



UNOLS News

Exciting updates from UNOLS & the Academic Research Fleet!

April 2019 - Volume 33, No. 1

Say Hello to the New UNOLS Crew!

As of May 1, 2019, the UNOLS Office will transition to a new host institution at the University of Washington, following a ten year residence at the University of Rhode Island. Meet the new UNOLS Team!

Doug Russell, Executive Secretary



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UNOLS EVENTS

[2019 Ship Scheduling Committee Meeting](#)

May 22-23, 2019

Seattle, WA

[2019 Spring DeSSC Meeting](#)

May 29-30, 2019

Woods Hole, MA

[2019 RV BLUE HERON Chief Scientists Training Program](#)

June 15, 2019

Duluth, MN

[2019 RV KILO MOANA Chief Scientists Training Program](#)

June 13, 2019

Honolulu, HI

[2019 RVTEC Meeting](#)

October 22-24, 2019

Fairbanks, AK

Doug Russell will be the new UNOLS Executive Secretary. He'll have overall responsibility for the new office as well as facilitating and coordinating the work of the following UNOLS committees: Ship Scheduling, Research Vessel Operators, Arctic Icebreaker Coordinating, and Marine Seismic Research Oversight. His favorite marine animal is the Emperor Penguin because they are regal, resilient, steadfast, and just plain tough. Doug can be reached at doug@unols.org or 206-543-5062.

Alice Doyle, Deputy Executive Secretary



Alice Doyle will be the new UNOLS Deputy Executive Secretary and will be coordinating the work of the DeSSC, FIC, SCOAR, and RVTEC Committees. Her favorite marine animal is the humpback whale because they are aware, curious, calm and playful and you just can't help but smile when you see them. Alice can be reached at alice@unols.org or 970-403-3874.

Brandi Murphy, Technical Services Manager



Brandi Murphy will be managing the UNOLS Tech Pool as the Technical Services Manager and supporting our tech managers. As for her favorite marine animal, it would be impossible to narrow it down to a single favorite marine mollusk, but *nudibranch* is really fun to say. You can reach



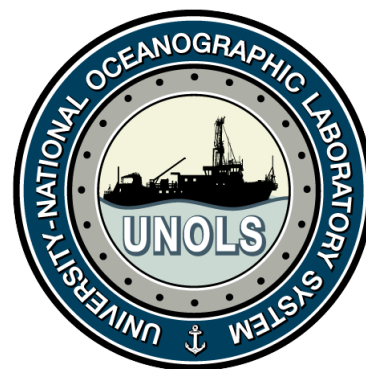
FEATURED PHOTO

Past and future UNOLS Executive Secretaries at the 2019 UNOLS Celebration Dinner. From left to right, Douglas Russell (UW) is our new Executive Secretary; Jack Bash, UNOLS Executive Secretary from (1991 to 2000); Mike Prince, UNOLS Executive Secretary from (2000 to 2009); and Jon Alberts, Executive Secretary from (2009 to 2019).

To submit a photo of the month, please email media@unols.org.

ARCHIVED NEWSLETTERS

Past UNOLS Newsletters can be found on the [UNOLS Website](http://unols.org)



FROM THE EDITOR

Thank you to all who contributed information and articles for this issue of UNOLS News. Articles are always welcome and encouraged. Copy, links, and images can be submitted by e-mail to media@unols.org.

CO-EDITORS

Alice Doyle
Brandi Murphy
Bridget Harrell-Donze
Annette Desilva-outgoing Editor

Brandi at brandi@unols.org or 206-616-2681.

Caitlin Mandel-outgoing Editor

Bridget Harrell-Donze, Program Operations Specialist



Bridget Harrell-Donze will be the new Program Operations Specialist for UNOLS. Her favorite marine animal is the polar bear because they are fierce, beautiful and protective of their babies. You can reach Bridget at bridget@unols.org or 206-685-9236.

Committee News

Call for Nominations: UNOLS Council Position!

UNOLS is currently seeking nominations for an open non-Operator position on the UNOLS Council. The UNOLS Council members represent and act on behalf of the UNOLS membership as the operating and governing body



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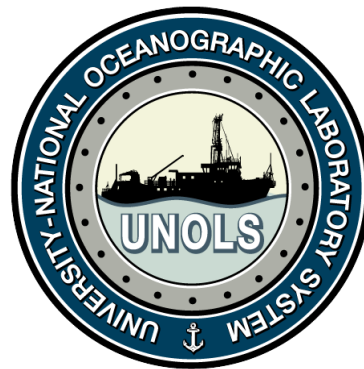
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of UNOLS. The nominee must be from a UNOLS non-Operator institution. [Please click here](#) to learn more about the position.

