# The Past, Present, And Future Of Field Ornithology

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Ornithology is an extremely broad idea, less a profession than a certain recognition of fascination with birds. Is it "mere" natural history or a real science? Lynn Merrill (1989) points out, in her fascinating book on natural history in the Victorian age, that "in fact, historians of science often take pains to dissociate the 'important', 'real' Victorian sciences from natural history."

That separation is less manifest in ornithology than in some fields, but it continues today. It is important that field ornithology reassert its importance and maintain momentum as attention is once again focused on what's happening in the lab.

## THE BIRTH OF FIELD ORNITHOLOGY

Field ornithology was the first ornithology, since the collectors working in the 1500s were of necessity field workers traveling to some of the most unknown and distant parts of the world. Erwin Stresemann calls this period the beginning of "exotic ornithology," and notes that for symbolic purposes we can date this period to the day Columbus carried a live parrot into Barcelona in 1493. For many years the exotica were simply that—crowd-pleasers, with no coherent science built around them or, for that matter, around more well-known European species. Large collections of European birds were not available at this time; there was no taxonomy as we know it, and various vaguely Aristotelian views of avian classification prevailed.

Field ornithology and laboratory ornithology began to form their distinctive conga line after Linnaeus's work in the early 1700s, although there were many different views as to what species were and how to classify them. Museums, mostly private, arose in Europe and collectors wandered the globe in increasing numbers, sending back specimens and, in some cases, useful information. North America began in this period to make the transition from a mere collecting ground for Europeans to a place where independent ornithological thought could occur.

Collecting and taxonomy became the only "true" ornithology, but this could not last when bird protection, early banding programs, and life-history studies began to emerge. By 1900, American Ornithologists' Union (AOU) member Frank Daggett helped focus attention on a key issue. He objected to the tendency of AOU leadership to accept as active members (a category then limited to 50 decision-makers) only those who did taxonomic work, not recognizing equally important life-history work then being done as "real ornithology" (Barrow, 1998). A similar problem faces us today, although due more to the norms of academe than to any formal wall-building at the AOU.

Many of us can conjure up vague images of a transition period from the Baird-Coues-Ridgway museum and collection days of the 19th century to the Frank Chapman-Ralph Hoffmann-Florence Merriam Bailey transition years, in which field guides appeared and bird protection became a serious activity. Roger Tory Peterson helped to popularize bird study starting in the 1930s. In a nutshell, we then saw the period (in the United States) of wildlife refuges being established and ornithology becoming a more varied science. Ranks of field workers focusing on wildlife in natural settings burgeoned—many of them worked for the new refuges—and a relative stasis occurred in the number of people involved in lab-related ornithology.

By the 1950s it was clear that a remarkably diverse collection of human activities could with some justification be labeled ornithology. This diversity meant that people at one end of the field had less and less in common with those at the other end and, as is natural in such a situation, assumed that their own way of approaching ornithology was the proper way, the scientific way, the way of the future, the most important way. The difficulty of syncretizing this wide array of people and approaches was not yet obvious because the number of "amateur" ornithologists was relatively small in the first half of the century.

In the 1950s and 1960s the increasing public interest in birdwatching that had built slowly but steadily since the 1930s suddenly increased significantly. It is not clear why this happened, but by the 1970s there was clearly a self-sustaining reaction that was bringing more and more field observers into bird study. Such publications as *Birding, Audubon Field Notes* (now *North American Birds*), and *Western Birds* undoubtedly helped fuel this fire.

Many of the people who developed an interest in birds in the 1960s and 1970s were not traditionally trained biologists and never entered ornithology as a paid profession. Nonetheless, many became self-taught experts within fields of their own interest. Ask Jon Dunn what his college degree is in sometime. As more professional ornithologists in the 1950s–1970s period went into wildlife

management (where the jobs were) and focused their efforts on game species (where the money and political interest were and are), non-game ornithology developed a peculiar vacuum between the traditional museum ornithologists and the feeder-watchers.

Into this vacant non-game zone where less was being done by "professional" ornithologists in such fields as distribution, seasonality, ecology, and even migration, the birders came. The establishment of many local and regional publications dedicated to field observations, the advent of rare-bird records committees, and the sheer volume of people at least nominally collecting data on birds created a parallel universe of people and information that is still growing today through such activities as breeding bird surveys, atlases, Christmas counts, migration counts, hawkwatches, and the like.

