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Illinois Birds: A Century of Change

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calendar was used when and where the volume was published; the Gregorian calendar replaced the Julian calendar at different times in different places, and other calendars were used in some places. As interesting and thought-provoking as this chapter is by itself, it would be more relevant to the book if there were examples of how each element played a part in firmly establishing the date of some important nomenclatural work.

Chapter 2 concludes with a multipage list of resources available for consultation in determining accurate dates, which easily could be its own chapter. These resources range from the original work itself, with all its editions and versions, and covers and wrappers, through dated advertisements for the work and minutes of society meetings that indicate the receipt of a volume, to library catalogues and almost any other place where a date has been used. Some may be as minor as notes scrawled on the cover of a publication or catalogue card by a librarian when a volume was received. Many of these secondary resources reflect the investigations of much earlier workers, such as C. D. Sherborn and C. W. Richmond, who were pioneers in compiling accurate citations and dates.

Chapters 3 (Books, 95 pp.) and 4 (Periodicals, 89 pp.) constitute the meat of this volume on dating. Each entry is headed with a full citation, which is followed by remarks on publishing details, reasons for considering the date problematic, references to published authorities on the case, and conclusions or recommendations on the proper date. The last entry indicates whether the authors consider the case resolved, settled as the best available information, or yet unresolved. This is not, of course, a complete list of ornithological works. Each work or series must have introduced new scientific names for birds, and the dates of the works must at some time have been in doubt, misunderstood, or miscited. Most of the books were published in the 1800s. Only a few are from the 1900s, only two after the 1930s. This suggests that authors and publishers have become more aware or more careful in dating their works accurately. And, of course, there have been fewer new names introduced.

The "remarks on publishing details" give the results of scholarly studies that must have involved hundreds of hours in library stacks and archives, searching for clues on when parts of long-term works were printed, changes of names of periodicals, whether dated preprints were available to authors, and other evidence that helps to determine, validate, or correct given or assumed dates. Not all the work is original for this volume, but merely drawing everything together is a major feat of dedication to the topic.

The Auk is listed among the periodicals, partly because some October numbers were published after the end of the calendar year and some January issues were published in the previous December. There are only two (presently unused) names whose dates should be advanced because they were published in December rather than January. There were other publication irregularities in 1992–1996, in which time several new names appeared but no year–date problems resulted. The preceding *Bulletin of the Nuttall Ornithological Club* is not included, perhaps because no dating irregularities were obvious.

The main part of the book is followed by a useful glossary of important terms used in it, mainly related to the publishing process discussed in Chapter 2 or to terms in the Code. There are five short appendices, on the French revolutionary calendar, the months of the year in Russian, references for the study of watermarks, a method of deriving dates for early numbers of the *Proceedings of the Academy of Natural Sciences of Philadelphia*, and a list of periodicals the compilers had hoped to cover but did not, for unstated reasons.

The CD-ROM accompanying the book contains 66 tables, in pdf format, presenting true publication dates for certain books (Tables 1–18) and periodicals (19–65) discussed in the text. These tables would take 156 pages to print out. Table 66 is a 34-page alphabetical list of bird names for which the dates have been changed since the publication of the Peters *Checklist* volumes, where it has been found that the names were misdated. This list is by the scientific name used in the third (2003) edition of the *Howard & Moore Complete Checklist of the Birds of the World* (of which Dickinson was the editor) and will be keyed to the soon-to-appear fourth edition of that work. Obtaining correct dates, and spellings, for that checklist seems to have been the major impetus for this entire work.

There are very few minor errors in the book. Co-author L. Overstreet informed me that the date for the beginning of the year in the United Kingdom until 1752 should be 25 March rather than 1 April (p. 42). In the caption for figure 5, the word "printing" appears twice; the second presumably should be "publication." In a discussion of Code Article 22, Citation of date (p. 21), there is the peculiar statement that the use of a comma between the author's name and date "is becoming less frequent—a trend apparently promoted in the U.S.A." In fact, the citation of author and date with a scientific name is infrequent in journals and books in the United States (as elsewhere), other than in the AOU *Check-list* and its annual supplements in *The Auk*. In those publications the comma is always used in the citation of the name of a taxon. The comma is omitted when an author–date citation in a paper is to a reference in the Literature Cited. This latter practice is also common in non-taxonomic literature. Perhaps Dickinson has confused these two situations. I noticed a single typo, a missing end parenthesis in the entry for *Thrum's Almanac* on p. 156.

