

PACIFIC
Currents

Aquarium of the Pacific

WINTER 2023

Aquarium Careers



Inspired by the Past

By Gabriel Sandoval



2,745 MILES—THAT'S HOW FAR my grandparents traveled with what they could carry to the United States, hauling five children and reconstructing their entire livelihoods. Lynwood, California is where they settled, a place entirely different from the Yucatán in Southern Mexico. My family, like many other Latine immigrants and people of color, were funneled into an environmental justice community. Environmental justice communities are lower income neighborhoods, and often communities of color, that are neglected by policymakers and suffer disproportionately from environmental hazards. They oftentimes bear the brunt of climate change and experience high levels of pollution.

I recall trips to visit family in Progreso, Yucatán, where I would spend hours watching incredible thunderstorms explode over the Gulf of Mexico. Growing up, my passion for weather and climate grew as I learned more about science and as I witnessed more and more of nature's incredible power. As my awareness grew of climate change and all of its impacts, so did my motivation to protect Earth's population from natural disasters triggered by our changing climate. Climate change already impacts everyone, particularly Latine Americans and other marginalized communities, a reality that alarms me.

Within the span of a month in July and August of this year, the United States witnessed five one in 1,000-year rain events. Fueled by accumulated fossil fuel emissions and claiming the lives of many, these storms should only occur about once every millennium. On the other side of the globe, China experienced a historic drought and

the most intense heat wave ever seen in any part of the world. Lake Mead near Las Vegas—the largest reservoir in the United States—recently reached its lowest levels in almost 100 years due to the ongoing megadrought in the western United States. We can no longer ignore the evidence of climate change. I am fascinated by these statistics and wish to learn more about the mechanisms that caused them.

Thirty-six years after my father's family arrived from Mexico, I was born into privilege in a neighborhood with many more buffers to climate change and other environmental hazards. I may not have had to experience the environmental hardships endured by other Latine Americans living in environmental justice communities, but education inspires and empowers me to mitigate impacts upon marginalized neighborhoods.

Most recently in my undergraduate experience, I studied social science on Catalina Island, where I saw firsthand how this area of study can provide data that influences environmental change and climate action. Now, at the Aquarium of the Pacific, I research alongside social scientists to better understand the impacts of aquaculture—an industry crucial to climate change adaptation—on California communities. We hope to bring a sustainable source of seafood to California waters considering the shifting baselines caused by both climate change and overexploitation of marine resources. I look forward to helping create a brighter future for all of us who feel the effects of climate change, society's biggest challenge today.



Gabriel Sandoval is pursuing a BS in environmental studies and a minor in applied analytics at the University of Southern California. He expects to graduate in December 2023. Sandoval was a member of the Aquarium's first cohort of paid interns. He supported the Aquarium's Seafood for the Future program by researching public perception of aquaculture.

“... I would spend hours watching incredible thunderstorms explode over the Gulf of Mexico.”



Letter from the CEO

Dear Members,

WE ACCOMPLISHED A LOT IN 2022 as we recovered from the pandemic. We launched the mobile ocean classroom that meets learners where they are. We head started almost 200 mountain yellow-legged frogs and released them into the wild, nearly doubling the wild population. And now we are hosting a second cohort of these highly endangered frogs, with another release in the future. We recognized that unpaid interns excluded those who simply cannot afford zero wages for so much of their time and have begun to build a comprehensive STEM (Science, Technology, Engineering, and Math) pathway initiative that mixes unpaid volunteers with paid interns and scholarships. Thanks to donations, we completed the construction of behind-the-scenes facilities for our sea otter surrogacy efforts. We taught the first ever on-site college course—Marine Conservation—in partnership with Orange Coast Community College’s Marine Science Program. Twenty-five local high school students earned transferrable college credit in marine science.

We love our animals, and it is the connection to animals that inspires our staff. But we have noted the shifting public views on animals in captivity and define our contribution to be much more than “fish tanks.” We are a community and a community resource. Our education programs embrace the goal of “STEM for all.” This does not mean we want everyone to become a scientist or engineer—but we do want everyone to see such a future as a possibility. Our evening First Wednesdays programs and numerous weekend festivals provide opportunities for conversations and celebrations that bring people together as well as in contact with nature. Our High Tide High School Film Festival inspires teens to find their voices and their power as creative citizens.

Three ideas fuel our work: 1) connecting people to nature is good for nature and good for people, 2) everyone deserves an opportunity to discover their own inner scientist, and 3) conservation in the 21st century is all about what has been lost can be recovered. None of these ideas would have any traction without our amazing volunteer program, members and donors, or without the support of the Long Beach community and our city government. It is not the Aquarium, or our resplendent sea jellies and playful otters that make it all work, it is the collective action of an engaged community that allows our Aquarium to make a difference. Thank you all for that.

But we have so much more to do. Carbon emissions rebounded rapidly from the pandemic and hit a new high in 2022 (37.5 billion metric tonnes)—1 percent higher than the previous high and certainly not the direction in which we need to be going. As we turn to 2023, lets all of us work to bend the emissions curve down—the ocean and its inhabitants will thank us.

Sincerely,

Peter Kareiva

COVER: Educator teaching students. ANDREW REITSMA

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Pacific Currents is published for members of the Aquarium of the Pacific. Please send your comments to our editorial staff at pacificcurrents@baop.org.

Our Mission: To instill a sense of wonder, respect, and stewardship for the Pacific Ocean, its inhabitants, and ecosystems.

Our Vision: To create an aquarium dedicated to conserving and building natural capital (nature and nature’s services) by building social capital (the interactions between and among peoples).

Pacific Currents Staff: Editor/Writer: Andreas Miguel | Copy editor: Cecile Fisher | Designer: Andrew Reitsma | Contributing writer: Claire Atkinson | Contributing photographer: Robin Riggs | Proofreaders: Cat Quach, Brandi Kenney, and Daniel Rosales.

Aquarium Hours: Open daily from 9:00 a.m.–6:00 p.m. except December 25.

Membership Office Hours: 9:00 a.m.–4:30 p.m. daily

Phone Numbers (562 area code):

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Development.....	951-1605	Gift Store.....	951-1732



The Aquarium of the Pacific is a non-profit 501(c)3 institution. To provide exciting and innovative exhibits and educational programs, we rely heavily on the generous donations of individuals, foundations, and corporations.





Endangered Frogs Raised at the Aquarium Released in Local Mountains

Critically endangered mountain yellow-legged frogs that were raised and cared for at the Aquarium were released back into their natural habitat in Southern California mountains this past September.

MOUNTAIN YELLOW-LEGGED FROGS faced near-extinction after the devastating Bobcat Fire in 2020. With help from the Aquarium and other partners, this species has a chance at survival. “The Aquarium’s amphibian team has taken special care of these frogs over the past year. We are very gratified to have had a hand in helping this local endangered species,” said Brett Long, the Aquarium’s curator of mammals and birds.

After the Bobcat Fire that threatened the cold-water streams where this species lives, government wildlife agencies rescued the remaining mountain yellow-legged frogs and tadpoles from these areas and placed them with local institutions like the Aquarium.

