

Part 2 presents a short but adequate and up-to-date summary of the world distribution and evolutionary history of the genus, including the New World cultivated cottons and the single wild tetraploid, *G. tomentosum*, of Hawaii.

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Cytogenetics and Embryology

Theodor Boveri. *Leben und Werk.* Fritz Baltzer. Wissenschaftlicher Verlag, Stuttgart, Germany, 1962. 194 pp. Illus.

Historical perspective is in danger of getting lost under the impact and the tempo of modern scientific production, and little is being done to keep the memory of the founding fathers of modern science alive. For this reason, the German series of short biographies of great scientists, to which Baltzer has contributed this volume on Boveri, deserves credit and emulation. Following the design of this series, the first part is biographical, and the second part gives an outline, in nontechnical language, of Boveri's scientific achievements. Baltzer, a student and friend of Boveri, and himself one of the leaders of European embryology, speaks with the authority that only an intimate personal acquaintance with the man and his work can give. His presentation, interwoven with personal reminiscences, does full justice to Boveri's complex and not easily approachable personality, in which ingenious imagination and penetrating clarity of thought were combined with artistic sensibility. Special chapters give a vivid picture of the life in the small Zoological Institute of Würzburg, where Spemann and Baltzer himself grew up, and of the congenial atmosphere at the Zoological Station at Naples, where Boveri's famous investigations on sea urchin eggs originated.

The contributions of Boveri to cytogenetics and embryology are of such a fundamental nature that they are almost lost in anonymity. Nowadays one is hardly aware that the persistence of chromosome individuality during interphase and the qualitative differences of chromosomes as carriers of genetic material were once highly controversial issues and that these concepts had to be given rigorous proof before the edifice

of modern cytogenetics could be built. And it is probable that few embryologists will associate the name of Boveri with the foundation of gradient theories or with the basic concept that the cytoplasm determines nuclear and specifically chromosomal activities. Boveri's theoretical acumen, his mastery of microscopic observation, and the ingenuity and elegance of his experimental designs, in short, the very spirit of his creativity, is recaptured in Baltzer's straightforward, yet eloquent, presentation.

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New Books

Mathematics, Physical Sciences and Engineering

Introduction to Probability and Statistics. Henry L. Alder and Edward B. Roessler. Freeman, San Francisco, Calif., ed. 2, 1962. 301 pp. Illus. \$5.50.

Lectures in Theoretical Physics. vol. 1. The Brandeis Summer Institute, 1961. R. S. Eden, J. C. Polkinghorne, G. Källén, and J. J. Sakurai. Benjamin, New York, 1962. 397 pp. Illus. Paper, \$4.

Mathematics in Everyday Things. William C. Vergara. New American Library, New York, 1962 (© 1959). 304 pp. Illus. Paper, \$0.75.

Modern Algebra and Trigonometry. Elbridge P. Vance. Addison-Wesley, Reading, Mass., 1962. 384 pp. Illus. \$5.50.

Molecular Structure and the Properties of Liquid Crystals. G. W. Gray. Academic Press, New York, 1962. 321 pp. Illus. 63s.

The Nomographic Computation of Complicated and Highly Saturated Magnetic Circuits. Otto Benedikt. Pergamon, New York, 1962. 283 pp. Illus. \$15.

Non-Destructive Testing of Concrete. R. Jones. Cambridge Univ. Press, New York, 1962. 113 pp. Illus. \$4.75.

Polarized Light, Production and Use. William A. Shurcliff. Harvard Univ. Press, Cambridge, Mass., 1962. 216 pp. Illus. \$6.25.

Principles of Self-Organization. Heinz Von Foerster and George W. Zopf, Jr., Eds. Pergamon, New York, 1962. 559 pp. Illus. Plates. \$15. Transactions of a symposium, sponsored by the Informations System Branch of the Office of Naval Research, held at the University of Illinois, 8-9 June 1961.

