

# Golden Plover *Pluvialis apricaria* breeding in Jameson Land, East Greenland

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Nederlandse Groenland Expeditie Scoresbysund, 1973 & 1974

(Med et dansk resumé: Hjejele *Pluvialis apricaria* fundet ynglende i Jameson Land, Østgrønland)

## INTRODUCTION

The main purpose of the Nederlandse Groenland Expeditie in 1973 (T.M. van Spanjfd the author) and 1974 (D.G. Rebel and the author) was the study of the ecology of the Long-tailed Skua *Stercorarius longicaudus*. In both years the base camp of the expedition was at Kap Stewart in south-east Jameson Land in Scoresbysund district (fig. 1). In 1973 we were in this district from 27th April until 10th September and in 1974 from 18th May until 11th September. Reports of our work on the skuas, cliff sea-birds and waders in general will be published elsewhere, but our observations of Golden Plovers in Jameson Land deserve special mention. Preliminary reports have already been published (de Korte, 1973 and 1974).

## SURVEY AREA (FIG. 1)

Jameson Land is an extensive tundra region with low hills and heather-clad ridges. From the south coast to the north the land rises gently from sea level to a height of at most 900 m in the southern part. The east coast along Hurry Inlet consists of steep cliffs. In the higher parts the rivers have created wide valleys which have quite a luxuriant vegetation on the southward facing slopes. In May the whole land is still covered with snow, which disappears in the course of June. In inland valleys where conditions are more arid (fig. 2) this may happen two weeks earlier than along the coast. Also from one year to another there may be a considerable difference in snow-cover in the same month.

## FORMER RECORDS OF THE GOLDEN PLOVER IN GREENLAND

It has often been suspected that the Golden Plover bred in Greenland, but real proof has never been found (cf. Salomonsen, 1950). The species is known to be an annual summer visitor to the southern part of the West – and East – coast of Greenland (Salomonsen, 1950, 1967). The observations fall mainly into two categories, viz. adult birds arriving from the end of April to about the middle of June and a group of adult and young birds seen mainly in September and October. Summer records are scanty. In Angmagssalik (Helms, 1926) and Scoresbysund district pairs of these birds were occasionally observed. In 1928 Pedersen (1930) saw pairs in spring and young in autumn and thought that the Golden Plovers were probably breeding along the south coast of Jameson Land and the east coast of Hurry Inlet. On 3th August 1933 Bertram et al. (1934) saw an adult and an immature bird at Constable Pynt. In 1962 at the end of July, Hall (1966) encountered a pair in southeast Scoresby Land (H in fig. 1) which showed breeding behaviour. A nest was not found, but young birds were reported on 14th and 20th August. Salomonsen (1967) rejects these observations as a proof of breeding, as according to him the plumage of the adult birds described by Hall was not breeding plumage.

## BREEDING IN JAMESON LAND

In 1973 we stayed at first on Rathbone Ø at the east coast of Liverpool Land and saw our first Golden Plover on 8th June. On 13th June

