

- Nash, D. L. 1975. Studies in American plants, VII. *Phytologia* 31: 361-364.
- . 1976. Flora of Guatemala, Compositae, Heliantheae. *Fieldiana, Bot.* 24: 181-361.
- Standley, P. C. & J. A. Steyermark. 1940. Studies of Central American plants I. *Field Mus. Nat. Hist., Bot. Ser.* 22: 221-321.

BOOK REVIEW

Introduction to the Algae: Structure and Reproduction. Harold C. Bold and Michael J. Wynne. 706 pp. Prentice-Hall, Engelwood Cliffs, NJ 07632. \$24.00.

The first sentence of the preface reads: "It seems to the authors, from their own experience in offering a semester-long introductory course in general phycology, that there has been a need for a teachable textbook in the field." This volume clearly meets the requisites to fill this gap, and will most probably remain the "standard" by which other texts are measured for decades to come. "Introduction to the Algae" represents a synthesis of the taxonomic, morphological, ultrastructural, and life history research of the two authors, and their intense love and experience through teaching and research are evident.

The algae are classified into basically nine divisions, each with its own chapter (the Cyanochloronta, and the Chloro-, Charo-, Eugleno-, Phaeo-, Chryso-, Pyrrho-, Rhodo-, and Cryptophycophyta). Many chapters contain keys to the ordinal level of classification, and most outline the criteria and unique features used to assess taxonomic relationships within a division. Ultrastructural and cytological specializations, such as bioluminescence, silicification, and nitrogen fixation are detailed with care and adequately referenced for the student who wishes to pursue these areas in greater detail.

Of particular note are the discussions dealing with algal reproduction, and modes of "vegetative cell division" (desmoschisis and elentheroschisis). The confusion resulting from the different phenomena described as "vegetative cell divisions" by Smith (1950) and Fritsch (1935) has been a problem for the student, and the treatment of this point by Bold and Wynne will clarify the issue for even the uninitiated. Similarly, in their treatment of the classification and phylogeny of the green algae, the authors outline the ultrastructural and biochemical system of Pickett-Heaps and Marchant (1972) and Stewart and Mattox (1975).

The text is well illustrated and contains an excellent bibliography and glossary. The few orthographic errors that were found were minor, and will hopefully not distract from the value of this book.

"Introduction to the Algae" is an excellent addition to any botanical library, and will stand as a fine attestation to the considerable abilities of its authors. This volume is perhaps the best one available for an undergraduate or graduate level course in phycology and ranks with the monumental synthesis of Smith and Fritsch.—KARL J. NILKAS, Department of Botany, Genetics and Development, Cornell University, Ithaca, NY 14850.