State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii 96813

September 26, 2025

Board of Land
and Natural Resources
Honolulu, Hawaii

Request for Approval of Special Activity Permit (2026-35) to George Peterson of the Monterey Bay Aquarium, Director of Marine Operations, to Collect, Possess or Transport Regulated and Non-Regulated Organisms, Including Various Species of Gelatinous Zooplankton, Zooplankton and Jellyfish, in a Regulated Area (West Hawaii Regional Fishery Management Area – "WHRFMA") and Non-Regulated Areas in Offshore Waters of West Hawaii, Using Non-Regulated Gear, for the Purposes of Educational Live Display in a Deep-Water Exhibit ("Aquarium Purposes") and Associated Research (e.g. Husbandry Captive Research and/or Culturing) At Monterey Bay Aquarium, Monterey, CA.

The applicant proposes to collect, possess or transport regulated organisms (lobster spp. / Scyllaridae and Palinuridae spp.; larval/zooplanktonic stage) and non-regulated organisms (various spp. of gelatinous zooplankton and zooplankton [larval/zooplanktonic stage] and jellyfish [larval though adult stages]), using non-regulated gear (jars), in areas of offshore waters (2 to 20 miles offshore) of Kaloko-Honokōhau, Hawaii, including a regulated area (West Hawaii Regional Fishery Management Area – "WHRFMA" – in areas in the WHRFMA in the 2-3 mile zone offshore outside of all smaller FMA, MLCD, FRA and NRA) and the non-regulated areas of offshore waters (3 to 20 miles offshore), for the purposes of educational live display in a deep-water exhibit ("aquarium purposes") and associated research (e.g. husbandry captive research and/or culturing) at Monterey Bay Aquarium, Monterey, CA. The collections will support the established *Into the Deep* Exhibition that opened in 2022 at the aquarium, featuring the mid-water and deep-water marine species (**see Appendix of draft permit for photos of examples of organisms to be collected**).

Note: The collection activities as proposed for this project fall under activities described under "Aquarium purposes" as defined under §13-60.4-3: Aquarium purposes means to hold aquatic life alive in a state of captivity, whether as pets, for scientific study, for public exhibition, for public display, or for sale for these purposes.

Note: This permit has been issued in previous years and was submitted last year at the 8/9/2024 BLNR meeting but was not approved. This year's proposed activity is primarily the same as the previously proposed activity, but certain changes have been

implemented – the **main changes proposed for this year would be the following**: 1) the request to change the permittee's name from John O'Sullivan to George Peterson (John O'Sullivan recently retired); 2) the removal of Fisher's Seahorse (*Hippocampus fisheri*) and a few additional species from the species list and; 3) the addition of any new outreach/collaboration or consultation activities conducted over the last year or planned for future years.

Collections and Methods.

Methods. The permittee and authorized assistants (the MBA's Midwater team and select Kona Honu staff) will charter a vessel from Kona Honu Dive Charters in Honokōhau Small Boat Harbor to conduct a series of blackwater SCUBA dives ~2 to 20 miles off of Honokōhau Small Boat Harbor, Hawaii (at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth), using a bluewater rig to collect gelatinous zooplankton in small plastic jars. After collection, MBA staff will transport the jars with specimens to MBA's rented laboratory space at the Natural Energy Laboratory of Hawaii Authority (NELHA) in Kailua-Kona, where they will be held for 3-5 days in chilled seawater systems. After temporary holding at NELHA, the MBA staff will then transport the specimens (in jars placed in coolers) via commercial airlines back to MBA (a facility with expertise in culturing and maintaining these organisms) where they will be placed in MBA seawater system holding tanks until acclimated and then placed on exhibit or utilized for culture work conducted by MBA staff.

Collections. Permittee and authorized assistants will annually collect up to seven hundred and fifty (750) individuals (various spp. and sizes) of gelatinous zooplankton, and zooplankton, (regulated and non-regulated – see Table 1 and Appendix for regulated spp.) and jellyfish by hand, using 400ml, 1.0L, and 1.5L plastic jars to contain individual specimens. Collection amounts of each species of organism will vary depending on incidence or need (in terms of educational exhibits or culturing/ research) but will range from fifty (50) up to two hundred (200) individuals of each species (see Appendix for amounts per type of organism). Note: The species list is primarily made up of "gelatinous zooplankton" (defined as organisms that remain gelatinous their whole lifecycle from juvenile to adult), of which both adults and juveniles will be collected, "zooplankton" (consisting of organisms that are gelatinous in their larval/planktonic stage, but may settle out to the substrate to become hard-bodied organisms when they mature, of which larval/planktonic stages will be collected; "jellyfish", of which larval through adult life stages may be collected. Note: Scyllaridae and Palinuridae spp. / lobster spp. may consist of the following regulated species: *Panulirus penicillatus* / green spiny lobster (tufted spiny lobster), *Panulirus marginatus* / Black leg spiny lobster, *Scyllarides* squammosus / Scaly Slipper lobster and *Scyllarides* haanii / Ridgeback Spiny Lobster, and non-regulated invertebrates may consist of non-regulated individuals of Scyllaridae and Palinuridae spp. / lobster spp.

Collections planned for 2026 will consist of similar species that have been collected in the past; past collections have included individuals of the various species of gelatinous zooplankton, zooplankton and jellyfish listed below (see species list at end of draft permit

for potential amounts per species or family/genus and **see Appendix** at end of draft permit **for photos of examples of organisms to be collected**). **Note**: Not all species or amounts listed in the Appendix of this permit will be collected – amounts per species are requested in anticipation that some species may not be present during certain dives or at certain locations; in these cases, more of another species may be collected. The maximum amount of individuals to be collected during the annual permitting period will be seven hundred and fifty (750) individuals of gelatinous zooplankton, zooplankton, jellyfish (various spp. and sizes); species may include the following: Phyllosoma - Lobster (Family *Scyllaridae*; regulated and non-regulated spp. - larvae), Phyllosoma - Lobster (Family *Synaxidae*; larvae), Phyllosoma - Lobster (Family *Palinuridae*; regulated and non-regulated spp. - larvae), Commensal Crabs (*Chyrostylidae* spp.), Sea Spiders (Class *Pycnogonidae*), Pelagic Nudibranch (*Phylliroe* spp.), Larvaceans (*Oikopleura* spp.), Larvaceans (*Bathochordaeus* spp.), Larvaceans (*Fritillaria* spp.), Palm Gooseberry (*Hormiphora palmata*), Sea Gooseberry (*Hormiphora* spp.), Venus Girdle (*Cestum veneris*), Ctenophore (*Velamen parallelum*), Lobate Ctenophore (*Eurhamphaea vexiligifera*), Amphipod (*Phronima* spp.), Amphipods (Order *Amphipoda*), Amphipods (Family *Hyperiidae*), Isopods (Order *Isopoda*), Siphonophores (Order *Siphonophora*) Siphonophore - Hula Skirt (*Physophora hydrostatica*), Siphonophore (*Diphyes* spp.), Siphonophore (*Forskalia* spp.), Siphonophore (*Agalma okeni*), Siphonophore (*Halistemma* spp.), Siphonophore (*Apolemia* spp.), Siphonophore (*Sulculeolaria* spp.), Siphonophore (*Athorybia rosacea*), Siphonophore (*Rhizophysa* spp.), Coronamedusa (*Atolla* spp.), Coronamedusa (*Atorella* spp.), Coronamedusa (*Nausithoe* spp.), Coronamedusa (*Periphylla* spp.), Hydromedusa (*Merga* spp.), Hydromedusa (Order *Trachymedusae*), Hydromedusa (Zancleopsis spp.), Hydromedusa (Aegina spp.), Rainbow tasseled Jellyfish (Thysanostoma loriferum), Crown Jellyfish (*Cephea cephea*), Mauve stinger (*Pelagia flaveola*), Swimming Comb Jelly (*Ocyropsis* spp.), Cubozoan Jelly (*Alatina alata*), Comb Jelly (*Callianira* sp.), Spotted Comb Jelly (*Leucothea* spp.), Cigar Comb Jelly (*Beroe* spp.), Sea Butterfly (*Clio pyramidata*) and Sea Butterfly (*Clio cuspidate*).

Some of the jellyfish specimens will be placed into MBA's *Into the Deep* exhibit, which opened to the public in April of 2022. MBA biologists will also continue on-going efforts to culture specimens in-house for future use in their *Into the Deep* exhibit. The Aquarium will work to integrate Hawaiian-specific information into exhibits that display organisms that are sourced from Hawaii, to provide information on a species significance within the Hawaiian seamounts, pelagic ecosystems or culture (if applicable), or other relevant information such as the problems these organisms may face with climate change, environmental degradation, overfishing etc., as educational outreach. Black water dives using blue water rigs will take place ~1900-2100 PST. Activities may be conducted during a few different collection periods/trips throughout the year (permitting period); dates may vary due to delays or interruptions.

Research and Conservation Activities at Monterey Bay Aquarium. In addition to displaying organisms and providing educational opportunities (free of charge) for more than 81,000 students a year (many from low-income communities), the Monterey Aquarium also conducts various research (including life history, propagation techniques and husbandry). Monterey Bay Aquarium helped create momentum for the establishment of the Monterey Bay National Marine Sanctuary in 1992, one of the largest marine

protected areas in the United States. Staff scientists have authored scientific publications involving sea otters, great white sharks, and bluefin tunas, which are important species in the northern Pacific Ocean. In addition to other animals, work has been published in the areas of veterinary medicine, visitor studies, and museum exhibition development. Among over 200 institutions accredited by the Association of Zoos and Aquariums, Monterey Bay Aquarium ranked 10th in scientific publication activity between 1993 and 2013. For Monterey Bay Aquarium's captive animal propagation efforts, the Association of Zoos and Aquariums has granted two awards, including one for the aquarium's work with purple-striped jellies in 1992. It has also received the association's general conservation award for its Sea Otter Research and Conservation Program.

The Monterey Bay Aquarium (MBA) and the Monterey Bay Aquarium Research Institute (MBARI) are partner organizations collaborating on several research, education and ocean conservation projects. As discussed above, the MBA recently opened the amazing *Into The Deep* Exhibition in 2022 to more than 1,000,000 in-person visitors/year with large numbers of virtual visitors as well. MBARI is a private non-profit research organization that, together with their education and conservation partner, the Monterey Bay Aquarium, and the aquarium's principal funder, the David and Lucile Packard Foundation, strives to provide the best science, engineering, and outreach tools to the ocean science and conservation community. As part of the collaboration, MBA and MBARI are working together to bring back gelatinous (jellylike) organisms from Hawaii's offshore waters for husbandry research and for the *Into The Deep* Exhibition.

MBA biologists have developed animal care methods for jellies that are now used by other aquariums and scientists worldwide (Raskoff et al 2003) and have described the life cycles of seven species of jellies displayed in the Aquarium: the cross jelly (Mitrocoma cellularia, Widmer 2004), the egg-yolk jelly (Phacellophora camtschatica, Widmer 2006), the flower hat jelly (Olindias formosus, Patry et al 2014), the Pacific sea nettle (Chrysaora fuscescens, Widmer 2008) and the purple-striped jelly (Chrysaora colorata, Sommer 1993), Earleria corachloeae (Widmer 2011) and Earlieria purpurea (Widmer, Cailliet and Geier 2010). The Aquarium cultures jellies to minimize the need to collect from the wild and to contribute to the natural history and diversity knowledge of these important animals.

Most recently, Aquarium biologists in collaboration with the University of Miami, developed the first mass culture techniques for ctenophores, or comb jellies (Patry et al 2020 and Presnell et al 2022) which has led to renewed interest in the biology of ctenophores and a slew of important findings in evolutionary biology and biodiversity (Schultz et al 2021, Bessho-Uehara et al 2020, Johnson et al 2022, Presnell and Browne 2021, Burkhardt et al 2023, Dunn 2023). Biologists here have applied these or adapted similar techniques to culture and/or display several Hawaiian species of ctenophores, siphonophores and other gelatinous zooplankton; *Hormiphora sp., Pelagia flaveola, Nausithoe sp., Atorella sp., Eurhamphaea vexilligera, Rhizophysa eysenhardtii, Athorybia rosacea, Merga costata* and achelata (various larvae). The MBA hopes to continue this work over the coming years as culturing these species is not only critical to the sustainability of their collection at the Aquarium but a vital part of their mission to inspire conservation of the ocean.

Links to Videos, MBA and MBARI websites:
https://www.montereybayaquarium.org/
Black Water Diving Videos
https://www.mbari.org/

Assessment of Cumulative Impacts. DAR does not anticipate cumulative impacts to occur as a result of the activities conducted under this permit. Gelatinous zooplankton, zooplankton, and jellyfish have an extremely patchy distribution in the water column and the types of each species present, and the numbers of any particular species collected on any single dive will vary depending on the water mass and migration of different species. The collections during each dive conducted by the MBA are anticipated to have a negligible impact on the biodiversity or density of species in Hawaiian waters as they will be a select subsample of the amount and type which are present throughout the islands. The MBA anticipates deploying 5 to eight (5-8) stationary divers in the water (at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth) for forty to seventy (40 – 70) minutes per dive; each diver can only collect what arrives in front of them within arm's reach. The currents and drift of the charter vessel will put the divers in a different location at the end of the dive from when they first entered the water; thus, the collections are distributed over a large location and limited to the availability at the time and location and collection reach of the diver. The divers will be moving with the current, as will the specimens, therefore there should be no cumulative impacts on any particular species (i.e. no collections will occur in one concentrated location).

The special conditions within the permit have been designed to minimize the impact of this sampling method, provide transparency and optimize the potential benefits. No threatened or endangered species are being collected. Select special conditions are below – see the permit for all general and special conditions.

- Collection Plans/Collection Reports: Collectors will submit monthly collection plans and collection reports to verify actual numbers and sizes of collected organisms that are reviewed and approved by DAR biologists on a monthly basis or for a specific trip (if select collection trips will occur).

- Incidental mortality. Incidental mortality of target and non-target organisms (various spp. and sizes) may occur in the field or while or while in captivity (target organism). Researchers will report any incidental mortalities in monthly collection report and final report. If a repeated occurrence of mortality occurs, DAR may request to review the method and see if modifications can be made to the method to reduce mortality. DAR recommends changing sampling location if mortality occurs.

- Bycatch. Methodology for collection of samples may have unintended by-catch. Permittee or authorized assistants will attend gear at all times and release/return all unintended by-catch as quickly as possible to the marine environment (if applicable).

- Invasive Species, Disease and Parasites. The permittee will mitigate for the spread of invasive species, disease and parasites between sampling areas (if sampling in environmentally different areas) by utilizing best management practices, including but not limited to, ensuring that all organisms, hand tools or collection bags/containers are inspected and absent of any non-natives or invasive organisms before transportation to lab aquariums (not applicable where invasive species, disease and parasites are target species for collections) or before collection in a new area, and ensuring that all gear is disinfected or sterilized between collection areas.

This permit is being brought before the board due to a requirement for out-of-state institutions requesting Special Activity Permits ("SAP") to go before the board for review. This permit was previously issued on an annual basis between 2019 and 2023 (with similar collections and same collection locations), using the permit process that is utilized for many SAP, consisting of approval from DAR and the Chair, as the board has delegated signature authority to the Department Chair for SAP for recognized Hawaiian institutions. This error was due to misunderstanding of the requirements of the delegation of signature authority assigned to SAP. Going forward, in order to rectify any other instances where this may have occurred in the past, DAR will be submitting any renewals of permits issued in the past or any new requests for permits, which are applied for by non-recognized Hawaiian institutions, to the board for review.

Benefits to the State of Hawaii. The benefits to the State of Hawaii from these collections include increased awareness and education about various spp. of deep water gelatinous zooplankton, zooplankton and jellyfish that occur in Hawaiian waters and the role they play in the ecosystem, to people from around the world who visit the Monterey Bay Aquarium; increased awareness and education will aid future conservation efforts needed to preserve these organisms and the ecosystems they inhabit. In addition, facilities that have expertise holding these types of deep water organisms are able to collaborate with other institutions to develop and share successful techniques on husbandry research or culturing, which can then be utilized to continue research or propagate certain species within aquariums to reduce future collections (for educational display or research) from the wild.

Consultation, Engagement and Outreach with Communities, DAR, and Academic Institutions. The Monterey Bay Aquarium (MBA) and the Monterey Bay Aquarium Research Institute (MBARI) have conducted extensive outreach and engagement with both the Division of Aquatic Resources (DAR) and community stakeholders in support of the SAP (Special Activity Permit) application process. MBA engaged with the local West Hawai‘i Community by offering educational presentations at NELHA, consultations with local groups such as Aha Moku Council, Miloli‘i Community-based Subsistence Fishing Area, and Hui Aloha Kīholo, and educational outreach at UH Hilo, West Hawai‘i Explorations Academy (etc.). Conversations with DAR staff from O‘ahu and West Hawai‘i have guided the engagement and permitting process. Letters of support have been secured from West Hawai‘i community, cultural, and research stakeholders, which include Dr. Amy Moran, University of Hawai‘i, and West Hawai‘i Explorations Academy.

MBA has conducted the following consultation, engagement, and outreach activities:

DAR and DLNR Meeting (Oʻahu – December 12, 2024)

- John O'Sullivan and George Peterson (MBA), and Dr. George Matsumoto (MBARI), met in person with DAR staff—Brian Neilson, David Sakoda, and Catherine Gewecke—and Dawn Chang, Director of the Department of Land and Natural Resources (DLNR). The purpose of this meeting was to review and discuss the Monterey Bay Aquarium's SAP application and gather agency input.

Community Consultation (Keauhou – February 27, 2025)

- An in-person meeting was held with John O'Sullivan and George Peterson (MBA); Charles "Uncle Charlie" Young (Aha Moku Council); Uʻilani Naipo (Miloliʻi Community-Based Subsistence Fishing Area); and Chad Wiggins (Executive Director, Hui Aloha Kīholo). The group outlined key steps for improving the SAP application, including enhanced community consultation and cultural engagement. The meeting notes were reviewed and approved by participants before being submitted to DAR.

Public Presentation (NELHA – July 16, 2025)

- Dr. George Matsumoto, Senior Education and Research Specialist from MBARI, with assistance from George Peterson and John O'Sullivan, delivered a public presentation from the offices of NELHA on the history and future of blackwater diving collection off Kona. The event was attended by 15 people in person and over 28 participants via Zoom. A Q&A session followed the presentation and community feedback was overwhelmingly positive.

Summary of Engagement Activities

- Ongoing collaboration with DAR staff on Oʻahu and in West Hawaiʻi to ensure compliance and transparency throughout the permitting process.

- Engagement with key community stakeholders and cultural representatives, including:

    - Aha Moku Council
    - Miloliʻi Community-Based Subsistence Fishing Area
    - Hui Aloha Kīholo

- Educational outreach efforts to:

    - University of Hawaiʻi
    - West Hawaiʻi Explorations Academy

- Letters of support received from:
    - Dr. Amy Moran, University of Hawai‘i
    - Una Burns, West Hawai‘i Explorations Academy

These efforts underscore the commitment of MBA and MBARI to cultural sensitivity, community collaboration, and responsible scientific exploration in West Hawai‘i.

Approval of this SAP will allow MBA and MBARI to:

- Enhance public understanding of Hawaiian pelagic ecosystems through live exhibition and outreach.
- Advance husbandry and culture research of fragile midwater organisms.
- Support long-standing collaborations with Hawai‘i communities, researchers, and educators.
- Continue MBA’s mission to inspire ocean conservation by connecting audiences with species rarely seen outside their natural habitat.

RECOMMENDATION: The Department Recommends

Based on the Departments exemption determination (attached) and the application and record in this matter, the Board DECLARES, FINDS, and DECIDES:

1) That the actions covered by this permit will have little or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment;

2) To delegate the Chairperson to sign the declaration of exemption on behalf of the Board, for purposes of recordkeeping requirements of chapter 343, HRS, and chapter 11-200.1, HAR; and

3) To authorize and approve, with stated conditions, the proposed Special Activity Permit.

Respectfully submitted,

Brian J. Neilson, Administrator
Division of Aquatic Resources

APPROVED FOR SUBMITTAL

Dawn N. S. Chang, Chairperson
Board of Land and Natural Resources

Attachments:

1) Draft Special Activity Permit (SAP 2026-35) (w/ Appendix w/ Species Table, Photos and Map)

2) Declaration of Exemption ("DE") from the Preparation of an Environmental Assessment under the Authority of Chapter 343, HRS & Chapter 11-200.1 HAR

3) Slides from NELHA Presentation on Blackwater Diving Collection off Kona

4) Letters of Support (UH-Manoa and West Hawaii Explorations Academy)

Special Activity Permit
SAP No. 2026-35

App. No. Renewal of 5446

Department of Land & Natural Resources
DIVISION OF AQUATIC RESOURCES
1151 Punchbowl Street, Room 330
Honolulu, Hawaii 96813

Date Issued: September 26, 2025

Valid not longer than: September 25, 2026

SPECIAL ACTIVITY PERMIT

The Department of Land and Natural Resources hereby grants permission for certain activities involving aquatic organisms belonging to the people of Hawaii, under Section 187A-6, Hawaii Revised Statutes, and other applicable laws.

The Permittee is

Name:	George Peterson	Address:	Monterey Bay Aquarium
Title:	Director of Marine Operations		886 Cannery Row
Affiliation:	Monterey Bay Aquarium (MBA)		Monterey, CA 93940
Email:	gpeterson@mbayaq.org		

This permit is issued, subject to the general and special conditions, to collect, possess or transport regulated organisms (lobster spp. / Scyllaridae and Palinuridae spp.; larval/zooplanktonic stage) and non-regulated organisms (various spp. of gelatinous zooplankton and zooplankton [larval/zooplanktonic stage] and jellyfish [larval though adult stages]), using non-regulated gear (jars), in areas of offshore waters (2 to 20 miles offshore) of Kaloko-Honokōhau, Hawaii, including a regulated area (West Hawaii Regional Fishery Management Area – "WHRFMA" – in areas in the WHRFMA in the 2-3 mile zone offshore outside of all smaller FMA, MLCD, FRA and NRA) and the non-regulated areas of offshore waters (3 to 20 miles offshore), for the purposes of educational live display in a deep-water exhibit ("aquarium purposes") and associated research (e.g. husbandry captive research and/or culturing) at Monterey Bay Aquarium, Monterey, CA.

