

# PACIFIC **Currents**

*Aquarium of the Pacific*

WINTER 2020



HELPING LOCAL

*Sea Turtles*

# Know Your Food

Can we make food choices that will reduce our environmental impact?

ONE OF THE WAYS WE CAN WORK to create a better planet here on Earth is examining the methods we use to produce and distribute our food. From the amount of land and water needed to produce crops and livestock to the carbon emissions produced in transporting these products to markets, our food systems have a significant impact. In fact, agriculture uses 70 percent of all fresh water and half of Earth's ice-free land.

The United Nations estimates that the growing human population will require up to 70 percent more food by 2050. Furthermore, to ensure a healthy planet, we will need to reach this goal while decreasing environmental impact, all under the pressure of a changing climate.

While it can be difficult to determine the precise environmental impact of various food items, there are two practices that experts say can make a difference: Eat less beef and choose sustainable seafood.

## CUTTING BACK ON BEEF

The United States is home to close to 95 million cattle as of 2019. Raising cattle requires a lot of open land and high volumes of feed and has a high environmental impact.

Producing one pound of beef requires 1,800 gallons of water. This includes water for the cows to drink and to grow the food they eat. Also, cattle are a major source of methane, a potent heat-trapping gas contributing to climate change. These and other factors make beef and milk products the highest carbon footprint foods in the United States.

While some people might opt to eliminate beef from their diets, even those who cut back just a little bit can help make a difference. Producing beef uses twenty times the land and emits twenty times the emissions as growing

beans, per gram of protein, and requires over ten times more resources than producing chicken. Pork requires two-thirds the amount of water compared to beef. By choosing different proteins for some meals, we can reduce the environmental impact of our food.

## SELECTING SEAFOOD

Replacing beef with responsibly produced seafood can make a healthy and environmentally friendly alternative. Seafood requires very little fresh water and minimal land to produce, especially when compared to raising livestock. Farming fish at sea can have a low carbon footprint. Plus, seafood is an important source of nutrients, including omega-3 fatty acids.

Shrimp, tuna, and salmon are the seafood items we eat most in the United States. While there are responsible sources for all of these, diversifying our seafood consumption to include more local species, such as California yellowtail, mussels, and rockfish, could help reduce pressure on those top three and reduce greenhouse gas emissions associated with transporting the seafood to market.

Seafood from California and the rest of the United States is well managed and supports healthy ocean ecosystems and communities. Check the label for the country of origin, or go to a local seafood market to buy directly from the fishers. You can find a list of fish markets at [aquariumofpacific.org/seafoodfuture/](http://aquariumofpacific.org/seafoodfuture/) recommendations. You can also look for seafood products labeled with certifications, such as Best Aquaculture Practices or Aquaculture Stewardship Council.

## VISIT

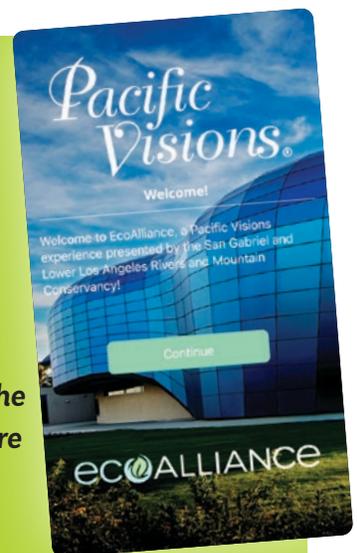
To learn more about these topics, visit the Aquarium's new Pacific Visions wing.



**What do you know about the foods you eat, where they come from, and how much resources are used in their production?**

*In Pacific Visions, the Know Your Food exhibit displays rotating belts featuring dozens of informational signs that cover the environmental, economic, and health impacts of various foods.*

**Test out your knowledge in the Pacific Visions EcoAlliance app now available for download in the Apple App Store and Google Play Store.**



To learn more about the Aquarium's sustainability efforts, visit [aquariumofpacific.org/conservation](http://aquariumofpacific.org/conservation).

# Letter from the CEO

Dear Members,



**AS WE ENTER 2020**, there are several events you should not miss at the Aquarium.

The Festival of Human Abilities on January 25 and 26 showcases the abilities and talents of people with disabilities. We are so proud that one of our longtime performers at this festival, Kodi Lee, was the winner of *America's Got Talent* Season 14 last year. The African-American Festival on February 22 and 23 features live music and dance, storytelling, and an interactive drum circle. Members with young children won't want to miss International Children's Festival on March 28 and 29.

We will also host a variety of lectures, courses, and other important events in the coming months. These events are great opportunities for members to enhance their Aquarium experience, participate in cultural celebrations, learn something new, and share in the diversity and vibrancy of our community. And we hope you use these opportunities to also visit Pacific Visions to learn how together we can create a sustainable future.

As you may know, in September last year I announced my intention to retire after seventeen years as the Aquarium's president and CEO. I will remain in my current role while the Aquarium's Board of Directors conducts a search for my replacement. The Board expects to have selected a new CEO by this coming summer.

In my time at the Aquarium, I have been proud to work with a group of the most dedicated, passionate people I have ever encountered. The Aquarium's staff is talented, resourceful, and driven to create an institution that provides state-of-the-art care to its animals, educates visitors of all ages through innovative programs and exhibits, and participates in local, national, and international conservation efforts. Together we have created one of the most distinctive aquariums in the world that not only engages people on ocean issues, but also boldly tackles the challenges we face as a planet.

The staff's dedication and passion for ocean conservation is matched by that of Aquarium members, and I have been delighted to have met many of you during my tenure. The Aquarium is fortunate to have the support of its members, many of whom have been on board with us since the beginning. Your support as members and participation in Aquarium programs is an important part of what makes this place special.

As I conclude my journey with the Aquarium of the Pacific in the coming months, I hope to see you at one of our many engaging programs and events this winter and spring.

Thank you for your ongoing support.

Sincerely,

Jerry R. Schubel



6



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## In This Issue

### 2 Focus on Sustainability

What do you know about the foods you eat, where they come from, and how much resources are used in their production? Test your knowledge and think about how we can change our food systems to be able to feed more people while decreasing the environmental impact.

### 4 Animal Updates

New animals on exhibit at the Aquarium include a horned puffin chick and a five-year-old lorikeet named Kyrie known for her ability to help raise other lorikeet chicks. Also, read about special medical treatment senior harbor seal Shelby received for a cataract in her right eye.

### 6 Giving a Helping Hand to Local Sea Turtles

Since 2000 the Aquarium has rehabilitated and released fifteen sea turtles that were found stranded or injured along our coast. Learn how the veterinary team cares for these animals and what you can do to help sea turtles.

### 27 Conservation Corner

Aquarium staff members are being trained to help wildlife after an oil spill through California's Oiled Wildlife Care Network. Trained volunteers collect oiled wildlife, then provide medical care and clean and help the animals recover before their release back into the wild.

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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@lbaop.org](mailto:pacificcurrents@lbaop.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: Claire Atkinson | Copy editor: Cecile Fisher | Designer: Andrew Reitsma | Contributing photographer: Robin Riggs | Proofreaders: Alyssa Pacaut and Francisco Rocha.

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

**Membership Office Hours:** 8:00 a.m.-5:30 p.m. daily

#### Phone Numbers (562 area code):

General Information .....	590-3100	Lost & Found .....	951-1733
Membership .....	437-3474	Private Event Info .....	951-1663
Development .....	951-1605	Gift Store .....	951-15EA (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.



## Shelby the Harbor Seal Scheduled for Cataract Surgery

Caring for senior animals at the Aquarium often requires special attention.

**RECENTLY** the Aquarium's mammalogists noticed that Shelby, a 23-year-old harbor seal, was experiencing some inflammation and discomfort in her right eye. Mammalogists treated the inflammation with medication, but determined that further treatment was necessary.

This past August an ophthalmologist team visited the Aquarium to examine Shelby's eye and discovered a cataract lens. As with humans, Shelby's cataract will require surgery for removal. In the meantime, she will continue to receive medication to treat the inflammation and will stay in a behind-the-scenes holding area with her fellow seal Ellie keeping her company. Harbor seals Troy and Kaya, Shelby's pup, remain on view in the Seals and Sea Lions Habitat.

Shelby is twenty-three years old and one of the Aquarium's original charter animals. In the wild, harbor seals typically live twenty-five to thirty years. Providing specialized medical treatment like this is part of how aquariums care for their senior animals.

