

ANNUAL MEETING - JUNE 1968TEMPERATURE CONDITIONS IN THE GULF OF MAINE-
GEORGES BANK AREA DURING NOVEMBER 1967

by

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The annual fall groundfish survey of the Gulf of Maine-Georges Bank area was conducted by the Bureau of Commercial Fisheries during the period 7 November - 9 December 1967 (Albatross IV Cruise 67-21). During this survey bathythermograph observations were made at all trawl stations and at 10-mile intervals between stations. The distribution of temperature at the surface, 50 meters, and 100 meters and of temperature anomalies at these depths relative to the November 1940-59 mean are shown in Figure 1. The 20-year time period 1940-59 was chosen as a norm for the number of years were approximately equal in warming and cooling periods as indicated by both coastal and offshore observations (Lauzier 1965, Stearns 1965, Colton, 1968).

The temperature distribution charts are based on in situ bathythermograph observations and the isotherms were drawn directly to the data with a minimum of smoothing. Temperature anomalies were computed as the difference between the 1967 mean temperature and the 1940-59 mean temperature within 30-minute quadrangle areas. Temperature values from survey cruise stations located on whole or half degree latitude and longitude lines were entered in the quadrangle immediately to the south and west. The anomaly values were entered at the center of each 30-minute quadrangle and the isallotherms drawn directly to the data.

Although the temperature structure at all depths was highly complex, the temperature anomaly values were remarkably consistent. With the exception of three 30-minute quadrangle values at the surface and one 30-minute quadrangle value at 50 meters,

all temperature anomaly values were negative. In general, the negative anomalies were greatest along the edge of the Continental Shelf. These offshore data support observations made at coastal stations in the Gulf of Maine area in that the cooling trend in sea water temperatures which commenced in the middle 1950's has continued through 1967.

REFERENCES

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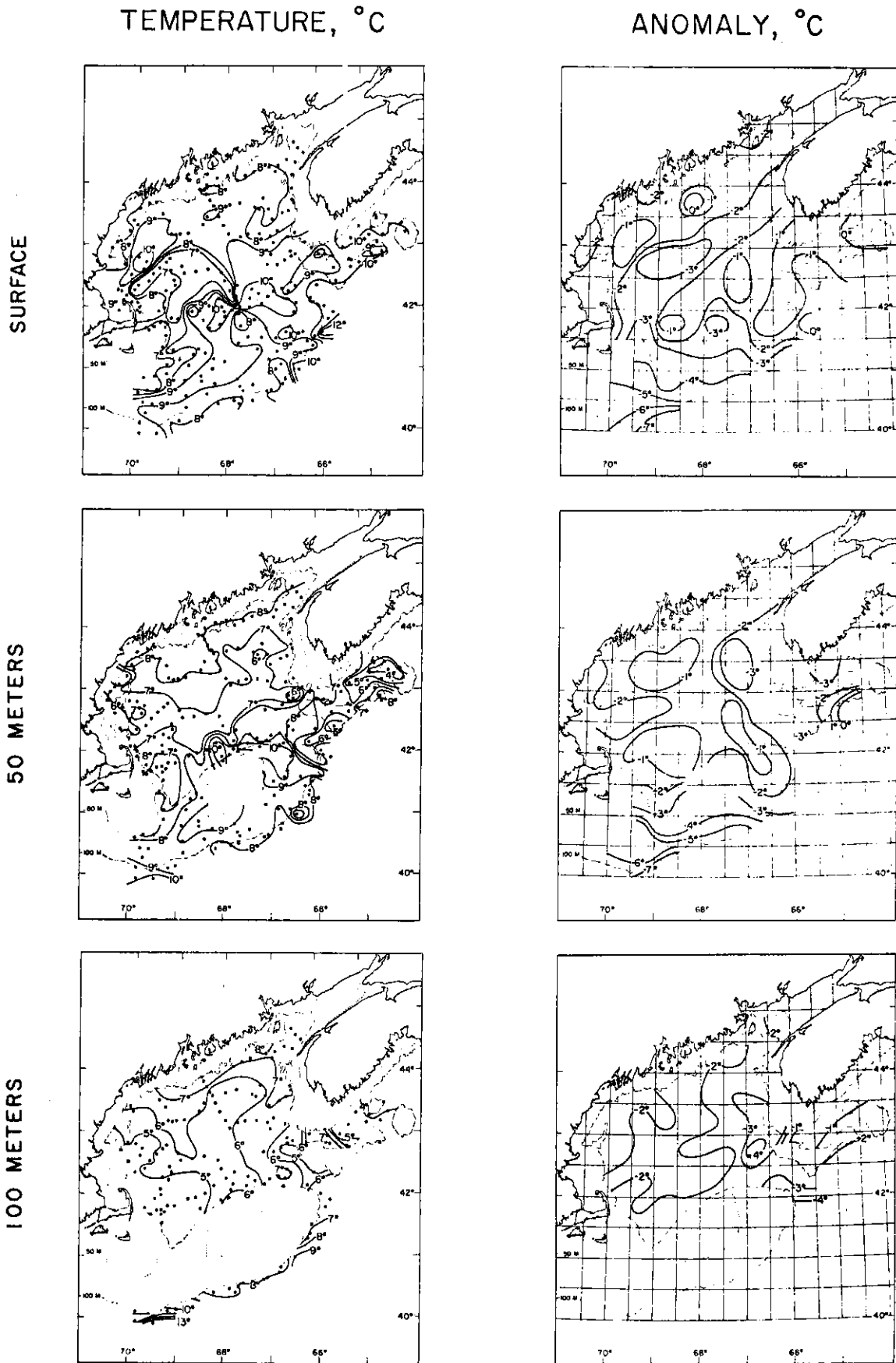


Fig. 1 --Temperature distribution and temperature anomalies relative to the November 1940-59 mean during Albatross IV Cruise 67-21, 7 November - 9 December 1967.
