

would assign them. One wishes that the editor had included some information on psychological testing procedures in the chapter on emotional disorders. Reports from psychologists frequently make reference to such procedures, and some knowledge of what the tests entail adds meaning to the findings reported.

The chapters on diseases of the kidney and on neoplasms are especially noteworthy because of the brief discussion at the end of each chapter of some of the broader implications of the disease entities presented.

In this regard, the ideal textbook is yet to be written owing to the welter of unsolved social problems created by the ravages of disease. Awareness of the concept of rehabilitation has not yet filtered into the general medical consciousness, where it belongs as properly as it does within the minds of those who work in the specific specialty. When this has occurred and we have accumulated more knowledge in the never-never land between disease and restoration to the community, many of our current textbooks will need to be rewritten.

JOHN E. SARNO, JR.
Institute of Physical Medicine and Rehabilitation, New York

Organoboron Chemistry

Organoboron chemistry has become a popular field in recent years, and one of the areas that has attracted most attention has been concerned with compounds containing boron-nitrogen bonds. A large variety of novel heterocyclic systems of this kind have been prepared, many of which show unusual and interesting properties.

The present book, **Boron-Nitrogen Compounds** (Springer, Berlin; Academic Press, New York, 1965. 184 pp., \$6.75), by Kurt Niedenzu and John W. Dawson, provides a concise but comprehensive review of this field. After a brief introduction dealing with the history and nomenclature of organoboron chemistry, there are chapters discussing amineboranes and other analogous coordination compounds, aminoboranes (that is, amides of boric, boronic, and borinic acids), the borazines, other heterocyclics containing rings composed entirely of boron and nitrogen, and heterocyclic compounds containing rings with carbon, boron, and nitrogen. The last chap-

ter discusses the structure of boron nitride, and there is an appendix dealing with the B^{11} -nuclear magnetic resonance spectra of boron compounds.

This is an excellent book. It gives a clear, well-documented, and timely account of the subject, covering both the experimental facts and their theoretical implications; it is also pleasantly free from errors and irrelevant details and is very well produced. The authors obviously have a real enthusiasm for their subject, and they have done a service to the field and to their fellow chemists by producing such a good and readable account. This book should be in every library, and on the bookshelves of all chemists who are in any way interested in boron chemistry.

MICHAEL J. S. DEWAR
*Department of Chemistry,
University of Texas, Austin*

Natural History

This volume, small enough to be taken easily into the field, is designed primarily for the nonbotanist with an interest in the identification and natural history of the 56 species of cone-bearing trees that are indigenous to the Pacific Coast states. The fact that **Cone-Bearing Trees of the Pacific Coast** (Pacific Books, Palo Alto, Calif., 1965. 231 pp., \$4.95) is now in its seventh printing (it was first published in 1942) is testimony to its continued popularity.

The body of the text is prefaced by more than 50 pages of introductory material, with sections devoted to tree ring analysis, "inspirational trees," and tree ring studies of bristlecone pines, which have been added, in the order listed, with the fifth, sixth, and seventh printings. In the main portion of the book, a full page of illustrations and a page of descriptive information are devoted to almost every species. A "Needle Key," an "Elevation Key," and a "Geographical Key" are included to provide short-cuts in the identification process. Technical vocabulary is held to a minimum throughout the book.

The descriptive material is conveniently arranged, concise, and generally accurate. The direct comparisons of closely similar species, sometimes given in tabular form, are particularly helpful. The illustrations are highly appropriate and include both habit photographs and detailed drawings. On the

other hand, the "keys" to identification are less satisfactory. Both the needle key and the elevation key provide only limited simplification and contain a number of minor errors. There are serious inaccuracies in portions of the geographical key—for example, at least six of the 26 species listed for the district that includes most of Southern California do not in fact occur there, while one species that does occur is not listed.

The supplementary material on tree ring analysis and age determination of bristlecone pines, while highly interesting, is incidental to the primary purpose of the book, and perhaps should be made the subject of a separate volume. The section on "inspirational trees" is a mixture of anthropomorphic biology and personal philosophy, which some readers will probably appreciate and others will find distasteful.

Despite these shortcomings, the very apt species descriptions, the helpful comparisons, and the fine illustrations combine to make this little volume a valuable addition to the amateur naturalist's library.

