Mindre meddelelser

Vagtlen *Coturnix coturnix* på Færøerne

I Nordeuropa er Vagtlen kendt som en uregelmæssig ynglefugl, stærkt svingende i antal med lejlighedsvise topår, og med tilbøjelighed til at kolonisere nye områder for hurtigt at forlade dem igen (Cramp & Simmons 1979). Den synes at have været mindre hyppig i dette århundredes første halvdel end både før og senere, men dens skjulte levevis gør, at registreringen får et noget tilfældigt præg.

Færøerne udgør den nordvestlige grænse for Vagtlens udbredelse, idet den aldrig er truffet på Island (Æ. Petersen pers. medd.). Den tidligste henvisning er Landt (1800), der var præst på Færøerne i årene 1791-1799, og som en enkelt gang hørte Vagtel i denne periode (Streymoy). Fra sidste halvdel af 1800-tallet er der 8 fund af reder med æg: ca 1858 (Müller 1863); 1865 (Streymoy) og 1866 (Sandoy) (Feilden 1872); samt 1879 (Eysturoy, Streymoy, Nólsoy), 1882 (Streymoy) og 1890 (Nólsoy) (Andersen 1902). Alle disse kuld har været i H. C. Müllers besiddelse. P. F. Petersen på Nólsoy, en ivrig jæger og ornitolog som var oplært af Müller, anså ikke Vagtlen for sjælden og havde "skudt den for- og efterår" (i: Andersen 1898).

I dette århundrede er der ikke set Vagtler, endsige fundet reder, før en rede blev opdaget på Vágar i et af årene 1958-60 (Meltofte 1973). I 1980erne er enkelte fugle registreret på Mykines (1982; Bloch & Sørensen 1984), Vágar (1983; Boertmann et al. 1986), og Nólsoy (1987; Sørensen 1988). Ynglefund er kun gjort på Vidoy (Vidareidi), hvor Vagtlen til gengæld har optrådt konstant gennem nogle år. Fra 1984 foreligger et udokumenteret fund af et kuld Vagtel-kyllinger. Et andet kuld sås i 1988 (godkendt af SU), og i 1989 var der mindst 3 kuld med tilsammen ca 17 kyllinger (dokumenteret med video-optagelser men endnu ikke behandlet af SU).

Kroen fra 2 ihjelkørte Vagtler fra Vidareidi (ad. hhv. juv. hun) indeholdt store mængder frø af stor vandarve *Montia fontana* (bestemt af Jóhannes Johansen, Tórshavn), men ingen andre plantefrø og ingen insekter.

Vidareidi ved Færøernes nordligste punkt ligger godt beskyttet mod de fremherskende vestlige og sydvestlige vinde, der giver tåge og regn over det meste af Færøerne om sommeren. Efter færøske forhold er det et optimalt sted for Vagtler – jvf. i denne sammenhæng, at de 4 kuld æg fra 1879 og 1890 var rådne, efter H. C. Müllers mening p.g.a. det fugtige vejr i de pågældende sæsoner. Selve ynglepladsen i Vidareidi er en ca 5 ha nyopdyrket græsmark på en sydøstvendt skråning, d.v.s. i læ for vestenvinden, veldrænet og soleksponeret. Ejerne af jorden, Sámal og Niels Jacob Absalonsen, lader nu et stykke af græsmarken stå uslået af hensyn til Vagtlerne.

Alle redefund på Færøerne er gjort i august-september i forbindelse med høslæt, der kun foretages i disse to måneder. Ellers overses Vagtler let, og artens status er derfor noget usikker. Den har åbenbart i perioder været regelmæssig, men "tidligere ret hyppig", som Salomonsen (1963) angav, har den næppe været. Samme forfatter (Salomonsen 1935) har tidligere omtalt Vagtlen som meget fåtalligt men sandsynligvis årligt ynglende, og den karakteristik er sikkert meget dækkende for situationen, både i forrige århundrede og i dag.

Summary: Breeding records of the Quail in the Faeroes

The Quail bred occasionally or perhaps annually in the Faeroes during the last century, when a total of 8 clutches were reported from various localities between 1858 and 1890. But apart from a single record around 1960, the Quail has not been known to breed on the islands during this century until 1984, when it appears to have nested at Vidareidi, the northernmost point in the Faeroes. Broods were found at the same place in 1988 (1) and 1989 (3). The site is a 5 ha hay-field on a southeast exposed slope.

