Salmonid Meristics and Necropsy Data from F/V Sea Eagle, F/V Frosti SE0005, SE0007, FR0206-01, FR0206-02, FR0208 in the Northeast Pacific from 2000-2002 (NEP project)

Website: https://www.bco-dmo.org/dataset/3562
Version: 2005-05-20

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
Pool, Suzan S	Oregon State University (OSU-CIMRS)	Co-Principal Investigator
Copley, Nancy	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

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Dataset Description

Contacts for this data set:

Dr. Richard Brodeur
Northwest Fisheries Science Center
National Oceanic and Atmospheric Administration
Newport, OR 97365
Phone: 541-867-0336
Email: Rick.Brodeur@noaa.gov

Robert Emmett
Northwest Fisheries Science Center
National Oceanic and Atmospheric Administration
Newport, OR 97365
Phone: 541-867-0109
Email: Robert.Emmett@noaa.gov

Suzan Pool
Cooperative Institute for Marine Resources Studies
Oregon State University
Newport, OR 97365
Phone: 541-867-0195
Email: Suzan.Pool@noaa.gov

Contact for ages by scale analysis:
Joseph Fisher
College of Oceanic and Atmospheric Sciences
Oregon State University
Corvallis, OR 97331
Phone: 541-737-3964
Email: jfisher@coas.oregonstate.edu

Contact for coded-wire tags collected:
Susan Hinton
Northwest Fisheries Science Center
National Oceanic and Atmospheric Administration
Hammond, OR 97121
Phone: 503-861-1818
Email: Susan.Hinton@noaa.gov

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.

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 min 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 were done during daytime, although a few were done at dawn and dusk and two diel series were completed in 2002.

All juvenile salmon caught were measured for fork lengths, then immediately frozen for laboratory analysis. In the laboratory, juvenile salmonids were weighed prior to dissections for subsamples of growth, condition, pathology, genetic analysis, and food habits. As large subadult/adult salmonids were released shortly after being captured, their weights were estimated from length-weight regressions.

Data Processing Description

Detailed analyses of the juvenile salmonid catches for 2000 are presented in Brodeur et al. (2004).

References

Brodeur, R. D., J. P. Fisher, D. J. Teel, R. L. Emmett, E. Casillas, and T. W. Miller. 2004.

Juvenile salmonid distribution, growth, condition, origin, and environmental and species associations in the Northern California Current. Fish. Bull. 102: 25-46.

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Data Files

File
smeristics.csv (Comma Separated Values (.csv), 302.29 KB) MD5:6b2253780479ad556dbbfcd0f6658be8 Primary data file for dataset ID 3562

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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	Name of sampling instrument.	unitless
gear_area_m2	Mouth area of gear.	meters²
max_sample_depth	Maximum sampling depth (meters).	meters
dist_towed	Distance towed (km).	kilometers

vol_net_km3	Volume of water filtered by trawl (km3).	km^3
genus_species	Taxonomic category.	unitless
comments	comment for species record.	unitless
min_sample_depth	Minimum sampling depth (meters).	meters
salmon_id	Identification number assigned to salmon (G####).	unitless
life_stage	Life stage based on length; for age by scale analysis, contact Joe Fisher.	unitless
fork_length	Fork length.	millimeters
froz_releas	Frozen or released salmonid caught.	unitless
ad_clipped	Adipose fin was clipped (true/false).	True/False
scanned_cwt	Scanned for coded-wire tag (true/false).	True/False
cwt	Coded-wire tag detected (true/false); for CWT info., contact Susan Hinton.	True/False
other_tags	Other tags: BLL=blue latex left eye; RLL=red latex left eye; GLL=green latex left eye; GLR=green latex right eye; OLL=orange latex left eye; LP1=left pectoral fin clipped; LP2=left pelvic fin clipped; RP1=right pectoral fin clipped; RP2=right pelvic fin clipped	unitless
fish_weight	Weight of individual salmonid.	grams
sex	Sex, if known.	Female/Male
ship	Name of vessel.	unitless

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Instruments

Dataset-specific Instrument Name	Nordic 264 Rope Trawl
Generic Instrument Name	Nordic 264 Rope Trawl
Dataset-specific Description	built by Nor'Eastern Trawl Systems, Inc. was towed in surface waters. It was towed with about 300 m of warp for 30 min 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 were done during daytime, although a few were done at dawn and dusk and two diel series were completed in 2002.
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

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

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.

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.

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

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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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