

THE HESSIAN FLY.

(*Cecidomyia destructor* Say.—Diptera: Tipulidae.

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For many years this Province has happily been almost entirely free from the ravages of the Hessian Fly. During the present year (1877) however, this very destructive insect has again appeared in the wheat-fields, and is attracting much attention from farmers and others specially interested in the culture of this most important cereal. As far as we have been able to obtain information the Hessian fly has been recently observed in the counties of Grey, Simcoe, York and Ontario, and also in the County of Oxford. No doubt, if not checked, it will soon spread over a much wider area, and cause much loss and disappointment to our wheat-growers.

The subject being one of so great importance, it has been considered advisable to reproduce here our Report upon this insect, published six years ago (*Report of the Entomological Society of Ontario*, 1871, pages 392-5).

The Hessian fly, together with a number of other most destructive insects, has come to us from the other side of the Atlantic. European entomologists have repeatedly maintained that it must be a native of America, as no such insect was observed amongst their wheat-fields during a long series of years; and Mr. Curtis has even gone so far as to call it "the American wheat-midge," in contradistinction to what he terms "the British wheat-midge" (*C. tritici*). It is now, however, generally admitted that it is of European origin, and it is almost certain that it was first brought to this continent in some straw used for the purpose of packing by the Hessian troops, under Sir William Howe, during the American War of Independence. These soldiers landed on Staten Island, and on the west end of Long Island, in the year 1776, and in this neighbourhood the fly was first observed; hence it obtained its popular name of "Hessian Fly." Having multiplied in these places—as Dr. Harris relates—"the insects gradually spread over the southern part of New York and Connecticut, and continued to proceed inland at the rate of fifteen or twenty miles a year. They reached Saratoga (two hundred miles from their original station) in 1789." Proceeding in this manner, the tiny pest gradually spread over the country, and has been found in almost every locality where wheat is grown. In the old world also, its depredations have been sufficiently great to attract notice in England, France, Germany, Austria, Switzerland, Italy, Russia,—in fact in almost every country where this grain is cultivated to any extent. Our own Dominion, though frightfully devastated in subsequent years, was not invaded by the pest till about the year 1816, when it became prevalent in Lower Canada. It appears to have been first noticed in this Province in the year 1846. (For a detailed history of its progress in this country and the neighbouring States down to the year 1854, see Prof. Hind's Essay, pp. 42-46.)

So much has been said and written respecting the Hessian fly, and so many descriptions of it have appeared in agricultural and scientific publications, that we feel disinclined to attempt any new account of it or repeat once more "an oft told tale." As we have no new light to throw upon the subject, and, with the exception of some specimens received from Ancaster during the past summer, have had no opportunity for some years of investigating its habits, we shall not hesitate to make free use of the writings of others, especially those which are not likely to be accessible to the majority of our readers. In every case we shall, of course, make due acknowledgement of the source from which information is derived.

The Hessian fly, though known for its destructive qualities for some time before, was first scientifically described by Mr. Say—one of the most eminent of the early American

Entomologists—insect—Dr. Fi first of these o of the young spring and summer several change state of the we specimens, plac have their grow morphoses. In to two attacks occupies the lo continually, fro the grain ripen can rear but o Nor can the He which to nestle

The eggs September, in t on a single leaf, man, of Maryla interesting acco ber, the first so blades, I resorte ocular demonstr Selecting a favo a furrow, and l small, black flies settled on the ri observation. Sl the little ridges sting. After sl wrapped her up caught several si cavities of the b These eggs are c

When haterl Herrick:—"Th skin, crawls dow the next joint be and lives upon th thereof; but as t the stalk. After and wrinkled app more and more cl intestinal part is larva begins to t semblance to a fl the plant and cau

In this cond winter. Regardi much controversy the opinion that t ened outer integu again, and notabl Whatever may be when the insect c (Fig. 50.)