

picture of acridid behavior and the underlying mechanisms involved. Integration of this kind is probably rarely achieved by teamwork. Perhaps the most we can hope for is the emergence of another Sir Boris Uvarov.

Several particularly interesting aspects of physiology and development are presented in this section. Ellis, for example, summarizes the evidence that phase transformation in *Schistocerca gregaria* requires several generations; since the eggs of crowded females are larger than those of solitary females, and since the rearing conditions of the fathers are immaterial, one assumes that the phase transformation is mediated in part through cytoplasmic inheritance. However, N. J. Nolte has shown that rearing conditions have genotypic effects as well. He presents data showing that chiasma frequency in *Locusta pardalina* males is appreciably higher in individuals raised under crowded conditions and undergoing phase transformation. He suggests that since it is just such individuals that migrate and encounter unpredictable conditions for egg-laying, physiological or developmental control of chiasma frequency by individual locusts may be an evolved mechanism for increasing variability in the offspring.

The largest section of this book deals with population studies and is divided into four subsections treating factors affecting distributions and population fluctuations and the detection and prediction of population increases. Since, in species displaying phase variation, it is the gregarious, migratory morphs that are economic pests, much attention is given to determining which aspects of the environment influence the transition from solitary to gregarious phase and to detecting incipient swarms.

The sections devoted to an evaluation of the economic impact of grasshoppers on range and crop lands stress the fact that these insects continue to be economically important even though major outbreaks have not occurred in the last five or six years. Since the factors resulting in reduced populations and swarming behavior are not understood, there is at present no way to recognize and modify outbreak conditions should they recur. P. T. Haskell, present director of COPR, therefore urges international and national control organizations to devote more resources to long-term ecological research than to short-term, stopgap control research.

This is an important contribution to the study of grasshopper biology. The

book will be useful in both basic and applied insect research and should be of interest to a wide variety of insect biologists.

DANIEL OTTE

Department of Zoology,  
University of Texas, Austin

## Atomic Processes

**Hyperfine Interactions in Excited Nuclei.** Proceedings of a conference, Rehovot and Jerusalem, Israel, Sept. 1970. GVIROL GOLDRING and RAFAEL KALISH, Eds. Gordon and Breach, New York, 1971. In four volumes. Vol. 1, xxviii pp. + pp. 1-360, illus.; vol. 2, xxviii pp. + pp. 361-732, illus.; vol. 3, xxvii pp. + pp. 733-984, illus.; vol. 4, xxviii pp. + pp. 985-1354, illus. \$27.50 each.

The origin of the name "hyperfine interaction" dates back about 75 years to the time when Michelson and others first looked at atomic spectral lines with the high resolution of their newly developed interferometers. They discovered that many spectral lines possess a structure much finer still than the usual fine structure, and hence the name hyperfine structure. At that time the nucleus had not yet been discovered. Subsequent developments have shown that this structure is attributable to the influence of the nucleus on its surrounding electrons. From these delicate and remote beginnings the study of hyperfine interactions has indeed blossomed, especially in recent years, to the point where the proceedings of the recent Rehovot Conference on the subject is a four-volume work.

What are the reasons for this surge of activity? Of course the Mössbauer effect continues to play a prominent and fruitful role in this field. However, in reading through these volumes I was especially impressed by two things: the great usefulness of heavy-ion beams from accelerators, and the remarkable interaction of a diversity of disciplines. The present and potential usefulness of heavy-ion beams is reflected in the proceedings by the inclusion of such papers as an account of radiation damage from ion implantation (D. Dautreppe), a lucid discussion of the use of channeling phenomena to discover the location of impurity atoms in crystals (B. Deutch), and a comprehensive review of the static quadrupole moment of the 2+ state in  $^{114}\text{Cd}$  by the Coulomb excitation reorientation effect (U. Smilansky).

The diversity of disciplines contributing to this field is recognized by the

participants themselves, and the salutary result is a number of papers of high pedagogical quality. Some examples are the review of mesic atoms (S. Devons), the evaluation of isomer shifts (G. Kalvius), and the review of spin-rotation, stroboscopy, and dynamic perturbations (E. Rechnagel).

The alluring feature of heavy-ion beams is the possibility of simultaneously exciting the nucleus and its atomic electrons. The large linear momentum imparted to the residual atom in such a collision can literally tear the atom apart. A large number of the electrons are completely removed from the atom, and those that remain may be put into unusual states of excitation involving high angular momenta and simultaneous excitation of several electrons. One can then study the interaction of this strongly perturbed atom with its excited nucleus. Another useful parameter is the lifetime of the excited nucleus. The lifetime can be varied from seconds to subpicoseconds. Finally, the large momentum makes it possible to implant the atom into a solid where one can study solid state effects. The proceedings cover a number of possibilities; recoil into vacuum (R. Nordhagen), recoil into gases (G. Sprouse), recoil into ferromagnetic materials (R. Borchers), and recoil into nonmagnetic metals (B. Herskind).

In the last volume there are several valuable tables summarizing what is known about changes in nuclear radius, values of hyperfine fields, and nuclear moments (about 700 references). This volume also presents an interesting discussion by I. Talmi on the subject of the theoretical implications, especially from a nuclear-shell-model point of view, of this substantial collection of values for nuclear moments of ground and excited states.

PAUL STELSON

Physics Division, Oak Ridge National  
Laboratory, Oak Ridge, Tennessee

## Books Received

**Abstract Automata.** Peter H. Starke. Translated from the German edition (Berlin, 1969). North-Holland, Amsterdam; Elsevier, New York, 1972. 420 pp., illus. Cloth, \$28.75; paper, \$17.95.

**Adolescence.** A Psychological Perspective. Dorothy Rogers. Brooks/Cole, Monterey, Calif., 1972. x, 238 pp., illus. Paper, \$4.50.

**Advances in Gerontological Research.** Vol. 4. Bernard L. Strehler, Ed. Academic

(Continued on page 1020)



## END DANGER OF FLYING GLASS ... with the BEL-ART Safety Dewar

A silvered borosilicate glass dewar with a protective container made of corrosion-proof black polyethylene.

Available at your laboratory supply house.

Send for NEW 88 page catalog 372. For your FREE copy write Dept. E-9.



### BEL-ART PRODUCTS

PEQUANNOCK, N. J. 07440

Circle No. 89 on Readers' Service Card

## PARR® CELL DISRUPTION BOMB

*For Rapid  
Cell and Tissue  
Extractions*

With samples held under an inert nitrogen blanket, rapid decompression from a reliable PARR® bomb offers the ideal way to release the contents of cells, tissues and micro-organisms without heating, without ionization and without high mechanical stress. Either large or small samples can be treated easily with the action varied to produce either partial rupture or complete homogenization by simply adjusting the nitrogen pressure.

