

ance and maternity benefits. For the first time, a routine contribution to medical research was offered (one penny per insured person). The Act was greatly modified and increased in coverage in subsequent years.

It is entertaining and instructive to read this careful study in the light of our present initiation into Medicare. The excellent series of articles on the events leading to the passage of the Medicare bill published in July of this year in the *New Yorker* offers an interesting contrast to the material in this book.

DANA W. ATCHLEY

Harkness Pavilion-Presbyterian
Hospital, New York 32, New York

Anaerobic Microorganisms

André Prévot's *Manuel de Classification et de Détermination des Bactéries Anaérobies* has been an essential reference book for microbiologists ever since the first edition came out during World War II. The second French edition of 1948 and the third of 1957 incorporated changes rendered necessary by work carried on in the intervening years. The first American edition of **Manual for the Classification and Determination of the Anaerobic Bacteria** (Victorien Fredette, Transl. Lea and Febiger, Philadelphia, 1966. 402 pp., \$15), which has just been published, is primarily a translation of the third French edition but incorporates changes in taxonomic arrangement. It includes 50 genera and about 500 species, 56 of which are new.

The fundamental advantages of Prévot's system of classification of the anaerobic bacteria are retained. This unified approach to all of the obligately anaerobic bacteria offers advantages to the microbiologist seeking to identify an unknown organism, and the use of only morphological characteristics to designate genera allows any strain to be placed within a genus. This feature is most appealing to the inexperienced worker, for there is a place for every organism; Prévot's strict adherence to the rules of nomenclature is likely to appeal to the classical taxonomist. That Prévot's system of classification has filled some real needs is shown by the increasing number of workers who use it, particularly for the non-spore-forming rods, the group that gives the most trouble and has had the least critical taxonomic work.

Nevertheless, this scheme of classification is not without difficulties, for while it is simple, application is not always easy. Closer attention than usual must be given to details of technique, for a minor variation in procedure or a slight misinterpretation of results may result in the selection of an incorrect genus. Also, daily observation and measurement, for several weeks, may be necessary to determine in which of two genera a strain should be placed.

Although genera in this system are characterized only on morphological characteristics, subgenera are established by several criteria. Some subgenera are established on the basis of physiological properties, others on the basis of pathologic changes produced in laboratory animals. Species differentiation is based on gas production, colony shape and color, nutritional requirements, and the classical culture characteristics long used by the microbiologist with any system of classification.

There have been many minor but few major changes from the third French edition. Two genera, *Fusocillus* and *Sphaerocillus*, have been removed, with the species formerly listed in *Fusocillus* having been transferred to *Zuberella*. The species formerly listed in *Sphaerocillus* have disappeared entirely. Some desirable changes have not been made. For instance, the clear establishment by recent workers of four distinct species in *Actinomyces* (*Actinobacterium*)—*A. israelii*, *A. naeslundii*, *A. eriksonii*, and *A. bovis*—has not been recognized.

Like almost all books, the *Manual* has its flaws. The publishers are to be complimented on producing a well-made book printed in highly legible type, well bound, and quite suitable for constant use in the laboratory. It is unfortunate, however, that careless proofreading has resulted in so many errors. The translation is exact but tends to be literal; for example "this genus groups presently 15 species" and "To revitalize the pathogenicity, non-specific agents must alter the host's tissues." One also occasionally finds a puzzling statement such as that concerning *Cillobacterium endocarditis*, "The sterile filterate [sic] kills mice (intravenous injection) at 1 to 20 ml.," a massive dose for an animal that usually weighs between 20 and 30 grams. There are a few inconsistencies such as the statement in the preface that "*Fusiformis* cannot be considered as

autonomous any longer but a subgenus of *Sphaerophorus* which brings together all the species with pointed ends," although in the text *Fusiformis* is listed as a valid genus in its own right with three former species having been transferred to *Ristella*.

Although few workers with the anaerobes will agree with every detail of this system of classification or with every species description they will, nevertheless, appreciate that this manual is the only book that endeavors to treat all the anaerobic bacteria by a single system, and that only a microbiologist with Prévot's decades of experience could have written it. It will find a place on the reference shelf of every laboratory concerned with the anaerobes and will undoubtedly fulfill the hope of the author "to bring closer together the taxonomic concepts of French and American bacteriologists."

LOUIS DS. SMITH

Department of Botany and
Microbiology, Montana State
University, Bozeman

New Books

General

The Adventure of Man: His Evolution from Prehistory to Civilization. Arthur S. Gregor. Macmillan, New York, 1966. 192 pp. Illus. \$4.50 (juvenile).

Ancient Oaxaca: Discoveries in Mexican Archeology and History. John Paddock, Ed. Stanford Univ. Press, Stanford, Calif., 1966. 432 pp. Illus. \$18.50. Contributions by Ignacio Bernal, Alfonso Caso, Robert Chadwick, Howard F. Cline, Wigberto Jiménez Moreno, Howard Leigh, John Paddock, Donald Robertson, and Charles R. Wicke.

Ancient Peruvian Ceramics: The Nathan Cummings Collection. Alan R. Sawyer. New York Graphic Soc., Greenwich, Conn., 1966. 144 pp. Illus. \$8.50.

John James Audubon. Alexander B. Adams. Putnam, New York, 1966. 510 pp. Illus. \$7.95.

Behind the Dim Unknown. John Clover Monsma, Ed. Putnam, New York, 1966. 256 pp. \$4.95. Contributors are Russell C. Artist, Donald G. Baker, Paul G. Bartels, John A. Buehler, Wilbur L. Bullock, Clifford L. Burdick, Leonard F. Burkhardt, Ralph F. Coleman, Lion F. Gardiner, Frederick H. Giles, Duane T. Gish, Terry F. Godlove, John J. Grebe, Dean Owen Harper, H. Harold Hartzler, George F. Howe, O. Carroll Karkalits, M. Joseph Klingensmith, William G. Pollard, Dwight L. Randall, Harold L. Slusher, William H. Van de Born, Laurence C. Walker, Kurt Weiss, Albert M. Winchester, and Merlin Wayne Zook.

(Continued on page 1559)

NEW BOOKS

(Continued from page 1517)

Being Mentally Ill: A Sociological Theory. Thomas J. Scheff. Aldine, Chicago, 1966. 222 pp. Illus. \$5.75.

