

LITERATURE CITED

- American Ornithologists' Union (A.O.U.). 1998. *Check-list of North American birds*. 7th ed. Am. Ornithol. Union, Lawrence, Kansas.
- Pulich, W. M. 1988. *The birds of north central Texas*. Texas A&M Univ. Press, College Station, Texas.
- Thompson, M. C., and C. Ely. 1992. *Birds in Kansas*. Vol. 2. Univ. Kansas Mus. Nat. Hist., Lawrence, Kansas.
- Wolf, B. O. 1997. Black Phoebe (*Sayornis nigricans*). In: *The Birds of North America*, No. 268 (A. Poole and F. Gill, eds.). Acad. Nat. Sci., Philadelphia, and Am. Ornithol. Union, Washington, DC.

311 BAYOU ROAD, FORT GIBSON, OK. 74434. Received 9 April 2000, accepted 2 August 2000.

Bull. Okla. Ornithol. Soc. 33:23-27, 2000

© Oklahoma Ornithological Society 2000

Recent Literature

Barrow, Mark V., Jr. 1998. *A Passion For Birds: American Ornithology After Audubon*. Princeton University Press. Princeton, New Jersey. ISBN:0-691-04402-3. 352 pages. \$39.50.

Farber, Paul Lawrence. 1997. *Discovering Birds. The Emergence of Ornithology As a Scientific Discipline: 1760-1850*. John Hopkins University Press. Baltimore, Maryland. ISBN:0-8018-5537-3. 191 pages. \$14.95.

Mearns, Barbara, and Mearns, Richard. 1997. *The Bird Collectors*. Academic Press. San Diego, California. ISBN:0-12-487440-1. 472 pages. \$49.95.

Until almost the start of the twentieth century, the taxon-based natural sciences (e.g., ornithology, entomology, mammalogy) were subsets contained within general natural history. Few people specialized on one group of animals, and universities offered no specific training on birds or other taxa. These three books tell part of the fascinating story of how ornithology developed as an independent science.

Discovering Birds begins the story in eighteenth century Europe with the publication of Mathurin-Jacques Brisson's *Ornithologie* and George Louis Leclerc de Buffon's *Histoire Naturelle des Oiseaux*. Prior to the appearance of these two books, there was considerable interest in general natural history in Europe, but birds were not considered to be subjects of serious scientific inquiry. Both books were intended to stimulate further scientific study of birds although from different perspectives. Brisson's

book was mostly a specimen-based study of the classification and systematics of Rene-Antoine Ferchault de Reaumer's collection of bird specimens. Buffon, on the other hand, felt that the knowledge of birds was incomplete without data and observations collected in the field. This began the dichotomy we still see today: collection- or museum-based studies of classification and systematics and field-based studies of behavior and ecology. Farber tells us that by the time of Charles Lucien Bonaparte's completion of Wilson's *American Ornithology* and his incomplete *Conspectus Generum Avium*, ornithology had emerged as a independent scientific discipline and was on track to develop rapidly.

The eighteenth and nineteenth centuries were a time of great change in Europe and throughout the world. Technological advances in typesetting and lithography appeared, making the printing of bird books and journals more efficient and of higher quality. This made dissemination of information to general audiences much easier and made the profession of science writer possible. Bird encyclopedias, monographs, and avifauna lists began to appear at this time. These publications were illustrated by some of history's greatest bird artists such as John Gould and John James Audubon. The drawings of such artists had a couple of uses. One was simply to illustrate beautiful creatures, and another was to accurately record the appearance of species only known from fragile and decaying specimens.

During this same period, European colonialism throughout the world put observers across the globe. Many were members of military and government expeditions, some were missionaries, some were from trading companies, and some were members of scientific expeditions. Part of the charge of these observers was to describe and to collect specimens in the lands in which they found themselves. Birds figured prominently in these collections. More information was becoming available to scientists and writers, which in turn was being published and disseminated. As specimens and information became available from worldwide exploration, public and private museums become more important. The synergy resulting from all these factors powered the development of ornithology as a science.

