Alexander Wilson: Enlightened Naturalist. Aperçus: Histories Texts Cultures Series

Edited by Edward H. Burtt, Jr. 2016. Bucknell University Press and Rowman & Littlefield. 202 pages, 80.00 USD, Cloth, 39.99, Paper or E-book.

Alexander Wilson is presented here as the father of American ornithology. One might wonder why John James Audubon does not have this distinction, for Audubon overshadows Wilson, enjoying a larger reputation, owing at least in part to his name having been adopted by one of the premier conservation societies of America and, indeed, the world. Audubon's larger stature is conceded by the authors of this book, but their work goes some way to justifying and raising awareness of Wilson's role. Indeed, the claim is made that Wilson inspired Audubon by example. But you'll have to wait awhile – if you read the book from beginning to end – to get to the meat of their argument. First, however, we must learn of Wilson's life in Scotland, his emigration to the United States, and his poetic descriptions of life in the early 19th century eastern forests.

Alexander Wilson: Enlightened Naturalist is an outcome of a one-day symposium on Wilson held in April 2014 at Ohio Wesleyan University. It was organized by one of Wilson's biographers, Edward H. Burtt, Jr., who edited the proceedings. Burtt taught at Ohio Wesleyan, overcoming his life-long physical limitations to become a keen field ornithologist and inspiring professor who, sadly, did not live to see this lovely volume in print. The publisher's website hosts audio recordings of Wilson's poetry, which occupies two of the book's five chapters: http://www.bucknell.edu/universitypress/alexanderwilson.

Alexander Wilson developed an early passion for both nature and poetry, starting with his boyhood experiences as a cowherd. Later, as an apprentice weaver, his poetry took a turn toward activism on behalf of oppressed labour, which resulted in his being jailed under dubious circumstances. The story is outlined in a preliminary Biographical Sketch and further in the first chapter, which examines Wilson's life in Scotland through his poetry. Faced with continuing legal woes, Wilson emigrated to America in 1794, at the age of 28. There, he came under the mentorship and influence of William Bartram and Charles Wilson Peale, artists and naturalists both. Bartram was a mentor throughout Wilson's life in America, and Wilson supplied Peale with specimens for his museum, the country's first public natural history museum. After a brief stint as a schoolteacher, Wilson decided to dedicate his life and "considerable artistic talent" to documenting the birds of America, travelling extensively for years over a region described as the "eastern deciduous forest". It was his constant practice to go beyond studying and describing the birds themselves, for he was endlessly curious about their behaviour and habitats wherever he went.

Wilson documented avian life through his paintings and field notes but recorded his travels through his poetry. The latter is the focus of chapter two, "Verses from America", the longest and least satisfying in the book. Wilson had much to say about nature and his experiences as a traveller, but I found the discussion here to be repetitive, remaining on the surface and suffering occasional errors of fact. Almost 30 pages are given to discussion of Wilson's "The Foresters", a poem of over 2000 lines describing a trip taken in 1804 with several companions through Pennsylvania to Niagara Falls. The poet has much to say about the natural world around him and the conditions of the various people he and his companions met. Furthermore, Wilson's interest in painting birds was born during this trip, quickly blossoming into the concept of an American ornithology. Wilson wrote five poems on specific species of birds that are reprinted and discussed in the final section of this chapter.

As suggested above, the sections of most interest and relevance to field-naturalists are the final three chapters. Wilson's painting is analyzed in chapter three, "The Art of Illustrating Nature", by William E. Davis, Jr., who co-authored with Burtt the 2013 biography of Wilson.[1] In the days before (and, thankfully, after) the invention of photography, painting and sketching were the primary methods available for visually recording natural phenomena. Techniques and talents varied, as well as principles, among the many who took up these methods. Davis compares Wilson's achievements with other notable painters, including Bartram, Catesby, Albin, and Edwards. For this discussion, more than 30 full colour plates are reproduced here, selected from a first edition of *American Ornithology* and collections in Harvard University's Ernst Mayr Library of Comparative Zoology. A professor of ornithology with a keen interest and skills in art, Davis is well placed to point out elements that escape the amateur's eye, guiding the reader into a fuller appreciation of the work. Sheer beauty aside, the accuracy Wilson achieved is a singularly important feature of his work, which was acknowledged in Europe – by Baron Cuvier, no less – for its high quality. Wilson completed eight volumes and had the ninth well underway at the time of his death in 1813. The full set, originally published between 1805–1814, was revised and republished under the direction of Prince Charles Lucian Bonaparte, estranged nephew of the dictator, up to 1877, the "first scientific work published in the fledgling United States" (p. 101).

Wilson took an innovative field guide approach, his work becoming steadily more ecologically, behaviourally, and morphologically accurate in line with his goal to produce paintings that would assist in bird identification in the field. He varied perspectives of his subjects when necessary, to highlight particular features and, unlike other painters, made sure to place his birds in appropriate habitats. Davis notes that Wilson paid special attention to the accurate depiction of eyes, feet, beaks and other features.

