

$\alpha$ -fetoprotein concentrations of 20 nanograms per 100 cubic centimeters of blood or less can be found in normal adults by means of radioimmunoassay. In 1963, Abelev reported elevated serum concentrations of  $\alpha$ -fetoprotein in adult mice with hepatoma, and a year later Tartarinov reported a similar observation in patients with hepatoma. The anomalous presence of  $\alpha$ -fetoprotein in adults was thought to be diagnostic of hepatoma for some time thereafter, until reports confirming the early observations of Masopust and his colleagues began to appear: elevated serum  $\alpha$ -fetoprotein concentrations were sometimes present in patients with certain gonadal tumors and even in patients with hepatitis. Patients with gastric carcinoma, especially when metastasis to the liver has occurred, may also have elevated  $\alpha$ -fetoprotein concentrations. What then is the value of serum  $\alpha$ -fetoprotein detection in the diagnosis of any of these conditions, particularly hepatoma, and does quantitation add to specificity in diagnosis? In a patient with gastric carcinoma that has metastasized to the liver, is the increased  $\alpha$ -fetoprotein synthesis due to the original tumor, to the hepatic metastases, or to the distorted hepatic parenchyma surrounding the metastases? Can serum  $\alpha$ -fetoprotein assays be used to follow the efficacy of tumor therapy? Can they be used to evaluate prognosis? This review is not a whodunit, but limited space compels referral of the reader to the book for the answers to these questions, although it is recognized that some of the papers will raise still more questions. For example, in one study reported, rats given chemical hepatocarcinogens by mouth often have increased  $\alpha$ -fetoprotein synthesis during the first few weeks of treatment, but synthesis later decreases even if the carcinogenic agent is continued; in those rats that subsequently develop hepatomas, increased  $\alpha$ -fetoprotein synthesis recurs. What is the relation then between hepatopathy and hepatoma in the production of  $\alpha$ -fetoprotein? There does seem to be an increased association between hepatitis, cirrhosis, and hepatoma in some countries, for example, Japan, and increased  $\alpha$ -fetoprotein levels are seen in some patients with cirrhosis as well as in those with hepatoma. Do some types of hepatitis or cirrhosis predispose to hepatoma? Although the collection of 26 papers contained in this book were presented in December 1971, the data are timely. In fact,

some of the information presented can as yet be found nowhere else. In all, this combined international effort represents not only a fine summation of our knowledge of  $\alpha$ -fetoprotein, but also a significant advance.

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## Books Received

**Acupuncture.** A Selected Bibliography. Vol. 1, 1800–1972. David E. Bresler and Patricia L. Wisne. National Acupuncture Association, Los Angeles, 1973. 130 pp. Paper \$10.

**Advances in Magnetic Resonance.** Vol. 6. John S. Waugh, Ed. Academic Press, New York, 1973. xiv, 310 pp., illus. \$27.50.

**Advances in Nuclear Physics.** Vol. 6. Michel Baranger and Erich Vogt. Plenum, New York, 1973. xii, 462 pp., illus. \$25.

**Analytic Function Theory.** Einar Hille. Chelsea Publishing Co., New York, ed. 2, 1973. Two volumes, illus. Vol. 1, xii, 308 pp. Vol. 2, xiv, 496 pp. Each volume, \$9.95. Reprint of the 1959 edition.

**Biology of the Turbellaria.** Papers from a symposium, Chicago, Dec. 1970. Nathan W. Riser and M. Patricia Morse, Eds. McGraw-Hill, New York, 1973. xxviii, 530 pp., illus. \$25. McGraw-Hill Series in the Invertebrates.

**Calculus of Several Variables and Differentiable Manifolds.** Carl B. Allendoerfer. Macmillan, New York, and Collier Macmillan, London, 1974. xii, 228 pp. \$12.95.

**Cattle of North America.** John E. Rouse. University of Oklahoma Press, Norman, 1973. xiv, 650 pp., illus. \$20. World Cattle, vol. 3.