J. R. HALLER
*Department of Biological Sciences,
University of California, Santa Barbara*

New Books

Biological and Medical Sciences

Advances in Acarology. vol. 21 John A. Naegele, Ed. Cornell Univ. Press, Ithaca, N.Y., 1965. 184 pp. Illus. \$9.75. Six papers: "Acarology in the U.S.S.R." by Nina G. Bregetova; "Principles of chemical control of phytophagous mites" by L. R. Jeppson; "Resistance in the Acarina: Ticks" by G. B. Whitehead; "Resistance in the Acarina: Mites" by W. Helle; "A review of the genera of the family Tydeidae (Acarina)" by Edward W. Baker; and "A review of the family Rhyncoptidae Lawrence, parasitic on porcupines and monkeys" by A. Fain.

Advances in Applied Microbiology. vol. 7. Wayne W. Umbreit, Ed. Academic Press, New York, 1965. 415 pp. Illus. \$14. Ten papers: "Microbial carotenogenesis" by Alex Ciegler; "Biodegradation: Problems of molecular recalcitrance and microbial fallibility" by M. Alexander; "Cold sterilization techniques" by John B. Opfell and Curtis E. Miller; "Microbial production of metal-organic compounds and complexes" by D. Perlman; "Development of coding schemes for microbial taxonomy" by S. T. Cowan; "Effects of microbes on germfree animals" by Thomas D. Luckey; "Uses and products of yeasts and yeast-like fungi" by Walter J. Nickerson and

(Continued on page 609)

NEW BOOKS

(Continued from page 561)

Robert G. Brown; "Microbial amylases" by Walter W. Windish and Nagesh S. Mhatre; "The microbiology of freeze-dried foods" by Gerald J. Silverman and Samuel A. Goldblith; and "Low-temperature microbiology" by Judith Farrell and A. H. Rose.

Advances in Chemotherapy. vol. 2. Abraham Goldin, F. Hawking, and Robert J. Schnitzer, Eds. Academic Press, New York, 1965. 342 pp. Illus. \$13. Six papers: "Systemic control of plant nematodes" by F. C. Peacock and J. E. Peachey; "The cephalosporins" by E. P. Abraham and G. G. F. Newton; "Metabolic basis for the actions of analogs of purines and pyrimidines" by Gertrude B. Elion and George H. Hitchings; "Olivomycin, mithramycin, chromomycin: Three related cancerostatic antibiotics" by G. F. Gause; "Recent advances in the chemotherapy of tuberculosis" by Wallace Fox; and "Progress and perspectives in the chemotherapy of acute leukemia" by Emil Frei, III, and Emil J. Freireich.

Basic Physiology and Anatomy. Norman Burke Taylor. Putnam, New York, 1965. 666 pp. Illus. \$6.95 (*Text-Aid*[™], for use with *Basic Physiology and Anatomy*, by Richard H. Miller, 182 pp. \$4.95).

Biochemical Approaches to Cancer. Eric Reid. Pergamon, New York, 1965. 210 pp. Illus. Paper, \$3.95. The Commonwealth and International Library.

Biomedical Telemetry. Cesar A. Caceres. Ed. Academic Press, New York, 1965. 410 pp. Illus. \$15. Fifteen papers.

Cancer Chemotherapy. L. F. Larionov. Translated from the Russian edition (Moscow, 1962) by A. Crozy. W. J. P. Neish, Translation Ed. Pergamon, New York, 1965. 564 pp. Illus. \$22.50.

Computers and the Life Sciences. Theodor D. Sterling and Seymour V. Pollack. Columbia Univ. Press, New York, 1965. 352 pp. Illus. \$12.50. This book was reviewed by J. Lederberg in *Science* 150, 1576 (1965).

