

medicine, food, or fiber, you may be surprised to find instead an up-to-date, inexpensive, paperback primer on plant physiology.

The Lore of Living Plants (National Science Teachers Association, Washington, D.C., 1964. 160 pp. 50¢), by Johannes van Overbeek and Harry K. Wong, allegedly written for junior and senior high school students, is eminently readable and well illustrated, but no amount of editorial magic could transform the complexities of plant physiology so that all portions could be grasped by the avowed audience. If the sights were set too high to hit its stated target, the book still scores a bull's-eye on another—the high school biology teacher. He and his students in advanced placement biology programs will find in this volume useful supplementary reading, complete with suggested activities. The book could serve some college biology courses equally well. Even the high-flying research professor could profitably note how difficult concepts have been translated from journal gobbledegook to simple declarative sentences.

The facts of plant physiology are presented with credit to their discoverers, methodology, and institutions. This communicates the spirit and excitement of inquiry of many workers on the frontier of science. The technique identifies science with human beings, not textbook dogma.

STEPHEN COLLINS

*Southern Connecticut State College,
New Haven*

New Books

Biological and Medical Sciences

Adaptation. Bruce Wallace and Adrian M. Srb. Prentice-Hall, Englewood Cliffs, N.J., ed. 2, 1964. 127 pp. Illus. Paper, \$1.75; cloth, \$3.95.

Advances in Enzymology. And related subjects of biochemistry. vol. 26. F. F. Nord, Ed. Interscience (Wiley), New York, 1964. 459 pp. Illus. \$12.50. Seven papers: "Phytochrome and its control of plant growth and development," H. W. Siegelman and S. B. Hendricks; "Sugar nucleotides and the synthesis of carbohydrates," Ginsburg; "Formation of the secondary and tertiary structure of enzymes," F. B. Straub; "Die wasserstoffübertragung mit pyridinnucleotiden," H. Sund, H. Diekmann, and K. Wallenfels; "Bagshaped macromolecules—A new outlook on bacterial cell walls," W. Weidel and H. Pelzer; "Fortschritte auf dem vitamin B₁₂-Gebiet," K. Bernhauer, O. Müller, and F. Wagner; and "The metab-

olism of propionic acid," Y. Kazirow and S. Ochoa.

Advances in Fluorine Research and Dental Caries Prevention. Proceedings of a congress (Geneva), July 1963. vol. 2. J. L. Hardwick, J.-P. Dustin, and Hans R. Held, Eds. Pergamon, London; Macmillan, New York, 1964. 226 pp. Illus. \$17.

Allgemeine Botanik. Kurzes Lehrbuch für Mediziner und Naturwissenschaftler. Wilhelm Nultsch. Thieme, Stuttgart, Germany, 1964. 284 pp. Illus. Paper, DM. 980.

Annual Review of Medicine. vol. 15. Arthur C. DeGraff and William P. Creger, Eds. Annual Reviews, Palo Alto, Calif., 1964. 484 pp. Illus. \$8.50.

Annual Review of Plant Physiology. vol. 15. Leonard Machlis and Winslow R. Briggs, Eds. Annual Reviews, Palo Alto, Calif., 1964. 525 pp. Illus. \$8.50. 21 papers: "Plant membrane lipids," A. A. Benson; "RNA in developing plant cells," Y. Oota; "Nutrition of algae," S. H. Hutner and L. Provasoli; "Nitrate assimilation by plants," E. Kessler; "Bacterial photosynthesis," L. P. Vernon; "Kinetic studies of the photosynthetic carbon reduction cycle," J. A. Bassham; "Respiratory mechanisms in plants including organic acid metabolism," I. Zelitch; "Alkaloid biogenesis," E. Ramstad and S. Agurell; "The genetic basis of selective ion transport in plants," E. Epstein and R. L. Jeffries; "Dormancy in higher plants," A. Vegis; "Shoot morphogenesis," A. Alsopp; "Pollen physiology," H. F. Linskens; "Physiology of growth retarding chemicals," H. M. Cathey; "Growth substances in fruit setting and development," J. C. Crane; "Biochemical aspects of morphogenesis in algae and fungi," W. J. Nickerson and S. Bartnicki-Garcia; "The physiology of plants at high altitudes," W. Tranquillini; "Physiology of plants under drought," P. A. Henckel; "Role of plants in closed systems," C. G. Golueke and W. J. Oswald; "Interaction of factors affecting yield," H. F. Clements; "Physiological aspects of curing plant products," W. G. C. Forsyth; "Absorption spectroscopy *in vivo*: Theory and application," W. L. Butler. Indexes include subject, author, and cumulative indexes of contributing authors titles for vols. 6–15.

