in the natural history of disease. Without doubt man's own evolution has been greatly affected by racial experience with plagues of various types, ranging from malaria, typhus, and smallpox, to tuberculosis and other similar diseases; great die-offs in population create conditions favorable for evolutionary change. Nearly all virulent diseases, newly introduced, have become attenuated with time by mutual adapations of host and parasites. The Australian investigators are to be congratulated on providing such a lucid and well-documented account of how such modifications can actually take place.

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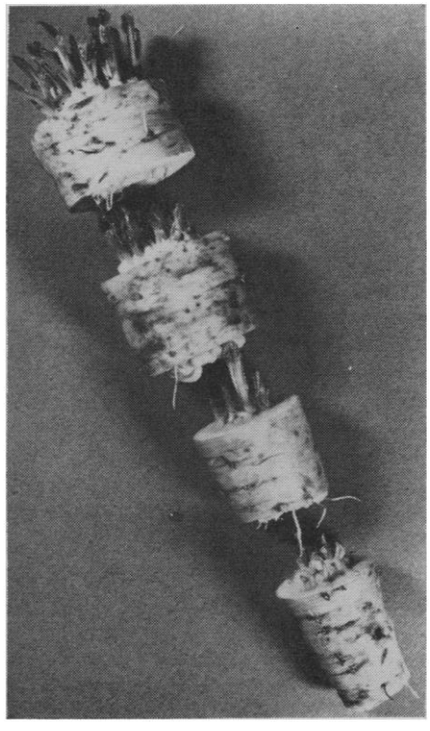
An Inside View of Our Living World

Encyclopedia of the Life Sciences. Albert Delaunay, Scientific Editor. vol. 1, *The Living Organism*; vol. 2, *The Animal World*; vol. 3, *The World of Plants*; and vol. 4, *The World of Microbes*. Translated from the French edition, 1961. Doubleday, Garden City, N.Y., 1965. 160 pp. each volume. $9.95 each volume.

In the introduction, Max Perutz states the high objectives of this series. "Each volume is written by a panel of international experts. . . . This is not an encyclopedia of Natural History. . . . It tries to convey to the reader what plants and animals are made of, and how they develop and work, rather than what they and what their different parts are called." Biology is blossoming and these books do much to convey this excitement. The numerous, large, and beautiful photographs are excellent. Many of them show close-up views of living things, both in and out of the laboratory, which will inspire even the scientist who works with the real stuff. The approach in the text is to present experimental biology, not just descriptions. Graphs and tables of data, experimental procedures, and results—all of these are presented in an artistic and meaningful format. Margins of most pages contain definitions of terms, key historical notes, small figures, and other relevant information which helps to fill in background material for the reader. Magnification of pictures or size of objects is often indicated in the figure captions, something which is desirable but not seen in most American books on biology, not even in textbooks.



Cut-up pieces of stump of chicory root form buds at the apical pole and roots at the basal pole. [Photo Lod]

The editors designed this encyclopedia for the layman, although it is admitted in the introduction that a basic knowledge of science will be an advantage for the understanding of many chapters. The editors are correct, and this is my only real criticism of the series. There is so much good material in these books, one can only wish that the writing were even simpler so that junior high school students could be challenged by the contents. But high school students who faired well in a BSCS biology course will find many familiar topics and much to interest them, and one can always settle for just looking at the illustrations. Probably any educated person can read these volumes and discover the fascinating roles that microbes play in society and experimental biology, get a feeling for the world as "seen" by plants and animals, and be given a short course in molecular biology. Five titles from the 25 chapters in *The Living Organism* will illustrate the scope: "Barriers of the living world"; "Life-giving molecules"; "The culture of isolated organs"; "The immortal cells"; and "A giant-cell—the egg: The problem of bilateral symmetry." But this encyclopedia is not the "Gee whiz!" kind of superficial survey of biology written by a nonbiologist editor; it is a serious attempt by experts to convey the excitement and fun they experience in doing biology.

