

ANNUAL MEETING - JUNE 1969International Cooperative Work on the Methods
of Sampling Zooplankton in 1968

by

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Scientists from Canada, the Soviet Union, and the United States met at Woods Hole, Massachusetts in September 1968 to discuss, plan, and conduct further investigations into the problems of sampling fish eggs and larvae. After reviewing the work done in 1967 by the Soviet Union and the United States, it was decided to investigate the effects on estimates of abundance of sizes of samplers, mesh size, speed and length of tow, and tow profile. Three research vessels THETA (Canada), ALBATROSS IV (USA), and BLESK (USSR) were involved in the operations.

PARTICIPANTS

ALBATROSS IV		BLESK		THETA	
J. Posgay	BCF	V. Richter	ALN	C. Kohler	FRB
F. Lux	BCF	V. Volkov	ALN	W. McFarlane	FRB
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ALN - AtlantNIRO, Kaliningrad, U.S.S.R.

BCF - Bureau of Commercial Fisheries, Woods Hole, Mass. U.S.A.

FRB - Fishery Research Board of Canada, St. Andrews, N.B., Canada

NMC - National Museum of Canada, Ottawa, Ontario, Canada

UMD - University of Maryland, Solomons Island, Maryland, U.S.A.

VMS - Virginia Institute of Marine Science, Gloucester Point, Virginia U.S.A.

CRUISE PLAN

All operations were conducted by all ships within an area 10 miles square south of Martha's Vineyard, Massachusetts. Average water depth in the area was about 60 meters. Station location within the area, speed of tow, and length of tow were all randomized within six blocks; three day and three night.

THETA towed an array of three nets; one BCF Bongo (.3) with #1050 mesh on one side and #505 on the other and one Miller Sampler with #505. All tows were horizontal just below the surface at 3, 5, and 7 knots for 1, 2, 3 kilometers. There were six tows made in each block.

ALBATROSS IV towed an array of five nets, one BCF Bongo (.3) with #1050 and #505 mesh, one BCF Bongo (.03) with #153 and #505, and one Miller Sampler with #505 mesh. Tows were 10-step oblique hauls from 50 meters to the surface at three and five knots for one, two, and three kilometers. There were six tows made in each block.

BLESK towed a set of six Miller Samplers and one BCF Bongo (.03) all with #505 mesh. All tows were horizontal at five knots with the nets fishing at 0, 2, 10, 20, 30, 40, and 50 meters depth.

(over)

RESULTS

All of the samples were retained by the ship which collected them and are being sorted at their respective laboratories. When sorting is complete, the results will be circulated among the laboratories and plans made for analysis and publication.

FUTURE PLANS

After the cruise, further discussions were held to make plans for 1969. It was generally agreed that any further investigations on the effects of the kind of gear used and station procedures should wait complete analysis of the data already collected. It was, therefore, decided that the next steps would be some tests of sampling design and methods of analysis.

The first approach will be a comparison of the results of a stratified random sampling design and those of a systematic sampling design. Two cruises are planned, one in April, the other in May. On both cruises, the USSR vessel will occupy 16 stations laid out in a grid within each of the six sampling strata (Figure 1) during 24 hours. During the same 24-hour period, the USA vessel will occupy as many as possible of a set of randomly selected stations within the same stratum.