Anxiety and Tension Control. A physiologic approach. Edmund Jacobson. Lipincott, Philadelphia, 1964. 264 pp. Illus. \$9.

Atlantide Report, No. 7. Scientific Results of the Danish Expedition to the Coasts of Tropical West Africa, 1945–1946. Jørgen Knudsen and Torben Wolff. Published for Univ. of Copenhagen and the British Museum (Natural History), London, by Danish Science Press, Copenhagen, 1963. 213 pp. Illus. Paper, \$8. Five papers: "Soleoidea," by Jørgen G. Nielsen; "Poissons marins de l'Est Atlantique Tropical," II, pt. 2, "Percoidae (Teleostei Perciformes)," by M. L. Bauchot and M. Blanc; "Alcyonacea et Pennatulacea de l'Afrique occidentale," by A. Tixier-Durivault; "Pelagic Copepoda, I. Copepoda Calanoida of the Families Calanidae up to and Including

Euchaetidae," by W. Vervoort; and "Brotulidae (Pisces) from Tropical West Africa," by Jørgen G. Nielsen and O. Nybelin.

Bailey's Textbook of Histology. Revised by Wilfred M. Copenhaver. Williams and Wilkins, Baltimore, ed. 15, 1964. 693 pp. Illus. \$13.50.

Biochemical Disorders in Human Disease. R. H. S. Thompson and E. J. King, Eds. Academic Press, New York, ed. 2, 1964. 1086 pp. Illus. \$22.

Biologie Antarctique. A symposium (Paris), September 1962. Robert Carrick, Martin Holdgate, and Jean Prévost, Eds. Hermann, Paris, 1964. 651 pp. Illus. F. 54.

Bones, Bodies, and Disease. Evidence of disease and abnormality in early man. Calvin Wells. Praeger, New York, 1964. 288 pp. Illus. \$6.95.

Botany: An Introduction to Plant Science. Wilfred W. Robbins, T. Elliott Weier, and C. Ralph Stocking. Wiley, New York, ed. 3, 1964. 624 pp. Illus. \$8.95.

Cardiac Pacemakers (*Ann. N.Y. Acad. Sci.* 111, art. 3). Harold E. Whipple, Ed. New York Acad. of Sciences, New York, 1964. 308 pp. Illus. Paper, \$7. 27 papers and panel discussions presented at a conference in September 1963.

Cell Culture and Somatic Variation. Morgan Harris, Holt, Rinehart, and Winston, New York, 1964. 557 pp. Illus. \$15.

Le Champ Unitaire en Biologie. Henri Prat. Presses Universitaires de France, Paris, 1964. 166 pp. Illus. Paper.

Chelating Agents and Metal Chelates. F. P. Dwyer and D. P. Mellor, Eds. Academic Press, New York, 1964. 546 pp. Illus. \$17.

Chemical Background for the Biological Sciences. Emil H. White. Prentice-Hall, Englewood Cliffs, N.J., 1964. 160 pp. Illus. Paper, \$1.95; cloth, \$4.95.

College Physiology. Donald M. Pace and Benjamin W. McCashland. Crowell, New York, ed. 2, 1964. 688 pp. Illus. \$7.25.

Columbia-Presbyterian Therapeutic Talks. Topics in medicine for the internist and general physician. vol. 2. Hamilton Southworth and Frederick G. Hofmann, Eds. Macmillan, New York, 1964. 230 pp. \$7.