This permit, signed by an authorized representative of the Department of Land and Natural Resources (the Department), authorizes the permittee, and assistants designated on the final page(s) of, or attachments to, this permit, to engage in activities otherwise prohibited by law, subject to the conditions, which **TAKE, CATCH, POSSESS OR TRANSPORT** certain aquatic life from waters of the State, as follows:

Spc. Code	Spc. Description	Spc. Amt.	Morphology	Spc. Size	Island	Location	Comments
Regulated organisms							
5117 5116 5338 5336	Scyllaridae and Palinuridae spp./ lobster spp.) Panulirus penicillatus,/ green spiny lobster (tufted spiny lobster) Panulirus marginatus / Black leg spiny lobster Scyllarides squammosus/ Scaly Slipper lobster Scyllarides haanii/ Ridgeback Spiny Lobster See Appendix at end of permit for species list/table & amounts	Up to 400	Individuals	Individuals **(planktonic/ larval size)** Any available info on species, amounts or sizes will be specified in final report	Hawaii	120-Hawaii Offshore (2 to 20 miles offshore) (Locations to be specified in final report)	Sampling will occur offshore of Kaloko-Honokōhau, Hawaii (2 to 20 miles offshore), at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth or in areas further offshore Scyllaridae and Palinuridae spp./lobster spp. will be collected; **zooplanktonic/ larval stage will be collected** Note: Up to a total of 750 individuals will be collected across both the regulated lobster species and non-regulated spp. of gelatinous zooplankton, zooplankton and jellyfish

Continued from previous page							
Non-regulated organisms							
25710	Non-Regulated Invertebrates (Various spp.) Various species of invertebrates, (**consisting of various spp. of gelatinous zooplankton, zooplankton and jellyfish**) will be collected; may include non-regulated individuals of Scyllaridae and Palinuridae spp. See Appendix at end of permit for species list/table & amounts & **example photos**	Up to 750 (Various sizes)	Individuals	Individuals **(various sizes; planktonic though adult stages)** Any available info on species, amounts or sizes will be specified in final report	Hawaii	120-Hawaii Offshore (2 to 20 miles offshore) (Locations to be specified in final report)	Sampling will occur offshore of Kaloko-Honokōhau, Hawaii (2 to 20 miles offshore), at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth or in areas further offshore **Various spp. of gelatinous zooplankton, zooplankton and jellyfish will be collected; planktonic though adult stages** Note: Up to a total of 750 individuals will be collected across both the regulated lobster species and non-regulated spp. of gelatinous zooplankton, zooplankton and jellyfish, across various offshore/blue water areas

I. SPECIAL CONDITIONS

A. Location

All activities will occur in areas of offshore waters (2 to 20 miles offshore) of Kaloko-Honokōhau, Hawaii, including a regulated area (West Hawaii Regional Fishery Management Area – "WHRFMA" – in areas in the WHRFMA in the 2-3 mile zone offshore outside of all smaller FMA, MLCD, FRA and NRA) and the non-regulated areas of offshore waters (3 to 20 miles offshore). The Monterey Bay Aquarium's (MBA) Midwater team and Dive Office will conduct a series of blackwater SCUBA dives using a bluewater rig to collect organisms at a collection location ~2 miles off of Honokōhau Small Boat Harbor, Hawaii at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth or in areas further offshore (2 to 20 miles offshore). Conducting the dives in the regulated area of the WHRFMA is essential due to logistical limitations on where blackwater diving operations can be safely conducted, as well as the proximity to the temporary holding facility located at the Hawai'i Natural Energy Laboratory of Hawai'i Authority (NELHA) – in addition this area offers uniquely favorable conditions for accessing gelatinous zooplankton. Live collections will be transported to a temporary holding facility at Hawaii's Natural Energy Laboratory of Hawaii Authority (NELHA), for acclimation, and then transported the Monterey Bay Aquarium, Monterey, CA. for educational display, husbandry research, and propagation efforts. Activities under this permit is limited to waters of the State of Hawaii and is expressly prohibited at the following locations unless listed in **bold** font:

Island of MAUI	Island of KAUA'I	Island of HAWAI'I
Ahihi-Kinau NAR[3]	Hā'ena CBSFA	Areas within the West Hawaii
Honolua-Mokulē'ia Bay MLCD[2]	Hanamā'ulu Bay and Ahukini	Regional Fishery Management Area:
Kahekili FMA[1]	Recreational Pier FMA	(1) Ka'ūpūlehu Marine Reserve
Kahului Harbor FMA	Kapa'a Canal FMA	(2) North Kohala Fish FRA[6]
Kīpahulu CBSFA[8]	Kōke'e PFA	(3) Puakō-'Anaeho'omalu FRA
Molokini Shoal MLCD	Nāwiliwili Harbor FMA	(4) Kaloko-Honokōhau FRA
	Port Allen FMA	(5) Kailua-Keauhou FRA
Island of LANA'I	Waika'ea Canal FMA	(6) Red Hill FRA
Mānele Harbor FMA	Wailua Reservoir PFA	(7) Nāpo'opo'o-Hōnaunau FRA
Mānele-Hulopo'e MLCD	Waimea Bay & Recreational Pier FMA	(8) Ho'okena FRA
		(9) Ka'ohe Beach FRA (Pebble Beach)
Island of MOLOKA'I		(10) Miloli'i FRA (part of Miloli'i CBSFA)

Kaunakakai Harbor FMA	Island of HAWAI‘I	(11) Kikaua Point-Mākole‘ā Point NRA[7]
	Hilo Harbor, Wailoa River &	(12) Nenue Point–Kealakekua Bay NRA
Island of KAHO‘OLAWE	Wailuku River FMA	(13) Hanamalo Point–Kanewa‘a Point NRA (part
Restricted 2 nautical mile boundary - Zone	Kailua Bay FMA	of Miloli‘i CBSFA)
A and Zone B surrounding Kaho‘olawe	Kawaihae Harbor FMA	(14) Kanonone–Kalīpoa NRA
	Kealakekua Bay MLCD	
Island of O‘AHU	Keauhou Bay FMA	
Ala Wai Canal FMA	Kīholo Bay FMA	**Island of HAWAI‘I**
Coconut Island MLR[4]	Kona Coast FMA (Wawāloli Zone,	**West Hawaii Regional Fishery**
‘Ewa LMA[9]	Papawai Bay Zone, Kailua Bay	**Management Area (WHRFMA):**
Hanauma Bay MLCD	Zone, Red Hill Zone)	
He‘eia Kea Wharf FMA	Old Kona Airport MLCD	**Other areas in the WHRFMA outside of all**
Honolulu Harbor FMA	Lapakahi MLCD	**smaller FMA, MLCD, FRA and NRA**
Kapālama Canal FMA	Miloli‘i CBSFA	
Maunalua Bay FMA	Puakō Bay and Puakō Reef FMA	
Paikō Lagoon Wildlife Sanctuary	South Kona FMA (partly in Miloli‘i	
Pōka‘ī Bay FMA	CBSFA)	
Pūpūkea MLCD	Waiākea PFA	
Waialua Bay (Hale‘iwa Harbor) FMA	Waialea Bay MLCD	
Waikīkī-Diamond Head Shoreline FMA		
Waikīkī MLCD		
Wahiawā PFA[5]		

Table 2 – Regulated Areas – Definitions: FMA[1] = Fisheries Management Area, MLCD[2] = Marine Life Conservation District, NAR[3] = Natural Area Reserve (DOFAW), MLR[4] = Marine Laboratory Refuge, PFA[5] = Public Fishing Area, FRA[6] = Fish Replenishment Area, NRA[7] = Netting Restricted Area, CBSFA[8] = Community-Based Subsistence Fishing Area, LMA[9] = Limu Management Area

B. **Activities.** Permittee and authorized assistants are authorized to collect, possess or transport regulated organisms (lobster spp. / Scyllaridae and Palinuridae spp.; larval/zooplanktonic stage) and non-regulated organisms (various spp. of gelatinous zooplankton and zooplankton [larval/zooplanktonic stage] and jellyfish [larval though adult stages]), as listed in Table 1 on Page 1, in areas of offshore waters (2 to 20 miles offshore) of Honokōhau, Hawaii, including a regulated area (West Hawaii Regional Fishery Management Area – “WHRFMA” – in areas in the WHRFMA in the 2-3 mile zone offshore outside of all smaller FMA, MLCD, FRA and NRA) and the non-regulated areas of offshore waters (3 to 20 miles offshore), using non-regulated gear (jars). The objective of the activity is to collect gelatinous zooplankton, zooplankton and jellyfish for the purposes of educational live display in a deep-water exhibit (“aquarium purposes”) and associated research (e.g. husbandry captive research and/or culturing) at Monterey Bay Aquarium, Monterey, CA. The collections will support the established *Into the Deep* Exhibition that opened in 2022 at the aquarium, featuring the mid-water and deep-water marine species.

***Note:** The collection activities as proposed for this project fall under activities described under "Aquarium purposes" as defined under §13-60.4-3: Aquarium purposes means to hold aquatic life alive in a state of captivity, whether as pets, for scientific study, for public exhibition, for public display, or for sale for these purposes.

Collections and Methods.

Methods. The permittee and authorized assistants (the MBA’s Midwater team and select Kona Honu staff) will charter a vessel from Kona Honu Dive Charters in Honokōhau Small Boat Harbor to conduct a series of blackwater SCUBA dives ~2 to 20 miles off of Honokōhau Small Boat Harbor, Hawaii (at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth), using a bluewater rig to collect gelatinous zooplankton in small plastic jars. After collection, MBA staff will transport the jars with specimens to MBA's rented laboratory space at the Natural Energy Laboratory of Hawaii Authority (NELHA) in Kailua-Kona, where they will be held for 3-5 days in chilled seawater systems. After temporary holding at NELHA, the MBA staff will then transport the specimens (in jars placed in coolers) via commercial airlines back to MBA (a facility with expertise in culturing

and maintaining these organisms) where they will be placed in MBA seawater system holding tanks until acclimated and then placed on exhibit or utilized for culture work conducted by MBA staff.

Collections. Permittee and authorized assistants will annually collect up to seven hundred and fifty (750) individuals (various spp. and sizes) of gelatinous zooplankton, and zooplankton, (regulated and non-regulated – see Table 1 and Appendix for regulated spp.) and jellyfish by hand, using 400ml, 1.0L, and 1.5L plastic jars to contain individual specimens. Collection amounts of each species of organism will vary depending on incidence or need (in terms of educational exhibits or culturing/ research) but will range from fifty (50) up to two hundred (200) individuals of each species (see Appendix for amounts per type of organism). Note: The species list is primarily made up of "gelatinous zooplankton" (defined as organisms that remain gelatinous their whole lifecycle from juvenile to adult), of which both adults and juveniles will be collected, "zooplankton" (consisting of organisms that are gelatinous in their larval/planktonic stage, but may settle out to the substrate to become hard-bodied organisms when they mature, of which larval/planktonic stages will be collected; "jellyfish", of which larval through adult life stages may be collected. Note: Scyllaridae and Palinuridae spp. / lobster spp. may consist of the following regulated species: *Panulirus penicillatus* / green spiny lobster (tufted spiny lobster), *Panulirus marginatus* / Black leg spiny lobster, *Scyllarides* squammosus / Scaly Slipper lobster and *Scyllarides* haanii / Ridgeback Spiny Lobster, and non-regulated invertebrates may consist of non-regulated individuals of Scyllaridae and Palinuridae spp. / lobster spp.

Collections planned for 2026 will consist of similar species that have been collected in the past; past collections have included individuals of the various species of gelatinous zooplankton, zooplankton and jellyfish listed below (see species list/table at end of permit for potential amounts per species or family/genus and **see Appendix for photos of examples of organisms to be collected**). **Note**: Not all species or amounts listed in the Appendix of this permit will be collected – amounts per species are requested in anticipation that some species may not be present during certain dives or at certain locations; in these cases, more of another species may be collected. The maximum amount of individuals to be collected during the annual permitting period will be seven hundred and fifty (750) individuals of gelatinous zooplankton, zooplankton, jellyfish (various spp. and sizes); species may include the following: Phyllosoma - Lobster (Family *Scyllaridae*; regulated and non-regulated spp. - larvae), Phyllosoma - Lobster (Family *Synaxidae*; larvae), Phyllosoma - Lobster (Family *Palinuridae*; regulated and non-regulated spp. - larvae), Commensal Crabs (*Chyrostylidae* spp.), Sea Spiders (Class *Pycnogonidae*), Pelagic Nudibranch (*Phylliroe* spp.), Larvaceans (*Oikopleura* spp.), Larvaceans (*Bathochordaeus* spp.), Larvaceans (*Fritillaria* spp.), Palm Gooseberry (*Hormiphora palmata*), Sea Gooseberry (*Hormiphora* spp.), Venus Girdle (*Cestum veneris*), Ctenophore (*Velamen parallelum*), Lobate Ctenophore (*Eurhamphaea vexiligifera*), Amphipod (*Phronima* spp.), Amphipods (Order *Amphipoda*), Amphipods (Family *Hyperiidae*), Isopods (Order *Isopoda*), Siphonophores (Order *Siphonophora*) Siphonophore - Hula Skirt (*Physophora hydrostatica*), Siphonophore (*Diphyes* spp.), Siphonophore (*Forskalia* spp.), Siphonophore (*Agalma okeni*), Siphonophore (*Halistemma* spp.), Siphonophore (*Apolemia* spp.), Siphonophore (*Sulculeolaria* spp.), Siphonophore (*Athorybia rosacea*), Siphonophore (*Rhizophysa* spp.), Coronamedusa (*Atolla* spp.), Coronamedusa (*Atorella* spp.), Coronamedusa (*Nausithoe* spp.), Coronamedusa (*Periphylla* spp.), Hydromedusa (*Merga* spp.), Hydromedusa (Order *Trachymedusae*), Hydromedusa (Zancleopsis spp.), Hydromedusa (Aegina spp.), Rainbow tasseled Jellyfish (Thysanostoma loriferum), Crown Jellyfish (*Cephea cephea*), Mauve stinger (*Pelagia flaveola*), Swimming Comb Jelly (*Ocyropsis* spp.), Cubozoan Jelly (*Alatina alata*), Comb Jelly (*Callianira* sp.), Spotted Comb Jelly (*Leucothea* spp.), Cigar Comb Jelly (*Beroe* spp.), Sea Butterfly (*Clio pyramidata*) and Sea Butterfly (*Clio cuspidate*).

Gelatinous zooplankton, zooplankton, and jellyfish have an extremely patchy distribution in the water column and the types of each species present, and the numbers of any particular species collected on any single dive will vary depending on the water mass and migration of different species. The collections during each dive conducted by the MBA are anticipated to have a negligible impact on the biodiversity or density of species in Hawaiian waters as they will be a select subsample of the amount and type which are present throughout the islands. The MBA anticipates deploying 5 to eight (5-8) stationary divers in the water (at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth) for forty to seventy (40 – 70) minutes per dive; each diver can only collect

what arrives in front of them within arm's reach. The currents and drift of the charter vessel will put the divers in a different location at the end of the dive from when they first entered the water; thus, the collections are distributed over a large location and limited to the availability at the time and location and collection reach of the diver. The divers will be moving with the current, as will the specimens, therefore there should be no cumulative impacts on any particular species (i.e. no collections will occur in one concentrated location).

Some of the jellyfish specimens will be placed into MBA's *Into the Deep* exhibit, which opened to the public in April of 2022. MBA biologists will also continue on-going efforts to culture specimens in-house for future use in their *Into the Deep* exhibit. The Aquarium will work to integrate Hawaiian-specific information into exhibits that display organisms that are sourced from Hawaii, to provide information on a species significance within the Hawaiian seamounts, pelagic ecosystems or culture (if applicable), or other relevant information such as the problems these organisms may face with climate change, environmental degradation, overfishing etc., as educational outreach. Black water dives using blue water rigs will take place ~1900-2100 PST. Activities may be conducted during a few different collection periods/trips throughout the year (permitting period); dates may vary due to delays or interruptions.

Research and Conservation Activities at Monterey Bay Aquarium. In addition to displaying organisms and providing educational opportunities (free of charge) for more than 81,000 students a year (many from low-income communities), the Monterey Aquarium also conducts various research (including life history, propagation techniques and husbandry). Monterey Bay Aquarium helped create momentum for the establishment of the Monterey Bay National Marine Sanctuary in 1992, one of the largest marine protected areas in the United States. Staff scientists have authored scientific publications involving sea otters, great white sharks, and bluefin tunas, which are important species in the northern Pacific Ocean. In addition to other animals, work has been published in the areas of veterinary medicine, visitor studies, and museum exhibition development. Among over 200 institutions accredited by the Association of Zoos and Aquariums, Monterey Bay Aquarium ranked 10th in scientific publication activity between 1993 and 2013. For Monterey Bay Aquarium's captive animal propagation efforts, the Association of Zoos and Aquariums has granted two awards, including one for the aquarium's work with purple-striped jellies in 1992. It has also received the association's general conservation award for its Sea Otter Research and Conservation Program.

The Monterey Bay Aquarium (MBA) and the Monterey Bay Aquarium Research Institute (MBARI) are partner organizations collaborating on several research, education and ocean conservation projects. As discussed above, the MBA recently opened the amazing *Into The Deep* Exhibition in 2022 to more than 1,000,000 in-person visitors/year with large numbers of virtual visitors as well. MBARI is a private non-profit research organization that, together with their education and conservation partner, the Monterey Bay Aquarium, and the aquarium's principal funder, the David and Lucile Packard Foundation, strives to provide the best science, engineering, and outreach tools to the ocean science and conservation community. As part of the collaboration, MBA and MBARI are working together to bring back gelatinous (jellylike) organisms from Hawaii's offshore waters for husbandry research and for the *Into The Deep* Exhibition.

MBA biologists have developed animal care methods for jellies that are now used by other aquariums and scientists worldwide (Raskoff et al 2003) and have described the life cycles of seven species of jellies displayed in the Aquarium: the cross jelly (Mitrocoma cellularia, Widmer 2004), the egg-yolk jelly (Phacellophora camtschatica, Widmer 2006), the flower hat jelly (Olindias formosus, Patry et al 2014), the Pacific sea nettle (Chrysaora fuscescens, Widmer 2008) and the purple-striped jelly (Chrysaora colorata, Sommer 1993), Earleria corachloeae (Widmer 2011) and Earlieria purpurea (Widmer, Cailliet and Geier 2010). The Aquarium cultures jellies to minimize the need to collect from the wild and to contribute to the natural history and diversity knowledge of these important animals.

Most recently, Aquarium biologists in collaboration with the University of Miami, developed the first mass culture techniques for ctenophores, or comb jellies (Patry et al 2020 and Presnell et al 2022) which has led to renewed interest in the biology of ctenophores and a slew of important findings in evolutionary biology and biodiversity

(Schultz et al 2021, Bessho-Uehara et al 2020, Johnson et al 2022, Presnell and Browne 2021, Burkhardt et al 2023, Dunn 2023). Biologists here have applied these or adapted similar techniques to culture and/or display several Hawaiian species of ctenophores, siphonophores and other gelatinous zooplankton; *Hormiphora sp., Pelagia flaveola, Nausithoe sp., Atorella sp., Eurhamphaea vexilligera, Rhizophysa eysenhardtii, Athorybia rosacea, Merga costata* and achelata (various larvae). The MBA hopes to continue this work over the coming years as culturing these species is not only critical to the sustainability of their collection at the Aquarium but a vital part of their mission to inspire conservation of the ocean.

Links to Videos, MBA and MBARI websites:
https://www.montereybayaquarium.org/
Black Water Diving Videos
https://www.mbari.org/

Consultation, Engagement and Outreach with Communities, DAR, and Academic Institutions. The Monterey Bay Aquarium (MBA) and the Monterey Bay Aquarium Research Institute (MBARI) have conducted extensive outreach and engagement with both the Division of Aquatic Resources (DAR) and community stakeholders in support of the SAP (Special Activity Permit) application process. MBA engaged with the local West Hawai‘i Community by offering educational presentations at NELHA, consultations with local groups such as Aha Moku Council, Miloli‘i Community-based Subsistence Fishing Area, and Hui Aloha Kīholo, and educational outreach at UH Hilo, West Hawai‘i Explorations Academy (etc.). Conversations with DAR staff from O‘ahu and West Hawai‘i have guided the engagement and permitting process. Letters of support have been secured from West Hawai‘i community, cultural, and research stakeholders, which include Dr. Amy Moran, University of Hawai‘i, and West Hawai‘i Explorations Academy.

MBA has conducted the following consultation, engagement, and outreach activities:

DAR and DLNR Meeting (O‘ahu – December 12, 2024)

- John O’Sullivan and George Peterson (MBA), and Dr. George Matsumoto (MBARI), met in person with DAR staff—Brian Neilson, David Sakoda, and Catherine Gewecke—and Dawn Chang, Director of the Department of Land and Natural Resources (DLNR). The purpose of this meeting was to review and discuss the Monterey Bay Aquarium's SAP application and gather agency input.

Community Consultation (Keauhou – February 27, 2025)

- An in-person meeting was held with John O’Sullivan and George Peterson (MBA); Charles “Uncle Charlie” Young (Aha Moku Council); U‘ilani Naipo (Miloli‘i Community-Based Subsistence Fishing Area); and Chad Wiggins (Executive Director, Hui Aloha Kīholo). The group outlined key steps for improving the SAP application, including enhanced community consultation and cultural engagement. The meeting notes were reviewed and approved by participants before being submitted to DAR.

Public Presentation (NELHA – July 16, 2025)

- Dr. George Matsumoto, Senior Education and Research Specialist from MBARI, with assistance from George Peterson and John O’Sullivan, delivered a public presentation from the offices of NELHA on the history and future of blackwater diving collection off Kona. The event was attended by 15 people in person and over 28 participants via Zoom. A Q&A session followed the presentation and community feedback was overwhelmingly positive (see Appendix for photo example of presentation poster).

Summary of Engagement Activities

- Ongoing collaboration with DAR staff on Oʻahu and in West Hawaiʻi to ensure compliance and transparency throughout the permitting process.

- Engagement with key community stakeholders and cultural representatives, including:

    - Aha Moku Council
    - Miloliʻi Community-Based Subsistence Fishing Area
    - Hui Aloha Kīholo

- Educational outreach efforts to:

    - University of Hawaiʻi
    - West Hawaiʻi Explorations Academy

- Letters of support received from:

    - Dr. Amy Moran, University of Hawaiʻi
    - Una Burns, West Hawaiʻi Explorations Academy

These efforts underscore the commitment of MBA and MBARI to cultural sensitivity, community collaboration, and responsible scientific exploration in West Hawaiʻi.

Collection Plans/Collection Reports (see section D. below): Collectors will submit monthly collection plans and collection reports to verify actual numbers and sizes of collected organisms that are reviewed and approved by DAR biologists on a monthly basis or for a specific trip (if select collection trips will occur). **Incidental mortality.** Incidental mortality of target and non-target organisms (various spp. and sizes) may occur in the field or while or while in captivity (target organism). Researchers will report any incidental mortalities in monthly collection report and final report. If a repeated occurrence of mortality occurs, DAR may request to review the method and see if modifications can be made to the method to reduce mortality. DAR recommends changing sampling location if mortality occurs. **Bycatch.** Methodology for collection of samples may have unintended by-catch. Permittee or authorized assistants will attend gear at all times and release/return all unintended by-catch as quickly as possible to the marine environment (if applicable).

Distribution of Samples/Invasive Species, Disease and Parasites. The permittee will mitigate for the spread of invasive species, disease and parasites between sampling areas (if sampling in environmentally different areas) by utilizing best management practices, including but not limited to, ensuring that all organisms, hand tools or collection bags/containers are inspected and absent of any non-natives or invasive organisms before transportation to lab aquariums (not applicable where invasive species, disease and parasites are target species for collections) or before collection in a new area, and ensuring that all gear is disinfected or sterilized between collection areas (**see General Conditions O. Other Collection Guidelines: Aquatic Invasive Species for more guidelines and conditions**). Efforts will be made by permittee and authorized assistants to ensure that collection of samples is conducted in such a manner as the process does not result in any additional harm to surrounding organisms or environment. **Permittee and authorized assistants will implement collection/sampling design that removes a sustainable proportion from the local population of target organisms and make efforts to distribute collection activities across shoreline/reef flat/benthic areas, so as not to consolidate the impacts of collection in one location (if applicable/if collecting samples).** Discretion should be used to avoid conflicts with fishers and others during authorized activities. Efforts will be made by permittee and authorized assistants to communicate with the public that have inquiries about the collection activities or methodology. Permittee and authorized assistants will clearly state the overall objective of the project, that these activities require permits, and that the methods the permittee and authorized assistants are employing are not approved for recreational fishing but research, education, management or propagation ONLY.

C. Gear and Methods. This permit authorizes the following use of regulated and non-regulated gear and methodology:

Regulated gear: n/a

Non-regulated gear: Plastic collecting jars: 400ml, 1.0L, 1.5L or small plastic bags and containers to hold sensitive specimens.

D. Collection, Monthly or Trip Plans/Reporting, Use of Organisms.

1. COLLECTING PRACTICES: The permittee is responsible for persons engaging in activities under this permit behaving professionally and responsibly, in manner which does not generate conflict with public or private sectors, including but not limited to the following: local communities, fishing or dive-tour industries, etc.

   a) Collecting activities under authority of this permit must be supervised directly, on site, by the permittee: George Peterson or authorized assistants (MBA Staff: Scott Chapman, Andrew Morgan, James Bonovich, Sara Arguera (Namay), Meriah Long, Tori Bartindale – Guffey, Wyatt Patry, Evan Firl, Michael Howard, Thomas Knowles, MacKenzie Bubel, Ellen Umeda, George Matsumoto (MBARI), Drew Bewley (MBARI), Ray Direen, Manny Ezcurra, Scott Reid; Kona Honu staff: Jeff Milisen, Andrew Feifarek, Sarah Milisen).

   b) Collectors should be hired under a separate contract/agreement with the organization or permittee which obtains the SAP. The collector will be regarded as the organization's staff and will provide services as a collector to the project. Collectors need to be listed as an authorized assistant under the SAP.

   c) Collectors shall not collect fish opportunistically and offer them to various organizations. No collections should occur outside of the species/amounts/size classes that have been requested and approved under an SAP.

   d) Boats and vehicles used or hired for collecting under this permit must be clearly marked with inscription or sign bearing the permittee's affiliation, 'Monterey Bay Aquarium' or a flag bearing a unique identifier number issued by DAR.

   e) Every net or trap (if applicable), except for hand-nets, used for collecting under this permit, regardless of mesh-size, must bear a tag or inscription showing the name of the permittee's affiliation, "Monterey Bay Aquarium", and the number of this permit, 'SAP 2026-35'.

   f) Except as specified expressly in the permit or amendment to the permit and approved collecting plan, no organism unlawful for taking or possession by reason of size, season or sex, under statute or administrative rule, may be collected or displayed under this permit.

   g) The Division may require the permittee to accommodate presence of an observer specified by the Division.

   h) The permittee will accommodate periodic site visits by the Division either immediately before or throughout the permitting period (if requested);

   i) Mass mortality - the permittee must notify DAR within one day of:

i) Any instance of major outbreak of disease or instance of mass mortality in a display or holding tank. "Mass Mortality" may be defined as unusual or large amounts of organisms (groups) perishing or repetitive cases of mortality due to activities such as collection or transportation practices or tank conditions (e.g. water quality/disease issues). "Unusual or large amounts" of organisms may be defined as more than the regular occurrence of incidental mortality of limited amounts of organisms that may occur due to natural causes (e.g. old age) or select incidences of stress, predation, lack of acclimation to captivity, of single organisms, etc.

ii) Monterey Bay Aquarium will provide information on measure(s) taken to control such disease or cause of mortality, and, as appropriate, measures taken to prevent or reduce release of pathogen or cause into ocean waters through the permittee's outfall, and;

iii) Monterey Bay Aquarium will provide information on plan(s) for any additional such control and prevention measure(s).