Shelby is 23 years old and one of the Aquarium's original charter animals.



Shelby underwent a specialized eye exam with an expert team of ophthalmologists.



Helvola sea nettles are about 6 inches wide and 18 inches long.

## New Sea Jellies Now on View Were Cultured at the Aquarium

This was the first time this species has reproduced at an aquarium in the United States.

**HELVOLA SEA NETTLES** bred at the Aquarium are now on view in the Northern Pacific Gallery. This is the first time an aquarium in the United States has successfully cultured and raised this species. Senior Aquarist Josh Wagner experimented with different types of food for the jellies and chemical compounds to stimulate their reproductive cycle.

Helvola sea nettles are found in cool ocean waters surrounding Japan and have a lifespan of nine months to a year. In the wild these jellies have a potent sting. Their venom has even been used in scientific experiments to destroy cancer cells. But according to Wagner, jellies born in an aquarium setting have a milder sting.

Wagner began the culturing process by acquiring wild male and female helvola sea nettles from Japan. These adults were on display at the Aquarium in 2018. To get them to reproduce, he left the jellies together in a behind-the-scenes holding area overnight, allowing them to send each other chemical signals to release eggs and sperm.

After fertilization, Wagner was able to see the resulting larvae under a microscope. Next, the larvae settled on a hard surface, becoming polyps. The polyps can reproduce asexually, budding off baby jellies, called ephyrae. It was at this stage that aquariums have had difficulty working with this sea nettle species.

To overcome this hurdle, Wagner fed the polyps a varied diet to find a type of food that would help them grow successfully and produce ephyrae. He also tried introducing various chemical compounds to alter the water chemistry and stimulate strobilation, the process the polyps undergo when they stack up and bud off ephyrae. His efforts were successful in July, when his polyps strobilated and produced healthy baby sea nettles.



BRANDI KENNEY

Kyrie is a 5-year-old rainbow lorikeet with a special job.

Kyrie compensates for her missing leg by leaning to the opposite side.

## Special Bird Moves into Lorikeet Forest

Kyrie has helped socialize dozens of lorikeet chicks behind the scenes.

**KYRIE** is a five-year-old rainbow lorikeet that has lived behind the scenes at the Aquarium her whole life. A few days after she hatched, she lost her left leg and remained behind the scenes to receive special care. Over that time she took on the role of helping to socialize lorikeet chicks. Chicks that were hatched and raised in the Molina Animal Care Center were socialized by spending time with Kyrie.

In late 2019 the aviculturists decided Kyrie was ready to join the rest of the flock in Lorikeet Forest. Visitors can spot her by looking for the lorikeet with a distinctive lean.

## Juvenile Horned Puffin Joins Diving Bird Exhibit

This chick is the sixth born to two of the Aquarium's longtime resident puffins.

**A HORNED PUFFIN CHICK** was introduced to the Diving Birds exhibit this past October. The chick can be identified as juvenile based on its size, beak color, and some plumage differences from the adults. It is smaller than the other horned puffins in the exhibit and has a white chest and black back. It has a black beak instead of an orange or cream-colored beak like the adults. The juvenile will begin to look like the other adults after the breeding season in late April to June. Aquarium aviculturists will determine its sex after its first physical in early 2020.

The puffin chick hatched at the Aquarium on July 27, 2019. It lived in its parents' nest inside the Diving Birds exhibit for six weeks, then was moved to the behind-the-scenes nursery while it fledged, replacing its downy newborn feathers with watertight plumage. This chick's parents are longtime Aquarium residents and have successfully hatched six chicks.



Baby puffins are called pufflings. This one was born at the Aquarium last July.

# GIVING A HELPING HAND



## *to Local Sea Turtles*

**SEA TURTLES HAVE THRIVED IN OUR LOCAL URBAN OCEAN FOR DECADES, MAYBE LONGER.**

While these animals find abundant food and comfortable habitat here, some sea turtles occasionally get stuck in concrete channels or power plant intakes or caught on fishing lines. Others accidentally ingest a piece of trash, fishing gear, or other debris.

The Aquarium has treated numerous sea turtles suffering these types of injuries over the course of its history. And in recent years, we have invited the public to come watch as these rehabilitated sea turtles return to their home in the ocean.



ou don't have to take a Hawaiian vacation to see a sea turtle. For decades locals have spotted green sea turtles in the San Gabriel River and the surrounding waters. These sea turtles are well known among cyclists on the bike path, people fishing from bridges or jetties, and local sailors, kayakers, and paddle boarders. Since 2012 volunteers from the Aquarium have counted them, watching in the early morning hours for the sea turtles' small heads to poke above the surface for a breath of air.

This population of green sea turtles (*Chelonia mydas*) thrives in local waters. However, when a sea turtle is injured or stranded, the Aquarium's veterinary staff stands ready to treat and rehabilitate it. Once the sea turtle is deemed healthy, Aquarium staff members release it back into our local urban ocean.

## ABOUT SEA TURTLES

Sea turtles are reptiles and spend most of their lives in the ocean, often migrating long distances. They live in temperate and tropical waters around the world. Because they are cold-blooded and use their environment to regulate their body temperature, they often seek out warmer water. Sea turtles rely on both marine and terrestrial environments, coming onto beaches to lay their eggs or rest.

Green sea turtles have nesting sites in more than eighty countries.

While other sea turtle species feed on animals like sea jellies, crabs, shrimp, and fish, as adults green sea turtles are primarily herbivores that feed on algae and seagrasses. They are thought to live up to sixty or seventy years.

Six of the world's seven sea turtle species are found in the waters in and around the United States and are protected under the Endangered Species Act. The population of green sea turtles in the eastern Pacific Ocean, which we see locally, is listed as threatened. The National Oceanic and Atmospheric Administration (NOAA) Fisheries office and the U.S. Fish and Wildlife Service (USFWS) are the agencies that monitor sea turtles in the United States.

## LOCAL POPULATION

NOAA began tracking the green sea turtles in the San Gabriel River and surrounding area about a decade ago. Dan Lawson is a fisheries biologist leading local sea turtle research and conservation efforts for NOAA Fisheries' West Coast Region. He began working with graduate students at California State University, Long Beach, at that time to track and tag sea turtles to get initial estimates of abundance. He soon connected with the Aquarium and helped develop the citizen science program that monitors the population today.

Each month a group of Aquarium volunteers conducts a sea turtle count at the San Gabriel River, collecting data that

provides a baseline index of sighting locations. When new coastal developments are planned, the data can be used to inform environmental guidelines and designate protected sea turtle habitats. Sea turtles in the San Gabriel River are likely attracted to the warm water that is discharged from power plants, which use sea water to cool their engines. As those systems are phased out as mandated by a state policy change, it will be interesting to see if the turtles continue to populate the river.

If you would like to try spotting a sea turtle, visit the mouth of the San Gabriel River and walk along the bike and pedestrian path. Slowly scan the water, and Lawson says it probably won't take you more than fifteen to twenty minutes to spot a turtle.

## INJURIES AND STRANDINGS

Sea turtles that end up at the Aquarium for treatment often arrive here after being stranded, entangled in trash or debris, or even accidentally hooked by someone fishing. Sea turtles on land are under USFWS jurisdiction, while sea turtles in the ocean or other waterways are under NOAA jurisdiction. These agencies determine the appropriate course of action for each sea turtle.

Injured sea turtles from as far away as Morro Bay have been sent to the Aquarium because of the veterinary team's expertise in treating sea turtles. When a new case comes

in, a notification goes out to the NOAA staff members involved with monitoring sea turtles and the USFWS permit officer for the region so that all the people who need to stay informed know where the sea turtle will be treated.

## TREATMENT

The Aquarium receives anywhere from zero to ten sea turtles needing medical care per year. The most common species treated here is green sea turtles, but the team has also treated loggerhead and olive ridley sea turtles.

When a sea turtle arrives at the Aquarium, it is taken to the Molina Animal Care Center to be examined by the veterinary staff.

The first step is to address immediate concerns, like external wounds, then make sure the animal is stabilized by running diagnostics and taking a blood sample. The team takes photos to document the entire process. They measure the sea turtle's shell and tail, weigh the turtle, and take x-rays to look for metallic foreign bodies. Sometimes x-rays will also show evidence of plastic objects. If metal or plastic is found in the x-rays, the veterinary staff will proceed with a procedure to remove it. They can use an endoscope (a long flexible tube with a camera and light on the end) to find and remove the object. In some cases, surgery is required to remove the object or repair damage it caused.

