

# The PIER Review

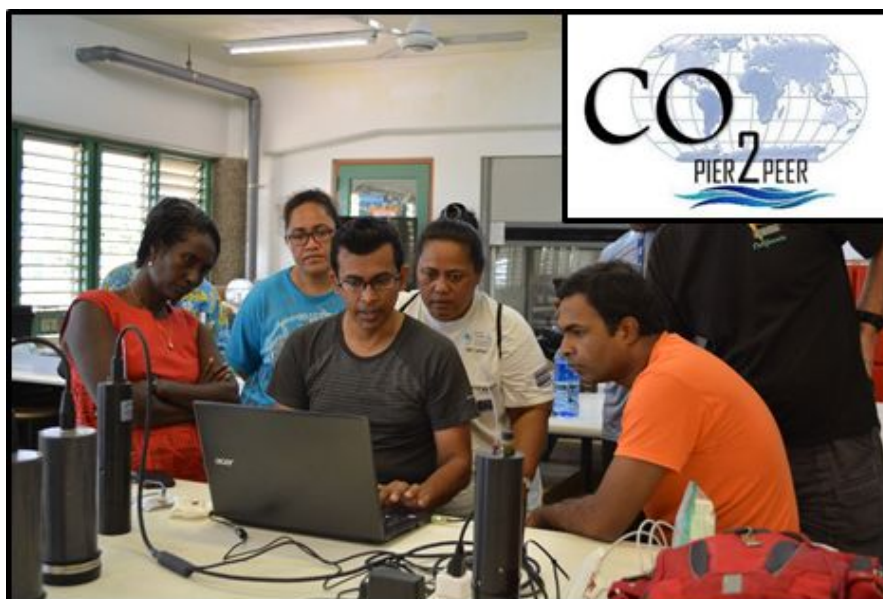
Welcome to the October 2020 issue of the PIER Review, the monthly [GOA-ON Pier2Peer](#) newsletter! This edition features a recap of Ocean Acidification Week 2020. Additionally, this issue contains relevant OA-related news, updates, funding and job opportunities, and recently published open-access publications. Please send ideas and feedback for future issues of the *Pier Review* to **Mike Acquafredda, the Pier2Peer Program Coordinator** ([Michael.Aquafredda@noaa.gov](mailto:Michael.Aquafredda@noaa.gov)).

## Pier2Peer Program Assessment 2020

If you haven't already completed the P2P Program Assessment 2020, then please take a few moments (<5 minutes) to do so. This is a survey about your experience in the Pier2Peer Program. Survey responses will be used to determine the effectiveness of the Pier2Peer Program. We will use this information to improve the program, to grow the program's membership, and to explore additional funding opportunities for active mentor/mentee pairs. Your answers will not be seen by your mentors or mentees.

Mentees, access your survey [here](#).

Mentors, access your survey [here](#), and please complete one survey for each of your mentees.



## P2P FEATURE

### Ocean Acidification Week 2020

Last month, GOA-ON hosted Ocean Acidification Week 2020. This multi-day forum consisted of 10 sessions that highlighted the latest in OA research and initiatives. Eight of the sessions were hosted by the GOA-ON regional hubs. One of the sessions was presented by organizations that work closely with GOA-ON, including GOOS, MBON, TOF, and OA Alliance. The final session, the capstone, was a conversation between the co-chairs of GOA-ON and co-chair of the upcoming High CO2 Symposium.