Jac. Berzelius: His Life and Work. J. Erik Jorpes. Translated from the Swedish manuscript by Barbara Steele. Almqvist and Wiksell, Stockholm, 1966. 156 pp. Illus.

A Bibliography in Neuropsychology: Review and Books 1960-1965. Prepared by Richard T. Louttit. U.S. Department of Health, Education, and Welfare, Natl. Institutes of Health, Bethesda, Md., 1966. 28 pp. Paper.

The Birth of Language: The Case History of a Non-verbal Child. Shulamith Kastein and Barbara Trace. Thomas, Springfield, Ill., 1966. 192 pp. Illus. \$6.75.

Catalogue of Technical and Scientific Films. Edited by the Film Section of the Information Service of OECD. Organisation for Economic Co-operation and Development, Paris, 1966. 355 pp. Contains a section on film data and description, a title index, a subject index, and a list of national film centers in various countries; lists over 4500 films.

The Cautionary Scientists: Priestley, Lavoisier, and the Founding of Modern Chemistry. Kenneth S. Davis. Putnam, New York, 1966. 256 pp. Illus. \$5.75.

Civil War Medicine. Stewart Brooks. Thomas, Springfield, Ill., 1966. 160 pp. Illus. \$6.

Climates of the World and Their Agricultural Potentialities. J. Papadakis. The Author, Av. Cordoba 4564, Buenos Aires, Argentina, 1966. 184 pp. Illus. Paper.

Clinical Epidemiology. John R. Paul. Univ. of Chicago Press, Chicago, ed. 2, 1966. 325 pp. Illus. \$7.50.

Communication Switching Systems. Murray Rubin and C. E. Haller. Reinhold, New York, 1966. 400 pp. Illus. \$16.50.

Ecuador. Betty J. Meggers. Praeger, New York, 1966. 220 pp. Illus. \$7.50.

The Education of Catholic Americans. Andrew M. Greeley and Peter H. Rossi. Aldine, Chicago, 1966. 390 pp. Illus. \$8.95.

Electronics: A Bibliographical Guide. vol. 2. C. K. Moore and K. J. Spencer. Plenum Press, New York, 1965. 385 pp. \$18. Covers the literature between 1959 and 1964.

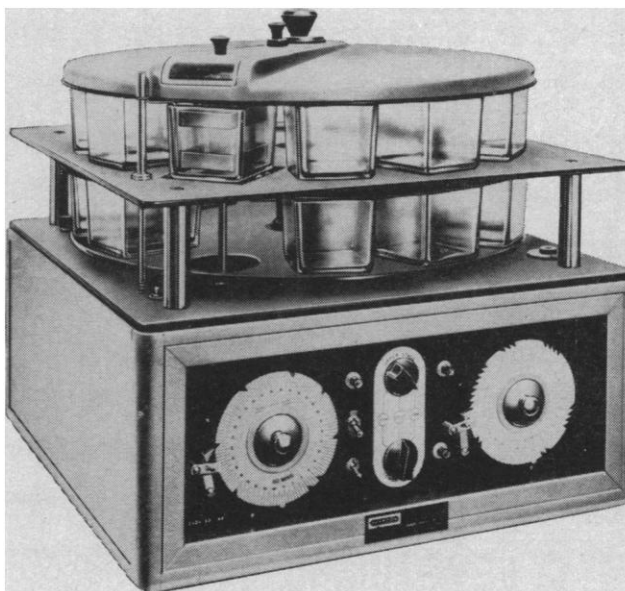
Engineer: Ingenious Contriver of the Instruments of Civilization. S. C. Hollister. Macmillan, New York, 1966. 155 pp. \$3.95. Career Book Series.

Evaluating Development Projects. Samuel P. Hayes, Jr. Unesco, Paris, ed. 2, 1966 (order from Unesco Publications Center, New York). 116 pp. Illus. Paper, \$2.50.

The Focal Encyclopedia of Photography. vols. 1 and 2. L. A. Mannheim et al., Eds. Focal Press, New York, ed. 2, 1966. vol. 1, 864 pp.; vol. 2, 891 pp. Illus. \$39 set. More than 2400 articles contributed by 281 authors.

The Forests of the U.S.S.R. V. P. Tseplyaev. Translated from the Russian edition (Moscow, 1961) by A. Gourevitch. Israel Program for Scientific Translations, Jerusalem, 1965; Davey, New York, 1966. 527 pp. Illus. \$19.

Improve the performance of your lab staff... **AUTOMATICALLY**



This is the Shandon-Elliott 23-station automatic slide staining machine. With it you are assured an extremely high degree of reproducibility when preparing Pap stains, blood films, bone marrow spreads and tissue sections. It is equally well suited for routine slide staining or where absolute quality from slide to slide is required. Automatic slide staining improves the performance of your lab staff by releasing skilled technicians to do other important work.

The Shandon-Elliott 23-station slide staining machine, which holds up to 54 slides, is actually three machines in one. It acts as two separate machines operating simultaneously on different cycles, or as two separate units operating on the same staining cycle at the same time, or as one machine operating at all 23 staining positions. Cost: \$2200.

Other slide staining machines include 8-station model at \$1250 and 12-station model at \$1460. Also available is a Shandon-Elliott coverslip staining machine with a capacity of 72 coverslips at \$1250.

For more information on Shandon-Elliott slide and coverslip staining machines and other quality scientific tools, contact Shandon Scientific Company, Inc., 515 Broad Street, Sewickley, Pa. 15143 (Pittsburgh District).

SHANDON

Gas Chromatography Abstracts, 1965. C. E. H. Knapman, Ed. Published by the Institute of Petroleum, London. Elsevier, New York, 1966. 314 pp. \$12.

General Physical Geography. Pierre Birot. Translated from the French edition (1959) by Margaret Ledésert. Wiley, New York, 1966. 360 pp. Illus. \$8.50.

Group Practice and Prepayment of Medical Care. William A. MacColl. Public Affairs Press, Washington, D.C., 1966. 267 pp. Paper, \$2.50; cloth, \$4.50.

