SCIENCE

FRIDAY, OCTOBER 19, 1900.

CONTENTS:

MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson N. Y.

PROCEEDINGS OF THE SECTION OF BOTANY AT THE NEW YORK MEETING OF THE AMERICAN ASSOCIATION.

VICE-PRESIDENT TRELEASE'S address on 'Some Twentieth Century Problems' was given in the large botanic laboratory in Schermerhorn Hall, on Monday, June 25th, at 3 p. m. (Published in SCIENCE, 12: 48, 1900.) On the following day and on the 29th, regular sessions were held for the reading of papers after the customary manner, and a list with some abstracts is given below.

The Torrey Botanical Club gave, by invitation, a special memorial program in honor of Dr. John Torrey, in the Museum of the New York Botanical Garden, on Wednesday, June 27th. The principal features of the day were:

'Reminiscences of Dr. Torrey': DR. T. C. PORTER.

'Work of Dr. Torrey as a botanist': DR. N. L BRITTON.

'Historical sketch of the development of botany in New York City': DR. T. F. ALLEN.

'Comment on the earlier botanical history of New York': JUDGE ADDISON BROWN.

'Work of the Torrey Botanical Club': SECRETARY E. S. BURGESS.

Comments and reminiscences: PROFESSOR PECK, PROFESSOR MACLOSKIE, PROFESSOR BEAL and DR. T. F. ALLEN. A communication from JAS. HYATT was also read. These papers will be published in the *Bulletin of the Torrey Botanical Club.*

The sectional committee had concluded arrangements with the Council of the Botanical Society of America by which the pro-

this subject which proclaims itself as 'scientific' must expect severe scrutiny.

Mr. Drähms would have been well advised, and would have served better the cause of science, had he been content (like some French prison chaplains) to set down a brief and simple record of those things which during his residence in San Quentin he has himself seen and known.

HAVELOCK ELLIS.

BOOKS RECEIVED.

Physiology for the Laboratory. B. M. BROWN. Boston, Ginn & Co. 1900. Pp. viii + 167.

Laboratory Directions for Beginners in Bacteriology. VERANUS A. MOORE. Boston, Ginn & Co. 1900. 2d edition. Pp. xvi + 143.

SCIENTIFIC JOURNALS AND ARTICLES.

THE current issue of the *American Anthropologist*, Vol. II, No. 3, July–September, 1900, is of unusual interest, almost the entire field of anthropology being covered by the ten articles which comprise the principal part of its 200 pages. In his paper on 'Obsidian Mines of Hidalgo, Mexico,' Professor W. H. Holmes, of the National Museum, describes the process employed by the natives in obtaining obsidian during the centuries necessary to produce the flakage so thickly covering hundreds of acres on the mountain slopes, one heap alone being estimated to contain twenty or thirty thousand cubic feet of this artificially flaked material. The process of flaking is also described and illustrated. A complementary article, 'The Obsidian Razor of the Aztecs,' by Dr. George Grant MacCurdy, of Yale University, describes and explains the distinguishing features of obsidian fracture, and shows that to them is due, in a measure at least, the excellence of obsidian as a material for knife and razor making. Early last spring Dr. J. Walter Fewkes, of the Bureau of American Ethnology, made an examination of some remarkable but little-known cavate and pueblo ruins (the latter still standing several feet in height), northeast of Flagstaff, Arizona, and he also conducted some excavations therein. The results of these observations are now exploited (with several excellent views and ground-plan drawings) under the title 'Pueblo Ruins near Flagstaff, Arizona.' Judging from the character of the houses, the pottery and other art products, and his knowledge of the traditions of the Hopi Indians, the author is inclined to attribute these now-ruined pueblos to that tribe. An excellent article by Mrs. Alice Carter Cook is devoted to 'The Aborigines of the Canary Islands,' based on information obtained from personal observation in the archipelago and intimate acquaintance with the early Spanish literature of the subject. Every phase of the life of the people is described, and type pictures of the inhabitants and their curious dwellings are given. Still another corner of the world is treated in Mr. R. H. Mathews' paper on 'The Wombya Organization of the Australian Aborigines,' in which various unusual customs are also set forth. Dr. Swan M. Burnett presents a scholarly essay on 'Giuseppe Mazzini—Idealist: A Chapter in the Evolution of Social Science,' in which is given some portions of the great reformer's labors, with the underlying principles for which he contended with such courage and persistency as have rarely been equalled in the history of human endeavor. A 'Grammatic Sketch of the Catawba Language' of South Carolina is given by Dr. A. S. Gatschet. This almost extinct tongue belongs to the Siouan stock, and but few examples of it have ever been published. Mr. Gerard Fowke, whose wide experience in archeologic investigation of the Mississippi drainage area, and his familiarity with the supposed Norse remains in Massachusetts (first discovered and described by the late Professor E. W. Horsford, and later by his daughter, Miss Cornelia Horsford) make his study of the 'Points of Difference between Norse Remains and Indian Works most closely resembling them' of double interest. Mr. Harlan I. Smith, of the American Museum of Natural History, presents the details of his 'Archeological Investigations on the North Pacific Coast in 1899,' conducted under the auspices of the Jesup Expedition, and H. Newell Wardle discusses the interesting 'Sedna Cycle' of the Eskimo which sheds new light on the mythology of the most northerly inhabitants of the globe. The usual 'Book Reviews,' discussion of 'Periodical Literature,' and 'Notes and News' complete the number. (G. P. Putnam's Sons, Publishers, New York.)

