiding studies of wildlife largely ignored in past research and helping surveys through activities like reporting bird sightings.

Gardeners and landscapers may be recruited for programs on cultivating wild plants and designing new habitat to attract birds and mammals to urban

sites. Youth groups will also be sought for assistance in planting, building bird houses and other activities.

The program has a three-person staff, coordinator Paul Arneson in the Anchorage Fish and Game office, nongame biologist Nancy Tankersley in Anchorage and nongame biologist Sue Quinlan in Fairbanks.

It focuses on the vast majority of wildlife that are not usually hunted, although it also includes nonhunting activities like viewing and photography

of animals that are hunted.

One immediate goal for the program is to find a way of financing it in the future. While it was begun this year with a special appropriation secured primarily by State Rep. Sally Smith, D-Fairbanks, its sponsors feel its future depends on support and interest from those it serves.

Traditionally Fish and Game management has been financed primarily by license and tag fees charged to hunters and fishermen and

has emphasized management of game animals. Other states finance nongame programs with voluntary state income tax credits, but the repeal of the income tax in Alaska and the state constitution's ban on dedicated funds make financing from nongame wildlife users more difficult here.

Only a small minority of the state's wildlife species are hunted, and many of those that are hunted draw attention from nonhunters in places like the

Creamers Field waterfowl sanctuary and the McNeil River falls area popular with bear photographers.

A statewide guide to wildlife viewing may be an early priority of the program. Another project urged in previous workshops is an observation card program for reports by individuals of sightings of nongame animals. Little research has been done on many of the state's birds, mammals, amphibians and reptiles when compared to the effort for larger game animals.

Few nongame species have been included in the past in the department's "Wildlife Notebook" series of one-page

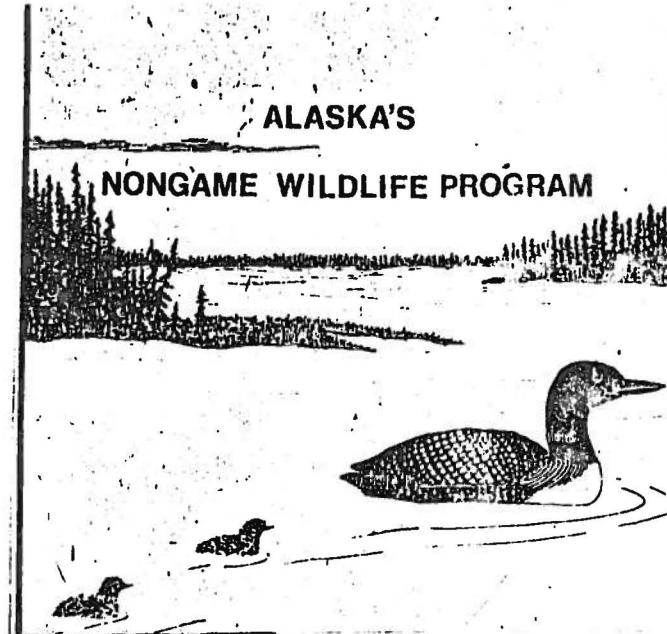
reports on Alaskan wildlife, and the nongame program has asked for help from volunteers willing to help staff biologists in that effort as well.

The program's first newsletter noted that a recent study showed that Alaskans have a higher interest and knowledge of wildlife than any other group of Americans except for those who have graduate degrees in wildlife science.

"The nongame program is for photographers, bird watchers, tourists, artists, teachers, scientists, writers, outdoor enthusiasts, conservationists, sportsmen and probably you," the newsletter stated.

November

7



Alaska nongame species are finally recognized

Mention the words Alaskan wildlife to most people and what usually comes to mind is the dramatic big game species often associated with wilderness.

The attention on such species as bear, moose, caribou, wolf and sheep has meant most of the efforts of the state's wildlife managers and most of the money for management has been directed toward Alaska's harvested species.

There has been, however, a long-standing interest in the state for a wildlife program concerned with nongame species, of which there are over 400 in Alaska.