2. **COLLECTING PLANS**: Collecting activities authorized under this permit must be approved in advance, by the Division's written approval of a collecting plan for each month or each specific trip (if select collection trips will occur), in a form specified by the Division.

a) Each collecting plan must:

i) Describe species and quantities intended for collection at specific locations, by specific methods, within specific date-ranges;

ii) Be submitted to the DAR office (Oahu & Hawaii) for approval (West Hawaii: Chris Teague - Aquatic Biologist; email: christopher.h.teague@hawaii.gov) and cc DAR Honolulu office (Oahu: email: Catherine Gewecke - Aquatic Biologist; email: catherine.a.gewecke@hawaii.gov or dar.sap@hawaii.gov).

b) The Division may add conditions specific to particular species, locations, times, or methods proposed in a collecting plan.

c) Organisms approved for collection in one month but not actually collected, do not remain approved for collection in any subsequent month unless requested and approved again in a collecting plan for the subsequent month.

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4. **USE OF ORGANISMS**: Organisms taken from Hawai'i waters under authority of this permit may be used only for research, education/display or propagation at Monterey Bay Aquarium, except as authorized by prior written approval of the Division):

a) Organisms collected under authority of this permit may not be used for personal consumption or sale;

b) Written approval must be obtained from the Division prior to:

i) Purchasing or any other acquisition of regulated organisms (regardless of origin) from any other party;

ii) Transporting any organisms (regulated or non-regulated) between islands;

c) The permittee may not convey in any fashion (including, but not limited to, exchanging, donating, selling, trading, giving or loaning) any organism collected under this permit to any person, party or organization in Hawai‘i which does not already have a permit from the Department authorizing possession of same, unless authorized by this permit. If propagation is occurring, this condition may not apply to future progeny of organisms collected under this permit (see Section B Activities – Note – if applicable).

d) Signage approved by the Division must accompany any display(s) at Monterey Bay Aquarium (if open to the public), to communicate requirement for special activity permit to take and possess regulated organisms.

5. **MONTHLY COLLECTING REPORTS**: The permittee must provide to the Division's Honolulu office and to DAR Maui monthly, written reports of collecting activity carried out under this permit:

a) Each report, in form specified by the Department (e.g. include genus/species or other taxonomic designation acceptable to the Division, quantities and sizes collected (or names and quantities of organisms purchased or otherwise acquired), collection locations, dates and methods of collection, disposition of any specimens not maintained at Monterey Bay Aquarium (e.g. discarded on the spot, returned to the ocean, died during collection or in captivity);

b) Reports should include names of collectors; collectors must be listed as authorized assistants on the permit;

c) Each monthly or trip-specific (if select collection trips will occur) collecting report is due to the DAR office (Oahu & Hawaii) for approval (West Hawaii: Chris Teague - Aquatic Biologist; email: christopher.h.teague@hawaii.gov) and cc DAR Honolulu office (Oahu: email: Catherine Gewecke - Aquatic Biologist; email: catherine.a.gewecke@hawaii.gov or dar.sap@hawaii.gov) within five working days after the last day of the month for which it reports;

d) Upon request of the Department, the permittee will furnish with any monthly report an inventory of organisms collected under this permit and held at Monterey Bay Aquarium.

E. **Annual Report:** Upon 90 days post expiration of the permit or 30 days prior to expiration of the permit (depending on **renewal** or **non-renewal** status), the permittee must provide to DAR a final written report summarizing the results of the collection activity carried out under this permit and (if available/applicable) analysis of the data.

1. The annual report should provide a written description of the activity and objective and a written explanation as to how the collection of or activity with a fully protected or regulated marine species for scientific, education, management or propagation purposes is benefiting the State of Hawai'i in general and specifically, the improved management of the species or related species.

2. The annual report must describe the following, in form specified by the Department (reporting template can found on DAR permitting portal or be requested at dar.sap@hawaii.gov for info from #2. a. & c. and #3) – include all other info (#1, #2 b. & d. into a PDF report) – **consult permit coordinator for most up-to-date reporting template (if necessary)**:

   a. **Species name and total quantities and sizes** of all regulated and non-regulated specimens collected under this permit.

   b. **Results of chemical, genetic, physiological, histological, pathological, statistical or other analysis of data** (if possible/applicable).

   c. **GPS coordinates (decimal degrees) of location of each sample taken or action conducted and associated geographic location** (e.g. windward side or east side of Patch Reef 8, or north side of Lilipuna Pier). Multiple samples collected in one single area can be geo-referenced by a single GPS point and associated geographic location.

      If GPS is not available: Make accurate note of your sampling location in field and obtain GPS location from Google Earth after field sampling **(instructions are for the downloaded program - Google Earth Pro, not web version)**:
      :

      i. Click "Tools" in the top line menu and open Options.

      ii. In the "3D View" tab, **find** the "Show Lat/Long" section. Change the default from Degrees, Minutes, Seconds to **Decimal Degrees**.

      iii. Next, click the pushpin icon in the menu; click and drag the pushpin that appears to the point on the map from which you wish to obtain a GPS coordinate:

      (e.g.: Lat: 21.441646, Long: -157.799076)

      iv. Enter GPS coordinate into spreadsheet with associated sampling information (species, amount, size).

   d. **Photo-documentation** of a representative example of organisms collected, methodology, and gear:

      i. Photo-documentation of a **representative example of gear (e.g. plastic collecting jars: 400ml, 1.0L, 1.5L or net, etc.),** photo-documentation of a **representative example of an average collection of organisms for different types of gear,** photo-documentation of **field operations or collectors conducting collections in field (if possible)**, photo-documentation of **representative example of incidental mortality or by-catch (if applicable),** photo-documentation **of tanks or aquaria organisms are housed in,** photo-documentation **of select organisms in holding tanks / aquaria or in exhibit.**

      ii. Each representative example should include the following photos:

For gear (e.g. plastic collecting jars: 400ml, 1.0L, 1.5L or net, etc.), photo-documentation should include: one (1) **photo of each piece of gear (with scale for size);**

For average collection of organisms for different types of gear, photo-documentation should include: one (1) **photo of collection of organisms for each different type of gear (with scale for size);**

For field operations or collectors conducting collections in field (if possible), photo-documentation should include: **any photos that can be captured of field operations or collectors conducting collections underwater (if possible)**;

For by-catch, photo-documentation should include: **photos of various incidental mortality or by-catch (if applicable; without causing by-catch mortality if live);**

For tanks or aquaria organisms are housed in, photo-documentation should include: one (1) **photo of example of different types of tanks or aquaria organisms are housed in (with scale for size);**

For example of select organisms in Deep Water Exhibit (after construction), photo-documentation should include: one (1) representative **photo per species collected (either in collecting jars, in holding tanks at NELHA or in Deep Water Exhibit)**.

3. An inventory (species list) of organisms (dead or alive) present at the facility or with the permittee the end of the report period, in form acceptable to the Division, must accompany the annual report;

4. The annual report is due at the Division's Honolulu office one month (30 days) before expiration of the permit if renewal is needed or within three months (90 days) after expiration of the permit if renewal is not needed or as otherwise instructed by the Division.

F. **Use of Organisms, Parts of Organisms, Tissue Samples or other Aquatic Resources.** The permittee may not convey in any fashion (including, but not limited to, selling, trading, or giving) any organisms, parts of organisms, tissue samples or other aquatic resources to any person or party in Hawai`i that does not already have a permit from the Department authorizing possession of same and without written approval from DAR. Organisms taken under authority of this permit may be used for scientific study or educational purposes **ONLY**, except as authorized by prior written approval of DAR.

a. This permit authorizes the permittee and authorized assistants to transport organisms listed in Table 1, within or outside of Hawai'i to the following institutions and authorizes the following institutions to receive organisms listed in Table 1 from the permittee and authorized assistants:

   i. Natural Energy Laboratory of Hawaii Authority (NELHA), Kailua-Kona, HI
   ii. Monterey Bay Aquarium, Monterey, CA

II. GENERAL CONDITIONS:

A. This permit does not make the Department of Land and Natural Resources or the State of Hawaii liable in any way for any claim of personal injury or property damage to the permittee or assistants which may occur during any activity conducted under this permit; moreover, the permittee and all assistants agree to hold the State harmless against any and all claims of personal injury, death or property damage resulting from activities of the permittee or any assistant.

B. This permit conveys a privilege to engage in only those activities under the jurisdiction of the Department of Land and Natural Resources. The permittee is responsible for complying with all applicable County, State, and Federal requirements. The permit does not convey any privilege of access over or through private property.

C. The permittee and each assistant are individually responsible and accountable for their actions while conducting activities authorized under this permit; additionally, the permittee is responsible and accountable for the actions of the permittee's assistants.

D. This permit is not transferable or assignable. Any person whose name does not appear on this permit and is conducting any activity described herein is subject to prosecution for violation of State laws.

E. The permittee may request changes to the permit. Any such request to make changes to the permit must be made in writing and received by the Department at least thirty (30) days prior to the change. The addition of new assistants will require each individual to sign the Attachment on page 17, 18 or 19 stating that they have read, understood, and agree to abide by all general and special permit conditions. No change may be implemented without written approval from the Department.

F. The permittee may request the following changes; no change may be implemented without written approval from the Department:

1. Add assistants to the permit;
2. Add another permittee or replace an existing permittee in the manner stated above; and
3. Change the activities authorized under this permit.

G. The permittee or their assistant(s) must have with them a copy of this permit while conducting activities authorized by this permit.

H. This permit authorizes collection of organisms protected by Federal law only with prior appropriate Federal authority, which must be described on Page 1 of this permit (if applicable).

I. This permit does not authorize the sale of any collected organism.

J. This permit expires on the date indicated on Page 1. **If no renewal is needed**, the permittee must email a PDF of this permit with all signature sheets (Cathy Gewecke: catherine.a.gewecke@hawaii.com or dar.sap@hawaii.gov) and additionally email a **PDF version of a final report** (to catherine.a.gewecke@hawaii.gov or dar.sap@hawaii.gov) with complete information on all activities authorized under this permit (see Special Conditions, **Section E. Annual Report**) within **three months (90 days) after** the expiration date. **If renewal is needed**, permittee must submit a **PDF version of a final report** to the Division **one month (30 days) prior** to the expiration date for DAR biologists to review, in addition to turning in expired permit with signatures no later than the regular **three months (90 days) after expiry date**. If complete report cannot be submitted **one month (30 days) prior** to the expiration date, the permittee will submit a short synopsis of the research conducted in the past year (PDF version- **one month [30 days] prior** to the expiration date) including information on activities conducted and quantities [genus / species / collection locations etc.] (on excel reporting sheet), and submit full report no later than the regular **three months (90 days) after expiry date**.

K. The permittee and assistants agree to provide access to data obtained under authority of this permit upon request of the Division of Aquatic Resources, and to provide to the Division a copy of each report, published for distribution, prepared with data obtained under this permit. The permittee agrees to provide the Division of Aquatic Resources access to organisms obtained and held under this permit for on-site inspection.

L. The permittee agrees to notify the island office of the Division of Conservation and Resources Enforcement (DOCARE – Oahu Central Office: 808-643-3567 or DOCARE – Kona Office - 808-327-4961) at least 24 hours prior to any authorized activity being conducted in the field and immediately after returning to shore with organisms collected under this permit, to give DOCARE the opportunity to conduct an on-site inspection (if determined necessary). See section **O. Other Collection Guidelines** (below) for additional requirements.

M. A violation of any terms or condition of this permit or any violation of State law not covered by this permit may result in revocation of the permit and other penalties as provided by law. In addition, the Department may consider any such violation as grounds for denying any future application for this or any other permit issued by the Department.

N. Coral Activities: Activities under this permit shall abide by the following conditions (if authorized to collect coral):

1. Coral - the Permittee must notify DAR Oahu (catherine.a.gewecke@hawaii.gov or dar.sap@hawaii.gov) within 24 hours of:

   a. Any instance of major damage caused to coral or other marine natural resources, because of collection or other research activities conducted under this permit.

2. Fragmentation - This permit **does not authorize** fragmentation of coral colonies.

3. Rare Species - The following *Porites* species require special permission from the Division prior to collection under this permit: *Porites pukoensis, Porites duerdeni, Porites studeri*. The following *Montipora* species require special permission from DAR prior to collection under this permit: *Montipora dilitata*. The following *Pocillopora* species require special permission from DAR prior to collection under this permit: *Pocillopora ligulata, Pocillopora molokensis*.

4. **No impact-causing activities will be conducted on (or immediately adjacent to) any intact, attached coral colony measuring larger than 1 m x 1 m x 1 m. Specific efforts will be made to avoid damage to any large colonies of living coral.**

O. Other Collection Guidelines:

1. Collecting generally - the Permittee must give notice, in form specified by the Department (email or phone call), to DAR (dar.sap@hawaii.gov or catherine.a.gewecke@hawaii.gov) and to the Department's Division of Conservation and Resources Enforcement Central Office - Oahu (DOCARE: 808-643-3567), at least 24 hours prior to initial commencement of any series of field collection/sampling activities taken place under this permit and immediately after returning to shore with organisms collected under this permit, to give DOCARE the opportunity to conduct an on-site inspection (if determined necessary). Researcher will confirm with central DOCARE office (Oahu) to see if Hawaii Island DOCARE office (Kona) (808-327-4961) should be contacted directly before and after each sampling. **Researcher will provide the following info when DOCARE is notified**: SAP #, researcher name/institution, date/time/location (or range of dates/times/locations if collecting throughout the year), activity description (e.g. collection of regulated organisms, collecting in regulated areas, using regulated gear to collect – e.g. using small mesh nets to collect fish in a specific area), including gear type, description of boat being used (color, size, type of boat)(if applicable), description of vehicle on shore (if applicable), number of people involved in activity **and contact information**.

2. An **Aquatic Invasive Species (AIS) Mitigation Plan** will be filed with the Division prior to conducting any collection under this permit. The Plan will include methods and protocols to minimize AIS or disease movement through gear, supplies and activities of the permittee. Permittee must take actions to verify that collection tools have been disinfected before use if previously used in collection activities.

Invasive Species/Disease/Parasites: All collection gear deployed must be visually checked for invasive species/disease/parasites and disinfected with 10% bleach solution for 10 minutes before deployment in alternate location if current or previous activities involved collecting or conducting activities between multiple watersheds/distinct reef areas/islands. If collection gear cannot be bleached, gear must be thoroughly rinsed with fresh water and dried in sun for 24 hours before deployment in alternate location, sterilized with another viable method or alternate sampling gear should be utilized. If sampling disease or anomalous growth specimens, gear should be sterilized between each specimen or new collection gear should be used. **(If applicable) If collecting in Kaneohe Bay or Maunalua Bay**: Kaneohe Bay: All collection gear utilized in Kaneohe Bay must be visually checked for invasive species/disease/parasites (e.g. *Kappaphycus spp., Eucheuma denticulatum, Gracilaria salicornia, Mycale grandis/armata* and *Anemone manjano*) and disinfected with 10% bleach solution for 10 minutes before deployment in alternate location other than Kaneohe Bay. Maunalua Bay: All collection gear deployed in Maunalua Bay must be visually checked for invasive species/disease/parasites (e.g. *Avrainvillea amadelpha/lacerata and Gracilaria salicornia*) and disinfected with 10% bleach solution for 10 minutes before deployment in alternate location other than Maunalua Bay. The following species remain a concern to the division: Algae (*Kappaphycus spp., Eucheuma denticulatum, Gracilaria salicornia, Acanthophora spicifera, Hypnea musciformis*, and *Avrainvillea amadelpha/lacerata/erecta*, and *Chondria tumulosa*); various invertebrates including Majano Anemone (*Anemone manjano*), Orange keyhole sponge (*Mycale armata/grandis*), Pulsing Xenia (*Unomia stolonifera*), Kenyan Tree (*Capnella sp.*); Coral disease/parasites (*Montipora, Pocillopora*, and *Porites* tissue loss syndrome, *Montipora, Pocillopora*, and *Porites* anomalies, *Montipora* black band, *Porites trematodiasis*); and any other non-native organisms. **Note: No collections in Kaneohe Bay or Maunalua Bay are authorized under this permit**

(If applicable) Permittee will mitigate for the spread of invasive species/disease/parasites by ensuring that all organisms (e.g. coral colonies, fragments or live rock) collected from Kaneohe Bay are absent of any algae fragments or basal attachments of the invasive alga *Kappaphycus spp., Eucheuma denticulatum, Gracilaria salicornia, Mycale grandis/armata* and *Anemone manjano* or other invasive species/disease/parasites (unless collecting these non-native species specifically) before transporting organisms to alternative location for research. **Note: No collections in Kaneohe Bay or Maunalua Bay are authorized under this permit.**

(If applicable) Permittee will mitigate for the spread of invasive species/disease/parasites by ensuring that all organisms (e.g. coral colonies, fragments or live rock) collected in Maunalua Bay are absent of any algae fragments or basal attachments of the invasive alga *Avrainvillea amadelpha/lacerata, Gracilaria salicornia*, or other invasive species/disease/parasites (unless collecting these non-native species specifically) before transporting organisms to alternative location for research. **Note: No collections in Kaneohe Bay or Maunalua Bay are authorized under this permit.**

Quarantine Protocol. If transporting and holding live organisms (including live rock) in an aquarium/tank: After inspection, organisms transported to or from other locations on island must have a quarantine protocol involving either closed-system tanks for the entire research period or closed-system tanks for a select amount of quarantine time followed by flow-through tanks with UV lights on outfall. Organisms will be placed in placed into flow-through tanks only if observations indicate that no invasive species are present. Permittee will sacrifice any AIS/disease/parasites if found at this stage, and keep host organisms in closed system tanks for research. Length of quarantine time and type of holding tank (closed-system or open-system) will be determined based on location of collection/location of holding and type of organism collected, after consultation with DAR. Exceptions (after consultation with DAR): If the quarantine process is not possible (due to capacity/lack of available closed-system tanks), then the quarantine process is not required for researchers working with fish and invertebrates (other than coral) collected from areas outside of area where research tanks are located, if researchers are able to conduct initial inspection of organisms for AIS/disease/parasites before transporting organisms back to open-system (flow-through tanks) at research location. DAR will work with researchers on a case by case basis, that work with coral and live rock collected

from areas outside of outside of the area where research tanks are located, but which may have limited quarantine capacity (lack of available closed-system tanks), to determine if the quarantine process is necessary.

3. No organism other than those listed on this permit will be collected or impacted by any activities conducted under this permit.

4. Gear and Methods: Use of any chemical substances pursuant to Section 188-23, Hawai‘i Revised Statutes, electrical shocking devices, or explosives remains expressly prohibited.

5. Sampling Moratoriums**:** The Division may request a voluntary sampling moratorium, or in some cases, implement a mandatory sampling moratorium, for certain organisms authorized for collection under any current permit, during times of ecosystem pressure caused by natural or anthropogenic stressors. Example of ecosystem pressure may include coral bleaching events, which have occurred most recently in Hawaii during the months of July/August to November. Please take this into consideration when applying for a permit, plan your collections accordingly and be prepared to take a sampling hiatus (if necessary) until the stressor event is determined to have ended. Exemptions may be provided for studies or projects that have a research objective directly related to the naturally or anthropogenically caused stressors, which require collecting data or samples during this period, or select projects that are evaluated to not cause additional pressure during this period.

P. **OWNERSHIP OF BIOGENETIC RESOURCES.** The State holds legal title to the natural resources and biogenetic resources gathered from state lands, including submerged lands. See Haw. Op.Atty.Gen. Opinion No. 03-03 (April 11, 2003). Biogenetic resources refer to the genetic material or composition of the natural resources and other things connected to, or gathered from public lands. See Davis v. Green, 2 Haw. 327 (1861); United States v. Gerber, 999F.2d 1112 (7th Cir. 1993).

DAWN N. S. CHANG, Chairperson
Department of Land and Natural Resources

cc: (x) DOCARE (Hawaii - Kona)
(x) DAR – (Hawaii - Kona)

SIGNATURES AND AGREEMENT

By my signature below, I acknowledge receipt and understanding of the general and special conditions of this Special Activity Permit. Further, I agree to abide by all of these conditions when conducting activities authorized by this permit.

PRINCIPAL PERMITTEES: _____
George Peterson

DESIGNATED ASSISTANTS:

Signature:		Signature:	
Print Name:	Scott Reid	Print Name:	Jeff Milisen
Signature:		Signature:	
Print Name:	George Matsumoto (MBARI)	Print Name:	Michael Howard
Signature:			
Print Name:	Mackenzie Bubel		

SIGNATURES AND AGREEMENT

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DESIGNATED ASSISTANTS:

Signature:		Signature:	
Print Name:	James Bonovich	Print Name:	Scott Chapman
Signature:		Signature:	
Print Name:	Meriah Long	Print Name:	Evan Firl
Signature:		Signature:	
Print Name:	Sara Arguera (Namay)	Print Name:	Wyatt Patry
Signature:		Signature:	
Print Name:	Andrew Feifarek	Print Name:	Thomas Knowles
Signature:		Signature:	
Print Name:	Sarah Milisen	Print Name:	Ellen Umeda
Signature:		Signature:	
Print Name:	Ray Direen	Print Name:	Andrew Morgan
Signature:		Signature:	
Print Name:	Tori Bartindale – Guffey	Print Name:	Drew Bewley (MBARI)
Signature:		Signature:	
Print Name:	Manny Ezcurra	Print Name:	
Signature:		Signature:	
Print Name:		Print Name:	

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Print Name:		Print Name:	
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Appendix. Map of collection location, photo examples of the types of organisms that are collected from the water column in deep water areas off West Hawaii, photo example of poster for outreach and species list:

Map 1. Monterey Bay Aquarium black water dive project location; collections will be made ≈ 3 - 20 miles offshore of Kaloko- Honokōhau FRA

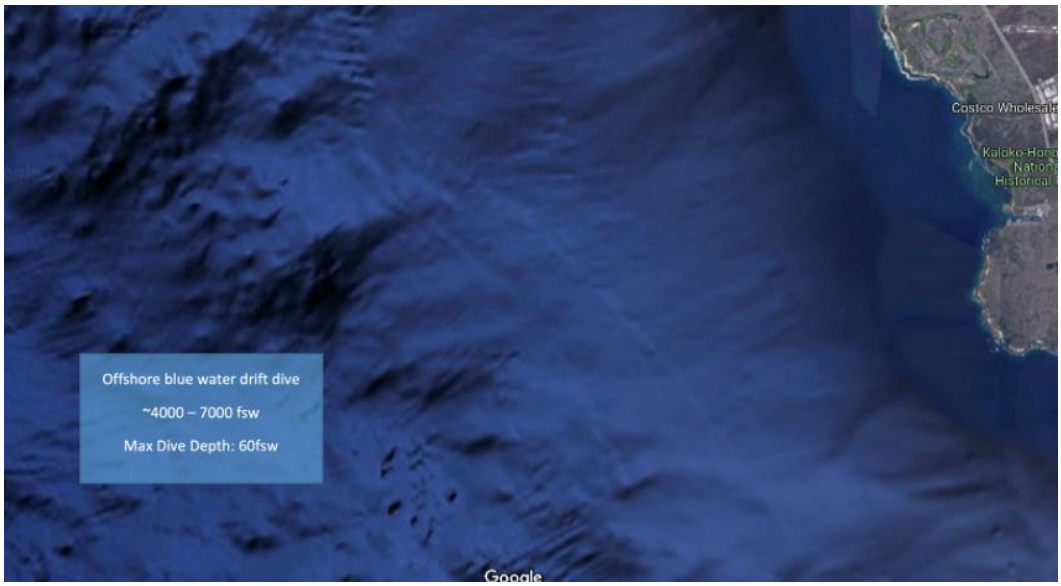


Photo 1. Hydrozoans in MBA Jelly Kreisel holding tank.