Comparative Nutrition of Man and Domestic Animals. vol. 2. H. H. Mitchell. Academic Press, New York, 1964. 862 pp. Illus. \$28.

Cytology and Cell Physiology. Geoffrey H. Bourne, Ed. Academic Press, New York, ed. 3, 1964. 798 pp. Illus. \$20.

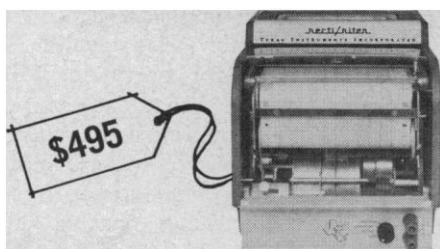
Elements of Comparative Vertebrate Embryology. Harold W. Manner. Macmillan, New York, 1964. 266 pp. Illus. \$5.95.

Estudio Edafológico y Agrobiológico de la Huerta de Murcia. Centro de Edafología y Biología Aplicada del Segura, Murcia, Spain, 1963. 197 pp. Illus. Paper.

Extrachromosomal Inheritance. John L. Jinks. Prentice-Hall, Englewood Cliffs, N.J., 1964. 191 pp. Illus. Paper, \$2.95; cloth, \$4.95.

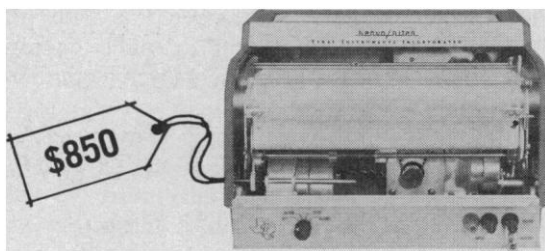
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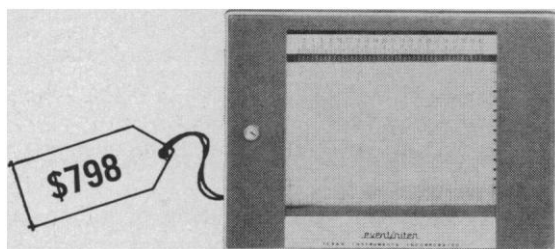
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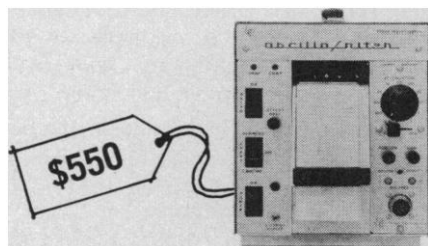
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Gonadotropins: Their Chemical and Biological Properties and Secretory Control. Sixth Animal Reproduction Symposium (Corvallis, Ore.), August 1963. H. H. Cole, Ed. Freeman, San Francisco, Calif., 1964. 258 pp. Illus. Paper, \$7.50.

Growth and Development. Maurice Sussman, Prentice-Hall, Englewood Cliffs, N.J., ed. 2, 1964. 128 pp. Illus. Paper, \$1.75; cloth, \$3.95.

Handbook of Cell and Organ Culture. Donald J. Merchant, Raymond H. Kahn, and William H. Murphy, Jr. Burgess, Minneapolis, Minn., ed. 2, 1964. 271 pp. Illus. Paper, \$6.25; cloth, \$7.50.

Histologie und Mikroskopische Anatomie des Menschen. pt. 5, *Überarbeitete Auflage.* W. Bargmann. Thieme, Stuttgart, Germany (© 1951), 1964. 870 pp. Illus. DM. 72.

Host-Parasite Relationships in Invertebrate Hosts. A symposium, British Society for Parasitology (London), November 1963. Angela E. R. Taylor, Ed. Blackwell, Oxford, England; Davis, Philadelphia, 1964. 142 pp. Paper, \$3.50.

Human Reproduction and Sexual Behavior. Charles W. Lloyd, Ed. Lea and Febiger, Philadelphia, 1964. 564 pp. Illus. \$12.50.

An Introduction to Genetics. A. H. Sturtevant and G. W. Beadle. Dover, New York, 1964 (reprint of 1939 ed.). 391 pp. Illus. Paper, \$2.

