An Attempt to Infect Mink and Fox with Erysipelothrix Rhusiopathiae*

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Hartsough[1] first isolated *E. rhusiopathiae* in ranch-raised mink. The isolation was made from a young kitten which showed a loss of appetite as the predominating symptom. In another case in which the cause of death was obscure, he recovered the same agent.

Many mink ranchers both in the United States and Canada have considerable difficulty raising mutation Aleutian mink. This particular color phase, although very beautiful, is susceptible to a variety of conditions, because they probably have a genetic constitutional weakness. We recently received four of these mink from a rancher in western Oregon. He had lost most of his Aleutian mink and the

remainder were dying. From the heart blood of one of these mink, we isolated an organism which conforms to the biochemical characteristics of *E. rhusiopathiae*. Since the heart blood and spleens of the other three mink showed no growth, we feel that the isolation of *E. rhusiopathiae* was incidental to the underlying cause.

This is the only instance in which we have recovered the agent from either mink or fox on routine bacteriological examination here at this station. According to the available literature, no isolations have been made from fox.

In order to test the pathogenicity of the erysipelas organism, Hartsough[1] inoculated a series of mink intramuscularly, subcutaneously and intraperitoneally. None of the mink showed any symptoms, while his control pigeons succumbed. Since *E. rhusopathiae* infected pork and fish is probably being fed to fur bearers in some instances, we repeated the work done by Hartsough to further check the pathogenicity of the organism.

We obtained a culture of *E. rhusiopathiae* that had been isolated in a natural outbreak in turkeys the previous week. After isolation, the organism was grown in serum broth for 20 hours at 37.5° C. It was then inoculated intramuscularly in 1.5cc amounts to four healthy mink, intraperitoneally in 1cc amounts to the same number and fed in 50cc portions to four additional mink in their regular diet.

Foxes were simultaneously exposed in the same maner. Two foxes were given 2.5cc intramuscularly, two were given 2cc intraperitoneally and two were each fed 100cc in their regular diet. At the end of 40 days, no symptoms were noted in any of the animals, while control mice were killed in less than 40 hours and control trukeys in less than four days.

From our observations and those of Hartsough[1], we feel that the occasional occurrence of *E. rhusiopathiae* in pork and fish scrap probably will not cause disease in healthy mink and fox.

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* From the Fur Animal Disease Research Laboratory, U. S. Bureau of Animal Industry in collaboration with the Division of Veterinary Science, Agricultural Experiment Station, Washington State College.

[1] Hartsough, G. R. 1945. Isolation of *Erysipelothrix Rhusiopathiae* from farm-raised mink. *J. Am. Vet. Med. Assn.* 107:242-243.

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