is a danger that must be clearly looked to. The importance of making an immediate monetary use of grazing and game-carrying propensities pales into insignificance beside the issue involved in the protection of these works.

Exotic Forests.

Deer are a distinct menace in these. Seemingly the tender bark of some of the young conifers provides an appreciated article of diet. It is becoming increasingly difficult at Whakarewarewa to do planting. In a young compartment of *Pinus insignis*, four years old, hundreds of trees have had the bark eaten or rubbed off them, and are either dead or dying. In one place of approximately an eighth of an acre I counted twenty trees that were completely ringbarked. Close by is a compartment of some 40 acres of sweet chestnuts: these have been browsed on and broken down so that it would be difficult to find more than three dozen trees that are not maimed. A very necessary experiment of underplanting indigenous forest with conifers was started a few years ago, but every one of the young pines (*strobus*) has had its leader bitten or broken off, and the experiment is spoiled. Incidentally the actual cost (£200) has been lost, but the greatest loss is that the experiment has been put back some years. It will have to be repeated elsewhere.

Farmers in the same district have had their young shelter-belts destroyed in the same manner, and shelter-belts are very necessary on the farm.

I am quite certain that the regeneration or replanting of the State's exotic plantations can never be accomplished if the presence of deer is allowed. The older compartments supply the necessary harbour from which the animals will carry out their depredations. European foresters state that the presence of deer is inimical to forest development, and the same thing must apply here.

The National Economic Position.

From the foregoing it will be seen that the damage is great, far exceeding the advantages gained; but it is necessary that the position should be presented, if possible, in comparative figures.

We have, on the one hand, an estimated credit to deer of £7,000. Against this must be balanced (1) displacement of stock, (2) damage to farms (crops, pastures, fences, &c.), (3) damage in the forests. The first two are in many cases dependent on one another and impossible to separate. Loss or partial loss of a crop of turnips, for instance, means a lessened carrying-capacity on the farm. I will therefore consider these together as displacements.

It has been estimated to me that a deer requires as much food as three sheep, or three-quarters that required by a cattle-beast. This estimate is in my opinion correct were the land in question wholly suited to grazing with sheep or cattle, or forest only suited to cattle. I will therefore assume that one cattle-beast is equal to four sheep, and work totally on the basis of sheep.

Taking all the land affected into consideration—viz., (*a*) that totally unsuited to grazing, (*b*) that partially so (mountain country grazed only in summer), (*c*) that wholly suited, and (*d*) that suited to grazing and cropping—it is evident that as the land totally unsuited to grazing carries a big proportion of the herds of deer, the displacement of three sheep for one deer is a high estimate; but to place it at half—say, one deer to one and a half sheep—is a fair average. I have estimated the deer herds of the Dominion at some 300,000 head, so that the number of sheep displaced is approximately 450,000 head. A large proportion of these would be high-country sheep, worth on an average 5s. per annum; another proportion would be those of lower-country ewes producing store lambs worth about 10s. per annum; thirdly, ewes on land suitable to the production of fat lambs. It is on this class of land that damage to the farms is most evident, and I will therefore assess these ewes at £1 per annum. Lastly, there are the cattle displaced in the forest, each equal at present prices to four high-country sheep, or £1 per head per annum. Considering all these, I will make the basis that each sheep displaced is a loss of 8s.—a total of £180,000 per annum.

From the forest aspect the damage in forests harbouring numbers of deer is impossible to assess in terms of cash. I have stated that the presence of anything but strictly controlled grazing is inimical to the perpetuation of these forests for posterity, so that, unless deer are regulated in them to a degree commensurate with forest regeneration, they will ultimately be lost. The value of the damage being done where deer are uncontrolled is therefore the value of those forests.

Control.

In this Dominion the control of deer is vested in the various acclimatization societies in whose district they happen to be. Some of these societies, alive to the necessity of keeping up the standard of their herd, have culled regularly and rigidly, with the result that the herds are more or less under control and have never increased sufficiently to become a menace. Other societies, again, either from lack of funds or knowledge of the damage of increasing herds, have followed a policy of drift, their herds now being completely out of control and spread over land where it is not economic that they should be. To bring these herds back to a standard commensurate with other interests I would suggest the following:—

(1.) On settlement or contiguous to settlement land the protection should be wholly removed, and I have every reason to believe this will provide the means of control in these areas. The carcases and hides of deer killed should be allowed to be marketed: this is only some little compensation for damage done. It will probably be stated that this procedure will be open to abuse, but there can be no abuse in eliminating an obvious pest.