The Aquarium has been caring for and raising around 125 wild tadpoles hatched in April 2020 and about 150 that were hatched in 2021 at the Los Angeles Zoo, one of the other facilities in the partnership. Previous wild releases showed that the frogs were most successful when released as froglets that had metamorphosed out of the tadpole stage. The Aquarium’s tadpoles began to metamorphose into froglets in the spring and summer of 2022, making them good candidates for release.

Several organizations have partnered in the effort to raise and release the frogs. Scientists and officials from the U.S. Geological Survey and California Department of Fish and Wildlife monitor wild populations and oversee releases and the release site was approved by California State Parks.

Mountain yellow-legged frogs are native to California’s mountainous regions and depend on habitats in the San Gabriel, San Bernardino, and San Jacinto Mountains. To help these frogs continue to recover, you can support this conservation effort by staying on marked trails and paths and respecting signs announcing off-limits areas when visiting local mountains and reduce your carbon footprint.

The Aquarium is continuing its commitment to save this species and is currently caring for a new group of frogs for future release.

“We are very gratified to have had a hand in helping this local endangered species.”

— Brett Long, curator of mammals and birds



ROBIN RIGGS

Longhorn Cowfish Greet Visitors in Coral Lagoon

Have you met the cowfish yet?

OUR LONGHORN COWFISH (*Lactoria cornuta*) in the Coral Lagoon exhibit in the Tropical Pacific Gallery has been drawing the attention of visitors for his curious nature and unusual appearance. Named after the two “horns” protruding near its eyes, the longhorn cowfish has a boxlike shape and a small beaklike mouth. Using the large translucent fins on either side of its body, the unique swimming pattern of the cowfish often makes it look as though it is hovering in the middle of the exhibit, observing guests as they walk by.

Cowfish are in an interesting order of fish called Tetraodontiformes. The root words of that order’s name translate to “four-toothed forms.” Cowfish have four teeth that are fused from smaller teeth creating their beak-like shape that is perfect for munching on small invertebrates and algae. They often use their small mouth to shoot strong jets of water into the sand and rock crevices to uncover prey items. At the Aquarium, the cowfish gets hand-fed small meaty food items including clam, mussel, shrimp, and squid tentacles.



ROBIN RIGGS

Two Baby Otters Travel to New Home

They were named Suri and Willow.

LATE LAST YEAR TWO OF THE AQUARIUM’S BABY SEA OTTERS (926 and 929) were welcomed to their new home, where they also received their official names. While they were with us, they helped our staff and adult sea otters develop the skills they will need to aid in the care of stranded sea otter pups in partnership with the Monterey Bay Aquarium Sea Otter Surrogacy program.

The two otters arrived at their new home at the Shedd Aquarium in Chicago, where they were named Suri (926), inspired by Big Sur in Northern California, and Willow (929), inspired by Willow Creek Picnic Area and Beach in Monterey County, California.

The Aquarium misses Suri and Willow but is thrilled that they are thriving in their new home.



The horseshoe crab is not really a crab! It is more closely related to scorpions, spiders, and mites than to true crabs, lobsters, and shrimp.



Aquarium Careers

IS WORKING AT AN AQUARIUM YOUR DREAM JOB?

For many of us here today, it was a dream that started many years ago that came true through hard work and determination. For each person, it was a different path to get here. What most people do not realize is that it takes hundreds of people from a variety of backgrounds, skills, and disciplines to run an aquarium.

So even if you don't pursue a career in marine biology or animal care, there are plenty of other career options that support an institution like ours. Beyond the jobs covered here, there are also jobs in finance, retail, special events, security, audio visual and information-technology (IT), fundraising, environmental services, and more.



Animal Care | Jobs in the animal care industry are highly coveted, because who wouldn't want to spend their days feeding penguins, training sea otters, and tending to tiny frogs and baby birds? If you are interested in these jobs, you should know that they also require hard physical work and getting your hands dirty (or fishy).

Daily duties for the animal care team include preparing food for their animals, adding supplements or medications, and doing feedings. They also clean the habitats by hosing down surfaces and removing debris. They check to make sure all the animals are present and are in good health. Throughout the day, they may SCUBA dive in a habitat to clean or do other maintenance. Mammalogists, who work with our sea otters, harbor seals, and sea lions, and aviculturists, who work with our birds, may also conduct animal husbandry sessions to work on trained behaviors. These behaviors often allow the animals to participate in their own healthcare, by moving into positions that allow the staff members to check their teeth or body parts or allow a veterinarian to draw blood or conduct an ultrasound.

Animal husbandry training is also part of the job for aquarists, who take care of fish and invertebrate animals. The sharks, rays, sea turtles, and some fish at the Aquarium are target trained to come to a target placed at a station in their exhibit for feeding or medical exams.

Veterinarian | Dr. Lance Adams, the Aquarium's head veterinarian, has cared for the Aquarium's animals for more than twenty years. Throughout the day, he coordinates with husbandry staff members who assist in handling animals for exams, drawing blood, or moving an animal to and from its exhibit. Between exams and medical procedures, Dr. Adams also reviews research projects, helps maintain equipment in the Molina Animal Care Center, and conducts training for staff, veterinary students, and interns, among other duties. He is on call all day, every day.

Brittany Goodwin, registered veterinary technician at the Aquarium, provides treatments for sick animals, schedules and assists with exams, manages the hospital (cleaning, inventory, and stocking), and processing and shipping test samples. She also assists with research projects, managing samples, and writing up protocols.

Life Support | If you love aquariums and are also skilled at plumbing, building, and mechanics, the life support department may be the place for you. This team oversees the systems that maintain water flow, filtration, and temperature in the exhibits. At least one life support technician is on duty twenty-four hours a day to monitor and maintain the Aquarium's ten miles of pipes, 450 pumps, and 1.2 million gallons of water circulating through the system every hour.

Life support technicians go on rounds, checking a 1,000-point inspection list of sensors, levels, and other indicators that are all logged on an iPad. The life support manager is on call twenty-four hours a day and often comes in after hours to address problems.

In addition to maintaining the building's life support systems, this department also spends time each year designing and building systems for new exhibits.

Operations and Guest Services | The guest services and operations staff play the very important role of interacting directly with the Aquarium's visitors. Guest Support Center staff answer questions when people call, and Guest Services staff answer questions at the Membership Desk. They answer questions and book reservations for upcoming events and programs.

The operations team also helps with visitor flow, sets up and breaks down for special events like festivals, evening lectures, and performances. These positions require physical stamina and excellent customer service skills.

Marketing | The Aquarium's marketing team includes graphic designers and photographers, advertising and public relations specialists, event planners, web and app developers, sales and promotions professionals, writers, and video and social media content creators.

Working in marketing at an aquarium requires a good base of knowledge about the animals and exhibits plus a knack for creating fun and educational content.

Education | Teaching visitors about the ocean and marine life is central to the Aquarium's mission.

The education department trains the employees and volunteers who work throughout the Aquarium. Education volunteers are posted at various locations around the Aquarium to help visitors touch animals at the touch pools, answer questions, and present educational shows throughout the day. The education staff members narrate whale watching cruises daily.

Aquarium educators teach classes for visiting students in the Ocean Theater, Ocean Science Center, and our three onsite classrooms. They also visit schools and other locations around the community. Viewers anywhere in the world can also watch Aquarium classes online through the Aquarium's Online Academy.

Water Quality | The Aquarium's water quality lab is critical to the health and safety of our staff and animals. In a typical week, water quality staff members run approximately 2,000 individual tests on the water from exhibits.

