

International Coral Reef Initiative (ICRI)

Member's Report | 38th General Meeting

9th – 13th September 2024 Jeddah, – Kingdom of Saudi Arabia

Reporting Period: 2023 & 2024

A. Member Information:

- Name of ICRI member: Mote Marine Laboratory (mote.org)
- Name of person(s) completing member's report: Dr. M.P. Crosby (President & CEO) with significant input from numerous Mote Marine Laboratory scientists
- Position/Title: President & CEO
- Email: mcrosby@mote.org
- Are you a designated ICRI Focal Point: Yes No
 - If no, please indicate who you are completing the form on behalf of:
- Which was the last General Meeting you attended: ICRI GM37 September 2023 Hawai'i
- Will you be attending the 38th ICRI General Meeting in Jeddah, Kingdom of Saudi Arabia:
 Yes No
- Member social media:
 - Twitter/X: @motemarinelab
 - LinkedIn: <https://www.linkedin.com/company/mote-marine-laboratory>
 - Instagram: @motemarinelab
 - FaceBook (Meta): <https://www.facebook.com/MoteMarineLab>
 - TikTok: @motemarinelab

B. Reporting on the implementation of the ICRI Plan of Action 2021-2024: turning the tide for coral reefs. *Your responses will help inform the Secretariat about members' contributions toward the current Plan of Action. You can download the ICRI Plan of Action here: <https://icriforum.org/documents/plan-of-action-2021-2024/>*

What are the main contributions you, as an ICRI member, have made to the ICRI Plan of Action?

Theme 1 - Preparing for the Future: Promoting Resilient Coral Reefs

Theme 2 - Coral Reef Science and Oceanography: Advancing and Utilizing the Latest Science and Technology

Theme 3 - Local Threat Reduction: Integrating Response Planning Frameworks

Theme 4 - Diversity and Inclusion: Expanding the Coral Reef Community

Answer:

Theme 1: Preparing for the Future: Promoting Resilient Coral Reefs

Mote Marine Laboratory's Coral Reef Research & Restoration initiatives support numerous scientists working across multiple disciplines to reverse decades of ecosystem decline, bringing new life and new hope to coral reefs around the world. The guiding principle behind Mote's efforts includes incorporating mechanisms that promote resilience at both the population and community levels. Typically, coral reef restoration efforts focus on populations. Mote scientists are actively evaluating multi-species common garden restoration methods that capitalize on resilient populations of multiple species guided by a prescriptive genetic management plan to ensure richness and evenness at the genetic, population, community, and meta-community levels. Further, Mote has integrated non-coral species whose ecological functions, such as grazers, directly and/or indirectly facilitate coral growth, survival, and recruitment. At the population level, we study and promote the incorporation of coral genotypes that are resistant to major threats such as infectious diseases, high water temperatures, and ocean acidification processes. These resistant genets are widely distributed within the restoration broodstock, represented among regional coral nursery and production facilities, and are archived in Mote's International Coral Gene Bank, but also are used as parents for the next generation to incorporate potentially heritable resilient traits in corals. We have created the first ever Caribbean King Crab hatchery at Mote's Aquaculture Research Park that will allow for the production of this native herbivore which will be stocked onto degraded reefs alongside coral outplants. After stocking, these grazers significantly reduce algal cover leading to a benthic community that promotes a more abundant and rich fish community, increases the survival of coral outplants, and provides suitable habitat for natural coral recruitment. Finally, Mote is a

key partner of the Florida Keys National Marine Sanctuary and collaborates with this entity as well as other local and state partners to promote sustainable use and conservation of Florida's Coral Reef.

