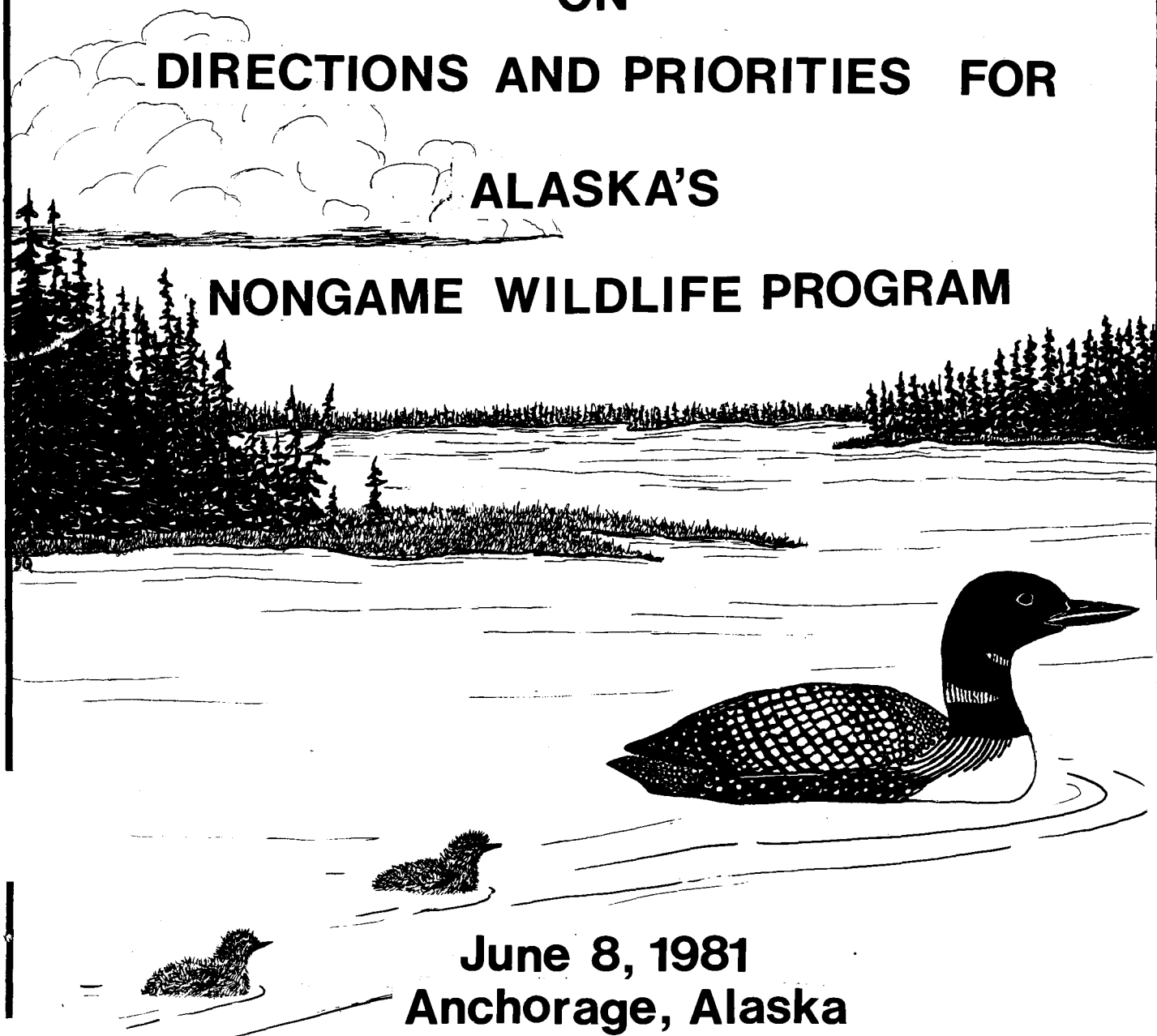


**PROCEEDINGS OF
A WORKSHOP
ON
DIRECTIONS AND PRIORITIES FOR
ALASKA'S
NONGAME WILDLIFE PROGRAM**



**June 8, 1981
Anchorage, Alaska**

Alaska Department of Fish and Game

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

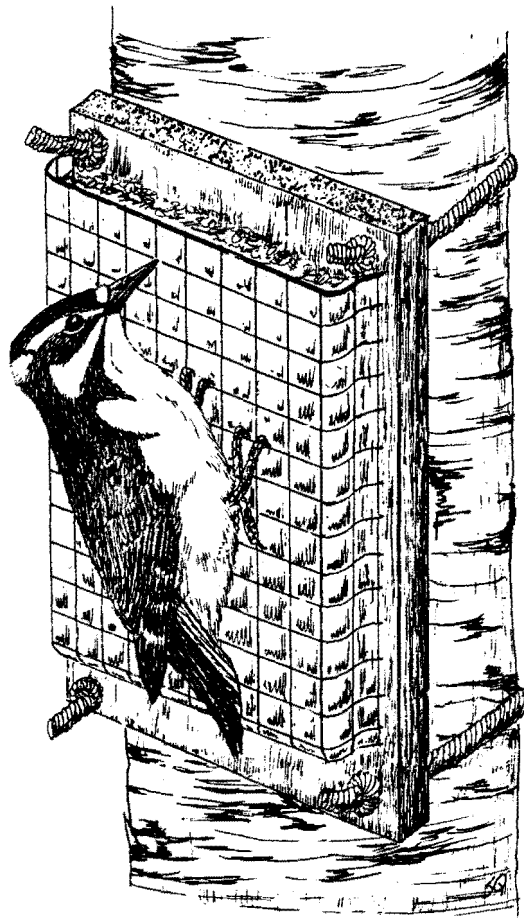
Tentative Schedule

- 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.

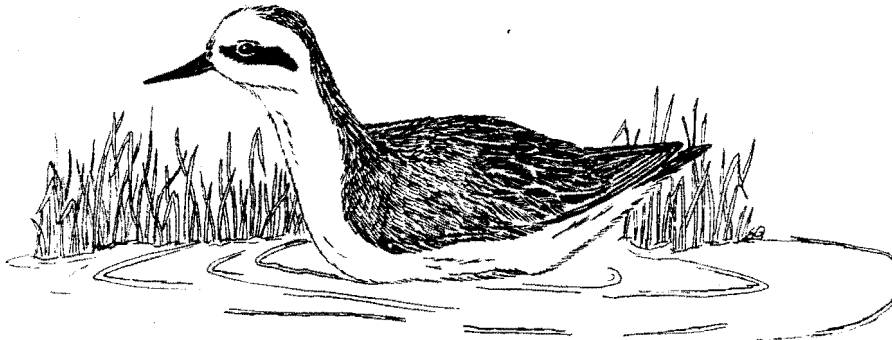
So it is my fervent hope that this dividing up of wildlife into game and nongame only represents a step forward in the evolution of a comprehensive and sophisticated State wildlife program that recognizes the value and role of all creatures in the natural ecosystem. I am convinced we are moving in that 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 million⁴ to buy birdfeeders, field guides, and other bird-watching equipment. 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, 505,000 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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- ⁴ Payne, B. R., and R. M. DeGraff. 1975. Economic values and recreational trends associated with human enjoyment of nongame birds. Pages 6-10 in Proceedings of the symposium on management of forest and range habitats for nongame birds. U.S.D.A. Forest Service. General Technical Report WO-1.
- ⁵ Alaska Department of Commerce and Economic Development. 1978. Alaska visitor industry: a summary of the visitor-related firm and the census and expenditure survey. Not a numbered publication.

NONGAME PROGRAMS IN THE UNITED STATES

by
Paul D. Arneson
Nongame Wildlife Program Coordinator
Alaska Department of Fish and Game



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.