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Navigerer Broget Fluesnapper *Ficedula hypoleuca* ved hjælp af stjernerne?

I august 1984 flyttede jeg nogle unge Brogede Fluesnappere fanget på træk på Christiansø til Strødam i Nordsjælland. I den næste måneds tid blev fuglenes orientering undersøgt ved hjælp af tragt-metoden i et mindre stjerne-planetarium (for en nærmere beskrivelse, se Rabøl 1981). På grund af kuplens ringe størrelse sås den kunstige stjernehimmel lidt forskelligt fra de fire tragte (Tab. 1), og samme tragt blev derfor brugt i alle forsøg med samme fugl.

Proceduren i forsøgene var, at fuglene fik fremvist en kopi af den rigtige stjernehimmel over Strødam – en kopi med hensyn til stjerne-breddegrad (Nordstjernens højde over horisonten), stjerne-længdegrad (rotations-fasen) og rotationshastigheden (15° i timen). Ved to lejligheder, 14.-15. august og igen 23., 24. og 25. august, ændredes stjerne-breddegraden imidlertid fra 56°N til 30°N, svarende til at fuglene fra at se en dansk efterårs-stjernehimmel nu kikkede op på en nordafrikansk stjernehimmel (Fig. 1).

Spørgsmålet er nu, om fuglene opfatter den ændrede stjernehimmel med Nordstjernen kun 30° over horisonten som resultatet af en geografisk forflytning? Og desuden, om de ved hjælp af stjerne-navigation fastlægger deres position i relation til et målområde, der i undersøgelsesperioden må formodes at befinde sig et sted på trækruten mellem Nordtyskland og Spanien?

Kan der svares ja til begge disse spørgsmål, må vi forvente en orientering mellem VNV og N i de forsøg, hvor fuglene så en stjernehimmel på breddegraden 30°N (svarende til en simuleret forflytning til Nordafrika). Derimod skal orienteringen testet under en dansk stjernehimmel være et sted mellem SSØ og SV (Fig. 1).

Resultaterne (Fig. 2-3) stemmer desværre ikke ganske med de smukke forventninger. I starten forløb alt vel: Fuglene var klart S-orienterede. Men det fortsatte de med at være også i forsøgene den 14. og 15. august, hvor de jo blev præsenteret for den sydlige stjernehimmel; dog skiftede den ene fugl til en nordlig orientering den sidste nat. I de fem nætter mellem den 16. og 20. august råder så den store forvirring, med tendenser til en totoppet orientering med mest aktivitet omkring N og S. Den uklare orientering er bemærkelsesværdig: Tidligere var fuglene jo klart S-orienterede under den danske stjernehimmel. I nætterne den 21. og 22. august sker der imidlertid en stabilisering omkring en entydig sydlig oriente-

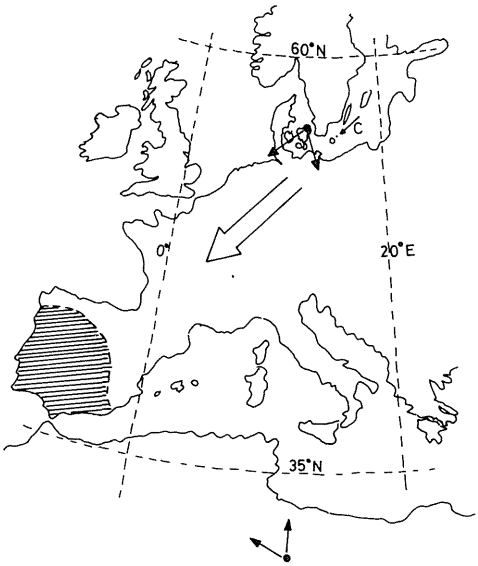

Fig. 1. Hvis fluesnapperne eksponeres under en planetarie-stjernehimmel svarende til Strødam, må man forvente en orientering mellem SSØ og SV. Eksponeres de derimod under en planetarie-stjernehimmel, hvor rotationspunktet (Nordstjernen) kun er 30° over horisonten, vil de måske opfatte den ændrede stjernehimmel som udslag af en geografisk forflytning til Nordafrika (den sorte prik) og orientere sig et sted mellem VNV og N. På det tidspunkt af året skal de nemlig befinde sig i trækruten et sted mellem Nordtyskland og Spanien. C viser fangststedet Christiansø.
C is Christiansø, the black dot in eastern Denmark is Strødam, and the black dot in northern Africa indicates the approximate position of the contemporary stellar sky at 30°N, i.e. the position of the simulated displacement. The hatched area in Spain and Portugal is the resting and feeding area used by almost all European Pied Flycatchers before the one-step trans-Saharan migration. The large white arrows shows the migratory track of the Swedish and Finnish breeding populations passing Christiansø. The arrows at Strødam and in North Africa encompass the directional sectors of orientation directed towards the migratory route, i.e. the expected orientation if stellar-based coordinate navigation is carried out.

