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Preliminary Information on the Icelandic Shrimp (*P. borealis*) fishery
in the Denmark Strait in 1981

by

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Introduction

In connection with cod and redfish fishery on the Dohrnbank-Stredbank area it had been well known in Iceland that shrimp was present on these grounds, although the catch had not been enough to suggest a commercial fishery.

However, a major effort was made in May 1978, when the Icelandic trawler "DALBORG" was chartered by the Ministry of Fisheries to find new shrimp grounds in offshore Icelandic waters. During this survey promising shrimp grounds were located north off the Dohrnbank yielding up to 800 kg/trawling hour. Later that year "DALBORG" started commercial fishery in this area but no other ships joined until the next year.

The fishery

A brief account of the fishery has previously been presented (Hallgrímsson 1980; Jonsson and Hallgrímsson 1981) as well as a review of Icelandic investigations on shrimp from this region.

Although the Icelandic shrimp fishery in the Denmark Strait stretches from 65°30'N to 67°00'N approximately, on a narrow edge of the Greenland continental shelf east of the Iceland-Greenland median line, it has since 1979 only been a minor part of the shrimp fishery on the East Greenland continental shelf. Already in 1979 the Norwegians fished about 62% of the shrimp in this area and in 1980 the Icelanders fished only about 6.5% of the total shrimp catch in this region. Since then the fishery has been dominated by EEC-countries or by countries having reached a special quota agreement with the EEC.

In early May this year the R/V ARNI FRIDRIKSSON tried to trawl for shrimp in the aforementioned area but in vain as the banks were totally covered by ice.

In June two trawlers commenced fishery in this area and in July the third one joined in. The fishery ended in latter half of August and had been extremely poor all the time. The ice extended unusually far to the south above the continental slope during the whole summer and hindered the fishery considerably.

Table 1. Effort (trawling hours) and catch-per-hour of Icelandic vessels (per month) in 1981.

Month	Effort (hours)	Catch (kg/hr)
June	539	98.9
July	472	78.4
August	191	39.1

Although all catch reports have not been received it is known that the total catch did not exceed 125 tons compared to 614 tons in 1980. The calculated mean catch per hour is 81.4 kg but was 107.2 in 1980 and 290.7 when the fishery began in 1978.

As mentioned before, the fishing grounds were heavily covered with ice during the whole summer of 1981. The bottom temperatures were also unusually low, about 0.5° to 1.0°C below average, and polar water was dominant.

During the fishery in 1981, 5 samples were taken in April-May and 6 samples in August (Fig. 1). The length frequencies indicate slightly decreasing mean length since 1979.

References

- HALLGRIMSSON, F., 1980. Preliminary information on the Icelandic shrimp fishery in the Iceland-East Greenland area. Unpubl. Contr. to NAFO Mtg., Nov. 1980.
JONSSON, E., and HALLGRIMSSON, F. 1981. The Icelandic shrimp (*P. borealis*) fishery in the Denmark Strait. Int. Comm. Explor. Sea. C.M. 1981/K:7.

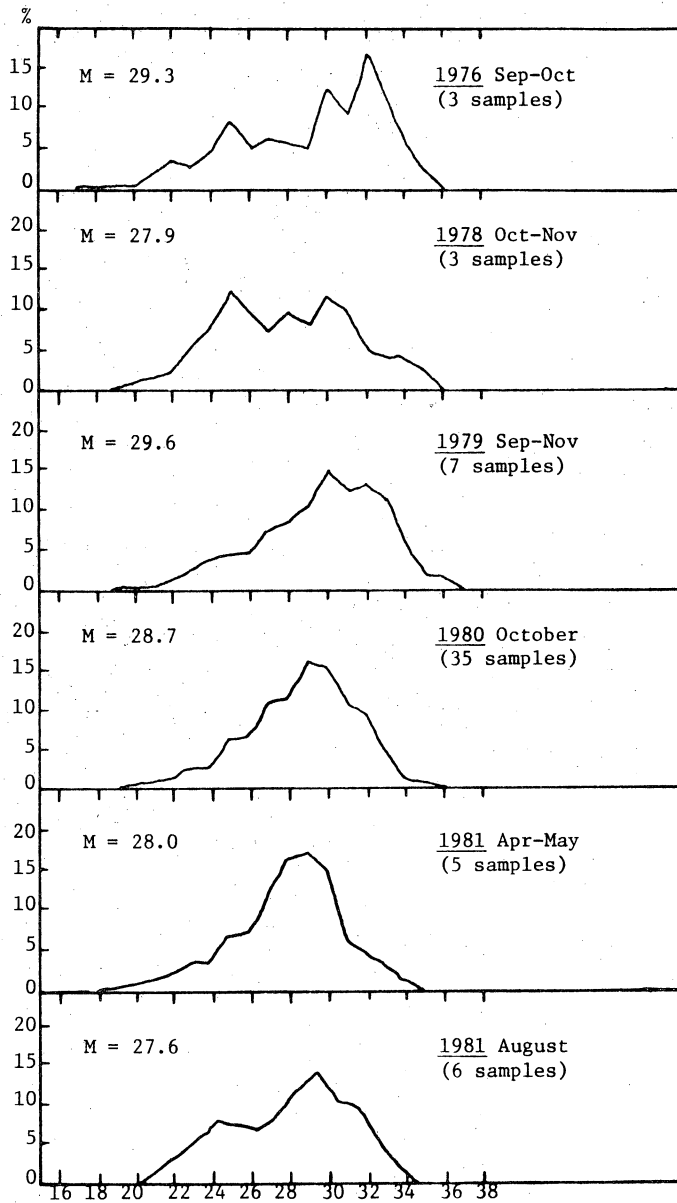


Fig. 1: Length frequency distribution of Denmark Strait shrimp in autumn during a period of 4 years (and in spring and summer 1981) and mean length (M).