

in cancer," reviewed by V. E. Price and R. E. Greenfield, as one of the complex end results of the neoplastic process, may well be related to the "Specific tumor antigens" which L. A. Zilber describes, as an autoimmunization effect, or to the catalase-reducing, heat-stable protease with which W. Nakahara and F. Fu-kuoka deal in their "Newer concept of cancer toxin."

P. N. Campbell describes "Protein synthesis with special reference to growth processes both normal and abnormal." The Weisburgers give a full account of the "Chemistry, carcinogenesis and metabolism of 2-fluorenamine and related compounds"; these intriguing chemical "polycarcinogens," unlike the aromatic hydrocarbons, fortunately seem to maintain the fruitful interest of biochemists. P. R. Peacock presents a timely chapter on "Chemically induced tumors of fowls." The role of viruses is not any clearer in these neoplasms than in other species, despite the present popularity of this concept.

C. Berman condenses his long-term interest in "Primary carcinoma of the liver" into a short, clinically oriented chapter. Despite the fact that only relative frequency figures are available as an index of its occurrence, it is clear that liver cancer is an environmental neoplasm of epidemic proportions in South Africa, India, and the Far East. It is one of the neoplastic afflictions of mankind (along with carcinoma of the bladder associated with infestation by *Schistosoma haematobium*, and epidermoid carcinoma of the lung induced by cigarette smoke and other air pollutants) in which research and public health can join hands in an international effort, with the victory of substantial prevention being an assured, achievable goal.

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**Land of the Tollund Man.** The prehistory and archaeology of Denmark. Palle Lauring. Translated by Reginald Spink. Macmillan, New York, 1958. 160 pp. Illus. \$6.

If it is not correct to call the *Land of the Tollund Man* a book for professional archeologists, neither is it fair to call it merely a popular book on the archeology of Denmark. A judiciously limited amount of straight archeological fact is clothed in cultural dress based on stimulating data from other fields and trimmed with theories and speculations which are always carefully distinguished from the facts.

In the first chapter, Lauring's description of the changes in land and cli-

mate, based on the latest views of glacial geology and geography, clarify the limited picture of man's first appearance in Denmark. As the archeological story progresses, the chapters abound with a variety of subjects: modern experimentation in flint-flaking, including rather bloody attempts by the author himself; religious ideas that may have underlain the practice of constructing megalithic monuments; a comparison of the economics of farming in Neolithic and modern times; accidentally preserved costumes of the Bronze Age; the necessity of postulating a powerful organization in Bronze Age Denmark which exported local products, largely amber, on a large scale and which demanded and made use of expensive bronze and gold objects in return; the construction of Iron Age boats; and the importance of the sea in Denmark's economy in all periods.

Among the most interesting finds are the treasures and well-preserved human bodies found in bogs. The condition of the body, with face bashed in, throat cut, or with a noose around the neck, gives Lauring the opportunity to recreate the scene of sacrifice in vivid, melodramatic prose. One of these sacrifices, the Tollund Man, supplies the title to the book.

The final chapter carries the story down through the Germanic Iron Age, in which the foundation for the Viking period was laid.

The book is illustrated with 77 photographs of exceptionally high artistic and technical quality.

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**Communicable Diseases.** A bibliography of internal medicine. Arthur L. Bloomfield. University of Chicago Press, Chicago, 1958. viii + 560 pp. \$10.

In the preface Bloomfield states that "The surge of new knowledge in medicine has created a tremendous problem both for the student and for the practitioner . . . . In current medical writing what is referred to as the 'older literature' often turns out to be that of the previous decade . . . . In brief, there is a real danger that we shall become completely cut off from our medical past and relapse into a sort of modern Dark Age."

With this situation in mind, Bloomfield, professor emeritus of medicine at Stanford University School of Medicine, has compiled this bibliography of communicable diseases. Thirty diseases are included: typhoid fever, cholera, bacillary dysentery, plague, brucella infection, pneumococcal pneumonia, scarlet fever, erysipelas, rheumatic fever, meningococcal infection, gonorrhea and gonococcal infection, tuberculosis, leprosy, diphthe-

ria, tetanus, typhus, syphilis, malaria, amebic dysentery, influenza, poliomyelitis, the common cold, measles, smallpox, vaccinia, rabies, yellow fever, herpes zoster, mumps, and whooping cough.

References cover the period from about 1800 to the present. An author index is included.

**Bridges and Their Builders.** David B. Steinman and Sara Ruth Watson. Dover, New York, rev. ed., 1957. xvi + 401 pp. Illus. Paper, \$1.95.

The first book devoted solely to bridges did not appear until 1714, but this lack of specialized information has been fully remedied in more recent times. There is today a legion of technical publications available to the modern bridge engineer which would fill a major size library. These many works reveal the fascinating story of the bridgebuilder's ever-increasing competence and ingenuity in more effectively and economically meeting man's continually expanding needs for such basic transportation facilities. Unfortunately, however, this story is both largely unavailable to the layman and obscured by technical terms and details. As a result, the few popular books on bridges which have been issued are largely pictorial in character and seldom attempt to explain either the simpler problems of bridgebuilding or the many factors, from the availability of materials and the economics of construction to the compelling forces of need and cost, that condition the labors of the bridgebuilder. Such works thus offer little to enlighten the layman and little of value to the engineer.

