

eMOLT Fall 2015 Update

Temperature:

Mailing probes

When you are done fishing for the year, please remember to mail in your temperature probe to Jim Manning, NOAA, 166 Water St, Woods Hole, MA. 02543 and remember to provide documentation of latitude, longitude, and depth deployed **even if it is in the same location/depth as usual**. It is very important that we start getting away from documenting positions in Loran TDs. Can you toggle your navigation system to read GPS lat/lon position the next time you are at your eMOLT site?

Real-time temperature

The real-time temperature probe project has made great progress since the last newsletter. You may have read about it in a recent issue of Commercial Fisheries News. We now have a system installed on a dozen boats where average bottom temperatures from each trawl are wirelessly and automatically telemetered to the NOAA server without the fisherman having to push any buttons. Trawls are binned into 10-minute squares (to keep exact position private) and then mapped on a publicly accessible website at <http://nefsc.noaa.gov/epd/oceanography/fishtemps.html>. We hope to install a system like this on a fleet of lobster boats in the coming year. We have supplied a few fishermen with a wireless temperature probe that reports to any smartphone. Let me know if you are interested in participating (email: james.manning@noaa.gov).

2015 results

The most interesting result this past year is the effect of last winter's cold air. While we started out the year with some of the warmest water in eMOLT history, there was record cold water by the mid-March (see example below from Norbert Lemieux).

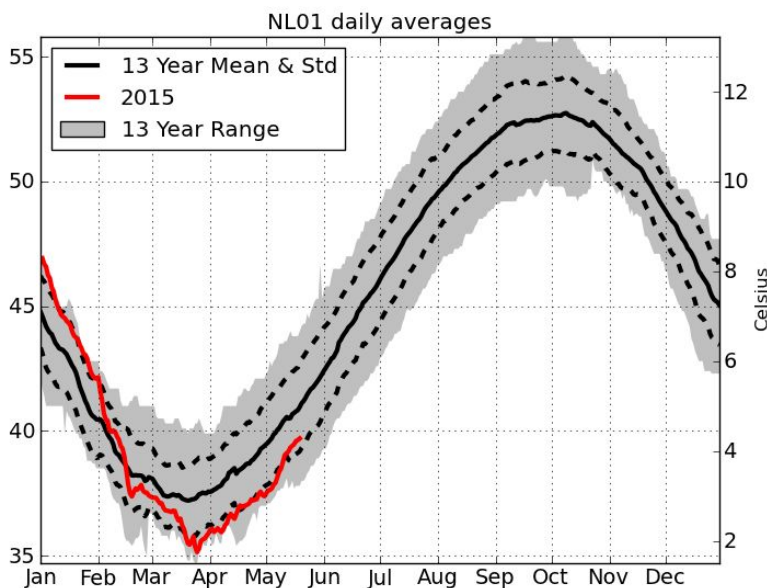


Figure 1. Norbert Lemieux's temperature data from 50 fathom (91 meters) off Cutler, ME with his mean temperature (solid black line), +/- one standard deviation (dashed), range (gray), and 2015 (red) showing the drastic switch from January being the warmest in 13 years to March being coldest.

Other Project Updates:

Current meters

After adding a digital compass, we are now in the process of adding a wireless download along with a temperature sensor. These instruments may be ready for operational use on eMOLT traps in the near future. We thank all those who participated in earlier trials.

Drifters

The drifter project was very active again this year with approximately 150 student-built units deployed. A few dozen high schools from Mass, NH, and Maine were involved. If any of your local schools would like to be involved, please let me know at james.manning@noaa.gov or contact Erin Pelletier (erin@gomlf.org) who has been instrumental in making this program work. Much of our drifter effort recently is directed at STEM education and part of that is teaching students basic coding techniques. We use our favorite programming language, Python, to process and visualize the drifter tracks. Three proposals were accepted that will provide more drifters in 2016. These were funded by various NOAA programs (B-WET, ECOHAB, and Marine Debris).

Cameras on traps

The camera project is still on hold unless someone has a particular interest, reason, and funding to pursue it further.

Unmanned sail boats

The unmanned sail boats deployed in December 2013 by eMOLT participants have landed in Europe, were brought into local schools there, refurbished, and redeployed offshore in hopes they will return to the American shores (http://www.nefsc.noaa.gov/drifter/drift_ep_2013_2.html).

Weather Stations on Fishing Boats

When the National Weather Service heard we were telemetering data from fishing boats, they gave us money to buy and install a few weather stations on fishing vessels. As you know, they often have a difficult time in forecasting the offshore weather because of the lack of data. With only a few buoys to provide air temp, wind, barometric pressure, and humidity, their models are hungry for more data. If you are interested in having a high quality weather station on your boat that automatically reports to the NWS, let me know.

eMOLT in the Press: <http://www.nefsc.noaa.gov/epd/ocean/MainPage/drift/inthenews.html>

There has been a string of news articles in the press. While most are local newspaper stories about the drifters with very little response from readers, an article in the National Science Teachers Association Newsletter resulted in dozens of emails from teachers from around the country looking for ways to involve their students in marine science. Please share with your local science teacher.