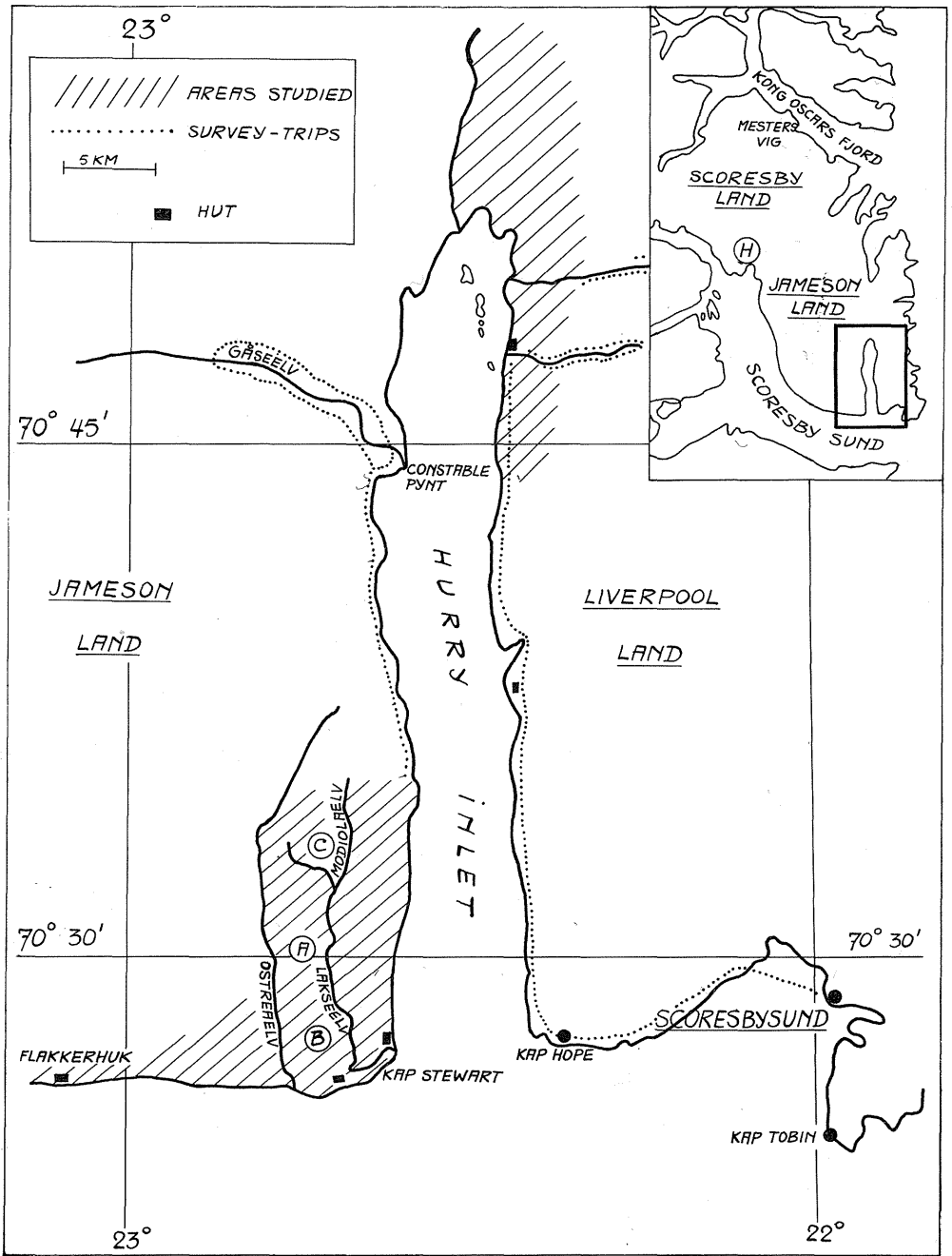


Fig. 1. Map of Scoresbysund district with areas investigated in 1973 and 1974. Breeding sites of Golden Plover are indicated by A (1973), B, C (1974) and H (probably breeding in 1962, see Hall (1966)). Kort over Scoresbysund distrikt med de områder, der blev undersøgt i 1973 og 1974. Højelens ynglepladser er angivet ved A (1973), B, C (1974) og H (sandsynligvis ynglende allerede i 1962, se Hall (1966)).



Fig. 2. Modiolaelv, looking North-west on 30th May, 1974. In this valley Golden Plovers had arrived in May on snow-free patches and were found breeding in July. Author's photograph.

*Modiolaelv, et kig mod nordvest den 30. maj 1974. Hjejlerne ankom her i maj til de snefrie pletter og blev senere fundet ynglende i juli.*

we came to Kap Stewart and there the first Golden Plovers (2) were seen on 21st June, along the coast. On 30th June a pair about 4 km inland (site B, fig. 1) was uttering alarm calls but we did not find a nest. At this place there was a pair during the whole summer. On 8th July another pair east of Ostreaelv (site A, fig. 1) showed distraction behaviour and here T.M. van Spanje found a nest with 4 newly hatched young. The next day the young had left the nest and we could not find them anymore. Between Ostreaelv and Hurry Inlet there may have been a total of 5 pairs holding territories in 1973. On 16th August we were in southeast Scoresby Land and saw 2 pairs uttering alarm calls near the place described by Hall (1966).

In 1974 we arrived at Kap Stewart on 22nd May. The snow cover lasted about 10 days longer than in 1973 and we still could make ski trips inland after the middle of June. On 30th May there was a pair at site A, which was

just free of snow at that time. That day two other pairs were seen on snow-free patches near Modiolaelv (fig. 2). On 25th June one bird was seen near Constable Pynt. On 2nd July we found a nest at site B (fig. 1, fig. 3), containing 3 eggs (measurements: 30 g, 34,6 x 49,8 mm; 30,5 g, 34,3 x 51,5 mm; 30 g, 34,1 x 52,2 mm). Two days later there was a fourth egg (28,5 g, 33,6 x 49,9 mm). On 7th July the nest was empty, probably robbed by an Arctic Fox *Alopex lagopus*. The predation of foxes on wader nests turned out to be very heavy; this was probably because of the scarcity of Greenland Lemmings *Dicrostonyx groenlandicus* in that year. On 2nd July we found at site A a pair showing distraction behaviour, but a nest was not found. On 9th July no Golden Plovers were seen anymore at this place. On 13th July we found a nest with 4 eggs (measurements: 29,5 g, 34,8 x 51,2 mm; 30,5 g, 34,9 x 52,00 mm; 28,5 g, 34,8 x 50,0 mm; 31 g, 34,5 x 50,7 mm) near Modiolaelv