Tab. 1. Stellar N viser retningen mod planetariets stjerne-N (i forhold til geografisk N), og Polaris altitude viser planetariets Nordstjerne-højde (= breddegrad) – begge som de vil registreres af en fugl midt i hver af de fire tragte placeret N, Ø, S og W omkring stjerne-projektoren. Der er klare forskelle mellem tragtene på grund af den lille afstand fra projektor til "himlen" (2 meter), og tragtenes afstande til projektoren (midt-til-midt afstanden er ca 40 cm).
The compass direction of Stellar N (Polaris) and the Polaris altitude, as viewed from the middle of the N-, E-, S- and W-funnels when the star-projector produces a starry sky of 56°N or 30°N, and Stellar N = 0°.

Tragt *Funnel*	Projector 56°N		Projector 30°N	
	Stellar N	Polaris altitude	Stellar N	Polaris altitude
N	0°	67°	0°	37°
E	340°	54°	347°	29°
S	0°	48°	0°	25°
W	20°	54°	13°	29°

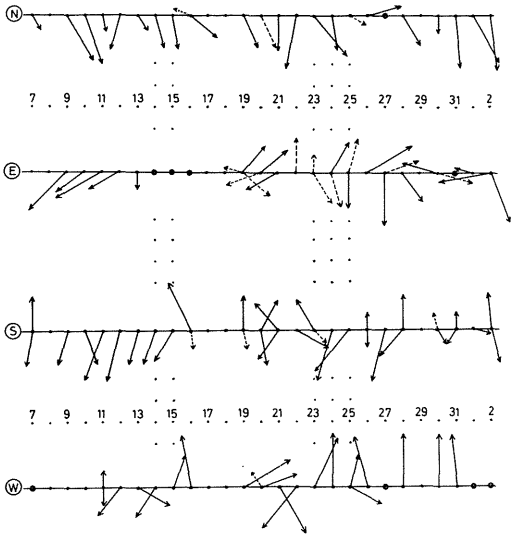

Fig. 2. N, E, S og W står for orienteringen i de fire tragte anbragt N, Ø, S og V i forhold til den centrale stjerne-projektor. De samme fugle er testet i N-, S- og V-tragten i hele perioden, medens to forskellige fugle blev undersøgt i Ø-tragten: En indtil 16. aug. og en anden fra 19. aug. Den vandrette akse viser datoerne i august og september, og de fem lodrette punktlinier de fem nætter, hvor fuglene blev eksponeret under en stjernehimmel svarende til 30°N. Pilenes retning viser orienteringen (N er opad), og længden er et udtryk for koncentrationen af aktiviteten omkring gennemsnitsretningen. Ret ofte viser fuglene en to-toppet orientering.
The orientation of five Pied Flycatchers in four funnels (N, E, S and W), from 7 Aug. to 2 Sep. On the night of 14, 15, 23, 24 and 25 Aug. the birds were exposed under the starry sky of latitude 30°N. The same three individuals were used in the N-, S-, and W-funnels, whereas two different individuals were used in the E-funnel (the first until 16 Aug., the other from 19 Aug. onwards). The arrows denote the orientation. Three different arrow-lengths are used to denote high, medium and low concentration. Hatched arrows of unimodal orientation signal low activity, whereas a hatched arrow in a bimodal activity pattern signals the minor peak or low acitivity. A white ring shows dis-orientation, and a small black dot without arrow or ring denotes a date where no experiments were carried out.

