

lines have disappeared with the exception of some remains of the spiracular line from the anal clasper to last pair of legs more distinct than ever. Head small, greenish, and there are some white dots on each segment, from which are emitted short single hairs. Belly strikingly greenish white.

All the larvae had disappeared for pupation by 4th May. Fed, healthily, all through, on vaccinium.

Seven moths (all females) emerged about the middle of September. In the natural state the time of appearance here is October.

THE OYSTER SHELL SCALE.

By Tom Wilson, F.R.H.S.,

Dominion Inspector of Indian Orchards.

In view of the fact that the Oyster Shell Scale (*Lepidosaphes ulmi*) is one of the most common insects in our orchards, I wish to record for our Proceedings a list of host plants that I have observed in British Columbia infested by this insect. I am perfectly well aware that this insect has been reported on from many sections of Canada and the United States, and that several papers have appeared recording its full life history, habits and destructiveness. The United States Bulletin No. 121 of the Bureau of Entomology, in particular, forms a complete record of this insect, and a long and probably complete list of host plants is mentioned in the text. So far as British Columbia alone is concerned, we have no full record of host plants of our own; consequently to record these, from my own experience, is the main object of this paper. Possibly also I may be able to add a few more host plants to the list in Bulletin 121.

Among the different scale insects which infest our orchards and forests, none has such a large and varied "bill of fare" as the Oyster Shell Scale, and, judging from the different parts of the world in which it is found, few have such a wide geographical range.

We are apt to look on our orchards as the principal place to find the different insect pests, probably because they come closest under our observation; but in many cases our natural forests harbour many of them. Where the original home of the Oyster Shell scale was, it would be difficult or impossible now to determine. It has a world-wide distribution at present, but it is believed that it was first imported into the Eastern United States in the 18th century, from where it has covered the greater part of the North American Continent. It seems to be able to adapt itself to very different climatic conditions, as is evidenced by the fact that it thrives as well here in the neighbourhood of Vancouver as it does on Vancouver Island and in the "dry" country of the

