

modern physics student much of the material is now very thoroughly treated in excellent elementary textbooks, and in advanced undergraduate or early graduate courses.

The book is organized as follows: Part 1 (about half the book) deals with structure and properties of diatomic and polyatomic molecules. Part 2 treats elementary properties of crystals and is an introduction to quantum statistical mechanics. This is a rather heterogeneous selection of topics, in terms of the way the teaching of physics is organized today. In my opinion the second part has little to offer the contemporary reader. Those sections of part 1, on the other hand, that deal with molecular structure per se represent material which is rarely treated these days in the physics curriculum. For the student who wants to obtain a bird's-eye view of molecular theory, and who has an elementary knowledge of wave mechanics, they could prove quite useful. And, of course, those who find pleasure in seeing familiar things said simply will certainly enjoy this book.

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A Stimulus for Dialogue

The Ecological Theater and the Evolutionary Play (Yale University Press, New Haven, Conn., 1965. 152 pp., \$5), by G. Evelyn Hutchinson, is a collection of six essays based on lectures. The first three of the essays are based on lectures given at Temple University in 1964. The fourth essay is a lecture delivered at the University of Wisconsin, also in 1964. Taken together, the four lectures expound the broad aspects of ecological thought and the influence of ecological mechanisms on the course of evolutionary change. The first part examines the nature of the biosphere, or the totality of the domain of life on the earth. There is speculation about possible biospheres on other planets, particularly Mars, in terms primarily of the transfer of energy and matter. The biosphere is defined fundamentally according to the conditions of liquid and energy sources. A dazzling display of facts from the literature is accompanied by detailed and lengthy footnotes that tend to divert the reader's attention. Additional distraction is in-

troduced by Hutchinson's penchant for using specialized jargon—*eubiosphere*, *parabiosphere*, *allobiosphere*, *autobiosphere*, and *hyperallobiosphere*, for example. These terms are not really essential to the explanations, and their use is a contradiction in a literary type of exposition. The biosphere is viewed also from the standpoint of mineralogy and the molecular level. Finally, the stages in the history of the earth's biosphere are discussed.

In the second part, the nature of the "niche" is taken up in great detail in what the author calls the "merological" approach as distinguished from "holological." Major attention is given to the so-called "competitive exclusion principle." Here again we find complexity of both adumbration and reference material. Much of this writing presumes a rather sophisticated reader who has a close acquaintance with basic sciences and biostatistics.

The author's literary style interferes somewhat with scientific clarity. What is an "equilibrium community?" And when do data suggest some "principle to be generally operative?" I think scientists would rather say that natural mechanisms are operative, the revelation of which may serve as a basis for a man-made principle. In the third part, human evolution is viewed in terms of both the limits and opportunities set by the interaction of organism and environment.

In the fifth essay, there is an account of the ecologic implications of limnological investigation, especially that done at the University of Wisconsin by Birge and Juday, pioneers in the field. The essay is based on Forbes's idea of the lake as a microcosm. The sixth essay is concerned with the early genetic researches of Doncaster and Onslow who contributed to the theories of chromosomal and blending inheritance, respectively. With some charm, the author indicates how these two men were aided by an English country clergyman who collected and bred varieties of the magpie (or gooseberry) moth.

The fourth essay touches on the "Naturalist as art critic," and I fail to understand why it was included in this volume on ecology. On the surface it seems to be an erudite exploration of beauty (art?) in nature, in primitive society, and in modern cultures, but I find it a rather shal-

low exposition, loaded with surprising stereotypes. The author laments the fact that people do not realize that many objects in a natural history museum are of "extraordinary natural beauty." The result is to equate "natural beauty" with art. In my view, the author fails to see that nature has no beauty—that beauty is a human conceptualization, that only man, representing evolution in its self-conscious stage, has given beauty to nature, has made nature an imitation of art.

This brief and inadequate review should at least demonstrate that Hutchinson's book is primarily a stimulus for dialogue. The attentive reader cannot help but react to the aggressive ideas set forth. I can recommend it only for those in advanced college or in professional careers. A few sophisticated college seniors may find it stimulating.

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New Books

General

About Sharks and Shark Attack. David H. Davies. Hobbs, Dorman, New York, 1966. 237 pp. Illus. \$6.95.

The Addictive Drinker: A Manual for Rehabilitation. Joseph Thimann. Philosophical Library, New York, 1966. 179 pp. Illus. \$6.

Admission Requirements of American Dental Schools: 1966-67. American Association of Dental Schools, Chicago, 1966. 143 pp. Paper, \$2.

Aerospace and Defense Research Contracts Roster. Compiled by Frost and Sullivan, Inc. Bowker, Washington, D.C., 1966. 1295 pp. \$35. A report of the research and development contract award actions announced by the U.S. Government to companies and institutions for the fiscal year 1965.

Arms and Influence. Thomas C. Schelling. Yale Univ. Press, New Haven, Conn., 1966. 303 pp. \$7.50.

Boston: The Job Ahead. Martin Meyerson and Edward C. Banfield. Harvard Univ. Press, Cambridge, Mass., 1966. 127 pp. Illus. \$3.95.

Catalog of Living Whales. Philip Hershkovitz. Smithsonian Institution, Washington, D.C., 1966 (order from Superintendent of Documents, Washington, D.C.). 267 pp. Paper, \$1.

Chemical Study of Some Indian Archaeological Antiquities. Satya Prakash and N. S. Rawat. Asia Publishing House; Taplinger, New York, 1966. 91 pp. Illus. Paper, \$3.75.

The Communist Controversy in Wash-

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