

## BOOKS RECEIVED

(Continued from page 434)

**The Production and Hazards of a Hyperbaric Oxygen Environment.** Proceedings of a symposium, London, January 1968. G. S. Innes, Ed. Pergamon, New York, 1970. x, 122 pp., illus. \$5.50.

**Progress in Nucleic Acid Research and Molecular Biology.** Vol. 10. J. N. Davidson and Waldo E. Cohn, Eds. Academic Press, New York, 1970. xxiv, 288 pp., illus. \$14.50.

**The Psychology and Education of the Young.** A Guide to the Principles of Development, Learning and Assessment. Margaret Munro. Elsevier, New York, 1969. viii, 294 pp. \$4.95.

**Psychosocial and Educational Aspects and Problems of Mental Retardation.** Robert M. Allen and Arnold D. Cortazzo. Thomas, Springfield, Ill., 1970. xii, 124 pp. \$6.

**Rank Order Probabilities.** Two-Sample Normal Shift Alternatives. Roy C. Milton. Wiley, New York, 1970. xvi, 304 pp., illus. \$12.95. Wiley Series in Applied Statistics.

**Recent Advances in Researches on Filariasis and Schistosomiasis in Japan.** Manabu Sasa, Ed. University of Tokyo Press, Tokyo; University Park Press, Baltimore, Md., 1970. xiv, 402 pp., illus. \$21.

**Regional Ecology.** The Study of Man's Environment. Robert E. Dickinson. Wiley, New York, 1970. xiv, 200 pp. \$6.95.

**Regular and Related Solutions.** The Solubility of Gases, Liquids, and Solids. Joel H. Hildebrand, John M. Prausnitz, and Robert L. Scott. Van Nostrand Reinhold, New York, 1970. x, 228 pp., illus. \$10.95.

**The Research Act.** A Theoretical Introduction to Sociological Methods. Norman K. Denzin. Aldine, Chicago, 1970. xviii, 370 pp. \$9.50.

**A Revision of the Termites of the Genus Meacrotermes from the Ethiopian Region (Isoptera: Termitidae).** Jean-Emile Ruelle. Trustees of the British Museum (Natural History), London, 1970. Illus. Paper, £2.60. Entomological Series of the Bulletin of the British Museum, vol. 24, No. 9, pp. 363-444.

**Russian Derivational Dictionary.** Dean S. Worth, Andrew S. Kozak, and Donald B. Johnson. Elsevier, New York, 1970. xxiv, 750 pp. \$22.95.

**Science and Technology in the World of the Future.** Arthur B. Bronwell, Ed. Wiley-Interscience, New York, 1970. xxii, 394 pp., illus. \$11.95.

**The Science of the Clouds.** R. A. R. Tricker. Mills and Boon, London; Elsevier, New York, 1970. 144 pp., illus. + plates. \$6.95.

**Seismic Design in Nuclear Power Plants.** A conference, Cambridge, Mass., 1969. Robert J. Hansen, Ed. M.I.T. Press, Cambridge, 1970. xiv, 496 pp., illus. \$17.50.

**Semiconductors and Semimetals.** Vol. 5, Infrared Detectors. R. K. Willardson and Albert C. Beer, Eds. Academic Press, New York, 1970. xiv, 552 pp., illus. \$26.

**A Short History of Botany in the United States.** Joseph Ewan, Ed. Hafner, New York, 1969. x, 174 pp. \$7.50.

**Sierra Nevada.** Verna R. Johnston. Illustrated with photographs by the author and maps by Samuel H. Bryant. Houghton Mifflin, Boston, 1970. xx, 282 pp. +

plates. \$7.95. The Naturalist's America, vol. 2.

**The Social Contract.** A Personal Inquiry into the Evolutionary Sources of Order and Disorder. Robert Ardrey. Drawings by Berdine Ardrey. Atheneum, New York, 1970. x, 406 pp., illus. \$10.

**A Sociology of Sociology.** Robert W. Friedrichs. Free Press, New York; Collier-Macmillan, London, 1970. xxiv, 432 pp. \$11.95.

**Soils.** Their Nature, Classes, Distribution, Uses, and Care. J. Sullivan Gibson and James W. Batten. University of Alabama Press, University, 1970. xviii, 298 pp., illus. \$7.

**Spark Chambers.** Otto Claus Allkofer. Under the cooperation of Wolf-Dieter Dau and Claus Gruppen. Verlag Karl Thieme, Munich, 1969. xii, 248 pp., illus. \$15.

