Mapping spawning and hatching grounds of the American lobster: individual lobster temperature data from F/V Maureen R NEC-DC2002-1 in the Muscongus Bay, Maine from 2002-2005 (NEC-CoopRes project)

Website: https://www.bco-dmo.org/dataset/3560
Version: final
Version Date: 2005-11-28

Project
» Northeast Consortium: Cooperative Research (NEC-CoopRes)

Program
» NorthEast Consortium (NEC)

Contributors	Affiliation	Role
Cowan, Diane	Wells National Estuarine Research Reserve	Principal Investigator

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Coverage

Location: Muscongus Bay, Maine, USA
Spatial Extent: **N**:44.1 **E**:-69.11 **S**:43.72 **W**:-69.52

Dataset Description

The Lobster Sonar Tracking Project was launched in late summer 2002, and was implemented for 2 tracking seasons. In September and October of the first season (2002) a total of 191 egg-bearing females were tagged: lobster IDs: 001 - 193. These lobsters were then tracked over the subsequent 13 months. In August and September of 2004 - the second season of the project - 45 egg-bearing females AND 41 males were tagged, a total of 86 lobsters: lobster IDs: 300 - 400.

Project Leader: Diane Cowan, The Lobster Conservancy

Additional Participants:
Mathew Thomson, F/V Shearwater
Win Watson, University of New Hampshire
Matthew Weber
Andrew Solow, Woods Hole Oceanographic Institution
Mark Wallace, F/V Pamela B
Tim Thompson, F/V Haley & Amy
Bill Rourke, F/V A-Bill
Michael Reny

Richard Nelson, F/V Pescadero
Peter Murphy
Jon Murphy, F/V Redeemed
Steve Lash, F/V Streaker II
Troy Hayes, F/V Gray Ghost
Mark Havener, F/V Sarah Ashley
Philip Genthner, F/V Melinda Kay
Darrell Brazier, F/V Amy Sue
Nick Caloyianis, Caloyianis Productions, Inc.
Clarita Berger, Caloyianis Productions, Inc.
Richard Barter, F/V Tammy Jeane II
Kevin Benner, F/V Wanda Marie
Rex Benner, F/V Sydni & Erik
Denny Benner, F/V Maureen R
Jim Bolen, F/V Finest Kind
Philip Bramhall, F/V Amanda Kate

Methods & Sampling

Each lobster was tagged with three pieces of equipment: a sonar transmitter that emits a unique frequency/code combination, a temperature datalogger ("Tidbit") that records the ambient water temperature every hour, and a ribbon tag with the lobster's ID and The Lobster Conservancy (TLC) phone number to identify the lobster in the event of recapture. Participants were equipped with vessel-based hydrophones to periodically "listen" for sonar signals throughout their fishing territory. Frequency and code were recorded from each observed signal and the lobster ID was subsequently looked up. Hence, the tagged lobsters could be tracked any one of three ways: via hydrophone, trap recapture, or SCUBA dive recapture (using an underwater dive receiver). Information on lobster egg state could only be collected upon recapture. Likewise, temperature data collected by the Tidbit was only useful if the logger was recovered upon recapture and the information downloaded. Temperature data on 30 lobsters from the 2002-2003 season and 18 lobsters from the 2003-2004 season were downloaded as well as data from stationary loggers. Each lobster ID in that data object corresponds to lobster IDs in the associated data objects.

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Data Files

File
lobster_temps.csv (Comma Separated Values (.csv), 18.21 MB) MD5:c67af09bd7772fbbd6aea1a6fc9c65c6 Primary data file for dataset ID 3560

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Related Publications

Cowan, D. F., Watson, W. H., III, Solow, A. R., & Mountcastle, A. M. (2006). Thermal histories of brooding lobsters, Homarus americanus, in the Gulf of Maine. Marine Biology, 150(3), 463–470. https://doi.org/10.1007/s00227-006-0358-5 https://doi.org/10.1007/s00227006-0358-5
Results

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Related Datasets

IsRelatedTo

Cowan, D. (2005) **Mapping Spawning and Hatching Grounds of the American Lobster Tagging Data from F/V Maureen R NEC-DC2002-1 in the Muscongus Bay, Maine from 2002-2005 (NEC-CoopRes project).** Biological and Chemical Oceanography Data Management Office (BCO-DMO). (Version final) Version Date 2005-11-01 http://lod.bco-dmo.org/id/dataset/2780 [view at BCO-DMO]