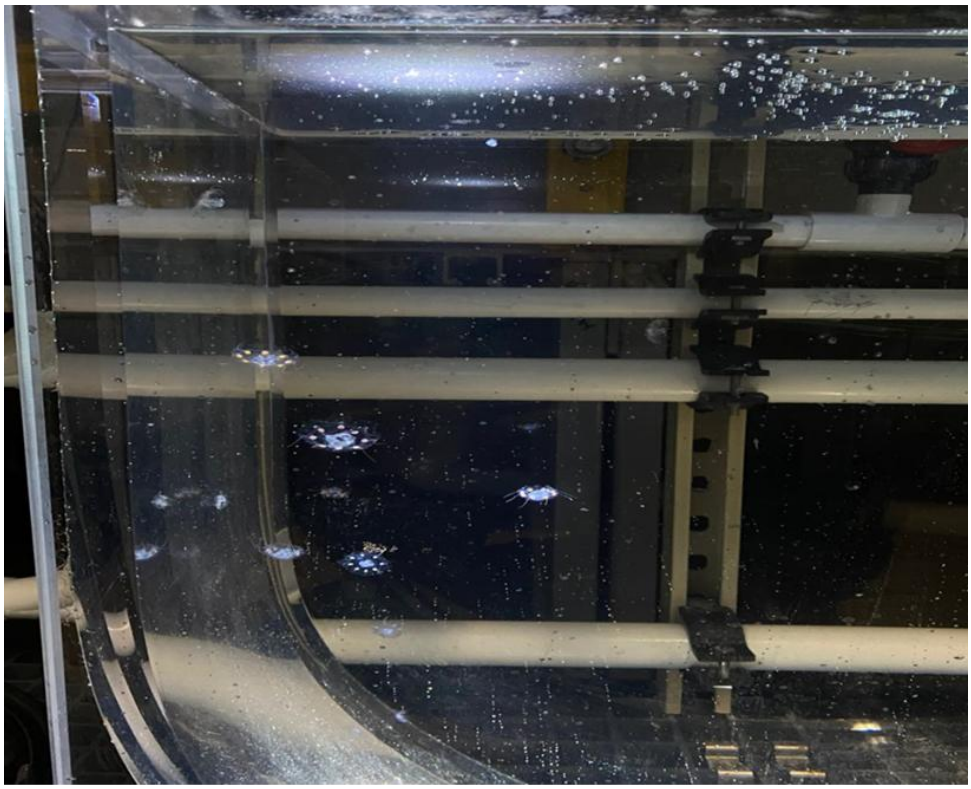
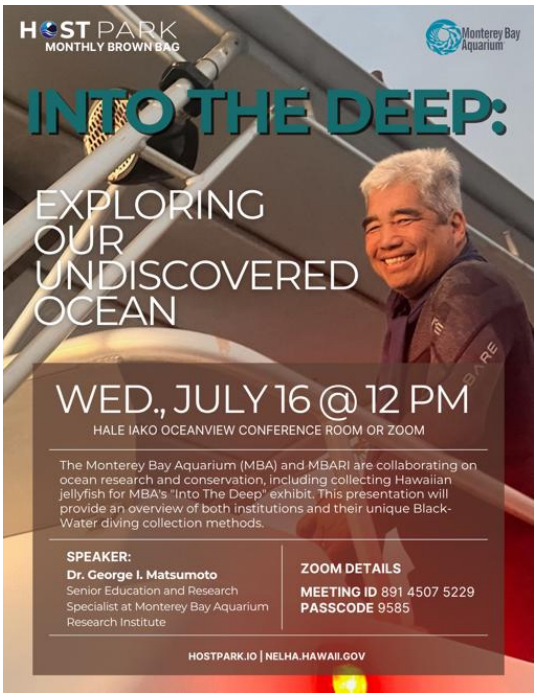


Photo 2. Scyphozoans in MBA Jelly Kreisel holding tank

Photo 3. Photo example of poster for outreach



SAP 2026-35
Species list for Monterey Bay Aquarium collections during 2025-2026

Note: Not all species or amounts listed in the Appendix of this permit will be collected – amounts per species are requested in anticipation that some species may not be present during certain dives or at certain locations; in these cases, more of another species may be collected. **The maximum amount of individuals to be collected during the annual permitting period will be seven hundred and fifty (750) individuals** of gelatinous zooplankton, zooplankton, jellyfish (various spp. and sizes).

Regulated organisms			
Phyllosoma, Lobster (larvae)	*Family Scyllaridae - regulated species: Scyllarides squammosus / Scaly Slipper lobster & Scyllarides haanii/ Ridgeback Spiny Lobster)*	200	Waters of Hawaii
Phyllosoma, Lobster (larvae)	*Family Palinuridae - regulated species: Panulirus penicillatus,/ green spiny lobster (tufted spiny lobster) & Panulirus marginatus / Black leg spiny lobster*	200	Waters of Hawaii
Non-regulated organisms			
Phyllosoma, Lobster (larvae)	*Family Scyllaridae (non-regulated spp.)*	200	Waters of Hawaii
Phyllosoma, Lobster (larvae)	*Family Synaxidae*	200	Waters of Hawaii
Phyllosoma, Lobster (larvae)	*Family Palinuridae (non-regulated spp.)*	200	Waters of Hawaii
Shrimp, Deep Water Mysid	*Gnathophausia spp.*	50	Waters of Hawaii
Crabs, Commensal	*Chyrostylidae spp.*	200	Waters of Hawaii
Brittle star, Deep Sea	*Asteroschema spp.*	200	Waters of Hawaii
Sea Spiders	*Class Pycnogonidae*	200	Waters of Hawaii
Pelagic Nudibranch	*Phylliroe spp.*	200	Waters of Hawaii
Larvaceans	*Oikopleura spp.*	200 (larvae)	Waters of Hawaii
Larvaceans	*Bathochordaeus spp.*	200 (larvae)	Waters of Hawaii

Larvaceans	*Fritillaria spp.*	200 (larvae)	Waters of Hawaii
Palm Gooseberry	*Hormiphora palmata*	200	Waters of Hawaii
Sea Gooseberry	*Hormiphora spp.*	200	Waters of Hawaii
Venus Girdle	*Cestum veneris*	200	Waters of Hawaii
Ctenophore	*Velamen parallelum*	200	Waters of Hawaii
Lobate Ctenophore	*Eurhamphaea vexiligifera*	200	Waters of Hawaii
Amphipod	*Phronima spp.*	200	Waters of Hawaii
Amphipods	*Order Amphipoda*	200	Waters of Hawaii
Amphipods	*Family Hyperiidae*	200	Waters of Hawaii
Isopods	*Order Isopoda*	200	Waters of Hawaii
Siphonophores	*Order Siphonophora*	200	Waters of Hawaii
Siphonophore, Hula Skirt	*Physophora hydrostatica*	200	Waters of Hawaii
Siphonophore	*Diphyes spp.*	200	Waters of Hawaii
Siphonophore	*Forskalia spp.*	200	Waters of Hawaii
Siphonophore	*Agalma okeni*	200	Waters of Hawaii
Siphonophore	*Halistemma spp.*	200	Waters of Hawaii
Siphonophore	*Apolemia spp.*	200	Waters of Hawaii
Siphonophore	*Sulculeolaria spp.*	200	Waters of Hawaii
Siphonophore	*Athorybia rosacea*	200	Waters of Hawaii

Siphonophore	*Rhizophysa* spp.	200	Waters of Hawaii
Coronamedusa	*Atolla spp.*	200	Waters of Hawaii
Coronamedusa	*Atorella spp.*	200	Waters of Hawaii
Coronamedusa	*Nausithoe spp.*	200	Waters of Hawaii
Coronamedusa	*Periphylla spp.*	200	Waters of Hawaii
Hydromedusa	*Merga spp.*	200	Waters of Hawaii
Hydromedusa	*Order Trachymedusae*	200	Waters of Hawaii
Hydromedusa	*Zancleopsis spp.*	200	Waters of Hawaii
Hydromedusa	*Aegina spp.*	200	Waters of Hawaii
Jellyfish, Rainbow tasseled	*Thysanostoma loriferum*	200	Waters of Hawaii
Jellyfish, Crown	*Cephea cephea*	200	Waters of Hawaii
Mauve stinger	*Pelagia flaveola*	200	Waters of Hawaii
Swimming Comb Jelly	*Ocyropsis* spp.	200	Waters of Hawaii
Cubozoan Jelly	*Alatina alata*	200	Waters of Hawaii
Comb Jelly	*Callianira* sp.	200	Waters of Hawaii
Spotted Comb Jelly	*Leucothea spp.*	200	Waters of Hawaii
Cigar Comb Jelly	*Beroe spp.*	200	Waters of Hawaii
Sea Butterfly	*Clio pyramidata*	200	Waters of Hawaii
Sea Butterfly	*Clio cuspidate*	200	Waters of Hawaii

JOSH GREEN, M.D.
GOVERNOR | KE KIAʻĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIAʻĀINA

DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RYAN K.P. KANAKAʻOLE
FIRST DEPUTY

CIARA W.K. KAHAHANE
DEPUTY DIRECTOR – WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 26, 2025

TO: Division of Aquatic Resources File

THROUGH: Dawn N. S. Chang, Chairperson

FROM: Brian J. Neilson, Administrator
Division of Aquatic Resources

SUBJECT: Declaration of Exemption from the Preparation of an Environmental Assessment under the Authority of Chapter 343, HRS, and Chapter 11-200.1, HAR, for a Special Activity Permit to George Peterson of the Monterey Bay Aquarium, Director of Marine Operations.

The following permitted activities are found to be exempted from preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200.1, HAR:

Project Title: Special Activity Permit to George Peterson of the Monterey Bay Aquarium, Director of Marine Operations, to collect, possess or transport regulated and non-regulated organisms, including various species of gelatinous zooplankton, zooplankton and jellyfish, in a regulated area (West Hawaii Regional Fishery Management Area – "WHRFMA") and non-regulated areas in offshore waters of West Hawaii, using non-regulated gear, for the purposes of educational live display in a deep-water exhibit ("aquarium purposes") and associated research (e.g. husbandry captive research and/or culturing) at Monterey Bay Aquarium, Monterey, CA.

Permit Number: SAP 2026-35

Project Description: The permit, as described below, would authorize to collect, possess or transport regulated organisms (lobster spp. / Scyllaridae and Palinuridae spp.; larval/zooplanktonic stage) and non-regulated organisms (various spp. of gelatinous zooplankton and zooplankton [larval/zooplanktonic stage] and jellyfish [larval though adult stages]), using non-regulated gear (jars), in areas of offshore waters (2 to 20 miles offshore) of Kaloko-Honokōhau, Hawaii, including a regulated area (West Hawaii Regional Fishery Management Area – "WHRFMA" – in areas in the WHRFMA in the 2-3 mile zone offshore outside of all smaller FMA, MLCD, FRA and NRA) and the non-regulated areas of offshore waters (3 to 20 miles offshore), from September 26, 2025 through September 25, 2026, for the purposes of educational live display in a deep-water exhibit ("aquarium purposes") and associated research (e.g. husbandry captive

research and/or culturing) at Monterey Bay Aquarium, Monterey, CA. The taking of undersize specimens or collection during out-of-season for certain lobster species is prohibited under sections 13-95-53 and 13-95-54 and the collection of organisms for "Aquarium purposes" (to hold aquatic life alive in a state of captivity, whether as pets, for scientific study, for public exhibition, for public display, or for sale for these purposes), is prohibited under the current aquarium ruling and section 13-60.4-3, unless authorized by a permit issued under section 187A-6, HRS.

***Note:** The collection activities as proposed for this project fall under activities described under "Aquarium purposes" as defined under §13-60.4-3: Aquarium purposes means to hold aquatic life alive in a state of captivity, whether as pets, for scientific study, for public exhibition, for public display, or for sale for these purposes.

This permit is being brought before the board due to a requirement for out-of-state institutions requesting Special Activity Permits ("SAP") to go before the board for review. This permit was previously issued on an annual basis between 2019 and 2023 (with similar collections and same collection locations), using the permit process that is utilized for many SAP, consisting of approval from DAR and the Chair, as the board has delegated signature authority to the Department Chair for SAP for recognized Hawaiian institutions. This error was due to misunderstanding of the requirements of the delegation of signature authority assigned to SAP. Going forward, in order to rectify any other instances where this may have occurred in the past, DAR will be submitting any renewals of permits issued in the past or any new requests for permits, which are applied for by non-recognized Hawaiian institutions, to the board for review.

Note: This permit has been issued in previous years and was submitted last year at the 8/9/2024 BLNR meeting but was not approved. This year's proposed activity is primarily the same as the previously proposed activity, but certain changes have been implemented – the **main changes proposed for this year would be the following**: 1) the request to change the permittee's name from John O'Sullivan to George Peterson (John O'Sullivan recently retired); 2) the removal of Fisher's Seahorse (*Hippocampus fisheri*) and a few additional species from the species list and; 3) the addition of any new outreach/collaboration or consultation activities conducted over the last year or planned for future years.

Locations. All activities will occur in areas of offshore waters (2 to 20 miles offshore) of Kaloko-Honokōhau, Hawaii, including a regulated area (West Hawaii Regional Fishery Management Area – "WHRFMA" – in areas in the WHRFMA in the 2-3 mile zone offshore outside of all smaller FMA, MLCD, FRA and NRA) and the non-regulated areas of offshore waters (3 to 20 miles offshore). The Monterey Bay Aquarium's (MBA) Midwater team and Dive Office will conduct a series of blackwater SCUBA dives using a bluewater rig to collect organisms at a collection location ~2 miles off of Honokōhau Small Boat Harbor, Hawaii at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth or in areas further offshore (2 to 20 miles offshore). Conducting the dives in the regulated area of the WHRFMA is essential due to logistical limitations on where blackwater diving operations can be safely conducted, as well as the proximity to the temporary holding facility located at the Hawai'i Natural Energy Laboratory of Hawai'i Authority (NELHA) – in addition this area offers uniquely favorable conditions for accessing gelatinous zooplankton. Live collections will be transported to a temporary holding facility at Hawaii's Natural Energy Laboratory of Hawaii Authority (NELHA), for

acclimation, and then transported the Monterey Bay Aquarium, Monterey, CA. for educational display, husbandry research, and propagation efforts.

Activities. Permittee and authorized assistants are authorized to collect, possess or transport regulated organisms (lobster spp. / Scyllaridae and Palinuridae spp.; larval/zooplanktonic stage) and non-regulated organisms (various spp. of gelatinous zooplankton and zooplankton [larval/zooplanktonic stage] and jellyfish [larval though adult stages]), as listed in Table 1 on Page 1, in areas of offshore waters (2 to 20 miles offshore) of Honokōhau, Hawaii, including a regulated area (West Hawaii Regional Fishery Management Area – "WHRFMA" – in areas in the WHRFMA in the 2-3 mile zone offshore outside of all smaller FMA, MLCD, FRA and NRA) and the non-regulated areas of offshore waters (3 to 20 miles offshore), using non-regulated gear (jars). The objective of the activity is to collect gelatinous zooplankton, zooplankton and jellyfish for the purposes of educational live display in a deep-water exhibit ("aquarium purposes") and associated research (e.g. husbandry captive research and/or culturing) at Monterey Bay Aquarium, Monterey, CA. The collections will support the established *Into the Deep* Exhibition that opened in 2022 at the aquarium, featuring the mid-water and deep-water marine species.

Collections and Methods.

Methods. The permittee and authorized assistants (the MBA's Midwater team and select Kona Honu staff) will charter a vessel from Kona Honu Dive Charters in Honokōhau Small Boat Harbor to conduct a series of blackwater SCUBA dives ~2 to 20 miles off of Honokōhau Small Boat Harbor, Hawaii (at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth), using a bluewater rig to collect gelatinous zooplankton in small plastic jars. After collection, MBA staff will transport the jars with specimens to MBA's rented laboratory space at the Natural Energy Laboratory of Hawaii Authority (NELHA) in Kailua-Kona, where they will be held for 3-5 days in chilled seawater systems. After temporary holding at NELHA, the MBA staff will then transport the specimens (in jars placed in coolers) via commercial airlines back to MBA (a facility with expertise in culturing and maintaining these organisms) where they will be placed in MBA seawater system holding tanks until acclimated and then placed on exhibit or utilized for culture work conducted by MBA staff.

Collections. Permittee and authorized assistants will annually collect up to seven hundred and fifty (750) individuals (various spp. and sizes) of gelatinous zooplankton, and zooplankton, (regulated and non-regulated – see Table 1 and Appendix for regulated spp.) and jellyfish by hand, using 400ml, 1.0L, and 1.5L plastic jars to contain individual specimens. Collection amounts of each species of organism will vary depending on incidence or need (in terms of educational exhibits or culturing/ research) but will range from fifty (50) up to two hundred (200) individuals of each species (see Appendix for amounts per type of organism). Note: The species list is primarily made up of "gelatinous zooplankton" (defined as organisms that remain gelatinous their whole lifecycle from juvenile to adult), of which both adults and juveniles will be collected, "zooplankton" (consisting of organisms that are gelatinous in their larval/planktonic stage, but may settle out to the substrate to become hard-bodied organisms when they mature, of which larval/planktonic stages will be collected; "jellyfish", of which larval through adult life stages may be collected. Note: Scyllaridae and Palinuridae spp. / lobster spp. may consist of the following regulated species: *Panulirus penicillatus* / green spiny lobster (tufted spiny lobster), *Panulirus marginatus* / Black leg spiny lobster, *Scyllarides* squammosus / Scaly Slipper lobster and *Scyllarides* haanii / Ridgeback Spiny Lobster, and non-regulated invertebrates may consist of non-regulated individuals of Scyllaridae and Palinuridae spp. / lobster spp.

Collections planned for 2026 will consist of similar species that have been collected in the past; past collections have included individuals of the various species of gelatinous zooplankton, zooplankton and jellyfish listed

below (see species list/table at end of permit for potential amounts per species or family/genus and **see Appendix for photos of examples of organisms to be collected**). **Note**: Not all species or amounts listed in the Appendix of this permit will be collected – amounts per species are requested in anticipation that some species may not be present during certain dives or at certain locations; in these cases, more of another species may be collected. The maximum amount of individuals to be collected during the annual permitting period will be seven hundred and fifty (750) individuals of gelatinous zooplankton, zooplankton, jellyfish (various spp. and sizes); species may include the following: Phyllosoma - Lobster (Family *Scyllaridae*; regulated and non-regulated spp. - larvae), Phyllosoma - Lobster (Family *Synaxidae*; larvae), Phyllosoma - Lobster (Family *Palinuridae*; regulated and non-regulated spp. - larvae), Commensal Crabs (*Chyrostylidae* spp.), Sea Spiders (Class *Pycnogonidae*), Pelagic Nudibranch (*Phylliroe* spp.), Larvaceans (*Oikopleura* spp.), Larvaceans (*Bathochordaeus* spp.), Larvaceans (*Fritillaria* spp.), Palm Gooseberry (*Hormiphora palmata*), Sea Gooseberry (*Hormiphora* spp.), Venus Girdle (*Cestum veneris*), Ctenophore (*Velamen parallelum*), Lobate Ctenophore (*Eurhamphaea vexiligifera*), Amphipod (*Phronima* spp.), Amphipods (Order *Amphipoda*), Amphipods (Family *Hyperiidae*), Isopods (Order *Isopoda*), Siphonophores (Order *Siphonophora*) Siphonophore - Hula Skirt (*Physophora hydrostatica*), Siphonophore (*Diphyes* spp.), Siphonophore (*Forskalia* spp.), Siphonophore (*Agalma okeni*), Siphonophore (*Halistemma* spp.), Siphonophore (*Apolemia* spp.), Siphonophore (*Sulculeolaria* spp.), Siphonophore (*Athorybia rosacea*), Siphonophore (*Rhizophysa* spp.), Coronamedusa (*Atolla* spp.), Coronamedusa (*Atorella* spp.), Coronamedusa (*Nausithoe* spp.), Coronamedusa (*Periphylla* spp.), Hydromedusa (*Merga* spp.), Hydromedusa (Order *Trachymedusae*), Hydromedusa (Zancleopsis spp.), Hydromedusa (Aegina spp.), Rainbow tasseled Jellyfish (Thysanostoma loriferum), Crown Jellyfish (*Cephea cephea*), Mauve stinger (*Pelagia flaveola*), Swimming Comb Jelly (*Ocyropsis* spp.), Cubozoan Jelly (*Alatina alata*), Comb Jelly (*Callianira* sp.), Spotted Comb Jelly (*Leucothea* spp.), Cigar Comb Jelly (*Beroe* spp.), Sea Butterfly (*Clio pyramidata*) and Sea Butterfly (*Clio cuspidate*).

Gelatinous zooplankton, zooplankton, and jellyfish have an extremely patchy distribution in the water column and the types of each species present, and the numbers of any particular species collected on any single dive will vary depending on the water mass and migration of different species. The collections during each dive conducted by the MBA are anticipated to have a negligible impact on the biodiversity or density of species in Hawaiian waters as they will be a select subsample of the amount and type which are present throughout the islands. The MBA anticipates deploying 5 to eight (5-8) stationary divers in the water (at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth) for forty to seventy (40 – 70) minutes per dive; each diver can only collect what arrives in front of them within arm's reach. The currents and drift of the charter vessel will put the divers in a different location at the end of the dive from when they first entered the water; thus, the collections are distributed over a large location and limited to the availability at the time and location and collection reach of the diver. The divers will be moving with the current, as will the specimens, therefore there should be no cumulative impacts on any particular species (i.e. no collections will occur in one concentrated location).

Some of the jellyfish specimens will be placed into MBA's *Into the Deep* exhibit, which opened to the public in April of 2022. MBA biologists will also continue on-going efforts to culture specimens in-house for future use in their *Into the Deep* exhibit. The Aquarium will work to integrate Hawaiian-specific information into exhibits that display organisms that are sourced from Hawaii, to provide information on a species significance within the Hawaiian seamounts, pelagic ecosystems or culture (if applicable), or other relevant information such as the problems these organisms may face with climate change, environmental degradation, overfishing etc., as educational outreach. Black water dives using blue water rigs will take place ~1900-2100 PST.

Activities may be conducted during a few different collection periods/trips throughout the year (permitting period); dates may vary due to delays or interruptions.

Research and Conservation Activities at Monterey Bay Aquarium. In addition to displaying organisms and providing educational opportunities (free of charge) for more than 81,000 students a year (many from low-income communities), the Monterey Aquarium also conducts various research (including life history, propagation techniques and husbandry). Monterey Bay Aquarium helped create momentum for the establishment of the Monterey Bay National Marine Sanctuary in 1992, one of the largest marine protected areas in the United States. Staff scientists have authored scientific publications involving sea otters, great white sharks, and bluefin tunas, which are important species in the northern Pacific Ocean. In addition to other animals, work has been published in the areas of veterinary medicine, visitor studies, and museum exhibition development. Among over 200 institutions accredited by the Association of Zoos and Aquariums, Monterey Bay Aquarium ranked 10th in scientific publication activity between 1993 and 2013. For Monterey Bay Aquarium's captive animal propagation efforts, the Association of Zoos and Aquariums has granted two awards, including one for the aquarium's work with purple-striped jellies in 1992. It has also received the association's general conservation award for its Sea Otter Research and Conservation Program.

The Monterey Bay Aquarium (MBA) and the Monterey Bay Aquarium Research Institute (MBARI) are partner organizations collaborating on several research, education and ocean conservation projects. As discussed above, the MBA recently opened the amazing *Into The Deep* Exhibition in 2022 to more than 1,000,000 in-person visitors/year with large numbers of virtual visitors as well. MBARI is a private non-profit research organization that, together with their education and conservation partner, the Monterey Bay Aquarium, and the aquarium's principal funder, the David and Lucile Packard Foundation, strives to provide the best science, engineering, and outreach tools to the ocean science and conservation community. As part of the collaboration, MBA and MBARI are working together to bring back gelatinous (jellylike) organisms from Hawaii's offshore waters for husbandry research and for the *Into The Deep* Exhibition. MBA biologists have developed animal care methods for jellies that are now used by other aquariums and scientists worldwide (Raskoff et al 2003) and have described the life cycles of seven species of jellies displayed in the Aquarium: the cross jelly (Mitrocoma cellularia, Widmer 2004), the egg-yolk jelly (Phacellophora camtschatica, Widmer 2006), the flower hat jelly (Olindias formosus, Patry et al 2014), the Pacific sea nettle (Chrysaora fuscescens, Widmer 2008) and the purple-striped jelly (Chrysaora colorata, Sommer 1993), Earleria corachloeae (Widmer 2011) and Earlieria purpurea (Widmer, Cailliet and Geier 2010). The Aquarium cultures jellies to minimize the need to collect from the wild and to contribute to the natural history and diversity knowledge of these important animals.

