ESTABLISHING THE ACCURACY OF FIELD IDENTIFICATIONS OF BIRDS: METHODS AND MOTIFS

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ABSTRACT — Often, when unusual birds are observed, or common birds are observed under unusual circumstances, the observer will want to report what has been seen to someone. Watching birds for recreation and making tangible contributions to the science of bird study are not mutually exclusive pursuits. To be useful in science-based conservation efforts, field observations of birds, especially rarities, have to be accurate and subject to review and verification. Observers need to remember that panels of reviewers, or state records committees, are not necessarily challenging the observer's veracity when they reject a written report of an observation. Rather, they are concluding that the written account of the observation, by itself, simply was not sufficiently convincing to verify the reported identification and establish or confirm the accuracy of the report. A number of complex and interacting factors can affect the accurate identification of a bird in the field. Those factors involve establishment of temporal, spatial, and social contexts for the observation, along with consideration of the equipment and experience of the observer. Collecting and reporting the kinds of information described in this paper, at the time an observation is made, can enhance your chances that an observation will be verifiable and acceptable as an accurate, permanent record of the occurrence of a species.

INTRODUCTION

There has been much progress in methods for bird identification since Audubon verified his observations over the barrel of a muzzle-loader. There also is a growing recognition of the value of observations reported in the form of floral or faunal lists for assessing the relevance of different land areas to regional biodiversity conservation efforts (Palmer *et al.* 1995, Smith 1991, 1994). Information about the species of birds occurring in a circumscribed geographic area (*e.g.*, nature preserve, refuge, county, or state) can be useful in assessing the contributions the local area makes to regional patterns of biodiversity (Scott *et al.* 1993). The State Parks Check-list Project of the Federation of New York State Bird Clubs is just one example of how local bird lists can be useful in assessing the extent to which any given state park contributes to the bird species variety of the larger land area within which it

occurs (Smith 1994), allowing conservationists to evaluate both the content and the context of the state park with respect to the birds reported there (Smith 1991). The production of local and regional lists of birds, documenting species occurrences for some region of interest, relies extensively upon the observations of birdwatchers.

To be useful in science-based conservation efforts (Smith 1991, 1994), field observations of birds, especially rarities, have to be accurate and subject to review and verification. In the absence of a museum specimen, one's observations can be subjected to alternative means of verification. I will describe here some of the considerations essential to establishing the accuracy of field identifications of birds, especially rarities, without necessarily requiring that a specimen be collected.

Often, when unusual birds are observed, or common birds are observed under unusual circumstances, the observers will want to report what has been seen to someone. Observers also may expect their observations to be published in a local or regional report, or added to checklists of birds for the region in which the observation occurred. In so doing, one may be challenged to demonstrate the accuracy and veracity of the observation and evidence may be solicited to verify the account and establish its accuracy (Spahn 1997). In contexts where verification of observations is desirable, good quality photographs or sound recordings of the observed species can supplement the written account. However, because cameras and tape recorders can be subject to some of the same illusions that influence human observers (for visual examples, see Grant 1983), photographs or sound recordings do not substitute for a detailed, written account of the observation. Ideally, such written accounts, possibly including hand-drawn sketches, are prepared in the field at the time of the observation. Detailed descriptions of birds from such written accounts should be sufficient to permit identification of the species, using only the written description, by an independent, experienced observer. The written account certainly can be supplemented with photographs, or sound recordings, but such supporting evidence should complement and not in any way substitute for the detailed written account.

Both experienced and inexperienced observers need to be aware of how the viewing conditions under which the observation was made can affect their interpretations of what was seen. For example, a dark bird against a pale background or a pale bird against a dark background can give very different impressions of size, making absolute size of the bird in the field difficult to judge and significantly limiting the value of size by itself as a field mark (Grant 1983). In addition, the orange or yellow atmospheric hue resulting from a rising or setting sun can make the pale undersides of some species appear yellowish or reddish in color, when they actually may be white or gray.

Observers also should remember that panels of reviewers, or state records committees, are not necessarily challenging the observer's veracity when they reject a written report of an observation. Rather, they are concluding that the written account of the observation, by itself, simply was not sufficiently convincing to verify the reported identification and establish or confirm the accuracy of the report. A good example of the technical challenges in making some field identifications, as well as the pitfalls of photographic evidence, is found in the summary of the status of Bell's Vireo (*Vireo bellii*) in New York, recently reported by Salzman (1997). And at another level, when the possible observation of a Sandhill Crane (*Grus canadensis*) in New York is contemplated, how often is the likelihood of an occurrence of the very similar Common Crane (*Grus grus*), escaped from captivity, considered in identifying the species in the field?

