

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.

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FRIDAY, JULY 25, 1902.

SOME RECENT APPLICATIONS OF FUNCTION THEORY TO PHYSICAL PROBLEMS.*

CONTENTS:

The American Association for the Advancement of Science:—

Some Recent Applications of Function Theory to Physical Problems: PROFESSOR JAMES McMAHON..... 121

Section A, Mathematics and Astronomy: PROFESSOR EDWIN S. CRAWLEY..... 131

Section G, Botany: HERMANN VON SCHRENK 136

Assignments of Geologic and Paleontologic Parties 141

Scientific Books:—

Korschelt and Heider's Lehrbuch der vergleichenden Entwicklungsgeschichte der wirbellosen Thiere: J. P. McM. Job's *Among the Water-fowl:* F. A. L. Schmidt and *Weis on Bacteria:* PROFESSOR H. W. CONN. *Nelson's Analytical Key to some of the Common Flowering Plants of the Rocky Mountain Region:* PROFESSOR FRANCIS RAMALEY..... 144

Scientific Journals and Articles:..... 147

Societies and Academies:—

The Anthropological Society of Washington: DR. WALTER HOUGH..... 149

Discussion and Correspondence:—

Zoological Nomenclature: DR. WM. H. DALL. *Range of the Fox Snake:* ARTHUR ERWIN BROWN 150

Shorter Articles:—

Preliminary Note on a New Organism producing Rot in Cauliflower and Allied Plants: F. C. HARRISON..... 152

Recent Museum Reports 152

Notes on Entomology: NATHAN BANKS..... 154

Botanical Notes:—

Two Text-books of Botany; Further Studies of Cellulose; Studies of the Structure of Mosses; The Ignoring of Beginners and Amateurs: PROFESSOR CHARLES E. BESSEY. 156

Scientific Notes and News..... 157

University and Educational News..... 159

It has seemed appropriate that the address of the retiring chairman should draw attention to some of the most recent developments in those sciences which it is the object of this Section of the Association to promote, especially to some problems that seem to be making but slow headway, and to others that are at a standstill for want of appropriate modes of mathematical expression.

In selecting a particular group of problems I have been guided by the thought that there is one field of work which touches the domain of every member of this Section, whether his or her immediate interests lie in abstract mathematics, in physical mathematics or in astronomy. I mean the great field of the theory of functions of a complex variable.

The physicist or astronomer who wishes to understand the true nature of any function which he deals with must study its behavior on the complex plane, its zeros, its poles, its singularities and perhaps its Riemann surface. Moreover, in dealing with such important questions as stability

* Address by the retiring Vice-President and Chairman of Section A—Mathematics and Astronomy—of the American Association for the Advancement of Science, Pittsburgh meeting, June 28 to July 3, 1902.

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