



NOAA FISHERIES

UPCOMING EVENTS

April 30-May 4

Sea Scallop SAW Working Group Meeting
Woods Hole, MA

April 30-May 4

EBFM Strategy Review
Woods Hole MA

April 30-May 3

ASMFC Spring Meeting
Arlington, VA

May 2-4

Atlantic Herring SAW Working Group Meeting
Location TBD



New NEFSC Fishery Monitoring & Research Division Chief Amanda McCarty joined the staff in late January. The division includes the Fisheries Sampling Branch and the Northeast Cooperative Research Branch. She previously served as Assistant Director for Programs and Partnerships and Acting Deputy Director of the National Sea Grant Office.

Top Story

NOAA Upgrades Online Groundfish Trip Notification System



Northeast fishery observer (left) sorts catch with Captain Doug (right) of F/V *Kestrel* out of Connecticut. Photo credit: NOAA Fisheries/NEFOP.

Before leaving on a trip to catch groundfish, Northeast groundfish vessels first notify NOAA about the trip so a fishery monitor or observer can be assigned to the trip if needed. A technical team has been working for more than a year to upgrade the online notification system so it is easier to use, mobile friendly, and can be adapted to new management requirements as they come along. These significant improvements will come online in late April, and NOAA Fisheries is doing some expanded outreach to get fishing businesses familiar with improvements ahead of the next fishing year, which begins May 1, 2018.

"We are thrilled to launch this upgrade," said Jon Hare, director of the Northeast Fisheries Science Center. "Fishermen have one of the toughest jobs in the world. We continue to look for ways to make fishery monitoring easier and more valuable to every business we work with. This is a big step in the right direction."

Known as PTNS, short for pre-trip notification system, it's a way to ensure fair and adequate monitoring across fleets. Vessels can notify NOAA Fisheries that they are planning a trip by email, phone, or through the online PTNS. Most users prefer the online system. Data collected by observers and monitors support a range of fishery management and science work, and are a major source of information on what kind, and how much, fish is caught but not landed.

In comparison to the current system, the redesigned PTNS can better handle revisions to monitoring requirements. Since PTNS debuted in 2010, for example, electronic monitoring has arrived, along with some exemptions and experimental fisheries. Improvements in the underlying database structure will allow these kinds of changes to be accommodated more easily. Although most of those improvements will not be obvious to the user, improvements in data entry and accessibility will be.

Latest NEFSC Publications

Winton MV, Fay G, Haas HL, Arendt M and others (2018). Estimating the distribution and relative density of satellite tagged loggerhead sea turtles using geostatistical mixed effects models. *Mar Ecol Prog Ser* 586:217-232. <https://doi.org/10.3354/meps12396>

Samara M. Haver, Jason Gedamke, Leila T. Hatch, Robert P. Dziak, Sofie Van Parijs, Megan F. McKenna, Jay Barlow, Catherine Berchok, Eva DiDonato, Brad Hanson, Joseph Haxel, Marla Holt, Danielle Lipski, Haru Matsumoto, Christian Meinig, David K. Mellinger, Sue E. Moore, Erin M. Oleson, Melissa S. Soldevilla, Holger Klinck. Monitoring long-term soundscape trends in U.S. Waters: The NOAA/NPS Ocean Noise Reference Station Network. *Marine Policy*. <https://doi.org/10.1016/j.marpol.2018.01.023>

Guida, V., A. Drohan, H. Welch, J. McHenry, D. Johnson, V. Kentner, J. Brink, D. Timmons, E. Estela-Gomez. 2017. Habitat Mapping and Assessment of Northeast Wind Energy Areas. Sterling, VA: US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2017-088. 312 p. <https://www.boem.gov/espis/5/5647.pdf>

Root-Gutteridge H, DA Cusano, Y Shiu, DP Nowacek, SM Van Parijs, SE Parks. A lifetime of changing calls: North Atlantic right whales, *Eubalaena glacialis*, refine call production as they age. *Animal Behaviour* 137 (2018) 21-34.

Northeast Fisheries Science Center (NEFSC). 2018. 64th Northeast Regional Stock Assessment Workshop (64th SAW) Assessment Summary Report. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 18-03; 27 p.

Adams CF. 2018. Butterfish 2017 Stock Assessment Update. US Dept Commer, Northeast Fish Sci CenRef Doc. 18-03; 27 p.

Khan C, Henry A, Duley P, Gatzke J, Crowe L, Cole. 2018. North Atlantic Right Whale Sighting Survey (NARWSS) and Right Whale Sighting Advisory System (RWSAS) 2016 Results Summary. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 18-01; 13 p.