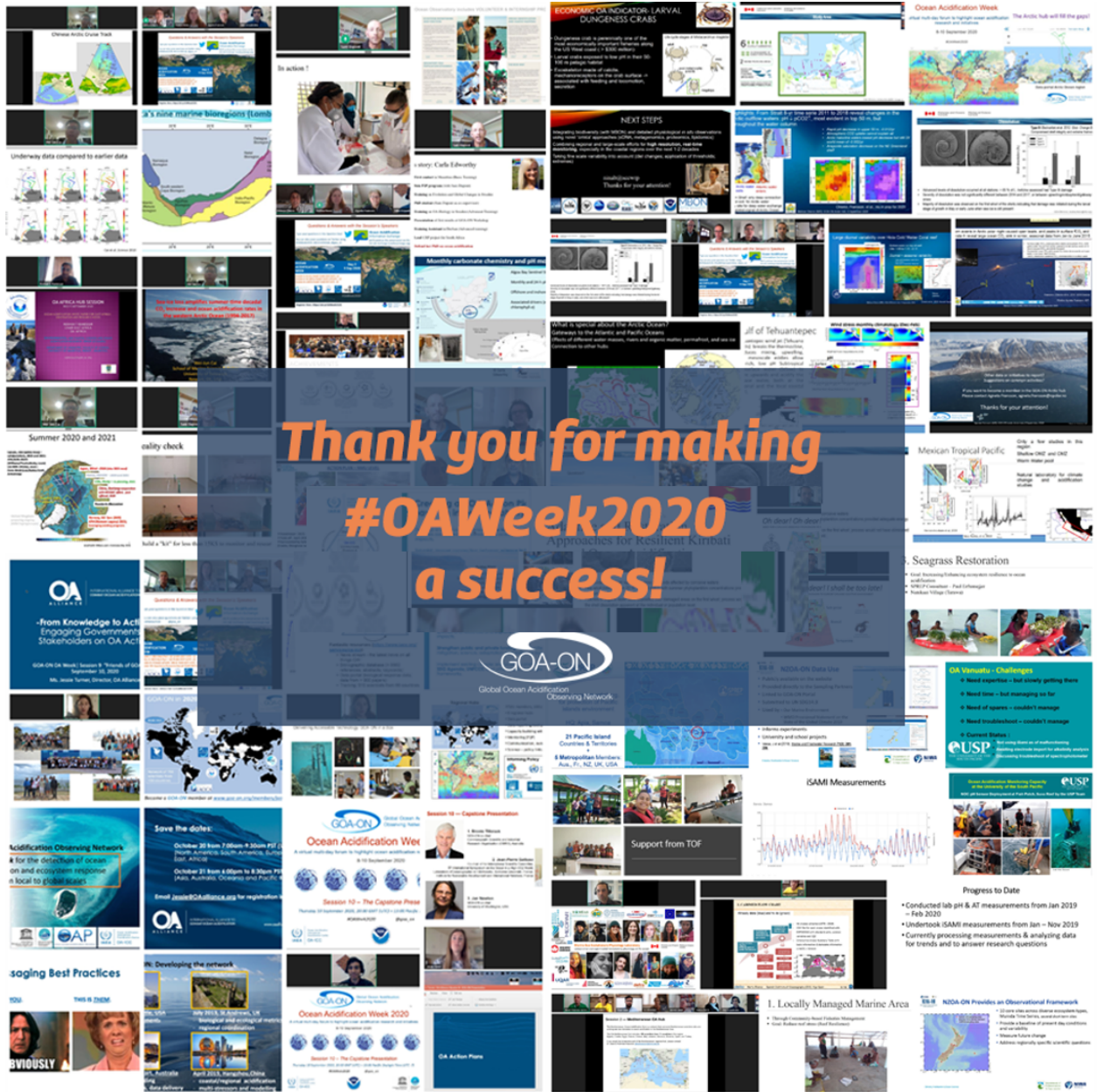
OA Week 2020 brought tremendous attention to GOA-ON and the upcoming [5th International Symposium on the Ocean in a High CO2 World](#). Nearly every session had more than 100 participants, who logged on from Samoa to Sweden and everywhere in between. Researchers, decision makers, and other stakeholders actively participated during the sessions and over social media, like [Twitter](#) and [Facebook](#), and the [OA Information Exchange](#).

Between the month leading up to OA Week, the GOA-ON website had more than 2400 page views from 955 new users. Through the end of OA Week, the public's engagement with GOA-ON's Facebook page increased by 2923%. The session recordings, which have been uploaded to the [GOA-ON Youtube Channel](#), have been watched and shared dozens of times.

Astonishingly, GOA-ON added more than 45 members in the two around OA Week, doubling the amount of new members since the start of 2020.

