

This volume lacks papers discussing work on Ca^{2+} uptake by reconstituted sarcoplasmic reticulum membranes, an important research undertaking in which there have been many recent advances. On the whole, however, it should have a widespread appeal to both researchers and teachers in biology.

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Fruit Flies

The Genetics and Biology of *Drosophila*. M. ASHBURNER and E. NOVITSKI, Eds. Academic Press, New York, 1976. Vol. 1a, xx pp. + pp. 1-486, illus., + plates + index. Vol. 1b, xx pp. + pp. 487-954, illus., + index. Vol. 1c, xvi pp. + pp. 955-1430, illus., + index. Each volume, \$42.50.

In their preface to this first volume of a three-volume work, the editors point out that it has been 50 years since the publication of *The Genetics of Drosophila* by Morgan, Bridges, and Sturtevant and 25 years since the publication of *Biology of Drosophila*, edited by Demerec. The immense literature that has developed in the intervening years poses an awesome hurdle for anyone planning to work with *Drosophila*, and even the active researcher can be familiar with only a limited portion of this literature. A major aim of this work is to bring together a collection of reviews that would serve as a guidebook for the newcomer and be useful to workers in the field as well. In addition to summarizing the present state of our knowledge, the editors hoped that the work would serve to point out areas of deficiency.

Volume 1 (really three volumes labeled 1a, 1b, and 1c) is devoted to the formal genetics of *Drosophila*. Its 31 chapters represent the efforts of 39 authors plus a collective entity, the "UBC *Drosophila* Research Group." A task of this magnitude poses seemingly insuperable logistic problems at every step in production and demands extensive compromise. Nevertheless, the volume is a pleasant surprise. In general, the aspirations of the editors have been fulfilled, and this collection will surely find its place beside other standard reference works found in every active and well-financed *Drosophila* research laboratory.

The chapters that focus on genetic studies with *Drosophila melanogaster* fall roughly into six overlapping areas—cytogenetics, radiation and chemical studies, recombination, chromosome distribution, mosaics and related phenome-

na, and organization of genetic material. Studies with *Drosophila hydei* and *Drosophila virilis* are treated in separate chapters. Each of the three parts of volume 1 has its own extensive author, subject, species, and genetic variation indexes. Readers will undoubtedly differ in their assessment of the various chapters, but all are at least of considerable use as bibliographic sources.

My chief adverse comment relates to the price of the volume. In view of the cost, the editors might have restricted the volume to topics with the greatest general usefulness and longevity rather than attempting broad coverage. Indeed, some of the chapters were badly out of date by publication time. Others review subjects on which no substantial progress has been made in recent years. For example, little has been added to our understanding of interchromosomal effects (chapter 7) and position-effect variegation (chapter 24) over the past 25 years. Except for minor additions to bibliography, ample reviews of these (and several other topics) are readily available elsewhere. At least a third and possibly half of the coverage might well have been eliminated on these grounds.

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Abundance Effects in Classification. Proceedings of a symposium, Lausanne-Dorigny, Switzerland, July 1975. B. Hauck and P. C. Keenan, Eds. Published for the International Astronomical Union by Reidel, Boston, 1976. xxviii, 264 pp., illus. Cloth, \$31.50; paper, \$22.50. International Astronomical Union Symposium No. 72.

Action Theory. Proceedings of a conference, Winnipeg, Manitoba, Canada, May 1975. Myles Brand and Douglas Walton, Eds. Reidel, Boston, 1976. vi, 340 pp. + index. \$39.50. Synthese Library, vol. 97.

Adolescent Medicine. Topics. Vol. 1. Ralph I. Lopez. Spectrum, New York, 1976 (distributor, Halsted [Wiley], New York). xii, 260 pp., illus. \$22.50. To order this book circle No. 373 on Readers' Service Card

Advances in Ready Mixed Concrete Technology. Proceedings of a conference, Dundee, Scotland, Sept. 1975. Ravindra K. Dhir, Ed. Pergamon, New York, 1976. xxiv, 492 pp., illus. \$20.

