

tion on hydrolytic products of the cardiac glycosides are tabulated in the second table. Included are the type of sugar and the type of genin or additional glycoside hydrolyzed. The third table contains data on animal assay doses for over 300 cardioactive drugs. Lethal dose, mean lethal dose, and LD₅₀ dose, as well as species of animal, route of injection, and references, are listed. Short sections on structural features and structure-activity relationships of cardiac glycosides and genins are also included.

It is unfortunate that the author decided not to include assay doses for heart-lung preparations, isolated heart preparations, and the like; this information would have increased further the utility of this monograph. Chemists and biologists working with cardiac glycosides will welcome this as an excellent reference source which provides ready access to botanical, chemical, and pharmacological data that is widely scattered through the literature.

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Field Manual

A Flora of the Alaskan Arctic Slope.

Arctic Institute of North America, *Special Publication*, No. 4. Ira L. Wiggins and John Hunter Thomas. University of Toronto Press, Toronto, Canada, 1962. xii + 425 pp. Illus. \$9.50.

During the past 20 years the Arctic Slope of Alaska, between the Brooks Range and the Arctic Ocean, has received more extensive study by biologists and earth scientists than any comparable area in Arctic North America; in large part this was the result of support from the Office of Naval Research and its Arctic Research Laboratory and the cooperating universities. This detailed taxonomic and geographical treatment of the vascular plants of the region is one of the major contributions resulting from this research.

This book is a highly useful field manual, with concise but entirely adequate keys to families, genera, species, and (where appropriate) infraspecific taxa and with commendably detailed descriptions of morphologic characters, accompanied by remarks on common

habitats and total ranges. It resembles, in some respects, a monographic flora, for all specimens examined are cited along with their collection localities and the localities are carefully plotted on maps in an appendix. On the other hand, citations from the literature on the systematics and distributions of the species are scarce and only a part of the "problem groups" are marked by explanatory statements. The authors are justified in omitting these items, as well as locality records from the older literature, because all were treated in Hulten's *Flora of Alaska and Yukon* (1941–1950).

As a result of this economy of space, however, the distribution maps in this volume must be used in conjunction with those of Hulten's *Flora* in order to obtain a full picture of the records for most species on the Arctic Slope. In some instances parenthetical reference to synonyms in recent use would be helpful. The authors included brief but useful notes about certain complex hybrid and apomictic groups that are prominent in Arctic floras. Appendices, in addition to the 150 maps of collection localities, include a gazetteer of those localities, a glossary of specialized botanical terms, and two pages of references. The index lists the taxa treated and those synonyms that are mentioned. The book has been edited and printed in conformity with high standards.

Especially deserving of comment is an introductory section (29 pages) that describes the physical geography, biotic factors affecting the vascular flora, and the principal classes of habitats, with summary accounts of characteristic species. A highly informative guide to the ecological plant geography of the Arctic Slope, this section reflects the authors' extensive experience in the area, particularly that of the senior author, who was for three and one-half years scientific director of the Arctic Research Laboratory at Point Barrow.

The Arctic Slope is an invaluable source for information concerning the biota and environments of high latitudes. Now that this eminently usable flora is available, field studies of all aspects of the region's vascular flora and vegetation can be more readily accomplished, with improved accuracy of plant identifications.

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New Books

Biological and Medical Sciences

Advances in Horticultural Science and Their Applications. vol. 1. Proceedings of the 15th International Horticultural Congress. Nice, 1958. Jean-Claude Garnaude, Ed. Pergamon, New York, 1961. 627 pp. Illus. (vols. 2 and 3 announced for publication in early 1962). vols. 1–3, \$60. The papers are in French, English, or German.

Advances in Protein Chemistry. vol. 16. C. B. Anfinsen, Jr., M. L. Anson, Kenneth Bailey, John T. Edsall, Eds. Academic Press, New York, 1961. 579 pp. Illus. \$16.

Animal Parasitology. Laboratory manual. Elmer R. Noble and Glenn A. Noble. Lea and Febiger, Philadelphia, Pa., 1962. 120 pp. Illus. Paper, \$3.50. Designed for use in beginning undergraduates courses in parasitology.

