# MAN AND THE EARTH

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649160259

Man and the Earth by Nathaniel Southgate Shaler

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

### NATHANIEL SOUTHGATE SHALER

# MAN AND THE EARTH



# MAN AND THE EARTH

# MAN AND THE EARTH

BY

NATHANIEL SOUTHGATE SHALER

PROFESSOR OF GEOLOGY IN HARVARD UNIVERSITY



69503

NEW YORK
FOX, DUFFIELD & COMPANY
1905

#### COPYRIGHT, 1905, By Nathaniel Southgate Shaler.

Published November, 1905

THE UNIVERSITY PRESS, CAMBRIDGE, U.S.A.

#### PREFACE

N this book I have endeavored to set forth certain reasons why there should be a change in the point of view from which we commonly regard the resources of the earth. As a teacher of Geology, I have seen that there is a complete lack of understanding in our communities as to the duty we owe to our successors in their use of these limited resources. In this regard our conduct is like that of children who take the good that comes to them with no thought of the hereafter. This attitude of men as regards the future of the material values of the earth notably contrasts with that they hold to the moral and political future of their kind. A large part of their thought and endeavor goes to that group of problems, but practically none at all to the immediate questions that relate to the material foundations on which all the higher development of the life of their kind has to rest. It is with some hope of directing attention to this neglected field of inquiry that I have written this book.

It will, perhaps, be noted that the statements concerning the mineral and other material resources of the earth are not supported by statistics set forth in these pages. They thus lack the apparent authority which such a presentation would have given them. It would have been a matter of no great difficulty to have carried out my original plan and to have filled many pages with such matter. The truth is, however, that although the earth's stores of value to men can be estimated in general terms there is as yet no sufficient basis for accurate quantitative reckonings. Thus while we can clearly foresee that the store of coal is certain to be so far exhausted within two or three centuries that it will have no considerable place in the arts, we cannot estimate the amount of this fuel with anything like statistical accuracy. Thus it is that the statements in this book should be taken as the judgments of an observer who has endeavored to inform himself as to the resources of the earth of value to men, who is confident that in the general terms in which these opinions are stated they have value as guides to conduct.

Several of the chapters of this book, in all about one-fourth of the whole, have been published in the "International Quarterly." I am indebted to Mr. Richardson, the editor of that journal, for permission to repeat them substantially in the form in which they there appeared.

N. S. S.

CAMBRIDGE, MASS. October, 1905.

# CONTENTS

		PAGE
I	EARTH AND MAN	. 1
II	THE FUTURE OF POWER	20
III	THE EXHAUSTION OF THE METALS	42
IV	THE UNWON LANDS	69
v		
VI	THE PROBLEM OF THE NILE	101
VII	THE MAINTENANCE OF THE SOIL	120
VIII	THE RESOURCES OF THE SEA	139
IX	THE CHANGES TO COME IN THE HUMAN	
	PERIOD	150
X	THE BEAUTY OF THE EARTH	172
XI	THE FUTURE OF NATURE UPON THE	
	EARTH	190
XII	THE LAST OF EARTH AND MAN	209
XIII	THE ATTITUDE OF MAN TO THE EARTH	
	- SUMMARY AND CONCLUSIONS	228
NDEX		235

### MAN AND THE EARTH

#### I

#### EARTH AND MAN

THE situation of man with reference to the material resources of the earth deserves more attention than has been given to it. Here and there students of the mineral deposits of certain countries, especially those of Great Britain, have computed the amounts of coal and iron within limited fields and estimated the probable time when those stores would be exhausted; but a general account of the tax that civilization makes on the fields it occupies and a forecast as to their endurance of the present and prospective demand on them is lacking. It is evident that such a fore-looking should be one of the first results of high culture. We may be sure that those who look back upon us and our deeds from the centuries to come will remark upon the manner in which we use our heritage, and theirs, as we are now doing, in the spendthrift's way, with no care for those to come. They will date the end of barbarism from the time when the generations began to feel that they rightfully had no more than a life estate in this sphere, with no right to squander the inheritance of their kind.