
New Versions of Well-Known Textbooks of Plant Physiology

The second edition of Miller's "Plant Physiology" is an enlargement and revision of the first edition which appeared in 1931. The general plan of the earlier edition has been retained. The increased size of the book is due chiefly to inclusion of the results of recent investigations. The bibliographies, a valuable feature of this book, are even more comprehensive in the present than in the earlier edition. This volume will undoubtedly continue to be the most useful modern reference textbook for advanced students, teachers, and investigators, but because of its length and encyclopedic presentation of subject matter is not well adapted for general classroom use.

"Plant Physiology," the English version of the Fifth Russian Edition of Maximov's textbook differs considerably from the earlier "A Textbook of Plant Physiology" (1930) which was based on the Second Edition of the Russian textbook. The current edition is not only more comprehensive than the earlier one but an entirely different and distinctive organization has been followed. The physico-chemical organization of the plant and its chemical compositions are first discussed, followed by chapters on respiration and growth. Next come five chapters dealing with fundamental plant processes. The last five chapters deal, in order, with the resistance of plants to unfavorable environmental conditions, correlations and vegetation propagation, physiology of development, physiology of reproduction, and seasonal phenomena in the life of plants. The author's intention is "to reproduce for the student as clearly as possible a complete picture of the life of the plant, not as a sum of separate physiological functions, but as a unified developing process beginning with the germination of seeds and terminating with the maturing of seeds newly reproduced by the plant." The reviewer is more in sympathy with the author's avowed purpose than he is with the organization which has been adopted in attempting to achieve that objective. Instead of leading the student on, step by step, and with ever-widening capacity for the interpretation of increasingly complex phenomena, the transition from subject to subject is often abrupt and psychologically illogical, so that the chapters must certainly appear as a series of only loosely related topics to the uninitiated student. The book does contain much sound and interesting information, and is quite worthwhile from this standpoint. The number of uncritical or misleading statements is greater, however, than should be tolerated in any introductory textbook.—*B. S. Meyer.*

Plant Physiology, 2nd Ed., by E. C. Miller. 1201 pp. New York, The McGraw-Hill book Co., 1938. \$7.50.

Plant Physiology, by N. A. Maximov, edited by R. B. Harvey and A. E. Murneck. 473 pp. New York, The McGraw-Hill Book Co., 1938. \$4.50.