Other medical issues that can require surgery include buoyancy problems. If a sea turtle ruptures a lung, or air leaks into its body cavity, this can prevent it from being able to surface for air or sink to the bottom to forage for food or rest.

After these treatments are completed, the veterinary team will monitor the turtle to look for signs of recovery. These



Photo: The Aquarium's sea turtle releases are conducted with the approval and assistance of the City of Seal Beach's Marine Safety Department.

include regular eating, activities like swimming and surfacing to breathe, and blood work showing no abnormalities.

As the sea turtles recover, the Aquarium's husbandry staff offers them a variety of food options to see if the turtle might prefer, for example, squid over clams or zucchini over romaine lettuce. Juvenile green sea turtles eat a more carnivorous diet, but adults tend to be vegetarians.

## PREPARING FOR RELEASES

Sea turtles that are treated at the Aquarium receive a microchip that is inserted under the skin in their front flipper so the sea turtles can be identified if stranded again or collected by scientists. Mature turtles may also receive a permit flipper tag, making it possible for scientists to identify the sea turtles visually from a distance. The Aquarium has rehabilitated and released fifteen sea turtles since 2000.

The female sea turtle that was rehabilitated at the Aquarium last fall, affectionately nicknamed Aristurtle by the Aquarium staff, had previously been collected in the San Gabriel River channel and tagged by NOAA biologists in 2014. Since that time, she grew about 8 inches and gained about 90 pounds. She was released in Seal Beach on October 8, 2019.

Because released sea turtles tend to return to the San Gabriel River, the Aquarium has determined that to be an appropriate location to release them after rehabilitation. The Aquarium coordinates with NOAA, USFW, and the City of Seal Beach's Marine Safety Department to conduct sea turtle releases near the mouth of the river, where sea turtles can easily choose whether they prefer to travel upriver or out to sea.

Sea turtles are typically transported to the release location in an Aquarium vehicle and carried onto the beach in a large sling. The veterinary team and husbandry staff members set the sling down right at the water's edge, allowing the sea turtle to enter the water directly as onlookers watch. Future releases will be announced on the Aquarium's Facebook and Instagram pages.

## OUR SEA TURTLE NEIGHBORS

Lawson credits the abundance of green sea turtles in our area in part to successful conservation efforts, both in the United States and in the countries where they nest. Regulations on commercial fishing gear protect turtles from being caught as bycatch. In addition, governments have prohibited poaching and turned nesting beaches into protected national parks.

Lawson says here in Southern California we must protect our coastal areas to ensure there is ample habitat for sea turtles in the future. "I never would have thought when you look at this industrial-looking area, that it would be a turtle paradise. It still blows my mind," he says. "It's good news that these turtles can cohabitate with us in that industrial environment. We should consider them a part of the community going forward."

## REPORTING A SEA TURTLE

If you see a sea turtle that appears to be injured or stranded in San Diego, Orange, or Los Angeles Counties, you can call the sea turtle stranding hotline maintained by NOAA Fisheries' Southwest Fisheries Science Center at (858) 546-7162 or (562) 506-4315.

Marine Animal Rescue, a nonprofit organization operating under federal authorization from NOAA, responds to sea turtle and other marine animal strandings in the Los Angeles area, from Pacific Palisades to San Pedro and Catalina Island. Their hotline number is (800) 39-WHALE.



The veterinary team can use a scope to look for internal problems, such as fishing hooks or other debris the sea turtle may have swallowed.

When a sea turtle is ready for release, it is usually transported to the release site by the Aquarium's veterinary staff in a truck or van.



PHOTOS BY MADELINE WALDEN

# HOW YOU CAN HELP

1

The number one threat to local sea turtles, according to Lawson, is being struck by a boat, which can be fatal.

To avoid boat strikes, always observe posted speed limits in local waterways, and keep a sharp lookout for turtles and other marine life, especially in areas known to be hot spots.



ANDREW RETSMA

2

Fishing gear is the top cause of injuries to sea turtles that the veterinary team treats at the Aquarium.

Be sure to properly dispose of your fishing gear, and purchase seafood that is harvested responsibly.

NOAA Guidelines for Fishers  
[www.fisheries.noaa.gov/pacific-islands/resources-fishing/fishing-around-seals-and-turtles](http://www.fisheries.noaa.gov/pacific-islands/resources-fishing/fishing-around-seals-and-turtles)



ELAINE ROSS

3

Trash and other pollution in our waterways are dangerous to sea turtles.

Some trash, like plastic bags, can look like food to sea turtles, and they may ingest it, causing internal damage. Always properly dispose of your trash, participate in beach clean-ups, and reduce your use of single-use plastic.



ANDREW RETSMA

4

Become a citizen scientist and help monitor our local sea turtle population.

Visit [aquariumvolunteers.org](http://aquariumvolunteers.org) to apply, and visit [facebook.com/seaturtlemonitoring](https://facebook.com/seaturtlemonitoring) to learn more.



CASSANDRA DAVIS

## \* Member Events

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

### Member Kids Activity Night

■ Thursday & Friday, March 5-6

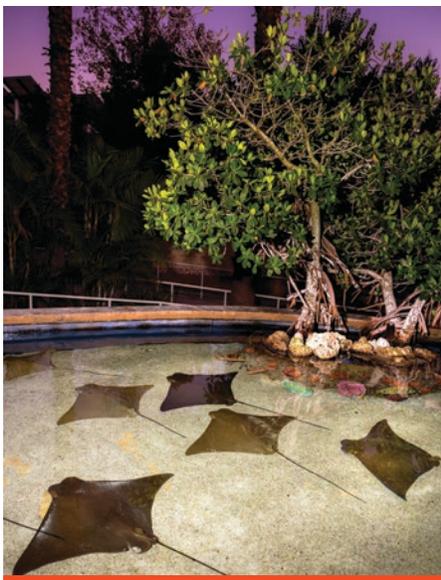
6:30 P.M.-9:00 P.M.

Get ready for a Crustacean Carnival at this year's Kids Activity Night! Bring the family in for a crab-ulous evening of entertainment here at the Aquarium. Your little ones will love fun and educational activities including a special show just for kids, crustacean-themed crafts, and carnival games.

- Cost | Free for members (reservations required)
- RSVP | (562) 437-3474 to reserve



Member Kids Activity Nights, March 5 and 6



Free Shark Lagoon Nights, Fridays, Jan. 10-June 12

ANDREW REITSMA

## \* Special Events

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

### Shark Lagoon Nights

■ Fridays, January 10-June 12 (except Feb. 14, Mar. 6 & 13, and Apr. 17)

6:00 P.M.-9:00 P.M.

Get up close with the ocean's ultimate predators for free during Shark Lagoon Nights. Guests will have the opportunity to touch bamboo sharks, epaulette sharks, and cownose rays and see large sharks, such as sand tiger and zebra sharks in the Aquarium's Shark Lagoon. Cold beer, sodas, and snacks are available for purchase. Live music offered on select evenings.

- Free for everyone

### Valentine's Day Night Dive

■ Friday, February 14

7:00 P.M.-11:00 P.M.

Night Dive is an adults-only event featuring food and drink, live performances, and other special programming for an 18-and-over crowd. Discover the Aquarium at night and explore its galleries in a new way, with DJs and local artists creating a unique ambiance. Live bands take the stage in front of the Honda Blue Cavern, turning the Great Hall into a music venue. Learn something new from expert speakers presenting mini-lectures in the Ocean Theater.

- Free for members, \$24.95 for non-members
- Open to ages 18+ only

### President's Day Weekend Late Night

■ Sunday, February 16

5:00 P.M.-8:00 P.M.

Enjoy a visit to the Aquarium with special extended hours and discounted admission in celebration of President's Day Weekend. The entire Aquarium will be open, except Lorikeet Forest. Watch the nighttime activities of our animals, touch a shark, and enjoy the beautiful evening lighting of the Aquarium's architecture.

- Free for members, \$19.95 for non-members after 5:00 p.m.

### Abilities Night

■ Sunday, March 8

6:00 P.M.-9:00 P.M.

At this exclusive event for people with disabilities, experience a tranquil evening where guests can explore the exhibits and enjoy the nighttime lighting of the Aquarium. All animal exhibits will be open with the exception of Lorikeet Forest. Capacity is limited; advance reservations are required.

