

## BOOK REVIEW

D. F. JACKSON, Editor, *Algae and Man*. Proceedings of the Advanced Study Institute Algae and Man, held July 22—August 11, 1962, at the University of Louisville, Kentucky, sponsored by the Scientific Affairs Division of NATO. 1964. X + 434 pp. Plenum Press, New York. Price \$ 14.50.

The title of this book, which was also the name of the symposium, provided an opportunity to combine papers on many varied subjects. Some of the 19 authors presented a mere compilation of the literature of the subject concerned but most of them also included the results obtained from their own work in these papers. Since the stream of phycological literature is considerable, as can be seen from Silva's annual phycological bibliography in *Phycologia*, compilations are also welcome.

Papers on taxonomy of Algae were given by Prescott, Van den Hoek and Christensen. The last mentioned author presented a project for a modern classification based on the presence or absence of chlorophyll b and the flagellar structure. This classification appears to have been accepted by several phycologists now. Arguments for including unialgal cultures in most monographical studies on Algae were brought to the fore by Van den Hoek. He demonstrated some of the results from his monographical study of *Cladophora* in search of reliable characters to recognize the species of this genus. Prescott's long paper is disappointing because several inaccuracies have slipped in.

Margaret Roberts née Naylor gave a review of the present knowledge of the chromosomes in the *Phaeophyceae* to which she herself has contributed a great deal.

Ecology has been dealt with by Fogg, Eyster, Round, Ruth Patrick, Lackey and Verduin. Fogg who has been studying nitrogen-fixing *Cyanophyceae* discusses the changes in the metabolism in Algae in connection with the environment. Eyster's paper gives a review of the micronutrient requirements of Algae. Primary production and photosynthesis of plankton in natural circumstances were dealt with by Verduin. Round gives an extensive resumé of the communities of benthic Algae living in various habitats. Ruth Patrick, with her long experience of Diatoms, discusses the communities occurring in that group; she recognizes many associations of species which are indicators of ecological conditions.

Wurtz elucidates the present day knowledge of culturing of Algae; he also mentions the various uses of such cultures. Benoit's paper also concerns cultures of Algae but especially in connection with photosynthetic gas exchange.

Waterblooms of Algae and their toxicity are treated more or less directly in papers by Luckey, Palmer, Skulberg, Fitzgerald, Gorham, Lefèvre, D. Schwimmer and M. Schwimmer. Palmer treated the relation of Algae to water supplies in the United States of America, Skulberg the same in Europe. Fitzgerald's paper deals with the factors that influence the waterblooms and with the sequence in waterblooms. Gorham thoroughly investigated the toxins of several species of *Cyanophyceae* that cause waterblooms. He also gave a review of severe cases of toxicity of waterblooms caused by Algae. The production of substances by certain Algae has been profoundly studied by Lefèvre. The author expects many advantages in further investigations in this field in connection with hydrobiological problems and for the benefit of phycotherapy. The Schwimmer brothers review the literature on intoxications and other morbid symptoms caused by Algae in man and animals, more in an extensive than in a critical way. It is not always clear whether Algae or Bacteria have caused the symptoms concerned.

The author of the last chapter, on the future of Phycology, would have been more satisfied about one of his suggestions (to have a complete list of recent phycological literature published regularly and also to have the opportunity for international co-operation for phycologists) if he had been aware of the existence of the International Phycological Society, founded in 1961, with its journal *Phycologia*.

Nearly all papers are provided with a more or less extensive list of literature. The articles by Van den Hoek, Eyster, Round, Ruth Patrick, Verduin, Palmer, Skulberg, Gorham and Lefèvre are illustrated, but the paper used, unfortunately, did not show the often excellent photographs at their best.

J. TH. KOSTER