Staff members test samples for pH, salinity, alkalinity, ammonia, nitrate, nitrite, phosphate, chlorine, chloroquine, and copper concentrations using ion chromatography, UV-Vis spectrophotometry and colorimetric testing methods, and ion selective electrodes.

Divers | Many jobs at the Aquarium require SCUBA certification, but some employees focus entirely on diving in the exhibits and managing the team of volunteers that conducts dives throughout each day.

The Aquarium's divers help clean exhibits and feed animals. The exhibit diving coordinator makes sure all the day's dives are staffed and happen on time, monitors them for safety, trains divers on feeding and exhibit cleaning techniques, and services and maintains dive gear.

Staff Profiles



Brittney Goodwin
REGISTERED VETERINARY
TECHNICIAN

FAVORITE PART OF THE JOB
Working with such a wide variety of animals and always learning something new, collaborating on research projects with universities and other aquariums.

EDUCATIONAL BACKGROUND
Bachelor of science degree in marine biology from Texas A&M, associate degree in applied science in veterinary technology from Dallas College Cedar Valley Campus, master of science degree in wild animal biology from the Royal Veterinary College.

PREVIOUS JOBS
General veterinary practices, an emergency veterinary hospital, and as a surgical veterinary tech at a specialty hospital. The Sea Otter Research and Conservation program at the Monterey Bay Aquarium. Marine mammal rehab intern at the Institute of Marine Mammal Studies and volunteer aquarist and vet tech intern at Moody Garden's Aquarium.

IMPORTANT SKILLS
Multitasking and organization.

ADVICE:
This job takes time, dedication, and patience without a high payout. Currently many veterinary technicians need to work a second part-time job at the same time to make a livable wage.

CHALLENGES
A majority of exotic animal-related illness are husbandry related. However, animal care and husbandry in AZA-accredited aquariums is gold standard. This means that when our animals get sick, it takes a lot of investigating to discover the cause and sometimes, they still leave us guessing.



Nate Jaros
CURATOR OF FISH AND
INVERTEBRATES

FAVORITE PART OF THE JOB
Developing exhibits that help educate, inspire, and motivate people to care about protecting wild places.

EDUCATIONAL BACKGROUND:
Bachelor of science degree in environmental science and biology.

PREVIOUS JOBS
Swing keeper of penguins and fish, sea jelly aquarist, and farm hand.

IMPORTANT SKILLS
General aquarium science (filtration, diving, water chemistry, animal care, nutrition, animal reproduction, animal collection, marine biology, and ecology), scientific diving/conservation skills, organization, communication, and management skills.

ADVICE
Diversify your skills. Work with a variety of animals and projects, but also develop soft skills and make professional connections.

CHALLENGES
Dealing with the death of an animal.



Frankie Lill
AVICULTURIST II

FAVORITE PART OF THE JOB
Opportunities to be part of the local community, working with people of all experience levels and interests, and taking part in animal conservation.

EDUCATIONAL BACKGROUND
Degree in zoology.

PREVIOUS JOBS
Florist, accounting, front desk services, and lifeguard.

IMPORTANT SKILLS
Being eager to learn and being a good team member. Almost everything else (understanding the needs for animals individually and as a species) can be learned on the job.

ADVICE
Know the institution's vision and find ways to incorporate today's trends into that. Brush up on challenging questions people sometimes ask about the zoo/aquarium industry.

CHALLENGES
The emotional toll when an animal passes, either naturally or after the staff has made the difficult decision to euthanize.



Chris Carr
LIFE SUPPORT MANAGER

FAVORITE PART OF THE JOB
Knowing that we are doing our best every minute to make sure the animals are safe and healthy.

EDUCATIONAL BACKGROUND
Bachelor of science degree in marine biology and minor in chemistry.

PREVIOUS JOBS
California Department of Fisheries, California Department of Fish and Game, volunteer and aquarist assistant at Cabrillo Marine Aquarium, aquarium service technician, and chemist at an environmental lab.

IMPORTANT SKILLS
People skills, plumbing, electrical, engineering, mechanical, programming, automation, safety training, and SCUBA certification.

ADVICE
Network with people in the field, attend lectures and training to learn the skills needed for the position, show you have interest in the position, be very coachable, and have a positive attitude.

CHALLENGES
Managing a 24-hour department and staying on top of any issues large or small while designing and building new life support systems and other projects.



Nicole Meek
DIRECTOR OF VISITOR OPERATIONS

FAVORITE PART OF THE JOB
Getting to work with wonderful people every day and seeing the Aquarium through the eyes of excited children.

EDUCATIONAL BACKGROUND
Bachelor of fine arts degree in theater.

PREVIOUS JOBS
Front-of-house/operations positions at performing arts venues and a science museum.

IMPORTANT SKILLS
Multitasking, team building, and people skills to interact with the public.

ADVICE
It's really fulfilling, but it is also really hard work. Be prepared to solve problems and to jump into new projects on a regular basis.

CHALLENGES
Coaching staff members who are having performance issues and speaking with guests who are upset.



Staci Wong
INTERPRETATION MANAGER

FAVORITE PART OF THE JOB
Building relationships with guests and the people I work with.

EDUCATIONAL BACKGROUND
Bachelor's degree in animal physiology and neuroscience.

PREVIOUS JOBS
Biotech lab, animal behavior researcher, animal show presenter, and outdoor education teacher.

IMPORTANT SKILLS
Science communication, collaboration with other departments and external partners, organization and managing many responsibilities and projects, and coaching and management of employees and volunteers.

ADVICE
Go for it! There are lots of opportunities in informal education at zoos, aquariums, and museums. Start by volunteering to assess your interest level and work on communication skills and connecting people to topics.

CHALLENGES
Finding ways to give everything the attention that it deserves.



Rachel Cushman
DIVE SAFETY OFFICER

FAVORITE PART OF THE JOB
Knowing that the work we do here makes a difference every single day, watching the public fall in love with the ocean, and getting to hand feed the animals underwater.

EDUCATIONAL BACKGROUND
National Association of Underwater Instructors, Advanced Rescue Diver, bachelor of science degree in marine biology, and SCUBA instructor.

PREVIOUS JOBS
Restaurant customer service and reservations, Aquarium volunteer, and fisheries researcher.

IMPORTANT SKILLS
Situational awareness, communication (especially of life-saving safety information), adaptive management, and volunteer management.

ADVICE
Get as much experience as possible diving in different surroundings, practice taking leadership roles at your local dive club or other team activity and spend time with experienced divers or first responders, and volunteer.

CHALLENGES
Staying focused to optimize situational awareness and practicing patience with others as well as myself.



Hunter Ryan
WATER LAB MANAGER

FAVORITE PART OF THE JOB
I love digging down into a data set to determine what is really going on or establishing a new testing regimen to address an ongoing water quality issue.

EDUCATIONAL BACKGROUND
Associate degree in aquarium and aquaculture science, bachelor degree in behavioral psychology with emphasis on animal behavior, and master of science degree in neurobiology and behavior.

PREVIOUS JOBS
Life support systems/water quality manager at a science center, aquarium maintenance and fish/reptile curator, research lab manager, divemaster, and tidepool ranger.