Theme 2 - Coral Reef Science and Oceanography: Advancing and Utilizing the Latest Science and Technology

Mote scientists are actively collaborating with multiple partners to integrate technology, artificial intelligence, and efficient workflows to maximize production and outplanting efficiency of resilient corals and grazers. For example, Mote scientists are working with partners to develop and implement a digital inventory system that allows for the near instantaneous acquisition, archival, and querying of inventory data, dramatically reducing errors and the time and effort required to quickly and accurately locate and account for specific coral fragments based on species, genotype, size class, health status, and physical location within and among nursery and production facilities. Additionally, Mote is working with partners from the University of Alabama to utilize a novel multispectral chlorophyll-a fluorometer coupled with machine learning to identify more heat tolerant corals without the need for experimentation, thus preserving biomass for restoration purposes.

Theme 3 - Local Threat Reduction: Integrating Response Planning Frameworks

The 2023 hyperthermal event in Florida resulted in the largest coral evacuation process in history with the ultimate goal of preserving genetic diversity and biomass of Florida Acroporid corals; the restoration focal species most susceptible to bleaching within the region. This event provided the framework for future planning efforts associated with thermal stress responses, which may also be modeled and modified for the next coral disease outbreak. The lessons learned and recommendations associated with that planning framework was compiled into a perspective paper created by 30 different Florida-based coral restoration/research authors, led by Mote's Dr. Erinn Muller. This paper is currently under review in Conservation Biology.

Theme 4 - Diversity and Inclusion: Expanding the Coral Reef Community

Internship Experiences: In 2023 & 2024 alone, Mote's Coral Reef focused programs hosted 84 total undergraduate/graduate students for internships gaining hands-on research and restoration experience within one of the following programs: Coral Health and Disease Research, Mote's International Coral Gene Bank, Coral Reef Restoration Research, or Ocean Acidification Research. A total of 21 of those interns (25%) were under-represented minorities. Each intern works directly with a Mote mentor developing skills associated with coral care, experimental research, conservation and leadership. Furthermore, we have 24 active volunteers within our coral programs, 1 of which is an under-represented minority.

Mote SEA: Mote Marine Laboratory is also expanding its footprint through the creation of a workforce development laboratory at the new Mote Science and Education Aquarium (Mote SEA) that will open in 2025. This workspace will be a public facing active research laboratory that will specialize in training early career students on coral reef related research and restoration skills. The laboratory will be a certified coral holding facility creating more space to grow and care for corals that can be utilized for restoration purposes while simultaneously conducting pivotal research on coral health and resilience.

Two NSF-funded projects aimed at broadening participation in marine science include engagement with Mote's coral research and restoration programs and staff. The Marine Science Undergraduate Research Experience Professional and Research Preparation (MarSci URE PRP) IUSE:EDU project is developing, implementing and evaluating undergraduate research experience preparation courses for undergraduate students to develop research and science career skills, and obtain hands-on experience doing marine science research under the mentorship of professional scientists, all the while building their affective science skills (e.g., science identity, sense of belonging, confidence and self-efficacy). Students will gain essential knowledge and aptitudes that they may not have the opportunity to obtain during their academic undergraduate education alone, thereby increasing their perceived readiness, competitiveness in applying for and success in future undergraduate research experiences. The overall goal of this project is to increase the number and preparedness of students from historically excluded populations earning undergraduate degrees in marine STEM to meet the increasing national demands for a highly skilled, diverse and innovative STEM workforce. The primary goal of GEOPaths Informal Network Vocational Experiences and Research Training in Marine Science (GP-IN:VERT) is to increase the number of pre-college students pursuing undergraduate degrees in marine STEM. This is being accomplished through engaging students primarily from historically excluded groups in authentic, marine geoscience career-relevant experiences; providing access to students that might otherwise not encounter geoscience before deciding on a major; and creating mechanisms to engage local high school students in experiences that demonstrate the geosciences as a viable career path.

(ICRI) What are your upcoming priorities for coral reefs?