- Free for members and people with disabilities (reservations required)
- Reserve online at [aquariumofpacific.org/abilitiesnight](http://aquariumofpacific.org/abilitiesnight). For groups of seven or more, call (562) 590-3100, ext. 0.

### Noche de Estrellas

■ Friday, March 13

6:30 P.M.-10:30 P.M.

Party with the sea stars at the Aquarium's Latin-themed night, Noche de Estrellas. The Aquarium will remain open until 10:30 p.m., so you can dance to the sounds of cumbia, rock en Español, salsa, cha cha, and other Latin rhythms. Noche de Estrellas (Night of the Stars) will feature live bands, DJs, underwater dive shows, scavenger hunts with prizes, and ocean activities. Mexican cuisine, beers, and drinks will be available for purchase.

- Free for members, \$19.95 for non-members

### Divers Day

■ Saturday, March 14

9:00 A.M.-5:00 P.M.

Learn about recent advancements in diving at the Aquarium's annual Divers Day, featuring educational presentations and live dive demonstrations. The Aquarium will also host several organizations that are related to the sport and science of diving. The diving community is invited to find out about volunteer diving and other opportunities for

involvement with dive-related organizations in Southern California. Divers who present valid proof of certification with their photo I.D. will receive free admission.

- Free for members and SCUBA divers with valid proof of certification and photo I.D.

### Autism Families Night

■ **Sunday, March 15**  
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, \$7 for non-members

### Scout Day

■ **Sunday, March 22**  
9:00 A.M.-4:00 P.M.

Cub Scouts, Girl Scouts, and their families and friends can visit the Aquarium and complete steps toward badges utilizing self-led activity sheets that are specifically designed for scouts. Leaders or parents facilitate the scouts' learning experience and guide them through the steps for badge requirements. For an additional fee, scouts can participate in an educator-led Scout Discovery Experience or Harbor Tour with Harbor Breeze Cruises. Patches will be available for sale in the Pacific Collections gift store.

### Mother's Day Brunch

■ **Sunday, May 10**  
8:30 A.M.-10:30 A.M.

Join us for a memorable Mother's Day brunch on the Aquarium's Harbor Terrace and Veranda to celebrate the special women in your life. You'll explore the wonders of the Pacific Ocean as you visit over 12,000 animals. All-day Aquarium admission is included.

- Cost | \$64 per member, \$24 per member child. \$74 per non-member, \$34 per non-member child.



MADELINE WALDEN

February 22-23: 18th annual African-American Festival

## \* Festivals

*Experience our community's diverse cultures and their connections to the ocean and environment. All festivals are free for members; members' guests receive 20% off regular admission.*

### Festival of Human Abilities

■ **Sat. & Sun., January 25-26**  
9:00 A.M.-5:00 P.M.

The Festival of Human Abilities is a celebration highlighting the creative talents and abilities of people with disabilities. Now in its seventeenth year, this event features wheelchair dance performances, live music, signing choirs, art demonstrations, accessible SCUBA diving demonstrations, storytelling, interactive workshops, and other creative performances by people who have disabilities. Sign language interpreters will be present at all major shows and an audio tour and Braille visitor guide is available for guests who are blind.

### African-American Festival

■ **Sat. & Sun., February 22-23**  
9:00 A.M.-5:00 P.M.

Join the Aquarium of the Pacific as it hosts its eighteenth annual African-American Festival, celebrating the rich diversity of African-American and African cultures. The weekend will feature live entertainment and arts and crafts. Festival performers include Mardi Gras second line dancers, hip hop and break dancers, jazz musicians, interactive drum circles, West African dancers, and storytellers.

### International Children's Festival

■ **Sat. & Sun., March 28-29**  
9:00 A.M.-5:00 P.M.

The Aquarium's fifteenth annual International Children's Festival will be 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, Persian, Irish, Slovak, and Czech dance performances. Enjoy performances by an international children's choir and martial arts demonstrations. Kids of all ages can partake in a percussion circle, Japanese origami, Native American 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 Festival

■ **Sat. & Sun., April 25-26**  
9:00 A.M.-5:00 P.M.

Learn what you can do to help our ocean planet at the Aquarium's twentieth annual Earth Day Celebration. Join the Aquarium for a weekend of family fun celebrating Earth Day while learning simple, everyday tips to protect our environment. Visit booths from various Earth-friendly organizations, and participate in hands-on learning demonstrations for people of all ages.

### Urban Ocean Festival

■ **Sat. & Sun., May 2-3**  
9:00 A.M.-5:00 P.M.

Explore and celebrate Southern California's coast during the Aquarium's eleventh annual Urban Ocean Festival. The event will include art exhibitions, a fashion show and contest for designs using recycled materials, mural painting, poetry readings, booths, and educational activities.

**For tickets and information, visit [aquariumofpacific.org](http://aquariumofpacific.org) or call (562) 590-3100, ext. 0.**

## \* Guest Speakers

Lectures are free for Aquarium members, teachers, seniors age 62 and up, and students with valid I.D. and advanced reservations. Otherwise, tickets are \$5. All lectures start at 7:00 p.m. and are streamed live. Visit [aquariumofpacific.org/news/lectures](http://aquariumofpacific.org/news/lectures).

GRUNION GAZETTE  
www.thegrunion.com

COURTYARD  
BY MARRIOTT  
LONG BEACH DOWNTOWN



Jan. 15: Susan Gerros discusses bird conservation.

### Susan Gerros | Saving Birds in the Northern Mariana Islands

■ Wednesday, January 15

In recent years the Aquarium has sent staff members to assist with a project called Marianas Avifauna Conservation, which works to conserve bird populations in the Mariana archipelago. In this lecture Susan Gerros will share stories of her experiences on the island of Saipan, located in the Northern Mariana Islands, where several species of birds are being relocated to help save them from possible extinction. Gerros is a senior aviculturist at the Aquarium and cares for birds and reptiles. She has worked with over one hundred and fifty different species of animals, including reptiles, birds, insects, arachnids, mammals, fish, and crustaceans. Previously she held positions at the San Diego Zoo, the Phoenix Zoo, and the Florida Aquarium.

 =book signing



February 19: Nate Jaros and Briana Fodor will discuss coral reef conservation in Guam and Palau.

### Ellen Prager | Galápagos Wonders



■ Wednesday, January 22

From their unusual animals to the volcanic landscapes, the Galápagos Islands are one of the world's most fascinating locations. Dr. Ellen Prager will share her experiences in the Galápagos and the wonder of the islands through stories and images. She will also provide a sneak peek and explain how she integrated these into her new adventure novel for children ages eight to fourteen, *Escape Galápagos*. Dr. Prager is a marine scientist and science advisor to Celebrity Cruises in the Galápagos Islands. Her previous books include *Sex, Drugs, and Sea Slime: The Oceans' Oddest Creatures and Why They Matter*.

### Josie Iselin | The Curious World of Seaweed



■ Thursday, January 30

Marine algae like seaweed and kelp help oxygenate the ocean, create habitat for other organisms, and form the base of a critical food web for life on Earth. In her new book *The Curious World of Seaweed*, artist Josie Iselin combines essays and imagery to explore seaweed and kelp from the Pacific coast. She will discuss how her interest in art and science brought her to study seaweed and introduce a few women scientists who were crucial in broadening our understanding of the oceans. She will also share her imagery of seaweeds collected from California's coastline and beaches. Iselin uses a flatbed scanner and computer for generating imagery and exhibits large-scale fine art prints at select galleries and museums.

### David Bader | A Story About People and Place: Lessons Learned in Vaquita Conservation

■ Thursday, February 6

The story of how the vaquita porpoise became the world's most endangered marine mammal did not begin with modern day poaching, drug cartels, and mafia, although that is the compelling story being told today. The full story is more complex—it begins at the turn of the century and it involves westward expansion, global trade, and the development of communities supported by this trade. In this lecture Aquarium Director of Education David Bader will discuss lessons learned from the story of the vaquita and what it can tell us broadly about what it will take to achieve conservation success for other porpoises facing extinction. Bader also serves as a lead coordinator for the Association of Zoos and Aquariums' Vaquita SAFE (Saving Animals From Extinction) program.