**Spins in Chemistry.** R. McWeeny. Academic Press, New York, 1970. xii, 156 pp., illus. \$8.50. Current Chemical Concepts. Monograph of the Polytechnic Institute of Brooklyn.

**A Stereotaxic Brain Atlas for Macaca nemestrina.** W. D. Winters, R. T. Kado, and W. R. Adey. University of California Press, Berkeley, 1969. xiv, 94 pp., illus. \$18.50.

**Taxonomist's Glossary of Genitalia in Insects.** S. L. Tuxen, Ed. Munksgaard, Copenhagen, ed. 2, 1970. 360 pp., illus. Kr. 200. Scandinavian University Books.

**Techniques for Plant Electron Microscopy.** B. E. Juniper, G. C. Cox, A. J. Gilchrist, and P. R. Williams. Blackwell Scientific Publications, Oxford, England, 1970 (U.S. distributor, Davis, Philadelphia). xii, 108 pp., illus. \$3.50.

**Technological Change.** Its Impact on Man and Society. Emmanuel G. Mesthene. Harvard University Press, Cambridge, Mass., 1970. 128 pp. \$4.95.

**Technology, Management and Society.** Essays by Peter F. Drucker. Harper and Row, New York, 1970. xii, 212 pp. \$5.95.

**Theories of Light.** From Descartes to Newton. A. I. Sabra. Oldbourne, London, 1970 (U.S. distributor, Elsevier, New York). 364 pp., illus. \$12.75. Oldbourne History of Science Library.

**Topics in Applied Quantumelectrodynamics.** Paul Urban. Springer-Verlag, New York, 1970. viii, 268 pp. \$15.85.

**The Tyranny of the Experts.** How Professionals Are Closing the Open Society. Jethro K. Lieberman. Walker, New York, 1970. viii, 318 pp. \$8.50.

**Vector Analysis for Mathematicians, Scientists and Engineers.** S. Simons. Pergamon, New York, ed. 2, 1970. viii, 192 pp., illus. Cloth, \$4.75; paper, \$2.25. Commonwealth and International Library: Physics Division.

**Vigilance and Habituation.** A Neuropsychological Approach. Jane F. Mackworth. Penguin, Baltimore, 1970. 240 pp., illus. Paper, \$1.95. Penguin Science of Behaviour.

**Viruses as a Cause of Cancer.** A Report on Research. American Cancer Society, New York, 1969. 28 pp. Paper.

**Where Medicine Fails.** Anselm L. Strauss, Ed. Aldine, Chicago, 1970. x, 174 pp. Paper, \$2.45. Trans-action Book 4.

**The Year Book of the Royal Society of London 1970.** (Royal Society of London, 1970). 432 pp. \$2.75.

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**Biologist,** Ph.D., 34, 8 years of university experience, desires position in institution where innovative undergraduate learning experiences are considered more important than volume of faculty publications. Box 381, SCIENCE. 10/30

**Biomedical Scientist,** B.S., D.V.M., M.S., Ph.D., with 6 years of junior-level administrative experience in biological sciences and research (pharmacology, toxicology, infectious disease). Integrated concepts of basic biochemistry, biology, physiology, pathology, pharmacology, medicine. Seeking senior-level administrative post in university or organization which recognizes integrative nature of life sciences. Want to keep hand in research. Publications. Good teaching background and capability. Box 392, SCIENCE. X

**Biophysical Chemist,** Ph.D., associate professor with extensive research experience in biological applications of spectroscopy at a large university. Desires relocation to clean, pleasant environment. Box 393, SCIENCE. X

**Cytologist,** Ph.D. Publications. Research experience in insect experimental embryology, mammalian cytogenetics, and human chromosomes studies. Seeks research-teaching position. Box 394, SCIENCE. X

**Entomologist,** Ph.D. (36), 10 years of university and research experience in insect ecology, behavior, physiology, cold-hardiness. Senior postdoctoral training. Publications. Desires position with opportunity for research. Consider U.S., Canada, or Australia. Box 395, SCIENCE. X

**Enzymologist** with biochemical and histochemical publications. Research or research and teaching. Box 396, SCIENCE. 11/20;12/18

**M.D.-Ph.D. Research Team** in psychobiology, psychopathology, and addiction seeking research setting of small size in pleasant place to provide space and facilities for grant. Substantial contributions. Box 397, SCIENCE. X

**Medical Writer,** M.S., bacteriology, formerly Chief, Technical Literature and Consulting Medical Editor for major pharmaceutical firm; for full-time work in Houston or free-lance of all sorts anywhere. Résumé. Box 398, SCIENCE. X

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The salary is open; the appointment is to be made preferably by 15 January 1971, or 1 July 1971, and the closing date for applications is 15 December 1970. Apply to:

Malcolm MacDonell  
President  
St. Francis Xavier University  
Antigonish, Nova Scotia, Canada

#### EDITOR

Full-time editor needed for interdisciplinary scientific journal based in Washington, D.C. To edit manuscripts of review articles and research reports and to negotiate editorial changes (technical and stylistic) with authors. Graduate work in a biomedical science preferred. Two to five years of solid editing experience required. Reply by letter, stating qualifications and salary requirements.