Ask for Product Sheet 4635 describing this convenient extraction method.



**PARR INSTRUMENT COMPANY**

211 Fifty-Third St.

Moline, Ill. 61265

Telephone (309) 762-7716

Circle No. 84 on Readers' Service Card

### BOOKS RECEIVED

(Continued from page 985)

Press, New York, 1972. xiv, 344 pp., illus. \$21.50.

**Advances in Quantum Chemistry.** Vol. 6. Per-Olov Löwdin, Ed. Academic Press, New York, 1972. xvi, 414 pp., illus. \$24.50.

**Advances in Veterinary Science and Comparative Medicine.** Vol. 16. C. A. Brandly and Charles E. Cornelius, Eds. Academic Press, New York, 1972. xii, 420 pp., illus. \$28.

**Aerospace Propulsion.** Dennis G. Shepherd. Elsevier, New York, 1972. x, 278 pp., illus. \$14.50.

**Air Pollution and Its Control.** Wayne T. Sproull. Exposition, Jericho, N.Y., ed. 2, 1972. 132 pp., illus. \$6.

**Air Pollution Control in Transport Engines.** A symposium, Solihull, England, Nov. 1971. Institution of Mechanical Engineers, London, 1972. viii, 376 pp., illus. £ 13.

**Algebraic Numbers.** Paulo Ribenboim. Wiley-Interscience, New York, 1972. xii, 300 pp., illus. \$17.95. Pure and Applied Mathematics, vol. 27.

**Alternatives to the Internal Combustion Engine.** Impacts on Environmental Quality. Robert U. Ayres and Richard P. McKenna. Published for Resources for the Future by Johns Hopkins University Press, Baltimore, 1972. xvi, 324 pp., illus. \$12.

**Amine Extraction.** V. S. Shmidt. Translated from the Russian edition (Moscow, 1970) by J. Schmorak. Israel Program for Scientific Translations, Jerusalem, 1971 (U.S. distributor, Halsted, New York). x, 210 pp., illus. \$22.50.

**The Analysis of Biological Populations.** Mark Williamson. Arnold, London; Crane Russak, New York, 1972. xii, 180 pp., illus. \$14. Special Topics in Biology Series.

**Animal Ribosomes.** Experimental Studies of the Last Five Years. Papers by Giuseppe Attardi, William Steele, Kenneth Tartof, Robert Perry *et al.* MSS Information Corp., New York, 1972. 200 pp., illus. \$15.

**Annual Review of Plant Physiology.** Vol. 23. Leonard Machlis, Winslow R. Briggs, and Roderic B. Park, Eds. Annual Reviews, Palo Alto, Calif., 1972. xiv, 506 pp., illus. \$10.

**Antiepileptic Drugs.** Dixon M. Woodbury, J. Kiffin Penry, and Richard P. Schmidt, Eds. Raven, New York, 1972. xxiv, 536 pp., illus. \$19.75.

**Atti della LI Riunione.** A conference, Pugnoli, Italy, Sept. 1971. Società Italiana per il Progresso delle Scienze, Rome, 1972. 672 pp., illus. Paper, 7000 lire.

**Automation and Management in the Clinical Laboratory.** A conference, San Francisco, May 1971. George E. Westlake and James L. Bennington, Eds. University Park Press, Baltimore, 1972. xiv, 274 pp., illus. \$12.50.

**Banach Algebra Techniques in Operator Theory.** Ronald G. Douglas. Academic Press, New York, 1972. xvi, 218 pp. \$14. Pure and Applied Mathematics, vol. 49.

**Bears.** Their Biology and Management.

SCIENCE, VOL. 177

Papers from a conference, Alberta, Canada, Nov. 1970. Stephen Herrero, Ed. International Union for Conservation of Nature and Natural Resources, Morges, Switzerland, 1972. 372 pp., illus. Paper, \$9. IUCN Publications New Series, No. 23.

**The Biochemistry and Physiology of Bone.** Geoffrey H. Bourne, Ed. Vol. 2, Physiology and Pathology. Academic Press, New York, ed. 2, 1972. xvi, 408 pp., illus. \$26.50.

**Bioenergetics.** The Molecular Basis of Biological Energy Transformations. Albert L. Lehninger. Benjamin, Menlo Park, Calif., ed. 2, 1972. x, 246 pp., illus. Cloth, \$10.95; paper, \$5.95.

**Biology and Radiobiology of Anucleate Systems.** Proceedings of a symposium, Mol, Belgium, June 1971. Silvano Bonotto, Roland Goutier, René Kirchmann, and Jean-René Maisin, Eds. Academic Press, New York, 1972. 2 vols. Vol. 1, Bacteria and Animal Cells. xviii, 228 pp., illus. \$7. Vol. 2, Plant Cells. xx, 368 pp., illus. \$11.

**Biology of Bone.** N. M. Hancox. Cambridge University Press, New York, 1972. viii, 200 pp., illus. \$21. Biological Structure and Function, No. 1.

**Biology of the Cell.** Stephen L. Wolfe. Wadsworth, Belmont, Calif., 1972. xiv, 546 pp., illus. \$13.95.

**Birth and Brain Damage.** An Investigation into the Problems of Antenatal and Paranatal Anoxia and Allied Disorders and Their Relation to the Many Lesion-Complexes Residual Thereto. Cyril B. Courville. Published by Margaret Farnsworth Courville, 1000 Oxford Way, Pasadena, Calif., 1971. xxii, 410 pp., illus. Boxed, \$20.

**The Book of Family Therapy.** Andrew Ferber, Marilyn Mendelsohn, and Augustus Napier. Science House, New York, 1972. 726 pp. \$20.

**Book of the Descendants of Doctor Benjamin Lee and Dorothy Gordon.** Ventnor, Ventnor, N.J., 1972. xvi, 176 pp., illus. \$8.50.

**Boundary Value Problems.** David L. Powers. Academic Press, New York, 1972. x, 238 pp., illus. \$9.95.

**Brain and Human Behavior.** A symposium, Chicago, Oct. 1969. A. G. Karczmar and J. C. Eccles, Eds. Springer-Verlag, New York, 1972. xii, 476 pp., illus. \$30.50.

