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A survey of the use of banding in education

Katherine Anderson and Mark Spreyer

Purposes of the Survey

The Bird Banding Laboratory (BBL) and the various banding associations encourage all of us to conduct research and publish the results. Some banders, however, do not obtain enough data to produce statistically significant results. We decided a good way to illustrate another value of banding was to circulate a questionnaire to the Eastern Bird Banding Association (EBBA) membership (Appendix A). We wanted to find out how many permittees use banding as an educational tool to awaken an appreciation for birds in other people. We also wanted to learn the amount of time banders spent on educational banding, the kind of groups with which they were working, how they presented banding to their audiences, whether or not they were compensated for their services, and what they believed was the value of such demonstrations.

We received an excellent response. 303 (approximately 35%) of the questionnaires were returned, and many included detailed letters. Before proceeding with our findings, we wish to thank all who wrote for taking the time to give our questionnaire such thoughtful consideration.

Also, please keep in mind this was an informal survey, based on responses from EBBA members; we did not use a statistically designed sampling method.

Over two-thirds of the respondents (210 of 303) use banding as an educational tool (Figure 1), and they serve a wide variety of audiences. These educational banders may be grouped into three categories:

The first category includes 135 banders who devote less than 40% of their banding time to educational demonstrations. They volunteer their services and usually work with 4th-9th graders. The children are exposed to banding either as part of their school programs or as part of Scouting activities. This first division works with large groups (more than 20), and rarely allows the extensive handling of birds. The birds that visitors are permitted to touch are usually sparrows, starlings, or other species that are sturdy enough to withstand some handling. Limitations on bird handling are to be expected considering the age level of the audience and the nature of the demonstrations (see outline of a typical demonstration below). This first category of banders tends to skip the high school and college age audience but often bands with adult groups.

The second category includes the 33 banders who devote over 80% of their banding to educational demonstrations (the authors are in this group). These banders' activities are likely to be related to their jobs. They work with all age groups and are often affiliated with a nature center or other environmental organization. This second division of banders is apt to allow properly supervised groups to visit their net lanes, and the size of their visiting groups varies widely. Both of these findings are predictable if one considers that visits to environmental education centers tend to be of a drop-in nature.

The third category represents a group of approximately 24 "special interest" banders. These people spend less than one-third of their time on educational demonstrations, and their demonstrations rarely follow the outline described below. This third category includes college professors and researchers who use banding in conjunction with ornithology classes or in-depth studies. They work with very small groups of adults or college students who have a serious interest in ornithology and banding. Extensive handling of birds is an integral part of their banding classes. (Figure 1)

No matter what categories educational banders fall into, they all share many methods and practices. The BBL's apprenticeship method of training banders should be credited with assuring this consistency and quality among banders. After we read scores of surveys, the outline of a standard banding demonstration became evident.

As a typical example, here is the summary sent to us by Edgar H. Smith of Arlington, VA:

"... I explain reasons for banding, licenses, methods of capture. I demonstrate a mist net, banding equipment, show bands, demonstrate banding and processing on one or more birds, and show birds previously processed. I release most birds by placing on visitor's cupped hands. I usually encourage the group to try to identify birds, and if they're up to it, I point out I.D. features. I talk about the complex birdlife: migration, nesting, high metabolism: what little miracles the birds are. I discuss longevity, hazards, and predation."

Additional items mentioned by other banders (and undoubtedly included by Mr. Smith in his talks) are: what to do with bands found on dead birds; why pigeon bands are not Federal bands; the laws protec-

ting our wild birds; and some of the results that come from banding studies.

In no case, except for serious college students of ornithology, did our respondents allow more than light touching of a bird, or releasing it from open hands. Most considered the kind of bird involved, stressing that they allowed touching only of what they consider "tough" species such as starlings. (Figure 2)

Everyone agreed that without proper processing there is no point in banding birds at all. Many admitted that the added pressure of talking about a bird while processing it might lead to inadequate records, but all emphasized that they were very careful to give sufficient attention to their field data. Using birds for educational purposes does not have to result in poor record-keeping. Doug Gross of Berwick, Pa., expressed this

well, saying: "I feel that the ultimate rationale for banding is to understand birds. Too many 'interpretive naturalists' demonstrate banding as an 'Oh, wow' experience without demonstrating the need for research and the use of banding as research. If a 'naturalist' wants observers to get an 'eyeball-to-eyeball' view of our feathered friends alone, why band them? Why not catch them, display them, hold them, and release them without bands? ... Perhaps each education-oriented banding station should have small research projects of limited scope (for instance, what birds are here in both summer and winter?) ... The general public is the ultimate judge of whether banding is 'worth it'".

