

OBSERVATIONS ON THE WADERS OF EQALUNGMIUT NUNAAT, WEST GREENLAND

by A.D. Fox

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The breeding waders of central west Greenland are poorly known. During biological expeditions to Eqalungmiut Nunaat in 1979 and 1984, observations were made on passage and breeding waders. The most abundant of breeding wader were Red-necked Phalaropes, with Ringed Plovers and Purple Sandpipers also breeding at very low densities. A Snipe was seen drumming in 1979, apparently the first time such behaviour has been recorded in Greenland, whilst a Grey Phalarope was also seen. The two seasons had strongly contrasting patterns of spring thaw, and the effects of the different weather patterns on the phenology of Red-necked Phalarope arrival and breeding is discussed.

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INTRODUCTION

Two biological expeditions spent the arctic summers (May-August) of 1979 and 1984 in an area of central west Greenland studying Greenland White-fronted Geese *Anser albifrons flavirostris*. The study area, Eqalungmiut Nunaat (67° 30' N, 50° 30' W, Figure 1), is little visited except during July and August of each year when Greenlanders hunt Caribou *Rangifer tarandus* and trap Arctic Char *Salvelinus alpinus*. Although the subject of general descriptions by Salomonsen (1950, 1967), there are few records of breeding waders in west Greenland. This short note summarises observations of waders in Eqalungmiut Nunaat during the two summers of contrasting weather conditions.

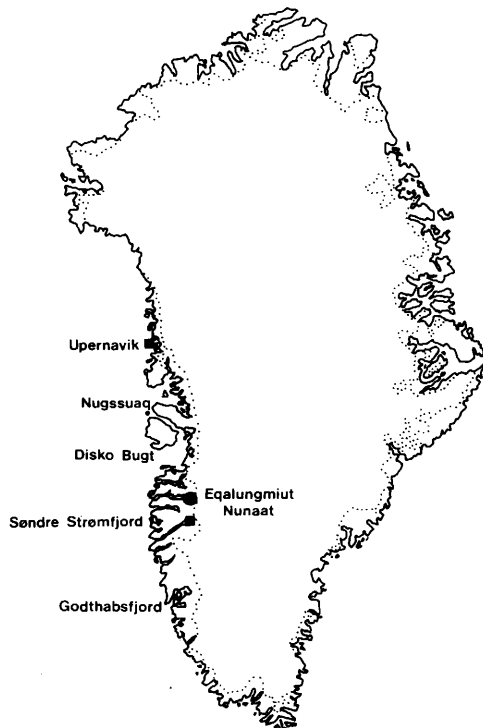


Figure 1. Greenland, showing the location of Eqalungmiut Nunaat and other places mentioned in text.

THE STUDY AREA

Eqalungmiut Nunaat is a discrete area of 750 km² adjacent to the Greenland ice-cap. Conditions here are typical of large areas of central west Greenland between Disko Bugt in the north and Godthabsfjord in the south, with the major landform being a uniform gneissic plateau 400-600 m a.s.l. The plateau is incised by ancient deep glaciated valleys which form lush lowland areas. The vegetation of the lowland valley areas is low arctic steeps dominated by the grass *Calamagrostis lapponica* with a ground layer of the moss *Aulacomnium turgidum*. However, on warm south-facing slopes and along river courses, an open *Salix glauca* scrub community is dominant.

The plateau is more exposed, with dwarf shrub heath and dry, barren open fjell-fields on exposed hill-tops and ridges. Uplands and lowlands alike are dotted with lakes and mires both of which provide important habitat for nesting waders. Most wetlands consisted of moss-sedge marsh communities, dominated by *Sphagnum squarrosum*/*Eriophorum* (both *E. angustifolium* and *E. scherzeri*). *Carex stans* and *Salix arctophila* are abundant at lower sites and *Carex rariflora* at higher altitudes. Fox (1981) gives full details of the range of habitats and plant communities found throughout the area.

