

HABITS OF THE LESSER REDPOLL IN THE WELLINGTON PENINSULA.

By H. L. Secker, Wellington.

The lesser redpoll (*Carduelis cabaret*) according to available records has met with less success in colonising New Zealand than its relative the goldfinch (*Carduelis carduelis*). Redpolls are common in the Auckland, Wellington and Christchurch districts where the original liberations were made. They are common also in Otago province and in parts of the North Auckland and Nelson provinces, but elsewhere birds are reported more rarely and generally density of population appears to vary. As a consequence of probable dispersal redpolls have been reported from Westland and from offshore and oceanic islands.

The lesser redpoll is a species adapted to a wide range of geographical and climatic conditions. It ranges from Britain, through the mountain systems of Central Europe, south in winter to the Mediterranean and Balkan regions. With other species of redpolls it is accustomed to summer temperatures broadly equivalent to those of New Zealand if to severer winters. Failure to completely colonise the New Zealand archipelago may result from the unfavourable ecological conditions met with.

In the Wellington Peninsula (the hill country approximately west of Wellington Harbour) observations conducted between December, 1947, and January, 1951, indicated that the species was in a gravely unstable condition locally, its favourite breeding haunts being the widely isolated scrubby remnants of the rain forest which clothed the hills of the district up to about 1380. This vegetation substitutes for the ash thickets verging on the tree lines of mountains in parts of Central Europe, and for the aspen and willow scrub verging on the tundra, the natural habitats of redpolls in the Nearctic and Palaearctic regions. This vegetation which is predominantly composed of kaikamako (*Pennantia corymbosa*), mahoe (*Melicytus ramiflora*), and fuchsia (*Fuchsia excorticata*) is now in a state of decay. At present no more than 400 redpolls inhabit the Wellington Peninsula, and as a result of impressions gained from field studies it appears that unless rapid growth of the noxious tutu (*Coriaria*) to replace this scrub takes place, the redpoll may become extinct about Wellington within the next 25 years. The Wellington Peninsula covers about 60 square miles, but there are only ten breeding colonies consisting of several pairs with nests 100 to 250 metres apart established throughout, mostly in the Karori and north Makara areas where patches of scrub suitable for breeding remain. Urbanization threatens destruction of several of these habitats. Pairs, however, breed in plantations of pines, or in single pine trees where gorse and broom, or cassinia thickets exist, and also in isolated indigenous trees, preferably fuchsia growing in gullies among cassinia thickets, or as in one case surrounded by both cassinia and dense tussocks of the grass (*Festuca novaeseelandiae*). Where tiny copses of native trees survive adjacent in the midst of thickets two pairs of redpolls often breed. Throughout the extensive cassinia thickets of Wellington, where scrub is absent, it is common to walk for 15 miles in spring and summer without seeing redpolls.

As regards food, the birds in autumn spend much time feeding on seed heads of the composite cassinia and they are also attracted by the seed kernels of the tutsan wort (*Hypericum androsaemum*). In winter and spring, flocks forage on pasture where the herbs *Vittadina australis* and *Oxalis corniculata* during summer are conspicuous. Study of the species has been largely confined to flocking and territorial habits.

In early January unemployed males in drab plumage, together with females, associate with the season's young. Breeding males tend to associate as the urge to mate and hold territory dies away. By late January the male redpoll has left the territory, and autumn flocking takes place. It is, however, noteworthy that many male and female

birds cohabit from January until mid-May, and perhaps later. From observations made in 1947 and 1950 movement from summer breeding grounds to winter haunts takes place at the end of March. On each date an excitable but silent flock of from 50 to 70 redpolls has been observed on passage in the north Makara Valley, a favourite breeding haunt. As only six colonies exist in the valley during summer, the origins of each sizeable flock cannot for certain be known, although possibly many of these birds originated from breeding haunts along the Kaiwarra Stream across a hill two kilometers distant. Several territories were recorded there in successive springs between 1937 and 1940. Redpolls thenceforth decrease in numbers in the north Makara Valley. By mid-April redpolls have been known to occupy cassinia thickets bordering the main Makara Valley where they were rare in summer, and similar movements to winter feeding grounds take place from other gullies five kilometers distant. Despite this egress in March and April, however, numbers still frequent the north Makara breeding habitat in May, and in June small flocks consisting entirely of male birds have been seen foraging for food in cassinia thickets. These flocks exhibit a hierarchical form of organisation, for though the birds which compose it are feeble in voice and exhibit no aggressive behaviour, vagrant birds seeking to join a flock will dance around the birds which compose it in swerving flight.

