

planted. Or the Government should take the initiative in the matter. They are acquiring large blocks of land which are not fit for grazing, but would do for tree-planting. These portions could be conserved for afforestation purposes without much loss to the Government.

7. I suppose that as builders you recognize that your supplies in this district are very limited?—Up to within fifty miles from Napier on the inland road from twenty to twenty-five years' supply is all there is in sight with the present demand. If the demand increases it would be cut out under that time.

HENRY MARTIN SMITH sworn and examined. (No. 41.)

1. *The Chairman.*] You are the Crown Lands Ranger, Hawke's Bay?—Yes, and an authorized surveyor. I have been acquainted with this district constantly since 1889.

2. Is there much timber land at the Gisborne end?—A considerable area, but I have not been there for ten years. There is another Ranger there; I meet him at Mohaka. There has been a vast quantity of timber cut in the Motu district, and also destroyed by fire.

3. Do you know the Waikaremoana district?—Yes.

4. What class of bush is there?—Plenty of rimu and birch, but not very much totara.

5. Is the bush there of a kind that is liable to fire?—I do not think so, if ordinary care is taken. I laid off a road to the accommodation-house twelve years ago, and the bush was accidentally fired on one occasion by the fuse used for blasting.

6. Are there any deer running through the forests there?—Yes; moose and red deer. I have not been there for some years.

7. When you were there were the deer living in the bush or in the open?—In the bush; but there were not many. It is within the last ten years that they have increased.

8. *Dr. Cockayne.*] Are the moose increasing?—I cannot say.

9. Do they live in the bush too?—Yes; it is a scrubby sort of bush, and they are occasionally found on the outskirts; they would eat the undergrowth.

10. If they increased rapidly and kept on eating out the undergrowth do you not think the bush would be rendered more liable to fire?—I do not think so. I have had experience lately in respect to plantations which have been fenced in and the stock kept out, with the result that one or two have fired; whereas if the sheep had been allowed in in the spring they would have eaten down the grass and prevented the fire getting a hold. I do not say that cattle should be allowed in the plantations, but sheep do more good than harm.

11. If the underscrub is eaten out the grass will come on, but if there is any growth the grass will not come on: is not that so?—That is so; but in the case of an accidental fire, if the stock have been prevented having access to the plantation the same thing I speak of would occur—the grass would come on and the fire would have something to take hold of.

12. Supposing there were no grass in the forest would the danger from fire be increased?—Probably it would be increased if the underscrub were gone.

13. The under-planting and the scrub is the part which assists the forest to hold water and keep it in the soil. Supposing the scrub is removed by deer, would not there be a greater chance of the bush losing its water-holding power than if the scrub were there?—I do not think so. In the case of a forest reserve here on the ranges, some twenty years ago a huge fire swept over hundreds of acres, and had it not been for the underscrub the fire would not have gone as far as it did. Having once got a hold the whole area was destroyed, whereas had there been cattle in the bush to eat down the underscrub I doubt if the fire would have gone so far.

14. What about the question of the holding-capacity of the soil as regards water being lessened by the removal of the scrub?—It probably would be lessened.

15. *Mr. Murdoch.*] Supposing in the case of birch forests the old trees were dying out, and the deer had free play to roam where they liked and eat the trees and undergrowth, would the forest be able to regenerate itself again?—Under those circumstances regeneration might be prevented; but the great trouble in Hawke's Bay has been through the settlers firing their land and so damaging the forests adjoining.

16. *Mr. Adams.*] Do you know what shrubs the deer eat?—I do not.

17. *Mr. Sadd.*] They will eat any shrubs the cattle will eat.

18. *The Chairman.*] Do you know any scenic reserve in this district, Mr. Smith, as to which the settlers have complained that they are unsuitable for the purpose and are becoming breeding-grounds for weeds and rabbits?—I do not know of any complaints from settlers in that respect.

19. *Dr. Cockayne.*] Does any shooting take place in the scenic reserves?—Not that I am aware of; but possibly in the case of the reserve near Waipukurau, which should be in charge of a caretaker, shooting does go on.

20. *The Chairman.*] Have you reported on the estimated quantities of timber in the bush in this district?—Yes, and the position of the mills.

21. What method do you adopt in estimating the timber?—I have taken an acre or two of what I considered was a fair average area, have noted the number of trees in that area, and made my report on that basis.

22. Would you take the measurement of these trees to work out the quantities?—I estimate the height.

23. What formula do you use for calculating the contents?—One-quarter the girth squared, multiplied by the length. I use the Hopper's measure.

24. You know the return for 1909 as to the forest areas of New Zealand, and the number of feet of milling-timber: do you consider those figures anywhere correct?—No; they are very approximate indeed.