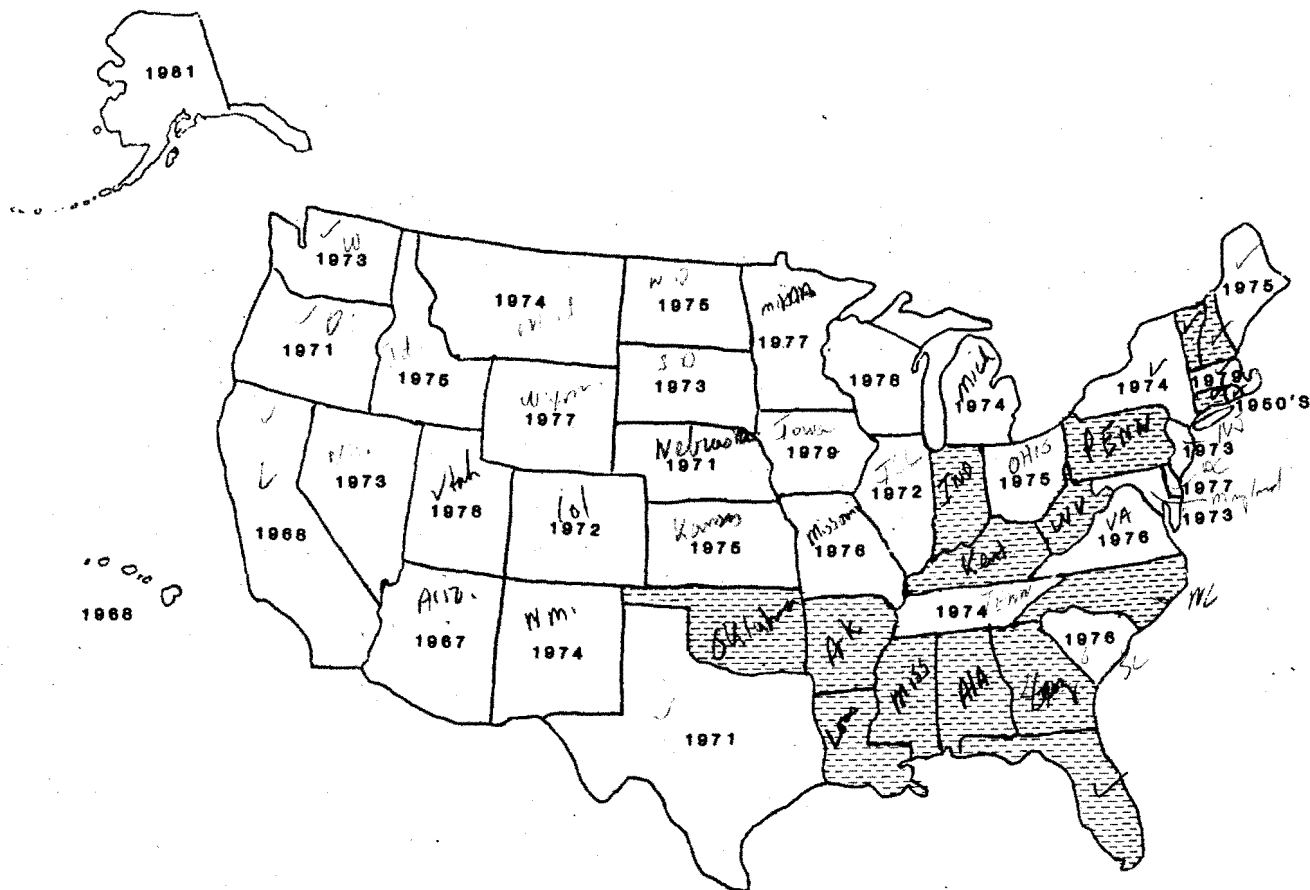


Fig. 1. Year in which each state began nongame wildlife programs. Shaded states do not have active nongame wildlife programs in 1981. (Compiled by Paul Arneson, ADF&G, Anchorage.)