Hands on the Past: Pioneer Archaeologists Tell Their Own Story. C. W. Ceram, Ed. Knopf, New York, 1966. 434 pp. Illus. \$8.95. Contributors are J. M. Allegro, G. B. Belzoni, T. G. Bibby, H. Bingham, H. Bossert, P. E. Botta, R. L. S. Bruce-Mitford, E. A. Budge, J. L. Burckhardt, H. Carter, J. Y. Cousteau, O. G. Crawford, E. Curtius, G. Dennis, D. V. Denon, F. K. Dörner, A. Edwards, A. J. Evans, N. Glueck, A. Goldsmidt, Z. Goneim, H. V. Hilprecht, C. Humann, A. Kircher, R. Koldewey, A. H. Layard, C. M. Lerici, P. Mackendrick, A. F. Mariette, G. C. Maspero, L. Matouš, W. F. Petrie, A. Posnansky, H. C. Rawlinson, C. J. Rich, A. Ruz, C. F. Schaeffer, H. Schliemann, E. Seler, H. Sloane, G. Smith, G. Elliott Smith, C. P. Smyth, J. L. Stephens, C. Tarral, W. Taylour, T. H. Turner, V. W. von Hagen, A. von Humboldt, J. M. Waldeck, H. Walpole, H. Winckler, C. L. Woolley, and W. Wright.

High-Speed Photography. R. F. Saxe. Focal Press, New York, 1966. 137 pp. Illus. \$15.

An Historical Outline of Architectural Science. Henry J. Cowan. Elsevier, New York, 1966. 185 pp. Illus. Paper, \$5.75. Elsevier Architectural Science Series, vol. 1.

History of Analytical Chemistry. Ferenc Szabadváry. Translated from the Hungarian edition (Budapest, 1960) by Gyula Svehla. Pergamon, New York, 1966. 429 pp. Illus. \$18.50. International Series of Monographs in Analytical Chemistry, vol. 26.

A History of Space Flight. Eugene M. Emme. Holt, Rinehart, and Winston, New York, 1966. 224 pp. Illus. \$2.95.

Hortulus. Walahfrid Strabo. Translated from the 9th century manuscript by Raef Payne. Commentary by Wilfrid Blunt. Hunt Botanical Library, Pittsburgh, Pa., 1966. 103 pp. Illus. \$12.

The Human Body in Equipment Design. Albert Damon, Howard W. Stout, and Ross A. McFarland. Harvard Univ. Press, Cambridge, Mass., 1966. 380 pp. Illus. \$11.95.

In the Name of Science. H. L. Nieburg. Quadrangle Books, Chicago, 1966. 443 pp. \$7.95.

Index Kewensis: Plantarum Phanogamarum. Supplement 13. Compiled by George Taylor. Oxford Univ. Press, New York, 1966. 153 pp. \$18.50. Covers the data between 1956 and 1960.

Indian Culture and European Trade Goods. The archaeology of the historic period in the western Great Lakes region. George Irving Quimby. Univ. of Wisconsin Press, Madison, 1966. 231 pp. Illus. \$5.

Insects and Their World. Harold Oldroyd. British Museum (Natural History), London, ed. 2, 1966. 152 pp. Illus. Paper, 7s 6d.

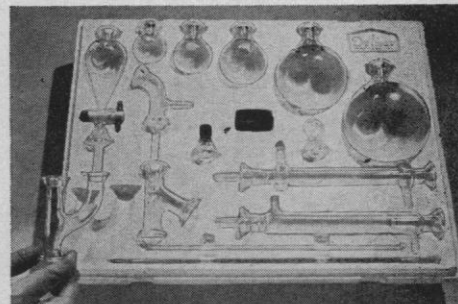
23 SEPTEMBER 1966

DELMAR MITE-O-WARE™ PREP-KIT

Makes any glassware set-up faster, easier, safer . . .

- no grease — uses O-ring joints and Teflon stopcocks — eliminates standard taper joints. Will not contaminate volatile agents.
- easily assembled—and dis-assembled
- convenient semi-micro size, for 15 mm tubing, micro and macro sizes also available

The Prep-Kit offers new speed, convenience and student comprehension in academic use . . . and its rugged practicality makes it ideal for commercial laboratories. Positive O-ring joints are superior to greased joints for high or low pressures over wide temperature range.



PREP-KIT, complete with Separatory Funnel, Claisen Adapter, Connecting Adapter, Vacuum Take-off, Condensers, Flasks, Thermometer, Buna-N O-rings, Clamps, etc. Price—only \$72.00. Quantity prices on request.



Delmar

SCIENTIFIC LABORATORIES, INC.
317 Madison Street, Maywood, Illinois 60153

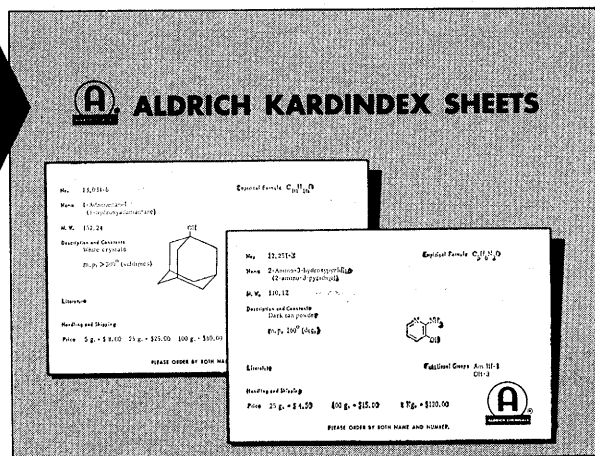
WRITE FOR
BULLETIN DB-25BS

A SUBSIDIARY OF COLEMAN INSTRUMENTS CORPORATION

Are You Up On The Latest In Available ORGANIC RESEARCH CHEMICALS?

Receive these
free supplements to our
1966 catalog
which already
lists over 8000
chemicals!

Detailed descriptions of exciting new additions to our rapidly expanding product line are sent to you quarterly, keeping you up-to-date on the latest in organic, analytical and biochemical tools.



For your FREE subscription to our Kardindex Service, simply fill in the coupon and mail to one of the offices shown below.

KARDINDEX	NAME	POSITION
	COMPANY	
	ADDRESS	
	CITY	STATE ZIP



ALDRICH CHEMICAL CO., INC.

