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Results of Ichthyoplankton Survey on the
Flemish Cap Bank in May-June 1985

by

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ABSTRACT

The paper considers results of the ichthyoplankton survey conducted on the Flemish Cap Bank in May-June 1985. Quantitative and qualitative characteristics of eggs and larvae collected on stations of the bank are given, the character of redfish larvae distribution is revealed.

INTRODUCTION

The annual ichthyoplankton surveys on the Flemish Cap Bank are carried out in accordance with the international ecologic program developed in Murmansk in 1977.

The present paper gives the results of ichthyoplankton survey data analysis conducted by the RV "Boguslav" on the Flemish Cap Bank since 31 May throughout 07 June 1985.

MATERIAL AND METHODS

Ichthyoplankton samples were collected at 42 standard oceanographic and ichthyoplankton stations of the Flemish Cap (Fig.1). Three tows with IKS-80 net were made at each station:

a) a vertical tow (bottom-surface), a 800-0 m layer was sampled, with the net hauled at the speed of 0.8-1.0 m/sec,

when the sea depth was over 1000 m;

b) a horizontal tow was carried out in two depths - surface and 25 m during the vessel circulating for 10 minutes at the slowest speed of 2.0-2.5 knots.

Material collected was fixed in a 3-4% formalin solution.

The analysis of data and identification of ichthyoplankton were conducted at PINRO. Total length (TL) of larvae was measured.

RESULTS

Due to V.P.Serebryakov's paper (Serebryakov et al., 1984), over 40 species are included into the ichthyoplankton composition on the Flemish Cap Bank. Eggs, larvae and juvenile of 12 species were registered in the samples collected over the Flemish Cap area in the period from 31 May to 07 June 1985. The qualitative characteristic is given in Table 1.

Redfish larvae were the most numerous ones in the ichthyoplankton composition. Those were marked over the whole area of the bank, except the western slope. Maximum concentrations of Sebastes genus larvae were found on the eastern slope of the bank in relatively warm waters with temperature of 4-5°C (Fig.2). The length of Sebastes spp. larvae fluctuated from 6.0 to 10.7 mm at the average size of 8.2 mm. The length characteristic of the redfish larvae is shown in Fig.3.

Myctophidae were represented by typical arctoboreal species of Benthosema glaciale 31-45 mm long taken by net at hauling in a 800-0 m layer. All three specimens of B. glaciale were found on the northwestern slope of the bank in the zone of the cold waters influence of the Flemish Cap branch of the Labrador Current. The representatives of Gonostomatidae, Melamphaeidae and Bathylagidae families occurred in the samples taken on the northern and western extremities of the Flemish Cap "polygon".

The eggs and larvae of cod were registered over the whole area of the bank, Hippoglossoides platessoides eggs were also often found in the samples. The distribution of eggs and larvae

of Gadus morhua and eggs of Hippoglossoides platessoides is shown in Fig. 4.

REFERENCES

Serebryakov V.P., Astafjeva A.V., Aldonov V.K. and A.K.Chumakov.
1984. USSR Ichthyoplankton Investigations within
the Framework to the Flemish Cap Project in
1978-1983. NAFO SCR Doc.84/IX/95, Serial No.NS90.

Table 1. Fish species which eggs, larvae and juvenile
were collected on Flemish Cap in May/June 1985

Taxon	Eggs	Larvae	Juvenile	Stations, depth sampled
<u>Gonostomatidae</u>				
<i>Cyclothone braueri</i>			4	I.I; 12.I; 17.I; 21.I*
<u>Bathylagidae</u>				
<i>Bathylagus euryops</i>		I	I	17.I
<u>Myctophidae</u>				
<i>Benthoosema glaciale</i>			3	15.I; 27.I; 28.I
<u>Melamphaeidae</u>				
<i>Scopelogadus beanii</i>			I	I.I
<u>Gadidae</u>				
<i>Gadus morhua</i>	37	66		3.3; 5.2.3; 6.3; 7.3; 8.2.3; 9.2.3; 13.3; 15.3; 16.2.3; 17.2.3; 21.2.3; 21.2.3; 22.3; 25.2; 26.2.3; 27.2.3; 28.2; 35.2.3; 36.2.3; 37.2.3; 39.3; 40.2; 41.2.3; 42.2
<u>Osmeridae</u>				
<i>Mallotus villosus</i>		I		25.2
<u>Scorpaenidae</u>				
<i>Sebastes</i> spp.		7659		1.2.3; 3.2.3; 4.2; 5.2.3; 6.2.3; 7.2.3; 8.2.3; 9.2.3; 10.2.3; 13.2.3; 16.3; 21.2.3; 23.3; 25.2; 26.2.3; 27.2.3; 35.2.3; 36.2.3; 37.2.3; 38.2.3; 39.2.3; 40.2.3; 41.2.3; 42.2.3.
<u>Lumpenidae</u>				
<i>Leptoclinus maculatus</i>		I		9.3
<u>Pleuronectidae</u>				
<i>Hippoglossoides platessoides</i>	35			9.2; 26.3; 39.3; 40.2.3; 41.2.3; 42.2.3
<u>Anarhichadidae</u>				
<i>Anarhichas denticulatus</i>			3	1.3; 33.2; 34.3
<u>Cottidae</u>				
<i>Myoxocephalus scorpius</i>		I		40.3
gen.sp.	2			21.3

* / First figure means station's No., the subsequent ones - the depths sampled: 1 - 800-0 m, 2 - surface, 3 - 25 m.

