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**RESEARCH PLAN FOR THE UNITED STATES CRUISE IN THE  
EASTERN BERING SEA AUGUST-SEPTEMBER, 2001**

by

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## ABSTRACT

A research cruise by scientists from the National Marine Fisheries Service (NMFS), Ocean Carrying Capacity (OCC) program to study the distribution, migration, and growth of juvenile salmon along the coastal waters of the eastern Bering Sea is described. Primary objectives of the cruise are to determine the extent of offshore migrations of Bristol Bay juvenile salmon; to describe the physical environment of the eastern Bering Sea shelf occupied by juvenile salmon; and to collect biological information of other ecologically important species.

The cruise will begin in Dutch Harbor, Alaska on August 27 and end in Dutch Harbor on September 15 (Table 1). Participating scientists are listed in Table 2. Fish sampling will begin at the northern end of 160°W; transects and sampling stations will be along longitudinal lines and will cross coastal, middle, and outer domains of the eastern Bering Sea shelf (Figure 1). The cruise will be conducted aboard the contracted fishing vessel (F/V) *Sea Storm*. Fish samples will be collected using a midwater rope trawl, which is 198 m long, has hexagonal mesh in wings and body, and has a 1.2-cm mesh liner in the codend. The rope trawl is towed at 5 kts, at or near surface, and has a typical spread of 52 m horizontally and 18 m vertically. Trawl gear will be deployed for 30 minutes at each station (or less depending on salmon density) and then retrieved.

Salmon and other fishes will be sorted by species and counted. Standard biological measurements including fork length, body weight, and sex as well as scale samples from the preferred area (for growth analyses) will be taken from subsamples of all salmon species. All other fish species will be counted and standard biological measurements including length and weight will be taken from subsamples of each species.

Oceanographic data will be collected at each trawl station. Depth profiles of salinity and temperature will be taken from surface to near bottom depths at each trawl station using a conductivity, temperature, and depth meter. Plankton samples will be collected at each trawl station using double oblique bongo tows taken to near bottom depths using a 60-cm diameter frame with 505 and 333 micron mesh nets.

Table 1. Cruise itinerary for NMFS OCC August 27- September 15, 2001 eastern Bering Sea research cruise.

Date	Location/Activity
26-August	Scientists arrive in Dutch Harbor, AK
27-August	Load scientists and gear, enroute 160°W, (gear trials)
28-August	Enroute 160°W
29-August	Begin sampling south along 160°W
30-August	Continue sampling 160°W (south); enroute 161°W; begin sampling (north)
31-August	Continue sampling 161°W (north)
1-September	Continue sampling 161°W (north); enroute 162°W; begin sampling (south)
2-September	Continue sampling 162°W (south)
3-September	Continue sampling 162°W (south); enroute 163°W; begin sampling (north)
4-September	Continue sampling 163°W (north)
5-September	Continue sampling 163°W (north); enroute 164°W
6-September	Begin sampling 164°W (south)
7-September	Continue sampling 164°W (south)
8-September	Continue sampling 164°W (south); enroute 165°W; begin sampling (north)
9-September	Continue sampling 165°W (north)
10-September	Continue sampling 165°W (north)
11-September	Continue sampling 165°W (north); enroute 166°W; begin sampling (south)
12-September	Continue sampling 166°W (south)
13-September	Continue sampling 166°W (south)
14-September	Continue sampling 166°W (south); enroute Dutch Harbor
15-September	Unload scientists and gear
16-September	Scientists depart Dutch Harbor, AK

Table 2. Participating Scientists during the August 27 – September 15, 2001 OCC juvenile salmon survey in the coastal waters of the eastern Bering Sea.