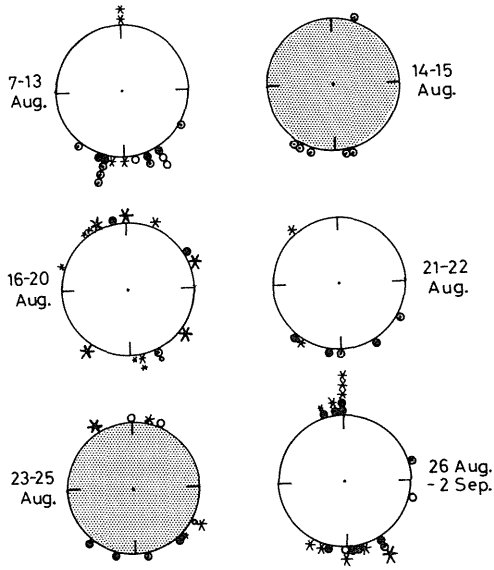

Fig. 3. Den samlede orientering af de tre gennemgående fugle i N-, S- og V-tragtene i de viste perioder. De to prikkede cirkler viser de to perioder, hvor fuglene var eksponeret under en stjernehimmel svarende til 30°N. Bemærk hvordan orienteringen i starten er klart sydlig. Senere optræder der også en klar nordtop – rimeligvis en mere eller mindre forsinket reaktion på synet af den sydlige planetarie-stjernehimmel 14.-15. aug. hhv. 23.-25. aug.
The orientation of the birds in the N-, S-, and W-funnels in six periods (compare Fig. 2). The two dotted circles denote experiments on star-latitude 30°N. Black, dotted and white dots show unimodal orientations of high, medium and low concentrations, respectively. A large and a small asterisk denote the major and the minor peaks of a bimodal activity pattern. A medium-sized asterisk refers to one of the peaks in a bimodal activity pattern in which the amount of activity is about the same in the two peaks.

ring. Da fuglene så igen den 23., 24. og 25. august eksponeres under den sydlige stjernehimmel, vender forvirringen (totoppetheden) tilbage, og denne gang hurtigere end under den første "forflytning". Endelig holder den totoppede N/S-orientering sig perioden ud, efter at fuglene endnu engang er blevet anbragt under en dansk stjernehimmel.

Resultaterne skal nok tydes derhen, at fuglene orienterer sig i normaltrækretningen, hvis de eksponeres for en planetarie-stjernehimmel, der svarer til den samtidige naturlige stjernehimmel. Med nogen *forsinkelse* reagerer de så med en mere eller mindre N-rettet orientering, når de præsenteres for en sydlig stjernehimmel, og forsinkelsen holder sig i nogen tid efter, at de er "flyttet" tilbage under den danske stjernehimmel. Det er imidlertid ikke til at afgøre, om den nordlige orientering skyldes en kompenserende reaktion baseret på stjernenavigation, eller om der "blot" er tale om omvendt retnings-orientering (i forhold til den sydlige normaltrækretning) baseret på stjerne-nord som retningsgiver.

Vi kan sikkert få svar på, hvad der skete i det lille og usle stjerne-planetarium, når jeg i september 1990 forhåbentligvis får gentaget og udbygget forsøgene i Tycho Brahe Planetariet i København.

Sådanne planetarieforsøg har fået fornyet interesse, efter at vi i efteråret 1987 flyttede 45 trækfugle fra Christiansø til Kenya, hvor de blev testet for orientering under den stedlige naturlige stjernehimmel (Rabøl 1989). Ca halvdelen af de Brogede Fluesnappere viste NV-N-orientering i den første uges tid efter forflytningen, og denne orientering kan tydes som resultat af en kompenserende koordinat-navigation fastlagt i relation til den afrikanske stjernehimmel. Om det virkelig forholder sig sådan, må imidlertid belyses med planetarie-forsøg, hvor man ved at ændre på stjerne-breddegraden og/eller stjerne-længdegraden *simulerer* en geografisk forflytning. Andre omverdensfaktorer, f.eks. magnetfeltet, lades uændrede, så hvis trækfuglen reagerer som forudsagt, er en simuleret forflytning et meget stærkt instrument til belysning af, at den manipulerede faktor (her stjernehimlen) er årsagen til retnings-ændringen og baggrunden for et navigationssystem.

Summary: Star-navigation in Pied Flycatchers *Ficedula hypoleuca*?

