

SCIENCE

FRIDAY, AUGUST 11, 1916

CONTENTS

<i>Recent Progress in our Knowledge of the Physiological Action of Atmospheric Conditions:</i> PROFESSOR FREDERIC S. LEE	183
<i>The Origin of the Pre-Columbian Civilization of America:</i> PROFESSOR G. ELLIOT SMITH.	190
<i>The Production of Tungsten</i>	195
<i>Scientific Notes and News</i>	196
<i>University and Educational News</i>	201
<i>Discussion and Correspondence:—</i>	
<i>Mosquitoes and Man:</i> ALLAN H. JENNINGS. <i>Goiter among the Indians along the Missouri:</i> DR. ALEŠ HRDLÍČKA. <i>Compulsory Mathematics—an Explanation:</i> DR. DAVID SNEDDEN. <i>The Southern Bullfrog:</i> H. A. ALLARD	201
<i>Scientific Books:—</i>	
<i>Thorp's Outlines of Industrial Chemistry:</i> S. P. SADTLER. <i>Hoernes's Urgeschichte der bildenden Kunst in Europa:</i> PROFESSOR GEORGE GRANT MACCURDY	205
<i>The Mechanism of Light Production in Animals:</i> PROFESSOR E. NEWTON HARVEY	208
<i>Special Articles:—</i>	
<i>On the Association and Possible Identity of Root-forming and Geotropic Substances of Hormones in Bryophyllum calycinum:</i> DR. JACQUES LOEB	210
<i>The American Chemical Society:</i> CHARLES L. PARSONS	211

MSS. intended for publication and books, etc., intended for review should be sent to Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

RECENT PROGRESS IN OUR KNOWLEDGE OF THE PHYSIOLOGICAL ACTION OF ATMOSPHERIC CONDITIONS¹

Two weeks ago to-day, in the physiological laboratory of the Columbia School of Medicine, Dr. Fred W. Eastman and I made the following experiment: A young man, twenty-one years of age, in excellent physical condition, who was willing to act as the subject of our tests, was dressed in light underclothing and light trousers, a sweater, stockings and shoes. His systolic and diastolic blood pressures and his pulse rate were taken in the sitting posture; the carbon-dioxide content of the alveolar air of his lungs was determined; a pneumograph was attached to his chest for recording his respiratory movements; a resistance thermometer was placed in the rectum and connected with a self-writing galvanometer for the continued record of his bodily temperature; and a flat-bulbed thermometer was strapped firmly to his forehead to serve as an indicator of the temperature of his skin. Thus equipped he entered a small chamber, provided with a door and windows and with facilities for heating and humidifying the air. He remained there, sitting quietly, for a period of four and one quarter hours. The temperature of the air in the chamber was raised as quickly as possible above the temperature of his body and reached a maximum of 43.3° C. (110° F.) with a maximum wet-bulb reading of 37.2° C. (99° F.), while the relative humidity was increased to a maximum of 85 per

¹ Read before the American Pediatric Society, Washington, D. C., May 8, 1916.

Science

44 (1128)

Science 44 (1128), 183-218.

ARTICLE TOOLS

<http://science.sciencemag.org/content/44/1128.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. The title *Science* is a registered trademark of AAAS.

Copyright © 1916 The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works.