## BACK TO THE LAB

As science itself changed, so did professional ornithology. Today's biochemical ornithology with its emphasis on DNA, the effect of pesticides, and other lab studies is part of this change. In a sense, it represents a symbolic return to the days of Coues, when the work perceived as most interesting and important occurred with dead birds indoors. However, in the 1800s there was a powerful linkage between the major museum-based ornithologists (whose degrees, if they had any, tended to be in medicine or something not specifically related to birds) and other people in the field, of whom there were relatively few. Today that linkage is quite tenuous and ornithology, taken in its broadest meaning, is following the pattern that Joseph Grinnell described for mammals divided by the Colorado River: it is speciating and there are fewer connections between the parts.

It is not that work being done by the indoor ornithologists is lacking in interest or value. Indeed, fascinating new concepts of species and relationships can't help but expand our appreciation and understanding of birds. I am writing the Fox Sparrow account for a new book on birds of Oregon; try doing that without entering the world of indoor ornithology. Rather, the work of basic field ornithology is now perceived by academe and its journals as of lesser importance, and this is not true.

There is a great deal that is not known about the distribution, habitat, behavior, and life history of birds of North America, and it is wrong to consider work related to this basic ornithology unscientific or of lesser value than what is now supported in zoology departments and published in major journals. I state this as a person interested in birds but also, perhaps more importantly, as a citizen.

Are we really to return to the days when Margaret Morse Nice could say: "I went to the books and read that this species has two notes besides the song, and that incubation lasted ten to fourteen days and was performed by both sexes - meager enough information and all of it wrong. The men at the State Museum ... could not answer my questions; they did not know whether 4M's singing in late February meant that he had taken up his territory, nor could they tell me when the nesting song sparrows arrived" (Nice 1979).

I hope not.

Who, today, is an ornithologist? Are the thousands of people who conduct banding, census shorebirds, record the birds of their local plot, and discover two species of vireo cohabiting in a local nest ornithologists? Absolutely. Are the DNA crunchers? Certainly. Are the people who get their "dead-goose degrees" in wildlife management programs? To be sure. It is the connections that are sclerifying. It is the priorities in universities that are wrong.

## ORNITHOLOGY IN ACADEME

As Patten et al. (1995) pointed out, basic distributive bird study is hardly even considered ornithology by college faculty anymore The major bird journals now publish less about the status, distribution, habitat, and natural history of birds in North America, even though so much remains to be determined. Much of what appears in these journals strikes me as serving little purpose other than to give faculty and their graduate students a place to publish things. It is simply too narrow and lacking in utility.

It is true that usefulness is not an appropriate criterion to apply to basic research, and that basic research is what many large universities are for, in significant part. Perhaps they should not be, but they are. It is also true that popularity or even utility is not an indicator of quality or importance; the opposite is often true. Nonetheless, the growing disinterest in basic field ornithology by so many university-based "ornithologists" argues for a redefinition of terminology.

One example of what happens when linkages fail can be illustrated through a goof by an extremely respectable and well-known academic ornithologist who has done decades of work on the effect of chemicals on birds. One of his recent big journal articles contained a statement that the species he is studying does not occur in a particular region. In fact, it moved into that region over 15 years ago and is now an obvious breeder. He simply had not paid any attention to any literature outside his own sub-field for years, let alone actually visited the area in question, which is in his home state This is not a felony and such detachment is indeed almost a way of life in academe today, but it is his big journal work that will be relied upon and cited, and it is wrong.

Peer review for such articles is done by other experts in the micro-field, and none of them are likely to catch such a blunder In this case they obviously did not, though any of a hundred reasonably aware field ornithologists in his home state would have. If he wanted to make a statement about distribution, he needed to have it reviewed by someone who understood the subject, and he did not More importantly, neither did the journal. Distribution was considered not important enough to be worth checking, which is simply bad science and bad editing.

I evaluate college degree programs for a state government, which combined with my visibility as a birder means that I am often asked where to go to get a degree focusing on ornithology, which are the best programs and how to make a decision among them. That always starts a very long conversation, in part because of the almost universally unasked question: what jobs exist?

