

HUMAN RELATIONSHIPS WITH WILDLIFE IN VERMONT

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Although fish and wildlife are common property resources owned by the public as a whole, agencies charged with decision-making about them often respond to pressure from special interest groups. While we have substantial information about the characteristics and motivations of special interest group members, we have far less knowledge about the attitudes of the general public. This study reports the results of a November, 1993 survey of the general public in Vermont regarding their attitudes about wildlife. Results indicate that Vermonters as a whole are extremely interested in wildlife, and are generally supportive of hunting and fishing. Attitudes about individual animals are highly species specific. Vermonters see man and his development as a manifestation of the natural world, but are apprehensive about our ability to interfere with natural processes. Knowledge of the general public's attitudes may point the way towards resolving many natural resource conflicts.

Introduction

With few exceptions, fish and wildlife are common property resources until they are legally captured. Ownership rights are usually vested to individual states, and fish and wildlife basically belong to residents of a state. Yet, when it comes to decision-making, policy formation is generally driven by highly vocal, special interest groups such as organized sportsmen, animal rightists, or others who oppose them. Fish and wildlife management agencies have often formulated policy around the needs of these groups on the premise that they are the most interested and affected parties. However, evidence is mounting that concern for fish and wildlife resources extends well beyond these interest groups (Kellert 1980; Glass et al 1990; Stevens et al. 1991; Boyle and Bishop 1987). Indeed, much of the success of the conservation movement as a whole can be attributed to broad public support in addition to the contributions of specific groups such as hunters and anglers. Unfortunately, while we have information on the characteristics, motivations, and perceptions of specific interest groups, we have far less knowledge of these factors for the public at large. Information on the values that the public as a whole places upon fish and wildlife, the underlying motivations for their involvement and concern, and, most especially, how the public wants its common property resources managed could help place the demands of specific interest groups in proper perspective.

In Vermont, there are diverse attitudes about fish and wildlife. Although Vermont is a rural state with a strong tradition of hunting, fishing, and trapping, recent years have seen growing polarization around these activities. Hunting and trapping in particular have a highly vocal opposition and a 1993 proposal to permit moose hunting was widely debated throughout the state.

Methods

To gain a better understanding of the views and perceptions of Vermont residents regarding fish and wildlife, a questionnaire was developed and mailed to 2,000 randomly selected Vermont households in November, 1993, following techniques described by Dillman (1978). The adult having the next birthday was asked to complete the questionnaire to reduce the chance of sex bias. After the questionnaire and two reminders were sent, a follow-up telephone survey was conducted with a randomly selected subsample of nonrespondents. Results from mail and telephone surveys were tested to determine if any differences were statistically significant. Data from the questionnaires were tabulated and frequencies run.

Results

The initial mail survey generated 669 completed questionnaires (41% response rate, after adjusting for undeliverables). There were no significant differences between mail questionnaire respondents and telephone survey of nonrespondents.

Results indicate that Vermont residents are interested in wildlife and wildlife-related issues. In fact, 98 percent of the respondents were either "somewhat interested" (40.3%) or "very interested" (57.7%) in wildlife. Even when asked how important are wildlife-related issues in context of Vermont's other current problems, 91 percent indicated that wildlife was either "very important" (41.9%) or "important" (49%).

With respect to people's relationships with wildlife, 81 percent agreed that "people are dominant, but have an obligation to minimize suffering that they may cause." By contrast, 18 percent indicated that "people and animals are equals" and only one percent felt that "people are dominant and can treat animals as they want." There was substantial support for consumptive uses of wildlife among the general public: two-thirds of the respondents disagreed with the statement that "trapping is never acceptable," and 95 percent of the respondents agreed that hunting was acceptable, at least under some circumstances.

When asked what best describes their sense of the relationship between people and nature, 64 percent of the sample agreed that "people and their developments are entirely natural and should be considered part of nature". The remainder were equally divided between those who thought "people and their developments are separate from nature" and those who were not sure since they usually didn't think in those terms.

