

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; J. LE CONTE, Geology; W. M. DAVIS, Physiography; O. C. MARSH, Paleontology; W. K. BROOKS, C. HAET MERRIAM, Zoölogy; S. H. SCUDDER, Entomology; N. L. BRITTON, Botany; HENRY F. OSBORN, General Biology; H. P. BOWDITCH, Physiology; J. S. BILLINGS, Hygiene; J. McKEEN CATTELL, Psychology; DANIEL G. BRINTON, J. W. POWELL, Anthropology; G. BROWN GOODE, Scientific Organization.

FRIDAY, MAY 15, 1896.

CONTENTS:

<i>Some Problems about to Confront Astronomers of the Twentieth Century:</i>	J. K. REES.....	717
<i>On a New Form of Radiation:</i>	W. K. RÖNTGEN.....	726
<i>Behavior of Sugar towards Röntgen Rays:</i>	FERDINAND G. WIECHMANN.....	729
<i>The X-Rays in Medicine and Surgery:</i>	CHARLES L. NORTON.....	730
<i>Current Notes on Physiography:—</i>		
<i>De L'apparent's Leçons de géographie physique: The Interior Plateau of British Columbia; The Volcanic Group of Topographic Forms; Le tour du monde; Thunder Storms at Sea are Nocturnal;</i>	W. M. DAVIS.....	731
<i>Current Notes on Anthropology:—</i>		
<i>The Anthropological Institute of Great Britain; Canadian Archæology:</i>	D. G. BRINTON.....	733
<i>Scientific Notes and News:—</i>		
<i>Batrachians and Crustaceans from the Subterranean Waters of Texas; The Forest Resources of the United States; Cape Colony Geological Commission; The Metric System; General:</i>		734
<i>University and Educational News:</i>		738
<i>Discussion and Correspondence:—</i>		
<i>Principles of Marine Zoögeography:</i>	ARNOLD E. ORTMANN.	
<i>The Child and Childhood in Folk-Thought:</i>	FRANZ BOAS.	
<i>The Discussion of Instinct:</i>	C. LLOYD MORGAN.	
<i>The Subject of Consciousness:</i>	JOHANNES REHMKE.	
<i>The Pre-rogatives of a State Geologist:</i>	ERASMUS HAWORTH.	
<i>A Correction:</i>	T. A. JAGGAR, JR.	
<i>The Absolute and the Relative:</i>	J. W. POWELL.....	739
<i>Scientific Literature:—</i>		
<i>Marcou's Life, Letters and Works of Louis Agassiz. Mosso's Fear:</i>	J. McKEEN CATTELL.	
<i>Hueppe's Bakteriologie:</i>	H. W. CONN.....	745
<i>Scientific Journals:—</i>		
<i>The Astrophysical Journal; The American Geologist:</i>		748
<i>Societies and Academies:—</i>		
<i>The Academy of Science of St. Louis:</i>	WILLIAM TRELEASE.	
<i>New York Academy of Sciences, Section of Anthropology, Psychology and Philology:</i>	LIVINGSTON FARRAND.	
<i>Torrey Botanical Club:</i>	W. A. BASTEDO.	
<i>Geological Conference of Harvard University:</i>	T. A. JAGGAR, JR.	
<i>Philosophical Society of Washington:</i>	BERNARD R. GREEN.....	750

SOME PROBLEMS ABOUT TO CONFRONT ASTRONOMERS OF THE TWENTIETH CENTURY.

Members of the New York Academy of Sciences, Ladies and Gentlemen: The nineteenth century has shown vigorous development in all branches of science, and in none more than in astronomy. The effective work of numerous observers and mathematicians has lifted us to greater heights of knowledge, making visible and clear many things previously discerned dimly. But the elevation has also extended our horizon, and the boundaries of knowledge appear 'infinitely infinite.' This evening I shall not make any attempt to sketch the details, or even the general features of the view before us, as we stand at the end of the century, looking down from the elevated position the scientific workers in astronomy enable us to occupy. I shall content myself with a much narrower survey, selecting here and there some especial part of the field before us, with the desire of stating briefly what has been done in that field and in what condition it now stands.

From the point of view of the practical astronomer the stars are so many signal lights marking the 'milestones on the great celestial highway traversed by the planets, as well as on the byways of space occasionally pursued by comets.' If we desire to know the position of a planet or a comet on

*Address of the retiring President of the New York Academy of Sciences, March 30, 1896.