Box 400, SCIENCE

#### EDITOR

M.D., under 45 wanted to join editorial staff of large midwestern clinical, research, and teaching institution; mostly editing of medical and basic-sciences manuscripts; opportunity for some teaching; doctorate in medicine and some editorial training or experience required.

BOX 390, SCIENCE

#### IMMUNOBIOLOGIST

Ph.D. immunobiologist with background and interests in cell-mediated hypersensitivity and/or inflammation to engage in independent research on immune response at the cellular level and in intact animals. Please reply in confidence to Dr. E. H. Wiseman, Pharmacology Department, Pfizer Inc., Groton, Connecticut 06340.

#### UNIVERSITY OF OTAGO Dunedin, New Zealand SECOND CHAIR OF ZOOLOGY

The University Council has decided to establish a Second Chair of Zoology. Applications are invited. Professorial salaries are fixed at various points within the range of \$NZ9,000 to \$NZ11,500 per annum. (Note: \$NZ100 equals £46. 13.4 stg, \$US112, \$A100).

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**POSTDOCTORAL FELLOWSHIPS IN IMMUNOLOGY.** Some fellowships are available starting 1 September 1971 in the fields of Cellular Immunology, Immunochemistry and Immunopathology. American citizenship or resident visa required. For further information write including C.V. to Doctor V. Nussenzweig, Department of Pathology, New York University School of Medicine, 550 First Avenue, New York 10016.

**PREDOCTORAL FELLOWSHIPS IN PHYSIOLOGY.** Training leading to the Ph.D. with special orientation in physiological control systems, cardiovascular, temperature regulation, endocrinology, and neurophysiology. Emphasis upon preparation for academic careers combining teaching and research. Stipends with tuition and dependency allowance available to qualified undergraduates in engineering, biology, chemistry, mathematics, or physics. A maximum of five new students accepted each year, maintaining a low student-adviser ratio. Detailed information from DR. CLARENCE N. PEISS, Graduate Program Director, Department of Physiology, Loyola University-Stritch School of Medicine, 2160 South First Avenue, Maywood, Illinois 60153.

**GRADUATE STUDY IN PHARMACOLOGY.** A program leading to the Ph.D. degree involving course work and research training which stresses research on fundamental mechanisms of drug action on neural, neuro-humoral, membrane transport, and endocrine systems using electrophysiological, biochemical and computer techniques. Full stipend and tuition available to qualified U.S. citizens. Early application for September 1971 strongly advised. Department of Pharmacology, Schools of Medicine and Dentistry, State University of New York at Buffalo, 122 Capen Hall, Buffalo, N.Y. 14214.

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seeing the world in new colors. The weight of their numbers now permits all Kodak Processing Stations in the land to handle this film. Another way the necessary volume could have been attained would have been for this country to adopt the new practice in Finland, where women routinely undergo mammography in "false color" to visualize vascularization patterns suggestive of early breast cancer.

*Write Scientific Photography, Eastman Kodak Company, Rochester, N.Y. 14650 if there are any questions.*

### Accessories for the bandwagon

They are saying that environmental concern is just a passing fad. Let's hope they are wrong.

Talk is cheap about  $\text{SO}_2$  in the air. 5-Aminofluorescein (EASTMAN 10866) is not very expensive either. It helps put the talk on a quantitative basis. Its fluorescence is depressed by the reaction product of bisulfite and formaldehyde in a manner to permit determination of  $\text{SO}_2$  trapped in sodium tetrachloromercurate(II) down to a level of 20 nanograms per ml. Details from the National Center for Atmospheric Research can be found in *Anal. Chem.* 42:512 (1970), where our assistance is graciously termed "invaluable."

Fluorescein Mercuric Acetate (EASTMAN 9963) has its fluorescence dimmed by  $\text{H}_2\text{S}$ , which is also in the air, as is talk about its presence. Same laboratory tells in *Anal. Chem.* 41:1856 (1969) how *that* talk can be put in terms of fractional parts per billion. The part of the paper that tells how to make fluorescein mercuric acetate can now be skipped.

