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The wintering area of Shorelarks *Eremophila alpestris* breeding in Swedish Lapland

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Abstract

Although it is known that considerable numbers of Shorelarks winter in the North Sea region, it has also been suggested that Scandinavian Shorelarks winter in a south-easterly direction. There are only three previous recoveries of ringed birds, only one of them of a bird ringed in the breeding area which gave a doubtful recovery in Spain. Birds that were colour-ringed on the breeding grounds at Ammarnäs in southern Lapland have now given eight winter recoveries: one in southern Norway, six along the Swedish west coast, one in Jutland, and one on Jersey. A ninth recovery was made on the Varanger peninsula in August. This clearly shows for the first time that the Scandinavian Shorelarks winter in the North Sea region and not in any unknown area to the south-east.

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Eight recoveries of colour-ringed Shorelarks breeding in southern Lapland confirm for the first time that the wintering area is, as most often assumed, located in the North Sea region, and not in a south-easterly direction as has also been suggested.

The Shorelark has declined as a breeding bird in Scandinavia during the latter half of this century. The decline has been observed both in Finland (Hildén 1987) and Sweden (Svensson 1990), and seems to have occurred also in northern Norway (the Finnmark and Troms population), whereas the isolated population in southern Norway seems not to have been affected yet (Stueflotten 1994). The Shorelark is now listed among the "vulnerable" species in the most recent Swedish "Red list" (Ahlén & Tjernberg 1996). A decline has also been observed from the mid-seventies among wintering birds in Britain (Lambert 1986).

A study of the species, supported by WWF Sweden, was started at Ammarnäs in southern Lapland in 1990 in order to determine possible factors causing the decline (Svensson et al. 1992, Svensson & Berglund 1994), but so far no conclusive evidence of impaired breeding performance has been obtained. It has been observed, however, that in this particular area, where the decline of the Swedish population was first observed in the seventies (Svensson et al. 1984), the decline has continued.

As a part of the study both adults and nestlings were colour-ringed. The main purpose was to reveal breeding site fidelity and survival between breeding seasons, but the ringing also contributed a number of recoveries in the wintering area. As far as I know, no other project has been colour-ringing Shorelarks before December 1996, when R. Cosgrove started ringing in Lincolnshire, England (in litt.). Hence all birds recovered before December 1996 must come from my project. Recovery no. 9 below, made in 1997, must also be a bird from Ammarnäs since its colour combination has not been used in England. The study area is located on the mountain Björkfjället 8-20 km northeast to north of Ammarnäs (roughly within 66°06'N, 16°10'E – 66°09'N,16°20'E – 66°06'N,16°30'E – 66°01'N, 16°20'E).

Regrettably we did not use a consistent system of colour combinations from the very beginning of the project. We always put a metal ring on the right leg, most often but not always also a colour ring on that leg. On the left leg we usually put two colour rings, but sometimes only one. The majority of birds were ringed with one metal and three colour rings, but some have only one metal and one or two colour

rings. In a few cases we ringed a whole brood with the same ring combination, one metal and one colour ring of the same colour. This means that we cannot uniquely identify all recovered birds. But for the purpose of this paper, mapping of the wintering area, this does not matter.

The recoveries and identification of the birds

Since it is notoriously difficult for observers to read colour rings correctly in the field, details of the recoveries must be provided. They are all described below and also shown i Figure 1.

1. *Råberg kirke, near Skagen, Jutland (57°44'N, 10°35'E).* One bird with a red ring on its left leg was observed on 27 April 1991. It was one of a flock with 30 Shorelarks. A flock had been observed near the church since October 1990, but it is not known whether the colour ringed bird had been a member of the flock earlier. Reported by Henrik Møller Thomsen, Aalborg, letter 8 January 1992.

This bird is one of four young ringed in a nest on Mieskat on 22 June 1990 (hatched on 15 June). All four young were ringed with one red ring on the left leg and a metal ring on the right leg. The ring number is one of 2961138-41.

