

sexuality was an integral part of aboriginal religion, it is singularly rare in the art of either the past or the present. The next chapter compares the Marquesans with Polynesia in general, showing basic similarities, and the final chapter is an often provocative and interesting treatment of the probable causes of cultural change. Five appendices on special topics and a bibliography conclude the volume.

The book is replete with information which, when compared to other cross-cultural data, is of substantial theoretical import. For example, it is clear that female sexual responsiveness

is extremely subject to cultural conditioning; that permissiveness does not preclude strong jealousy nor prevent preoccupation with sex; and that a major cultural interest need not be expressed in the graphic art. In view of the value of Suggs's contribution, one joins him in his hope that anthropology will develop more precise measurements and techniques to categorize behavior into meaningful units so as to facilitate studies of change and causation.

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Introductory Textbook on Ecology

This second edition of **Field Biology and Ecology** (McGraw-Hill, New York, ed. 2, 1966. 509 pp., \$9.50), by Allen H. Benton and William E. Werner, Jr., has been largely rewritten with additional chapters on energy exchange and marine ecology. The appendix has also been enlarged to include bibliographic reference sources, ecological instrumentation, and a very brief discussion of statistical terms. The book is composed of 13 chapters, one of the earliest being a brief but excellent history of the development of natural history and ecology in the United States. In addition to lucid chapters on taxonomy, communities, and succession, the authors also present the basic principles of animal behavior and, in a later chapter, review and stress the increasing importance of ecologically orientated research on man's deteriorating environment. However, although the authors claim that their book "is designed to meet the needs of a beginning ecology or field biology course," it only partially reflects the orientation and important research developments that characterize the growth of ecology during the past decade. For example, of the 13 chapters, one is devoted to energy flow in ecological systems and one to population ecology, but together these chapters comprise less than half of the material describing ecological succession. In the chapter on natural populations the significant concepts and current problems relating to growth and regulation are only briefly touched on, and the emerging relationships between genetics and ecology are omitted. In addition no mention is made of the Morris 15-year budworm study, which is prob-

ably one of the most significant studies of a natural population ever attempted, nor of the work of MacArthur on species diversity and community stability which has stimulated so much recent research and discussion.

The authors' interests and competence in the description of natural ecological systems is evident throughout the book, particularly in the chapters on plant communities and succession which comprise almost half the book. Avoided in the discussion of communities, however, is the biocoenological approach that has resulted in research into the reality of the plant community and the emergence of the concept of the vegetational continuum. In addition, even though many students today are equipped with the elements of calculus before enrolling in a beginning ecology course, an introduction to the use of mathematics and statistics has been avoided throughout the book, despite the fact that these are indispensable tools for the ecologist today.

Most chapters are profusely illustrated with excellent photographic material, much of it from the authors' own files. Graphical content is low and reflects the descriptive rather than the analytical and experimental approach of the authors. The book will continue to serve very adequately as a text for use in an elementary ecology course at the sophomore level, where emphasis is on vegetation, but it does not provide sufficiently the balance of content and the depth necessary for the more prevalent introductory course in general ecology at the junior-senior level.

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Meteorology

Climates of the U.S.S.R. (Aldine, Chicago, 1966. 279 pp., \$10), by A. A. Borisov, is written as a manual for high school teachers and students of geography. It presents a considerably reworked version of the first edition (1948) which was received very unfavorably in the U.S.S.R. [*Meteorol. i Gidrol.* No. 1, pp. 79-81, and No. 4, pp. 51-52 (1950)]. This English-language edition was translated from the second Russian edition (1959) by R. A. Ledward; Cyril A. Halstead edited the translation.

In the introduction Borisov presents a quite interesting outline of the development of climatology in the U.S.S.R., he then discusses, in the first chapter, the climate-forming factors, such as radiation regime, circulation conditions, and moisture cycle. The tables showing the frequencies of different air masses, and of lows and highs, are compiled for the interval 1930 to 1939 rather than for a later or a longer period. Under the heading "Moisture Cycle" the author discusses the attempts to calculate the moisture transport in the period prior to World War II (Kasatkin, Kaminskii), but the investigations of contemporary meteorologists are only briefly mentioned.

The second chapter deals with the general characteristics of climatic elements in the U.S.S.R.: air and soil temperatures, humidity (here it is difficult to understand why the author presents a map showing the distribution of relative humidity at 1 p.m. in May), cloudiness and sunshine, precipitation, evaporation, and snow cover. This chapter concludes with a treatment of the general characteristics of the climate of the U.S.S.R. and with a table comparing the extreme values of climatic elements in the U.S.S.R. with those recorded world-wide. In the brief discussion of continentality it is rather odd for the author to use Zenker's formula (not "Tsenker"—one should be careful in re-transliterating *non-Russian* names; the same holds for "Fikker" = Ficker).

The last, the most valuable, and also the most interesting chapter, chapter 3, deals with regional climates of the U.S.S.R. The author divides the area into eight regions according to the circulation types and dominant air masses. He also describes the climatic regions in relation to their geomorphological features: climates of seas and lakes, of plains, and of mountainous