Answer:

Mote Marine Laboratory supports more than 25 independent research programs, several of which are directly or indirectly focused on coral reefs. Each of Mote's coral reef focused research programs is tackling an array of priorities ranging from pure biological and ecological research, applied conservation and restoration methodological research, and community engagement in research and restoration implementation. Among these priorities is evaluating the

effect of shifting from a species-level restoration strategy to one aimed at a more holistic approach focusing on the ecological community including the use of multi-species common garden restoration assemblages, the integration of non-coral species that provide critical ecological functions, and a shift in monitoring paradigms to include more informative metrics such as benthic and demersal community composition dynamics rather than simple survival/mortality metrics of restoration success. The foundation of Mote's coral reef restoration strategy is the integration of genetically diverse and resilient traits into the restored community to facilitate a more resistant and resilient restored coral reef community generation after generation via sexual reproduction and recruitment.

C. Reporting on the Restoration of Coral Reefs (Target 2 GBF/Action Point 3 Coral Reef Breakthrough)

- (ICRI) Are you able to estimate the total area (km²) of coral reef under active restoration and the total area you consider to be 'restored', as a result of your organisation/country's in 2023?
 - Total area under active restoration in 2023: 245.15 km²
 - Total area considered to be restored in 2023: 0 km²

- (ICRI) If available, please provide further information on the total area considered to be restored, and under active restoration for the total period of the restoration programme, including the timeframe:

Answer:

Mote is currently permitted and actively engaged in coral reef restoration efforts among 91 distinct 1 nautical mile diameter locations along Florida's Coral Reef with a combined area of 245.15 km². While active and ongoing restoration efforts are underway throughout this substantial area, all of these areas are still in the process of ecological restoration.

- (ICRI) For the purpose of the above, please provide definitions for how your programme/organisation/country considers coral reefs to be:
 - A) Under active restoration
 - B) Restored

Answer:

A) *Under active Restoration:*

Active manipulations (e.g., coral outplanting, grazers additions) are currently underway or have been applied and are currently being monitored for effect.

B) *Restored:*

Cover of living coral tissue meets (or exceeds) historic values and a proportion (>25%) of corals are reproductively viable; net accretion is neutral or positive; benthic coral reef community composition (richness and relative abundance of species, genotypes) is similar to or greater than historic values; >70% of macroalgal productivity is consumed daily; algal community is dominated by early successional turfs with a small proportion (<10%) laden with sediment; mean standing macroalgal cover is low (<30%) across the reef.

[Does your country have any restoration policies or regulations?](#)

Many locations have outdated and insufficient regulations for coral reef restoration, resulting in inadequate oversight of restoration efforts. In addition, the absence, limitations, or differences among regulations between countries prevents the development and implementation of effective regional coral reef conservation strategies.

- (ICRI) Please describe the restoration policies or regulations (if any) that are in place in your country.

Answer:

Coral Reef Restoration in Florida is highly regulated through the management oversight of the Florida Fish and Wildlife Conservation Commission (FWC), Florida Division of Agriculture and Consumer Resources (FDACS), additional local management agencies overseeing submerged lands, US National Park Service (NPS), Florida Department of Environmental Protection (FDEP), US Army Corps of Engineers (USACE), and the Florida Keys National Marine Sanctuary (FKNMS). Several permits are required to create nurseries (ocean based or on land), collect corals for broodstock, hold corals on land, release corals back into the ocean, and attach corals to the substrate for restoration. Extensive monitoring and reporting requirements are also established for conducting all activities listed above. Federal laws/regulations include, inter alia, the Coral Reef Conservation Act 2000 (restoration explicit), and the Magnuson-Stevens Fisheries and Management Act 2007 (requires biennial reports to Congress on steps taken to identify, monitor, and protect deep sea coral areas, including through research), and National Marine Sanctuaries Act as amended 2000 (requires compensation for damage to a sanctuary

resource that requires restoration or replacement which could include corals). Florida laws/regulations include, inter alia, the Florida Coral Reef Protection Act 2009 (provides for damage recovery for restoration), and the Florida Environmental Protection Act, Chpt. 403.9334 (requires responsible party to undertake damage assessment and primary restoration when vessel damages reef).