2. *Komagvær on the Varanger peninsula in Finnmark (70°15'N, 30°31'E).* This recovery was first reported by Sverre Asmar Nilsen, Vadsø (letter 25 February 1992). The bird was observed on 17 August 1991, but the colour combination as reported (green ring on right leg, metal and red ring on left leg) did not exactly correspond with any combination that had been used at Ammarnäs. We have always put the metal ring on the right leg. If a mistake about the legs had been made, two birds were possible candidates: one with yellow and green and one with red and green on the left leg, both from the same brood. The most likely candidate was the first mentioned one, since it would be more easy to misread the yellow/green combination than the red/green one for only green. It was a very surprising recovery, since it was made 760 km to the north-east only one and a half month after fledging. However, in a letter from the Norwegian ringing center at Stavanger Museum of 12 December 1996, the recovery was confirmed. The reported colour combination (yellow over green on left leg, red over metal on right leg) was one of the five young ringed in a nest on Dåratjåkko on 27 June 1991 (ring no. 2801468). The two recoveries were made on the same day very close to each other (70°15'N, 30°31'E and 70°15'N,30°32'E, respectively), hence there is little doubt about them referring to the same bird.

3. *Balgö, island northwest of Varberg (57°10'N, 12°10'E).* This bird was seen on 22-24 October 1991 (letter from Mikael Nord, Varberg). It had a red ring on its left leg and was observed together with 26

Figure 1. Recoveries of Shorelarks ringed as nestlings or breeding adults at Ammarnäs in southern Lapland. Star = the ringing site. Dots = recoveries in the non-breeding season (October–April). Square = late summer recovery.

Återfynd av berglärkor märkta som boungar eller häckande adulta i Ammarnäs i södra Lappland. Stjärna = märkplats. Prickar = återfynd utanför häckningssäsongen (oktober–april). Kvadrat = återfynd på sensommaren.

other Shorelarks. This must be one of the birds from the same brood as recovery no. 1 above. No other birds have been ringed with only a red ring on the left leg. There is a slight possibility to misread two red rings on the same leg for only one: there is one bird with two red rings, but this bird also had a red ring over the metal ring on the right leg, which should have been observed.

4. *Björkäng, 12 km south of Varberg (57°00'N, 12°21'E).* The observation was made on 16 November 1993, and the ringed bird was one in a flock of 36 Shorelarks. It had a red ring on its left and a metal ring on its right leg. Also this bird must be one of the brood of four since no other birds have been ringed with only one red ring.

5. *Noirmont Point, Jersey (49°10'N, 2°10'W).* This was one of three birds seen together on 30 and 31 October 1992, reported by the Ornithology Section, Société Jersiaise (letter of 5 December 1992). The ring combination was blue over red on the left and blue over metal on the right leg. This bird was no. 2801479, ringed as nestling on 19 July 1992 on Dåratjåkko.

6. *Nabben, Falsterbo (55°23'N, 12°49'E).* This Shorelark was observed by John Larsen (also photographed) together with four other birds on 30 October 1992. It had blue over metal on the right and red over blue on the left leg. It was ringed as nestling on Båsatjåkko on 21 July 1992 (ring no. 2801485).

7. *Nordhasselbukta, Farsund, Vest-Agder (58°05'N, 6°37'E).* This bird was reported to Stavanger Museum, and the recovery was advanced to me by Olav J. Runde. The recovery date was 23 October 1992. The ringed bird was a yearling, one of two yearlings together with one adult bird. The reported colour combination was light blue over metal on the right and red over metal on the left leg. The presumed metal ring on the left leg was a white plastic ring since we never put a metal ring on that leg. The bird was ringed on Båsatjåkko on 23 July 1992, being one of five young in a second brood. The ring no. was 2801488.

8. *Galtabäck, 10 km south of Varberg (57°02'N, 12°19'E).* This bird had an orange ring over a metal ring on its right leg. The left leg could not be seen. The observation was made on 8 April 1996 and the ringed bird was one in a flock of four. The observation was made by Reino Andersson, Varberg. We have not ringed any bird with an orange ring on the right leg. It must have been a red ring with somewhat faded colour. Then it must be one of eight birds, either one of three young ringed on 18 July 1991 or one of five young ringed on 1 July 1991, both broods on Dåratjåkko. This bird was almost five years old which explains the faded ring colour.

9. *Morups Tånge, c. 8 km west-north-west of Falkenberg (56°55'N, 12°22'E).* On 19 October 1997, Pär Sandberg and Christer Andersson, Varberg, saw five Shorelarks at this traditional locality for the species (letter, 19 October 1997). One of them had colour rings. The recorded color combination was white over red on left leg, and a metal ring on the right leg. Since no colour ring was observed on the right leg (all birds now have three colour rings), there are two possible individuals, having the same combination on the left leg. However, one of them, ringed in 1992, also had a blue ring on the right leg, and this should have been observed. The other bird was ringed on 25 June 1997 near Båsatjåkko, an adult female with four young in the nest. It had a black ring above the metal ring on the right leg, a colour that is difficult to distinguish on the dark leg of the bird. It is almost certain that the recovery was of this individual which had metal ring no. 2961217.