Basic Anatomy and Physiology. C. F. V. Smout. Arnold, London, 1962 (order from Williams and Wilkins, Baltimore, Md.). 124 pp. Illus. \$3.50.

Biological Transmission of Disease Agents. Symposium held under the auspices of the Entomological Society of America, Atlantic City, 1960. Karl Maramorosch, Ed. Academic Press, New York, 1962. 204 pp. Illus. \$7.

Clinical Immunology and Allergy. Leo H. Criepp. Grune and Stratton, New York, 1962. 592 pp. Illus. \$18.75.

Comparative Biochemistry. A comprehensive treatise. vol. 3, *Constituents of Life*, pt. A. Marcel Florkin and Howard S. Mason, Eds. Academic Press, New York, 1962. 987 pp. Illus. \$30.

Handbook of Medical Laboratory Formulae. R. E. Silvertown and M. J. Anderson. Butterworth, Washington, D.C., 1961. 688 pp. \$18.

Introduction to Immunochemical Specificity. William C. Boyd. Interscience, New York, 1962. 166 pp. Illus. \$8.

Lectures on the Methodology of Clinical Research. Max Hamilton. Livingstone, London, 1961 (order from Williams and Wilkins, Baltimore, Md.). 147 pp. \$5.

Methods in Carbohydrate Chemistry. vol. 1, *Analysis and Preparation of Sugars*. Roy L. Whistler and M. L. Wolfrom, Eds. Academic Press, New York, 1962. 611 pp. Illus. \$20.

Economics and the Social Sciences

Biennial Review of Anthropology. 1961. Bernard J. Siegel, Ed. Stanford Univ. Press, Stanford, Calif., 1962. 338 pp. \$7.50.

Capital Formation in Japan, 1868–1940. Henry Rosovsky. Free Press (Macmillan), New York, 1961. 371 pp. \$7.50.

Computer Applications in the Behavioral Sciences. Harold Borko, Ed. Prentice-Hall, Englewood Cliffs, N.J., 1962. 653 pp. Illus. Trade ed., \$11.65; text ed., \$8.75.

The Industrial Revolution in Europe, 1815–1914. W. O. Henderson. Quadrangle Books, Chicago, Ill., 1961. 297 pp. Illus. \$6.

Intelligence and Experience. J. McV. Hunt. Ronald Press, New York, 1961. 425 pp. Illus. \$8.

Men and Nations. Louis J. Halle. Princeton Univ. Press, Princeton, N.J., 1962. 238 pp. \$4.75.

The Oedipus Complex. Cross-cultural evidence. William N. Stephens. Free Press (Macmillan), New York, 1962. 284 pp. \$5.

Primitive Government. Lucy Mair. Penguin Books, Baltimore, Md., 1962. 288 pp. Paper, \$1.25.

Psychoanalysis and Existential Philosophy. Hendrik M. Ruitenbeek, Ed. Dutton, New York, 1962. 288 pp. Paper, \$1.75.

Psychoanalysis and Social Science. Hendrick M. Ruitenbeek, Ed. Dutton, New York, 1962. 255 pp. Paper, \$1.65.

The Psychology of Jung. A critical interpretation. Avis M. Dry. Wiley, New York, 1962. 343 pp. \$6.

Psychology, a Study of a Science. Study 2, Empirical Substructure and Relations with Other Sciences. vol. 4. *Biologically Oriented Fields: Their Place in Psychology and in Biological Science.* Sigmund Koch, Ed. McGraw-Hill, New York, 1962. 770 pp. Illus. \$12.50.

The Rate and Direction of Inventive Activity: Economic and Social Factors. A report of the National Bureau of Economic Research, New York. Princeton Univ. Press, Princeton, N.J., 1962. 645 pp. Illus. \$12.50.

Scientists. Their psychological world. Bernice T. Eiduson. Basic Books, New York, 1962. 315 pp. \$6.50.

