



SOUTHERN CALIFORNIA COASTAL OCEAN OBSERVING SYSTEM

Summer Newsletter

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In the Spotlight

Ocean Observing in California Conference

Celebrate the Past, Showcase the Present, Envision the Future



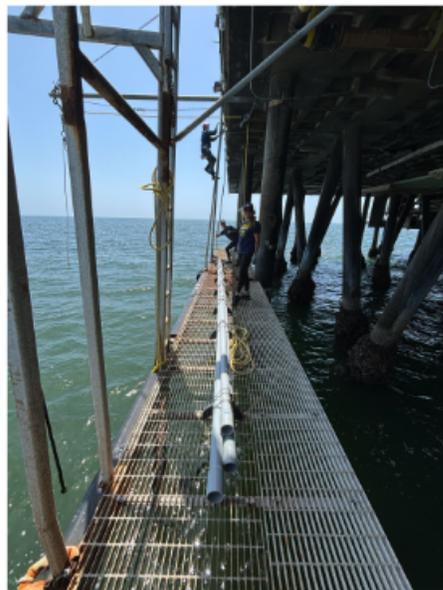
CalCOFI, CeNCOOS, and SCCOOS hosted a 3-day conference full of networking, collaboration, knowledge exchange, and community engagement alongside a celebration of our anniversaries. Attendees shared ideas and latest observations on the state and dynamics of the California Current, showcased success stories between scientists and data users, and forged new relationships across the ocean community. The event brought together over 300 ocean professionals, including marine scientists, maritime enthusiasts, early-career ocean professionals, and maritime industries (i.e. offshore wind, ports and harbors, fisheries and shellfisheries), resulting in the assembly of hundreds of unique organizations and dozens of knowledge producers/users to share, learn, and build a collaborative vision for future ocean prosperity.

We are grateful to all that attended and our sponsors that generously supported our event - [Scripps Institution of Oceanography](#), [CeNCOOS](#), [SCCOOS](#), [Baja Aqua Farms](#), [California Sea Grant](#), [IOOS](#), [City of Los Angeles Sanitation and Environment](#), [Synchro](#), [CODAR Ocean Sensors](#), [Del Mar Oceanographic](#), [Fugro](#), [McLane Research Laboratories, Inc.](#), [Ocean Innovations](#), [Ocean Motion Technologies](#), [Ocean Science Trust](#), [RBR](#), [Sea-Bird Scientific](#), [StartBlue](#), and [Vineyard Offshore Wind](#).



In the Field

Bilateral Infrastructure Law (BIL) & National Harmful Algal Bloom Observing Network (NHABON) Funds at Work



- Due to tropical storm Hilary, which made landfall in southern California in August 2023, and large winter storm events of 2024, the SCCOOS Automated [Shore Station](#) at Santa Monica Pier power and data cables broke, and the conduit (*conduit install left picture*) that houses cables that run from the pier deck to the sensors underwater cracked. This caused the Santa Monica Pier to be offline for weeks, impacting local recreational swimmers. Thanks to BIL funding, Melissa Carter and team installed new data cables, pier conduit, and an air blaster system at Santa Monica Pier Automated Shore Station in May and June 2024.
- SCCOOS supports the California HAB Early Warning System, which includes nine operational [Imaging Flow Cytobots](#) (IFCBs - *Del Mar IFCB install middle picture*). In May 2024, an IFCB was successfully deployed at Stearns Wharf after an extended period of repairs. The IFCB collects data in near real-time and is currently being integrated into the HAB Data Assembly Center ([HABDAC](#)). The California HAB Early Warning System is a highly leveraged

network with support from the CA Ocean Protection Council, IOOS [NHABON](#) funds, and IOOS BIL funding.

- Thanks to BIL funding and the hard work from [CSU Long Beach SharkLab](#), two additional acoustic receiver buoys were purchased and deployed off San Onofre and Ventura (*right picture*). The buoys are successfully collecting and transmitting real-time air temperature, sea surface temperature, acoustic transmitter detections, as well as seafloor temperature, chlorophyll-a, and dissolved oxygen. The transmitted shark detections and environmental data are essential for California lifeguards and public safety.

Program Office Updates

SCCOOS Welcomes Makenna Martin

Clarissa Anderson's New Appointment & SIO Outreach Video



- Dr. Makenna Martin joins SCCOOS to advance outreach efforts in the surrounding community and within K-12+ education settings. Makenna recently completed her Ph.D. in Science Education in the joint doctoral program at San Diego State University and the University of California San Diego. Her dissertation work focused on the design of educational activities to bolster students' personal connections to science content. Her experience in science education is combined with a passion for ocean science, with her M.S. degree in Marine Science from the University of South Florida and her B.S. in Marine Biology from the University of California, Santa Cruz. She looks forward to helping further develop and strengthen SCCOOS' relationship with community members, organizations, educators, and stakeholders.
- Clarissa Anderson has been appointed as the co-chair of the [National Harmful Algal Bloom Committee](#) (NHC) for the [US National Office](#) for Harmful Algal Blooms.
- Clarissa Anderson is featured in Scripps Institution of Oceanography's, "A Scientist's Life", series - check out the [video](#) and [article](#).

