

the titles of the various symposia and the names of guest lectures. The symposia, which included 60 substantial papers, were as follows: Strahlungsklima und seine Messung; Biological Action Spectra; Photoreceptors in Aquatic Organisms; Lupus vulgaris; Initial Mechanisms Involved in Radiation Effects; Photoreactivation; and Phototherapy. The four guest lectures were entitled "Plant cell response to visible light—excluding photosynthesis," given by H. Virgin of Stockholm; "Light induced phosphorylation," D. I. Arnon, Berkeley; "The effects of long visible and near infrared radiation," H. Mohr, Tübingen; and "Biologische Uhren," J. Aschoff, Heidelberg. The remaining papers were presented in seven more or less general sessions, and it is apparent from their contents that a pronounced trend toward photochemistry, with emphasis on the physical interaction of light with specific molecular species, is evident. This is a measure indicative both of a developing maturity and sophistication, the movement of research being away from the purely biological description of results toward the investigation of basic mechanisms, and of a growing awareness that one of the most profound influences in our environment is that of light itself, with various segments of the electromagnetic spectrum having precise effect on a number of regulatory phenomena.

It is worthy of notice that the Third International Congress of Photobiology was designated the Finsen Memorial Congress. Niels R. Finsen, born in 1860, was a Danish doctor, interested medically in the eradication of the vitamin-deficient disease, lupus vulgaris, but equally interested in the quantitative physical, chemical, and biological effects of light of various qualities. When one considers that much of this work was done prior to the discovery of x-rays, one can readily appreciate how far advanced Finsen was in his appreciation of some of the problems of "light and life." He can, justifiably, be called the father of photobiology, and so deserves the honor conferred on him.

It is equally appropriate to mention that the rapid development of, and current interest in, photobiology has been materially assisted by the organizational ability of a relatively few scientists: A. Hollaender in the United States, R. Latarjet in France, B. C. Christensen in Denmark, and W. Burckhardt in Switzerland, in particular, stand out.

This volume, consequently, is several things at once: a sound and extensive survey of an exciting and active field of biology, a memorial to Niels Finsen, and a tribute to those who are continuing in the Finsen tradition.

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New Books

Biological and Medical Sciences

Advances in Cancer Research. vol. 6, Alexander Haddow and Sidney Weinhouse, Eds. Academic Press, New York, 1961. 533 pp. Illus. \$13.

Advances in Virus Research. vol. 8, Kenneth M. Smith and Max A. Lauffer, Eds. Academic Press, New York, 1961. 423 pp. Illus. \$12.

Childbirth. W. C. W. Nixon. Penguin Books, Baltimore, Md., 1962. 106 pp. Illus. Paper, \$0.85.

Cold Spring Harbor Symposia on Quantitative Biology. vol. 26, *Cellular Regulatory Mechanisms*. Biological Laboratory, Cold Spring Harbor, N.Y., 1961. 423 pp. Illus. \$8.

Cryptobiotic Stages in Biological Systems. Nathan Grossowicz, Shlomo Hestrin, and Alexander Keynan, Eds. Elsevier, Amsterdam, Netherlands, 1961 (order from Van Nostrand, Princeton, N.J.). 244 pp. Illus. Paper, \$5. Proceedings (15 papers and discussion) of the fifth biology conference, *Oholo*, 1960; sponsored by the Israel Institute for Biological Research.

First International Conference on Congenital Malformations, Proceedings. Compiled and edited for the International Medical Congress. Lippincott, Philadelphia, Pa., 1962. 328 pp. Illus. \$7.50. The first conference, sponsored by the National Foundation (New York), was held in London 18–22 July 1960.

Fluorescence Assay in Biology and Medicine. Sidney Udenfriend. Academic Press, New York, 1962. 515 pp. Illus. \$14.

General Microbiology. William G. Walter and Richard H. McBee. Van Nostrand, New York, ed. 2, 1962. 414 pp. \$6.95.

Heredity and Your Life. A. M. Winchester. Dover, New York, 1962 (© 1956). 333 pp. Illus. \$1.45 (reprint).