With the growth in popularity of birding as a hobby and a concomitant growth in the sport of listing birds competitively, the need for a system of careful review of reports of rarities and potential additions to state lists of species is more important now than ever before. None other than Ludlow Griscom, Arthur A. Allen's first graduate student (Davis 1994) , made the following observation relating to sources of inaccurate identifications (Griscom 1922):

> "Mental attitude of the observer: By this I mean, in part, list-crazy enthusiasts, whose one idea is to get as large a daily, monthly, or yearly list as possible, and whose greatest happiness is to add some rare or casual visitant to their list. As this attitude is neither ornithological nor scientific, their observations are unavoidably open to suspicion."

Given a modern tendency for the urgency of competitive listing to replace the artistry and aesthetics of more casual bird study, Griscom's observation may be more relevant today than it was 75 years ago. What an observer adds or does not add to their life list is purely their business, rather like religion and politics. But when an observer decides they have seen a bird that is sufficiently rare to want to report the observation and have it accepted by others, they have to be prepared to submit to different, sometimes more demanding, standards and greater scrutiny (see Spahn 1997), and to accept the likelihood that they may have made an error in identification — not an easy possibility for some birders to comprehend.

For those geographic areas where checklists exist (*e.g.*, many states and most national parks and wildlife refuges), a report of any species observed that either does not appear on the published list, or is listed as "Accidental" on that list, should be accompanied by written details of the observation. The suggestions which follow are based, in part, on those offered by Axtell (1955),

and form a basis for evaluations of observations of rarities in modern times by many state records committees, like the New York State Avian Records Committee (DeBenedictis 1978).

RECOMMENDED METHODS

The process by which a field observation becomes a verified record of occurrence is summarized in Figure 1. During the process of documenting an observation, the observer should seek information to answer a series of straightforward questions about the bird being observed. These questions include at least the following: "What species is it?," "Should it be here, at this geographic location, at this time of year, in this habitat?," and "Has it occurred in this area before?" While considerable time and energy may be focused upon answering the first question, the subsequent questions, all equally important and answerable with most field guides or local checklists, may not be given the attention they deserve. Also, a number of complex and interacting factors can affect the answers to these questions. Taking those factors into consideration involves establishment of temporal, spatial, and social contexts for the observation, along with reporting the optical equipment and reference materials used and experience of the observer. Collecting and reporting the kinds of information described below can enhance your chances that a reported observation will be verifiable and accepted as an accurate record of occurrence.

Temporal Context:

A temporal context for the observation can be established if the following information is obtained:

- Date and time of day of the observation, noting whether the time of day is standard time or daylight savings time.
- Length of time the bird was studied and whether it was determined from a timepiece or estimated.

Spatial Context:

The spatial context for the observation can be addressed with the following information:

- Detailed account of the location of the observation; include distance from a nearby highway intersection or prominent landmark; a map or specific reference to the name of the appropriate US Geological Survey topographic map is helpful.
- What was the position of the bird in relation to the observer (*e.g.*, high in a tree, on the ground, in low bushes, flying or perched)?
- What was the habitat like; in what kinds of vegetation was the bird seen?
- Distance at which you saw the bird and how the distance was judged, *i.e.*, estimated, paced, or measured with a tape.

