



WOODS HOLE  
**OCEANOGRAPHIC**  
INSTITUTION

## Marine Facilities & Operations

# *Sea Words*

June 2021



### ***Summer Kick-Off!***

*Welcome to our second issue of "Sea Words." It's hard to believe that it's already June! I am pleased to share good news and updates to our Marine Operations world, and want to thank all of you for your patience and continued hard work as we've navigated through the pandemic. I remain hopeful that, in a few short weeks, we will be able to safely work together, see each other's smiling faces, and celebrate our accomplishments in person. As we approach the start of summer, let us remember to take a step back, reflect on the last year and spend much needed time with friends and family.*

*Best wishes for a happy, warm and mask-free summer.*

*-Rob*

*Thanks to those of you who provided content.*

## ***R/V Atlantis***

The R/V *Atlantis* Mid-Life Refit that began last summer is nearly complete! At the time of writing, testing of the new electrical generation systems are finishing up with sea trials to follow. The plan is to sail 2nd week of July back to WHOI with 8 days dedicated to testing of new science systems after departing the yard. Dakota Creek Industries has been an excellent partner in the overhaul efforts.

Gary McGrath has been on site since the start of the overhaul, and Dutch Wegman has remained directly involved, his last run on R/V *Atlantis* is planned during the upcoming sea trials. Thanks to you both, along with each member of the crew and tech staff, for all of your hard work during this last year. Your contribution is significant and greatly appreciated!



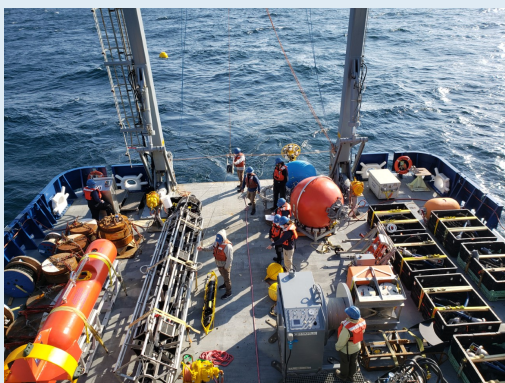




While in MidLife Refit, science systems and spaces have also gone through a series of upgrades. From new laboratory benches and seating to major hull mounted sensors, like the new EK80 and EM124 systems, funding provided through NSF and ONR has positioned the *Atlantis* to continue to lead the way in the Academic Research Fleet.

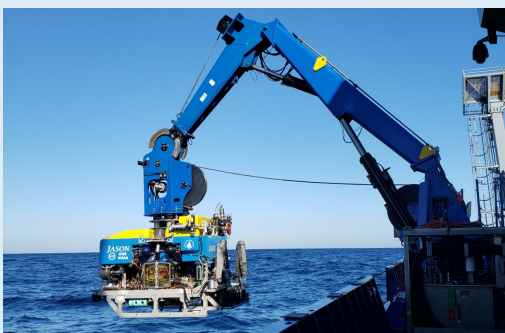
Captain Derek Bergeron takes the helm of R/V *Atlantis* when she departs from Anacortes, WA in only a few short weeks. David Zimmermann has led the project management side of the overhaul and is retiring in June. Dave & Ian Comerford have been a remarkable team, keeping everything right on the mark, financially speaking. R/V *Atlantis* expects to return to Woods Hole in mid-August, and we can't wait to welcome her home (and show her off)!

## R/V *Neil Armstrong*



Full aft deck deployment of moorings on YT Lin's TFO NESBA expedition

The R/V *Neil Armstrong* has maintained its regular cruise schedule despite any challenges related to COVID-19. January and February were filled with maintenance work and cyber security exercises. As of March, the *Armstrong* was back underway on science missions with YT Lin and the NESBA team dominating the spring cruise schedule, totaling 5 cruises over 4 short months. In between the action-packed scheduled, the *Armstrong* vessel and crew also completed a successful OOI mission to the Pioneer Array.



Deployment of DSV Jason off R/V Neil Armstrong

The end of May brings our 13th expedition aboard the *Armstrong* during COVID restrictions. To date, no science mission has been canceled due to any COVID case. Successful excursions have been made possible by an immense collaboration between the various science parties, marine operations shore support, and the crew.

Many of the planning and shipboard protocols set in 2020 remain in place in 2021 with science parties and crew isolating prior to boarding the vessel and the ship continues to have thorough COVID mitigation protocols in place.

Each cruise continues an in-depth risk assessment and receives feedback from stakeholders before sailing. As vaccines become more common among those going to sea, protocols for pre-boarding isolation continue to be reviewed while continuing to keep everyone safe and COVID-free.

We extend our thanks to WHOI Senior Management and federal stakeholders (NSF, ONR, UNOLS) who have approved every cruise to date aboard the R/V *Neil Armstrong*.



Morning Reflection on R/V Neil Armstrong

# TIOGA

Tioga continues operating under strict COVID-19 protocols, and the crew are pleased to report that they have been fully vaccinated. Science complements remain limited to four people to maintain safety protocols, but stay posted as this is under review.