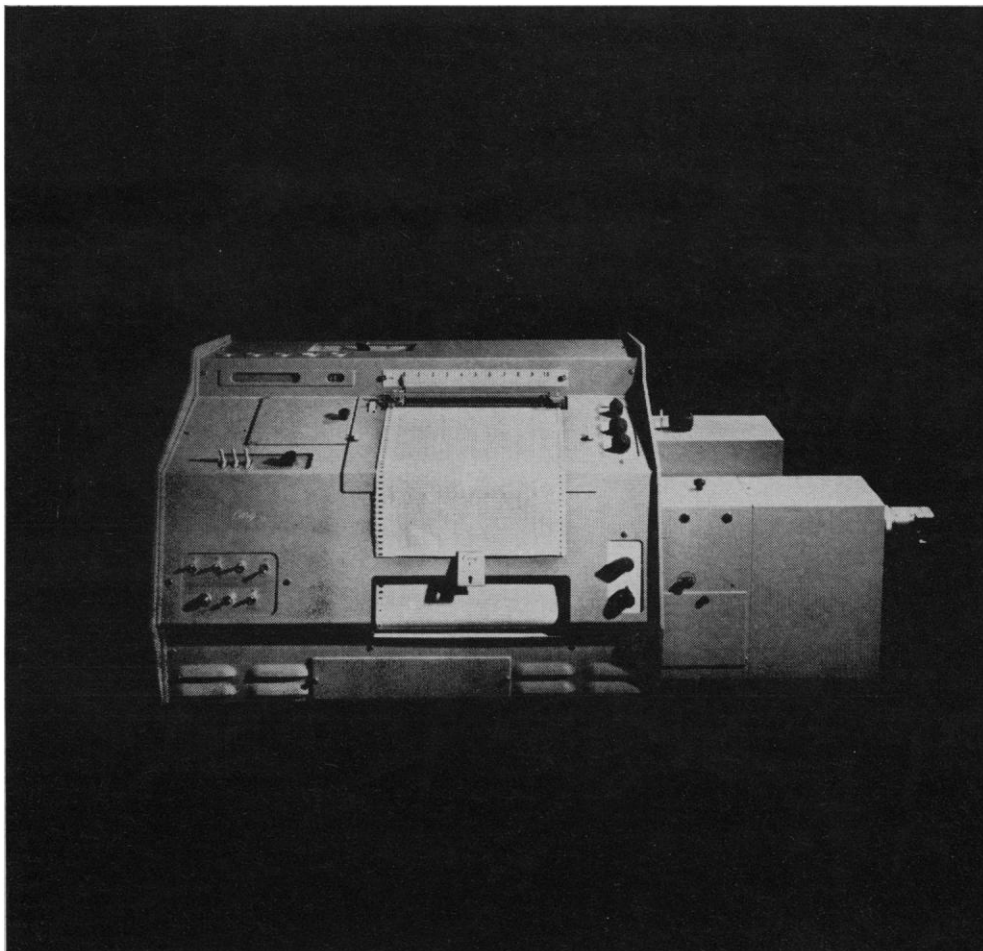
Contributions to the Psychobiology of Aging. Robert Kastenbaum, Ed. Springer, New York, 1965. 127 pp. Illus. Paper, \$3. Nine papers: "Engrossment and perspective in later life: A developmental-field approach" by Robert Kastenbaum; "Engagement and disengagement: Toward a theory of adult development" by William E. Henry; "The interpersonal theory of adjustment" by Walter G. Klopfer; "The import of learning theory for gerontology" by John E. Anderson, Jr.; "Aging theory: Cellular and extracellular modalities" by Harry Sobel; "The somatic mutation theory of aging" by Howard J. Curtis; "Immunology and aging" by Roy L. Walford; "Chromosomal changes and aging" by Lissy F. Jarvik; and "On longevity regarded as an organized behavior: The role of brain structure" by George A. Sacher.

Evolution and Systematics. Otto T. Solbrig. Macmillan, New York, 1966. 128 pp. Illus. Paper, \$1.95. Current Concepts in Biology Series, edited by Norman H. Giles, Walter Kenworthy, and John G. Torrey.

General Pathology: The Biological Aspects of Disease. J. F. A. McManus.

4 FEBRUARY 1966

AN INVESTMENT IN QUALITY CARY Model 15 UV-Vis Spectrophotometer



See Cary Instruments at the Pittsburgh Conference or send for Data File E403-26

Technical personnel are a large investment. Model 15's advanced design prevents their capabilities being instrument-limited. ■ **Reliability is an investment.** Model 15's quality and craftsmanship minimize expensive down-time. ■ **Versatility is an investment.** Model 15 has ten different accessories which mount in seconds into spacious sample compartment (5¼"x5¼"x5¼") to offer ready adaptability to a wide range of problems. ■ **Performance is an investment.** Model 15's precision and repeatability meet tomorrow's needs as well as satisfying those of today. ■ **Make an investment in quality** with a CARY 15. Priced under \$12,000.

APPLIED PHYSICS CORPORATION
2724 SOUTH PECK ROAD • MONROVIA, CALIFORNIA

Cary
INSTRUMENTS

Raman UV/IR Recording Spectrophotometers • Vibrating Reed Electrometers

Year Book Medical Publishers, Chicago, 1966. 755 pp. Illus. \$16.

