

INTRODUCTION.

The investigations here described were started in 1911, at Agassiz, British Columbia; since that time a number of papers on Warble flies have been published by the author.

As these papers are now out of print, at the suggestion of Doctor Torrance, Veterinary Director General, the subject matter has been summarized and enlarged to form the present bulletin, which includes many of the original illustrations.

The object of the experiments was to discover expedients to reduce the number of Warble flies and, consequently, the damage they occasion. In this connection, it is interesting to note that, owing to representations made by the War Office to the Board of Agriculture and Fisheries, an attempt is now being made in England to eradicate Warble flies in certain districts. The advisory committee chosen consists of Sir Stewart Stockman, Professor Carpenter, Mr. Fryer, Professor Macdougall, and Mr. Seymour-Jones.

The amount of damage caused, annually, in Canada, is very great. Figures obtained from the principal tanners show that 27.5 per cent of our hides are injured every year. In addition to the hides, how much milk is lost, how much flesh, must be left to the imagination, as there is no reliable method to compute these losses.

It is to be hoped, however, that, when the reader has scanned through these pages, he will gain an idea of the magnitude of the problem that is before us.

To conclude, mention should be made of those who have, in the past, contributed most to our knowledge of these flies. Bracy Clark's remarkable observations were published in 1796, 1826, and 1827. After him came Brauer, Hiurichsen, Koorevaar, Curtice, Schaupp, Carpenter, Hewitt, and Gläser; among whom, in America, Schaupp, and Doctor Cooper Curtice of the Bureau of Animal Industry, deserve special notice.

Finally, the lines quoted by Bracy Clark will not be out of place as they show that long ago the annoyance and damage which the flies occasion was well understood.

"I will put the brize in's tail, shall set him gadding presently."—Old Elizabethan drama.

"The herd hath more annoyance by the brize than by the tiger."—Shakespeare.

The psychic effect of non-biting flies has also been noted:—

"Un avorton de mouche en cent lieux le harcèle;

Tantôt pique l'échine, et tantôt le museau,

Tantôt entre au fond du naseau.

La rage alors se trouve à son faite montée.

Les plus à craindre sont souvent les plus petits."—La Fontaine.