Most recently, Aquarium biologists in collaboration with the University of Miami, developed the first mass culture techniques for ctenophores, or comb jellies (Patry et al 2020 and Presnell et al 2022) which has led to renewed interest in the biology of ctenophores and a slew of important findings in evolutionary biology and biodiversity (Schultz et al 2021, Bessho-Uehara et al 2020, Johnson et al 2022, Presnell and Browne 2021, Burkhardt et al 2023, Dunn 2023). Biologists here have applied these or adapted similar techniques to culture and/or display several Hawaiian species of ctenophores, siphonophores and other gelatinous zooplankton; *Hormiphora sp., Pelagia flaveola, Nausithoe sp., Atorella sp., Eurhamphaea vexilligera, Rhizophysa eysenhardtii, Athorybia rosacea, Merga costata* and achelata (various larvae). The MBA hopes to continue this work over the coming years as culturing these species is not only critical to the sustainability of their collection at the Aquarium but a vital part of their mission to inspire conservation of the ocean.

Links to Videos, MBA and MBARI websites:
https://www.montereybayaquarium.org/
Black Water Diving Videos
https://www.mbari.org/

Consultation, Engagement and Outreach with Communities, DAR, and Academic Institutions. The Monterey Bay Aquarium (MBA) and the Monterey Bay Aquarium Research Institute (MBARI) have conducted extensive outreach and engagement with both the Division of Aquatic Resources (DAR) and community stakeholders in support of the SAP (Special Activity Permit) application process. MBA engaged with the local West Hawai‘i Community by offering educational presentations at NELHA, consultations with local groups such as Aha Moku Council, Miloli‘i Community-based Subsistence Fishing Area, and Hui Aloha Kīholo, and educational outreach at UH Hilo, West Hawai‘i Explorations Academy (etc.). Conversations with DAR staff from O‘ahu and West Hawai‘i have guided the engagement and permitting process. Letters of support have been secured from West Hawai‘i community, cultural, and research stakeholders, which include Dr. Amy Moran, University of Hawai‘i, and West Hawai‘i Explorations Academy.

MBA has conducted the following consultation, engagement, and outreach activities:

DAR and DLNR Meeting (O‘ahu – December 12, 2024)

- John O’Sullivan and George Peterson (MBA), and Dr. George Matsumoto (MBARI), met in person with DAR staff—Brian Neilson, David Sakoda, and Catherine Gewecke—and Dawn Chang, Director of the Department of Land and Natural Resources (DLNR). The purpose of this meeting was to review and discuss the Monterey Bay Aquarium's SAP application and gather agency input.

Community Consultation (Keauhou – February 27, 2025)

- An in-person meeting was held with John O’Sullivan and George Peterson (MBA); Charles “Uncle Charlie” Young (Aha Moku Council); U‘ilani Naipo (Miloli‘i Community-Based Subsistence Fishing Area); and Chad Wiggins (Executive Director, Hui Aloha Kīholo). The group outlined key steps for improving the SAP application, including enhanced community consultation and cultural engagement. The meeting notes were reviewed and approved by participants before being submitted to DAR.

Public Presentation (NELHA – July 16, 2025)

- Dr. George Matsumoto, Senior Education and Research Specialist from MBARI, with assistance from George Peterson and John O’Sullivan, delivered a public presentation from the offices of NELHA on the history and future of blackwater diving collection off Kona. The event was attended by 15 people in person and over 28 participants via Zoom. A Q&A session followed the presentation and community feedback was overwhelmingly positive (see Appendix for photo example of presentation poster).

Summary of Engagement Activities

- Ongoing collaboration with DAR staff on Oʻahu and in West Hawaiʻi to ensure compliance and transparency throughout the permitting process.

- Engagement with key community stakeholders and cultural representatives, including:

    - Aha Moku Council
    - Miloliʻi Community-Based Subsistence Fishing Area
    - Hui Aloha Kīholo

- Educational outreach efforts to:

    - University of Hawaiʻi
    - West Hawaiʻi Explorations Academy

- Letters of support received from:

    - Dr. Amy Moran, University of Hawaiʻi
    - Una Burns, West Hawaiʻi Explorations Academy

These efforts underscore the commitment of MBA and MBARI to cultural sensitivity, community collaboration, and responsible scientific exploration in West Hawaiʻi.

Collection Plans/Collection Reports (see section D. below): Collectors will submit monthly collection plans and collection reports to verify actual numbers and sizes of collected organisms that are reviewed and approved by DAR biologists on a monthly basis or for a specific trip (if select collection trips will occur). **Incidental mortality.** Incidental mortality of target and non-target organisms (various spp. and sizes) may occur in the field or while or while in captivity (target organism). Researchers will report any incidental mortalities in monthly collection report and final report. If a repeated occurrence of mortality occurs, DAR may request to review the method and see if modifications can be made to the method to reduce mortality. DAR recommends changing sampling location if mortality occurs. **Bycatch.** Methodology for collection of samples may have unintended by-catch. Permittee or authorized assistants will attend gear at all times and release/return all unintended by-catch as quickly as possible to the marine environment (if applicable).

Gear and Methods. This permit authorizes the following use of regulated and non-regulated gear and methodology:

Regulated gear: n/a

Non-regulated gear: Plastic collecting jars: 400ml, 1.0L, 1.5L or small plastic bags and containers to hold sensitive specimens.

Assessment of Cumulative Impacts. DAR does not anticipate cumulative impacts to occur as a result of the activities conducted under this permit. Gelatinous zooplankton, zooplankton, and jellyfish have an extremely patchy distribution in the water column and the types of each species present, and the

numbers of any particular species collected on any single dive will vary depending on the water mass and migration of different species. The collections during each dive conducted by the MBA are anticipated to have a negligible impact on the biodiversity or density of species in Hawaiian waters as they will be a select subsample of the amount and type which are present throughout the islands. The MBA anticipates deploying 5 to eight (5-8) stationary divers in the water (at a dive depth of 60ft. in offshore waters that range between in 4000 to 7000 ft. depth) for forty to seventy (40 – 70) minutes per dive; each diver can only collect what arrives in front of them within arm's reach. The currents and drift of the charter vessel will put the divers in a different location at the end of the dive from when they first entered the water; thus, the collections are distributed over a large location and limited to the availability at the time and location and collection reach of the diver. The divers will be moving with the current, as will the specimens, therefore there should be no cumulative impacts on any particular species (i.e. no collections will occur in one concentrated location).

The special conditions within the permit have been designed to minimize the impact of this sampling method, provide transparency and optimize the potential benefits. No threatened or endangered species are being collected. Select special conditions are below – see the permit for all general and special conditions.

- Collection Plans/Collection Reports: Collectors will submit monthly collection plans and collection reports to verify actual numbers and sizes of collected organisms that are reviewed and approved by DAR biologists on a monthly basis or for a specific trip (if select collection trips will occur).

- Incidental mortality. Incidental mortality of target and non-target organisms (various spp. and sizes) may occur in the field or while or while in captivity (target organism). Researchers will report any incidental mortalities in monthly collection report and final report. If a repeated occurrence of mortality occurs, DAR may request to review the method and see if modifications can be made to the method to reduce mortality. DAR recommends changing sampling location if mortality occurs.

- Bycatch. Methodology for collection of samples may have unintended by-catch. Permittee or authorized assistants will attend gear at all times and release/return all unintended by-catch as quickly as possible to the marine environment (if applicable).

- Invasive Species, Disease and Parasites. The permittee will mitigate for the spread of invasive species, disease and parasites between sampling areas (if sampling in environmentally different areas) by utilizing best management practices, including but not limited to, ensuring that all organisms, hand tools or collection bags/containers are inspected and absent of any non-natives or invasive organisms before transportation to lab aquariums (not applicable where invasive species, disease and parasites are target species for collections) or before collection in a new area, and ensuring that all gear is disinfected or sterilized between collection areas.

Benefits to the State of Hawaii. The benefits to the State of Hawaii from these collections include increased awareness and education about various spp. of deep water gelatinous zooplankton, zooplankton and jellyfish that occur in Hawaiian waters and the role they play in the ecosystem, to people from around the world who visit the Monterey Bay Aquarium; increased awareness and education will aid future conservation efforts needed to preserve these organisms and the ecosystems they inhabit. In addition, facilities that have expertise holding these types of deep water organisms are able to collaborate with other institutions to develop and share successful techniques on husbandry research or culturing, which can then be utilized to continue research or propagate certain species within aquariums to reduce future collections (for educational display or research) from the wild.

Consulted Parties: Chris Teague, District Aquatic Biologist, DAR (Hawaii-Kona), Cathy Gewecke, Aquatic Biologist DAR (Oahu), Brian Neilson, Administrator, DAR (Oahu), Charles Young (Aha Moku Council), Uʻilani Naipo (Miloliʻi Community-Based Subsistence Fishing Area), Chad Wiggins (Hui Aloha Kīholo).

Exemption Determination: Exemption Determination: After reviewing §11-200.1-15, HAR, including the criteria used to determine significance under §11-200.1-13, HAR, DLNR has concluded that the activities under this permit would have minimal or no significant effect on the environment and that issuance of the permit is categorically exempt from the requirement to prepare an environmental assessment based on the following analysis:

1. All activities associated with this permit have been evaluated as a single action. Since this permit involves an activity that is precedent to a later planned activity, i.e., the same methodology used throughout the permit period, the categorical exemption determination here will treat all planned activities as a single action under §11-200.1-10, HAR.

2. The General Exemption Type #1 for Operations, Repairs or Maintenance of Existing Structures, Facilities, Equipment, or Topographical Features, #4 for Minor Alterations in the Conditions of Land, Water, or Vegetation and #5 for Basic Data Collection, Research, Experimental Management, And Resource Evaluation Activities Which Do Not Result In A Serious Or Major Disturbance To An Environmental Resource, Appears to Apply. §11-200.1-16 (a) (1) and §11-200.1-16 (a) (2), HAR, exempts the class of actions that involve "maintenance of existing structures, involving minor expansion or minor change of use beyond that previously existing", "minor alterations in the conditions of land, water, or vegetation" and "basic data collection, research and experimental management with no serious or major environmental disturbance". These exemption types have been interpreted to include the collection, possession and transportation of regulated and non-regulated organisms, for the purposes of educational live display in a deep-water exhibit ("aquarium purposes") and associated research (e.g. husbandry captive research and/or culturing).

The proposed activities here appear to fall squarely under the general the exemption classes identified under HAR §11-200.1-16 (a) (1) and as described under the 2020 DLNR exemption list, under exemption type #1 (Part 1), item #6 and under exemption type #4 (Part 1), item #15 and under exemption type #5 (Part 1), item #15, which includes, respectively, "operation, repair and maintenance of existing fisheries facilities, involving capture, containment, sustaining, experimentation, and husbandry of various freshwater, estuarine, and marine fishes, invertebrates, and other aquatic organisms", "captive propagation

of birds, mammals, invertebrates, or aquatic organisms…" and "game and non-game wildlife surveys, vegetation and rare plant surveys, aquatic life surveys, inventory studies, new transect lines, photographing, recording, sampling, collection, culture, and captive propagation".

As discussed below, no significant disturbance to any environmental resource is anticipated. Thus, so long as the below considerations are met, the general exemption types should include the action now contemplated.

3. Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Potentially Particularly Sensitive Environment Will Not be Significant. Even where a categorical exemption appears to include a proposed action, the action cannot be declared exempt if "the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment." §11-200.1-15 (d), HAR. To gauge whether a significant impact or effect is probable, an exempting agency must consider every phase of a proposed action, any expected primary and secondary consequences, the long-term and short-term effects of the action, the overall and cumulative effect of the action, and the sum effects of an action on the quality of the environment. §11-200.1-13, HAR.

Significant cumulative impacts are not anticipated as a result of this activity, and numerous safeguards further ensure that the potentially sensitive environment of the project area will not be significantly affected. All activities will be conducted in a manner that does not diminish marine resources, qualities, and ecological integrity, or have any indirect, secondary, cultural, or cumulative effects.

Since no significant cumulative impacts or significant impacts with respect to any particularly sensitive aspect of the project area are anticipated, the categorical exemptions identified above should remain applicable.

4. Overall Impacts will Probably have a Minimal or No Significant Effect on the Environment. Any foreseeable impacts from the proposed activity will probably be minimal, and further mitigated by general and specific conditions attached to the permit. Specifically, all research activities covered by this permit will be carried out with strict safeguards for the natural, historic, and cultural resources, other applicable law and agency policies and standard operating procedures.

Conclusion. Upon consideration of the permit to be approved by the Chairperson, being delegated signatory authority on behalf of the Board of Land and Natural Resources at its meeting of October 24, 2008, the potential effects of the above listed project as provided by Chapter 343, HRS, and Chapter 11-200.1, HAR, have been determined to be of probable minimal or no significant effect on the environment and exempt from the preparation of an environmental assessment.

MBARI and MBA Collaborations

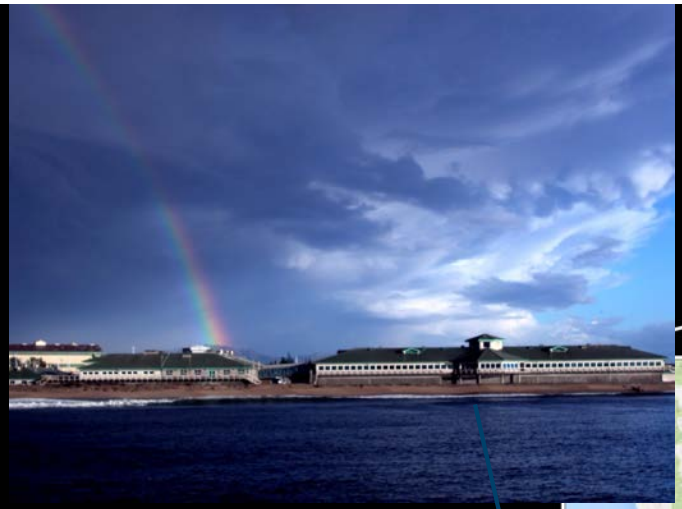
Kona, HI

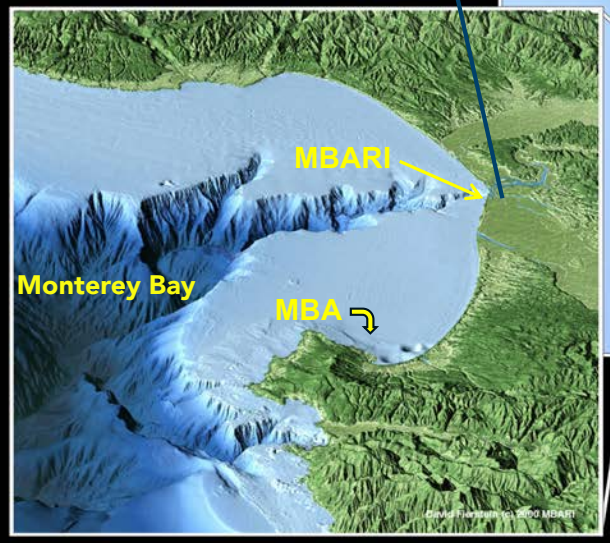
George Matsumoto, George Peterson, John O'Sullivan

July 16, 2025

MBARI Monterey Bay Aquarium Research Institute


MBARI
Monterey Bay Aquarium
Explore and Understand
Champion Change



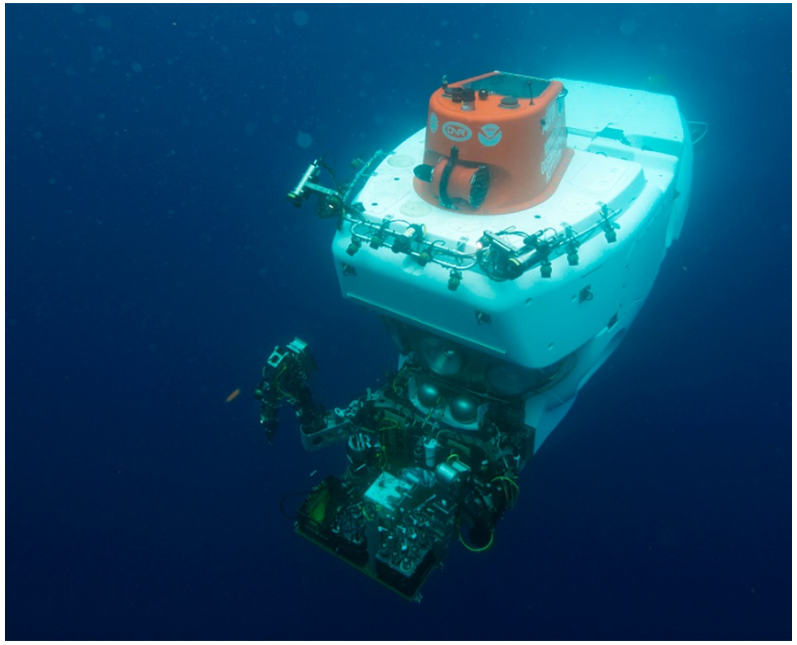


Monterey Bay Aquarium Research Institute

DAVID PACKARD HAD A CLEAR VISION FOR HOW MBARI WOULD TACKLE THAT CHALLENGE.

THAT VISION WAS DIFFERENT FROM OTHER OCEANOGRAPHIC INSTITUTIONS.

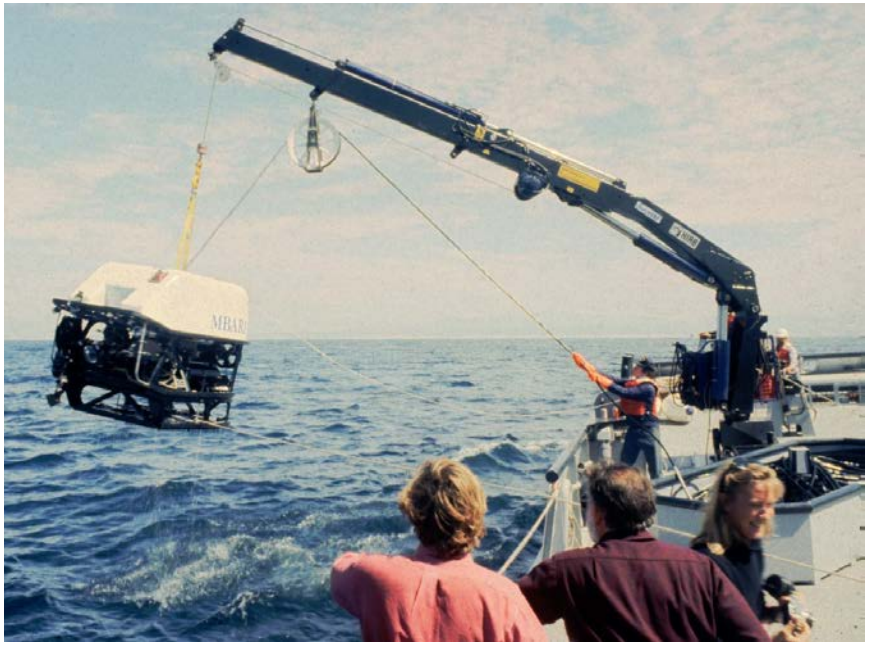
Human Occupied Vehicle (HOV)



Woods Hole Oceanographic Institute's HOV: *Alvin* (1964 first launch)

vs.

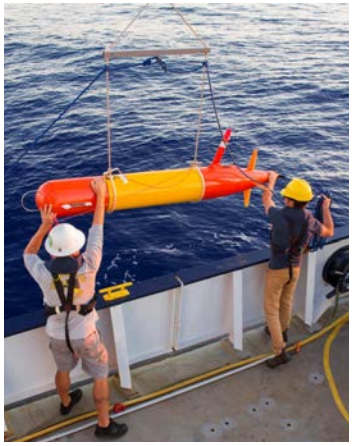
Remotely Operated Vehicle (ROV)

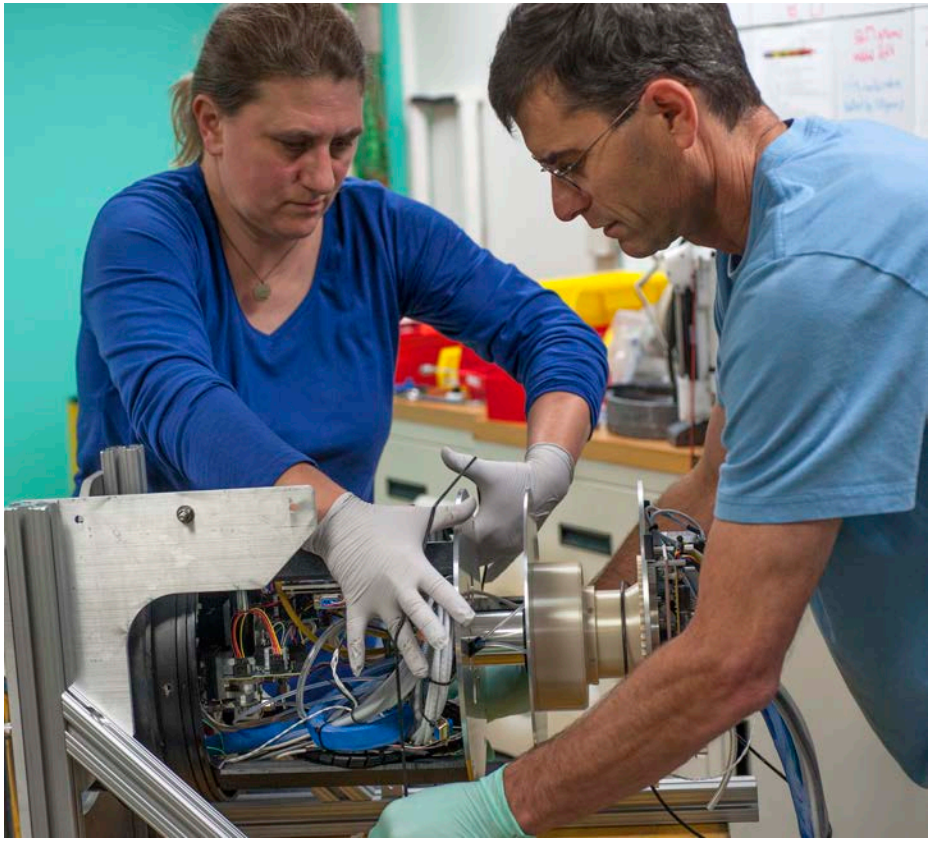


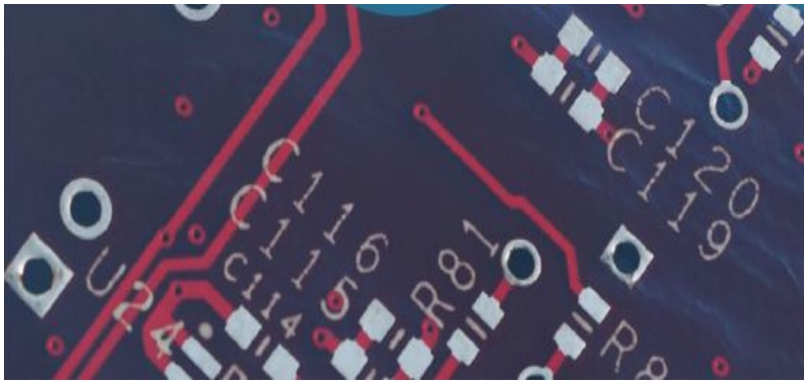
MBARI's *Ventana* (1989 first launch)

MBARI Monterey Bay Aquarium Research Institute

His vision focused on creating partnerships between scientists and engineers.