Main Offices and Labs
2365 North 30th Street
Milwaukee, Wis. 53210

Eastern Office
78 Clinton Road
Fairfield, N. J. 07006

West Coast Distributor
Wilshire Chemical Co., Inc.
15324 So. Broadway
Gardena, Calif. 90247

1561

TRG's new 104A laser system



Rugged • Reliable • Versatile • Economical

TRG's new 104A laser system has been designed specifically to meet the needs of the scientific researcher and the industrial laser technologist. A medium-power, economical laser system that is capable of operation under a wide range of conditions — including those outside a laboratory environment — the TRG 104A can be used for many applications, such as: Atmospheric Studies; Ballistic Research; Chemical Research; High-speed Photography; Medical and Biological Research; Optical Ranging; Vacuum Evaporation of Thin Films; Microwelding.

Special Features

- Maintenance-free operation in excess of 25,000 cycles
- Flashlamp replacement does not require realignment of optics
- Simple function switch permits rapid selection of either normal pulse or Q-switched operation
- Optical alignment is maintained under normal operating conditions of shock and vibration

Accessories

- 104A-4 — Second Harmonic Generator
- 104A-5 — Liquid Q-switch
- 109A — Daly-Slms Single-Pulse Accessory
- 109-4A — Baseplate for mounting laser, Q-switch, and 109A accessory.

Specifications

	Output
Normal mode	3 to 5 joules
Q-switched mode	1 to 1.5 joules
Wavelength	6943 Å
Minimum Recycle Time ...	15 seconds

For more complete information write: TRG Inc., Section , Route 110, Melville (Long Island), New York 11746, Tel. (516) 531-6343.



TRG | A SUBSIDIARY OF CONTROL DATA CORPORATION

Intelligence in the Universe. Roger A. MacGowan and Frederick I. Ordway, III. Prentice-Hall, Englewood Cliffs, N.J., 1966. 416 pp. Illus. \$13.50.

International Politics since World War II: A Short History. Charles L. Robertson. Wiley, New York, 1966. 397 pp. Paper, \$3.95; cloth, \$6.95.

Into Work. Michael Carter. Penguin Books, Baltimore, 1966. 239 pp. Paper, \$1.25.

Is Reality Meaningful? Kelvin Van Nuys. Philosophical Library, New York, 1966. 624 pp. \$10.

Land under the Pole Star: A Voyage to the Norse Settlements of Greenland and the Saga of the People That Vanished. Helge Ingstad. Translated from the Norwegian edition (1959) by Naomi Walford. St. Martin's Press, New York, 1966. 381 pp. Illus. \$10.

Law and Administration. Jerry L. Weinstein, Ed. Pergamon, New York, 1966. 426 pp. \$15. Progress in Nuclear Energy Series, vol. 4. Nine papers: "The Vienna International Conference on Civil Liability for Nuclear Damage" by Karlfritz Wolff; "The Paris Supplementary Convention" by Raffaello Fornasier; "International Conventions on Civil Liability and Latin American Legislations" by Enrique Zaldívar; "Liability Legislation in Japan" by Shunji Shimoyama; "Some factors influencing the regulation of nuclear health and safety" by Ian Williams; "Reactor sites and safety" by C. Rogers McCullough; "Private ownership of special nuclear material in the United States" by Gerald Charhoff; "Legal and administrative problems arising from the implementation of International Atomic Energy Agency safeguards" by Paul C. Szasz; and "Liability of operators of nuclear ships: The 1962 Brussels Convention and its alternatives" by Peider Könz. There are 13 appendices containing the texts of the conventions and various documents.

Lectures on Geology: Including Hydrography, Mineralogy, and Meteorology with an Introduction to Biology. John Walker. Harold W. Scott, Ed. Univ. of Chicago Press, Chicago, 1966. 326 pp. Illus. \$8.50. Most of the papers are dated between 1782 and 1796.

The Living World of the Sea. William J. Cromie. Prentice-Hall, Englewood Cliffs, N.J., 1966. 349 pp. Illus. \$6.95.

Mariner IV to Mars. Willy Ley. New American Library, New York, 1966. 157 pp. Illus. Paper, 60¢.

Mathematics for Everyone. F. Klinger. Based on a translation of the French edition. Philosophical Library, New York, 1966. 207 pp. Illus. \$4.75.

Medical Practice in Modern England: The Impact of Specialization and State Medicine. Rosemary Stevens. Yale Univ. Press, New Haven, Conn., 1966. 415 pp. Illus. \$10.

Medicine in America: Historical Essays. Richard Harrison Shryock. Johns Hopkins Press, Baltimore, 1966. 366 pp. \$7.50.

Medicine in Modern Society. Medical planning based on evaluation of medical achievement. Thomas McKeown. Hafner, New York, 1966. 234 pp. Illus. \$5.25.

Men, Machines and History. The story of tools and machines in relation to social progress. S. Lilley. International Publishers, New York, 1966. 366 pp. Illus. \$7.50.

Mind and Cosmos. Essays in contemporary science and philosophy. Robert C. Colodny, Ed. Univ. of Pittsburgh Press, Pittsburgh, Pa., 1966. 380 pp. Illus. \$8. Ten essays by Herbert A. Simon, Dudley Shapere, Sylvain Bromberger, Carl G. Hempel, Wesley C. Salmon, Joseph T. Clark, Thomas Gold, and Henry Margenau.

Multilingual Dictionary of Important Terms in Molecular Spectroscopy. Prepared by the Subcommittee on Units and Terminology. Gerhard Herzberg, chairman. Commission on Molecular Structure and Spectroscopy, National Research Council of Canada, Ottawa, 1966. 227 pp. Illus. Paper. Available free to spectroscopists, librarians, and other interested scientists on request to the Secretary, National Research Council of Canada. The dictionary is divided into five sections, English, French, German, Japanese, and Russian, with the equivalent of each word or phrase given in the other four languages.

Mycenae and the Mycenaean Age. George E. Mylonas. Princeton Univ. Press, Princeton, N.J., 1966. 340 pp. Illus. Plates. \$18.50.

The New Field Book of Freshwater Life. Elsie B. Klots. Putnam, New York, 1966. 398 pp. Illus. \$4.95.