**Characteristic Raman Frequencies of Organic Compounds.** Francis R. Dollish, William G. Fateley, and Freeman F. Bentley. Wiley-Interscience, New York, 1974. xx, 444 pp., illus. \$22.50.

**Current Topics in Cellular Regulation.** Vol. 7. Bernard L. Horecker and Earl R. Stadtman, Eds. Academic Press, New York, 1973. xx, 222 pp., illus. \$17.50.

**Developments in the Theory of Turbulence.** D. C. Leslie, Clarendon (Oxford University Press), New York, 1973. xx, 368 pp., illus. \$38.50.

**Diatomic Interaction Potential Theory.** Vol. 2, Applications. Jerry Goodisman. Academic Press, New York, 1973. xvi, 412 pp. \$34. Physical Chemistry Series, vol. 31–2.

**Discovering the Basis of Life.** An Introduction to Molecular Biology. Ann Roller. McGraw-Hill, New York, 1973. viii, 280 pp., illus. Paper, \$5.95.

**Environmental Pollution and Mental Health.** John S. Williams, Jr., Edward Leyman, Stephen A. Karp, and Paul T. Wilson. Information Resources Press, Washington, D.C., 1973. xii, 136 pp. \$9.50.

**Eye-movements and Visual Perception.** R. W. Ditchburn. Clarendon (Oxford University Press), New York, 1973. xvi, 422 pp., illus. \$30.50.

**Fibre Optics.** Theory and Practice. W. B. Allan. Plenum, New York, 1973. viii, 248 pp., illus. \$22.50. Optical Physics and Engineering.

**Final Report of the Commission of Inquiry into the Non-medical Use of Drugs.** Information, Canada, 1973. xxvi, 1148 pp. Paper, \$7.95.

**A Guide to Sources of Consumer Information.** Sarah M. Thomas and Bernadine Weddington. Information Resources Press, Washington, D.C., 1973. xii, 178 pp., illus. \$10.50.

**Habits of Some Asian Woodpeckers** (Aves, Picidae). Lester L. Short. American Museum of Natural History, New York, 1973. ii, pp. 255–364, illus. Paper, \$4.20. Bulletin of the American Museum of Natural History, vol. 152, article 5.

**Hemodynamic Stress and Relief of the Heart.** Proceedings of a congress, Ljubljana, Yugoslavia, Apr. 1971. Gojmir Južnič, Ed. Karger, Basel, 1973 (U.S. distributor, Phiebig, White Plains, N.Y.). xiv, 184 pp., illus. Paper, \$30.55. Bibliotheca Cardiologica, No. 30. Part 1.

**Heroes of Conservation.** C. B. Squire. Fleet Press, New York, 1974. 108 pp., illus. \$5.95.

**Inorganic Chemistry of the Transition Elements.** Vol. 2. A Review of the Literature Published between October 1971 and September 1972. B. F. G. Johnson, senior reporter. Chemical Society, London, 1973. xvi, 502 pp., illus. £9.50. Specialist Periodical Reports.

**The International Law of Pollution.** James Barros and Douglas M. Johnston. Free Press (Macmillan), New York, and Collier Macmillan, London, 1974. xviii, 476 pp. \$14.95.

**The Interpretation of Quantum Mechanics.** Michael Audi. University of Chicago Press, Chicago, 1974. xiv, 200 pp. \$11.50.

**Introduction to Health Planning.** David F. Bergwall, Philip N. Reeves, and Nina B. Woodside. Information Resources Press, Washington, D.C., 1974. x, 222 pp., illus. \$15.

**Linear Statistical Inference and Its Applications.** C. Radhakrishna Rao. Wiley, New York, ed. 2, 1973. xxii, 626 pp. \$22.50. Wiley Series in Probability and Mathematical Statistics.

**Methods and Theories of Anthropological Genetics.** Papers from a symposium, Santa Fe, N.M., Feb. 1971. M. H. Crawford and P. L. Workman, Eds. University of New Mexico Press, Albuquerque, 1973. xviii, 510 pp., illus. \$20. School of American Research Books.

