

Oteen, N.C., on 8 May by Jim McConnell. Other individuals were observed at Seneca, S.C., on 12 May by Paul Hamel and at Clemson, S.C., on 13 May by Harry LeGrand.

BOBOLINK: A late migrant was seen on 30 May in Halifax County, N.C., by Merrill Lynch.

DICKCISSEL: Two singing males were found at Pendleton, S.C., on 16 May by Sidney Gauthreaux. Another individual was observed near Clemson, S.C., on 21 May by Harry LeGrand.

PURPLE FINCH: Two late-lingering males were seen at a feeder in Winston-Salem, N.C., on 27 May by Barbara Page.

RED CROSSBILL: At Raleigh, N.C., Gail Whitehurst observed a pair of adults feeding three fledged young on 20 April, and another pair with a fledgling was

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BOOK REVIEW

Bird Sounds

Gerhard A. Thielcke. 1976. Ann Arbor Science Series. University of Michigan Press, Ann Arbor, Michigan. 190 p., ill. \$6.96, paperback \$2.95.

This is a concise, well organized, modestly priced book with little duplication of other recent books on avian vocalization. Most of the information presented is based on studies of European birds (over a third of the references cited are German), and perhaps its main value is to acquaint the reader with research efforts being conducted on the other side of the Atlantic. Much of this derives from Thielcke's own studies, and as an active researcher he is able to provide insight into the interpretation of bioacoustical research and provide excellent examples of the concepts discussed. A fair number of these appear to be from Thielcke's unpublished observations, and his enthusiasm for interpreting bird sounds is apparent even to the most casual reader.

The opening chapters provide a good summary of the present methods and goals of the study of avian sounds, but are somewhat marred by jargon. The chapter on calls is excellent. Most researchers have focused their attention on species-specific songs of male passerines, and consequently most books on bird sounds contain very limited discussions of the ethological role of calls. Subjects which have been treated in detail by other authors have been wisely limited to a few paragraphs, and the reader is referred directly to their works.

This book was first published in 1970 (Vogelstimmen, Springer-Verlag, Berlin-Heidelberg-New York) and a lot of pertinent ornithological research has taken place in the 6 years between publication and the appearance of this translation. Consequently, the book is not as current as its publication date would imply. Some minor problems appear to be artifacts of translation. I found the consistent use of words like "born" for "hatched" to be annoying. Apparently no attempt was made to match many of the German terms with their English counterparts, and I fear this will only perpetuate a major problem faced by the young science of bioacoustics—a general lack of standardization of terminology.

Finally, those of us who grew up thinking that buzzard is synonymous with vulture, that blackbirds are Icterids, and that yellow hammers are large woodpeckers, had best keep a field guide to European birds handy while reading this book.—DAVID S. LEE, North Carolina State Museum of Natural History