

NOTES ON NOTORNIS, 1951-1952.

The following report has been prepared by the Wildlife Division of the Internal Affairs Department for the general information of research workers in ornithology and covers the status of *Notornis hochstetteri* from 1 October, 1951, to 8 April, 1952.

: Data has been obtained from reports made by officers engaged on guard and conservation work in the habitat of the takahe and also includes information from reports supplied by the Director of the Canterbury Museum, Dr. Roger Duff, Dr. W. R. B. Oliver and Mr. Baughan Wisely. These observers were authorised to enter the area on research work.

Eight inspections of the habitat were made comprising the following personnel:—

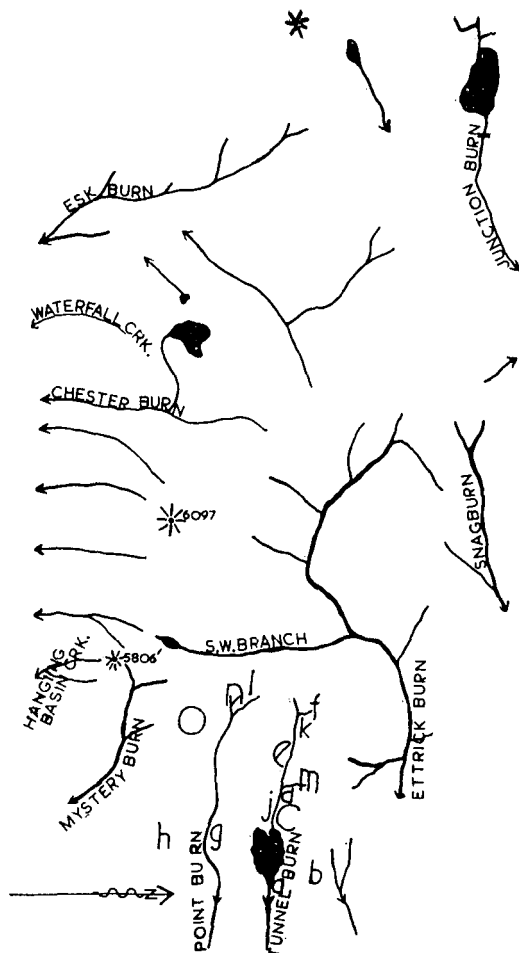
- (1) 1/10-11/10.—Messrs. Woodrow and Morgan. Takahe—Point Burn Valleys.
- (2) 1/11-11/11.—Messrs. Woodrow and Morgan. Mystery Burn—Takahe—Point Burn Valleys.
- (3) 19/11-30/11.—Messrs. Woodrow and Morgan. Waterfall Creek—Esk Burn Valleys.
- (4) 7/12-20/12.—Messrs. Woodrow and Wisely. Waterfall Creek—Esk Burn—Junction Burn Valleys.
- (5) 7/12-20/12.—Messrs. Bell, Duff and Morgan. Takahe, Point Burn, Mystery Burn, adjacent valleys and Ettrick Burn valleys.
- (6) 27/12-25/1.—Mr. Woodrow. Same valleys as (5).
- (7) 16/2-20/2.—Messrs. Woodrow, Morgan and Dr. Oliver. Takahe and Point Burn valleys.
- (8) 18/3-8/4.—Messrs. Woodrow and Morgan. Takahe, Point Burn and Mystery Burn Valleys.

In November some new country was explored in an endeavour to plot the range of the bird. Two headwater basins of the Esk Burn were examined by Departmental officers and the head of the Chester Burn was also investigated. In December the search was extended to more branches of the Esk Burn and to the head of one branch of the Junction Burn. A hanging valley adjoining the Mystery Burn was partly explored in December-January and the valley next to the hanging valley was looked at from a distance but not actually entered; the sides were steep and broken and the country at the head of the valley appeared suitable for takahe. In January a long traverse of the Ettrick Burn was made at a higher altitude than the traverse carried out in 1950; and a further penetration westward was made from the South-West Branch to a saddle at the head of the Snag Burn. The rough sketch map appended to this report gives an idea of the areas covered by the various parties.