Cowan, D. (2005) **Mapping Spawning and Hatching Grounds of the American Lobster Tagging Data: detailed lobster recapture data from F/V Maureen R NEC-DC2002-1 in the Muscongus Bay,Maine from 2002-2005 (NEC-CoopRes project).** Biological and Chemical Oceanography Data Management Office (BCO-DMO). (Version final) Version Date 2005-11-01 http://lod.bco-dmo.org/id/dataset/2782 [view at BCO-DMO]

Cowan, D. (2005) **Mapping Spawning and Hatching Grounds of the American Lobster Tagging Data: tracking data from F/V Maureen R NEC-DC2002-1 in the Muscongus Bay,Maine from 2002-2005 (NEC-CoopRes project).** Biological and Chemical Oceanography Data Management Office (BCO-DMO). (Version 1) Version Date 2005-11-01 http://lod.bco-dmo.org/id/dataset/2781 [view at BCO-DMO]

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Parameters

Parameter	Description	Units
lob_id	identification number assigned to individual lobsters; this number is on the ID tag and TidbiT; the TidbiT is programmed to this number	
date_tagged	date the lobster was tagged	
date_recaptured	date lobster or tag was recaptured/recovered	
comments	words related to the location or the data	
year	year in which the data was recorded, four digit year	
yrday_local	day of the year, Julian Day	
day_local	day of the month, (1-31)	
month_local	month of the year, (1-12)	
time_local	time of day, hours and minutes	
temp	water temperature recorded by the TidbiT, centigrade	degrees Celsius

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Instruments

Dataset-specific Instrument Name	Onset Pro v2 temperature logger
Generic Instrument Name	Onset HOBO Pro v2 temperature logger
Dataset-specific Description	HOBO® TidbiT by Onset Computer; range –4 to +37oC; accuracy +0.2oC; dimensions 30 x 41 x 17 mm. Affixed to the right cheliped with a plastic cable tie recorded hourly temperature.
Generic Instrument Description	The HOBO Water Temp Pro v2 temperature logger, manufactured by Onset Computer Corporation, has 12-bit resolution and a precision sensor for ±0.2°C accuracy over a wide temperature range. It is designed for extended deployment in fresh or salt water. Operation range: -40° to 70°C (-40° to 158°F) in air; maximum sustained temperature of 50°C (122°F) in water Accuracy: 0.2°C over 0° to 50°C (0.36°F over 32° to 122°F) Resolution: 0.02°C at 25°C (0.04°F at 77°F) Response time: (90%) 5 minutes in water; 12 minutes in air moving 2 m/sec (typical) Stability (drift): 0.1°C (0.18°F) per year Real-time clock: ± 1 minute per month 0° to 50°C (32° to 122°F) Additional information (http://www.onsetcomp.com/) Onset Computer Corporation 470 MacArthur Blvd Bourne, MA 02532

Dataset-specific Instrument Name	Sonotronics acoustics transmitter
Generic Instrument Name	Sonotronics acoustics transmitter
Dataset-specific Description	Sonotronics® CT-82-2, battery life 14 months, outer diameter 65 x 16 mm, weight 8 g, range 1000 m.
Generic Instrument Description	Individually coded acoustic transmitters generate a unique aural sequence, as well as unique combinations of frequency and ping interval allowing detection by both passive and active receivers. see http://www.sonotronics.com/?page_id=116

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Deployments

NEC-DC2002-1

Website	https://www.bco-dmo.org/deployment/57757
Platform	F/V Maureen R
Report	http://northeastconsortium.org/ProjectFileDownload.pm?report_id=450&table=project_report
Start Date	2002-09-05
End Date	2005-05-20
Description	Many fishing vessels were used for this dataset. Others include: F/V Finest Kind, F/V Amanda Kate, F/V Sarah Ashley, F/V Steacker, F/V Redeemed, F/V A-Bill, F/V Haley & Amy, F/V Pamela B. Most of these are based in Friendship, Maine, with the exception of F/V Maureen R, which is based in Waldoboro. See Deployment Report for details. **Methods & Sampling** Many fishing vessels were used for this dataset, including: F/V Maureen R, F/V Finest Kind, F/V Amanda Kate, F/V Sarah Ashley, F/V Steacker, F/V Redeemed, F/V A-Bill, F/V Haley & Amy, F/V Pamela B. Most of these are based in Friendship, Maine, with the exception of F/V Maureen R, which is based in Waldoboro. See Deployment Report for details.