Of the 50 speakers who presented during OA Week, 13 were Pier2Peer mentors and 7 were Pier2Peer mentees. Many of these individuals specifically highlighted projects made possible due to the support of the Pier2Peer Program. For example, mentee Antoine de Ramon N'Yeurt discussed observations he made at Suva Lagoon and reef, which were used to assess the carbon budget of reef communities and inform ecosystem-based management of the area. Additionally, Carla Berghoff, who went from P2P mentee to a co-chair of the LAOCA regional hub, spoke about monitoring efforts on the Patagonian shelf and the greater Western Southern Atlantic Ocean basin.

OA Week 2020 demonstrated that despite the many hardships and uncertainties people around the world are facing due the coronavirus pandemic, the GOA-ON community remains as resilient and adaptable as ever.



## NETWORKS

### [Become a Pier2Peer recruiter](#)

Many early career OA scientists need a mentor! Please help us recruit senior and experienced OA observing experts to serve as Pier2Peer mentors. If you know someone who would be a good mentor, direct them to the [Pier2Peer website](#) or put them in contact with Mike Acquafredda ([Michael.Acquafredda@noaa.gov](mailto:Michael.Acquafredda@noaa.gov)).

Additionally, if you are attending a meeting or event, and you are interested in sharing a few slides on the program and disseminating sign-up information, then please email Mike. He will send you communication materials and sign-up sheets for your upcoming event.



## Ocean Acidification Information Exchange

### [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 field

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](#).

### [Join the Interdisciplinary Marine Early Career Network \(IMCaN\)](#)

Officially launched at the IMBeR Future Oceans2 Open Science Conference in Brest, France in 2019, IMECaN aims to:

- Provide a networking platform for early career marine researchers to develop collaborations;
- Provide training and development in areas not traditionally provided through formal education and training programmes; and
- Provide leadership opportunities for ECR marine researchers, particularly from developing nations.

Join the IMCaN and learn about upcoming activities [HERE](#)

## NEWS

### **Updates to the [GOA-ON Data Portal](#)**

The newest version of [SOCAT](#) - Surface Ocean CO<sub>2</sub> Atlas - is available and has been integrated into the GOA-ON Data Portal. SOCAT is a synthesis activity for quality-controlled, surface ocean fCO<sub>2</sub> (fugacity of carbon dioxide) observations by the international marine carbon research community (>100 contributors). SOCAT data is publicly available, discoverable and citable. It is also a core data product for biogeochemistry endorsed by the Global Ocean Observing System ([GOOS](#)). The updated SOCAT data product can be accessed on the GOA-ON Data Portal by selecting “Layers” on the left-hand menu.

Additionally, the GOA-ON Data Portal now includes data links, metadata and track visualizations, and from 71 Biogeochemical Argo Floats ([BGC Argo](#)).

### **GOA-ON Youtube Channel**

GOA-ON has launched a [Youtube Channel](#)! Check out all of the recordings from [OA Week 2020](#), featuring prominent members of the GOA-ON community. Don't forget to like and subscribe!

### **Community Survey to Assess Ocean Acidification Capacity in Pacific Islands & Southeast Asia**

The Ocean Foundation (TOF) and National Oceanic & Atmospheric Administration Ocean Acidification Program (USA) are launching a new three-year project focused on building capacity to monitor and address ocean acidification in Southeast Asia and the Pacific Islands region. To shape the design of this project, NOAA and TOF seek the input of individuals living in or conducting research in those regions.

Please complete [this survey](#) so that they can assess current capabilities and needs in the region. The project ultimately will establish a regional training hub and fund scientific equipment distribution. Your answer to this survey will help NOAA and TOF identify key partners, opportunities, and needs. If you have any questions about this survey or this project, please contact Alexis Valauri-Orton at [avalauriorton@oceanfdn.org](mailto:avalauriorton@oceanfdn.org).

### **Community videos and web stories**

GOA-ON members have been producing videos and web stories that document their OA-related monitoring and research efforts. Check them out!