Not all members of the animal kingdom are equally popular with the general public. To determine the species-specific effects of popularity, we constructed a hypothetical situation in which a vegetable garden was being destroyed. Assuming that various controls such as repellents, fencing, and live trapping had failed, we asked respondents if they would destroy animals from a list of selected species. The results demonstrate that the highest proportion would destroy small invertebrates (slugs and insects) and the smallest proportion would destroy large mammals (Table 1). More than 9 out of 10 respondents would eliminate Japanese beetles and slugs, while 87 percent would destroy corn borers. Mice were the only other species that more than one-half of the respondents indicated they would destroy. Less than one-half of the respondents would kill the remaining species destroying their garden. White-tailed deer and dogs were the animals that fewest of the respondents would destroy.

A question was also asked concerning the acceptability of taking animals from the wild and keeping them in captivity (Table 2). Only in two cases--rehabilitation after injury and for scientific research--did more than one-half of the respondents agree that keeping a wild animal in captivity is acceptable. However, the respondents were ambivalent with respect to confining wild animals for classroom education and public education displays. Keeping wild animals in captivity for pets, for commercial entertainment, and as breeding stock for commercial purposes were soundly rejected.

Table 1. Reaction of Vermont residents toward destruction of vegetable garden pests after other control measures failed.

Species	<u>Would destroy</u>		<u>Would not destroy</u>		<u>Not sure</u>	
	Number	Percent	Number	Percent	Number	Percent
Japanese beetles	584	91.7	20	3.3	32	5.0
Slugs	578	91.2	22	3.4	34	5.3
Corn borers	549	87.0	23	3.6	59	9.4
Mice	455	72.5	119	19.0	54	8.5
Woodchucks	301	47.8	243	38.1	88	14.1
Crows	269	42.9	278	44.1	80	13.0
Blackbirds	232	36.8	293	46.4	104	16.9
Skunks	225	35.8	288	45.4	116	18.8
Raccoons	195	30.9	327	51.7	107	17.4
Cottontail rabbits	151	24.2	353	56.4	118	19.3
Dogs	110	17.3	406	64.4	114	18.3
White-tailed deer	88	14.1	441	70.3	96	15.5

Table 2. Public acceptance of taking animals from the wild and keeping them in captivity for specific purposes.

Purpose	<u>Acceptable</u>		<u>Unacceptable</u>		<u>Not sure</u>	
	Number	Percent	Number	Percent	Number	Percent
Scientific research	326	53.6	191	31.2	93	15.2
Classroom education	249	41.5	256	42.0	100	16.5
Public education displays	242	40.2	255	42.1	106	17.7
Commercial entertainment	55	9.1	495	81.3	57	9.6
Keep as a pet	60	10.1	483	79.4	63	10.4
Rehabilitation after injury	588	93.2	14	2.2	27	4.6
Breeding stock for commercial purposes	84	14.0	403	66.0	121	20.0

Despite the fact that only 24 percent of Vermonters are active hunters and 40 percent are active anglers, most Vermonters did not object to harvesting fish and wildlife providing certain conditions were met (Table 3). In fact, 81 percent of the respondents disagreed with the statement that "It's wrong to kill

wildlife for any reason." More than four out of five agreed that harvesting of fish and wildlife was acceptable if it was not wasted or populations were not seriously reduced. Surprisingly, the respondents were more ambivalent relative to the acceptability of collecting insects for pleasure.

Table 3. Public acceptance of the harvesting of fish and wildlife.

Statement	<u>Agree</u>		<u>Disagree</u>		<u>Neutral</u>	
	Number	Percent	Number	Percent	Number	Percent
Wildlife and fish can be harvested if they are not wasted	538	84.1	39	6.1	63	9.8
Wildlife and fish can be harvested if their populations are not seriously reduced	559	87.5	27	4.3	53	8.3
It's wrong to kill wildlife for any reason	45	7.0	521	81.3	75	11.7
It's wrong to collect insects for pleasure	198	30.5	243	37.4	209	32.2

Vermont residents gave considerable support to wildlife even when conflicts were perceived with human development (Table 4). In fact, over 90 percent of the respondents disagreed with the statement that "wildlife is worth nothing if a dollar value cannot be put on it." A majority of respondents also rejected statements that "economic development is more important than wildlife," and "fish and wildlife protection is over-emphasized while ignoring human needs." Slightly more than one-half of the respondents agreed that mankind has dominion over all animals, but there was some ambivalence with respect to public safety being more important than wildlife.