Scientists		Affiliation	
FPC	Ed Farley	Math. Stat.	NMFS/ABL
	Chuck Guthrie	Fish. Res. Biol.	NMFS/ABL
	John Pohl	Fish. Res. Biol.	NMFS/ABL
	Seiji Katakura	Visiting Scientist	Hokkaido Univ., Japan
	Maxim Koval	Visiting Scientist	KamcatNiro, Russia

FPC - Field Party Chief  
 NMFS - National Marine Fisheries Service  
 ABL - Auke Bay Laboratory

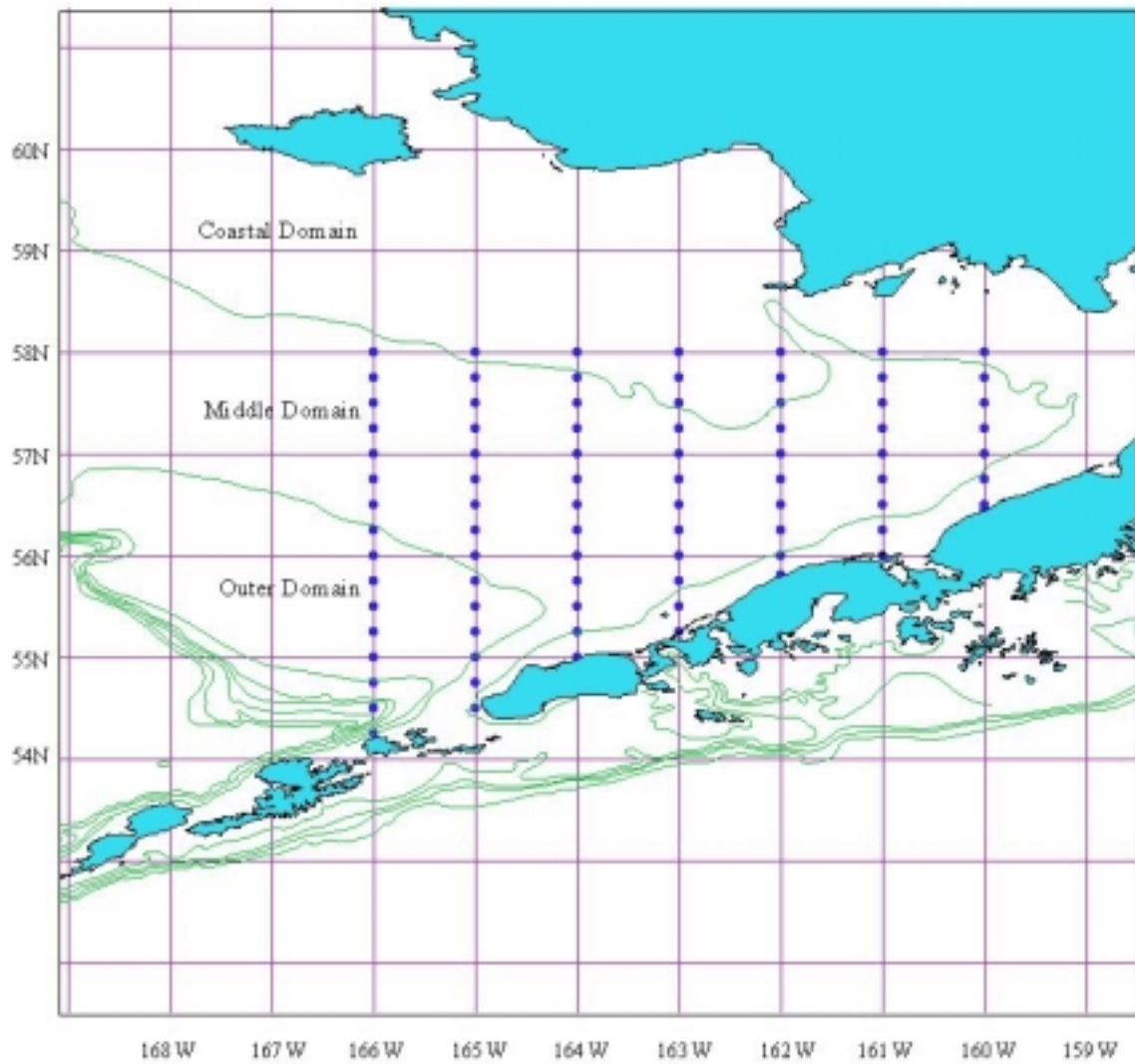


Figure 1. Transects and proposed station locations to be sampled by the NMFS OCC program in the eastern Bering Sea, August 27 – September 15, 2001.