

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, edited by J. McKeen Cattell and published every Friday by

THE SCIENCE PRESS

11 Liberty St., Utica, N. Y. Garrison, N. Y.
New York City: Grand Central Terminal

Annual Subscription, \$6.00 Single Copies, 15 Cts.

Entered as second-class matter January 21, 1922, at the Post Office at Utica, N. Y., under the Act of March 3, 1879.

VOL. LVI AUGUST 25, 1922 No. 1443

CONTENTS

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| <i>The Record of Science:</i> PROFESSOR WM. WARNER BISHOP..... | 205 |
| <i>The Depletion of Soils by Chemical Denudation:</i> DR. MILTON WHITNEY..... | 216 |
| <i>Scientific Events:</i> | |
| <i>The Pittsburgh Meeting of the American Chemical Society; Exhibit of Optical Instruments; Ventilating Code of the American Society of Heating and Ventilating Engineers; The Aquarium of the Zoological Society of London.....</i> | 219 |
| <i>Scientific Notes and News.....</i> | 221 |
| <i>University and Educational Notes.....</i> | 225 |
| <i>Discussion and Correspondence:</i> | |
| <i>The Food Habits of Swordfish:</i> PROFESSOR J. S. KINGSLEY. <i>Experimental Transformation of the Smooth-bladder of the Dog:</i> DR. EBEN J. CAREY. <i>An Albino Mutation of the Dematiaceous Fungus Brachysporium Trefolii:</i> DR. LEE BONAR. <i>A Damp Chamber for Microscopes:</i> PROFESSOR CLIFFORD H. FARR. <i>The Cost of German Publications:</i> PROFESSOR JAS. LEWIS HOWE..... | 225 |
| <i>Quotations:</i> | |
| <i>Science and the Tropics.....</i> | 228 |
| <i>Scientific Books:</i> | |
| <i>Keyser's Mathematical Philosophy:</i> PROFESSOR G. A. MILLER..... | 229 |
| <i>Special Articles:</i> | |
| <i>The "Winter Cycle" in the Fowl:</i> DR. J. ARTHUR HARRIS and H. R. LEWIS. <i>The Effect of X-Rays on Chemical Reactions:</i> A. R. OLSON..... | 230 |
| <i>The Fifteenth Annual Conference on Weights and Measures.....</i> | 232 |

THE RECORD OF SCIENCE¹

One learns by adversity—at least such is the popular belief, although the press dispatches from Europe during the past few months would seem to give the lie to this old adage. It used to be my fate to encounter at frequent intervals a genial friend of great distinction in the field of physics and astronomy, long engaged in high administrative functions, an alumnus of this university—together a man of great weight and substance, who endeavored each time we met to overwhelm my cherished ambitions by bringing forth with great gusto this aphorism, "Bibliography is the platitude of research!" So much did this phrase please him that he paraded it on many occasions, and I confess I used to dodge around the corner to avoid its rotund and sonorous condemnation of my own ways and works. I hope to show you that bibliography is the *foundation* of research, and that however level and flat that foundation may be, however dull may be the task of laying it deep and strong, no lasting and lofty superstructure may safely be reared, save on the secure footing of a knowledge of previous work done by others, a knowledge resting necessarily even in the field of science on the much despised labor of the bibliographer.

There is prevalent on every university campus, I suppose, an impression—not among students alone—that the various branches of human knowledge are for practical purposes divided into two groups, the laboratory sciences and the book sciences. This is an extremely convenient and easy grouping—and it has certain elements of truth in its facile cleavage of the field of inquiry. But it is essentially inaccurate in that it ignores a fundamental factor common alike to research with the microscope

¹ Address at the annual meeting of the Michigan Chapter of Sigma Xi.