CLIMATE

Situated adjacent to the ice-cap, Eqalungmiut Nunaat experiences a continental-type climate typified by high summer temperatures, low precipitation and low relative humidity. There is frequently little cloud cover and conditions are often calm. However, the patterns of spring thaw in 1979 and 1984 were radically different. On 7 May 1979 there was only 15-20% snow cover, yet on the same date in 1984, there was total snow cover to a depth of 80 cm, with much deeper drifting in many areas. This had considerable consequences for the phenology of plant growth and animal activity. In 1979, running water was frequent at low altitude on our arrival (7 May), but was delayed by over three weeks in 1984. Deep snow persisted throughout May 1984, until a dramatic 'fohn', or warm katabatic, wind on 3 June brought a rapid thaw at all altitudes. The result of

this swift and late thaw was to eliminate altitudinal differences in thaw which were pronounced in 1979. Then, lowest altitudes thawed first, and higher altitudes thawed progressively during the summer. This difference in thaw was reflected in differing nesting strategies between years of both Greenland White-fronted Geese (Fox & Stroud in press) and Lapland Buntings *Calcarius lapponicus*; Fox et al 1987.

THE WADERS OF EQALUNGMIUT NUNAAAT

Five species of wader were recorded in Egalungmiut Nunaat between 7 May and 20 August 1979, and 5 May and 7 August 1984.

Ringed Plover *Charadrius hiaticula*

The Ringed Plover is extremely common in high arctic northern and eastern Greenland (Meltofte 1985), yet it is very local in low arctic west Greenland where it is largely restricted to coastal areas (Salomonsen 1967). Salomonsen (1950) recorded breeding from only two areas in west Greenland, both near Disko Bugt. However, for the past 22 years the species has occurred during the summer in inland dune systems 2.5 km from Søndre Stromfjord Air Base (Figure 1) and has been proved nesting there since 1975 (Steen Malmquist in litt.).

During 1979 in Egalungmiut Nunaat, a pair were present in a similar sandur, or braided glacial river, dune system throughout the summer at times showing distraction display to humans, and by 14 August there were at least 15 birds in the dunes including several recently fledged young. In 1984, breeding was confirmed from the same site when two small chicks were caught on 10 July. Another pair showed strong distraction displays at another dune site. The sandur dunes are botanically described by Fox (1981).

Due to the actively glaciated nature of this part of inland Greenland, there are numerous such dune systems scattered along the sides of melt rivers draining the glaciers of the inland ice. It would seem likely that there are scattered pairs of Ringed Plover nesting in similar situations throughout west Greenland, but total numbers are extremely small compared to north-east Greenland. No birds were seen in other habitats, although Salomonsen (1950) recorded birds in east Greenland using a variety of dry, stoney and open habitats ranging from bare granite plateaux to sloping hillsides.

Purple Sandpiper *Calidris maritima*

Purple Sandpipers breed throughout low arctic west Greenland, mainly in the interior. Salomonsen (1950) states that the species is rarely found more than 4-5 km from fjords, is most abundant at 100-200 m a.s.l., and nests down to fjord margins. The species was found nesting at eight sites in Egalungmiut Nunaat in 1979 in an area of 750 km², when all but one of the breeding records were more than 10 km from the nearest fjord, at altitudes of between 400 and 600 m a.s.l.

The exception was a very recently fledged juvenile seen on a fjord on 3 August which may have travelled some distance from its natal site. In 1984, there were only six records of Purple Sandpiper anywhere, and most were from the only breeding site at c450 m altitude. In both years the density of nesting pairs was extremely low, and certainly never approaching the 1 pair/km² reported by Longstaff (1932)

from an area further south in west Greenland.

Snipe *Gallinago gallinago*

This species is rare in Greenland, with only 17 accepted records up to 1967 (Salomonsen 1967). A bird was seen and heard displaying in Egalungmiut Nunaat on five dates between 23 May and 26 June 1979. It was witnessed drumming and "tick-tocking" on many occasions by several observers all of whom were familiar with the species. Unfortunately, no detailed field notes were taken of the bird, with the result that the record remains unacceptable to the Sjaeldenhedsudvalget, the rarities committee of the Danish Ornithological Society.

Red-necked Phalarope *Phalaropus lobatus*

The Red-necked Phalarope was the only 'common' wader in the study area in both years. It nested on small pools, along rivers, streams, the edges of lochs and in mires. Densities were very difficult to determine. In a lowland marsh area in 1979, two nests were found within a 1 km² survey plot, but up to 27 birds were present in a similar marsh area of c 0.8 km² during mid-June. Doubtless many more pairs were present in Egalungmiut Nunaat than just the number of nests and broods found suggested. One small pool 100 m a.s.l. had up to seven pairs consistently present in the same season, and most bred successfully.