Mathematical Tables for Research Workers in Human Genetics. Shelia Maynard-Smith, L. S. Penrose, and C. A. B. Smith. Little, Brown, Boston, Mass., 1962. 86 pp. Illus.

Methods in Hormone Research. vol. 1, *Chemical Determinations* (423 pp., \$16); vol. 2, *Bioassay* (788 pp., \$24). R. I. Dorfman, Ed. Academic Press, New York, 1962. Illus.

Mushrooms and Truffles. Botany, cultivation, and utilization. Rolf Singer. Interscience, New York, 1961. 295 pp. Plates. \$10.25.

The Orientation of Animals. G. S. Faenkel and G. L. Gunn. Dover, New York, ed. 2, 1962 (© 1940, Oxford Univ. Press, London). 376 pp. Illus. Paper, \$2.

The Physiology of Flowering. W. S. Hillman. Holt, Rinehart, and Winston, New York, 1962. 176 pp. Illus. \$4.50.

Plants. An introduction to modern botany. V. A. Greulach and J. E. Adams. Wiley, New York, 1962. 572 pp. Illus. \$7.50.

Pleuropneumonia-Like Organisms (PPLO) Mycoplasmataceae. E. Klieneberger-Nobel. Academic Press, New York, 1962. 166 pp. Illus. 40s.

Fourth Berkeley Symposium on Mathematical Statistics and Probability, Proceedings. vol. 4, *Biology and Problems of Health*. J. Neyman, Ed. Univ. of California Press, Berkeley, 1962. 420 pp. Illus. \$8.50.

The Secondary Glaucoma. J. Francois, Ed. Karger, Basel, Switzerland, 1961. 749 pp. Illus. \$19. Proceedings of the first European ophthalmological congress held in Athens in 1960.

A Textbook of Comparative Endocrinology. A. Gorbman and H. A. Bern. Wiley, New York, 1962. 482 pp. Illus. \$12.50.

Tree Growth. Theodore T. Kozlowski, Ed. Ronald, New York, 1962. 451 pp. Illus. \$12.

Social, Economic, and Political Sciences

Asylums. Essays on the social situation of mental patients and other inmates. Erving Goffman. Aldine, Chicago, Ill., 1962. 400 pp. \$6.75.

The Calculus of Consent. Logical foundations of constitutional democracy. James M. Buchanan and Gordon Tullock. Univ. of Michigan Press, Ann Arbor, 1962. 372 pp. Illus. \$6.95.

Conceptual Systems and Personality Organization. O. J. Harvey, David E. Hunt, and Harold M. Schroder. Wiley, New York, 1961. 387 pp. \$7.50.

Deterrence and Defense. Toward a theory of national security. Glenn H. Snyder. Princeton Univ. Press, Princeton, N.J., 1961. 303 pp. \$6.50.

Development of the Emerging Countries. An agenda for research. Robert E. Asher *et al.* Brookings Institution, Washington, D.C., 1962. 250 pp. Paper, \$2.75; cloth, \$3.75.

The Ethnobotany of Pre-Columbian Peru. Margaret A. Towle. Aldine, Chicago, Ill., 1962. 189 pp. Plates. \$6.

Heavens Below, Utopian Experiments in England 1560–1960. W. H. G. Armytage. Univ. of Toronto Press, Toronto, Canada, 1961. 465 pp. \$6.50.

Homosexuality. A psychoanalytic study. Irving Bieber *et al.* Basic Books, New York, 1962. 366 pp. \$8.50.

The Layman's Guide to Psychiatry. James A. Brussel. Barnes and Noble, New York, 1961. 246 pp. Paper, \$1.50.

The Nest Architecture of the Sweat Bees. A comparative study of behavior. Shoichi F. Sakagami and Charles D. Michener. Univ. of Kansas Press, Lawrence, 1962. 139 pp. Illus. \$5.

Operations Research in Production and Inventory Control. F. Hansmann. Wiley, New York, 1962. 257 pp. Illus. \$8.95.

The Sino-Soviet Conflict 1956–1961. Donald S. Zagoria. Princeton Univ. Press, Princeton, N.J., 1962. 496 pp. \$8.50.