

Identification of Redpolls, a compilation

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Some general remarks on the identification of redpolls

-Identification should always be based on a combination of features. It is important not to focus on a single or two characters alone but to consider the whole bird. There is not one single diagnostic feature that will allow you to conclude 'flammea' or 'exilipes' or 'hornemanni' or 'rostrata' or 'cabaret', no matter how hard you try. On the other hand, it is the combination of characters that will help you to work out a well-founded identification in most cases. However, a small percentage of birds or individual photos will not allow you to be 100% sure, some individuals aren't identifiable at all.

In the table below, the most resembling (sub)species are grouped together, only where needed a specific reference with differences amongst (sub)species is made.

-A Common Redpoll ssp. cabaret (Lesser Redpoll) – hereafter 'cabaret' – shouldn't cause to many problems providing that the observer has some experience with other (sub)species of redpoll.

-A Common Redpoll ssp. flammea (Common or Mealy Redpoll) – hereafter 'flammea' – and Arctic Redpoll ssp. exilipes (Coues's Redpoll) – hereafter 'exilipes' – are very closely related and very hard to identify, even a small percentage will have to be left unidentified.

-Arctic Redpoll ssp. hornemanni (Hornemann's Redpoll) – hereafter 'hornemanni' – from 'flammea' is readily identified, but 'exilipes' versus 'hornemanni' can be very difficult and again some will have to be left unidentified when one can't take to full biometrics or when the bird can't be thoroughly studied.

-Common Redpoll ssp. Rostrata (Greenland Redpoll) – hereafter 'rostrata' – compared with all the above shouldn't really pose a problem (perhaps this isn't absolutely true compared with the smaller 'cabaret') but the features contra Common Redpoll ssp. islandica (Islandic Redpoll) – hereafter 'islandica' – aren't completely understood yet and need further study. Most will have to be referred to as 'North Western-redpoll' without subspecific identification. Lastly, pale 'islandica' contra 'exilipes' are often also very hard to identify without a thorough study. Perhaps 'islandica' – but this is only a citation of conclusions in the literature – is just an intergrade between 'exilipes' and 'rostrata' on the one hand or 'hornemanni' and 'rostrata' on the other hand... and is therefore not always referenced to when no 'convincing' features were found in the literature in this document.

-Timing is also important! One needs to consider the fact that redpolls show a considerable amount of wear towards the spring/summer. White edging disappears and black centra broaden, which results in a darker head, mantle and rump whereas wingbars and pale edges disappear. Fall/early winter is the best time to apply identification features.

-Interpretation of size/shape/posture is largely depending on the experience of the observer and the circumstances of the observation. Don't forget the position of the observer to the bird and also the condition/behaviour of the bird. This results in a different interpretation of some of the field marks, such as flank streaking, head shape, rump and undertail-covert streaking, etc..

-Moult. Adult redpolls moult once a year, complete during the early fall and in or near the breeding areas. Young birds moult partially from juvenal to 1st winter. This means no primaries, secondaries and/or primary coverts and tail-feathers are replaced until the first 'adult' moult (the early fall of the bird's second calendar year). Sometimes however, some central tail-feathers are moulted. Body feathers and a number of or all median and greater coverts are replaced. For ageing purposes is the amount of wear on and shape of tail feathers important. Additionally perhaps a moult limit amongst the greater coverts and/or tail-feathers can confirm this as well as the amount of wear on the primary coverts and other exposed feathers. Cautionary note however: many adult 'flammea' show a fake contrast between the inner pale-tipped greater coverts and the outer browner-edged greater coverts.

Sexing is difficult, especially in 'flammea'. The amount of pink or red on the breast and the cheeks and rump is important, as well as the biometrics, all which overlap! Often only the adult males and a number of young females are possible to sex with any certainty. The hardest are the adult females against 1st winter males.

-Multiple papers state that all (sub)species can show pink, especially on the breast, but also a to lesser extent on the rump, surely by spring and particularly adult males exhibit these features. This is variable amongst the (sub)species: in a decreasing order of pink (to white): 'flammea' and 'cabaret', then 'exilipes' and 'hornemanni' with finally 'rostrata'.

