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Field investigations of harp and hooded seals
on the Front during the sealing season 1982

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Introduction

Seal investigations on the Front were carried out on board the sealing ship "Melshorn" during the sealing season 1982. In addition to "Melshorn" two other Norwegian ships, "Polarstar" and "Veslemari", participated in the seal hunt on the Front in 1982. "Melshorn" left Norway on 28 February and arrived at the pack ice on 9 March at 54° 05'N 53° 31'W. All the three Norwegian ships left the ice on 31 March.

Weather and ice conditions

Southerly winds dominated in the periods 10-17 March and 24-30 March. Except for strong winds and rain on 14, 15 and 27 March, the weather conditions were good with good visibility during these periods.

From 18 to 23 March northerly winds were blowing with strengths up to gale force on 19 March. In this period visibility was frequently reduced by snow.

From 10 to 13 March and on 24 and 25 March very close pack ice reduced the mobility of the ships. However, on the whole the ice conditions were favourable on the Front in 1982.

Harp seals

Scattered pupping was reported on 7 March southeast of South Wolf Island. Two days later the spotting plane found a whelping patch about 15 miles east of South Wolf Island. This patch was reported to cover an area of 4 x 15 miles (Figure 1). The ships arrived at

the southern end of the patch on 10 March, but because the pups were young the opening date was postponed to 12 March. From 12 March the ships hunted this patch from the southern end towards the central parts.

Having filled their allocated quotas on 17 March, "Melshorn" and "Polarstar" moved out of the whelping patch. "Veslemari", lacking about 1000 seals, left the patch on 18 March and finished her harp seal quota in the period 24-30 March.

The hunted whelping patch was observed again on 26 March at $51^{\circ}16'N$ $54^{\circ}37'W$ (Figure 1). The pups then varied from whitecoated to the beater (post moulting) stage.

A separate unhunted whelping patch was found on 30 March at $51^{\circ}59'N$ $53^{\circ}28'W$ (Figure 1). If continuous this patch must have extended more than 10 miles in a north-southerly direction. The pups in this patch were still whitecoated and some were not yet weaned on this date.

Date of pupping

In the southern end of the hunted patch, most of the pups probably were born on 7 and 8 March, while pupping in the central (or northern) part of the patch occurred from 9 to 12 March. In the unhunted patch observed on 30 March, whelping probably had occurred in the period 15-20 March.

Ratios of pelage types

Recorded frequencies of female pelage types from counts during the hunt in the whelping patch 12-17 March are listed in Table 1. Counts were made both at a distance through binoculars from the ship and at close range among the seals on the ice.

The criteria used to distinguish between the three types: "spotted" - without any indication of a saddle-mark, "spotted-harp" - with the inner (dorsal) edge of the saddle-mark appearing and "harp" - with a defined outer (ventral) edge to the saddle-mark, are difficult to apply especially at a distance. This may account for the low frequencies of the "spotted-harp" type in some of the counts from the ship when compared to counts on the ice.

The recorded proportion of "spotted-harp" seals was lower on 14 and 15 March when the weather was overcast with rain, than the other days with dry and sunny or partly sunny weather.

The possibility of having included some males, particularly in the counts from the ship, cannot be excluded.

Hooded seals

Scattered hooded seal families were observed on 18 and 19 March between $52^{\circ}55' N$ $54^{\circ}18' W$ and $51^{\circ}45' N$ $53^{\circ}43' W$ (Figure 2). Bluebacks were hunted from 20 March to 22 March in the area from $51^{\circ}41' N$ $53^{\circ}43' W$ to $51^{\circ}19' N$ $53^{\circ}34' W$. The ice drifted southwards and therefore the area of ice searched from 18 March to 22 March is less extensive than indicated in Figure 2. Daily catches by Norwegian ships varied between 200 and 450 hooded seals per ship this period.

On 23 March the bluebacks were more scattered and the Norwegian ships moved further South. On 24 and 25 March a few very scattered bluebacks were found in an area southeast of Grey Islands (Figure 2). Five longliners were hunting in this area and the Norwegian ships returned to the North. From 26 March to 30 March scattered bluebacks were found again and hunted West of and partly within the first hunted area (Figure 2). Daily catches now varied from 50 to 150 hooded seals per ship.

Age sample

A total of 57 jaws from female hooded seals were collected on board the "Melshorn". Marked with date and position the jaws were transferred to St. John's laboratory in Canada for processing and analysis (Table 2).

Table 1. Frequencies of "spotted", "spotted-harp" and "harp" pelage types counted in a harp seal whelping patch on the Front in March 1982.

Date	SPOTTED				SPOTTED-HARP				HARP			
	Ship		Ice		Ship		Ice		Ship		Ice	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
12.03	6	8,1	63	22,5	12	16,2	54	19,3	56	75,6	163	58,2
14.03	17	19,3	94	18,3	5	5,7	34	6,6	66	75,0	385	75,1
15.03	44	37,3	26	23,9	10	8,5	11	10,1	64	54,2	72	66,0
16.03	58	24,6	51	16,8	23	9,7	63	20,7	155	65,7	190	62,5
17.03	26	22,4	17	23,0	21	18,1	22	29,7	69	59,5	35	47,3
Total	151	23,9	251	19,6	71	11,2	184	14,4	410	64,9	845	66,0
Sum ship and and ice obs.			402	21,0%			255	13,3%			1255	65,6%

Table 2. Age samples from female hooded seals caught by the "Melshorn" on the Front in 1982.

