# SEED-TRAVELLERS: STUDIES OF THE METHODS OF DISPERSAL OF VARIOUS COMMON SEEDS

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Seed-travellers: Studies of the Methods of Dispersal of Various Common Seeds by  $\,$  Clarence Moores Weed

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## **CLARENCE MOORES WEED**

# SEED-TRAVELLERS: STUDIES OF THE METHODS OF DISPERSAL OF VARIOUS COMMON SEEDS





The Winged Travellers of the Milkweed.

Drawn by James Hall,

## SEED-TRAVELLERS

STUDIES OF THE METHODS OF DISPERSAL OF VARIOUS COMMON SEEDS

BY

CLARENCE MOORES WEED

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LELAND STANFORD JUNIOR UNIVERSITY

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### INTRODUCTION.

THERE are few subjects better adapted to awakening the faculties of observation to a sense of the significance of those things in the living world with which we come in daily contact than that of the dispersal of seeds. Away from the crowded streets of cities one can scarcely step out of doors without witnessing some phase of plant dispersal, while a little intelligent attention to the commonest objects along the roadside will reveal numberless interesting facts.

These studies may be pursued to advantage at any season of the year, but there is an especial wealth of material during the months of autumn and winter.

For studies of nature in the schools, seeds and fruits are particularly desirable. Specimens illustrating the various methods of dispersal are easily obtained by the pupils themselves. The significance of the several adaptations to dissemination is at once apparent; the connection between the plant and its surroundings is shown to advantage; and the general idea of the unity of nature may readily be brought before attentive minds.

I would recommend that this little book be used in connection with observations upon the specimens treated of; that the studies be read by the individual pupils, either with the objects in hand or for the purpose of inciting them to search for the specimens. If the material does not present itself in the order of the studies as they appear in the book, the studies may be read in the order in which the specimens are obtained. It may

then be advisable, after most of the parts have been read, to review the whole subject by having the pupils begin at the first of the book and read it through consecutively, with or without studying the objects again. They will thus be given a logical idea of the subject as a whole, and the knowledge already gained will be more firmly fixed in their minds.

To the teacher about to take up the subject of seed dispersal I would commend the spirit of these lines, written some years ago by Prof. L. H. Bailey: "The studious observer of nature is constantly impressed with the unlimited numbers of curious little contrivances and peculiar habits by means of which the commonest plants and animals are prepared to overcome the obstacles which surround them, for be it known that even plants have obstacles to surmount if they perpetuate their species. A plant must hold its own against its stronger and more aggressive neighbors, or suffer the fate of many of our native plants, which have been driven out by Old World weeds; it must possess some means of scattering its seeds beyond the limits of severe competition; it must struggle against uncongenial climate and the ruinous changes wrought by man; and it must clude or repel the attacks of herbage-loving or seed-loving animals. One who is interested in the fascinating peculiarities of common objects is often pained by the sneering estimate put upon them by less observant people. No one is prepared to study nature so long as he regards any phenomenon, however slight in itself, as trivial and unworthy his regard. He must not attempt to play the critic with nature. He must assume the attitude of a patient learner, who accepts all things as worthy his study and consideration." 1

C. M. W.

<sup>1</sup> Talks Afield about Plants.

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