

SCIENCE

FRIDAY, AUGUST 5, 1921

PARASITISM AS A FACTOR IN DISEASE¹

CONTENTS

<i>Parasitism as a Factor in Disease:</i> DR. THEO- BALD SMITH	99
<i>The First Appearance of the True Mastodon in America:</i> DR. HENRY FAIRFIELD OSBORN.	108
<i>Scientific Events:</i>	
<i>The Science Club of the University of Mis- sissippi; The Work of the Rockefeller Foun- dation; The Exposition of Chemical Indus- tries; The Chemical Meeting in New York City</i>	108
<i>Scientific Notes and News.....</i>	111
<i>University and Educational News.....</i>	113
<i>Discussion and Correspondence:</i>	
<i>A Defense of Professor Newcomb's Logic:</i> DR. W. W. CAMPBELL. <i>Biological Control of Destructive Insects:</i> DR. PAUL POPENOE. <i>A Longlived Woodborer:</i> H. E. JAKES.	113
<i>Quotations:</i>	
<i>The Cost of Printing Scientific Works in England</i>	114
<i>Special Articles:</i>	
<i>A Bacterial Disease of Gladiolus:</i> LUCIA + McCULLOCH	115
<i>The American Chemical Society:</i> DR. CHARLES L. PARSONS	116

MSS. intended for publication and books, etc., intended for review should be sent to The Editor of Science, Garrison-on-Hudson, N. Y.

THE study of etiology or causation is a study of the entire field of medicine from a certain point of view. Every phenomenon assumes an etiological aspect whenever we study it not as an effect to be simply contemplated and described, but as a cause or necessary condition of something that is going to happen. Provided with the information that for certain events to take place certain necessary conditions must precede, we can take steps by controlling the necessary conditions to allow the event to occur or not. Modern medicine has made the concept of causation its own. On it is founded all rational progress in prophylaxis and therapy. First to comprehend the cause, then to intercept and suppress it and thereby to prevent the next step is the kernel of medical science and practise. We project ourselves into the immediate future. The present is only the boundary between what has occurred and what is to happen. To control events we must know how to distinguish those conditions which are necessary from those which are merely associated and coincident.

The history of medical science, notably during the past half century, has clearly shown that observation of disease as it occurs in everyday life must be associated with the experiment. By observation I mean a survey or study of the phenomenon as a whole; by experiment, the observation of isolated parts of the entire phenomenon, the other parts being meanwhile eliminated or controlled by special devices. Observation and experiment, alternating, cooperating, and reacting on each other, are the only sure guides to a rational interpretation of disease. Nature is continu-

¹ Paper read at the annual meeting of the Association of American Physicians, May 10, 1921, as part of a symposium on etiology or causation of infectious diseases.