IMPORTANT SKILLS
Attention to detail, focus, critical thinking, problem solving, basic math skills, data entry/database management, and knowledge of seawater chemistry.

ADVICE
Learn about all aspects of aquarium science, such as water flow, temperature, and filtration efficiency in addition to feeding rate, animal stocking density. Understand how physical, biological, and chemical principles interact in an aquarium environment.

CHALLENGES
Processing a high volume of data to solve problems.





Valentine's Day Dinner

■ Tuesday, February 14

* Member Events

Please join us for these select events just for our members and donors.

Member Kids Activity Night

■ March 23–24, 2023

6:30 P.M.–9:00 P.M.

Get ready for a fin-tastic evening complete with crafts, music, and fun, all geared towards our youngest Aquarium members at this year's Kids Activity Night! Your little ones will love dancing with the fish, participating in educational activities, and enjoying the Aquarium after dark. This signature member night is our most popular of the year.

- \$5 for members, free for member kids under age 3 (tickets required)
- Call (562) 437-3474 to reserve



* Special Events

The Aquarium of the Pacific hosts a variety of performances, fundraisers, and other special events throughout the year. Check our website for more details and additional events.

Valentine's Day Dinner

■ February 14, 2023

5:00 P.M.–10:00 P.M.

Dive into Valentine's Day at the Aquarium of the Pacific with your favorite person or people this year for an exclusive experience. Enjoy a one-of-a-kind date night with dinner and a movie, surrounded by over 12,000 animals. Bask in the sunset, overlooking the harbor during cocktail hour before finding your seats in the Ocean Theater for a special showing of a cinematic treasure, *La La Land*. Your evening will continue at your private table with a chef-crafted duo entrée offering. Tickets to this event will include admission for the entire day to the Aquarium of the Pacific. Reservations are required and limited.

- \$89 members
- \$109 non-members
- \$109 VIP member
- \$129 VIP non-member

Night Dive

■ February 17, 2023

7:30 P.M.–11:00 P.M.

Kick the President's Day holiday weekend off with a bang at the first Night Dive of the year. This adults-only event features food trucks, cash bars, DJs throughout the Aquarium galleries, art, and a live band performing on the stage in front of the Honda Blue Cavern. Night Dive regularly sells out so be sure to purchase your tickets early.

- \$24.95 for members, \$29.95 for non-members
- Ages 18+ only



For information, visit aquariumofpacific.org or call (562) 590-3100, ext. 0. Events are subject to change. Please visit pacific.to/memberhub for more information or to make a reservation. Reservations for each event will be available at least two weeks in advance.

Noche de Estrellas

Friday, March 10

Noche de Estrellas

March 10, 2023
6:30 P.M.-10:30 P.M.

Party with the sea stars at the Aquarium's all-ages Noche de Estrellas (Night of the Stars) event. The Aquarium will remain open until 10:30 p.m., so you can dance to the sounds of cumbia, rock en Español, salsa, and other Latin music. Noche de Estrellas will feature live bands, DJ, booths, and educational activities in English and Spanish. Mexican cuisine, beers, and drinks will be available for purchase.

- Free for members, \$24.95 for non-members after 6:30 p.m.

Autism Families Night

March 12, 2023
6:00 P.M.-9:00 P.M.

Join us for a special evening at the Aquarium exclusively for families with adults or children with autism. The entire Aquarium, except Lorikeet Forest, will be open until 9:00 p.m. This will be an evening when guests can enjoy the tranquility of our exhibits and meet 12,000 animals from the world's largest ocean. The Aquarium closes to the public at 6:00 p.m.

- Free for members, \$12 for non-members

Night Dive

March 17, 2023
7:30 P.M.-11:00 P.M.

Don your favorite shade of green and grab a pint for a St. Patrick's Day-themed Night Dive. This adults-only event features food trucks, cash bars, DJs throughout the Aquarium galleries, art, and a live band performing on the stage in front of the Honda Blue Cavern. There might even be some surprise shenanigans in store! Night Dive regularly sells out so be sure to purchase your tickets early.

- \$24.95 for members, \$29.95 for non-members
- Ages 18+ only

Scout Day

April 30, 2023
9:00 A.M.-4:00 P.M.

Scouts with their family and friends are invited to the Aquarium on April 30 at a special price. With many animals to discover and learn about, the Aquarium will have self-led activity sheets, available online to download and print, for the Scouts to complete for badge requirements. Reservations are required.

- Free for members
- \$24.95 for adult non-members
- \$19.95 for child non-members



Proper food preparation is a big part of the behind-the-scenes routine at the Aquarium. Staff members carefully inspect each fish to make sure us animals are only eating top-of-the-line, fresh, sustainably sourced seafood. Mmmm! Now my tummy is rumbling!



Reservations required



MADELINE WALDBER

African American Festival

■ Saturday & Sunday, February 25-26

* Festivals

Experience our community's diverse cultures and their connections to the ocean and environment.

African American Festival

■ February 25-26, 2023
9:00 A.M.-5:00 P.M.

Join the Aquarium as it hosts its twenty-first annual African American Festival, celebrating the rich diversity of African American and African cultures. The weekend will feature live entertainment and arts. Festival performers include Mardi Gras second line dancers, hip hop and break dancers, jazz musicians, interactive drum circles, West African dancers, and storytellers. During the festival, the Aquarium will present the Heritage Award in recognition of service to the community and efforts to preserve and share culture. The Aquarium will also announce the 2023 African American Scholar program recipients.

International Children's Festival

■ March 18-19, 2023
9:00 A.M.-5:00 P.M.

The Aquarium's annual International Children's Festival is a special event for kids. Celebrating the amazing talents of children of many cultures, this festival features West African, Mexican, Pacific Islander, Cambodian, Chinese, Korean, Japanese, and Irish dance performances. Enjoy martial arts demonstrations. Kids of all ages can partake in a percussion circle, Japanese origami, American Indian crafts, and Pacific Islander traditional children's games. The Aquarium will also honor a local youth with its annual Young Hero Award in recognition of his or her efforts to make our planet a better place.

Earth Day Teen Climate Festival

■ April 22, 2023
9:00 A.M.-5:00 P.M.

Learn what you can do to help our ocean planet at the Aquarium's Earth Day Celebration hosted by our Teen Climate Council. Join the Aquarium for a day of family fun celebrating Earth Day while learning simple, everyday tips to protect our environment and to stop and adapt to climate change. Enjoy educational booths, an art display, mural painting, a fashion show, and more.



Volunteering is a fun and exciting way to get involved with the Aquarium. We have volunteering opportunities available for ages 9-109! To learn more about how to get involved visit: aquariumofpacific.org/volunteer



First Wednesdays

February 1, March 1, April 5, and May 3

* First Wednesdays

Reserve your seat by visiting aquariumofpacific.org (click on Guest Speakers under the Events tab) or calling (562) 590-3100.

SPONSORS

COURTYARD
BY THE SEA AT THE
SUNNY BEACH COMMUNITY

Stephen and
Brenda Olson

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First Wednesdays: Lecture, Cocktails, and Conversation

February 1, March 1, April 5, and May 3
7:00 P.M.-9:00 P.M.

Join us on the first Wednesday evening of every month for a talk with leading experts in our state-of-the-art Honda Pacific Visions Theater. Each presentation is followed by a cocktail/social hour with music. Guests can mix and mingle and participate in crafts, our digital Paint-a-Fish activity, book signings, and more.

