Time series of CTD data from SECM stations from R/V John N. Cobb SECM in the Gulf of Alaska from 1997-2006 (NEP project)

Website: https://www.bco-dmo.org/dataset/3741
Version: 2010-02-23

Project
» U.S. GLOBEC Northeast Pacific (NEP)

Program
» U.S. GLOBal ocean ECosystems dynamics (U.S. GLOBEC)

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Dataset Description

Note: This dataset is identical to SECM_CTD_points, however, this version is configured so that the data can be plotted as a time series in the MapServer interface (data for individual cruises cannot be mapped). To map the data by cruise number, see SECM_CTD_points.

This coastal monitoring study in the northern region of southeastern Alaska, known as the Southeast Coastal Monitoring Project (SECM), was initiated in 1997 and repeated from 1998 to 2006 (Orsi et al. 1997, 1998, 2000, 2001, 2002) to develop our understanding of the relationships between annual time series of biophysical data and stock-specific information.

CTD data was collected in conjunction with juvenile salmon studies in the Gulf of Alaska from 1997-2006 by the Southeast Coastal Monitoring Project.

Methods & Sampling

The CTD data were collected with a Sea-Bird1 SBE 19 Seacat profiler to 200 m or within 10 m of the bottom.

Surface (3-m) temperature and salinity data were collected at 1-minute intervals with an onboard thermosalinograph (Sea-Bird SBE 21).

Surface (bucket) and 20-m (Niskin bottle) water samples were taken once at each station for later nutrient and chlorophyll analysis.

To quantify ambient light levels, light intensities (W * m-2) were recorded at each station with a Li-Cor Model 189 radiometer.

To quantify relative water clarity, the CTD was used in lieu of a Secchi disk; depth measurements (m) were made by observing the visual disappearance of the CTD following deployment.

Also see related SECM datasets:
station data
nutrients
zooplankton
fish catch data
fish length and stomach contents

Station Codes:

station	locality
ABM	Auke Bay Monitor
CS A-D	Cross Sound
ED A-D	Cape Edward
FPR	False Point Retreat
IP A-D	Icy Point
IS A-D	Icy Strait
LC A-D	Lower Clarence
LFC	Lower Favorite Channel
MC A-D	Middle Clarence
TK G-I	Taku Inlet transect
UC A-D	Upper Chatham Strait

Data Processing Description

Use constraints: User must read and fully comprehend the metadata prior to use. User must acknowledge the Originator when using the data set as a source. User must share data products developed using the source data set with the Originator. Data should not be used beyond the limits of the source scale.

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Data Files

File
secm_ctd.csv (Comma Separated Values (.csv), 111.26 KB) MD5:7b78186e3286a041f46a7aa86a0652d8 Primary data file for dataset ID 3741

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Parameters

Parameter	Description	Units

depth_ctd	CTD wire out	meters
depth_secchi	depth that CTD disappears	meters
depth_w	water depth	meters
haul_id	haul number	integer
lat	latitude of station, North is positive	in decimal degrees
light	light level at surface	watts/meter square
lon	longitude of station. West is negative.	in decimal degrees
month_local	month of year	1-12
region	Northern vs Southern SE Alaska (NSE and SSE)	text
sal	salinity at 3 m depth	parts per thousand
station	Station code. See Acquisition Description (above).	see table above
temp	temperature at 3 m depth	degrees Celsius
time_local	time of day	local time
year	year of sampling	YYYY
yrday_local	local day and decimal time, as 326.5 for the 326th day of the year, or November 22 at 1200 hours (noon)	day of year (local)
day_local	day of month, local time	1-31
lat_haul	latitude at start of haul; North is positive	decimal degrees
lon_haul	longitude at start of haul; West is negative.	decimal degrees

cruise_id	cruise identification: jc=John Cobb; next two numbers = year; last 2 numbers = cruise # ('x' means cruise # is not known)	text

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Instruments

Dataset-specific Instrument Name	CTD Sea-Bird SEACAT 19
Generic Instrument Name	CTD Sea-Bird SEACAT 19
Dataset-specific Description	The CTD data were collected with a Sea-Bird1 SBE 19 Seacat profiler to 200 m or within 10 m of the bottom.
Generic Instrument Description	The Sea-Bird SBE 19 SEACAT Recorder measures conductivity, temperature, and pressure (depth). The SEACAT is self-powered and self-contained and can be deployed in profiling or moored mode. The SBE 19 SEACAT was replaced in 2001 by the 19plus. more information from Sea-Bird Electronics

Dataset-specific Instrument Name	Niskin bottle
Generic Instrument Name	Niskin bottle
Generic Instrument Description	A Niskin bottle (a next generation water sampler based on the Nansen bottle) is a cylindrical, non-metallic water collection device with stoppers at both ends. The bottles can be attached individually on a hydrowire or deployed in 12, 24, or 36 bottle Rosette systems mounted on a frame and combined with a CTD. Niskin bottles are used to collect discrete water samples for a range of measurements including pigments, nutrients, plankton, etc.