-Important is also the considerable individual variation in size amongst the sexes and ages. Males are bigger than females. Also adults are bigger in size, resulting in significant variations and/or an overlap between the different (sub)species and individuals. Also bill size varies slightly per sex and even seasonally. For the sake of completeness: convex=bulging towards the outer, concave=hollow or curving towards the inner.

-Many lone or less well observed individuals can't be identified to (sub)species, age or sex without a thorough comparison with other redpolls in the field, a series of skins or photos or an in-the-hand examination. Only typical individuals of the more difficult to identify (sub)species can be identified with 100% certainty.

-Buffy means with a light tan coloured or pasty sand coloured brown wash. For example white can be tinged creamy.

Identification table

The table is perhaps best usable if you first take a look at the left most column with the general remarks and then move to the right to see what the identification features are for the specific (sub)species you intent to identify.

	Lesser Redpoll Carduelis (flammea) cabaret	Common or Mealy Redpoll Carduelis flammea flammea	Coues's Redpoll Carduelis hornemanni exilipes	Hornemann's Redpoll Carduelis hornemanni hornemanni	Greenland Redpoll Carduelis flammea rostrata	Iceland Redpoll Carduelis flammea islandica
Size and structure <i>On its own a very consistent and reliable character, providing some experience and at the best a comparison between different individuals and/or (sub)species.</i>	Small with quite short tail. Small head and normal sized bill. Largest individuals overlap to a large extent with 'flammea'.	Seems slimmer and appears smaller compared with 'exilipes', but there is considerable overlap. Also overlaps with larger 'cabaret'. Generally also rounder head shape and less steep raising forehead than 'exilipes'.	Tail and wing biometrics overlap completely with 'flammea', though generally somewhat bigger with longer looking tail and smaller head. Often shows bigger with more and 'thicker' feathering (often also fluffed up). Higher, steeper forehead with flatter crown combined with thicker neck gives a 'pushed-in head' impression. Often thicker and denser tibial feathering than 'flammea', but largely overlapping with 'hornemanni'.	Obviously very big, size approaching a big Linnet or even Reed Bunting. Long wings with large primary projection. Long tail, thicker head/neck with steep forehead, even more striking than 'exilipes'. This heavy impression appears lark-like when bird is foraging on the ground. Tibial feathering often eye-catching, but overlapping with 'exilipes'.	Big and brown. As for colour resembling or even darker than 'cabaret', but obviously much larger and heavier. Size approaching 'hornemanni'.	According some authors probably a hybrid cline with birds that are identical to 'rostrata' and according others to 'exilipes': many birds overlap in size and shape with 'rostrata' but with paler underparts and rump.