D. The Global Coral Reef Monitoring Network (GCRMN)

The production of future GCRMN reports, both at the regional and global level, relies on the ongoing support of data contributors who are willing to share their coral reef monitoring data for this purpose. As such, from 2024 to 2026, the GCRMN will undertake the rigorous process of developing the **Status of Coral Reefs of the World: 2025** global report, including an extensive data collation process.

Do you have data to contribute to the upcoming GCRMN global report?

Mote staff actively participate in the collection of monitoring data in support of management agency-led landscape-scale monitoring efforts along Florida’s Coral Reef such as FRRP (FWC), NCREMP (NOAA/FWC), and Mission: Iconic Reefs (NOAA). These data are typically collected and compiled by the relevant agencies on an annual basis.

- Please provide the contact information for the data providers to allow for the GCRMN data collation team to request data and discuss the process of data contribution.

Please add further contacts as needed.

Answer:

Contact Name:

Organisation:

Email Address:

Contact Name:

Organisation:

Email Address:

Contact Name:

Organisation:

Email Address:

E. Capacity Building & Communications

Have you found the ICRI #ForCoral Webinar Series useful?

Through 2024, ICRI has hosted multiple webinars that aim to share knowledge and foster collaboration across critical topics concerning the conservation, protection, and restoration of coral reefs. These webinars form the #ForCoral webinar series, and topics include the 4th Global Bleaching Event, impacts of land-based sources of pollution and National Biodiversity Strategies and Action Plans.

The full list of webinars and recordings can be found here: <https://icriforum.org/forcoral-webinar-series/>

- (ICRI) Did you attend any of the series' webinars, and if so which topics have you found the most useful and engaging? If you did not attend the webinars, please explain why, and how what we could have done better.

Answer:

Mote did not directly attend the live webinars; however, we viewed the recordings of several sessions. Two of the webinars were of particular interest including "Recent Coral Response Events and the Need for Integrated Response Planning" and "The Impacts of Land based sources of pollution on Coral Reefs". The prior webinar listed was of particular interest because of our direct involvement in the 2023 bleaching response efforts and it was interesting to hear case studies from other regions to identify similarities and differences based on location, logistics, and severity of the threat. The LBS discussion was of particular interest because this topic is understudied and little is known about how contaminants could interact with major threats that we all focus on more readily such as disease and climate change.

- (ICRI) Do you have any suggestions or request for topics that you wish for ICRI to host as part of this series? If you have a specific topic in mind, and would like to host a webinar, please indicate below.

Answer:

One of the most apparent lessons learned in association with the 2023 hyperthermal event in Florida was the value of live coral gene banking as a way to preserve genotypic richness within threatened coral species. Mote believes this effort, in association with the Global Coral Biobank Alliance, should be a high priority topic for ICRI.

Have you found the ICRI communications useful?

- (ICRI) Do you find the ICRI Monthly Round of News Useful? If yes, what do you like about it and how would you suggest improving ICRI’s communications?

Answer:

Yes, the monthly round of news is very useful. Much of Mote effort is focused on Florida reefs and actions within our local/regional communities. The ICRI news allows us to learn about some of what is happening in other regions of the world on a near-real time basis.

F. Kunming-Montreal Global Biodiversity Framework

ICRI has continually supported the Convention on Biological Diversity and the Post-2020 process, developing a recommendation for coral reef indicators to be included in the Global Biodiversity Framework and supporting Parties during the negotiation process. Following the Framework’s adoption in 2022, ICRI’s support now aims to support parties in implementing the framework, especially through National Biodiversity Strategies and Action Plans (NBSAPS) and the Marine and Coastal Work Programme.

In 2024, ICRI released [A Guide for Integrating Coral Reefs and Associated Ecosystems into National Biodiversity Strategies and Action Plans](#) to support coral reef countries to integrate coral reefs and associated ecosystems into their NBSAPs.

- (ICRI) Did you use read, use, and/or apply the Guide on integrating coral reefs and associated ecosystems into *National Biodiversity Strategies and Action Plans (NBSAPs)* useful? Where possible, indicate specific elements that were useful or alternatively provide information if you did not find the guide useful.

