

**FIELD WORK IN NATURE
STUDY: A
HAND-BOOK FOR
TEACHERS AND PUPILS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649324446

Field Work in Nature Study: A Hand-book for Teachers and Pupils by Wilbur S. Jackman

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

WILBUR S. JACKMAN

**FIELD WORK IN NATURE
STUDY: A
HAND-BOOK FOR
TEACHERS AND PUPILS**

FIELD WORK

—IX—

NATURE STUDY

A HAND-BOOK FOR TEACHERS
AND PUPILS

Through the Senses to the Soul

BY

WILBUR S. JACKMAN, A. B.,

TEACHER OF NATURAL SCIENCE, COOK COUNTY NORMAL SCHOOL,
CHICAGO, ILL.

AUTHOR OF "NATURE STUDY FOR THE COMMON SCHOOLS,"
"NUMBER WORK IN NATURE STUDY," ETC.

PUBLISHED BY
THE AUTHOR

10 51



A. 19637.

COPYRIGHT, 1904

BY

WILBUR S. JACKMAN.

PREFACE.

IN using this book it is suggested that the teacher and pupil look through the questions under the topic selected for study with a view to getting the thought and purpose of the work to be undertaken. With a general idea in mind of what may be done, the topics prepared may then be taken up in that order which will best suit the peculiar conditions presented by any particular locality.

The following books will be found useful as works of reference and for general reading.

- ABBOTT, C. C., *M. D.* Days out of doors [New Jersey].
A naturalist's rambles about home [New Jersey].
Outings at odd times.
Recent rambles.
Travels in a tree top.
Upland and meadows: a Poaetquissings chronicle.
Waste land wanderings.
- APGAR. Trees of North America.
- BADENOCH, L. N. Romance of the insect world.
- BAILEY, L. H. Talks afield about plants and the science of plants.
- BALLARD, Julia P. Among the moths and butterflies.
- BAMFORD, Mary E. Up and down the brooks.
- BATTYE, A. T. Pictures in prose of nature, wild sport, and humbler life.
- BRIBBIN. Trees and tree planting.
- BUCKLEY, Arabella B. The fairy-land of science.
Life and her children.

- Through magic glasses.
 Winners in life's race, or the great backboneed family.
- BURROUGHS, J. Birds and Bees.
 Birds and Poets.
 Fresh Fields [England].
 Locusts and wild honey.
 Pepacton.
 Sharp eyes, a taste of Maine birch.
 Signs and seasons.
 Wake-robin.
- CREEVEY, Caroline A. Recreations in Botany.
- GOODALE, G. L. American wild flowers.
- GRANT, John B. Our common birds, and how to know them.
- GRAY. Manual of Botany.
- HARDINGE, E. M. With the wild flowers.
- HERRICK, Mrs. S. B. Chapters on plant life.
 The wonders of plant life.
- HUBERT, P. G., Jr. Liberty and a living.
 How to get bread and butter, sunshine and health leisure
 and books, without slaving away one's life.
- HUDSON, W. H. Birds in a village.
- HUTCHINSON, H. N. The story of the hills.
- JACKMAN. Nature Study for the Common Schools.
 Number Work in Nature Study.
- JEWETT, Sarah Orne. Country-by-ways.
- JORDAN. Manual of Vertebrates.
- KEELER, H. L. The wild flowers of early spring; a study of
 one hundred flowers growing in the suburbs of Cleveland
 and northern Ohio.
- KINGSLEY. Town Geology.
- KNIGHT, F. A. By leafy ways.
 Idyls of the field.
- LOOMIS, E. J. Wayside sketches.
- LUBBOCK, Sir J. The beauties of nature and the wonders of
 the world we live in.
- MABIE, Hamilton W. Under the trees.
- MERRIAM, Florence A. Birds through an opera-glass.
- MILL. The Realm of Nature.
- MILLER, M. My Saturday bird class.

- MILLER, Olive Thorne. A bird-lover in the west.
 Bird ways.
 In nesting time.
 Little brothers of the air.
- MILNER, G. Country pleasure.
- MITCHELL, Donald G. ["Ik Marvel," *pseud.*]. My farm of Edgewood; a country book.
 Wet days at Edgewood, with old farmers, old gardeners, and old pastorals.
- NEWHALL, C. S. The leaf-collector's handbook and herbarium.
 Shrubs of Northeastern America.
 Trees of Northeastern America.
- NUTTALL'S ornithology. 2 vols.
- PRIME, W. C. Along New England roads.
 I go a-fishing.
- PARKER. How to study Geography.
- ROBBINS, Mary Caroline. The rescue of an old place.
- ROBERT. The Earth's History.
- SAMUEL, Mark. The amateur aquarist.
- SANBORN, Kate. Adopting an abandoned farm.
- SCUDDER, S. H. Brief guide to the commoner butterflies of the Northern U. S. and Canada.
 The life of a butterfly.
- SERVISS, Garrett P. Astronomy with an opera glass.
- SHALER on Swamps. U. S. Geological Survey, Vol. 10.
 On Soils. " " " " 12.
 Aspects of the Earth.
 Our Continent.
 Nature and Man in America,
- STURGIS, R. *and others.* Homes in city and country.
- SYLVESTER, H. M. Homestead highways.
 Prose pastorals.
- THAXTER, Celia. An island garden.
 Among the Isle of Shoals.
- THOREAU, H. D. Autumn.
 Cape Cod.
 Early spring in Massachusetts.
 Excursions in field and forest.
 The Maine woods.

- Summer.
Walden, or, life in the woods.
Winter.
- TORREY, Bradford. Birds in the bush.
A Florida sketch-book.
Rambler's lesse.
The footpath way.
- TREAT. Home studies in nature.
- VAN RENSSELAER, Mrs. Schuyler. Art out-of-doors.
- WALLACE, Alfred Russell. Darwinism. Humboldt Library.
- WARD, J. H. The White Mountains.
- WARNER, C. D. My summer in a garden.
In the wilderness (the Adirondacks).
Our Italy (Southern California).
- WHITING, C. G. The Saunterer.
- WILLIAMS, Martha McC. Field Farings.

W. S. J.,

COOK COUNTY NORMAL SCHOOL,

July 26th, 1894.

CONTENTS.

	PAGE.
PREFACE AND BIBLIOGRAPHY, - - - - -	i.-iv.
INTRODUCTION, - - - - -	5- 7
HINTS AND SUGGESTIONS, - - - - -	9-15
GENERAL OUTLOOK, - - - - -	16-21
FIELD WORK IN A RIVER BASIN, - - - - -	22-27
FIELD WORK ON SOILS, - - - - -	28-30
FIELD WORK ON A SWAMP, - - - - -	31-34
FIELD WORK ON A LAKE SHORE, - - - - -	35-37
FIELD WORK ON A CLIFF, - - - - -	38-41
FIELD WORK IN BOTANY, - - - - -	42-47
FIELD WORK IN ZOOLOGY, - - - - -	48-55