Chapter 4, "*American Ornithology*: Exemplar of Scientific Creativity", was written by Burtt himself, who undertook a deep and fascinating textual analysis of Wilson's life work, placing it in the historical contexts of several themes. These themes include taxonomy, ecology, species, field notes and observation, use

[1]C. Stuart Houston reviewed this biography in the CFN: **Houston, C. S.** 2013. [Book Review] Alexander Wilson, the Scot who Founded American Ornithology. Canadian Field-Naturalist 127: 283–284. https://doi.org/10.22621/cfn.v127i3.1477

of hypotheses, the art of publishing art, quantitative and economic ornithology, and the role of birds in culture. The concept of aperçus as the revisionist exploration of "[r]elations among historiography, culture and textual representation [that] are presently complex and rich in possibilities…" (p. [ii]) reaches full flight here. Burtt digs deeply into the texts and the times, discussing problems with Linnaean taxonomy and its "chaotic naming" practices (p. 110), the limitations created by the notion of the fixity of individually divinely-created species and the lack of the taxonomic category of family, soon to be developed by Bonaparte.

A normal part of the practice of field research, one that photography eventually nullified, was the shooting of birds as specimens that could be prepared and kept for close study. While Wilson's technique for preparation is described here, of much more interest is his practice of living with birds, captured or raised from eggs, at times for several years, so that he could study not only their form and colour, but their behaviours as well. As we have seen, Davis discussed how Wilson was the first to make honest application of these careful observations; here, Burtt provides the how, Wilson's close proximity to live animals. Wilson was the first in America to adopt the Linnaean system and his work became the foundation for both the first field guide to the birds of North America and the American Ornithological Union checklist, first published in 1883. He was also a source of information and anecdote – but unfortunately not for illustrations – for the life histories of birds published by A.C. Bent (p. 111). Wilson also produced in 1811 the first-ever breeding bird survey, undertaken at William Bartram's "'botanic garden'" while he was living at Bartram's home (p. 124).

The works of other artists, including the famous Mark Catesby, could result in inaccuracies in identification that might persist for years; Catesby, for example, painted from memory after moving back to Europe. Wilson's field experience – indoors and out! – provided a corrective in several instances described by Burtt, including the proof that the bird believed by European ornithologists to be the female Baltimore Oriole was in fact the male Orchard Oriole and that Bobolinks and so-called Rice Buntings were two separate species. His accomplishments in this regard were based solidly on his stubborn ability to trust what he saw rather than others' descriptions, and to think for himself, testing hypotheses based on observation – something, according to Burtt, "that no one else was doing" (p. 117). This statement extended as well to Wilson's unique practice of keeping voucher specimens, some of which are now stored at the Ernst Mayer Library.

The issue of species identification is the subject of the short, concluding fifth chapter, "Bird Species: Then and Now", by Frank Gill and Rick Wright, respectively an award-winning ornithologist (including an honourary doctorate conferred at the symposium) and a scholar in the humanities who happens to write bird field guides. They briefly assess the state of knowledge in Wilson's time in comparison to the extensive resources employed today. A great number of the birds Wilson observed were new to him and many were new to science. Wilson intended his work to be a guide to the species and, in addition to his extensive notes from the field, often made directly on life sketches, he collected physical specimens of male and female in their seasonal and breeding plumages. His close examination of these specimens resulted, as noted above, in clarification of several species. They expand on the discussion by Burtt and offer other examples as well.

The limitations under which Wilson worked were not only physical. The philosophical questions he faced may seem almost quaint today, but our tremendous technologies, such as DNA analysis, force continuing evaluation of these questions at levels Wilson could not foresee. What he did foresee, however, was the continuing discovery of new species. He described and painted some 268 or 77% of the 348 known species in his lifetime. Yet today's pioneers, bringing new specimens into the realm of the molecular, are uncovering new species even among long-described groups and species complexes. Thus, Gill and Wright inform us, the 14 described species of wren-babblers have recently been divided into "three unrelated families and include five new species, with more likely to come" (p. 154). Think you know your birds? Hang onto your binoculars – you're in for a wild ride. Wilson would no doubt be pleased.

This book reflects the varied topics that arise in symposia covering a person's life and work and diligently pursues their precise documentation. It is a book written by and with scholars in mind. However, much may be gleaned by those with an interest in the history of ornithology, the development of field practices, taxonomic issues, and the intersection of these with the arts of poetry and painting. The sections on poetry provided interesting insights into Wilson's formative years and early life in America. However, I found the three chapters assessing his influential opus as a painter, his diligent practices as a field ornithologist – in contrast to those of Audubon, it may be said – and the problems of early taxonomy and speciation particularly fascinating. Wilson is more than worthy of the attention he receives here. In Burtt's words, Wilson "was a father who also gave his infant science the intellectual tools and rigor that would help it grow into a healthy, vibrant adult" (p. 107). And every painter of birds and student of ornithology ever since, knowing or not, is standing on his shoulders.

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