Answer:

We are familiar with the Guide on Integrating Coral Reefs and Associated Ecosystems into NBSAPs. It is a well-constructed document that provides actionable items for countries to integrate and accomplish. We recommend the utilization of this guide for universal global metrics and recommendations.

While not being a Party to the CBD, the US does not prepare formal NBSAPs, but participates through submission of factsheets on its biodiversity strategies and plans for implementation. As an NGO, Mote is not responsible for preparing these regular submissions, but does provide

regular input on findings of its coral-related research to the US government agencies involved, in particular NOAA and FWS.

- (ICRI) Did you revise your current *National Biodiversity Strategies and Action Plans (NBSAP)* to include coral reefs? **N.B.** if you are not a country representative, are you working with national focal points to help update their NBSAPs? Please provide further details.

Answer:

As noted above, Mote works with US national focal points (NOAA and FWS) for coral reef concerns and recommendations to be taken into account in US submissions to CBD in lieu of NBSAPs. Coral reef conservation and restoration has long been a priority for Mote as well as our Federal and State agency partners, as reflected in the latest US submission to COP15, and the National Ocean Biodiversity Strategy released in June 2024.

- (ICRI) How are you planning to implement the Kunming-Montreal *Global Biodiversity Framework*? Please list the target(s) and decisions that your work attributes to.

Answer:

Mote Marine Laboratory continues to support, strengthen, and expand its programs and projects with attributes supporting the Kunming-Montreal Global Biodiversity Framework (GBF) goals and targets. With respect to advancing the following specific GBF targets:

Target 2 - restore degraded coral reefs and ecosystems, and connectivity needs

Target 3 - increase protected areas and other conservation areas –e.g., FKNMS, aquatic preserves, NEPs

Target 4 - protect coral genetic diversity, both in situ and ex situ

Target 7 - pollution reduction – research on pesticides and other toxic substances on coral reefs

Target 8 - research on climate change threats, including ocean acidification, to corals and ecosystems

Target 21 - knowledge-sharing and cooperation – education, technical reports, meetings, science exchanges, etc.

The key areas of Mote’s work related to coral reef conservation and restoration include:

(Targets 2, 3, 4, 8, 21) Mote’s Coral Health & Disease Research Program studies the susceptibility and resistance to such major threats as climate change and infectious diseases within and among coral species and associated ecosystems to identify mechanisms that can be utilized to promote reef resilience.

(Targets 2, 3, 4, 8, 21) – Mote’s Coral Reef Restoration Research Program focuses on better understanding processes and environmental factors that influence coral reef health, including in the FKNMS, with special attention to red tide monitoring and secondary effects on coral reef communities, in-situ staghorn coral propagation and restoration, genetic research, impacts from climate change and ocean acidification), with investigators and community involvement.

(Targets 6, 8, as well as 2 on connectivity) – Mote’s Ecotoxicology Research Program conducts pollution reduction research including monitoring the distribution of mosquito control pesticides in the Fl Keys National Marine Sanctuary and impact on coral and lobster larvae as sentinel non-targeted organisms; research on the pharmaceutical leaching on coral reproduction and recruitment; investigating how climate change impacts the toxicity of toxic chemicals on coral larvae, and how elevated temperature and mosquito control pesticides impact coral larvae physiology and settlement.

(Target 8) – Mote’s Ocean Acidification Research Program seeks to understand responses of ecologically important species — like corals — to projected levels of ocean acidification; two main research facilities, one in Sarasota and one in the Keys, studying how corals and other reef species will react to changes in pH as well as changing ocean temperature due to climate change.

(Target 2) – Mote’s Fisheries Habitat Ecology and Acoustics Research Program focuses on coastal fishes, ranging from coral reef fishes to economically important sport fish, using focal species as tools to learn about coastal ecological processes.

