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SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. McKeen Cattell and published every Friday by

### THE SCIENCE PRESS

New York City: Grand Central Terminal Lancaster, Pa. Garrison, N. Y. Annual Subscription, \$6.00 Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

## RECENT REVIVALS OF DARWINISM'

### By Dr. HENRY FAIRFIELD OSBORN

AMERICAN MUSEUM OF NATURAL HISTORY

Before us are four recent volumes, the "Huxley Memorial Lectures," "The Causes of Evolution," by J. B. S. Haldane, "Problems of Relative Growth," by Julian S. Huxley, and "The Scientific Basis of Evolution," by Thomas Hunt Morgan, which bring us up to date in the latest British and American thought as to the nature and causes of evolution. They are popularly written and the chief impression they convey is their reversion to more or less pure Darwinism, especially surprising on the part of one of the authors, T. H. Morgan, who some years ago wrote a severe critique of Darwin's theory of adaptation.

We thus have presentations by a distinguished physiological chemist, by the leader of the experimental and genetic school, by an experienced zoologist, P. Chalmers Mitchell, and by one of the leading

Address before the Osborn Research Club in the American Museum of Natural History, December 13,

British authorities on animal life, Julian Huxley. The point of view shown in Julian Huxley's volume should be supplemented by his article in the recent edition of the "Encyclopaedia Britannica."

Preceding a critique of these volumes may we point out four historic explanations of the modes and causes of evolution.

## EMPEDOCLES-DARWIN HYPOTHESIS

This bit of absolutely inductive research has a 2,500 year speculative background because about 600 B. C., as described in my volume, "From the Greeks to Darwin," the Greeks began to speculate not only on the modes or kinds of evolution but on the hypothetical causes of evolution. Thus Empedocles of Agrigentum, a Sicilian town, anticipated what may be known as pure Darwinism, namely, that out of many kinds of accidents and variations more or less spontaneously occurring in animals, nature permits the survival only