An Introduction to the Study of Insects. Donald J. Borror and Dwight M. DeLong. Holt, Rinehart, and Winston, New York, ed. 2, 1964. 831 pp. Illus. \$10.75.

Kimura Commemoration Number, Science Reports, Tohoku University (Biology). Tohoku Univ., Sendai, Japan, 1963. 319 pp. Illus. 35 papers published in honor of Professor Arika Kimura on the occasion of his retirement from Tohoku University.

A Laboratory Manual of Mammalian Anatomy and Physiology. Sigmund Grollman. Macmillan, New York, 1964. 220 pp. Illus. Paper, \$4.50.

Langzeitbehandlung mit Antikoagulantien. vol. 6. Hamburger symposium (Blutgerinnung), May 1963. L. Zuckschwerdt and H. A. Thies, Eds. Schattauer, Stuttgart, Germany, 1964. 250 pp. Illus. DM. 36.

The Liver: Morphology, Biochemistry, Physiology. vol. 2. C. Rouiller, Ed. Academic Press, New York, 1964. 688 pp. Illus. \$24.

The Lower Tertiary Floras of Southern England. vol. 4, *A Summary and Survey of Findings in the Light of Recent Botanical Observations.* Marjorie Elizabeth Jane Chandler. British Museum (Natural History), London, 1964. 163 pp. Illus. Plates. £7 10s.

Maheshwari Commemoration Volume (*J. Indian Bot. Soc.* 42-A). T. S. Sadasivan, Ed. Indian Botanical Soc., Madras, 1963. 364 pp. Illus. 36 papers published in

honor of Professor P. Maheshwari. Among the contributors are F. C. Steward and R. H. Wetmore (U.S.); Tsunewaki, H. Kihara, and Y. Morimura (Japan); G. Erdtman (Sweden); and A. Fahn (Israel).

Methods in Cell Physiology. vol. 1. David M. Prescott, Ed. Academic Press, New York, 1964. 479 pp. Illus. \$16.50.

Molecular Biology: Genes and the Chemical Control of Living Cells. J. M. Barry. Prentice-Hall, Englewood Cliffs, N.J., 1964. 149 pp. Illus. \$3.35.

Molecular Pharmacology. The mode of action of biologically active compounds. vol. 1. E. J. Ariens, Ed. Academic Press, New York, 1964. 525 pp. Illus. \$17.

The Motor Endplate. Sumner I. Zacks. Saunders, Philadelphia, 1964. 333 pp. Illus. \$17.

Neural Theory and Modeling. Proceedings of a symposium (Ojai, Calif.), December 1962. Richard F. Reiss, Ed. Stanford Univ. Press, Stanford, Calif., 1964. 439 pp. Illus. \$13.50.

Nuclei and Radioactivity. Gregory R. Choppin. Benjamin, New York, 1964. 160 pp. Illus. Paper, \$1.95; cloth, \$4.95.

The Nucleohistones. James Bonner and Paul Ts'o, Eds. Holden-Day, San Francisco, Calif., 1964. 416 pp. Illus. \$12.75. 36 papers presented at the World Congress held 29 April to 2 May 1963.

Perspectives of Biochemical Plant Pathology. Symposia and lectures commemorating the 75th anniversary of the Department of Plant Pathology and Botany (New Haven, Conn.), May 1963. Saul Rich, Ed. Connecticut Agricultural Experiment Station, New Haven, 1963. 199 pp. Illus.

Pesticide Handbook, 1964. Compiled and edited by Donald E. H. Frear and Sidney Friedman. College Science Publishers, State College, Pa., ed. 16, 1964. 314 pp. Illus. Paper, \$2.50; cloth, \$3.50.

Photosynthetic Mechanisms of Green Plants. A symposium (Warrenton, Va.), October 1963. Bessel Kok, Ed. Natl. Acad. of Sciences-Natl. Res. Council, Washington, D.C., 1963. 778 pp. Illus. \$12.

Physikalische Begriffe in der Klinischen Biochemie. Hans Koblet and G. Riva. Thieme, Stuttgart, Germany, 1964. 286 pp. Illus. DM. 30.