The authors of this book, a revised and enlarged edition of a work first published in 1941, have attempted to follow a middle course. They have selected a group of notable bridges, especially more recent works, and have told the story of these bridges and of their builders with clarity and in some detail. Steinman is a well-known bridge engineer, and, while some of his interpretations of the reasons which led to the adoption of earlier bridge forms may be questioned, both the layman and the engineer will find much of interest in this effort to reveal "man's conception and creation of bridges."

As the authors note, engineering and architecture went hand in hand through earlier ages, and it was not until the 18th century that the design of bridges broke away from the overpowering artistic architectural interests of the Renaissance and a truly modern era of rationalized bridge design began to emerge. This movement was initiated in France, espe-

cially following the creation of the Corps des Ponts et Chaussées in 1716, but the forces prompting it became more insistent with the advent of iron in sufficient quantity and at a cost that made its use in bridges possible. This arrival of a real Iron Age, plus the advent of the railroad and, in the present century, motor transportation, have made it necessary for the engineer to continually create bigger and better bridges, many of which are interestingly described in *Bridges and Their Builders*.

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## New Books

*List of Films on Human Anatomy and Embryology.* Association Néerlandaise du Cinéma Scientifique, Catharijnesingel 59, Ingang Sterrenbos, Utrecht, Netherlands; Association Internationale du Cinéma Scientifique, 38, Avenue des Ternes, Paris 17<sup>e</sup>, ed. 2, 1957. 213 pp.

*Reaktionsmechanismen.* Volker Franzen. Huthig, Heidelberg, Germany, 1958. 160 pp. DM. 18.

*Space Flight.* Satellites, spaceships, space stations, and space travel explained. Carsbie C. Adams; Assisted by Frederick I. Ordway, III, Heyward E. Canney, Jr., Ronald C. Wakeford. McGraw-Hill, New York, 1958. 389 pp. \$6.50.

*Elektrochemische Sauerstoffmessungen.* Konzentrationsmessungen oxydierender und reduzierender Stoffe durch galvanische modellement. Fritz Todt. Gruyter, Berlin, 1958. 232 pp. DM. 36.

*Resource Training for Business, Industry, Government.* Including a report of the First Conference on Graduate Training in Resources, University of Michigan, April 1956. Published for the Natural Resources Study Committee by the Conservation Foundation, New York, 1958. 159 pp.

*Industrial Hygiene and Toxicology.* vol. 1, *General principles.* Frank A. Patty, Ed. Interscience, New York and London, ed. 2, 1958. 858 pp. \$17.50.

*Cosmic-Ray Results.* From Huancayo, Peru, January 1946–December 1955, Instituto Geofísico de Huancayo; Cheltenham, Maryland, March 1936–December 1955; U.S. Coast and Geodetic Survey, Cheltenham Magnetic Observatory; Christchurch, New Zealand, January 1947–December 1955, Department of Scientific and Industrial Research, Magnetic Survey Division; Godhavn, Greenland, January 1947–December 1950; Det Danske Meteorologiske Institut, Geofysisk Observatorium. Researches of the Department of Terrestrial Magnetism, vol. XX. Isabelle Lange and S. E. Forbush. Carnegie Institution of Washington, Washington, D.C., 1957. 229 pp. Paper, \$2; cloth, \$2.25.

*Conference on Extremely High Temperatures.* Boston, Massachusetts, 18–19 March 1958. Sponsored by Electronic Research Directorate, Air Force Cambridge Research Center. Heinz Fischer

and Lawrence C. Masur, Eds. Wiley, New York; Chapman & Hall, London, 1958. 269 pp. \$9.75.

*Inspection for Disarmament.* Seymour Melman, Ed. Columbia Univ. Press, New York, 1958. 291 pp. \$6.

*Principles of Internal Medicine.* Edited by T. R. Harrison, Raymond D. Adams, Ivan L. Bennett, Jr., William H. Resnik, George W. Thorn, M. M. Wintrobe, Eds. Blakiston Div., McGraw-Hill, New York, ed. 3, 1958. 1860 pp. \$18.50.

*The Population of Japan.* Irene B. Taeuber. Princeton Univ. Press, Princeton, N.J., 1958. 481 pp. \$15.

*The Science of High Explosives.* Melvin A. Cook. Reinhold, New York; Chapman & Hall, London, 1958. 455 pp. \$22.50.

*Introduction to Nuclear Engineering.* Richard Stephenson. McGraw-Hill, New York, ed. 2, 1958. 502 pp. \$9.50.

*Klinische Calorimetrie und Thermometrie.* Die thermischen messverfahren zur registrierung der haut- und gewebedurchblutung am menschen. Grundlagen, technik, methodik, anwendung in klinik und praxis. Helmut P. Kuemmerle. Thieme, Stuttgart, Germany, 1958 (order from Intercontinental Medical Book, New York 16). 112 pp. \$4.30.