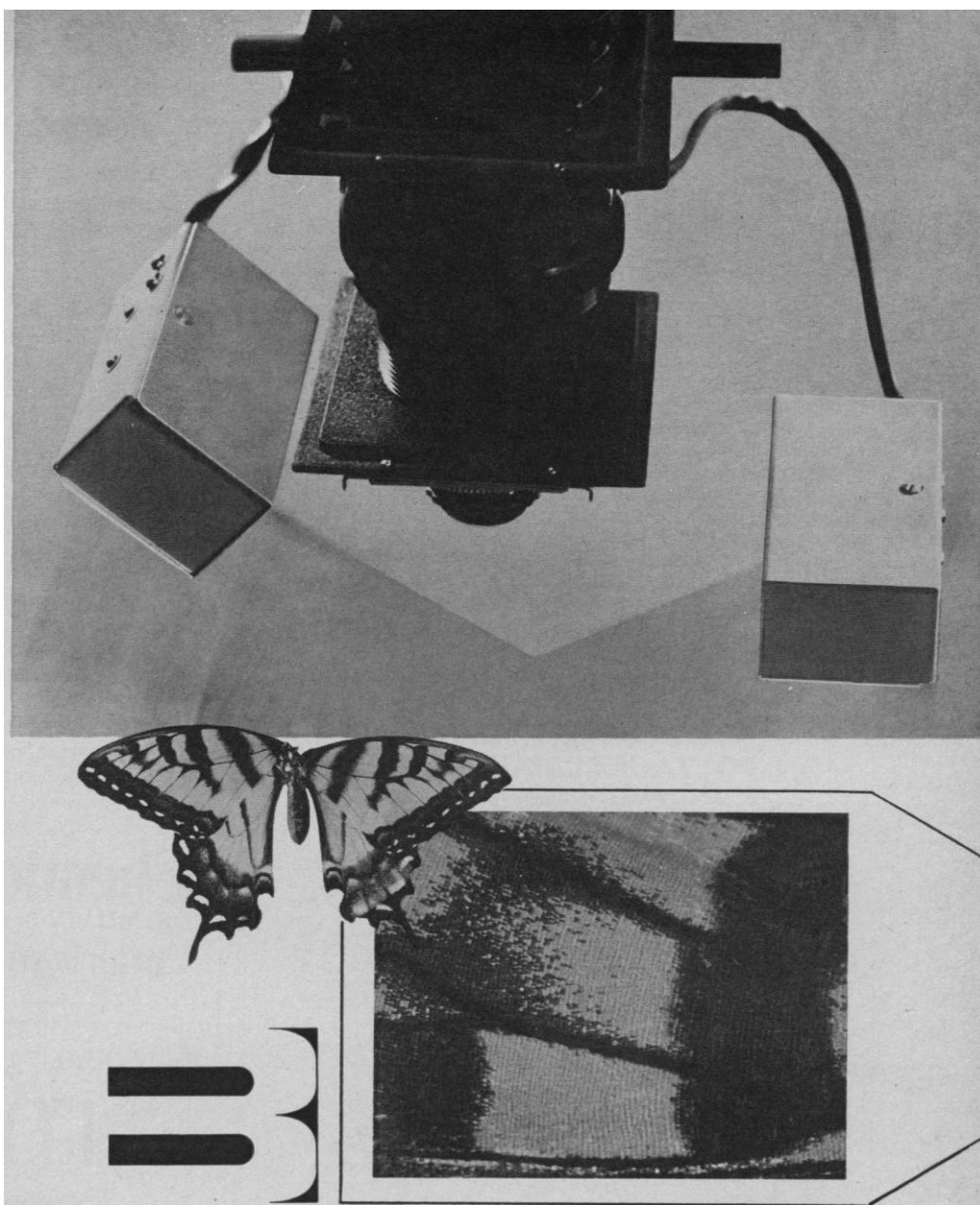
**The Chambered Tombs of Scotland.** Vol. 2. Audrey Shore Henshall. Edinburgh University Press, Edinburgh, 1972 (U.S. distributor, Aldine-Atherton, Chicago). xvi, 654 pp., illus. + maps. \$36.

**Chemical Thermodynamics.** Basic Theory and Methods. Irving M. Klotz and Robert M. Rosenberg. Benjamin, Menlo Park, Calif., ed. 3, 1972. xvi, 444 pp., illus. \$13.50.

**The Chemistry of Plant Pigments.** C. O. Chichester, Ed. Academic Press, New York, 1972. xiv, 218 pp., illus. \$13. Advances in Food Research, Supplement 3.

**Civilization and Science.** In Conflict or Collaboration? A symposium, London, June 1971. Elsevier, New York; North-Holland, Amsterdam, 1972. x, 228 pp. \$10.50. A Ciba Foundation Symposium.

**Climate for Creativity.** A conference,



# BOWENS MACRO-LITE

is a new lower cost  
high intensity electronic flash  
lighting system for close-up  
and photomacrography

Write for illustrated literature or see your dealer

**BOGEN PHOTO CORP.**

100 So. Van Brunt St. P.O. Box 448 Englewood, New Jersey, 07631

Circle No. 42 on Readers' Service Card

Greensboro, N.C., 1966. Calvin W. Taylor, Ed. Pergamon, New York, 1972. xii, 306 pp., illus. \$14.50. Pergamon General Psychology Series, vol. 9.

**Clinical Tropical Medicine.** Kevin M. Cahill, Ed. Vol. 1, Schistosomiasis, Hepatitis, American Contributions to Tropical Medicine. A symposium, New York, May 1967. xvi, 340 pp., illus. \$14.50. Vol. 2, Malaria, Amebiasis, Cholera. A symposium, New York, May 1969. xvi, 256 pp., illus. \$14.50. University Park Press, Baltimore, 1972.

**Collective Violence.** James F. Short, Jr. and Marvin E. Wolfgang, Eds. Aldine-Atherton, Chicago, 1972. x, 388 pp., illus. Cloth, \$12.50; paper, \$4.95. Law in Action.

**Comparative Biochemistry of Parasites.** Proceedings of a symposium, Beerse, Belgium, Sept. 1971. H. Van Den Bossche, Ed. Academic Press, New York, 1972. xvi, 516 pp., illus. \$15.

**The Compleat Herbal.** Ben Charles Harris. Barre, Barre, Mass., 1972. x, 244 pp. Cloth, \$6.95; paper, \$3.95.

**Comprehensive Chemical Kinetics.** Vol. 13, Reactions of Aromatic Compounds. C. H. Bamford and C. F. H. Tipper, Eds. Elsevier, New York, 1972. xii, 508 pp., illus. \$53.50.

**Connections, Curvature, and Cohomology.** Vol. 1, De Rham Cohomology of Manifolds and Vector Bundles. Werner Greub, Stephen Halperin, and Ray Vanstone. Academic Press, New York, 1972. xx, 446 pp., illus. \$24. Pure and Applied Mathematics, vol. 47.

**Conservation in the Soviet Union.** Philip R. Pryde. Cambridge University Press, New York, 1972. xvi, 302 pp., illus. \$12.50.