Genetics of the Norway Rat. Roy Robinson. Pergamon, New York, 1965. 814 pp. Illus. \$30. International Series of Monographs in Pure and Applied Biology.

International Review of Neurobiology. vol. 8. Carl C. Pfeiffer and John R. Smythies, Eds. Academic Press, New York, 1965. 346 pp. Illus. \$12.50. Seven papers: "A morphologic concept of the limbic lobe" by Lowell E. White, Jr.; "The anatomophysiological basis of somatosensory discrimination" by David Bowsher, with Denise Albe-Fessard; "Drug action on the electrical activity of the hippocampus" by Charles Stumpf; "Effects of drugs on learning and memory" by James L. McGaugh and Lewis F. Petrino-vich; "Biogenic amines in mental illness" by Günter G. Brune; "The evolution of the butyrophenones, haloperidol, and trifluoperidol, from meperidine-like 4-phenyl-piperidines" by Paul A. J. Janssen; and "Amplitude analysis of the electroencephalogram (review of the information obtained with the integrative method)" by Leonide Goldstein and Raymond A. Beck.

Kurzes Lehrbuch der Pharmakologie. G. Kuschinsky and H. Lüllmann. Thieme, Stuttgart, Germany, ed. 2, 1966. 353 pp. Illus. DM. 33.

Living Tissues: An Introduction to Functional Histology. R. L. Holmes. Pergamon, New York, 1965. 154 pp. Illus. Paper, \$2.95. Commonwealth and International Library.

An Outline of Radiographic Findings in Multiple-System Disease. John H. Simon-ton and Robert C. Jamison. Thomas, Springfield, Ill., 1965. 275 pp. \$11.75.

Ozaena: A Manifestation of Iron Deficiency. Ivan Bernát. Translated by P. Fenyő. Esmé Hadfield, Translation Ed. Pergamon, New York, 1965. 126 pp. Illus. \$5.

Progress in Nucleic Acid Research and Molecular Biology. vol. 4. J. N. Davidson and Waldo E. Cohn, Ed. Academic Press, New York, 1965. 310 pp. Illus. \$10. Eight papers: "Fluorinated pyrimidines" by Charles Heidelberger; "Genetic recombination in bacteriophage" by E. Volkin; "DNA polymerases from mammalian cells" by H. M. Keir; "The evolution of base sequences in polynucleotides" by B. J. McCarthy; "Biosynthesis of ribosomes in bacterial cells" by Syozo Osawa; "5-hydroxymethylpyrimidines and their derivatives" by T. L. V. Ulbricht; "Amino acid esters of RNA, nucleosides, and related compounds" by H. G. Zachau and H. Feldmann; and "Uptake of DNA by living cells" by L. Ledoux.

Splenoportography. Diagnostic phlebography of the portal venous system. Lucien Leger. Thomas, Springfield, Ill., 1966. 131 pp. Illus. \$8.50. American Lectures in Living Chemistry Series, edited by I. Newton Kugelmass.

Traité de Zoologie: Anatomie, Systématique, Biologie. vol. 4, pts. 2 and 3. pt. 2, Némathelminthes (Nematodes) (740 pp.); pt. 3, Némathelminthes (Nematodes, Gordiacés) Rotifères, Gastrotriches, Kinorhynques (774 pp.). Pierre-P. Grassé. Masson, Paris, 1965. Illus. Paper, F. 320; cloth, F. 344 set.

