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Seasonal and Regional Distribution of Tagged Harp Seals Recaptured in Greenland, 1949-79

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Since 1949 263 harp seals tagged and/or branded have been recaptured in Greenland. Four of these were tagged at Jan Mayen, 259 at Newfoundland. Appendix I contains a list of all the available data on the recaptures.

The four seals tagged at Jan Mayen were all recaptured in East Greenland (Angmagssalik-Scoresbysund), and of the 259 tagged and/or branded at Newfoundland, 4 were recaptured in East Greenland (Angmagssalik), and 255 along the west coast of Greenland.

Tables 1-3 show the number by month and district of seals recaptured within 12 months from tagging (Table 1), seals recaptured between 12 and 24 months after tagging (Table 2), and seals recaptured more than 24 months after tagging (Table 3). Furthermore the recaptures have been divided into seals tagged in the period 1949-77 and in 1978-79.

It appears from Tables 1-3 and Figures 1-2 that the main proportion of recaptures in the early summer (May-June) comes from South West and South Greenland. During the months July-September most of the recaptures come from Central West and North West Greenland (especially Jakobshavn and Umanak districts), some from South Greenland and a few from East Greenland (Angmagssalik). In October-January the greatest part of the recaptures comes from Central West Greenland (Egedesminde-Godhavn), and some from South West Greenland (Holsteinsborg-Godthåb). The recaptures in February, March and April are scattered along the southern parts of the west coast from Egedesminde-Godhavn in the north to Julianehåb-Narssaq in the south.

These results are in good agreement with the views expressed by D.E.Sergeant (1965), that the seals arrive at South West Greenland in the early summer, and then move up along the west coast to concentrate in the northern regions (Jakobshavn, Umanak and Upernavik). The southward migration starts early in the autumn, and during the first part of the winter some of the migrating seals, mostly young of the year, concentrate in the Egedesminde-Holsteinsborg area, whereas the older animals proceed to Canadian waters.

In addition to the seals migrating northward from the region of their first arrival, it seems that a small proportion move southward, and some seals even move around Kap Farvel and up along the east coast of Greenland as far as Angmagssalik.

Figure 3 illustrates these trends for the seals tagged in 1978 and recaptured within 12 months.

Although the material is rather small, a comparison between Figs 1 and 2 indicates that older animals (more than 12 months old) appear earlier in the northern districts than the young of the year, and also move farther north (Thule district). Recaptures in future of seals tagged during the large-scale tagging experiments in 1978 and 1979 may, together with a more detailed analysis of the material collected in Greenland for age determination, contribute greatly to show whether such a difference in migration pattern between young and older animals exists.

Comparison of the distribution of recaptures from previous tagging experiments and those in 1978-79 indicates that some change in the distribution of the seals may have occurred during the last years. It appears that a shift in abundance from Jakobshavn district to Egedesminde-Godhavn area has taken place, but whether this reflects lower hunting activity in Jakobshavn district, or whether it is an indication of changing migration routes, possibly caused by increasing number of fishing vessels in Jakobshavn district, or both, is difficult to say.

Apparently, an increasing number of animals less than 12 months of age has been caught in South West and South Greenland during the last years, whereas there has been a decrease in animals more than 12 months of age, but due to the limited material, nothing can be said with certainty. It is, however, in good agreement with the results presented by Kapel and Geisler (1979) that there has been a general increase in the number of harp seals, especially of the younger animals, caught in Greenland during the last years.

#### Acknowledgement

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#### References

- Kapel, F.O. & A.Geisler, 1979. Progress report on research on harp and hooded seals in Greenland, 1978-79. NAFO/SCR Doc. 79/XI/10.
- Sergeant, D.E., 1965. Migrations of Harp Seals, *Pagophilus groenlandicus* (Erxleben) in the Northwest Atlantic. J.Fish.Res.Bd.Canada, 22(2).



Table 3. Harp seals tagged at Newfoundland 1949-77 and recaptured in Greenland more than 24 months after tagging.

