

# **THE BEGINNINGS OF SCIENCE**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649214471

The beginnings of science by Edward J. Menge

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.  
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

[www.triestepublishing.com](http://www.triestepublishing.com)

**EDWARD J. MENGE**

**THE BEGINNINGS  
OF SCIENCE**



BADGER'S STUDIES IN SCIENCE

---

---

THE HIGHER USEFULNESS OF  
SCIENCE

*By William Emerson Ritter*

THE UNITY OF THE ORGANISM

*By William Emerson Ritter*

THE BEGINNINGS OF SCIENCE

*By Edward J. Menge*

THE PROBABLE INFINITY OF  
NATURE AND LIFE

*By William Emerson Ritter*

---

RICHARD G. BADGER, PUBLISHER, BOSTON

M 6445b

# THE BEGINNINGS OF SCIENCE

---

Biologically and Psychologically Considered

---

By

EDWARD J. MENGE, M.A., PH.D., M.Sc.

*Professor of Biology in the University of Dallas*

*Author of "Backgrounds for Social Workers"*



BOSTON  
RICHARD G. BADGER  
THE GORHAM PRESS

151909  
23-8-19

COPYRIGHT, 1918, BY RICHARD G. BADGER

—  
All Rights Reserved



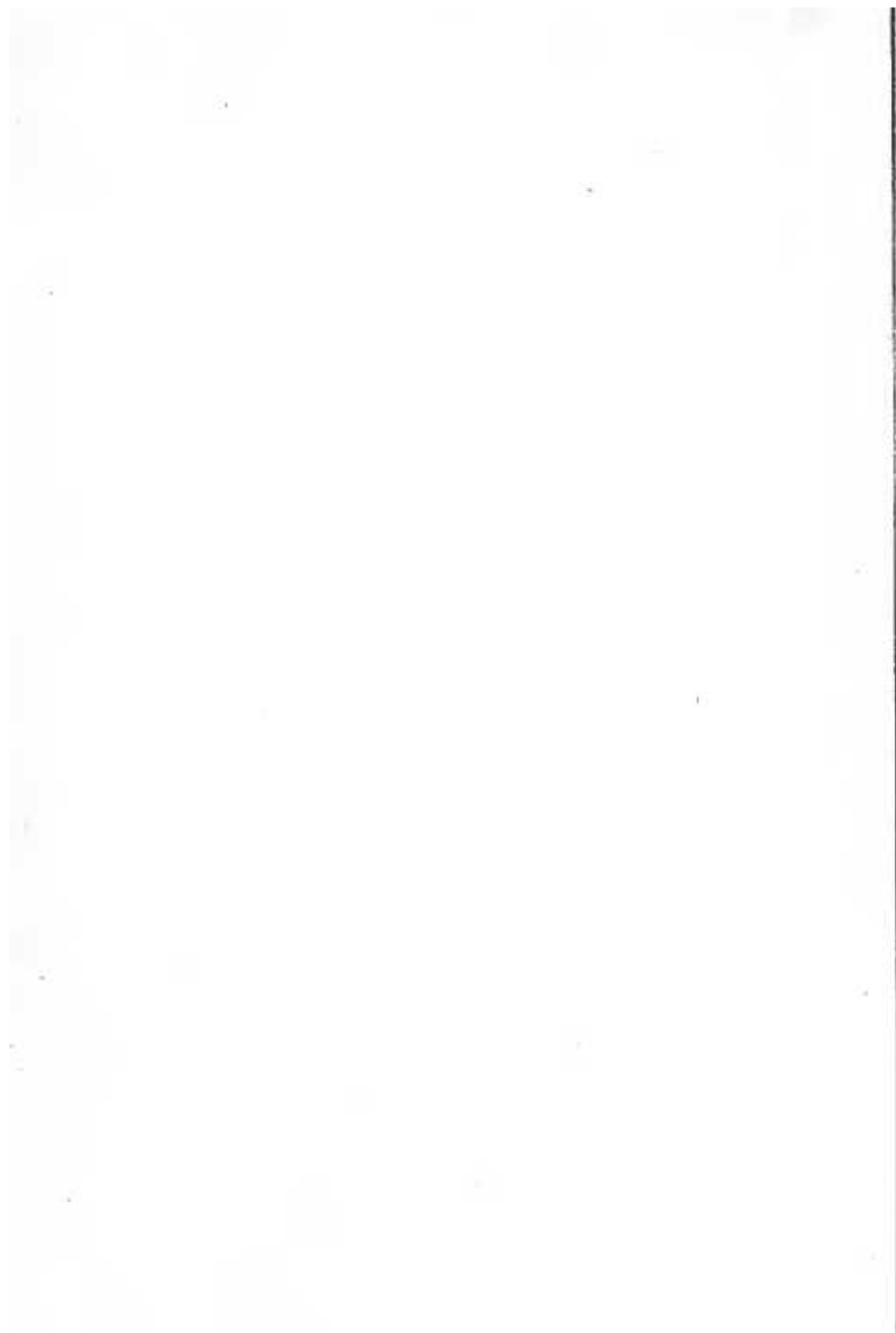
Made in the United States of America

—  
The Gorham Press, Boston, U. S. A.

TO  
MY WIFE

WHOSE CONSTANT ENCOURAGEMENT  
AND NEVER-WAVERING CONFIDENCE  
HAVE BEEN THE SOURCE OF THE  
AUTHOR'S MOST FRUITFUL STUDIES





## PREFACE

**I**T is now some ten years since the need of a volume in non-technical language, describing the relationship between Philosophy and the Laboratory Sciences, was brought home to the author, and with the end in view of filling that need, he began the series of studies which have made this book possible.

Six of the chapters have already appeared in print in the University of Dallas Quarterly Bulletins during the past few years, while much of the remaining material has been used in class-room and public lectures.

Students from all schools have seemed so one-sided in their viewpoint, that the desire to make them realize that many varying conclusions may often be drawn from the same facts, with just as much validity, has led to the often repeated stressing of this fact throughout these pages; and, having noticed that most students lose the thread of their reading when too many foot-notes are employed, we have tried, wherever possible, to embody what is usually placed in foot-notes, in the main portion of the paragraph.