Discussion

Only three European long-distance recoveries of Shorelarks were published in Zink (1975), and there are no further recoveries mentioned in the standard handbooks (Glutz von Blotzheim 1985, Cramp 1988). Details about two of them are given in Rendahl (1964). One bird was ringed at Kuivakangas, Övertorneå, northern Sweden on 18 November 1940 and recovered north of Kalmar on the eastern coast of southern Sweden on 27 December in the same year. The origin of this bird is unknown since it was ringed in late autumn, during the migration period. The other bird was ringed on Marsfjället, 80 km north-west of Vilhelmina in southern Lapland on 7 July 1949. It was reported to have been found at Almonte, Huelva in southern Spain on 15 October in the same year. Zink (1975) doubted that this recovery was correct since it was far south of the normal wintering range of the species. The date of the recovery is also very early to be so far south which was also observed by Rendahl (1964). The third European recovery comes from the southern part of the Komi republic (61°41'N, 53°40'E) in May, being a bird ringed at Halle in Germany in January in the same year. The recovery is mapped in Zink (1975), with reference to a then yet unpublished paper by Stiefel & Tauchnitz, which I have not been able to retrieve. This bird was obviously on its way to arctic breeding grounds in northern Russia.

The birds from Ammarnäs belong to the northern

population, being continuous with the one breeding in the rest of the mountains northwards and the lowlands in northern Norway, northern Finland, the Kola peninsula and further east. The new recoveries all lie in the sector between south-southwest and southwest. This general direction is probably valid for the whole population of western Palearctic which is indicated by the single bird between Germany and northern Russia. It has been stated that Scandinavian birds migrate southeastwards and that only a small proportion reaches Britain (e.g. Lambert 1986). The second part of the statment may be true since a majority of birds may winter along the western coast of Sweden, and in Denmark, northwestern Germany, and the Netherlands. But the first part of the statment is almost certainly not true. There is to my knowledge no substantiation of migration routes to the southeast. The autumn and winter records in Sweden are clearly concentrated along the western coast; very few birds winter along the much longer eastern coast. Hence it is likely that the whole Fenno-Scandian population winters in the North Sea, Channel, Skagerrak and Kattegat region.

The Varanger recovery is special. The direction is roughly opposite to the other ones. It is also the only recovery made before the ordinary appearance of Shorelarks during the normal wintering period. In southern Sweden Shorelarks are very rare before October, and usually any appreciable numbers never occur until about 10 October (Svensson 1990).

I have spent several periods on the breeding grounds at Ammarnäs in late August, September and early October searching for Shorelarks, but never observed a single one. This does not necessarily mean that they are absent. They moult during this period and may be very difficult to observe since they may be almost flightless for some time. But the Varanger recovery indicates another possible explanation for their absence. They may leave the mountains for coastal haunts during late summer and early autumn before they move to their final wintering areas in the North Sea region.

The decline of the Shorelark in the westernmost part of its northern range is difficult to explain. It still remains to be determined if any negative factor operates on the breeding grounds. If such a factor cannot be found, one must turn to the wintering areas in the search of an explanation. There is very little information about possible long-term population trends east of Scandinavia. In 1994 the Shorelark was fairly common at most sites visited by the Swedish-Russian tundra ecology expedition (Rogacheva et al. 1995). It was absent only at a few sites, such as the Arctic Institute and Wrangel islands. It was rare on northern Taymyr, but otherwise typical densities ranged between ten and twenty birds per ten hours of line transect (Svensson 1995). They appeared to be present wherever there were suitable habitats in the form of well-drained, sandy soils, for example along river banks. In spite of the pausity of earlier counts to compare these figures with, it seems that the populations of these areas have not suffered any drastic declines.

The recoveries reported here clearly show that the wintering area of the Shorelarks from Lapland is located in the North Sea region. This means that the wintering area of these birds is the same as the area assumed to be the wintering area of birds from southern Norway. That in turn means that the northern, declining population winters in the same area as the presumably stable population from southern Norway. This may indicate that the factors causing the decline in the north must be looked for in the breeding grounds in spite of the fact that the studies have not revealed any conclusive evidence for that explanation so far.

