

sociation, both before and after every spray was applied. No loss of bees or poisoned brood was found in any examination, and at the close of the season Bettschen harvested 2,160 pounds of honey from the 10 colonies, and the bees had ample winter stores. In an apiary several miles distant, within flying distance of an orchard sprayed without repellents being added, the loss was very heavy, almost all the field bees being poisoned.

We then found out that Evans and Baverstock had only used oil of creosote in one tank of spray each time. In the other tank used they had substituted crude carbolic acid at the rate of two ounces to each 100 gallons of spray. This information gave us two repellents that apparently could be used with perfect safety and equally good results insofar as bees were concerned.

In 1943 the repellents were tested on a larger scale in an orchard where there was a good cover crop of alfalfa, sweet clover, alsike clover and several native honey plants. As in the 1942 tests, complete cover sprays of arsenate of lead, containing one pint oil of creosote to 100 gallons, were used. A second orchard, adjacent to this, was under test with the same number of sprays, but in this case the repellent was crude carbolic acid. A close check up of the thirty colonies of bees in the orchard failed to show any loss of bees.

The formula with oil of creosote was given to several orchardists who were also beekeepers, to be tried out under the usual

growers' conditions. In every case a burning of foliage was reported, ranging from slight to severe. This seems to have been caused by the incomplete mixing of the creosote. No loss of bees was reported in any case.

In 1944 the officials conducting the tests decided to abandon the oil of creosote as being unsafe for use by growers and to continue with the more stable crude carbolic acid as a repellent. The orchard used was the one in which the creosote was tested the previous year. Four complete sprays were put on using carbolic acid two ounces to 100 gallons. The atmosphere varied from very moist to very dry during these tests. The cover crop was a heavy one and was in full bloom during at least two of the applied sprays.

The fourth spray varied from the others in that four ounces of crude carbolic acid were used in place of the usual two, to determine if there would be any burning of foliage. No burning whatever was noted.

Another test was carried out by a grower at Peachland, who was supplied with crude carbolic acid and it was applied in sprays by his own men under grower conditions. He had four colonies of bees on the edge of the 48 acres of orchard which were sprayed and the colonies were examined after each spraying. No loss whatever was noted and the bees built up to swarming strength during the time the four cover sprays were being applied.

Several other unofficial tests were carried on by orchardists and in every case "no loss of bees" was reported.

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BRITISH COLUMBIA AND ALBERTA RECORDS IN E. C. LERCH'S "A LIST OF HOMOPTERA FROM ONTARIO." Lerch's paper (*Bull. Brooklyn Ent. Soc.*, 28 (2): 76-78. April 1, 1933) lists a number of Homoptera said to have been collected by J. F. Brimley of Wellington, Ont. Actually it includes four species received by Brimley from collectors in Western Canada: *Ceresa basalis* Walker from Malakwa, B.C. (not "Malorwa"!); *Campylenchia latipes* Say, *Bythoscopus robustus* Uhler?, and *Oncometopia lateralis* Fabr., from Medicine Hat, Alta.

The Medicine Hat specimens were collected by the late F. S. Carr. The Malakwa example was taken in 1923 by J. H. Aubrey who at that time lived there and was associated with the Forest Service. Like Brimley, H. M. Speechly of Winnipeg and the late Norman Criddle of Treesbank, Man., Aubrey was a member of the British Empire Naturalist Association. Most of the insects he took were sent to Brimley, but his collection of Coleoptera, left behind when he went to the antipodes, came into my hands in 1931.—Hugh B. Leech.