

**THE PRINCIPLES OF ANIMAL AND VEGETABLE  
PHYSIOLOGY: A POPULAR TREATISE ON THE  
FUNCTIONS AND  
PHENOMENA OF ORGANIC LIFE. TO WHICH  
IS PREFIXED A GENERAL VIEW OF THE GREAT  
DEPARTMENTS OF HUMAN KNOWLEDGE**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649679775

The Principles of Animal and Vegetable Physiology: A Popular Treatise on the Functions and Phenomena of Organic Life. To Which Is Prefixed a General View of the Great Departments of Human Knowledge by J. Stevenson Bushnan

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Cover @ 2017

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**J. STEVENSON BUSHNAN**

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HUMAN KNOWLEDGE.

BY

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PHYSICIAN TO THE METROPOLITAN FREE HOSPITAL, ETC. ETC.

WITH ONE HUNDRED AND TWO ILLUSTRATIONS ON WOOD.



PHILADELPHIA:  
BLANCHARD AND LEA.

1854.

## PUBLISHERS' ADVERTISEMENT.

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THE present volume has just been issued in London as one of a series of Treatises published under the general title of "Orr's Circle of the Sciences." The editor of the series, and author of this volume, is DR. BUSHNAN, whose name, in connection with those of OWEN, ANSTED, LATHAM, and other contributors to the enterprise, carries with it the guarantee that however simple the work may be in form and popular in style, yet that its facts are strictly in accordance with the latest scientific investigations, and that nothing has been omitted which should find place in a manual destined for the general reader or the academical student.

The views which have actuated the author may be found in the following extracts from the English Preface:

"In the Introductory Treatise to this Volume, an attempt has been made to expound, in brief and lucid terms, the general nature, relations, and applications of all the chief departments of Human Knowledge, in order to give the Reader, not specially trained in Science, a general view of the vast field of inquiry which the Creator has laid open to the lawful exercise of the human intellect. Thus the Student has been led, in the first instance, and it is hoped by no rugged or precipitous ascent, to the summit of an eminence

whence he may take a survey of the various departments of knowledge, and of the principles which ought to guide him in the pursuit and application of the several Sciences.

“In the Treatise on the Physiology of Animal and Vegetable Life, the duties or functions of the organs in the living bodies of plants and animals are defined and classified; and the results of a complete analysis of the constituents of these organs are given, after they have been reduced by the anatomist to their component textures, and by the chemist to their proximate and ultimate elements. The principal modifications of the functions are traced through the different classes of animals, and the leading phenomena of the development of the germ and embryo, in both the divisions of the organic world, are described. The endeavour of the Author has been to compress into the compass assigned to each essay an outline of the chief characteristics of life in the two great departments of Organic Nature, a statement of the relations of Plants and Animals to each other, and an account of their common dependence on the mineral or inorganic world.”

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