(Target 21) – All Mote Education programs aim at knowledge sharing and knowledge building relating Mote’s research and science expertise, including in coral reef conservation, with some key examples: Internships, Community Outreach, Science Talks, Teacher Professional Development, Adult Life-long Learning courses, and annual Youth Ocean Conservation Summits.

(Target 2, 3, 4, 7, 8, 21) – Mote’s Marine Policy Institute (MPI), a Center of Excellence, works at international, regional, national, and state levels to promote, provide input, and advance science-based ocean policy and law across the spectrum of ocean conservation issues, including coral reefs and climate change. Among other things at the international level, the MPI Director serves as Chair of the IUCN-World Commission on Protected Areas (WCPA), Marine Connectivity Working Group (MCWG), a global network of marine conservation practitioners

working to maintain, restore, and enhance the long-term ecological integrity of marine biodiversity and ecosystems, including coral reef systems.

G. Upcoming events

Please tick the most any events that you will be, or are planning to attend:

- September 10th – 24th: 79th Session of the UN General Assembly (UNGA 79)
- September 23rd – 26th: GEF International Waters Conference
- October 13th – 18th: 7th International Marine Conservation Congress (IMCC7)
- October 21st – November 1st: CBD COP16
- November 4th – 8th: 77th Annual meeting of the Gulf and Caribbean Fisheries Institute (GCFI77)
- December 10th – 12th: The International Mangrove Conservation and Restoration Conference
- December 9th – 13th: Reef Futures (*Mote delegation will include numerous Scientists*)
- June 9th – 13th 2025: United Nations Ocean Conference
- October 9th – 15th 2025: IUCN World Conservation Congress
- Other

Please list any upcoming regional / international events relevant to ICRI that your organisation plans to attend:

Answer:

ReeFLorida Regional Symposium November 12 - 15, 2024, Miami, FL

H. Publications. Please list relevant publications / reports you have released recently (+ add a link if possible)

Publication	URL
<p>Becker, C., Weber, L. Zgliczynski, B., Sullivan, C., Sandin, S., Muller, E., Clark, A., Soule, M., Longnecker, K., Kujawinski, E. and Apprill, A. (2023). Microorganisms and dissolved metabolites distinguish Floridas Coral Reef habitats. <i>PNAS Nexus</i>, 9(2), 287.</p>	<p>https://doi.org/10.1093/pnasnexus/pgad287</p>
<p>Butler, M.J., Duran, A., Feehan, C.J., Harborne, A.R., Hykema, A., Patterson, J.T., Sharp, W.C., Spadaro, A.J., Wijers, T., Williams, S.M. (2024) Restoration of herbivory on Caribbean coral reefs: are fishes, urchins, or crabs the solution? <i>Frontiers in Marine Science</i>. 11:1329028.</p>	<p>https://doi.org/10.3389/fmars.2024.1329028</p>
<p>Dilworth, J., Million, W. C., Ruggeri, M., Hall, E. R., Dungan, A. M., Muller, E.M. and Kenkel, C. D. (2024). Synergistic response to climate stressors in coral is associated with genotypic variation in baseline expression. <i>Proceedings of the Royal Society B</i>, 291(2019), 20232447</p>	<p>https://doi.org/10.1098/rspb.2023.2447</p>
<p>Edwards, C.B., Viehman, T.S., Battista, T., Bollinger, M.A., Charendoff, J., Cook, S., Combs, I., Couch, C., Ferrari, R., Figueira, W., Gleason, A.C.R., Gordon, S., Greene, W., Kuester, F., McCarthy, O., Oliver, T., Pedersen, N.E., Petrovic, V., Rojano, S., Runyan, H., Sandin, S.A. and Zgliczynski, B.J. (2023). Large-area imaging in tropical shallow water coral reef monitoring, research, and restoration: A practical guide to survey planning, execution, and data extraction. <i>NOAA Technical Memorandum</i>. 313.</p>	<p>https://doi.org/10.25923/5n6d-kx34</p>
<p>Evensen, N.R., Parker, K.E., Oliver, T.A., Palumbi, S.R., Logan, C.A., Ryan, J.S., Klepac, C.N., Perna, G., Warner, M.E., Voolstra, C.R., and Barshis, D.J. (2023). The Coral Bleaching Automated Stress System (CBASS): A low-cost, portable system for standardized empirical assessments of coral thermal limits. <i>Limnology and Oceanography: Methods</i>, 21: 421-434.</p>	<p>https://doi.org/10.1002/lom3.10555</p>