Tioga began 2021 with a mission for the Woods Hole Group, also participating in the first of nine Mass Bay water surveys for Battelle. The Tioga was also enlisted for AUV operations by WHOI engineers and scientists, and she even completed her regularly scheduled dry docking maintenance. As soon as the maintenance was completed, Tioga started making regular trips to the MVCO, providing support to the tower and the underwater observatory power nodes.

WHOI Dive Operations Manager Ed O'Brien teamed up with the Tioga crew to help locate an AUV in Buzzards Bay for Hydroid. The team successfully located the underwater vehicle by sonar and divers brought the vehicle to the service. The mission was so successful, Hydroid hired Tioga (and Ed's team too) for a similar operation in April. April 2021 set a new record for most operational days in one month reaching 18 days.

Captain Peter Collins and Mate Jim Missios successfully worked through several weather delays and with the help of Eric, negotiations and schedule adjustments were successfully navigated, a remarkable achievement! May included additional MVCO work as well as the fourth Battelle survey in Massachusetts Bay.

Tioga expects another busy few months, and as we move into summer. WHOI Ship Operations will continue to review and update our COVID-19 protocols as more people become fully vaccinated and CDC guidelines are adjusted.



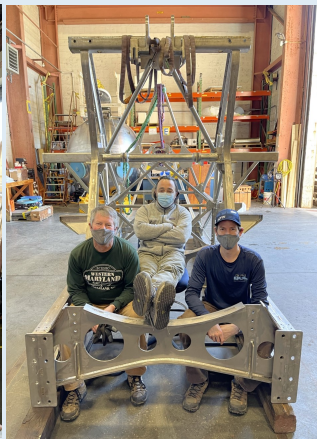
A heartfelt CONGRATULATIONS to Pete on the bundle of joy that joined his family earlier this year...

## HOV *Alvin*

*ALVIN* upgrade work is wrapping up and overhaul continues with final fabrication and reassembly leading up to sailing in September. Routine periodic hull penetrator maintenance is in process in preparation for re-installation in the personnel sphere. Syntactic foam shapes that had been sent to an outside vendor for repair and re-coating were received in February and new external skins have been fabricated and delivered. New titanium ballast spheres were completed in New Jersey and hydrostatically pressure tested at Penn State University. Three new banks of lead-acid batteries are being cycled prior to use and all new hydraulic system components are ready for vehicle integration. Oxygen cylinders are being hydro-tested and cleaned and new valves will be installed. The submersible will dive with two Schilling manipulators after overhaul, with the older ISE manip kept on standby. New external cameras from Deep Sea Power and Light will provide 4K imaging capability for science observers.

On May 1st, the modified/repared submersible frame and six new ballast spheres arrived at WHOI. The frame was placed in the ALVIN High Bay and reassembly of *ALVIN* has now commenced! A NAVSEA functional audit was conducted during the first week of May to examine all paperwork and procedures associated with the overhaul and upgrade.





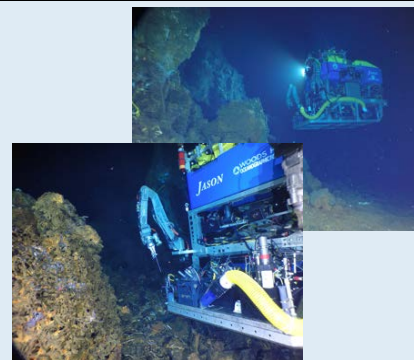
Photos are of the frame and ballast sphere delivery.

## ROV Jason

*Jason* is roaming again, having recently completed a cruise at the East Pacific Hydrothermal vent site.

After a brief maintenance period at WHOI, *Jason* is mobilized on the R/V *Thompson* (operated by UW) for a study of deep sea larval dispersions in the Gulf of Mexico and the US East Coast. *Jason* will be facing some high currents as they work in the Gulf Stream!

*Jason* also hopes to help recover some lost moorings for another group and expects to stay busy through the rest of the year, thanks to the crew for all you do.



ROV Jason sampling hydrothermal vents and taking temperature measurements while exploring the volcanic seafloor at the East Pacific Rise during cruise RR2102 on RV Roger Revelle in April 2021.

## AUV Sentry

As of April, *Sentry* has completed a cruise to the East Pacific Rise, this cruise led by PI Dan Fornari (WHOI) was focused on using *Sentry* for multibeam mapping, side-scan and photo surveys. *Sentry* focused camera surveys in previously explored areas of the axis, with multi-beam and side-scan surveys focused on areas around the axis that have not been explored with high resolution mapping and side-scan.

*Sentry* will have roughly three weeks at WHOI before mobilization for the Craig Young cruise out of Woods Hole. This cruise will focus on zooplankton in the Gulf Stream, with *Sentry* using the SyPRID sampler to collect zooplankton samples. The cruise will end in Gulfport MS, with *Sentry* and system shipped back to WHOI for the month of July.

Outside of operations, the *Sentry* group has been working in a hybrid work structure, partially at home and partially in person at Blake.

