



Fig. 1.—REDPOLL, *Carduelis flammea cabaret*, photographed in New Zealand.
Characteristic for the flammea group is the streaked rump; the British subspecies *cabaret* is characterized by
inconspicuous buff wing bars. Photo: Copyright, K. V. Bigwood.

TAXONOMIC STATUS OF THE REDPOLL IN N.Z.

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INTRODUCTION.

The introduced redpoll has appeared under a variety of different names in New Zealand ornithological literature. As the two most commonly found, *Acanthis cabaret* and *Carduelis cabaret*, are not in accordance with the internationally accepted nomenclature, and as the subspecies present in New Zealand has not been investigated an attempt has been made to remedy the existing gap by examination of a series of skins of New Zealand redpolls.*

REDPOLL LIBERATIONS IN NEW ZEALAND.

According to Thomson (1922, p. 172) the first attempt to introduce redpolls into New Zealand was made in Nelson by the Nelson Acclimatization Society in 1862. Later, larger importations were made in Otago, Canterbury, Wellington and Auckland Acclimatization Districts. They are now common breeding birds over most of New Zealand, especially in manuka and scrub-covered country.

REDPOLL NOMENCLATURE.

According to Lonnberg (Ibis, 1931, p. 306) Rudbeck's drawing referred to in "Fauna Svecica" and which is quoted under *Fringilla flammea* in Linnæi "Systema Naturæ," tenth edition, 1758, is that of a redpoll, for which reason *flammea* (which formerly was considered indeterminate) must be accepted as the specific name for the redpoll as it occurs before *linaria*, which was the specific name for the redpoll used by Linnæus.

Brisson in 1760 (Ornithologia, vol. I., p. 36) described a new genus *Carduelis* to which the redpoll belongs, as adopted by Hartert, who in his "Die Vogel der palaarktischen Fauna" (1910-22) united goldfinches, siskins, citrils, redpolls, twites and linnets into the one genus.

The generally accepted name for the redpoll is, therefore, *Carduelis flammea* (L.), as used in "The Handbook of British Birds," vol. I., p. 66, and in Jorgensen and Blackburne: "Glossarium Europae Avium," 1941, p. 34.

Redpolls ("genus" *Acanthis*) are not now generally separated from the goldfinch and its allies (*Carduelis*), and the trivial name *cabaret* which up till now has been used in New Zealand for the redpoll, is now used sub-specifically for the lesser redpoll *Carduelis flammea cabaret*.

REDPOLL SUBSPECIES.

The redpoll is a widely distributed bird in the Northern Hemisphere, and occurs in six subspecies (here based on Salomonsen, 1928, and Witherby et al., 1938):

1. Mealy redpoll, *Carduelis flammea flammea* (L.). Breeding distribution: Circumpolar, Scandinavia, Russia, Siberia, Canada; winters in middle Europe, Central Asia and U.S.A.

2. Holboll's redpoll, *Carduelis flammea holboellii* (Brehm). Breeds in northern parts of Scandinavia, Russia and Siberia; winters in middle Europe and Central Asia.

3. Labrador redpoll, *Carduelis flammea fuscescens* (Coues). Breeds in Labrador; winters down to north-eastern U.S.A.

4. Greenland redpoll, *Carduelis flammea rostrata* (Coues). Breeds in southern Greenland; winters Canada, U.S.A. and Europe.

5. Iceland redpoll, *Carduelis flammea islandica* (Hantsch). Resident in Iceland.

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6. Lesser redpoll, *Carduelis flammea cabaret* (P. L. S. Mull.) British Isles (resident) and Central Europe; in winter, south to Mediterranean.

In addition to these subspecies another species of redpoll comprises two subspecies: Hornemann's redpoll, *Carduelis hornemanni hornemanni* (Holb.) and Coues's redpoll, *Carduelis hornemanni exilipes* (Coues).

Of the redpolls listed above, all but *fuscescens* have been recorded from the British Isles, but only *flammea* and *cabaret* occur in fair numbers. The lesser redpoll is fairly common as a breeding bird in Great Britain, whereas the mealy redpoll is an irregular autumn-winter visitor to the British Isles.

No records are available as to where the redpolls, introduced into New Zealand, came from. Bird catchers anywhere in Europe may have supplied birds for the subsidised introductions 80 and 90 years ago as well as several subspecies might have been caught for shipment in England.

As redpoll subspecies differ mainly in regard to size, Table I has been composed to show differences in measurements to be compared with measurements of redpolls collected in New Zealand. Size differences in several of the subspecies of redpolls are so pronounced that subspecific determination is possible by elimination according to size.

TABLE 1.

Wing and Bill Measurements of Redpolls (after Salomonsen, 1928 and Witherby et al., 1938). Birds arranged in order of size. Measurements in millimetres.

Subspecies.	Wing Length.		Bill Length.	
	Male.	Female.	Male.	Female.
<i>Carduelis f. cabaret</i>	67-73	63-69.	8-10	8-9.5
<i>Carduelis f. fuscescens</i>	69-75	71	9-10	8.9
<i>Carduelis f. flammea</i>	71-79	69-76	8-10	7.7-9.1
<i>Carduelis f. holboellii</i>	72-79	71-75	8.7-12	8.9-11.2
<i>Carduelis h. exilipes</i>	73-79	69-76	7.7-9	7.9-8.2
<i>Carduelis f. islandica</i>	75-81.5	75-80	8.2-9.5	8-9.1
<i>Carduelis f. rostrata</i>	77-85	75-82	9.4-11.1	9.8-10.5
<i>Carduelis h. hornemanni</i>	80-88	79-87.5	8.1-10.3	7.8-10

NEW ZEALAND REDPOLLS.