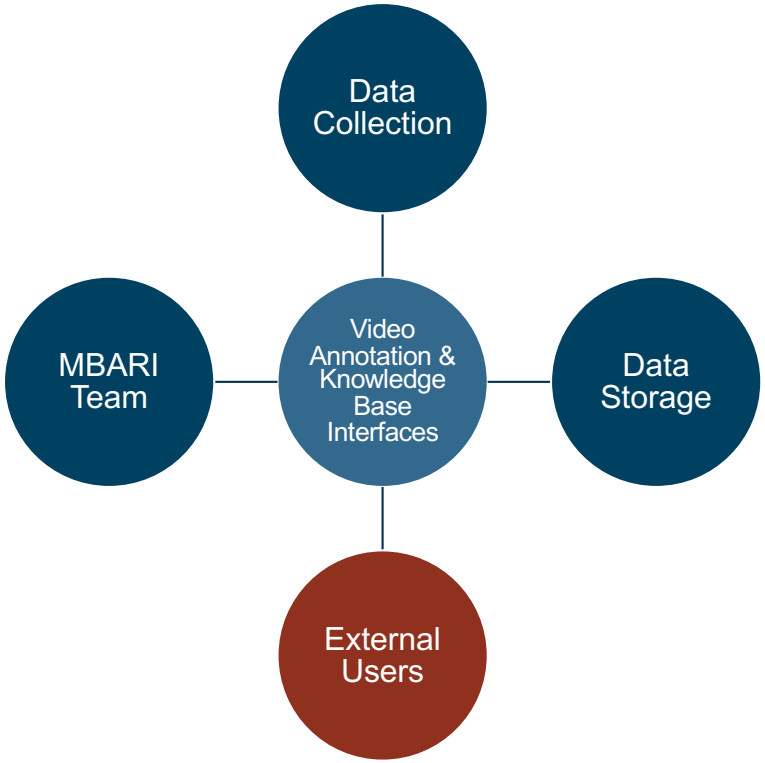




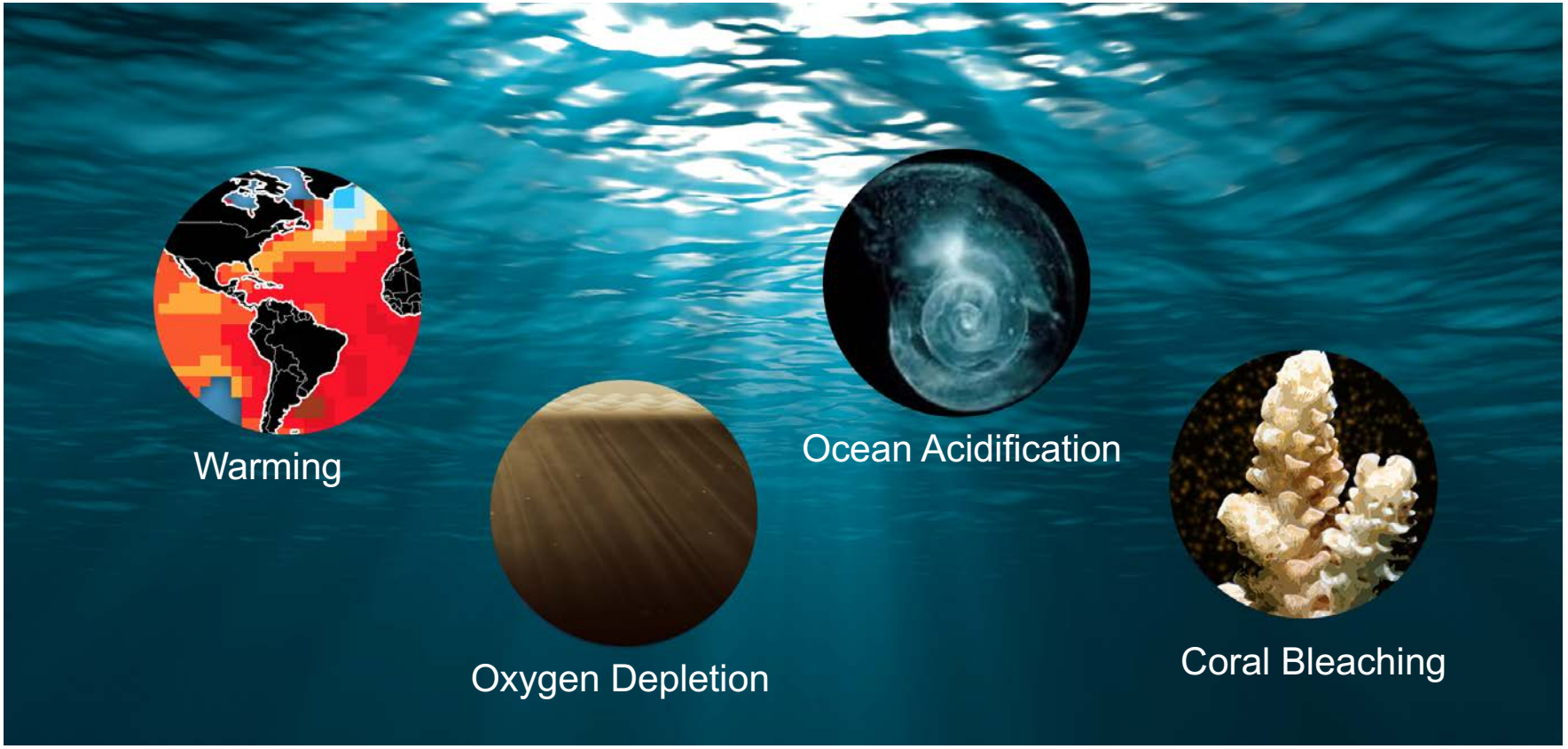


MBARI Monterey Bay Aquarium Research Institute

And an insistence on data management.

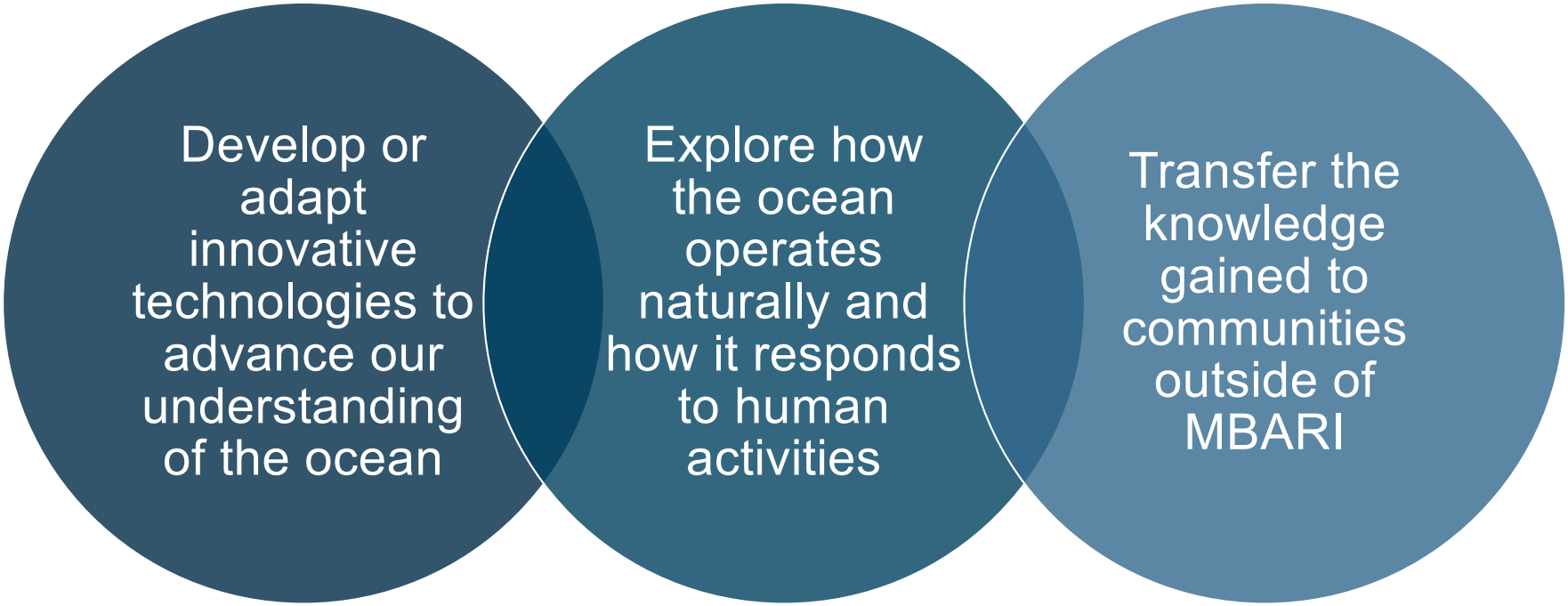


THE OCEAN IS UNDERGOING RAPID CHANGE —BOTH ITS CHEMISTRY AND BIOLOGY.



MBARI Monterey Bay Aquarium Research Institute

MBARI's Overarching Goals



MBARI Vision

MBARI envisions a future where we better understand and can predict ocean processes, from atoms to ecosystems; the highest-quality data informs ocean management and policy; and the ocean research and conservation community is diverse, inclusive, and equitable.

MBARI Monterey Bay Aquarium Research Institute

Strategic Roadmap

MBARI works to create and globally scale the research and technology required to explore, map, and understand our changing ocean, using Monterey Bay as our testbed.

- **Innovate and Build**
  - Build scalable technologies to improve ocean health assessments
  - Map the deep seafloor at high resolution
  - Advance ocean-based artificial intelligence
- **Explore and Protect**
  - Explore and observe life in a dynamic ocean
  - Study the impacts of climate change and other ocean threats
- **Inspire and Engage**
  - Share what we learn to inspire and inform ocean conservation
  - Make ocean science and engineering careers accessible to all

MBARI Monterey Bay Aquarium Research Institute

With a mission to inspire conservation of the ocean, the Monterey Bay Aquarium is the most admired aquarium in the United States, a leader in science education, and a voice for ocean conservation through comprehensive programs in marine science and public policy. Everything we do works in concert to protect the future of our blue planet.

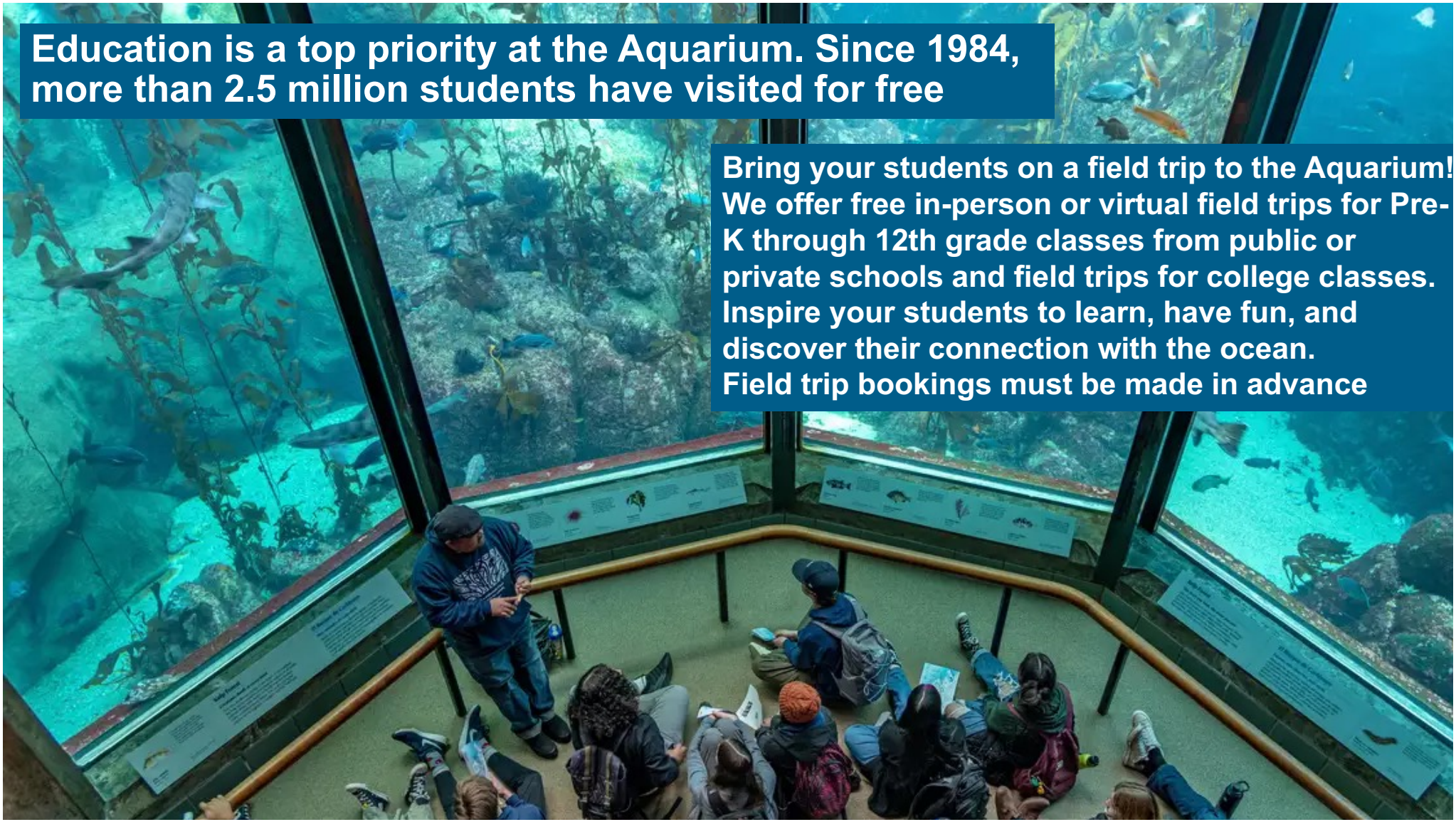

Founded in 1984, the Aquarium is known for our focus on local and global research and conservation efforts, excellence in exhibits and educational programs, and animal husbandry techniques
OUR COMMITMENT
Join us on our sustainability journey
Everything we love can thrive if we work together toward sustainability. Learn about our commitment to make a real impact by eliminating single-use plastics, implementing waste diversion, and collaboratively advancing our mission to reach net-zero by 2035.
Learn what this means to us
TICKETS AVAILABLE NOW
Make a splash this summer!
Kids ages 8-13 will dive into a watery world of wonder in our summer Underwater Explorers program. They'll experience a surface

Frolicking sea otters, fast-swimming sharks, pulsating jellies, and waddling penguins – the Aquarium's world-class exhibits and breathtaking scenery instill a love of the ocean in their visitors. Over 200 exhibits and 80,000 plants and animals, the Aquarium is a window to the wonders of the ocean.

Strategic commitment

Cultivate an equitable and thriving organization with people at the center.

We promote diversity, equity, inclusion, and accessibility (DEIA) to create a culture of well-being as a foundation for a thriving nonprofit. We commit to a culture of continuous learning and growth to become a workplace that removes barriers, compensates equitably, fosters inclusive leaders, and supports all staff in their development.


Education is a top priority at the Aquarium. Since 1984, more than 2.5 million students have visited for free
Bring your students on a field trip to the Aquarium! We offer free in-person or virtual field trips for Pre-K through 12th grade classes from public or private schools and field trips for college classes. Inspire your students to learn, have fun, and discover their connection with the ocean.
Field trip bookings must be made in advance

MBARI/MBA Collaborations

David Packard intended our institutions' goals and objectives would be met through close collaboration.

Today we continue that partnership and "work internally in each organization to ensure that collaborative projects are considered at the appropriate time and place in each institution's planning cycle and decide how to handle unanticipated projects or opportunities."

Photo taken during blackwater collections Kona, HI (Sept 2021)

MBARI and Aquarium Conservation Collaborations

Conservation priorities

Sustainable seafood

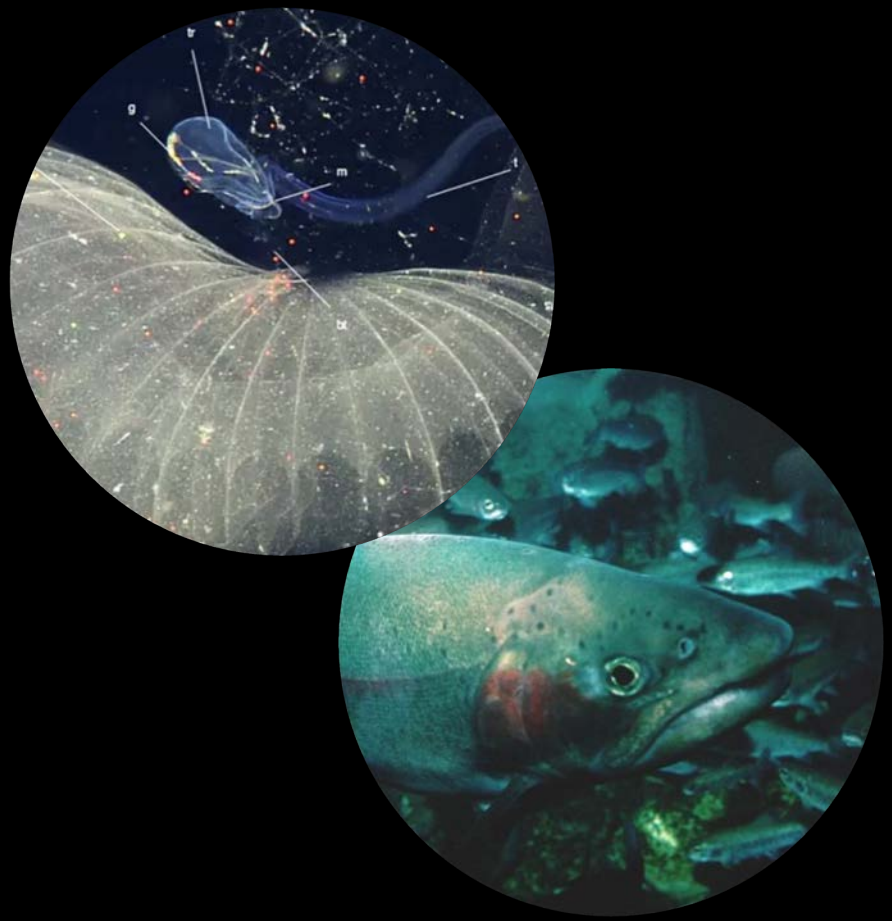
California ecosystems

Climate change

Plastic pollution

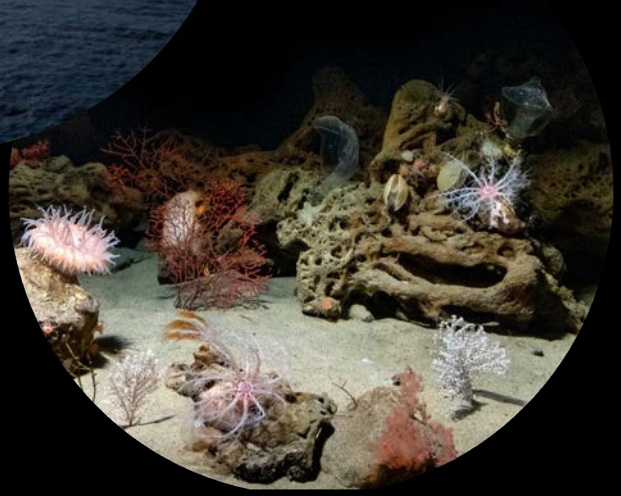
Monterey Bay Aquarium

MBARI Monterey Bay Aquarium Research Institute



First collaborations

- Microplastic pollution in the deep sea
- Salmonid migration and recovery in coastal rivers
- Sharing information with the public



Now includes

- Offshore wind and protected areas
- Impacts of seabed mining
- Evaluating climate mitigation proposals

Current Aquarium and MBARI collaborations

Monterey Bay Aquarium

MBARI Monterey Bay Aquarium Research Institute

EOS

July 2003

EOS, TRANSACTIONS, AMERICAN GEOPHYSICAL UNION

VOLUME 84 NUMBER 26 1 JULY 2003

IN THIS ISSUE:

An Educational Partnership in the Ocean Sciences: Benefits and Lessons Learned

For the past 15 years, the Monterey Bay Aquarium Research Institute (MBARI) and the Monterey Bay Aquarium (MBA) have been involved in a collaborative relationship that could serve as a prototype for other institutions interested in maximizing their potential for science education based on current research programs. This article describes this relationship collaboration and its operational functioning.

Despite their similar names, the two institutions have separate missions, staffs, budgets, boards of directors, and facilities. MBA is a non-profit aquarium with ~400 paid staff members and another 800 volunteers, whose mission is to inspire conservation of the world's oceans. MBARI is a non-profit research organization with ~200 staff members and a mission "to achieve and maintain a position as a world center for advanced research and education in ocean science and technology, and to do so through the development of better instruments, systems, and methods for scientific research in the deep waters of the ocean."

> The aim of the partnership is to cooperate on public outreach—through exhibits, etc.— in ways that enable both institutions to further the realization of their respective missions.

MBARI and MBA formalized a memorandum of understanding in 1990 to [illegible] dedicate the [illegible] to cooperative collaboration, laying out the goals and tasks expected by

MBARI Monterey Bay Aquarium Research Institute

Benefits of Collaboration

From its inception, MBA and MBARI have both realized benefits from this collaboration. From MBA's perspective, the benefits include access to:

- expertise of scientists, engineers, and other staff who provide accurate and timely information;
- cutting-edge technology and scientific research which can be interpreted to the public to further MBA's mission;
- high-quality, unique photographic and video images which enhance MBA's exhibits, publications, and educational products; and
- the use of research equipment and technologies to support MBA's own research, animal collections, and exhibit development.

From MBARI's perspective, the benefits of collaboration similarly include access to unique opportunities and the valuable skills of the MBA staff, including:

- support for MBARI in effective dissemination of information to the media and the public;
- expertise in the areas of education, communication, and assessment;
- a competent and cost-effective conduit for MBARI's educational message;
- the use of MBA's facilities and equipment

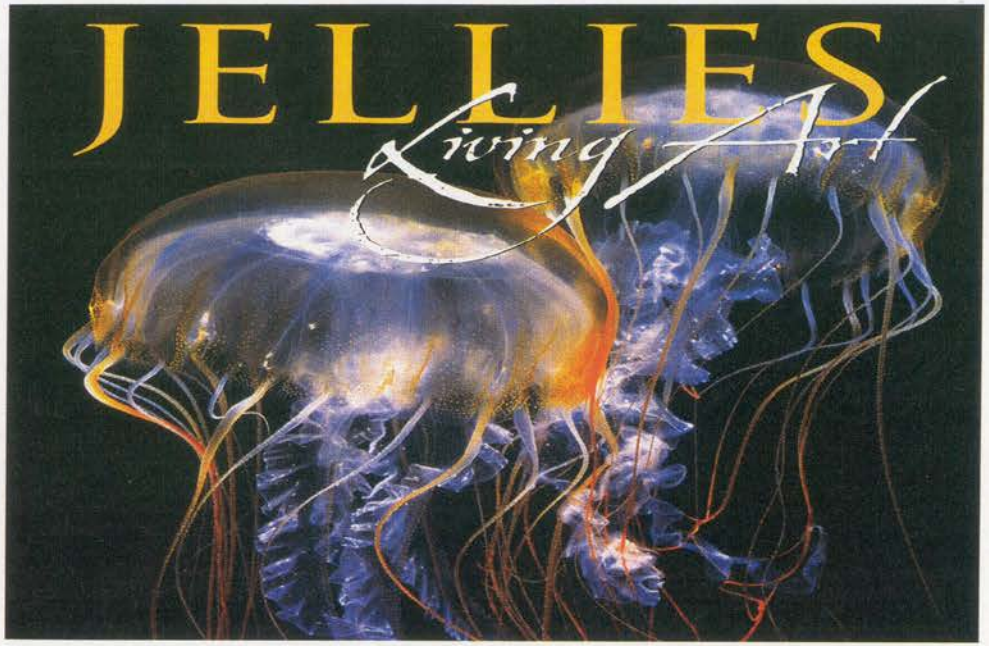
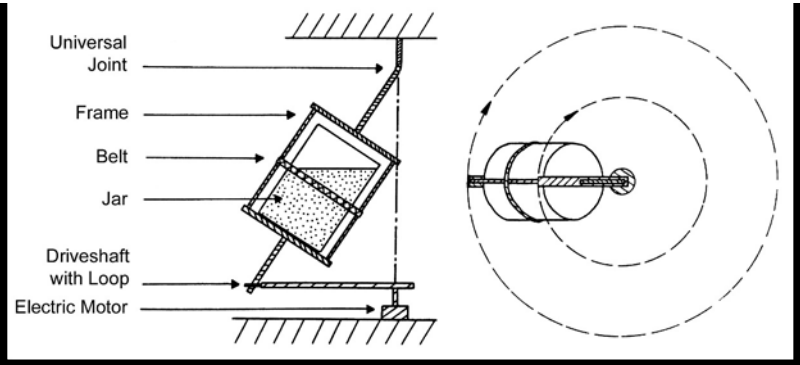
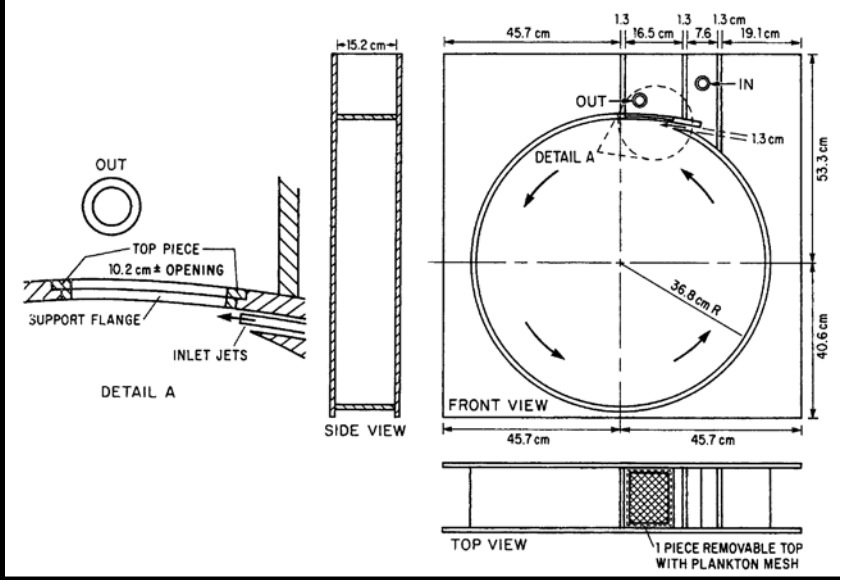


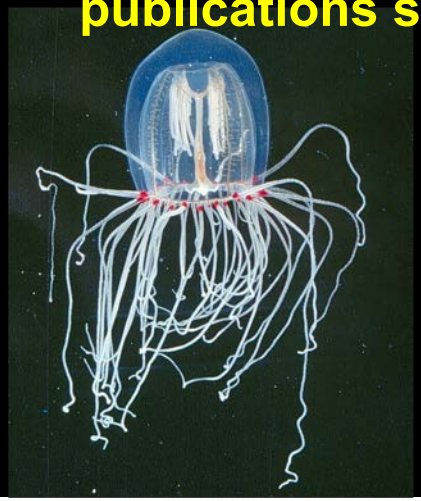
Fig. 1. Over 4500 copies of Jellies: Living Art *were purchased in 2002. This book was written by Judith Connor (MBARI) and Nora Deans (Birchtree Cove Studios, LLC) coincide with the opening of the new exhibit of the same name.*





Collection and Culture Techniques for Gelatinous Zooplankton

- 2003 Review article for Biological Bulletin
- Raskoff, Sommer, Hamner, Cross. - 12 more publications since then



Environmental DNA (eDNA) tools in estuaries:

a collaborative scoping project

Monterey Bay Aquarium

MBARI Monterey Bay Aquarium Research Institute

Collection of baseline data to inform policy makers about offshore wind effects on native marine fauna

Blackwater collections off Kona, Hawai'i

Palalia (Bryan, 1935)

*Pololia (*Māmaka Kaiao, 2003)

'ili mane'o, palalia, pa'imala

Bringing the Ocean's Midnight Zone Into the Light

The Monterey Bay Aquarium has learned how to raise the deepest sea life to the surface and keep it alive for display.

