

doing research on these receptor systems. Anatomy, physiology, and function were the central topics of the conference. In the first chapter Otto Lowenstein introduces the concept of the acousticolateral system, clarifying the morphological and embryological relation of the mechanoreceptor lateral line system to the auditory and vestibular systems, a relation which engenders much broader interest in these organs than would their occurrence in fish and amphibians alone. A series of papers on anatomy, electrophysiology, and function of the mechanoreceptor system is followed by several articles which attempt by behavioral criteria to assess the role of this system in underwater hearing. Thereafter is a section of five papers devoted to the electroreceptor system. One of these papers—the contribution of Hans Lissmann—compares the two systems and speculates on their possible common origin. Otherwise they are treated separately and by different participants.

The book deals much more fully, judged in terms of number of contributions, pages allocated, and range of topics covered, with the mechanical than with the electrical sensing organs. This distribution is probably a fair reflection of the interests of the participants, the number of people working in the fields, and the extent of available knowledge.

Many difficulties are presented by the problem of assigning function to sensory systems of animals living in an aquatic environment, with respect to whose sensory requirements we have little direct experience. This book goes a long way toward specifying the adequate stimuli for these organs; yet many questions remain concerning the function of each system as a whole. Von Békésy attempts to close the air-water gap by discussing similarities in sensory perception of fish and man. He also contributes an amusing preface in which he outlines the reasons for and against attending such conferences.

One of the main goals of the conference, expressed in the editor's preface, was to bring biologists together with engineers and physicists specializing in hydrodynamics and underwater sound. These are unknown territories to most biologists, and difficulties in controlling the physical stimulus have in the past led to much confusion concerning the adequate stimuli for these organs. The success of the conference from this point of view may be diffi-

cult for the reader to assess; the flavor of interaction between these two groups of scientists seems to me in retrospect to have been present in the conference more than one would conclude from the formal presentations or from the comments that follow them. But this is one of the advantages of having attended this conference over reading its proceedings. The final sections consist largely of presentations and panel discussions on hydrodynamic and instrumentation problems of interest to biologists in the field. In the end the biologists attempt to summarize and assess the present state of understanding of the lateral line system at several levels: from structural and neurophysiological, where information is now rather good, to systemic and behavioral, where large uncertainties remain.

LAWRENCE S. FRISHKOPF

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Chromatography

Gas Chromatographic Analysis of Drugs and Pesticides. BENJAMIN J. GUDZINOWICZ. Arnold, London; Dekker, New York, 1967. x + 605 pp., illus. \$28.50. Chromatographic Science, vol. 2.

Gudzinowicz has prepared a monograph which should be useful to workers in the field of drug (barbiturates, various alkaloids, antihistamines, phenothiazines, and so on) and pesticide analysis. Numerous references are cited, and their content is frequently discussed in detail. Many chromatograms are reproduced, enabling the reader to see the types of separations and chromatographic behavior he may encounter in the laboratory. The author has given the structural formulas of a large number of the compounds under discussion. Although this undoubtedly contributes to the length and price of the book, it is helpful to the nonspecialist to have such information available. The use of highly sensitive and specific methods for the identification and estimation of drugs and pesticides is clearly the order of the day. This book can be recommended as a timely review and reference work for those investigators not yet familiar with the value of gas-liquid chromatography in this field.

W. J. A. VANDENHEUVEL

*Merck Institute for Therapeutic
Research, Rahway, New Jersey*

Books Received

The Abacus. A Pocket Computer. Jesse Dilson. Illustrated by Angela Pozzi. St. Martin's, New York, 1968. 143 pp. \$3.95.

The Academic Revolution. Christopher Jencks and David Riesman. Doubleday, Garden City, N.Y., 1968. xx + 580 pp., illus. \$10.

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Advances in Magnetic Resonance. Vol. 3. John S. Waugh, Ed. Academic Press, New York, 1968. xiv + 320 pp., illus. \$15.

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Advances in Photochemistry. Vol. 5. W. Albert Noyes, Jr., George S. Hammond, and J. N. Pitts, Jr., Eds. Interscience (Wiley), New York, 1968. x + 400 pp., illus. \$17.

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(Continued on page 823)

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(Continued from page 777)