Nongame wildlife includes those species usually not hunted, fished or trapped, and includes nongame birds such as loons, songbirds, owls, puffins,

seabirds and woodpeckers and nongame mammals such as lemmings, shrews, flying squirrels and voles.

The Alaska Department of Fish and Game began a Nongame Wildlife Program earlier this year and identified several projects to get the program started. "The Nongame Wildlife Program is for photographers, bird watchers, tourists, artists, teachers, scientists, writers, outdoor enthusiasts, conservationists, sportsmen and probably you," according to Paul Arneson, coordinator of the program.

Fish and Game has scheduled a public meeting in Juneau for Tuesday at 7:30

p.m. at City Hall to give Capital City residents an idea of what the program is trying to accomplish and to gather information and opinion from interested citizens, according to Arneson.

Conservation of nongame species often benefits game species, according to Fish and Game biologist Sue Quinlan. Most transport seeds, eat insects and are themselves preyed on by species such as fox or marten.

The Nongame Wildlife Program has four goals: to maintain optimum populations of nongame wildlife; to promote and provide opportunities to use nongame wildlife; to provide schools

with information on wildlife; and to conduct research to meet these goals.

The first thing Fish and Game did to get the program moving was sponsor a meeting in Anchorage in June to hear suggestions from sportsmen, conservation groups, teachers and many others, according to Quinlan.

Several projects were suggested at the meeting which Fish and Game has undertaken, including:

- A statewide Guide to Alaska Wildlife Viewing, informing people how and where wildlife species can be observed.
- An Observation Card Program to collect information from amateurs about the distribution, abundances and status of nongame birds, mammals, amphibians and reptiles.
- Wildlife Watcher Reports covering topics like how to feed birds, landscaping to attract

wildlife, photographing wildlife without disturbing the animals and naturalist guides to the state's wildlife refuges.

•Wildlife Education Materials for public school teachers to teach wildlife conservation.

•A Wildlife Notebook Series published by Fish and Game and written by staff biologists to increase awareness of life histories of nongame species.

Fish and Game is looking for help on these projects. If they are successful the department has plans to undertake additional projects, including nature centers in Alaska's major cities.

The Nongame Wildlife Program can become just

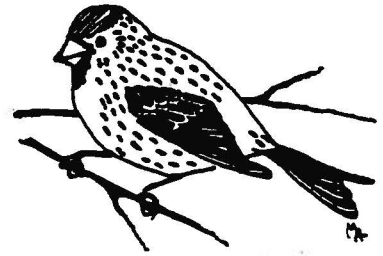
about anything Alaskans want it to be, Arneson stressed Tuesday's meeting is designed to hear what Juneau residents would like the program to be he said.

One crucial aspect of the fledgling program is funding sources, according to Fish and Game. Nongame programs other state traditionally rely on federal grants, though there is concern in the department that federal sources are likely to dry up.

School districts, Native corporations, the Legislature and private sources were offered alternatives to federal dollars at the organizational meeting in June.

REDPOLL

The newsletter of the Arctic Audubon Society



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THE JUNE NONGAME WORKSHOP

by Martha Robus

On June 8th, the Alaska Department of Fish and Game sponsored a nongame workshop in Anchorage. Everybody was invited to attend and voice their opinions and ideas about the scope and direction of nongame planning, research and management in Alaska. Those attending included representatives of the U.S. Fish and Wildlife Service, the U.S. Forest Service, the Alaska Department of Environmental Conservation, the Alaska Environmental Information and Data Center, researchers from the University of Alaska, prominent members of the National Audubon Society, the Alaska Conservation Society, The Wildlife Society, and other conservation organizations. Many people with no specific organization affiliation also attended.

Paul Arneson, the director of the Alaska Department of Fish and Game Nongame Program, opened the meeting, and he and Sue Quinlan, Fairbanks Nongame biologist, outlined the Department's goals for research and management. Their emphasis was on the conservation of all wildlife, because, they stated, the promotion of nongame will benefit game species, as well.

