

Environmental Monitors on Lobster Traps (eMOLT) Fall 2008 Update

Reminder to return probe(s)...

Notices have been recently mailed to all eMOLT participants reminding them to return their temperature probes when they are done fishing for the year. The data will be downloaded and the probes will be reinitialized for 2009.

Bottom Temperatures: early 2008

We can't label 2008 as being "cold" or "warm" in general. It depends on what time of year you refer to. As documented by Bobby Nudd Jr in 20 fathoms of water off the coast of New Hampshire (Fig 1), for example, 2008 started out to be cold (relative to the previous 5 years) and now appears to be warmer.

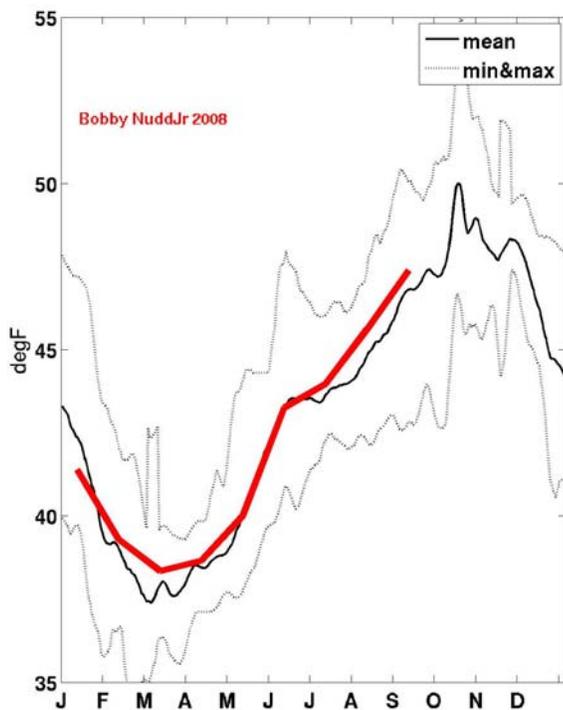


Fig 1. Bobby Nudd's weekly-average temperature records in 20 fthms off NH showing 2008 (thick line) relative to the mean and min/max.

What do temperature changes mean in terms of catch? We still don't know. If we look at Bobby's catch data (Fig 2), we can see that the catch at this particular site has apparently fallen each year while the temperatures do not follow any particular multi-year trend. Is there something else going on? We don't know. Is this the definitive picture of these variables representing all of New England? No, this is the result for one site off NH in 20 fathoms.

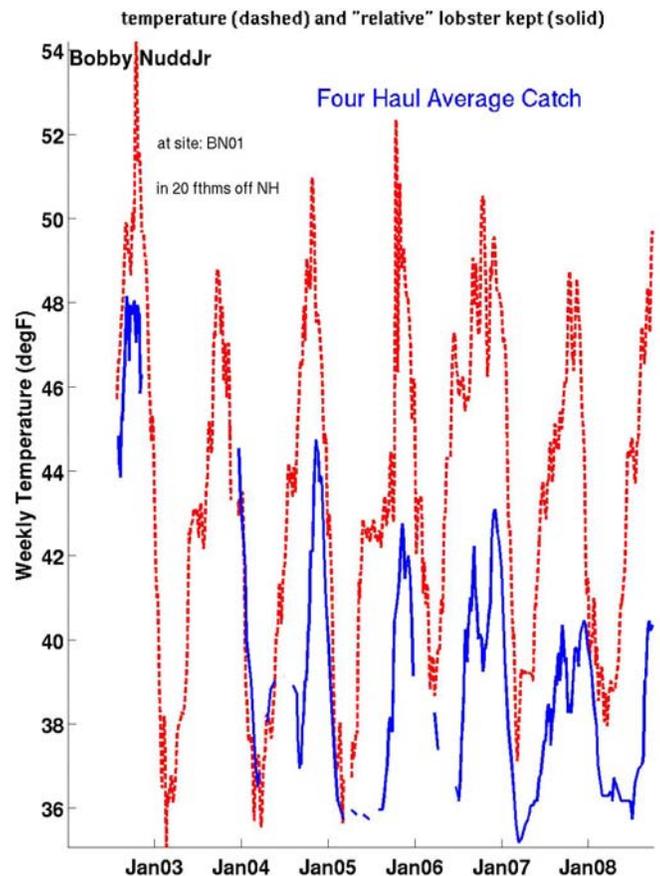


Fig 2. Bobby Nudd's time series of temperature (dashed) and catch (solid) from 2002 to present.