### Nate Jaros and Briana Fodor | Coral Reef Restoration in Palau and the Bahamas

■ Wednesday, February 19

Aquarium staff members Nate Jaros and Briana Fodor will discuss the Aquarium's involvement in coral reef restoration field work. Jaros traveled to Palau in 2019 to support SECORE International and Newcastle University's CORALASSIST Lab. This work included aiding in research to study the effects of warming seas on the coral populations, as well as techniques for scalable restoration methods.

Palau's rock islands possess shallow lagoons that remain slightly warmer than surrounding seas, which makes this an excellent area to study the effects of increasing temperature on reefs. Fodor traveled to the Bahamas in 2019 to participate in SECORE's restoration work there. Jaros is the Aquarium's curator of fish and invertebrates, and Fodor is a senior aquarist.



Feb. 26: Andrew Reeves on Asian carp in America

**Andrew Reeves | Unwitting Helpers: The Strange, True Story of How Silent Spring and the Clean Water Act Gave Rise to Asian Carp in America**

■ Wednesday, February 26

The publication of Rachel Carson's *Silent Spring* in 1962 kicked off a broad public discussion about the ways in which chemical pesticides were inadvertently killing birds, fish, and mammals—including humans. The book set in motion a movement that led, among other things, to the creation of the Environmental Protection Agency and the passage of the Clean Water Act. But in unintended ways, these books, agencies, and laws became unwitting helpers in the introduction and prolific spread of Asian carp, an invasive aquatic species. Environmental journalist and author Andrew Reeves will discuss this issue in-depth with stories and material from his book, *Overrun: Dispatches from the Asian Carp Crisis*.

**Joshua Willis | An Evening with Climate Elvis**

■ Thursday, March 12

Josh Willis is a NASA climate scientist and Elvis impersonator. His mission to the Arctic, Oceans Melting Greenland (OMG for short), is helping scientists make better predictions of sea level rise in our warming world. In his spare time, Willis writes and performs as Climate Elvis, singing songs about climate change. In this presentation, he will explain why Greenland is melting. Climate Elvis will perform *The Climate Rock* and answer your questions about global warming.

**Corinne Heyning Laverty | North America's Galápagos: The Historic Channel Islands Biological Survey**

■ Thursday, March 19

In her book *North America's Galápagos: The Historic Channel Islands Biological Survey* author Corinne Heyning Laverty recounts the story of scientific researchers, naturalists, and adventurers who undertook expeditions in the 1930s to piece together the human history and biological evolution of California's Channel Islands. Sometimes called North America's Galápagos, these islands each support unique ecosystems with varied flora and fauna and differing human histories. She also introduces a new generation of Channel Island scholars and their modern discoveries. Laverty is a research associate and fellow at the Natural History Museum, Los Angeles County, and an associate of the Santa Cruz Island Foundation.

**Melody Jue | Diving to Underwater Museums: Perspectives from an English Professor**

■ Thursday, March 26

SCUBA diver and English Professor Melody Jue will discuss her fieldwork in Mexico to visit underwater caverns and the underwater sculptures of Jason deCaires Taylor. Jue will

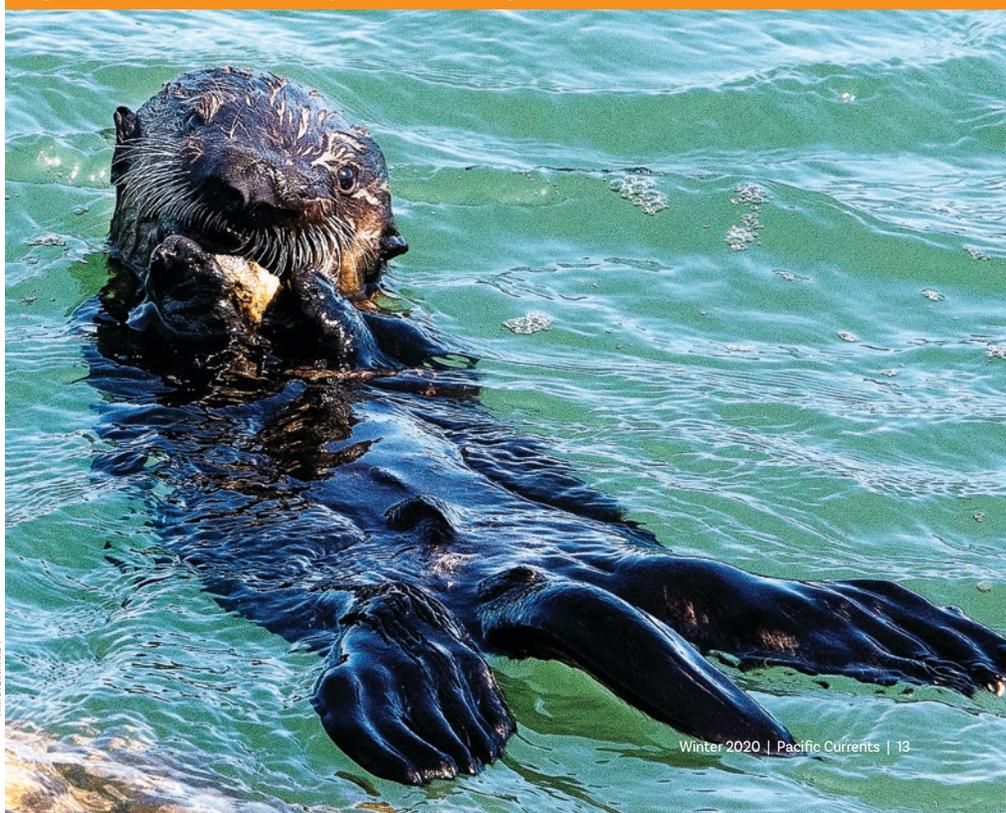
explain what makes underwater museums such interesting places and how the ocean challenges the way we normally think about language and media. Drawing on her new book *Wild Blue Media: Thinking Through Seawater*, Jue will talk about the importance of bringing the humanities into conversation with the ocean sciences.

