

Dr. Geo. M. Sternberg read a paper entitled *Explanation of Acquired Immunity from Infectious Diseases*, an account of which will be printed in the next issue of SCIENCE.

M. B. WAITE,
Recording Secretary.

SCIENTIFIC JOURNALS.

THE JOURNAL OF MORPHOLOGY.

THE latest number of the *Journal of Morphology* is of exceptional importance. Mr. Frank Lillie's article upon the *Embryology of the Unionidæ* contains a most careful investigation of the relations of the earliest cells in the embryonic cleavage to the adult organs of the body. This is followed by Oliver S. Strong's memoir upon the *Cranial Nerves of the Amphibia*, which opens up a new and thoroughly philosophical interpretation of the cranial nerves, based not upon their numerical relations, but upon their physiological components. This is the result of an investigation of a very difficult character which has been under way for the past five years. The third paper, by Pierre A. Fish, upon the *Adult Nervous System of the Salamander*, is followed by a brief but interesting paper from Professor W. K. Brooks upon the *Sensory Clubs of Certain Coelenterates*.

The most important feature of this number, however, is contained in three short preliminary papers at the end of the *Journal*, occupying only a few pages, but apparently establishing a new law in the field of fertilization phenomena. The discovery has been made independently by Dr. Wheeler and by Dr. A. D. Mead, of the University of Chicago, and by Professor E. B. Wilson and Mr. A. T. Matthews, of Columbia College. In course of correspondence the authors of these papers learned that they had independently reached the same unexpected conclusion, and it was arranged by the editor that their three communications should appear together. While they mark an important step forward in our knowledge of

fertilization, at first sight the results obtained by Dr. Wheeler and Professor Wilson are directly contradictory. Dr. Wheeler proves conclusively that in the fertilization of *Myzostoma* (a parasitic form of Annelid) there are no traces of the archoplasm or dynamic substance in the spermatozoon, and that this element is entirely resident in the ovum. Professor Wilson, on the other hand, independently working on the eggs of the echinoderm *Toxopneustes*, proves that there is no trace of the archoplasm in the ovum, but that it is entirely resident in the spermatozoon. It is too soon to make a general induction from these observations, but at present they appear to wholly set aside the brilliant announcement of Fol in 1891, which has been supported by Guignard and Conklin, that both the ovum and spermatozoon contain archoplasm, and that one feature of segmentation is a 'quadrille of the four centers' derived from these male and female archoplasmic masses. These observations do prove, however, that the archoplasm may be derived exclusively either from one sex or the other, and they show that Fol's law was based upon defective preparations. They tend also to show that the archoplasm is not a bearer of the hereditary qualities, but necessarily a purely neutral dynamic agent.

THE PSYCHOLOGICAL REVIEW, MARCH.

THE current number is largely taken up with the Princeton meeting of the *American Psychological Association*, already reported in SCIENCE (January 11). Authors' abstracts are given of sixteen papers presented, and the address of the President, Prof. William James, is given in full. Mrs. Franklin's paper on *Normal Defect of Vision in the Fovea* was also read before the Association. The only remaining paper consists of Contributions from the Psychological Laboratory of Columbia College. Dr. Griffing describes experiments on the relations between der-

mal stimuli and sensations, and Mr. Franz gives an account of measurements of the light which is just sufficient to produce an after-image. In addition to discussion and notes, there is an extended survey of recent psychological literature prepared by Profs. Sully, Ormond, Fullerton, Dewey, Baldwin, Donaldson, Cattell, Angell, Gardiner and Duncan, and Drs. Binet, Kirschmann, Tracy and Noyes.

THE POPULAR SCIENCE MONTHLY, MARCH.

THE number opens with an interesting account of *The Birth of a Sicilian Volcano* by Prof. Packard, describing an ascent of Monte Gernellaro, a crater on Mount Etna formed in 1886. In the second paper Dr. Bela Hubbard dwells on the importance of the forests and the need of legislation to prevent destruction by fire. An article by Dr. S. Millington Miller discusses the education of the blind and of the deaf and dumb and their careers. The number includes articles on engraving and bookbinding, two articles on scientific education, and accounts of Tyndall's work and of Thomas Nuttall (with a portrait).

THE ASTROPHYSICAL JOURNAL, MARCH.

Notes on the Atmospheric Bands in the Spectrum of Mars: WILLIAM HUGGINS.

Recent Researches on the Spectra of the Planets: H. C. VOGEL.

Solar Observations made at the Royal Observatory of the Roman College in 1894: P. TACCHINI.

On a very large Protuberance Observed December 24, 1894: J. FÉNYI.

On the Distribution of the Stars and the Distance of the Milky-Way in Aquila and Cygnus: C. EASTON.

Preliminary Table of Solar Spectrum Wave-Lengths. III.: H. A. ROWLAND.

The Modern Spectroscope: F. L. O. WADSWORTH.

Minor Contributions and Notes; Reviews; Recent Publications.

BULLETIN OF THE AMERICAN MATHEMATICAL SOCIETY, FEB.

On a Certain Class of Canonical Forms: RALPH A. ROBERTS.

Hayward's Vector Algebra: MAXIME BÔCHER.

Apolar Triangles on a Conic: F. MORLEY.

An Instance Where a Well-known Test to Prove the Simplicity of a Simple Group is Insufficient: GEORGE S. MILLER.

Briefer Notices; Notes; New Publications.

THE AMERICAN GEOLOGIST, MARCH.

Development of the Corallum in Favosites forbesi, var. occidentalis: GEORGE H. GIRTY.

Early Protozoa: G. F. MATTHEW.

The Stratigraphic Base of the Taconic or Lower Cambrian: N. H. WINCHELL.

The Second Lake Algonquin: F. B. TAYLOR.

Editorial Comment; Review of Recent Geological Literature; Correspondence; Personal and Scientific News.

NEW BOOKS.

Guide to the Study of Common Plants. VOLNEY M. SPALDING. Boston, D. C. Heath & Co. 1895. vii + 294.

Government of the Colony of South Carolina. EDSON L. WHITNEY. Baltimore, The Johns Hopkins University Press. 1895. Pp. 121. 75 cents.

Theoretical Chemistry. W. NERNST. Translated by Charles Steele Palmer. London and New York, Macmillan & Co. 1895. Pp. xxv + 697. \$5.

Mechanics. Dynamics. R. S. GLAZE BROOK. Cambridge University Press. New York, Macmillan & Co. 1895. Pp. xii + 251. \$1.25.

Diary of a journey through Mongolia and Tibet. WILLIAM WOODVILLE ROCKHILL. Washington, Smithsonian Institution. 1894. Pp. xx + 413.

Noxious and Beneficial Insects of the State of Illinois. S. A. FORBES. Springfield, Ill. 1894. Pp. xi + 165 + xii.