Real-time Temperature Update

Once again, there is very little to report on the development of a real-time temperature probe. While a few engineers have shown some interest and their prototypes have shown promise, a ready-for-real-world probe has not been delivered. One engineer spent some effort on developing a radio system that relayed data from a mooring in Woods Hole Harbor to a PC in my office (by-passing the expensive satellite) but that system still has power and range limitations. If it were easy ... it would have been developed by now.

eMOLT Interns

We are happy to have two computer science students from Cape Cod Community College to help with eMOLT tasks this winter. Joe Letourneau and Tanya Stoyanova will be assisting me a few hours per week. They will be conducting routine eMOLT chores. One project we hope to accomplish is the creation of laminated “site sheets”. We hope to send each participant a personalized sheet that has a detailed description of the site and data (including lat/lon, loran, depth, and temperature statistics) on one side and a detailed chart of the sites on the other side. Another project they will work on is a long-overdue update to the emolt.org website.

Drifter tracks in 2008

A total of 60+ satellite-tracked drifter deployments (to document surface flow patterns around the Gulf of Maine) were made so far in 2008. With some of them now reaching as far as the Grand Banks, these units have collectively traveled about 30,000 kilometers in 2008 alone. We want to thank several fishermen who helped recover drifters so we can redeploy them in 2009. Several units are still within the Gulf of Maine at the time of this writing and still transmitting. You can view the summary of this years drifters at: <http://www.nefsc.noaa.gov/drifter>.

eMOLT Phase VI: bottom currents

As noted in the last newsletter, we are in the process of developing an inexpensive bottom current meter. Just this past month we selected 10 eMOLT participants (based on where they fished) and mailed each of them one of these instruments to deploy. We asked particular fishermen that worked a) in the vicinity of GoMOOS moorings and/or b) in shallow (30 meters) of water. If these instruments perform well (i.e. compare well with nearby GOMOOS observations), we hope to propose additional funding to deploy a more extensive array throughout the eMOLT study area and at deeper depths next year. We plan to report on this fall’s pilot study at the Maine Fishermen’s Forum and at the Mass Lobstermen’s Weekend in early 2009. A map of the current meter sites is shown below (Fig. 3) along with a photo of the instrument attached to a trap (Fig. 4).

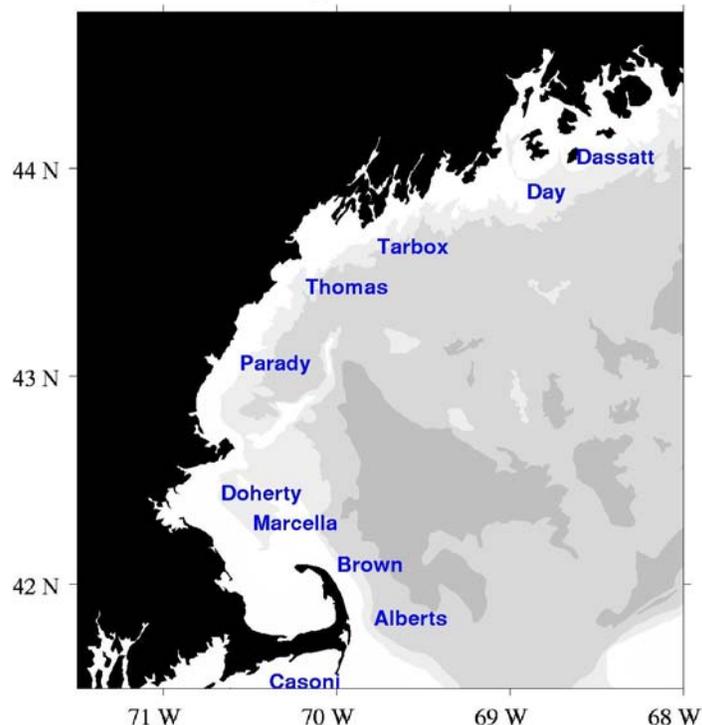


Fig. 3. eMOLT participants involved in bottom-current-meter study in the Fall of 2008.



Fig 4. Seahorse current-meter attachment to lobster trap.

More information on eMOLT can be found at emolt.org. There are multiple pages to view “what’s new”, links to various interim reports, and data access. As noted earlier, this site will be undergoing a face lift this winter so we encourage your feedback directed at james.manning@noaa.gov (508-566-4080 cell or 508-495-2211 office).