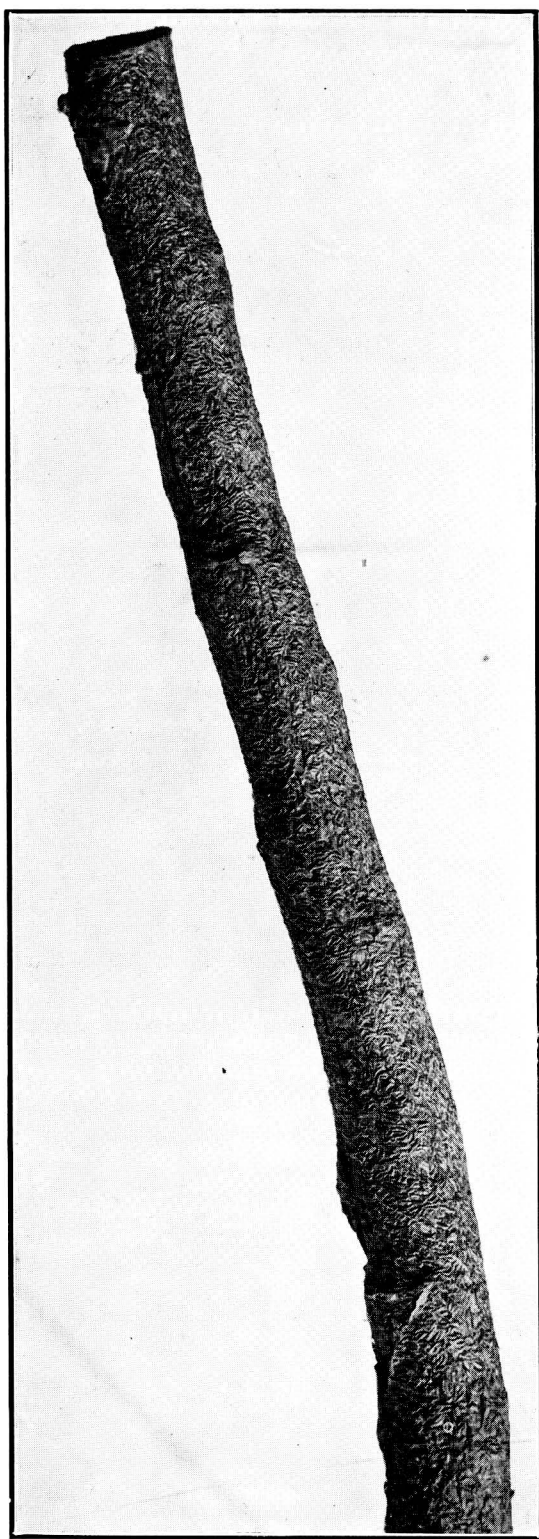
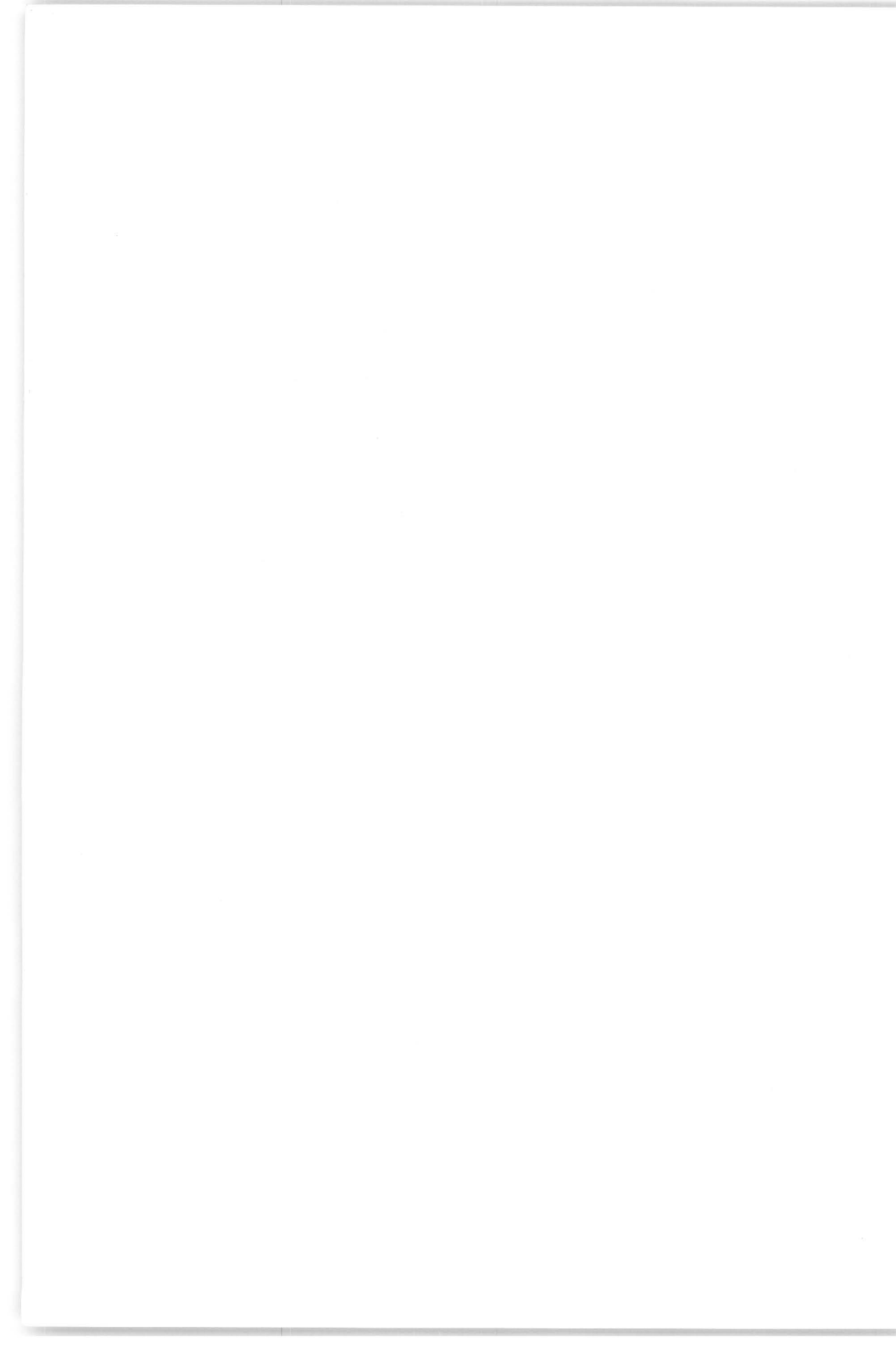