Some of the most interesting information at the conference was presented by the representatives of two states with successful nongame programs: John Torres, from the Colorado Division of Wildlife, and Carroll Henderson, from the Minnesota Department of Fish and Game. While their problems differ in many ways from those of Alaska, they both suggested some imaginative ways of raising money and sparking community interest. In Colorado, a program was initiated in 1978 whereby people could contribute a portion of their state income tax refund to the Nongame Program by checking a box on the state tax form. That year \$350,000 were raised in this manner. The annual amount has increased, and in 1981 more than \$750,000 have been received. Minnesota has also had success with this type of campaign, and their funds have been used for the reintroduction of endangered wildlife, such as the river otter, and programs to manage indicator species to monitor the needs of entire ecosystems (the so-called "barometer approach").

Dr. Bob Weeden, a University of Alaska biologist closed the morning session by contributing his ideas for the future of the Nongame Program in Alaska. He stressed the need of integrating nongame policy with policies of the Game, the Sport and Commercial Fisheries, and the Habitat Divisions of the Fish and Game Department. He also spoke of the necessity of establishing a good relationship with other state and federal agencies and with conservation groups, such as the National Audubon Society. Open communication with the public was also encouraged. Finally, he stated that the Nongame Program should provide a stimulus for acquiring local refuges and nature centers around the state.

Afternoon work sessions were composed of professionals and others with an interest in research, education and information. Research was further divided into discussions about mammals, terrestrial birds, water birds, and a general category for fish, amphibians, reptiles, invertebrates and plants.

What did the workshop accomplish? Many people urged that the program emphasize research stressing an entire-ecosystem approach, rather than a single-species management scheme. Other issues considered as priorities included: developing interpretive viewing sites (such as Creamer's Field); examining the effects of habitat destruction; emphasizing studies in areas of gas and oil leasing, and potential hydroelectric development; providing the public with information about nongame in Alaska; sponsoring wildlife apprentice programs; and catalyzing public participation in the Nongame Program. In addition, it was suggested that the Department sponsor annual workshops, thus assuring continued public input.

The Arctic Audubon Society, in association with the National Audubon Society, continues to support nongame research, education and management in Alaska. Workshops, such as the one in June, are extremely beneficial to those in the state Nongame

Program who need to know what the public wants. They need our (your) help in what direction their goals should take. We encourage and commend the work of biologists Paul Arneson, Sue Quinlan and Nancy Tankersley, and urge all our members to support the Nongame Program through letters and phone calls to either the Anchorage or Fairbanks Area Offices of the Alaska Department of Fish and Game.

After much negotiation, the Creamer's Dairy buildings were recently purchased by the Alaska Department of Fish and Game. We note the need for an interpretive nature center, and what better place than at Creamer's Field Refuge where migrating birds are monitored each spring and fall, and where the Department has already established nature walks and has encouraged wildlife viewing. But the ADF&G needs to know your thoughts and suggestions. Therefore, the Arctic Audubon Society urges everyone to write or call the Fairbanks Area Office and voice your support in establishing a nature center in one of the newly acquired buildings.



ATTENTION WILDLIFE WATCHERS

The Alaska Department of Fish and Game's new Nongame Wildlife Program will hold a public meeting in Fairbanks

Wednesday evening- Oct. 7, 1981- Noel Wien Library
7:00 - 9:30 PM

If you are interested in learning more about Alaska's nongame wildlife - owls, songbirds, seabirds, lemmings, shrews, flying squirrels, frogs and even a few fish.

If you are concerned that ADF&G conduct research on and plan management programs to ensure conservation of our "nongame wildlife"...

If you are interested in participating in planning, in research, in management or in specific projects...

The Nongame Wildlife Program is for you and this meeting is one you should not miss!

Come to the meeting to:

- Learn what the Nongame Wildlife Program is about.
- Learn what projects are already underway and how you can participate.
- Evaluate our current projects and tell ADF&G what you would like to see the Nongame Wildlife Program doing.

If you have any questions, or you'd like to attend but can't; call or write Sue Quinlan, Nongame Wildlife Program, Alaska Department of Fish and Game, 1300 College Rd., Fairbanks, AK 99701 - 452-1531-x259.

