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## THE BIRDS OF THE CLEDDAU RIVER AREA NEAR MILFORD SOUND, FIORDLAND

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Early in 1958 and 1959 two departmental expeditions examined some of the valleys in this area in a search for the Kakapo (Strigops habroptilus). In the earlier, most of the search was made in the valleys of the Tutoko and the western branch of the Cleddau: in the latter, activities were concentrated in the Tutoko once more and the valleys of the Donne and Gulliver. Dates and personnel were as follows:

Tutoko & Cleddau (mainly western branch): 28 February-11 March, 1958, M. M. Small, R. W. Cavanagh, F. L. Newcombe, K. H. Miers, G.R.W.

Tutoko: 21-28 February, 1959, K. S. Sutherland, A. G. Hall, G.R.W.

Donne & Gulliver: 21-27 February, 1959, N. B. Ewing, M. M. Small.

The observations that follow are those of all the members of these expeditions, and though those concerning the Kakapo are currently the most important, the value of the notes on the other species should increase with time for the Cleddau and its tributaries lie in an area that has so far been modified but little by man or by the browsing mammals It lies within the boundaries of the Fiordland he has introduced. National Park and the only direct changes of any magnitude so far made to the landscape have been the construction of a road from the Homer Tunnel to Milford Sound and the clearing of some small areas for buildings. Few deer have yet penetrated into the valleys because of the formidable natural barriers of ice, precipice and deep water that separate them from other parts of Fiordland, and opossums liberated at Milford Sound last century are not abundant. Stoats and rats also occur but not in large numbers though there were occasional rat plagues last century.

Rainfall is 200 inches a year or more and the topography is equally notorious — the last ice age has carved the ancient Paleozoic rocks into extremely steep and rugged contours, and mountains of between 6000 and 8000 feet are common, the highest in the vicinity. Mt. Tutoko, being 9042 feet. The rivers run in old glacial valleys thousands of feet deep with precipitous sides rising above old avalanche debris. A fairly uniform forest of predominantly silver beech (Nothofagus menziesii) covers the valley floors and extends to about 2500-3000 feet on the thin soils of the lower rock walls. At low altitudes the forest floor is covered with a deep carpet of moss and, in more open places, fern which is often waist-high. Scree slopes support a thick growth of small trees and shrubs such as Nothopanax spp., kamahi (Weinmannia racemosa), broadleaf (Griselinia littoralis), tutu (Coriaria arborescens), kotukutuku (Fuschia excorticata), mountain wineberry (Aristotelia fruticosa), Coprosma spp., Olearia spp., and Hebe spp. In more open areas, particularly at some height, there are various prostrate or semi-

prostrate shrubs such as Gaultheria spp., Suttonia spp., Carmichaelia spp., tussock grasses, heaths, mountain flax (Phormium colensoi) and mountain tutu (Coriaria plumosa). On various parts of the valley floors — particularly near the head of the Tutoko — there are extensive stands of mountain lacebark (Hoheria glabrata) above tall and thick expanses of fern, mainly shield fern (Polystichum vestitum). Open areas along river banks are covered with a mat of herbs with occasional clumps of toe-toe (Arundo conspicua), Danthonia tussocks (including D. cunninghamii which soon falls prey to moderate deer grazing) and brooms (Carmichaelia spp.).

The weather during the expeditions was a fair sample of what Fiordland has to offer in early autumn \_ fine, calm days interspersed with those in which up to a few inches of rain fell. The 1959 expeditions had the lion's share of better conditions.

## NOTES ON THE SPECIES

South Island (Common) Kiwi: Birds caught on two occasions belonged to this species. Others, unidentified, were heard almost every night close to our camps at altitudes varying from about 500 to 2500 feet above sea-level. Feathers were frequently found under bluffs and rocks and bill marks were common in soft ground. Kiwis were obviously not scarce.

Paradise Duck: None seen although a pair was heard calling in the Tutoko and a few moulted feathers found. The species was scarce

throughout but suitable habitat is scarce, too.

Blue Duck: A pair was seen in the Tutoko River and one in a pool in the Leader Creek at an altitude of about 2000 feet. As much of the usual habitat could not be examined, these few observations cannot be taken as any indication of true abundance.

Falcon: One heard in the lower Tutoko on 27th February, 1959.

Western Weka: None seen but a few feathers were found in the Tutoko and western Cleddau. One was heard in the latter valley and another in the Gulliver. The species appeared to be scarce during our visits.

Black-backed Gull: In 1958 there was a small flock of adults and young at the Tutoko-Cleddau junction. In 1959 two were seen flying above the headwaters of the Tutoko.

Kereru: Fairly common in forest throughout  $\_$  from the valley floors up to at least 2000 feet.

