

and (4: 49-50, 54). Listing such and state bird books can only add

to permit even a short summary of (or newly accessible) information in these books. Although readers will find them for distributional and status information, there is also plenty of biological material elsewhere or found only in scattered volumes brought together. Corrections are significantly the revelation that both specimens attributed to British (Jeffrey's revised (1986) *Birds of the Pacific* and on re-examination to be Pacific

Two volumes are worth every penny at steep price. I understand that the fine volumes is well underway, and

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are provided for more detailed on these diverse topics. For example, and chapters devoted to echolocation on a very general publication manual, to delve further into a sub-division both the general public and other sections (e.g., reproduction) in the introduction have no citation-unfortunate because many readers are with the appropriate literature.

ation keys provide dichotomous keys more than one diagnostic character key is designed for identification further verification from a cranial skulls provide a confirmation of identification because many differences are in the structures or the teeth. Excellent figures serve to illustrate diagnostic characters distinguish species. This is always an alternative purpose because pictures can be more than a written description.

counts contain a wealth of information-examples observed directly from field observations and habitats are detailed in county records depicted on maps. The specimens examined contain precise localities complemented by additional literature references are given at the end for further information on the photographs are of either the head or full excellent quality and detail. There

are also colour plates for half of the bats covered in this book.

References are separated into three parts, two of which are small sections on general works and "Mammalian Species" accounts. The latter publications are concise summaries of all known biological information on a particular species and include 27 of the 32 species found in Texas. The much larger section for technical papers has citations up to the year 1989. Although the breakdown into three parts is useful for scanning general works or "Mammalian Species" accounts, it is often awkward when searching for the full citation.

A few mistakes have crept in, such as typographical and citation errors (e.g., Jones et al. (1986), on

the last page of the preface is not in the bibliography) but these are minor. This book has been well researched as indicated by the extensive specimen examined sections for each species and the 428 references listed. Information is presented in a consistent and readable format with good photographs and helpful illustrations. Those with a general interest in bats or the natural fauna of Texas will find this book an important addition to their library.

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The Ostrich Communal Nesting System

By Brian C. R. Bertram. 1992. Princeton University Press, Princeton. viii + 196 pp., illus. U.S. \$35.

The breeding system of ostriches is peculiar. After establishing a nest in a male's territory, a female lays about 11 eggs at 2-day intervals. Surprisingly, she also allows other females to lay in her nest. This doubles the number of eggs in the nest, but not all of these eggs are incubated. A certain number are pushed out of the nest, and eventually rot. Such an intriguing breeding strategy raises many questions: what is the advantage of letting other females lay in one's own nest? Why then does the incubating female reject some of the eggs, and whose eggs are rejected? Do male and female benefit in the same way? And what determines whether a female should lay in her own nest or in another?

From July through October 1977-1979, Brian Bertram and his wife Kate studied the breeding behaviour of ostriches and attempted to answer such questions. Their work, which took place in Tsavo West National Park, Kenya, relied on simple methods: observation, time-lapse photography, and egg-marking. This book presents the results and conclusions of their research.

The first half of the book is a general description of the species, site, methodology used, population studied, breeding parameters, and ecological setting (in particular, the predators present and their impact). This part lays the groundwork for the second half of the book, in which the author presents his analysis of the breeding data and the evidence of how such a system can be maintained by natural selection.

The book is clearly written and is a pleasure to read. I was particularly impressed by the balanced

treatment the author gave to his results. Observational field work often yields data that are based on biased sampling or open to alternative interpretations. Bertram never fails to acknowledge the possible biases and to discuss all possible explanations for the results. Although his goal is obviously to explain the evolutionary maintenance of the system (an endeavor where speculation is tempting) he does not overextend his interpretation. I would not hesitate to recommend the book to biology students as an example of how field data should be treated.

Field work has another characteristic: it often generates more questions than it answers, and these new questions usually can only be addressed by a more rigorous approach than simple observation. Reasonable answers can be extracted from observational data, and Bertram does an excellent job of providing such answers in his book. However, a higher level of certainty could only be obtained from further, more experimental work which remains to be done. Some readers will find this state of affairs normal and intellectually stimulating, but others may find it frustrating not to have all the definite answers at once.

I think this book will be greatly appreciated by people interested in the evolution of odd breeding systems or the conduct of field work on large African animals. Also, if some readers feel slightly annoyed by the fact that I started this review with a few questions and then failed to give any hint as to what the answers are, then this book is definitely for them.

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