**A Consumer's Dictionary of Food Additives.** Ruth Winter. Crown, New York, 1972. vi, 236 pp. Cloth, \$5.95; paper, \$3.95.

**Contemporary Topics in Immunochimistry.** Vol. 1. F. P. Inman, Ed. Plenum, New York, 1972. xii, 186 pp., illus. \$14.50.

**The Crystal Chemistry and Physics of Metals and Alloys.** W. B. Pearson. Wiley-Interscience, New York, 1972. xx, 806 pp., illus. \$34.95. Wiley Series on the Science and Technology of Materials.

**The Dependability of Behavioral Measurements.** Theory of Generalizability for Scores and Profiles. Lee J. Cronbach, Goldine C. Gleser, Harinder Nanda, and Nageswari Rajaratnam. Wiley, New York, 1972. xx, 410 pp., illus. \$12.95.

**Depression and the Body.** The Biological Basis of Faith and Reality. Alexander Lowen. Coward, McCann and Geoghegan, New York, 1972. 318 pp., illus. \$7.95.

**Developmental Biology.** Nelson T. Spratt, Jr. Wadsworth, Belmont, Calif., 1972. viii, 566 pp., illus. \$12.95.

**Dictionary of Scientific Biography.** Vol. 5, Emil Fischer—Gottlieb Haberlandt. Charles Coulston Gillispie, Ed. Scribner, New York, 1972. xvi, 624 pp., illus. \$35.

**A Dictionary of Scientific Units.** Including Dimensionless Numbers and Scales. H. G. Jerrard and D. B. McNeill. Chapman and Hall, London, ed. 3, 1972 (U.S. distributor, Barnes and Noble, New York). x, 212 pp. Cloth, \$8.50; paper, \$4.25. Science Paperbacks.

15 SEPTEMBER 1972

# Now ...for the very first time



... you can have shadowless incident illumination of recessed areas, deep crevices, reflecting surfaces. Bausch & Lomb's new, patented Coaxial Illuminator beams pre-aligned light down through both sides of the StereoZoom 7 Microscope into those problem areas. The light is then reflected back up the opposite side it originally traveled. The result is such a completely different view of the specimen that you may find it hard to believe your own eyes.

■ You can use infinitely variable magnification over a range from 15× to 280× and anywhere in between. Field diameter ranges from 0.55 in. to 0.03 in. You do not sacrifice valuable working distance as with conventional vertical illuminators.

■ High eyepoint eyepieces, flat fields, accurate eye level magnification readings on the zoom knob plus Bausch & Lomb quality optics... there's a combination that has made this the stereomicroscope that users confidently depend on.

■ Color filters, green, yellow, blue (approximating daylight) are carousel-mounted within the body of the illuminator and moved in and out of the light beam by a convenient knurled ring. Illumination intensity is controlled by a variable transformer.

■ The Coaxial Illuminator is factory-aligned in the back of the power pod of the StereoZoom 7 Microscope convenient to the user but in no way interfering with visual use of the instrument.

■ We urge you to try the StereoZoom 7 Microscope with Coaxial Illuminator in your laboratory with your most difficult specimens.

**Write for catalog 31-2368 and our free demonstration offer.**

StereoZoom. Reg. T. M. Bausch & Lomb.

**BAUSCH & LOMB**   
SCIENTIFIC INSTRUMENT DIVISION

20809 Bausch Street, Rochester, New York 14602

Circle No. 40 on Readers' Service Card

1023



## Our new multi-channel peristaltic pump. Up to 18 channels, only \$29.75 per channel.

At \$535, this Desaga-Brinkmann Multi-channel Pump is a 'best buy' no matter how many channels you require, 1 or 18. Its pumping action is smooth and foam-free. An electronic control lets you continuously vary the flow rate from 0.3 to 7,200 ml per hour. The pump is self-priming and has no valves or seals.

A variety of pre-assembled 6, 12

and 18-channel tubing sets are available. Each is mounted in its own bracket to facilitate positioning in the pump bed. For descriptive literature, just write: Brinkmann Instruments, Canticogue Road., Westbury, N.Y. 11590. In Canada, write: Brinkmann Instruments (Canada) Ltd., 50 Galaxy Boulevard, Rexdale (Toronto), Ontario.



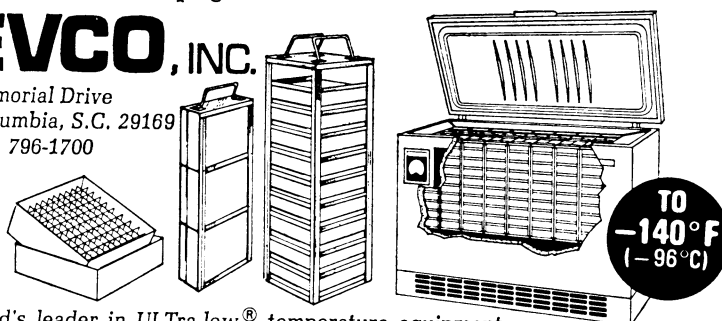
Circle No. 82 on Readers' Service Card

## Revco is More than a freezer... It's a System.

You get more than dependable ULTra-low® temperature when you buy a Revco freezer. We adapt the freezer to your particular use through the proper accessories from our inventory control systems. Let us show you how Revco provides the total answer to your ULTra-low® temperature needs. Available in sizes from 1-1/2 to 25 cubic feet, including the standard 6.5, 9, 12 and 17 cubic foot sizes, in chest models and upright.

### REVCO, INC.

1177 Memorial Drive  
West Columbia, S.C. 29169  
Tel. (803) 796-1700



The world's leader in ULTra-low® temperature equipment

1024

Circle No. 80 on Readers' Service Card

**Fundamentals of the Tracer Method.** Teresa J. C. Welch, E. James Potchen, and Michael J. Welch. Saunders, Philadelphia, 1972. x, 188 pp., illus. \$9.75.

**The Genus *Anadenanthera* in Amerindian Cultures.** Siri von Reis Altschul. Harvard University Botanical Museum, Cambridge, Mass., 1972. vi, 96 pp., illus. \$5.50.

**Geodynamic Models.** An Evaluation and a Synthesis. R. W. Van Bemmelen. Elsevier, New York, 1972. xii, 268 pp., illus. \$16.50. Developments in Geotectonics, 2.

**Geographical Ecology.** Patterns in the Distribution of Species. Robert H. MacArthur. Harper and Row, New York, 1972. xviii, 270 pp., illus. \$12.95.

**The Great Ocean Business.** Brenda Horsfield and Peter Bennet Stone. Coward, McCann and Geoghegan, New York, 1972. 360 pp. + plates. \$12.95.

