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## RECENT PUBLICATION

**Die Vogelarten der Erde. 6. Lieferung.**—Hans E. Wolters. [1980]. Verlag Paul Parey, Hamburg. 52 p. Paper cover. Subscription DM 30. Source: Verlag Paul Parey, Spitalerstrasse 12, 2000 Hamburg 1, Germany. This is the last part of a list of birds of the world (noted in *Condor* 82:397 and previous issues cited therein).

In addition to scientific, German, and English names, it gives information on nomenclature, distribution, and systematics. The work is not based on existing lists but expresses the author's view of phylogenetic relationships. This section contains, at the end of the list, notes, corrections, and additions to the entire work.

- HALL-CRAGGS. 1976. Visualizing interaction and sequential data in animal behavior: theory and application of cluster-analysis methods. *Behaviour* 56:1-43.
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## RECENT PUBLICATIONS

**The Age of Birds.**—Alan Feduccia. 1980. Harvard University Press, Cambridge, Mass. 196 p. \$20.00. This is a book about the evolution of birds, intended for readers at the *Scientific American* level and above. Starting with *Archaeopteryx* and its ancestors, it examines the evolution of flight and of flightlessness, and the histories of avian orders. Cognate subjects, such as anatomy, historical geology, and the methods of paleontology, are introduced where necessary. "Some of the ideas expressed . . . are new ones that have not yet withstood the test of time, but [the author's] aim has been to provide the reader with more than the static dogma of the past century." The text is written in a clear and interesting style and it is illustrated with many drawings and photographs. Altogether a model of scientific exposition and a fine overview of present knowledge and theories about the fossil history of birds.

**Voices of New World Nightbirds: Owls, nightjars, and their allies.**—Compiled, narrated, and produced by John William Hardy. 1980. 33½ rpm phonograph record, ARA-6. ARA Records and Bioacoustic Laboratory and Archive, Florida State Museum. Source: ARA Records, 1615 N.W. 14th Ave., Gainesville, FL 32611. Being largely nocturnal, owls, nightjars, and their allies rely on voice as a means of communication more than other birds. For the same reason, their voices are often the only sign of their presence. As an aid to the detection, identification, and study of these birds, Hardy presents this collection of recordings of 75 species from the Americas. That so many of these elusive birds have been recorded is a remarkable accomplishment and a tribute to Ben B. Coffey, Jr. and the other diligent recordists. The cuts are arranged in taxonomic order and are each announced by name only. Locality, date, and recordist for each cut are listed on the album cover.

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## RECENT PUBLICATIONS

**Transactions of the Forty-fourth Federal-Provincial Wildlife Conference.**—1980. Canadian Wildlife Service. 292 p. Paper cover. Source: Minister of Supply and Services [Ottawa, Canada]. The theme of this conference, "A national policy on wildlife," was the focus of policy statements, a keynote address, several lectures, and workshops. A complete record of the conference, this volume shows how much thinking has already gone into the formulation of a wildlife policy for North America.

**Wildfowl 31.**—G. V. T. Matthews and M. A. Ogilvie, eds. 1980. Wildfowl Trust, Slimbridge. 176 p. Paper cover. \$10.00. Source: Administrative Officer, Wildfowl Trust, Slimbridge, Gloucestershire, GL2 7BT, England. The latest volume in this series (previously noted in *Condor* 78:278 and 82:42) contains 22 articles or reports about waterfowl or sandpipers. As compared with former issues, the articles show more attention to the biology of birds in nature, wider geographic scope, and less emphasis on studies at Slimbridge. In addition to scientific illustrations, the volume carries a color painting on the cover and a few drawings by Peter Scott.

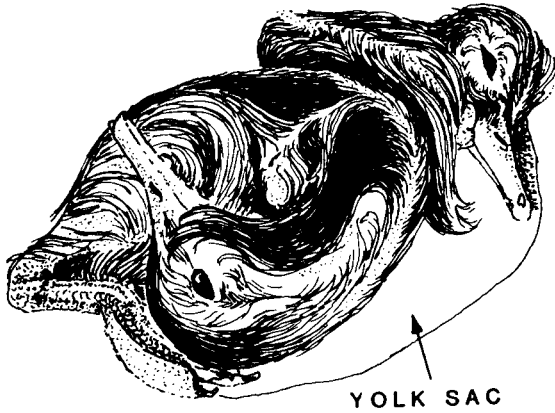


FIGURE 1. The position of the twin Gadwall embryos within the egg.