Lobster_Sonar_Tracking_Project_cruises

Website	https://www.bco-dmo.org/deployment/987387
Platform	Multiple Vessels
Start Date	2002-08-15
Description	The Lobster Sonar Tracking Project was launched in late summer 2002, and was implemented for 2 tracking seasons. Many people (lobstermen, researchers) and various fishing vessels made this possible. Most of these fishing vessels are based in Friendship, Maine, with the exception of F/V Maureen R, which is based in Waldoboro. F/V A-Bill (Bill Rourke) F/V Amanda Kate (Philip Bramhall) F/V Amy Sue (Darrell Brazier) F/V Finest Kind (Jim Bolen) F/V Gray Ghost (Troy Hayes) F/V Haley & Amy (Tim Thompson) F/V Maureen R (Denny Benner) F/V Melinda Kay (Philip Genthner) F/V Pamela B (Mark Wallace) F/V Pescadero (Richard Nelson) F/V Redeemed (Jon Murphy) F/V Sarah Ashley (Mark Havener) F/V Shearwater (Mathew Thomson) F/V Streaker II (Steve Lash) F/V Sydni & Erik (Rex Benner) F/V Tammy Jeane II (Richard Barter) F/V Wanda Marie (Kevin Benner)

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Project Information

Northeast Consortium: Cooperative Research (NEC-CoopRes)

Website: http://northeastconsortium.org/

Coverage: Georges Bank, Gulf of Maine

The Northeast Consortium encourages and funds cooperative research and monitoring projects in the Gulf of Maine and Georges Bank that have effective, equal partnerships among fishermen, scientists, educators, and marine resource managers.

The Northeast Consortium seeks to fund projects that will be conducted in a responsible manner. Cooperative research projects are designed to minimize any negative impacts to ecosystems or marine organisms, and be consistent with accepted ethical research practices, including the use of animals and human subjects in research, scrutiny of research protocols by an institutional board of review, etc.

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Program Information

NorthEast Consortium (NEC)

Website: http://northeastconsortium.org/

Coverage: Georges Bank, Gulf of Maine

The Northeast Consortium encourages and funds
cooperative research and monitoring projects in the Gulf of Maine and Georges Bank that have effective, **equal partnerships** among fishermen, scientists, educators, and marine resource managers.

At the 2008 Maine Fisheremen's Forum, the Northeast Consortium organized a session on data collection and availability. Participants included several key organizations in the Gulf of Maine area, sharing what data are out there and how you can find them.

The Northeast Consortium has joined the Gulf of Maine Ocean Data Partnership. The purpose of the GoMODP is to promote and coordinate the sharing, linking, electronic dissemination, and use of data on the Gulf of Maine region.

The Northeast Consortium was created in 1999 to encourage and fund effective, equal partnerships among commercial fishermen, scientists, and other stakeholders to engage in cooperative research and monitoring projects in the Gulf of Maine and Georges Bank. The Northeast Consortium consists of four research institutions (University of New Hampshire, University of Maine, Massachusetts Institute of Technology, and Woods Hole Oceanographic Institution), which are working together to foster this initiative.

The Northeast Consortium administers nearly $5M annually from the National Oceanic and Atmospheric Administration for cooperative research on a broad range of topics including gear selectivity, fish habitat, stock assessments, and socioeconomics. The funding is appropriated to the National Marine Fisheries Service and administered by the University of New Hampshire on behalf of the Northeast Consortium. Funds are distributed through an annual open competition, which is announced via a Request for Proposals (RFP). All projects must involve partnership between commercial fishermen and scientists.

The Northeast Consortium seeks to fund projects that will be conducted in a responsible manner. Cooperative research projects should be designed to minimize any negative impacts to ecosystems or marine organisms, and be consistent with accepted ethical research practices, including the use of animals and human subjects in research, scrutiny of research protocols by an institutional board of review, etc.

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Funding

Funding Source	Award
NorthEast Consortium (NEC)	2002:03-658; 2004:05-952

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