The 2023 winter/spring season highlights wild animals, nature, and conservation efforts. Monthly topics include sea otters, sea turtles, frogs and amphibians, sea bass, and sharks.



This program is best suited for high school and college students and adults of all ages. Cocktails are available for purchase. Visit our website for a full list of events and to make a reservation.

○ **Cost: \$5.00**



For information, visit aquariumofpacific.org or call (562) 590-3100, ext. 0. Events are subject to change. Please visit pacific.to/memberhub for more information or to make a reservation.



The giant Pacific octopus, like other octopuses, can camouflage by changing color and even texture. Visit our giant Pacific octopus in our Northern Pacific Gallery.

*Aquarium
of the Pacific*



LEARN AND EXPLORE

Classes and Tours

Connect with the Aquarium through in-person and virtual experiences that offer up-close views of our animals and exhibits.



School Field Trips

In-Person Field Trips

Bring your class to the Aquarium for a fun-filled learning experience while you explore the 12,000 animals living at the Aquarium. Teachers can choose a self-guided exploration or add on a live educational program in one of our learning spaces. The following pricing applies to accredited schools. After-school programs, extra-curricular school clubs, day-care affiliated programs, and other non-accredited organizations are not eligible for these rates

- Self-guided: \$8.50 per person, one free chaperone per 10 paid students.
- Class and theater programs: \$11.50 per person, one free chaperone per 10 paid students

Virtual Field Trips

The Aquarium is offering Virtual Field Trips for schools, homeschools, and care facilities for learners of all ages. These educator-led programs run live from our studio on site. Our educators will help you and your students/ participants explore various topics based on grade level, like recognizing shapes and colors, comparing sharks and fish, and even discussing conservation and human impacts on ecosystems. Prices range from \$100 to \$250 depending on the program.

Whale Watching Cruises

Whale Watching and Dolphin Cruise

■ Seasonal

The Pacific Ocean is home to many wondrous animals year 'round. Join us as we search for dolphins, seals, sea lions, and other marine life on our Whale Watching and Dolphin Cruise. This is an experience you and your family will not soon forget!

- Members: \$27 per adult, \$22 per senior (ages 62+), \$19 per child (ages 3-11). Non-members (includes Aquarium admission): \$58.95 per adult, \$54.95 per senior, \$44.95 per child.
- Prices subject to change.
- 2 to 2.5 hours
- (562) 590-3100, ext. 0 or visit our website

In-Person Programs

Animal Encounter: Sharks and Rays

Feed the sharks and walk among the rays! Join an Aquarium educator and animal care staff for a private encounter at the touch pools of Shark Lagoon.

- \$135 per member and \$150 per nonmember; minimum 2, maximum 4 participants
- Visit aquariumofpacific.org for dates and times or call (562) 509-3100, ext. 0

Gray Whale Watching Trips

■ Fall and Winter Season

Enjoy a voyage out in the open Pacific Ocean in search of one of the world's longest-migrating mammals. Learn new, exciting information about gray whales and other local marine life from an on-board Aquarium educator. Cruisers will also have the opportunity to spot dolphins, seals, sea lions, and other marine animals. Read about recent sightings on the Aquarium's Twitter feed (@OceanWatchLB).

- Members: \$27 per adult, \$22 per senior (ages 62+), \$19 per child (ages 3-11). Non-members (includes Aquarium admission): \$58.95 per adult, \$54.95 per senior, \$44.95 per child.
- Prices subject to change.
- 2 to 2.5 hours
- (562) 590-3100, ext. 0 or visit our website

Virtual Resources

Visit aquariumofpacific.org and click on Learn

The Aquarium offers a library of free virtual resources. Check out the following opportunities to connect with us.



Webcams

Want to check in on your favorite Aquarium animals from your living room? Webcams placed in our exhibits allow your family to visit the Aquarium virtually. Take webcam exploration even further with the Aquarium's Webcam Resource Kits (available at pacific.to/webcamkits). These kits include lesson plans and videos that provide guided exploration of the Aquarium webcams.

- Grades K-8



Career Connections

Introduce your teenager to a variety of STEM careers through the Aquarium's Career Connections series. By exploring the careers of scientists working at the Aquarium, you will learn more about current research and career opportunities. The series is available at pacific.to/careerconnections

- Grades 6-12

Conservation Series

Explore current conservation projects and meet the professionals who have dedicated their lives to conservation. Visit pacific.to/conservationseries for videos, discussion guides, and activities related to conservation and sustainability.

- Grades 6-12

Virtual Programs

Zoom Animal Appearance

Invite one of the Aquarium's animals to your next birthday party or Zoom meeting. Meet our animals up close and learn about them from our animal care staff in this private program.

- \$750
- Flexible dates and times based on advance reservations

Aquarium Online Academy



Tune in to the Aquarium's Online Academy for free interactive programming for kids of all ages. Visit pacific.to/onlineacademy for current scheduling. In addition to live programming, the Online Academy offers a large library of pre-recorded sessions on the Aquarium's YouTube channel.

- Grades PreK-12



Sea otters have been documented holding paws in the wild so they don't float too far from each other. **CUTENESS OVERLOAD!**

Career Match Activity

Have you ever wondered what it's like to work at the Aquarium of the Pacific? It's not just taking care of the fish. There are different kinds of jobs that you can do!

Can you draw a line to match each Pacific Pal to the job description they are dressed for?

Veterinarian

Veterinarians provide healthcare for animals. They do check-ups, treat injuries, perform surgeries, take x-rays, and draw blood. They are on-call all day, every day. This job is perfect for someone who is interested in becoming a doctor, but also loves helping animals.

Mammalogist

Mammalogists feed and care for the Aquarium's mammals, such as seals, sea lions, and sea otters. They prepare food by cutting up fresh fish, feed the animals, and conduct training sessions. One trained behavior is touching a target pole. Learning these types of behaviors is important for the animals so they are able to safely participate in health exams.

Aquarist

Aquarists take care of the fish and invertebrate animals (like sea stars, abalones, octopus, and more!) They also SCUBA dive in their habitats to clean and maintain these exhibits as well as observe animal behavior to ensure everyone is healthy. Aquarists also spend time preparing food for as well as feeding those animals.

Educator

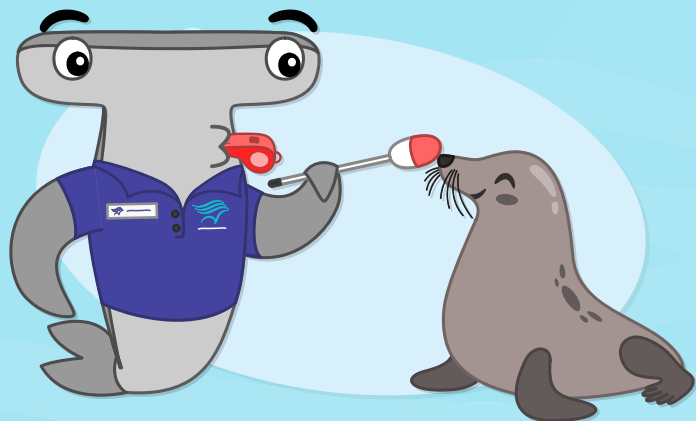
Members of the education department teach classes online or in person, present Aquarium shows, drive the Aquarium on Wheels to schools and community events, and teach day camps. Education staff members are prepared to answer any questions that guests might have and facilitate animal interactions at the touch labs.