This is a book that must be available in institutions where workers are engaged in systematic revisions and taxonomic reviews. The price may make it difficult for individuals, but most ornithologists would benefit from having it available and reading at least parts of it.—Richard C. Banks, *3201 Circle Hill Road, Alexandria, Virginia 22305, USA. E-mail: rcbalone@aol.com*

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Illinois Birds: A Century of Change.—Jeffery W. Walk, Michael P. Ward, Thomas J. Benson, Jill L. Deppe, Stacy A. Lischka, Steven D. Bailey, and Jeffrey D. Brawn. 2011. Illinois Natural History Survey Special Publication 31. vi + 230pp. ISBN 9781882932269. Paperback, $32.00.—This book looks at bird populations in Illinois over a hundred-year time span, from the early

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1900s to the early 2000s. No other geographic region has quantitative data on bird populations for a hundred-year period, for one simple reason: only Illinois had Stephen A. Forbes.

The Midwest was a hotbed of ecological thought in the later years of the 19th century. It is doubtful that anyone else understood the dimensions of ecology as fully as Forbes, a professor of zoology at the University of Illinois and the first chief of the Illinois Natural History Survey (INHS). He saw ecology as the interactions of organisms occurring within a system that, perhaps to avoid coining a new term, he called a microcosm. He saw the evolutionary implications of these processes. He also saw the need for methods to generate quantitative data for both theoretical and practical purposes. Among other innovations, he devised a bird census technique for large-scale counts of birds.

The Forbes technique used transects produced by two observers walking parallel lines 50 yards apart and counting all the birds in the strip or crossing it ahead of them. The first census, during 1906–1909, employed two young Illinoisans, Alfred Otto Gross and Howard A. Ray. Gross went on to get a Ph.D. at Harvard, had a long career at Bowdoin College, and produced many ornithological papers, including ones on the Dickcissel (*Spiza americana*) in Illinois, the extinction of the Heath Hen (*Tympanuchus cupido cupido*), and Snowy Owl (*Bubo scandiacus*) irruptions. Of Ray's life after he left Illinois, little is known.

Fifty years later, Richard Graber was hired as the nongame-bird biologist at INHS, with repetition of the Forbes census (1956–1958) as one of his first tasks. He was accompanied in the move—and the censusing—by his wife, Jean. Both were excellent ornithologists, recent Ph.D.'s from the University of Oklahoma, students of George M. Sutton.

Now INHS has completed a third iteration (2007–2009) of the census. The results, comparisons, and conclusions are in this substantial 8 ½ × 11 inch volume with an attractive color cover (meadowlarks by Carolyn Peet Nixon) and many graphs, maps, photographs of birds and habitats, and aerial photographs. Historical material, such as photos of Gross and Ray in camp with their collecting guns or Dick and Jean Graber striding along the sides of one of their transects, are in black and white, but other illustrations are in color. It's a book that any person or institution interested in animal populations and habitats, past, present, or future, in the Midwest or elsewhere, ought to own.

Following the introduction, a methods section describes how consistency was maintained in the two repetitions of the census. The 2000s census added point counts, little used in the publication itself, but available for comparison with what has become, for good or ill, the standard method for large-scale population counts of birds.

Section 3 describes changes in the state's landscape from 1820 to 2010. In 1820, most of the land was tall-grass prairie (nearly two-thirds) and forest (about one-third). Savanna was mostly submerged in the first two categories, and wetlands were less than 10 percent. By the time of the Gross-Ray census (1900s), most of the prairie had been plowed, most of the forest cut, and most of the wetlands drained. Corn occupied the largest proportion of the landscape, as it would for the whole hundred years, with no end in sight.

A strength of *Illinois Birds* is that the vegetation classification used is realistic, reflecting existing plant cover rather than being based on the original natural vegetation, which now exists mostly as scattered fragments. The 11 basic categories are corn, soybeans, small grains, hay, pasture, idle or fallow, urban, prairie, marsh, forest, and other.