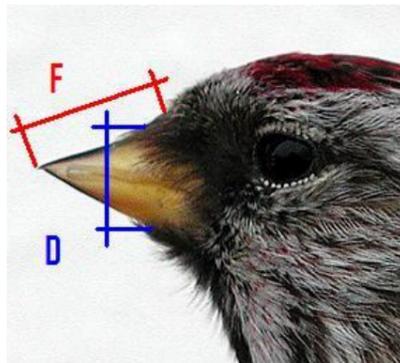
<p>Rump <i>Assessment is best made when the bird doesn't fluff-up the feathers, but detailed observation is essential to reach a correct identification.</i></p>	<p>Heavily streaked, only slightly paler than mantle. Uppertail-coverts evenly greyish brown with rusty or tan coloured edging. Some with darker shaft streaks. Only adult males pinkish tinged. Exceptionally partly white or pinkish with faint, inconspicuous streaking (mostly adult males).</p>	<p>Greyish white or buffy white to pale sandy, usually streaked grey-brown. In the field the rump appears paler than the rest of the upperparts and can even look white in flight. Strongly variable and some adult males show a complete unstreaked white rump approaching 10mm with sparse streaking elsewhere... Uppertail-coverts are dark greyish brown with brownish inner or subterminal edges (outer edge then off-whitish). Can be deep pinkish with whitish patches or white with deep pink patches. Variable per age and per sex.</p>	<p>Often quoted as the most important feature. At least 10mm (most approaching 16-22mm) of clean unstreaked white. White reaches or surpasses the base of the first tertial or more or less to the outer greater coverts on a closed wing. Many adult males and some females or young males show a <u>light</u> pink tinge. Some 1st years show a greyish wash near the base of the uppertail-coverts. Many, but not all adult and young females have the rump (mainly the upper half) streaked. Uppertail-coverts pale grey to greyish with broad white edging (sometimes slightly buffy tinged edges). Rump can be pinkish, but paler than 'flammea', most in adult males.</p>	<p>Very large white rump patch, running up along the sides. Can be slightly streaked (especially the centre). Uppertail-coverts dark grey, often with black shaft streaking (especially towards the tip) and broad white edging. Very rarely a pinkish tinge and if so it will be by late spring.</p>	<p>Most show a pale rump but always heavily streaked and looking dark from a distance. Paler individuals show dark diffuse streaks. Often shows a diffuse brownish hue, especially towards the uppertail-coverts. Uppertail-coverts brownish with greyish centres, feathers on the sides sometimes with a paler outer edge. No pink.</p>	<p>Very variable feature with the palest individuals like 'exilipes' and the darker more like 'rostrata'. Uppertail-coverts are greyish with more or less broad white edges, like 'exilipes' or 'hornemanni'. Most show paler rump compared to 'rostrata' more or less like 'flammea', especially so the paler forms. Dark birds can be very heavily streaked on a lighter 'underground' compared to 'rostrata'. No pink.</p>
<p>Upperparts <i>Redpolls often show one or more white or pale lateral streaks on the mantle ('tyre-mark'). Every single feather is dark in the centre with broad pale edges. Those pale edges determine the overall colour impression.</i></p>	<p>Deep brown or dark brown and heavily streaked. Some with a somewhat paler central area.</p>	<p>Darker grey-brown than in most 'exilipes' but also often shows paler central 'panel' or 'tyre-mark'. The back is usually slightly buff with heavier markings and with more prominent streaking due to broad, darker brown feather centra with narrower pale edging. The head is often conspicuously greyer than the back. The upperparts are more prone to wear and one needs to bear in mind that especially those feathers wear faster and so often only the dark centra remain by late spring/early summer.