

ART. LX.—*The Effect of Deer on the New Zealand Bush:
A Plea for the Protection of our Forest Reserves.*

By the Rev. P. WALSH.

[*Read before the Auckland Institute, 22nd August, 1892.*]

WITH the exception of that of the domestic animals, most of the attempts at acclimatisation that have been made in this country have been unfortunate. The small birds are a severe tax on the farmer: the rabbits threaten to break up the estates of the large landholders, who are said to have celebrated their introduction with a champagne lunch: while the stoats and weasels, from which so much was expected, have not only failed to accomplish the object desired, but are already, in the destruction of native birds, and in their depredations in the fowl-yard, proving themselves an intolerable nuisance.

Still, though the mistake is now generally admitted, the attempt in these cases was somewhat justified by the hope, delusive though it soon proved to be, of some tangible benefit that would more than compensate for any attendant evil. This justification, however, can hardly be allowed in the case of deer, unless their introduction be accompanied by certain restrictions that have not hitherto been observed. For, although there may be few forms of enjoyment to equal that which would be found in stalking the grand game amongst our forest-clad mountains, still those in a position to enjoy the sport would necessarily form but a fraction of our population, while even the keenest sportsman would hardly be content to purchase his own gratification by the destruction of that forest which is the glory of his country and the birth-right of the community at large.

To those who are unacquainted with the New Zealand bush it may seem strange to associate the idea of destruction with a few head of these innocent-looking creatures. They are perhaps familiar with the idea of an Old Country deer-park, where the animals wander harmlessly among the sylvan glades with no other effect than that of giving life and beauty to the landscape; and they would be surprised to learn that the presence of the deer would prove more injurious to a rata or a kauri than to an elm or an oak. And, indeed, if they made the comparison at all, their conclusion would probably be in favour of the giant growth and the massive density of our own forest. The two conditions, however, are entirely different, and the comparison is not so easily disposed of. The European forest or deer-park, it must be recollected, has

grown up *subject to the presence of ruminants of various kinds*—that is to say, the several species of trees and shrubs composing it have overcome (perhaps with artificial assistance) any struggle they may have had when young and weak, and the whole is now able to take care of itself. Again, the understuff in a great part consists of seedlings from the older trees, of which, though many may have been cropped or broken, a sufficient number have survived to replace the older growth. And, besides this, the floor of the forest is generally covered with a quantity of grasses, fern, and brambles, which spring up every year, and which amply supply the wants of the animals.

But in the New Zealand bush the case is quite opposite to all this. The forest has grown up through the course of ages undisturbed by any four-footed enemy whatever. In its virgin state there is no grass, properly speaking, at all, while the undergrowth of ferns, shrubs, and seedling plants, once destroyed, can never be restored. And, moreover, the constituent portions are so dependent on each other for nourishment and protection that, once the balance has been disturbed, the entire growth rapidly suffers.

It may seem incredible that the towering kauri or the giant rata, whose twisted limbs, loaded with a fairy garden of epiphytes and climbing-plants, have weathered a thousand storms, should be in any way affected by the removal of a few insignificant plants from about their base. But so it is. They, and all, or nearly all, of the larger trees in our bush, are dependent for their very life upon the growth which is so thoughtlessly allowed to be destroyed. As may be easily seen after a bush-burn, or where a tree has been overturned by the wind, the principal roots scarcely penetrate the ground. Running like a network of tangled snakes along the surface, they are protected by a sort of humus composed of decaying vegetable matter, which is kept in a moist condition by the multitude of ferns, mosses, and small plants of every kind which occupy every inch of space wherever the forest is undisturbed. Once this growth has been destroyed, which very soon happens when a browsing animal is admitted, a change begins to pass over the scene. The larger trees, deprived of the shelter at their feet, gradually grow thin and open at the top. The cathedral gloom and the damp solitude in which flourished the palm-like nikau and the stately fern-tree are penetrated by the burning sun, and invaded by fierce and parching winds. All the magic profusion of grace and beauty begins to shrivel and die; and as further desiccation takes place the unprotected roots can no longer support the strain they have to bear, and every here and there some hoary patriarch falls crashing amid an acre of ruin. And thus the game goes on: each step in

the chain of destruction preparing the way for the next at an accelerated rate of progression until the ruin is complete, when sooner or later the desolated region is swept by the fire from some neighbouring clearing, and at last a few charred stumps and bleaching skeletons are all that is left to mark the irretrievable loss of a paradise of beauty.

That this destruction is constantly going on may be seen in all the older settlements, where it may be observed in the rapidly-shrinking area of the standing forest and in the prevailing grey and brown tones of the tree-tops, which, with the dry and lifeless branches, impart an air of gloomy monotony to the portions which still remain. In some districts whole families of trees are fast disappearing. Of the tawa, a tree of very wide distribution and one whose value is just beginning to be recognised, it is now in many places a rare thing to find a perfect specimen.* The thin bark on its slender superficial roots bleeds to death on the slightest injury, and the tree rapidly perishes. The mahoe and the ngaio, once found in abundance on the Auckland isthmus, are now almost a thing of the past; and the whau, a handsome broad-leaved shrub which flourished in rich volcanic situations, is, in most settled districts, practically extinct.† Other trees make a longer struggle for life; but, sooner or later, with few exceptions and under more than usually favourable circumstances, they all succumb to their change of condition.

