

UTILIZATION OF THE PUBLIC IN SURVEYING RARE AND ENDANGERED SPECIES NEGATIVE AND POSITIVE ASPECTS

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ABSTRACT:

The public has increasingly encouraged our state wildlife departments to become involved with management of non-game and endangered species. Some Departments have indicated that they do not have the funds for such work since they are being financed mainly by the hunter and fisherman. However, many state wildlife departments have hired one or more non-game biologists or have given these added responsibilities to their game and fish personnel. Consequently, a few individuals are often called upon to collect and disseminate relatively accurate information on a large number of species in a comparatively short time. This otherwise impossible task can be accomplished if the biologist will utilize the public. The positive factors for utilizing the public in simple but extensive research, especially when the species is rare and difficult to encounter, far outweigh the negative factors. Organization and planning are the keys to success. Utilization of the public in a bald eagle-osprey correspondence survey and a peregrine falcon census in Texas proved very successful. Public participation in rare wildlife surveys or in any wildlife research where there is an insufficient number of professional personnel will (1) involve the public in wildlife and its appreciation and understanding, (2) benefit the species receiving the attention, (3) help a small staff with a big responsibility as in most endangered species programs today, and (4) help the wildlife departments's image in the eyes of the public.

While searching for at least a limited solution to problems caused by finances lagging behind need and public interest, I began to notice that at least one of every two citizens interested in non-game species was offering his services to my project if I would only tell him how he could help. Also, most of those offering help were mainly interested in birds. Their active attitude has been developed in several ways. For one reason, the National Audubon Society and other conservation organizations have for years been subjecting their members to simple research following set procedures. Their people have learned the value of consistency, research and teamwork. They have learned that many single individuals can pool their observations and knowledge, and, with only a limited amount of work, collect much data. Secondly, the field of endangered species is a romantic one. Many people have created interest in these species because they are new and exciting. The unknown, especially when rare, is intriguing. Thirdly, there is a strong desire on the part of many people today to benefit humanity by helping to save endangered species for future generations. Fourthly, there is a segment of hunters and fishermen who have come to the conclusion that all wildlife is important and they want to have an active part in the non-game research aspect. Fifthly, there is a small, partially uninformed segment of our public that opposes hunting (or firearms) and wants to involve themselves in the non-hunting portion of the game department. The endangered and non-game species enthusiasts are truly a composite of ideas and drives.

In 1972 I decided to plan several projects to utilize the help of interested Texans because uncommitted manpower within our Department was very limited.

One project was a combination bald eagle-osprey survey which was done exclusively by correspondence. The survey involved a self-addressed, postpaid questionnaire card accompanied by a letter of explanation. The questionnaire was mailed in the spring following the greatest concentration of osprey and bald eagles which occur in Texas during the fall and winter. The card requested the major specifics concerning the observations of bald eagles, ospreys and their nests in Texas in the past year.

A total of approximately 4,500 questionnaires was sent to State and Federal wildlife field personnel; Audubon Society, Texas Ornithological Society, Sierra Club, and Wilson's Society members; university wildlife professors, falconers, and pilot organizations.

Of 2,100 questionnaires returned, 622 contained positive reports of observed birds. This included 558 individual bald eagle and 288 osprey observations. Of course, many of these observations were duplicates. However, duplicate observations can be beneficial in estimating numbers, distribution, status, concentrations and habitat preference in relation to time, especially in preliminary research and with rare, secretive species. Over 72 percent of the observations were made by the public, a proportion that would have made the survey much less valuable if the public had not been included. The public eyes become even more valuable when a species is rare because do few observations are actually made for every ten people observing. Observation volume is very important in sighting species occurring in low density, but accuracy is equally important, particularly with birds. Texas has a large number of qualified bird watchers who see these birds whether or not here is a survey being conducted. Thence, the observations are already there for the asking, and a continuous annual survey encourages a larger number of more accurate observations each year as the public becomes more involved in the project.