These beautiful books are part of an eight-volume series. Yet to be published are four books that center attention on man—The Human Machine: *Mechanisms* (vol. 5); *Disorders* (vol. 6); *Adjustments* (vol. 7); and *Man of Tomorrow* (vol. 8). If the 640 pages published so far are matched in quality by the pages on man, this should be a remarkable series which has something for all.

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Soviet Chemists

Chemistry in the Soviet Union. John Turkevich. Van Nostrand, Princeton, N.J., 1965. x + 566 pp. $12.

This book is an extension in the area of chemistry of Turkevich's earlier book, *Soviet Men of Science* (1963), to which has been added a historical discussion of early Russian chemistry. The first part of the book, which is arranged by historical periods up to the present with discussion of the chemical programs and staff of present-day research establishments, constitutes about one-third of the book. The balance consists of two major sections devoted to various lists—one section covers Soviet chemical dissertations and provides authors, titles, and dates, arranged by broad classification (1964 to 1930). The last section, which involves about one-half of the book, is a list of the recent publications of chemists who are members of the Soviet Academy of Sciences. In most cases citations from *Chemical Abstracts* as well as the original reference are given, and in many cases the reference to available English trans-

lations is also given. In the list of publications only some 100 chemists and their associates are included, but the positions held by these academicians, the large number of their associates, and the general practice in Soviet laboratories of including the institute director as a coauthor when he is directly involved in the program provide a classified list of some 4000 papers.

In some respects this list of the publications of Academy members does not present an effective picture of Soviet chemistry any more than a list based on the publications of members of the Division of Chemistry of the U.S. National Academy of Sciences would provide a balanced presentation of chemistry in the United States. Nevertheless, this volume will prove most useful to chemists who visit the Soviet Union, as well as to research workers who wish to follow the work of a specific Russian "school" of chemical practice. The volume would be much easier to use if an index had been provided.

The translation of names results in a few duplications of names and some confusion. For example, there is some doubt that Aleksandr N. Nesmeyonov (p. 115) was in fact the author of papers with B. Z. Iofa (p. 431), V. Stakhovich (p. 440), W. Zelentsov (p. 440), L. P. Firsova (p. 441), and B. M. Korolev (p. 442). This confusion results from the facts that two chemists have the same surname and initials and the tendency of Soviet scientists not to use their given names. It is recognized that *Chemical Abstracts*, because it tries to cover what is done and the author as listed, cannot, without considerable research, determine the different "John Smiths," and many Soviet publications fail to give institutional sources so that a considerable amount of detective work may be necessary to identify authors and institutions. At times such identifications can be effected by considering the nature of the research program and the identified associates as well as citation references to prior work because almost all authors cite their own publications.

It was not easy to ascertain the fact (p. 191) that another A. N. Nesmeyonov (Andrei) received his doctoral degree in 1959, that he did his work in vapor pressure of elements as determined by radioactive methods, and that he is a professor (p. 155) in the same university in which the elder Nesmeyonov, the academician, is a professor (p. 155). Science seems to run in families—for example, the Turkevich, Brode, Zelany, Compton, Noyes, Dauben, and Smyth families—and one would expect some confusion, especially when members of the same family have the same initials, but one would also hope that such a family relationship, or lack of relationship, would be clarified in a source book such as this. Turkevich does comment that A. E. Arbuzov is the son of B. A. Arbuzov (both are distinguished chemists). In a few instances where confusion might arise, Turkevich has given the professional identification of individuals such as Kretovich (biochemist) and Nametkin (organic chemist), but in most cases the reader of *Chemistry in the Soviet Union* must not only confirm the identity of the individual, but he must also be prepared to have some combination of the work of more than one person presented under a particular name as well as to find that, because of the phonetic translation of many names, more than one name has been given for the same person.

The book should prove of considerable value to chemists who visit the Soviet Union and as a reference source to authors whose work involves the citation of the work of Soviet chemists.