All this lamentable ruin has been brought about in a very few years mainly by the cattle of the settler, many of which have gone wild and roam in constantly-increasing numbers among the forest-clad ranges; and, as has already been ascertained, wherever the deer have found a home their ravages upon the vegetation are even more rapid and fatal than those of the cattle. Nor is this surprising when we recollect that the instinct of these animals causes them to seek the protection afforded by the seclusion of the bush, and the fact that they are less dependent than the bovine species upon the grasses and other products of the open country, while actual observation of their haunts shows that not only are the twigs and foliage cropped to a most injurious extent, but that even trees of considerable size are frequently denuded of their bark.

It must, of course, be admitted that there are many species of trees which even a deer will not touch, and that the larger specimens are beyond the reach of their attack. But, although this is the case, still every one at all acquainted with the subject knows how difficult it is, even under the most favour-

* See Kirk's "Forest Flora of New Zealand," article "Tawa."

† *L.c.*, article "Whau."

able circumstances, to save a tree which has formed part of the standing bush, once the surrounding shelter is destroyed; and, though here and there an individual of a few of the more robust species—as, *e.g.*, the puriri and the karaka, or the totara and the rimu—may with great care be preserved to form a graceful object in the landscape, still, with the removal of the beautiful undergrowth, the whole character of the bush is gone; and, instead of the “forest primæval,” there remains but a poor imitation of a second-class English park.

It is not to be supposed that our bush can for ever be wrapped up in cotton-wool, so to speak. However we may lament, by far the greatest portion of it is destined to fall under the axe of the timber-man and the settler, though even the settler would find it greatly to his advantage in point of utility as well as of beauty were he less ruthlessly destructive than he generally is. Still, an attempt might be made to do something to preserve at least a few limited areas of the forest in its virgin state. The Mount Elmont reserve, in the Province of Taranaki, is a case in point. A generous policy has set apart the whole of the wooded slopes of the mountain within a radius of six miles from the summit as a State reserve, and it is hoped that the boundary may be extended to include the adjacent ranges. Similar reservations might easily be made in many of the mountainous districts of both Islands—as, *e.g.*, portions of the Coromandel Peninsula, the Great and Little Barriers, Te Aroha, Waitakerei, the Nelson sounds, the Southern Alps, and many other places where the land, though unfit for economic settlement, is, from a scenic point of view, unsurpassed in any part of the world. But it is not sufficient merely to mark off so many blocks of land on the survey charts. They must be protected, and that without delay, by something more substantial than an announcement in the Government *Gazette*.

The system of protection that obviously suggests itself would be at once simple and effective, and, considering the interests at stake, comparatively inexpensive. A broad track along the boundary-line, cleared from all dead timber, and flanked by a substantial fence of barbed wire, would serve all the purposes required, especially if a ranger were appointed, with full powers to shoot down all trespassing animals, and to prosecute any person found lighting fires or otherwise injuring the vegetation. It is to be hoped that this will be done, or it will be found when it is too late for remedy that the brightest flower has been plucked, and the glory has departed from the Garden of the South.

POSTSCRIPT.—It will be observed that I have dealt with the question from the æsthetic rather than from the economic

point of view. I have done so as my remarks are intended to apply chiefly to the portion of the forest which may be reserved for State parks, in which, by a little timely precaution, some of the natural beauties of the country may be preserved, to contribute to the health and pleasure of future generations of our people as well as of the increasing number of visitors from other lands, my attention having been specially drawn to the subject by the announcement that deer have been recently enlarged on the Taranaki reserve.

As regards the timber-bushes and the forest of the North Island generally, the case, I fear, is hopeless. What with the continued extension of farm-clearings, and the fires which originate among the *débris* along the road- and telegraph-lines and in the old kauri-workings, the greatest portion of the bush is going to rapid destruction. Every summer the country is enveloped in smoke and flame, and the fires rage through the standing bush, long since denuded of its natural protection.* Every season witnesses the blighting of many a lovely spot, and the waste of countless quantities of valuable material;† and, though here and there a settler of unusual artistic spirit may manage to save a little patch from the destruction around him, any general attempt would be at once laborious and futile.

ART. LXI.—*Unwritten Literature.*

By R. COUPLAND HARDING.

[*Read before the Wellington Philosophical Society, 26th October, 1892.*]

Is the expression "unwritten literature" a paradox? Only, I submit, when the literal structure of the word "literature" is allowed to veil its true meaning. The dictionary definitions, even, exclude the greater portion of what is written and printed from the category of literature. Just as music is independent of any system of notation, and existed long before such was devised, so is literature proper a thing apart from the altogether arbitrary and conventional means by

* In 1890, the fires which had started in the neighbourhood of Normanby travelled along the old clearings as far as New Plymouth, a distance of forty miles, destroying grass, fencing, &c., besides killing quantities of standing bush.

† In 1888, the Puhipuhi Forest, between the Bay of Islands and Whangarei—the most extensive kauri-bush existing—was on fire for several weeks, when about *one-third* of the area was traversed by the flames. It is estimated that the trees killed on that occasion contained at least three hundred million feet of timber.