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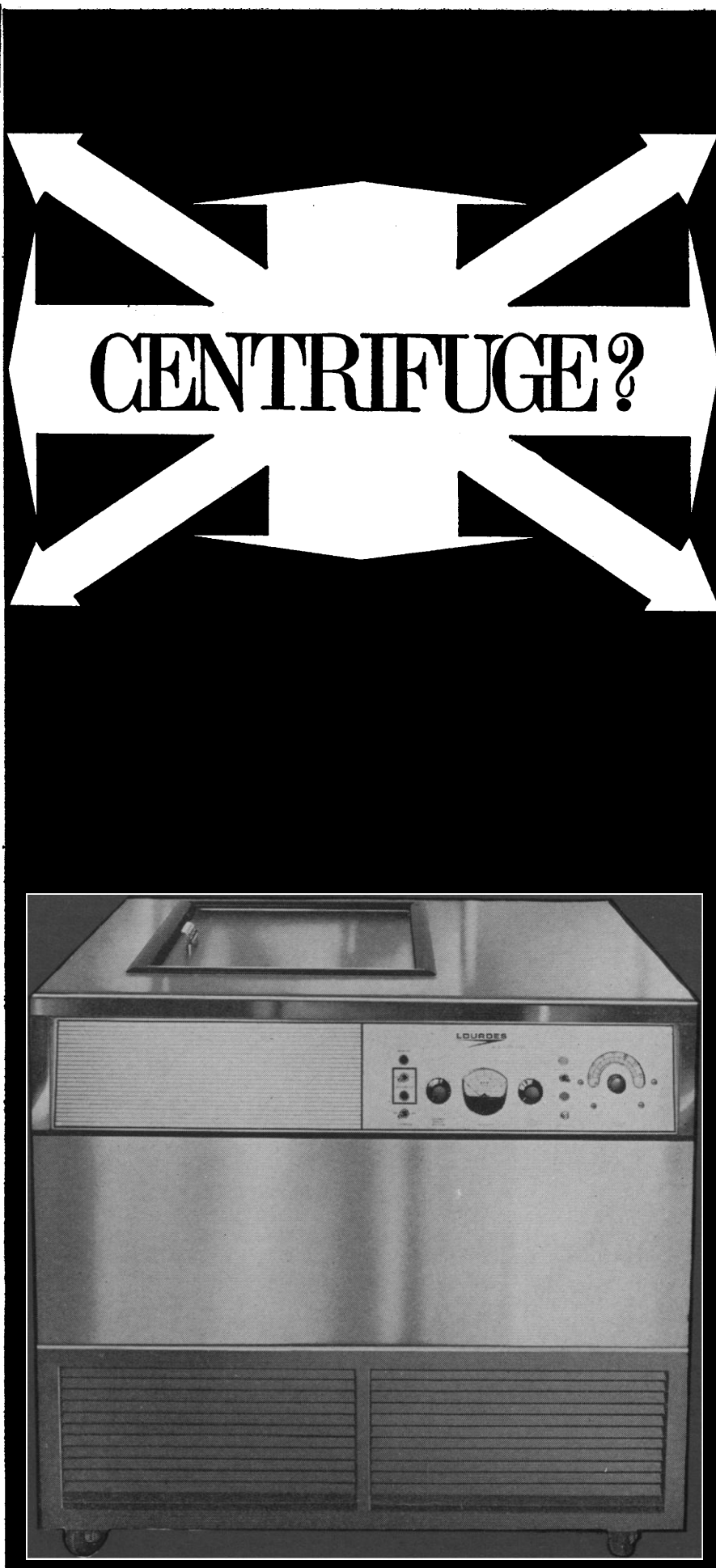
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Chemistry and Physics of Carbon. A



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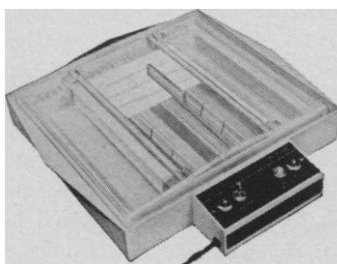
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Series of Advances. Vol. 3. Philip L. Walker, Jr., Ed. Dekker, New York, 1968. xii + 449 pp., illus. \$22.75.

Chemistry of Life Processes. Raymond P. Mariella and Rose Ann Blau. Harcourt, Brace and World, New York, 1968. x + 630 pp., illus. \$8.95.

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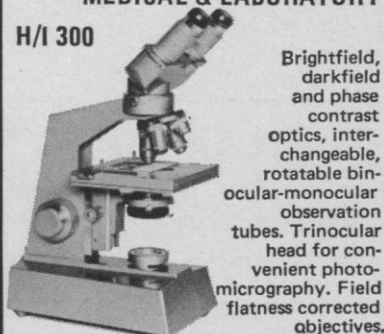


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The Geography of Air Transport. Kenneth R. Sealy. Aldine, Chicago, ed. 2, 1968. 198 pp., illus. Paper, \$2.45. University Library of Geography.

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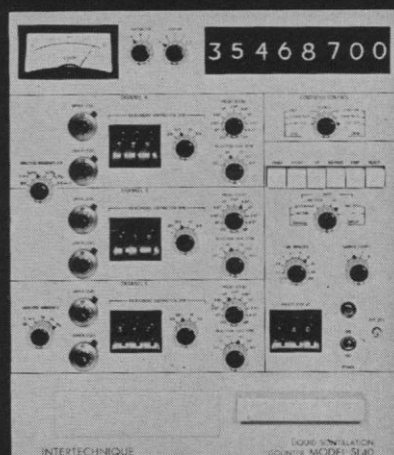
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Mathematics. The Alphabet of Science. Margaret F. Willerding and Ruth A. Hayward. Wiley, New York, 1968. xiv + 285 pp., illus. \$6.95.

McGraw-Hill Modern Men of Science. Vol. 2. Presented by the editors of the McGraw-Hill Encyclopedia of Science and Technology. McGraw-Hill, New York, 1968. xvi + 679 pp., illus. \$19.50; \$12.50 to subscribers to the encyclopedia.