SCCOOS at Work



Activities

- April 8: Ocean Discovery Science Leader Interview, [virtual](#) - Danielle Muller participated
- April 8-12: Ecological Forecasting Initiative Cyberinfrastructure [Workshop](#), Portsmouth, NH (co-organized by EFI & NERACOOS) - Clarissa Anderson attended
- April 20: MERITO [Earth Day](#) Celebration, Ventura, CA - Danielle Muller hosted a booth (*pictured above*)
- April 20-25: SIO UdeC workshop, Concepcion, Chile - Clarissa Anderson, Sophia Merrifeild, Falk Feddersen, Jeff Bowman, and Margaret Leinen attended and presented research (*pictures below*)

- April 30: Ocean Discovery Science Leader [Volunteer Day](#), Hoover High School San Diego, CA - Danielle Muller attended
- May 7-9: [Climate, Ecosystems, & Fisheries Initiatives \(CEFI\)](#) Workshop, SWFSC - Clarissa Anderson attended
- May 14-16: SCCOOS, CeNCOOS and CalCOFI Co-host [Conference](#): Celebrating Ocean Observing in California, San Diego, CA
- May 17: [StartBlue](#) Workshop, San Diego, CA - Danielle Muller attended
- May 21-22: Pacific Passive Acoustic Monitoring Network for Marine Mammals [Workshop](#), San Francisco, CA - May 21-23: IOOS [DMAC Code Sprint](#), Washington, D.C. - Ian Brunjes participated
- May 23: HABs in the Northeast Pacific [Webinar](#) - Megan Medina presented
- May 29: AltaSea [Ribbon Cutting](#) of Berth 58, San Pedro, CA - Danielle Muller attended
- May 29-30: [WCOA](#) Marine Mammal Indicator Workshop, SCCWRP - Clarissa Anderson attended
- June 3: Ocean Discovery Science Leader Interview, [virtual](#) - Danielle Muller participated
- June 12: American Cetacean Society, San Diego Chapter public [presentation](#) - Megan Medina presented (*pictured above*)
- June 18: West Watch [Webinar](#), virtual - Clarissa Anderson presented



Media

- June 3: A Scientist's Life, Clarissa Anderson, in 99 seconds, [Video](#) & [Article](#) - Scripps Institution of Oceanography/Rob Monroe
- June 3: California shark attack, features [CSULB SharkLab](#) and Chris Lowe - [ABC News](#)/Leah Sarnoff & Samara Said
- June 4: Del Mar beaches reopen following shark attack, features CSULB SharkLab and Zach Merson - [NBC7 Staff](#)
- June 11: Why does the ocean look dirty brown in Pacific Beach? Clarissa Anderson interview - [CBS8](#)/Abbie Black
- June 12: 'Red tide' returns to San Diego. What causes the dirty-looking waves, Clarissa Anderson interview - [Fox5](#)/Dan Plante & Danielle Dawson
- June 14: Why San Diego's ocean water looks murky brown, Clarissa Anderson interview - [ABC10 San Diego](#)/Perla Shaheen
- June 14: Here's Why the Water Looks Brown in Pacific Beach Lately, Clarissa Anderson interview - [La Jolla Light](#)/Mike Peterson

