

kunskaper.

Gällivare-fågeln är av allt att döma en sådan svårbestämd fågel. Med vinge 82 mm (Lundevall: 82), stjärt 63 mm (65,5), tars 16,0 mm (16), näbb till skallen 11,0 mm (10,0), näbb till fjäderfästet 8,3 mm (8,6) och näbbhöjd 7,1 mm (6,6) är den för stor för normala snösiskor av rasen *exilipes* och också för stor för normala gråsiskor av rasen *flammea*. Båda dessa har en vinglängd som inte överstiger 80 mm, stjärtlängden är hos de två maximalt 62 respektive 61 mm, och näbbhöjden är hos *exilipes* högst 7,0 mm.

Det finns en möjlighet att förklara fågeln som en varietet *holboellii*. Gråsiskor med denna beteckning är något mer storvuxna än normala gråsiskor, kan ha en vinglängd av 83 mm (35 sådana var. *holboellii* undersökta i Riksmuseets samling) och har framför allt en längre och litet kraftigare näbb. De är ofta också aningen kraftigare pigmenterade, även om detta är svårt att säkert fastställa eftersom de flesta insamlade är i sliten sommardräkt, som naturligt är något mörkare än vinter- och vårdräkter. En tolkning som var. *holboellii* skulle förklara Gällivare-fågeln storlek, men stämmer inte helt beträffande näbbens format.

Mitt förslag är att fågeln betraktas som en obestämbart aberrant gråsiska, möjligen med drag av var. *holboellii*. Den bör inte gälla som säkert bestämd *hornemanni*, vilken ras därmed fortfarande saknas på den svenska listan.

Litteratur

Lundevall, C.-F. 1941. *Carduelis h. hornemanni* (HOLBØLL) funnen i Sverige. *Fauna och Flora* 36: 83–85.

Shirihai, H. & Svensson, L. in prep. *Handbook of Western Palearctic Birds*. Helm, London.

Svensson, L. 1970. *Identification Guide to European Passerines*. 1:a uppl. Publ. av förf. Stockholm.

Summary

Two subspecies have been described of the Arctic Redpoll *Carduelis hornemanni*, the smaller *exilipes* in northern Eurasia and the larger *hornemanni* in Greenland and North America. One record of the subspecies *hornemanni* has been published for Sweden (Lundevall 1941): a young male collected at Gällivare in Lapland on 27 April 1934 (specimen NRM S 1). The bird is large with a long wing, 82 mm, but looks otherwise as a Common Redpoll *Carduelis flammea* (Figure 1). Both the upper and under tail-coverts are heavily streaked. At the

time when Lundevall published the record it was not known that Arctic Redpolls of both subspecies have under tail-coverts that are purely white or white with only a very narrow and pointed shaft streak whereas almost all Common Redpolls have coverts with broad dark shaft streaks. I have examined a large number of specimen of all taxa within the redpoll complex. The focal bird simply looks like an unusually large Common Redpoll.

The measurements of the Gällivare bird are as follows (Lundevall's within parenthesis): wing 82 (82) mm, tail 63 (65.5) mm, tarsus 16.0 (16) mm, bill to skull 11.0 mm (10.0), bill to feathering 8.3 (8.6) mm, bill depth 7.1 (6.6) mm. Normal Arctic Redpolls of subspecies *exilipes* and Common Redpolls of subspecies *flammea* are smaller with wing length not exceeding 80 mm and tail length not exceeding 62 mm. Bill depth at feathering of *exilipes* is less than 7.0 mm. The specimen could possibly be a variety of *Carduelis flammea* called *holboellii*. However, although the large size would indicate this, the bill shape is not perfect for var. *holboellii*, and the specimen is best regarded as an aberrant bird with no definite identification. The record of ssp. *C. h. hornemanni* should therefore in my opinion be removed from the Swedish list.

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Short-tailed Shearwaters *Puffinus tenuirostris* forage in Grey Whale *Eschrichtius* *robustus* mud plumes

Kortstjärtade liror Puffinus tenuirostris
födosoöker i sedimentmolnen efter
födosoökande gråvalar Eschrichtius
robustus

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The terrestrial ecology research expedition "Berzingia 2005" used the icebreaker Oden to transport researchers between field sites along the coast of Chukotka and Wrangel Island. In addition, some oceanographic work and chance bird observations



Figur 1. Short-tailed Shearwater *Puffinus tenuirostris*. Kortstjärtad lira. Photo: Jonas Bonnedahl.

were carried out during transit between stations.