**Groundwater Recovery.** L. Huisman. Winchester, New York, 1972. xii, 336 pp., illus. \$22.50.

**Grzimek's Animal Life Encyclopedia.** English edition. Bernhard Grzimek, Ed. Vol. 13, Mammals IV. A. G. Bannilow and eight others, Eds. Van Nostrand Reinhold, New York, 1972. 566 pp., illus. \$29.95. The set (13 volumes), \$325.

**A Guide to the Study of Electrode Kinetics.** H. R. Thirsk and J. A. Harrison. Academic Press, New York, 1972. xiv, 174 pp., illus. \$9.95.

**A Guidebook to Microscopical Methods.** A. V. Grimstone and R. J. Skaer. Cambridge University Press, New York, 1972. viii, 134 pp., illus. Cloth, \$8.75; paper, \$3.95.

**Handbook of Medical Sociology.** Howard E. Freeman, Sol Levine, and Leo G. Reeder, Eds. Prentice-Hall, Englewood Cliffs, N.J., ed. 2, 1972. xxvi, 598 pp. \$12.95.

**Handbook of Vapor Pressures and Heats of Vaporization of Hydrocarbons and Related Compounds.** Randolph C. Wilhoit and Bruno J. Zwolinski in collaboration with George K. Estok, Gisela B. Mahoney, and Sharon M. Dregne. Thermodynamics Research Center, Department of Chemistry, Texas A & M University, College Station, 1971 (order from Data Distribution Center, Texas A & M Research Foundation, College Station). viii, 330 pp. Paper, \$10. API44-TRC Publications in Science and Engineering, No. 101.

**High Energy Physics.** Vol. 5. E. H. S. Burhop, Ed. Academic Press, New York, 1972. xii, 282 pp., illus. \$16.50. Pure and Applied Physics, vol. 25-5.

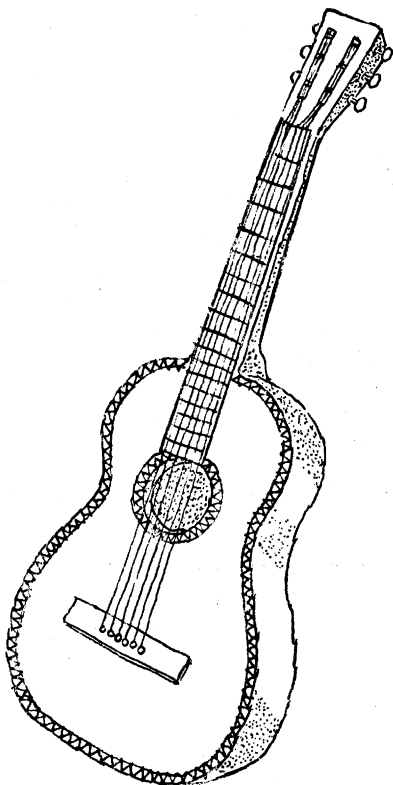
**Higher Education and the Disadvantaged Student.** Helen S. Astin, Alexander W. Astin, Ann S. Bisconti, and Hyman H. Frankel. Human Service Press, Washington, D.C., 1972. xvi, 360 pp. Paper, \$6.95.

**History in the Teaching of Physics.** Proceedings of a seminar, Cambridge, Mass., July 1970. Stephen G. Brush and Allen L. King, Eds. University Press of New England, Hanover, N.H., 1972. xii, 116 pp. \$4.

**How Animals Work.** Knut Schmidt-Nielsen. Cambridge University Press, New York, 1972. vi, 114 pp., illus. Cloth, \$5.95; paper, \$1.95.

SCIENCE, VOL. 177

## FOLK SONG STYLE AND CULTURE



### A Staff Report on Cantometrics Editor: Alan Lomax

384 pp., 7½ x 10¼, Illustrations, Bibliography, Index, 1968. 2nd Printing 1971. AAAS members' cash orders \$14.50. Regular price \$16.75.

Working with a large sample of recorded songs and filmed dances from all world culture areas, the Cantometrics Project has discovered some of the ways in which song and dance style vary by culture area. Strong statistical relationships have been established between a set of basic factors of social and economic structure and performance style. The book reports on an imaginative yet rigorous exploration of the paralinguistic and parakinesic realms and a thoroughgoing test of the hypothesis that factors of culture style are primary forces in shaping all human behavior. Performance style here becomes a psychocultural indicator, and, for the first time, the social and cultural import of the expressive act is firmly established.

AAAS

AMERICAN ASSOCIATION for the  
ADVANCEMENT OF SCIENCE  
1515 Massachusetts Avenue, N.W.  
Washington, D. C. 20005

**Human Structure.** A Companion to Anatomical Studies. C. Roland Leeson and Thomas S. Leeson. Illustrated by John W. Hackmaster, Jr. Saunders, Philadelphia, 1972. xvi, 384 pp. \$11.

**Illustrated Human Embryology.** Vol. 1, Embryogenesis. H. Tuchmann-Duplessis, G. David, and P. Haegel. Translated from the French edition (Paris, 1971) by Lucille S. Hurley. Springer-Verlag, New York; Chapman and Hall, London; Masson, Paris, 1972. x, 110 pp., illus. Paper, \$6.80.

**Immunogenicity.** Felix Borek, Ed. North-Holland, Amsterdam; Elsevier, New York, 1972. xxii, 584 pp., illus. \$37.50. Frontiers of Biology, vol. 25.

**Inorganic Chemistry.** Gregory C. Demitras, Charles R. Russ, James F. Salmon, James H. Weber, and Gerald S. Weiss. Prentice-Hall, Englewood Cliffs, N.J., 1972. xii, 556 pp., illus. \$15.95. Prentice-Hall International Series in Chemistry.

**Inorganic Plant Nutrition.** Hugh G. Gauch. Dowden, Hutchinson, and Ross, Stroudsburg, Pa., 1972. xii, 488 pp., illus. \$21.50.

**Insect Juvenile Hormones.** Chemistry and Action. Proceedings of a symposium, Washington, D.C., Sept. 1971. Julius J. Menn and Morton Beroza, Eds. Academic Press, New York, 1972. xvi, 342 pp., illus. \$11.

**The Intellectuals and the Powers and Other Essays.** Edward Shils. University of Chicago Press, Chicago, 1972. xiv, 482 pp. \$12.50. Selected Papers of Edward Shils, 1.

**Interatomic Potentials and Simulation of Lattice Defects.** Proceedings of a colloquium, Seattle, June 1971. Pierre C. Gehlen, Joe R. Beeler, Jr., and Robert I. Jaffee, Eds. Plenum, New York, 1972. xx, 782 pp., illus. \$40. Battelle Institute Materials Science Colloquia.

