

"The egg is slender, cylindrical, tapering rapidly towards each end. Length, 1.2m.m."

There is apparently some slight uncertainty as to the identity of our American insect with the true *Nematus Erichsonii* of Europe. In the United States Bulletin, No. 3, issued by the Entomological Division of the Department of Agriculture in 1883, I notice that it is mentioned as "*Nematus Erichsonii*." When the insect was first discovered, it was referred to Dr. Hagen, who pronounced it to be *N. Erichsonii*, and published the note above referred to in the *Canadian Entomologist*. The habits of the two forms do not seem to agree in every particular. In Dr. Packard's excellent report, he gives Ratzeburgh's description of the fly, which the latter author called the Large Larch Saw-fly, and further states that "our saw-fly differs slightly from the German, in the eggs being laid at the base of the leaves, on the newly-grown shoots, rather than on, or just under, the epidermis of the last year's shoots, where we have repeatedly, and in vain, searched for them." Ratzeburgh describes the eggs as "laid usually in a single row on the upper end of the young shoots, two or three sometimes being placed together along the shoot." In all instances that I have examined, the eggs were laid in a double row. The European insect is extremely rare, but Ratzeburgh thought that, from a forestry point of view, it might become injurious, since the larvæ had already, in certain seasons, abounded on the larches in sufficient numbers to attract the attention of the forestry officers in Holstein. Dr. Hagen records that twice before 1840 they had been observed to be very obnoxious to the larch in Holstein by Tischbein, and in the Horz by Saxesen.

However, the habits of the American and European forms are very similar, and Dr. Packard thinks it is very probable that the insect is common to both Europe and North-Eastern America. He further adds, "at any rate, our species could not have been introduced with European larches, since its ravages have been committed in the wilder and less frequented portions of Maine, New Hampshire, and New York, as well as on the seaboard in towns long settled." Notwithstanding the above, I cannot help thinking that the appearances are strongly suggestive of the insect being an introduced pest,—its rapid progress over the continent and its occurring in such vast numbers for four years successively, as well as its comparative freedom from parasites. Moreover, the first specimens were found on European larches, and wherever I have seen this tree, planted in the infested districts, it seems to have been preferred by the insect to the native tree, and to have suffered first; and it would even appear that in the notable instance of the discovery of the *nematus*, the native tree was left alone while the introduced species suffered. In Prof. Sargent's letter, printed in Dr. Packard's report, he writes, "I have not heard of any injury to our native hackmatacs. Three or four years ago, however, I noticed that specimens of the European larch in this immediate neighbourhood were suffering from the attacks of a larva, which I gathered and submitted to Dr. Hagen.

It is important to notice, too, that although the insect had been there, it had passed on to some other locality; and from this we may hope that a similar occurrence may take place in Canada; and indeed I am informed by S. A. Fisher, Esq., that on the lawn of the Hon. J. J. C. Abbott, of St. Anne's, P.Q., a specimen European larch was, in the summer of 1883, severely attacked by some larva and almost defoliated; but that during the past season it had been well covered with foliage and was uninjured.

Should the attack of these injurious saw-flies continue unabated for but a very few years more, it will occasion a most serious loss to the Dominion. The Tamarac or Larch, known also as Hackmatac and locally as "Juniper," is one of the most valuable available woods for railway sleepers, and is also used for many other purposes, particularly in ship-building; and not only is the wood valuable intrinsically, but the tree has also a special and peculiar value, from the fact that it will grow in those extensive swampy tracts, so common in Canada, where few timber trees are able to exist.

It is to be hoped that before long some natural enemy will appear, to keep these insects in check, for it would be impossible to apply any artificial remedy with any hope of success, on account of the inaccessible nature of the bogs and swamps in which they breed. Already some parasites have been discovered; Dr. Packard has provisionally named a chalcid parasite *Pteromalus nematicidæ* which was found in some cocoons collected in Maine and at Brome in the Eastern Townships. I found the larvæ being

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