lar filtration rate, and presumably in urate clearance as well, occurs predominantly in the first two decades after puberty, following which the rate of decline in function appears to be slowed. The major decrease in these renal functions thus appears to occur in a period which approximately coincides with the period during which the male carriers of inherited hyperuricemia develop elevated plasma urate levels. Such findings suggest that the decrease in glomerular filtration rate, which is a usual observation in the gouty, may in fact be largely genetically determined, rather than a complication of gout, as is usually assumed (Wolfson, *et al.*).

(9) It is suggested that normal standards for the upper limits of plasma urate concentration be revised to take cognizance of the normal sex differential in plasma urate level.

The complete data on which the foregoing statements are based will be published in detail elsewhere.

CHARLEY J. SMYTH, ROBERT M. STECHER, and WILLIAM Q. WOLFSON

William J. Seymour Division, Wayne County General Hospital, Eloise, Michigan; Cleveland City Hospital, Cleveland; and *Department of Biochemistry, Medical Research Institute, Michael Reese Hospital, Chicago*

Book Reviews

Atomic energy: being the Norman Wait Harris lectures delivered at Northwestern University. Karl K. Darrow. New York: John Wiley; London: Chapman & Hall, 1948. Pp. 80. (Illustrated.) $2.00.

This brief absorbing treatment of the physics of nuclear energy retains the informal language of Dr. Darrow's lectures at Northwestern University. It is a contribution to the growing list of publications whose admirable objective is to explain the physics of nuclear energy to the layman and to scientists in other fields. Within its 80 pages the reader who seeks to obtain a general review of the field will find a surprising amount of sound information woven into an interesting story.

Starting with introductory information about the atomic structure of matter and an ingenious explanation of physical units in everyday language, the story proceeds with the aid of simple but effective diagrams to a brief description of nuclear forces and a careful cataloguing of the masses of simple nuclei. This leads to the apparent contradiction that in nuclear physics the whole is not equal to the sum of its parts, a problem which is solved by the explanation of the equivalence of mass and energy and a statement of Einstein's equation.

Following a more detailed discussion of energy units, the specific nature of nuclear forces and the inappropriate use of the term "atom smashing," the possibility of transmutation is examined and found to require giant machines of which the Van de Graaf generator is described as a typical case. With the aid of cloud chamber photographs, simple transmutations are explained and the verification of Einstein's equation noted.

A brief eulogy of Rutherford's phenomenal contributions leads to a discussion of the stability of heavy nuclei, radioactivity, and the peculiar advantages of the free neutron as an atomic projectile. The discovery of atomic fission with its excess production of neutrons leads to the awesome implications of the chain reaction with disturbing questions about the stability of our immediate surroundings. These are allayed with an explanation of brakes on the process provided by nature and the story of the removal of such brakes one by one to yield, on one hand, the uncontrolled reaction or bomb and, on the other, the controlled reaction or pile with its singularly appropriate name. The story ends on the hopeful note that the controlled reaction can aid humanity in many ways if man can avoid further use of the uncontrolled reaction.

Dr. Darrow's book is distinguished among its kind by its brevity and the clarity of presentation. He gives enough, but just enough, information for the nonscientist to follow the essential ideas without becoming lost in extraneous details.

R. D. HUNTOON

National Bureau of Standards

Hemostatic agents: with particular reference to thrombin, fibrinogen and absorbable cellulose. Walter H. Seegers and Elwood A. Sharp. Springfield, Ill.: Charles C. Thomas, 1948. Pp. xii + 131. (Illustrated.) $4.50.

Recent rapid developments in the field of blood clotting have made available for the first time highly potent agents for stopping hemorrhage and bleeding. These substances have many possible applications. Associated with this development are important points of technique, descriptions of which are scattered through the literature or have not been published. Hence, there is a definite need for a simple description of these materials and their uses. This small book appears to meet this need admirably. The authors have been actively identified with many of the developments in this field.

The substances described are: thrombin, fibrinogen, oxidized cellulose, fibrin foam, and gelatin sponge. The chemical and biological properties of each substance are discussed, followed by a review of clinical uses found to date. In an introductory chapter the current views on the clotting of blood are sufficiently presented to give an understanding of the basis for the techniques described and their application. Evidently the authors have purposely avoided recent theoretical complexities in favor of providing information of immediate practical use.

This book will be of greatest value to those with surgical interests, with its immediate applications to neurosurgery, plastic surgery, gastroenterology, rhinology, urol-

ogy, and dentistry. As a summary of recent work which has transformed theoretical terms in textbooks of biochemistry and physiology to powerful tools in the hands of the clinician, it will be of interest to medical scientists generally.

L. B. JAQUES

University of Saskatchewan

Scientific Book Register

ADAMS, ROGER. (Ed.-in-Chief.) *Organic reactions.* (Vol. IV.) New York: John Wiley; London: Chapman & Hall, 1948. Pp. viii + 428. (Illustrated.) $6.00.

BATCHELOR, LEON DEXTER, and WEBBER, HERBERT JOHN. *The citrus industry.* Vol. II: *Production of the crop.* Berkeley-Los Angeles: Univ. California Press, 1948. Pp. xv + 933. (Illustrated.) $10.00.

BAWN, C. E. H. *The chemistry of high polymers.* New York: Interscience, 1948. Pp. x + 249. (Illustrated.) $4.50.

