

complete and up-to-the-minute bibliography is included. (References as a whole are amazingly up to date.) A fairly detailed chapter on tektites is included. Mason has added two appendices: one is a discussion of the problems encountered in the chemical analysis of meteorites as compared with the analytical problems met in studying artificial alloys and terrestrial rocks, which is helpful in gaining a proper perspective of the data; the other is a geographically arranged list of the meteorites of the United States, the value of which is not quite clear to me. But Krinov has provided such a list for the U.S.S.R., so there. The bibliography is quite good; it will be a valuable feature of the book.

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Comparative Anatomy

The Vertebrate Body. Alfred S. Romer. Saunders, Philadelphia, ed. 3, 1962. vi + 627 pp. Illus. \$8.

This latest edition of a time-tested text retains most of the virtues of the preceding editions and has several added improvements. Extensive portions of the chapters dealing with vertebrate embryology and with cells and tissues have been revised and rewritten. A short but useful chapter on the endocrine organs effectively brings together material that was scattered throughout the text in previous editions. Some of the brief physiological discussions have been expanded and brought up to date (for example, muscle fiber function). There are many new, and for the most part excellent, illustrations; a few of the older ones have been deleted. Most of the histological illustrations of bone, muscle, connective tissues, and the like, which did not reproduce well as halftone drawings, have been replaced with linecuts for greater clarity; this effort was not uniformly successful, and a few of the linecuts are poor (for example, Figs. 257 and 357). Eight diagrams of blood vessels in color (four of them new), add considerably to the effectiveness of this type of presentation. Greatly improved illustrations of the distribution and component parts of spinal nerves, cranial nerves, sensory and motor nuclei, and cerebral hemisphere differentiation have

been achieved by adequate color reproduction.

Although the new edition adheres closely to the pattern of its successful predecessors, a few minor faults may be noted. The pages have a more congested appearance, because the lines of the text are closer together; this gives the impression that the type has been reduced in size, and it does not make for easier reading. Some of the illustrations have suffered in reproduction, and a few, which are now arranged horizontally instead of vertically, run off the edge of the page; this does not, however, diminish their usefulness. The section on the heart would have profited from discussion of recent work dealing with the anatomy and circulatory patterns involved in certain reptilian and anuran hearts and associated vessels.

Romer's book remains one of the most useful and valuable of all textbooks dealing with comparative anatomy at the level of the beginning student, in that it presents an effective and skillful synthesis of gross and histological anatomy, embryology, paleontology, and physiology at the comparative level, a treatment which is vital to a conceptual understanding of vertebrate morphology and evolution.

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New Books

Mathematics, Physical Sciences, and Engineering

Advances in Applied Mechanics. vol. 7. H. L. Dryden and Th. von Karman, Eds. Academic Press, New York, 1962. 337 pp. Illus. \$11.

Advances in Electrochemistry and Electrochemical Engineering. vol. 2, *Electrochemical Engineering*. Charles W. Tobias, Ed. Interscience (Wiley), New York, 1962. 309 pp. Illus. \$12.

Advances in Geophysics. vol. 9. H. E. Landsberg and J. Van Mieghem, Eds. Academic Press, New York, 1962. 385 pp. Illus. \$14.50.

Advances in Nuclear Science and Technology. vol. 1. Ernest J. Henley and Herbert Kouts, Eds. Academic Press, New York, 1962. 366 pp. Illus. \$12.

Analysis and Design of Inertial Guidance Components. Ira Cochin. Razdow Laboratories, Newark, N.J., 1962. 165 pp. Illus. Paper, \$5.

Asphalt. Science and technology. Edwin J. Barth. Gordon and Breach, New York, 1962. 720 pp. Illus. \$32.50.

Astronomy in Action. Robert S. Richardson. McGraw-Hill, New York, 1962. 191 pp. Illus. \$3.95.

Calculations in Physical Chemistry. B. W. V. Hawes and N. H. Davies. Wiley, New York, 1962. 217 pp. Illus. \$4.50.

The Classical Theory of Fields. L. D. Landau and E. M. Lifshitz. Translated from the Russian by Morton Hamermesh. Pergamon, London; Addison-Wesley, Reading, Mass., 1962. 413 pp. Illus. \$14.50.

A Dictionary of Electronics. S. Handel. Penguin Books, Baltimore, Md., 1962. 384 pp. Illus. Paper, \$1.65.

Flight Mechanics. vol 1, *Theory of Flight Paths*. Angelo Miele. Addison-Wesley, Reading, Mass., 1962. 427 pp. Illus. \$10.

Fundamental Problems in Turbulence and Their Relation to Geophysics. Symposium, Marseilles, France, September 1961. Francois N. Frenkiel, Ed. American Geophysical Union, Washington, D.C., 1962. 236 pp. Illus. \$5.

Gas Chromatography. Principles, techniques, and applications. A. B. Littlewood. Academic Press, New York, 1962. 525 pp. Illus. \$15.

The Green Function Method in Statistical Mechanics. V. L. Bonch-Bruевич and S. V. Tyablikov. North-Holland, Amsterdam; Interscience (Wiley), New York, 1962. 263 pp. Illus. \$9.75.

Inorganic Polymers. F. G. A. Stone and W. A. G. Graham, Eds. Academic Press, New York, 1962. 642 pp. Illus. \$19.50.

International School of Physics "Enrico Fermi." Proceedings. Course 14, *Ergodic Theories*, P. Caldirola, Ed. (252 pp. \$7.50); Course 16, *Physicomathematical Aspects of Biology*, N. Rashevski, Ed. (524 pp. \$16); Course 17, *Topics in Radiofrequency Spectroscopy*, A. Gozzini, Ed. (320 pp. \$10). Academic Press, New York, 1962. Illus.

Mechanical Properties of Metals. D. McLean. Wiley, New York, 1962. 418 pp. Illus. \$12.

The Metallurgy of Tool Steels. Peter Payson. Wiley, New York, 1962. 362 pp. Illus. \$15.50.

Orbitals in Atoms and Molecules. Chr. Klixbull Jorgensen. Academic Press, New York, 1962. 169 pp. Illus. \$6.

Polyhydric Alcohols. Ibert Mellan. Spartan, Washington, D.C., 1962. 214 pp. Illus.

Principles of Aeroelasticity. Raymond L. Bisplinghoff and Holt Ashley. Wiley, New York, 1962. 536 pp. Illus. \$25.

Reflection and Refraction of Progressive Seismic Waves. L. Cagniard. Translated and revised by Edward A. Flinn and C. Hewitt Dix. McGraw-Hill, New York, 1962. 302 pp. Illus. \$11.

Treatise on Analytical Chemistry. pt. 2, *Analytical Chemistry of the Elements*. I. M. Kolthoff and Philip J. Elving, Eds. Section A, *Systematic Analytical Chemistry of the Elements*. vol. 2, *Gallium-Indium-Thallium, Silicon, Germanium, Iron, Cobalt, and Nickel*, Charles V. Banks et al. (491 pp.); vol. 9, *Uranium, the Transuranium, and Actinide Elements*, Glenn L. Booman et al. (507 pp.). Interscience (Wiley), New York, 1962. Illus. \$18 each.

Varactor Applications. Paul Penfield, Jr., and Robert P. Rafuse. Massachusetts Institute of Technology Press, Cambridge, 1962. 637 pp. Illus. \$15.