

# The PIER Review

Welcome to the June 2019 issue of the PIER Review, the monthly [GOA-ON Pier2Peer](#) newsletter! This edition showcases accomplishments of the Pier2Peer members, provides updates for our members, and shares funding, job opportunities and recently published open-access publications. Please send ideas and feedback for future Pier Review editions to Alicia Cheripka ([alicia.cheripka@noaa.gov](mailto:alicia.cheripka@noaa.gov))

## P2P FEATURE



Dr. Nina Bednarsek at the 4th GOA-ON International Workshop in Hangzhou, China. Photo credits: GOA-ON 2019 Workshop

At the 4th International GOA-ON workshop hosted April, 2019 in Hangzhou, China, researchers met to discuss “Observing ocean and coastal acidification and the impacts on organisms and ecosystems” during one of the breakout sessions . There has been a push in recent years to not only monitor changing ocean chemistry but to also capture the coincident effects of ocean acidification (OA) has on ecosystems. Biological oceanographer, Dr. Nina Bednarsek, is a researcher at the Southern California Coastal Water Research Project (SCCWRP) and resident expert on ocean acidification and the impacts on pelagic calcifiers known as pteropods. Nina previously worked at NOAA’s Pacific Marine Environmental Laboratory and the University of Washington, and continues to foster strong research relationships with those institutions. Nina has served as a mentor in the Pier2Peer program since 2018 and currently mentors Merna Awad, Leticia Espinosa Carrion, and Nashwa Shaaban).

Nina’s research focuses on the impact of multiple stressors on pelagic zooplankton and meroplankton. Specifically her research focuses on determining biological thresholds for a variety of organisms exposed to the combined effect of ocean acidification and hypoxia from the Southern California Bight, along the U.S. West Coast, and north to the Arctic.

Her biological research focus has made her an integral member of GOA-ON’s biological working group and has also filled a growing niche in the Pier2Peer program. As a mentor in the Pier2Peer program, Nina has jumped in with both feet and earnestly pushes her current mentees to stretch themselves and incorporate the biological impacts of OA into their research. The state-of-the-art multiple stressor facility at SCCWRP makes Nina’s research possible and Nina hopes this facility can be utilized and will benefit various scientific collaborations sparked by her current and future Peer2Peer collaborations. Along with actively seeking out new potential mentees, she has worked earnestly to create projects that will benefit both the mentee and the GOA-ON community. One such project was recently funded by The Ocean Foundation and Pier2Peer (Bednarsek and Awad), to establish an Ocean Acidification Joint-Program between the USA and Egypt. Her excitement for research and mentorship is a tremendous asset to Pier2Peer, and her impact on current and future mentees is something that the program hopes will continue for many years to come.

Do you have an exciting accomplishment or experience with the Pier2Peer program you would like to share? Send it to Alicia Cheripka ([alicia.cheripka@noaa.gov](mailto:alicia.cheripka@noaa.gov)) and you could be featured!

## **BECOME A Pier2Peer RECRUITER**

We are recruiting senior and experienced OA observing experts to serve as mentors. If you know someone who would be a good mentor, direct them to the [Pier2Peer website](#) or put them in contact with Alicia Cheripka ([alicia.cheripka@noaa.gov](mailto:alicia.cheripka@noaa.gov)).

If you are attending a meeting or event, are interested in sharing a few slides on the program and disseminating sign-up information, please email Alicia and we will send you communication materials and sign-up sheets for your upcoming event. And thanks!

## **JOIN THE OA INFO EXCHANGE**

The OA Information Exchange (OAIE) is a place to swap ideas, share resources, and interact with people in a variety of disciplines across many regions. This includes your mentor or mentee!

Members can:

- post updates and comments with questions, answers or announcements
- share papers, media files, presentations and links
- add events and host webinars
- join teams based on regions and topics of interest
- meet new people from a variety of fields

Scientists, citizen scientists, educators, NGO and government employees, resource managers, fishers, aquaculturists, concerned citizens, and others are all welcome to take part in the OA Information Exchange community! You can join [here](#).