#### **[“Tracking Ocean Acidification in Puerto Rico: A Video Journey”](#)**

Lisamarie Carrubba (NOAA Fisheries, PI), Efra Figueroa (Efravisuals), and Melissa Melendez (University of Hawaii)

#### **[“Land locked to Open Ocean: Putting a pH Sensor in the Hands of Students”](#)**

William Pardis (Woods Hole Oceanographic Institute), David Long (Flathead Valley Community College), Jenn Mintz & Brady Clarke (NOAA OAP),

## UPCOMING EVENTS & CONFERENCES

### [5th International Symposium on the Ocean in a High-CO2 World \(Lima, Peru\)](#)

~~7-10 September 2020~~/ **New Dates: 13-16 September 2021**

The 5th Symposium on the Ocean in a High-CO<sub>2</sub> World is the place to share cutting-edge science in a rapidly developing frontier of research dealing with the science of ocean acidification and related stressors. The Symposium will feature keynote talks by some of the leading experts in the field, as well as special events on ocean acidification and aquaculture, carbonate chemistry and the Latin American Ocean Acidification Network (LAOCA). As with past symposia in this series, we anticipate GOA-ON to play an important role in presenting advancements in OA research.

**Postponement information:** Although the Symposium has been postponed due to the COVID-19 pandemic, the meeting venue remains the same. Workshops associated with the symposium should also be rescheduled. Abstract submissions will remain open until 15 March 2021. Senior authors of abstracts already submitted will be contacted to provide an opportunity to modify or update the abstract and the type of presentation (oral or poster). The new meeting dates will be between late August and mid-September 2021. Exact dates will be posted on the Symposium website soon.

**For more information on the Symposium themes and meeting details**, please visit the Symposium website at <http://www.highco2-lima.org>.

### [2020 UN Ocean Conference](#)

~~2-6 June 2020~~/ **New dates TBD**

*Description:* The Ocean Conference, co-hosted by the Governments of Kenya and Portugal, comes at a critical time as the world is strengthening its efforts to mobilize, create and drive solutions to realize the 17 Sustainable Development Goals (SDGs) by 2030. The UN Ocean Conference will propel much needed science-based innovative solutions aimed at starting a new chapter of global ocean action towards advancing [SDG 14: Life Below Water](#)

**Location:** Lisbon, Portugal

### [World Aquaculture 2020](#)

~~14-18 December 2020~~

**New Dates: 14-18 June 2021**

The annual meeting of the World Aquaculture Society will be held in Singapore this year. The Asian-Pacific region has dominated aquaculture production for decades. However, aquaculture continues to expand broadly across the region. Within Singapore, aquaculture is becoming increasingly integrated into its food system, making 2020 the perfect time for the world aquaculture community to focus on this island city-state. A major international trade show will also take place at the meeting. The trade show is a place to learn about the latest aquaculture technologies presented by exhibitors from around the world.

**Location:** Singapore EXPO Convention & Exhibition Centre and MAX Atria, Singapore

**[Registration](#) is open now!**

### [The American Geophysical Union's Fall Meeting](#)

**1–17 December 2020**

AGU's Fall Meeting is the largest international Earth and space science meeting in the world. The meeting will be hosted virtually. Fall Meeting 2020 aims to bring a diverse and relevant set of topics to help move Earth and space science forward. It all starts with the innovative and dynamic session proposals from AGU's community. Session submissions are open now. We encourage sessions with diverse groups of conveners who can work together to broaden participation.

Notably, there will be an OA session at this conference. The P2P community is encouraged to submit their abstracts to this session, [The Earth System Response to Ocean Acidification](#)

For more information about the meeting's sessions, town halls, workshops, and innovative sessions, click [here](#).



## WEBINARS

### GOA-ON Webinar Series

GOA-ON has started a webinar series to foster greater collaboration and a sense of community among its members. Webinars will take place every 4-6 weeks and will consist of a presentation followed by a question and answer session. All webinars will be recorded and shared on the GOA-ON Youtube Channel. GOA-ON hopes to use this webinar series to lift the voices of early career scientists and other members of the GOA-ON research community who wish to share their science with a broader audience. If you are interested in giving a presentation or would like to suggest a topic, please send an email to the GOA-ON Secretariat ([secretariat@goa-on.org](mailto:secretariat@goa-on.org)).

