Non-salmon meristics from the F/V Sea Eagle, F/V Frosti SE0005, SE0007, FR0206-01, FR0208, FR0206-02 from the Northeast Pacific, 2000 and 2002 (NEP project)

Website: https://www.bco-dmo.org/dataset/2466
Data Type: Cruise Results
Version: 1
Version Date: 2005-06-29

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

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

Contributors	Affiliation	Role
Brodeur, Richard D	Northwest Fisheries Science Center - Newport (NOAA NWFSC)	Co-Principal Investigator
Emmett, Robert L	Northwest Fisheries Science Center - Newport (NOAA NWFSC)	Co-Principal Investigator
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Abstract
Non-salmon meristics from the F/V Sea Eagle, F/V Frosti SE0005, SE0007, FR0206-01, FR0208, FR0206-02 from the Northeast Pacific, 2000 and 2002 (NEP project)

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Coverage

Spatial Extent: **N**:44.692 **E**:-124.1281 **S**:41.8189 **W**:-126.007
Temporal Extent: 2000-05-29 - 2002-08-17

Dataset Description

U.S. GLOBEC Northeast Pacific California Current System Mesoscale Process Studies: Non-Salmonid Meristics Data

During juvenile salmonid trawling cruises, additional sampling included CTD profiles, neuston net tows, and Niskin bottle water collections for chlorophyll a. At most stations, data on all parameters were collected.

Results: Detailed analyses of the nekton trawl catches for 2000 are presented in Brodeur et al. (2004) and for jellyfish for both years in Suchman and Brodeur (2005).

Last modified: June 20, 2005

Methods & Sampling

At each station, a Nordic 264 rope trawl built by Nor'Eastern Trawl Systems, Inc. was towed in surface waters by a chartered fishing vessel (F/V Sea Eagle in 2000 and F/V Frosti in 2002). It was towed with about 300 m of warp for 30 minutes at 1.5 m/sec with a pair of 3.0-m foam-filled trawl doors and 90.7-kg weight chains to spread the mouth open. Except for two mid-water trawling events, six A-4 Polyform floats were clipped to wingtips and the headrope to fish the trawl at the surface. The trawl has a maximum mouth opening of approximately 30-m wide x 18-m high. Mesh sizes ranged from 162.6 cm in the throat of the trawl near the jib lines to 8.9 cm in the codend. To maintain catches of small fish and squid, a 6.1-m long, 0.8-cm knotless liner was sewn into the codend. All but several tows were 30 min in duration. The majority of trawls was done during daytime, although a few were done at dawn and dusk and two diel series were completed in 2002. From each trawl catch, up to 50 individuals per species of non-salmonid nekton and jellyfish were measured at sea.

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Data Files

File
nsmeristics.csv (Comma Separated Values (.csv), 2.09 MB) MD5:bd2aec506db83e80bbb56f73f07bff34 Primary data file for dataset ID 2466

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Related Publications

Brodeur, R. D., Fisher, J. P., Teel, D. J., Emmett, R. L., Casillas, E., & Miller, T. W. (2004). Juvenile salmonid distribution, growth, condition, origin, and environmental and species associations in the Northern California Current. Fishery Bulletin, 102(1), 24-46. http://fishbull.noaa.gov/1021/brodeur.pdf
Results

Suchman, C. L., & Brodeur, R. D. (2005). Abundance and distribution of large medusae in surface waters of the northern California Current. Deep Sea Research Part II: Topical Studies in Oceanography, 52(1-2), 51–72. doi:10.1016/j.dsr2.2004.09.017
Results

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Parameters

Parameter	Description	Units
year	year	unitless
cruise_id	cruise ID	unitless
cast	cast number within cruise	unitless
station_std	standard station name	unitless

lat_begin	starting latitude (decimal degrees)	decimal degrees
lon_begin	starting longitude (decimal degrees)	decimal degrees
lat_end	ending latitude (decimal degrees)	decimal degrees
lon_end	ending longitude (decimal degrees)	decimal degrees
depth_w	bottom depth of station at start of trawl event	meters
month_local	local month	unitless
day_local	local day	unitless
time_local_begin	starting local time (24-hr)	unitless
time_local_end	ending local time (24-hr)	unitless
inst	sampling instrument	unitless
gear_area_m2	mouth area of gear	meters²
max_sample_depth	maximum sampling depth	meters
dist_towed	distance towed (km)	km
vol_net_km3	volume of water filtered by trawl (km3)	km^3
genus_species	taxonomic category	unitless
comments	comment for species record	unitless
ship	vessel name	unitless
min_sample_depth	minimum sampling depth	meters
length_type	SL=standard length; FL=fork length; TL=total length; BD=bell diameter;DML=dorsal mantle length	unitless

length	length, bell diameter, or dorsal mantle length (mm)	mm

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Instruments

Dataset-specific Instrument Name	Nordic264 Trawl
Generic Instrument Name	Nordic 264 Rope Trawl
Dataset-specific Description	The trawl has a maximum mouth opening of approximately 30-m wide x 18-m high. Mesh sizes ranged from 162.6 cm in the throat of the trawl near the jib lines to 8.9 cm in the codend. To maintain catches of small fish and squid, a 6.1-m long, 0.8-cm knotless liner was sewn into the codend. It was towed with about 300 m of warp for 30 minutes at 1.5 m/sec with a pair of 3.0-m foam-filled trawl doors and 90.7-kg weight chains to spread the mouth open. All but for two mid-water trawling events, six A-4 Polyform floats were clipped to wingtips and the headrope to fish the trawl at the surface.
Generic Instrument Description	A Nordic 264 surface rope trawl is a 198-m long, 25-m wide, 35-m vertical trawl net, equipped with a 1.2-cm mesh liner in the cod end and towed at the surface.