## **NEWS**

### **Help share information and collaborate on ocean acidification research!**

Would you like to know about on-going and planned ocean acidification research activities? Would you like to promote others to work with you? One of the goals of the Ocean Acidification International Coordination Centre (OA-ICC) is to promote collaborative research projects, such as joint experiments and access to research facilities. To this end, the OA-ICC is looking to compile a list of ongoing and planned research projects on ocean acidification where there is a possibility for other researchers to participate. The list will be shared online to promote information exchange and collaboration.

To contribute to this effort, please send an email including the information below to:

Lina Hansson & Marine Lebrec, OA-ICC Project Office, IAEA Environment laboratories  
([oaicc\(at\)iaea.org](mailto:oaicc(at)iaea.org))

#### **Information needed:**

location  
contact (name, institute, email)  
brief research focus  
potential collaborator focus  
start date  
end date  
web link (if available)

### **OA-ICC bibliographic database is now Available!**

The OA-ICC bibliographic database currently contains more than 5,520 references related to ocean acidification, and includes citations, abstracts and assigned keywords. In addition to being available in [Mendeley](#), this bibliographic database is now freely available on the platform [Zotero](#).

In order to access this database, go to the Zotero homepage and create a free account. Click on the Groups tab, search for the group “OA-ICC”, and join this group. For more information on how to access the database and its functions, please see the “[User instructions](#)”.

### **It's a buoy! New OA buoy in Fagatele Bay, American Samoa**

NOAA and partners just launched a new ocean acidification buoy in Fagatele Bay within NOAA’s National Marine Sanctuary of American Samoa. The National Marine Sanctuary of American Samoa, co-managed by NOAA and the American Samoa Government, is located in the cradle of Polynesia’s oldest culture and is thought to support the greatest diversity of marine life in the National Marine Sanctuary System, including a wide variety of coral and other invertebrates, marine plants, fishes, marine mammals, and turtles such as the critically endangered hawksbill sea turtle. The sanctuary protects extensive coral reefs, including some of the oldest and largest Porites coral heads in the world, along with deep water reefs, hydrothermal vent communities, rare marine archaeological resources, and important fishing grounds. Despite its small size, Fagatele Bay supports exceptional biodiversity, with more than 160 species of coral found within a quarter-square-mile.

The new buoy is primarily funded by NOAA’s [Ocean Acidification Program](#) with numerous partners, including NOAA’s [Atlantic Oceanographic and Meteorological Laboratory](#), [Coral Reef Conservation Program](#), [Pacific Islands Fisheries Science Center](#), and [National Marine Sanctuary of American Samoa](#), as well as the [Pacific Islands Ocean Observing System \(PaciOOS\)](#), [National Park of American Samoa](#), [Department of Marine and Wildlife Resources of American Samoa](#), and the [Coral Reef Advisory Group of American Samoa](#).

Near real time surface seawater and air xCO<sub>2</sub> as well as seawater pH data can be viewed [here](#). Once sensors are recovered and data quality controlled, finalized data will be available at the [National Centers for Environmental information \(NCEI\)](#).

## **UPCOMING EVENTS and CONFERENCES**

[The Eleventh Western Indian Ocean Marine Science Association \(WIOMSA\) Scientific Symposium](#) will be held at the University of Mauritius from **1-6 July 2019**. The Symposium will bring together practitioners, academics, researchers and students to share knowledge, experience and solutions to the challenges experienced in our coastal and marine environment. The specific objectives of the symposium are to: Present current knowledge, provide a forum for discussion, exchange of information and experiences on coastal and marine science issues in the Western Indian Ocean region, promote interaction among social and natural scientists in order to strengthen multi and trans-disciplinary research for sustainable management of the coastal and marine environment and to identify gaps and priority research areas for improved management of the coastal and marine environment of the Western Indian Ocean region.

[27th International Union of Geodesy and Geophysics \(IUGG\) General Assembly](#) will be held in Montreal, Canada from **8-18 July 2019**. Section **P08-Coastal Ocean Acidification**, along with various other sessions, are relevant to ocean acidification. This symposium will highlight new research in coastal acidification, including changes in biogeochemistry; complexities associated with other ocean processes (e.g., freshwater mixing; hypoxia; multiple stressors); impacts on ecosystems and economies; and modeling and projection of future OA.