New Light on Prehistoric China. Cheng Te-K'un. Heffer, Cambridge, England; Univ. of Toronto Press, Toronto, 1966. 63 pp. Illus. \$5. Archaeology in China, supplement to vol. 1.

The New Technology and Human Values. John G. Burke, Ed. Wadsworth, Belmont, Calif., 1966. 416 pp. Paper, \$3.95; cloth, \$5.25. Sixty-two papers on the following topics: Science, Technology, and Society (19 papers); Automation—A Creation of the New Technology (13 papers); The New Technology and Emerging Issues (16 papers); and Science, Technology, and the Policy-Making Process (14 papers).

New Universities in the Modern World. Murray G. Ross, Ed. Macmillan, London; St. Martin's Press, New York, 1966. 200 pp. Illus. \$5. Eleven papers.

Our World and the Universe Around It. vols. 1 to 4. vol. 1, *The Universe* (167 pp.); vol. 2, *The Earth* (169 pp.); vol. 3, *Matter and Energy* (136 pp.); vol. 4, *Life* (141 pp.). Ginestra Amaldi. Translation based on the Italian edition by Norman Rudnick. Abradale Press, New York, 1966. Illus. \$40 set.

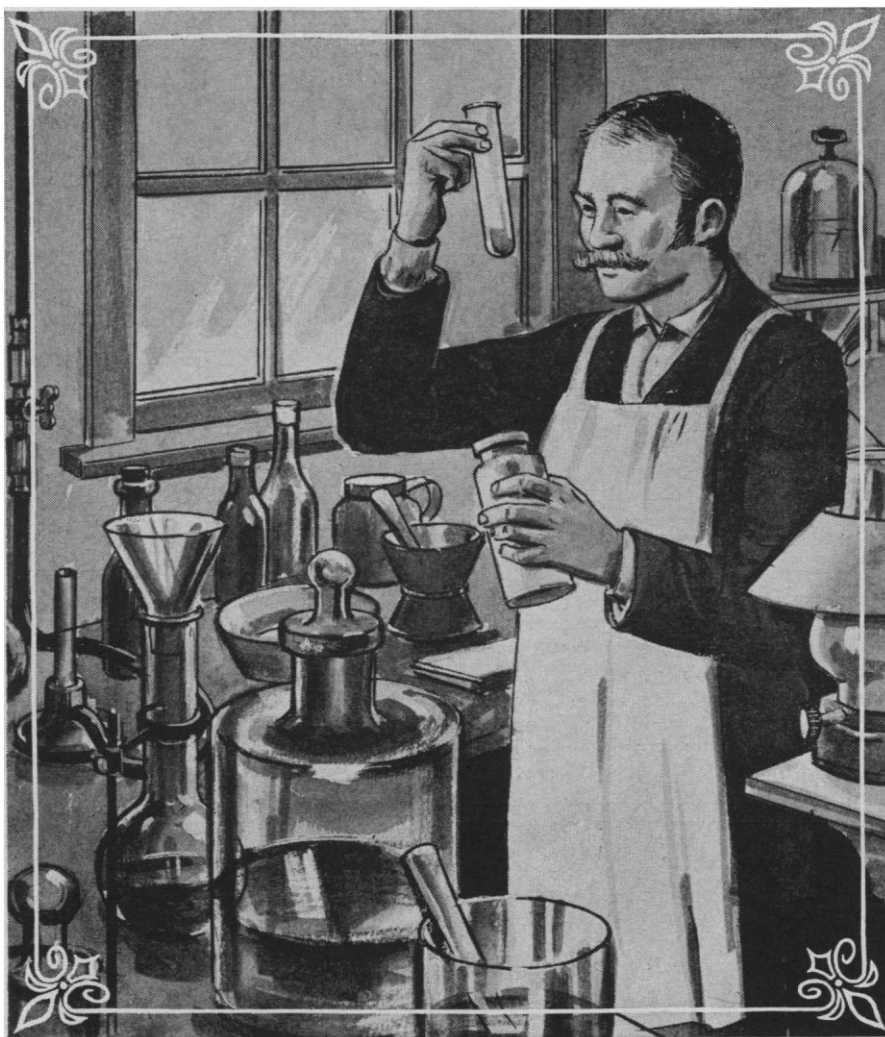
Pastoral Plants of the Riverine Plain. J. H. Leigh and W. E. Mulham. Jacaranda Press, Brisbane, Australia, 1966. 186 pp. Illus. \$10.50.

Patterns of Life: The Unseen World of Plants. William M. Harlow. Harper and Row, New York, 1966. 128 pp. Illus. \$6.95.

Peabody Museum Papers, vol. 57, No. 1, Craniometry and Multivariate Analysis: The Jomon Population of Japan, A Study by Discriminant Analysis of Japanese and Ainu Crania, W. W. Howells; A Multiple Discriminant Analysis of Egyptian and African Negro Crania, J. M. Crichton. Peabody Museum, Cambridge, Mass., 1966. 75 pp. Illus. Paper, \$3.50.

Percentage Baseball. Earnshaw Cook. M.I.T. Press, Cambridge, Mass., ed. 2, 1966. 431 pp. Illus. \$9.95.

M. RMgX



M. Victor Grignard never had it so good. *l'Homme Pauvre!* He still had to make his own Grignard reagents, even after he invented them. Maybe you're still making your own, too. *Tres triste!* Mais, *voila*—MC&B has M. Grignard's reagents already prepared. *Prodigieux!* Stability and quality preserved in safe screw-capped, tinned containers. *Merveilleux!* Exact lot molarity on the label. These, for instance, are available from stock:

			Molar Concentration	500 ml
EX703	9882	Ethylmagnesium Bromide	2.0	(1.0 mole)
PX806	9883	Phenylmagnesium Bromide	2.0	(1.0 mole)
CX2396	9884	Cyclohexylmagnesium Chloride	2.0	(1.0 mole)
BX1997	9885	tert-Butylmagnesium Chloride	2.0	(1.0 mole)
MX1146	9886	Methylmagnesium Chloride	2.0	(1.0 mole)
PX1926	9887	iso-Propylmagnesium Chloride	2.0	(1.0 mole)

Others may be had on a custom basis. Write for our brochure describing these versatile reagents, along with bibliography.