Reporting colour-ringed Shorelarks

Shorelarks are now colour-ringed at Ammarnäs in Lapland in the breeding period and in England during their winter stay (start in the winter 1996/97). From the winter 1997/98, Shorelarks will also be ringed in north-western Germany. It is essential that ornithologists carefully examine all observed Shorelarks to see if they are colour-ringed. It is necessary to be very careful about recording the precise colour and position on the leg of the different rings; all birds have now one metal and three colour rings. Colour-ringed Shorelarks should be reported to the author or to a national Ringing center.

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Sammanfattning

Övervintringsområdet för berglärkor Eremophila alpestris *som häckar i svenska Lappland*

Det har länge rått tveksamhet om var de skandinaviska berglärkorna övervintrar. Det är väl känt att berglärkor normalt övervintrar i södra Norge, längs Sveriges västkust, på Jylland samt i nordvästra Tyskland, Holland och England, d.v.s. i Nordsjöområdet. Trots detta har det flera gånger förmodats att åtminstone norra Skandinaviens berglärkor flyttar mot sydost. Orsaken till tveksamheten har varit bristen på ringåterfynd. Det har endast funnits tre stycken. En fågel märktes i Övertorneå den 18 november 1940 och återfanns i Kalmar den 17 december samma år. Dess häckningsplats är givetvis okänd. En annan fågel märktes som unge på Marsfjället den 7 juli 1949 och återfanns i södra Spanien den 15 oktober samma år. Detta återfynd kan knappast vara korrekt, och betvivlas också av flera författare. Ett tredje återfynd är av en fågel vintermärkt i Halle i Tyskland, vilken återfanns under flyttningen i maj i Komi i Ryssland, sannolikt på väg till sitt arktiska häckningsområde.

Under åren 1990-1997 har ett större antal berglärkor, både adulta fåglar och boungar färgmärkts i Ammarnäs. De har nu givit nio återfynd i form av fältavläsningar. Eftersom det inte skett några andra färgmärkningar före december 1996 (då en del berglärkor färgmärktes i England, dock med andra färgkombinationer) måste samtliga återfynd gälla fåglar som märkts i Ammarnäs. Åtta av återfynden har gjorts i vinterområdet: Råberg kirke vid Skagen på Jylland, Balgö vid Varberg, Björkäng söder om Varberg, Noirmont Point på Jersey, Nabben vid Falsterbo, Nordhasselbukta vid Farsund i Vest-Agder, Galtabäck söder om Varberg och Morups Tånge nordväst om Falkenberg. Fynden visar entydigt att de lappländska berglärkornas övervintringsområde ligger i Nordsjöregionen och att alltså deras sträckriktning är åt sydväst och inte åt sydost.

Det nionde återfyndet är märkligare. Det gjordes den 17 augusti 1991 och gällde en unge som märktes i Ammarnäs den 27 juni samma år. Den återfanns således 760 km åt nordost bara någon månad efter det att den blivit självständig. Detta återfynd antyder en förklaring till att jag aldrig sett någon berglärka i Ammarnäs under hösten trots att jag gått mycket i häckningsfjällen i augusti, september och början av oktober. Kanske lämnar åtminstone en del berglärkor häckningsterrängen för att bege sig till norska kusten innan de definitivt flyttar söderut. De brukar sällan uppträda i större mängder i övervintringsområdet eller på flyttning förrän i början av oktober. Ett ytterligare stöd för att berglärkorna inte flyttar åt sydost är att arten är mycket sällsynt längs Sveriges ostkust. De få fynd som görs där kan gälla de få finska fåglar som finns kvar och som i så fall också skulle flytta åt sydväst. Att arten var talrikare längs ostkusten förr stämmer då med att den förr också var vanligare i Finland men senare minskat drastiskt.

Förutom i Ammarnäs färgmärks som sagt fåglar sedan vintern 1996/97 också i England. Från vintern 1997/98 kommer berglärkor också att färgmärkas i Tyskland. Alla får en metallring och tre färgringar i individuella färgkombinationer. Det är därför ytterst viktigt att alla observerade berglärkor granskas för att se om de är ringmärkta och att ringarnas färger och position på benen avläses med största noggrannhet. Rapportering kan ske till författaren eller till Ringmärkningscentralen.