

**THE THEORY OF EVOLUTION,  
WITH SPECIAL REFERENCE  
TO THE EVIDENCE UPON  
WHICH IT IS FOUNDED**

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The theory of evolution, with special reference to the evidence upon which it is founded by  
William Berryman Scott

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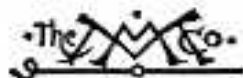
**WILLIAM BERRYMAN SCOTT**

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RICHARD WESTBROOK LECTURES OF THE WAGNER FREE INSTITUTE  
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**THE THEORY OF EVOLUTION**



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UPON WHICH IT IS FOUNDED

BY

WILLIAM BERRYMAN SCOTT

PH.D. (GIESSEN), HON. D.SC. (HARVARD & OXFORD), LL.D.  
(UNIVERSITY OF PENNSYLVANIA), CHAIR PROFESSOR OF  
GEOLOGY & PALEONTOLOGY IN PRINCETON UNIVERSITY

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## PREFACE.

A new book on evolution, which can lay little claim to novelty of fact or treatment, certainly demands an explanation, if not an apology. My choice of subject for the Westbrook lectures of 1914 was determined by the very general misapprehension in the public mind concerning the present status of the evolutionary theory among men of science. It is widely believed that the theory is an outworn device, which naturalists are beginning to discard and that soon it will have a merely historical interest. This misunderstanding, for such it is, has arisen from the debates among zoölogists and botanists as to the manner in which evolution has actually occurred and the efficient causes which have brought it about, and, further, from the ambiguous way in which the term "Darwinism" is often employed. Frequently, the term is made a synonym of evolution, but it ought properly to be restricted to Darwin's *explanation* of evolution by natural selection.

It seemed that a useful service might be rendered by making an outline review of the evidence upon which the doctrine of evolution is founded, for the nature and scope of this evidence are but little understood by the educated, though non-scientific public. The interest displayed in these topics by the

audiences at the Wagner Institute encourages me to hope that a larger and more widely dispersed audience may share the same interest. The annoying barrier of technical language has been evaded so far as possible, but the lack of suitable vernacular terms is such that it is not practicable to escape technicalities altogether. The effort to use ordinary speech and the want of numerous illustrations have caused a certain prolixity of description, which is regrettable, but less so, perhaps, than the alternative of obscurity.

My experience with graduate students of biology has shown me that usually their training has so completely taken for granted the truth of the evolutionary doctrine, that they have but a vague conception of the testimony by which that doctrine is supported. This book may be useful in directing their attention to the character of the evidence and, though, of course, the meagre sketch contained in these lectures is entirely inadequate in itself, it does provide an outline which students can easily fill in from their own reading.

In the winter of 1910-11 an admirable series of popular lectures by several men of high distinction was delivered in the Natural Science Society of Munich, as a tribute to the centennial of Charles Darwin's birth. These lectures were published in 1911 by G. Fischer of Jena with the title *Die Abstammungslehre*. To this most excellent compendium of the evidences of evolution I am under great ob-

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ligations and I wish that it might soon be translated into English. I take pleasure also in expressing my thanks to my colleagues, Professors Conklin and Smyth and Dr. Mayer for valuable suggestions in the difficulties of treatment and to Dr. W. J. Sinclair for his care in making the figures.

W. B. S.

PRINCETON, N. J., *December, 1918.*