The Deadline for Nominations is May 30, 2019

Unmanned Aerial Systems (UAS) Operator Handbook Released!



Photos courtesy of Luc Lenein, Chris Zappa and NSF/USAP.

Unmanned Aerial Systems (UAS), also known as drones, are being increasingly used from Academic Research Vessels (ARVs) to support field expeditions. These relatively new platforms have provided a way to significantly expand the capabilities and reach of the research fleet by providing better spatial sampling coverage away from the ship, often critical for oceanographic and atmospheric studies, while demonstrating to be a great tool for outreach purposes.

Because of technological advances and sensor miniaturization, many research-grade airborne instruments that once required manned aircraft can now be made from these platforms. Additionally, in recent years, improved control and guidance technologies have enabled ship launch and recovery of small UAS, reducing or eliminating transit time for oceanic flights. Because of the simplicity of its operation, at least for the very small, low-cost UAS, and the potential danger of operating such platform without appropriate training our understanding of the flight rules developed by flight authorities such as the Federal Aviation Administration (FAA), a policy for academic research vessels had become necessary.

In the summer of 2016, the UNOLS Council endorsed the following UAS policy:

“With the recent publication of the FAA small UAS rule, a policy for U.S. academic ships has become necessary. Effective immediately, operation of Unmanned Aircraft Systems (UAS), or drones, from or over U.S. academic ships may not take place without demonstrated compliance with national or international regulations (ICSA, FAA) and specific approval of the ship's captain or designee, as a minimum. This applies to crew, techs and members of the science party, and refers to all operations, whether recreational, educational, or professional. Obtaining national approvals, such as FAA's Sec 333 exemption or Certificate of Authority or Waiver (COA), as well as pilot qualifications, are not a guarantee the operations will be approved by the ship's captain. Recreational or hobbyist freedom of use over land is not available at sea, so the importance of contacting the ship's operator ahead of time is critical.”

Since then, a group of experts and scientists from the UNOLS Scientific Committee for Oceanographic Aircraft Research (SCOAR) and Research Vessel Operators Committee (RVOC), with the support of representatives from federal agencies, developed a handbook, entitled “Unmanned Aerial Systems (UAS) Operations from the U.S. Academic Research Fleet: Operator’s Handbook”, specifically designed to guide and help scientists who would like to make use of ship launched and recovered UAS during upcoming expeditions.

The document is now [available here](#). It contains requirements and recommendations for safe UAS operations on academic research vessels, along with various UAS technical information. Templates of common forms, such as communications plans and UAS pilot logs, are provided as examples that can be modified to suit a specific UAS activity.

Finally, this handbook should be viewed as a living document which, as UAS technology evolves, and as published research on the use of UAS from research vessels is made available, its contents will also evolve. Comments, on any aspect of this Handbook, are welcome.
by Luc Lenain, UCSD · Scripps Institution of Oceanography (SIO)

MERAS White Paper on Milestone Ceremonies

The Maintaining an Environment of Respect Aboard Ships (MERAS) committee released a white paper in February,

2019 on milestone ceremonies. Team building and celebratory practices on board ships should be inclusive and safe. Please refer to the [guidelines](#) for a refresher on appropriate behavior when carrying out milestone activities.

Welcome New Committee Members!

All of our committees are staffed by volunteers, and we are grateful for their time, experience and contributions. We would like to welcome the following individuals to UNOLS!

- Roxanne Beinart (URI) joined DESSC in March
- Leila Hamdan (USM) joined DESSC in March
- Dorsey Wanless (BSU) joined DESSC in March
- Zoltan Kelety (UCSD) became RVOC Chair-elect in March
- Masako Tominaga (WHOI) joined FIC as an Operator Rep in March
- Joseph Montoya (GA Tech) joined FIC as a Non-Operator Rep in March
- Jim Swift (UCSD) joined AICC as an ex-officio member in March
- Britton Stephens (NCAR) joined SCOAR in April
- John Orcutt (SIO) was appointed MSROC Chair in April
- Nathan Miller (USGS) joined MSROC in December
- Robert Steinhaus (Steinhaus Assoc.) joined MSROC in December

UNOLS Recognizes Outgoing Committee Members

We would like to thank the following individuals for their contributions to the UNOLS community:

- Robert Campbell (URI) for serving as AICC Chair and Council member
- Patrick Hart (USGS) for serving as MSROC Chair and Council member
- Stewart Lamerdin (OSU) for serving as RVOC Chair-elect
- Joan Bernhard (WHOI) for serving on FIC
- Warren Wood (NRL Stennis) for serving on MSROC
- Anne Trehu (OSU) for serving on MSROC