**Methods in Cell Biology.** Vol. 7. David M. Prescott, Academic Press, New York, 1973. xxii, 492 pp., illus. \$31.

**Microbial Genetics.** Morad A. Abou-Sabé, Ed. Dowden, Hutchinson, and Ross, Stroudsburg, Pa., 1973. xvi, 452 pp., illus. \$22. Benchmark Papers in Microbiology.

**Mining Geophysics.** D. S. Parasnis. Elsevier, New York, ed. 2, 1973. xx, 396 pp., illus. \$28. Methods in Geochemistry and Geophysics, vol. 3.

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## BOOKS RECEIVED

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**New Towns in America.** The Design and Development Process. James Bailey, Ed. American Institute of Architects, Washington, D.C., 1973 (distributor, Wiley-Interscience, New York). xii, 166 pp., illus. \$19.95.

**Nonaqueous Electrolytes Handbook.** Vol. 2. G. J. Janz and R. P. T. Tomkins and eight others. Academic Press, New York, 1973. xiv, 934 pp., illus. \$60.

**Nonlinear Elasticity.** Proceedings of a symposium, Madison, Wis., Apr. 1973. R. W. Dickey, Ed. Academic Press, New York, 1973. x, 404 pp. illus. \$12.50. Publication No. 31 of the Mathematics Research Center, University of Wisconsin.

**Progress in Optics.** Vol. 11. E. Wolf, Ed. North-Holland, Amsterdam, 1973 (U.S. distributor, Elsevier, New York). xvi, 358 pp. illus. \$40.

**The Project Physics Course.** Supplemental Unit B, Discoveries in Physics. David L. Anderson. Holt, Rinehart and Winston, New York, 1973. iv, 92 pp., illus. Paper, \$3.48.

**Right and Left.** Essays on Dual Symbolic Classification. Rodney Needham, Ed. University of Chicago Press, Chicago, 1974. xl, 450 pp., illus. \$19.50.

**Sites, Perception, and the Nonvisual Experience.** Designing and Manufacturing Mobility Maps. Ann Middleton Kidwell and Peter Swartz Greer. American Foundation for the Blind, New York, 1973. xviii, 192 pp., illus. Paper, \$5.95.

**Sourcebook on the Environment.** The Scientific Perspective. Charles ReVelle and Penelope ReVelle. Houghton Mifflin, Boston, 1974. x, 332 pp., illus. Paper, \$4.95.

**Spectroscopic Properties of Inorganic and Organometallic Compounds.** Vol. 6. A Review of the Literature Published during 1972. N. N. Greenwood, senior reporter. Chemical Society, London, 1973. xvi, 664 pp., illus. £11. Specialist Periodical Reports.

**Strange Phenomena.** A Sourcebook of Unusual Natural Phenomena. Vol. G-1. William R. Corliss. Published by the author, Glen Arm, Md., 1974. vi, 278 pp., illus. In looseleaf binder, \$6.95.

**Las Tierras Cultivadas de Caldas de Reyes.** Sánchez Rodríguez and G. Dios Vidal. Misión Biológica de Galicia, Salcedo, Pontevedra, Spain, 1973. viii, 236 pp. + maps. Paper.

**Topophillicia.** A Study of Environmental Perception, Attitudes, and Values. Yi-Fu Tuan. Prentice-Hall, Englewood Cliffs, N.J., 1974. x, 260 pp., illus. Cloth. \$8.95; paper, \$4.95.

**Toward a Political Sociology of Science.** Stuart S. Blume. Free Press (Macmillan), New York, and Collier Macmillan, London, 1974. xiv, 288 pp. \$9.95.

**Understanding Statistical Reasoning.** How to Evaluate Research Literature in the Behavioral Sciences. Eleanor Walker Willemssen. Freeman, San Francisco, 1974. xiv, 224 pp., illus. Cloth, \$10; paper, \$4.95. A Series of Books in Psychology.

**Viruses and Invertebrates.** A. J. Gibbs, Ed. North-Holland, Amsterdam, and Elsevier, New York, 1973. xvi, 674 pp., illus. \$60. Frontiers of Biology, vol. 31.

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