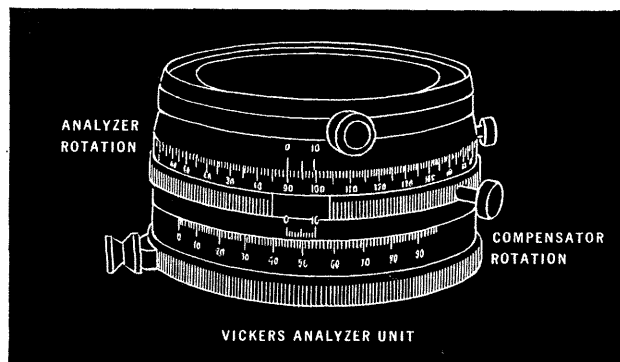
4 FEBRUARY 1966

VICKERS Excellence... in Polarizing Microscopes

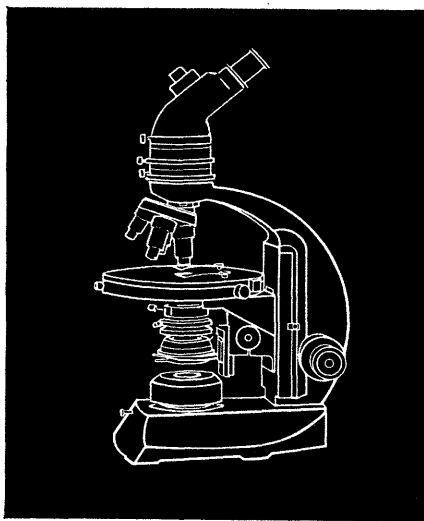
gives you significant new performance advantages in chemical, mineralogical or petrographic studies. Here are a few particular examples:

ANALYSIS OF POLARIZED LIGHT—no other polarizing microscope gives you facilities as complete as those designed into the Vickers for the quantitative analysis of polarized light. The swing-out polarizer is graduated and rotatable through 360°. The analyzer unit is rotatable through 180°.

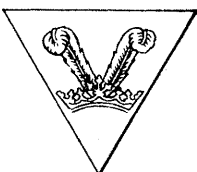
Compensators may be rotated through 90° and provision is made for rotation either independently or linked with analyzer rotation to a precision of 0.1°. With this facility you can, for example rotate a simple mica compensator below the



analyzer, eliminating the necessity for an expensive insertable "elliptic compensator". ▼ Compensators and graduated wedges may be inserted and read either in the analyzer unit, or just above the objective back lens (where graduations on a quartz wedge can be read over the interference figure) or, by using the Wright slotted ocular, above the Bertrand Lens. In this position compensators can be used equally well on the specimen image or its interference figure. In a few words, the Vickers design enables the most precise and convenient execution of all analyses, from the simplest to the most sophisticated. ▼ **MICROSCOPE STAGE**—the new ball-bearing stage is built to a new standard of smooth, easy motion, stability and precision operation. This is achieved by a unique manufacturing method involving preparation of the ball-race bearing surfaces by optical lens



working techniques. **FLAT FIELD PERFORMANCE**—the Microplan flat field objectives can be supplied strain-free in magnifications of 10x, 20x and 40x. This is the widest available range of strain-free, specially corrected objectives, giving you wide, absolutely flat fields of view from 50x to 700x. ▼ These examples are only examples—there is so much more which deserves your consideration,—other optical and mechanical design features, the wide range of models for research and routine applications, the unequalled selection of special accessory equipment. Our catalog tells the whole story. May we send it to you?



Member of the Vickers Group

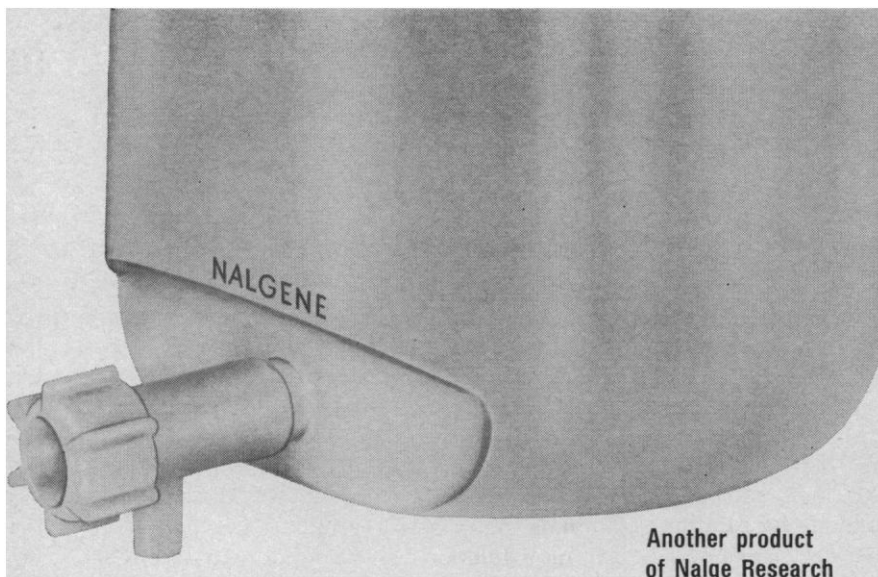
VICKERS

INSTRUMENTS, INCORPORATED

Successors to Cooke, Troughton & Simms, Inc.

