

SCIENCE

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The American Association for the Advancement of Science:

<i>Theobald Smith, Investigator and Man:</i> PROFESSOR SIMON HENRY GAGE	117
<i>Presentation of the 250 Thousandth Bausch and Lomb Microscope to Professor Frederick G. Novy: Address of Welcome by the President of the Bausch and Lomb Optical Company:</i> M. H. EISENHART	122
<i>Response by the President of the American Association for the Advancement of Science:</i> PROFESSOR EDWIN G. CONKLIN	122
<i>Presentation of the Microscope:</i> DR. EDWARD BAUSCH	124
<i>Some Results of Microscopical Research which have been Significant for Human Welfare:</i> PROFESSOR FREDERICK G. NOVY	124
Obituary:	
<i>Henry Sewall:</i> DR. H. J. CORPER. <i>Recent Deaths</i>	127
Scientific Events:	
<i>The High Voltage Laboratory of the University of London; Foundation of the Smithsonian Institution; Regional Stations of the U. S. Department of Agriculture; The Cancer Institute; International Forestry Congresses</i>	128
<i>Scientific Notes and News</i>	131
Discussion:	
<i>Early Observation and Attempted Explanation of the Glacial Drift:</i> PROFESSOR O. D. VON ENGELN. <i>Tumors in Drosophila melanogaster Resulting from Somatic Segregation:</i> DR. DONALD F. JONES. <i>Relation of Root Pressure to Plant Disease:</i> DR. JAMES JOHNSON. <i>A Study of the Effect of Drought on Trees:</i> E. N. MUNNS. <i>Remarkable Lightning Bolt:</i> H. A. ALLARD	134

Scientific Books:

<i>Man and His Environment:</i> DR. A. F. WOODS. <i>Cyrus Guernsey Pringle:</i> C. A. WEATHERBY	137
Special Articles:	
<i>Survival of Ascaris Eggs after Centrifuging:</i> PROFESSOR H. W. BEAMS and PROFESSOR R. L. KING. <i>The Semiquinone of the Flavine Dyes, including Vitamin B₂:</i> DR. L. MICHAELIS, M. P. SCHUBERT and C. V. SMYTHE. <i>Electrical Brain Waves and Temperature:</i> PROFESSOR HUDSON HOAGLAND. <i>Pyruvic Acid in Urine after Hard Exercise:</i> DR. R. E. JOHNSON and H. T. EDWARDS	138
Scientific Apparatus and Laboratory Methods:	
<i>A Practical Method for Inducing Oviposition in Diurnal Lepidoptera:</i> RALPH W. MACY. <i>Preparation of Non-toxic Urine Fractions for Assay of Male Hormone by the Female Bitterling Test:</i> PROFESSOR ISRAEL S. KLEINER, ABNER I. WEISMAN and DANIEL I. MISHKIND. <i>An Electrically Heated Needle for Paraffin Embedding:</i> DR. A. C. FABERGÉ and L. LA COUR	141
<i>Science News</i>	8

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THEOBALD SMITH; INVESTIGATOR AND MAN¹

By Professor SIMON HENRY GAGE
CORNELL UNIVERSITY

To understand even imperfectly any human being, it is necessary to know something of his heredity and his environment.

Theobald Smith's hereditary endowment came from skilled workers and teachers. Engrained therefore in his very being were the sterling qualities of industry and intellectual appreciation.

He was born in Albany and spent his childhood and early manhood in the state of New York preparing

¹ Address at the Theobald Smith Memorial Session of the American Association for the Advancement of Science before the joint meeting of the Section on Medical Sciences (N) and the Central New York branch of the Society of American Bacteriologists, the president of the association, Dr. E. G. Conklin, presiding. The address was given in the room where ten years before at the dedication of the Rochester School of Medicine and Dentistry, Dr. Smith had lectured on "Immunity, Natural and Acquired." A large portrait of Dr. Smith at the age of 62 was hung on the wall in front of the audience.

for his life-work. In 1884 this began in the Bureau of Animal Industry in Washington, and continued there until 1895. In 1895 he was called to Boston to aid in the State Board of Health and to join the staff of the Harvard Medical School, where he remained until 1915, when he removed to Princeton to assume the directorship of the Department of Animal Pathology of the Rockefeller Institute for Medical Research. In this position he remained as director and emeritus director to the end of his life in 1934.

Theobald Smith had his beginning and entire career of seventy-five years in one of the most stirring periods in human history, 1859-1934.

As the study of astronomy had taken the material universe out of the maze of superstition and made the earth, not the center of the universe, but only a minor part of it, so organic evolution had put living things

Four Important New Books

Boysen Jensen—Growth Hormones in Plants

By P. BOYSEN JENSEN, University of Copenhagen. Translated and revised by GEORGE S. AVERY, JR. and PAUL R. BURKHOLDER, Connecticut College. *McGraw-Hill Publications in the Agricultural and Botanical Sciences*. 262 pages, \$3.50

The first comprehensive review of the literature dealing with the rôle of growth hormones in normal growth and tropisms in plants, by the discoverer of growth hormones in plants. It includes such topics as techniques of investigation, chemistry, formation, transport (electrical, etc.), the significance of hormones for normal growth, and other phenomena. The book is more than a translation. The wealth of new material, including about 200 new contributions and numerous new and original illustrations, together with chapter summaries and index, make it practically a new book.