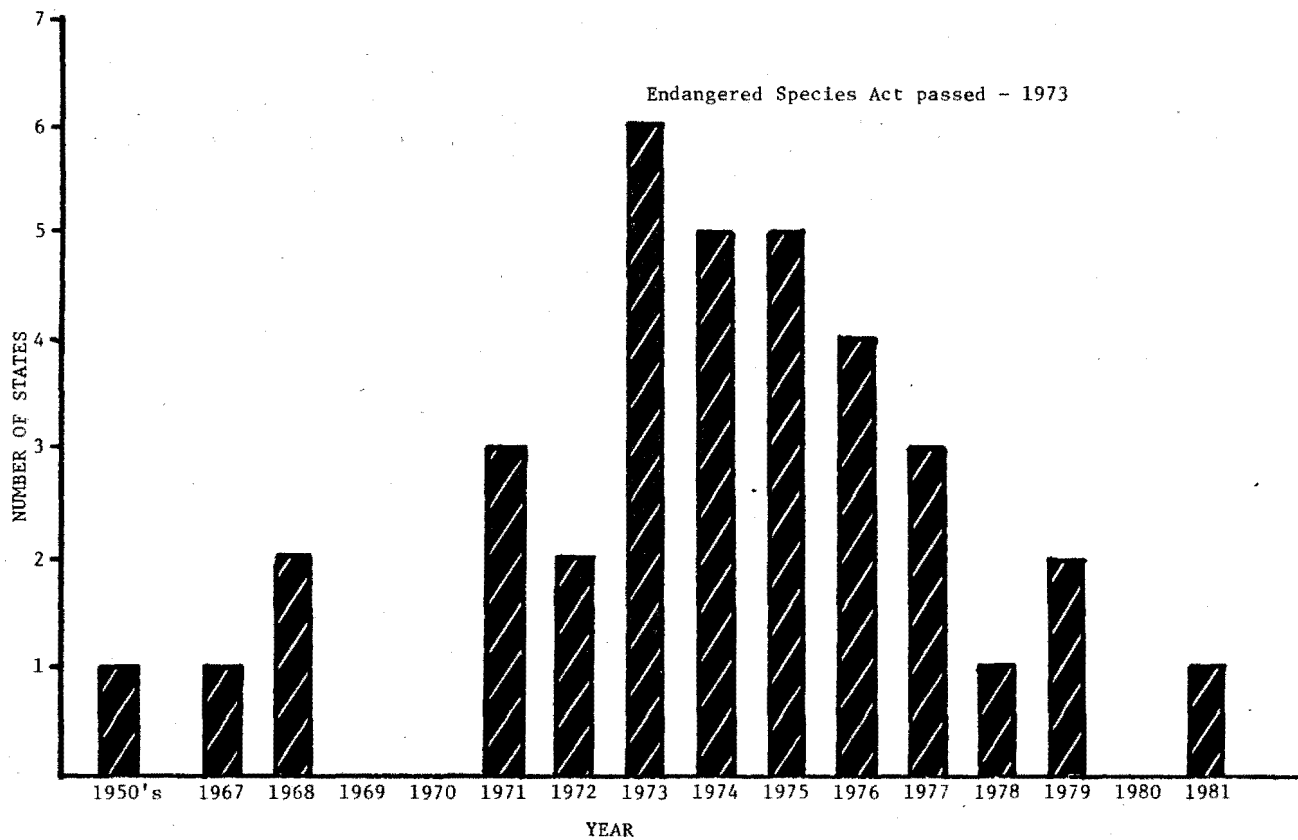


Fig. 2. Year in which 36 states initiated nongame wildlife programs. Fourteen states do not have programs. 1973 includes Indiana who voted in a nongame program but it has never been funded. (Compiled by Paul Arneson, ADFG, Anchorage.)

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>
<u>FEDERAL</u>	
Pittman-Robertson	14
Endangered Species	21
Dingell-Johnson	5
Contracts	2
<u>STATE</u>	
License Fees	22
General Fund	15
Tax check-off	9 (11 trying)
License Plate	2
Sales Tax	1
Decals	3
<u>PRIVATE</u>	
Grants	3
Donations	3

