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**The Algae of Western Lake Erie.** *Clarence E. Taft and Celeste W. Taft.* Bulletin of the Ohio Botanical Survey, New Series, Volume 4, number 1. The Ohio State University, University Publications Sales, Room 20, Lord Hall, 124 W. 17th Ave., Columbus, Ohio 43210. 1971. ix+189 p. Paper, \$5.50 plus postage.

Although written primarily for students who want to identify the algae in western Lake Erie, this work should be of value to all others who are interested in these fascinating plants or those who are interested in the changes taking place in our lakes and their environs. The Tafts have combined all previously known records for the region (537 species, 122 varieties, and 14 forms among 184 genera), and their treatment includes about one third again as many taxa as did the last comprehensive treatment, that of Tiffany, in 1937. It is a surprisingly large number for such a small area.

There are introductory chapters on algal habitats and relative abundance of algae that provide the distilled knowledge of many years of personal familiarity with the lake and its islands. Keys using microscopic characteristics are provided to the classes of algae and to the orders and genera of those nine classes known for the region, as well as a field key to some genera. Each division, class, order, genus, species, variety, and form is succinctly described and provided with distribution information. Each subgeneric taxon is diagnostically illustrated in figures, redrawn or original, by Celeste W. Taft on 24 attractive plates. The size is not given on the drawings but is provided in the text descriptions. A two-page bibliography and an index to all taxa complete this valuable monograph. Those who are interested in the biology of Lake Erie will applaud the Tafts for preparing this very useful volume.

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**Manual of Vegetation Analysis.** *Stanley A. Cain and G. M. deOliveira Castro.* Hafner, New York (hardbound reprint). 1972. xvii+325 p. \$12.00.

This reprint of the 1959 edition presents a review of the concepts and measurements used to classify and describe the composition and structure of vegetation. The book contains a comprehensive review of the pertinent literature up to 1959, but developments since then, especially in the application of statistical and mathematical techniques by E. C. Pielou and Greig-Smith, render the book somewhat obsolete. Many of the concepts and measurements, such as the species-area curve, have since been shown to be invalid.

It is not clear whether this compendium of the literature is designed to serve as a manual, a "cook-book" of methods, or a longer discussion of the nature and classification of vegetation. As a text book, for a course in community analysis, the *Manual* gives many examples of the actual application of concepts and techniques to vegetational study, and includes a glossary of terms used in phytosociology, but it fails as a step-by-step guide to vegetational study. Because the book was inspired by Dr. Cain's association with Dr. Castro in Brazil, "it does recognize the existence of the tropics" and the analysis of tropical vegetation. A whole chapter is devoted to describing the classification, structure, and climate of the tropical rain forest. This treatment includes some interesting comparisons of the rain forest with temperate deciduous forests, but concludes significantly that many phytosociological techniques and concepts developed in temperate regions cannot be applied to the tropics.

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