of the method is confusing, detailed, and oversimplified. The simplifying assumption that autotrophs are making carbohydrate is invalid. The worked-out example of net and gross production ignores the fact that the light bottle, in the oxygen method, by itself gives us net production. There is no discussion of why net or gross values are required or of how they are used. A diagram, a chemical equation for photosynthesis of a hypothetical compound representing protoplasm, and a demonstration of the effect of various nitrogen sources on the photosynthetic product would have resulted in a clearer picture of what algal physiologists are doing, of why they are doing it, and of some of the problems involved in using these methods. The example brings up a more general criticism. The author claims a physiological bias which is largely lacking and which, when attempted, is often confused.

Wimpenny's stronger chapters are excellent, owing to his long career in plankton research. In "Hangers on" (chap. 4) symbionts and parasites (largely neglected relationships in plankton work) are discussed in a chapter that is all too short. In "Days and seasons" (chap. 7), "Plankton associations" (chap. 8), the zooplankton portion of "The life within and things outside" (chap. 9), and "Counting it up" (chap. 11), the author is on firm ground and gives a detailed and extensive discussion of the distributional studies that have been carried on for so many years. Even in these chapters, additional charts and figures would have been helpful.

To give a better idea of the flavor and usefulness of this book I will describe the introduction. In it we are given a description of the appearance of the plankton in the sea and after they have been collected, personal anecdotes, a short history of planktonology, instuctions on making a plankton net, the derivation of the name *"Calanus finmarchicus,"* some systematics, an excerpt from the log of the *Challenger*, a history of the major oceanographic expeditions, a history of shore stations, some geography, some descriptive physical oceanography, and a 3½-page annotated bibliography.

The glossary should have been omitted. The definitions are either ludicrous ("diameter" referring to the greatest width of a diatom) or so general as to be meaningless ("production and productivity"). The "Illustrations of species," a separate section, is a collection of figures from many sources. They could easily have been distributed throughout the text; they most certainly cannot be used for identification. Two pages of figures of the unidentified appendages of mysids leave me at a loss. Finally, the index is completely hopeless. It consists of one-line entries like the following: "Atmosphere, and effect on sea, 37, 38," "Communities, and relative productivity rates of, 159-62," and "Primary geological period, and origin of petroleum, 288."

Despite my reservations and doubts about the general usefulness of this volume, *The Plankton of the Sea* is welcome for at least two particular reasons. In it the author presents his own special viewpoint. It is a pleasant change to read a scientific book that reflects the author's interests and prejudices rather than the usual comprehensive, even-handed, and pedantic piling of fact upon fact. Second, Wimpenny is not embarrassed to quote from the older literature when it is still pertinent. We tend to forget the *Meteor* Expedition, and the other expeditions. As a matter of fact, there is an abundance of data, acquired over the years, that awaits critical examination and synthesis.

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New Books

Biological and Medical Sciences

About Plants: Topics in Plant Biology. F. C. Steward. Addison-Wesley, Reading, Mass., 1966. 184 pp. Illus. Paper, $2.95. Addison-Wesley Series in the Principles of Biology.

Actions Chimiques et Biologiques des Radiations. M. Haissinsky, Ed. Masson, Paris, 1966. 204 pp. Illus. F. 66. Four papers: "Flash photolytic studies: The method and its applications" by R. Livingston; "Vacuum-ultraviolet photolysis of paraffin hydrocarbons" by J. R. McNesby; "Transfert intermoléculaire d'énergie d'excitation électronique entre molécules complexes en solution fluide" by J. T. Dubois; "Fluorescence à longue durée de vie de composés organiques" by S. Leach and E. Migirdicyan.

Advances in Ecological Research. vol. 3. J. B. Cragg, Ed. Academic Press, New York, 1966. 336 pp. Illus. $12.50. Four papers: "The distribution and abundance of lake-dwelling triclads—towards a hypothesis" by T. B. Reynoldson; "Energetics, terrestrial field studies, and animal productivity" by Manfred D. Englemann; "The production of marine plankton" by J. E. G. Raymont; and "The dynamics of a field population of the pine looper, *Bupalus piniarius* L. (Lep., Geom.)" by H. Klomp.

Basic Human Embryology. P. L. Williams, C. P. Wendell-Smith, and Sylvia Treadgold. Lippincott, Philadelphia, 1966. 136 pp. Illus. $6.50.

Biological Control Systems Analysis. John H. Milsum. McGraw-Hill, New York, 1966. 480 pp. Illus. $17.50.

Biology of Suspension Feeding. C. Barker Jørgensen. Pergamon, New York, 1966. 373 pp. Illus. $12.50. International Series of Monographs in Pure and Applied Biology, vol. 27, edited by G. A. Kerkut.

Cytology. G. B. Wilson and John H. Morrison. Chapman and Hall, London; Reinhold, New York, ed. 2, 1966. 333 pp. Illus. $8.50.

Developmental Genetics. Frederick J. Gottlieb. Reinhold, New York, 1966. 128 pp. Illus. Paper, $1.95. Selected Topics in Modern Biology Series, edited by Peter Gray.

Diagnostic Microbiology. W. Robert Bailey and Elvyn G. Scott. Mosby, St. Louis, ed. 2, 1966. 354 pp. Illus. $7.25.

Fishes of the Western North Atlantic. pt. 5, Order Iniomi: Aulopidae, Synodontidae, Bathysauridae, Bathypteroidae, Ipnopidae, Chlorophthalmidae, Myctophidae and Neoscopelidae (Interim Accounts), Scopelosauridae, Paralepididae, Omosudidae, Alepisauridae, Anotopteridae, Evermannellidae, Scopelarchidae; Order Lyomeri: Eurypharyngidae, Saccopharyngidae. Y. H. Olsen, Ed. Sears Foundation for Marine Research, Yale Univ., New Haven, Conn., 1966. 663 pp. Illus. $27.50. Sears Foundation for Marine Research Memoir No. 1. Contributors are William W. Anderson, Frederick H. Berry, James E. Böhlke, Rolf L. Bolin, Jack W. Gehringer, Robert H. Gibbs, Jr., William A. Gosline, N. B. Marshall, Gills W. Mead, Robert R. Rofen, and Norman J. Wilimovsky.

International Review of Experimental Pathology. vol. 4. G. W. Richter and M. A. Epstein, Eds. Academic Press, New York, 1965. 352 pp. Illus. $14.50. Five papers: "Recent advances correlating structure and function in mitochondria" by D. F. Parsons; "Ultrastructural cytochemistry: Principles, limitations, and applications" by Dante G. Scarpelli and Norbert M. Kanczak; "Cellular necrosis in the liver induced and modified by drugs" by A. E. M. McLean, Elizabeth McLean, and J. D. Judah; "The constitution and genesis of amyloid" by Alan S. Cohen; and "Complement: Hemolytic function and chemical properties" by P. G. Klein and H. J. Wellensiek.

Meat Hygiene. Paul J. Brandly, George Migaki, and Kenneth E. Taylor. Lea and Febiger, Philadelphia, ed. 3, 1966. 789 pp. Illus. $15.

Principles of Development and Differentiation. C. H. Waddington. Macmillan, New York, 1966. 127 pp. Illus. Paper, $1.95. Current Concepts in Biology, edited by Norman H. Giles, Walter Kenworthy, and John G. Torrey.

Protozoology. Richard R. Kudo. Thomas, Springfield, Ill., ed. 5, 1966. 1188 pp. Illus. $15.75.