But two articles of the October *Monist* are technically scientific in character. The first is by Professor A. S. Packard, of Brown University, and gives for the first time, in actual translations, a complete statement of Lamarck's views on the origin and evolution of man, and of his thoughts on morals, and on the relation between science and religion. Professor Packard believes that Lamarck's attempt at explaining the probable origin of man from some arboreal creature allied to the apes is more detailed and comprehensive than that offered by Darwin in his 'Descent of Man,' which was virtually anticipated by Lamarck. The second article, by Professor Arnold Emch, of the University of Colorado, treats of the 'Mathematical Principles of Esthetic Forms.' Starting from the physiological conditions for the perception of esthetic forms, the author proceeds to investigate the abstract law of symmetry as embodied in the principle of the group, projective and perspective transformation, inversion, etc., showing, for example, that the principle of repetition finds its mathematical expression in the geometry of the group, and explaining also why the various species of geometrical transformation do not destroy the impressions of axial and central symmetry. The remaining articles are: (1) an essay on modern Biblical criticism, by Professor Paul Schwartzkopff, entitled 'The Belief in the Resurrection of Jesus and its Permanent Significance'; (2) an illustrated paper on the 'Greek Mysteries as a Preparation for Christianity,' by Dr. Paul Carus; (3) 'The Ethics of Child-Study,' by Dr. Maximilian P. E. Groszmann; and (4) a report on the recent Psychological Congress at Paris. (Chicago: The Open Court Publishing Co.)

The Journal of Physical Chemistry, October. 'Toxic Action of Acid Sodium Salts on *Lupinus albus*,' by Louis Kahlenberg and Rollan M. Austin. Acid salts are found to be much more poisonous than they ought to be, assuming their toxicity to be due to the hydrogen ions only. 'Relationships between Thermodynamic Fundamental Functions,' by J. E. Trevor. 'The Boiling-points of Mixtures of Chloral and Water,' by Joseph C. Christensen. 'On the Emission and Absorption of Water Vapor by Colloidal Matter': correction, by P. Duhem. 'Quantitative Lecture Experiments on Electro-Chemistry,' by W. Lash Miller and Frank B. Kenrick. Description of an ingenious measuring instrument for rendering the results of experiments visible to a large audience, and a number of selected experiments.

SOCIETIES AND ACADEMIES.

NEW YORK ACADEMY OF SCIENCES.

SECTION OF ASTRONOMY, PHYSICS AND CHEMISTRY.

A meeting of the Section was held on Monday, October 1st, at 12 West 31st Street.

Professor E. R. Von Nardroff presented a paper 'On the Application of Fizeau's Method to the Determination of the Velocity of Sound,' with an experimental illustration. He used sound of very short wave length, beyond the limits of hearing. The sound was detected by means of a sensitive flame. He overcame the effect of irregular disturbing reflected and diffracted waves by using sound of considerable intensity and a flame only slightly sensitive. The sound after passing between the teeth of a rapidly revolving wheel, fell on a concave spherical mirror made of wood, some distance away, and was reflected back through the teeth at the opposite end of a diameter of the wheel, and came to a focus on a sensitive flame just behind the wheel. The author gave a neat demonstration of the working of the apparatus, and showed with great ease how with increasing speed of the revolving wheel the flame was alternately shielded from and exposed to the sound. The slightest disturbance of the adjustment of the mirror threw the focus away from the flame in a marked manner. He stated that the method could probably not be used to compete with other accurate methods heretofore used, but it supplied a beautiful illustration of Fizeau's method of measuring the velocity of light.

Professor J. K. Rees gave an interesting account of some of the scientific instruments at the Paris Exhibition. The great telescope was not yet finished, although this fact was not yet generally known, and it was impossible to tell yet whether it was to be a success. The German exhibit was superb. The Germans had a