This year has been demanding operationally with two week isolation times before every cruise. As *Sentry* focuses on remaining operations for 2021, there are several engineering projects, battery replacement, acoustic release upgrade, complete chassis replacement, and replacing our mission controller that runs the missions in real time sub sea planned.



Photo from Fornari cruise - and maybe some fun!



# CWATER



*Above is a rendering from the artist, Dongik Lee, with an interpretation and vision for the future CWATER complex*

Our WHOI CWATER Dock Project is deep into Phase 3 with a primary focus of preparing the project for “shovel ready” by March 2022. CWATER is imagined as a next-generation, world-class, sustainable marine research facility to enable fundamental advances in ocean science, engineering, and education throughout the 21st Century for the greater oceanographic community.

Phase 3 will accomplish the following objectives: (1) Design, cost & documentation for constructing an innovative, climate resilient pier structure, (2) Complete a new waterfront building (NWB) design to support water dependents use now & for expectations during the next 40 years, (3) Acquire necessary permits & approvals to allow construction to commence, (4) Deliberately design a public space within the NWB, on the landscape & within the Village to re-invent the public experience for visitors to WHOI, (4) Develop funds to support the construction of CWATER through public & private sources, and (5) Lead climate resiliency planning for WHOI & our Woods Hole Community in partnership with MBL, NOAA & the Town of Falmouth.

This project is supported by a host of excellent consultants including Payette (Architect), Moffatt & Nichol (Engineer), CambridgeSeven (Interpretive Design), Epsilon (Permitting), Woods Hole Group (Climate Resiliency planning), DSK (Strategic Facilities planning) & several additional partners. Launching a website to better inform the community on our CWATER project is a priority and will be coming to a theatre near you soon!

In the meantime, if you have any CWATER questions, please reach out to Leslie-Ann McGee at [lmcgee@whoi.edu](mailto:lmcgee@whoi.edu).

# Congratulations, Good Luck and Best Wishes!

Please join us in our congratulations and best wishes to our MarineOps members on their new and exciting milestones!

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## Derek Bergeron

Derek's career at Woods Hole Oceanographic Institution started in 2002 as Third Mate aboard the R/V *Knorr* under the leadership of Captains Colburn and Sheasley. He saw *Knorr* to her retirement in 2014 as Chief Mate and then transitioned over to the R/V *Neil Armstrong* as Relief Master in 2015. Earlier this year, with great honor, Derek accepted the offer as Regular Master aboard the R/V *Atlantis* upon Captain Al Lunt's retirement. As most are aware, the *Atlantis* is currently undergoing a mid-life refit in Anacortes, WA and it will be a sizable and welcoming challenge for Derek to guide *Atlantis* and her crew into her second chapter of research, exploration and discovery.

Congratulations, Derek!



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## Jenn Carter

Jennifer Carter has accepted the position of Department Administrator, Marine Chemistry & Geochemistry, succeeding Mary Murphy.

Jenn has been a wonderful member of our Marine Operations team. Among her many accomplishments, she played a key role in the recent reorganization of our administrative functions within Ship Operations and SSSG. We will miss her!

Please join us in congratulating Jenn on her new assignment.

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## Dave Zimmermann

Dave has announced his plan to retire from WHOI effective June 4th.

Dave joined WHOI in 2011 as a project manager for the OOI program and a year later transitioned to Marine Operations, where he helped build the Alucia program.

He's also managed the yacht *Finesse* for several years, in addition to his day job overseeing all-things administrative for the Alucia.

Two years ago Dave took on the project management of the *Atlantis* mid-life refit. He has been masterful, overseeing the procurement process that led to the selection of Dakota Creek.

Plans for adapting the management of both Alucia and *Atlantis* MLR to get them to the finish line after Dave's departure will be developed over the next few weeks and we will keep everyone posted.

Wishing you smooth motoring, Dave!

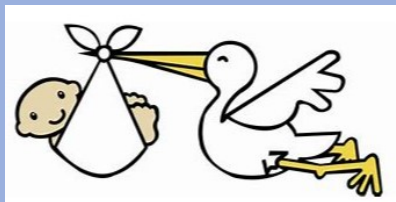




## Newest "Additions"

### Sarah Fuller

Sarah and her husband are excited to welcome their own bundle of joy in a few weeks!  
And WHOI looks forward to having another little mate joining the crew!



*Thank you, again, for making this a successful year!*

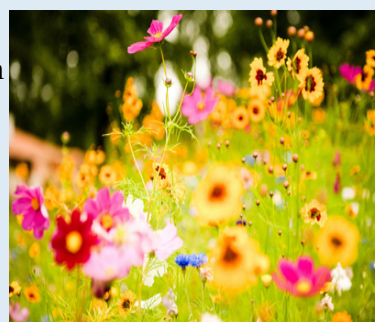
*Happy Summer!*

Please direct your questions and comments about this newsletter to  
Rob Munier, Vice President, Marine Facilities & Operations  
[munier@whoi.edu](mailto:munier@whoi.edu) or 508-289-3335

## The End



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Who We Are

Know Your Ocean

What We Do