

not end there and launches another attack against the opposing view, quite unnecessary at this point.

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Botany

COMFREY: FOOD, FODDER AND REMEDY, by Lawrence D. Hills. 1976. Universe Books (381 Park Avenue South, New York 10016). 253 p. \$12.50 hardback; \$4.95 softback.

Comfrey is a plant, *Symphytum* spp. of the Boraginaceae, to be exact. However, it is also a plant of much folklore, and as such, is particularly relevant to today's search for "back to nature" experiences. Throughout the years, comfrey has gained a reputation as a robust fast-growing plant yielding up to 125 tons per acre, which is palatable to humans and other animals, is a source of vitamin B₁₂ and allantoin, is able to heal wounds, possesses a nitrogen content almost as high as poultry manure, and seems to put weight on young animals very quickly. Even with such a reputation, however, its popularity has not caught on and it tends to languish in small backyard plots along with the likes of ginseng and "tame" dandelion. Hills sets out to show the reader that comfrey is, in fact, deserving of better treatment. He shows that comfrey silage has a protein and carbohydrate content equal to or better than corn, cereal-legume, or grass silage with approximately one-half the fiber content. It seems to fare very well as feed for animals of all sorts in fresh, wilted or silage form.

Several sections of the book deal with the medicinal value of comfrey. A major thrust of one such section covers the healing of surface ulcers. Some grim examples are described. Indication is given that such benefit would derive from the presence of allantoin in comfrey. For instance, a Dr. Charles MacAlister tells of huge, open-skin ulcers being cured by allantoin dressings. In a plant experiment, a short "feeble" hyacinth bulb growing next to a much "healthier" one, received allantoin injections. The smaller bulb reportedly outgrew and out-flowered the control bulb, which received only water injections. It is reported that such work has been repeated with a variety of other bulb species.

Before one runs out to plant a comfrey field, I should warn that most of the studies presented in the book are of meager scientific worth. There are no

industrial giants or philanthropic organizations concerned with comfrey study. Many of the experiments discussed in the book are of a "back yard" variety. The author recognizes this. However, as I mentioned in the beginning of this review, we are in a period when people have a rekindled interest in natural products. This book might inspire research in many directions, all of it needed. And the book is enjoyable to read—I recommend it.

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PLANTS AND INSECTS TOGETHER, by Dorothy H. Patent. 1976. Holiday House (18 East 53rd Street, New York 10022). 128 p. \$5.95.

This delightful book explores the many mechanisms of plants and animals developing complicated new adaptations to each other. Among the topics discussed are plants and insects: partners/enemies; chemicals on loan; how insects pollinate plants; the "ingenious" orchids; the strange relationships of ants and plants; galls and insect parasites; and the insect-eating plants.

The book is illustrated with a number of full-page line drawings that add to the appeal of its content. It is written in a nontechnical, lucid and readable style, with an adequate index and a short list of reference books and magazine articles. This book is highly recommended for both junior and senior high school libraries. Any student with an interest in insects should find it thoroughly enjoyable.

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THE PLANT KINGDOM: EVOLUTION AND FORM, by Samuel R. Rushforth. 1976. Prentice-Hall, Inc. (Englewood Cliffs, New Jersey 07632.) 348 p. \$13.95 hardback.

As a textbook for undergraduate courses in plant morphology and evolution, little can be found to recommend it. The rather gross errors would cause beginning students much difficulty. For example on page 190 the text reads: "Spanish moss (a foliose lichen) growing on bald cyprus. . . ." (note spelling of cypress). This is contradicted on page 193: "For example, the 'Spanish moss' characteristic of oak trees. . . is actually a fruticose lichen." Spanish moss is a flowering plant. On p. 197 the illustration depicting some liliaceous

plant is called "skunk cabbage," and on page 320, an *Anthurium* inflorescence is called a flower. Some illustrations are rather fuzzy, e.g., figures 18–20, page 216. In figures 28–14, page 319, the names of flowers are somewhat scrambled. No illustration gives the magnification of the subject. At times the writing is not clear, for example, "About 4,000 different species of 'leafy' liverworts are known and can be found almost anywhere in the world." There is too much wasted space on many pages, which probably increased the price of the book and cannot be justified easily in this period of emphasizing conservation.

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Educational and Professional Concerns

TEACHING ENVIRONMENTAL EDUCATION, by Harold R. Hungerford and R. Ben Peyton. 1976. J. Weston Walch (Box 568, Portland, Maine 04104). 167 p. Price not given.

This book provides an overview of the challenges of environmental education. It is not designed as a course of study for environmental education, but to aid in the development of a defensive and effective program. It is suitable as a source for the middle and secondary school teachers who are responsible for curriculum development. The author provides those components necessary to the development of environmental literacy.

The book is very valuable, current, and informative, providing operational strategies as well as cognitive and affective developing activities. Resource aids include lists of environmental organizations, periodicals, and environmentally related supply companies.

This is a very readable book that will be of benefit to many striving to develop and implement environmental education areas.

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IMPROVING READING IN SCIENCE, by Judith Thelen. 1976. (An IRA service bulletin) (Reading aids series) International Reading Association (Newark, Delaware 19711) 54 p. Members \$2.50, nonmembers \$3.50.

If a science teacher is looking for a way to help students read in order to