**International Agency for Research on Cancer Annual Report 1971.** International Agency for Research on Cancer, Lyon, France, 1972 (U.S. distributor, American Public Health Association, Washington, D.C.). 128 pp., illus. Paper, 75¢.

**The Interview.** Research on Its Anatomy and Structure. Joseph D. Matarazzo and Arthur N. Wiens. Aldine-Atherton, Chicago, 1972. viii, 184 pp., illus. \$9.75.

**Introducing Science.** Alan Isaacs. Penguin, Baltimore, ed. 2, 1972. 266 pp., illus. Paper, \$2.25. Pelican Books.

**Introduction to Contemporary Psychology.** Robert E. Lana and Ralph L. Rosnow. Holt, Rinehart and Winston, New York, 1972. x, 486 pp., illus. \$9.50.

**Introduction to Real Variable Theory.** S. C. Saxena and S. M. Shah. Intext, Scranton, Pa., 1972. xiv, 334 pp., illus. \$13.50.

**An Introduction to the Ionosphere and Magnetosphere.** J. A. Ratcliffe. Cambridge University Press, New York, 1972. x, 256 pp., illus. \$14.50.

**The Invisible Pyramid.** Loren Eiseley. Woodcuts by Walter Ferro. Scribner, New York, 1972. xiv, 176 pp. Paper, \$2.45. Reprint of the 1970 edition.

**Irrigation and Water Resources Engineering.** Henry Olivier. Arnold, London; Crane Russak, New York, 1972. xiv, 190 pp. + plates. \$19.50.

**Laboratory Animal Medical Subject Headings.** A Report of the Committee on Laboratory Animal Literature, Institute of Laboratory Animal Resources, National Research Council. National Academy of Sciences, Washington, D.C., 1972. viii, 212 pp. Paper, \$7.75.

**Language of the Mentally Retarded.** Proceedings of a conference, Lawrence, Kans., Feb. 1970. Richard L. Schiefelbusch, Ed. University Park Press, Baltimore, 1972. xxii, 252 pp., illus. \$12.50. National Institute of Child Health and Human Development Mental Retardation Centers Series.

**Law, Institutions, and the Global Environment.** A conference, Harriman, N.Y., Sept. 1971. John Lawrence Hargrove, Ed. Oceana, Dobbs Ferry, N.Y.; Sijthoff, Leiden, 1972. xx, 396 pp. \$20.

**Lectures on p-Adic L-Functions.** Kenkichi Iwasawa. Princeton University Press, Princeton, N.J.; University of Tokyo Press, Tokyo, 1972. viii, 106 pp., illus. Paper, \$5. Annals of Mathematics Studies, No. 74.

**Life. Conquest of Energy.** Richard M. Tullar. Holt, Rinehart and Winston, New York, 1972. 436 pp., illus. \$11.

**The Living Plant.** Peter Martin Ray. Holt, Rinehart and Winston, New York, ed. 2, 1972. xii, 206 pp., illus. Paper, \$4. Modern Biology Series.

**Mandala.** José and Miriam Argüelles. Shambala, Berkeley, 1972. 136 pp. + plates. Paper, \$5.95.

**The Masks of Hate.** The Problem of False Solutions in the Culture of an Acquisitive Society. David Holbrook. Pergamon, New York, 1972. x, 276 pp., illus. \$11.25. Pergamon English Library.

**Measure and Integration Theory on Infinite-Dimensional Spaces.** Abstract Harmonic Analysis. Zia Dao-Xing. Translated from the Chinese edition by Elmer J. Brody. Academic Press, New York, 1972. x, 426 pp. \$24. Pure and Applied Mathematics, vol. 48.

**Mechanisms Regulating the Discharge of Motoneurons.** Ragnar Granit. Thomas, Springfield, Ill., 1972. x, 78 pp., illus. \$8.25. Sherrington Lectures, University of Liverpool, 11.

**The Meiotic Process.** Pairing, Recombination and Chromosome Movements, 1. Papers by Everett Anderson, Robert C. King, Orlando Cuellar *et al.* MSS Information Corp., New York, 1972. 190 pp., illus. \$15.

**Mental Retardation.** An Atlas of Diseases with Associated Physical Abnormalities. Lewis B. Holmes and five others. Macmillan, New York, 1972. xii, 430 pp. \$28.

**Mesospheric Models and Related Experiments.** Proceedings of a symposium, Frascati, Italy, July 1970. G. Fiocco, Ed. Springer-Verlag, New York; Reidel, Dordrecht, Holland, 1972. viii, 300 pp., illus. \$26.80. Astrophysics and Space Science Library, vol. 25.

**Methods in Computational Physics.** Advances in Research and Applications. Berni Alder, Sidney Fernbach, and Manuel Rotenberg, Eds. Vol. 12, Seismology: Body Waves and Sources. Bruce A. Bolt, Ed. Academic Press, New York, 1972. x, 392 pp., illus. \$29.

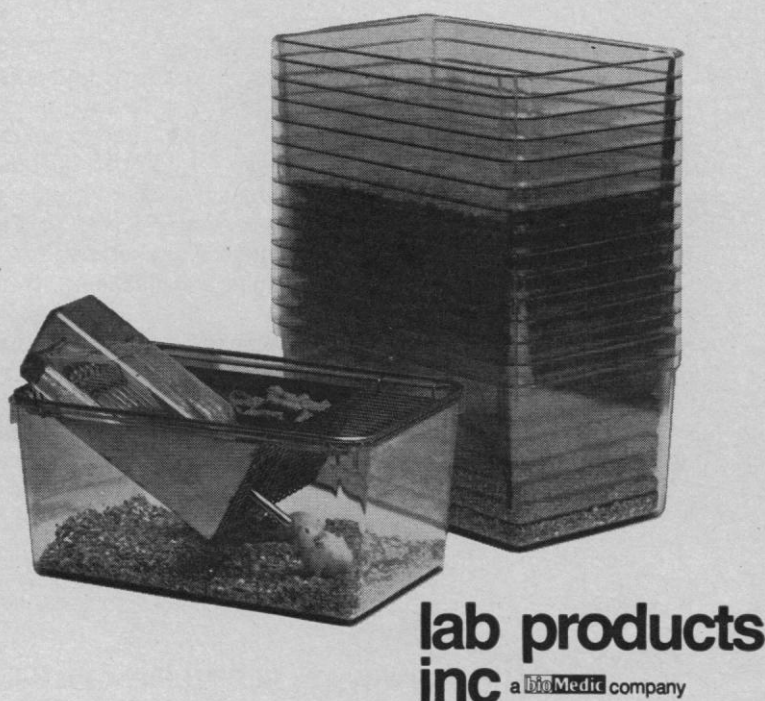
# end costly high-rise housing

We're talking about our new solutions to the traditional problems with disposable mouse cages. Our new clear disposable cages come fully nested, yet have stacking posts to prevent jamming. Altogether you save time, labor costs, storage space, and shipping costs. Even with bedding in them, 100 cages of our new clear, disposable mouse cages take up less than 4 cubic feet, less than half the volume of other disposable cages.