Social Research to Test Ideas. Selected writings of Samuel A. Stouffer. Free Press (Macmillan), New York, 1962. 345 pp. Illus. \$8.50.

The Soviet Economy. Structure, principles, problems. Nicolas Spulber. Norton, New York, 1962. 324 pp. Illus. \$5.95.

Soviet Potentials. A geographic appraisal. George B. Cressey. Syracuse Univ. Press, Syracuse, N.Y., 1962. 249 pp. Illus. \$5.75.

The Story of Man. From the first human to primitive culture and beyond. Carleton S. Coon. Knopf, New York, ed. 2, 1962. 476 pp. Illus. Plates. \$7.50.

Teaching Secondary School Social Studies. James High. Wiley, New York, 1962. 493 pp. Illus. \$6.95.

Traditional Cultures. And the Impact of Technological Change. George M. Foster. Harper, New York, 1962. 305 pp. \$6.50.

Uncertainty and Structure as Psychological Concepts. Wendell R. Garner. Wiley, New York, 1962. 370 pp. Illus. \$8.95.

General

The Academic President—Educator or Caretaker? Harold W. Dodds. McGraw-Hill, New York, 1962. 303 pp. \$5.95.

Africa South. Harm J. de Blij. Northwestern Univ. Press, Evanston, Ill., 1962. 409 pp. Illus. \$5.95.

America on the Moon. The enterprise of the sixties. Jay Holmes. Lippincott, Philadelphia, Pa., 1962. 272 pp. Illus. \$4.50.

Aristotle Dictionary. Thomas P. Kier-

nan, Ed. Philosophical Library, New York, 1962. 524 pp. \$7.50.

Better Communications for Better Health. Helen Neal, Ed. National Health Council, New York, 1962 (distributed by Columbia Univ. Press, New York). 237 pp. \$5.

Communication in Space. From wire- less to satellite relay. Orrin E. Dunlap, Jr. Harper, New York, 1962. 186 pp. Plates. \$4.95.

The Dual Progress Plan. A new philosophy and program in elementary education. George G. Stoddard. Harper, New York, 1961. 232 pp. \$4.

The Fabric of the Heavens. The development of astronomy and dynamics. Stephen Toulmin and June Goodfield. Harper, New York, 1961. 284 pp. Illus. \$5.

Fact and Fancy. Isaac Asimov. Doubleday, Garden City, N.Y., 1962. 264 pp. \$3.95.

James Clerk Maxwell and Electromagnetism. Charles Paul May. Watts, New York, 1962. 160 pp. Illus. \$1.95.

Letters of the Lewis and Clark Expedition. With related documents, 1783–1854. Donald Jackson, Ed. Univ. of Illinois Press, Urbana, 1962. 749 pp. \$10.

Living with the Atom. Ritchie Calder. Univ. of Chicago Press, Chicago, Ill., 1962. 289 pp. Illus. Plates. \$5.95.

Master Surgeon. A biography of Joseph Lister. Laurence Farmer. Harper, New York, 1962. 156 pp. Illus. \$2.95.

Mayflies of Michigan Trout Streams. Justin W. Leonard and Fannie A. Leonard. Cranbrook Inst. of Science, Bloomfield Hills, Mich., 1962. 149 pp. Illus. Plates. Paper, \$6; cloth, \$7.

McGraw-Hill Yearbook of Science and Technology, 1961. Compiled by the staff of McGraw-Hill Encyclopedia of Science and Technology, William H. Crouse, Ed.-in-Chief. McGraw-Hill, New York, 1962. 558 pp. Illus. \$17.50.

Medieval Technology and Social Change. Lynn White, Jr. Oxford Univ. Press, New York, 1962. 206 pp. Plates. \$6.

My Father, Marconi. Degna Marconi. McGraw-Hill, New York, 1962. 331 pp. Plates. \$7.50.

The Philosophy of Science. An introduction. Arthur Pap. Free Press (Macmillan), New York, 1962. 457 pp. Illus. \$7.50.

Revolution in Electricity. Martin Mann. Viking, New York, 1962. 171 pp. \$5.