Section 4, "Bird Communities through Time," gives quantitative population data on the bird species that occupied the different vegetation types in each of the three census periods. Relative abundance—the number of individuals of a given species seen in the habitat as a percentage of the number of individuals of all species seen there—is the main statistic used.

Quantitative information on bird populations by habitat is hard to come by. Such information is absent from Breeding Bird Surveys (BBS) and almost all breeding-bird atlas projects. The Illinois study also notes how the habitats themselves have changed. Orchards, pastures, and hayfields in the 1900s and, to a lesser degree, the 1950s held a diverse avifauna that included many native species of fairly narrow requirements. These agricultural habitats structurally mimicked savanna and grassland communities and were inhabited by many bird species characteristic of the natural communities. The orchards, pastures, and hayfields of today occupy much less acreage, match up less well structurally with any natural vegetation, and, even when they attract native species, may fail to contribute to the next generation. Today's hayfields, with their early and frequent mowings, are such an ecological trap.

Section 5 considers population changes individually for 40+ selected species. The measure used is density per hundred acres based on the transect counts. For comparative purposes, birds per BBS route (Illinois routes 1966–2007) are given. Also introduced is occupancy rate (stated as proportion of sites occupied by a given species). Less straightforward than the other figures presented, occupancy rates attempt to correct for species missed at a given census site because of various factors that might influence detectability, such as time of day. The computed occupancy values should be comparable from one census period to another. For many species, Section 5 also analyzes species data by region (south, central, and north).

Each species account has a short text and a photograph of the bird. Most include a bar graph, "Proportion of sites occupied," that shows occupancy rates in south, central, and north for the three census periods. Also often present is a dot graph of BBS results with a fitted trend line and a bar graph giving birds per hundred acres by vegetation type.

Section 6 is about changes in the past—sound information about what happened from the 1900s to the 2000s with economical, common-sense assessments of causes—and changes in the future with equally sensible and parsimonious projections of what may be in store for us. This section and, of course, *Illinois Birds* as a whole are full of fascinating information. What's the only clearly established member of the avifauna to have gone to zero since 1906? Bachman's Sparrow (*Peucaea aestivalis*) was seen by Gross and Ray and again by the Grabers but is now absent after a seemingly steep decline in the 1970s.

One potentially informative way of grouping species is based on how each species changed in the two repeat censuses (up, down, or steady, based on occupancy rates). Forty species in eight categories are specified. "Up" in the 1950s and still up in the 2000s is termed "early increase." The diverse examples include the Rock Pigeon (*Columba livia*), Kentucky Warbler (*Geothlypis formosa*), and Northern Cardinal (*Cardinalis cardinalis*). Up in the 1950s

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and then up some more in the 2000s is "consistent increase." Examples include the Horned Lark (*Eremophila alpestris*) and House Wren (*Troglodytes aedon*).

The Yellow-billed Cuckoo (*Coccyzus americanus*) and Northern Bobwhite (*Colinus virginianus*) were among the "consistent decreasers," down and then down some more. Several species showed a "dip," down and then up. The heavy use of chlorinated hydrocarbons, ca. 1945–1972, is suggested as a possible cause of this pattern in at least some of the species.

A few species showed little change from the 1900s to 2000s. The Mourning Dove (*Zenaida macroura*) was spectacularly stable as well as being common in all three sections of the state. The Acadian Flycatcher (*Empidonax virescens*) had steady occupancy rates over time but was common in the south, medium in central Illinois, and low in the north.

A related matter is an attempt to pick future winners and losers. Several species, such as the Bobolink (*Dolichonyx oryzivorus*), Eastern Whip-poor-will (*Caprimulgus vociferus*), and Red-headed Woodpecker (*Melanerpes erythrocephalu*), are nominated for extirpation in the next 50 years. Nominated to increase in the next 50 years are such species as the Black-bellied Whistling-Duck (*Dendrocygna autumnalis*), Trumpeter Swan (*Cygnus buccinator*), Blue Grosbeak (*Passerina caerulea*), and Fish Crow (*Corvus ossifragus*). Most of those tagged as increasers are southern species destined to move north with global warming. Some are already showing a strong expansionist signal.

