

a new and formidable grass-destroying insect, together with portions of grass destroyed by them, and also some of the soil, for the purpose of examination. If the insect is known to you, and there is any known way to exterminate it, please inform us at once. The evidence of its destructive work was first discovered in June of 1882, by Mr. H. C. King, of Hammond, St. Lawrence county. At haying time, about the middle of July, he noticed about three acres of his timothy grass to be apparently prematurely ripened. In the fall he observed that there was no aftergrowth, and that the stubble was as dead as if it had been boiled. Search was made among the dead roots without any discovery. The following spring the field was entirely barren of timothy, but some clover seeds and thistles occupied the ground where at least one and one-half tons of timothy to the acre, under favourable circumstances, would have been cut. In June of 1883, Mr. King discovered other fields to be affected in the same manner, and instituted a search which has recently resulted in the discovery of myriads of the insect, not in the dead grass, but at the edge of the live grass, where they may be scraped up by handfuls. They have destroyed about fifteen acres for Mr. King, and several acres for each of several other farmers of his vicinity. They are causing extreme alarm, and if you can give any relief from this calamity it will be gratefully appreciated. This is an important grazing locality. In addition to the timothy, June grass and wire grass are also destroyed."

On examination this insect proved to be the notorious chinch-bug, a pest hitherto extremely rare in New York State, and never before recorded as destructive within that State. Prof. Lintner at once visited the district referred to, and thus records his personal observations made during the 5th and 6th of October. He says: "The cold weather of the past few days (ice was formed upon three nights), has doubtless driven most of the bugs to their winter quarters for hibernation, in crevices, beneath boards, rails, etc., in rubbish heaps, and to many other secure retreats, where such insects are accustomed to hide. Yet, upon parting the roots of the timothy, upon the borders of the killed portion, they were found in alarming numbers—in some spots sufficient to cover the ground with their bodies over an area of a couple of inches in diameter, being apparently congregated in such places. In one spot, upon the warm sloping side of a dead furrow, they could be seen, in numbers, running like ants over the ground. Elsewhere, they were concealed among the roots, near to and about the bulbs, upon which they appeared mainly to feed. Their presence in any spot could always be detected by bringing the nose near the ground by their peculiar bed-bug odour. This method of detection proved more convenient, and infallible than looking for them.

"The invasion is more extended than was at first supposed. Nearly all of the farms in the neighbourhood of Mr. King have been attacked, either last year or this, and discoveries of attack not before suspected, are, upon examination, being made daily. A present range of about eight miles is indicated. It is believed to occur throughout most of the town of Hammond, and to extend into Alexandria.

"Without any desire to play the role of an alarmist, I feel it my duty to say that, as the result of my observations, this chinch-bug invasion of northern New York threatens to be the most serious insect attack to which our State has ever been subjected. The following are my reasons for this belief:—

"It has planted itself, maintained a footing and has shown a rapid increase under unfavouring, unpropitious and unnatural conditions, such as these:

"First.—It is regarded as a southern insect (extending further northward, as do most animal forms, in the Mississippi valley), yet it has appeared in the most northern county of the State, and upon (if the report be reliable) the St. Lawrence river.

"Second.—Its attack has been made upon timothy. This seems to be its most unusual food plant, and therefore, we infer, the least suited to it. All previous accounts concur in giving it a preference for spring wheat above all things else; next in order, oats or corn, and last the grasses. Timothy is only mentioned as occasionally attacked by it.

"Third.—In all previous accounts, great prominence has been given to its being a hot and dry weather insect, dependent upon these conditions, not only for its multiplication, but for its existence. Heavy rains have been claimed to be invariably fatal to it. It could not abound, it is stated, in a wet season. Dr. Fitch had even made recommendation

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