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Conference and Symposium Reports

Approximation of Functions. Proceedings of a symposium (Warren, Mich.), August and September 1964. Henry L. Garabedian, Ed. Elsevier, New York, 1965. 230 pp. Illus. $14. Thirteen papers: "The convergence of sequences of rational functions of best approximation with some free poles" by J. L. Walsh; "Uses of Hilbert space in approximation" by Arthur Sard; "Application of duality in approximation theory" by R. C. Buck; "Inclusion theorems for the minimal distance in rational Tschebyscheff approximation with several variables" by Lothar Collatz; "Rational approximation on finite point sets" by P. Fox, A. A. Goldstein, and G. Lastman; "Phase methods for polynomial approximation" by E. L. Stiefel; "Optimal and nearly-optimal linear approximation" by Michael Golomb; "Approximation by generalized rational functions" by E. W. Cheney; "Nonlinear approximation" by J. R. Rice; "Nonlinear sequence transformations" by F. L. Bauer; "Approximation theory in the first two decades of electronic computers" by P. J. Davis; "Piecewise polynomial interpolation and approximation" by Garrett Birkhoff and C. R. De Boor; and "Russian literature on approximation in 1958–1964" by G. G. Lorentz.

Children and the Death of a President: Multidisciplinary Studies. Martha Wolfenstein and Gilbert Kliman, Eds. Doubleday, Garden City, N.Y., 1965. 288 pp. Illus. $4.95. Nine papers given at a conference (New York) in April 1964.

Components of Population Change in Latin America. Proceedings of the Sixtieth Anniversary Conference of the Milbank Memorial Fund (New York), April 1965. Clyde V. Kiser, Ed. Milbank Memorial Fund, New York, 1965. 384 pp. Illus. Paper, $3. Sixteen papers.

Coordination Chemistry. Plenary lectures presented at the VIIIth International Conference on Coordination Chemistry (Vienna, Austria), September 1964. Butterworth, London, 1965. 76 pp. Illus. $5. Five papers: "Neue Ansätze in der Theorie der komplexen Ionen" by H. Hartmann; "Metal-metal interaction in transition metal complexes" by J. Lewis; "The role of organometallic compounds in the development of coordination chemistry" by F. G. A. Stone; "Cationic complexes" by E. L. Muetterties; and "Intermediates of electrode reactions of coordination compounds" by A. A. Vlček.

High Latitude Particles and the Ionosphere. Proceedings of a symposium (Alpbach, Austria), March 1964. B. Maehlum, Ed. Logos Press, London; Academic Press, New York, 1965. 328 pp. Illus. $16. Twenty-eight papers presented at a symposium organized by the COSPAR Panel on Polar Cap Experiments.

Isoantigens and Cell Interactions. A symposium (Philadelphia, Pa.), March 1965. Joy Palm, Ed. Wistar Institute Press, Philadelphia, 1965. 114 pp. Illus. Paper, $5. Wistar Institute Symposium Monograph No. 3; Eight papers: "Immunogenetics of mouse cellular isoantigens" by Jack H. Stimpfling; "The Ss System of the mouse—A quantitative serum protein difference genetically controlled by the H-2 region" by Donald C. Shreffler; "Tissue distribution and intracellular sites of some mouse isoantigens" by Joy Palm and L. A. Manson; "The immunogenetic basis of hybrid resistance to parental marrow grafts" by Gustavo Cudkowicz; "Lymphocyte interaction *in vitro*" by Kurt Hirschhorn and Carolyn S. Ripps; "The cytotoxic effect of antigenic and/or structural incompatibility *in vitro*" by Göran Möller and Erna Möller; "Serological analysis of isoantigenic variants from mouse tumors heterozygous at the H–2" by Harvey L. Ozer, George Klein, and Joy H. Ozer; and "Syngeneic preference and allogeneic inhibition" by K. E. Hellström and I. Hellström.

Mechanical Working of Steel II. Proceedings of the Sixth Technical Conference (Chicago, Ill.), January 1964. T. G. Bradbury, Ed. Gordon and Breach, New York, 1965. 542 pp. Illus. Paper, $14.50; cloth, $27.50. Twenty-seven papers given at a conference sponsored by the Mechanical Working and Steel Processing Committee, Iron and Steel Division, the Metallurgical Society and the Chicago Section of the American Institute of Mining, Metallurgical, and Petroleum Engineers.