Advances in Veterinary Science and Comparative Medicine. Vol. 20. C. A. Brandly and Charles E. Cornelius, Eds. Academic Press, New York, 1976. xii, 322 pp., illus. \$33.50.

Amphibians and Reptiles in Alaska, the Yukon, and Northwest Territories. Robert Parker Hodge. Alaska Northwest Publishing Company, Anchorage, 1976. xii, 90 pp., illus. Paper, \$3.95.

An Ancient World Preserved. Relics and Records of Prehistory in the Andes. Frederic André Engel. Translated from the French edition (Paris, 1972) by Rachel Kendall Gordon. Revised and updated by the author. Crown, New York, 1977. vi, 314 pp., illus. \$12.95.

Annual Review of Nuclear Science. Vol. 26. Emilio Segrè, J. Robb Grover, and H. Pierre Noyes, Eds. Annual Reviews, Palo Alto, Calif., 1976. xii, 526 pp., illus. \$19.50.

Applied Mathematical Physics with Programmable Pocket Calculators. Robert M. Eisberg. McGraw-Hill, New York, 1976. xiv, 176 pp., illus. Paper, \$6.95.

Atmospheric Chemistry. Julian Heicklen. Academic Press, New York, 1976. xiv, 406 pp., illus. \$38.

Atmospheric Physics from Spacelab. Proceedings of a symposium, Frascati, Italy, May 1976. J. J. Burger, A. Pedersen, and B. Battick, Eds. Reidel, Boston, 1976. xx, 414 pp., illus. \$39.50. Astrophysics and Space Science Library, vol. 61.

Atomic Processes and Applications. In Honour of David R. Bates' 60th Birthday. P. G. Burke and B. L. Moiseiwitsch, Eds. North-Holland, Amsterdam, 1976 (U.S. distributor, Elsevier, New York). x, 534 pp., illus. \$65.95.

Biological Basis of Clinical Effect of Bleomycin. A. Caputo, Ed. Karger, Basel, 1976. x, 230 pp., illus. \$53. Progress in Biochemical Pharmacology, vol. 11.

Biologie des Ophryoglenina. (Ciliés Hyménostomes Histophages.) Mario F. Canella and Ilda Rocchi-Canella. Redazione Pubblicazioni Scientifiche, Università di Ferrara, Ferrara, Italy, 1976. viii, 510 pp., illus. Paper, \$10. Contributions à la Connaissance des Ciliés, 8.

Carbohydrates, Lipids and Accessory Growth Factors. M. Rechcigl, Jr., Ed. Karger, Basel, 1976. xii, 224 pp., illus. Paper, \$40.75. Comparative Animal Nutrition, vol. 1.

Carbonium Ions. Vol. 5, Miscellaneous Ions, Theory, and Structure. George A. Olah and Paul von R. Schleyer, Eds. Wiley-Interscience, New York, 1976. xii + pp. 1961-2492, illus. \$42. Reactive Intermediates in Organic Chemistry. To order this book circle No. 374 on Readers' Service Card

Cell Hybrids. Nils R. Rintertz and Robert E. Savage. Academic Press, New York, 1976. xiv, 366 pp., illus. \$29.50.

Challenges and Opportunities in Materials Science and Engineering. Anniversary Volume of *Materials Science and Engineering*. Robert Maddin, Ed. Elsevier Sequoia, Lausanne, Switzerland, 1976. vi, 264 pp., illus. Paper, \$8.

Children's Cognitive Development. Piaget's Theory and the Process Approach. Ruth L. Ault. Oxford University Press, New York, 1977. x, 194 pp., illus. Cloth, \$9; paper, \$3.

Chromaffin, Enterochromaffin and Related Cells. Proceedings of a symposium, Gifu, Japan. R. E. Coupland and T. Fujita, Eds. Elsevier, New York, 1976. xiv, 400 pp., illus. \$49.95.

Chromatographic and Electrophoretic Techniques. Vol. 1, Paper and Thin Layer Chromatography. Ivor Smith and J. W. T. Seakins, Eds. Heinemann, London, ed. 4, 1976 (U.S.

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