The public awareness of, and appreciation for, the Department and species being observed more than pays for the minor costs of involving the public in research. Of the more than 2,000 individuals who returned questionnaires (many did not return questionnaires because it was not made clear that they should do so with negative as well as positive observations), only one was irritated by the whole project. She said that the Game Department had killed all the eagles and ospreys and that it was a bit late and hypocritical to ask for such information. Literally hundreds of the remaining reportees took too much of the valuable space on the card to express their appreciation to and support for the Department in attempting such a survey. They expressed a feeling of honor in being asked to help, often at the expense of telling me exactly where they saw the bird. The survey was further enhanced when many newspapers over the state reproduced the questionnaire. On many occasions, these forms were completed and returned to not only give observations but additional reliable individuals upon which to rely in years to come.

It should be realized that a small number of the observations were not accurate since some of the participants had little experience identifying raptors. However, this amount of error seemed to be almost as great in professional wildlifers because we were dealing with non-game, and area often newer to the professional than the non-professional. For example, our biologists and game wardens, as a whole, had just as much difficulty separating the immature bald eagle from the golden eagle in flight as the non-professional and this includes the author. Problems in identification of rare and endangered species, especially birds, certainly can be expected with professional wildlifers. Most of these people lack extensive field identification experience with these species.

After the survey was completed, there was no doubt that the public had allowed me to conduct a relatively inexpensive but effective survey of two endangered species that our entire Department could not have accomplished under any reasonable condition.

After realizing that our Department personnel could not provide the volume of manpower needed and after establishing contact with the most avain-minded segment of the populace, I decided to utilize the interested public in conducting a peregrine falcon census along the Texas Coast. From the beginning it was evident that public participation in this type census would be much more difficult to supervise. However, it was also evident that this census would require many man-days of help and the public was the only source. From the beginning of the census numerous people were eager to help. A majority of the participants were birders who had at least an elementary knowledge of research.

The most difficult part of the census preparation was scheduling the participants. They were not being paid for the task so they could not be told when and where to count. The cooperators were scheduled by asking them to choose from a calendar of survey days. As the remaining days decreased, the problems in scheduling increased. Several asked that I name the days and they would be there, but the majority indicated that they could census only on weekends. A few could census during the weeks of writing 50 letters and making 150 telephone calls, the census schedule was gradually filled. The names of the non-professional people that I asked to census were given to me by several prominent birders from the State. I had confidence that they could pick individuals who were knowledgeable of the raptors and who could understand the need for a consistency in research. Also, falconers were willing to help and were very capable.

Three people asked to help on the weekends for every one that I could utilize. However, in spite of much effort, the weekdays could not be filled by the public. Therefore, professional wildlife personnel were called on to round out the census. Forty-nine individuals helped from one to ten days, and of these, 26 were birders, with another three being falconers. The remaining individuals were from the Bureau of Sport Fisheries and Wildlife, Air Force, Laguna Atascosa National Wildlife Refuge, Welder Wildlife Foundation, Corpus Christi Museum of Natural History, Texas Parks and Wildlife Department or they were simply sportsmen or professors who represented no specific agency.

Three islands were censused following the techniques of Ward and Berry, 1972. These were Galveston, Matagorda, and South Padre Islands. They were to be censused daily from 10 October to 31 October, '72. There were many set procedures to follow, a copy of which was handed to each census team along with a form to complete on a daily basis. Each island was censused independently of the others, but the same procedures were followed on each. An attempt was made to begin censusing all islands on 10 October '72 but the Galveston Island census did not get underway until 20 October due to a shortage of personnel in that area. Matagorda and South Padre Island censuses began on schedule. The Galveston Island, Matagorda Island, and South Padre Island census lines were 36, 37, and 38 miles long, respectively. The census teams, consisting of one to three individuals (preferably two or three) arrived at the start of the lines at dawn. They began the lines immediately thereafter, driving down the beach at 20 to 30 miles per hour depending upon the tide level. The teams scanned the sky and beach ahead of them while recording all peregrine falcons observed as to time, location, activity, sex, age and other pertinent information. The teams also counted peregrines on the return trip. Each was to finish the census at or before 10:00 A.M.

