

CTDs from one cruise per year from the NE Pacific from multiple cruises in the Northeast Pacific, Coastal Gulf of Alaska from 2001-2004 (NEP project)

Website: <https://www.bco-dmo.org/dataset/3098>

Version: 2012-06-18

Project

» [U.S. GLOBEC Northeast Pacific](#) (NEP)

Program

» [U.S. GLOBal ocean ECoSystems dynamics](#) (U.S. GLOBEC)

Contributors	Affiliation	Role
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Dataset Description

These data were collected as part of the Northeast Pacific, Coastal Gulf of Alaska GLOBEC program by NOAA/PMEL/EcoFOCI from 2001-2004. E.D.Cokelet was the PI spearheading the collection of this data set. Data from one cruise per year are included in this CTD data set.

Methods & Sampling

CTD casts from surface to near-bottom were collected using a Sea-Bird SBE 25 CTD, Sea-Bird SBE 19 Seacat CTD, or Sea-Bird SBE 911plus Seacat CTD (see dataset-deployment metadata for specific model used on each cruise). Salinity samples were analyzed on shore with an AutoSal, and corrections were applied to the CTD-measured salinities. Chlorophyll-a was inferred from fluorescence by a linear least-squares fit of laboratory-measured chlorophyll extracted from water-bottle samples versus fluorescence measured at the same depth and time.

Data Processing Description

BCO-DMO re-formatted the data in June 2012: original 'yrday_special' was removed and 'yrday_gmt' was calculated and added; month_gmt, day_gmt, and time_gmt were also added; Cruises GP0401 and GP0207 (also known as GP0201) were separated into 2 legs each.

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Data Files

File
ecofoci_ctd.csv (Comma Separated Values (.csv), 7.37 MB) MD5:0121daf5fe7924fc754cac06bcfb6f3d
Primary data file for dataset ID 3098

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Parameters

Parameter	Description	Units
cast	CTD cast number.	dimensionless
lon	Longitude; positive values = East.	decimal degrees
lat	Latitude; positive values = North.	decimal degrees
depth_w	Bottom depth.	meters
press	Pressure.	decibars
temp	Temperature	degrees Celsius
sal	Salinity	PSU
fluor	Fluorescence.	micrograms/l
chl_a	Chlorophyll	micrograms/l
sigma_t	Sigma_t density.	kg/m ³
yday_gmt	Yearday, GMT.	dimensionless
cruiseid	Identifier of the cruise.	dimensionless
year	Four-digit year.	dimensionless
month_gmt	Month of the year (01 to 12), GMT.	dimensionless
day_gmt	Day of the month (01 to 31), GMT.	dimensionless
time_gmt	Time in hours, minutes, and decimal minutes (HHMM.ss); GMT.	dimensionless

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Instruments

Dataset-specific Instrument Name	CTD Sea-Bird
Generic Instrument Name	CTD Sea-Bird
Dataset-specific Description	CTD casts from surface to near-bottom were collected using a Sea-Bird SBE 25 CTD, Sea-Bird SBE 19 Seacat CTD, or Sea-Bird SBE 911plus Seacat CTD (see dataset-deployment metadata for specific model used on each cruise).
Generic Instrument Description	Conductivity, Temperature, Depth (CTD) sensor package from SeaBird Electronics, no specific unit identified. This instrument designation is used when specific make and model are not known. See also other SeaBird instruments listed under CTD. More information from Sea-Bird Electronics.

Deployments

GP0207-01

Website	https://www.bco-dmo.org/deployment/57500
Platform	F/V Great Pacific
Report	http://globec.who.edu/nep/reports/cgoa_cruises/gp0207cr.pdf
Start Date	2002-07-11
End Date	2002-07-27
Description	<p>NEP GLOBEC gave this cruise the designation GP0207 and NOAA gave this cruise the designation GP0201. The data say 0201. The cruise report, inventory and eventlog say GP0207. 18 May 2011, dld - This cruise consisted of Leg 1 and Leg 2. Metadata is edited to reflect this information gleaned from the event log and the cruise report. The cruise report starts with a transit, not the science. Leg 1 includes the 11-16 July 2002 transit from Dutch Harbor to Yakutat where science personnel and gear were picked up. The Leg ends on 27 July in Seward. Chief Scientist was Edward D. Cokelet. Leg 2 departed Seward on 28 July and arrived in Dutch Harbor on 8 August with Christine Kondzela as Chief Scientist.</p> <p>Methods & Sampling GP0207 and GP0201 are synonymous. The first is the GLOBEC descriptor, the second is the NOAA descriptor. The eventlog was submitted without a cruise-id, so data managers used the standard yy-mm descriptor. When NOAA submitted the data, the data had the GP0201 designation. CTD casts from surface to near-bottom or about 200 m (whichever was shallower) were collected using a Sea-Bird SBE 19 Seacat CTD (conductivity-temperature-depth) profiler carrying single, pumped temperature, conductivity and chlorophyll fluorescence sensors. The CTD sampled at 2 Hz and was lowered at 20 m/minute. Data were averaged into 1-decibar pressure bins. Sea Bird gives the temperature and conductivity accuracy of 0.01 degrees C and 0.001 S/m, respectively. On each cast, a Niskin bottle collected discrete water samples alternating between the shallowest and deepest sampling depths.</p> <p>Processing Description Salinity samples were analyzed on shore with an AutoSal, and corrections were applied to the CTD-measured salinities. Chlorophyll-a was inferred from fluorescence by a linear least-squares fit of laboratory-measured chlorophyll extracted from water-bottle samples versus fluorescence measured at the same depth and time.</p>