Plainly these observations imply the existence of local and irregular movement only from summer breeding haunts to nearby hillsides, but there is strong possibility that irruptions occur at times. In 1947 and 1949 the species was rare throughout July. A more precise understanding of the species' movements about the district from April to May and from July to August, is therefore needed.

Though the redpoll is a sociable species in the main, certain individual birds are only loosely attached to the flock, and visit the summer breeding haunts throughout the winter months. Visits become more regular from early August when males commence to call in prospective territories. In addition, individual redpolls vagrant from the flock frequently pass eastward in mid-winter across the suburb of Karori from their habitats in the nearby hills. Vagrants either single or in pairs return westward in the spring again to their breeding haunts. Males calling vociferously cross this built-up area to early October, and females are frequent visitors to gardens.

Flocking itself ceases rapidly from late September, when flocks comprise both male and female birds, and males move off to prospective breeding territories. In late October an occasional male will still cohabit with several females. Bickering takes place among the females, and surprisingly at this stage of their breeding cycle males have been seen attempting to copulate but without success.

An eminent authority on bird display, E. A. Armstrong, remarks that birds with feeble songs exhibit noisy and widely ranging habits of flight. The redpoll is a vengeful species of this type and rarely sings. From early October until late January territorial flight takes place in suitable nesting habitats, the male redpoll flying, and at the same time calling vociferously along the boundary of its territory. Boundary flights decrease to a minimum in November, when display flight proper is mainly to be observed, and it is thought by the writer that this change results from the habit of many female redpolls of wandering promiscuously through males' established territories together with the tardiness with which they seek to mate. During late November and December males calling harshly also wander widely like the females, and the boundaries of territories become ill-defined. Throughout this period the sexual relations of the birds are obscure, and the behaviour observed difficult to interpret.

It has been asserted that the purpose of the male's display flight in a species with weak song is to stimulate the female for successful

copulation, and in some cases to intimidate strange males which have intruded within a territory. Though the male redpoll has twice been seen to display in flight before a female within its territory, and in one case shortly after to exhibit threatening behaviour in flight to intruding males, both displays appearing to be identical, it is thought in view of other observation that this particular display has no relevance for the species. Instead, display behaviour appears to conform to a type evident in certain passerine species whereby the female excites the sexual instincts of the male and provokes it into pursuit flight and attempts at copulation. The habits of redpolls exhibit many instances of this behaviour. Thus females incompletely employed wandering about territories in the breeding season have been seen to provoke males nearby to vacate their territories and to congregate in display. On October 7 of a group of three birds seen flying vigorously together, one became detached, and two birds, obviously male and female, engaged in a twirling sexual chase. Indeed, in mid-November before the mating bond between the sexes is quite complete, and before actual nesting has commenced, a female present in a territory has a magnetic attraction for males holding territories nearby. Intruding males appear continually and threat flights and bickering squabbles in bushes between the male owning the territory and unwanted rivals take place for some days until nesting by the pair starts in earnest. These displays cease abruptly. The resident male perches in a prominent place near the centre of its territory, on cessation, where the carmine breast is clearly visible. As incubation reaches its height the male's noisy calling accompanied by display flight declines in intensity, and it is common to see the resident male perching at this time quietly in scrub where the bright breast is visible.

Two male birds have been seen chasing a female around cassinia bushes in late November. All three birds were located shortly after quietly feeding on the ground among the bushes. In December also groups of males have been seen consorting in shrubs with a vagrant female; brightly plumaged birds, and others in more drab attire participated. The best example, however, of a female stimulating a male into sexual excitement was observed on December 3, 1950. Birds were first seen fighting in a bush of cassinia, and one of the group, probably a male, departed, leaving a male and female perching together on the bush, obviously the centre of a territory. Clinging to a dead twig the female evoked high pitched cries reminiscent of juvenile redpolls recently fledged, at the same time quivering the wings, and gaping in the manner of *Zosterops lateralis* in threat display. No response by the male to the female's overtures could be detected, and the birds then flew away. Between 10.00 and 10.30 this behaviour occurred three times within the territory's precincts. The mating process appeared to be advanced, but as yet incomplete. The female persistently evicted strange, roving females from the territory but as is usual with female redpolls, disappeared itself for long intervals. The male bird in its mate's absence, occupied itself with displacement activities, namely false feeding on the inflorescence of rye-grass (*Lolium*), common behaviour in passerine birds when on account of some inhibition a male has failed to copulate. While false-feeding, the male redpoll was seen to strip loose bark from cassinia twigs, evidence of a desire to initiate nesting, a habit apparently common to the epigamic display of many species.

