

13. *Mr. Lethbridge.*] What is your opinion of the Waipoua Forest?—It would be a good thing to preserve it, but can we? Mr. Mueller, late Commissioner here, stated that wherever civilization approached the kauri it was doomed. In every case, in spite of Government protection, it has gone, as at Puhipuhi.

14. *Dr. Cockayne.*] Do you know that the gum-digger has been operating in the vicinity of Waipoua for the last thirty years?—I know that as the result of advancing civilization lots of fires have occurred. There is a great risk of fire in the case of that forest.

15. *The Chairman.*] Have you considered the value of taraire as a milling-timber?—I am glad you mentioned it. It grows very rapidly. Eighteen years ago I planted a taraire for ornamental purposes, and it now measures 38 in. in girth. The taraire will grow anywhere, and it is a very useful tree.

16. *Mr. Lethbridge.*] Do you know that all over the north the frost has killed a lot of taraire?—No.

17. *Mr. Murdoch.*] In your experience do you find any difference in the quality of timber in a kauri-tree which has been tapped for gum?—I do not know from my own experience, but other sawmillers have told me that it deteriorates a tree to bleed it, but they do not mind that if they are going to cut it down soon. If it is to remain as an asset they will not allow it to be tapped.

DAVID ALEXANDER HAY sworn and examined. (No. 53.)

1. *The Chairman.*] Your occupation?—I am a nurseryman.

2. Have you grown exotic trees in connection with your business?—Yes.

3. Have you planted any of them out under forest conditions?—Not very many. I have only supplied them.

4. Do you consider the poplar a good fire-resister if planted in belts?—It would be a good fire-resister when planted close together like a row I saw in Blenheim. I recommend as a fire-resister in this northern part the *Phytolacca dioica*, a native of Central America. It is almost impossible to burn it.

5. *Dr. Cockayne.*] But will it stand frost?—I am afraid not.

6. *The Chairman.*] Is it a valuable tree for commercial purposes as regards timber?—I think not, because it grows very rapidly, and the wood is soft. It grows to about 50 ft. high.

7. Have you ever taken any measurements of the growth of the *Pinus insignis*?—No. It is considered a fast grower on forest land. I think it would grow on the poor gum land, and could be grown by scattering the seed broadcast after burning off the manuka if you disced it in to save it from the birds.

8. *Mr. Murdoch.*] Could you name any trees that would make good milling-timber in the shortest possible rotation?—I believe in the eucalypti, which would be good timber-trees for New Zealand if carefully selected. *Gunnii* is one of the best, and *Cryptomeria japonica* would be valuable for the northern part; it has made with me 9 ft. of growth in two years.

9. If planted under forest conditions would *Pinus insignis* be a useful timber to grow?—I think so, but the great danger is fire. With the gums you will not have so much trouble in that respect, for if the fire goes through them it does not kill the trees. All varieties of Japanese trees succeed very well in the northern part here. Japanese larch is being planted.

10. *Mr. Adams.*] Did you hear Mr. Cumming speak of an oak in the Government House grounds here?—Yes, but I do not think it could have been the English oak.

11. *Mr. Murdoch.*] Have you seen any large trees of *Cryptomeria japonica*?—One about 50 ft. high, but with no bulk of timber in it. If close planted they would form good stems.

AUGUST CHARLES KOCH sworn and examined. (No. 54.)

1. *The Chairman.*] You are the District Engineer of the Railways Department?—Yes.

2. We would like to get an opinion from you as to the experience of the Railway Department in regard to the powellizing process for railway-sleepers?—I have had very little experience respecting the matter. We had a few hundred sleepers on the line here that were powellized, and they were not satisfactory—white-pine and rimu. After being twenty months in the track they were examined, and out of 200 white-pine sleepers 7 per cent. were found to be bad, and out of 100 rimu 3 per cent. were found to be decayed. After being two years and eight months in the track, fifty white-pine sleepers were examined and 62 per cent. were found to be bad, and 40 per cent. were found to be bad in the case of a further lot of 192 white-pine sleepers. 149 rimu sleepers, after being two years eight months in the track, were examined, and 22 per cent. were found to be bad. The proprietors of the process stated that there was something defective in the treatment.

3. Is your Department still having sleepers treated by the powellizing works?—I could not say.

4. What timber is being used now in your work?—Mostly imported ironbark for bridge-work. We use jarrah sleepers.

5. Has *Robinia* been tried for sleepers in New Zealand?—Not that I am aware of.

6. Is the Department using ferro-concrete for bridges?—They are using steel for railway-bridges. We use ferro-concrete in some cases.

7. How does the cost of steel compare with wood for bridge-work?—Steel costs more, but it has a longer life, and in the end should prove cheaper.