Publications

SCCOOS Principal Investigators are in **bold**

- Atharva Ramgirkar, Vadiraj Rao, Janhavi Talhar, Tusar Kanti Mishra, Swathi Jamjala Narayanan, Shashank Mouli Satapathy, Boominathan Perumal. Mining of heterogeneous time series information for predicting chlorophyll accumulation in oceans. Sustainable Computing: Informatics and Systems, Volume 42, 2024, 100980, ISSN 2210-5379. <https://doi.org/10.1016/j.suscom.2024.100980>.
Uses SCCOOS Data
- Letscher, R. T., & Aluwihare, L. I. (2024). A simple method for the quantification of amidic bioavailable dissolved organic nitrogen in seawater. Limnology and Oceanography: Methods. <https://doi.org/10.1002/lom3.10622>
Uses SCCOOS Data
- Comeau, K. (2024). The Pursuit of Understanding: How Curiosity About Exploration and Innovation Inspires Storytelling ([Doctoral dissertation](#))
References SCCOOS
- Mathilde Dugenne, Marco Corrales-Ugalde, Jessica Y. Luo, Rainer Kiko, Todd D. O'Brien, Jean-Olivier Irisson, Fabien Lombard, Lars Stemmann, Charles Stock, **Clarissa R. Anderson**, Marcel Babin, Nagib Bhairy, Sophie Bonnet, Francois Carlotti, Astrid Cornils, E. Taylor Crockford, Patrick Daniel, Corinne Desnos, Laetitia Drago, Amanda Elineau, Alexis Fischer, Nina Grandrémy, Pierre-Luc Grondin, Lionel Guidi, Cecile Guieu, Helena Hauss, Kendra Hayashi, Jenny A. Huggett, Laetitia Jalabert, Lee Karp-Boss, **Kasia M. Kenitz**, **Raphael M. Kudela**, et.al. First release of the Pelagic Size Structure database: global datasets of marine size spectra obtained from plankton imaging devices. Earth System Science Data, 16, 2971–2999, 2024. <https://doi.org/10.5194/essd-16-2971-2024>
Includes SCCOOS IFCB images

Articles of Interest

Not SCCOOS funded research, but important for our SCCOOS community

- Johnston EM, Waltz GT, Kosaka R, Brauer EM, Ziegler SL, Jarvis Mason ET, Glanz HS, Zaragoza L, Kellum AN, Brooks RO, **Semmens BX**, Honeyman CJ, Caselle JE, Bellquist LF, Small SL, Morgan SG, Mulligan TJ, Coscino CL, Staton JM, Starr RM, Hamilton SL, **Ruttenberg BI** and **Wendt DE** (2024) Participation in collaborative fisheries research improves the perceptions of recreational anglers towards marine protected areas. *Front. Mar. Sci.* 11:1330498. [doi: 10.3389/fmars.2024.1330498](https://doi.org/10.3389/fmars.2024.1330498)
- **Ryan K. Walter**, Michael Dalsin, Piero L.F. Mazzini, Cassia Pianca. Compound marine cold spells and hypoxic events in a nearshore upwelling system. *Estuarine, Coastal and Shelf Science*, Volume 300, 2024, 108706, ISSN 0272-7714. <https://doi.org/10.1016/j.ecss.2024.108706>.
- Brittany Hook/[UC San Diego Today](https://www.ucsd.edu/news), April 30, 2024, Impacts of 2020 Red Tide Event Highlighted in New Study
- Crow White, Yi-Hi Wang, **Ryan K. Walter**, **Benjamin I. Ruttenberg**, Danny Han, Eli Newman, Ethan R. Deyle, Sucharita Gopal, Les Kaufman, Spatial planning offshore wind energy farms in California for mediating fisheries and wildlife conservation impacts, *Environmental Development*, Volume 51, 2024, 101005, ISSN 2211-4645, <https://doi.org/10.1016/j.envdev.2024.101005>.
- Michelle E. Dan, Elan J. Portner, Jeff S. Bowman, Brice X. Semmens, Sarah M. Owens, Stephanie M. Greenwald, C. Anela Choy Using low volume eDNA methods to sample pelagic marine animal assemblages. *PLOS ONE* May 15, 2024. <https://doi.org/10.1371/journal.pone.0303263>
- Adusumilli, S., Cirrito, N., Engeman, L., Fiedler, J. W., **Guza, R. T.**, Lange, A. M. Z., **Merrifield, M.**, **O'Reilly, W.O.**, Young, A. (2024). Predicting shoreline changes along the California coast using deep learning applied to satellite observations. *Journal of Geophysical Research: Machine Learning and Computation*, 1, e2024JH000172. <https://doi.org/10.1029/2024JH000172>
- Vukašin Gligorić ,Gerben A. van Kleef, Bastiaan T. Rutjens. How social evaluations shape trust in 45 types of scientists. *POL ONE*. April 18, 2024. <https://doi.org/10.1371/journal.pone.0299621>

On the Horizon

Conferences

Unifying Innovations in Forecasting Capabilities Workshop 2024

UIFCW24
A UFS Collaboration Powered by EPIC

JSU
1877

WHEN:
July 22, 2024 – July 26, 2024

WHERE:
Jackson State University (JSU)
Jackson, MS and online

This 5-day event is FREE to attend virtually - Check out the [conference website](#) for more info



Eastern Pacific Ocean Conference

www.easternpacificoceanconference.org

September 11-14, 2024 at Timberline Lodge in Mt Hood, Oregon - Check out the [conference website](#) for more info
SCCOOS will SEE you there!

**Optimizing Ocean Observing Networks for
Detecting the Coastal Climate Signal**

September 23-25, 2024
Boulder, Colorado and Virtual

Bringing together operators and users of coastal ocean observing systems to identify key science issues in detecting and responding to coastal climate change in the coming decades.