Already a casual examination of the plumages of New Zealand redpolls shows that they do not belong to the *hornemanni* group which is characterized by a pure white, unstreaked rump (cf. Fig. 1).

New Zealand specimens (cf. Table 2) have a wing length of 67-72 mm (males) and 66-69 mm (females), and therefore belong to the British subspecies, the lesser redpoll (*cabaret*) as the obtained measurements fall only within the limits for that form. Furthermore *cabaret* is characterized by its wing bars being buff, not whitish as in *flammea* (cf. Fig. 1), the only other form of approximately the same size; also the New Zealand specimens have a warmer, more brown coloration than the paler, more greyish mealy redpolls.

The main difference between *flammea* and *cabaret* is in size, the wing in *flammea* being on the average 5 mm longer than in *cabaret*.

A total of 36 redpoll skins from various parts of the North Island, South Island, Kermadec Islands, and Campbell Island have been examined (cf. Table 2).

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SUMMARY.

The redpolls introduced to New Zealand and now found commonly over most of the country, belong to the British subspecies, the lesser redpoll, *Carduelis flammea cabaret*. Thirty-six specimens from various parts of the Dominion have been examined. The names formerly used, *Acanthis*

cabaret and *Carduelis cabaret* are not in accordance with the internationally accepted ornithological nomenclature and should be displaced by *Carduelis flammea*, or when subspecific determination is desired, by *Carduelis flammea cabaret* (P. L. S. Mull).

REFERENCES.

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TABLE 2.—Wing and Bill Measurements of 36 Redpoll Skins from various parts of New Zealand.

Sex.	Date.	Locality.	Wing in mm.	Bill in mm.	Collection and number
M. ad.	4/1/1950	Whanganui R., Lake Taupo	71	8.5	P.C.B.
M. ad.	13/1/1950	Tihoi, western Lake Taupo	69	8.5	P.C.B.
M. ad.	1934	Canterbury	68	8.5	A.M. 447.7
M. ad.	1934	Canterbury	70	8.0	A.M. 447.8
M. ad.	no year	Auckland	68	8.0	A.M. 447.11
M. ad.	24/6/1910	Kermadec Islands	72	8.5	A.M. 447.12
M. ad.	9/8/1943	Campbell Island	70	8.5	D.M. 43.184
M. ad.	15/8/1943	Campbell Island	71	8.5	D.M. 43.192
M. ad.	29/8/1943	Campbell Island	69	8.5	D.M. 43.202
M. ad.	23/11/1943	Campbell Island	69	9.0	D.M. 43.308
M. ad.	27/6/1945	Taiari Plain	71	8.5	U.O.
M. ad.	18/11/1943	Gore, Otago	69	8.5	U.O.
M. ad.	14/9/1944	Central Otago	71	9.0	U.O.
M. juv.	4/1/1950	Whanganui R., Lake Taupo	70	8.5	P.C.B.
M. juv.	4/1/1950	Whanganui R., Lake Taupo	68	8.0	P.C.B.
M. juv.	Aug., 1951	Christchurch	68	8.0	A.M. 447.15
M. juv.	Aug., 1951	Christchurch	70	8.5	A.M. 447.16
M. juv.	Aug., 1951	Christchurch	67	8.0	A.M. 447.17
M. juv.	Aug., 1951	Christchurch	67	8.0	A.M. 447.18
M. (juv.)	13/8/1943	Campbell Island	70	8.5	D.M. 43.191
M. juv.	6/11/1943	Campbell Island	71	8.5	D.M. 43.248
M. juv.	8/11/1943	Campbell Island	71	9.0	D.M. 43.250
M. juv.	27/6/1945	Taiari Plain	67	8.5	U.O.
M. juv.	27/6/1945	Taiari Plain	69	8.0	U.O.
M. juv.	27/6/1945	Taiari Plain	69	8.5	U.O.
F. (ad.)	1934	Canterbury	69	8.0	A.M. 447.9
F. (ad.)	1934	Canterbury	66	8.0	A.M. 447.10
F. (ad.)	Aug., 1951	Christchurch	68	8.0	A.M. 447.19
F. (juv.)	Aug., 1951	Christchurch	67	8.0	A.M. 447.20
F. (juv.)	Aug., 1951	Christchurch	69	8.0	A.M. 447.21
F. (juv.)	Aug., 1951	Christchurch	69	8.5	A.M. 447.22
F. (juv.)	3/8/1943	Campbell Island	66	8.0	D.M. 43.181
F.	28/8/1943	Campbell Island	69	8.5	D.M. 43.201
F.	25/10/1943	Campbell Island	67	7.5	D.M. 43.234
F.	17/11/1943	Campbell Island	69	8.5	D.M. 43.245
F.	27/6/1945	Taiari Plain	68	8.5	U.O.

The following abbreviations are used:—

M.—Male. F.—Female.

P.C.B.—P. C. Bull, Animal Ecology Section, Department of Scientific and Industrial Research.

A.M.—Auckland Museum.

D.M.—Dominion Museum, Wellington. The numbers given are field numbers of the "Cape Expedition" material.

U.O.—University of Otago, Department of Zoology.

PUBLICATIONS.—The "Checklist of New Zealand Birds" has now been published, and all copies ordered by members have been delivered. Copies are available from the secretary at 10/6 post free. A small number of copies has been interleaved for notes and bound, and these are priced at 20/-. The early cyclostyled issues, republished as "Reports and Bulletins, 1939-42," are available at 10/-, "The Takahe" at 5/-, and small stocks of all issues of *Notornis* are still held. Prices vary according to the number, and are available from the secretary.