Nutrients and CTD data in Southeastern Alaska from R/V John N. Cobb multiple cruises in the Coastal Southeast Alaska from 1999-2005 (NEP project)

Website: https://www.bco-dmo.org/dataset/3307
Version: 2010-02-24

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

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

Contributors	Affiliation	Role
Fergusson, Emily A.	National Oceanic and Atmospheric Administration - Alaska Fisheries Science Center (NOAA-AFSC-Auke)	Co-Chief Scientist, Data Manager
Orsi, Joseph A	National Oceanic and Atmospheric Administration - Alaska Fisheries Science Center (NOAA-AFSC-Auke)	Co-Chief Scientist, Lead Principal Investigator
Sturdevant, Molly V.	National Oceanic and Atmospheric Administration - Alaska Fisheries Science Center (NOAA-AFSC-Auke)	Co-Chief Scientist
Wertheimer, Alex C.	National Oceanic and Atmospheric Administration - Alaska Fisheries Science Center (NOAA-AFSC-Auke)	Lead Principal Investigator
Copley, Nancy	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

Table of Contents

- Dataset Description
  - Methods & Sampling
  - Data Processing Description
- Data Files
- Parameters
- Instruments
- Deployments
- Project Information
- Program Information
- Funding

Dataset Description

Note: This dataset is identical to SECM_nutrients_all, however, this version is configured so that the data are mapped as individual points (one per cruise) in the MapServer interface. See SECM_nutrients_all to map the data as a time series by station.

Nutrient data collected in conjunction with juvenile salmon studies in the Gulf of Alaska from 1999-2005 by the Southeast Coastal Monitoring Project. Measurements include settling volume, displacement volume, composition of taxa.

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.

One shallow vertical haul (20-m) was made at each station (except three at ABM) with a 50-cm, 243-micron mesh NORPAC net.

One deep vertical haul (to 200 m or within 10 m of bottom) was made at ABM and the Icy Point stations with a 57-cm, 202-micron mesh WP-2 net.

One double oblique bongo haul was made at stations along the Icy Strait and Lower Clarence Strait transects and at ABM to a depth of 200 m or within 20 m of the bottom, using a 60-cm diameter tandem frame with 505-micron and 333-micron mesh nets. A VEMCO ML-08-TDR time-depth recorder was used with the oblique bongo hauls to record the maximum sampling depth of each haul. General Oceanics model 2031 or Rigosha flow meters were placed inside the bongo and deep conical nets for calculation of filtered water volumes.

Also see related SECM datasets:
station data
ctd
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

Surface water samples were taken at each station for later nutrient and chlorophyll analysis contracted to the Marine Chemistry Laboratory at the University of Washington School of Oceanography.

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 souce. 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.

[table of contents | back to top]

Data Files

File
secm_nuts.csv (Comma Separated Values (.csv), 61.59 KB) MD5:47a593a91cfd02bf8b4e91302f646371 Primary data file for dataset ID 3307

[table of contents | back to top]

Parameters

Parameter	Description	Units
chl_a	chlorophyll	mg/m3
day_local	day of month	integer
depth_ctd	CTD wire out	meters
depth_nuts	depth that nutrients water sample was taken normally @ surface (0m); 2005 has 20m samples	meters
depth_secchi	depth that CTD disappears	meters
depth_w	water depth	meters
haul_id	haul number	integer
lat_haul	latitude at start of haul; North is positive; negative denotes South	decimal degrees
lat	latitude for station; North is positive; negative denotes South	decimal degrees
light	light level at surface	watts/meter square
lon_haul	longitude at start of haul; East is positive; negative denotes West	decimal degrees
lon	longitude at station; East is positive; negative denotes West	decimal degrees
month_local	month of year	1-12
NH4	ammonium	nd
NO2	nitrites	nd

NO3	nitrates	nd
phaeo	phaeopigment	mg/m3
PO4	phosphates	nd
region	Northern (NSE) or Southern SE Alaska (SSE).	text
sal	salinity at 3 m depth	parts per thousand
SiO4	silicate; Si(OH)4	nd
station	station code; see table above	text
temp	temperature at 3 m depth	degrees Celsius
time_local	time of day; local time; using 2400 clock format	HHmm
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)	jjj.ddd
cruise_id	cruise identification: jc=John Cobb; next two numbers = year; last 2 numbers = cruise # ('x' means cruise # is not known)	text

[table of contents | back to top]

Instruments

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.

