## SCIENCE

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## THE EVOLUTIONARY CONTROL OF ORGAN-ISMS AND ITS SIGNIFICANCE<sup>1</sup>

I

A COMPARATIVELY brief period has passed since the evidence brought together by Darwin in connection with the results slowly accumulated from other sources has clearly demonstrated that the diversity of organic life in the world occurs through evolution. It is one thing, however, to clearly diagnose a condition and quite another to understand the causes which have brought about the phenomenon so that similar results may be produced advantageously. With the assumption that evolution was merely the survival of those forms which were best adapted to the environment, generation after generation, the explanation of the method as well as its practical application, namely the improvement of organisms in any given direction, was apparently a simple matter. It seemed evident that man had modified and adapted to his welfare various plants and animals by a more or less unconscious and haphazard selection long before history records civilization.<sup>2</sup> Why then could not civilized man carry forward the work and with the knowledge gained since the principles of evolution were recognized, obtain far-reaching results within a brief period of time. All that seemed necessary was to have individuals

<sup>1</sup> Presidential address before the twenty-third annual meeting of the Ohio Academy of Science, Oberlin, O., November 28, 1913.

 $^2$  One need not be a pessimist to assert the actual evidence thus far obtained indicates that the supposed progress made in the improvement of domesticated animals and plants is nothing more than the sorting out of pure lines and thus represents no advancement.

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