capacities, linear measures, etc., and a table of LD_{50} values determined by different techniques on various insect species.

Altogether, this work presents a clear, orderly treatment of the chemical control of insects and is abundantly documented by original source references. There are few printing errors, the illustrations, paper, and binding are good, and the format is pleasing. Some omissions are noted and the arrangement of material may be criticized in some places. *Biological Abstracts* and the *Experiment Station Record,* the latter no longer published but still important for its coverage of the older literature, are absent from the list of abstract journals in Chapter I; and bibliographic sources—the *Index to the Literature of American Economic Entomology* and the list published for many years by *Entomological News,* to mention only two—are lacking. The treatment of the inorganic insecticides appears overly full in view of the ascendancy of the synthetic organic materials. Space given to the arsenates of magnesium, manganese, aluminum, iron, and copper, for example, could be greatly reduced without detracting from the value of the book. This reviewer believes fumigants are sufficiently important in a work of this kind to merit a chapter of their own. But these considerations will not seriously detract from the general excellence of the book.

Insect Control by Chemicals is a different sort of book. It places greater emphasis on modern organic insecticides and modern machines and methods for their dispersal; it restricts the field by practically excluding attractants and repellents. The short, crisp style of presentation and abundant documentation (more than 2,000 references to cited literature) will appeal more strongly to the advanced student and professional worker than to the beginner. It provides a valuable source book for the research laboratory.

The opening chapter devotes 62 pages to descriptions of about 100 practical and experimental insecticides, mostly organic materials; the inorganics are dispensed with in about 7 pages. The next three chapters discuss the relation of the structure of organic chemicals to toxicity, the entrance of poisons into insects, and the pharmacology of poisons for insects. Information from more than 600 references is condensed in these pages into the most complete and thoroughgoing treatment of the essentials of insect toxicology this reviewer has seen. Two chapters covering equipment for ground and airplane application of insecticides are noteworthy for their discussions of the physical factors influencing the dispersal of insecticide particles. There is a chapter on the toxicity of insecticides to man and domestic animals and one on the effects of insecticides on plants. Two chapters discuss chemical control of insects that feed on plants and of those that affect man and domestic animals. Insect orders rather than crops (or animals) form the subdivisions under which the insecticides are discussed, enabling one to visualize quickly the types of compounds that affect broad insect groups. The last chapter treats the effect of insecticides on the natural balance of insect populations, featuring principally the pertinent information on DDT.

Some omissions and some statements that may appear incomplete or too categorical to critical readers have been noticed. These are to be expected in a text drawing upon so many sources of information. The few printing errors will be obvious to most readers but incorrect chemical formulas for nicotine (p. 132) and for parathion and ethyl *p*-nitrophenyl thionobenzenephosphonate (p. 158) should be pointed out.

This work should be a stimulus as well as an aid to research on insecticidal chemicals.

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Scientific Book Register

Nucleic Acids and Nucleoproteins: Physics, Chemistry, Biology, and Medicine, Vols. I and II. (In Japanese.) Fujio Egami, Ed. Tokyo: Kyoritsu Pub., 1951. Vol. I: 481 pp., 1,000 yen; Vol. II: 426 pp., 1,350 yen.

Insect Resistance in Crop Plants. Reginald H. Painter. New York: Macmillan, 1951. 520 pp. $8.50.

Vocabulaire de la Psychologie. Publié avec la collaboration de L'Association des Travailleurs Scientifiques. Henri Piéron *et al.* Paris: Presses Universitaires de France, 1951. 356 pp. 1,300 fr.

Finite Matrices. W. L. Ferrar. New York: Oxford Univ. Press, 1951. 182 pp. $4.00.

Outline of Fundamental Pharmacology: The Mechanics of the Interaction of Chemicals and Living Things. David Fielding Marsh. Springfield, Ill.: Thomas, 1951. 219 pp. $6.00.

Science in Progress, Vol. VII. Sigma Xi National Lectureships, 1949 and 1950. George A. Baitsell, Ed. New Haven, Conn.: Yale Univ. Press, 1951. 512 pp. $6.00.

An Introduction to Acoustics. Robert H. Randall. Cambridge, Mass.: Addison-Wesley, 1951. 340 pp. $6.00.

The Tsimshian: Their Arts and Music. American Ethnological Society Publications, Vol. XVIII. Viola E. Garfield, Paul S. Wingert, and Marius Barbeau. Locust Valley, N. Y.: J. J. Augustin, 1951. 290 pp. $6.00.

Recent Progress in Hormone Research, Vol. VI. Proceedings of the Laurentian Hormone Conference. Gregory Pincus, Ed. New York: Academic Press, 1951. 431 pp. $8.50.

The Normal Cerebral Angiogram. Arthur Ecker. Springfield, Ill.: Thomas, 1951. 190 pp. $6.50.

The Aurorae. International Astrophysics Series, Vol. 1. L. Harang. New York: Wiley, 1951. 166 pp. $4.50.

A Laboratory Guide to the Anatomy of the Rabbit. E. Horne Craigie. Philadelphia: Blakiston, 1951. 113 pp. $3.25.

Réarrangements Moléculaires et Inversion de Walden, Montpellier, 24–29 Avril 1950. Colloques Internationaux du Centre National de la Recherche Scientifique, XXX. Paris: C. N. R. S., 1951. 152 pp.

Anemias. Manuales Ibys, Vol. V. Valentin de la Loma. Madrid, Spain: Ibys, 1950. 393 pp.

The Theory of Isotope Separation as Applied to the Large-Scale Production of U^{235}. Karl Cohen and George M. Murphy. New York–London: McGraw-Hill, 1951. 165 pp. $2.00.