Early Career Program Updates

Two NSF-UNOLS Chief Scientist Training Expeditions Will Be Held This June



Two NSF-UNOLS Chief Scientist training expeditions will be taking place this June. The 2019 UNOLS Great Lakes Chief Scientist Training Expedition will be aboard the R/V *Blue Heron*, out of Duluth, June 16-22. The other will take place onboard the R/V *Kilo Moana*, June 15-24. Once underway, you can follow the research aboard the R/V *Kilo Moana* by following along on their blog at <http://csw.unols.org/> or check out their Facebook Page [Nsf-Unols Early Career Scientist Training Cruise](#). While the application deadline for these expeditions has ended, you can be notified of future Chief Scientist Training Cruises, when you [sign up](#) for our Early Career Listserv!

UNOLS Community Updates

Imaging System for Box-Coring Available

by Dan Fornari and David Fisichella, WHOI



WHOI SSSG-MISO deep-sea imaging systems (24MP still imaging and 1080P HD video) and real-time telemetry on a MC800 multicorer used

in 2018 on the R/V Kilo Moana. (photo courtesy of Dan Fornari - WHOI)

Box coring and multi-coring are routine methods for acquiring undisturbed, spatially co-located upper sediment and sediment-water interface samples in a range of water depths for geological, geochemical, and biogeochemical studies. The need for locating sampling areas with specific, active biological, chemical or physical processes, as well as performing controlled penetration of the seafloor to achieve optimal sample recovery are essential capabilities for this type of seafloor sampling. Having a real-time video and/or digital still camera, CTD and altimeter on these types of samplers greatly increases the chances of successful coring operations and quality of data in a variety of sedimentary settings where spatially restricted habitats occur. In addition, in situations where real-time imaging is not possible because of limitations related to a ship's capacity to easily carry multiple types of conducting and trawl wires, self-contained, time-lapse imaging provides post-sampling characterization of the sample site that can be used to enhance the scientific context of recovered material as well as provide guidance on deployment strategies.

For nearly 20 years, the WHOI-MISO (Multidisciplinary Instrumentation in Support of Oceanography) Facility has provide routine capabilities for deep-sea imaging using both towed cameras as well as imaging and lighting systems that can be deployed on an array of deep submergence vehicles and, most recently, on multicorers and box corers. Starting in 2010, as part of an NSF-OCE funded development effort, MISO imaging/data systems have been routinely deployed on an array of multicorers and – most recently – box corers to provide either real-time camera controlled sampling when conducting cables were available, or as stand-alone time-lapse systems for imaging sampler penetration into the sediment to characterize the coring site. When a conducting cable is used, the MISO systems have also successfully developed and implemented an anti-pretrip collar on standard MC-800 multicorers that permits controlled release of the coring mechanism when close to the seafloor to prevent pre-tripping of the multicore spyder. Over the past six years, the WHOI SSSG-MISO systems have been successfully used on 12 cruises in the Pacific, Atlantic and Arctic Oceans, on seven academic research vessels and one Norwegian ship that used box corer and multi-corers for seafloor sediment sampling.

Since 2018, the MISO Facility is operating within the WHOI Shipboard Scientific Services Group (SSSG) and funded through NSF-OCE's Oceanographic Instrumentation Program. Users and Operators interested in taking

advantage of SSSG-MISO seafloor imaging systems for academic research should request use of the systems on the UNOLS STRS website and contact the authors for details on providing these capabilities for funded field programs. Additional photos of the system in action on various corers can be found [here](#) and the MISO Camera System User Guide can be found [here](#).

The MISO facility is just one of many facilities and instrumentation available to sea-going scientists. An extensive list along with a brief description of each of the facilities can be found on the [Other Facilities](#) page on the UNOLS website. Available facilities range from equipment support (e.g. vans, winches) to data support (e.g. multibeam, ADCP, CTD) and items in between. These facilities were developed to give the sea-going scientists access to expertise within the community. They are there to be used! For specifics, contact the facility directly.

These facilities are in addition to the equipment and instrumentation available on each vessel. A comprehensive list of the equipment and instrumentation available within the Academic Research Fleet can be found [here](#). This comprehensive list shows both the vessel specific equipment as well as the portable equipment that can be moved from one vessel to another.

For any general questions about equipment, instrumentations or the facilities available, please contact the UNOLS Technical Services Manager, Brandi Murphy - brandi@unols.org.