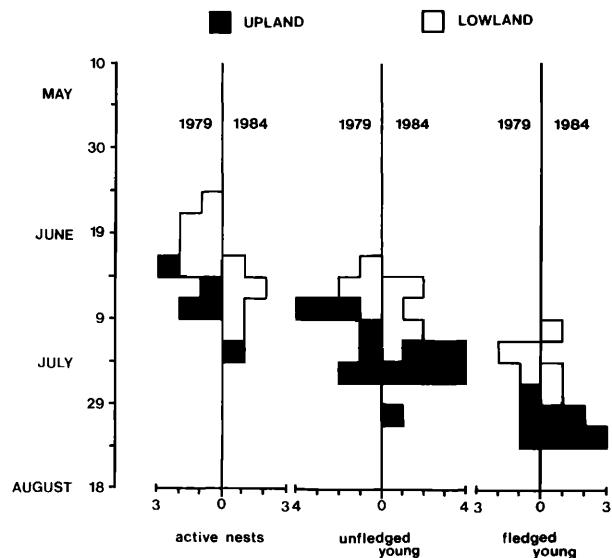


Figure 2. The location of Red-necked Phalarope nests in Egalungmiut Nunaat, with respect to altitude, in 1979 and 1984.

Densities breeding at higher altitudes (>300 m a.s.l.) were noticeably lower than in the lowland valleys, although the species nested successfully up to at least 550m altitude in both seasons. Densities in 1984 appeared generally lower compared with 1979 with at least 100 pairs in the study area, although there are no comparable census data to confirm this. The delayed thaw in 1984 apparently shortened the nesting season of phalaropes at all altitudes compared to 1979 (Figure 2). In 1979, the first Red-necked Phalaropes were seen on 10 May, with the main arrival during 16-20 May. In 1984, the first sighting was not until 31 May, and most birds arrived following the dramatic thaw on 3 June.

Grey Phalarope *Phalaropus fulicarius*

This species is restricted to the coastal areas of west Greenland (Salomonsen 1950) where it breeds on offshore islands north from Disko

Bugt to Upernavik District. A single vagrant was seen in Eqaqungmiut Nunaat (which lies 100 km from the open coast) on 2 July 1979. The bird was in full breeding plumage at a time when breeding birds would normally have been nesting. A period of severe cyclonic weather for several days prior to the sighting may have caused its occurrence far from its normal range in Greenland.

DISCUSSION

The inland areas of west Greenland may not hold the spectacular numbers of waders present in high arctic Greenland (Meltofte 1985), but the extent of suitable habitat and the densities of Red-necked Phalarope encountered suggest that the area is important for at least one breeding wader species. Our observations of Ringed Plover breeding in habitat more typical of the species in temperate regions than in other parts of Greenland, suggest that there may be a previously unrecognised, dispersed, population in interior west Greenland.

The presence of Snipe in 1979 apparently represented the first record of this species displaying in Greenland. Whilst its presence is perhaps anomalous, there were a number of other southerly vagrants such as Teal *Anas crecca*, Common or Ringed-billed Gull *Larus* sp., Lesser Black-backed Gull *Larus fuscus* and Short-eared Owl *Asio flammeus* in 1979; and Pintail *Anas acuta* Canada Goose *Branta canadensis*, Bean Goose *Anser fabalis* and Short-eared Owl in 1984, suggested that such occurrences of southerly waders are possibly more common than currently supposed.

With biologically depauperate inter-tidal areas at the heads of the inland fjords, this area of west Greenland does not seem likely to be an important staging area for waders moving up the west side of Greenland, or indeed, after crossing the inland ice from Iceland. There were signs of increased numbers of Red-necked Phalaropes during spring and autumn passage, but no other species showed signs of heavy movement through the study area. Observers were present in Eqaqungmiut Nunaat during the periods of peak wader migration across the Greenland ice-cap noted by Alerstam et al (1986), and any large, low-altitude, movements would have been noted. That they were not implies either that northerly breeding birds move up the coast away from the inland areas, or that those birds on the general WNW/NW migration path across the inland ice noted by Alerstam et al (1986) will arrive further north on the west coast - probably in the Disko Bugt/ Nugssuaq peninsula region. The latter seems more likely.

Most of inland west Greenland remains little visited by ornithologists, especially during the early months of the summer, and there is much more to learn of the distribution and abundance of waders in this area. However, our observations from a relatively small area suggest that low arctic west Greenland does not hold anything approaching the high wader densities of high arctic regions.

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