Division of The Matheson Co., Inc. **MC&B**
Norwood (Cincinnati), Ohio; East Rutherford, N. J.; Los Angeles

*A clear, direct and practical presentation
of microtechnical procedures—*

ESSENTIALS OF PRACTICAL MICROTECHNIQUE

by the Late **ALBERT E. GALIGHER**
and **EUGENE N. KOZLOFF, Ph.D.**, Professor of Biology,
Lewis and Clark College, Portland, Oregon.

1964 484 Pages 60 Illustrations \$10.00

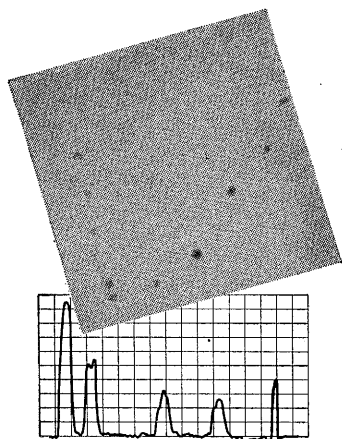
This book provides detailed explanations of the procedures commonly used in preparing material for microscopic study. All methods are introduced by clearly worded discussions of the principles involved, what each preparation should show, and how to obtain the best results. Techniques for vertebrates and invertebrates, including parasites, are covered in this text which numbers or letters consecutively the actual steps to be taken, and indicates pitfalls to be avoided. Contents include the use of the microscope; organization of the laboratory; methods for the study of living and fresh material; fixation; staining; paraffin, nitro-cellulose, and freezing and grinding methods; metallic impregnation; permanent mounting media; a summary of procedures recommended for various types of material used in teaching and research laboratories; and a table of weights and measures. "Gives the student the basis for logical and intelligent application of the various techniques."

Examination Copies Sent to Teachers on Approval

Washington
Square

LEA & FEBIGER

Philadelphia
Pa. 19106



**don't hesitate
automate**

TLC
analysis
with the
PHOTOVOLT
Densitometer

Write for bulletin

PHOTOVOLT

1115 Broadway, New York 10, N. Y.

Philosophy of Natural Science. Carl G. Hempel. Prentice-Hall, Englewood Cliffs, N.J., 1966. 128 pp. Paper, \$1.75. Foundations of Philosophy Series.

The Physiological Basis of Habituation. E. M. Glaser. Oxford Univ. Press, New York, 1966. 112 pp. Illus. Paper, \$3.50.

Prehistoric and Primitive Man. Andreas Lommel. McGraw-Hill, New York, 1966. 176 pp. Illus. \$5.95.

Probability, Confirmation, and Simplicity. Readings in the philosophy of inductive logic. Marguerite H. Foster and Michael L. Martin, Eds. Odyssey Press, New York, 1966. 480 pp. Illus. \$7.25. Thirty-six papers on the following topics: The Meaning of Probability (12 papers); Problems of Confirmation Theory (5 papers); Simplicity (6 papers); and The Justification of Induction (13 papers).

A Proposed Model for Visual Information Processing in the Human Brain. Matthew Kabrisky. Univ. of Illinois Press, Urbana, 1966. 112 pp. Illus. \$6.75.

Recommendations of the International Commission on Radiological Protection. Published for The International Commission on Radiological Protection. Pergamon, New York, 1966. 31 pp. \$1.75.

Report of the International Clearinghouse on Science and Mathematics Curricular Developments. Compiled under the direction of J. David Lockard. American Assoc. for the Advancement of Science and Science Teaching Center, Univ. of Maryland, College Park, 1966. 311 pp. Paper. Available free from J. D. Lockard, Science Teaching Center.

Roman Africa in Color. Mortimer Wheeler. McGraw-Hill, New York, 1966. 160 pp. Plates. \$25.

Russian-English Dictionary of Prestressed Concrete and Concrete Construction. Ben C. Gerwick, Jr., and Peter V. Peters, Eds. Gordon and Breach, New York, 1966. 119 pp. \$20.

Science and the Modern World. Lectures presented at Georgetown University, Washington, D.C. on the occasion of its 175th anniversary, October 1963-May 1964. Jacinto Steinhardt, Ed. Plenum Press, New York, 1966. 235 pp. Illus. \$7.50. Ten papers: "New developments in our knowledge of the universe" by G. C. McVittie; "Biological evolution and human equality" by Theodosius Dobzhansky; "Limits of scientific enquiry" by Ernan McMullin; "The socialization of science" by James McCormack; "Practical uses of atomic energy" by Arthur E. Ruark; "Population trends and population control" by Ansley J. Coale; "The impact of new materials and new instrumentation on our foreseeable technology" by E. R. Piore; "Design for a brain" by Philip M. Morse; "The revolution in biology and medicine" by Bentley Glass; and "Is there life on other worlds?" by Carl C. Kiess.

The Science of Science. Maurice Goldsmith and Alan MacKay. Penguin Books, Hammondsworth, England, ed. 2, 1966. 317 pp. Illus. Paper, 6d. Sixteen papers contributed by C. P. Snow, E. H. S. Burhop, P. M. S. Blackett, Gerard Piel, C. F. Powell, Herbert Coblans, Peter Kapitsa, Alexander King, Joseph Needham, J. B. S. Haldane, N. W. Pirie, R. L. M. Synge, Maurice Korach, D. J. de S. Price, Stevan Dedijer, and J. D. Bernal.

The Sciences and the Humanities: Conflict and Reconciliation. W. T. Jones. Univ. of California Press, Berkeley, 1965. 294 pp. Illus. \$6.50.

Scientific and Managerial Manpower in Nuclear Industry. James W. Kuhn. Columbia Univ. Press, New York, 1966. 229 pp. \$7.50.

Selected Logic Papers. W. V. Quine. Random House, New York, 1966. 260 pp. Illus. \$6.95. Contains 23 papers written between 1934 and 1960.

Seven States of Matter. Milton Gootlieb, Max Garbuny, and Werner Emmenrich. Walker, New York, 1966. 255 pp. Illus. \$5.95.

Shell Collecting: An Illustrated History. S. Peter Dance. Univ. of California Press, Berkeley, 1966. 378 pp. Illus. \$10.

A Social History of Engineering. W. H. G. Armytage. M.I.T. Press, Cambridge, Mass., 1966. 378 pp. Illus. \$10.