Strategies for Conducting 21st Century Oceanographic Research



R/V Atlantis in San Diego (photo credit - Caitlin Mandel)

Planning an oceanographic research expedition requires an incredible amount of coordination between scientists, ship operators, funding agencies, logistics companies, and international government entities. Several members of the UNOLS Community (Alice Doyle, Daniel Fornari, Elizabeth Brenner, and Andreas P. Teske) have written an *Earth and Ocean Sciences (Eos)* Project Update detailing the findings of a UNOLS Working Group that convened to improve the planning of research expeditions in the modern age. [Click here](#) to read the full article!

Fleet Highlights

NSF Releases Solicitation for Operator of the 3rd Regional Class Research Vessel (RCRV #3)



The Division of Ocean Sciences (OCE) Integrative Programs Section (IPS) is soliciting proposals from eligible organizations to serve as the Operating Institution for the third ship in the Regional Class Research Vessels (RCRV #3).

This solicitation seeks to select a qualified Operating Institution that shall either be a current UNOLS Vessel Operator or be capable of becoming one prior to taking over responsibility for full vessel operations.

The full proposal deadline is July 1, 2019. For more details, please see the [NSF Webpage](#). Or the PDF linked [here](#).

Farewell from the Editor

UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

UNOLS NEWS

VOLUME 8, No. 1

SEPTEMBER, 1991



THE UNOLS OFFICE MOVES TO RHODE ISLAND

In May 1991, the UNOLS office moved its home to the University of Rhode Island, Bay Campus. The office had previously been hosted by the University of Washington in Seattle for the past nine years. Jack Bash, formerly the marine superintendent at URI, was selected as UNOLS's Executive Secretary. The office includes two additional staff members, Annette DeSilva, Assistant Executive Secretary, and Mary Jane D'Andrea, Senior Clerk Typist.

We welcome any input from the UNOLS community to this newsletter, in fact, we encourage it. Any information you would like to share can be submitted to the UNOLS Office for inclusion in the next issue. Please submit all articles prior to December 31, 1991 for inclusion in the January issue of UNOLS News.

Copy can be submitted to:
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Saunderstown, RI 02874
or by TELEMAIL to:
UNOLS.OFFICE. O

HIGHLIGHTS

- * UNOLS Moves to Rhode Island
- * UNOLS Welcomes Risk Manager
- * Ship Construction and Refit
- * AGOR 24/25 Selection
- * NOAA/USC VICKERS Agreement
- * Arctic Vessel
- * Coastal Oceanography
- * NOAA's Fleet Modernization
- * Scientific Opportunities for a Nuclear Submarine
- * LANEY CHOUËST Lease Agreement
- * Sea Cliff and Turtle
- * ALVIN Planning
- * New Cruise Assessment Forms
- * Guidelines for Becoming a UNOLS vessel
- * UNOLS Safety Manual
- * Ship Time Requests
- * UNOLS Brochure
- * Random Drug Testing Policy
- * UNOLS Initiatives
- * Funding/Budget
- * UNOLS Research Vessels in 1992
- * UNOLS Officials
- * Calendar of UNOLS Meetings

UNOLS WELCOMES RISK MANAGER

UNOLS is pleased to announce that Professor Dennis Nixon has joined the UNOLS Staff as a part-time risk manager and functions to serve UNOLS and its member institutions. Professor Nixon tasks include monitoring the legal environment to keep UNOLS informed of relevant developments in the law. He will re-examine existing levels of UNOLS ship insurance coverage to determine both the adequacy of coverage and the

strength of the underlying carrier. Additionally, Dennis will develop a facility to provide a group insurance program for all operators interested.

Professor Nixon has been involved with both RVOC and UNOLS in an informal basis for the past five years. Please feel free to contact Dennis through the UNOLS Office if you have any questions related to his areas of expertise:

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Telemail - UNOLS.OFFICE



Early edition of the UNOLS News

Dear UNOLS Community,

It has been a great privilege to be a part of this community and I have thoroughly enjoyed sharing news about Fleet operations, ship construction projects, and UNOLS activities and initiatives. My work on *UNOLS News* began in 1991 and over the decades I have witnessed the dedicated work of the UNOLS Council, committee, members, ship operators, marine technicians, and agency representatives in their efforts to provide access to an outstanding academic research fleet. The capabilities of this fleet along with the technical support provided have enabled unmatched scientific research and oceanographic discoveries.

As I move onto my next venture, I look forward to reading future issues of UNOLS News to keep abreast of the work of this amazing community. My best wishes to the University of Washington Office as the next editorial team for *UNOLS News*.

Warm regards,

Annette DeSilva
Outgoing managing editor of UNOLS News



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