BENBROOK, EDWARD A., and SLOSS, MARGARET W. *Veterinary clinical parasitology.* Ames, Ia.: Iowa State College Press, 1948. Pp. 187. (Illustrated.) $4.50.

BLACK, NEWTON HENRY. *An introductory course in college physics.* (3rd ed.) New York: Macmillan, 1948. Pp. xiv + 800. (Illustrated.) $5.00.

CLAUSEN, JENS, KECK, DAVID D., and HIESEY, WILLIAM M. *Experimental studies on the nature of species.* III: *Environmental responses of climatic races of Achillea.* (Publ. No. 581.) Washington, D. C.: Carnegie Institution, 1948. Pp. iii + 129. (Illustrated.) $2.50 paper; $3.00 cloth.

COX, JOSEPH F., and JACKSON, LYMAN E. *Crop management and soil conservation.* (2nd ed.) New York: John Wiley; London: Chapman & Hall, 1948. Pp. xxii + 572. (Illustrated.) $3.80.

DAHLBERG, GUNNAR. *Mathematical methods for population genetics.* Basle, Switzerland: S. Karger; London-New York: Interscience, 1948. Pp. viii + 182. (Illustrated.) $4.50.

DEGERING, ED. F., and collaborators. *Fundamental organic chemistry.* Ypsilanti, Mich.: University Lithoprinters, 1948. Pp. xvi + 516. (Illustrated.)

EBERSON, FREDERICK. *Microbes militant: a challenge to man.* (A revision of *The microbe's challenge.*) New York: Ronald Press, 1948. Pp. x + 401. (Illustrated.) $4.50.

JONES, FREDERIC WOOD. *Hallmarks of mankind.* Baltimore: Williams & Wilkins, 1948. Pp. vi + 86. (Illustrated.) $2.50.

KENT, GEORGE C. *Practical anatomy of the dogfish, Necturus, and cat.* Dubuque, Ia:. Wm. C. Brown Co., 1948. Pp. iii + 84. (Illustrated.) $3.00.

KLEINER, ISRAEL S. *Human biochemistry.* (2nd ed.) St. Louis: C. V. Mosby, 1948. Pp. 649. (Illustrated.) $7.00.

LIVINGSTON, ROBERT. *Physicochemical experiments.* (Rev. ed.) New York: Macmillan, 1948. Pp. xiii + 267. (Illustrated.) $3.50.

MOTT, N. F., and SNEDDON, I. N. *Wave mechanics and its applications.* Oxford, Engl.: Clarendon Press; New York: Oxford Univ. Press, 1948. Pp. xii + 393. (Illustrated.) $10.00.

RASHEVSKY, N. *Mathematical biophysics.* (Rev. ed.) Chicago: Univ. Chicago Press, 1948. Pp. xxiii + 669. (Illustrated.) $7.50.

ROSS, HERBERT H. *A textbook of entomology.* New York: John Wiley; London: Chapman & Hall, 1948. Pp. ix + 532. (Illustrated.) $6.00.

SMITH, AUSTIN. *The drugs you use* (with a Foreword by Morris Fishbein). New York: Revere, 1948. Pp. xii + 243. $3.00.

STRUIK, DIRK J. *A concise history of mathematics.* Vol. II: *The seventeenth century—the nineteenth century.* New York: Dover Publications, 1948. Pp. 125–299. (Illustrated.) $3.00.

WILKS, S. S. *Elementary statistical analysis.* Princeton, N. J.: Princeton Univ. Press, 1948. Pp. xi + 284. $2.50.

———. *The Royal Society Empire Scientific Conference, June–July 1946.* (2 vols.) Edinburgh, Scotland: Morrison & Gibb, Ltd., 1948. Vol. I: Pp. 828; Vol. II: Pp. 707. (Illustrated.) 2: 2: 0 net.

———. *Survey of food and nutrition research in the United States: 1947.* (Compiled by the Committee on Survey of Food and Nutrition Research, Food and Nutrition Board, with the support of the Committee on Food Research, Quartermaster Food and Container Institute for the Armed Forces.) Washington, D. C.: National Research Council, 1948. Pp. x + 306. $1.00.

Just Received—

ASMOUS, VLADIMIR C. *Fontes historiae botanicae Rossicae.* (*Chronica Botanica,* Vol. II, No. 2.) Waltham, Mass.: Chronica Botanica, 1947. Pp. 87–118. (Illustrated.) $1.25.

BERNHARD, HUBERT J., BENNETT, DOROTHY A., and RICE, HUGH S. *New handbook of the heavens.* (2nd ed.) New York-Toronto: Whittlesey House, 1948. Pp. xi + 360. (Illustrated.) $3.00.

KAGAN, SOLOMON R. *Fielding H. Garrison: a biography.* Boston: Medico-Historical Press, 1948. Pp. 104. (Illustrated.) $4.00.

MARTIN, L. C. *Technical optics: a revised and enlarged edition of "An introduction to applied optics."* (Vol. I.) New York-Chicago: Pitman, 1948. Pp. vii + 343. (Illustrated.) $7.50.

SMART, JOHN (with chapters by Karl Jordan and R. J. Whittick). *A handbook for the identification of insects of medical importance.* (2nd ed.) London: British Museum of Natural History, 1948. Pp. xi + 295. (Illustrated.) 20/-.

TRACEY, M. V. *Proteins and life.* London: Pilot Press, 1948. Pp. x + 154. (Illustrated.) 10/6.