Fig. 3. Nest (B) of Golden Plover with 3 eggs, 2nd July. Author's photo.

*En af Højlerederne (B) med 3 æg, 2. juli.*

(C in fig. 1, fig. 2). When found the male was incubating; later the female took his place. On 15th July the male (fig. 4) was trapped (cagetrapp) and ringed (weight 195 g, wing 185 mm). The nest was empty on 16th July, probably robbed by an Arctic Fox. After this mishap we lost the inspiration to search for other nests, but in the whole area surveyed between Ostreaelv and Hurry Inlet (about 90 km<sup>2</sup>) at least 6 pairs were holding territories. In the second half of July we regularly saw 3 adult Golden Plovers near site B; they were mostly together with some Knots *Calidris canutus* or Dunlins *Calidris alpina*.

#### BREEDING HABITAT

In Jameson Land steep south-facing slopes in the lee of north-eastern winds, which carry the snow in winter, have often a thick snow layer throughout the summer. Dunlins often nest near the base of this snow in wet areas. Along the east- and west-facing slopes along rivers,

where conditions are rather dry in summer, we found the nests of Sanderlings *Calidris alba* and Golden Plovers. The three Golden Plover nests mentioned above were all situated on the upper part of a gentle slope, less than 100 m from a little stream. Nest A (7 km inland) was about 250 m above sea level on a stony east-facing slope, with a sparse *Dryas octopetala* vegetation. Nest B (4 km inland) was about 200 m above sea level on a rather dry west-facing slope with quite an extensive *Dryas octopetala* vegetation (fig. 3). Nest C (13 km inland) was about 350 m above sea level on a rather moist west-facing slope among *Cassiope tetragona* hummocks. Both the *Dryas* and *Cassiope* vegetation indicate a moderate thin snow layer, which disappears relatively early in summer (Rønning, 1965).

#### SUBSPECIES AND PLUMAGE

Most of the Golden Plovers seen by us in Jameson Land showed the characters of the northern subspecies *Pluvialis apricaria altifrons* (Witherby et al. 1952; Bannerman & Lodge, 1963). But some showed the characteristics of the southern subspecies *Pluvialis apricaria apricaria*. The Greenlandic Golden Plovers are mostly ascribed to *P. a. altifrons* (Salomonsen, 1950, 1967). Hall (1966) describes Golden Plovers with young in southeast Scoresby Land as follows: 'The parent bird entirely lacked the black cheeks and throat of *Pluvialis apricaria altifrons* ... and more closely resembled the southern race *P. a. apricaria*. This description was for Salomonsen (1967) a reason to assume that these birds were not in full breeding plumage and were immatures. The pattern of geographical variation in the Golden Plover seems to be more complicated than hitherto believed. It seems that in most populations there are birds with as well 'northern' as 'southern' characteristics (Fabricius & Hald-Mortensen, 1969). The difference between males (most clearly) and females (tend to male *P. a. apricaria*) and between adults and immatures (not fully developed breeding plumage tends to *P. a. apricaria*) can give rise to problems as to which of the two races a bird should belong.

#### DISCUSSION

It has long been taken for granted that the Golden Plovers seen in Greenland were birds

belonging to the Icelandic breeding population (Salomonsen, 1950 and 1971; Nørrevang, 1963). It was assumed that these birds had missed Iceland on their spring migration. The autumn records were assumed to be due to individuals drifted to Greenland by adverse winds when leaving Iceland. This possibly holds true for part of the Golden Plovers seen in Greenland and probably this was the way the first breeding birds came there. In my opinion, it is possible that the Golden Plover has bred for a long time in East Greenland, without people having noticed it. In Jameson Land it is a bird locally as common as e.g. the Knot. The chance that the breeding places have been visited in the past during summer seems small. At the time the birds actually breed in the inland valleys transport by dog sledge is impossible and transport by boat is of course only along the coast.