Progress in Polarography. vol. 1. P. Zuman and I. M. Kolthoff, Eds. Interscience, New York, 1962. 369 pp. Illus. Plates. \$12.

The Real Number System in an Algebraic Setting. J. B. Roberts. Freeman, San Francisco, Calif., 1962. 154 pp. Illus. Paper, \$1.75.

Regular Solutions. Joel H. Hildebrand and Robert L. Scott. Prentice-Hall, Englewood Cliffs, N.J., 1962. 190 pp. Illus. \$7.

Reliability: Management, Methods, and Mathematics. David K. Lloyd and Myron Lipow. Prentice-Hall, Englewood Cliffs, N.J., 1962. 550 pp. Illus. Trade ed., \$15; text ed., \$11.25. A volume in the Space Technology Series edited by C. W. Besserer and Floyd E. Nixon.

Semimicro Laboratory Exercises in General Chemistry. J. Austin Burrows, Paul Arthur, Otto M. Smith. Macmillan, New York, ed. 3, 1962. 329 pp. Illus. Paper, \$4.

Space Research. vol. 2. Proceedings of the 2nd International Space Science Symposium, Florence, 1961. H. C. van de Hulst, C. de Jager, and A. F. Moore, Eds. North-Holland, Amsterdam; Interscience, New York, 1961. 1256 pp. Illus. Plates. \$29.50.

Structure and Properties of Organic Compounds. A brief survey. Carl R. Noller. Saunders, Philadelphia, Pa., 1962. 260 pp. Illus.

Successful Mineral Collecting and Prospecting. Richard M. Pearl. New American Library, New York, 1961. 164 pp. Illus. Paper, \$2.95.

Systems Philosophy. An introduction. David O. Ellis and Fred J. Ludwig. Prentice-Hall, Englewood Cliffs, N.J., 1962. 398 pp. Illus. Plates. Trade ed., \$13; text ed., \$9.75. A volume in the International Series in Engineering.

The Morphology of the Earth. A study and synthesis of world scenery. Lester C. King. Hafner, New York, 1962. 711 pp. Illus. Plates. \$13.50.

The Nature of Atoms and Molecules. A general chemistry. Ewing C. Scott and Frank A. Kanda. Harper, New York, 1962. 777 pp. Illus. \$8.

The New Mathematics. Irving Adler. New American Library, New York, 1962 (© 1958). 192 pp. Illus. Paper, \$0.60.

New Perspectives in Physics. Louis de Broglie. Basic Books, New York, 1962. 303 pp. \$6.

Thermal Environmental Engineering. J. L. Threlkeld. Prentice-Hall, Englewood Cliffs, N.J., 1962. 527 pp. Illus. Plates. Trade ed., \$16; text ed., \$12.

Ultra-violet and Infra-red Engineering. W. Summer. Interscience, New York, 1962. 320 pp. Illus. Plates. \$7.50.

Unified Organic Chemistry. Charles A. MacKenzie. Harper, New York, 1962. 593 pp. Illus. \$8.50.

Use and Abuse of Statistics. W. J. Reichmann. Oxford Univ. Press, New York, 1962. 336 pp. Illus. \$5.

Vector Mechanics for Engineers. pt. 2, *Dynamics.* Harry R. Nara, Ed. Wiley, New York, 1962. 443 pp. Illus. \$6.50.

Vocabulary of Mechanics in Five Languages: English, German, French, Polish, Russian. Based on the work of M. T. Huber, revised by the Board of Terminology for Mechanics, Polish Standards Committee, A. T. Trokolanski, chairman. Pergamon, New York, 1962. 198 pp. \$15.

World Dictionary of Mathematicians, 1961. International Mathematical Union and Tata Institute of Fundamental Research, Bombay, India. 250 pp. Paper.

The World of Ice. James L. Dyson. Knopf, New York, 1962. 422 pp. Plates. \$6.95.