Month		V	VI	VII	VIII	IX	X	XI	XII	I	II	III	IV
Thule	1949-77	-	-	-	-	1	-	-	-	-	-	-	-
Upernavik	1949-77	-	-	2	-	2	-	-	-	-	-	-	-
Umanak	1949-77	-	1	-	2	-	-	1	-	-	-	-	-
Jakobshavn	1949-77	-	1	1	-	-	1	-	-	-	-	-	-
Egedesminde-Godhavn	1949-77	-	1	-	-	-	-	-	-	1	1	-	-
Holsteinsborg-Godthåb	1949-77	-	1	-	-	-	-	-	-	-	-	-	-
Frederikshåb	1949-77	-	1	-	-	-	-	-	-	-	-	-	-
Julianehåb-Narssaq	1949-77	-	-	-	-	-	-	-	-	-	-	-	-
Nanortalik	1949-77	-	-	-	-	-	-	-	-	-	-	-	-
Angmagssalik Scoresbysund	1949-77	-	-	1	-	-	-	-	-	-	-	-	-

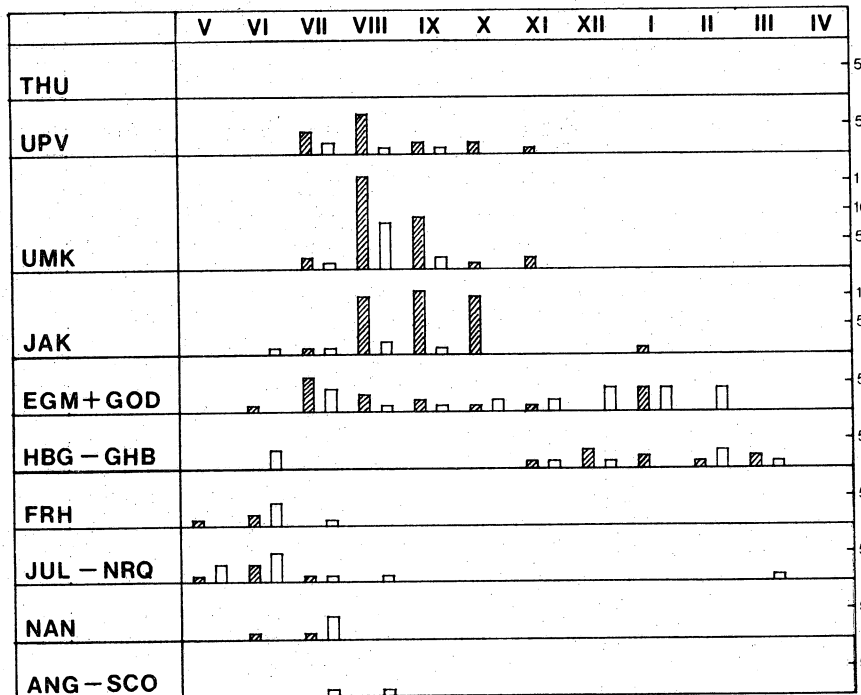


Figure 1. Regional and seasonal distribution of Harp seals tagged at Newfoundland 1949-79 and recaptured in Greenland within 12 months. Hatched columns animals tagged 1949-77, open columns animals tagged 1978-79.

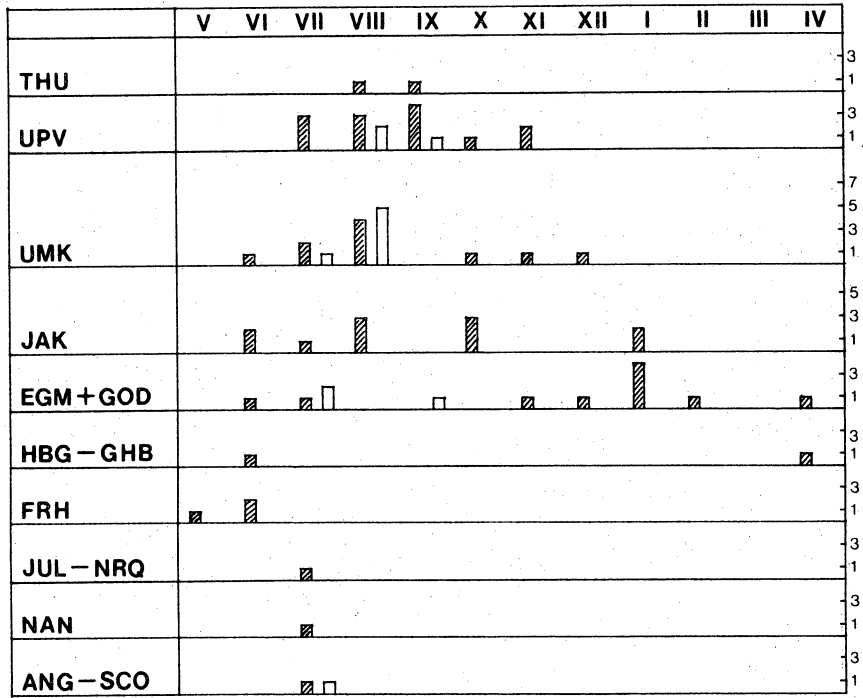


Figure 2. Regional and seasonal distribution of harp seals tagged at Newfoundland 1949-79 and recaptured in Greenland more than 12 months after tagging. Hatched columns animals tagged 1949-77, open columns animals tagged 1978-79.