</p>	<p>Quite pale and grey ground colour with darker streaking on the most characteristic individuals. Even the browner or more chamois leather coloured birds show a whitish central mantle. But is highly variable. Some show a grey or white 'panel' on the central mantle with 2 obvious lines of dark feathers contrasting with the brownish/black streaked scapulars and sides of the mantle (albeit less so than 'flammea'). Back is white or whitish with loose greyish or brownish streaking, but the pale dominates the dark.</p>	<p>Less conspicuous pale panel on the mantle and back due to overall greyer mantle and upperparts. Often very pale grey with black centra. Sometimes with pale buffy chamois leather tone to it.</p>	<p>Variable from dark to light brown, but always heavily streaked, many with chestnut or rusty tinge. Some with paler middle part on the mantle but not so conspicuous as with 'exilipes' or 'flammea'.</p>	<p>Has the tendency to be darker, warmer brown compared to 'flammea'. Compared to 'rostrata' often paler and colder in tone. By spring greyer and more streaked, without the warm buffy undertone shown by 'rostrata' (and many 'flammea').</p>
<p>Flanks and underparts <i>Dependent from posture and the condition of the individual. Highly variable character within and amongst the different (sub)species.</i></p>	<p>Broad (yellowish) brown band running from sides of breast to rear flank, quite diffusely bordered on a whitish undertone. Always heavily streaked dark, even down to the rear flanks. Middle part of the breast always unstreaked, some showing a more prominent white middle breast, but most have a complete brownish or rusty tinged breast band. Only adult males in spring show a deep brick red throat and upper breast (not crimson red as in 'flammea').</p>	<p>Streaking running down to (rear) flanks. Variable but usually heavier, more diffuse or less 'tidy' on a less clean white undertone than in 'exilipes'. Largely streaked from sides of breast down to the legs (often even further down). Though there is much overlap and there are many less streaked individuals (some 1st winter and/or adult males) which then look especially like 'exilipes'. Adult males, but also 1st year/2nd year birds can be very crimson red, which is often also seen on the cheeks and down the flanks.</p>	<p>The most characteristic individuals show thin streaking on the sides of the breast and sideways down towards the flanks ending somewhere where the legs are, leaving the rear end of the flanks pure white. Which produces together with the white rump a broad white 'band' across the bird's rear end. Some have less neat looking or thicker flank streaking, but the rear-end of the flanks is usually free of any streaking. Females and young birds can be heavier marked. Breast and underparts normally have a clean white 'undertone', but side of breast can be warm creamy white to ochre coloured. If any pink, then usually less intensive with a softer tinge and not so far down, rather limited to chin and upperbreast.</p>	<p>Barely or no streaking on flanks. Undertone pure white, at the most somewhat more diffuse in females (can show then some diffuse streaking). Centre of breast white with on the sides the same warm ochre or chamois-leather coloured tinge like on the head (at least in 1st winters). Seldom a pinkish hue.</p>	<p>Flanks heavily streaked, quite hazy like in many dark 'flammea'. Sides of breast often heavily streaked with heavy rusty/brown hint, going down towards the flanks even until rear flanks. Middle of chest mostly whitish. No pink hue.</p>	<p>Triple streaked flanks on a white undertone, more obvious than in 'flammea' (which shows often 'blurry' or 'untidy' flank streaking) on a lighter, purer undertone than in 'rostrata'. Never pink or pinkish.</p>

