

#### **NZOAC Newsletter**

We hope everyone had a great World Oceans Day (8 June). Just in time for this special day, UNESCO announced the first officially endorsed Actions of the UN Decade of Ocean Science for Sustainable Development. The <u>full list</u> of Actions includes GOA-ON's <u>Ocean Acidification Research for Sustainability</u> and NOAA's <u>A Transformative Decade for the Global Ocean Acidification Observing System.</u>

Closer to home, New Zealand's Climate Change Commission released their final report: <u>Ināia tonu nei: a low emissions future for Aotearoa</u>. NZOAC's Linn Hoffmann spoke with the Otago Daily Times about <u>the exclusion of the oceans in the emission budgets</u>.

#### Ocean acidification in New Zealand

- Quadrillions of squashed bryozoans. Otago's Professor Abby Smith and PhD student Tyler Feary speak with the Otago Daily Times about bryozoans, ocean acidification, and Oamaru stone.
- NIWA's Kim Currie and University of Otago's Christina McGraw spoke about New Zealand's ocean
  acidification work at two UN World Ocean Day events 2021: "The ocean: Life and livelihoods" and the
  "Implementing UN SDG 14.3 Protecting communities and livelihoods from the threat of a changing ocean"
  (The OA Alliance and The Ocean Foundation)
- The <u>University of Otago highlighted</u> the <u>Policymaker's Handbook for Addressing the Impacts of Ocean</u>
  <u>Acidification</u>, which was recently released as part of New Zealand's role as Champion of the Commonwealth
  Blue Charter Action Group on Ocean Acidification.
- There are a range of upcoming OA events around the country. On 30 June, Christopher Cornwall will give an Alumni Lecture (<u>Coral Reefs and Climate Change</u>) at Victoria University of Wellington's Auckland premises. Dunedinites may be interested in a workshop on <u>Bringing Climate Data to Life</u> (15 July).

# Acidification, fisheries, and aquaculture

- The Pacific Community (SPC) recently hosted a Heads of Fisheries meeting, which brought together over 100 participants from Pacific Island countries and territories to discuss priorities, new tools, and scientific knowledge. Conference documents are available online, or read the press release at Stuff.co.nz.
- Researchers in the UK, Norway, and China published a paper assessing the current state of knowledge of the
  impacts of ocean acidification on fish stocks and movement. The authors suggest the use of satellite
  observations to address some of the current knowledge gaps. You can read a summary of the work at
  <a href="Plymouth Marine Laboratory">Plymouth Marine Laboratory</a>, or the full article <a href="here">here</a>.
- <u>DOC</u> continued their excellent World Ocean Day blog, with a post on <u>Climate Change Adaptation and</u>
   <u>Mitigation</u>. The post includes a brief discussion about the use of kelp and seagrass to reduce acidification near mussel farms.

### Resources

- The global creative community is mobilizing their talents to help improve ocean literacy through the <u>Ocean</u> Decade Art Exhibition. All the art work is free for use in outreach activities.
- The <u>IUCN</u> released an <u>Ocean Acidification Web Story</u> which summaries the impacts of ocean acidification, mitigation and adaptation options, and research and policy priorities.
- The OA Alliance launched their <u>new website</u>, which makes it easier to access their wide range of resources, including <u>posters</u>, <u>webinars</u>, and <u>toolkit</u>.

#### **Upcoming webinars**

- <u>Ridge-to-Reef and Icefield-to-Ocean: Collaborative Research in Extreme Environments</u>, hosted by USGS, 13
   July 2021.
- <u>Biological time series for science and marine status assessment</u>, Dr. Adriana Zingone, Senior Scientist at the Stazione Zoologica Anton Dohrn, **15 July 2021**.

