

Summary

Cruise: AT-41

Pilot: Bruce Strickrott **Dive:** A4962 **Stbd Observer:** C. McFadden

Date: 8-23-18 **Site:** Richardson Ridge **Port Observer:** E. Cordes

Today's plan was to dive at Richardson Ridge, initially landing at the base of the ridge and working our way up to the highest point. The basket had two bioboxes each with three inserts, 10 quivers (2 clean and sealed for Chris Kellogg), 12 pushcores, 5 Niskins and slurp. As we descended we drifted NE of target, coming down onto an extensive field of coral rubble (738 m). Visibility was good, with only small particulates in the water column. We began maneuvering towards WPT2, crossing over rubble with lots of small, white plexaurid gorgonians, primnoids, some Anthomastus, cup corals, and sea urchins. Stopped at 729 m to collect a quiver of octocorals (plexaurid, primnoid, Anthomastus), then continued on up to a ridge at 725 m where there were large colonies of live Lophelia, mostly on the windward side of the ridge. Filled one biobox insert (B2) with Lophelia, fired a Niskin, and dropped marker #17. We then tried to move south, fighting a strong current. We crossed over extensive Lophelia reef as well as coral rubble with more nephtheids and primnoids. Set down at 744 m to fill a second biobox insert (B3) with Lophelia, and also filled quiver Q1 for Chris Kellogg. Fired a second Niskin. A swordfish buzzed us 4-5 times and hit the sub. We paused for a few minutes to eat lunch. It seemed like the current had eased off a bit, and we continued to try to head south, climbing a hill over a rubble field with scattered small patches of Lophelia and Enallopsammia and lots of the white plexaurid. Stopped at 711 m to collect more Lophelia (B1), and fired another Niskin. Moved further up to top of ridge at 695 m, where there was lots of live Lophelia, nephtheid soft corals, some primnoids. Collected a fourth sample of Lophelia in biobox (B4), a second quiver (Q2) for Chris, and fired a Niskin. We continued towards WPT3 along a ridge covered with Lophelia, soft corals and globose sponges. Stopped at 696 m to collect more Lophelia (B6) and an encrusting, stoloniferous octocoral that was overgrowing dead coral skeleton. As we continued towards WPT3 we encountered very strong currents. Saw a Madrepora as we went up a slope, turned around to look for it again, but had difficulty maneuvering the sub and setting down because of the current. Managed to set down at 704 m and collect a Madrepora (B5) but had to leave the ridge and find a better place to set down before securing the biobox lid. Because it was proving impossible to travel south against the current we decided to move east and then tack back to the west. Passed over a rubble slope with some plexaurids and bamboo corals and then found an area (715 m) with a number of Enallopsammia colonies which we stopped to collect along with more Lophelia. The current pushed us uphill, and we tried to stop to collect more Enallopsammia but couldn't set down. We drifted NE with the current and were able to set down on a rubble slope (708 m) to collect a final colony of Enallopsammia, bringing the total to 5 quivers with Enallopsammia, 6 biobox inserts plus 4 quivers (including two for Chris) of Lophelia, one Madrepora, and a quiver of octocorals. Tried to take a pushcore in the rubble, but it wouldn't go in. We finally found a place to set down where we could secure the basket and wait for clearance to surface. While surfacing the current carried us nearly 2 km NE.