

THE POISONING OF HORSES BY THE COMMON BRACKEN

(*Pteris aquilina* L.)*

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A disease known locally as Staggers has been prevalent on the Pacific slope for many years. It is characterized by uncertain gait, loss of equilibrium, general unthriftiness and unimpaired appetite. The greatest number of cases occur during the winter months, the disease being most common when the weather is severe and protracted. Treatment if instituted early is usually successful, but neglected animals generally die.

On all the farms where cases occurred, bracken (*Pteris aquilina* L.) was found in the hay. While it was thought that bracken might be the cause of the trouble, very little literature could be found on the subject. Various authorities have mentioned that the plant was suspected of being poisonous but do not support their statement by any experimental evidence. The best description of bracken poisoning is given by Lander, in his book on toxicology, i.e., "The poisoning of horses after prolonged feeding on bracken along with other forage is mentioned by the German authorities." Poisoning is thought to be due to the effects of an acid (pteritannic acid), similar to and possibly identical with filicic acid of male-fern. Bracken poisoning of the horse does not appear to have been reported in Great Britain, but quite recently we were advised by a returned army veterinarian (L. D. Swenerton) that he had seen some cases in the South of England that had been fed on ferny hay from Northumberland, at the time, however, he did not connect the bracken with the trouble, as at that time he had not seen our preliminary communication. In 1909-1910 the British Board of Agriculture investigated a somewhat obscure disorder that occurred in cattle in the early autumn (August-November), after eating bracken. This investigation was confined to cattle and the results obtained show no similarity to the disease with which we are dealing; this may be due to the fact that green bracken was used, their findings, however, were inconclusive. We have never seen cattle or horses eat green bracken unless starved to it.

We have evidence that the disease occurs in Washington and Oregon as well as in British Columbia, and in view of the fact that *Pteris aquilina* has a very wide distribution it seems probable that the fern causes trouble elsewhere. During the hard winter of 1915-1916 the mortality amongst horses in the Fraser Valley and on Vancouver Island was very heavy. As an extreme instance we cite the following:—In the little village of St. Elmo, B.C., out of twenty-four horses owned by eleven farmers, sixteen died of bracken poisoning, four recovered and the balance (four) did not take the disease. To determine definitely whether bracken was the cause of the disease known locally as Staggers or not, it was decided to conduct some experiments. Permission was obtained from the Veterinary Director General to buy the necessary animals and incriminated feed. As the disease has only been reported when horses have been confined, it was decided to simulate in so far as possible the conditions under which animals became affected. It was commonly believed by the majority of people

*NOTE.—In compiling this bulletin it has been necessary to include some matter which may not be of particular interest to the average reader. The attention of farmers is especially directed to the paragraphs dealing with the following:—Summary of experiments, symptoms, treatment and the eradication of fern.