Water Quality

Water quality staff members are in charge of making sure the water is clean in the exhibits and touch labs. They collect water samples from all over the Aquarium each day so they can be tested in the lab. These tests make sure that the water is healthy, both for the animals and the humans that dive in the exhibits. They measure things like acid, salt, and ammonia levels in the water.

Guest Services Ambassador

Guest services ambassadors are the friendly faces you see when you first arrive at the Aquarium. They are found at the Member Services Desk to answer any questions you may have. These team members answer incoming calls, book reservations, and greet the guests.



Member Services



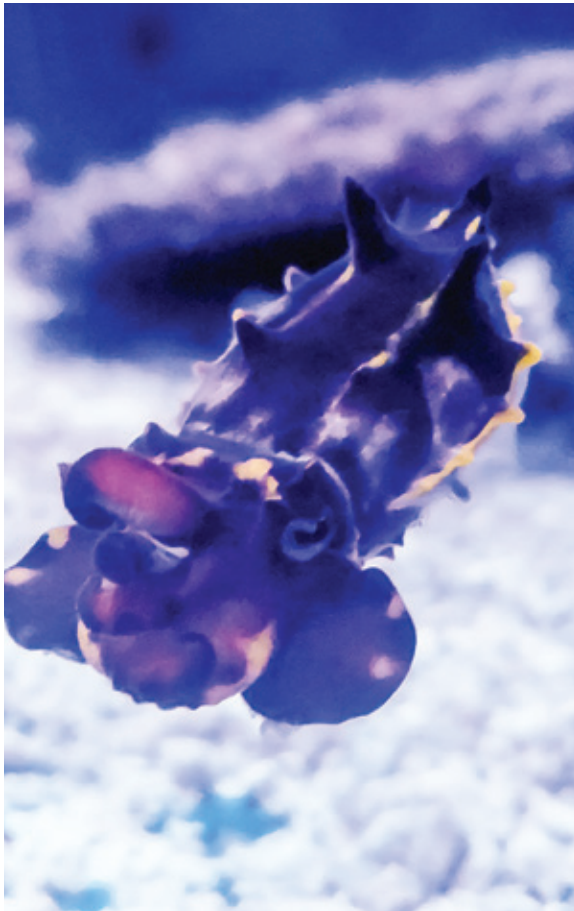
Aquarist Photo Challenge

Aquarists capture exciting moments of the animals they care for at the Aquarium.

THE STAFF MEMBERS AT THE AQUARIUM who care for our animals witness many exciting moments in the course of their work. To capture those for others to see, Aquarist Nicole Leier challenged her fellow team members who care for our fish and invertebrates. Here are some of the exciting moments.

To watch the videos and learn more, visit our Instagram account at @aquariumpacific.

We encourage you to capture the special moments you witness at the Aquarium. Share your photos and video by posting them on social media using #loveAOP.



A colorful, flamboyant cuttlefish has a moment of curiosity.

MICHAEL MCGHEE



Tortellini, the two-spot octopus, reveals one of the spots below her eye and head.

LAUREN SAMARCOV



A small crab cozily buries itself in the sand to settle in for the day.

JENIFER BURNNEY

Helping to Restore a Coral Reef in Saipan

THE AQUARIUM'S LONGTIME PARTNERSHIP with SECORE International has made it possible for several staff members to travel around the world to participate in hands-on coral reef restoration projects.

Last spring the Aquarium's Curator of Fish and Invertebrates Nate Jaros traveled to Saipan in the Northern Mariana Islands to participate in a coral restoration project with SECORE International (Sexual Coral Reproduction) International and Johnston Applied Marine Sciences (JAMS). At the restoration site in a shallow lagoon, there are two species of staghorn corals that spawn during the full moon in May. Each night after sunset, marine biologists with JAMS and SECORE International and a group of more than a dozen local volunteers snorkeled out to predetermined areas and waited for the spawn to begin. In the space of just a few minutes, the corals would simultaneously release egg and sperm bundles (gametes) that would float to the surface.

The scientists and volunteers collected the gametes and brought them to shore to observe and confirm the fertilization under a microscope. The developing embryos were then transported by boat to a floating coral lab. These floating labs make it possible for the scientists to grow the baby corals in a protected lab environment without a land-based facility, which can be costly. As they develop, eventually the coral larvae will settle onto small walnut-sized pieces of specialized ceramic. These will later be monitored as the corals grow at an underwater nursery site, then out planted on the reef.

Aquarium staff members have participated in SECORE International projects in Guam, Palau, Saipan, and the Bahamas.

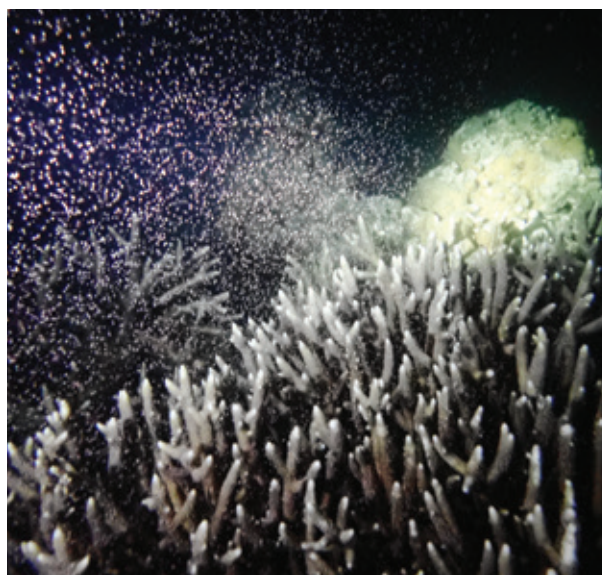
SECORE International is a global network of scientists, public aquarium professionals, and local stakeholders using a multidisciplinary strategy combining research, education and outreach, and active reef restoration for the conservation of coral reefs. It is a non-profit organization whose work is actively supported by several other Association of Zoos and Aquarium (AZA) facilities. Aquarium staff members have participated in SECORE International projects in Guam, Palau, Saipan, and the Bahamas.

SECORE International and other coral restoration agencies are shifting their focus to resiliency. In the face of rising ocean temperatures, acidification, and coral reef disease, scientists are working with genotypes that exhibit a tolerance to the challenges of changing ocean conditions in the hopes that these valuable genes can be passed on to help protect these keystone species.



Beach in Saipan

NATE JAROS



Coral spawning

DR. LYZA JOHNSTON



How much of the Earth is covered by ocean?
 A) 50% B) 60%
 C) 70% D) 80%

96 percent of the Earth's water.
C! The ocean holds about 96 percent of the Earth's water.
ANSWER:

Monarch Monitoring Project

Community science volunteers help the endangered North American population of monarch butterflies with volunteer work in the field and at the Aquarium of the Pacific.

MONARCH BUTTERFLIES are an important migratory insect with an incredible story. They travel thousands of miles in their annual migrations, which can take four generations of butterflies to complete. During the winter, monarch butterflies congregate in trees in Mexico and along the coast of California to overwinter in great numbers. Their caterpillars rely exclusively on milkweed as they grow, and milkweed is the only plant where monarch butterflies lay their eggs. Monarch butterflies need native milkweed and other flowering plants that are free of pesticides along their migration routes.