There was disagreement about man's ability to manage wildlife and the sensitivity of professionals to public wants (Table 5). Nearly one-half of those responding thought wildlife biologists were the people best qualified to make decisions about wildlife populations and programs. However, the statement that "fish and wildlife professionals only care about sportsmen" was soundly rejected. By the same token, only 18 percent felt wildlife professionals were out of touch with the public, but another 29 percent were not sure. On the other hand, 60 percent of the respondents agreed that "interfering with nature is usually a mistake."

Table 4. Public views toward human-wildlife conflicts.

Statement	<u>Agree</u>		<u>Disagree</u>		<u>Not sure</u>	
	Number	Percent	Number	Percent	Number	Percent
Economic development is more important than wildlife	36	5.6	488	75.8	119	18.5
If a dollar value cannot be put on wildlife, it is worth nothing	33	5.1	587	91.2	23	3.6
We overemphasize protecting fish and wildlife while ignoring human needs	97	15.1	430	67.0	115	17.9
Only economically important wildlife should be protected	43	6.6	530	82.3	71	11.0
Mankind has dominion over all animals	202	31.6	325	50.8	113	17.6
Public safety is more important than wildlife	240	37.6	194	30.4	205	32.1

Table 5. Public perceptions of wildlife managerial capabilities and responsiveness.

Statement	<u>Agree</u>		<u>Disagree</u>		<u>Not sure</u>	
	Number	Percent	Number	Percent	Number	Percent
Wildlife biologists are the people best qualified to make decisions about wildlife populations and programs	317	49.3	180	27.9	147	22.8
Interfering with nature is usually a mistake	386	60.0	126	19.6	131	20.4
Wildlife professionals are out of touch with the public	119	18.4	306	47.4	220	34.1
People really don't know enough to manage wildlife populations effectively	196	30.5	268	41.7	179	27.8
Fish and wildlife professionals only care about providing fish & wildlife for sportsmen	59	9.2	468	72.8	116	18.0

Discussion

Human relationships with wildlife are complex and may be analyzed at different levels. At the highest level, relationships exist in the abstract and are primarily intellectual. Clearly, the public as a whole has an immense interest in wildlife. For example, 91 percent of the respondents in this general population survey believed that wildlife was important to them. They believed that people and their developments are entirely natural, but they felt apprehensive about human interference with nature. They indicated quite clearly their belief that the appropriate role for people was as stewards; it is all right to use the natural environment to satisfy human needs so long as it is done responsibly and does not endanger natural populations.

At a more specific level, however, attitudes can be much more varied, and the emotions can exert a stronger pull. As our garden example indicated, reactions may be quite species specific: these Vermonters were much more willing to tolerate garden damage from large mammals than from insects or mice. Although people may understand the ecological importance of a species such as the timber rattlesnake, it is quite another thing to encounter one along a trail. These preferences may be the result of anthropomorphism, which is generally greater for mammals and birds than for other classes of animals. For example, stories about mammals and birds are targeted to reach much younger children than are stories about insects or crustaceans (More 1979). The preferences we form at an early age may have policy implications for the restoration of rare and endangered species.

Fish and wildlife harvesting also received strong support among the general public in Vermont, with the proviso that the harvested fish and wildlife be utilized and that the harvesting be kept within sustainable limits. Still, there are subpopulations with strongly divergent views. Considerably more research is needed to understand the underlying meanings of attitudes toward wildlife and the intensity of people's commitments to these attitudes. A person may, for example, be opposed to hunting in general, but may tolerate hunters under specific circumstances or by specific individuals.

Alternative methods may be necessary. Mail questionnaires may not lend themselves well to determining the level of commitment respondents have regarding their attitudes toward wildlife. Responses may be based upon misunderstanding, limited knowledge, or transient emotions, or they may reflect deeply held values that are unlikely to change under any circumstances. Follow-up studies are needed to determine the tolerance of opponents to specific wildlife uses, underlying values, and sensitivity to new information. Clearly, the deeper examinations of public acceptability of people-wildlife interrelationships will require more costly personal interviews rather than mailed survey instruments.

In sum, interest in wildlife and wildlife-related issues extends well beyond the narrow focus of specific interest groups to the public as a whole. The problems of incorporating divergent values into the decisionmaking process clearly present a hurdle to wildlife management agencies. Yet, the public as a whole often represents the middle ground between conflicting groups, and although more emphasis on broad public involvement may not reduce conflicting viewpoints, it can point the way towards this resolution.

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