

Ornithology: From Aristotle to the Present.
Erwin Stresemann

(Originally published in German as "Die Entwicklung der Ornithologie von Aristoteles bis zur Gegenwart.") Harvard University Press, Cambridge, Mass. ©1975. \$20.00.

Erwin Stresemann's name is one of the most respected in the world of ornithology. Most of his works were rather scientific and complex — all of them brilliant.

The work being reviewed is a departure from the scientific. It is not for the casual birder but for the serious student of ornithology. It is the history of ornithology, with heavy emphasis on the *philosophical* aspect of the formation of this field over the years. It is thorough; it has the thoroughness of an analytical mind. I did not expect this type of work from Stresemann, but it is so appropriate that this subject was taken up by him rather than, for instance, by a newcomer to the field. If anyone has a right to claim this historical treatment, it is a man of great stature. He has added perhaps the most significant chapters to the ornithological progression in the "old" and the "new" world. Stresemann effectively bridges both the old and the modern.

Ernst Mayr, an evolutionist, completes this fine work with a foreword and an epilogue: materials for a History of American Ornithology. This is most fitting because "the New World" covered a vast addition to the history of ornithology.

It is interesting to note that bird-banding as a method of investigation is but a tiny speck on the top of this ornithological iceberg. Sometimes I wonder about its success as a data gathering device when one considers the huge amount of data that has been unearthed by brilliant scientists deprived of this method. These scientists must never be forgotten.

Dr. Stresemann died on 20 November 1972 at the age of 83. Another book could be written on his impact on the History of Ornithology. "Ornithology: from Aristotle to the Present" is a book which kept me busy for several months. I recommend it to all who are engaged in the sciences and to our readers

who are most serious in the pursuit of ornithological research.

F.S. Schaeffer

Review of Farner, D.S., and J.R. King (eds.). *Avian Biology*, Vol. 3 (1973), xx & 573 pp. (\$44.00); Vol. 4 (1974), xxii & 504 pp. (\$37.00). Academic Press, New York.

It has been over 10 years since A.J. Marshall's *Biology and Comparative Physiology of Birds* provided a comprehensive treatment of all facets of avian biology. The four volumes of *Avian Biology* published under the editorship of D.S. Farner and J.R. King (1971-1974) are not, for the most part, simply an updating of Marshall's work. Each topic has been reworked in the light of present-day understanding, and some of Marshall's topics have been largely reduced or entirely deleted while other topics have been added. Thus, *Avian Biology* stands independent of Marshall's *Biology*, although the editors admit conceptual indebtedness to this earlier work.

Volumes 3 and 4 and the two other previously published volumes of *Avian Biology* are intended for the reference use of advanced students and professionals in ornithology as well as in broader functional disciplines such as comparative physiology, ecology, and evolutionary biology. Yet any amateur with a good background in biology (and to a lesser degree, chemistry and physics) and with enough perseverance to gain any prerequisite understanding that is lacking will find these two volumes a fascinating review of the state of avian biology at this point in its history. Although an understanding of the information contained in these volumes does lead to a better appreciation of the bird in its real world, these books are not for casual reading by someone interested in the natural history of birds. The gaining of a deeper understanding of the science of ornithology would be better served by reading J.C. Welty's *The Life Of Birds* (second edition, 1975, W.B. Saunders Co.) or G.J. Wallace and H.D. Mahan's *An Introduction to Ornithology* (third edition, 1975, MacMillan).

Volume 3 covers reproduction in birds (by B. Lofts

and R.K. Murton), the adenohypophysis (by A. Tixier-Vidal and B.K. Follett), peripheral endocrine glands (by I. Assenmacher), neuroendocrinology (by H. Kobayashi and M. Wada), vision (by A.J. Sillman), chemoreception (by B.M. Wenzel), mechanoreception (by J. Schwartzkapff) and behavior (by R.A. Hinde). Volume 4 contains chapters on the peripheral and autonomic systems (by T. Bennett), pineal gland (by M. Menaker and A. Oksche), the functional anatomy of the skeleto-muscular system (by W.J. Bock), energy balance and thermoregulation (by W.A. Calder and J.R. King) and the physiology of flight (by M. Berger and the late J.S. Hart).

The non-technical reader whose experience relates to watching and banding birds will find the chapter on behavior in Volume 3 familiar and containing much information that will be of interest. Although dependent on considerable technical vocabulary, the chapters on reproduction and vision in Volume 3 and those on the skeleto-muscular system, energy balance and thermoregulation, and the physiology of flight in Volume 4 are perhaps most allied with the experiences of the amateur field ornithologist. Not only will appreciation for the truly wonderful creatures that birds are be enhanced by just reading selected chapters from these volumes, but also one cannot escape being impressed by the wide range of endeavors that scientists interested in birds have undertaken — whether working with the whole organism or with systems of interacting cells.

Contributed by John L. Zimmerman, Division of Biology, Kansas State University, Manhattan, KS

A Field Guide to Birds Nests — by Hal H. Harrison; color photography by the author; bird sketches by Ned Smith; maps and endpapers by Mada Harrison. 250 pages. \$8.95. Peterson Field Guide Series #21.

It seems natural in this day and age to watch carefully the direction our money takes, but where this book is concerned the price of \$8.95 is a steal! If you are a bird watcher or bander anywhere east of the Mississippi, this is a book you should have — not just on your shelves, but at your elbow, no

matter what other books you already have. You will learn about the places birds choose for building their nests, the diverse materials they use, the various shapes and sizes of nests they create, and the eggs they lay.

Of the 285 species covered, Mr. Harrison supplies an incredible amount of precise information such as breeding range, habitat, nest and eggs, which is easily located under these headings. In addition, Mr. Harrison will often add some telling comment in a section of "Notes," such as pointing out types of trees used for nest building, birds victimized by cowbirds, even records of strange nesting sites. You will learn, for example, that an American Redstart at a nest in Ottawa County, Ohio, built in 2 1/2 to 3 days, making 650-700 trips to the nest with material. And the Yellow Warbler, which sometimes builds a nest floor over Brown-headed Cowbird eggs.

Hal H. Harrison is a retired newspaperman and lecturer; Ned Smith has served as staff artist for the Pennsylvania Game Commission for a number of years; Mada Harrison, wife of the author, is an excellent field ornithologist, botanist and conchologist, as well as artist.

The bird species appear in authoritative systematic order and, where important, some subspecies are described. In the beginning of the book, the background information covering subspecies, time of nesting, courtship, bird measurements and nest measurements is offered. This is a wealth of information in itself without going farther into the book.

All 26 states east of the Mississippi River are covered. The excellent color photographs are placed directly above the text descriptions for the 222 species whose nests are illustrated in color. You will go a long way before finding illustrations of this caliber. At the bottom of each of these pages is Ned Smith's perceptive drawing of the bird itself. Thus, illustrations and text appear on the same page. The endpapers (for convenient reference) show egg shapes and marking. An outstanding work with first-rate color photography!

Mrs. Roger W. Foy