

# SCIENCE

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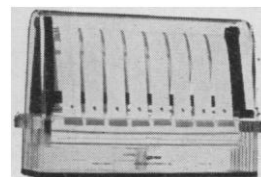
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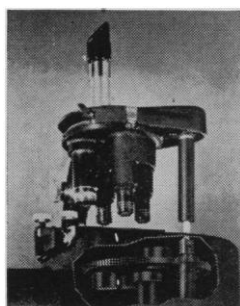
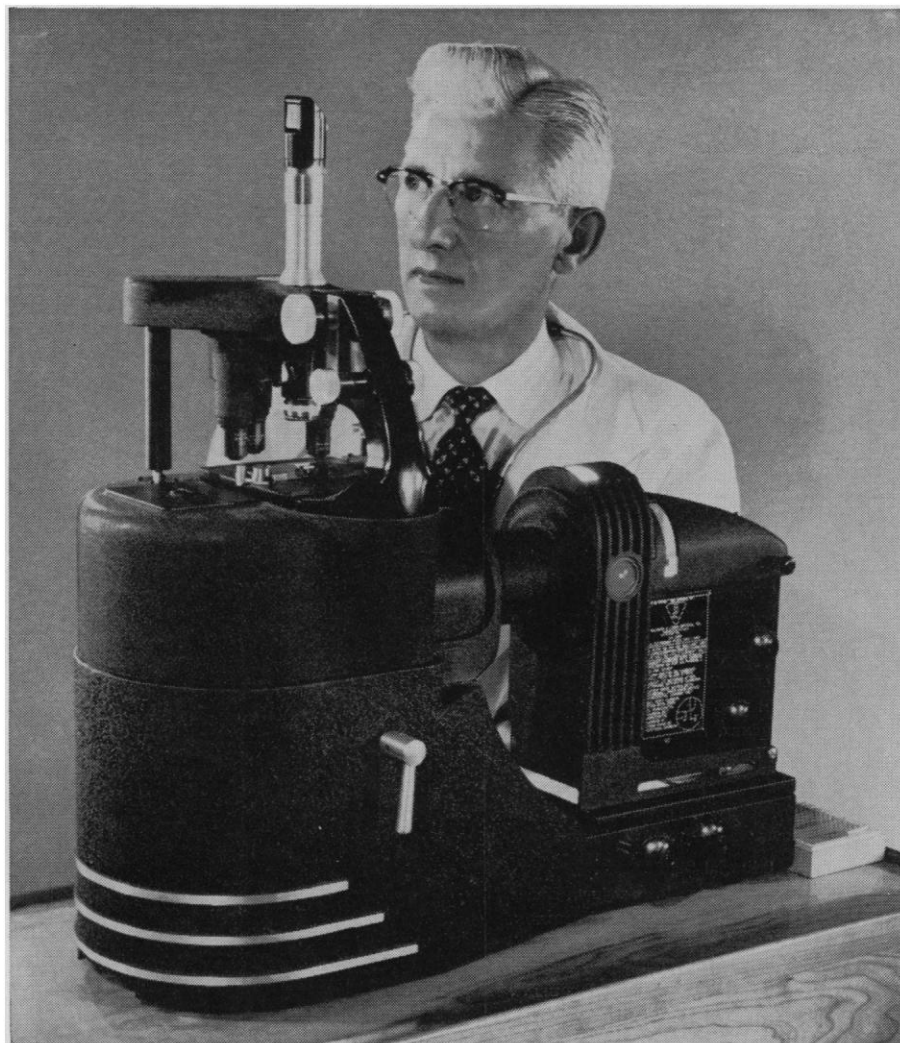
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sufficient derivation. This may disturb the reader who is not familiar with the requisite statistical theory. (iv) The theory of surfaces properly belongs in a single chapter, since experimentally it is a separate field of study and, also, since combining it with the ordinary theory of heterogeneous equilibrium tends to disrupt the continuity.

In conclusion, this monograph is better than other textbooks which cover similar material, and its weaknesses can be corrected readily by a competent instructor. *Thermodynamics* can therefore be warmly recommended as a textbook or reference work for a graduate course.

RICHARD J. BEARMAN

Yale University

## New Books

*Free Radicals in Solution.* Cheves Walling. Wiley, New York; Chapman & Hall, London, 1957. 640 pp. \$14.50.

*Die Toxoplasmosis.* Bei mensch und tier. O. Thalhammer. Maudrich, Vienna, Austria, 1957 (order from Intercontinental Medical Book Corp., New York 16). 307 pp. \$13.75.