Mizuta DD, Wikfors GH. 2018. Seeking the perfect oyster shell: a brief review of current knowledge. *Rev Aquacult*. doi:10.1111/raq.12247

continued on page 4

Since 2010, the technical team has been compiling suggestions from users on improvements, and many of these have been incorporated into the redesign. The NEFSC team that spearheaded the redesign has been in major ports and at the Maine Fishermen's Forum to talk about and demonstrate the system and help people understand the changes. More here:

https://www.nefsc.noaa.gov/press_release/pr2018/other/PTNS-launch/

Science Shorts

Basking Sharks Gather in Large Groups off Northeast U.S. Coast

Groups of basking sharks ranging from as few as 30 to nearly 1,400 individual animals have been observed aggregating in waters from Nova Scotia to Long Island. While individual sightings are fairly common, seeing large groups is not. The reason why the animals congregate has not been clearly determined, although it is thought to be related to feeding, socializing, and/or courtship given behaviors in other shark species. Observations of these aggregation events are relatively rare. The largest aggregation ever recorded on the aerial survey was at least 1,398 animals photographed on Nov. 5, 2013 in southern New England waters. As luck would have it, the NEFSC's EcoMon survey sampled the same area on Nov. 16 and 17, 2013, providing an estimate of the zooplankton community characteristics in that area at that time of year. More here: https://www.nefsc.noaa.gov/press_release/pr2018/scispot/ss1802/

The Changing Voices of North Atlantic Right Whales

Researchers have found that right whale calls, much like human voices, change as individuals age. An NEFSC researcher and colleagues examined 986 high-quality calls from 49 individual North Atlantic right whales of known ages spanning from 1 month to 37 years. Much like those of human infants and other mammals, calls made by whales younger than 1 year were shorter and less structured than adult sounds. As the animals matured their calls became more clear, with better defined structure and longer call durations. Data used in the study were collected during 1999 to 2016 in the Bay of Fundy, Cape Cod Bay, and off the southeastern U.S. coast. More here: https://www.nefsc.noaa.gov/press_release/pr2018/scispot/ss1801/

Caribbean Waters May Hold Clues to Humpback Whale Populations

NEFSC researchers and local colleagues on a number of Caribbean islands are learning what underwater recording devices deployed in 2017 revealed about humpback whales migrating to that area in the winter and early spring. Working with local collaborators, they deployed one of two types of underwater passive acoustic recording devices off of each island to record the differences in songs and seasonal differences in the arrival of humpback whales. The devices recorded whale sounds for six months; all were recovered in late May-early June 2017. Some of the humpback whales arrive in the Caribbean in December and leave by February, while others arrive in March and leave by late May. The whales are thought to migrate from Northwest Atlantic waters off of New England and Canada, including the Gulf of Maine and the Grand Banks. Another group is thought to migrate from the eastern North Atlantic off of the Cape Verde Islands, where they head after spending the summer in northeast Atlantic waters off Norway and Iceland. More here:

https://www.nefsc.noaa.gov/press_release/pr2018/features/champ/



NEFSC fishery biologist Chris Sarro with the Cooperative Research Program's study fleet was one of the staff members participating in the MREP focused on ecosystems-based fishery management. Photo credit: NOAA Fisheries



Gray seal mom and pup on Muskeget Island in January 2018 during pupping season. Image taken under MMPA research permit #17670-04. Photo credit: NOAA Fisheries/ Michael Abbott, NEFSC



Phil Politis was selected lead of the Ecosystems Surveys Branch bottom trawl survey. Phil has been with the survey for 10 years and has been a key figure in survey standardization and tow validation on the NOAA Ship *Henry B. Bigelow*.

NEFSC Researchers Help Promote Understanding of Ecosystem-Based Fishery Management and Science

The Marine Resource Education Program (MREP), best known for its fisheries science and management workshops, recently extended its curriculum to address emerging topics such as concepts in ecosystem-based fishery management. During sessions in New Bedford, MA and Pt. Judith, RI members of industry and Northeast Fisheries Science Center scientists participated in a mix of discussion and hands-on tours that included visiting fishing vessels and seafood businesses. Industry discussion moderators help ensure a productive exchange of ideas. More here: https://www.nefsc.noaa.gov/press_release/pr2018/other/2018-mrep-nb/

Acoustic Tags, Drones Help Seal Researchers on Muskeget, Monomoy Islands off Cape Cod

