

# Book Reviews

## Botany

### ALFALFA, BEANS AND CLOVER

by Joan Elma Rahn. 1976. Atheneum Publishers (122 East 42nd Street, New York 10017). 119 p. \$6.50 hardback.

Written primarily for children, this book could be utilized by any beginner interested in botany. It is small in size but jam-packed with information presented in a delightful and interesting format which holds the attention of the reader.

Not only does it include the classification of the Family *Leguminosae* but also explains the necessity and scheme of taxonomy. Whenever a member of the family is discussed the scientific name is given, a translation of this name is available, and a sampling of common names is included. The legume is compared with other legumes in order to point out its place in the family; similarities and differences in the leaves, flowers, seeds, and pods are used to do this. The description also contains the present growth areas, present uses and, in many cases, the historical uses. Botanical terms are used throughout the text. As these are introduced they are accompanied by easy-to-understand descriptions and explicit illustrations. Illustrations by Ginny Linville Winter are used extensively.

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### PLANT BIOLOGY

by Knut Norstog and Robert W. Long. 1976. W.B. Saunders Company (West Washington Square, Philadelphia 19105). 585 p. \$14.50.

This textbook has been designed by the authors as an introductory botany text for the student who has no previous college level biology. It is oriented throughout to the relation of plants to humans. In the introduction this is accomplished by discussing specific historical events involving human dependence upon plants for food, superstitions concerning plants, and early agricultural attempts. The next several chapters set the necessary background for considering plants in our world by discussions of chemical evolution through time, heredity systems, possible kinds of early cells by consideration of

present day prokaryotic cells and viruses, and finally the eukaryotic cell.

A chapter dealing with photosynthesis and respiration is followed by a discussion of ecosystems, energy flow, plant succession, vegetation patterns and finally the effects of human's activities on the environment.

In the next twelve chapters, the various groups of green plants and the fungi are discussed. Again, the authors associate information on basic morphology and life cycle aspects of the particular group with some familiar uses or common representatives.

The final two chapters deal with heredity and some practical applications of basic understanding of inheritance and factors affecting plant growth and development.

The book is interestingly illustrated throughout and is well organized.

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### INTRODUCTORY PLANT PHYSIOLOGY

by G. Ray Noggle and George J. Fritz. 1976. Prentice-Hall, Inc. (Englewood Cliffs, New Jersey). 703 p. Price not given.

This textbook is designed to introduce undergraduate students to plant physiology in a one semester course. In an attempt to explain concepts at a basic level yet keep abreast with current literature, the authors have produced a comprehensive and clearly written text, but one too long to be adequately covered in one semester.

After introducing the general organization of higher plants, the authors examine a number of plant processes: respiration, photophysiology, photosynthesis, photorespiration, mineral nutrition, transport, water relations and specific processes under growth regulator control. The book closes with a three-chapter treatment of the life cycle of higher plants including seed physiology, an exceptional discussion of vegetative growth and finally reproductive growth.

The authors excel in integrating current literature and providing the reader with a basic knowledge of techniques used by plant physiologists without flaunting technical details. Other outstanding features of the book are the many examples of practical applications

of plant physiology in agriculture and horticulture, the emphasis on unsolved problems in plant physiology and the recurrence of concepts in different sections of the book each time with a different perspective. The authors have chosen to dispense with the practice of citing references in the text but have supplied a reference list at the end of each chapter. Without annotation this is likely to be too long for the average second or third year student.

As a textbook for a one year course in plant physiology for students with only one or less years of college biology and chemistry, this book is unsurpassed.

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## Ecology and Environmental Biology

### ENVIRONMENTAL RESPECT: A NEW APPROACH TO OUTDOOR EDUCATION

by Albert R. Huck and Eugene Decker. 1976. Safari Club International Conservation Fund (Tucson, Ariz.). 177 p. Price not given.

The ever-present cast off beer can is a familiar sight to all of us. Even in the most remote of areas evidence of civilization in the way of junk can be found. As more and more people participate in outdoor activities the problem grows. This manual is a systematic method for developing a course which emphasizes concern, and, therefore, respect for the environment and the people who use it.

The objective of the manual is to develop an attitude in the student which fosters outdoor etiquette. The vehicle for developing this attitude is outdoor recreational activity. This manual is an excellent, step-by-step procedure for establishing an outdoor education program based on environmental respect in a classroom, school, or school district.

The manual addresses itself to the professional educator or the outside lay person who is interested in getting such a program started. The first part deals with planning the program, from writing the proposal and obtaining board approval through implementation. While this manual details planning for an environmental education program, the chapters