Perhaps banders who are working with aspiring sub-permittees should include some instruction that would eliminate this "oh, wow" type of performance (although, as naturalists, the authors like to think that we

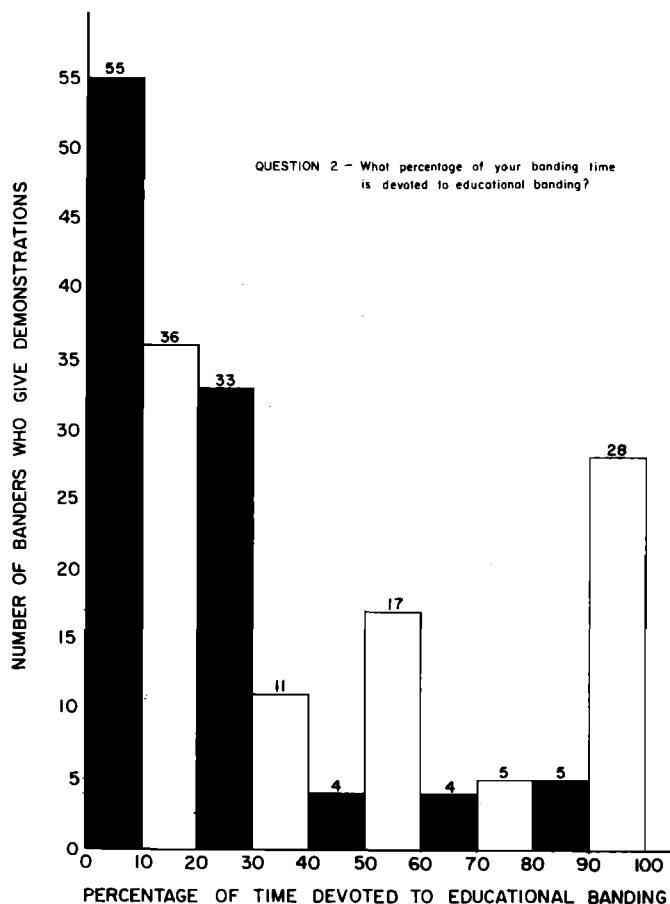


Figure 1. Survey results — Question 2:
What percentage of your banding time is devoted to educational banding?

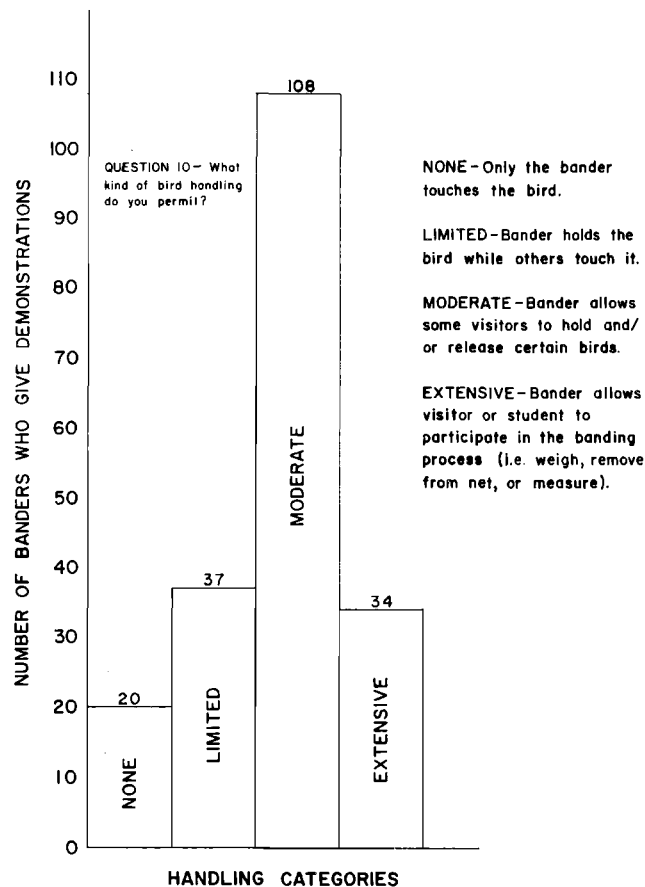


Figure 2. Survey results — Question 10:
What kind of bird banding do you permit?

all have a more serious approach to our demonstrations). Stephen Kress, ornithologist at National Audubon Society's Maine Camp, writes: "My research for my Ph.D. concerning modification of children's negative attitudes toward animals points strongly to the importance of direct experience and *guided participation with professionals* to encourage the development of positive attitudes and behavioral modification. Bird banding offers an excellent opportunity for just such gains." (Emphasis added.)

