

R/V Carson Update, 21 March 2013

Today:

- ran two Dorado surveys along primary section past ESPs
- conducted net tows and hydrocasts at 5 stations along the primary section
- triggered ESP sampling to coincide with hydrocasts next to the moorings
- recovered Stella 111 on the far side of San Pedro Channel and took net tow at the recovery site
- recovered & redeployed drifters to mark flow from ESPs
- conducted underway surface mapping and net tow along the inner shelf

Surface conditions

The association between relatively high chlorophyll concentrations and relatively cool surface temperature persisted in the bay (Fig. 1). Warming was evident at Mack, and this trend was accompanied by decreasing chlorophyll concentrations (see:

https://odss.mbari.org/data/canon/2013_Mar/esp/services/espweb/).

In the shallow net tow near Catalina, we found *Pseudo-nitzschia* < ~5% of population.

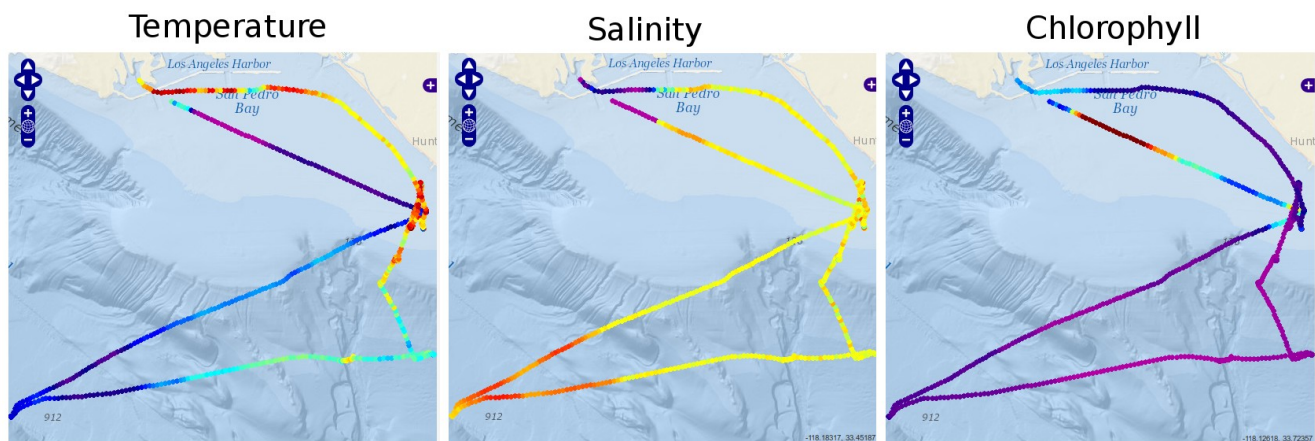


Fig. 1. Surface properties from the R/V Carson underway mapping system (intake at ~ 1.5 m) on 21 March. Ranges are 13.6 to 15.1°C for temperature, 33.4 to 33.6 for salinity, and 0.6 to 5 mg m⁻³ for chlorophyll.

Subsurface conditions

Data from the Dorado AUV outbound survey today showed the shelf phytoplankton populations yet further submerged — actually concentrated near the bottom. CTD casts confirmed. The data also indicated cross-shelf/channel exchange as well as layering of water types across the shelfbreak / channel. The role of DCM creation by transport of shelf populations was again suggested by the synoptic patterns in the data. The data require further QC and analysis but for a quick-look section plot, see: http://dods.mbari.org/data/auvctd/surveys/2013/images/Dorado389_2013_080_02_080_02_2column.png

Pseudo-nitzschia

Viewing local plankton samples under the microscope and seeing healthy long chains of *Pseudo-nitzschia* at Bruce, we were inspired to maintain daily sampling with the ESPs. Indications of *Pseudo-nitzschia* populations being more dense relatively close to the coast persisted. This is part of what inspired Adaptive Net-Tow Sampling (ANTS, Fig. 2) along the inner shelf on the return trip today (Fig. 1).