[OceanObs'19](#) is part of a decadal conference series on setting ocean observation priorities to be held on **16-20 September 2019** in Honolulu, Hawaii, U.S.A. On-site registration will be available and the poster deadline has been extended to **27 June 2019**. The OceanObs'19 conference will celebrate tremendous progress across regional, national, and global ocean observation networks and strengthen user connections to enhance these systems over the coming decade. Strategic working sessions and network functions during the conference will enable oceanographic researchers, technology operators, data experts, early career scientists, policy-makers, and end-users to chart the future of ocean observing.

[CERF 25th Biennial Conference](#) will be held from **3-7 November 2019** in Mobile, Alabama USA. The theme of the conference this year is Responsive, Ready, Relevant. Taken from the website: "With this year's conference theme, we endeavor to connect science and society in the collective goals of preserving the coastal and estuarine habitats, resources, and heritage. Through the conference, we will discuss the nature of research agendas that are directed at finding and solving problems, and how to engage stakeholders in that process. Our goal is to balance a natural and social scientific agenda with the food, music, and art emblematic of the Gulf Coast. In keeping with tradition, we hope to create a seriously fun and memorable 25th Biennial CERF Conference." There is an OA session: Ocean acidification in a multiple climate change stressors context: science-based tools for management at the 2019 CERF Biennial Conference. Early Registration deadline: **May 15, 2019**.

[The Santiago Climate Change Conference \(COP25\)](#) - the Blue COP. This is the 25th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) and this year the meeting is taking place from **2-13 Dec 2019** in Santiago, Chile. The meeting will focus on highlighting the response to climate change, including a need to consider how the ocean mitigates climate change and how marine ecosystems are in turn impacted by ocean acidification and other stressors such as warming and deoxygenation. The pre-session period will run from **26 November-1 December 2019**.

#### [5th International Symposium on the Ocean in a High-CO<sub>2</sub> World \(Lima, Peru\)](#)

The [SOLAS-IMBER Working Group on Ocean Acidification \(SIOA\)](#) is pleased to announce that the 5th International Symposium on the Ocean in a High-CO<sub>2</sub> World will be held in Lima, Peru, from **7-10 September 2020**. The lead organizers are Drs. Wilmer Carbajal (Pedro Ruiz Gallo National University, Peru) and Michelle Graco (Institute of the Sea of Peru, IMARPE) together with their colleagues, based on their successful bid that was submitted to the SIOA.

The previous symposia in this series were held in Paris in 2004, Monaco in 2008, Monterey in 2012, and Hobart in 2016, each proving to be essential for the international and

multidisciplinary community of researchers studying ocean acidification. The same is expected for this 5th symposium, the first to be held in South America. Please save the dates! More detailed information will soon be available from the organizers.

## FUNDING and JOB OPPORTUNITIES

### **The Ocean Foundation Pier2Peer Scholarships**

Organization: The Ocean Foundation

Description: Small grant program providing funds to Pier2Peer matches to collaborate on a project, conduct training visits, collect data for GOA-ON submission, etc.

Requirements: Applicants must be in a Pier2Peer partnership and applying to use funds to support this collaboration.

Amount: USD 5,000

Application Deadline: Current quarter deadline: 31 August 2019; Applications are accepted on a continuing basis; submit to Alicia Cheripka ([alicia.cheripka@noaa.gov](mailto:alicia.cheripka@noaa.gov)) and Alexis Valauri-Orton ([avalauriorton@oceanfdn.org](mailto:avalauriorton@oceanfdn.org)).

Application Details: Funding Announcement attached to email

### **MS Assistantship in Marine Biology (Ocean Acidification) at University of Alaska Fairbanks**

**Position:** Research Assistantship (MS in Marine Biology) at the University of Alaska Fairbanks.

One MS student is sought to study the physiological impacts of future ocean change multi-stressors (OA, increased temperature, reduced salinity) on key marine invertebrates in coastal Alaska. Taking an integrative approach, this project includes biochemical, microscopy and carbonate chemistry analyses with the opportunities for seasonal fieldwork. This position is funded through the National Science Foundation's EPSCoR Program <https://www.alaska.edu/epscor> Coastal Margins research group.