Margaret A. Parsons of Lucas, Ohio, uses bird banding as an aid in training local health department personnel. She has an interesting and different approach: "My presentations are geared to showing how public health is studied in the field and involves mosquitoes, ticks, venomous animals, and mammals (live-trapped) as well as birds. On the positive side, these demonstrations appear to open up two new dimensions for students: (1) [the concept] that public health is a lot broader and more interesting than they thought; and (2) an appreciation for conserving our nation's wildlife and learning ways to protect it from man's encroachment. After seeing these animals 'close up and personal,' what young person will willfully aim a firearm at them 'just for the heck of it?'"

At the Miles Wildlife Sanctuary of the National Audubon Society (Sharon, Conn.), the approach to bird banding starts with a one-hour walk during which children (or adults) are provided with binoculars and taught some field identification of birds. Art Gingert, Manager of this facility, says: "Children may be strongly affected by the sequence of events which allows them to see and identify a White-breasted Nuthatch, for example, at a distance, and then, 30 minutes later, to closely observe this very same species in the hand. Adults respond the same way, though of course they may be somewhat more reserved in their expression of wonder. Second, the banding demonstration serves to illustrate some of the techniques of science to the audience, and may make more understandable the lives and efforts of natural scientists. Third, a positive, rewarding experience for the participant may result in an increased local/regional awareness of what the particular agency is in existence for, and it may also lead to some level of financial support for that agency."

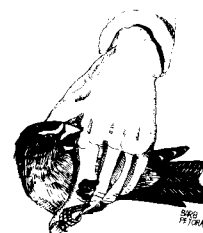
We are all aware of current state and federal efforts to provide financing for study of non-game birds and mammals, and the generally positive reactions in those states that allow voluntary tax contributions for wildlife purposes. While we who are involved with birds realize that the protection given to game species (i.e. preservation of wetlands) also may provide habitat for non-game species, the general public is not apt to make this correlation. Hence emphasis by banders on re-

search on non-game species — particularly birds, the most-enjoyed wildlife of all — can stimulate public awareness of the need for this funding.

In New Jersey, Judith and Ed Henckel band raptors, and so do not invite groups to their station. However, Judith writes: "In an educational slide lecture I've developed we mention banding. We feel using slides and a few demonstration song birds would do in most cases unless it was an exceptionally interested group. But we are coming to an age when all wildlife is threatened by human population and development, so maybe education of the masses in wildlife appreciation may do more good than the banding is accomplishing."

J.M. Magner of Webster Groves, Missouri, says: "Probably not one person in a thousand has had an opportunity to see a live wild bird closely, to see the identifying and delicate markings, the live eye, and best of all to actually touch or even hold briefly a delicate fluff of feathers. Banding has given and is giving great strength to conservation efforts."

Charles H. Davis of Towson, Maryland, has expressed himself well: "As a society (particularly the urban community), we have become so successful at controlling our immediate physical environment that we have become ignorant of the functions and dynamics of the natural systems of which we are a part. This social condition is further reinforced by the narrow focus of society on the direct economic gains and losses in order to assess impacts and to make decisions. Certain segments of society have truly been isolated physically, intellectually, and spiritually from a fundamental component of their identity — the living natural environment. . . . No form of native urban wildlife is more conspicuous than birds. . . . Banding provides a medium in which to relate to a conspicuous yet elusive component of man's daily environment. To interact with birds in a positive, non-destructive manner is a desirable value-forming experience. As stated by Aldo Leopold, all ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts. Banding demonstrations play a beneficial role in forming a healthy environmental ethic."



Terry Carter of Arlington Heights, Ill., adds an interesting note: "... Banding programs with song birds are just as important as those with game species. There are many gaps in (our knowledge of) migration patterns, and what better way to monitor the changes in birds that winter in the South American forests, that are disappearing at an alarming rate."

Negative Aspects

The primary fear of banders is always that a bird may be accidentally injured or may die during capture or processing. We have all experienced these problems at one time or another. All respondents reported taking great care to prevent accidents from happening. To quote Art Gingert once more: "If the situation is not handled properly, negative responses may predominate. Educational opportunities are lost, and the agency may suffer from adverse publicity of some kind. The same may hold true for situations where birds are netted, processed, and released safely, coupled with a lack of description of the value to science gained by the procedures. I know that large visiting groups at a major research station like Manomet Bird Observatory have come upon the occasional dead bird in a mist net, but that the excellence of the discussion and demonstration leads to an understanding and acceptance of this uncommon and yet disturbing situation."