The Bird Collectors takes up the story at this point, telling us about ornithology during the period of colonialism and world exploration, concentrating on the growth of the world's collections of bird specimens. This was an important and essential stage in the development of ornithology.

The main characters in the Mearns' part of the story are the collectors and describers of species and the participants in the expeditions that explored the world, an extraordinary collection of individuals. The tales of these expeditions make for some fine adventure travel reading. Try reading the Mearns' recounting of "The Worst Journey In The World" as an example. It is the story of a trip to collect Emperor Penguin (*Aptenodytes forsteri*) eggs in the Antarctic winter of 1911. You will never feel cold on a Christmas Bird Count again.

As a collector of bird art, I was most interested in the Mearns' discussion of bird artists and their role in ornithology. With the advances in lithography in the 1700–1800s, the opportunities for bird artists expanded. Today, when we look at the works of Audubon, Gould, Wolf, and others, we admire them for their aesthetic quality, and we sometimes forget their scientific significance. Although most of the big illustrated bird monographs were done as commercial ventures, they often contained the first descriptions of new species. In the early days of specimen collecting, the techniques used to prepare and preserve specimens were very inadequate. Consequently, relatively few specimens from the 1700s and 1800s still exist. They simply decayed away. Often specimens were lost (ships sink) or were irreparably damaged during shipment (ships leak). In some cases, the illustrations of a species from that era are surrogate type specimens. The Mearns' discussion of how specimens were collected, prepared, and transported is also interesting.

I particularly like the work of John Gould (1804–1881), who was one of the finest bird artists ever. Along with producing such illustrated books as *The Birds of Great Britain* and *A Monograph of the Trochilidae or Family of Hummingbirds*, he was an accomplished museum scientist and collector. He did much of his work in association with the British Museum of Natural History. He made the first descriptions of hundreds of new species from Australia, South America, and Central America. Apparently, his own private collection of bird specimens contained a remarkable percentage of type specimens, mostly sold to the British Museum of Natural History upon his death. Gould had a close connection to Charles Darwin, illustrating Darwin's *Zoology of the Voyage of the HMS Beagle (1839-1843)*. As a recognized ornithologist with the Zoological Society of London, Gould examined Darwin's specimens of Galapagos finches, Galapagos mockingbirds, and South American rheas, determining that they were indeed specimens of different, distinct species. This helped lead in part to Darwin's *Origin of Species*.

A Passion For Birds adds the American angle to the story of ornithology's development. Barrow discusses the dichotomy that developed between "scientific" ornithology and "conservation" ornithology, a division first made by Brisson and Buffon in the late 1700s.

Several ornithological societies were formed in the late 1800s, notably the American Ornithologists' Union in 1883 and the Nuttall Ornithological Club in 1873. The Audubon Society movement also began at about this same time. Initially all of these organizations were concerned with issues of bird conservation and protection. In 1878, the Nuttall Club met to discuss "the sparrow question." In the 1850s, urban residents of the eastern United States imported and released thousands of House Sparrows (*Passer domesticus*). They did this to provide a predator for insect pest larvae and apparently to remind themselves of their European origins. By the 1870s, sparrows had spread beyond their initial introduction points and had become pests, eating more grain than insect larvae and

damaging native species. People began to promote eradication programs and to speak out against House Sparrows. In January 1878, Elliott Coues, a sparrow opponent, and Thomas M. Brewer, a sparrow proponent, engaged in a heralded debate on the issue. Ultimately, 17 of the Nuttall Club's 23 members met and condemned the House Sparrow introduction.

