

BOOK REVIEW

Ten Thousand Birds: Ornithology since Darwin. Tim Birkhead, Jo Wimpenny, and Bob Montgomerie. 2014. Princeton University Press, Princeton, NJ. 524 pages; \$45.00, hardbound. ISBN-13: 978-0-691-15197-7. URL <http://myriadbirds.com>

The authors have produced a very readable, albeit hefty volume on the history of ornithology since Charles Darwin and the publication of *On the Origin of Species* (Darwin 1859). Birds are great study subjects because they are beautiful, mainly diurnal, and easily observed. Research on birds has contributed more to the study of zoology than any other group of animals.

The book is divided into 11 chapters and covers a wide range of topics, including the origin and diversification of species, ecological adaptations for breeding, form and function, instinct, behavior and adaptation, sexual selection, and population studies. The focus is not only the history of the scientific discipline of ornithology, but also the scientists and researchers behind the science. The authors take great care to humanize the research and discoveries by detailing how the researchers explored new ideas and tested new hypotheses. Some of the more entertaining parts of the book are when scientists disagree with one another and question the validity of each other's ideas. Disagreements only make the science more rigorous, and more often than not, the truth lies somewhere in the middle. Many great avian researchers are featured, including Alfred Newton, Erwin Stresemann, Ernst Mayr, and David Lack. More than 700 researchers and their accomplishments are mentioned and discussed in the book.

Each chapter opens with a painting that symbolizes the topic and ends with brief biographies of contemporary ornithologists. The paintings represent work of 11 noted wildlife artists. The biographical content is drawn from interviews with, and writings of, the featured persons. Also included in each chapter is a timeline diagram that illustrates landmark

events relevant to the chapter topic. The chapters are written such that they can be read independently and are packed with so much information that a second reading is warranted. The text is well documented with citations and annotations. The book tends to be biased toward research within the Western Hemisphere; however, key discoveries in Africa and Australia are covered. Also the book contains 2 appendixes (a list of key ornithological histories and a list of 500 ornithologists), a notes section, a reference section, an index, and image credits.

The volume strikes a fine balance between photos and text without being overly photo-centric. Photos are strategically placed within the text, and the photos feature research topics (i.e., the birds) and the researchers, either as portraits or in the field.

The final chapter about the future of birds (Chapter 11, *Tomorrow's Birds*: 389) is worth mentioning in detail. The title of the book, "Ten Thousand Birds," refers to the approximately 10,000 species of birds in the world; however, with the current rate of extinction, this number is dropping. The authors discuss reasons for declining bird populations, such as loss of habitat and fragmentation of landscapes. The authors cite Meffe and Viederman (1995:327) as a succinct summary of the issue:

We can no longer simply do the science and hope that someone else uses the information to make good laws that protect species and their ecosystems . . . the major advances in conservation action will take place not in scientific laboratories or field research sites, but in the political and economic arenas, because present limitations in conserving biodiversity do not typically occur through lack of knowledge, but rather poor implementation—the policy arena.

With the current rate of habitat loss, prompt and effective action is needed but strong scientific evidence is often not enough to stimulate such action. Legislation and a new economic paradigm are necessary to conserve species on the ecological community level. The writing is

on the wall, and for many species, the time for saving action may have passed. *Ten Thousand Birds* is a solid read for students of nature, avian enthusiasts, and scientists. Hopefully the take-home message is a renewed appreciation of earth's wildlife species and a sense that we are certainly not alone on this wonderful planet.

LITERATURE CITED

DARWIN, C.R. 1869. On the origin of species by means of natural selection, or the preservation of favoured

species in the struggle for life. 5th edition. John Murray, London, England.

MEFFE, G.K., AND S. VIEDERMAN. 1995. Combining science and policy in conservation biology. *Wildlife Society Bulletin* 23:327–332.

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Uncertain Path: A Search for the Future of National Parks. William C. Tweed. 2011. University of California Press, Berkeley, CA. 248 pages; \$24.95, paperback. ISBN-13: 978-0520271388.

To grasp the true meaning of “nature,” “natural,” or “wild,” one must journey down William Tweed’s *Uncertain Path*. Tweed sets out on a 240-mile hike along the John Muir Trail, looking for a new perspective on wilderness. His goal is to analyze the covenant of the National Park Service (NPS), written to preserve parklands “unimpaired” for future generations to enjoy. Tweed is knowledgeable; he worked for 3 decades in the National Park System. With his deep, unwavering love for backpacking in the Sierra Nevada, he draws us in.

What is the fate of these mountain landscapes? As we hike down the John Muir Trail, Tweed unfolds the rich history of the National Park System. He argues for the reform of its management policies—reforms necessary to meet the demands of our changing climate. He identifies issues that have been ignored and proposes the redefinition of the NPS covenant. By embedding forest science into his evocative wilderness stories, Tweed teaches us the foundations of wilderness management. His book is a timely and honest assessment of the future of America’s backcountry.

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