**Kim Steinhardt | The Edge of Extinction: Can Sea Otters and Cheetahs Survive the Human Threat?**

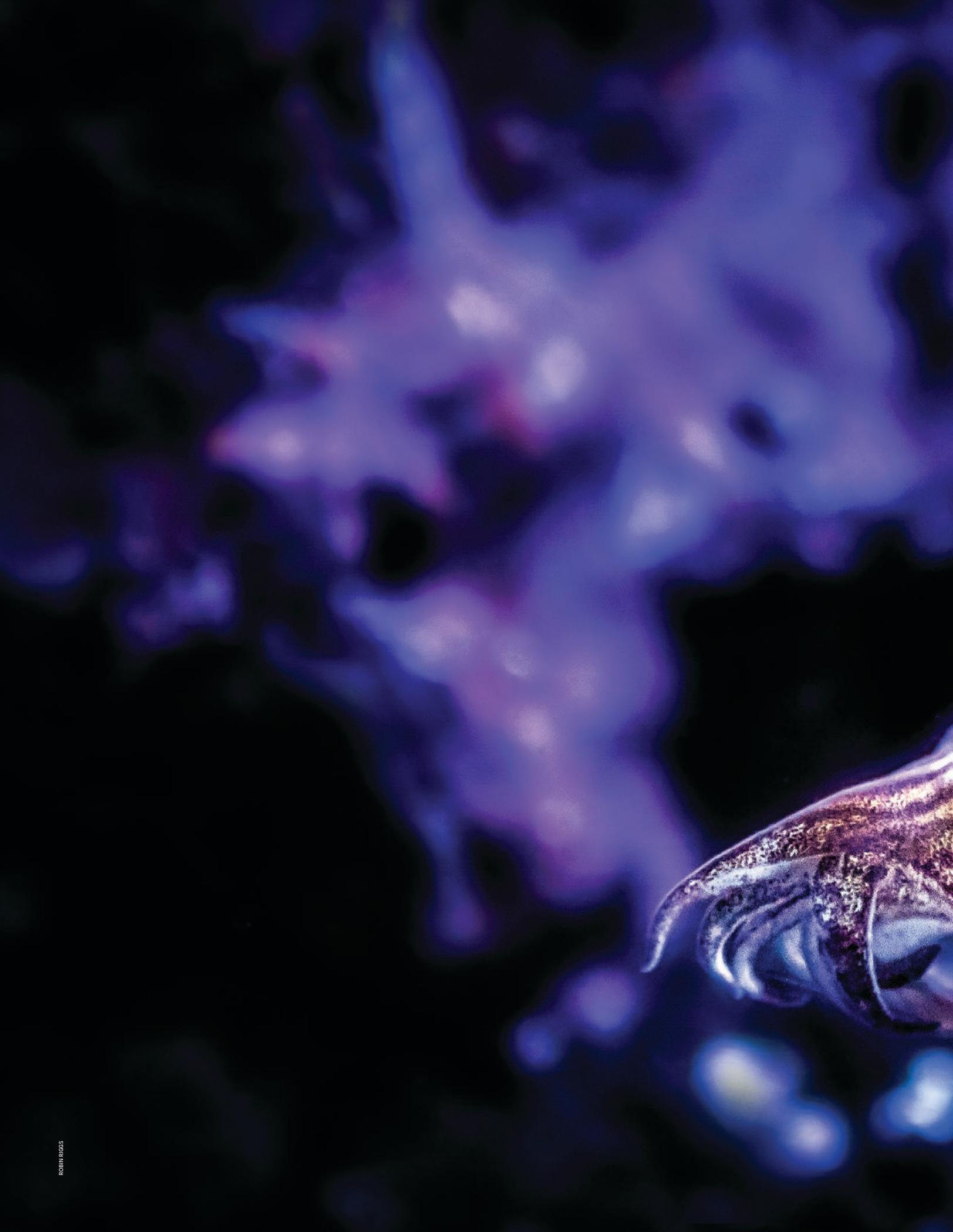
■ Thursday, May 7

In his lecture Kim Steinhardt will share a global conservation story and photos documenting the lives of the Pacific Ocean's southern sea otter and the Serengeti's cheetah. He will discuss these species' struggle to avoid extinction, linked by the common threat posed by humans. According to Steinhardt, their stories reveal resilience in the face of grave threats as well as the differences between the wildlife conservation efforts for each species under widely differing legal systems. Steinhardt will also sign copies of his latest book for children, *Sabby the Sea Otter: A Pup's True Adventure and Triumph*. Steinhardt is an environmental author and wildlife photographer. A former administrative law judge, he teaches law classes on legislative policymaking emphasizing ocean advocacy and wildlife conservation.

May 7: Kim Steinhardt discusses endangered species, including sea otters.

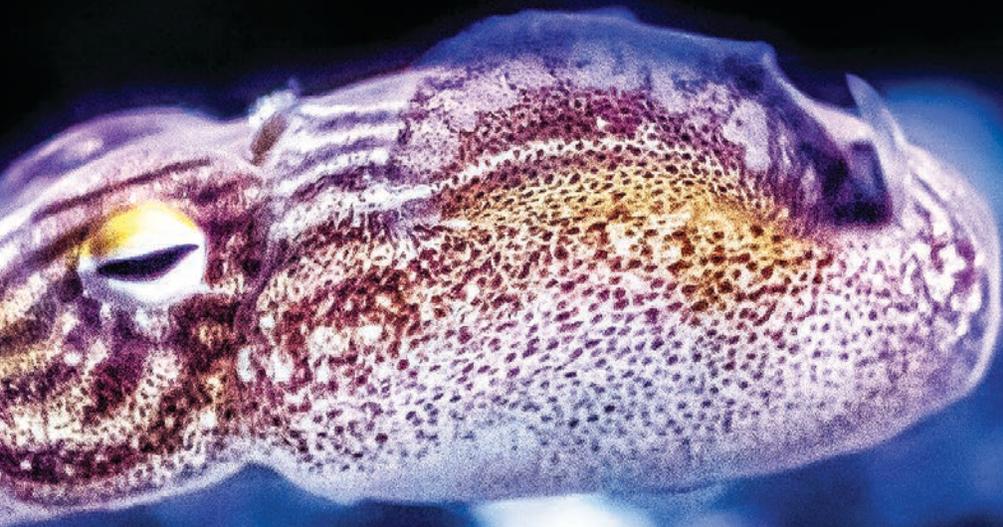


KIM STEINHARDT



# *Aquarium of the Pacific*

Pajama squid are on view in the Tropical Pacific Jewels exhibits. Despite its name, this animal is actually a type of cuttlefish. It has an internal shell called a cuttlebone, eight arms, and two tentacles for feeding. Pajama squid typically spend their time buried in sand with their eyes peeking out for an opportune snack.



# ADD-ON EXPERIENCES

## Family Programs

Family programs at the Aquarium give children of all ages the chance to participate in fun classes with an Aquarium educator. Every class brings another opportunity for learning more about the ocean, discovering new things about the Aquarium, and exploring marine life. Pre-registration is required.

### Job Shadow Class

Four rotating themed programs.

#### ■ First Saturday and third Sunday of every month

9:00 A.M.-12:00 P.M.

- \$35 per member, \$39 per non-member (Aquarium admission not included)
- Ages 13 to 17

### Parent and Me

Four rotating themed programs.

#### ■ Third Saturday of every month

10:00 A.M.-11:30 A.M.

- Members: \$19 per adult/child pair; \$10 for additional guests. Non-members: \$49 per adult/child pair; \$20 per additional guest (Aquarium admission included)
- Ages 2 to 6 years old with an adult

## Field Trips

Bring your class on a field trip to the Aquarium of the Pacific for as low as \$7 per student. Inspire students to connect to ocean habitats through engaging exhibits and opportunities to touch animals including sharks, sea stars, and more. Add to your experience with an educator-led classroom program. Visit [aquariumofpacific.org](http://aquariumofpacific.org) to view field trip program and pricing options.



ANDREW REITSMA

## Summer Day Camps

Summer Day Camps go on sale on March 15, and the Aquarium will send an email to members on that date with details. Call early to lock in your dates before camps sell out.



MADLINE WALDEN



ANDREW REITSMA

### Junior Biologist

Learn about the animals and habitat right off our own coast. Do you know a budding marine biologist? The Junior Biologist series of programs at the Aquarium will encourage a love of science in your seven- to twelve-year-old child. Each 2-hour class includes theme-related activities, guided gallery tour, interaction with our animal care staff behind-the-scenes, and a keepsake journal.

Five rotating themed programs.

#### ■ Second and fourth Saturday of every month

9:30 A.M.-11:30 A.M.

- \$25 per member, \$29 per non-member (Aquarium admission not included)
- Ages 7 to 12

# Whale Watching

## CRUISES

### Gray Whale Watching Trips

#### ■ 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 whale watch Twitter feed (@OceanWatchLB).

- Members: \$25 per adult, \$20 per senior (ages 62+), \$15 per child (ages 3-11). Non-members (includes Aquarium admission): \$49.95 per adult, \$45.95 per senior, \$33.95 per child.
- 2 to 2.5 hours
- (562) 590-3100, ext. 0



# Aquatic Academy

## COURSE

### The Effect of Earth's Health on Human Health

#### ■ March 4, 11, 18, and 25

7:00 P.M.-9:00 P.M.

Earth has a fever, her health is declining, and her mood swings are becoming more turbulent. Earth's health has profound effects on human health and welfare, from increases in infectious diseases, to extreme heat waves causing mass mortalities, to failing crops causing widespread hunger. In this course, we explore how human health is affected by Earth's declining health and what can be done to offset these effects.

- \$40 for the four-lecture series; \$25 for students and Aquarium members. \$10 extra for CEU credit from CSULB CCPE. Includes parking in Aquarium parking structure.
- (562) 590-3100, ext. 0

Call (562) 590-3100 for more information. Pre-registration and pre-payment required on all programs unless noted. All prices subject to change.

# Tours & Encounters

*These programs are opportunities to see the Aquarium in a different light and get up close to the animals.*

### Behind-the-Scenes Tours

See what it takes to maintain a world-class aquarium, from water filtration to animal care and feeding. Venture to the top of our largest exhibit and discover more about the Aquarium!

- \$15 per member, \$19 per non-member
- Children must be age 7 or older.

### Animal Encounters

Animal encounters offer a chance to feed a sea otter, train a sea lion, feed a shark, or hang out with a penguin.

- \$99 per member, \$109 per non-member (Aquarium admission included).
- Pre-registration required at least 24 hours in advance.
- Age restrictions apply.

### VIP Experiences

#### ■ By reservation.

Get even closer in this special animal encounter experience! Tour the Aquarium, meet two separate animals, and have exclusive experiences only for VIPs. Choose from Penguins and Pinnipeds, Otters and Octopus, or Sharks and Rays.

