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OCEANOGRAPHY 1958**

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**SPECIAL SCIENTIFIC REPORT-FISHERIES No. 312**

**UNITED STATES DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE**

#### SPECIAL NOTE

The International North Pacific Fisheries Commission, established in 1953 by the International Convention for the High Seas Fisheries of the North Pacific Ocean, coordinates the research of the member nations: Japan, Canada, and the United States. The resulting investigations provide data to the Commission for use in carrying out its duties in connection with fishery conservation problems in the North Pacific Ocean. Publication of this scientific report has been approved by the United States Section of the Commission.

United States Department of the Interior, Fred A. Seaton, Secretary  
Fish and Wildlife Service, Arnie J. Suomela, Commissioner

NORTH PACIFIC AND BERING SEA OCEANOGRAPHY, 1958

by

Felix Favorite and Glenn Pedersen  
Fishery Research Biologists  
Bureau of Commercial Fisheries

Contribution No. 13 to research conducted with  
the approval of the United States Section of the  
International North Pacific Fisheries Commission.



United States Fish and Wildlife Service  
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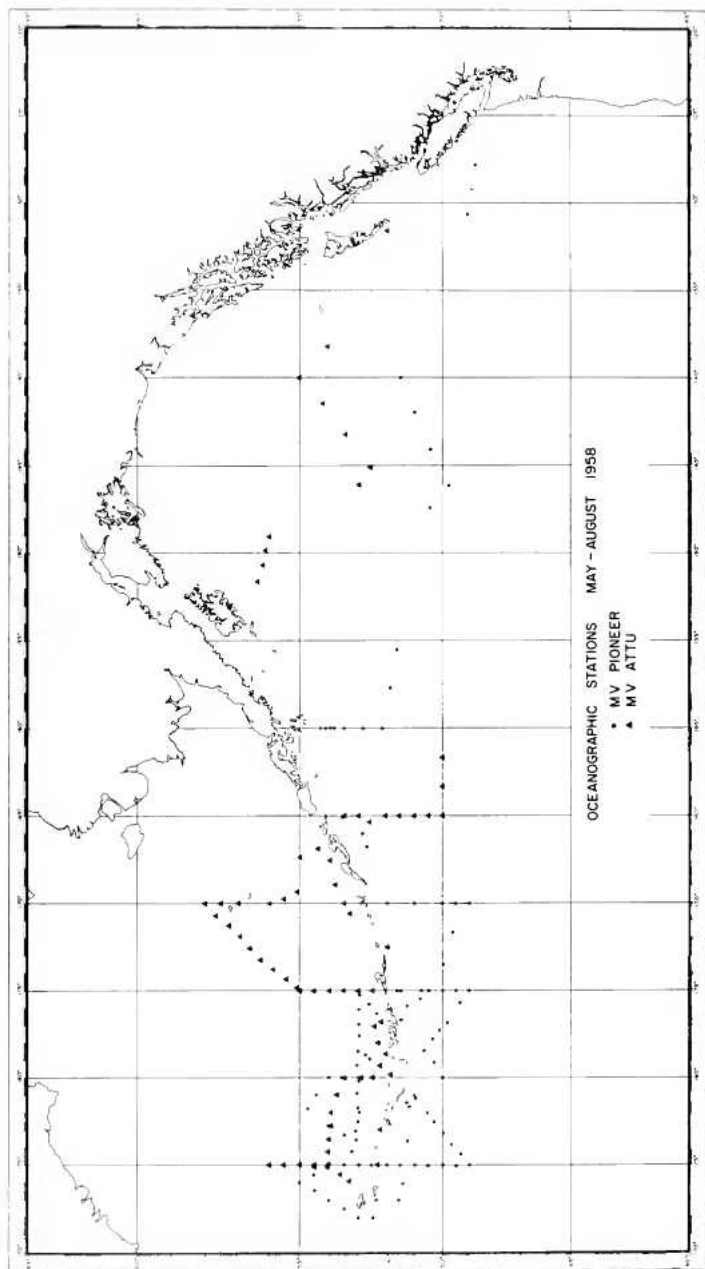
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NORTH PACIFIC AND BERING SEA OCEANOGRAPHY, 1958

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ABSTRACT

This report presents oceanographic data collected on the charter fishing vessels Attu and Pioneer at and between fishing stations in the North Pacific and the Bering Sea from May to September 1958. Procedures are described and stations are shown.

The tabulated data show temperature, and values of salinity, density, and dissolved oxygen at varying depths to 1050 meters; number, time, and position of drift bottle releases; time, position, and weather and sea conditions for bathythermograph lowerings; and displacement volumes, wet weights, and numbers of organisms per cubic meter of water for the vertical plankton hauls.

INTRODUCTION

Scope and Purpose

These data represent the second summer's field work by the Oceanographic Section of the Biological Laboratory, Seattle, <sup>1/</sup> under the direction of the American Section of the International North Pacific Fisheries Commission. The observations were taken on board fishing vessels chartered to continue the investigation of the distribution and migration of salmon in the North Pacific Ocean and the Bering Sea.

The purpose of the oceanographic observations is to define the general oceanic salmon environment, reveal geographical differences in the general environment, and investigate the relations of physical, chemical, and biological properties to the abundance and distribution of salmon stocks.

Changes from 1957 Procedure

Unusually severe weather in 1958 which

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<sup>1/</sup> Formerly Pacific Salmon Investigations.

persisted throughout the spring and summer severely curtailed the cruise plans, and at numerous times it was impossible to accomplish any work for several days.

Cruise plans.--As in the previous year reported in North Pacific and Bering Sea Oceanography, 1957, <sup>2/</sup> the cruise plans were determined by the fishing sets. In 1958, since only two vessels were chartered, the repeated sampling as in 1957 at 50°, 53°, and 56° N. on longitudes 165° W., 175° W., and 175° E. was discontinued, and cruise plans were constructed to provide serial fishing sets at 60-mile intervals within the above area to provide more detailed sampling.

The change in cruise plans permitted an increase in the number of oceanographic stations even with only two boats. In contrast to 1957 stations, which were at

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<sup>2/</sup> Felix Favorite and Glenn Pedersen, U. S. Fish and Wildlife Service, Special Scientific Report--Fisheries No. 292, May 1959.