MF0310

Website	https://www.bco-dmo.org/deployment/57556
Platform	R/V Miller Freeman
Report	http://globec.whoi.edu/nep/reports/cgoa_cruises/mf0310cr.pdf
Start Date	2003-07-18
End Date	2003-08-09
Description	<p>Methods & Sampling CTD casts from surface to near-bottom or about 1500 m (whichever was shallower) were collected using a Sea-Bird SBE 911plus Seacat CTD (conductivity-temperature-depth) profiler carrying dual, pumped temperature and conductivity sensors and a single chlorophyll fluorescence sensor. The CTD sampled at 24 Hz and was lowered at 20 m/minute to just below the pycnocline and then at 50 m/minute below that. Data were averaged into 1-decibar pressure bins. Sea Bird gives the temperature and conductivity accuracy of 0.001 degrees C and 0.0003 S/m, respectively. On each cast, a Niskin bottle collected discrete water samples alternating between the shallowest and deepest sampling depths.</p> <p>Processing Description Salinity samples were analyzed on shore with an AutoSal, and corrections were applied to the CTD-measured salinities. Chlorophyll-a was inferred from fluorescence by a linear least-squares fit of laboratory-measured chlorophyll extracted from water-bottle samples versus fluorescence measured at the same depth and time.</p>

GP0401-01

Website	https://www.bco-dmo.org/deployment/57501
Platform	F/V Great Pacific
Report	http://globec.whoi.edu/nep/reports/cgoa_cruises/gp0401cr.pdf
Start Date	2004-10-17
End Date	2004-10-28
Description	<p>23 May 2011, dld - This cruise consisted of Leg 1 and Leg 2. Metadata is edited to reflect this information gleaned from the event log and the cruise report. Leg 1 departed Dutch Harbor. The Leg ended in Kodiak. Chief Scientist was Jamal H. Moss. Leg 2 departed Kodiak and arrived in Dutch Harbor. Chief Scientist was Edward D. Cokelet.</p> <p>Methods & Sampling TD casts from surface to near-bottom or about 200 m (whichever was shallower) were collected using a Sea-Bird SBE 25 CTD (conductivity-temperature-depth) profiler with an automatic firing mechanism (AFM) water-bottle rosette lowered at 20 m/min. Single, pumped temperature, salinity and chlorophyll fluorescence sensors collected data at 4 Hz. Data were averaged into 1-decibar pressure bins. Sea Bird gives the temperature and conductivity accuracy of 0.002 degrees C and 0.0003 S/m, respectively. On each cast, Niskin bottles collected discrete water samples at 5, 15, 25, 35, 50, 75 and 100 m depth for nutrient concentrations. Chlorophyll samples were taken from the bottle depth nearest the chlorophyll maximum, usually in the upper 35 m. Salinity samples were taken alternately at the shallowest and deepest bottle depth for calibration with the CTD. For CTD casts 21-27, the CTD rosette stopped working owing to computer communication problems. For these casts, an SBE 25 CTD without oxygen sensor or rosette was used. In those cases, one Niskin bottle was tripped at 15 m.</p> <p>Processing Description Salinity samples were analyzed on shore with an AutoSal, and corrections were applied to the CTD-measured salinities. Chlorophyll-a was inferred from fluorescence by a linear least-squares fit of laboratory-measured chlorophyll extracted from water-bottle samples versus fluorescence measured at the same depth and time.</p>