The webinar schedule is coming soon!



### Ocean Webinars

This [comprehensive list](#) contains many worthwhile webinars about ocean-related topics. This site is regularly updated and is a useful resource.



## FUNDING & JOB OPPORTUNITIES

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

*Description:* Small grant program providing funds to Pier2Peer matches to collaborate on a project, conduct training visits, collect data for GOA-ON submission, etc. Scholarships are given out on a quarterly basis. Applications can be submitted to Mike Acquafredda ([Michael.Acquafredda@noaa.gov](mailto:Michael.Acquafredda@noaa.gov)) and Alexis Valauri-Orton ([avalauriorton@oceanfdn.org](mailto:avalauriorton@oceanfdn.org)).

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

*Amount:* \$5000 USD

**Third quarter deadline: ~~31 October 2020~~ Extended deadline: 6 November 2020**

**Fourth quarter deadline: 31 January 2021**

### **In the Second Quarter of 2020, scholarships were awarded to:**

#### ***Dr. Patrizia Ziveri & Falilu Adekunbi (\$5000 USD)***

*Monitoring seasonal coastal ocean acidification and coccolithophores: a study off the Southwestern coast of Nigeria (Gulf of Guinea)*

### **The Ocean Acidification Information Exchange Microgrants**

*Description:* The mission of the Ocean Acidification Information Exchange is to respond and adapt to ocean and coastal acidification by fostering an online environment built on trust, where our members, regardless of background, feel empowered to ask, answer, and learn from one another. To that end, OAIE offers grants for members who propose innovative strategies for leveraging the OA Information Exchange's collaboration tools to advance the community's mission, facilitate their own work related to ocean and coastal acidification and expand the reach/utility of the OAIE. Submit proposals using this [Google form](#). More information and criteria can be found on the [OAIE](#) or the [RFP](#).

*Requirements:* Must be a member of the OAIE

*Amount:* Between \$200USD and \$5000 USD.

***Deadline: Rolling Basis***

### **Acquire a free ocean sensing buoy from Aqualink**

Aqualink is a philanthropically funded system to help people manage their local marine ecosystems in the face of increasing ocean temperatures. The system consists of satellite-connected underwater temperature sensors and photographic surveys to allow for remote collaboration with scientists across the world. If you are concerned about the effect of climate change on your local reef and want to do something about it then please apply to get a smart buoy for free.

### **Addressing the impacts of multiple stressors on shellfish aquaculture through research/industry partnerships**

NOAA's National Sea Grant Office and Ocean Acidification Programs are pleased to announce an effort to bolster understanding of how acidification and other stressors will impact shellfish aquaculture by seeking applications that establish, continue, and/or expand collaborations between researchers and the shellfish aquaculture industry. Specifically, applications to this competition should utilize new or existing research/industry partnerships to study how ocean and coastal acidification in combination with other stressors impact shellfish aquaculture. Projects should utilize multiple parameter physical, chemical, or biological observing systems and/or conduct multiple stressor experimental research. Additionally, research/industry partnerships must utilize a co-production of knowledge framework. This means shellfish growers must collaborate with researchers throughout all aspects of the scientific process, from project conceptualization to execution to dissemination of knowledge and development of deliverables.

Topics suitable under this Notice of Funding Opportunity (NOFO) should aim to: (1) build or strengthen relationships between the shellfish aquaculture industry and the aquaculture research community (including university, industry, private sector, tribal, state, and/or federal scientists representing diverse perspectives), (2) develop scientific knowledge on the impact of ocean and coastal acidification in combination with other stressors to shellfish aquaculture, and (3) create data products, tools, technologies, management practices, or other deliverables that are broadly applicable to building resilience within the shellfish aquaculture sector.

