DEPLOYMENT OF YSI INSTRUMENT AT CATALINA ISLAND THROUGH COLLABORATIVE EFFORT OF USC WRIGLEY INSTITUTE FOR ENVIRONMENTAL STUDIES, CATALINA CONSERVANCY DIVERS, AND CATALINA MARINE SOCIETY

A YSI instrument with the capability of collecting data on temperature, chlorophyll content, dissolved oxygen, and Ph of the water was deployed on December 4, 2010, at the Wrigley Marine Reserve, located in Big Fisherman Cove, Catalina Island. A project to deploy the instrument, with a goal of collecting a continuous data stream for a 1 year period of time, is being undertaken as a collaborative effort by the USC Wrigley Marine Science Center / Wrigley Institute for Environmental Studies, Catalina Conservancy Divers (a support group of the Catalina Island Conservancy), and the Catalina Marine Society. The instrument is deployed at a depth of 60 feet, on the mooring line for mooring 15 in Big Fisherman Cove, which is used to moor a dock extension during the winter months.

The photograph above depicts the location of mooring 15, just to the right of the dock extension in the center / right area of the image. To see a detailed series of photos related to the deployment on 12/4/10, click on the link below, or paste it into your web browser.

http://www.flickr.com/photos/56410801@N03/

The instrument has recently been refurbished and readied for re-deployment, under the direction of Karla Heidelberg and Lauren Czarnecki. Lauren Czarnecki wears two hats in association with this project; she is lab manager at WIES, and is also a point person on the project as a member of the board of directors for Catalina Marine Society. The instrument was deployed by volunteers from Catalina Conservancy Divers, including JP Pylkkanen, Ari Requicha, and Mike Doran (who also wear two hats, as a CCD volunteer diver, and member of the board of directors of Catalina Marine Society). Deployment was under the supervision of Gerry Smith, dive safety officer at the WIES Marine Science Center, with the use of WIES facilities and the assistance of waterfront staff, including Trevor Oudin.

For deployment, a protective cap over the instruments is removed, and the vented covering over the instruments is screwed on in its place. The entire instrument is then placed inside the custom fitted outer housing, constructed by Ted Sharshan of Catalina Conservancy Divers. The outer housing is then physically attached to the mooring line, at a 60 foot depth

adjusted for the tide variance at time of deployment.

After the refurbishment, a new battery pack sticks up higher than the original one. The new configuration would no longer accommodate a cross bar piece through the outer housing, to secure and lock the instrument in place. With the assistance of the WIES staff, a revised rig was devised to use the lock itself to hold the instrument in place within the outer housing, and to then secure the lock into place. The upper end of the outer housing connects through a link in the mooring line chain, and the lower end is secured to the mooring line using a small length of chain. It was found that a Ph sensor is not in place in the instrument, which will need to be addressed as the project proceeds. At present, the instrument is collecting temperature, chlorophyll, and dissolved oxygen content data.

The instrument will need to be retrieved every 45 to 60 days, to retreive data, replace battery packs, and clean off fouling by marine organisms. Redeployment within a 24 hour period of time, over the course of a year long period, is the goal of the collaborative project.

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