Doane, Van Dyke, Chamberlin, and Burke—Forest Insects

By R. W. DOANE, Stanford University, E. C. VAN DYKE, University of California, W. J. CHAMBERLIN, Oregon State College, and H. E. BURKE, formerly Senior Entomologist, U. S. Bureau of Entomology. *The American Forestry Series*. 463 pages, \$4.50

Makes available a comprehensive presentation of the important part that insects play in the forest, with descriptions of the various orders of insects that are injurious to forests and forest products, and discussions of the principal methods of control recommended for each order. A feature of the book is the wealth of excellent photographs and drawings, most of which are now published for the first time.

Drinker and Hatch—Industrial Dust: Hygienic Significance, Measurement and Control

By PHILIP DRINKER and THEODORE HATCH, Harvard University. 300 pages, \$4.00

A presentation and critical discussion of the various phases of the problem of dust control in its relation to the health of workmen, covering the physical aspects of dust and fume suspensions and their effects upon man; the analysis, measurement, and microscopy of fine dusts; and practical control of dusts and the use of respiratory protective devices.

Alling—Interpretative Petrology of the Igneous Rocks

By HAROLD L. ALLING, University of Rochester. 345 pages, \$4.00

Seeks to provide a chemical background for the study of igneous rocks, to discuss the chemical nature of the common rock-making minerals, and to present impartially the advantages and disadvantages of the various theories supposed to account for the origin of igneous rocks.

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THE AMERICAN NATURALIST

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Devoted to the Advancement of the Biological Sciences with

Special Reference to the Factors of Evolution

JULY—AUGUST

Early Man in America with Particular Reference to the Southwestern United States:

Introductory Note. Edgar B. Howard.

The Association of a Human Culture with an Extinct Fauna in New Mexico. Edgar B. Howard.

The Succession of Mammalian Forms within the Period in which Human Remains are Known to Occur in America. Professor Chester Stock.

Dating Records of Early Man in the Southwest. Dr. Ernst Antevs.

Recent Discoveries of the Material Culture of Folsom Man. Dr. Frank H. H. Roberts, Jr.

A Pleistocene Lake in the White River Valley. Dr. Paul MacClintock, Professor E. H. Barbour, C. B. Schultz and Professor A. L. Lugn.

Recent Studies of Early Man in the Southwestern Part of the United States. Dr. E. H. Sellards.

Mollusks Associated with Early Man in the Southwest. Dr. Horace G. Richards.

The Non-identity of the Neurohumors for the Melanophores and the Xanthophores of *Fundulus*. A. A. Abramowitz.

Linkage Relations of Crest, Dominant White and Frizzling in the Fowl. Dr. D. C. Warren and Dr. F. B. Hutt.

Shorter Articles and Discussion: Linkage Studies in the Rat: Dr. E. Roberts and J. H. Quisenberry. Body Weight of Snails with Reference to Health and Parasitism: Professor C. T. Hurst. The Occurrence of Albino and Spotted Rats under Feral Conditions: Dr. Arthur Svihla. Heterokaryosis and Hormones in *Neurospora*: Dr. Carl C. Lindgren. A Rapid Method for Making Permanent Mounts of *Drosophila* Salivary Gland Chromosomes: A. Marshak. Culturing Protozoa: Paul F. Brandwein and Arthur J. Cohen.

MARCH-APRIL

Symposium on the Species Problem of the American Society of Zoologists and the American Genetics Society: Species Studies and the Species Problem. Professor W. H. Longley. The Distribution of Physiological and Chemical Peculiarities in the "Natural" Groups of Organisms. Professor A. C. Redfield. Inter-specific Sterility. Dr. Curt Stern. Genetic Aspects of Certain Problems of Evolution. Professor E. M. East.

The Phylogeny of the Adrenal Gland. Dr. Geoffrey Bourne.

Shorter Articles and Discussion: Hybrid Vigor in Maize: Eric Ashby. The Structure of the Chromosomes of the Salivary Gland of *Drosophila melanogaster*: Alfred Marshak. Isolation and Growth Characteristics of the "Zoochlorella" of *Paramecium bursaria*: John B. Loefer. The Relation between *b* and *k* in Systems of Relative Growth Functions of the Form $y = bx^k$: Hyman Lumer. Species from the Genetic Standpoint: Professor Robert K. Nabours.

MAY-JUNE

The Evolution of the Pediculate Fishes. William K. Gregory and G. Miles Conrad.

Size Inheritance in Mice. Professor W. E. Castle.

A Technique of Transplantation for *Drosophila*. Dr. Boris Ephrussi and Dr. G. W. Beadle.

Chromosome Structure in *Tradescantia* VII: Further Observations on the Direction of Coiling in *Tradescantia* reflex Raf. Dr. B. R. Nebel and Dr. M. L. Ruttle.

The Statistical Analysis of the Distribution of Pond Molluscs in Western Canada. Dr. Alan Mozley.

A Developmental Analysis of Inherited Shape Differences in Cucurbit Fruits. Professor Edmund W. Sinnott.

Shorter Articles and Discussion: A New Method of Synthesizing Pure-breeding Types with Extra Chromosomal Material in *Datura*: Dr. A. F. Blakeslee, Dr. A. Dorothy Bergner and A. G. Avery. The "Resting" Nucleus: N. J. Berrill and C. L. Huskins. Form and Size Variation in a *Spathidium* Believed to be *Spathidium* *Spathula*: Charles Earl Packard. Zoogeographica—a Review: Professor W. C. Allen and Karl P. Schmidt.

SUPPLEMENT

A Single Theory for the Physiology of Development and Genetics: Dr. E. E. Just.

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