They travel thousands of miles in their annual migrations, which can take four generations of butterflies to complete.

Monarch Monitoring Project volunteers support monarch butterfly populations throughout Southern California. Pesticide-free native milkweed and pollinator gardens are planted and tended to by volunteers, both at the Aquarium and within their neighborhoods, communities, and home gardens. Volunteers monitor milkweed plants for health, eggs, larvae, and adult butterfly activity on site at the Aquarium and at their homes and communities. Bi-monthly virtual meetings help volunteers to stay connected, learn more about monarchs, and collaborate to support conservation goals. During migration season, monitoring volunteers help to count the number of monarch butterflies that stop at the Aquarium and their local Southern California communities.

The North American population of monarch butterflies (*Danaus plexippus plexippus*) was classified as endangered by the International Union for Conservation of Nature (IUCN) in 2022 in response to rapidly dropping winter migration counts. The Aquarium's Monarch Monitoring Project is part of the Association of Zoos and Aquariums (AZA) SAFE (Saving Animals from Extinction) North American Monarch program. AZA's SAFE Monarch Network was formed in 2020 and works closely with 50 other AZA facilities like the Aquarium of the Pacific to raise awareness about monarch butterflies and to further their conservation.

The Aquarium started helping wild monarch butterflies in 2014, when horticulture volunteers noticed an influx of these butterflies after planting pollinator gardens that provided much-needed food and shelter. Since that initial planting, monarch butterfly populations in North America have fallen, with a precipitous drop in 2020. In response to this drop, during the COVID-19 pandemic closures, Aquarium horticulture and education volunteers connected with one another by meeting regularly online to help support planting native plants free of pesticides, expanding monarch butterfly habitat, following best practices to support butterfly populations, and monitoring sightings of butterflies in their communities.



A monarch butterfly

CASSANDRA DAVIS



Aquarium volunteer stands next to a sign depicting the life cycle of a monarch butterfly.

CASSANDRA DAVIS



CASSANDRA DAVIS

At first, the monarch caterpillar protects itself in a green chrysalis to begin an incredible transformation.



CASSANDRA DAVIS

The chrysalis turns clear as the monarch butterfly begins the process to emerge.

Monarch Monitoring Project volunteers support monarch butterfly populations throughout Southern California.

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A Unique Setting for Your Event

The Aquarium of the Pacific's award-winning Pacific Visions wing provides a unique venue for private events, including outdoor picnics and indoor receptions or dinners. Other spaces available include the Great Hall, Shark Lagoon, and adjacent Shoreline Aquatic Park.

yourevent.aquariumofpacific.org 562-951-1663 AOPCatering@longbeach.cc.com
100 AQUARIUM WAY LONG BEACH, CA 90802

Aquarium of the Pacific



Supporter Stories

Aquarium educators have been traveling to schools to provide engaging science programs.

Education Support

THE AQUARIUM IS GRATEFUL for recent grant funding from The Boeing Company, Edison International, Kenneth T. and Eileen L. Norris Foundation, Windsong Trust, Dwight Stuart Youth Fund, and Healthpeak Properties, Inc. These companies and foundations are supporting the Aquarium's Ocean Science Education program, which provides experiential learning to young students, teachers, and families. Due to this support, Aquarium educators have been traveling to schools to provide engaging science programs, welcoming classes to explore the Aquarium, and connecting with students locally and across the U.S. through virtual field trips.

More than 700 people attended the Aquarium's Sea Fare Chowderfest event this past October, raising \$139,000 in support of animal care, education, and conservation programs.



What kind of horse can swim underwater?

**A seahorse!
ANSWER:**

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- **Mr. Troy Grande**,
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- **Ms. Cecile Fisher**,
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(as of December 31, 2022)
aquariumofpacific.org



SHAINA BODHEKA

Coastal Clean-up Day

THIS PAST SEPTEMBER the Aquarium hosted a beach clean-up as a part of the greater California Coastal Clean Up Day. A record 300 participants gathered at the end of the Long Beach peninsula to remove debris along the beach. The volunteers removed more than 730 pounds of trash, which included microplastics, fishing wire, food packaging, and even a suitcase! This was an employee volunteer opportunity for the Aquarium's corporate supporters, enabling their employees, friends, and families the opportunity to help protect our local beaches and our own backyards.

Sea Fare Chowderfest

MORE THAN 700 PEOPLE ATTENDED the Aquarium's Sea Fare Chowderfest event this past October raising \$139,000 in support of animal care, education, and conservation programs. Guests enjoyed strolling through the galleries while sampling hearty chowders, savory bites, fresh baked goods, craft beer, and wine, which were donated by over twenty local businesses. The live and silent auctions featured dozens of items, trips, and experiences, including Aquarium-inspired art by artists Sam Carter, Gina Hsiang, and Sküt.

"Sea Fare Chowderfest was a celebration of the animals, conservation efforts, and education programs at the Aquarium. We rely on the support of our loyal donors, members, and community, and we are so grateful for their generosity," said Ryan Ashton, Aquarium of the Pacific vice president of development.

The Aquarium thanks Sea Fare Chowderfest sponsors: U.S. Bank, Gazette Newspapers, SAVOR..., Age of Aquariums, Mark Bertrand, Esther S.M. Chui Chao, Farmers & Merchants Bank, Ed Feo, Charlotte and Allen Ginsburg, Robert Gordon, Alicia Jensen, Keesal, Young & Logan, lbfoodcoma, Dana Noble, and Chad Sawyer.



SCOTT SMELTZER



SCOTT SMELTZER



SCOTT SMELTZER

Aquarium Accolades



Cecile Fisher, vice president of marketing and communications, with Cindi Alvitre

Cindi Alvitre Heritage Award

The Aquarium presented the Heritage Award to Cindi Alvitre during the Moompetam American Indian Festival in September.

Alvitre is a descendant of the Tongva and served as the first woman chair of the Gabrieleno/Tongva Tribal Council. She teaches American Indian Studies at California State University, Long Beach, where she is also the Native American Graves Protection and Repatriation Act coordinator.

Alvitre has worked for many years to protect and preserve Puvunga on the campus of Cal State Long Beach, a spiritually significant sacred site for local indigenous tribes. Her work on this issue led to partnerships with artists and activists connected to Puvunga. In 2021 she created an art installation with the Puvunga Collective in response to the removal of the statue of Christopher Columbus in Grand Park in Los Angeles. And an artist in the collective illustrated her recently published book, *Waa'aka: The Bird Who Fell in Love with the Sun*, which retells a traditional Tongva story about the black-crowned night heron and how the sun got up into the sky.

Alvitre is a cofounder of cultural and environmental education collective Mother Earth Clan and the Ti'at Society, which focuses on renewal of the ancient maritime practices of the coastal and island Tongva. Alvitre is also a board member for the State of California's California Indian Heritage Center and an alumna of the California Council for the Humanities.



Charles Song with Board Director Sam Limon

Charles Song Heritage Award

The Aquarium presented the Heritage Award to Charles Song during its Southeast Asia Day festival in October.