Kakapo: There have been a number of reports of this species being seen or heard in the Cleddau system over the last 25 years, the most recent being of 'booming' being heard in the Tutoko in early 1952 (Williams, 1956). This last account was one of the main factors deciding the mounting of the present expeditions. Advice of earlier naturalists familiar with Kakapo was accepted and permission was obtained from the National Parks Authority to take trained and muzzled dogs into the area to help in the search. In 1958 a dachshund and a pointer were used and in 1959 a labrador and a pointer-labrador cross. The dachshund had to be retired because of the roughness of the going, but it is fair to say that, without the pointer, the Kakapo would not have been found on the earlier expedition. Because in both years the expeditions took place outside of the main "booming" period (which is between late November and mid-February) the success of the search was

going to depend mainly upon the dogs' and our ability to find signs of the birds' presence in the frequently-described tracks, dust-bowls and feedings signs and, perhaps, feathers, droppings and unfamiliar calls other than "booming." We now know we were fortunate: on the third day of the first expedition, after a search that had been fruitless, the pointer indicated a Kakapo basking in the sun under a large rock. It was captured, photographed in colour (the first colour photographs taken of the species), measured and then released. It struggled savagely while held but was docile enough on release to allow itself to be stroked. The bird was healthy but one eye appeared white and blind. After a short time the Kakapo bounced down a steep rock face and disappeared from sight among the beech trees. An unsual observation was that the plumage smelt strongly and pleasantly of some plant, and so have all feathers found since. This could be a rough criterion of freshness of such material.

There were none of the "classical" signs of Kakapo in the vicinity — only a scrap of white down, two nipped-off pieces of five-finger (Nothopanax colensoi); and some thumb-sized, purplish droppings of loose texture. These proved to be the same as those collected during the bird's capture and were later found to consist almost wholly of pulp and seeds of the mountain tutu. Similar droppings were later found in other places and were often associated with feathers. Weathering reduces them to a mass of small seeds loosely held together, and when they have lost their "blackberry jam" texture it becomes difficult to decide whether they have come from Kakapo, Kea or even Blackbird.

The place where the bird was found was under Mt. Syme on a north-west-facing slope at about 2000 feet. Occasional large avalanche boulders are scattered among the silver beech trees and shrubs of Oleania "infolia, Hebe spp., Carmichaelia sp., etc. Mountain tutu was abundant and heavily in fruit, as was the five-finger and various species of prostrate Coprosmas, Leucopogon fraseri, Pentachondra pumila and Cyathodes accessos.

Only a few hours were spent in this basin in 1958 and little more sign of Kakapo seen. In 1959, three days were spent here with a labrador dog, and although Kakapo feathers and droppings were found scattered over a wide area in sites varying from warm and dry to cold and wet (if anything, more common in the latter, under old avalanche debris) and an unfamiliar parrot-like screech was heard twice in a place where feathers were later found, no bird was seen or indicated to us by the dog. Because of the roughness of the terrain and lack of a powerful light, no search was made at night.

Either feathers or droppings (those of the more usual coiled shape and made of fibrous material) were found here and there in the higher parts of the western Cleddau, the Donne and the Gulliver and in places some distance off the Homer-Milford road, but nowhere were they common. In the Gulliver, small balls of chewed tussock were found still hanging on the plant. These were fresh and associated with feathers.

To summarise: Kakapo occur throughout the area examined but probably only in very small numbers. Most evidence of their presence was found at altitudes of about 2000ft, in or about old avalanche debris now covered with vegetation or under sheltering rock bluffs. No clear tracks or dust bowls were discovered and only two calls heard that could

have been from this species. These indications of preferred habitat may be biased for our searches were made mainly in those places where there was better chance for preservation of sign. On the thickly moss-covered and wet floors of the valley bottoms, searching is more difficult and conditions less favourable for preservation. The tussock-clad slopes above the subalpine scrub were hardly examined at all because of their relative inaccessibility, steepness and small extent. As far as the continued occurrence of Kakapo in the Cleddau system is concerned, it may be significant that red deer are still scarce there, for they are known to be fond of both mountain tutu and five-finger — both of which are heavily grazed when moderate deer populations are present and both of which seem to be preferred foods of the Kakapo.

Kaka: Frequently seen in all low-level forest though not abundant.

Kea: Common but not abundant at subalpine level and above.

Parakeets (Cyanoramphus spp.): Frequently heard and widely-distributed. None was seen closely enough to allow the species to be identified.

Morepork: Apparently scarce as only one was heard \_\_ this during the 1958 expedition in the Tutoko.

Rifleman: Common throughout.

Rock Wren: One seen in the head-basin of the Donne in February, 1959.

Fantail: Common. A black one was seen in the Tutoko, another in the Gulliver and two in the western Cleddau.

Yellow-breasted Tit: Abundant at all lower levels.

Brown Creeper: Two flocks were seen in the lower reaches of the western Cleddau; there is one call record from the Tutoko.

Grey Warbler: Common throughout all low level forest.

Songthrush: One heard singing in the lower Tutoko in February, 1959.

Blackbird: Fairly common throughout up to altitudes of at least 2500ft. More usually identified by the "alarm rattle" than seen.

Dunnock: Occasionally seen and heard in the Tutoko. Probably occurs in the other valleys, too, in spite of being unrecorded.

Pipit: Seen on avalanche fans at the foot of Mt. Tutoko in February, 1959. Though this is the only record made during the expeditions, the species is almost certainly commoner than this scant mention implies. Habitat is rather limited except above the subalpine scrub zone.

Bellbird: Common throughout.

Waxeye: Small flocks were commonly seen or heard in widely scattered areas.

Redpoll: The species was common and flocks were frequently seen and heard, particularly on higher slopes and in the various head basins

Chaffinch: Common about clearings and along river banks, especially at low altitudes.

## REFERENCE'