

on the farm and demonstrated more clearly than ever the necessity of active measures to insure their protection."—(T. S. Palmer, Biological Survey, U.S. Department of Agriculture.)

ANIMALS AND OUR FORESTS

By HON. SECRETARY, *New Zealand Native Bird Protection Society.*

Animals in our forests means slow but certain death to our forests. Such is the assertion; and now it behoves us to analyse this statement.

Our forests are maintained largely, succoured and kept moist by decaying leaves, moss and numerous small plant life forming their floor.

The function of this floor is to act in a sponge-like manner and hold moisture over and about the roots of the forest trees, which trees are in New Zealand surface feeding.

Besides this all this growing and decaying humus matter nourishes and keeps the soil warm, thus encouraging growth.

Animals of course destroy the floor totally or in a lesser degree according to the numbers present, leaving roots bare in many places, besides destroying the young trees which are intended to eventually take the place of the older and more matured trees.

A forest consists of trees in various stages from the seedling to the matured tree. Now it is very apparent that, if the seedling and young trees are destroyed, the sequence, as it were, in the growth of the forest is broken and there will come a time when the older trees will reach maturity and die, and with them the forest will die, as there will be no young trees to replace the losses.

There is even a greater evil arising from the presence of animals than this in that these trespassers tramp on the exposed roots, rub their horns on the stems, eat and tear bark off, forming suitable entry places for various fungoid and other diseases which in many instances have already killed the larger timber trees.

This constant worrying and harrying of our forests by animals has the effect of letting in cold winds, thus driving away the remaining moisture and heat, forming tracks for other less energetic animals, vermin, etc., with the result that the main matured timber trees, robbed of their natural root protection and attacked by diseases, are some of the first to die and can be seen in the form of giant skeletons in those forests where animals are or have been numerous. To him who has eyes to see the effects of the presence of animals are apparent from the con-