Northeast Fisheries Science Center researchers and colleagues continued their studies of gray seal pupping season on Muskeget, the largest U.S. pupping colony, and Monomoy islands off the southeastern Massachusetts coast in December and January. A new pilot project this year put acoustic tags on Muskeget seal pups to study movement patterns after they leave the colony. Unmanned Aerial System (UAS) or hexacopter pilots flew several flights over the island to collect information on the distribution of animals and approximate ages of the pups. A U.S. Coast Guard H65 helicopter helped get researchers to the island during some frigid weather and heavy ice conditions in early January. Despite poor weather, the team deployed 18 acoustic tags, 2 satellite tags, and captured and sampled close to 100 pups before the end of the season. More here: https://www.nefsc.noaa.gov/press_release/pr2018/features/seals-muskeget-2018/

Vessel and Field Updates

NOAA Ship *Henry B. Bigelow* Begins Spring Bottom Trawl Survey

NOAA Ship *Henry B. Bigelow* completed motor repairs at a shipyard in Norfolk, Va., in early March and got underway on March 12 for the Northeast Fisheries Science Center's annual spring bottom-trawl survey. Calibration of the autotrawl system was done at the start of leg 1, which ended March 23. Leg II began March 27 and will run until April 6.

R/V *Gloria Michelle* Undergoes Winter Shipyard Work

The vessel left the Woods Hole Laboratory Feb. 14 and headed for the J. Goodison Company shipyard in North Kingstown, RI. Within a day of arrival the hull had been cleaned, zincs removed, and work begun to remove the shaft, which has since been completed. The yard crew also opened up tank spaces for inspection. The vessel is due back in Woods Hole in early April.

Right Whale Aerial Surveys, Sample Collection Underway

Right whales are congregating in Cape Cod Bay, much like they have in years past, but in greater numbers and earlier in the season. NEFSC researchers are on and over the water, using boats and aircraft to track the animals during their time in the region. Aerial surveys began March 20 in the Great South Channel.

Latest NEFSC Publications (continued)

Olsen E, IC Kaplan, C Ainsworth, G Fay, S Gaichas, R Gamble, R Girardin, CH Eide, TF Ihde, HN Morzaria-Luna, KF Johnson, M Savina-Rolland, H Townsend, M Weijerman, EA Fulton, JS Link. Ocean futures under ocean acidification, marine protection, and changing fishing pressures explored using a worldwide suite of ecosystem models. *Front Mar Sci*, 01 March 2018.

L.M. Crowe, O. O'brien, T. H. Curtis, S. M. Leiter, R. D. Kenney, P. Duley, S. D. Kraus. Characterization of large basking shark *Cetorhinus maximus* aggregations in the western North Atlantic Ocean. *Journal of Fish Biology*. doi:10.1111/jfb.13592

Li Y, Meseck SL, Dixon MS, Wikfors GH. 2018. The East River tidal strait, New York City, New York, A high-nutrient, low-chlorophyll coastal system. *International Aquatic Research* 10(1), 65-77.



A basking shark from the air. The animals can grow up to 32 feet long, but adults are typically in the 20-26 foot range. NEFSC scientists photographed at least 1,398 in southern New England waters in November 2013, the largest known aggregation. Photo credit: NOAA Fisheries/Corey Accardo

Waters west of the Exclusive Economic Zone 200 miles offshore will be surveyed from Maine to New York over the next few months. Focus will be on areas where right whales have been sighted historically and where NEFSC receives reports of aggregations. In addition, protected species researchers are working from the deck of a 24-foot boat, weather permitting, to photograph individual whales for identification and health assessments. Researchers also aim to take small tissue samples with a retrievable dart from a long list of individual whales that have never been sampled for genetic studies. Once the right whale aggregations have departed U.S. waters, most likely the end of May or early June, the aircraft and members of the NEFSC aerial team will head north to Canada to work with Canadian colleagues on right whale surveys in the Gulf of St. Lawrence. More here: <https://www.nefsc.noaa.gov/psb/surveys/index.html>

Fishery Monitoring Update

Industry Funded Monitoring Amendment

The Fisheries Sampling Branch continues to meet with the GARFO/implementation team to further evaluate and identify/develop the requirements of the program (certifications/training's/regulations/notification system/vessel selection).

Pre-Trip Notification System Update

A newer version of the Pre-Trip Notification System (PTNS) will be rolled out for the start of the 2018 Groundfish fishing year (May 1, 2018). Starting in February, NMFS conducted webinars and port visits to Gloucester, New Bedford, and Montauk to explain the PTNS's newer features. Future port visits will include Chatham, Scituate, Portland and Point Judith in April.

Northeast Groundfish			
Program	Sea days	Trips	Coverage rate (16% target)
At-Sea Monitoring	140	42	6%
Northeast Fishery Observer Program (NEFOP) monitoring	626	215	10.5%
All NEFOP ₁			
1 From January 1 through March 31. Includes industry funded scallop monitoring.			
	400	85	

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