

Very different are the postwar years covered by this volume. From his post in Zurich, Pauli kept in touch with all that was happening in fundamental theory in the United States as well as in Europe. Particularly extensive is the correspondence about the theoretical developments prompted by Lamb's experiment on the fine structure of the hydrogen spectrum: the new quantum electrodynamics. From the summer of 1947 to the end of 1949, roughly a hundred letters touch to some extent, centrally or en passant, on the "Lamb shift" and all that followed from it, thus providing a sort of source book complementary to S. S. Schweber's comprehensive history (reviewed on p. 1888).

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Concepts in Virology. From Ivanovsky to the Present. BRIAN W. J. MAHY and DMITRI K. LVOV, Eds. Harwood, Langhorne, PA, 1993 (distributor, International Publishers Distributor, Brooklyn, NY). xii, 438 pp., illus. \$90 or £59. From a symposium, St. Petersburg, Russia, Sept. 1992.

Though the term "virus" was not coined until 1898, the origin of the field of virology can be traced to the isolation by Dmitri Ivanovsky of the causative agent of tobacco mosaic disease, which was reported to the Imperial (Russian) Academy of Sciences in St. Petersburg in 1892. A symposium held in that city to mark the centennial of the event has given rise to the present book. The volume begins with a series of five "historical reports," all of which include comment on the work of Ivanovsky and of his contemporaries Adolf Mayer in Germany and Martinus Beijerinck in the Netherlands, fellow pioneers of work on tobacco mosaic virus. In the opening report Lvov gives an account of the history of virology in Russia, where after a flourishing era for Russian science the field was laid waste as a result of the activities of "a small, but well organized and financed group of international terrorists" in 1917. He then reports on the revival of the field through studies of smallpox, orthopox, rabies, and other viruses in the 1920s and after and ends with a plea for international cooperation to offset current economic hardships. One of the first-noticed features of the tobacco mosaic virus was that it could pass through bacteria-proof filters, and in an account of studies of fowl plague (influenza A) virus Mahy discusses filtration and other techniques. In other papers in this section of the book M. H. V. Van Regenmortel recounts the use of tobacco mosaic virus in studies of the molecular basis of virus antigenicity, M. C. Horzinek describes the work of recent de-

cades on positive-stranded enveloped RNA viruses, and V. V. Mesyanzhinov and B. S. Singer discuss bacteriophages as "empowering viruses" for molecular biology. The remaining 34 papers in the volume are devoted, in about equal measure, to "old and new" (including reemerging) virus infections; viral hepatitis; influenza; arthropod- and rodent-borne viruses; "general virology"; and control of virus infections. In addition to laboratory studies on such topics as glycoproteins, genetic sequencing, replication, and mechanisms of pathogenesis, coverage is given to issues of epidemiology, vaccine development, and therapeutics. The authorship of the book is international, with contributors representing Russia, various western European nations, Israel, Australia, Korea, and the United States. A subject but not a name index is included.

Katherine Livingston

Genetics and Evolution of Aging. MICHAEL R. ROSE and CALEB E. FINCH, Eds. Kluwer, Norwell, MA, 1994. vi, 314 pp., illus. \$150 or £100 or Dfl. 250. Contemporary Issues in Genetics and Evolution, vol. 3. Reprinted in part from *Genetica*, vol. 91, no. 1-3.

"The genetics of aging is Janus-faced, looking in one direction to gene function, molecular biology, and cell biology, looking in the other direction to fitness, population genetics, and evolution," write the editors in the opening chapter of this volume. To further the task of integrating these perspectives, Rose and Finch put together a special issue (1993) of the journal *Genetica* that included 22 papers that had been subjected to review and revision prior to publication. Now, in the hope of providing a work that will "breathe" somewhat more than the special issue . . . could," they have produced this collection in which the journal papers are augmented by four contributions solicited to provide personal perspectives on issues not fully covered in the original publication. The opening section of the book, offering "general perspectives," comprises the three original papers by Rose and Finch, Charlesworth, and Bell and a new contribution in which A. G. Clark discusses mutation-selection balance and the evolution of senescence. The second section, on diversity of aging, likewise includes a new paper, D. E. L. Promislaw and M. Tatar on the potential of a comparative approach to the subject, in addition to the original papers dealing, respectively, with *Saccharomyces cerevisiae*, plants, *Caenorhabditis elegans*, and crustaceans. A third section reprints the eight original papers on aging in *Drosophila*. The two further additions are found in the fourth and final section, a total of nine papers devoted to mammals. In one of the new

contributions R. Holliday discusses the relationship between longevity and fecundity and reports that the predicted inverse relationship is confirmed by a survey of eutherian mammals. In the other A. Richardson and M. A. Pahlavani discuss the evolutionary implications of the reported relationship between caloric restriction and increased life-span in rodents.

