

THE ORIGIN AND NATURE OF LIFE

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649244157

The origin and nature of life by Benjamin Moore

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

BENJAMIN MOORE

**THE ORIGIN AND
NATURE OF LIFE**

THE
ORIGIN AND NATURE
OF LIFE

BY

BENJAMIN MOORE

M.A., D.SC., F.R.S.

JOHNSTON PROFESSOR OF BIO-CHEMISTRY
UNIVERSITY OF LIVERPOOL



NEW YORK
HENRY HOLT AND COMPANY
LONDON
WILLIAMS AND NORGATE

CONTENTS

CHAPTER	PAGE
I PHYSICAL AND PSYCHICAL EVOLUTION .	7
II GENESIS OF ELECTRONS AND ATOMS .	27
III CHEMICAL EVOLUTION IN THE SUNS . .	51
IV CHEMICAL COMPOUNDS ON EARTH . .	79
V BUILDING MATERIALS FOR LIVING MATTER	101
VI EVOLUTION OF COLLOIDS . . .	123
VII THE ORIGIN OF LIFE	158
VIII HOW LIFE CAME TO EARTH	171
IX THE LIVING ORGANISM AT WORK . .	197
X CYCLIC ACTIVITIES OF LIFE: WAKING AND SLEEPING: FATIGUE AND RECOVERY	243
BIBLIOGRAPHY	254
INDEX	255

THE ORIGIN AND NATURE OF LIFE

CHAPTER I

PHYSICAL AND PSYCHICAL EVOLUTION

WHETHER the human mind be dealing with the problems of some branch of natural science, or constructing systems of ethics, philosophy, or religion, it is equally essential to clothe its thoughts in language derived from those things in the material world which appeal to the human senses.

The extent and accuracy of our knowledge of external phenomena increase all the time, and it is this increase of knowledge which makes all science progressive.

True religion apart from dogma is the sublimed essence of the knowledge of the highest things in the world, and in itself is never opposed to natural science; but when there is error in men's conceptions of religion or of natural science, then there may for a time appear to be a conflict. But as time advances

D. H. HILL LIBRARY
North Carolina State College

8 ORIGIN AND NATURE OF LIFE

and thought on both sides becomes clearer, it is found that both religion and science stand out as a united whole purified by the removal of the dross and more brightly radiant in intrinsic beauty and loveliness.

Seventy years have elapsed since Macaulay made his famous pronouncement in his remarkable essay on Ranke's "History of the Popes," that neither natural theology nor revealed religion is a progressive science, and the advances in religious thought and scientific knowledge during those seventy years have alike refuted his position, and shown that religion as much as any science is progressive in its nature, and that man's religious thought broadens with the flight of time.

When new scientific facts are suddenly thrown in amongst old pre-conceived ideas of divinity, there may at first appear discords, and zealous champions of natural science, and of religious knowledge, fly to arms and indulge in acrimonious polemics ; but, as time advances and things that are crude and adventitious are thrown away on each side, it is discovered that science has added a new beauty to religion, or rather revealed a beauty that was there all the while, but concealed by misconception, or by lack of knowledge.

The presence of this progress and organic evolution in religion, ethics, and social science, cannot be doubted by any thoughtful person of middle age who will cast his mind back on the change in religious thought and teaching during his own life, and if ampler confirmation be required, it may readily be obtained by comparing a volume of sermons, or some other form of theology, written say a hundred years ago with a modern work. If a similar appeal be made in the case of natural science the like result will be obtained, and to-day we laugh at the naïve conceptions of natural philosophers of a century ago, just as much as we sometimes shudder at the religious ideas of their contemporaries who invented theological dogmas which we have now buried in a merciful oblivion.

But the eternal truths of science and religion were the same one hundred years ago as they are to-day and as they will be one hundred years hence, both realms of knowledge, as well as our inborn desires to penetrate their mysteries, are a part of the great plan of creation, and in their intrinsic laws remain the same "yesterday, to-day and forever." It is our knowledge and powers of conception that have changed and not the eternal verities.