CLIMATE OF HABITAT.

Climate of the takahe habitat during the late winter has been discussed by E. G. Turbott (1951), *Notornis* 4 (5). Snow fell to a depth of two feet at the entrance to the Takahe Valley on 1 October, 1951, and the water of the lake at the head of the valley was frozen over. This was at the commencement of the breeding season. The ice broke up about 11 October, when another fall of snow took place. Again during the nesting season snow fell to a depth of 5 inches on 2 November, and a further light fall took place on 7 December. In the Mystery Burn there was snow and rain on 1 January and on 6 January heavy snow fell all day. Two feet of snow lay on the pass between the Mystery Burn and the Ettrick Burn on 9 January and on the 17th of the same month there was further snow and rain in the area. A further fall of snow fell on 24 and 25 March. On 19 February the whole Point Burn Valley Flat, which is adjacent to the Takahe Valley, was swept by a flood.

If the above climatic conditions are to be accepted as the usual over this period of the year the weather might constitute a hazard during the breeding season of the bird.



SKETCH MAP OF NOTORNIS AREA.

BEHAVIOUR.

Mr. F. Woodrow, a Departmental officer, traversed the Takahe and Point Burn valley area in October, 1951, and reported having sighted a number of pairs of birds in places described by workers as occupied by A, J, C, D, E and G pairs.* The location of these and other pairs is disclosed on the appended sketch map. The "A" pair had a nest with one egg in when again sighted on 14 December and the hen was still sitting on 31 December, but when a further examination was made of the nest later in January there was no sign of egg shells. A nest, with a bird sitting, was found in mixed scrub and tussock on the side of a sink hole above the northern cliffs on 18 December. It was presumed to belong to pair "B," as it was within the range of that pair. One bird of pair "C" was seen in January and it was accompanied by a chick. A chick belonging to pair "D" was heard on 18 December, but it was not seen and on 23 January a bird of "E" pair was still sitting upon an addled egg which was removed.

* Location given on map Notornis 4 (5) : 117.

In October, Mr. Woodrow saw the cock bird of "G" pair trying to tread the hen. The cock fanned and depressed the tail in the same manner of a cock blackbird (*Turdus merula*) courting a hen blackbird. The tail, when fanned, was not held erect like that of the turkey (*Meleagris gallopavo*). This same pair was again seen on 9 December and they were still calling on the 18th. They were again sighted on 1 January and on 19 February but they were not accompanied by any chick, but it is to be noted that it was over their nesting area that the flood mentioned above swept in early February.

Fresh signs were found on a sunny face of the head basin of Takahe Valley in mixed scrub and tussock which could have resulted from either the "F" or "K" pairs, but there was no recent sign in the locality where the "K" pair was seen in March, 1951. Of the "H" pair no trace was found, but on 1 November the "J" pair was found to have two eggs and as on 8 December, when one bird was seen, egg shells lay about, it is likely that both eggs had hatched although when again sighted in January only one chick was associated with the pair.

Two nests were discovered in the Point Burn head basins, one of which could have belonged to "L" pair and the other which has been attributed to the pair designated "N." A further nest was found in the first basin on 16 December. Although built in the scrub and made of tussock grass the nearest tussock was situated six feet away. The pair associated with the nest was still nearby and from the evidence of uprooted tussock roots and general signs about the nest, the existence of a chick was suggested. Signs were also seen in the basin to the north where the "L" pair was seen in March 1951 and later on 17 December. Again on 3 January an adult bird with one chick was seen in the basin and later, on 31 March, a nest was found with a chick nearby some seven days old and there was evidence around to show that a parent had been obtaining insects for the chick. Much recent sign was found on 19 December in the hanging valley on the northern side of the Takahe Valley in the form of two living or practice nests. These evidently belonged to the "M" pair.