*The Neutrino.* James S. Allen. Princeton Univ. Press, Princeton, N.J., 1958. 176 pp. \$4.50.

*Chemical Engineering Practice.* vol. 4, *Fluid State.* Herbert W. Cremer, Ed. Academic Press, New York; Butterworths, London, 1957. 648 pp. \$17.50.

*Children of the Kibbutz.* Melford E. Spiro. Harvard Univ. Press, Cambridge, 1958. 520 pp. \$10.

*Commercial Fruit and Vegetable Products.* W. V. Cruess. McGraw-Hill, New York, ed. 4, 1958. 891 pp. \$15.

## Reprints

*The Japanese Abacus.* Its use and theory. Takashi Kojima. Tuttle, Rutland, Vt., 1958. 102 pp. Paper, \$1.25.

*The Typhoon-Hurricane Story.* Robert E. Fuerst. Tuttle, Rutland Vt., 1958. Paper, \$1.50.

*Microwave Transmission Design Data.* Theodore Moreno. Dover, New York, 1958. 257 pp. Paper, \$1.50.

*Mathematical Tables of Elementary and Some Higher Mathematical Functions.* Herbert Bristol Dwight. Dover, New York, ed. 2, 1958. \$1.75.

*History of Mathematics.* vol. I, *General Survey of the History of Elementary Mathematics*; vol. II, *Special Topics of Elementary Mathematics.* David Eugene Smith. Dover, New York, 1958. 618 pp.; 737 pp. Paper, \$2.75 per volume; set, \$5.

*Functions of Real Variables.* William Fogg Osgood. 407 pp. *Functions of Complex Variable.* William Fogg Osgood. 262 pp. Chelsea, New York, 1958. \$4.95 (bound in 1 volume).

*History of the Primates.* An introduction to the study of fossil man. W. E. Le Gros Clark. Phoenix Book, Univ. of Chicago Press, Chicago, 1958. 186 pp. \$1.25.

## Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to Science, but to the publisher or agency sponsoring the publication.)

*L'Auto-intoxication après brûlure.* T. Godfraind. Université Catholique de Louvain. Arscia, Brussels, 1958. 190 pp.

*Some Relationships between U.S. Consumption and Natural Resources, 1899, 1947, 1954.* Bureau of Business and Economic Research, Univ. of Maryland, College Park, 1958. 21 pp.

*The Air Over Louisville.* Summary of a joint report. Special air pollution study of Louisville and Jefferson County, Kentucky, 1956–1957. Robert A. Taft Sanitary Engineering Center, Cincinnati 26, Ohio, 1958. 57 pp.

*Catalogue of Type Specimens of Reptiles and Amphibians in Chicago Natural History Museum.* Fieldiana: Zoology, vol. 36, No. 4. Hymen Marx. Chicago Natural History Museum, Chicago, 1958. 86 pp. \$1.25.

*The Role of the College in the Recruitment of Teachers.* A report prepared by Frederic W. Ness for the Commission on Teacher Education. Assoc. of American Colleges, Washington, 1958. 83 pp.

*The Effects of a Threatening Rumor on a Disaster-Stricken Community.* Disaster Study No. 10. Elliott R. Danzig, Paul W. Thayer, Lila R. Galanter. National Acad. of Sciences–National Research Council, Washington, 1958. 116 pp. \$2.

*The In-Service Training of Science Teachers.* A report on the training of out-of-license teachers of general science in New York City. Division of Junior High Schools, Board of Education, of the City of New York, New York, 1958. 68 pp. \$0.60.

*Tape Editing and Splicing.* For the professional and amateur tape recordist. N. M. Haynes. Robins Industries, Flushing 54, N.Y., 1958. 24 pp. \$0.25.

*Genetics.* Laboratory manual. A. M. Winchester. Brown, Dubuque, Iowa, 1958. 128 pp. \$2.75.

*Engineering and Scientific Education.* Foundation of national strength. Conference sponsored by Engineering Manpower Commission of Engineers Joint Council (including American Society for Engineering Education), National Academy of Sciences–National Research Council, National Science Foundation, Scientific Manpower Commission. Scientific Manpower Commission, Washington, 1958. 99 pp. \$1.

*Archaeological Excavations in the Northern Sierra Madre Occidental, Chihuahua and Sonora, Mexico.* Series in Anthropology No. 7. Robert H. Lister. Reports by Paul C. Mangelsdorf and Kate Peck Kent. Univ. of Colorado Press, Boulder, 1958. 121 pp. \$3.50.

*Orbital Results for Satellite 1957 Beta One.* Special Rept. No. 13, Optical Satellite Tracking Program. Luigi G. Jacchia. Smithsonian Astrophysical Observatory, Cambridge, Mass., 1958. 8 pp.

*Report on a Study of the Supply of Physics Teachers in U.S. Colleges and Universities Offering a Major in Physics.* American Inst. of Physics, New York 17, 1958. 8 pp.