Mechanisms of Drug Toxicity. Proceedings of the 3rd International Pharmacological Meeting, São Paulo, July 1966, vol. 4. H. Rašková, Ed. Pergamon, New York, 1968. viii + 104 pp., illus. \$9.

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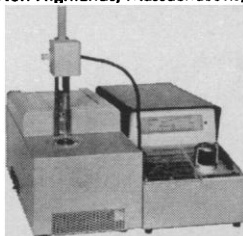
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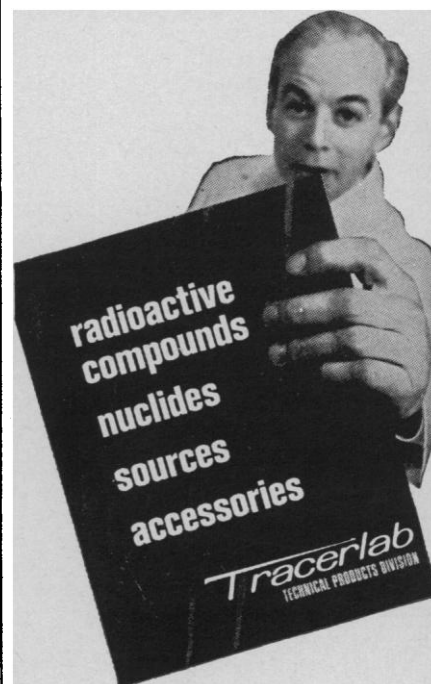
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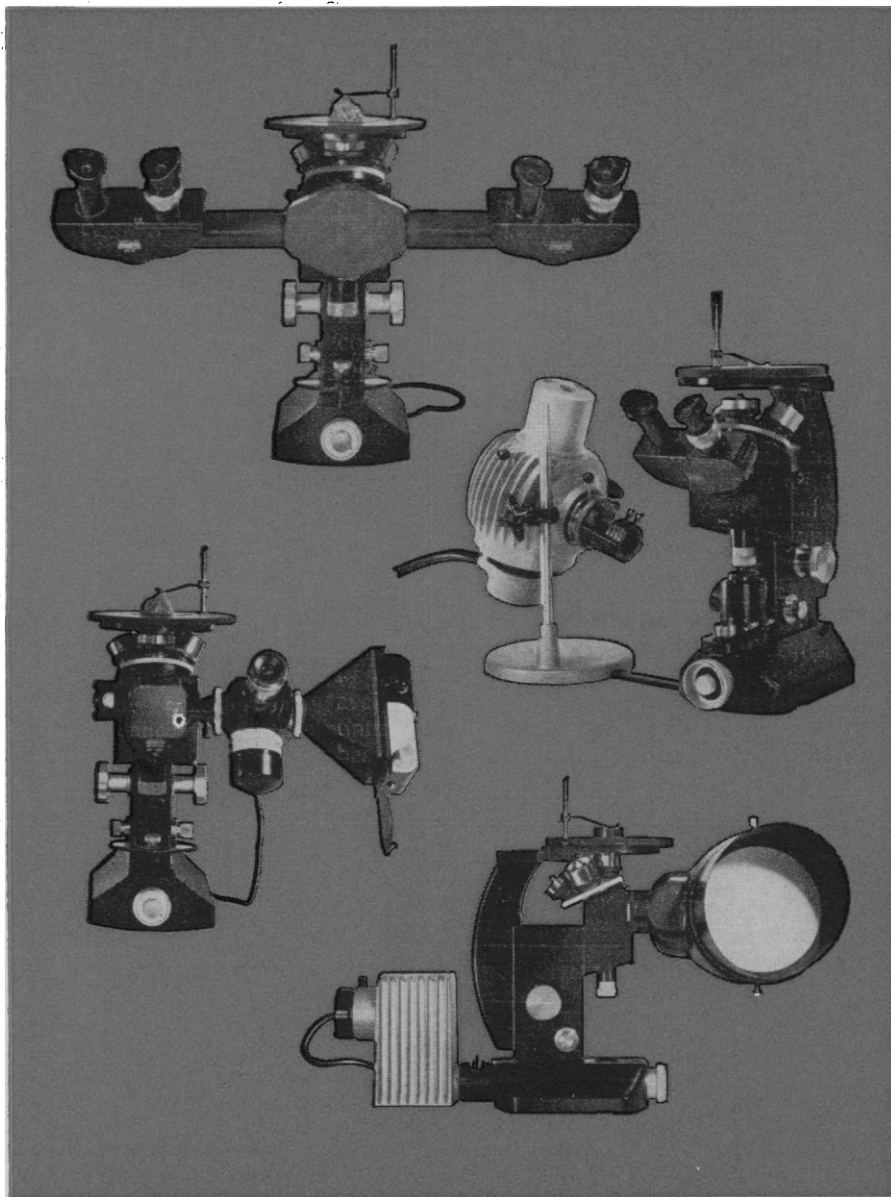
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