

the Agent-General ought to be authorized, if he finds it necessary, to send out some person who might be willing to undertake the task of introducing disease amongst rabbits that would not affect sheep. I should be obliged if you would telegraph the opinion of the Government on the subject.

The Hon. the Colonial Secretary, Wellington.

I have, &c.,

J. D. LANCE.

Enclosure 2 in No. 1.

Dr. HECTOR to the Hon. the COLONIAL TREASURER.

Colonial Museum of New Zealand, Wellington,

1st September, 1886.

(Memorandum.)

THE suggestion of Mr. Stroeveer to introduce the disease called red-measle in the pig, with the view to its destroying rabbits, would, as he himself admits, require very careful investigation before its adoption. I think there must be some mistake as to the nature of the disease alluded to. The pig is affected with two kinds of measles, one of which is a hydatid fluke, which is the larvæ condition of the common tapeworm in man, and the other of the tapeworm of the dog. Both of these produce the measles in the pig, but I do not think they would be communicable to the rabbit.

Most probably by the red-measle is meant a very formidable disease known as the "swine-plague," which is due to the presence of a minute organism known as *bacilli suis*. This disease caused a loss in 1877 in the United States of two millions. A committee was appointed to investigate the disease, and from their report it appears that it can be communicated to several other animals, among which is the rabbit, and also the sheep. This was effected by artificial inoculation; but it does not appear that there is any evidence of its ever having spread naturally to either of these animals in the United States.

I think it would be well to ask the Agent-General to confer with some of the officers of the Canadian Government now in London, with the view of ascertaining what is known as to the nature of a disease that periodically destroys the rabbits in the Canadian backwoods. In 1857-58 the Saskatchewan swarmed with rabbits, and the Indians depended there on rabbits largely for their food in the winter time; but during the winter of 1858-59 the rabbits almost entirely disappeared, and I found the Thickwood Indians starving to death in consequence. I was nearly starved myself, with my party, travelling on the snow between Jasper House and Fort Edmonton, a distance of 230 miles. We had relied on finding rabbits plentiful for the whole distance, but only got one, and were several days without food. I was told by the hunters and officers of the Hudson Bay Company that about every seven to ten years the rabbits were attacked by a murrain that destroyed them. There was nothing unusual in the severity of the season to account for their destruction. My impression at the time was that the disease was a fluke or hydatid that attacked the liver, but soon spread to the muscles and other tissues of the rabbit. I have seen several instances of such a disease among rabbits in the Wairarapa District; but it does not seem to spread, most probably owing to the absence of proper carnivorous animals in which the hydatid exists in the tapeworm stage. The animals that prey upon the rabbits in the country I refer to are the lynx, the case-wolf, the kit-fox, and the common fox; so that if it is due to a fluke it is probable that it is from one of these animals that the disease is derived.

The Hon. Sir J. Vogel, K.C.M.G.

JAMES HECTOR.

No. 2.

The AGENT-GENERAL to the Hon. the COLONIAL SECRETARY.

SIR,—

20th October, 1886.

I have to acknowledge the receipt of your letter of the 3rd September, No. 2996, reminding me of the Premier's letter of the 28th March last year on the subject of the destruction of rabbits, and covering a letter from Mr. Lance and a minute by Dr. Hector, dated 1st September.

At the time I wrote to the Premier, in July last year, I intended going over to Paris to see M. Pasteur, because I was quite sure he would require, before expressing any opinion, explanations as to the rabbit-pest which could only be given *viva voce*. I was not, however, able to get over to Paris last year, and when the work of the Exhibition once began I could not leave it; but I made inquiries here, with the result of always coming back to the same point—namely, that to introduce so formidable a disease as red-measles was a very dangerous thing to do, and might end in immense losses not only among the pigs but among the sheep of the colony.

I now find this to be confirmed by what Dr. Hector says, and I am very glad you have laid down that the introduction of any disease to destroy rabbits must only be attempted if it can be done without injury to other animal life. As soon as the High Commissioner returns from Canada I will see him and obtain all the information I can, as directed by you; and will also consult with scientific men, and endeavour to get the best advice for the Government on the subject.

I have, &c.,

The Hon. the Colonial Secretary, Wellington.

F. D. BELL.

No. 3.

The Hon. the COLONIAL SECRETARY to the AGENT-GENERAL.

SIR,—

Colonial Secretary's Office, Wellington, 31st December, 1886.

I have the honour to acknowledge with thanks the receipt of your memorandum of the 20th October ultimo (No. 1304) containing information in regard to the introduction of a disease to destroy rabbits in New Zealand, and hope soon to hear further upon the subject.

I have, &c.,

The Agent-General for New Zealand, London.

P. A. BUCKLEY.