Date	Position		No.
20.03	51°41' N	53°41' W	15
21.03	51°45' N	53°42' W	16
22.03	51°19' N	53°34' W	5
25.03	50°20' N	54°45' W	2
26.03	51°21' N	54°36' W	3
27.03	51°22' N	54°34' W	7
28.03	51°53' N	54°11' W	2
29.03	51°57' N	53°33' W	3
30.03	51°55' N	53°35' W	4
Total			57

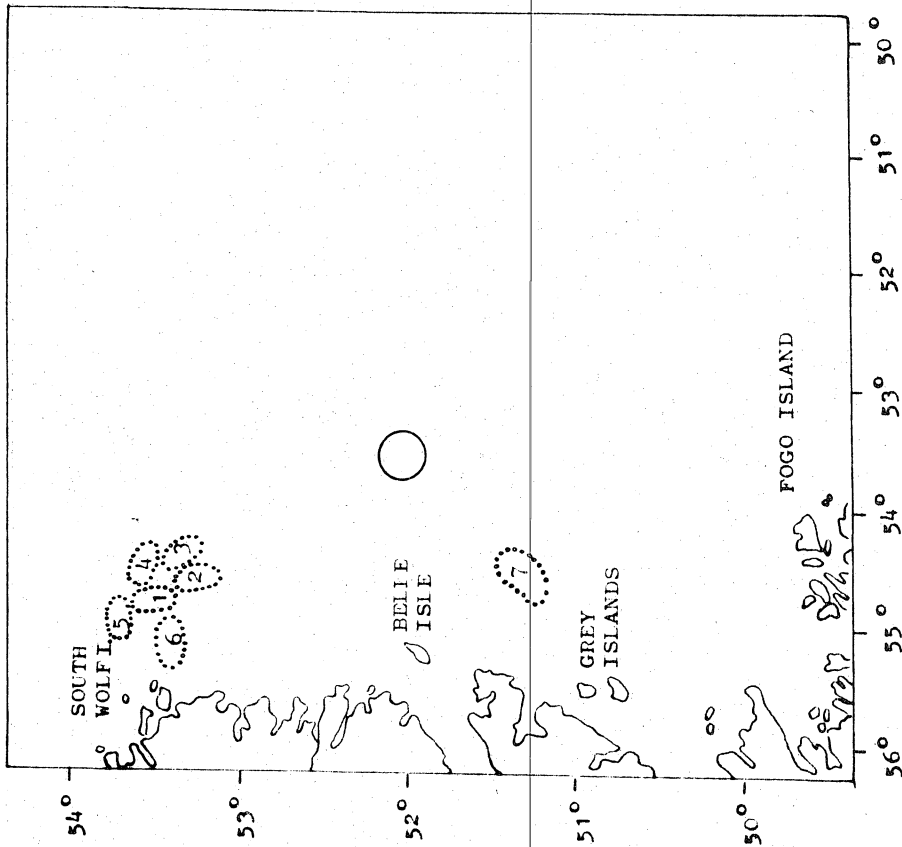


Figure 1. Observed distribution and drift of harp seal whelping patches on the Front in 1982.
 Broken lines: the hunted patch. 1: position on 12 March, 2: 13 March, 3: 14 March, 4: 15 March, 5: 16 March, 6: 17 March and 7: 26 March. Circle: an un hunted patch observed on 30 March.

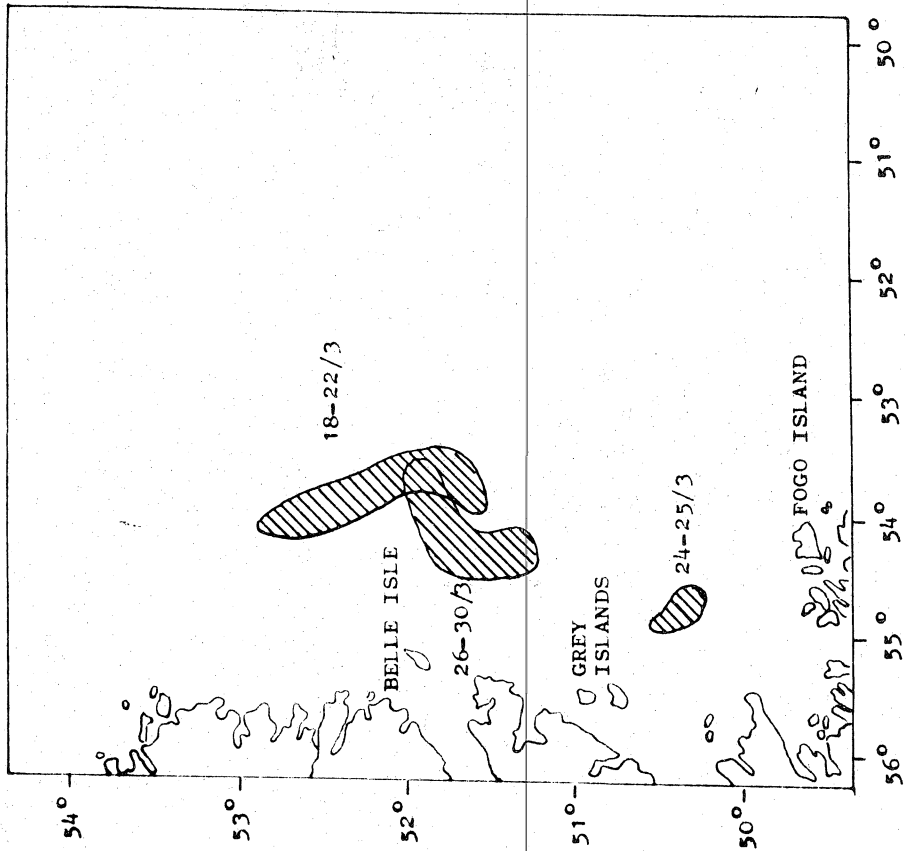


Figure 2. Observations of hooded seal families and bluebacks on the Front in 1982.