Dataset-specific Instrument Name	Radiometer
Generic Instrument Name	Radiometer
Dataset-specific Description	To quantify ambient light levels, light intensities (W* m-2) were recorded at each station with a Li-Cor Model 189 radiometer.
Generic Instrument Description	Radiometer is a generic term for a range of instruments used to measure electromagnetic radiation (radiance and irradiance) in the atmosphere or the water column. For example, this instrument category includes free-fall spectral radiometer (SPMR/SMSR System, Satlantic, Inc), profiling or deck cosine PAR units (PUV-500 and 510, Biospherical Instruments, Inc). This is a generic term used when specific type, make and model were not specified.

Dataset-specific Instrument Name	Thermosalinograph
Generic Instrument Name	Thermosalinograph
Dataset-specific Description	Surface (3-m) temperature and salinity data were collected at 1-minute intervals with an onboard thermosalinograph (Sea-Bird SBE 21).
Generic Instrument Description	A thermosalinograph (TSG) is used to obtain a continuous record of sea surface temperature and salinity. On many research vessels the TSG is integrated into the ship's underway seawater sampling system and reported with the underway or alongtrack data.

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Deployments

SECM

Website	https://www.bco-dmo.org/deployment/58037
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/
Start Date	1997-05-20
End Date	2006-08-29
Description	Periodic salmon, zooplankton, nutrient sampling over a 10 year period. No cruise numbers are provided. The John N. Cobb is a 29-m research vessel with a main engine of 325 horsepower and a cruising speed of 10 knots. **Methods & Sampling** Southeast Coastal Monitoring (SECM) Project cruises; fish, zooplankton, nutrients, ctd sampling. Coastal, inshore and strait stations off southern Alaska. This deployment encompasses all SECM cruises from 1997 to 2006.

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Project Information

U.S. GLOBEC Northeast Pacific (NEP)

Website: http://nepglobec.bco-dmo.org

Coverage: Northeast Pacific Ocean, Gulf of Alaska

Program in a Nutshell

Goal: To understand the effects of climate variability and climate change on the distribution, abundance and production of marine animals (including commercially important living marine resources) in the eastern North Pacific. To embody this understanding in diagnostic and prognostic ecosystem models, capable of capturing the ecosystem response to major climatic fluctuations.

Approach: To study the effects of past and present climate variability on the population ecology and population dynamics of marine biota and living marine resources, and to use this information as a proxy for

how the ecosystems of the eastern North Pacific may respond to future global climate change. The strong temporal variability in the physical and biological signals of the NEP will be used to examine the biophysical mechanisms through which zooplankton and salmon populations respond to physical forcing and biological interactions in the coastal regions of the two gyres. Annual and interannual variability will be studied directly through **long-term observations** and detailed **process studies**; variability at longer time scales will be examined through **retrospective analysis** of directly measured and proxy data. Coupled **biophysical models** of the ecosystems of these regions will be developed and tested using the process studies and data collected from the long-term observation programs, then further tested and improved by hindcasting selected retrospective data series.

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Program Information

U.S. GLOBal ocean ECosystems dynamics (U.S. GLOBEC)

Website: http://www.usglobec.org/

Coverage: Global

U.S. GLOBEC (GLOBal ocean ECosystems dynamics) is a research program organized by oceanographers and fisheries scientists to address the question of how global climate change may affect the abundance and production of animals in the sea.

The U.S. GLOBEC Program currently had major research efforts underway in the Georges Bank / Northwest Atlantic Region, and the Northeast Pacific (with components in the California Current and in the Coastal Gulf of Alaska). U.S. GLOBEC was a major contributor to International GLOBEC efforts in the Southern Ocean and Western Antarctic Peninsula (WAP).

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Funding

Funding Source	Award
National Oceanic and Atmospheric Administration (NOAA)	unknown NEP NOAA
National Science Foundation (NSF)	unknown NEP NSF

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