# Recent webinars (now available for streaming)

- Implementing UN SDG 14.3: Protecting Communities and Livelihoods from the Threat of a Changing Ocean, invited speakers from the Pacific Coast of North America, New Zealand, Mediterranean and Latin America, hosted by the OA Alliance and The Ocean Foundation.
- <u>Innovative Solutions to Address Impacts of Ocean Acidification</u>, invited speakers discuss private-public partnerships, adaptation and mitigation, and shellfish hatchery techniques. Hosted by the <u>OA Alliance</u> and <u>The Ocean Foundation</u>.
- Advancing Climate and Ocean Action Through Art, Education and Outreach, presentations from the Seattle Aquarium, SPREP, Woods Hole, Gullah/Geechee Nation, and Oceano Azul, hosted by the <u>OA Alliance</u>
- Arctic-African collaborative OA research on the Canary Current and Benguela Current upwelling systems, Dr. Mohammed Idrissi, Dr. Melissa Chierici, and Dr. Chibo Chikwililwa, hosted by <u>GOA-ON</u>

# Articles from our members

- <u>Feedback mechanisms stabilise degraded turf algal systems at a CO<sub>2</sub> seep site</u>, Harvey, B.P., Allen, R.,
   Agostini, S., Hoffmann, L.J., Kon, K., Summerfield, T.C., Wada, S., Hall-Spencer, J.M.(2021). Communications Biology.
- Surface ocean microbiota determine cloud precursors, Sellegri, K., Nicosia, A., Freney, E., Uitz, J., Thyssen, M., Grégori, G., Engel, A., Zäncker, B., Haëntjens, N., Mas, S., Picard, D., Saint-Macary, A., Peltola, M., Rose, C., Trueblood, J., Lefevre, D., D'Anna, B., Desboeufs, K., Meskhidze, N., Guieu, C., Law, C.S. (2021). Scientific Reports.
- <u>Developing in the intertidal: effects of salinity and temperature on development to the pentameral juvenile seastar, Parvulastra exigua</u>, Balogh, R., Byrne, M. (2021). Marine Biology.
- The role of ligand-gated chloride channels in behavioural alterations at elevated CO2 in a cephalopod. Thomas, J. T., Spady, B. L., Munday, P. L. and Watson, S.-A. (2021). Journal of Experimental Biology.

# ECOPs (early career ocean professionals) and outreach happenings

- Outreach: Rebecca Zitoun is leading a satellite activity for the upcoming Ocean Decade Laboratory 1 "An Inspiring and Engaging Ocean". The laboratory will be held on 7-8 July 2021. Rebecca will present the ECOP program of the UN Decade and will launch the ECOP information portal.
- **Congratulations:** After graduating with her PhD in December 2020, Morgan Meyers served as the Teaching Fellow for Otago's new Agricultural Innovations programme. Morgan has now returned to the States and accepted a new role as a full-time teaching Lecturer in general biology at the University of Georgia.
- Article: The authorship rows that sour scientific collaborations (Nic Fleming, published in Nature) discusses junior researchers' experiences of authorship disputes, with advice on how to deal with or avoid them.

### Conferences, events, and workshops

- In New Zealand New Zealand Marine Science Society Conference. Tauranga, New Zealand, 5-8 July 2021.
- Advances in Marine Ecosystem Modelling Research (AMEMR) Symposium (Virtual Conference), 12-15 July 2021.
- 2021 National Marine Educators Association (Virtual Conference), 14-17 July 2021.
- 4th International Coral Reef Symposium (Virtual Conference), 19-22 July 2021.
- <u>8th International Conference on Fisheries and Aquaculture 2021 (ICFA 2021)</u>, (Virtual Conference), **19-20 August 2021**.
- In New Zealand Physiomar 2021 Conference. Nelson, New Zealand, 7-10 September 2021.
- ECOP International Conference for YOUNG Marine Researchers (ICYMARE) (Online Event), 21-24 September 2021.
- The 5th International Symposium on the Ocean in a High CO<sub>2</sub> World has been postponed until 13-16 September 2022.

### International opportunities

• <u>Contribute a Satellite Activity</u> to one of the next Ocean Decade Laboratories taking place in 2021 and 2022. Submit any ideas for a "Predicted Ocean" and a "Clean Ocean" until **4 July** and **2 August 2021**, respectively. Laboratories for the other Decade Challenges are being advertised in the coming months.

