

# Reviews

## Behavior

**ANIMAL BEHAVIOR: AN EVOLUTIONARY APPROACH**, by John Alcock. 1975. Sinauer Associates (Sunderland, Mass. 01375). 558 p. \$14.00 hardback.

In the last 10 years we have seen an upsurge of interest in the study of animal behavior as exemplified by the work of such scientists as Jane van Lawick-Goodall and George Schaller. Alcock has written a textbook that integrates our present understanding of animal behavior with an examination of the evolution of this behavior.

The book is divided into several basic sections. A brief introductory chapter provides the rationale for a book on the evolution of behavior and outlines the reasons for both the orientation and the organization of the book. The author devotes two chapters to phylogenetics and the bulk of the first part of the book to a thorough discussion of the effect of the information systems (hormonal and nervous) on an organism. The second half consists of an in-depth examination of the interrelationship of organisms and their ecology; the two concluding chapters deal exclusively with the evolution of human behavior, that is, the interaction of physical and cultural anthropology.

Each chapter is prefaced with an introductory essay describing the content of the chapter and telling why we should or should not read it. For example, in the introductory essay to chapter 2, "Animal Species and their Evolution," Alcock indicates that he realizes most of his readers are familiar with phylogenetic evolution and advises us that we may "safely ignore" it. He concludes each chapter with an excellent summary of the major subject areas explored and a short suggested reading list for further study. Finally at the end of each chapter there is a godsend for all teachers—a list of pertinent films along with addresses of distributors.

*Animal Behavior* reads well: Alcock has a nice sense of humor along with an excellent understanding of, and an obvious love for, his subject area. He is possessed of a clear, no-nonsense style, which eliminates unnecessary technical language while retaining all applicable scientific terminology. Because he cross-references voluminously, there is a tendency toward repetition. For example, herring gull nesting behavior is

examined—from different viewpoints to be sure—in three different sections of the book. Given the organization of the book, this seems difficult to avoid.

There are many black-and-white photographs of good quality and numerous graphs and diagrams that are well executed and helpful for teaching purposes. The reading level appears to be designed for college undergraduates and bright twelfth grade high school students. This is an excellent textbook, and I would recommend it to teachers as well as to readers interested in the evolution of animal behavior.

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**MY SISTER LOOKS LIKE A PEAR**, by Douglas Anderson. 1974. Hart Publishing Co. (15 W. 4th St., New York 10012). 268 p. \$7.50 hardback, \$2.95 softback.

The author believes that everyone has the potential for creative expression of ideas, thoughts, feelings, and emotions through poetry. It is his argument that this ability lies dormant within the minds of many young students due to the restrictive influence exerted by many classroom teachers. Thus, several problems associated with the clarification of teacher values must be solved. For the most part, these problems seem to be associated with the ability of the teacher to accept student use of words and language forms that are in conflict with the teacher's value system. Through the use of student examples, the author suggests ways for teachers to modify their behavior in order to provide an environment conducive to reactive expression.

Many biology teachers have been reluctant to include affective experiences within their curricula, whereas at least one elementary science curriculum and several environmental education guides focus upon the inclusion of such activities. Thus, this book would be especially beneficial to the biology teacher who has wished to include activities devoted to the expression of feelings, attitudes, and emotions within this domain, but has previously lacked resources for doing so. For many environmental educators, such activities are a must.

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## Botany

**BOTANY: AN INTRODUCTORY SURVEY OF THE PLANT KINGDOM**, by James D. Haynes. 1975. Halsted Press (605 Third Ave., New York 10016). 562 p. Price not given.

Intended design as stated in the preface is achieved in this book: "The student who has had a principles course in general biology will find the book useful as an introduction to botany and the more advanced areas of plant morphology and anatomy ..." Further, "This book does not discuss ... interpretations of taxonomy and classification."

The topical sequence is uniform for each group, which should make study easier for students. A definition of the group begins each topic, followed by an outline of morphological characteristics and one or more life histories. A final portion of the discussion of each group is entitled "Human Relevance." Groups of interest to plant pathologists and mycologists are discussed first, but the phylogenetic connection between bacteria and blue-green algae is acknowledged.

Algal groups are covered in the second series of chapters. The author recognizes the difficulty of separating algae and protozoa taxonomically and indicates that the difficulty of separating algae and higher plants is even more difficult. Life cycles are well described and clear reference is made to haploidy in all cells except the zygote in *Chlamydomonas* and *Volvox*. The chapter on lichens is between the chapters on algae and on bryophytes, a convenient choice since lichens and bryophytes are sometimes studied together in other courses. Lichens are referred to as a designation of symbiotic relationship. *Marchantia*, *Porella*, *Anthoceros*, *Sphagnum*, and *Polytrichum* are used as examples of bryophyte morphology.

The last half of the book is devoted to vascular plants. Terminology in this section, as elsewhere in the book, is held to a desirable minimum. The 34 pages on human relevance of angiosperms is an excellent review of economic botany.

Writing style is reasonably concise and objective. On page 450, one of the few style lapses makes it difficult to determine what the author wished to indicate about the persistence of endosperm and photosynthesis in cotyledons. Printing errors are rare; on page