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Deployments

SE0005

Website	https://www.bco-dmo.org/deployment/57576
Platform	F/V Sea Eagle
Report	http://globec.whoi.edu/nep/reports/ccs_cruises/se0005cr.pdf
Start Date	2000-05-29
End Date	2000-06-11
Description	**Methods & Sampling** At each station, a Nordic 264 rope trawl built by Nor'Eastern Trawl Systems, Inc. was towed in surface waters by a chartered fishing vessel (F/V Sea Eagle in 2000 and F/V Frosti in 2002). It was towed with about 300 m of warp for 30 minutes at 1.5 m/sec with a pair of 3.0-m foam-filled trawl doors and 90.7-kg weight chains to spread the mouth open. Except for two mid-water trawling events, six A-4 Polyform floats were clipped to wingtips and the headrope to fish the trawl at the surface. The trawl has a maximum mouth opening of approximately 30-m wide x 18-m high. Mesh sizes ranged from 162.6 cm in the throat of the trawl near the jib lines to 8.9 cm in the codend. To maintain catches of small fish and squid, a 6.1-m long, 0.8-cm knotless liner was sewn into the codend. All but several tows were 30 min in duration. The majority of trawls was done during daytime, although a few were done at dawn and dusk and two diel series were completed in 2002. From each trawl catch, up to 50 individuals per species of non-salmonid nekton and jellyfish were measured at sea. **Processing Description** Detailed analyses of the nekton trawl catches for 2000 are presented in Brodeur et al. (2004) and for jellyfish for both years in Suchman and Brodeur (2005).

SE0007

Website	https://www.bco-dmo.org/deployment/57577
Platform	F/V Sea Eagle
Report	http://globec.whoi.edu/nep/reports/ccs_cruises/se0007cr.pdf
Start Date	2000-07-28
End Date	2000-08-12
Description	**Methods & Sampling** At each station, a Nordic 264 rope trawl built by Nor'Eastern Trawl Systems, Inc. was towed in surface waters by a chartered fishing vessel (F/V Sea Eagle in 2000 and F/V Frosti in 2002). It was towed with about 300 m of warp for 30 minutes at 1.5 m/sec with a pair of 3.0-m foam-filled trawl doors and 90.7-kg weight chains to spread the mouth open. Except for two mid-water trawling events, six A-4 Polyform floats were clipped to wingtips and the headrope to fish the trawl at the surface. The trawl has a maximum mouth opening of approximately 30-m wide x 18-m high. Mesh sizes ranged from 162.6 cm in the throat of the trawl near the jib lines to 8.9 cm in the codend. To maintain catches of small fish and squid, a 6.1-m long, 0.8-cm knotless liner was sewn into the codend. All but several tows were 30 min in duration. The majority of trawls was done during daytime, although a few were done at dawn and dusk and two diel series were completed in 2002. From each trawl catch, up to 50 individuals per species of non-salmonid nekton and jellyfish were measured at sea. **Processing Description** Detailed analyses of the nekton trawl catches for 2000 are presented in Brodeur et al. (2004) and for jellyfish for both years in Suchman and Brodeur (2005).

FR0206-01

Website	https://www.bco-dmo.org/deployment/57497
Platform	F/V Frosti
Report	http://globec.whoi.edu/nep/reports/ccs_cruises/fr0206/fr0206cr.pdf
Start Date	2002-05-31
End Date	2002-06-08
Description	Event logs provide an overall summary of the sampling activities during a cruise. A hard copy of the event log is also included in the cruise report. Further documentation about event logs is available in Chief Scientist Data Reporting Requirements. For further information contact the Data Management Office Last updated November 03, 2006; gfh 20 May 2011, dld - This cruise consisted of Leg 1 and Leg 2. Metadata is edited to reflect this information which was gleaned from the event log and the cruise report. Leg 1 departed Astoria, OR late on 31 May and ended with a brief port stop in Newport, OR to exchange some science personnel and take on supplies on 8 June. The Chief Scientist was Robert Emmett. Leg 2 began late in the afternoon of 8 June departing from Newport, OR and ended 18 June in Newport, OR. The Chief Scientist was Richard Brodeur. **Methods & Sampling** At each station, a Nordic 264 rope trawl built by Nor'Eastern Trawl Systems, Inc. was towed in surface waters by a chartered fishing vessel (F/V Sea Eagle in 2000 and F/V Frosti in 2002). It was towed with about 300 m of warp for 30 minutes at 1.5 m/sec with a pair of 3.0-m foam-filled trawl doors and 90.7-kg weight chains to spread the mouth open. Except for two mid-water trawling events, six A-4 Polyform floats were clipped to wingtips and the headrope to fish the trawl at the surface. The trawl has a maximum mouth opening of approximately 30-m wide x 18-m high. Mesh sizes ranged from 162.6 cm in the throat of the trawl near the jib lines to 8.9 cm in the codend. To maintain catches of small fish and squid, a 6.1-m long, 0.8-cm knotless liner was sewn into the codend. All but several tows were 30 min in duration. The majority of trawls was done during daytime, although a few were done at dawn and dusk and two diel series were completed in 2002. From each trawl catch, up to 50 individuals per species of non-salmonid nekton and jellyfish were measured at sea. **Processing Description** Detailed analyses of the nekton trawl catches for 2000 are presented in Brodeur et al. (2004) and for jellyfish for both years in Suchman and Brodeur (2005).