Eight juvenile Pied Flycatchers were trapped as migrants on Christiansø on 5 Aug. 1984 and the very same day transported to Strødam north of Copenhagen. Five of these birds were used in funnel-experiments almost every night between 7 Aug. and 2 Sep. The birds were tested within a small planetarium (radius 2 m, see Rabøl 1981) for as long as 4-5 hours around midnight. The "starry" sky was rotating with normal speed (15°/h counterclockwise around the Polaris) and the longitude and latitude were calibrated by contemporary observations of the natural stellar sky. The directions of stellar North and magnetic North coincided. Four funnels were placed close to the star projector in the directions N, E, S and W. Because of the small dome the stellar sky, as viewed from the center of the different funnels, was not the same (Tab. 1). These differences were the reason for always using the same funnel (position) for the same individual bird.

The purpose of the experiment was to throw light on the possible navigatory parameters, and I guessed that the star latitude was operating as a N/S-coordinate. The general procedure was to show the flycatchers a copy of the outside stellar sky for some nights and then by a sudden change of the rotational axis simulate a geographical displacement towards S. The shift was from 56°N to 30°N (Fig. 1). If the altitude of the rotational axis is a N/S-coordinate in a navigatory system "compensatory" orientation in the NW-sector is to be expected.

The results are shown in Figs 2-3. The treatment seems to induce an increased amount of reverse, northerly orientation – and there seems to be a time lag in the reactions. Whether or not the northerly peak is a reverse one-direction orientation in a clock-and-compass system, or a compensatory navigational response, is not possible to discern at present. The northerly peak, however, is probably functionally related to the northern peak in a bimodal orientation pattern found in Pied Flycatchers after displacement from Denmark to Kenya in Sep. 1987 (Rabøl 1989).

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Late autumn observations of birds within the Greenland Sea pack-ice

During the summer the pack-ice in the Greenland Sea locally supports sizeable numbers of birds, which utilize the phytoplankton-based production there. Most of these birds leave the ice before the winter, but small numbers of some species are known or supposed to remain within the pack-ice throughout the winter. Many explorers on ships frozen into the ice in different parts of the Arctic have, for example, seen Black Guillemots *Cepphus grylle* in temporal leads during mid-winter (examplified in U. N. Glutz von Blotzheim & K. M. Bauer (eds), Handbuch der Vögel Mitteleuropas 8: 1094-95, 1982).

Transect observations of birds within the pack-ice of the Greenland Sea have been made from June until September (e.g. F. Mehlum, Norsk Polarinst. Skr. 191: 1-56, 1989), and from the edge of the ice we also have winter and early spring observations (February - April; R. G. B. Brown, Polar Research 2 n.s.: 1-18, 1984). However, our knowledge of birds within the ice during the late autumn have so far been practically non-existent.

In October 1989 one of the authors (SB) took part, as an ornithologist, in a test cruise to the Greenland Sea made by the new Swedish ice-breaker HMS *Oden* (Fig. 1). The ship's mission was technical, to test its ice-breaking capacity and strain resistance in heavy multi-year ice, and since it usually remained on a steady course for hours there were excellent opportunities for transect observations of birds.

The counts were performed from the bridge, 20 m above sea level. Observations were made up to 7 hours a day and recorded for 10-minute periods. Besides the

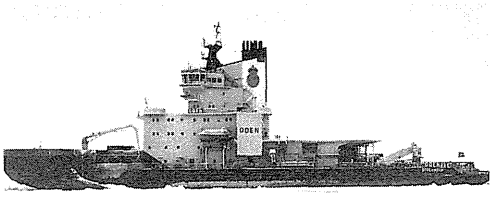

Fig. 1. The Swedish ice-breaker HMS *Oden* in the Greenland Sea.
Den svenske isbryder Oden *i Grønlandshavet.*

number of individuals and flock size, the age (when possible to determine), behaviour and flight directions were also recorded. The observations covered a c. 300 m wide zone on each side of the ship, to get as complete an overview of the traversed area as possible – at a time of the year when several species could be supposed to occur only as scattered individuals. As the speed of the ship, when cruising through ice of varying thickness, was not constant the figures presented here should not be directly recalculated into densities.

Oden entered the pack-ice on 3 October, at 76°35'N 5°29'W (Fig. 2). Until 6 October the course was approximately 350°, most of the time going straight and neglecting the varying distribution of ice and open water. The northernmost position, 79°31'N 5°50'W, was reached in the evening of 6 October. During the two following days only shorter distances were covered along a zig-zag route towards SE. On 9 October the ship (which always lay still during the night) started from 78°35'N 4°18'W at dawn and came out into the open sea at dusk, at 77°47'N 3°11'W. In all, 7 days were spent partly or wholly within the pack-ice (days 1-7, Fig. 2), and the observations there covered 190 10-minute periods.