La Soif du Monde et le Dessalement des Eaux. Cyril Gomella. Presses Universitaires de France, Paris, 1966. 245 pp. Illus. Paper, F. 16. La Science Vivante Series.

Solid State Chemistry: Whence, Where and Whither. J. Arvid Hedvall. Elsevier, New York, 1966. 108 pp. Illus. \$6.50.

Le Solutréen en France. Philip E. L. Smith. Laboratory of Prehistory, Univ. of Bordeaux, Bordeaux, France, 1966. 465 pp. Illus. Paper, F. 120.

The Territorial Imperative. A personal inquiry into the animal origins of property and nations. Robert Ardrey. Atheneum, New York, 1966. 404 pp. Illus. \$6.95.

The Thread of Life. An introduction to molecular biology. John C. Kendrew. Harvard Univ. Press, Cambridge, Mass., 1966. 142 pp. Illus. \$4.

The Travel Diaries of Thomas Robert Mathus. Patricia James, Ed. Cambridge Univ. Press, New York, 1966. 332 pp. Illus. \$8.50.

Treatise on Invertebrate Paleontology. pt. U, *Echinodermata* 3, vols. 1 and 2. Raymond C. Moore, Ed. Geological Soc. of America, New York; Univ. of Kansas Press, Lawrence, 1966. vol. 1, 396 pp.; vol. 2, 331 pp. Illus. \$18.50 set.

Ultraviolet and Visible Absorption Spectra: Index for 1960-1963. Including also references to optical rotatory dispersion and circular dichroism spectra. Herbert M. Hershenson. Academic Press, New York, 1966. 245 pp. \$14.

United States Government Organization Manual, 1966-1967. Office of the Federal Register, General Services Administration, Washington, D.C., 1966 (order from Superintendent of Documents, Washington, D.C.). 819 pp. Paper, \$2.

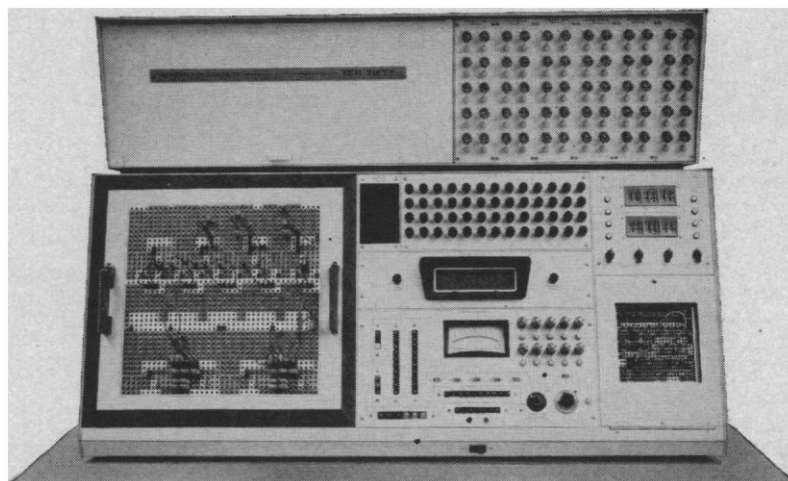
United States Merchant Shipping Policies and Politics. Samuel A. Lawrence. Brookings Institution, Washington, D.C., 1966. 419 pp. \$8.75.

The Use of Computers in Business Organizations. Frederic G. Withington. Addison-Wesley, Reading, Mass., 1966. 253 pp. Illus. \$7.95.

The Validity of Occupational Aptitude Tests. Edwin E. Ghiselli. Wiley, New York, 1966. 165 pp. Illus. \$7.95.

World List of Scientific Periodicals. Scientific medical and technical entries from the British Union Catalogue of Periodicals. Kenneth I. Porter, Ed. Butterworth,

What in heaven's name makes Computer Products think it's going to get anywhere in the tough analog computer business?



Just this... the new Ten-Fifty

We have to be honest about it. The world just doesn't need another analog computer. So when we designed the new Ten-Fifty, we made a value analysis of every major machine in its class. Look at the results:

Capacity. 43% more computing capacity at any one time — 86 modules. 47% more patching terminals — 2040. 200% more peripheral trunks — 126.

Performance. Repetitive solutions up to 1000 per second. Simultaneous real time and fast time operation. Patented two or three mode electronic switching. Switching times less than 500 nanoseconds. High accuracy multipliers — zero error 0.05%. 500 KC solid state amplifiers.

Hybrid operation is integral — logic is built-in. You get a separate 440 hole patch panel. Individual integrator controls. High speed electronic comparators and analog switches. The Ten-Fifty is fully compatible with major digital computers.

Dependability. Patch panel is solid aluminum with coaxial terminals and fully gold plated wiping contacts, which are undisturbed during patching. Patch cords and wiring are shielded for low cross-talk. Short-circuit proof construction. Circuits are conservative in design and fully field-proven. Entire computer is factory wired and tested for full expansion.

Convenience. Pushbutton readout of amplifiers, pots and trunks. All amplifiers are uncommitted. Three built-in electronic timers — simultaneous operation. Thumbwheel time adjustments. Patch panel is color coded and lettered for full complement. All expansions simply plug-in. Expansion is by addition — not substitution.

Economy. Your first cost is low. Your expansion cost is low. There are no hidden extras. The Ten-Fifty is Value Engineered to give you the most computational capability per dollar invested. No computer in its class can match it.

Judge for yourself. Send for free comparison chart that shows you point by point where the value lies in analog computers.



COMPUTER PRODUCTS, INC.

55 Chapel Street, Newton, Mass. 02158 Tel. (617)-244-7575

Washington, D.C., 1966. 212 pp. \$24. Records new periodical titles for the period in and after 1960.

Conference and Symposium Reports

Acquisition of Skill. Proceedings of a conference (New Orleans, La.), March 1965. Edward A. Bilodeau, Ed. Academic Press, New York, 1966. 555 pp. Illus. \$12.50. Ten papers: "A brief history of research on the acquisition of skill" by Arthur L. Irion; "Selective learning" by Clyde E. Noble; "Individual differences" by Marshall B. Jones; "Some mechanisms of motor responding: An examination of attention" by Jack A. Adams; "Facilitation and interference" by William F. Battig; "Information feedback" by Ina McD. Bilodeau; "Retention" by Edward A. Bilodeau; "Tracking behavior" by E. C. Poulton; "Cybernetic theory and analysis of learning" by Karl U. Smith; and "Motor-skills learning and verbal learning: Some observations" by Benton J. Underwood.

