

THE INDIANA WEED BOOK

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649102198

The Indiana weed book by W. S. Blatchley

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

W. S. BLATCHLEY

**THE INDIANA
WEED BOOK**

THE INDIANA WEED BOOK

By W. S. BLATCHLEY

Author of "Gleanings from Nature," "A Nature Wooing," "Boulder Reveries,"
"Woodland Idyls," "The Coleoptera of Indiana," etc.

"Up there came a flower,
The people said, a weed."
—*Tennyson.*

THE
NATURE
PUBLISHING
COMPANY

Second Edition

1920

INDIANAPOLIS:
THE NATURE PUBLISHING COMPANY

SE 612
I 6 P 6
1920

"If I knew

Only the herbs and simples of the wood,
Rue, cinquefoil, gill, vervain and agrimony,
Blue-vetch and trillium, hawkweed, sassafras,
Milkweeds and murky brakes, quaint pipes and sundew,
And rare and virtuous roots, which in these woods
Draw untold juices from the common earth,
Untold, unknown, and I could surely spell
Their fragrance, and their chemistry apply
By sweet affinities to human flesh,
Driving the foe and stablishing the friend—
O, that were much, and I could be a part
Of the round day, related to the sun
And planted world, and full executor
Of their imperfect functions.
But these young scholars, who invade our hills,
Bold as the engineer who fells the wood,
And travelling often in the cut he makes,
Love not the flower they pluck, and know it not,
And all their botany is Latin names."—*Emerson.*

12020/21

Copyright, 1912.

By W. S. BLATCHLEY.

TO THE
LIBRARY OF THE
MUSEUM OF COMPARATIVE ZOOLOGY
HARVARD UNIVERSITY

"How ineffably vast and how hopelessly infinite is the study of nature! If a mere dilettante observer like myself—a saunterer who gathers posies and chronicles butterflies by the wayside for the pure love of them—were to tell even all that he has noticed in passing of the manners and habits of a single weed—of its friends and its enemies, its bidden guests and its dreaded foes, its attractions and its defenses, its little life history and the wider life history of its race—he would fill a whole book up with what he knows about that one little neglected flower; and yet he would have found out after all but a small fraction of all that could be known about it, if all were ever knowable."—*Grant Allen.*

83271

PREFACE.

"Tough thistles choked the fields and killed the corn,
And an unthrifty crop of weeds was borne."—*Dryden*.

Long has it been said that "An ill weed grows apace," yet few are the books that tell us how to check that growth. The wild plants which dwell most closely with us, those with which we are most familiar, are many of them "weeds," yet of them and their history we know but little. Whence came they? How did they get here? What, if any, are their uses? What is their place among other plants in the great scheme of Nature? How can we best control or get rid of them? Those are the questions which we endeavor to answer in this book on Indiana weeds.

By the U. S. Department of Agriculture it has been estimated that to crop and meadow lands weeds cause an average annual loss of one dollar per acre. As at least two-thirds of the area of Indiana is comprised of such lands it follows that the annual loss in this State is \$15,509,330 from weeds alone. This great loss falls almost wholly upon the farmer, and it is for him, therefore, that this book has been especially written. In the simplest manner possible we have endeavored to describe the worst weeds of the State, show their place among other plants and give the most practicable methods for their control or eradication.

While the average farmer spends most of his years in fighting weeds, he knows too little about them. A man is not considered much of a carpenter unless he knows the different kinds of lumber and the uses to which each can best be put; nor can he become much of a printer unless he gets acquainted with the different forms of type and learns how best to set them for the most effective display. Why, then, should not the farmer strive to understand the true character of each of those plants which it is his especial duty to either cultivate or extirpate? The close study of soils, fertilizers, weeds, live stock and other factors of the farm is rapidly raising the science of husbandry to a plane where it is no longer regarded as irksome drudgery, but as one of the highest callings of a free and intellectual people. Just as the old Roman

Emperor, Diocletian, was most content while fighting the weeds in his cabbage patch, so all other gardeners and farmers are performing man's noblest duty, when they are endeavoring to make two blades of grass grow where but one has grown before. And especially is this true if that one was only a weed.

Not only for the farmers but also for the schools, where the future farmers will be educated, has the book been prepared. A farm-boy and a teacher has the writer been, and knows somewhat, therefore, the needs of both. While to the minds of most people weeds and poetry may seem to have little in common, the average boy or girl of 15 or thereabouts delights in an apt quotation, a legend or a bit of history which will illuminate the subject in hand. A little poetry and folk-lore, therefore, has been added here and there to give a zest to the work. The farmer, if he be a disciple of Gradgrind and so content only with facts, can blow this off as froth and drink in only the more substantial draught which lies below.

In this connection we cannot do better than to once again quote Grant Allen, who says: "Our thoughts about nature are often too largely interwoven with hard technicalities concerning rotate corollas and pedicellate racemes; and I for my part am not ashamed to confess that I like sometimes to see the dry light of science diversified with some will-o'-the-wisp of pure poetical imagination. After all, these things too are themselves matters for the highest science; and that kind of scientific man who cannot recognize their use and interest is himself as yet but a one-sided creature, a chemical or biological Gradgrind, still spelling away at the weak and beggarly elements of knowledge, instead of skimming the great book of nature easily through with a free glance from end to end. Surely there are more things in heaven and earth than are dreamed of in Gradgrind's philosophy!"

* * *

"Wayside songs and meadow blossoms; nothing perfect, nothing rare;
 Every poet's ordered garden yields a hundred flowers more fair;
 Master-singers know a music richer far beyond compare.

Yet the reaper in the harvest, 'mid the burden and the heat,
 Hums a half remembered ballad, finds the easy cadence sweet—
 Sees the very blue of heaven in the corn-bloom at his feet."