During the cruise the weather was overcast with rather strong northerly winds (7-14 m/s) and temperatures between -5°C and -12°C. Visibility was reduced to around 300 m during days 3-6 due to fog, low clouds and snow.

The ice encountered during days 1-2 consisted of small-sized floes (AES standard), 1.5 - 2.0 m thick with narrow leads of open water between. The following days floes were larger (medium big) and leads wider, here and there with larger bodies of open water partly covered with thin new ice. During the last day the ship passed through an area with smaller floes and many rather wide leads (300-500 m).

Ivory Gull *Pagophila eburnea*

A total of 252 records (1.3 per 10-min. period) were made. Since the birds were prone to follow the ship many individuals were recorded during several consecutive 10-minute periods. An overall minimum estimate is 54 individuals (0.2 per 10-min. period), of which 51 could be aged. Close to the ice-edge (days 1 and 7) 32 individuals, of which 10 (31%) were juveniles, were recorded and aged. In contrast, the interior of the pack-ice (days 2-6) held distinctly lower numbers of Ivory Gulls (19; Tab. 1), of which only one bird (5%) was a juvenile (comparison of age-class distribution between the inner and outer parts of the ice: p=0.06; Fisher's exact test). The low percentage of juveniles and immatures normally seen in this species has recently been discussed by Brown & Mactavish (Arctic 41: 248, 1988), who speculated that the Ivory Gull has a generally low breeding success.

Until day 4, as long as the ship held its steady northerly course, the Ivory Gulls appeared to arrive at the ship from the north and, after having followed it for some time, resumed their original course towards south (cf. the observations of south-migrating Ivory Gulls in August-September 1975, in the drift-ice around 74°N; C. Hjort, Dansk Orn. Foren. Tidsskr. 70: 72-73, 1976). On emerging from the pack-ice (day 7) the gulls seemed to follow the ship for much longer periods.

On one occasion an adult Ivory Gull was first noticed when resting on the ice 10 m from a seal. All other birds were flying when first seen, and not associated with other birds or mammals. At three occasions Ivory Gulls were seen to take fish from the upwelling water behind the ship. One of the fishes (probably a polar cod *Gadus saida*; length c. 10 cm) was taken by an adult Ivory Gull which first hovered 5 m above the water and then dived, submerging at least 20 cm. Most of the time the gulls took small unidentified items, perhaps amphipods, from the water surface. They rarely landed on the water and never remained there for more than 5 seconds.

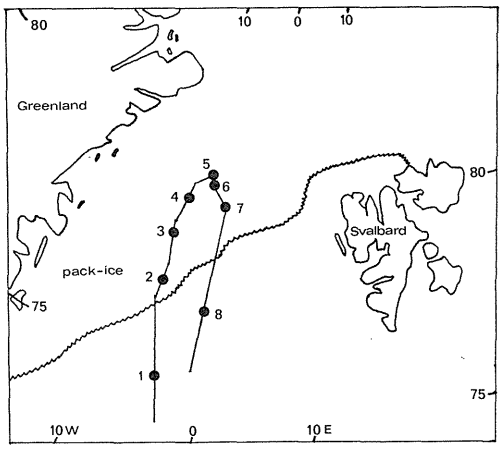

Fig. 2. The Greenland Sea with the ice edge in early October 1989 and with the route taken by *Oden*. The numbered dots indicate the position at the beginning of each day, with day 1 being 3 October.
Kort over Grønlandshavet, med Oden*'s rute indtegnet. Skibets position ved begyndelsen af hver af de otte dage er markeret (dag 1 er 3. oktober 1989).*

Black Guillemot *Cepphus grylle*
In all 37 individuals (22 observations) were recorded within the ice (0.2 per 10-min. period), all during days 4 and 7. The birds occurred singly or in small parties of up to 5. At five occasions Black Guillemots came flying on a steady course some 20-40 m above the ice, but their flight directions appeared random.