15 WAITE COURT, MALDEN, MASS. 02148 • (617) 324-6666

IN CANADA: 1570 MIDLAND AVE., SCARBOROUGH, ONTARIO • (416) 751-4360



A NEW CONCEPT IN CARBOY DESIGN



It's the new Nalgene® Aspirator Carboy with Spigot! This unique, new design incorporates the threaded boss as an integral part of the carboy. Greater strength is assured... possibility of leakage is eliminated! This sophisticated new blow molding technique is a result of Nalge's advanced molding skills. The Nalgene Aspirator Carboy provides the safest and most efficient tool for handling, storing and dispensing corrosive liquids, as well as distilled water.

Available in 1, 2, 5, 6½ and 13 gallon sizes. Recessed handgrips or shoulder-mounted carrying handles on three largest sizes. Assortable with other Nalgene Labware for maximum discounts. Order from your lab supply dealer or write for our new 1966 Nalgene Labware Catalog. Department 2726, The Nalge Co., Inc., Rochester, New York 14602.

 **NALGENE
LABWARE**
Leader in quality plastic labware since 1949

Conference and Symposium Reports

The Application of Neuroleptanalgesia in Anaesthetic and Other Practice. Proceedings, First British Symposium (Edinburgh), June 1964. N. W. Shephard, Ed. Pergamon, New York, 1965. 106 pp. Illus. \$8.50. Six papers: "The chemistry and pharmacology of droperidol, phenoperidine, and fentanyl" by N. W. Shephard; "The use of neuroleptanalgesia in neurosurgery" by A. S. Brown; "Some experiences with phenoperidine and droperidol in general anaesthesia" by G. Lavery Evans and B. A. Poley; "The use of droperidol and fentanyl for anaesthesia during operation for ultrasonic destruction of the labyrinth in Meniere's disease" by M. C. Holderness and P. J. F. Baskett; "Droperidol in obstetric practice" by S. W. McGowan; and "Neuroleptanalgesia during and after open-heart surgery" by C. Prys Roberts.

Autoimmunity. A symposium, 5th Congress, International Academy of Pathology (London), 1964. R. W. Baldwin and J. H. Humphrey, Eds. Davis, Philadelphia, 1965. 108 pp. Illus. Paper, \$4.50. Eleven papers: "Methods used in the investigation of autoimmune diseases" by I. M. Roitt and D. Doniach; "Studies in rheumatic fever: IV; Concepts of the pathogenomic tissue responses" by Bernard M. Wagner; "Autoimmunity and rheumatoid arthritis" by L. E. Glynn; "Autoimmunity in Sjögren's syndrome" by J. R. Anderson, J. S. Beck, K. Bloch, W. W. Buchanan, and J. J. Bunim; "Immunological aspects of systemic lupus erythematosus" by E. J. Holborow; "Autoimmune thyroid disease" by D. Doniach and I. M. Roitt; "Serological aspects of the autoimmune haemolytic anaemia" by Sheila M. Worledge; "Some clinical aspects of autoimmune liver disease" by A. E. A. Read; "Immunological aspects of pernicious anaemia" by W. J. Irvine; "Autoantibodies in ulcerative colitis and their production in rabbits by the injection of foreign gut or bacteria" by Geoffrey L. Asherson; and "The thymus and autoimmunity" by Delphine M. V. Parrott and June East.

Forms of Water in Biologic Systems (*Ann. N.Y. Acad. Sci.* 125). Harold E. Whipple, Ed. New York Academy of Sciences, New York, 1965. 524 pp. Illus. Paper, \$10. Twenty-eight papers presented at a conference held in October 1964.

Microbiology and Soil Fertility. A symposium (Corvallis, Ore.). C. M. Gilmour and O. N. Allen, Eds. Oregon State Univ. Press, Corvallis, 1965. 176 pp. Illus. \$4.50. Seven papers presented at the 25th annual biology colloquium: "Sites of nutrient exchange in soils" by C. D. Moodie; "Mineralization and immobilization of soil nutrients" by Howard Lees; "The cycling of carbon and nitrogen in the biosphere" by C. C. Delwiche; "The characterization of soil humus" by F. E. Broadbent; "Nonleguminous plant symbiosis" by Ethel K. Allen and O. N. Allen; "The rhizobium-legume association" by J. C. Burton; and "Interaction of higher plants and soil microorganisms" by M. I. Timonin.

Mineral Processing. Proceedings, Sixth International Congress (Cannes), 1963. A. Roberts, Ed. Pergamon, New York, 1965. 752 pp. Illus. \$45. Fifty papers.