All of these features add up to a savings of 50% or more over other types of disposable cages. Made of clear polystyrene, these cages accept standard lids and covers. In addition, they have molded flanges for use in suspension racks.

You also have the option of ordering them pre-packed with the finest animal bedding we know of **ab-sorb-dri®**. It's patented. (U. S. Patent No. 3,256,857.) Your research work will go easier — every day — because you don't have to worry about the separate storage of the bedding material or the time consuming labor of filling each cage with bedding.

Another contribution to small animal care from Lab Products, a company of experienced people with new ideas in lab animal care equipment. We have them all in a catalog. For your copy, write or call Lab Products, Inc., 635 Midland Avenue, Garfield, New Jersey 07026, (201) 478-2535.



©1972, BionMedic corporation

Circle No. 43 on Readers' Service Card

**Methods for Studying the Ecology of Soil Micro-organisms.** D. Parkinson, T. R. G. Gray, and S. T. Williams, Eds. Published for International Biological Programme by Blackwell, Oxford, England, 1971 (U.S. distributor, Davis, Philadelphia). xii, 116 pp., illus. Paper, \$6. IBP Handbook No. 19.

**Methods in Cell Physiology.** Vol. 5. David M. Prescott, Ed. Academic Press, New York, 1972. xviii, 406 pp., illus. \$23.50.

**Methods in Pharmacology.** Vol. 2, Physical Methods. Colin F. Chignell, Ed. Appleton-Century-Crofts, New York, 1972. xii, 500 pp., illus. \$29.95.

**Nerve Growth Factor and its Antiserum.** A symposium, London, Apr. 1971. Eleanor Zaimis and Julie Knight, Eds. Athlone, London, 1972. xii, 274 pp., illus. £7.50.

**Order.** In Life. Edmund Samuel. Prentice-Hall, Englewood Cliffs, N.J., 1972. xii, 404 pp., illus. \$13.

**Our Own Metaphor.** A Personal Account of a Conference on the Effects of Conscious Purpose on Human Adaptation. Burg Wartenstein, Austria, summer 1968. Mary Catherine Bateson. Knopf, New York, 1972. xiv, 324 pp., illus. + index. \$8.95.

**A Pedestrian Approach to Quantum Field Theory.** Edward G. Harris. Wiley-Interscience, New York, 1972. xiv, 168 pp., illus. \$11.95.

**Personal Rapid Transit.** A conference, Minneapolis, Minn., Nov. 1971. J. Edward Anderson, Jack L. Dais, William L. Garrard, and Alain L. Kornhauser, Eds. University of Minnesota Institute of Technology, Minneapolis, 1972 (available from University of Minnesota Department of Audio Visual Extension, Minneapolis). xii, 502 pp., illus. Paper, \$8.75.

**PL/1 for the IBM 360.** Clarence B. Germain. Prentice-Hall, Englewood Cliffs, N.J., 1972. xii, 284 pp., illus. Cloth, \$12.50; paper, \$8.50.

**Plastic Analysis and Design of Plates, Shells and Disks.** M. A. Save and C. E. Massonnet. North-Holland, Amsterdam; Elsevier, New York, 1972. xviii, 478 pp., illus. \$31. North-Holland Series in Applied Mathematics and Mechanics, vol. 15.

**Regulation of the Natural Gas Producing Industry.** A seminar, Washington, D.C., Oct. 1970. Keith C. Brown, Ed. Resources for the Future, Washington, D.C., 1972 (distributed by Johns Hopkins University Press, Baltimore). xii, 260 pp., illus. Paper, \$8.50.

**Rescuing Man's Environment.** Nine Essays on Environmental Reform. Robert C. Axtmann, Ed. Princeton University Council on Environmental Studies, Princeton, N.J., 1972. xviii, 236 pp., illus. Paper \$3.50.

**Riccati Differential Equations.** William T. Reid. Academic Press, New York, 1972. x, 216 pp. \$14. Mathematics in Science and Engineering, vol. 86.

**Rutherford Recollections of the Cambridge Days.** Mark Oliphant. Elsevier, New York, 1972. xvi, 158 pp. + plates. \$7.50.

**Seed Biology.** Vol. 2, Germination Control, Metabolism, and Pathology. T. T. Kozlowski, Ed. Academic Press, New

SCIENCE, VOL. 177

York, 1972. xii, 448 pp., illus. \$26. Physiological Ecology.

**Self-Directed Behavior.** Self-Modification for Personal Adjustment. David Watson and Roland Tharp. Brooks/Cole, Monterey, Calif., 1972. xvi, 264 pp., illus. \$5.95.

**Statistical Issues.** A Reader for the Behavioral Sciences. Roger E. Kirk, Ed. Brooks/Cole, Monterey, Calif., 1972. xii, 402 pp., illus. Paper, \$5.95.

**Systematic Analysis of Surface-Active Agents.** Milton J. Rosen and Henry A. Goldsmith. Wiley-Interscience, New York, 1972. xxviii, 592 pp., illus. \$27.50. Chemical Analysis, vol. 12.

**Systems Theory Research.** Vol. 22. A. A. Lyapunov, Ed. Translated from the Russian edition (Moscow, 1970). Consultants Bureau, New York, 1972. vi, 296 pp., illus. Paper, \$16.50.

**The Teaching of Geometry at the Pre-College Level.** Proceedings of a conference, Carbondale, Ill., March 1970. Hans-Georg Steiner, Ed. CEMREL, Inc., St. Ann, Mo., 1972. viii, 388 pp., illus. Paper, \$10. Reprinted from Educational Studies in Mathematics, Vol. 3, No. 3/4, and Vol. 4, No. 1.

**Textbook of Cytogenetics.** Walter V. Brown. Mosby, St. Louis, 1972. viii, 346 pp., illus. \$12.50.

**Textbook of Zoology.** Invertebrates. T. Jeffery Parker and William A. Haswell. A. J. Marshall and W. D. Williams, Eds. Elsevier, New York, 1972. xx, 874 pp. ed. 7, illus. \$11.

**Topics in Learning and Performance.** Richard F. Thompson and James F. Voss, Eds. Academic Press, New York, 1972. xxvi, 274 pp., illus. \$13.50.