<p>Gantt, S.E., Keister, E.F., Manfroy, A.A., Merck, D.E., Fitt, W.K., Muller, E.M. and Kemp, D.W. (2023). Wild and nursery-raised corals: comparative physiology of two framework coral species. <i>Coral Reefs</i>. 1-12.</p>	<p>https://doi.org/10.1007/s00338-022-02333-9</p>
<p>Gardner, J.P.A., Lausche, B., Pittman, S.J., Metaxas, A. (2024). Marine connectivity conservation: Guidance for MPA and MPA network design and management. <i>Marine Policy</i>, 167.</p>	<p>https://doi.org/10.1016/j.marpol.2024.106250</p>
<p>Hoadley, K., Lockridge, G., McQuagge, A., Pahl, K.B., Lowry, S., Wong, S., Craig, Z., Petrik, C., Klepac, C., and Muller, E.M. (2023). A phenomic modeling approach for using chlorophyll-a fluorescence-based measurements on coral photosymbionts. <i>Frontiers in Marine Science</i>, 10 (379).</p>	<p>https://doi.org/10.3389/fmars.2023.1092202</p>
<p>Hoadley, K.D., Lowry, S., McQuagge, A., Dalessandri, S., Lockridge, G., O'Donnell, S., Elder, H., Ruggeri, M., Karabelas, E., Klepac, C., Kenkel, C., Muller, E.M. (2024). Bio-optical signatures of in situ photosymbionts predict bleaching severity prior to thermal stress in the Caribbean coral species <i>Acropora palmata</i>. <i>Coral Reefs</i>, pp.1-14.</p>	<p>https://doi.org/10.1101/2023.07.06.547971</p>
<p>Kiel, P. M., Formel, N., Jankulak, M., Baker, A. C., Cunning, R., Gilliam, D. S., Kenkel C.D., Langdon, C., Lirman D., Lustic C., Maxwell K., Moulding A., Moura A., Muller, E.M., Schopmeyer S., Winters R. S., & Enochs, I. C. (2023). <i>Acropora cervicornis</i> Data Coordination Hub, an open access database for evaluating genet performance. <i>Bulletin of marine science</i>, 99(2), 119-136.</p>	<p>https://doi.org/10.5343/bms.2022.0064</p>
<p>Klepac, C.N., Eaton, K.R., Petrik, C.G., Arick, L.N., Hall, E.R., and Muller, E.M. (2023). Symbiont composition and coral genotype determines massive coral species performance under end-of-century climate scenarios. <i>Frontiers in Marine Science</i>, 10.</p>	<p>https://doi.org/10.3389/fmars.2023.1026426</p>
<p>Klepac, C. N., Petrik, C. G., Karabelas, E., Owens, J., Hall, E. R., and Muller, E.M. (2024). Assessing acute thermal assays as a rapid</p>	<p>https://doi.org/10.1038/s41598-024-51944-5</p>