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Books Received

Applications of Heuristics and Biases to Social Issues. Linda Heath *et al.*, Eds. Plenum, New York, 1994. xx, 343 pp. \$55. Social Psychological Applications to Social Issues, vol. 3.

Biological Monitoring. An Introduction. Shane Que Hee, Ed. Van Nostrand Reinhold, New York, 1993. xx, 650 pp., illus. \$69.95.

The Biology of Tardigrades. Ian M. Kinchin. Portland, London, 1994 (U.S. distributor, Ashgate, Brookfield, VT). xli, 186 pp., illus. \$65 or £40.

Bioprocess Production of Flavor, Fragrance, and Color Ingredients. Alan Gabelman, Ed. Wiley, New York, 1994. xiv, 361 pp., illus. \$64.95.

A Colour Atlas of Tomato Diseases. Observation, Identification and Control. D. Blancard. Manson, London, and Wiley, New York, 1994. iv, 212 pp. \$89.95. Translated from the French edition (Paris and Limoges, 1988).

Culture Clash. Law and Science in America. Steven Goldberg. New York University Press, New York, 1994. xiv, 255 pp. \$29.95.

Homologous Recombination and Gene Splicing in Plants. Jerzy Paszkowski, Ed. Kluwer, Norwell, MA, 1994. xii, 385 pp., illus. \$162 or £107 or Dfl. 275.

Immunotoxicology and Immunopharmacology. 2nd ed. Jack H. Dean *et al.*, Eds. Raven, New York, 1994. xxii, 761 pp., illus. \$135. Target Organ Toxicology Series.

International Directory of Primatology. 2nd ed. Lawrence Jacobson and Raymond Hamel, Eds. Wisconsin Regional Primate Research Center, Madison, WI, 1994. Unpagged. Spiral bound, \$15.

International Handbook of Phobic and Anxiety Disorders in Children and Adolescents. Thomas H. Ollendick, Neville J. King, and William Yule, Eds. Plenum, New York, 1994. xiv, 496 pp. \$75. Issues in Clinical Child Psychology.

Introduction to High-Temperature Superconductivity. Thomas P. Sheahen. Plenum, New York, 1994. xviii, 580 pp., illus. \$59.50. Selected Topics in Superconductivity.

Molecular and Biomolecular Electronics. Robert R. Birge, Ed. American Chemical Society, Washington, DC, 1994. xii, 596 pp., illus. \$139.95. Advances in Chemistry Series, 240. From a symposium, New York, Aug. 1991.

More Mathematical People. Contemporary Conversations. Donald J. Albers, Gerald L. Alexanderson, and Constance Reid, Eds. Academic Press, San Diego, CA, 1994. xviii, 375 pp., illus. Paper, \$39.95. Reprint, 1990 ed.

Multilingual Dictionary of Agronomic Plants. S. Rehm, Ed. Kluwer, Norwell, MA, 1994. x, 286 pp. \$120 or £80 or Dfl. 200.

The Poetics of Mind. Figurative Thought, Language, and Understanding. Raymond W. Gibbs, Jr. Cambridge University Press, New York, 1994. x, 527 pp. \$59.95; paper, \$18.95.

Polymer Science and Engineering. The Shifting Research Frontiers. National Research Council. National Academy Press, Washington, DC, 1994. xli, 180 pp., illus. \$34.95.

Population and Environment. Rethinking the Debate. Lourdes Arizpe, M. Priscilla Stone, and David C. Major, Eds. Westview, Boulder, CO, 1994. viii, 352 pp. Paper, \$29.85. Based on a workshop, Coyoyoc, Mexico, 1992.