**Trigonometry with Applications.** Ralph Mansfield. Wadsworth, Belmont, Calif., 1972. xxiv, 530 pp., illus. \$9.95.

**Turbulence Phenomena.** An Introduction to the Eddy Transfer of Momentum, Mass, and Heat, Particularly at Interfaces. J. T. Davies. Academic Press, New York, 1972. xii, 412 pp., illus. \$19.50.

**Urethane Foams.** Technology and Applications, 1971. Yale L. Meltzer. Noyes Data Corp., Park Ridge, N.J., 1971. viii, 448 pp., illus. Paper, \$36.

**The Use of Stereographic Projection in Structural Geology.** F. C. Phillips. Arnold, London; Crane Russak, New York, ed. 3, 1972. vi, 90 pp., illus. \$7.75.

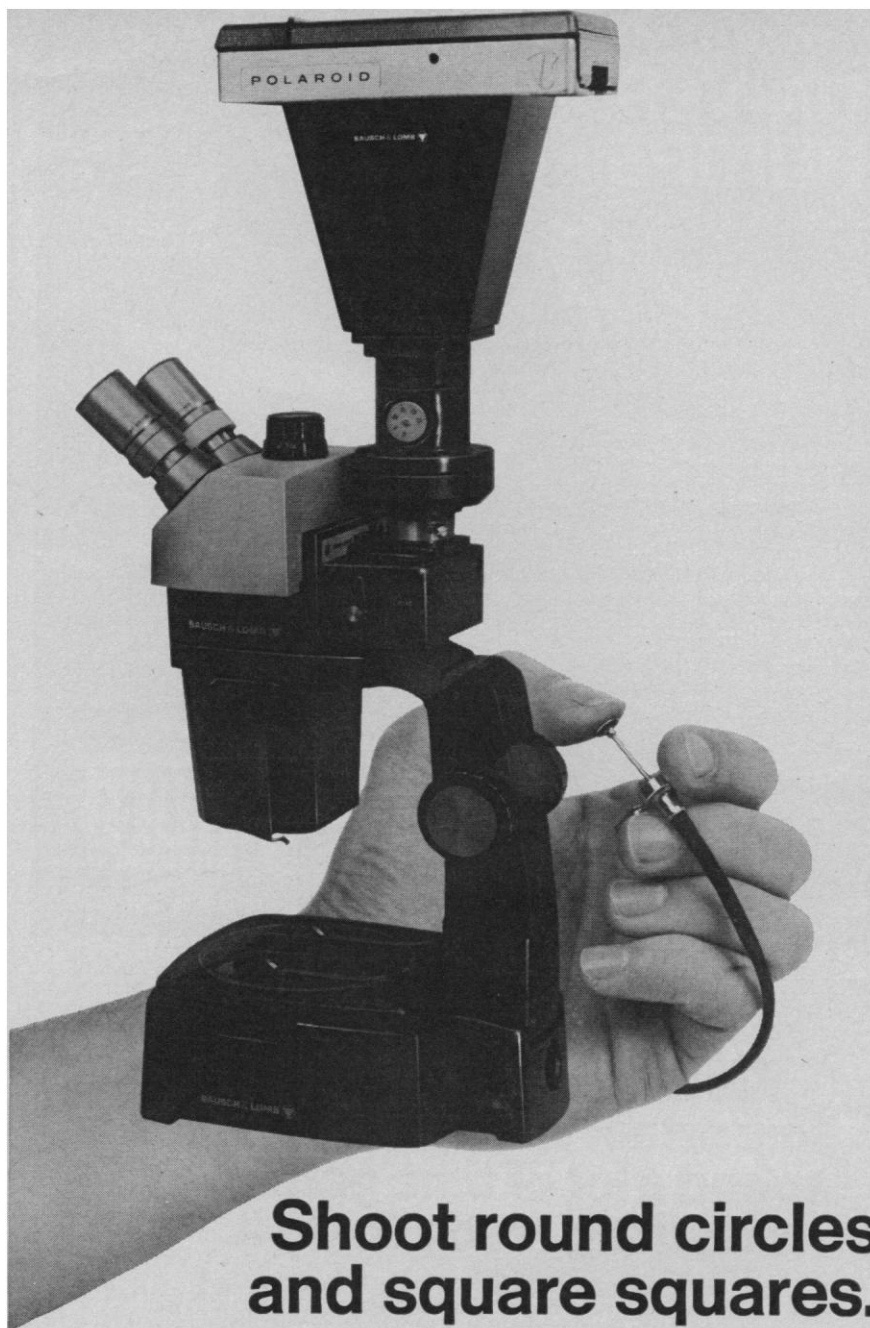
**Les Verres de Contact.** M. Massin. Karger, Basel, ed. 2, 1972 (U.S. distributor, Phiebig, White Plains, N.Y.). xii, 162 pp., illus. \$16.55.

**Virus-Cell Interactions and Viral Antimetabolites.** Proceedings of a symposium, Varna, Bulgaria, Sept. 1971. D. Shugar, Ed. Academic Press, New York, 1972. viii, 232 pp., illus. \$11.95. Seventh Federation of European Biochemical Societies Meeting, vol. 22.

**Water Deficits and Plant Growth.** Vol. 3, Plant Responses and Control of Water Balance. T. T. Kozlowski, Ed. Academic Press, New York, 1972. xiv, 368 pp., illus. \$19.50.

**What Kinds of Graduates Do We Need?** F. R. Jevons and H. D. Turner, Eds. Oxford University Press, New York, 1972. vi, 120 pp. Paper, \$3.75. Science and Engineering Policy Series.

15 SEPTEMBER 1972



## Shoot round circles and square squares.

Some extraordinary optics in the new Bausch & Lomb Integrated Camera Series II produce images freer of distortion than ever before. Shooting a properly aligned specimen through a StereoZoom 7 Microscope, Series II Camera and Camera Adapter, you get a picture that retains the *identical* shape. Circles are never out of round. Squares are *square*—sides don't cave in or bulge out. Compare results with any other system and convince yourself.

There's more, too, like a large viewing screen that permits comfortable group viewing in ambient light. A highly sensitive exposure meter simplifies picture taking by eliminating guesswork.

Your choice of three interchangeable camera bodies—the 35mm, takes the full range of 35mm films—BW, color prints and transparencies; 3¼" x 4¼" Polaroid\* and 4" x 5" which accepts plates, film packs, sheets, Polaroid sheets.

Ask for a see-for-yourself, no-obligation demonstration, or write for our fact-filled Catalog 42-2396.

**BAUSCH & LOMB**   
SCIENTIFIC INSTRUMENT DIVISION

StereoZoom, Reg. T.M. Bausch & Lomb  
\*Trademark, Polaroid Corp.

87809 Bausch Street, Rochester, N.Y. 14602

Circle No. 41 on Readers' Service Card