Our emphasis must, of course, be on safety for the birds. There have been incidents in which nets were left rolled and unattended where neighborhood children could get to them. The children opened a net but then did not know how to remove the birds safely, with subsequent losses. There are also some cases, which the authors feel reflect negatively on the BBL, in which banders are allowed an unlimited number of nets. Unless the banders have proper ethics about not working alone with large numbers of open nets, they cannot make their rounds fast enough to remove all the birds promptly.

Richard Kane of New Jersey Audubon stresses a vital point: "I prefer to take the emphasis off the method of capture, and put the emphasis on the birds. We are not teaching how to catch, we are teaching about birds. Most of our demos are not banding demos per se — they are worked into classes about birds, in which banding is only a part of the total lesson and a very useful close-up tool. With young children or with adults, the results are equally good."

Kathy Klimkiewicz of the Bird Banding Laboratory reminds us: "The Fish & Wildlife Service does not encourage the use of banding for strictly educational

purposes ... There is no objection to the use of the banding for educational purposes if this is done as an adjunct or in addition to the research goals ... I do a considerable amount of banding, most of which is aimed at several research goals. If, in the course of these activities, I can provide a banding demonstration for either young people or adults, I attempt to do so. However, the quality of my data and the meeting of my project goals always take precedence ... Children can be taught the value of wildlife and an appreciation of wildlife without having to handle or capture large numbers of birds."

We noted with interest that very few banders ever catch more birds than they believe they need for a demonstration. Most start netting well before the group arrives, and process and release all but a few, which are held for a short time to show to the group. Most people who stated that they released excess birds unbanded were college professors who were working with small ornithology classes.

Conclusion

We conclude that banding can be an important way to educate the public about scientific research, about the miraculous lives of birds, and about birds' vital role in the environment of which we are all a part. It can also serve to encourage the lay public to be better observers. Scholarly research and scientific findings may be of little use if the public is not informed or if they simply don't care. Educational banders can bridge the gap between scientific research and public awareness.

Again we wish to thank all who responded and who put so much thought into their replies. We can only add a comment by a bander who wished to remain anonymous, but who surely speaks for all of us: "One may become a better bander by teaching about it!"

(Katherine Anderson is a naturalist with the Saw Mill River Audubon Society, Inc. in Westchester County, NY.)

(Mark Spreyer was, at the time of the survey, a naturalist with the Teatown Lake Reservation, Ossining, NY. He is now in Minnesota, pursuing an advanced degree and spent last summer as an instructor at the Audubon Camp in Wisconsin.)

Graph credits: Daniel J. Graustein, Redford, Michigan.

(See next page for Questionnaire used in survey.)

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SURVEY OF BANDING AS AN EDUCATIONAL TOOL

FOR MASTER PERMITEE OR PERSON RESPONSIBLE FOR STATION PERMIT:

1. Do you use banding as an educational tool? ☐ Yes ☐ No (If No, please check and mail back survey.
2. If so, what percentage of your banding time is devoted to this? _____
3. Is your educational banding related to your job? _____
4. If not, are you paid for your banding services or do you volunteer them?
5. What organization do you band with or for? ☐ Nature Center ☐ Schools ☐ Scouts, 4H or other outdoor groups ☐ Local or regional recreation Dept. ☐ Senior citizens ☐ Handicapped programs ☐ Church group Other (Please specify _____).
6. What percentage of your banding is done with the following age groups?
☐ 3rd grade or below ☐ 4th, 5th, 6th ☐ 7th, 8th or 9th ☐ High School ☐ College ☐ Adult ☐ 65 + years old.
7. What is the average size group you work with?
8. If you use mist nets, do you allow groups to visit net lanes? ☐ Yes ☐ No.
9. Do you allow children or adult visitors to handle birds? ☐ Yes ☐ No.
10. What kind of bird handling do you permit? Please describe _____

11. If you have more birds than actually needed during the time of the program, do you release them unbanded? ☐ Yes ☐ No.
12. On a separate sheet of paper (back of cover letter), please outline a typical banding demonstration that you do with a group.
13. On that same piece of paper briefly discuss what you feel to be the positive and negative aspects of banding demonstrations.
14. May we use your name in our survey on the educational use of banding?
☐ Yes ☐ No.

Thank you for your cooperation.

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Appendix: Questionnaire used in survey