When displays initiated by females occur in November, they are not seen in December, for they appear to cease when the female begins to nest in earnest. However, when the young have fledged, about December 15 for earliest broods, boundary flights by males around the territories start to recommence, as might be expected. Incubation, however, continues as late as January 2 and therefore in these territories males remain inactive. After January 20 both boundary flights and displays wane and cease, but the urge to copulate remains extant. Sexual chases are frequent in late autumn and early winter, and are especially evident among the adult birds present in autumn flocks of passage.

The life-history of the redpoll is complex and no authentic appreciation is attainable since elementary data relative to nesting activities remains incomplete. Puzzling features of the species behaviour in the breeding season is the tendency for non-breeding males of the previous year's hatch to skulk about with females in the territory when males are silent, or absent. Behaviour also requiring study is the congregation in mid-October of groups of males in patches of scrub with parties of females nearby. Though probably related to the mating activities described, this behaviour is interesting as superficially it shows resemblance to lek display.

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THE POSITION OF THE MYNA IN 1950.

by J. M. Cunningham, Masterton.

Since publication of details of the distribution of the myna (*Acridotheres tristis*) in New Zealand (N.Z. Bird Notes, Vol. 3, No. 2, Oct., 1948) certain additional information has appeared in various issues of that journal and its continuation "Notornis." Other material has been passed on to me and is here reproduced and a survey made of the position as it is known up to the end of 1950. Thanks are offered to those members and others whose reports have been drawn on; particular mention must be made of Mr. E. G. Turbott who has collected many of the Auckland records.

WAIRARAPA.

In the Wairarapa the myna retains a precarious foothold in Featherston, Greytown, Carterton and Martinborough. It has apparently now disappeared from Masterton and the last record I have is of two birds in March, 1950.

HAWKE'S BAY—EAST CAPE.

An additional early record is of a bird seen at Woodville (1923, R. H. D. Stidolph). I have no record of any change of status in Hawke's Bay, but at Matahura Station, 14 miles west of Ruatoria, C. K. Williams states they are fewer in numbers than in 1920.

MANAWATU-TARANAKI.

Records from all parts of the Manawatu remain sparse, particularly from northern Manawatu.

From west of the Hawera-New Plymouth Road comes information from B. D. Heather that mynas are present in small numbers in most of the townships (e.g. Puniho, Rahotu, Pihama, Manaia) on the Opunake coast road and also inland, but are rarely seen away from townships. They exist in fair numbers in Opunake. He has also seen a bird between Mt. Messenger and Mokau.

WAIKATO-AUCKLAND.

They are now present at Atiamuri (October, 1950, R.H.D.S.), and G. A. Fleming writes (August, 1950), "Mynas are now in Rotorua, where they are said to be numerous—in fact, they were not there in May, 1948. I also saw a pair at Mihi on the Rotorua-Taupo Road."

On the Coromandel Peninsula, R. McKenzie (November, 1948) has persistent reports of birds breeding at Whitianga on the east coast, where

NIGHT SINGING OF SHINING CUCKOO.—During the early months of summer a shining cuckoo sang in our garden a great deal during the day, both the long upward notes and downward notes; but at one stage it also decided to keep us awake at night with its call (usually the upward notes only). We first noticed this night singing on November 4. It ceased about November 23. On the evening of November 10, about 11.30 o'clock, I counted 54 continuous calls of the upward note and about five minutes later 32 were repeated.—Noelle Macdonald, Howick.

HABITS OF LESSER REDPOLL in the Wellington Peninsula.—Corrections, p. 64: For the word "colonies" read "territories"; for the word "irruption," paragraph 2, read "eruption."—H. L. Secker.

LITTLE BLUE PENGUIN FEEDING.—From a convenient jetty an excellent view was obtained of a little blue penguin feeding on some very small fish. From a resting place under the jetty it darted out and made a circle about 20 yards in diameter, keeping a little under the surface. Smaller and smaller circles were made, all in the one operation, until the small fish were herded into a tight circular dark pack three feet across. The penguin then drove through the pack and surfaced. Heads and tails protruded from its bill. These were quickly swallowed and it rounded up the fish pack again before it could disperse, driving through and surfacing again up to 10 or 15 times before seeking another rest under the jetty. The whole operation was repeated several times. The speed of the bird under the water was remarkable. This method of feeding is probably not uncommon. Other people at Whangaroa, not having the advantage of a jetty, had reported a "tortoise," which put its head out of the water. The "tortoise" was probably the rounded dark mass of fish and the penguin, when surfacing at the end of its charge through the fish, was taken for its head.—T. M. Roberts, Whangaroa.

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An asterisk denotes a Life Member.

- | | |
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