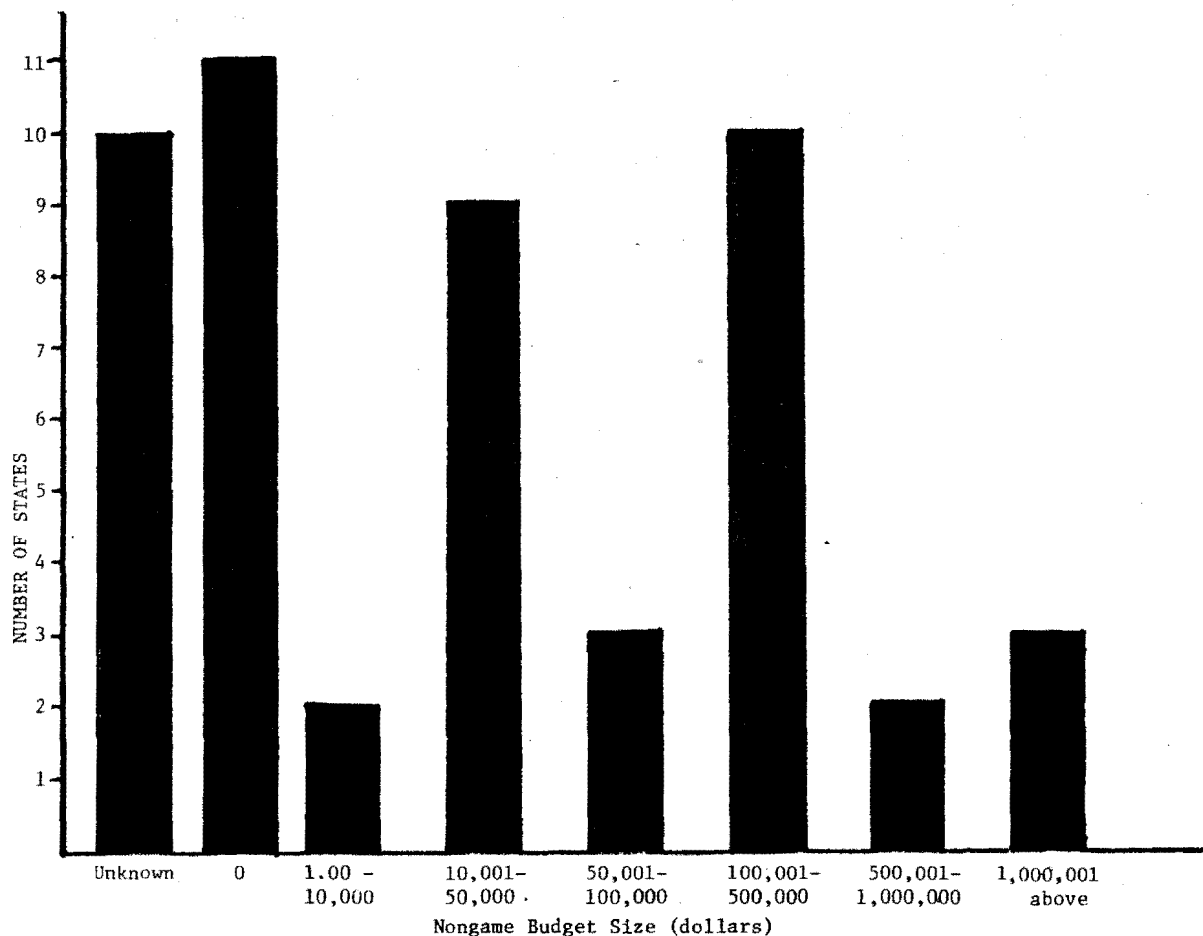


Fig. 3. Relative magnitude of nongame budgets for those states with nongame wildlife programs. (Data incomplete - some states did not reply; compiled by Paul Arneson, ADFG, Anchorage.)

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	<u>23</u>	<u>10</u>
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	<u>15</u>	<u>8</u>	<u>17</u>

*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 states 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 artifical 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. Carrol 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 \$3.34.

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.

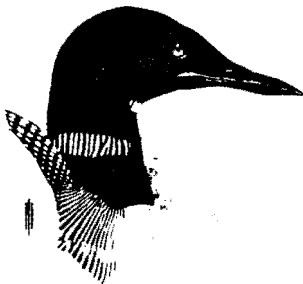
Finally, several species will be restored to their former range in the state. The trumpeter swan is the largest waterfowl in the world. Large individuals may weigh up to 38 pounds. This magnificent, graceful

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 tract 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 "Seaweeek") 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.

Carrol 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

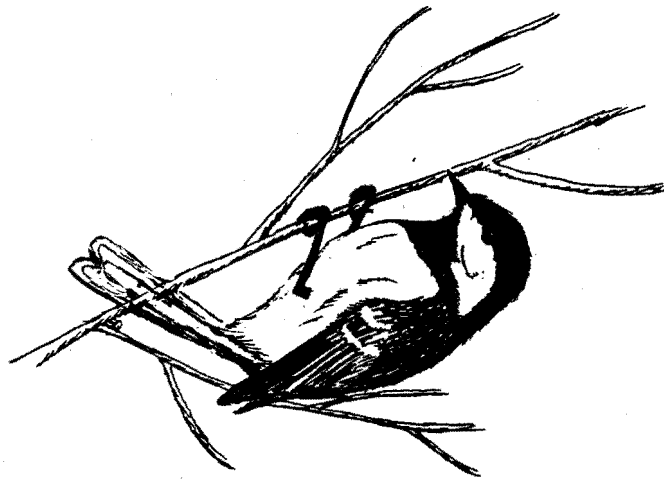
State, Federal, and private funding sources voted on by 39 conference participants:

<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

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Dave Allen	USDA-Forest Service	Anchorage
Michael Amaral	U.S. Fish and Wildlife	Anchorage
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Ted Bailey	U.S. Fish and Wildlife	Soldotna
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