Into the Deep: Exploring Our Undiscovered Ocean

April 9th, 2022


Midwater
Deep water defines this living space
Between sunlit waters and the deep seafloor lies the midwater. This vast expanse is the largest habitat on Earth. Life here darts and drifts with no boundaries, little to no light and no place to hide.
Aguas Intermedias
Las aguas profundas definen este espacio vital
Entre aguas iluminadas por el sol y el profundo lecho marino, se encuentran las aguas intermedias. Esta vasta extensión es el hábitat más grande de nuestro planeta. En este lugar la vida ocurre moviéndose de manera constante, sin haber fronteras ni escondites.


Living Light
Enter a twinkling world
In the darkness of the deep sea, there's a language of light. Most animals here create their own glow, called bioluminescence. These dazzling displays confuse predators, lure prey or attract mates.
Step inside and enjoy a show with video footage of real midwater animals!
Luz Viviente
Entra a un mundo centelleante
En la oscuridad del mar profundo existe un lenguaje de luz. Aquí la mayoría de los animales crean su propio brillo llamado bioluminiscencia. Estos deslumbrantes juegos de luz confunden a los depredadores, sirven de señuelo para atrapar presas o atraer parejas.
¡Placeholder text dera vere nati abolgendi dolescitas aiminulp ariant eserum fugitatur repelen!


Bloodybelly comb jelly
Red looks black in the deep sea
This jelly appears flashy, but without a spotlight, it disappears in the darkness. Red light doesn't pierce this part of the deep sea, so red animals look black and hide in plain sight.
Range: North Pacific Ocean
Depth: 900 to 9,750 ft. (275 to 2,975 m)
Ctenóforo vientre rojo
Rojo es negro en el mar profundo
Este ctenóforo parece llamativo, pero sin un reflector, desaparece en la oscuridad. La luz roja no penetra esta parte del mar profundo. Por ello, los animales rojos se ven negros y se esconden a plena vista.
Distribución: Océano Pacífico Norte
Profundidad: 900 a 9,750 pies (275 a 2,975 m)
Lampocteis cruentiventer

Bubblegum coral

What look like wads of bubblegum on this coral's branches are tiny animals called polyps. Hundreds of these polyps make up each coral.

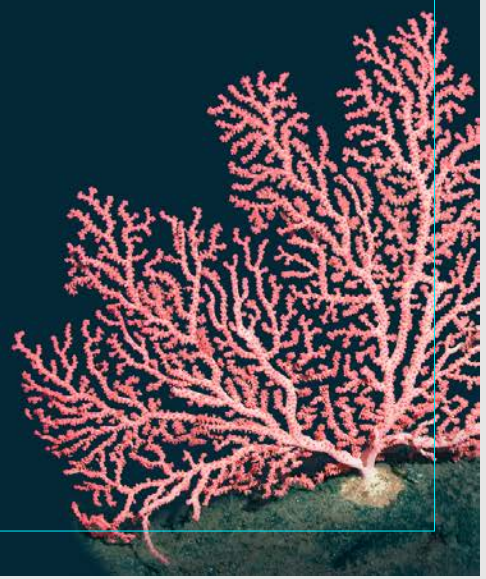
Range: worldwide
Depth: 130 to 6,000 ft. (40 to 1,830 m)

Coral chicle

Semejantes a unas bolitas de chicle bomba ubicadas sobre las ramas de este coral, son en realidad animales diminutos llamados pólipos Cientos de estos pólipos conforman a cada coral.

Distribución: alrededor del mundo
Profundidad: 130 a 6,000 pies (40 a 1,830 m)

Paragorgia spp.

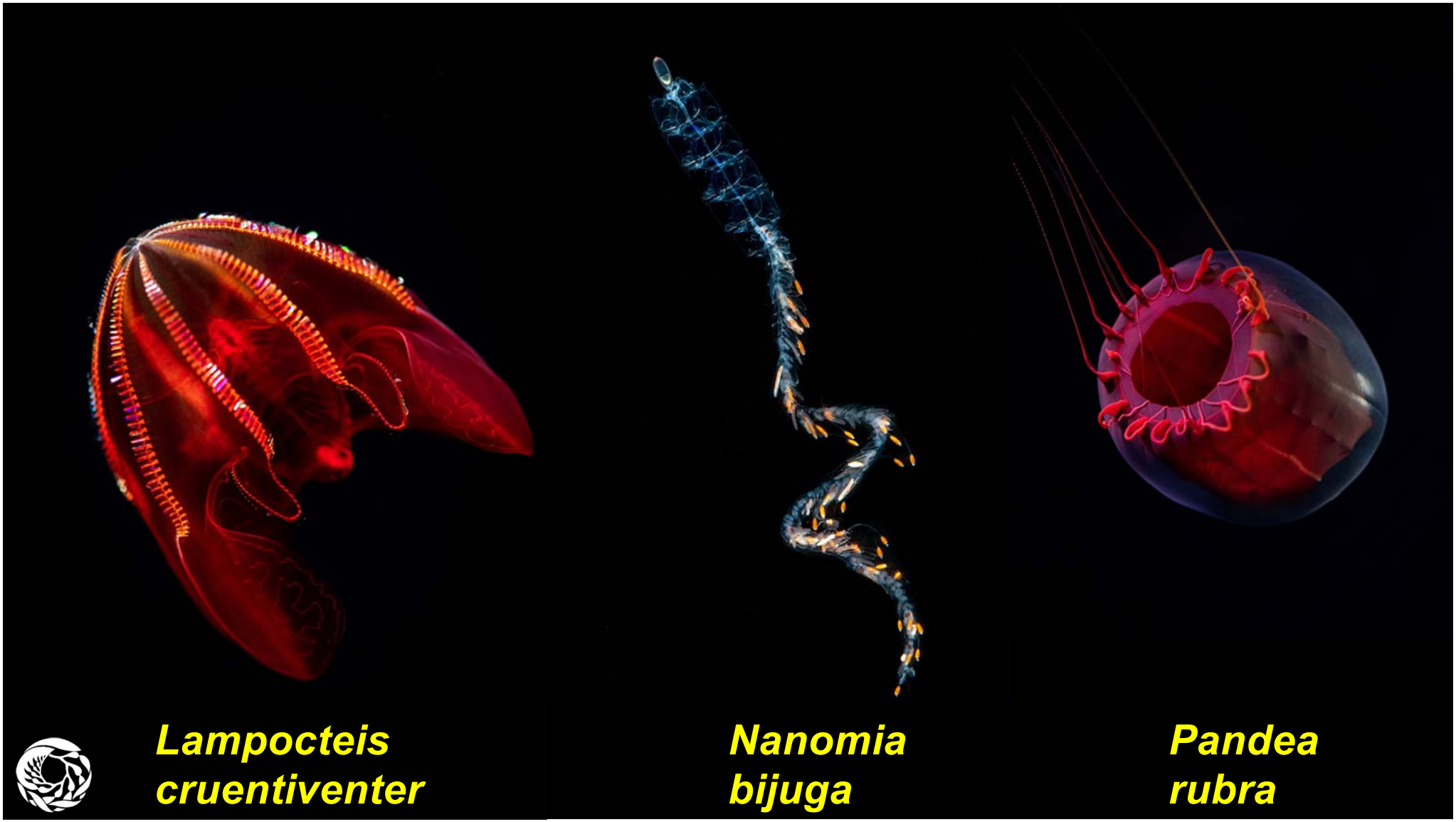


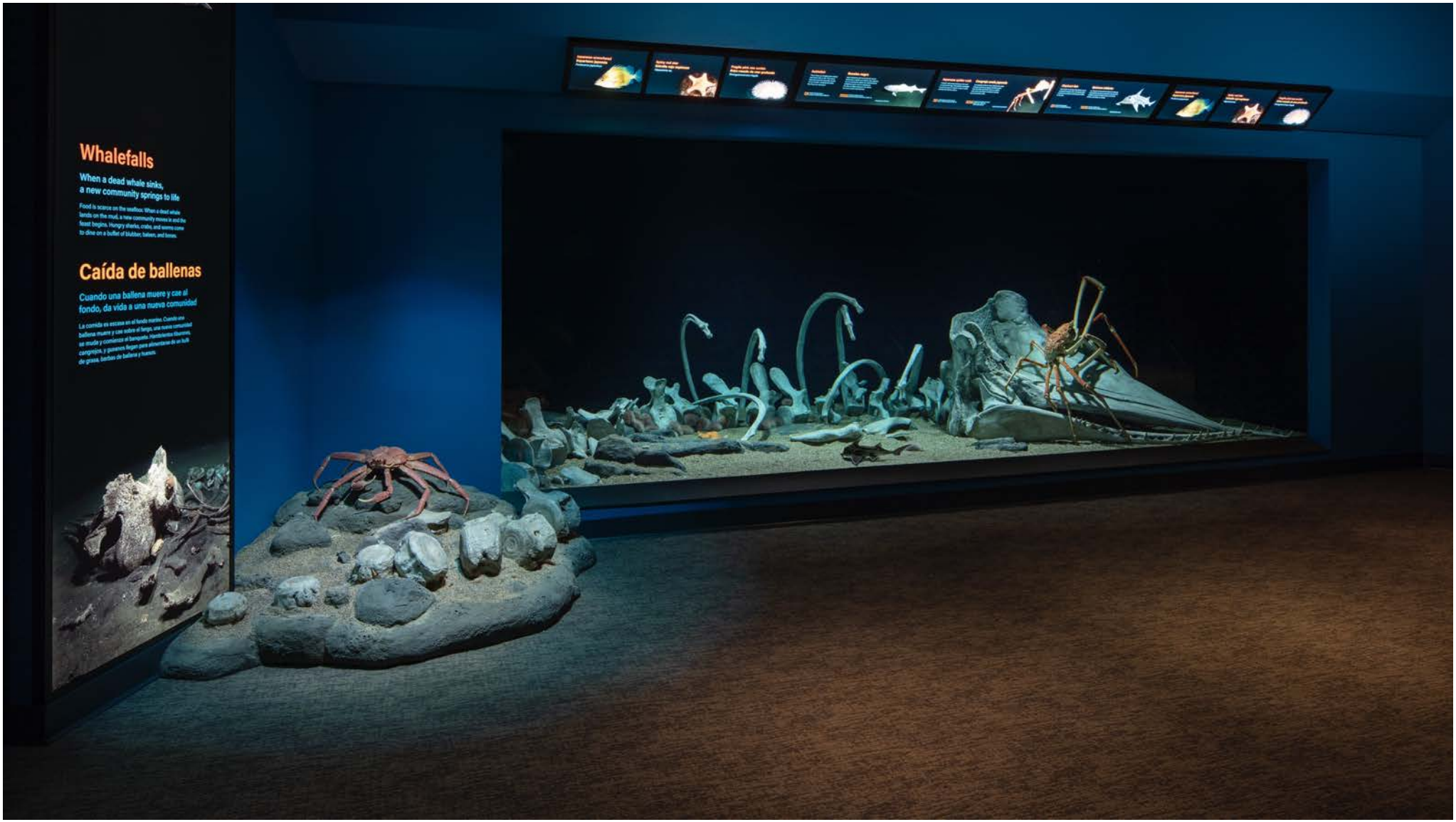
Into The Deep

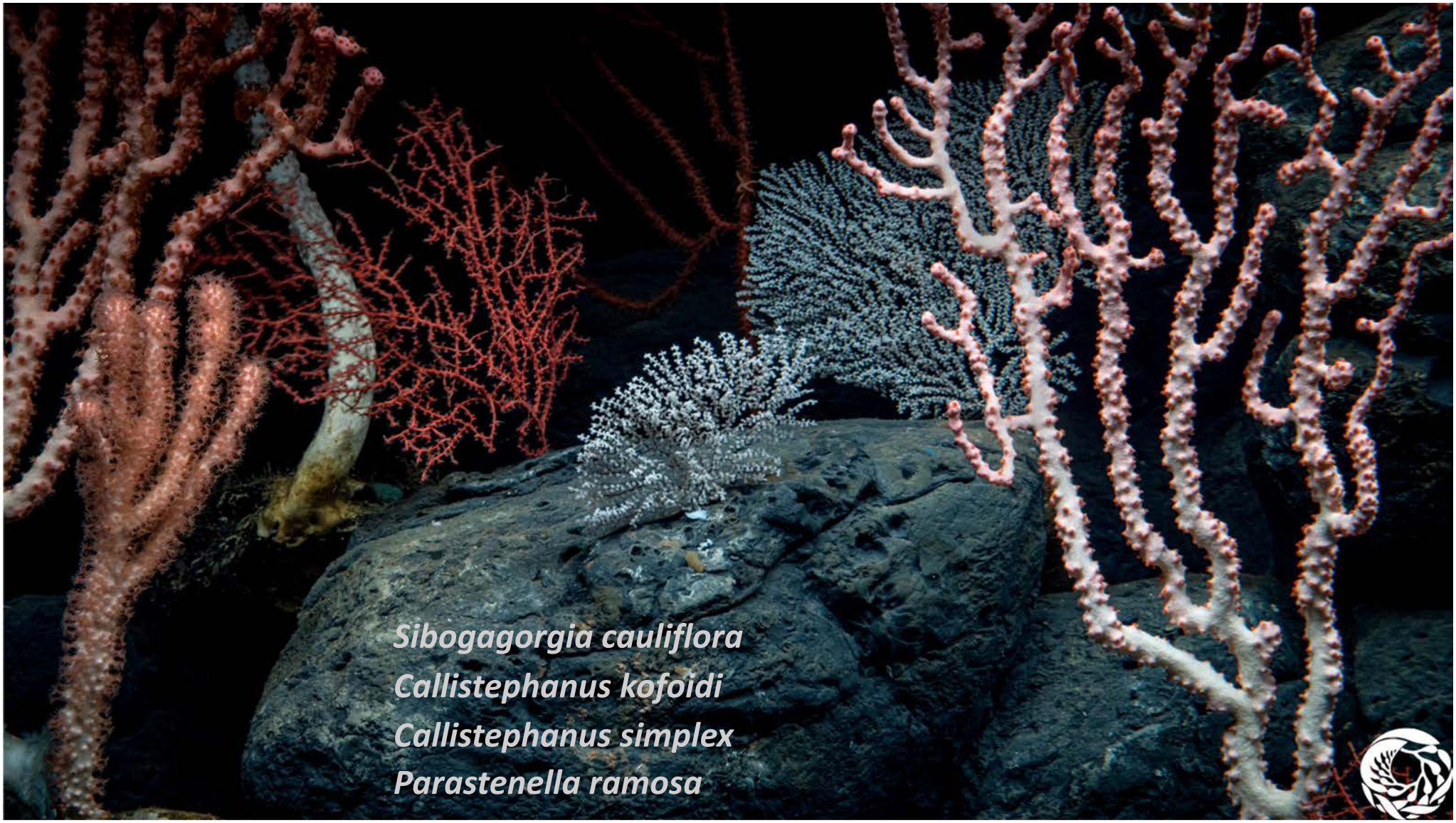
2 million visitors per year

- 10,000 square feet
- Live exhibits:
  - Midwater: 8 exhibits
  - Benthic: 13 exhibits
  - Novel low O2 filtration
  - Novel species
- Features:
  - Bioluminescence gallery
  - MBARI highlights
  - Microplastic Interactives
  - Hydrothermal Vent

MBARI Monterey Bay Aquarium Research Institute

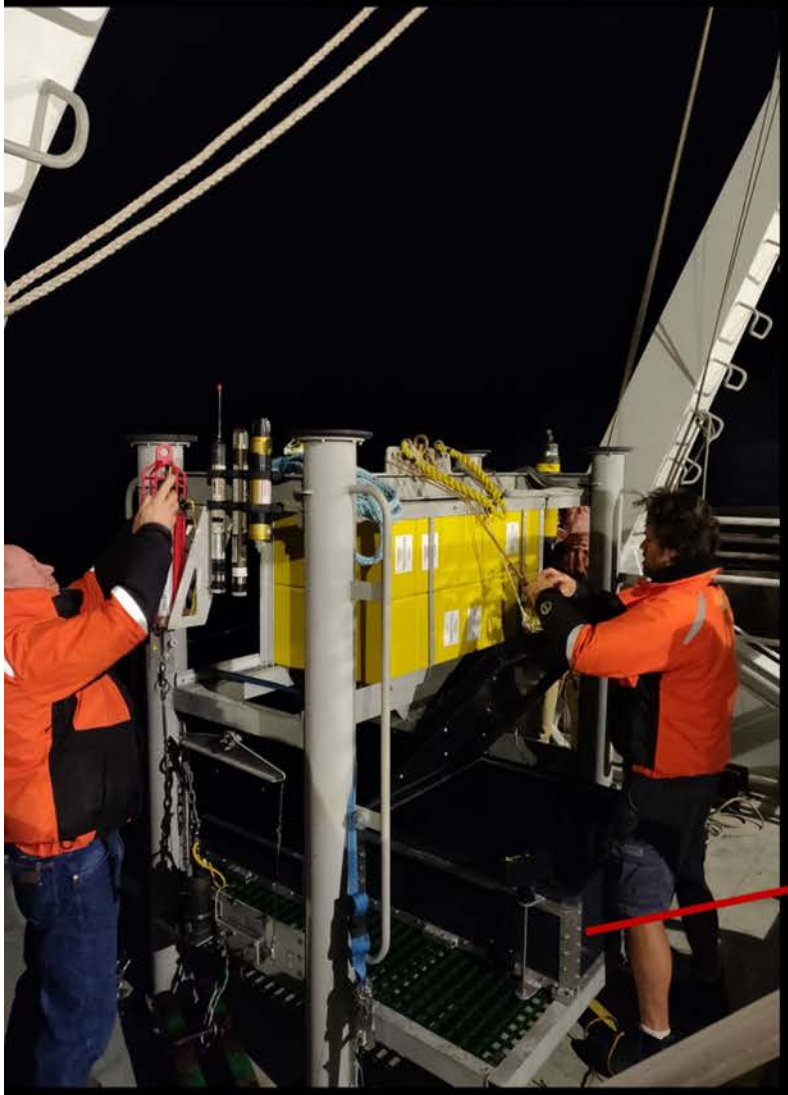

Lampocteis cruentiventer
Nanomia bijuga
Pandea rubra

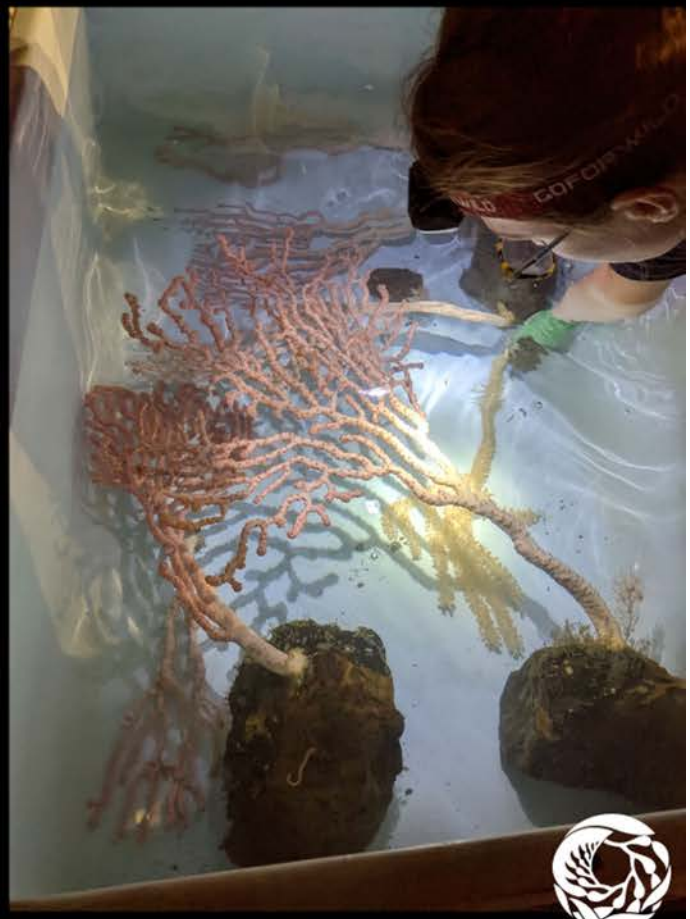

Whalefalls
When a dead whale sinks, a new community springs to life
Food is scarce on the seafloor. When a dead whale lands on the mud, a new community moves in and the feast begins. Hungry sharks, crabs, and worms come to dine on a buffet of blubber, baleen, and bones.
Caída de ballenas
Cuando una ballena muere y cae al fondo, da vida a una nueva comunidad
La comida es escasa en el fondo marino. Cuando una ballena muere y cae sobre el fango, una nueva comunidad se muda y comienza el banquete. Hambrientos tiburones, cangrejos, y gusanos llegan para alimentarse de un bufé de grasa, barbas de ballena y huesos.