[table of contents | back to top]

Deployments

jc0005

Website	https://www.bco-dmo.org/deployment/58068
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0005cr.pdf
Start Date	2000-05-19
End Date	2000-05-25
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0009

Website	https://www.bco-dmo.org/deployment/58069
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0009cr.pdf
Start Date	2000-06-26
End Date	2000-07-02
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0012

Website	https://www.bco-dmo.org/deployment/58070
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0012cr.pdf
Start Date	2000-07-19
End Date	2000-07-25
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0016

Website	https://www.bco-dmo.org/deployment/58071
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0016cr.pdf
Start Date	2000-08-25
End Date	2000-08-31
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0018

Website	https://www.bco-dmo.org/deployment/58072
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0018cr.pdf
Start Date	2000-09-25
End Date	2000-10-01
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0105

Website	https://www.bco-dmo.org/deployment/58073
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0105cr.pdf
Start Date	2001-05-19
End Date	2001-05-25
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0109

Website	https://www.bco-dmo.org/deployment/58074
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0109cr.pdf
Start Date	2001-06-26
End Date	2001-07-02
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0113

Website	https://www.bco-dmo.org/deployment/58075
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0113cr.pdf
Start Date	2001-07-27
End Date	2001-08-02
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0116

Website	https://www.bco-dmo.org/deployment/58076
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0116cr.pdf
Start Date	2001-08-26
End Date	2001-09-01
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0118

Website	https://www.bco-dmo.org/deployment/58077
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0118cr.pdf
Start Date	2001-09-26
End Date	2001-10-02
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0205

Website	https://www.bco-dmo.org/deployment/58078
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0205cr.pdf
Start Date	2002-05-21
End Date	2002-05-24
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0209

Website	https://www.bco-dmo.org/deployment/58079
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0209cr.pdf
Start Date	2002-06-22
End Date	2002-06-27
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0213

Website	https://www.bco-dmo.org/deployment/58080
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0213cr.pdf
Start Date	2002-07-23
End Date	2002-07-31
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0216

Website	https://www.bco-dmo.org/deployment/58081
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0216cr.pdf
Start Date	2002-08-23
End Date	2002-08-30
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0302

Website	https://www.bco-dmo.org/deployment/58082
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0302cr.pdf
Start Date	2003-05-20
End Date	2003-05-25
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0305

Website	https://www.bco-dmo.org/deployment/58083
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0305cr.pdf
Start Date	2003-06-21
End Date	2003-06-30
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0308

Website	https://www.bco-dmo.org/deployment/58084
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0308cr.pdf
Start Date	2003-07-22
End Date	2003-07-29
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0312

Website	https://www.bco-dmo.org/deployment/58086
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0312cr.pdf
Start Date	2003-08-21
End Date	2003-08-27
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0406

Website	https://www.bco-dmo.org/deployment/58087
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0406cr.pdf
Start Date	2004-05-18
End Date	2004-05-23
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0408

Website	https://www.bco-dmo.org/deployment/58088
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0408cr.pdf
Start Date	2004-06-20
End Date	2004-06-28
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0411

Website	https://www.bco-dmo.org/deployment/58089
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0411cr.pdf
Start Date	2004-07-23
End Date	2004-07-31
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0414

Website	https://www.bco-dmo.org/deployment/58090
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0414cr.pdf
Start Date	2004-08-21
End Date	2004-08-28
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0506

Website	https://www.bco-dmo.org/deployment/58091
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0506cr.pdf
Start Date	2005-05-22
End Date	2005-05-25
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0508

Website	https://www.bco-dmo.org/deployment/58092
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0508cr.pdf
Start Date	2005-06-20
End Date	2005-07-03
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0510

Website	https://www.bco-dmo.org/deployment/58093
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0510cr.pdf
Start Date	2005-07-20
End Date	2005-08-01
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0512

Website	https://www.bco-dmo.org/deployment/58094
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0512cr.pdf
Start Date	2005-08-23
End Date	2005-08-29
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc9906

Website	https://www.bco-dmo.org/deployment/58109
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc9906cr.pdf
Start Date	1999-05-20
End Date	1999-05-25
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc9909

Website	https://www.bco-dmo.org/deployment/58110
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc9909cr.pdf
Start Date	1999-06-26
End Date	1999-07-01
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc9912

Website	https://www.bco-dmo.org/deployment/58111
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc9912cr.pdf
Start Date	1999-07-24
End Date	1999-07-30
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc9915

Website	https://www.bco-dmo.org/deployment/58112
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc9915cr.pdf
Start Date	1999-08-20
End Date	1999-08-26
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc9918

Website	https://www.bco-dmo.org/deployment/58113
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc9918cr.pdf
Start Date	1999-09-26
End Date	1999-10-02
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

jc0304b

Website	https://www.bco-dmo.org/deployment/58114
Platform	R/V John N. Cobb
Report	http://globec.whoi.edu/globec-dir/reports/secm/jc0304cr.pdf
Start Date	2003-06-12
End Date	2003-06-15
Description	Southeast Alaska Coastal Monitoring (SECM) cruise

[table of contents | back to top]

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.

[table of contents | back to top]

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).

[table of contents | back to top]

Funding

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

[table of contents | back to top]