

THE BROWN TAIL MOTH SITUATION IN NOVA SCOTIA

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 itself, and ten days later emerges as an adult fly. During the winter all the brown tail moth webs are saved and in the spring are placed in large wooden cages. The caterpillars that leave the nests are fed until all the parasites have emerged from their host, after which the non-parasitised caterpillars are destroyed. In this way the parasites are saved for another year which otherwise would be destroyed were the webs burned. Parasite cages have been located at different points in the infested area, viz., Bear River, Annapolis, Moschelle, Round Hill, Bridgetown and Wolfville. There were also nests saved from twenty-one localities during the winter of 1916-17, and in the following summer the caterpillars were reared at the laboratory to determine parasitism in this insect. The following shows the average number of Apanteles that emerged from each nest:

Locality	County	No. of Apanteles per web
Weymouth	Digby	1.33
Smiths Cove		4.2
Bear River	Annapolis	6.71
Annapolis		3.0
Moschelle		1.46
Deep Brook		4.5
Grenville Ferry		1.46
Belleisle		5.25
Tupperville		2.33
Round Hill		12.25
Upper Granville		.53
Bridgetown		1.1
Clarence		2.93
Williamston		5.46
Nictaux		3.
Middleton		0.0
Harmony	Kings	.111
Somerset		0.0
Highbury		2.28
Sunnyside		0.0
Greenwich		.42

I might also mention that about the time the Apanteles were imported into Nova Scotia, that this same species was recovered from a brown tail larva at Annapolis. It probably came along with the brown tail from the N.E. England States. It was considered worth while, however, to assist this particular parasite to increase rapidly, so its breeding has since been continued.

The Calasoma sychantha, a brilliantly colored green beetle, was also liberated in Nova Scotia. This beetle has never been recovered, so it is not known whether it survives or not.

Another parasite, Compsilura concinata a tachinid fly much resembling the house fly, has also been liberated. This fly deposits a living larva beneath the skin of the young brown tail larva. Extensive work has been conducted, using very large numbers of caterpillars in order to recover the parasite, and it is of interest to know that the only Compsilura recovered in N. S. from a brown tailed moth larva from Annapolis, within two miles of where it was liberated.

3. Climatic Conditions.—For a number of years the first webs collected in the season were experimented with in this manner, viz., twenty-five nests were tied in a wire cage and one cage exposed in various places over the province where official thermometers registered. The cages were collected at the end of the severe weather and a count made of the living and dead caterpillars. The accompanying table shows results from this exposure during the winter of 1913-14.

Locality	Per-centage Living	Per-centage Dead	Lowest temperature
Bridgetown	54.5	45.5	-19
Kentville	60.6	39.4	-17

Locality	Per-centage Living	Per-centage Dead	Lowest temperature
Wolfville	70.0	30.0	-15.5
Windsor	45.0	55.0	-18.5
Halifax	75.0	25.0	-13
Truro	0	100	-24.6
Antigonish	35.0	65.0	-20
New Glasgow	43.0	57.0	-19.5
Parrsboro	4.0	96.0	-21
New Germany	0	100.0	-27
Yarmouth	49.0	51.0	-6.4

Now, in contrast, notice results from a milder winter, 1912-13.

These records show that where the mercury drops to 10 deg. below zero, the temperature cannot be considered as a controlling factor for each degree of cold below -10 deg. mortality increases, at -20 deg. 65-85 per cent. of the caterpillars are dead, and at -25 deg. all are dead.

4. Spraying—Spraying has aided control work to a marked extent. Never in a well sprayed orchard has there been a bad outbreak of brown tails. For a number of years a well sprayed section of Kings County prevented spread, but the moth, being such a strong flyer, finally crossed this area, and started colonies in unsprayed orchards. As the larva commences to feed in the spring, as soon as the buds begin to burst, it is only the early sprays that are effective. It has also been proved that the last regular spray of the season, with the usual arsenical strength, will either kill all the newly hatched larva in the fall, or else so weaken them that they are unable to form a sufficiently protective nest to withstand the winter.

In conclusion, the Province of Nova Scotia is particularly fortunate to be in such a favorable condition and to have escaped the ravages of the brown tail moth. In the New England States an immense amount of damage has been done, both to cultivated and forest areas, while in our province there has not been one dollar's worth of damage.

Such gratifying results have been brought about chiefly by the several agencies, which I have attempted to explain. The insect is under better control than it was a few years ago. However, there is plenty of evidence at hand to show that, if one or more of these agencies should be removed, the pest is likely to again assume dangerous proportions.

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WENT HIM ONE BETTER

It was in the smoking compartment of a Pullman, and an obviously self-satisfied little man had been doing most of the talking for some time:
 "I tell you," he declared emphatically, "there is nothing like the good old America stock that goes right back to the beginning. Now—I don't like to boast, but facts are facts—an ancestor of mine signed the Declaration of Independence!"
 "That so?" a young Jewish travelling man responded mildly. "Interesting of course, but—well, one of my ancestors signed and certified to a rather more important and older document."
 "Nothing on earth more important than the Declaration!" the little man bristled. "What sort of a document are you talking about?"
 "The Ten Commandments," was the gentle rejoinder.

Mr. Henpeck—Wot's yer steak like terday?
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 Mr. Henpeck—Oh, is it? Then I'll 'ave some tripe.

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The Canadian-bred "Roxton Mickey" owned by J. Stroud, College Street, Toronto, who jumped on the bench at the New Westminster Dog Show at New York recently, hunched his shoulder, set his jays and intimated "Let 'em all come." He carried off first prize in the limit class, open class, breeders' class and winners class; also two specials. This is the first occasion that a Canadian-bred English bulldog has ever been so successful.

Thirteen is always an unlucky number to have at the table, when there is only dinner for twelve.

ALREADY KEEPING COMPANY

A Dutch pastor makes it a point to welcome any strangers cordially, and one evening after the completion of the service he hurried down the aisle to station himself at the door.

A Swedish girl was one of the strangers in the congregation. She was employed as a domestic in one of the fashionable homes, and the minister, noting that she was a stranger, stretched out his hand.

He welcomed her to the church and expressed the hope that she would be a regular attendant. Finally he said that if she would be at home some evening during the week he would call.

"Thank you," she murmured bashfully, "but Ay have a fella."

A new boot-boy at a hotel took up to one of the rooms a couple of boots, one of which was a top-boot and the other an ordinary shoe.

"What do you mean," said the visitor, "by bringing me two boots of different shapes?"

"I don't know sir," came the reply, "But what bothers me most is that there is another pair down stairs just like 'em."

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