Most of the people who ask me such questions are interested in a career studying living birds, what they do, and what they are. Most such jobs are concerned with game birds or teaching within larger fields in universities, though there are some opportunities connected with endangered species. Jobs are generated by money, and most money in ornithology comes from the government or from corporate entities, which can amount to the same thing depending on who is in power at the time. Unless a student is interested in subjects that the government or Exxon wants to study, funding will be minor and intermittent. Indeed, there is political pressure on government agencies not to study non-game wildlife, since more knowledge is viewed as potentially disruptive to economic development. I hope that the "Teaming with Wildlife" concept will infuse some additional dollars into these programs, but even that activity is dependent for funding on offshore oil and gas lease revenue, perhaps a devil's bargain.

This circumstance leads me to encourage potential students to avoid ornithology as a profession unless they realize that they will be

(a) working in an academic reward system that discourages work with practical utility, (b) working on game birds in a system funded largely by hunters or (c) forever outside the mainstream, pecking at the margins of a career.

## PROFESSIONALISM AND THE FUTURE OF ORNITHOLOGY

The narrowly-focused work rewarded in academe is of no greater value to science or society, and in many cases is of far less value. The reward structures in universities and within the greater ornithological community need to be changed to reflect this fact. Unless work published in *Western Birds, American Midland Naturalist,* or *The Loon* is considered to have equal weight in the university reward structure as work published in *Wilson Bulletin,* this problem will continue.

We all know that these changes are very unlikely. What will happen instead is that people who study birds will be more and more inclined to ignore each other and publish incorrect statements about birds. Privately funded field work containing the best recent data on many species will remain proprietary, lurking in the mysterious realm of gray literature. The term "ornithology" will continue to have an astonishing variety of meanings as it has for most of a century now. The major journals will continue to primarily serve the faculty feedback loop.

Early this century an Oregon cheesemaker named Alex Walker could have been one of the most important field ornithologists and collectors on the West Coast. Today, a well-qualified field ornithologist and bander living in the same small city cannot teach a lower-division credit class in ornithology at his local community college because his graduate degree is in medicine, not biology. This is absurd, but all too common in academe, where Elliot Coues and Charles Bendire would be rejected on the same grounds. Indeed, in my "day job" I am required by state law to make similar judgments.

What do we, the field observers of North America, do with ourselves while this silliness goes on? We should focus our energies on issues that can be resolved only by field study, and go to it, publishing our results locally or in regional journals. Material of significant geographic scope belongs in *NAB,* where it can inform readers across the continent. What goes on in academe is simply not as important any more at a time when the very survival of so many birds is at stake. Let the academics do what they like, and ignore them unless their work is of genuine value.

In my home state, there have been ten significant works of distributive ornithology (county and regional studies) and one statewide bibliography done in the past ten years. The authors at the time of publication worked as a lobbyist, high-school teacher, handyman, computer programmer, waiter, water-quality evaluator, shipping clerk, and part-time seasonal bird researcher, respectively. One of them produced two of the publications. My state has many "professional" ornithologists in academe and government agencies, but with rare exceptions they simply can't spend time on projects that don't earn rewards within their employment structure.

In fact, many of them don't know much about birds anymore. For example, an author of a species account in our in-progress *Birds of Oregon* did a great job discussing the breeding habitat and ecology of a species that she has studied for several years, then made the breathtakingly preposterous statement that it is sedentary. In fact it is migratory and there are several obvious sources for this information

The problem? She had worked with the species only in the breeding season because that was the only season for which there was interest and funding (from the timber industry) within her graduate school. It had not occurred to her that the breeding birds actually winter somewhere else and that the winter birds in the same area come from Canada. The notion that there are several subspecies and that they have different movements was foreign to her. Worse, it had not occurred to her to ask. Worst of all, the issue obviously strikes her as unimportant. She is a becoming a leading authority on the species in the region and will no doubt become an "expert" whose work is relied upon. This is what is being taught as ornithology in major university science programs.

## THE ROLE OF *NORTH AMERICAN BIRDS*

What can *NAB* do to ensure that distributive ornithology has a long and healthy life and gains in respect within academe and government? First, it must remain true to its mission of publishing the best in field ornithology and not be distracted by fads or sudden shifts in the wind. Provide both the facts of distribution and the analysis that is so valuable and so much rarer. Publish identification information that will help the readership in field work. Make quality reprints easily available to authors. Refer readers to the best work on distribution and related fields published in state, regional, and specialized journals from all of North America. Perhaps most important, *NAB* must not not equate success with growth, provided that an adequate baseline of subscribers can be established and maintained.

We who observe birds will study birds where they live. It is essential and far more useful to the birds themselves.

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