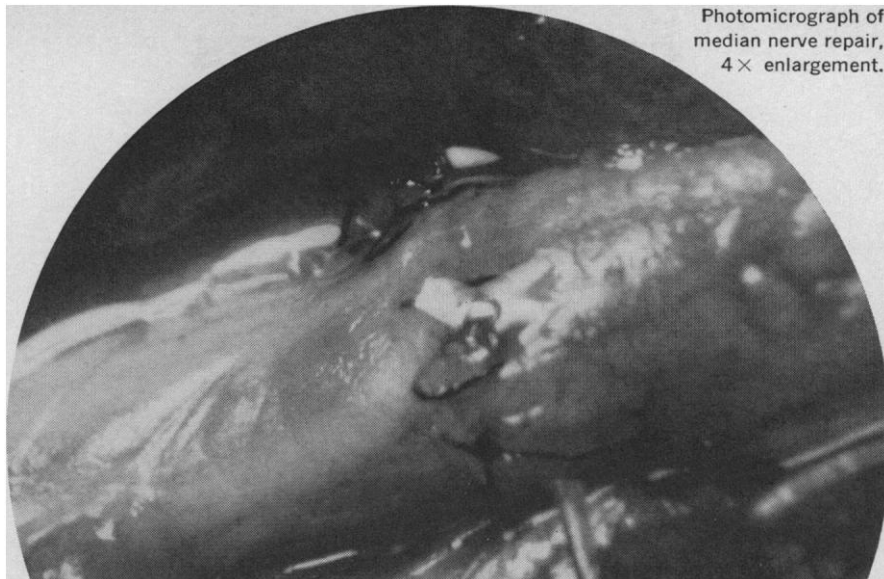
The Physiological Clock. Endogenous diurnal rhythms and biological chronometry. Erwin Bünning. Translated from the second German edition (Berlin, 1963). Springer, Berlin; Academic Press, New York, 1964. 151 pp. Illus. \$6.50.

The Physiology of Synapses. John Carew Eccles. Academic Press, New York; Springer, Berlin, 1964. 328 pp. Illus. \$9.

Pilot Register of Zoology. W. L. Brown, Jr., Ed. Department of Entomology and Limnology, New York State College of Agriculture, Cornell University, Ithaca, 1964. 20 cards (an experimental edition).

Pollen Physiology and Fertilization. A symposium (Univ. of Nijmegen, Netherlands), August 1963. H. F. Linskens, Ed. North-Holland, Amsterdam, 1964. 269 pp. Illus. \$11.20.

Radiation and Immune Mechanisms. William H. Taliaferro, Lucy Graves Taliaferro, and Bernard N. Jaroslow.



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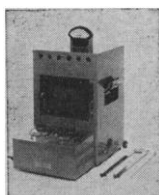
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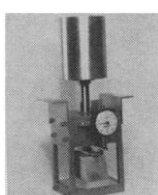


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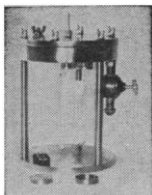
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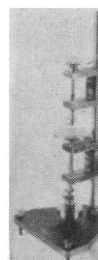
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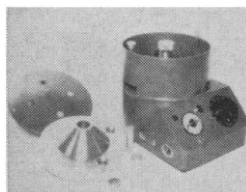


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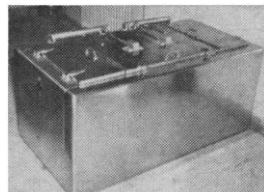
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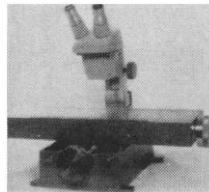
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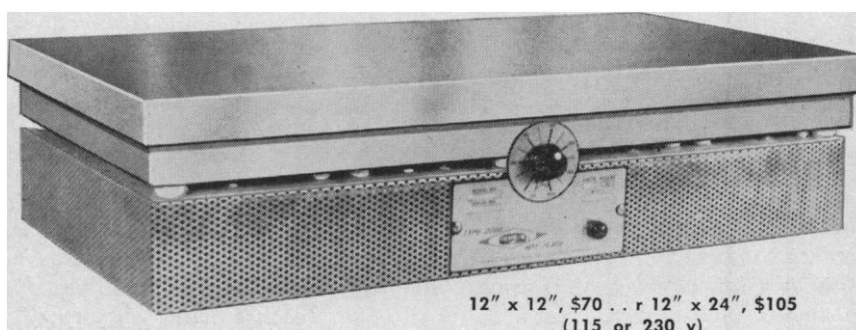