Advances in X-Ray Analysis. vol. 9. Proceedings of the Fourteenth Annual Conference on Applications of X-ray Analysis (Denver, Colo.), August 1965. Gavin R. Mallett, Marie Fay, and William M. Mueller, Eds. Plenum Press, New York, 1966. 554 pp. Illus. \$22.50. Forty-seven papers.

Aspects of Comparative Ophthalmology. Proceedings of a symposium organized by the British Small Animal Veterinary Association (London), June 1965. Oliver Graham-Jones, Ed. Pergamon, New York, 1966. 357 pp. Illus. \$13. Twenty-seven papers.

Biological Membranes: Recent Progress. (*Ann. N.Y. Acad. Sci.* 137). Edward M. Weyer, Ed. New York Academy of Sciences, New York, 1966. 646 pp. Illus. Paper, \$12. Forty-six papers presented at a conference held in October 1965.

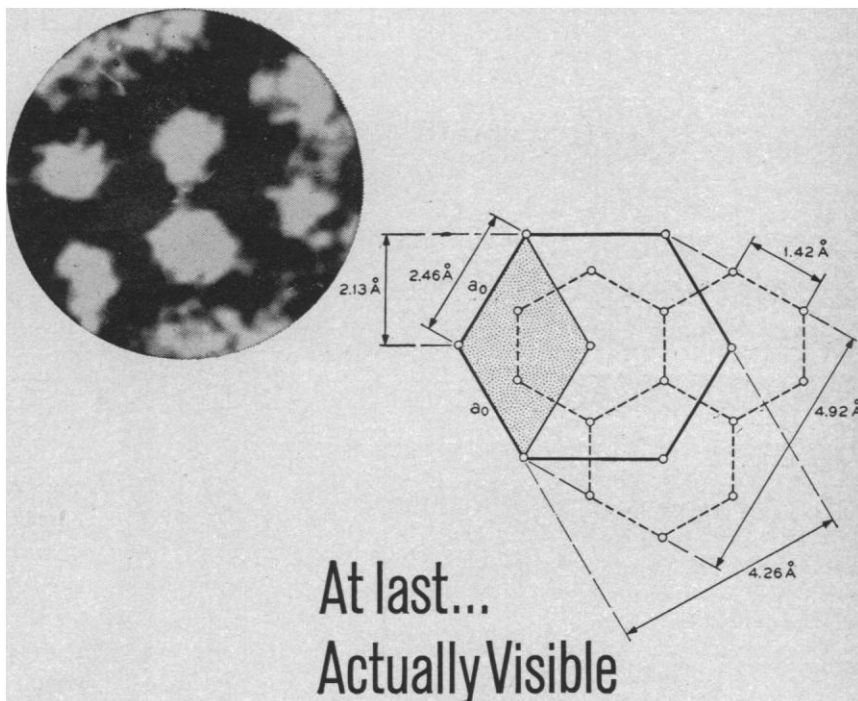
Biosynthesis of Aromatic Compounds. vol. 3. Proceedings of the Second Meeting of the Federation of European Biochemical Societies (Vienna), April 1965. G. Billek, Ed. Pergamon, New York, 1966. 152 pp. Illus. \$4.50. Thirteen papers.

Breeding Pest-Resistant Trees. Proceedings of a N.A.T.O. and N.S.F. Advanced Study Institute (University Park, Pa.), August-September 1964. H. D. Gerhold, R. E. McDermott, E. J. Schreiner, and J. A. Winieski, Eds. Pergamon, New York, 1966. 515 pp. Illus. \$24. Fifty-eight papers.

Cell Differentiation and Morphogenesis. International Lecture Course (Wageningen, The Netherlands), April 1965. W. Beermann, R. J. Gautheret, P. D. Nieuwkoop, C. W. Wardlaw, V. B. Wigglesworth, E. Wolff, and J. A. D. Zeevaart. North-Holland, Amsterdam; Interscience (Wiley), New York, 1966. 217 pp. Illus. \$9.75.

Chromosome Manipulations and Plant Genetics. Contributions to a symposium held during the Tenth International Botanical Congress (Edinburgh), August 1964. Ralph Riley and K. R. Lewis, Eds. Plenum Press, New York, 1966. 131 pp.

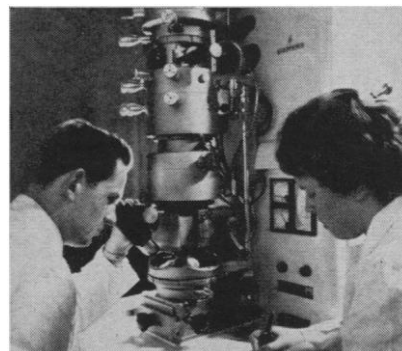

SIEMENS



For the first time, the hexagonal structure of graphite has been seen, with the Siemens Elmiskop. A 6-sided carbon cell of 5 Å diameter, made up of 3 carbon crystal cells, or only 10 atoms, was photographed by R. D. Heidenreich of Bell Telephone Laboratories in New York and H. Fernandez Moran of the University of Chicago. Although this form of carbon is well known by x-ray and electron diffraction, this is indeed the first time that the structure had been actually visible. The visibility of the hexagonal cells, using axial illumination, indicates that a point to point resolution of 2 Å can be obtained with the Elmiskop I A, due to its short objective focal length of 2.2 mm. Another example of Siemens performance.

Electron Microscope Elmiskop I A

Siemens Elmiskop Electron Microscopes have won a worldwide reputation for highest resolution, stability and reliability. Over 800 Elmiskops are already in service at leading universities, medical centers and industrial laboratories.



**VISIT BOOTHS 5-6-7
EMSA MEETING**

SIEMENS AMERICA INCORPORATED

350 Fifth Avenue, New York, N.Y. 10001

SIEMENS CANADA LIMITED

407 McGill Street, Montreal 1, P.Q.

Corporations of THE SIEMENS GROUP IN GERMANY • Berlin • Munich • Erlangen