Same idea from same lab with plain fluorescein (as the disodium salt, EASTMAN 735) for  $\text{NO}_3^-$  down to 10 nanograms per ml in concentrated  $\text{H}_2\text{SO}_4$  (*Anal. Chim. Acta* 51: 21 (1970)). This permits measurement of  $\text{NO}_x$  in the air. First you filter particulate matter out of the air, then convert to  $\text{NO}_3^-$  by bubbling through  $\text{H}_2\text{O}_2$  solution.

For  $\text{O}_3$  down to a part per billion in the atmosphere, one

turns from dimmed fluorescence to chemiluminescence. The reaction is with Rhodamine B (EASTMAN 4453) on silicone-treated EASTMAN CHROMAGRAM Sheet 6061 in an instrument which has been described by workers at the National Air Pollution Control Administration, Division of Chemistry and Physics, 3820 Merton Drive, Raleigh, N.C. 27609. These workers are suspicious of measurements with iodide-iodine solution that come up with lower values for total atmospheric oxidants than *they* get for  $\text{O}_3$  alone.

Rhodamine B is not to be confused with Rhodamine 6G, (EASTMAN 10724). In *Applied Physics Letters* for Sept. 15, 1970, a communication by Peterson, Tuccio, and Snively of our own Research Laboratories tells how with Rhodamine 6G they achieved the first CW dye laser. It is known that highly monochromatic laser emission from dyes can be continuously tuned over a broad spectral range. When pointed over a suffering city and swept over an appropriate frequency range, a dye laser beam should call forth from each molecular species in the air a fluorescence signature. Can you see any demand for such an instrument? There would be no worry about proper disposal of the very mercury compounds used in measuring  $\text{SO}_2$  and  $\text{H}_2\text{S}$ , would there?

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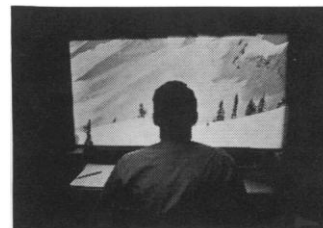
Rather few of us 113,000 souls here spend our working hours thinking beautiful patterns of thought. The rest of us live by a more literal concept of work. Of our many thousands of products and services, not many flow in such majestic torrents that the only human help possible must come from the brain's topmost centers. Some of us—archaic though it may seem—are actually paid to use our hands, eyes, and feet. This in turn provides employment for 15 of us drawn from the disciplines of engineering, medicine, psychology, and physiology to grapple with such questions as:

- Despite appearances, are some jobs too taxing to the body or the human spirit to do day-in and day-out?
- Despite appearances, which jobs are insufficiently taxing to keep the jobholder vigilant?
- How would workers benefit by variations in work methods, changes in rest periods, or job rotation?
- What kind of tests would best match people to difficult jobs?
- Where can redesign of equipment and work environment help productivity and quality through worker comfort?

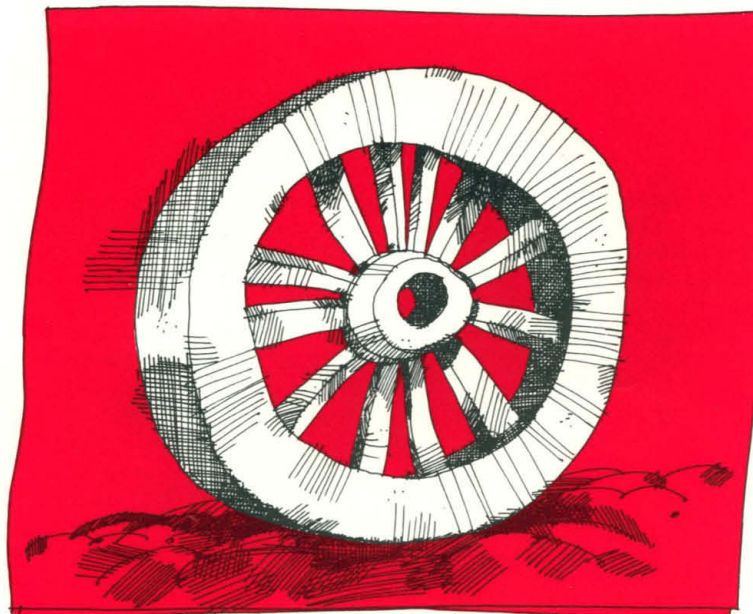
- How much should production workers and inspectors know about the use of the product?
- How can these human-factors studies guide design of the products to help the humans who use them?



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