- \$330 per member, \$350 per non-member (Aquarium admission included).
- Pre-registration required at least two weeks in advance.
- Age restrictions apply.

### Dive Immersion

#### ■ Daily with reservation

3:00 P.M.-5:00 P.M.

Certified SCUBA divers can dive in our warm 350,000-gallon Tropical Reef Habitat with more than 600 animals.

- \$279 per member, \$299 per non-member
- Age 15 and up. Please note: Ages 15 to 17 require a supervising adult to also sign up for the dive.

# Stuffed Animal Exam

Dr. Adams, the Aquarium's head veterinarian, needs some help with an animal exam. Grab your favorite stuffed animal and help him out, filling out the medical chart as you go.



ANDREW REITSMAN

KEN KURTIS

## VET VISIT

Vet Name: \_\_\_\_\_ Date: \_\_\_\_\_

Animal Name: \_\_\_\_\_ Type of Animal: \_\_\_\_\_

Color: \_\_\_\_\_

### EXAM NOTES

Length: \_\_\_\_\_

Eyes:  CLEAR  CLOUDY

Nose:  HEALTHY  RUNNY  
OR STUFFY

Fur:  SOFT  ROUGH

Any injuries?  YES  NO

Diagnosis: \_\_\_\_\_

### TREATMENT PLAN

Medicine  Stitches  Rest

## EXAM SKETCH

# Make Some New Friends with Piper the Seahorse!



**HI,  
EVERYONE!  
I'm Piper, and  
I would like to  
introduce you to  
some new friends at  
the Aquarium.**

**One of our  
volunteer divers,  
Ken, has a special  
fishy friend he would like  
you to meet: Bubbles, the  
golden spadefish. Bubbles lives  
in our Tropical Reef Habitat  
and has an affinity for—you  
guessed it—bubbles!  
Take it away, Ken!**

Bubbles likes to stay close to the divers wearing a full-face mask, allowing them to talk to the audience during our live shows. The exhaust bubbles come out of the left side of the mask, and Bubbles will position himself right next to the diver giving the presentation. When the diver exhales, Bubbles makes a run through the exhaust, allowing the air bubbles to run up and through his gills, almost as if the diver was his personal spa tub. Bubbles then circles around and waits for the next breathing cycle.

Bubbles is the only spadefish in Tropical Reef to exhibit this behavior. Spadefish in the wild have been observed closely following divers and swimming through their exhaust bubbles. We have no idea why he does this or what benefit he may get from it, other than that it might feel good.

So the next time you visit the Aquarium of the Pacific, visit the Tropical Reef Habitat during one of the dive shows, and keep your eye on the presenter diver. You will likely see Bubbles slide into position as he awaits the exhaust. And then the fun will begin!



# AQUARIUM

# Animal Facts



ROBIN RIGGS

CORAL RESTORATION EXHIBIT | TROPICAL PACIFIC GALLERY

## Mandarinfish

*Synchiropus splendidus*

The mandarinfish dazzles Aquarium visitors with its bright, distinctive coloration. It also sends a signal to other animals that it is unappetizing—rather than scales, these fish are covered in a thick layer of toxic slime. Mandarinfish are found in the western Pacific Ocean, from Hong Kong to Australia. They live around coral reefs and lagoons and spend their time looking for food along the seafloor.

GIANT PACIFIC OCTOPUS & GIANT SPIDER CRAB EXHIBITS |  
NORTHERN PACIFIC GALLERY

## Sunflower sea star

*Pycnopodia helianthoides*

The sunflower sea star gets its name from its appearance. It is the largest sea star species and has the most arms, weighing up to 13.4 pounds and growing fifteen to twenty-four arms. They are found along the west coast of North America, from Alaska to Baja California, but they are less abundant south of Monterey Bay. These sea stars live on hard surfaces in the intertidal zone and feed on sea urchins, fish, crustaceans, and other invertebrates.



ANDREW REITSMAN



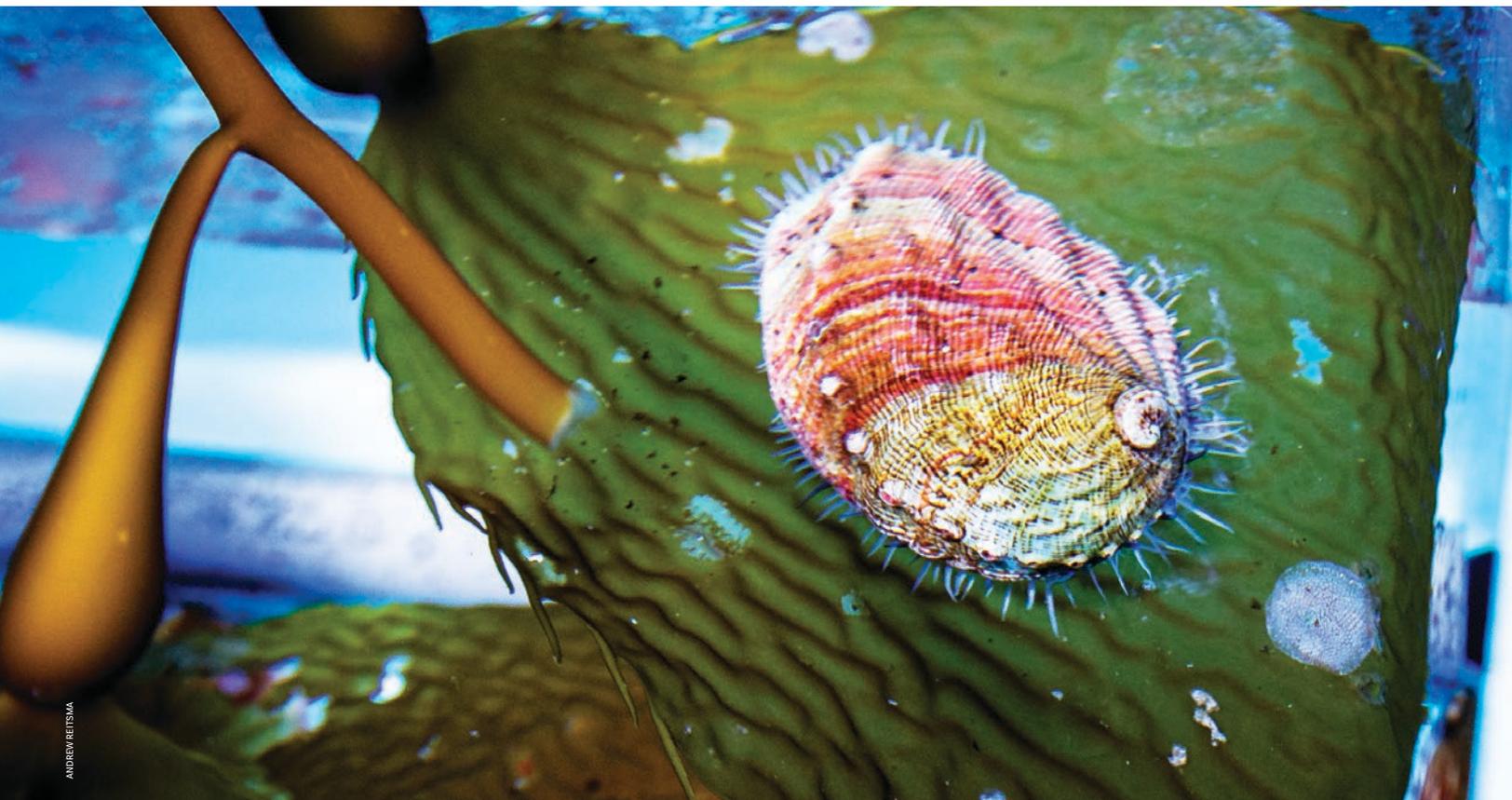
JONATHAN RACKA

AMBASSADOR ANIMAL

## Norway rat

*Rattus norvegicus*

At the Aquarium two Norway rats serve as ambassador animals that are brought to meet-and-greet locations for visitors to see up close. Also known as brown rats, these rodents are about 18 inches long on average and live on every continent except Antarctica. They nest in burrows, storm drains, or inside walls or other human-built structures. Norway rats are true omnivores and will eat almost anything. They live in large groups and are most active at night. They often vocalize in ultrasonic frequencies that humans can't hear.