FR0208

Website	https://www.bco-dmo.org/deployment/57498
Platform	F/V Frosti
Report	http://globec.whoi.edu/nep/reports/ccs_cruises/fr0208/fr0208cr.pdf
Start Date	2002-08-01
End Date	2002-08-17
Description	**Methods & Sampling** At each station, a Nordic 264 rope trawl built by Nor'Eastern Trawl Systems, Inc. was towed in surface waters by a chartered fishing vessel (F/V Sea Eagle in 2000 and F/V Frosti in 2002). It was towed with about 300 m of warp for 30 minutes at 1.5 m/sec with a pair of 3.0-m foam-filled trawl doors and 90.7-kg weight chains to spread the mouth open. Except for two mid-water trawling events, six A-4 Polyform floats were clipped to wingtips and the headrope to fish the trawl at the surface. The trawl has a maximum mouth opening of approximately 30-m wide x 18-m high. Mesh sizes ranged from 162.6 cm in the throat of the trawl near the jib lines to 8.9 cm in the codend. To maintain catches of small fish and squid, a 6.1-m long, 0.8-cm knotless liner was sewn into the codend. All but several tows were 30 min in duration. The majority of trawls was done during daytime, although a few were done at dawn and dusk and two diel series were completed in 2002. From each trawl catch, up to 50 individuals per species of non-salmonid nekton and jellyfish were measured at sea. **Processing Description** Detailed analyses of the nekton trawl catches for 2000 are presented in Brodeur et al. (2004) and for jellyfish for both years in Suchman and Brodeur (2005).

FR0206-02

Website	https://www.bco-dmo.org/deployment/58670
Platform	F/V Frosti
Report	http://globec.whoi.edu/nep/reports/ccs_cruises/fr0206/fr0206cr.pdf
Start Date	2002-06-08
End Date	2002-06-18
Description	Event logs provide an overall summary of the sampling activities during a cruise. A hard copy of the event log is also included in the cruise report. Further documentation about event logs is available in Chief Scientist Data Reporting Requirements. For further information contact the Data Management Office Last updated November 03, 2006; gfh 20 May 2011, dld - This cruise consisted of Leg 1 and Leg 2. Metadata is edited to reflect this information which was gleaned from the event log and the cruise report. Leg 1 departed Astoria, OR late on 31 May and ended with a brief port stop in Newport, OR to exchange some science personnel and take on supplies on 8 June. The Chief Scientist was Robert Emmett. Leg 2 began late in the afternoon of 8 June departing from Newport, OR and ended 18 June in Newport, OR. The Chief Scientist was Richard Brodeur. **Methods & Sampling** At each station, a Nordic 264 rope trawl built by Nor'Eastern Trawl Systems, Inc. was towed in surface waters by a chartered fishing vessel (F/V Sea Eagle in 2000 and F/V Frosti in 2002). It was towed with about 300 m of warp for 30 minutes at 1.5 m/sec with a pair of 3.0-m foam-filled trawl doors and 90.7-kg weight chains to spread the mouth open. Except for two mid-water trawling events, six A-4 Polyform floats were clipped to wingtips and the headrope to fish the trawl at the surface. The trawl has a maximum mouth opening of approximately 30-m wide x 18-m high. Mesh sizes ranged from 162.6 cm in the throat of the trawl near the jib lines to 8.9 cm in the codend. To maintain catches of small fish and squid, a 6.1-m long, 0.8-cm knotless liner was sewn into the codend. All but several tows were 30 min in duration. The majority of trawls was done during daytime, although a few were done at dawn and dusk and two diel series were completed in 2002. From each trawl catch, up to 50 individuals per species of non-salmonid nekton and jellyfish were measured at sea. **Processing Description** Detailed analyses of the nekton trawl catches for 2000 are presented in Brodeur et al. (2004) and for jellyfish for both years in Suchman and Brodeur (2005).

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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-0002855
National Oceanic and Atmospheric Administration (NOAA)	unknown NEP NOAA

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