GP0207-02

Website	https://www.bco-dmo.org/deployment/58669
Platform	F/V Great Pacific
Report	http://globec.whoi.edu/nep/reports/cgoa_cruises/gp0207cr.pdf
Start Date	2002-07-28
End Date	2002-08-08
Description	<p>NEP GLOBEC gave this cruise the designation GP0207 and NOAA gave this cruise the designation GP0201. The data say 0201. The cruise report, inventory and eventlog say GP0207. 18 May 2011, dld - This cruise consisted of Leg 1 and Leg 2. Metadata is edited to reflect this information gleaned from the event log and the cruise report. The cruise report starts with a transit, not the science. Leg 1 includes the 11-16 July 2002 transit from Dutch Harbor to Yakutat where science personnel and gear were picked up. The Leg ends on 27 July in Seward. Chief Scientist was Edward D. Cokelet. Leg 2 departed Seward on 28 July and arrived in Dutch Harbor on 8 August with Christine Kondzela as Chief Scientist.</p> <p>Methods & Sampling CTD casts from surface to near-bottom or about 200 m (whichever was shallower) were collected using a Sea-Bird SBE 19 Seacat CTD (conductivity-temperature-depth) profiler carrying single, pumped temperature, conductivity and chlorophyll fluorescence sensors. The CTD sampled at 2 Hz and was lowered at 20 m/minute. Data were averaged into 1-decibar pressure bins. Sea Bird gives the temperature and conductivity accuracy of 0.01 degrees C and 0.001 S/m, respectively. On each cast, a Niskin bottle collected discrete water samples alternating between the shallowest and deepest sampling depths.</p> <p>Processing Description Salinity samples were analyzed on shore with an AutoSal, and corrections were applied to the CTD-measured salinities. Chlorophyll-a was inferred from fluorescence by a linear least-squares fit of laboratory-measured chlorophyll extracted from water-bottle samples versus fluorescence measured at the same depth and time.</p>

GP0401-02

Website	https://www.bco-dmo.org/deployment/58671
Platform	F/V Great Pacific
Report	http://globec.whoi.edu/nep/reports/cgoa_cruises/gp0401cr.pdf
Start Date	2004-11-01
End Date	2004-11-12
Description	<p>23 May 2011, dld - This cruise consisted of Leg 1 and Leg 2. Metadata is edited to reflect this information gleaned from the event log and the cruise report. Leg 1 departed Dutch Harbor. The Leg ended in Kodiak. Chief Scientist was Jamal H. Moss. Leg 2 departed Kodiak and arrived in Dutch Harbor. Chief Scientist was Edward D. Cokelet.</p>

GP0108

Website	https://www.bco-dmo.org/deployment/57499
Platform	F/V Great Pacific
Report	http://globec.whoi.edu/nep/reports/cgoa_cruises/gp0108cr.pdf
Start Date	2001-07-17
End Date	2001-08-06
Description	<p>The July - August 2001 OCC/GLOBEC cruise focused on salmon (<i>Oncorhynchus</i> spp.), and zooplankton distribution, and physical properties (current, temperature, and salinity) along 11 transects beginning at Icy Point near northern Southeast Alaska and ending at Cape Kaguyak at the western end of Kodiak Island. Sampling along each transect occurred over the continental shelf of the Gulf of Alaska and beyond the 200-m slope and into oceanic depths. The purpose was to investigate the relationships between biological and physical oceanographic processes that affect the distribution of juvenile salmon in the coastal Gulf of Alaska. This deployment was also known as GP0101.</p> <p>Methods & Sampling CTD casts from surface to near-bottom or about 200 m (whichever was shallower) were collected using a Sea-Bird SBE 19 Seacat CTD (conductivity-temperature-depth) profiler carrying single, pumped temperature, conductivity and chlorophyll fluorescence sensors. The CTD sampled at 2 Hz and was lowered at 20 m/minute. Data were averaged over 1-decibar pressure bins. Sea Bird gives the temperature and conductivity accuracy of 0.01 degrees C and 0.001 S/m, respectively. On each cast, a Niskin bottle collected discrete water samples alternating between the shallowest and deepest sampling depths.</p> <p>Processing Description Salinity samples were analyzed on shore with an AutoSal, and corrections were applied to the CTD-measured salinities. Chlorophyll-a was inferred from fluorescence by a linear least-squares fit of laboratory-measured chlorophyll extracted from water-bottle samples versus fluorescence measured at the same depth and time. Deployment GP0108 was also known as GP0101. This CTD dataset was originally associated with GP0101, though all the other datasets from the cruise were associated with GP0108. As of 4/27/12, this dataset is now associated with GP0108.</p>

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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
NSF Division of Ocean Sciences (NSF OCE)	OCE-0109078

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