

GLOBEC CRUISE REPORT
CRUISE HX282 – 7 April 2004

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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 this 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. These interdisciplinary cruises will occur over a seven-year period and throughout the year so that seasonal and interannual depictions of the oceanography of this shelf will be available. Some of the data will be compared with historical data sets whereas other data sets will be a product of the first systematic sampling effort from this shelf.

The April 2004 cruise was to focus on the distribution of physical properties, nutrients, and chlorophyll, zooplankton, and seabird populations over the shelf along the Seward Line, within western Prince William Sound, and on the shelf south of Hinchinbrook Entrance. The purpose was to characterize the along shore variability in the physical and chemical properties and the biological components of the northern Gulf of Alaska shelf. We planned to obtain a few bottom cores on the Seward Line and within Prince William Sound as an ancillary effort to support a later NSF deep sea drilling project.

Cruise Objectives

Determine thermohaline, velocity, and nutrient structure of the Gulf of Alaska shelf, emphasizing Seward Line, C. Fairfield Line, Prince William Sound stations, offshore PWS stations and the Cape Clear Southeast Line. Other lines and bottom coring as time permits.

Determine primary production and phytoplankton biomass distribution.

Determine the distribution and abundance of zooplankton.

Determine the distribution and abundance of seabirds and marine mammals.

Determine copepod and euphausiid rates of growth and egg production.

Chronology

The cruise departed Seward, Alaska at 1003 ADT 7 April 2004 and proceeded to Resurrection Bay 2.5 where a CTD cast with standard nutrients was taken along with a ring net. Tested the HTI on the way to GAK1. At 1230 it was noted that the clutch was slipping worse than it was at the beginning of the cruise and there were unusual noises from the reduction gear. The decision was made by Captain Rook, Marine Superintendent Tom Smith and Chief Scientist Tom Royer to return to Seward to inspect the clutch. An additional ring net was taken on the way into Seward Harbor. Arrived Seward at 1453. By 2030 the clutch pack was removed and inspected. Clutch plates were warped and cracked. Replacement parts were on order from the company in Norway and arrival was expected during the week of 12 April. Since about a week of installation would be required, HX-282 was terminated.