

lower flats all over the island, and must be a beautiful sight when in bloom.

The slopes of the main ridge are a continuous succession of small, deep gullies, the spurs clothed with both varieties of manuka, and dotted with small rewarewa about 12ft high.

Each gully, on the very bottom—there are no streams on the island—is a jungle of Whau (native cork tree) which grows here like a weed, while on the sides are to be found makomako or wine-berry, growing much larger than on the mainland, many trees being well over 12ft in diameter, mangeao, kohekohe, mapou, pukapuka, mahoe, and a few tree ferns, the undergrowth being supplejack, tutu, *Rhabdodhannus Solandri*, or waituta, with its pretty orange-scarlet flowers, and a few ferns. The pigs, which are unfortunately on the island, keep down much of the undergrowth.

On the tops of the high ridges are to be seen the red and white berries of the *Mingimingi* *Cyathodes acerosa*, the orange-red fruits of the coprosma, which are quite a sight so well do they grow; the pretty white-flowered *Gaultheria oppositifolia* and blue berries of the *Dianella*.

From the trig station on top of the ridge above Opo Bay a view of the centre of the island shows it to be a great basin, the old crater. On the eastern side are the lakes; the near one, about 6 acres in extent, appears to be dark blood-red, and the other, of about 20 acres, a deep blue-black. A visit to the lakes shows the water to be quite clear, but full of some apparently vegetable matter; the lakes have no visible outlet.

The whole basin, except for a small swamp by the lakes, is covered with pohutukawas and manuka. The flat between the lakes now overgrown with manuka was the cultivation ground of the Maoris in the old days; the soil reminds one of the blue-grey mud thrown out by mud volcanoes at Waitapu, and is said to have grown wonderful crops.

Few signs remain of the Maori camps, but some *Pinus Pinaster* are spreading at a great rate, and if left will possibly in time dominate the island.

Wild duck and shags find a quiet home on the lakes; and in the trees the bell-birds are in thousands; to sit under a tree within a few feet of twenty or thirty of these birds, called *kokorohimako* by the Bay of Plenty Maoris, each trying to make more sound than the other, is an experience few have in these days.

There are a few small springs on the island, most of them near the tops of the ridges, and towards evening the bell-birds collect there and give a concert no pen description can set out. Pigeons, tuis, kakas, kingfishers, and a few other small birds are there, but what a sanctuary the lakes would make for black and brown teal, almost extinct now on the mainland!

The Maoris have tried felling, burning, and sowing grass, but nothing remains now except an odd plant here and there. One old cultivation ground is thick with the native *Hibiscus*. There is no water supply on the island for stock. The Maori in charge is deeply interested in protecting the birds; but, when he is not there visitors shoot anything and everything.

The Maoris say there was practically no bush on the island when they occupied it. The story of the many fights, and of the growth of vegetation since they left, is still to be written.

VERMIN AND OTHER QUESTIONS.

(by Hon. Secretary N.Z. Native Bird Protection Society.)

One of the most probable causes of many of our wild bird life troubles is that the weasel in most localities destroyed the woodhen, the principal enemy of rats, which then increased abnormally and preyed upon our birds. This theory is strengthened when one sees how our birds will prosper on islands where the introduced enemies are practically non-existent. It is astonishing how few people make accurate observations, never thinking to look deeper. Thus in the earlier days some acclimatisation societies declared war on the weka as an enemy to the pheasant because it will destroy unprotected eggs. But it is now evident the small damage this bird did was overwhelmingly counteracted by its fondness for rats, which ate immeasurably more eggs than the weka, but now in most districts where the weka is exterminated the pheasants and game have almost entirely disappeared. Then, again, we may take the weasel in relation to the rabbit question. The weasel in this instance appears to use the rabbit merely as a standby when birds are unprocurable, and the result is that an inordinate number of weasels are enabled to winter with little or no appreciable effect on