

## CRUISE PLAN - GLOBEC CRUISE (G02-1)

PROJECT: Fish studies in the Gulf of Alaska  
VESSELS: R/V PANDALUS - Mid-water trawl vessel  
AREA: Seward Hydrographic Line, G.O.A. and Southwest Prince William Sound  
DATES: 19 July – 27 July, 2002

### Participating Organizations:

School of Fisheries and Ocean Sciences, University of Alaska Fairbanks

### Scientific Personnel:

Lew Haldorson- Juneau Center School of Fishery Ocean Sciences  
Jennifer Boldt- Juneau Center School of Fishery Ocean Sciences

### Overall Scientific Purpose:

The purpose of the NE Pacific GLOBEC program is to develop a mechanistic understanding of the response of this marine ecosystem to climate variability. Toward that end the GLOBEC cruises on the Gulf of Alaska shelf will determine the physical-chemical structure, primary production and the distribution and abundance of zooplankton, YOY salmon and other planktivorous fish.

### Cruise Objectives:

The objectives of the fish studies in the N. GOA are to:

- 1.) Determine the distribution and abundance of fish along the Seward hydrographic transect and in Southwest Prince William Sound and preserve samples for laboratory analyses (Figure 1, Tables 1 and 2).
- 2.) Determine the distribution and species composition of net zooplankton in surface waters along the Seward hydrographic transect and in southwest Prince William Sound (Figure 1, Tables 1 and 2).
- 3.) Determine the temperature, salinity, density, and fluorescence of the water column along the Seward hydrographic transect and in southwest Prince William Sound (Figure 1, Tables 1 and 2).

### Sampling:

- 1.) Determine distribution and abundance of surface fishes with a surface trawl and gillnets.
- 2.) Sample surface zooplankton at all stations with an NIO net/tucker trawl.
- 3.) Measure the water temperature, salinity, and fluorescence of the water column with a Seabird Seacat CTD, equipped with a WetStar fluorometer.
- 4.) Collect zooplankton with a 60 cm diameter bongo net (505 u and 333 u mesh, side by side) at a subset of stations where tucker trawl samples were collected.
- 5.) Collect and freeze samples of zooplankton with the tucker trawl for energetic modeling work.

Collection Procedures:

Fish samples will be sorted to species, and up to 200 fish of each species and size class will be measured. Fish samples will be frozen, zooplankton samples collected at regular stations will be preserved in 10% buffered formalin, and zooplankton samples collected for energetic modeling will be frozen.

Tentative Schedule:

July 17: Scientists arrive in Seward

July 18: Prepare gear

July 19: Load gear on R/V Pandalus at Seward Marine Station at about noon (after Alpha Helix leaves the dock)

July 19-27: Sample the Seward transect and SW PWS with the R/V Pandalus.

July 27: Offload gear at the Seward Marine Station in the morning; scientists leave Seward

Table 1. Station locations on the Seward hydrographic transect.

Station	Latitude	Longitude	Approximate Depth (m)
GAK1	59 50.7	149 28.0	265
GAK2	59 41.5	149 19.6	220
GAK3	59 33.2	149 11.3	220
GAK4	59 24.5	149 2.9	200
GAK5	59 15.7	148 54.5	175
GAK6	59 7.0	148 46.2	445
GAK7	59 58.3	148 37.8	230
GAK8	58 47.5	148 29.4	290
GAK9	58 40.8	148 21.0	275
GAK10	58 32.5	148 12.7	1300
GAK11	58 23.3	148 4.3	1400
GAK12	58 14.6	147 56.0	1500
GAK13	58 5.9	147 47.6	1525

Table 2. Station locations in southwest Prince William Sound.

Station	Latitude	Longitude
PWS1	60 16.3	148 9.0
PWS2	60 6.0	147 50.0
PWS3	60 3.0	147 40.0

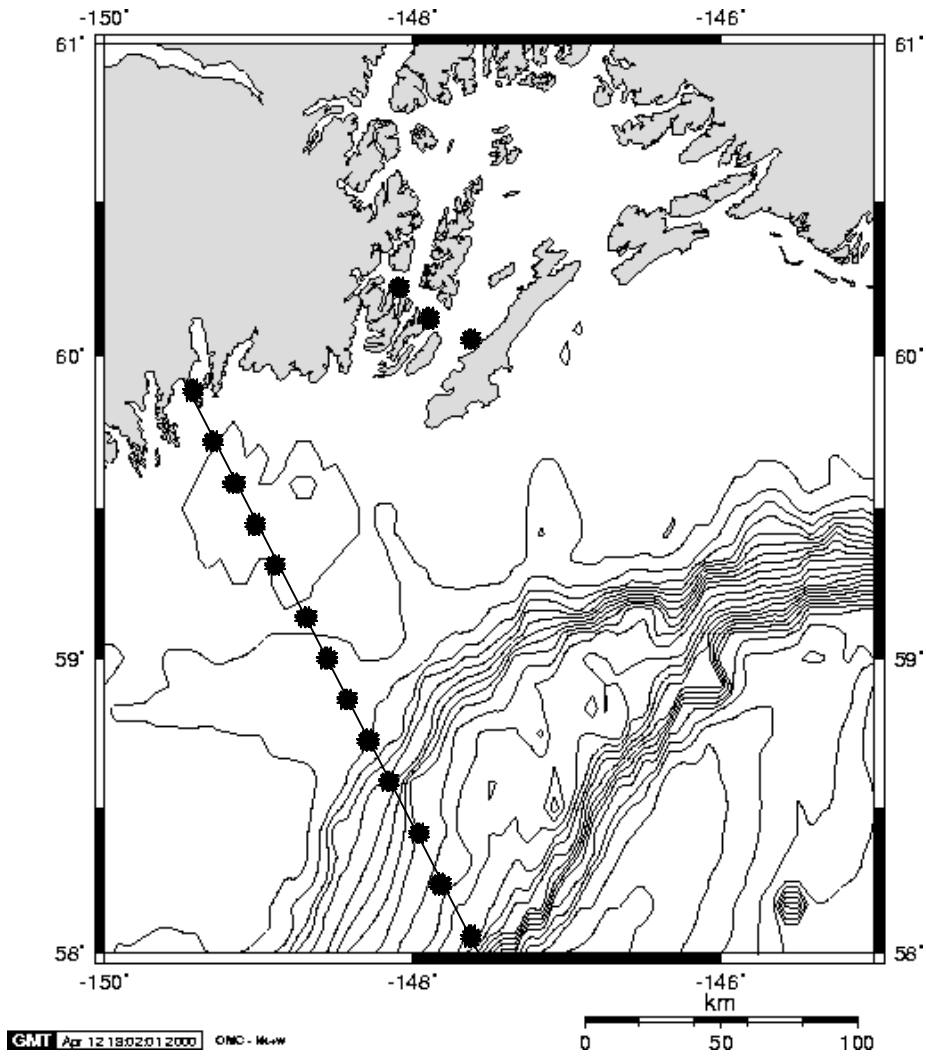


Figure 1. Station locations along the Seward hydrographic transect and in southwest PWS.