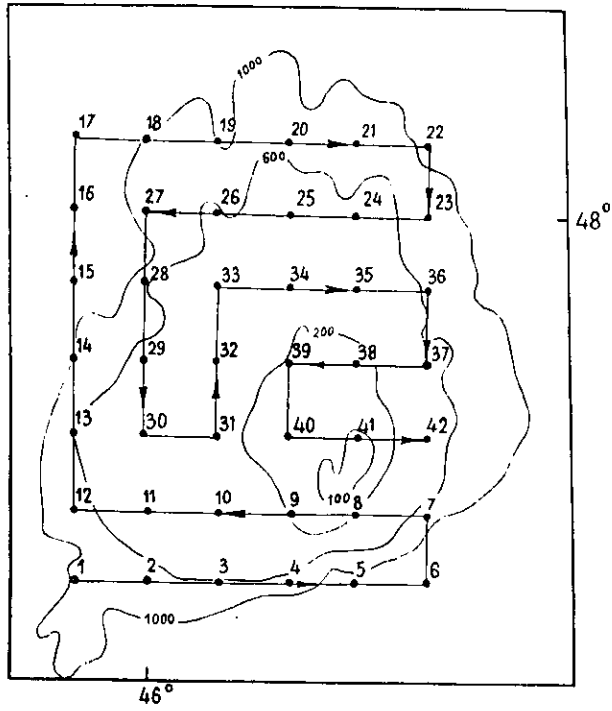


Fig. 1 Scheme and track of ichthyoplankton survey on Flemish Cap in May/June 1985

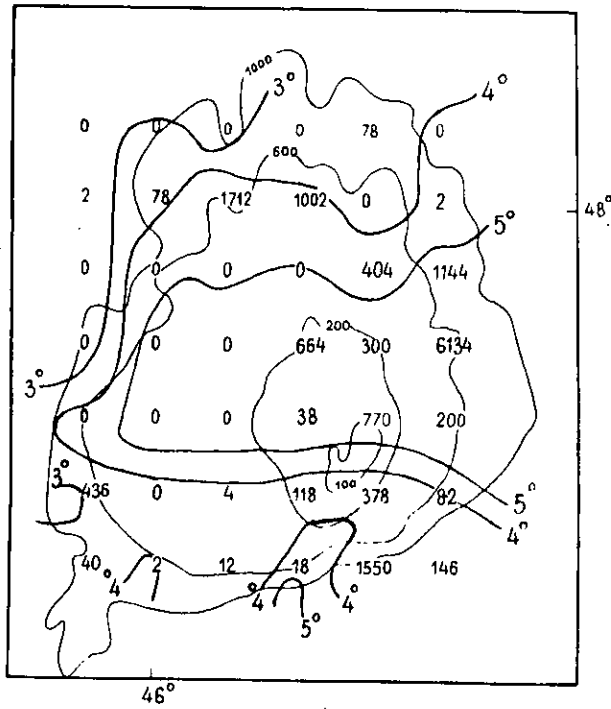


Fig. 2 Surface temperature and *Sebastes* spp. larvae distribution on Flemish Cap in May/June 1985 (spec/m²)

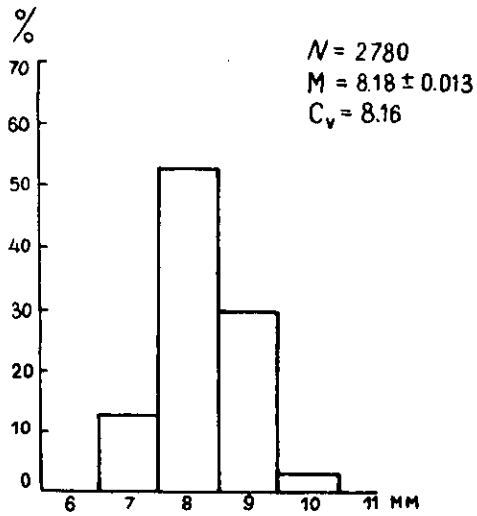


Fig. 3 Size frequency of *Sebastes* genus larvae in ichthyoplankton samples collected on Flemish Cap in May/June 1985

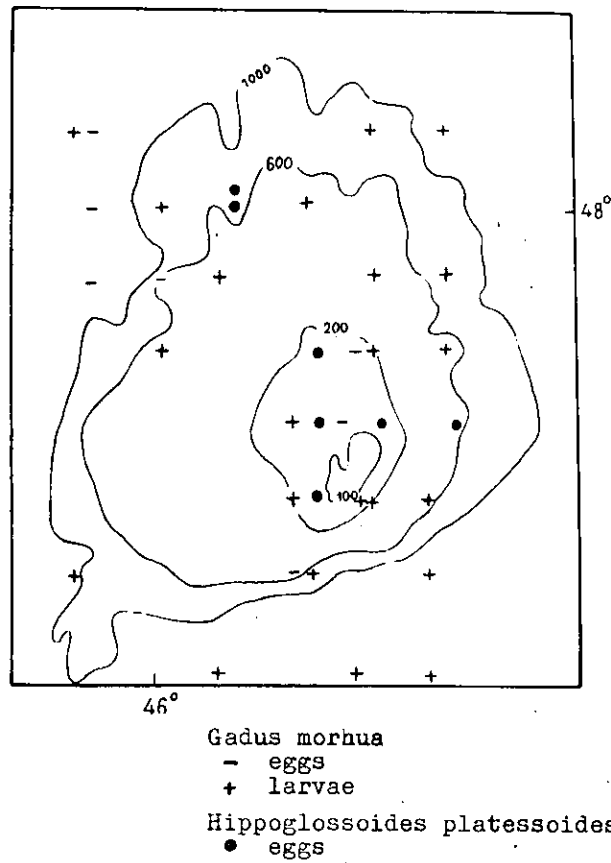


Fig. 4 Distribution of *Gadus morhua* eggs and larvae and *Hippoglossoides platessoides* eggs on Flemish Cap in May/June 1985