

Attitudes of Georgians Toward Nongame Wildlife: A Survey

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Abstract: In 1988 the Georgia Department of Natural Resources contracted the Survey Research Center of the University of Georgia to conduct a telephone survey of public attitudes toward nongame wildlife. Phone numbers of potential respondents were selected using random digit dialing, a method that allowed all telephone households (97% of all Georgia households) an equal chance of being selected. Respondents were asked a series of 17 questions of which 12 pertained to interest in and support of nongame wildlife and 5 related to demographics. A total of 541 individuals were surveyed. Over 81% of the respondents expressed at least some interest in nongame wildlife. These and other data were used to assist administrators charting the direction of Georgia's nongame wildlife conservation efforts.

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Public support is critical to the success of any wildlife management program, and it is necessary to understand public attitudes and desires and incorporate them into program planning. One of the best ways to gauge public attitudes is to conduct surveys specifically aimed at answering questions related to a particular program or management concern (Kellert 1979, Kellert and Berry 1980, Anderson 1991). Once this information is gathered it can be used to aid in planning program formulation and direction.

In 1988, the Georgia Department of Natural Resources, conducted a survey of public attitudes toward nongame wildlife as a corollary to establishing its Nongame-Endangered Wildlife Program. The major objectives of the survey were: (1) to determine the public's interest in nongame wildlife, (2) to gauge taxpayer willingness to financially support a nongame program by earmarking a certain amount of the individual's income tax, (3) to ascertain the public's perception of the priorities

of the nongame program, and (4) to provide baseline data that could be used to evaluate the efficaciousness of nongame conservation initiatives. The information collected during this survey has been and continues to be used to help chart the course of Georgia's Nongame-Endangered Wildlife Program.

The data were made available by the Survey Research Center of the University of Georgia. Neither the Survey Research Center nor the University of Georgia bears any responsibility for the analyses or presentation herein. We thank Dr. Dot Kingery for her guidance and assistance during the development of the questionnaire and for the administration of this survey.

Methods

Between 3–14 February 1988, a telephone survey of Georgia residents was conducted for the Georgia Department of Natural Resources by the Survey Research Center of the University of Georgia. Nongame wildlife was defined as animals that are not typically hunted, fished, or trapped. Each respondent was asked to answer 12 questions related to his/her interest in and support of nongame wildlife and 5 questions related to demographics (Appendix 1). Only respondents ≥ 18 years of age were surveyed.

The study design called for a minimum of 500 interviews. Random digit dialing was used to select the telephone numbers of households to be called. This method was employed rather than random selection of numbers from telephone directories because the high proportion of unlisted numbers in metropolitan areas would introduce biases related to economic class (i.e., a higher proportion of unlisted numbers for high income groups and low income groups versus middle income groups). By using the random digit dialing method, people who were not listed in telephone directories (those new to the state and those with unlisted numbers) would be just as likely to be called as the people listed in the directory. This would assure that the sample group would be as representative of the population of the state as possible.

Telephone numbers used in the survey were derived by using a 2-stage random digit dialing (Waksberg 1978). This procedure includes determining each Central Office Code (COC) used in the state. The Central Office Code is the first 3 digits of the 7-digit number. Using this 3-digit number and a randomly selected 4-digit number, a 7-digit telephone number is constructed. When this number is an active household number (i.e., a number for a residence), an additional group of numbers (termed a cluster) surrounding this number is generated. The cluster consists of 100 numbers (e.g., 994–1400 to 994–1499). If the original number is not an eligible household the entire cluster surrounding it is discarded. Each of the telephone numbers generated for the sample was called until an interview was completed, the person refused the interview, or the number was determined to be ineligible (ineligible numbers included businesses, organizations, and all other non-residential numbers). Numbers for which there was no answer, busy signals, strange noises, or complete silence on 5 successive attempts over a period of 3

days were dropped from the survey.

The Troldahl-Carter (1964) technique was used to select the individual within a household that was to be asked to participate in the survey. This technique stratified the sample by age and sex.

Questions asked during the interview were generated by Georgia Department of Natural Resources staff, then edited and combined into a questionnaire by Survey Research Center staff. All questions were pretested by administering them to a group of 20 people chosen from primary telephone numbers selected for interviews. Some questions were modified based upon the answers derived from the pretest (Kingery 1989).

The result of this selection process was a sample of 541 individual respondents which were representative of the populace of the state. Sampling error was less than $\pm 5\%$, at the 95% confidence interval.