During the last decades the number of Greenland records has increased considerably (Salomonsen, 1950), so it is probable that there are more Golden Plovers in Greenland than formerly. This may be due to the amelioration of the arctic climate during this century (Vibe, 1967), favouring conditions for the Golden Plover, which has, outside Greenland, a boreo-low arctic distribution. Compared with the other waders breeding in Jameson Land, viz. Ringed Plover *Charadrius hiaticula*, Turnstone *Arenaria interpres*, Knot, Dunlin and Sanderling, the Golden Plover is a large bird with the longest incubation and fledging period (together about two months, Bannerman & Lodge, 1963) of them all. It cannot start breeding earlier than the other waders, because of the snow, so it has to complete the breeding cycle later. In August when the small waders are leaving the tundra and gathering along the shores for the autumn migration, the Golden Plover is the only wader which can be encountered inland caring for its young. When conditions become a little more extreme (lower temperature, more snow) the summer may become too short to complete the breeding cycle. A situation which also in other waders sometimes results in (partial) non-breeding years.

The Greenland — Old World distribution of the Golden Plover is rather similar to that of the Whimbrel *Numenius phaeopus* (not yet described as breeding in Greenland, Nørrevang, 1963). It is quite possible that other species breed unnoticed in this largely unexplored country.

## ENGLISH SUMMARY

During two expeditions to Scoresbysund (27th April — 10th September 1973 and 18th May — 11th September 1974) the south-east corner of Jameson Land was chosen as a working area. This is a hilly country with many rivers and valleys, on the slopes of which several species of waders breed. In both years we noticed in June that several pairs of Golden Plovers had arrived on snow-free patches inland. In July about 6 pairs were holding territories between Ostreaelv and Hurry Inlet (fig. 1). On 8th July 1973 a nest with 4 newly hatched young was found on a dry stony slope (A in fig. 1). On 2nd July 1974 a nest with 3 eggs (on 4th July 4 eggs) was found on a slope with some *Dryas octopetala* vegetation (B in fig. 1, fig. 3). On 13th July 1974 a nest with 4 eggs was found on a rather moist slope between hummocks of *Cassiope tetragona* (C in fig. 1).

Former records of Golden Plovers with juveniles in Greenland, Pedersen (1930), Bertram et al. (1934) and Hall (1966), suggest that at least during this century these birds have bred more or less regularly in the Scoresbysund district. The amelioration of the climate in the North Atlantic during this period (Vibe, 1967) is probably the reason why these birds are now more numerous in these regions than in former days. We must keep in mind, however, that in the past breeding of the Golden Plover possibly was overlooked and that it already a long time has bred in East Greenland.

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## DANSK RESUME

### Hjejlje *Pluvialis apricaria* fundet ynglende i Jameson Land, Østgrønland

To nederlandske ekspeditioner i 1973 og 1974 havde til hovedformål at studere økologien hos Lille Kjøve *Stercorarius longicaudus* i Jameson



fig. 4. Male Golden Plover from nest C near Modiolaelv. Author's photo.

*Hannen fra rede C, nær Modiolaelv.*

Land, Østgrønland. Der blev dog også gjort andre iagttagelser, af hvilke flere redefund af Hjejle *Pluvialis apricaria* var de mest bemærkelsesværdige. I 1973 fandtes en rede med 4 nyklækkede unger, men i området fandtes desuden 6 territoriehævdende par. I 1974 fandtes først en rede med 3 æg, og senere endnu en med 4 æg. Polarræve gjorde tilsyneladende et kraftigt indhug på ynglefuglene i området, også Hjejlerne.

Der gives en beskrivelse af ynglehabitaten, som også illustreres på fig. 2 og 3.

Det diskuteres hvilken race disse Hjejler kan tilhøre. Problemet er mere uoverskueligt end man skulle tro (Fabricius & Hald-Mortensen, 1969).

Tidligere iagttagelser af Hjejler i området gennemgås. Der har flere gange været formodninger om ynglende Hjejler i dette område, bl.a. fandt Hall (1966) territoriehævdende fugle i 1962. Reden fandtes imidlertid ikke, men store unger sås i august. Også andre har fundet tegn på ynglende Hjejler, f.eks. Helms (1926), Pedersen (1930) og Bertram et al. (1934), men det afgørende redefund har altid manglet.

På baggrund af fundene i 1973 og 74 anser forfatteren det dog for sandsynligt, at Hjejlen har ynglet i området flere gange tidligere, f.eks. 1962.

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