**Qualifications:** The Kelley lab is seeking a self-motivated, independent, and creative thinker that is excited about pursuing a graduate degree in the study of marine biology in Alaska. Preferably (but not a prerequisite) the successful candidate has experience with the following: Microsoft Office suite, R or Matlab, molecular biology laboratory skills, as well as an understanding of the fundamentals of chemical oceanography as it relates to ocean acidification. Minimum Qualifications: a BS degree in Biology, Environmental Science, Oceanography or a related field. The position starts Fall (Aug) 2019, with the potential to delay until Spring 2020.

**Stipend and tuition and fees:** This position includes full support in the form of a graduate assistantship, tuition and fee waiver, and health insurance for a minimum of two years.

**Application instructions:** Please send via email in a single file attachment (include your last name in the file name): a cover letter, a statement of your interest in this graduate position, qualifications and career goals, a CV with the names and contacts for 3 references, copies of transcripts (unofficial are O.K.) and GRE scores and percentiles (not combined) to Amanda Kelley (email: [alkelley@alaska.edu](mailto:alkelley@alaska.edu)). Please put "MS EPSCoR application" in the subject line.

Applications will be reviewed as they are received until a candidate has been identified and accepted into the graduate program at UAF.

Dr. Amanda Kelley, Assistant Professor, College of Fisheries and Ocean Sciences  
University of Alaska Fairbanks  
(907) 474-2474  
Kelley Lab webpage: <https://kelleylabatuaf.weebly.com/>  
College of Fisheries and Ocean Sciences <https://www.uaf.edu/cfos/>

### **Postdoctoral Opportunities: OA coral reef science**

Organization: University of Miami CIMAS

Description: The Cooperative Institute for Marine and Atmospheric Studies (CIMAS) at the University of Miami invites applications for a postdoctoral associate specializing in coral reef carbonate chemistry to work closely with scientists at RSMAS and NOAA's Atlantic Oceanographic and Meteorological Laboratory's Ocean Chemistry and Ecosystem Division (AOML/OCED).

The position is for one year and does not require the applicant to relocate to Miami. Duties can be fulfilled remotely. The position is within the Acidification, Climate, and Coral Reef Ecosystems Team (ACCRETE, <http://www.coral.noaa.gov/research/accrete.html>), a subunit of the Coral Health and Monitoring Program (CHAMP, <http://www.coral.noaa.gov/>). The successful candidate's duties will include, but are not limited to the following: 1) Focusing on synthesis and analysis of the NCRMP Ocean Acidification Enterprise datasets, i.e. baseline carbonate, diurnal suite, and census-based carbonate budgeting., 2) developing foundational models to link oceanic carbonate projection models with coastal biogeochemistry in focal island area within the NCRMP framework, and 3) Co-authors manuscripts describing the research for publication in peer-reviewed scientific journals and outreach materials for a general audience. The successful applicant must possess a doctorate degree in marine science or a related field from an accredited university. They must be highly motivated, organized, and have the ability to adapt to a dynamic lab environment. Strong analytical and laboratory skills are required.. Preference will be given to candidates with: 1) an exemplary track record of peer-reviewed publications, 2) experience working in biogeochemistry and the ecology of ocean acidification, 3) Knowledge of ocean acidification processes and impacts to coral ecosystems, 4) Knowledge of ocean acidification modeling, and 5) Demonstrated competence in data analysis for large data sets and development of analytical scripts (e.g., R, Matlab).

Curriculum Vitae, a letter of interest, and the contact information for 2 persons who can provide letters of recommendation are required. For more information, please contact both Derek Manzello ([derek.manzello@noaa.gov](mailto:derek.manzello@noaa.gov)) and Tom Oliver ([thomas.oliver@noaa.gov](mailto:thomas.oliver@noaa.gov))

Apply online at: [www.miami.edu/careers](http://www.miami.edu/careers).

Other Postdoc and Research assistant positions are available at CIMAS as well and can be found on the Miami University Careers page.