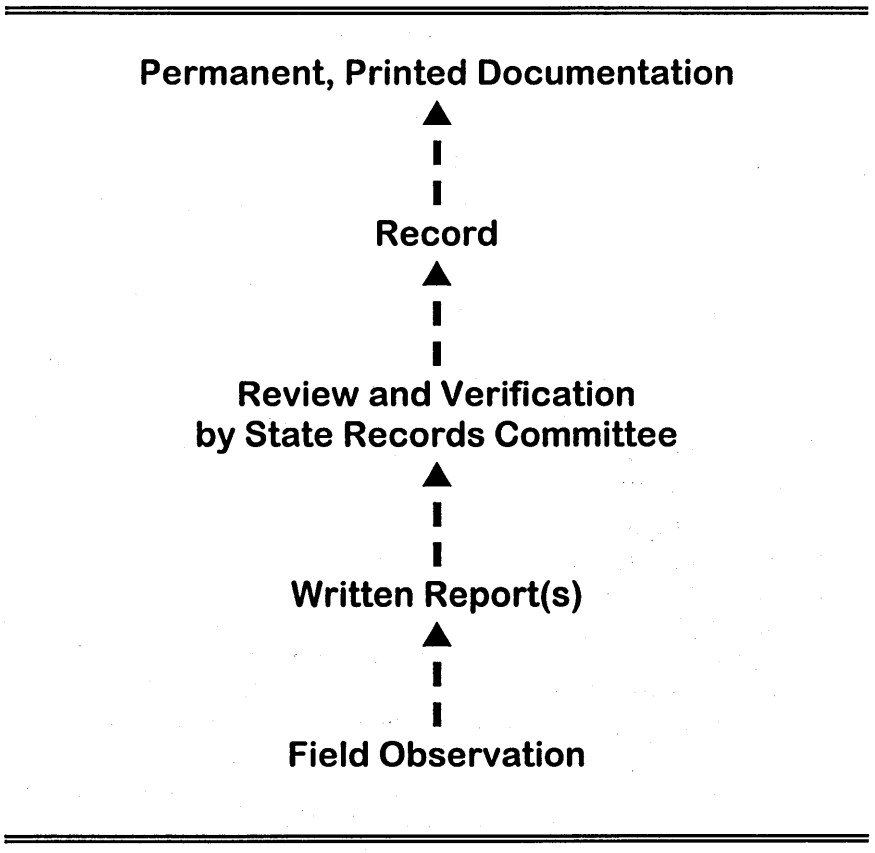

Figure 1. A flowchart showing the process by which an original field observation of a bird species becomes reported, reviewed, established as an accurate identification, and permanently documented as a record of occurrence. Ideally, permanent documentation would be in a state journal like *The Kingbird*, but it also could take the form of a local or regional check-list or regional avifaunal study. Multiple, written reports of the observation, independently submitted by several observers, are better than just one report from one observer.

- Lighting conditions: (a) Was it generally clear and sunny or were there light, medium, or dark clouds, or rain? (b) Was the bird in the open or in light, medium, or deep shade? (c) Where was the sun as you faced the bird and in relation to the bird (behind you, in front of you, to your left or right side)?

Social context:

The more complicated and potentially more sensitive social context can be addressed by collecting and reporting the following kinds of information:

- Names of other observers accompanying you who saw the bird, and identified it in agreement with your identification.
- Names of other observers, if any, who independently identified the bird in agreement with your identification, with an explanation of the circumstances.
- Were written field notes, including most of the above information, taken in the field at the time of the observation? If notes were not taken in the field, how long after the observation were they transcribed and what references were consulted in the interim.

Equipment and Experience:

Finally, some information regarding the equipment used and your own experience needs to be reported:

- Type (binocular or spotting scope), manufacturer, magnification, objective lens diameter, and condition of optical equipment used.
- References consulted: (a) Did you use a field guide or similar aid during the observation? (b) Have you consulted any aid such as a book, illustration, or knowledgeable ornithologist since the observation? (c) If you answer, "Yes" to either (a) or (b), how, specifically, did the aid(s) consulted influence your conclusions and what aid was used?
- Your previous acquaintance with this species: how many times have you seen it over how many years? How many years have you been watching birds?

CONCLUSION

An awareness and explicit consideration of the points just discussed, at the time of the observation, can enhance the chances that an important observation will be verifiable and acceptable as a record of occurrence to more experienced observers and to committees of reviewers. There are numerous opportunities for amateurs and enthusiasts to contribute to our understanding of the dynamics of seasonal occurrences of birds and the changing geographic distributions of some species. Watching birds for recreation and making tangible contributions to the science of bird study are not mutually exclusive pursuits. Perhaps the

best summary statement of the subtle challenges we face with bird identification in the field is provided by John Burroughs in the following quote from his essay, "Ways of Nature," published in 1905:

> "The power to see straight is the rarest of gifts: to see no more and no less than is actually before you; to be able to detach yourself and see the thing as it actually is, uncolored or unmodified by your own sentiments or prepossessions. In short, to see with your reason as well as with your perceptions, that is to be an observer and to read the book of nature aright."

To increase the likelihood that their observations will be accepted by the ornithological community, especially when rare species are reported, observers should be prepared to convince skeptical reviewers of the accuracy of their observations with detailed, written accounts of what they saw. For the serious reader desiring to review this subject in greater detail, the bibliography in Appendix A may be of interest.

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APPENDIX A - ADDITIONAL REFERENCES

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