Pending appropriation of funds, NOAA's National Sea Grant College and Ocean Acidification Program anticipate awarding between two and six projects funded at the approximate level of \$100,000 - \$300,000 per year. Projects can be 1-3 years in duration. Letters of intent must be received by 11:59 pm EST on December 15, 2020 and full proposals must by 11:59 pm EDT on March 16, 2021.

Questions about the content of and information about the status of your submission can be directed to: Attn: Rebecca Certner, Competitions Manager [oar.hq.sg.aquaculture@noaa.gov](mailto:oar.hq.sg.aquaculture@noaa.gov)

[See the full Notice of Funding Opportunity on grants.gov](#)



### REV Ocean Cruises in 2022

*Description:* REV Ocean will be opening its first call for proposals for research and innovation projects on board RV REV Ocean in April 2020. We are looking for the best marine scientists and innovators globally, to focus on solutions to three of the most important challenges facing the ocean today: (1) plastic pollution, (2) climate change / ocean acidification, and (3) overfishing and destructive fishing impacts. To ensure research proposals are of the highest quality and match with REV Ocean selection criteria, all projects will be evaluated in a thorough and transparent international peer-reviewed process. The successful proposals will have access to the vessel and its equipment for cruises in 2022.

***Deadline: TBD - The date of announcement and closing for this call will be relatively short; follow their social media and check their [website](#) to be alerted when the call opens.***

### **Call for proposals for WIOMSA's Marine Research Grant (MARG) Program for 2020!**

*Description:* WIOMSA (Western Indian Ocean Marine Science Association) is inviting submission of proposals for its MARG Program for 2020. The MARG programme provides young and upcoming scientists with a reliable and flexible mechanism to turn their ideas into research projects and also offers opportunity for presentation of research results at various regional and international fora. Please read all the instructions carefully before you submit your proposal. You will find all relevant information [here](#).

*Deadline:* The deadline for submitting MARG I applications has passed. However, MARG II & III applications are processed on a rolling basis, and awards are subject to funding availability at the time of submission.

**For more information contact the WIOMSA secretariat: [secretary@wiomsa.org](mailto:secretary@wiomsa.org)**



**POGO (The Partnership for Observation of the Global Ocean) Shipboard Fellows**

*Description:* POGO offers shipboard fellowship opportunities on ocean research vessels. Normally, calls for fellows are issued six months before a cruise begins, but 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.

*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. Click here for [Application Details](#).

*Amount:* Round-trip transportation; up to two months' stay at home institution to train prior to cruise; accommodation at ship port; ship messing fee; seafaring medical/survival course.

***Deadline: Open call with no stated closure.***

**EMBO (European Molecular Biology Organization) Short-Term Travel Fellowships**

*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. Click here for [Application Details](#).

*Amount:* Travel and living costs of the traveling fellow

***Deadline: Three months before proposed starting date of travel***

**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](#)

[NOAA OAP Job List](#)

[Ocean Carbon & Biogeochemistry List](#)

## THE LATEST LITERATURE

### **OA-ICC bibliographic database**

The OA-ICC bibliographic database currently contains more than 6,300 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 either of these citations management websites and create a free account. Click on the Groups tab, search for “OA-ICC”, and join this group. **To receive daily notifications of new ocean acidification literature, news, and opportunities, subscribe to the [OA-ICC News Stream](#).**

### **Here are some of the latest OPEN ACCESS OA-related articles**

[Effects of global ship emissions on European air pollution levels](#)

*J. E. Jonson, M. Gauss, M. Schulz, J.-P. Jalkanen, H. Fagerli*

*Atmospheric Chemistry and Physics*. 2020;20:11399-11422 DOI [10.5194/acp-20-11399-2020](#)

[Abstract](#) | [Full Text](#)

[Ocean Acidification Mitigates the Negative Effects of Increased Sea Temperatures on the Biomineralization and Crystalline Ultrastructure of Mytilus](#)

*Antony M. Knights, Matthew J. Norton, Anaëlle J. Lemasson, Anaëlle J. Lemasson, Natasha Stephen*

*Frontiers in Marine Science*. 2020;7 DOI [10.3389/fmars.2020.567228](#)