Over 77% of the 697 households contacted yielded a complete interview. A positive response rate (calls that yield interviews) of 65% is usually considered adequate for inferring conclusions about the sampled population. Quality control during the interviews was maintained by having a supervisor monitor 20%–25% of the actual interviews and having a second supervisor check completed survey forms for errors.

Results and Discussion

More than 81% of the 541 respondents expressed some interest in nongame wildlife (Table 1). Almost 30% of this group showed a high level of interest and only 16% expressed no interest at all. Responses to question 3 (What species should be given special attention) suggests that the public feels raptors, cold-blooded vertebrates (reptiles/amphibians/fish), and songbirds deserve the highest priority in conservation planning (Table 2). Unfortunately, reptiles, amphibians, and fish were grouped together as 1 answer, making it impossible to determine the level of support for each taxon. Another question was aimed at ascertaining whether people were willing to make financial contributions toward nongame activities through an income tax checkoff. Ninety-three percent of those people expressing an opinion supported using this mechanism to fund a nongame wildlife

Table 1. Survey respondents level of interest in nongame wildlife. Neutral responses, such as "don't know," refusal to answer, and "not ascertained" are not included in this summary.

Response	<i>N</i> of People	%
Very interested	161	30.4
Somewhat interested	281	53.0
Not at all interested	88	16.6

Table 2. Wildlife that survey respondents felt should be given special attention. Neutral responses, such as "don't know," refusal to answer, and "not ascertained" are not included in this summary.

Response	<i>N</i> of People	%
Raptors, birds of prey	120	31.3
Songbirds	49	12.8
Waterfowl	22	5.7
Other birds	31	8.1
Small mammals	29	7.6
Large mammals	15	3.9
Reptiles/amphibians/fish	86	22.5
None	4	1.0

program (Table 3). Almost 80% of the respondents who pay taxes were willing to donate some sum of money to nongame programs through an income tax checkoff (Table 4).

Interest in nongame wildlife proved to be surprisingly high (83.4%) in comparison with the numbers of Georgians that hunt (14.7%). Other states, such as Pennsylvania, have also experienced a high level of interest in nongame wildlife (Snyder and George 1981). Coupled with acute interest in nongame was a corresponding willingness to use tax revenues to support nongame-related conservation efforts. Concomitantly, since the income tax checkoff has not proven to be the panacea for the nongame funding dilemma, it would behoove the Wildlife Resources Division to channel this extremely high interest into support for a dependable, significant source of funding for nongame conservation efforts in Georgia. If such an effort were to prove successful, in the future, those interested in nongame wildlife could become the Wildlife Resources Division's greatest political and financial supporters.

Table 3. Response by those surveyed to the concept of a tax checkoff for support of the nongame wildlife management program. Neutral responses, such as "have no opinion," "don't know," refusal to answer, and "not ascertained" are not included in this summary.

Response	<i>N</i> of People	%
Strongly favor	96	24.9
Favor	263	68.1
Oppose	21	5.4
Strongly oppose	6	1.6

Table 4. Amount of checkoff monies that respondent would be willing to designate for support of the nongame wildlife program. Neutral responses, such as "don't know," refusal to answer, and "not ascertained" are not included in this summary.

Response	N of People	%
None	78	20.6
Up to \$5	106	28.0
\$6 to \$19	66	17.5
\$20 to \$49	50	13.2
\$50 and above	78	20.6

The survey revealed that nongame-related educational efforts are a high priority with most Georgians. Respondents demonstrated strong support for the construction of nature trails and demonstration areas (84.3%) and the production of films and pamphlets (77.2%) as well as providing information to the public (82.2%) and teachers (86.6%) on nongame subjects. Ironically, information/education projects are poorly funded within many state wildlife resource agencies.

The survey also uncovered strong public support for managing both nongame wildlife and their habitats. Four out of 5 people surveyed want habitat to be managed for nongame. As might be expected, providing for and managing endangered species received the highest support (83.5%). However, there is also strong support for managing wildlife in urban settings (46.4%).

It is not surprising that the public feels wildlife biologists should give special attention to birds, since they constitute the state's most highly visible and widely distributed vertebrate taxa. Within this taxonomic group, raptors are given a high priority. Conversely, respondents indicated that small mammals should be given more attention than marine mammals. It might be that most of the public does not realize that many marine mammals, particularly manatees and northern right whales, have suffered significant declines in their populations in the past and are still imperiled by human activities. If this is the case, support for management initiatives will be predicated on the effectiveness of educational efforts directed at informing the public of the need for the conservation of marine mammals. Educational efforts should also be geared toward informing the public about less charismatic organisms and natural communities.

