

# Drifter Newsletter #11

## June 2013

### *Additions to the drifter website*

Just in the past few weeks, a new component to the drifter website was added. The 2nd link at <http://www.nefsc.noaa.gov/drifter> points to the “construction manuals”. Instead of sharing these manuals as pdf or doc files, we now have an on-line version that is updated regularly as we find new ways of doing things, add more pics and videos.

### *Results of 2013 deployments thus far*

A total of 39 drifters have been deployed thus far in 2013. Most of these deployments are for educational purposes where K-12 students have been involved with the whole process including decorating the sails, meeting the fishermen who deploy the units, and following its track on the website. The students at Newburyport High School north of Boston, for example, have been heavily involved in the study of currents. They setup a lab experiment with mini-drifters in a tank of water blown around by a electric fan wind and water hose rivers. The drifters they made in class and had deployed offshore a few weeks ago are now on their way to Nova Scotia!



*New England Science and Sailing students with their colorfully-painted surface drifters mid-picture (photo by Mary Horrigan)*

As shown on the main drifter page, there are several more interesting tracks of Dick Baldwin's unmanned sailboats. There are several underway at the time of this writing including one that made it to the mid-Atlantic, turned around, and is now headed up the eastern seaboard in the track a typical hurricane. We hope to secure drogues to some of these boats in the coming year.

### *The bamboo-framed “Cassie” drifter*

One of the weaknesses of the last few “eco-friendly” drifter designs was the wooden-dowels used for spars. They would often break when the drifter washed ashore. So, in the spring of 2013, we think we have developed a solution to this problem. Since we have only deployed a few of them so far, we can't be sure but we are fairly confident this will become are standard Davis-style surface drifter. The mast is made of 3” bamboo posts now sold at most ACE Hardwares in New England. Both the spars and the mast extension transmitter mount is made with 1” bamboo. The complete description of this drifter and how to build it is posted at the new website noted above. The drifter is named after Cassie Stymist who coordinated a series of drifter-building workshops this past winter when we first introduced this model.

## ***The pop-up-leaf-bag-drogued “Colin” drifter***

A drogued drifter is no longer cost prohibitive. We found we can lash a series of pop-up-leaf-bags, attached a 3-point 1/8” stainless bridle, and a tether to a relatively small surface float in order to construct a drogue to oceanographic standards with very little effort. All materials are likely available at your local hardware. We are using a large lobster buoy for our surface float and are experimenting with other alternatives such as mini-boats made of buoyant material. The construction manual will appear on the website mentioned earlier. The drifter is named after Colin Sage, a Massasoit Community College summer intern, working on its construction.

## ***New schools involved with the program this year:***

Dartmouth High School (MA), Newburyport High School (MA), Swampscott High School (MA), Scituate Elementary (MA), Hull Elementary (MA), UCONN (CT), Brewster Family, School (MA), Gulf of Maine Institute (MA), Environmental Challenge Group of home schoolers (MA), New England Science and Sailing (CT), Massasoit Community College (MA), Global Learning Charter School (MA), Falmouth High School (MA)

## ***Refurbishing old TrackPack transmitters***

We are now building our own battery packs to refurbish old transmitters. While we are not certain how well our soldering jobs are holding up but we have a method to make them nevertheless. If you would like us to do the job, send in your old TrackPacks that no longer work so we can TRY to get them going again.

## ***Tracking animals***

With help from a few summer interns, Jen Troubetaris and Gritidach Manakitivipart, we have been encapsulating old transmitters in 2-part marine epoxy so that they survive submergence in the water column. We hope to be attaching these units to large marine animals like seals and turtles and tether them behind sharks and entangled whales. If you know of any animal-tracking-marine-biologist, please send them our way. We think we have a low-cost solution.

## ***Drifter-building workshops and presentations***

If you click on the third link of the main drifter page noted above, you will see the “process of getting involved with the project”. In that document is a list of past and future “drifter building workshops” where groups of teachers spend the day putting together drifters. We had a few in Falmouth MA back in December 2012. One in March 2013 was sponsored by NERACOOS and the Mass Marine Eduactors. We are planning one in Connecticut on June 19, 2013 and in northern New England on September 14, 2013. We also presented the drifter project at the annual Cambridge Science Festival in April 2013 and the Southern New England STEM Expo in May 2013.

## ***Future Plans***

As mentioned in each “newsletter”, we continue to look for funding for more drifter-building workshops and satellite time. We are working with the tracker manufacturer and service provider to minimize the cost to the schools involved. We continue to reduce the cost down within the range of a typical mini-grant proposal but, ideally we hope to someday secure a large gov't grant. This would supply the various schools with the raw material they need to construct these units and to have them connect with their local fishermen for routine deployments offshore. If you have ideas, please email [james.manning@noaa.gov](mailto:james.manning@noaa.gov). We now have a collection of proposals that can be reworked to fit your plans.