Nongame - A Negative Word for a Positive Program



by Sue Quinlan, Nongame Biologist, ADF&G

Thank you for this opportunity to tell you about the Alaska Department of Fish and Game's (ADF&G) new Nongame Wildlife Program. I got my original interest and fascination with wildlife from my father, who trapped muskrat, mink, and beaver in Iowa. As a child, I was amazed by his ability to tell so much about an animal from just its tracks, and his knowledge of where to look to find a particular animal. Though I have learned to identify tracks and sign and know where to look for certain animals, I can still learn much from my father's

trapping experience. That's one reason I would like members of the Interior Alaska Trappers' Association to know about the Nongame Wildlife Program. I think your knowledge of wildlife and observational skills could be valuable to the Program — and we need help if the Program is to succeed.

Let me start by telling you what the Nongame Wildlife Program is about. It originated in 1981 in response to public interest in a State wildlife program oriented toward unharvested species of wildlife and wildlife appreciation. Unlike most ADF&G programs which, as you know, are paid for by sportsmen, the Nongame Wildlife Program is funded by a General Fund appropriation by the legislature; about \$200,000. was appropriated in 1981. Currently, there are three staff: Coordinator Paul Arneson and Technician Nancy Tankersley in Anchorage; and myself in Fairbanks.

The Program has four functions: management, research, information, and education. The management and research functions will deal specifically with Alaska's unharvested wildlife — those 400+ species of birds, mammals, fish, amphibians, and reptiles in Alaska that are not harvested for sport, subsistence, or commercial purposes. Among these 400+ species are songbirds, seabirds, voles, shrews, and wood frogs.

"Why go to all the trouble of managing nongame wildlife?" Only those who fail to understand the interrelationships of all organisms and the land, or those who either are unable, or don't, appreciate wildlife, can ask this question with sincerity. It's much easier to explain the reasons to knowledgeable sportsmen who understand these interrelationships well. Nongame species are far more diverse and numerous than game species, so there is no question they play equally important roles in ecosystems. Nongame birds and mammals aerate and fertilize the soil, transport seeds, and enhance as well as reduce seedling regeneration, thus affecting Alaska's plant communities. Insect-eating birds and mammals may be important in preventing insect outbreaks. Every trapper knows that many furbearers prey on nongame animals like voles and shrews. Further, nongame species are "barometers" of habitat quality; changes in their populations can sometimes be detected more easily than game population changes. Finally, nongame wildlife is valuable to man for aesthetic reasons. Perhaps there is no more compelling reason to conserve nongame wildlife than that people are awed by the trans-continental migrations of shorebirds, enjoy the songs of thrushes in spring, and are curious about the life

of these animals. Even indirectly benefits nongame wildlife, the experience of other states indicates that nongame populations have declined, and in many cases are now being reintroduced. Persons familiar with traditional game management, i.e.,

setting bag limits and seasons, often ask, "How can you manage nongame wildlife?" Unlike game management's goal of "maximum sustainable harvest", the goal of nongame management is "maintaining self-sustaining populations". Aside from regulating harvests, the tools of game and nongame management are the same. Through research, we must obtain information on the habitat requirements, mortality factors, and production rates of nongame species, and then use this information to manipulate habitats.

At present, we have insufficient information on even the distributions, abundances, and population trends of any nongame species. Most likely, any research and management we undertake in the near future will deal with wildlife-habitat relationships and the effects of habitat changes on nongame species. With volunteer assistance, we hope to learn more about the distributions and abundances of nongame species and hopefully establish some statewide monitoring programs to assess population trends of nongame species.

The information and education goals of the Program are to promote appreciation of all Alaska's wildlife and provide the public with sound biological information on the natural history and ecology of wildlife. Information disseminated through the Program should be of interest to all wildlife users - trappers, hunters, fishermen, birdwatchers, wildlife photographers, teachers, conservationists, and others. Additionally, I hope the information will reach that large group of people who only know about wildlife from TV or as casually glanced at from a car window. These people may be mildly interested in wildlife but are not involved and are usually either uninformed, or worse - misinformed. Perhaps through the Nongame Wildlife Program, these people can become more involved, better informed, and appreciative of wildlife.