<p>Undertail-coverts <i>Difficult to see in the field, but crucial in the identification!</i> <i>Quite variable with only the extremes usable/diagnostic.</i> <i>Basically only the longest undertail-coverts are considered here for identification.</i></p>	<p>Heavily triangular streaking on a pale but mostly yellowish brown/buffy tinted undertone. Exceptionally with only one weak central streak.</p>	<p>Typically heavy ‘arrowhead’-shaped or ‘dagger’-shaped streak on multiple undertail-coverts (thus not limited to the longest like in most ‘exilipes’), giving the impression that they are bordered white. But there are also males that are completely unstreaked. Those are mostly adult males with much deep pink on the chest and underparts and also on the rump and are then as such identifiable.</p>	<p>There is overlap with ‘flammea’, but the extremes are diagnostic. Pure white undertone always present. In case of streaking, then limited to a thin shaft streak on the longest undertail-coverts. Very thin to 2mm at the widest (‘hairline streak’). Never arrow-shaped.</p>	<p>Pure white to slightly streaked (only shaft streaking). No greyish or buffish undertone.</p>	<p>Heavily streaked with triangular or ‘arrow-shaped’ dots, darker than most ‘flammea’.</p>	<p>Very variable, from heavily streaked to very light. Tendency to be paler than ‘flammea’, but with the same ‘arrow-shaped’ dark grey pattern. Thus a strong difference with the pattern in ‘exilipes’ and ‘hornemanni’. Generally without the brownish hue of many ‘rostrata’.</p>
<p>Wings <i>Wingbars and pale feather edging heavily exposed to wear.</i> <i>Best judged in autumn/early winter.</i> <i>Feature for ageing: adults often show a pale panel due to light/whitish edging on the primaries and secondaries.</i></p>	<p>Wingbars quite equally broad, mostly with a darker rusty or browner tinge. Primaries and secondaries buffy.</p>	<p>Less broad, but variable. Proportionally broader paler tips on the inner greater coverts than ‘exilipes’ (the wingbar is broader at the base than at the outer half). Colour quite variable, but mostly white with a buffish/brownish tinge when the bird is fresh. Median coverts are quite thin and buffish white. Edging on tertials is thin and whitish, but heavily variable and overlapping largely with ‘exilipes’. Though also the inner secondaries show a darker panel, this is much less contrasting (also due to the darker wingbar and tertial edging). Some do show more whitish edges, overlap!</p>	<p>Tips of inner greater coverts broad and whitish (though most show a buffish tinge). Shows a much more obvious wingbar (mostly not pure white) on the median coverts. Tertials have broad white or buffy white edges and tips. If there is a buffy tinge or hue it is then usually most obvious on the shortest/innermost tertial. Much overlap with ‘flammea’ and only usable as a supportive character. Edging of primaries and secondaries is flashy pure white, but the base of the inner secondaries is dark, resulting in a distinct contrast. Variable and most appearing in adult males.</p>	<p>Distinct wingbars, especially on the greater coverts, broadening towards the base. Mostly white, but can also be buffish ochre or brownish tinged. Edges and tips of primaries and secondaries pure white. Most obvious in adults. Tertials with broad white edges and tips.</p>	<p>Wingbars usually thin, quite parallel with darker brownish or rusty on (especially) outer tips. But can also be pure white. Greater covert and tertial edging is often rusty or brownish tinged, even when the tips are white. Primary and secondary edging with rusty or brownish hue, only the outer are somewhat paler.</p>	<p>Like in ‘flammea’, flashy but less broad and getting thinner towards the base. Purer white than ‘flammea’, rarely with a slight brownish tinge. Compared to ‘rostrata’ more obvious, broader and also paler without a buffish hue. Compared to ‘exilipes’ and ‘hornemanni’ more prominent buffy edging on primaries and secondaries. Tertials with thin edging and only the tips distinctly purer white.</p>
<p>Head <i>Dependent of the position of the bird. Variable character that varies with age and sex between and amongst the (sub)species.</i></p>	<p>Cheeks and ear-coverts quite even, only distal aurical feathers somewhat greyer. Lores and chin patch rather greyish and small. More full, paler eye-ring compared to ‘flammea’ (which frequently only shows a paler lower half). In adult males the cheeks are generally reddish. Crown patch is always brick-red.</p>	<p>Most show a buffy brown forehead, but some show a white. Red crown patch on average a trickle bigger (especially males) but of little importance in the identification process. Both ‘flammea’ as well as ‘exilipes’ have a white or whitish supercillium. The contrasting head pattern is typical: a pale face darkening, getting more streaked towards the greyish brown or brownish ear coverts, combined with a grey-brown or brownish hint on crown and neck. The feathers on the rear-crown are pale-brown or show buffy edging. The neck is paler and contrasting with the darker mantle. Although a paler ‘shawl’ is often noticeable, it is often much less eye catching than in many ‘exilipes’. Males and adult females often show some pink on the cheeks. Crown patch is carmine/crimson red or brick-red (always brick-red in ‘cabaret’).</p>	<p>Suggestive lighter/whiter colour on the forehead compared to ‘flammea’, but most 1st years and some adults have darker, greyish centra on the forehead feathering. Additionally many 1st years show also a buffy wash or even warm ochre or bronze tone on the cheeks or even the entire head. Red crown patch on average somewhat smaller, some show a very small patch, more typical of ‘exilipes’. The aurical area is characteristically whitish without any significant streaking, often with a pale surrounding. There is also often a pale ‘necklace’ or ‘shawl’ in the neck and upper mantle, which gives the bird a typical ‘frosty’ appearance. Seldom or never pinkish on the cheeks.</p>	<p>Obvious contrast between the warm chamois leather or ochre coloured face and the greyish mantle and back. All redpolls can show this, but it is the most showy in ‘hornemanni’. Due to wear this feature can be less obvious or fade away. Often no eye-catching supercillium present compared to ‘exilipes’. Cheeks are seemingly not pinkish tinted.</p>	<p>Brown or greyish, especially on the ear coverts, less streaking than in ‘flammea’, but often with a more ‘open-face’ expression. Neck greyish or brownish and heavily streaked, running down to mantle and scapulars. No pink.</p>	<p>Face plainer and a more ‘open-face’ expression than in ‘rostrata’ and ‘flammea’ with often a pale chamois leather/vanilla tint (especially 1st years). Characteristically compared to ‘rostrata’ is the tendency to show a supercillium, especially before and above the eye. Cheeks seemingly without a pink or pinkish tinge.</p>