*Introduction to Statistical Inference.* Jerome C. R. Li. Edwards, Ann Arbor, Mich., 1957. 566 pp. \$7.50.

*Analytical Design of Linear Feedback Controls.* George C. Newton, Jr., Leonard A. Gould, James F. Kaiser. Wiley, New York, 1957. 430 pp. \$12.

*Chemical Phase Theory.* A comprehensive treatise on the deduction, the applications and the limitations of the phase rule. J. Zernike. Kluwer's, Deventer, Netherlands. 509 pp. Fl. 70.

*Engineering Manpower, How to Improve Its Productivity.* A special report for management by graduate students at the Graduate School of Business Administration, Harvard University, Boston, 1957. Engineering Management Reports, P.O. Box 161, Cambridge, Mass., 1957. 162 pp. \$18.50.

*Handbook of Toxicology.* vol. II, *Antibiotics.* William S. Spector, Ed.; compiled by John N. Porter and Gilbert C. De Mello. Saunders, Philadelphia, 1957. 276 pp.

*Laboratory Guide for Elementary Plant Physiology.* Rufus H. Moore. Burgess, Minneapolis, Minn., 1957. 144 pp. \$3.

*The Liberal Arts College.* A chapter in American cultural history. George P. Schmidt. Rutgers University Press, New Brunswick, N.J., 1957. 319 pp. \$6.

*The Life and Work of Sigmund Freud.* vol. 3, *The Last Phase, 1919-1939.* Ernst Jones. Basic Books, New York, 1957. 553 pp. \$7.50.

*A Modern Introduction to Philosophy.* Readings from classical and contemporary sources. Paul Edwards and Arthur Pap, Eds. Free Press, Glencoe, Ill., 1957. 648 pp. \$6.50.

*Nuclear Chemical Engineering.* Manson Benedict and Thomas H. Pigford. McGraw-Hill, New York, 1957. 608 pp. \$9.50.

*Pharmaceutical Calculations.* Willis T. Bradley, Carroll B. Gustafson, Mitchell J. Stoklosa. Lea & Febiger, Philadelphia, ed. 3, 1957. 325 pp. \$4.50.

*Principles of Physical Science.* Francis T. Bonner and Melba Phillips. Addison-Wesley, Reading, Mass., 1957. 752 pp. \$7.50.

*A Short Course in Quantitative Analysis.* Hobart H. Willard, N. Howell Furman, Egbert K. Bacon. Van Nostrand, Princeton, N.J., ed. 2, 1957. 249 pp. \$4.25.

*Solid State Physics. Advances in Research and Application.* vol. 4. Frederick Seitz and David Turnbull, Eds. Academic Press, New York, 1957. 554 pp. \$12.

*Steroid Homeostasis, Hypophysis and Tumorigenesis.* Alexander Lipschutz. Heffer, Cambridge, England, 1957. 92 pp. 15s.

*Psychopathic Personalities.* Harold Palmer. Philosophical Library, New York, 1957. 179 pp. \$4.75.

*Systematic Organic Chemistry.* Theory and applications. Hugh C. Muldoon and Martin I. Blake. McGraw-Hill, New York, 1957. 836 pp. \$7.75.

*A Treatise on Photo-Elasticity.* E. G. Coker and L. N. G. Filon; revised by H. T. Jessop. Cambridge University Press, London, ed. 2, 1957. 755 pp. \$12.50.

*Annual Review of Physical Chemistry.* vol. 8. H. Eyring, Ed. Annual Reviews, Palo Alto, Calif., 1957. 534 pp. \$7.

*The Detection and Measurement of Infra-Red Radiation.* R. A. Smith, F. E. Jones, R. P. Chasmar. Clarendon Press, Oxford, England, 1957 (order from Oxford University Press, New York 11). 461 pp. \$11.20.

*Atoms at Your Service.* Henry A. Dunlap and Hans N. Tsch. Harper, New York, 1957. 178 pp. \$3.50.

*An Introduction to Fluid Mechanics and Heat Transfer.* With applications in chemical and mechanical process engineering. J. M. Kay. Cambridge University Press, Cambridge, England, 1957 (order from Cambridge University Press, New York 22). 325 pp. \$7.

*Behavior of Materials in the Earth's Crust.* Papers and discussion from the second annual Symposium of Rock Mechanics. Colorado School of Mines, 21-24 April 1957. Colorado School of Mines, Golden, 1957. 306 pp. \$2.

## Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to Science, but to the publisher or agency sponsoring the publication.)

*Acanthurus Randallii, a New Surgeon Fish from the Gulf of Mexico.* Bulletin of the Florida State Museum, vol. 2, No. 4. John C. Briggs and David K. Caldwell. 10 pp. \$0.25. *Two Pleistocene Mammalian Faunas from Alachua County, Florida.* vol. 2, No. 5. Robert S. Bader. 23 pp. \$0.45. *A Taxonomic Reappraisal of the Turtle Pseudemys Alabamensis Baur.* vol. 2, No. 3. Archie Carr and John W. Crenshaw, Jr. 20 pp. \$0.30. University of Florida, Gainesville, 1957.

*Accidents in Childhood.* Facts as a basis for prevention. Report of an advisory group. WHO Tech. Rept. Series No.

118. World Health Organization, Geneva, 1957. 40 pp. \$0.30.

*The Effects of the Sulfonylureas and Related Compounds in Experimental and Clinical Diabetes.* Annals, vol. 71. Rachmiel Levine, Conference Chairman and Consulting Ed. New York Academy of Sciences, New York, 1957. 293 pp. \$4.

*Fundamentals of Combustion of Gaseous Fuels.* A critical literature review. Research Bull. 15. S. A. Weil, R. T. Ellington, E. F. Searight, S. Hu. Institute of Gas Technology, Technology Center, Illinois Institute of Technology, Chicago 16, 1957. 64 pp. \$5.

*The Genus Fitchia (Compositae).* Pubs. in Botany, vol. 29, No. 1. Sherwin Carlquist. 145 pp. \$2.50. *Homing Behavior of California Rocky Shore Fishes.* Pubs. in Zoology, vol. 59, No. 7. George C. Williams. 36 pp. \$0.75. *The Interrelationships of the New and Old World Hystricomorph Rodents.* Pubs. in Zoology, vol. 56, No. 1. Stuart O. Landry, Jr. 119 pp. \$2.50. University of California Press, Berkeley, 1957.

*Laboratory Manual and Workbook in Anatomy and Physiology.* Caroline E. Stackpole and Lutie C. Leavell. Macmillan, New York, ed. 3, 1957. 326 pp. \$4.50.

*Late Mogollon Communities.* Four sites of the Tularosa phase, Western New Mexico. Fieldiana: Anthropology, vol. 49, No. 1. Paul S. Martin, John B. Rinaldo, Eloise R. Barter. 144 pp. \$4. *Marianas Prehistory.* Archaeological survey and excavations on Saipan, Tinian, and Rota. Fieldiana: Anthropology, vol. 48. Alexander Spoehr. 187 pp. \$4.50. Chicago Natural History Museum, Chicago, 1957.

*Papers Presented at Engineering Test Reactor Industrial Preview, Idaho Fall, Idaho, 2-3 October 1957.* In connection with design, construction, and operation of engineering test reactor, National Reactor Testing Station, Idaho, for the U.S. Atomic Energy Commission. Idaho Operations Office, U.S. Atomic Energy Commission; Phillips Petroleum Co., Atomic Energy Div.; Kaiser Engineers of H. J. Kaiser Co.; and General Electric Co., Atomic Power Equipment Dept. 12 papers.

*The Pelecaniform Characters of the Skeleton of the Shoe-Bill Stork, Balaeniceps Rex.* Bulletin of the British Museum (Natural History), Zoology, vol. 5, No. 3. Patricia A. Cottam. 24 pp. 8s. *A Revision of the Arhopala Group of Oriental Lycaenidae.* (Lepidoptera: Rhopalocera.) Bulletin, Entomology, vol. 5, No. 3. 57 pp. 15s. *A Revision of the Bruelia (Mallophaga) Species Infecting the Corvidae.* pt. II. Bulletin, Entomology, vol. 5, No. 4. M. Atiqur Rahman Ansari. 40 pp. 12s. *The Silver Fish and Firebrat.* Economic Leaflet, No. 3. 2 pp. 1d. British Museum (Natural History), London, 1957.

*Prevention of Rheumatic Fever.* Second report of the Expert Committee on Rheumatic Diseases. WHO Tech. Rept. Series No. 126. World Health Organization, Geneva, 1957. 27 pp. \$0.30.

*Professor Himadri Kumar Moorkerjee Memorial Volume.* Proceedings of the Zoological Society, India. Zoological Society, Calcutta, 1957. 396 pp. 50s.

