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## THE OCCURRENCE OF THE WARBLE FLY HYPODERMA BOVIS DE GEER IN CANADA.

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In the early writings on the Warble Fly occuring in the United States, the species was constantly referred to as *Hypoderma boxis* of de Geer, which was supposed to be the species common to Europe and North America. Curtice, in 1891, concluded that the American species was *H. lineata* Villiers, and not *H. bovis*, and Riley in the following year (Insect Life, Vol. 4, pp. 302-317, 1892) discussed the question fully, and concluded that "the older Ox Bot-fly, *Hypoderma bovis*, hitherto supposed to be a common species of both America and Europe, is in reality either a very rare insect in this country, or possibly does not occur here at all." Aldrich (Catalogue of North America Diptera, 1905) states that *bovis* is not positively known from North America.

Subsequent workers on this continent have been accustomed to refer only to *H. lineata* in speaking of the North American species.

Brauer described *H. lineata* Villiers as *H. bonassi* from the larva only, specimens having been obtained in Colorado from the American buffalo. Besides being generally distributed through the United States, according to Riley, it also occurs commonly in Europe. Walker described it from Nova Scotia in 1853 as *Oestrus* supplens.

During the summer of 1912 Dr. Seymour Hadwen, in charge of the Branch Laboratory of the Health of Animals' Branch of the Dominion Department of Agriculture located at Agassiz, B.C., carried out a series of experiments on Warble Flies, and his important contribution to our knowledge of the biology of these insects has now been published (Bull. No. 16, Health of Animals' Branch Dept. of Agriculture, Ottawa). Dr. Hadwen made the interesting discovery that the common species of fly under observation was *H. bovis*, and all the full-grown larvæ collected at Agassiz,