*strepera*) embryos during the pipping stage (Alliston 1975). On 28 June 1979, one egg of a clutch of 12 being marked was found to contain two live embryos. This is the only incidence of twinning we have seen in some 300 Gadwall eggs.

The egg with the twin embryos weighed 47.0 g. The other eggs in the clutch varied in weight from 31.0 g to 35.0 g and averaged 33.0 g. The twin embryo egg was 14.0 g (45%) heavier than the average. The mean weight of 119 Gadwall eggs at pipping stage in 1979 was 38.9 g and only one egg exceeded the weight of the twin embryo egg.

Eggs lose weight during incubation, thus the egg with the twins was much heavier than the rest of the clutch when laid. It probably contained two blastoderms and what appeared to be one large yolk or possibly two intimately associated yolks. The occurrence of two blastoderms within the single egg was probably not caused by low temperatures. Temperatures in the general locale did not fall below freezing during laying

or the week previous to laying (U.S. National Oceanic and Atmospheric Administration 1979). Twinning was probably caused by a physiological stress other than cold temperature that affected this yearling hen prior to laying.

The two embryos were positioned in the egg with the abdomens touching and the heads at opposite ends of the egg (Fig. 1). Both embryos were females. Both were perfectly formed and alive when initially observed but died soon after being collected. Neither of the twins had broken the egg shell, and it is questionable if they would have had sufficient strength to hatch and leave the nest.

We appreciate the sketch of the twin embryos so aptly accomplished by Allison Banks and the review of the paper by George A. Swanson and Bruce D. J. Batt.

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## RECENT PUBLICATIONS

**A Guide to Bird Finding West of the Mississippi. Second edition.**—Olin Sewall Pettingill, Jr. 1981. Oxford University Press, New York. 783 p. \$25.00. Pettingill's major innovation in ornithology is probably his idea—now much copied—of a guidebook about where to look for birds. The present volume is a thoroughly updated version of his western guide (originally published in 1953), a counterpart to the already-revised eastern guide (noted in *Condor* 79:286). "In this second edition, most chapter introductions are retained virtually unchanged except for corrections, updating, and otherwise slight alterations. But all bird-finding sites are either new, or, if repeated from the first edition, have been revised in accordance with changes in bird distribution during the past quarter-century, modifications of the natural environment by human creations and activities, and highway construction." The chapter introductions each give an admirable overview of the environment and birdlife of their state, especially good for birders who cannot visit the specific sites that are described. The book is illustrated with 60 pen-and-ink drawings by George M. Sutton, many of them new in this edition. The index is useful for identifying places where a desired species may be sought.

**Naturalist's Color Guide. Part III.**—Frank B. Smithe. 1981. American Museum of Natural History, New York. 10 color cards and 37-page paperbound booklet, \$8.00. Complete set, \$17.50. Source: Publications Dept., A.M.N.H., Central Park West at 79th Street, New York, NY 10024. This is a supplement to a reference work for identifying and describing colors (noted in *Condor* 77:372). The color cards (which are punched to fit the looseleaf binder of Part I) more than double the number of colors; the booklet tells how these colors were selected and measured. Now complete, the system should be even more workable for those who need to refer to colors in nature.

**Avian Endocrinology.**—Edited by August Epple and Milton H. Stetson. 1980. Academic Press, New York. 577 p. \$34.00. The 27 articles in this book treat the structure and function of avian endocrine organs and the roles of hormonal mechanisms. Based on papers that were given at a 1980 symposium and published soon afterward, they provide a comprehensive and concise evaluation of current knowledge in this field. No introduction or summary is offered and no discussion by the participants is included. The volume is fittingly dedicated to Donald S. Farner. Illustrations, references, index.