Of particular interest were those responses relating to which, if any, wildlife management practices are utilized around the home. By far, the most common management practice was the use of feeders (43.4%), followed by adding food plants (35.5%), providing water (34.2%), and erecting bird houses (30.3%). A comparatively small number of Georgians (13.7%) plant cover for wildlife in backyard settings. These data can be used in designing technical assistance projects aimed at backyard wildlife habitats.

The findings of this survey are currently being used to help chart the direction and scope of Georgia's fledgling Nongame-Endangered Wildlife Program. The key facets of this program reflect both the public's priorities, as revealed by this survey, and the judgements of the biological and administrative staffs. Currently the only thing that prevents full implementation of an all encompassing nongame initiative is adequate funding. Buoyed by the results of this survey, the Wildlife Resources Division is actively engaged in trying to identify a dedicated funding source to alleviate the financial needs of the Nongame-Endangered Wildlife Program.

Literature Cited

- Anderson, S. H. 1991. *Managing our Wildlife Resources* (2nd ed.). Prentice-Hall. 492pp.
- Kellert, S. R. 1979. *Public Attitudes toward Critical Wildlife and Natural Habitat Issues*. U.S. Dep. Int. Fish and Wildl. Serv. Washington, D.C. 138pp.
- Kellert, S. R. and J. K. Berry. 1980. *Knowledge, Affection, and Basic Attitudes toward Animals in American Society*. U.S. Dep. Int. Fish and Wildl. Serv. Washington, D.C. 162pp.
- Kingery, D. W. 1989. *Attitudes Toward Nongame Wildlife Survey*. Unpub. Rep. to the Ga. Dep. Nat. Resour. by the Survey Res. Ctr., Univ. Ga., Athens. 26pp.
- Snyder, A. P. and J. L. George. 1981. *Wildlife related activities and attitudes of Pennsylvania*. Proc. North Am. Wildl. and Nat. Resour. Conf. 46:455-462.
- Troldahl, V. C. and R. R. Carter, Jr. 1964. *Random selecting of respondents within households in telephone surveys*. J. Marketing Res. 1:71-76.
- Waksberg, J. 1978. *Sampling methods for random-digit dialing*. J. Am. Stat. Assoc. 73:40-46.

Appendix 1. Questions administered to respondents by the University of Georgia Survey Research Center staff.

Definition of nongame wildlife: Nongame wildlife are wildlife animals that are not typically hunted, fished for, or trapped. Included are everyday animals such as songbirds and chipmunks as well as endangered species like the bald eagle.

- Q1** Would you say you are (1) very interested, (2) somewhat interested, or (3) not at all interested in nongame wildlife? Other recorded responses include: (4) Refused to answer; (5) Don't know; and (6) Not ascertained.
- Q2** Next, I would like to read you a list of wildlife-related activities. Please tell me approximately how many times during 1988 you participated in each activity: (2.1) Watched birds or other wildlife in your backyard; (2.2) Watched birds or other wildlife in a state park or state wildlife management area; (2.3) Went on a trip for the specific purpose of observing birds or other wildlife; (2.4) Fed wildlife; (2.5) Photographed birds or other wildlife; (2.6) Read wildlife magazines or books or par-

icipated in educational activities concerning wildlife; (2.7) Went on family outing; (2.8) Personally hunted wildlife. Possible responses for each part of this question were: (1) Did not participate; (2) 1–10 times; (3) 11–20 times; (4) Over 20 times; (5) Refused to answer; (6) Don't know; and (7) Not ascertained.