Little Auk *Alle alle*
A total of 168 individuals were recorded (0.9 per 10-min. period). The majority were seen during days 4 and 7. In about 60% of the cases the Little Auks occurred in small parties of 1-5 individuals, otherwise in somewhat larger flocks of up to 27 birds. The average flock size was significantly larger within the pack-ice (x=6.4), compared with data from 81 flocks observed south of the ice on 20 October (x=2.9) (U-test, $p<0.01$). The Little Auks were mostly seen resting on the water, mainly in leads about 100 m or more across. Many took off a few 100 m in front of the approaching ship.

Other species
One Fulmar *Fulmarus glacialis* heading southwest 30 m above the ice on day 2 was the only observation of that species within the ice, although it was frequently observed as soon as the ship left the ice. Two Glaucous Gulls *Larus hyperboreus* (one juvenile and one immature) followed the ship on its way out from the ice on day 7.

Observations outside the ice
On day 1 observations were performed in the open sea at c. 76°00'N during 13 10-min. periods. Here, Little Auks were much more abundant than within the pack-ice (Tab. 1). Fulmars, Kittiwakes *Rissa tridactyla* and Brünnich's Guillemots *Uria lomvia* were also seen in substantial numbers. The mean flight direction of 11 independent observations of Brünnich's Guillemot was 264° (range 230°-280°), which indicates that they were still on migration towards winter quarters off SW Greenland. The Kittiwakes, of which 90% (n=25) were adults, came in loose groups with a mean flight direction of 179° (range 160°-200°).

Discussion
When these October observations are compared with the summer data from the pack-ice in roughly the same parts of the Greenland Sea (Mehlum 1989) a not unexpected scarcity of birds is noted. In summer the Ivory Gull is more common, although not seen everywhere and mostly in small numbers, though it may attain densities of 3-10 birds per 10-min. period and occasionally as many as 30-100 birds per 10-min. period. The Little Auk is very common in the outer part of the ice (and outside it) in summer, often reaching densities of 30-100 birds per 10-min. period. With a few notable exceptions, its numbers decrease quickly towards the interior of the ice. Black Guillemots are scarce in the Greenland Sea pack-ice on these latitudes even in summer, numbering between 0 and 0.3 birds per 10-min. period, which is similar to the October figures. The Fulmar, on the other hand, in summer occurs in densities of 0.3-3 birds per 10-min. period over most studied parts of the ice-covered Greenland Sea where, in October, it was practically absent. To this comes, in summer, scattered occurrences within the ice of Brünnich's Guillemot, Kittiwake, Ross's Gull *Rhodostethia rosea* and a few other species, none of which were encountered during the October cruise.

Brown's (1984) transect observations in the open sea and along the ice edge, from late February to early April, were documented in a somewhat different way (birds/km in a 90°-sector), rendering comparison a little difficult. But his recorded scarcity of Black Guillemots near the ice edge was similar to the findings in summer and autumn. Brown saw small numbers of Ivory Gulls and Little Auks up to north of 79°N in mid-March, but Brünnich's Guillemot and the Kittiwake were virtually absent from these northern waters at that time of the year.

Tab. 1. Average numbers per 10-min. period of six species of birds observed in the open sea (day 1) and in the pack-ice, near the edge (days 1 and 7) and in the interior parts (days 2-6).
Gennemsnitstætheder (antal pr 10 min.) for (fra oven) Mallemuk, Ride, Ismåge, Polarlomvie, Tejst og Søkonge. Tætheden er givet særskilt for det isfri hav og for pakisen, hhv. randzonen og de indre dele.

	Open sea	Pack-ice	
		edge	interior
Fulmar	4.0	0	<0.01
Kittiwake	1.9	0	0
Ivory Gull	0.2	4.3	0.2
Brünnich's Guillemot	1.7	0	0
Black Guillemot	0	0.3	0.2
Little Auk	11.7	1.8	0.7

Resumé: Fugle i Grønlandshavets pakis
Fugle blev observeret fra den svenske isbryder *Oden* under et togt 3.-9. oktober 1989 (Fig. 2). Lignende observationer er ikke tidligere foretaget så sent på året. Kun få arter blev set: i pakisen mindst 54 Ismåger (31% juv. nær iskanten, men kun 5% dybere inde i pakisen), 168 Søkonger (småflokke med op til 27 fugle) og 37 Tejster. Nær iskanten sås desuden en Mallemuk og to Gråmåger. Udenfor iskanten sås Polarlomvier på træk mod SV, samt Søkonger og enkelte Rider. Som forventet optrådte fuglene i drivisen i langt ringere antal end de gør om sommeren.

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