

the fall, will disturb these cells and kill the inmates by exposure. Seeding down only encourages the wireworm, but barley and rye seem distasteful to this pest, and fair crops of these can be grown even if the field be badly infested with it; and possibly the field itself be ultimately cleared of the pest.

Among pests of foliage has been the pallid aspen beetle. The loathsome larvæ of this beetle were very destructive to the early leaves of aspen poplars throughout Alberta and the Territories, and considerably marred their beauty. Remedy: Poison their food by spraying with Paris Green solution.

The striped cottonwood beetle was also very abundant on willows. The fetid larvæ emit, when disturbed, a milk like fluid from tubercles along their back, and trail a sticky fluid wherever they crawl upon the leaf. This is a very troublesome pest in the East, in districts where osiers are cultivated. The larvæ as well as the beetle cause the osier canes to branch by injuring the tips. Should osiers be cultivated in the Northwest this pest will be on hand. Remedy: Paris green or green arsenite solution sprayed on the food.

Lice on poplars and plants have been common in many parts of Alberta. Remedy: Suffocation by coal oil emulsion, or fumes of tobacco. The Western Blister Beetle was reported like "swarms of bees" on beans at Lethbridge in Southern Alberta about 25th June. Other blister beetles were abundant on vetches in Central and Northern Alberta.

Fleas. Towards the end of summer this pest became an intolerable nuisance throughout the Northwest. Hay mattresses swarmed with them. A slight odor of carbolic acid will prevent them from coming into a room so scented; but if introduced with hay or otherwise, then burning pyrethrum powder is a good remedy for driving them out.

Warbles in cattle appear to be on the increase. Cattle farmers are very well acquainted with this fly, but it is a trouble that is too apt to be treated as of not a very serious nature, and as not preventable. This, however, is a great mistake. In the first place the bot maggot, or warble, so damages the hides that grubby hides sell for one-third less than sound ones. But the beef itself is rendered so inferior that buyers of the highest class of meat, who supply hotels, &c., will not on any account buy carcasses showing traces of warble attack. Such beef has therefore to be sold at a lessened price below that obtainable for good beef, the reduction sometimes amounting to \$5 per carcass. In view of the large and increasing exports of beef (cold stored) to England, it becomes important to see that the reputation of the Northwest is sustained by keeping stock free from this pest. In dairies, too, the loss sustained through the attacks of warbles is just as serious. There is the loss in quantity of flow of milk as well as deterioration in quality, resulting from the annoyance of the animals by the flies when depositing their eggs, and later by the grubs. The shrinkage in the milk is estimated at 10 per cent. and the deterioration in quality at the same rate, making a total of 20 per cent. By the time the warbles are discovered in the spring the mischief is done. Certain localities are more particularly infested than others, and a dry season seems more encouraging to the warble fly than a wet season, and where there is danger of the warble the animals should be protected during the summer months by spraying them occasionally with strong smelling oils, such as fish oil, train oil, kerosene emulsion, &c.

To make kerosene or coal oil emulsion add to 1 gal. of kerosene hot soap suds made of $\frac{1}{2}$ gal. of water (rain water preferred) and $\frac{1}{4}$ lb. soap. Then churn all thoroughly together till it will adhere to the surface of glass without oiliness. When required for use, dilute the emulsion by adding from 9 to 15 times its measure of warm water.

After the close of the discussion consequent on the President's address, the officers of the Society for the year 1901 were elected. The officers for 1900 were re-elected in the capacities respectively held by them with the exception of A. D. Gregson, who retired from the curatorship, the same being accepted by Percy B. Gregson, the collections having been safely removed to his house.

Mr. F. H. Wolley-Dod most generously presented to the Society a large number of Lepidoptera, the bulk of which were new to the collection.

Mr. O. O. Poling, of Quincy, also presented to the Society several exceedingly rare specimens including *Neophasia Terlootii* and *Erebia Magdalena*. Some of these specimens are represented in but one or two other collections in the world.

After a vote of thanks to the Chairman, the proceedings terminated.

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