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Radiolysis of Hydrocarbons. A. V. Topchiev, Ed. Translated from the Russian edition. R. A. Holroyd, Ed. Elsevier, New York, 1964. 244 pp. Illus. \$11.

Régulateurs Naturels de la Croissance Végétale. A colloquium (Gif-sur-Yvette, France), July 1963. J. P. Nitsch, Ed. Édition du Centre National de la Recherche Scientifique, Paris, 1964. 748 pp. Illus. Papers presented at the Fifth International Conference on Plant Growth Substances.

The Reproduction of Life. Robert L. Lehrman. Basic Books, New York, 1964. 256 pp. Illus. \$4.95.

Residue Reviews. vol. 5, *Instrumentation for the Detection and Determination of Pesticides and their Residues in Foods.* A symposium (Los Angeles, Calif.), April 1963. Francis A. Gunther, Ed. Springer, Berlin; Academic Press, New York, 1964. 184 pp. Illus. \$6.50.

Review of Gross Anatomy. A dynamic approach. Ben Pansky and Earl Lawrence House. Macmillan, New York, 1964. 455 pp. Illus. Paper, \$6.95; cloth, \$8.95.

Seaweed Symposium, Proceedings. Fourth International Symposium (Biarritz, France), September 1961. Ad. Davy de Virville and J. Feldmann, Eds. Pergamon, London; Macmillan, New York, 1964. 491 pp. Illus. \$15.

The Structure and Life of Bryophytes. E. V. Watson. Hillary House, New York, 1964. 192 pp. Illus. \$3.

Studien zum Problem der Deformation von Baumkronen durch Wind. W. Weischedt and D. Barsch. Geographisches Institut I der Universität Freiburg, Freiburg, Germany, 1963. 130 pp. Illus. Paper.

Substances Producing Pain and Itch. C. A. Keele and Desirée Armstrong. Williams and Wilkins, Baltimore, 1964. 407 pp. Illus. \$8.

A Systematic Revision of the Shrew Genus Crocidura in Southern Africa. Jurgens Meester. Transvaal Museum, Pretoria, 1963. 135 pp. Illus.

Treatise on Invertebrate Paleontology. Raymond C. Moore, Ed. pt. C. *Protista 2: Sarcodina Chiefly "Thecamoebian" and Foraminiferida.* vols. 1 and 2. Alfred R. Loeblich, Jr., and Helen Tappan. Geological Soc. of America, New York; Univ. of Kansas Press, Lawrence, 1964. vol. 1, 543 pp.; vol. 2, 392 pp. Illus. Set, \$2.50.

Vertebrate Embryology: The Dynamics of Development. Roberts Rugh. Harcourt, Brace, and World, New York, 1964. 608 pp. Illus. \$9.50.

Vistas in Botany. vol. 4, *Recent Researches in Plant Taxonomy.* W. B. Turrill, Ed. Pergamon, London; Macmillan, New York, 1964. 328 pp. Illus. \$14. Seven papers: "Philosophy and classification," J. S. L. Gilmour and S. M. Walters; "Palynology," G. Erdtma; "Embryology in relation to taxonomy," P. Maheshwari; "Cytologie, taxonomie, und evolution bei samenpflanzen," F. Ehrendorfer; "Plant taxonomy, phytogeography, and plant ecology," and "Floras," W. B. Turrill; and "Fossil plant taxonomy," K. I. M. Chesters.

Water Metabolism in Plants. Theodore T. Kozlowski. Harper and Row, New York, 1964. 247 pp. Illus. Paper, \$3.95.

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