cerebral endings of the analyzer systems represents a physical basis of the diverse grades of transfer from actual sensory perception and impressions to abstract-logical forms of concepts of reality and behavior patterns." Such are the phrases that allegedly bring us "closer to the solution of the cardinal question posed by Pavlov: what is the fine structure of the analyzers, and how do their various components interact?"

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Morphogenesis in Insects

Biochemical Aspects of Insect Development. P. S. CHEN. Karger, Basel, 1971 (U.S. distributor, Phiebig, White Plains, N.Y.). viii, 230 pp., illus. $17.30. Monographs in Developmental Biology, vol. 3.

Recently developmental biologists have increasingly recognized the opportunities for genetic analysis of development afforded by that genetically best-known of all animals, *Drosophila*. At the same time, research on endocrine aspects of insect development has burgeoned, spurred in part by the encouraging possibility that hormone mimics may be valuable in the selective control of insects. A book on the biochemistry of insect development is therefore welcome, and P. S. Chen, an active contributor to this field for the past two decades, is well qualified to provide it. This concise volume takes up insect development stage by stage—embryo, larva, metamorphosis, adult—reviewing the biochemical knowledge of each, and concludes with a chapter on genetically based studies. The book is generally up to date and, with a bibliography of more than 900 titles, is a valuable source for the literature of the field. Endocrine aspects receive little emphasis, which is appropriate in view of the existence of several current reviews on insect hormones, and genetic aspects, in which the author has special interest, are emphasized. Although in this field of research, as in others, many investigations have suffered from technical inadequacy, many premature conclusions have been drawn, and many inferences have been legitimately revised in the light of new discovery, Chen studiously refrains from criticism and value judgment. This seems a pity—some guidance through the jungle of papers, and personal opinion from an experienced worker, would have been welcome. Also a little disappointing is the limited amount of new interpretation and synthesis. Perhaps the boldest broad conclusion is the rejection of any massive alteration of the protein pattern at metamorphosis. Chen does not accept the concept, put forth by others, of gene-set switchover at metamorphosis. "Even in the higher Diptera, which have the most complete metamorphosis, the data do not imply a switchover from a larval set of genes to an adult set" (p. 96). Changing gene expression during development could be called the theme of this book, but Chen believes that the evidence indicates a less extensive and more gradual change in pattern of gene expression than has sometimes been assumed. This reviewer found the final chapter, on biochemical analysis of developmental mutants (chiefly *Drosophila*), the most interesting. Modern methods of nucleic acid and protein research are now being applied to this material, and significant results for developmental biology are to be expected.

The volume is regrettably expensive for its size, and would have benefited from better proofreading.

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Books Received

A la Carte. Selected Papers on Maps and Atlases. Compiled by Walter W. Ristow. Library of Congress, Washington, D.C., 1972 (available from the Superintendent of Documents, Washington, D.C.). x, 232 pp., illus. $4.

Advances in Experimental Clinical Psychology. Henry E. Adams and William K. Boardman, Eds. Pergamon, New York, 1972. x, 220 pp., illus. $11.50. Pergamon General Psychology Series.

Advances in Psychobiology. Vol. 1. Grant Newton and Austin H. Riesen, Eds. Wiley-Interscience, New York, 1972. xiv, 302 pp., illus. $16.50.

Analysis of Industrial Wastewaters. K. H. Mancy and W. J. Weber, Jr. Wiley-Interscience, New York, 1972. vi, 149 pp. Paper, $6.95. Reprinted from *Treatise on Analytical Chemistry*, part 3, vol. 2 (Industrial Toxicology and Environmental Pollution and Its Control).

Antenatal Diagnosis. A symposium, Chicago, June 1970. Albert Dorfman, Ed. University of Chicago Press, Chicago, 1972. xii, 286 pp., illus. $12.50. NICHD-eMntal Retardation Research Centers Series.

Aphid Technology. With Special Reference to the Study of Aphids in the Field. A meeting, Silwood Park, England, 1968. H. F. van Emden, Ed. Academic Press, New York, 1972. xiv, 344 pp., illus. $18.50.

The Application of Micrometeorology to Agricultural Problems. L. P. Smith, Ed. Secretariat of the World Meteorological Organization, Geneva, 1972 (U.S. distributor, Unipub, New York). xiv, 74 pp. Paper, $4. World Meteorological Organization Technical Note, No. 119. WMO, No. 298.

An Archaeological Perspective. Lewis R. Binford with a contribution by George I. Quimby. Seminar Press, New York, 1972. xii, 464 pp., illus. $11.95. Studies in Archeology.

Archaeology under Water. George F. Bass. Penguin, Baltimore, 1972. 184 pp. + plates. Paper, $1.95. Reprint of the 1966 edition.

Asbestos and Enzymes. Paul Brodeur. Ballantine, New York, 1972. xiv, 146 pp. Paper, $1.25. Reprinted from *The New Yorker*.

Atmospheric Transport Processes. Part 3, Hydrodynamic Tracers. Elmar R. Reiter. U.S. Atomic Energy Commission Office of Information Services, Oak Ridge, Tenn., 1972 (available as TID-25731 from National Technical Information Service, Springfield, Va.). viii, 212 pp., illus. Paper, $3. AEC Critical Review Series.

Autistic Children. A Guide for Parents. Lorna Wing. Brunner/Mazel, New York, 1972. xiv, 158 pp. $6.95.

Automated Multiphasic Health Testing. Proceedings of a conference, Davos, Switzerland, Sept. 1970. Engineering Foundation, New York, 1972. 432 pp., illus. Paper, $15. Engineering Foundation Research Conferences.

Basic Machine Principles. J. K. Iliffe. Macdonald, London; Elsevier, New York, ed. 2, 1972. x, 122 pp., illus. $5.50. Computer Monographs.

Die Beherrschung der Mannigfaltigkeit. Philosophische Grundlagen der Taxonomie. Rolf Löther. Fischer, Jena, Germany, 1972. 286 pp., illus. Paper, 36 DM.

Bioceramics. Engineering in Medicine. A conference, Henniker, N.H., Aug. 1970. C. W. Hall, S. F. Hulbert, S. N. Levine, and F. A. Young, Eds. Interscience, New York, 1972. xii, 484 pp., illus. $18. Journal of Biomedical Materials Research Biomedical Materials Symposium No. 2.

Biomedical Implications of Radiostrontium Exposure. Proceedings of a symposium, Davis, Calif., Feb. 1971. Marvin Goldman and Leo K. Bustad, Eds. U.S. Atomic Energy Commission Office of Information Services, Oak Ridge, Tenn., 1972 (available as CONF-710201 from National Technical Information Service, Springfield, Va.). viii, 404 pp., illus. Paper, $6. AEC Symposium Series, 25.

Botany. An Ecological Approach. William A. Jensen and Frank B. Salisbury. Wadsworth, Belmont, Calif., 1972. x, 758 pp., illus. $13.95.

British Marine Isopods. Keys and Notes for the Identification of the Species. E. Naylor. Published for the Linnean Society of London by Academic Press, New York,

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