Sibogagorgia cauliflora
Callistephanus kofoidi
Callistephanus simplex
Parastenella ramosa


Umbellula
Megalodicopia

Elevator with bio-boxes





MBARI/MBA Collaborations

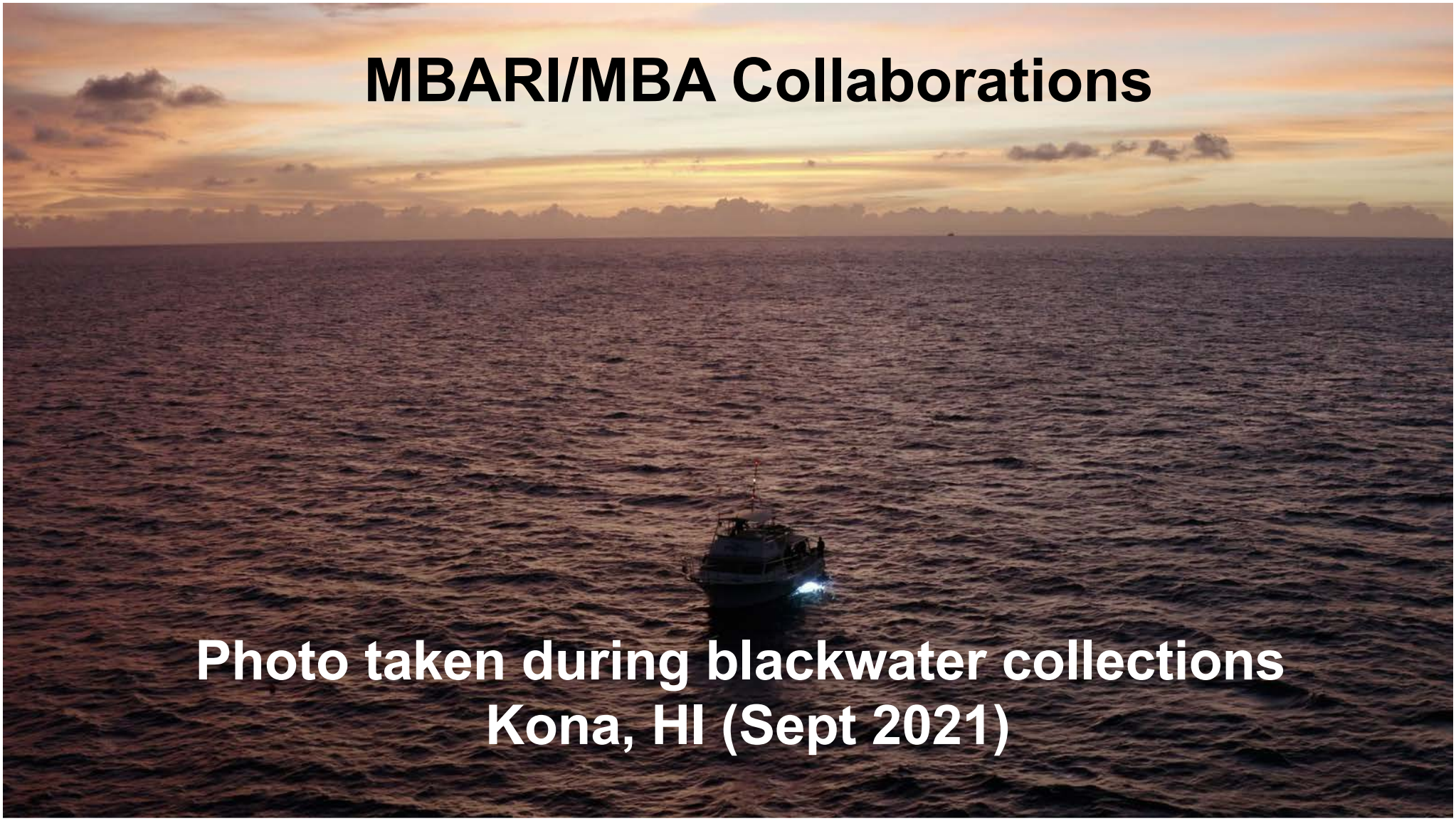
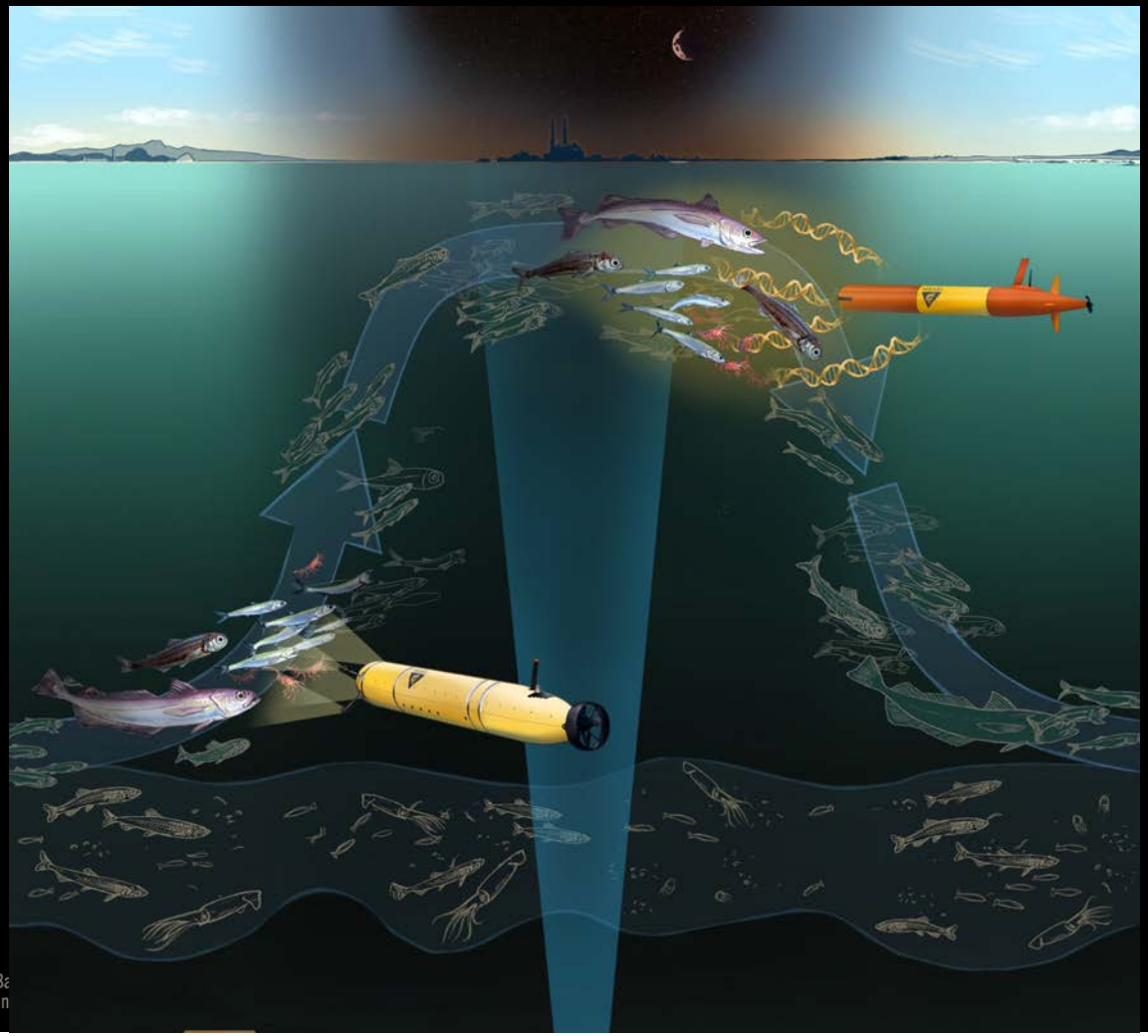
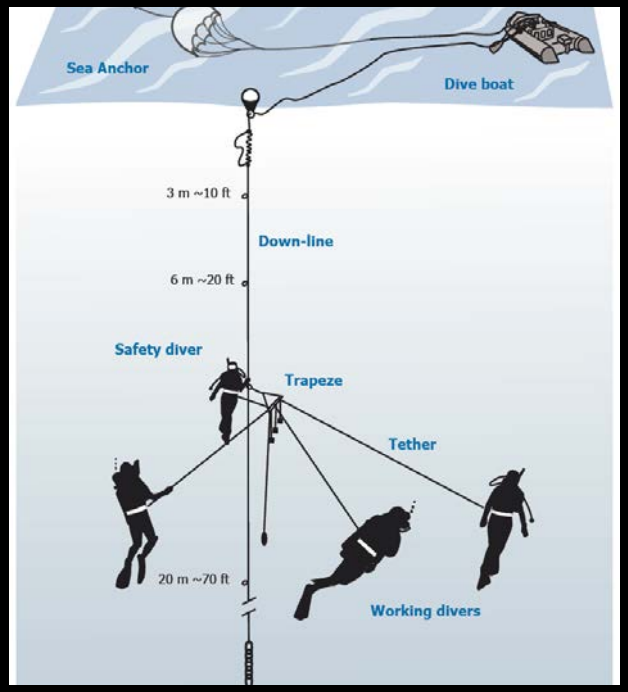


Photo taken during blackwater collections
Kona, HI (Sept 2021)

Diurnal Vertical Migration



MBARI Monterey Ba
Research In



How best to dive?

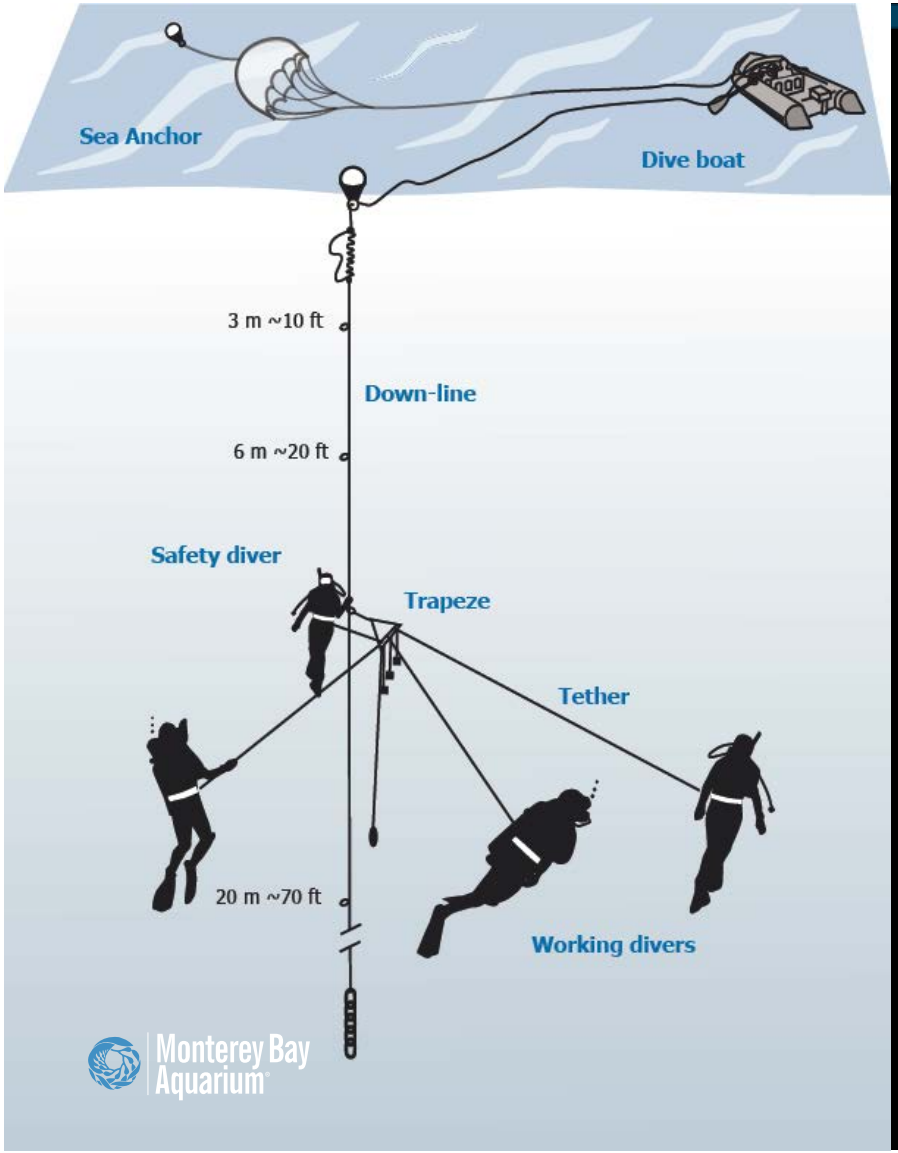
On the left, typical scientific blue-water diving rig

Image credit: Scientific Blue-Water Diving (Haddock, Heine)

On the right, typical setup of recreational black-water charter dives

Image credit: Jack's Diving Locker

MBARI Monterey Bay Aquarium Research Institute



The winner is…

Safety diver has better control

- Depth management
- Communication
- Recall capabilities
- Divers are task loaded/hyper focused

Bluewater Diving

Diving in the open ocean without a functional bottom and no fixed objects for reference

Scientific Blue-Water Diving (Haddock, Heine)

Challenges

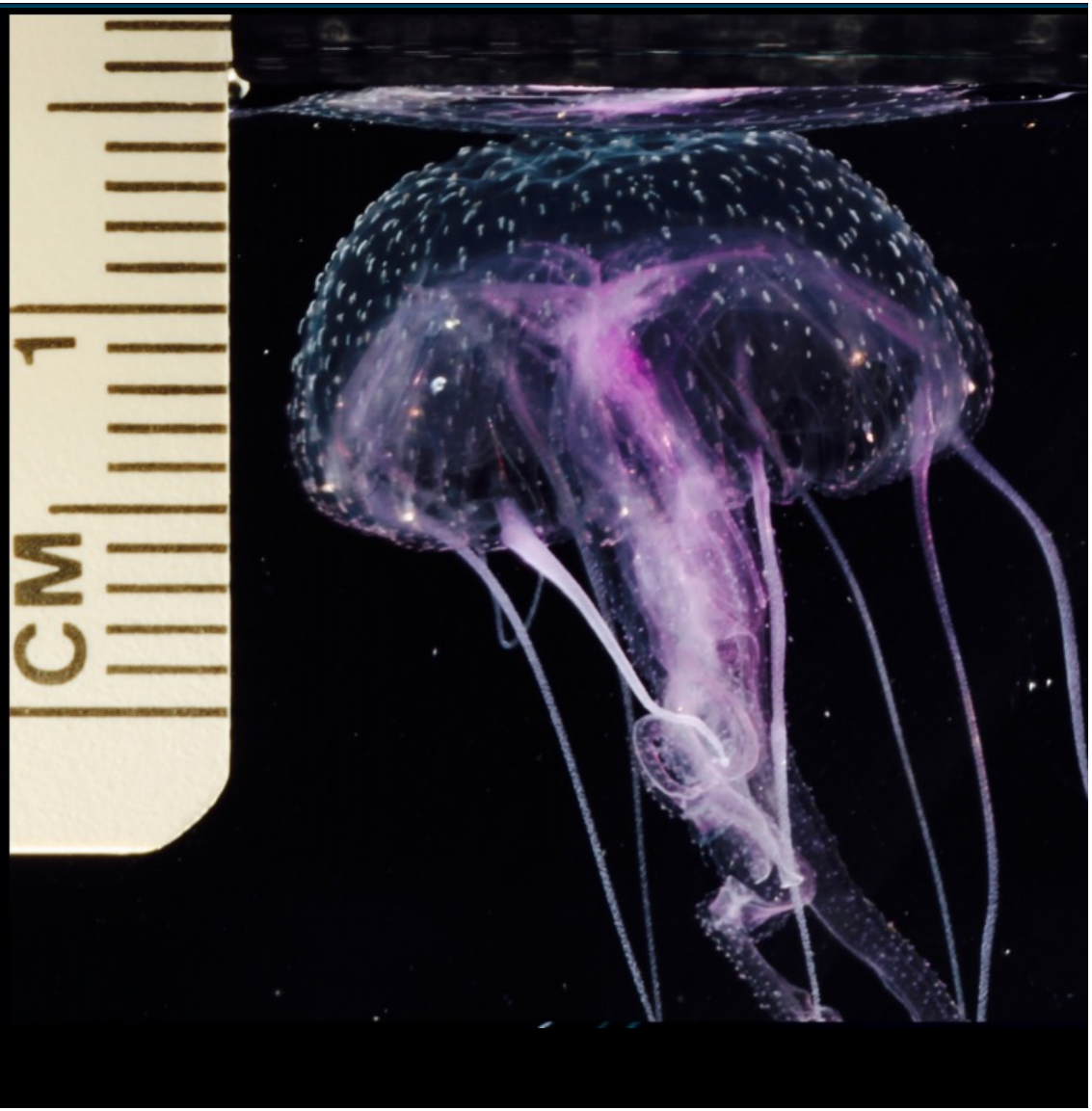
- Disorientation
- Decrease in awareness
  - Depth
  - Buoyancy
  - Current

Blackwater Diving

Collaboration

- MBA, MBARI
- Kona Honu Divers
- National Energy Lab of Hawai'I Authority (NELHA)
- Dept. of Land and Natural Resources
- Division of Aquatic Resources
- University of Hawai'i

- Collect pelagic species using blue-water diving techniques at night (aka black-water diving)
- Transport back to Monterey
- Husbandry research
- Exhibit and outreach



MBARI Monterey Bay Aquarium Research Institute

Logistical Planning


Approximate dive location(s)
at least 3-4 miles offshore
Offshore blue water drift dive
~4000 – 7000 fsw
Max Dive Depth: 60fsw
Costco Wholesale
Kaloko-Hono
Nationa
Historical
Google

Post-dive

pre and post dive reports to DAR

MBARI Monterey Bay Aquarium Research Institute

Explorations & opportunities ahead

Monterey Bay Aquarium

MBARI Monterey Bay Aquarium Research Institute

Kelp forest recovery and resilience: evidence-based guidance for management and policy




Monterey Bay Aquarium
MBARI Monterey Bay Aquarium Research Institute

Developing new eDNA techniques for marine mammal research

Monterey Bay Aquarium

MBARI Monterey Bay Aquarium Research Institute

Microplastic sedimentation rate in the Monterey Canyon

Microplastics monitoring and measurement models and techniques

Science & technology advice for conservation

STORY

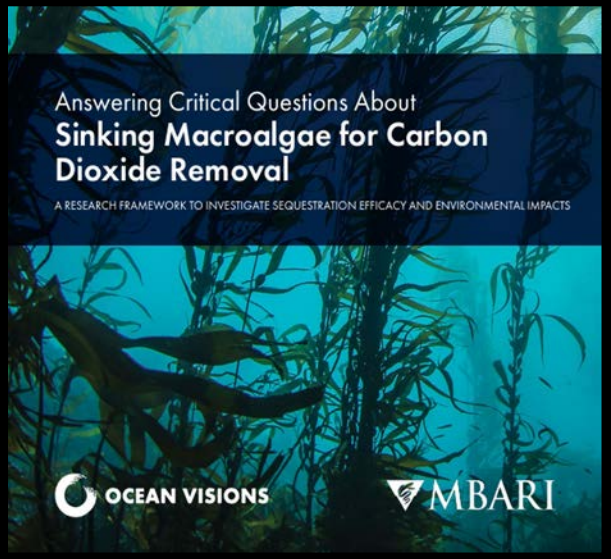
Sep. 19, 2022

The state joins Oregon and Washington in protecting the seafloor

The Aquarium joined with Lieutenant Governor Eleni Kounalakis and Surfrider to support Assembly Bill 1832, authored by Assemblymember Luz Rivas, which bans destructive mining of mineral deposits on the seafloor.

Key areas:

- Offshore wind
- Deep sea mining
- Protected areas
- Climate change



Monterey Bay Aquarium

VISIT ANIMALS JOIN & GIVE ACT FOR THE OCEAN FOR EDUCATORS

Act for the ocean ‹ Climate change

Answers to frequently asked questions about offshore wind development off of California

UN Ocean Conference: June 7-13 Nice, France

- **Aquarium/MBARI Delegation**
- **Priorities for President Macron:**
  1. BBNJ ratifications (achieve 60)
  2. Advance sustainable fishing
  3. Advance 30x30 (from 8 to 12% protection)
  4. Decarbonize maritime transport
  5. Tackle plastic pollution (Plastic Treaty)
  6. Mobilize ocean finance
  7. Support locally led climate action
  8. Defending science as the cornerstone of public action (incl. for deep-sea mining)
- **Outcomes**: political declaration and voluntary commitments (Nice Ocean Action Plan)

Global Plastic Treaty: August 5-14, Geneva

- **Aquarium + International Science Council**
- **Remaining sticking points:**
  - Reduction of upstream polymer production
  - Elimination of harmful plastic products and chemicals
  - Financing
- **Key milestones to Geneva**:
  - UNOC (Nice)
  - Heads of Delegation meeting (Nairobi)

Thank you

George Matsumoto (mage@mbari.org)

Thank you!

Questions?

Thank you!

Collections conducted under Hawai'I Department of Land and Natural Resources Division of Aquatic Resources Special Activity Permits

Monterey Bay Aquarium

MBARI Monterey Bay Aquarium Research Institute

Promote a culture of inclusion

MBARI is located on the unceded land of the Hueñeren and Guacharron peoples. This area was home to a settlement called Locuyusta in the region of Calendaruc, which means “ocean homeplace.” The Native peoples of this area were taken to Mission San Juan Bautista and Mission San Carlos Borromeo de Carmelo. Native people taken to Mission San Juan Bautista are represented today by the Amah Mutsun Tribal Band.

Land acknowledgement statement developed in partnership with the Amah Mutsun Land Trust.

UNIVERSITY of HAWAI'I® MĀNOA

College of Natural Sciences
School of Life Sciences

July 13, 2025

To Whom It May Concern,

I am writing in strong support of the Monterey Bay Aquarium (MBA) and the Monterey Bay Aquarium Research Institute (MBARI) in their request for a Special Activities Permit to collect unregulated gelatinous animals in West Hawaiian waters using black water diving. The MBA is one of the foremost public aquariums in the world and, together with MBARI, is known globally for excellence in marine research, science education, public engagement, and ocean conservation leadership. I vividly remember my first visit to the MBA's incredible exhibits, and during my years at UH Mānoa, many aspiring marine biology students have shared that their childhood visits to the MBA played a key role in inspiring them to study marine ecosystems and conservation.

These proposed collections will support MBA's *Into the Deep* exhibit, which highlights open-ocean and deep-sea organisms—many of which the public rarely gets to see or even knows exist. The MBA does an outstanding job of showing both scientists and the general public why understudied animals like gelatinous zooplankton are important and worth protecting. MBA and MBARI's publicly available videos and photographs of gelatinous zooplankton from past collections are also an excellent teaching resource; I use many of them in my marine biology courses at UH Mānoa, and I know of no better tool for helping students understand these animals in a classroom setting.

Lastly, I've worked directly with some of the MBA staff involved in this proposal and can say that they are highly responsible, thoughtful, and committed to ethical collecting and solid science. I trust them completely to carry out this project with care and respect for Hawai'i's marine environment and organisms.

For all these reasons, I strongly support MBA and MBARI's application.

Mahalo for your time and consideration,

Amy Moran
Professor and Associate Director

3190 Maile Way, St. John 101
Honolulu, Hawai'i 96822
Telephone: 808.956.8303
Fax: 808.956.4745
lifesci@hawaii.edu
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West Hawai`i Explorations Academy
A Public Charter School located at the Natural Energy Laboratory Hawai`i, Keahole Point, Kona
73-4460 Queen Ka`ahumanu Highway
Kailua Kona, Hawai`i 96740
Phone: 808.327.4751
Email: explorations@whea.net
Domain: www.whea.net
Facsimile: 808.327.4750

To Whom It May Concern:

On behalf of West Hawai‘i Explorations Academy (WHEA), I am writing to express our strong support for the Special Activities Permit application submitted by Monterey Bay Aquarium (MBA) and the Monterey Bay Aquarium Research Institute (MBARI) to conduct deep sea specimen collection in the Kona region.

As a public charter school located on the west coast of Hawai‘i Island, WHEA specializes in project-based, hands-on learning with a strong emphasis on marine science, environmental research, and sustainability. Our students regularly engage in deep sea studies, and we recognize the vital importance of responsible specimen collection in furthering both education and scientific discovery.

We have had the privilege of collaborating with both MBA and MBARI and are continually impressed by the rigor, ethics, and educational value of their marine education and research programs. Their commitment to careful, minimal-impact collection methods and their focus on student engagement in real-world science aligns closely with WHEA’s own mission and values.

Approving this permit will not only support a program that educates and inspires the next generation of ocean stewards, but also foster continued collaboration between coastal schools engaged in deep sea research. This kind of work benefits the broader scientific and educational communities and contributes to a greater understanding of one of Earth’s most mysterious and vital ecosystems.

We respectfully urge you to approve the MBA/MBARI request for a Special Activities Permit so that this meaningful work can continue.

Sincerely,
Una Burns: Teacher Deep Sea Project Coordinator
West Hawai‘i Explorations Academy