Photo by R. C. Treherne

Twig showing severe infestation by the Oyster
Shell Scale—*Lepidosaphes ulmi*.



Okanagan. I have also seen it in all its glory in the Old Country, and, judging from specimens received from Japan, it also thrives in Asia.

Over twenty years ago, when there was a threat made by the Provincial Board of Horticulture to enforce the regulations and compel the people to spray for this scale, I pointed out then that there were several other trees than those growing in our orchards upon which the scale fed and flourished. Since then I have noticed many more, belonging to very different natural orders.

I subjoin a list, beginning with the most common:

Rosaceae.

Apple

Pear

Crab apple

Mountain Ash

Roses

Spirea discolor

Prunus emarginata

English Hawthorn

Douglas Thorn

Amelanchier alnifolia

Japanese quince

Cornaceae.

Cornus nuttallii

Cornus stolonifera

Leguminosae

Broom

Laburnum

Salicaceae

Willows of many kinds

Poplar

and the following:

Vine Maple

Ash

Beech

Elm

Privet

Lilac

Box

Rhamnus purchiana

We notice from this that we have several different orders represented, and I doubt not that there are many others that have not come to my attention. I have found the insect at sea level up to an altitude of not less than 3,000 feet.

Happily for us here the scale is extremely subject to parasitism and reproduces slowly, else with our beneficent climate it would be difficult to keep in check.

Little more need be said. I should be pleased to hear from anyone who has recorded this scale on any other host plant than I have mentioned. The life history is simple and single brooded and outlined for the Society in an article in our last annual Proceedings* by Mr. Treherne.

* Bulletin No. 4, N. S., 1914, B. C. Ent. Soc.

PAPERS FOR FUTURE PUBLICATION.

The following papers, presented at the meetings, have been withdrawn for publication at some later date:

1. Insect Pests in the Okanagan.....Max Ruhman
2. Control of Incipient Infestation of Codling Moth in a New DistrictW. H. Lyne
3. New Sprays of Up-to-date Interest.....L. L. Palmer
4. The Tarnished Plant Bug.....R. C. Treherne
5. The Part Played by Insects in the Spread of Plant DiseasesJ. W. Eastham
6. Insect Pollination of Plants.....Tom Wilson
7. Conditions Relative to the Codling Moth in British ColumbiaThomas Cunningham
8. Insects of the Lower Fraser Valley, 1914.....F. H. Getchell
9. Insects of the Greenhouse.....G. E. Wilkerson
10. Ornamental and Shade Tree Insects.....R. C. Treherne
11. Life History of the Codling Moth on the Pacific Coast of B. C.W. H. Lyne
12. Forest Insect NotesJ. M. Swaine
13. Records from AtlinE. M. Anderson
14. Notes on the Geometridae of V. I.E. H. Blackmore
15. *Lithocolletis gaultheniella*R. N. Chrystal

Lady Bug gave a party,
 It was a grand affair;
 The finest Beetle dandies
 And the nattiest Gnats were there.
 The Glowworm glowed his brightest,
 And the Hornet played his horn;
 The Butterfly brought butter,
 And the Miller Moth brought corn;
 The Caterpillar sat and purred,
 The Horse Fly galloped high,
 The Ants came with their uncles
 And the Spiders came with pie;
 The June Bug in his buggy came
 Dragged by the Dragon Fly;
 The Centipede gave his last cent
 To see the pair go by.
 It **was** a splendid party,
 But when the last was done
 The Hop Toad sat outside the door
 And swallowed every one.

—ANON.