#### Jobs

- <u>Community Engagement Officer Managing Coastal Aquifers Project (MCAP)</u> with the Pacific Community (SPC) as part of the Geoscience Energy and Maritime Division in Suva, Fiji. Closes 4 July.
- <u>National Project Coordinator Managing Coastal Aquifer Project (MCAP)</u> with the Pacific Community (SPC) as part of the Geoscience Energy and Maritime Division in Delap-Uliga-Djarrit, Markup, Atoll, Republic of the Marshall Islands. Closes 4 July.
- Scientist with the Ministry for Primary Industry in Wellington, NZ. Closes 4 July 2021.
- <u>Engagement Advisor Maori Sustainable Seas National Science Challenge</u> position with the National Institute for Water and Atmospheric Research in Wellington, NZ. Closes 11 July 2021.
- <u>Senior Data Scientist/Biometrician</u> with the Pacific Community (SPC) as part of the Fisheries, Aquaculture and Marine Ecosystems (FAME) Division in Noumea, New Caledonia. Closes 25 July 2021.
- <u>Senior Fisheries Scientist (Tuna Population Modelling)</u> with the Pacific Community (SPC) as part of the Fisheries, Aquaculture and Marine Ecosystems (FAME) Division in Noumea, New Caledonia. Closes 25 July 2021.
- <u>Senior Fisheries Scientist (Climate)</u> with the Pacific Community (SPC) as part of the Fisheries, Aquaculture and Marine Ecosystems (FAME) Division in Noumea, New Caledonia. Closes 25 July 2021.
- Lead Microbiomes Future Science Platform with CSIRO in Brisbane, Australia. Closes 25 July, 2021.
- <u>Senior Environmental Consultant Marine Science</u> with RPS in Perth, WA, Australia.
- <u>PhD Position in Coral Reef Biogeochemistry</u> with the Southern Cross University in Lismore, NSW, Australia.
- <u>Postdoc San Francisco Bay River Plume</u> with Rutgers University, Dept. of Marine & Coastal Science in New Brunswick, NJ, USA.
- Postdoc Marine Symbiosis with the University of New Hampshire in Durham NH, USA.
- <u>Postdoc Microbial Ecology</u> with the University of Southern California, Marine and Environmental Biology Section within the Dept. of Biological Sciences in Los Angeles, CA, USA.
- Postdoc Microbial Ecology with Clark University in Worcester, MA, USA.
- Postdoc Fisheries Conservation with the University of Washington in Seattle, WA, USA.
- <u>Postdoc Emergent behavior in high-resolution multi-scale climate simulations</u> with University of California Irvine, in Irvine, CA, USA. Closes 31 July 2021.
- <u>Postdoc Management Strategy Evolution</u> with the Gulf of Maine Research Institution in Portland, ME, USA.
- <u>Postdoc Fisheries Simulation Modelling</u> with Saltwater, Inc. in Anchorage, AK, USA.
- <u>Postdoc Environmental Regulation Cephalopod RNA editing</u> with the University of Chicago Marine Biological Laboratory (MBL) in Woods Hole, MA, USA.
- <u>Postdoc Modeling Interactions among Wind Energy and Shellfish Fisheries</u> with Rutgers University at the Haskin Shellfish Research Laboratory in Port Norris, NJ, USA.
- <u>Postdoc Kelp Restoration</u> with the University of California Santa Barbara at the Marine Science Institute in Santa Barbara, CA, USA. Closes 30 Nov 2021.
- Postdoc Marine Symbiosis with Bacterial Bioengineering with the Haverford College in Haverford, PA, USA.

If you have news, opportunities, resources, or a published article you'd like included in the next newsletter, let us know by replying to this e-mail.

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## Cheers,

Christina McGraw, Habibeh Hashemi, Jesse Vance, Rebecca Zitoun, and the NZOAC Council