US CLIVAR NASA NOAA NSI ICOC IOOS

Check out the [conference website](#) for more info...SCCOOS will SEE you there!

OCEAN BIODIVERSITY TECHSURGE

OCTOBER 1 & 2, 2024
INNER HARBOR, BALTIMORE, MARYLAND

*Empowering a Sustainable Blue Future: Implementing the US Ocean Biodiversity Strategy and Related Global Efforts
Towards a Sustainable Ocean Economy*

Check out the [conference website](#) for more info - Abstracts due **August 14th**

Funding Opportunities



- Due **July 31st** - Apply for the \$10k Climate + MPAs [Microgrant](#). These funds will help address some of the concerns or needs summarized in the MPA Collaborative Statewide Climate [Report](#). All are welcome to apply, and are encouraged to submit their ideas!
- Due **August 12th** - The BoatUS Foundation, in partnership with the NOAA Marine Debris Program, is soliciting applications under their [Abandoned and Derelict Vessel Removal Grant Program](#). Using funding provided by the Bipartisan Infrastructure Law, the BoatUS Foundation will award up to \$7.5 million in grants to remove abandoned and derelict vessels (ADV) across coastal and marine areas of the United States. Projects may range from \$50,000 to \$1 million.

Priority will be given to projects that include input from and benefit underserved, low-income, or tribal communities; demonstrate strong community support; benefit marine animals and their habitats, local coastal communities, or local economies; and include local outreach and education activities directed toward the boating community and general public to prevent abandoned and derelict vessels.

Volunteer, Workshop, and Training Opportunities



Pathways to Inclusive Research Training Program Symposium

30 > 30
CALIFORNIA

30x30 Draft Decision-Making
Framework for Coastal Waters



MPA Observer Program

La Jolla North

- [Register](#) for a virtual symposium on **August 2nd** and **August 15th** featuring California Sea Grant's Pathways to Inclusive Research Training Program recipients. Learn more about the research programs that broadened participation and a sense of belonging for undergraduate students from groups that are underrepresented and underserved in marine and coastal sciences, particularly Black or African-American, American Indian or Alaska Native, Hispanic or Latine, female, nonbinary, first-generation college students, veterans, LGBTQIA2S+, and students with disabilities.
- Due **August 30th** - Apply to Expedition to Deploy and Recover Oceanographic Moorings, Profilers, and Gliders, leaving Newport, Oregon on October 4, 2024; returning to Newport on October 20, 2024. Send questions and applications to [Ed Dever](#)

The cruise will deploy and recover oceanographic moorings, profilers and gliders off Washington and Oregon as part of the National Science Foundation Ocean Observatories Initiative (OOI) Coastal Endurance Array on R/V Sikuliaq. Seven surface moorings will be deployed and recovered along with up to four profilers and six gliders. The cruise will also acquire CTD casts (with bottle sampling) and underway ship data for comparison to deployed equipment. The volunteer

will assist in the deployment and recovery of moorings and gliders. They will also assist with CTD casts and associated water sample processing, and there will be opportunities to work with OOI data.

- Due **October 2nd** - OPC announced the draft Decision-Making [Framework](#) for 30×30 in Coastal Waters, which translates policy objectives for 30×30 Conservation Areas – protecting biodiversity, expanding access to nature, and building climate resilience – into objective, transparent, science-based criteria.

OPC has launched a 120-day public comment and tribal consultation period on the draft framework with comments due via [form](#) or **email**.

Informational, in-person [workshops have been set up regionally](#), if you missed the **July 10th** South Coast San Diego workshop, there are two more - Central Coast Monterey on **August 14th** and North Coast Arcata on **September 12th**

- Ocean Science Analytics (OSA), a company dedicated to advancing ocean science research, preserving natural resources, and offering technical training has an **ongoing project** [La Jolla North MPA Observer Program](#). Visit their website if you are interested in becoming an observer.

In Case You Missed It

- [California Ocean Bill Tracker](#) serves as a first-of-its-kind resource for the broader scientific community in California to stay informed on legislative policies impacting the future of our coast and ocean.
- NOAA Office of Tides & Currents announce a [Technical Assistance Program](#) that aims to provide a technical support system to better meet stakeholder needs for water level and currents data collection, processing, analysis, and application, both proactively and on-demand.
- In June the National Science and Technology Council released a [National Aquatic Environmental DNA \(eDNA\) Strategy](#) aiming to inform the application of eDNA for environmental research and operational monitoring efforts to address mission objectives and management needs at local, regional, and national scales.

Thanks for reading, we at SCCOOS wish you a great summer!!

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