It was a more "scientific" question that led to the formation of the American Ornithologists' Union (AOU). By the 1880s Robert Ridgway and Elliott Coues each had published a list of the birds of North America, and both insisted that their list was the correct one. This threatened to divide the American ornithological community (until ultimately the two lists were apparently hybridized into the first AOU check list). In January 1883, Coues suggested calling "a congress of American ornithologists" to discuss avian nomenclature; this resulted in the September 1883 founding of the American Ornithologists' Union, an organization consisting of the likes of Coues, Joseph Grinnell, C. Hart Merriam, Spencer Baird, J. A. Allen, and William Brewster. The AOU was controlled by a small group of "scientific" ornithologists, but the membership rolls consisted largely of "amateur" ornithologists and bird enthusiasts on whose financial support the society relied. Unfortunately and perhaps not surprisingly, this caused a polarization between the members of the two groups. This came about largely over the legitimate need to collect bird specimens for research purposes and the equally important need to protect birds as a natural resource and to study live birds in the field, a point also made in the Mearns' book. As a result of the bad blood between (sometimes insensitive) professional ornithologists and (sometimes unreasonable) preservationists, the AOU de-emphasized conservation issues. The legacy was that for decades the professional ornithological societies (especially the AOU) had only a minor role in bird conservation; the National Audubon Society and other organizations became the principal advocates for conservation. Only recently have the major ornithological societies become involved in conservation and policy issues, with the relatively recent establishment, for example, of the North American Ornithological Council, partly under the auspices of the AOU.

In 1916, Julian Huxley pointed out that "amateur" ornithologists were a vast resource that could be valuable allies in the production of information about birds. One of the most influential and enthusiastic supporters of this idea was Frank Chapman. His enthusiasm is embodied today in the Christmas Bird Count program. In 1900, Chapman first proposed the idea of going out in mid winter, around the Christmas holidays and surveying bird populations. Only 27 people participated in the first Christmas Bird Count, but by 1909, 200 people were involved and by 1939 there were more than 2000 observers. The first Christmas Bird Count to tally more than 100 species came in 1913. By 1922, Chapman claimed the Christmas Bird Count was "well established" with an "obvious scientific value." Others have called it "the greatest ornithological project in North America."

All three books are illustrated with period photographs and lithographs. The Mearns book includes a charming photograph of Fannie Chapman, wife of Frank, skinning a Brown Pelican (*Pelecanus occidentalis*) on their 1898 honeymoon in Florida. The Mearns also include a chapter on the accomplishments of female ornithologists (most of whom collected birds) in the era before Margaret Nice. This was a remarkable but little known group. Two of the more noteworthy were Martha Dartt Maxwell (1831–1881) and Dr. Emilie Snethlage (1868–1929). Maxwell studied the birds and mammals of Colorado. Robert Ridgway named the pale gray subspecies of the Eastern Screech-Owl (*Otus asio maxwelliae*) for her. Apparently she was the first woman to be recognized in this way specifically for her scientific contributions; before this, only royalty or wives and daughters of collectors were so honored. Snethlage specialized on the birdlife of Amazonia. A clearly intrepid woman, during an expedition to a tributary of the Amazon, she amputated the middle finger on her right hand herself, after it had been partially eaten by piranhas.

These books include stories and profiles of some of the most famous names in the history of ornithology. One of my favorites is the story of George M. Sutton as a boy at home in Illinois. He was afraid that a house fire would destroy his collection of feathers, bones, eggs, and nests. So he built up a mound of soft dirt under his second story bedroom window and practiced fire drills. He became so skilled at jumping from his window that he could make the leap without damaging the stuffed crow he carried.

These three books may provide more detail on the history of ornithology than you may want to know, but it is a fascinating story and one well worth reading.—MARY BOMBERGER BROWN

The Bulletin of the Oklahoma Ornithological Society (ISSN 0474-0750) is published quarterly in March, June, September, and December, at Tulsa, Oklahoma. Editor, CHARLES R. BROWN, Department of Biological Sciences, University of Tulsa, Tulsa, OK. 74104-3189; Editorial board, JAMES ARTERBURN, MARY BOMBERGER BROWN, VICKI BYRE, JEFFREY COX, JOSEPH GRZYBOWSKI, JAMES HOFFMAN, DOUGLAS MOCK, GARY SCHNELL, and JOHN TOMER. Subscription is by membership in the OOS: \$5 student, \$10 regular, \$15 family, \$15 or more sustaining, per year; life membership \$200. Questions regarding subscription, replacement copies, back issues, or payment of dues should be directed to: CLAUDIA GLASS, OOS Membership/Circulation Chairman, P. O. Box 2931, Claremore, OK. 74018.