

eMOLT Spring 2013 Update

2012 was the warmest in the eMOLT record

Your efforts this past decade have paid off. We can now say with confidence that the bottom waters of the Gulf of Maine were indeed warm in 2012. In most places they were nearly two standard deviations greater than the eMOLT mean. While this may only be a few degrees in most places, this is significant. It will be interesting to see how long this trend continues. It is more important than ever that we maintain our existing protocol and continue the operation.

Probes mailed with this newsletter

Thanks all of you who returned temperature probes from your 2012 season so I could reinitialize them, calibrate them, and mail them back to you today. Despite their age, they all checked out in good condition as determined from a professional calibration bath at the Woods Hole Oceanographic Institute this past week. The average bias of all probes was less than 0.1 degC and none of them were more than 0.2 degC. Please install them on your trap and be ready to return them in the same envelope at the end of your 2013 fishing season. **IMPORTANT: Many of these probes may be running low of battery. If you want to be sure the probe is still collecting data, it is a good idea to occasionally check if the little red light is still flashing every 10 seconds.** You can mail probes anytime to Jim Manning, NOAA, 166 Water St, Woods Hole, MA. 02543 and I'll send you a new one. I have a small stock of new probes which will be good for another 10 years. Please remember to provide documentation of lat/lon and depth deployed. Please include this information even if it is the same spot as previous years so that I can validate my records.

Bottom temperature observations now assimilated into ocean models

The data you collect is now being used in numerical ocean circulation models to help constrain the bottom temperature fields. The modelers at UMASS Dartmouth have been able to refine their simulations to be more accurate when they run "hindcast" of past conditions. It is hoped that we may someday be able to feed them real-time data to help in their forecast products. Much like the meteorologist get various data feeds from school and airports, oceanographers could get data from fishermen in order to predict ocean conditions.

Status of the real-time temperature probes

Given some funding from the Northeast Cooperative Research Program, we were able to send the new "real-time" temperature and depth probe out on four boats this spring. They have already returned some interesting results such as the fact that some deep water trawls are occasionally lifting off the bottom in times where strong surface currents are moving the surface buoy. The pressure sensor on these probes provide a very accurate recording of the water depth. We plan to apply for more funding and be able to distribute these probes to more fishermen in the future. There are at least three different companies who have a product we can use. It is not clear yet which will provide the best product for the least \$. The brochure on a \$2500 probe from Aquatec is enclosed in this mailing. Our priority is to make sure all the longtime participants are provided with the standard probes before we invest too much in the new-style units.

Lobsterman discovers exotic fish near Georges Bank.

Ernie Milward, a captain on board Bob Colbert's F/V Miss Julie, noticed an unusual fish come up in his trap last summer. Being somewhat of an ichthyologist, he recognized the significance of this find and gave me the sample. When I showed it around the lab, it became quite a sensation. I was instructed to

mail it down to the Smithsonian where it is now being analyzed and written about in a scientific paper. This particular species has never been documented north of the Carolinas, just another indication that the ecosystem is changing.

Year-round monitoring

As I have mentioned before, if you would like to maintain a year-round monitoring site, let me know, and I will mail you a fresh probe to swap out at the end of the year. You can email james.manning@noaa.gov or call 508-495-2211 (office) or 508-566-4080 (cell). We understand there is a good chance the probe will be lost over the winter but we are willing to take that chance.

Websites needing feedback

The Integrated Ocean Observing System folks are asking fishermen what they would like to see for information on the web. There are a number of sites that have you in mind at:

<http://mymaracoos.org/fish>

<http://www.neracoos.org/datatools/climatologies>

<http://emolt.org>

We invite you to check these out and provide feedback.

Status of the current meter project

A digital compass has now been integrated into the instrument. We hope to try out this new prototype in our local waters this year (2013) and perhaps, with additional funding, distribute some to fishermen in 2014.

Status of the camera project

The camera project is on hold as we wait for the battery limitation to be solved. If you still have one of the cameras and are not using it, please send it in so we can pass it along to others. We have shown that it is feasible to collect good data on species abundance and behavior but, in addition to more battery life, we need the manpower to process and analyze the imagery. That cost \$.

Status of the drifter project

The drifter project is still very much alive. It has turned into a great educational program where students and teachers build the instrument and hand it over to fishermen who deploy it offshore. There are a growing number of “stories” compiled from this project and the results are posted not only at <http://www.nefsc.noaa.gov/drifter> but on both the NERACOOS and MARACOOS websites. There are a number of schools who have recently deployed (or plan to soon). Some of the “drifters” we track are not traditional drifters but unmanned sailboats deployed by the “Educational Passages” group. Since they move primarily with the wind and waves rather than the current, they are capable of crossing the ocean more easily and often land on distant shores. Some of their stories are particularly interesting. If you would like to get your local school involved, let me know. We are planning a “drifter building workshop” on 15 April and another one on 14 September hosted by the Gulf of Maine Marine Education Association. For links to various newspaper articles on the eMOLT project (primarily related to the drifter project) see: <http://www.nefsc.noaa.gov/epd/ocean/MainPage/drift/inthenews.html>