On 6–7 August 2005, in the Bering Strait and Chukchi Sea, approximately between 66° 40' N, 170° 50' W and 67° 16' N, 173° 50' W the Oden passed an area with large flocks (>10 000 in each flock) of Short-tailed Shearwaters *Puffinus tenuirostris* (Figure 1 and 2) and many feeding Grey Whales *Eschrichtius robustus* and Humpback Whales *Megaptera novaeanglie*. The shearwaters were feeding mainly at the surface, but were

attracted to both whale species as soon as they surfaced. Only foraging Grey Whales that emitted mud plumes held the attention of the birds for more than a few seconds; the birds rapidly lost interest in Humpback Whales and Grey Whales that were not actively foraging. The first birds arriving to a mud plume would pluck prey at the surface for up to approximately 30 seconds before other birds aggressively replaced them. Birds continued to be attracted to the mud plumes for more than one minute, but birds that arrived later seemed to spend less time in the mud plume than the first arrivals. In total, several tens of shearwaters (up to at least 54) would seek out an individual mud plume. A few Black-legged Kittiwakes *Rissa tridactyla* were also present and would actively seek out the mud plumes. These would stay in a plume longer than the shearwaters and would not be replaced by other birds, but behave aggressively against the shearwaters.

At three occasions shearwaters were also seen attracted to Grey Whale mud plumes in areas without large flocks of shearwaters. In these cases 5–6 shearwaters and as many kittiwakes would attend a feeding whale, successively moving to the next mud plume when the whale surfaced again; both



Figur 2. The local density of Short-tailed Shearwaters *Puffinus tenuirostris* in the Chukchi Sea may be very high. Kortstjärtade liror kan förekomma i hög täthet i Tjukthjerhavet. Photo: Jonas Bonnedahl.

the Shearwaters and Kittiwakes would remain in the previous mud plume until they could move to the next one.

Grey Whales are the only large cetaceans that are specialised bottom feeders (Evans 1982, Jones et al. 1984). When a Grey Whale surfaces after a feeding dive, sediment is strained out between the baleen creating a mud plume at the surface. Several species of seabirds are known to forage in these mud plumes (Harrison 1979, Obst & Hunt 1990), but there appears to be no previous account in literature that short-tailed shearwaters do so.

Short-tailed Shearwaters nest in the southern hemisphere and winter in the northern up to the Bering and Chukchi Seas. While wintering, the shearwaters feed mainly on euphausiids (Krill), but also consume some copepods and fish (Hunt et al. 2002). The actual food organisms used by the shearwaters foraging in mud plumes is not clear. But comparing areas with and without large flocks, the waters with large flocks contained much higher levels of chlorophyll and zooplankton as apparent from the water samples of the on-board oceanographic programme. It seems likely that the shearwaters were attracted to the area primarily because of a generally high availability of food items. As the birds were competing fiercely for a good feeding spot in a mud plume, the mud plumes must carry a substantial added foraging benefit.

It is notable that birds foraging in the mud plumes outside of the large flocks spent more time in the mud plumes and did not actively forage outside the mud plumes while the whale was at the bottom. As Obst & Hunt (1990) note, birds attending mud plumes that derive from Grey Whales foraging on benthic amphipods, either quickly lose interest in a mud plume as the larger particles of food sink, or they remain to forage on very small particles of food that remain near the surface. The difference in the behaviour of the shearwaters under the two circumstances described above may reflect differences in the types of prey fed upon by the whales. Also, the oceanographic measurements indicated that there were fewer food items outside of the mud plumes in these areas, and as the number of birds was low there was less competition for good spots in the mud plumes.

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References

- Evans, P.G.H. 1982. Associations between seabirds and cetaceans: a review. *Mammal Review* 12: 187–206.
- Harrison, C.S. 1979. The association of marine birds and feeding Grey Whales. *Condor* 81: 93–95.
- Hunt, Jr. G.L., Baduini, C. & Jahncke, J. 2002. Diets of Short-tailed Shearwaters in the southeastern Bering Sea. *Deep-Sea Research II* 49: 6147–6156.
- Jones, M.L., Swartz, S.L. & Leatherwood, S. 1984. *The Gray Whale, Eschrichtius robustus*. New York, Academic Press.
- Obst, B.S. & Hunt, Jr. G.L. 1990. Marine birds feed at Gray Whale mud plumes in the Bering Sea. *Auk* 107: 678–688.

Sammanfattning

Gråvalar *Eschrichtius robustus* är de enda stora valar som är söker föda genom att filtrera botten-sediment. Då valen återkommer till ytan uppstår ett sedimentmoln då sediment pressas ut mellan barderna.

Under den svenska expeditionen “Beringia 2005” sågs flockar om flera 10 000 övervintrande kortstjärtade liror *Puffinus tenuirostris* i Tjukthjervhavet. I områden där även födosökande gråvalar förekom, sökte lirorna aktivt föda i sedimentmolnen. Kortstjärtade liror lever i första hand på krill, och i de områden där de stora flockarna av liror observerades förekom höga koncentrationer plankton. Eftersom lirorna trots tillgången på plankton dras till sedimentmolnen måste dessa innehålla organismer som är extra attraktiva som föda. Det är sedan tidigare känt att andra havsfåglar dras till sedimentmolnen, men detta är första gången det beskrivs för kortstjärtad lora.

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