screening tool for coral restoration. <i>Scientific Reports</i> , 14(1), 1898.	
Klinges, J.G., Craig, Z.W., Villoch Diaz-Mauriño, M., Merck, D.E., Brooks S.N., Manfroy A.A., and Clark, A.S. (2023) Common aquarium antiseptics do not cause long-term shifts in coral microbiota but may impact coral growth rates. <i>Front. Mar. Sci.</i> 10:1281691.	https://doi.org/10.3389/fmars.2023.1281691
Klinges, J.G. , Patel, S.H., Duke, W.C., Muller, E.M. , and VegaThurber, R.L. (2023). Microbiomes of a disease - resistant genotype of <i>Acropora cervicornis</i> are resistant to acute, but not chronic, nutrient enrichment. <i>Scientific Reports</i> , 13: 3617.	https://doi.org/10.1038/s41598-023-30615-x
Mydlarz, L.D., and Muller, E.M. (2023). Genome-wide study in staghorn coral identifies markers of disease resistance. <i>Science</i> , 381 (6665): 1414-1415.	https://www.science.org/doi/10.1126/science.adk2492
Patterson, M., Patterson, S., Edson, E., Williams, S. , Torossian, J., Dwyer, A. (2023). Cosplay as a Novel Method for Outreach in Ocean Science. <i>Current: The Journal of Marine Education</i> , 1 (38): 16-27.	https://doi.org/10.5334.cjme.80
Rosales S.M., Huebner, L.K., Evans, J.S., Apprill, A., Baker, A.C., Becker, C.C., Bellantuono, A.J., Brandt, M.E., Clark, A.S., del Campo, J., Dennison, C.E. , Eaton, K.R., Huntley, N.E., Kellogg, C.A., Medina, M., Meyer, J.L., Muller, E.M. , Rodriguez-Lanetty, M., Salerno, J.L., Schill, W.B., Shilling, E.N., Stewart, J.M. and Voss, J.D. (2023). A meta-analysis of the stony coral tissue loss disease microbiome finds key bacteria in unaffected and lesion tissue in diseased colonies. <i>ISME Journal</i> , 3(19).	https://doi.org/10.1038/s43705-023-00220-0
Simpfendorfer, C.A., et al., including Hagan, V., Hueter, R. , and Chapman, D.D. (2023). Widespread diversity deficits of coral reef sharks and rays. <i>Science</i> . 6650 (380): 1155-1160.	https://doi.org/10.1126/science.adc4884

I. ICRI Member Feedback. What do you find most valuable about being a member of ICRI as well as completing the ICRI member reports? If you have any ideas to improve the Member Reports, please list below:

Answer:

ICRI provides access to a global network of coral reef scientists, restoration practitioners and researchers, and conservationists. There is an immense amount of activity happening locally, that much time and energy must be devoted to our home region, however, ensuring that global lessons are shared and connections across oceans are made allows for greater understanding and perspective. We thank ICRI for providing one of those avenues for global sharing.

J. Contact information & member information. (Note that this information will be posted on the ICRI website on your member page: <https://icriforum.org/members/>).

Please use the table below to provide us updates to your member’s focal points as well as the blank cells to indicate changes to information (please add more rows, as needed):

Focal Point 1:	
Name:	
Title/Organisation:	
Email:	
Focal Point 2:	
Name:	
Title/Organisation:	
Email:	
Focal Point 3:	
Name:	
Title/Organisation:	
Email:	
Member page updates:	
Section	Update

<p>Member institution description</p>	<p>Mote Marine Laboratory is an independent non-profit marine research and science education institution that, since its establishment in 1955, has pushed the frontiers of science for a noble cause – Conservation and sustainable use of our Oceans.</p> <p>Mote has over 40 Ph.D. level scientists as part of over 300 staff, conducting research at our eight campuses in Florida and with partner institutions around the world. Coral reefs are a significant focus for many of our research and science education programs in the U.S., wider Caribbean, Pacific Islands, Southeast Asia, Taiwan and Middle East.</p>
<p>Member social media</p>	<ul style="list-style-type: none"> ○ Twitter/X: @motemarinelab ○ LinkedIn: https://www.linkedin.com/company/mote-marine-laboratory ○ Instagram: @motemarinelab ○ FaceBook (Meta): https://www.facebook.com/MoteMarineLab ○ TikTok: @motemarinelab

Thank you very much for sharing your valuable experiences and information with ICRI. Members reports, meeting outputs and resources will be uploaded to: <https://icriforum.org/events/37th-icri-general-meeting/>