Given these general purposes, I'd like to briefly mention a few of this year's projects. These were chosen on the basis of a public workshop in Anchorage last June. Our major project is developing a guide to wildlife viewing in Alaska. This booklet will provide information on the various wildlife habitats in Alaska and when, where, and how to look for or photograph Alaska's wildlife. We could use some help on this project in terms of furbearers. The booklet will also provide information on areas set aside for viewing wildlife and have a chapter on ethics. We hope this booklet will sensitize people to the relationships between wildlife and habitat and create more awareness of Alaska's interesting wildlife resources.

A second project is an observation card program. We are soliciting volunteers to record observations of less well-known wildlife, so we can increase our knowledge of distributions and habits of nongame species. Some people have suggested including less well-known game species, like wolverine, in the project. This is one project where Alaskan trappers might be able to contribute significantly since they are afield when so many other people are staying close to home fires.

We are also starting a series of Wildlife Watcher Reports. The first one covers birdfeeding in Alaska. If you don't already know the birds, it's a good place to start. Future topics include landscaping for wildlife, building birdhouses, how amateurs can contribute to wildlife research, and various naturalist's guides to special wildlife areas. We also plan a statewide breeding bird survey and hope to develop some wildlife education materials for teachers to use.

As I mentioned earlier, this Program is funded by the General Fund. We are working to devise a means for people who are interested in nongame wildlife conservation to contribute financially to the Program, just as sportsmen contribute to the game and fish programs now. In other states, nongame wildlife programs are funded by sales of personalized license plates, nongame stamps, general fund appropriations, and income tax checkoffs. The most successful funding method has been the voluntary, state income tax checkoffs, whereby citizens can contribute part of their refund to nongame. This past year, Coloradans contributed \$740,000; in Minnesota, taxpayers contributed \$700,000 to support their state's nongame wildlife program. ADF&G hopes to develop some



NONGAME (cont. from page 21)

similar voluntary contribution method, but it must be an innovative one, as we no longer pay State income taxes. If we are successful, this will mean more money for wildlife conservation. And just as game management has benefited nongame, future management of nongame will, no doubt, indirectly benefit game species.

I am very interested in your opinions and suggestions for the Program. If you'd like to comment or learn about the Nongame Wildlife Program and our projects, or how you can participate, please write or call me at 1300 College Road, Fairbanks, Alaska 99701; phone: 452-1531, ext. 259. I hope you'll take time to contact me.

By FTA Rep. Norm Phillips

FUR TAKERS TALK

In the last issue of "Fur Takers" they had an article on FTA's Trappers College, which, by the way, became a reality this past year. This is a large step in the right direction and we wish FTA every success with this program.

The December issue of Alaska Trapper had many fine articles and one of them was written by Sue Quinlan of ADF&G under the heading of "Nongame-A Negative Word for a Positive Program". Sue stresses the importance of nongame wildlife in our outdoor experiences and I think back of all the times a little Chickadee has entertained me with its chickadee dee dee song, yes, nongame wildlife is very important in the balance of things, possibly Sue could send out a questionnaire, much like the one Jean Ernst sends out on furbearers. I for one would be happy to provide what information I could as I'm sure many trappers would.

The December issue of Alaska Trapper also mentioned the trapping school ATA held in October. I, as coordinator of this school, would like to personally thank instructors Terry Johnson, Pete Buist, LeRoy Shank, Ron Long, Gerry "Bear" Wyse, Jon Gleason and State House Rep. Ken Fanning. I understand Ken is trapping while the State House is not in session and he has a good catch of fur. I also thank Al Jones who started the fires every evening and took pictures each night as well as many other helpful duties, Elaine Long who made sure we had coffee and took care of student fees, Joe Dart who taped the whole five days and also produced the advertising for the course, Dave Woodward who wrote the article for the Alaska Trapper, Chuck Vogel who was ready to step in if any one of us could not make it and, of course, the 51 students who attended the school. Many of the students were not novice trappers but attended the course to pick up a few pointers on cold weather trapping or to get a tip on a special problem they were having on their trapline. We plan to continue this program each year as needed, probably each fall prior to the trapping season.

'Talk to you again next month and in the mean time...

GOOD TRAPPING!

Norm