On 6 November a bird, presumably belonging to the pair now called "O," was seen in the corrie leading to the saddle between the Point Burn and the Mystery Burn. The pair of birds was seen on 10 December and the nest, on which one bird was sitting, was in a clump of mixed tussock and sub-alpine scrub. On 13 December a bird was still sitting, also on 16 December but the nest was empty and a broken addled egg was lying outside of the nest yet on 4 January a chick was reported in this locality. ...

In the Mystery Burn and Hanging Basin Creek to the south, a bird was at the camp site between 1 and 11 November and signs of a nest were noted. Three birds were also recorded at the head of the basin. In early December old signs were found along the ridge tops between the two valleys and along the upper part of the eastern branch of the creek where an old nest was also found. During this same period three practice or living nests were found in the Mystery Burn head basin and one bird was seen at the top of the scrub line while in January a takahe with a chick was reported between the two branches of Hanging Basin Creek.

In the south-west branch of the Ettrick Burn, just below the small lake, sign was seen on 13 December and on 11 January three birds were seen in this basin and one was heard calling below. Again on 12 January two birds were seen close to the camp. A pair with a chick were reported at about 4,000ft. altitude in the second west fork on 13 January, and three days later another pair and chick were seen in the third north fork at about the same altitude, while in the third west fork, leading to the Snag Burn, signs were noted shortly afterwards.

In the Waterfall Creek—Esk Burn—Junction Burn area, three birds were heard in different places in November in the basin at the head of Waterfall Creek and in the open valley, some one and a half miles long at the head of the east branch of the Esk Burn, one bird was seen and two more heard. During the period 19–30 November six single birds were seen. In the head basin of Waterfall Creek and in Hebe and *Dracophyllum* scrub

a pair of birds about eight feet apart each having one chick was found on 8 December. In the head of the east branch of the Esk Burn a bird and a nest were also seen and sign was observed in the next basin to the north. In a valley, presumed to be a branch of the Junction Burn, no sign was found and no suitable food was present, in the area traversed. However, in April, 1951, two deer stalkers reported fresh droppings and an old nest in this general area. Two more high basins of tributaries of the Esk Burn were viewed through binoculars and the country appeared to be suitable habitat for the birds.

The pairs seen during this period are, of course, not the total of those located from discovery of the birds to the present time

RELATIONSHIPS WITH OTHER ANIMALS.

Stoats.

Signs of the one stoat (*Mustela erminea*) were found in the snow in October at the Point Burn—Takahe Valley Saddle. Although traps were set up in these two valleys no stoats were caught nor were any further signs found. Five stoats were, however, caught about the landing in February and April. No signs were found in the Waterfall Creek—Esk Burn area.

Opossums.

Seven opossums (*Trichosurus vulpecula*) were caught near the landing and at access points to the Takahe Valley and two were caught in snares near the Point Burn camp.

Falcons.

Whether these birds (*Falco novaeseelandiae*) are a threat to the survival of the takahe is not known, but on 1 April a black teal (*Aythya novaeseelandiae*) was killed by a falcon at the lake in the Takahe Valley.

Deer.

As was indicated by Williams, *Notornis* 4 : 207, 1952, red deer (*Cervus elaphus*) which range throughout the area, might constitute a danger to the welfare of the takahe as they modify, by their browsing and movement, the habitat of this species. Observations indicate that deer have not been long in the Esk Burn. Fivefinger trees (*Nothopanax* sp.) are not damaged to the extent prevailing in Waterfall Creek. Dr. Oliver reports that while to the casual observer the forest was intact in Takahe Valley, plants such as Anisotome, Hebe and others were only found on cliffs and this suggests that they had been eaten out elsewhere. Lace-bark and fivefinger were practically exterminated because there was no regeneration from seedlings.

Large wallows were found on the Mystery Burn—Point Burn Saddle by a departmental officer, and these, through destruction of the vegetative cover, may progressively endanger the adjoining land. A kiwi nest set in a burrow in the Takahe Valley was destroyed by deer trampling; a large area of sub-alpine scrub and tussock above the bush line on the south-west side of the Etrick Burn showed definite signs of being modified; destruction of snow grass was evident in many places. The departmental observer felt that areas of mixed scrub and tussock on sunny places may be of importance to takahe in the winter as this scrub is not crushed down by the snow.

