

The author has obviously done much work on amassing his quantitative data, sorting it and resorting it. He has calculated standard errors and standard deviations for the useable samples representing several characters for both subspecies and demes. Various techniques of statistical analysis and presentation were tried and finally the Duncan Multiple Range test decided upon as the one best suited to the problem. To me the reasons behind nomenclatural decisions taken would have been more easily appreciated had a modified Dice-Leraas or Hubbs graph been presented. This, however, may be my own bias.

The absence of any text reference to the actual differences in quantitative characteristics differentiating between adjoining subspecies or demes makes this work somewhat difficult to use in the interpretation of newly taken material. Nowhere are the details presented upon the graphs and tables discussed in the text in support of the conclusions drawn. The linear graphs given on Figures 8 to 14 bear no legend to explain the significance of the boxes erected upon the range lines. Are the open boxes one standard deviation and the black boxes one standard error on each side of the mean? If so, why not show 2 standard errors, so that differences significant to the .05 level could be approximated by direct reading of the graphs? It would have greatly facilitated comparisons if the sexes had been placed upon separate graphs.

On Table 8 in Appendix I asterisks are used for two purposes. To learn what the asterisks in the vertical columns mean it is necessary to refer to p. 15. Referring further to these, and subsequent tables, the placement of the asterisks makes it difficult to tell which comparisons are being indicated as significant.

Despite these shortcomings this revision is a valued addition to the literature on Holarctic mammals and it should

become part of the working library of any student of mammals and of wildlife management in the Northern Hemisphere.

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**The Amphibians and Reptiles of Illinois**

By PHILIP W. SMITH. Illinois Natural History Survey, Bulletin 28(1). Urbana, Illinois, 1961. 298 p. \$3.00.

The Amphibians and Reptiles of Illinois is a comprehensive work covering the 109 forms recorded for that state. "The objectives of this report on the amphibians and reptiles of Illinois are threefold. The first is to provide a critical review of the species and subspecies known to inhabit Illinois. The second is to present detailed distributional information for these animals in the hope that the data may contribute to the knowledge of the ecology and biogeography of Illinois. The third is to call attention to variation trends that I have discerned within Illinois and that will enable future investigators to utilize character analyses for populations occurring in limited parts of the state."

The life histories of many amphibians and reptiles are adapted to narrow ecological limits and, consequently, they make excellent indicators of climatic zones. In Illinois, only twenty-five species are state wide in their distribution, and the rest form all sorts of distribution patterns. These patterns are a reflection of both the present-day climate, and the post glacial climatic sequence. Therefore, not only do these animals demonstrate natural ecological divisions within the state of Illinois, but their distribution patterns also indicate the direction from which they entered the area after the retreat of the glaciers. At present, there are sixty-nine species which have met limiting barriers to their dispersal somewhere in Illinois. This sort

of analysis of the amphibians and reptiles within one area is of great consequence to the taxonomist, for it shows how species can disperse, become isolated, differentiate into various forms, and make contact again. In this manner the taxonomist can describe relationships of recent forms, both in space and in time.

This publication is printed on glossy paper, 7 x 10, which allows for large illustrations. In fact, the photographs of many species are several times larger than life. The maps are also excellent because of their large size. The distribution maps deserve special comment because, in addition to the map depicting the distribution of the species within Illinois, there is a small insert map indicating the entire range of the species within the United States. The distribution maps for Illinois have both general shaded areas and the actual spot records on which the shaded areas are based. There is also an extensive list of references and a fine index.

The book is especially recommended to those interested in amphibians and reptiles, and in the subject of Zoogeography, and to others because of the excellence of the photographs and maps.

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#### **Wildlife Sketches — Near and Far —**

By BRUCE S. WRIGHT. Fredericton, N.B.  
Brunswick Press, 1962. 288 p. \$5.95.

There have been few more sobering words penned in the endless plea for conservation than the starkly resigned epilogue to this volume: "Wildlife habitat is decreasing all over the world as the human population grows. It follows that we who live today can see more of the great and small creatures that populated the earth before our own kind dominated the scene than will our

great-grandchildren . . . I am thankful that my turn came for my brief "run on deck" before the erupting masses of my own species crowded off the planet the last lion, caribou or blue whale. So far I have made the best of it".

The vivid pages of the text carry the truth of the epilogue home—the glimpses of the author's "run on deck" range from his beloved New Brunswick to Africa and include the necessarily limited but enlightening observations of wildlife seen through the cloud of a man-made war. Throughout the text is the stamp of perceptive personal observation and diligent literature research. For those who have neither the time, patience, or opportunity to search for information through the often woefully dry original scientific reports on a wide variety of wildlife this will serve, in addition to its value for prose and message alone, as a palatable source of facts combined with conjecture.

The individual chapters were originally written and published as entities in themselves and have, as the writer explains in his introduction, not been extensively reworked. This unfortunately leaves a certain repetition of style and professional clichés. A trifle grating is the tendency in certain selections to talk down to his reader and use such phrases as "Mr. Respectable Citizen" which are perhaps more suitable for the eventide serialized nature stories many of us were raised on.

However, nothing can detract from the rugged force and deep, honest appreciation for wilderness and wildlife that pulses through every phrase. These stories will open new vistas of perspective to the uninitiated and conjure warm, often familiar images to those who have personally tasted at nature's fountain. In addition, it should admirably perform its co-aim and win staunch supporters for the crucial conservation crusade.

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