- Q3** Think for a moment about all types of nongame wildlife, including mammals, birds, reptiles and fish. What specific wildlife found in Georgia do you think should be given special attention under a wildlife management program? This does not include deer. Possible responses were: (1) Raptors, birds of prey (hawks, owls, eagles); (2) Songbirds (sparrows); (3) Waterfowl (ducks, loons); (4) Other birds (woodpeckers, wild turkeys, plovers, sandpipers); (5) Small mammals (chipmunks, squirrels); (6) Large mammals (foxes, deer); (7) Marine mammals (manatees, whales); (8) Reptiles, amphibians and fish. Other recorded responses include: (9) None; (10) Refused to answer; (11) Don't know; (12) Not ascertained.
- Q4** Which of the following, if any, have you added around your home for wildlife: (4.1) Feeders; (4.2) Bird houses; (4.3) Bird baths; (4.4) Protective cover; (4.5) Plants that provide food; (4.6) A pond? Possible responses for each part of this question were: (1) Yes; (2) No; (3) Refused to answer; (4) Don't know; and (5) Not ascertained.
- Q5** Beginning this year, Georgia will allow tax payers to designate part of their taxes to go for nongame wildlife management programming. This plan will not increase the amount of tax you pay. It will provide tax money for wildlife management programs on a voluntary basis. Do you (1) strongly favor, (2) favor, (3) oppose, (4) strongly oppose, (5) or have no opinion concerning such a plan for Georgia? Other recorded responses included: (6) Refused to answer; (7) Don't know; and (8) Not ascertained.
- Q6** How much tax money (1) None, (2) Up to \$5, (3) \$6 to \$19, (4) \$20 to \$49, or (5) \$50 and above, would you be willing to designate? Other recorded responses include: (6) Do not pay taxes; (7) Refused to answer; (8) Don't know; and (9) Not ascertained.
- Q7** The following projects: (7.1) Providing for and managing endangered species; (7.2) Providing for and managing habitats for nongame wildlife; (7.3) Developing nature trails and wildlife demonstration areas on state land; (7.4) Producing pamphlets and films about nongame wildlife subjects; (7.5) Informing the public about where nongame wildlife can be found in the state; (7.6) Providing information about nongame wildlife to teachers could be supported by such tax contributions. For each project please tell me if you would be (1) very interested, (2) moderately interested (3) or not interested in the project

being funded. Other recorded responses include: (4) Refused to answer; (5) Don't know; and (6) Not ascertained.

- Q8** For each of the following topics: (8.1) Attracting wildlife to your home or property; (8.2) Observing wildlife in their natural habitat; (8.3) Managing wildlife in urban settings (parks, industrial parks, shopping centers); (8.4) Bird feeding; please tell me whether or not you would be interested (1) Yes, or (2) No in receiving information or assistance from the Georgia Department of Natural Resources. Other recorded responses include: (3) Refused to answer; (4) Don't know; and (5) Not ascertained.
- Q9** Which of the following statements: (1) I am a hunter, (2) I do not hunt but am not opposed to others hunting; (3) I oppose any type of hunting would best describe your attitude toward hunting? Other recorded responses include: (4) Refused to answer; (5) Don't know; and (6) Not ascertained.
- Q10** Do you belong to any conservation or wildlife organization? Possible responses were: (1) No; (2) Yes. If yes, ask: What would those be? (A) National Wildlife Federation; (B) Georgia Ornithological Society; (C) Georgia Conservancy; (D) Audubon Society; (E) Sierra Club; (F) Hunting/Trapping/Fishing Organization; (G) Humane Society; (H) Other. Other recorded responses include: (3) Refused to answer; (4) Don't know; and (5) Not ascertained.
- Q11** In the last 12 months, approximately how much money: (1) None, (2) \$1 to \$25, (3) \$26 to \$50, (4) \$51 to \$100, (5) \$101 to \$500, (6) Over \$500 did you spend on wildlife related activities? Other recorded responses include: (7) Refused to answer; (8) Don't know; and (9) Not ascertained.
- Q12** How many hours would you drive, one way: (1) I would not, (2) up to 1 hour, (3) up to 3 hours, (4) up to 5 hours to spend a day watching wildlife? Other recorded responses include: (5) Refused to answer; (6) Don't know; and (7) Not ascertained.
- Q13** Now we're almost finished, but for statistical purposes we need to ask you a few short questions about yourself. Again, all the information is strictly confidential. What is your age? Possible responses: (1) Actual age; (2) 95 or older; (3) Refused to answer; (4) Don't know; and (5) Not ascertained.
- Q14** Record sex of respondent—ask only if unsure. Possible answers: (1) Male; (2) Female; (3) Refused to answer; (4) Don't know; and (5) Not ascertained.
- Q15** Are you (1) White, (2) Black, (3) Hispanic or (4) another race? Other recorded responses include: (5) Refused to answer; (6) Don't know; and (7) Not ascertained.

- Q16** Do you live in a (1) city, (2) suburb, (3) small town, or (4) rural area? Other recorded responses include: (5) Refused to answer; (6) Don't know; and (7) Not ascertained.
- Q17** What was your total family income: (1) Less than \$10,000; (2) \$10,000 to \$20,000; (3) \$20,000 to \$35,000; (4) \$35,000 to \$50,000; or (5) Over \$50,000 last year? Other recorded responses include: (6) Refused to answer; (7) Don't know; (8) Not ascertained.