[Abstract](#) | [Full Text](#)

[Fine Characterization of Natural SiO<sub>2</sub>-Doped Catalyst Derived from Mussel Shell with Potential Photocatalytic Performance for Organic Dyes](#)

*Zhen Wang, Liping Xia, Jinlong Chen, Lili Ji, Yarui Zhou, Yaning Wang, Lu Cai, Jian Guo, Wendong Song*

*Catalysts*. 2020;10(1130):1130 DOI [10.3390/catal10101130](#)

[Abstract](#) | [Full Text](#)

[A New “Business as Usual” Climate Scenario and the Stress Response of the Caribbean Coral \*Montastraea cavernosa\*](#)

*Michael P. Lesser et al.*

*Frontiers in Marine Science*. 2020;7 DOI [10.3389/fmars.2020.00728](#)

[Abstract](#) | [Full Text](#)

[Crumbling Reefs and Cold-Water Coral Habitat Loss in a Future Ocean: Evidence of “Coralporosis” as an Indicator of Habitat Integrity](#)

*Sebastian J. Hennige et al*

*Frontiers in Marine Science*. 2020;7 DOI [10.3389/fmars.2020.00668](#)

[Abstract](#) | [Full Text](#)

Effects of Temperature and pH on the Egg Production and Hatching Success of a Common Korean Copepod

*Eun HSYe Lee, eo Yeol Choi, Min Ho Seo, Seok Ju Lee, Ho Young Soh*  
*Diversity*. 2020;12(372):372 DOI 10.3390/d12100372

[Abstract](#) | [Full Text](#)

Fossil-calibrated molecular phylogeny of atlantid heteropods (Gastropoda, Pterotracheoidea)

*Deborah Wall-Palmer, Arie W. Janssen, Erica Goetze, Le Qin Choo, Lisette Mekkes, Katja T. C. A. Peijnenburg*  
*BMC Evolutionary Biology*. 2020;20(1):1-14 DOI 10.1186/s12862-020-01682-9

[Abstract](#) | [Full Text](#)

The effects of near-future coastal acidification on the concentrations of Cd and Pb in the crab *Dotilla fenestrata*

*Babatunde Adeleke, Deborah Robertson-Andersson, Gan Moodley*  
*Heliyon*. 2020;6(9):e04744

[Abstract](#) | [Full Text](#)

Bigfin reef squid demonstrate capacity for conditional discrimination and projected future carbon dioxide levels have no effect on learning capabilities

*Blake L. Spady, Sue-Ann Watson*  
*PeerJ*. 2020;8:e9865 DOI 10.7717/peerj.9865

[Abstract](#) | [Full Text](#)

Transcriptome Analysis of the Nematode *Caenorhabditis elegans* in Acidic Stress Environments

*Yanyi Cong et al*  
*Frontiers in Physiology*. 2020;11 DOI 10.3389/fphys.2020.01107

[Abstract](#) | [Full Text](#)

Assessment of the Components and Sources of Acid Deposition in Northeast Asia: A Case Study of the Coastal and Metropolitan Cities in Northern Taiwan

*Hung-Yu Chen, Ling-Fei Hsu, Shih-Zhe Huang, Long Zheng*  
*Atmosphere*. 2020;11(983):983 DOI 10.3390/atmos11090983

[Abstract](#) | [Full Text](#)

Impact of Ocean Warming and Acidification on Symbiosis Establishment and Gene Expression Profiles in Recruits of Reef Coral *Acropora intermedia*

*Youfang Sun, et al*  
*Frontiers in Microbiology*. 2020;11 DOI 10.3389/fmicb.2020.532447

[Abstract](#) | [Full Text](#)

Hypoxia and Acidification, Individually and in Combination, Disrupt Herbivory and Reduce Survivorship of the Gastropod, *Lacuna vincta*

*Craig S. Young, Christopher J. Gobler*  
*Frontiers in Marine Science*. 2020;7 DOI 10.3389/fmars.2020.547276

[Abstract](#) | [Full Text](#)