After escaping the Khmer Rouge in the 1980s, Song came to Long Beach and took on a leadership role in the local Cambodian community to help other newcomers adapt to their new home in California. Since that time he has dedicated his time and energy to service and helping people in any way he can.

Since 1995 he has worked with the Khmer Parent Association to provide scholarships and advocate for a Cambodian dual immersion program in the local school district. As chairman of the Khmer American Civic Engagement Committee, he organized the first Mayoral Candidate Forum for the Cambodian community. In 2015 he helped create the Midtown Business Improvement District in Cambodia Town and currently serves as its vice chair. He is also a board member for the Signal Hill Community Foundation and a co-chair of Equity for Cambodians, which worked on community redistricting in 2018.

In recent years, as chairman of the United Khmer American Coalition Committee, Song has dedicated his time to supporting community members affected by and most at risk during the COVID-19 pandemic. In his nine years on the American Red Cross Board of Directors, Song has raised relief funds for major natural disasters, including Hurricane Katrina in 2005 and the Japanese tsunami in 2011.



Latino Outdoors Founder José González with Jennie Dean, vice president of education and conservation

Latino Outdoors Heritage Award

The Aquarium presented its Heritage Award to Latino Outdoors during the Baja Splash Cultural Festival in September.

Latino Outdoors' mission is to inspire, connect, and engage Latino communities in the outdoors and embrace *cultura y familia* (culture and family) as part of the outdoor narrative, ensuring their history, heritage, and leadership are valued and represented. Their vision is a world where all Latino communities enjoy nature as a safe, inclusive, and welcoming place—a world where the outdoors is a place to share and celebrate stories, knowledge, and culture, while growing leadership and an active community of Latino outdoor users, mentors, and stewards. They are a community that strives for an outdoors that is safe and welcoming for all people and believe meaningful outdoor experiences make us stronger, healthier, and happier. Founder José González accepted the award on behalf of Latino Outdoors.

"I am so honored to have decades of my community work recognized in this way by the Aquarium of the Pacific. And it means so much to me that the work I am so passionate about also resonated with others." – Charles Song, Heritage Award honoree, Southeast Asia Day

Kelp Forests

One of California's most iconic marine habitats is the kelp forest. Towering stalks swaying in the swell. Twinkling light on a sea lion as it darts among the stipes and blades. These are images that I vividly see in my mind when I think about California's ocean.

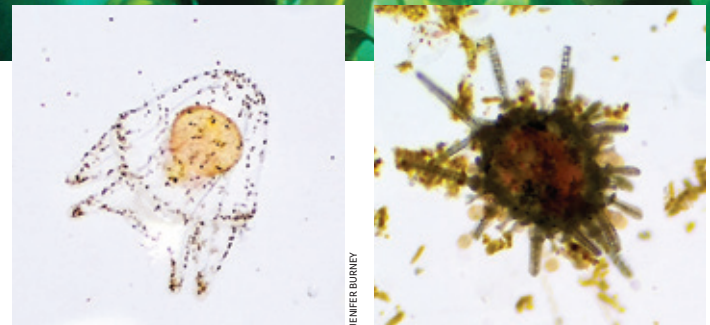
UNFORTUNATELY, IN RECENT YEARS these views have been harder and harder to find as California's kelp forests have seen dramatic fluctuations. While fluctuation is normal for this fast-growing habitat, the trend has been largely a decline in coverage. In Northern California, kelp has declined by 95 percent since 2008. Closer to home, the Palos Verdes Peninsula has lost 80 percent of its kelp canopy.

***Kelpwatch.org* is a collaborative output that maps kelp coverage over the last 35 years at a local scale through remote sensing data.**

The reason for this decline is two-fold. First is disruption to the food web. As predators like sea otters and sunflower sea stars are removed, grazers, like urchins, are left unchecked and destroy the base of the kelp, known as a holdfast. The end result is an underwater wasteland called an urchin barren. The second major reason for kelp decline is climate change and more specifically warmer water. Kelp is a temperate species—it likes nutrient-rich, cold water. Periodic shifts in water temperatures that come with El Niño or other marine heat waves disrupt its growth. As these events become more frequent and longer in duration, kelp is negatively impacted, as are the populations of species that live in the kelp forest. The negative impacts are compounded when declines of predators have already occurred, as is the case in our waters.

The Aquarium of the Pacific is taking action to help restore kelp forests and their inhabitants. Some of our work you are already familiar with—white abalone, giant sea bass, and sea otters.

Sunflower sea stars (*Pycnopodia helianthoides*) is a new species the Aquarium is adding to its conservation efforts. Sunflower sea stars are not your typical sea star—they are different in several significant ways. They are really big—up to 39 inches across, have up to 24 arms, and they have a skeleton made of five pieces instead of



Green urchin larvae

Sand dollar larvae

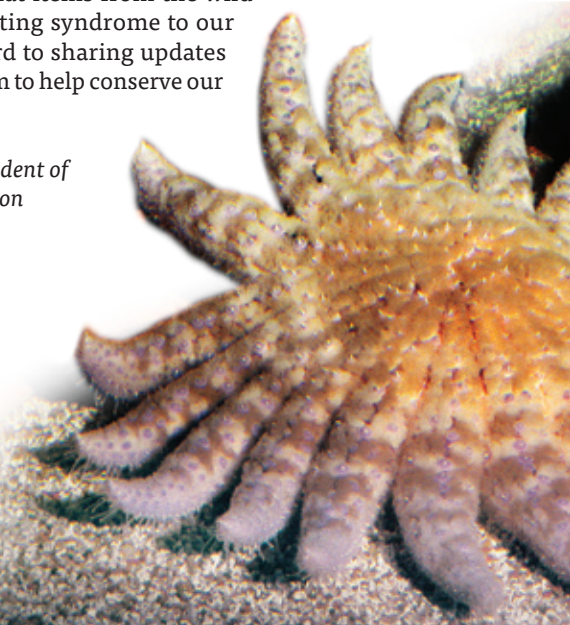
just one like other sea stars. Their 15,000 tube feet allow them to cruise at speeds of up to 9.8 feet per minute across the seabed, looking for prey. You can find them in our Giant Spider Crab exhibit in our Northern Pacific Gallery.

Sunflower sea stars were nearly wiped out across the West Coast by a mysterious and fast-spreading condition called sea star wasting syndrome starting in 2013. The Aquarium is one of five aquariums that still has sunflower sea stars that came from the wild. Our aquarist team has partnered with other institutions, such as University of Washington's Friday Harbor Labs, to better understand the species' reproductive behavior. The goal is to spawn our four sea stars, in tandem with spawns of animals held at other locations, to initiate a captive breeding program.

As we gear up to do this work, our aquarist team has been busy perfecting the cultivation of the sunflower sea stars' food: urchins and sand dollars. It is important for us to do this at the Aquarium—as opposed to collecting from the ocean—to protect the sea stars. There is a known risk that items from the wild could introduce the wasting syndrome to our exhibits. We look forward to sharing updates on this important program to help conserve our local kelp forests.

— By Jennie Dean, vice president of education and conservation

Sunflower sea star



PACIFIC
Currents



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Will you be my Valentine?

Adopt an animal at the \$100 level or above and your loved one will receive an adorable plush animal, Aquarium tote bag, and Valentine's Day gram.

**Promotion ends February 7. While supplies last.*

aquariumofpacific.org/adopt