

## WEASELS.

THE need for much extended field work by trained biologists is demonstrated by many of the observations of that noted naturalist, Mr. H. Guthrie Smith, appearing in "Tutira." Weasels, for instance, appear to be frequently northward bound. They become numerous in some localities at times and then disappear *in toto*. Pukeko, kiwi and weka have been known also, as they did at Tutira, to disappear from or flow into localities. Mr. H. Guthrie Smith writes:—

The earliest weasel was seen on Tutira in 1902. Between that date and 1904 they had overrun the country between Tutira and the southern edge of the Poverty Bay Flat. Everywhere I heard of them. On every road and new-cut bridle-track these two seasons I met or overtook weasels hurrying northwards, travelling as if life and death were in the matter. Three or four times also I came on weasels dead on the tracks. These weasels, alive or dead, were or had been travelling singly. The only party I heard of was reported by Mr. J. B. Kells, then managing Tangoio. In firing a small dried-up marsh, he dislodged a large number; according to his statement, they "poured out" of the herbage. For a short period weasels overran like fire the east coast between Tutira and Poverty Bay, and then like fire died out. I traced them by personal observation to the very edge of the Poverty Bay Flats, then, like the Great Twin Brethren, "away they passed and no man saw them more." Nowadays on Tutira I do not hear from shepherds or fencers of the weasel once in six years. I have not seen one for twenty years. There is something ridiculous in the fact that the weasel should have arrived on the station before the rabbit, and that later, when rabbits had become numerous, weasels should have practically passed out of the district—that the cure, in fact, should have preceded the disease.

I have myself known seven or eight healthy young lambs killed in a night within a short distance of one another, each with a small puncture in the throat.

Returning in March, 1919, after five years absence owing to the war, I found that pukeko (*Porphyrio melanonotus*) and weka (*Ocydromus greyi*) were practically gone from Tutira; the former, which used to feed in hundreds

about the swamp, had been reduced to three pairs on one spot and three pairs on another; the numbers of the weka had declined in an equal ratio. There had been no poisoning with grain and no shooting, for during these anxious years my brother was never away from the place. The damage, I found, was generally attributed to weasels; that they had been seen here and there was cited in corroboration of this belief. It may be so, but there are facts that do not dovetail into this theory. I say nothing of not having personally seen either weasels or signs of weasels during twelve months since my return, but why, if they have destroyed weka and pukeko, have the numbers of the small pied tit (*Petroica toitoi*) hugely, astonishingly increased during these five years? Why have Californian quail certainly also increased? Why do starlings, blackbirds, thrushes, minahs still, as formerly, swarm on the station? Possibly light may be thrown on the problem by remembering that twice during my residence great irruptions of weka have passed through Tutira. Is it possible that for a third time weka may have, as formerly, followed a moose trek and not returned? Is it possible that for some reason unknown, pukeko have also migrated in a body? Were their runs at last overstocked?

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"Together we looked at the hill-side; picturing it as it was then; seeing it as it is now, and the contrast was heart-rending. The marvellous colour of trees was gone—forever. The evening pean of the Bell-birds was absent. Proud trees, their tops hidden in fleeting wreaths of mist peculiar to bush-clad ranges, no longer raised their green crowns. Only was present a chaos of twisted, broken, rotting trunks, fire-blackened and pitiful. Gorse and biddi-biddi, that never could have survived if the trees had been standing, waxed abundant on all sides. Tutu, too, with an appalling rapidity of growth, had romped over the lifeless trees and jagged stumps in some places. Here and there the unchecked fury of the winter rains had caused wash-outs, large enough to have formed a grave for dozens of the trees. In a few short months man had destroyed that which it had taken nature thousands of years to achieve.

"'And it is all so useless, so wasteful,' said Lonesome Pine."