

# SCIENCE

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE, PUBLISHING THE OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

EDITORIAL COMMITTEE: S. NEWCOMB, Mathematics; R. S. WOODWARD, Mechanics; E. C. PICKERING, Astronomy; T. C. MENDENHALL, Physics; R. H. THURSTON, Engineering; IRA REMSEN, Chemistry; CHARLES D. WALCOTT, Geology; W. M. DAVIS, Physiography; HENRY F. OSBOEN, Paleontology; W. K. BROOKS, C. HART MERRIAM, Zoology; S. H. SCUDDER, Entomology; C. E. BESSEY, N. L. BRITTON, Botany; C. S. MINOT, Embryology, Histology; H. P. BOWDITCH, Physiology; WILLIAM H. WELCH, Pathology; J. MCKEEN CATTELL, Psychology.

FRIDAY, MARCH 13, 1903.

## CONTENTS:

|   |     |
|---|-----|
| <i>On the Foundations of Mathematics:</i> PROFESSOR ELIAKIM HASTINGS MOORE.....   | 401 |
| <i>The American Association for the Advancement of Science:</i> —   |     |
| <i>Section C, Chemistry:</i> DR. H. N. STOKES..   | 416 |
| <i>Scientific Books:</i> —  |     |
| <i>McMurrich on the Development of the Human Body:</i> PROFESSOR C. S. MINOT. <i>Comstock's Field Astronomy for Engineers:</i> PROFESSOR H. N. OGDEN. <i>Professor Heilprin on Mount Pelée:</i> T. A. J., JR..... | 421 |
| <i>Scientific Journals and Articles.....</i>  | 425 |
| <i>Societies and Academies:</i> —   |     |
| <i>The Biological Society of Washington:</i> F. A. LUCAS. <i>The Chemical Society of Washington:</i> J. S. BURD. <i>The Torrey Botanical Club:</i> F. S. EARLE.....   | 426 |
| <i>Discussion and Correspondence:</i> —   |     |
| <i>The St. Louis Meeting:</i> PROFESSOR W. M. DAVIS. <i>The Policy of the American Association for the Advancement of Science:</i> PROFESSOR W. J. BEAL. <i>Abundant Honorary Degrees:</i> C. S. M.....           | 428 |
| <i>Shorter Articles:</i> —  |     |
| <i>The Sacred Spot in Maya Indians:</i> PROFESSOR FREDERICK STARR. <i>The Eggs of the Eastern Atlantic Hag-fish:</i> PROFESSOR BASHFORD DEAN. <i>Origin of Name Monotremes:</i> DR. THEO GILL.....                | 432 |
| <i>Current Notes on Physiography:</i> —   |     |
| <i>Overthrust Mountains of Northern Montana; The Oases of Souf and M'zab; The Other Half of Geography:</i> PROFESSOR W. M. DAVIS.....   | 434 |
| <i>The D. O. Mills Astronomical Expedition..</i>  | 436 |
| <i>American Ornithologists' Union Excursion to California.....</i>  | 436 |
| <i>Minute in Reference to the Death of Professor Harkness.....</i>  | 436 |
| <i>Scientific Notes and News.....</i>   | 437 |
| <i>University and Educational News.....</i>   | 440 |

## ON THE FOUNDATIONS OF MATHEMATICS.\*

THE American Mathematical Society gives its retiring president the privilege of speaking on whatever he may have at heart. Accordingly, this afternoon I propose to consider with you some matters of importance—indeed, perhaps of fundamental importance—in the development of mathematics in this country; and it will duly appear in what non-technical sense I am speaking 'On the Foundations of Mathematics.'

### A VIEW.

*Abstract Mathematics.*—The notion within a given domain of defining the objects of consideration rather by a body of properties than by particular expressions or intuitions is as old as mathematics itself. And yet the central importance of the notion appeared only during the last century—in a host of researches on special theories and on the foundations of geometry and analysis. Thus has arisen the general point of view of what may be called *abstract mathematics*. One comes in touch with the literature very conveniently by the mediation of Peano's *Revue des Mathématiques*. The Italian school of Peano and the *Formulaire Mathématique*, published in connection with the *Revue*,

\* Presidential address delivered before The American Mathematical Society at its ninth annual meeting, December 29, 1902.

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.

# Science

17 (428)

*Science* 17 (428), 401-440.

ARTICLE TOOLS

<http://science.sciencemag.org/content/17/428.citation>

PERMISSIONS

<http://www.sciencemag.org/help/reprints-and-permissions>

Use of this article is subject to the [Terms of Service](#)

---

*Science* (print ISSN 0036-8075; online ISSN 1095-9203) is published by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. 2017 © The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works. The title *Science* is a registered trademark of AAAS.