<p>Bill shape <i>Young birds have slightly shorter bills than adults. Studies have shown that redpolls seem to show longer bills during summer. Males have longer bills than females.</i></p>	<p>Proportionally normal looking, typical triangular or somewhat cone shaped bill. Mostly straight or somewhat concave culmen with a thin or diffuse dark line, but somewhat variable in this species. During summer largely dark bill.</p>	<p>Bill often somewhat longer with a straight culmen (often slightly convex at tip). The range of bill sizes is asymmetric, with a small percentage of individuals with a very long and thick bill. These 'types' are called 'holboellii'.</p>	<p>On average shorter, more conical with a straighter culmen than 'flammea', rarely convex at the tip. Many appear like they have a very small bill. Those individuals with the smallest bills, combined with a sloping forehead result in the typical 'pushed-in face' impression, but many miss this! Some show a higher bill base which then bring to mind 'hornemanni'. Paler in colour, often with only a thin dark line on the culmen towards the tip.</p>	<p>Bill size comparable with 'flammea' but is broader and higher resulting in a typical broad bill base. This emphasizes the massive head and neck and results in a top-heavy impression, not present in 'flammea' and most 'exilipes'.</p>	<p>Bill shape typically convex, thick and triangular. Dark orange or yellowish tinged with a dark broad line from centre to tip on the culmen.</p>	<p>Bill-shape like in 'rostrata': heavy, big and with a convex shaped culmen. (Especially) lower mandible often more orangy/yellowy, but with a broad dark line from base to tip on the culmen and with a dark tip on the lower mandible.</p>
<p>Biometrics* <i>The ringers/banders experience plays an important role here. All measurements in mm. and with the maximum wing-length method (see Svensson 1992.)</i></p>	<p>Wing-length on average: 69,4-71,1mm Wing-length min/max: ♂ 65-75mm ♀ 67-75mm Tail: 47-56mm Bill (F): 7,7-10,2mm Bill (D): 5,2-6,5mm</p>	<p>Wing-length on average: 75,2-77,6mm Wing-length min/max: ♂ 70-83mm ♀ 70-80mm Tail: 49-61mm Bill (F): 7,5-10,4mm Bill (D): 5,2-6,8mm <i>'holboellii'</i> Wing-length on average 74,7-77,8mm Wing-length min/max: ♂ 73-83mm ♀ 70-79mm Tail: 51-59mm Bill (F): ♂ 10,5-13,5mm ♀ 10,0-13,1mm Bill to skull (S): ♂ 13,8-16,5mm ♀ 13,0-14,8mm</p>	<p>Wing-length on average: 73,6-76,3mm Wing-length min/max: ♂ 71-81mm ♀ 69-78mm Tail: 53-62mm Bill (F): 6,3-8,8mm (Svensson: to 9,6mm) Bill (D): 5,3-6,4mm</p>	<p>Wing-length on average: 82,7-85,5mm Wing-length min/max: ♂ 80-92mm ♀ 79-89mm Tail: 55-70mm Bill (F): 7,7-10,8mm Bill (D): 6,1-7,8mm</p>	<p>Wing-length on average: 78,8-80,3mm Wing-length min/max: ♂ 74-86mm ♀ 75-85mm Tail: 53-67mm Bill (F): 7,8-11,0mm Bill (D): 6,3-7,5mm</p>	<p>Wing-length on average: 76,5-79,5mm Wing-length min/max: ♂ 75-85mm ♀ 72-81mm Tail: 54-66mm Bill (F): 6,6-10,0mm Bill (D): 5,7-7,1mm</p>

* Taking the bill measurements is somewhat more technical to be able to compare with data in certain studies.

- bill-length to feathering (F) is measured from where the bill passes over into the implant of the nasal feathering (where the edge of the bill ends in a more fleshy part).
- bill-depth (D) is measured at the bill base, at the implant of the nasal feathering.
- bill-width is also measured at the bill base, more or less at 90° against the cutting edges.



To be able to compare the biometrics, it is best to compare a larger sample of different individuals, measured by one person.

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