Seventy-two animals were destroyed by shooting and snaring, of which number fifty-eight were destroyed in the Takahe and adjoining valleys. The bulk of these were taken in the rutting season.

Wekas.

A single weka was seen in the Takahe Valley in October and was later caught, and another bird was seen in the Mystery Burn in November, while some birds were also reported beyond the south-west branch of the Etrick Burn in January. They were also reported from the Esk Burn in November and in the following month two pair, each with a single chick, were reported. It was noted on one occasion that an intruding weka was quickly put to flight by the takahe. Field observations indicated that over several days the two species would commence calling almost simultaneously but if the takahe was close at hand the weka calls ceased and did not

resume until the takahe had moved on. Whenever a weka called, the takahe, if visible, was seen trying to locate the weka.

Kiwis.

These birds were heard in Waterfall Creek and in the Esk Burn, and in November kiwi were reported as nesting in the Takahe Valley—Mystery Burn area. Four nests were definitely located and they were usually in a hole in the ground near water. In January, two hatchings were reported and one chick was seen in the nest. Another kiwi was also seen that same month near the upper camp in the Point Burn.

Other Birds.

In the Takahe Valley—Mystery Burn area the following birds were reported in December: Keas, riflemen, pied tits, kakas, grey warblers, fantails, waxeyes, blackbirds, chaffinches hedge sparrows and rock wrens. In the same month there were seen in the Waterfall Creek—Esk Burn area: pair of brown duck and five young, eight wekas (two pairs each with a single young), grey ducks, keas, kakas, tomtits, wrens, bellbirds, pigeons, moreporks and the common introduced birds, such as blackbirds and chaffinches. One bat (sp.) was also seen and on the Junction Burn, two pairs of blue ducks. In January, four young paradise ducks, three young blue ducks, five young black teal and a brood of grey ducks were on the Takahe Valley lake.

REFERENCES.

- Turbott, E. G.—“Notornis” 4 (5), 107-113, “Winter Observations on Notornis in 1949.”
- Williams, G. R.—“Notornis,” 4 (8), 202-208, “Notornis in March, 1951—A Report of the Sixth Expedition.”
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MATING OF LESSER REDPOLL.—P. J. Conder, quoting Lack, “Ibis,” 90 : 4, states that cardueline birds mate in the flock, but there is reason to believe that mating in the flock is often not practised by redpolls (*Carduelis cabaret*) resident in the Wellington area. Some birds in winter are only loosely attached to flocks and may never join one for mating. Individual birds call loudly in summer breeding habitats in August when they should, it seems, be with a flock, cf. “Notornis,” 4 : 64. In flocks in October sex ratios are not equal; hens predominate. Significantly single birds retire in mid-spring across Karori, a suburb of Wellington city to breeding habitats from winter haunts in a nearby reservoir reserve. Lone hens were seen on 1 September 1951, scattered throughout the usual breeding places, perching on cassinia bushes and one on a ngaio tree (*Myoporum laetum*). In mid-October, 1951, ten birds were seen together on the banks of a stream. Two were cocks with faint pink breasts, several looked to be in immature plumage but were probably young hens, and the remainder were old hens. A cock redpoll was watched crouching low, winding through the short grass toward a nearby hen. This cock once took up the slim, craned stance before the hen, of the domestic Belgian canary. It appeared to be trying to mate with the hen. At the same time lone cock redpolls were flying out of nearby scrub-filled gullies, suitable for nesting in, over the flock, calling loudly. This flock shortly afterwards broke up. The hen redpolls moved off independently in the direction of these particular cocks. Several fast chases then took place. On these grounds, it is difficult to agree with the statement that cardueline birds pair up in the flock.—H. L. Secker, Wellington.