

# Weekly Report 1

## May 25 – June 1, 2015

From Alison Macdonald (chief sci.) and Sabine Mecking (co-chief sci.)

P16N – Leg 2 Honolulu to Seattle via 152°W

Position: 31°N, 152°W

Continued calm seas, winds 5-10 knots

We have now been at sea for seven days. The first few days after leg 1 came in on May 12 was spent attending to repairs that included an inspection of the z-drive oil leak reported from leg 1. Investigative dives suggested that the leak has resolved itself, which sounds too good to be true, but the thinking is that it may have been something caught in the o-ring, which managed to work its way out. In any case, it was decided that without access to dry dock facilities little could be done to investigate further until we make port in Seattle where the ship is scheduled for its mid-season repair.

The following week, (May 19 – 24) as many of you already know, was spent in port dealing with the a/c issue. With so many aspects of the cruise dependent upon good air conditioning (from the z-drive to science) it was considered imprudent to head out without both the large air conditioning units working. After a variety repair attempts, a refurbished compressor was shipped overnight from the east coast. The service company doing the installation and Brown's engineers worked through the holiday weekend to have us ready to leave on Monday, May 25 (Memorial Day) from Pearl Harbor.

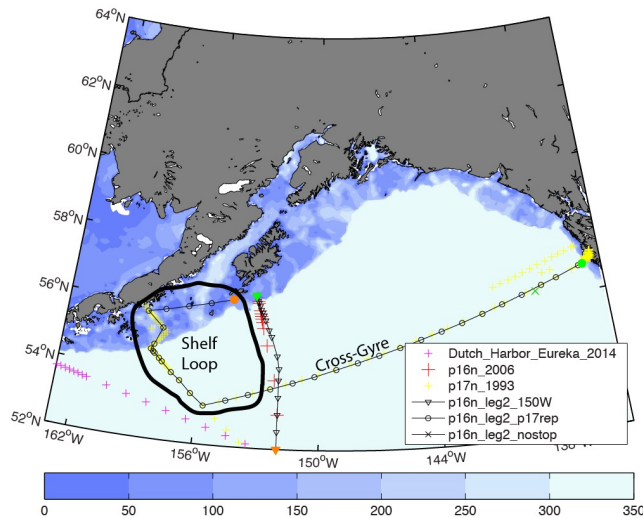
During our extended stay in port, we were pleased to have Chris Sabine and Dick Feely visit us on the Brown, and some of the science party took the opportunity to walk to the NOAA building to hear Chris's seminar. Before leaving port, the C/O was told that we would receive at least two of our lost sea days back, leaving us with 34 DAS. As the ship has a hard constraint for a fleet inspection on June 29, it is not possible for us to obtain all the lost DAS. Having laid out various scenarios, we have decided to forego the Alaskan Shelf stations (the *Shelf Loop* in the figure below) in favor of repeating the cross-gyre segment of P17N (last observed in 1993).

We decided to leave at noon on the 25th, local time, so to give the new a/c a 24 hour test run and so there could be some overlap in the morning between the ODF/SIO data processor taking over for Mary Johnson, who had to leave the cruise due to the uncertainty surrounding our arrival date in Seattle. On May 24<sup>th</sup> we had a going away/retirement party for Mary as P16N leg1 turned out to be her very last cruise. We combined this with the celebration of 5 birthdays amongst the science party over the holiday weekend. On Memorial Day Monday, at 12:00, after some brief words from the C/O in remembrance of those who have given so much to our country, particularly in the historic port in which we were docked, we moved away from Pearl Harbor toward Koko Head.

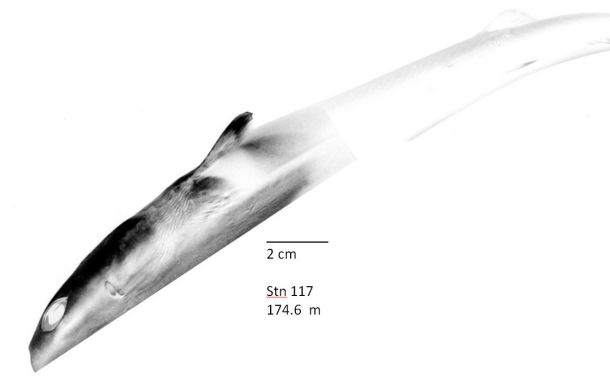
After separate test stations for the CTD and Bongo net tows, our first station was at 22.5°N, 152°W, repeating the last station of leg 1. A little shaky at the beginning with a number of

first timers among the science party and a variety of newcomers to the crew (on the bridge, winch and deck), we are now beginning to develop the efficiency needed to successfully complete the planned leg 2 stations from 22.5°N to 56.4°N along 152°W and the across the gyre toward Sitka. We are grateful for the calm weather and seas we have seen thus far, and are watching storms to the south and north of our position. The crew of the Brown has been a great help with all aspects of our operations, especially in orchestrating the dance among the CTD, Bongo and C-ops. The CTD along with the many instruments on the package are behaving well. While the UVP has been collecting some interesting photographs of the water column (see below) the bongo nets are providing us with new fauna every night. We have just crossed paths with the 2013 P2 30°N line and are heading north.

– Alison and Sabine (also see our cruise blog at <http://clivarp16n2015.blogspot.com/>)



The northern component of the 2015 occupation of P16N. Black circles indicate station positions. Red crosses represent the 2006 P16N stations. Yellow crosses indicate the track of the 1993 P17N line. Stations labeled as *Shelf Loop* will be removed from the station plan due to the loss of 4 Days at Sea.



Fish swimming past the rosette, caught on camera by the UVP at 175m. (Photo courtesy of Jessica Turner)