# VENOMS

Edited by: **Eleanor E. Buckley**, Medical Department, Wyeth Laboratories; and **Nandor Porges**, Eastern Regional Research Laboratory of the U.S. Department of Agriculture, Philadelphia, Pennsylvania.

6 x 9 inches, 480 pages, 113 illustrations, index, clothbound, 1956.

Price \$9.50. AAAS Members' prepaid order price \$8.25.

A symposium volume of the American Association for the Advancement of Science.

The more than sixty scientific papers included in this volume were presented at the first International Conference on Venoms during the AAAS Meeting in Berkeley, California. The authorship spans the globe, and the coverage of all aspects of the problem is equally comprehensive.

E. R. Trethewie of Australia reports experimental studies on certain pharmacological antagonists used in an effort to prolong life, providing more time for therapeutic measures. B. W. Halstead of the College of Medical Evangelists in California covers present knowledge on poisonous fishes. H. A. Reid of Malaya describes clinical effects of the bite of the sea snake (*Enhydrina schistosa*) in three fatal cases. Giovanni Favilli of the University of Bologna, Italy, discusses spreading factors in animal parasites and venoms, and some properties of hyaluronidase. The last subject is also covered by Paul Boquet, of the Institut Pasteur, in Paris. B. R. Criley and associates, of the Wyeth Laboratories, Marietta, Pennsylvania, describe the development and standardization of a multivalent refined antivenom for the family *Crotalidae*. The final article by H. L. Keegan of the U.S. Army Medical Corps presents an invaluable list of all known antivenins available throughout the world for all types of poisonous bites, with information on producers, sources, indications, dosages, and other details. The random selection is only a small sample of the wealth of valuable material by outstanding world authorities.

This book covers: poisonous fishes and marine organisms, many species of venomous snakes, the Gila monster, toads, scorpions, spiders, caterpillars, wasps and other venom-bearing insects; hyaluronidase-like substances and other spreading factors in venoms; various chemical components of venoms, coagulant and anticoagulant factors, antigenic principles; various experimental and suggested clinical uses of venoms; clinical considerations such as mortality rates in various localities throughout the world; and treatment of many kinds of envenomation (by snakes, scorpions, spiders and other organisms). Included are new developments in serotherapy and types of supplementary medication (as cortisone, ACTH, antihistamines). The dangers of refrigeration for treatment of envenomation are discussed.

Physicians, pharmacologists, chemists, and zoologists will all find this volume an invaluable reference.

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## MICRO and MACROCOSM:

### notes on two new books — and homage to a classic

The phrase 'a long awaited text' is one readers of publishers' advertisements rightly treat with skepticism and the rejoinder 'awaited by whom?' In the case of Carl P. Swanson's *Cytology and Cytogenetics* (1957. 596 pp. Illus. Text price \$10.00) however, we can answer 'by all biologists interested in cells and cell structure' who (as Franz Schrader pointed out in his informative review in *Science*, 23 August, 1957) have not had a reassessment of cytogenetics available in English in the past 20 years.

Swanson brings together in integrated fashion all the findings of cellular morphology, behavior, physiology and biochemistry, which have been grouped under the general term "cytology", and then considers these data in their relation to inheritance and evolution.

Designed as a basic text for upper division and graduate courses in genetics, cytology, and evolution, Swanson's book should also serve as an invaluable reference for all biologist interested in the contributions of cytology and cytogenetics as a whole.

Less pioneering but equally comprehensive is *The Microbial World* (1957. 682 pp. Illus. Text price \$8.00) a book which Professor S. E. Luria of the University of Illinois called "probably the outstanding text in general microbiology that has appeared in this country."—an opinion that coincides with those of more than a hundred and fifty of his colleagues who have reviewed the book (and taken the time to write to us).

Written by Roger Y. Stanier, Michael Doudoroff, and Edward A. Adelberg, *The Microbial World* is suitable for all introductory courses in microbiology and bacteriology.

The ecological approach is stressed throughout the book, particularly in the sections on disease, in which the theme is the host-parasite relationship. A chapter on the dynamics of disease in populations is included.

This year marks the 15th anniversary of our publication of H. U. Sverdrup, Martin W. Johnson, and Richard H. Fleming's *The Oceans* (1942. 1087 pp. Illus. Text price \$12.50). The chances are that you are to some extent familiar with this book—but you may not be aware that it remains the *only* text in the English language that integrates all the sciences that form the broad field of oceanography.

*The Oceans* is an indispensable reference book for all who need facts about the oceans—and a treasurehouse of information for all who wish to know more about the waters that cover 70% of our globe.

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