### **POGO Shipboard Fellows**

Organization: The Partnership for Observation of the Global Ocean (POGO)

Description: POGO offers a number of shipboard fellowship opportunities on ocean research vessels. Normally, specific calls for fellows working in certain sub-disciplines are issued six months before a cruise begins. However, POGO also fills available berths with qualified applicants on shorter notice. They have issued an open call for early career scientists, technicians, postgraduate students, and post-doctoral fellows involved in oceanographic work at centers in developing countries and countries with economies in transition. Qualified applicants will be contacted if an appropriate shipboard fellowship becomes available.

Requirements: Applicants must be involved in oceanographic work in a developing country or a country with an economy in transition. They must provide a fellowship proposal, intentions to build capacity for ocean observing, and a summary CV.

Amount: Round-trip ticket from home institute to the host institution; up to two months' stay at home institution to train prior to cruise; accommodation at ship port; ship messing fee; seafaring medical and sea survival course.

Application Deadline: Open call with no stated closure.

[Application Details](#)

### **Western Indian Ocean Marine Science Association Marine Research Grant Programme**

Organization: Western Indian Ocean Marine Science Associated (WIOMSA)

Description: The award is designed to enhance the capacity of scientists in the Western Indian Ocean region to conduct marine research. There are three tiers (MARG I, II, III) that vary in duration and amount. MARG I and II applications are closed.

**MARG-III:** Intended to provide opportunities for individual researchers to travel to attend scientific meetings and conferences for the purpose of presenting their work and learning from others. The maximum amount offered is US\$ 3,000. Proposals for MARG III Grants are reviewed continuously through the year subject to availability of funds. MARG III grants are provided for the purchase of return tickets, accommodation or daily subsistence allowance.

Requirements: Applicants should be young scientists studying the Western Indian Ocean region

Amount: USD 3,000 (MARG III)

Application Deadline: No deadline for MARG III

[Application Details](#)

### **EMBO Short-Term Travel Fellowships**

Organization: European Molecular Biology Organization

Description: The fellowship funds research exchanges of up to three months between laboratories in [eligible member countries and cooperation partners](#).

Requirements: Applicants must be from one of the member or cooperation countries and traveling to a lab in another member or cooperation country. Research must be related to life sciences. The travel must be associated with a larger project and not just limited to training in a technique, though it can include that type of training.

Amount: Travel and living costs of the traveling fellow

Application Deadline: Three months before proposed starting date of travel

[Application Details](#)

### ***Jobs Lists:***

[The Global Marine Community Newsletter & Jobs List](#)

[Ocean Opportunities](#)

[Josh's Water Jobs List](#)

[International Ocean Carbon Coordination Project Jobs](#)

[OA-ICC Job News Stream](#)

## Links to new OPEN ACCESS ARTICLES on OA

Bednarsek, N., Feely, R. A., Howes, E. L., Hunt, B., Kessouri, F., León, P., ... & Sutula, M. (2019). [Systematic Review and Meta-analysis Towards Synthesis of Thresholds of Ocean Acidification Impacts on Calcifying Pteropods and Interactions with Warming](#). *Frontiers in Marine Science*, 6, 227.

Cornwall, C. E., Diaz-Pulido, G., & Comeau, S. (2019). [Impacts of ocean warming on coralline algae: knowledge gaps and key recommendations for future research](#). *Frontiers in Marine Science*, 6, 186.

Linsley, B. K., Dunbar, R. B., Dassié, E. P., Tangri, N., Wu, H. C., Brenner, L. D., & Wellington, G. M. (2019). [Coral carbon isotope sensitivity to growth rate and water depth with paleo-sea level implications](#). *Nature communications*, 10(1), 2056.

Ishizu, M., Miyazawa, Y., Tsunoda, T., & Guo, X. (2019). [Development of a Biogeochemical and Carbon Model Related to Ocean Acidification Indices with an Operational Ocean Model Product in the North Western Pacific](#). *Sustainability*, 11(9), 2677.

Terlouw, G. J., Knor, L. A. C. M., De Carlo, E. H., Drupp, P. S., Mackenzie, F. T., Li, Y. H., ... & Sabine, C. L. (2019). [Hawaii Coastal Seawater CO2 Network: A Statistical Evaluation of a Decade of Observations on Tropical Coral Reefs](#). *Frontiers in Marine Science*, 6, 226.