The Road to Modern Surgery. Hugo Glaser. Dutton, New York, 1962. 224 pp. Plates. \$5.75.

Seadragon. Northwest under the ice. George P. Steele. Dutton, New York, 1962. 255 pp. Illus. Plates. \$4.95.

60 Jahre Quarzglas—25 Jahre Hochvakuumtechnik. Heraeus, Hanau, Germany, 1961. 343 pp. Illus.

The Ship Would Not Travel Due West. David Lewis. St. Martin's Press, New York, 1961. 166 pp. Illus. Plates. \$4.50.

Sight, Light, and Work. H. C. Weston. Lewis, London, ed. 2, 1962. 294 pp. Illus. £3 5s.

Space, the Architecture of the Universe. Gottfried Honegger and Peter van de Kamp. Dell, New York, 1962. 120 pp. Illus. Paper, \$0.95.

Strokes. How they occur and what can be done about them. Irvine H. Page, Clark M. Millikan, Irving S. Wright, Edward Weiss, E. Stanley Crawford, Michael E. De Bakey, and Howard A. Rusk. Dutton, New York, 1961. 226 pp. Illus. \$4.50.

Sunken Treasure. Pierre de Latil and Jean Rivoire. Hill and Wang, New York, 1962. 285 pp. Plates. \$5.95.

A Treasury of World Science. Dagobert D. Runes, Ed. Philosophical Library, New York, 1962. 999 pp. Illus. \$15.

The Wonderful Life of Flowers. Paul Jaeger. Dutton, New York, 1961. 195 pp. Illus. \$15.

The Yearbook of the Royal Society of London 1962. Royal Society, London, 1962. 320 pp.

Mathematics, Physical Sciences and Engineering

Engineering Aspects of Magnetohydrodynamics. Proceedings of the Second Symposium on the Engineering Aspects of Magnetohydrodynamics, Philadelphia, Pa., 9–10 March 1961. Clifford Mannal and Norman Mather, Eds. Columbia Univ. Press, New York, 1962. 592 pp. Illus. \$13.50.

The Geology and Palaeontology of the Headwaters of the Burke River, Queensland. A. A. Öpik. Dept. of National Development, Commonwealth of Australia, Canberra, 1961. 249 pp. Illus.

Inert Atmospheres in the Chemical, Metallurgical and Atomic Energy Fields. P. A. F. White and S. E. Smith. Butterworth, Washington, D.C., 1962. 243 pp. Illus. \$9.

Orthogonal Polynomials. Estimates, asymptotic formulas, and series of polynomials orthogonal on the unit circle and on an interval. L. Ya. Geronimus. Consultants Bureau, New York, 1961. 248 pp. \$9.75. Translated from the Russian volume, published in 1958, in the series "Modern Problems of Mathematics."

Permanent Magnets and Their Application. Rollin J. Parker and Robert J. Studders. Wiley, New York, 1962. 415 pp. Illus. \$16.

Retardation of Evaporation by Monolayers: Transport Processes. Victor K. La Mer, Ed. Academic Press, New York, 1962. 297 pp. Illus. \$10.

Standard Methods of Chemical Analysis. vol. 1, *The Elements.* N. Howell Furman, Ed. Van Nostrand, Princeton, N.J., ed. 6, 1962. 1420 pp. Illus. \$25.

Synthetic Materials from Petroleum. A. V. Topchiev, M. F. Nagiyev, and T. N. Shakhtakhtinskii. Translated from the Russian by J. Burdon. Pergamon, New York, 1962. 137 pp. Illus. \$4.50. Translated from *Znacheniya nefi v proizvodstve sovremennykh sinteticheskikh materialov*, published by the Academy of Sciences of the U.S.S.R., Moscow, 1959.

The Wave-Guide Mode Theory of Wave Propagation. K. G. Budden. Prentice-Hall, Englewood Cliffs, N.J., 1961. 335 pp. Illus. Trade edition, \$16; text edition, \$12.

Wave Mechanics of Crystalline Solids. R. A. Smith. Wiley, New York, 1962. 488 pp. Illus. \$13.