Contrary to most volumes written on any subject, we have tried to present *both sides* when there were two, or more should that be the case. We have likewise tried to show where much error may be found in the teaching of both high-school and college students, in that not sufficient stress is laid on the all-important difference between **FACTS** and **INTERPRETATIONS**—on the varying and often contradictory beliefs of writers on Evolutionary Science—on the deplorable

lack of logical and philosophical thinking—on the fallacy of permitting the student to assume that because an hypothesis is necessary for experimental purposes, it must be true; and that because every teacher in a given school may uphold a doctrine, it does not follow that all men hold it, for the head of the department usually employs only those teachers who think along similar lines, or very often are the result of his own training, they having been his own pupils.

W. H. Mallock has well said that the laboratory man has had to go to school to philosophy, and it is this point we wish to emphasize more than any other.

We have therefore tried to present NECESSARY STUDIES, which *must* form the foundation of any valid interpretation of any facts found, by placing a goodly list of books and articles in our chapter on "Suggested Readings" that will bring home the ideas expressed in this Preface and permit a far more comprehensive knowledge of LIFE in general than any course or courses the average student is likely to get at any institution, unless he specialize for many years.

In other words, the object and aim of the author has been to show what is necessary for a broad, logical, and clear-cut view of Life; what theories are held by able men in all the various walks of life; where and how they agree and where and how they do not agree—to give perspective.

Great pains have been taken to make every statement, date and reference accurate, but should any errors have crept in, the author will consider it a favor to have his attention called to them.

Thanks are due to all the members of the faculty of the University of Dallas for their ready assistance and kindness, but especially to the Reverend Peter P. Finney, C.M., Ph.D., Professor of Philosophy, whose kindly suggestions