—*Van Dyke.*

ON WEEDS IN GENERAL.

From the day that man with a crooked stick first tickled the ground about the roots of some favorite plant which he desired to grow more rapidly, and pulled from around it other plants that it might have a better supply of air, moisture and sunshine—from that day *weeds* have existed upon the face of earth. Before that day each and every plant was on an equality, fighting its own battles in its own way, spreading far and wide by rootstocks and seed its kind, evolving year by year some property, some character which would the better enable it to succeed in the great struggle for existence. But when man for the first time began to domesticate certain plants—to help them fight the battle of life—to set off certain areas in which he wished them alone to grow—all plants which were in any way harmful to his plans he called “weeds.” From that day to this he has had to fight them, and from as far back as the time of Juno—according to old Homer—whenever he begins to get the better of them

“Old Earth perceives and from her bosom pours
Unbidden herbs and voluntary flowers.”

Many of the plants which that first gardener called weeds possessed hidden virtues, properties of excellence, which other men, far down the vista of the years, discovered. These plants they began to cultivate, to utilize, and so removed them from the category of weeds. Meanwhile some of the first of cultivated plants, when carried to other parts of the earth, have either lost those properties which rendered them useful to man or have, through a change of soil and other environment, become so successful, so aggressive, that they spread and intrude upon the areas set aside for other plants favored by man, and have become the most common of weeds. So the list of weeds is ever changing, some being added here, others subtracted there, until it is different in every country, state or nation on earth and is nowhere settled or stable.

DEFINITION OF A WEED.

As a result of the conditions stated there are many definitions of a weed, among them being:

- (a) "A plant out of place or growing where it is not wanted."
- (b) "A plant whose virtues have not yet been discovered."—*Emerson*.
- (c) "An herb which is useless or troublesome and without special beauty."
- (d) "Tobacco."
- (e) "A plant which contests with man for the possession of the soil."
- (f) "A useless plant growing wild, of sufficient size to be easily noticeable and of sufficient abundance to be injurious to the farmer."
- (g) "Any injurious, troublesome or unsightly plant that is at the same time useless or comparatively so."

The reader, be he student, teacher, poet or farmer, can choose from the above definitions or others the one which suits best his own taste, fancy, belief or experience. Suffice it to say that whether a plant is a weed or no depends wholly upon the point of view. Many a plant, which is among the worst of weeds to a farmer, is to the poet or naturalist a flower of surpassing beauty. The list of Indiana weeds which follows is based upon the standpoint of the farmer, and comprises the 227 of the 2,000 and more plants growing wild in the State* which are thought to be the most harmful to his interests. During its compilation definitions (f) and (g), above given, have been the ones considered.

Those plants which have become the most common or "worst weeds" are those which have been most successful in evolving methods or properties of defending themselves against being destroyed by plant-eating animals; in devising means for ready and rapid cross-fertilization, either by wind or insects, and in providing for themselves effective means of distributing their seeds or other ways of propagation when the seeds are difficult to ripen. Under the head of the Nettle Family, in the list which follows, are mentioned some of the ways by which plants defend themselves from browsing animals. The ox-eye daisy and related weeds of the Compositae Family have been most successful in devising methods for fertilization of a large number of flowers in a short time by insects, while the grasses and plantains are adepts in producing means for wind fertilization.

*Of these, 1,783 are listed in Stanley Coulter's "Catalogue of the Flowering Plants and Ferns and Their Allies Indigenous to Indiana," published in 1899. In various papers published since that date in the Proceedings of the Indiana Academy of Science, 177 additional species have been recorded.

DISTRIBUTION OF WEED SEEDS.

Our worst weeds are in general those which have devised the most successful ways of distributing their seeds to fields and pastures new, where the competition will not be so great as in the immediate vicinity of the parent plant. Many are the methods used and a number of agents or factors enter into this seed dissemination, chief among which are wind, water, birds, animals and man, his machinery and methods of commerce. These different methods of seed distribution should be of especial interest to the farmer, for a knowledge of them will often enable him to trace the source of some noxious migratory weed which has appeared upon his land, and will cause him to be on the lookout for it from the same or similar origin. Moreover, some of the factors of seed distribution are partly or wholly under his control, while others, such as water and wind, are wholly beyond his power to lessen.

SEEDS CARRIED BY WIND.—The wind is one of the most potent factors in the wide distribution of weed seeds. Many weeds, as those of thistle, dandelion, fireweed, prickly lettuce, etc., have each seed enclosed in a little case to the top of which is joined a tuft of downy hairs, thus enabling them to be lifted and carried several miles by the wind; in the case of the milkweeds the tuft is attached to the seed itself. Some of the grasses have long hairs upon the chaff surrounding the grain, which serves the same purpose, while some of the docks, the actinomeris and others have the seeds or achenes winged or expanded on the sides so that they are easily lifted and borne onward by a passing breeze. (Fig. 1, *a* and *f*.)

The seeds of many weeds are blown long distances over the surface of snow, ice or frozen ground. The ragweeds, velvet-leaf, docks, pigweeds, chickweed and different weeds of the grass family are examples of those whose seeds are so distributed.

Some plants after ripening their seeds are broken off near the ground and rolled over and over by the wind, the seeds dropping off at intervals along the way. These "tumble-weeds" as they are called, include our Indiana weeds known as old-witch grass, Russian thistle, two species of amaranth and the buffalo bur, besides a number of others.

SEEDS CARRIED BY WATER.—Water is an important agent in the dispersion of the seeds of many weeds, especially those which grow in flood plains or along the banks of streams. The great ragweed, smartweeds, bindweeds and others depend largely upon the annual overflows for the wide spreading of their seeds. The seeds