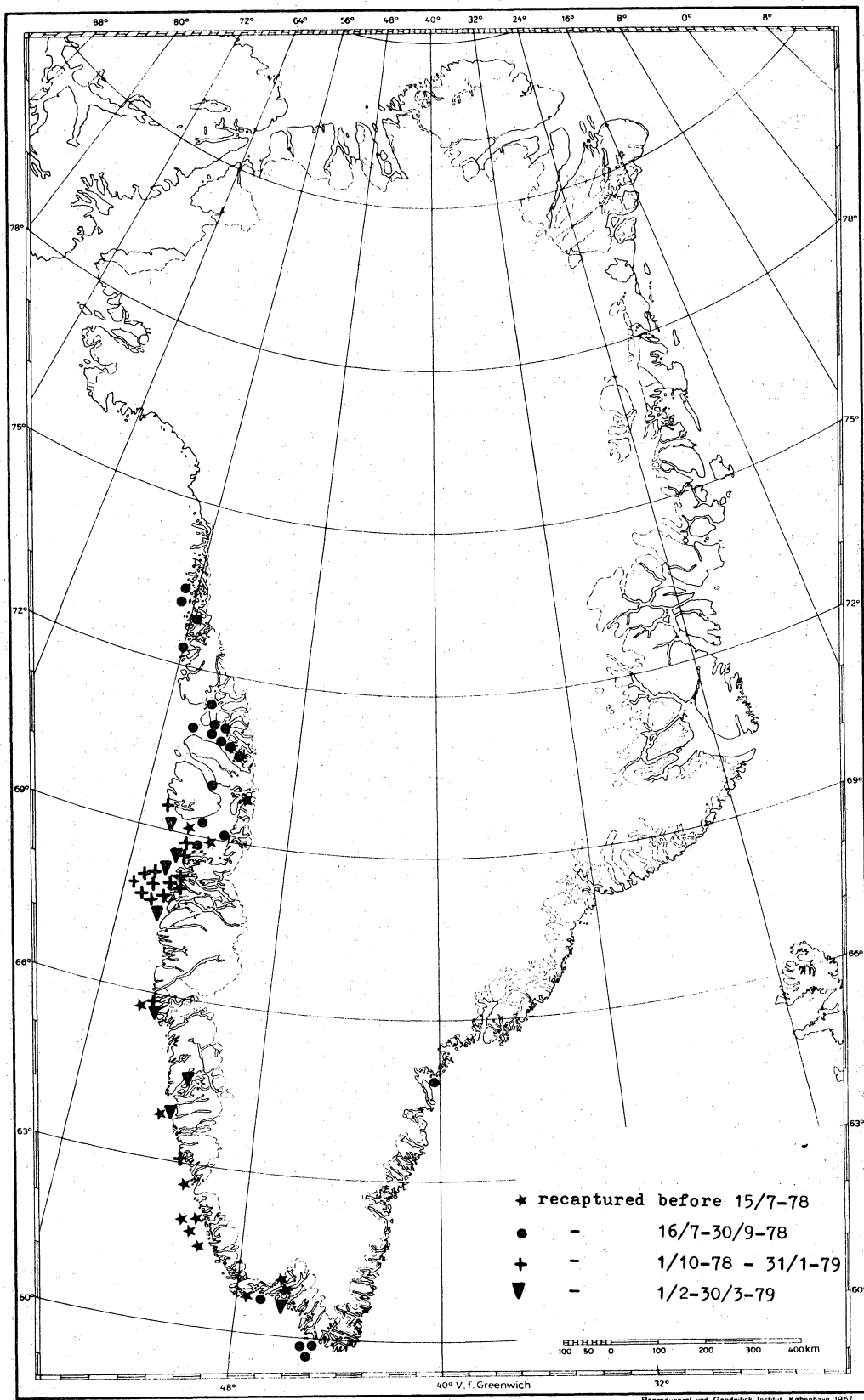


Figure 3. Regional and seasonal distribution of harp seals tagged at Newfoundland in 1978 and recaptured in Greenland within 12 months.