For Illinois or elsewhere, maintaining biodiversity of the native avifauna could have two components. One obvious course is retaining natural ecosystems by means of preserves and sanctuaries. The other is managing the rest of the landscape to provide habitat acceptable to the native species. *Illinois Birds* provides evidence in the bird lists of some of the 1900s agricultural lands that this second approach is feasible. Future events may provide evidence that the approach is also essential. Unfortunately, agricultural trends of the past 30 years have mostly run in the opposite direction, toward increasingly hostile landscapes.

Certain types of developed land are the other fraction of today's non-native landscapes where management for native biodiversity might be incorporated. Here the Illinois findings are a little more encouraging. Promising possibilities could be adopted more widely and amplified. The use of native plants in landscaping, including around streams and water bodies, could be increased. Attempts to facilitate nesting could be extended to a great variety of bird species—not just cavity and ledge/platform nesters but many others that have stereotyped nest sites.

In Illinois, as in most places, the acreage of preserved natural areas is small. We might suppose that this relatively small area contains a sizable fraction of the remaining native biodiversity, but *Illinois Birds* has little to tell us on this score. The Forbes technique tends to take the land as it comes (though both the 1950s and 2000s censuses did some supplementary sampling to add acreage of the rarer nearby habitats).

Even if directly applicable data are not available, we might learn something from Dick and Jean Graber's example. Over the course of the Grabers' 30-odd years of travel and study in Illinois, their knowledge of the land and dedication to preserving biodiversity grew. One outcome was that from their modest resources, they bought nearly 500 acres, largely forested, in the Shawnee Hills above the Ohio River in southern Illinois and eventually donated it to the Illinois Audubon Society as the War Bluff Valley Sanctuary. Jean, still living near the Sanctuary, provided the foreword to *Illinois Birds*.

Acknowledgments.—I thank R. Adams, M. A. Sydlik, and K. Takahashi for comments.—Richard Brewer, *Department of Biological Sciences, Western Michigan University, Kalamazoo, Michigan 49008, USA. E-mail: brewer@wmich.edu*

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The Black Woodpecker—A Monograph on *Dryocopus martius*.—Gerard Gorman. 2011. Lynx Edicions, Barcelona, Spain. 184 pp., 15 color plates, 22 text figures. ISBN 9788496553798. Hardcover, $29.00.—Because of their peculiar habits and appearance, woodpeckers (Picidae) figure among the most charismatic birds. This is especially true for the large-sized species belonging to the Campephilini tribe: the logcocks (*Dryocopus* spp.) and ivory-bills (*Campephilus* spp.). The world's most widely distributed representative from that tribe is the Black Woodpecker (*Dryocopus martius*), which is found across Eurasia, from Western Europe to the Russian Far East and Japan. Unlike some of the other large woodpeckers, the Black Woodpecker is generally not considered threatened with extinction (with a few regional exceptions). So, is there a need for a whole monograph on a bird species that is neither threatened nor hunted as game? Yes, without any doubt. Across its range, the Black Woodpecker has fascinated people for ages. It is the heavyweight woodpecker whose drumming is heard at long distances during cold spring mornings, the evasive black shadow haunting large forests, the woodcarver leaving impressive signs in trees and logs. From a scientific perspective, this species has received much attention in ornithological research, ranking fifth among all the world's woodpeckers in number of scientific articles in the last decade or so (Mikusiński 2006). Still, although some ornithological books provide fairly detailed accounts on the Black Woodpecker (e.g., Cramp 1994), I am not aware of any book in English entirely devoted to this species—that is, before the recent publication of this monograph by Gerard Gorman. It is not surprising that no English-language book has been published on the Black Woodpecker in the past, considering that the species does not occur in any English-speaking country. Still, English is probably the most appropriate language for reaching the variety of potential readers within and outside this woodpecker's distribution range.

In this elegantly written book, Gorman excels at communicating his passion for the Black Woodpecker. He covers virtually all aspects of the species' biology, including taxonomy and relationships, anatomy and identification, behavior, distribution and status, breeding, habitat use at multiple scales, and food and foraging. The book contains an interesting mixture of facts from the scientific literature and personal accounts from observations of the species. Considering that the Black Woodpecker's distribution range stretches over tens of different countries,

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