Consistency was a problem. Each team was responsible for getting to the census line. Often this required traveling one to two hundred miles either the evening before or early the morning of the count. Of the 50 teams that censused the three islands, three teams did not show and three more were very late. Of course, these days had to be removed from the census. Transportation for members of the census team was also a problem. A four-wheel drive vehicle was required on the lower two islands. If the census team on Galveston and South Padre Islands

did not have a four-wheel vehicle, and most of the public does not, and employee of our Department had to take the team on the census. If a Department employee could not drive on any particular day when the cooperater did not have a four-wheel drive vehicle, the day's census was lost. If a member of the team could not drive a jeep on Matagorda Island, Air Force personnel had to chauffeur them. This problem caused the loss of another four days. Vehicle breakdowns and getting stuck in sand and mud caused minor complications.

The public as a whole was very observant and responsible in censusing the migrating peregrines. Most followed perfectly and kept their trained eyes peeled for camouflaged resting peregrines over the entire course. Many were actually tired from such detailed observation when the day was complete. However, there were exceptions as there are in any situation where many people are involved. One team of ladies got so involved in observing other bird species for their life list that they never made it to the other end of the line by 1:00, P.M., and had to return to Matagorda Air Force Base to take the boat back to the mainland. They saw only one peregrine and I could not use the information for that day. Another team became involved in picking up antique bottles and was late in completing the line. Talking instead of watching was a minor problem. But as a whole, the non-professional wildlifers were quite "professional".

In years to come most of the above problems can be eliminated by more carefully selecting against them. If this is done in the right spirit and with the help of the birding leaders, individuals can be selected and encouraged to help that are very capable of improving such a project. Once a group of qualified teams has been located it can be depended upon year after year with little variation existing between teams and years. This survey was again planned for 1973 and is underway at this time. Approximately 75 participants will be cooperating this 40-day survey period.

This concept of public utilization can be extended to include such time consuming studies as observation of rare species from a blind, if necessary, determining behavior or food habits of non-game species, erecting artificial nest platforms for raptors or fish eating birds, locating ranches that will allow the reintroduction of rare and endangered species or even asking for donated materials for such work. Utilization of the public in conducting research has its limitations, and the results of such research should never be considered more valuable than those limitations allow it to be. However, I have tried to show you today that when research personnel are limited in your Department and you have *no chance of obtaining the needed data, especially when the species is rare*, the public can come to the rescue. Do not forget that a portion of the public is made up of misplaced wildlife enthusiasts who for many different reasons did not obtain the goal of life of being a wildlife professional. If directed properly, these people will usually satisfy your needs in survey work.

In conclusion, positive factors for utilizing the public in simple but extensive research, especially when the species is rare and difficult to encounter, far outweigh the negative factors. Organization and planning are the keys to success with these untrained people for their work must be carefully supervised and they must be held to the requirements of the project even though they may not completely understand the reasoning behind such requirements. Their love for wildlife being studied and their voluntary support of the research in the name of helping the species will encourage them to do their very best and follow directions to the fullest. Persons who want to help but are not qualified or cannot follow directions can and should be replaced by eager individuals who can meet these requirements. If it becomes difficult to replace such a person without hard feelings, he can be shuffled under the direction of a competent team leader.

Public utilization in rare wildlife research or in any wildlife research where there is not sufficient number of professional staff will (1) involve the public in wildlife and its appreciation and understanding, which they desire, (2) benefit

the species receiving the attention, (3) help a small project and staff with a big responsibility as in most endangered species programs today, and (4) help the Wildlife Department's image in the eyes of the public. Do not be afraid to utilize your interested public. Their sheer volume can be valuable to your research. They will walk the second mile for wildlife if they only know which way to walk.

LITERATURE CITED

Ward, F. P. and R. B. Berry. 1972. Autumn Migrations of Peregrine Falcons on Assateague Island, 1970-71 *J. Wildl. Mgmt.* 36 (2); 484-492.