ANDREW REITSMA

White abalone were once abundant off Southern California's coast. In 2001 it was the first marine invertebrate animal added to the federal endangered species list.

## Aquarium and Partners Released Endangered White Abalone for the First Time in History

**IN NOVEMBER LAST YEAR** a team of scientists and divers released white abalone raised at aquariums and other institutions into the ocean off Southern California. This release was the result of a years-long effort to help this endangered species repopulate local waters.

The National Oceanic and Atmospheric Administration (NOAA) in collaboration with the Aquarium of the Pacific, the University of California, Davis' Bodega Marine Laboratory, the Bay Foundation, Paua Marine Research Group (PMRG), the California Department of Fish and Wildlife, and various other partners have been working together to help save the white abalone from extinction. This is the first time in history that this federally protected species was released into the wild.

The Aquarium is a founding partner of the White Abalone Recovery Program and has been working with NOAA for the past eleven years on this project. It is the only public aquarium involved in field activities and research on this species.

Scientific divers from the Aquarium of the Pacific along with divers from NOAA, CDFW, the Bay Foundation, and PMRG released the white abalones from holding boxes, which were placed in their underwater locations at the end of October. The release locations will be kept confidential among the project partners, allowing the white abalones to settle in the ocean undisturbed.

The Aquarium of the Pacific was one of a small number of facilities that received brood stock (adults that would become parents) to jump-start the breeding program under human care. The breeding program has produced thousands of offspring that are being prepared for eventual release. In addition to spawning white abalones in its lab, the Aquarium has assisted with additional research on this species, and its scientific divers surveyed local waters to determine release sites.

White abalones were listed as endangered under the Endangered Species Act in 2001. Abalones are shellfish in the phylum *Mollusca*, which also includes clams, scallops, sea slugs, octopuses, and squid. Abalones have a single flat shell and are part of the genus *Haliotis*, meaning "sea ear," which refers to the shape of their shell.

To read more about this program, see page 27 in the fall 2019 issue of *Pacific Currents* or visit [aquariumofpacific.org/conservation](http://aquariumofpacific.org/conservation).

Scientific divers from the Aquarium and other partners conducted the releases.



Aquaculture is the farming of finfish, shellfish, or seaweed.



REMY HALE, HOG ISLAND OYSTER COMPANY

The study could identify appropriate sites for marine aquaculture operations in the U.S. that are best suited to the particular location.

## Seafood for the Future Supports Research on Marine Aquaculture

**THROUGH ITS SEAFOOD FOR THE FUTURE PROGRAM**, the Aquarium will participate in a two-year research project to assess how changing policies and fisheries conditions in the United States may have supported or hindered development of sustainable marine aquaculture. Marine aquaculture is the practice of farming seafood products, including finfish, shellfish, and seaweed, in the ocean.

The United States is currently the largest importer of seafood in the world. Despite American consumers' demand for seafood, domestic aquaculture and fisheries production has remained relatively flat for several decades. Because wild-caught fisheries are already under strain, many experts see responsible marine aquaculture as a sustainable source of seafood that could help meet demand with a lighter environmental footprint than imports.

In this project, researchers hope to analyze the adoption of marine aquaculture in coastal areas. The results could help identify places where responsible marine aquaculture could be established with fewer barriers, inform future policy and investment, and determine the efficacy of current aquaculture policies. The study will also take into account the relationship between aquaculture and wild-caught fisheries and could identify places where responsible aquaculture would help diversify the local seafood industry.

Funding for the project, totaling \$196,921, was part of \$16 million in grants awarded by the National Oceanic and Atmospheric Administration's Sea Grant program to support projects aimed at advancing sustainable aquaculture in the United States. The project is led by the University of California, Santa Barbara, in collaboration with the Aquarium; Florida State University; the National Sea Grant Law Center; and California Sea Grant.



ANDREW BRETSMA

Food prep room upgrades included new floors, lighting, wall panels, sinks, storage racks, and commercial dishwasher.

The project was completed last fall.

## Food Prep Room Receives Full Renovation

**IF YOU HAVE EVER PARTICIPATED** in a behind-the-scenes tour at the Aquarium, you have probably seen a glimpse of the food prep room, where husbandry staff members store, prepare, and dispense food for the animals. Funding was set aside to renovate the space in 2019. The process took about eight weeks to complete, and the new food prep room was unveiled in the fall.

During the renovation, the facilities department set up temporary storage container pods for food prep activities on the street next to the building. The Aquarium also rented a refrigerator trailer for a short period while work was completed on the food prep room's cold storage area.

The improvements made in the renovation included new epoxy coating for the floors, LED lighting, and new wall paneling made of fiberglass reinforced plastic. All sinks were replaced with new faucets and fixtures, new storage racks were installed in the main food prep room and cold storage room, and a small handwashing sink was added. Finally, a commercial high-heat dishwasher was installed, reducing the amount of chemical sanitizer needed to wash buckets, dishes, and other equipment used for food preparation.

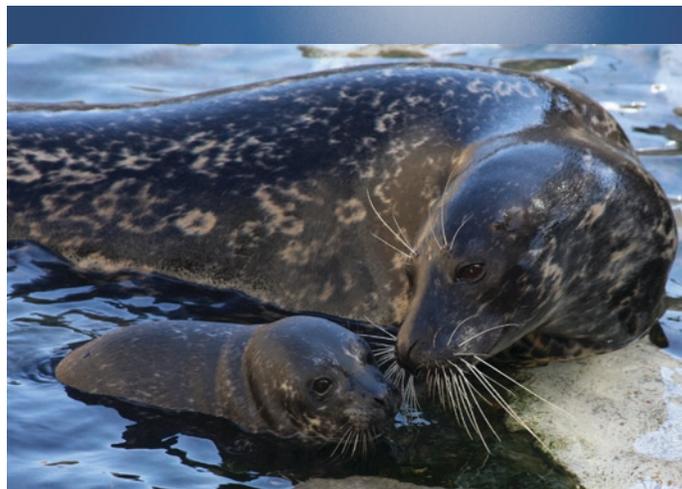


ANDREW REITSMAN

## Pacific Visions Awarded for Glass Façade

**THE BIOMORPHIC GLASS FAÇADE** of the Pacific Visions wing was the winner of the 2019 Glass Magazine Award for Best Decorative Glass Application, Exterior. Subcontractors Kuraray America and Pulp Studio were both recognized for their work on the project.

Previously, the Aquarium’s glass wall in the Pacific Collections gift store with a large-scale photo of an underwater kelp forest won a Glass Magazine Award in 2013 for Most Innovative Decorative Glass Project, Commercial Interior.



## Mother's Day Brunch

**SUNDAY, MAY 10 • 8:30 AM to 10:30 AM**

**PRICING:**  
Includes Aquarium admission

**General Public:**  
Adults: \$74 (12+)  
Child: \$34 (3-11)

**Members:**  
Adults: \$64  
Child: \$24 (3-11)

©2019 TOMI BONNER



## A Unique Setting for Your Event

The Aquarium of the Pacific’s new 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](http://yourevent.aquariumofpacific.org) 562-951-1663 [AOPCatering@longbeach.cc.com](mailto:AOPCatering@longbeach.cc.com)

100 AQUARIUM WAY LONG BEACH, CA 90802

*Aquarium  
of the Pacific*

# Fundraising Highlights

The Aquarium of the Pacific's supporters have participated in a number of recent events to engage in ocean conservation and stewardship.

## HCP Volunteers Serve Local Seniors

Long-standing supporter, HCP, Inc. continued its sponsorship of the Aquarium's Seniors Day event on October 7, 2019. The event served more than 5,000 visitors and provided free admission to attendees over the age of fifty. A group of eighteen volunteers from HCP staffed the event, welcoming seniors and directing them to various booth displays and special programming.

On October 31 HCP formally changed its name. Now called Healthpeak Properties, Inc., the company is a real estate investment trust, owning and developing healthcare real estate including senior housing. "The Aquarium and Healthpeak have shared a long history driven by our common goal of serving local seniors, and we congratulate them on this significant milestone in their history," said Ryan Ashton, the Aquarium's vice president of development.



Employees from HCP, now Healthpeak Properties, participated in Seniors Day at the Aquarium.

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(as of 12/31/19)  
aquariumofpacific.org



The Aquarium hosted a beach clean-up as part of the statewide Coastal Clean-Up Day event on September 21, 2019.

## New York Life Volunteers Clean Local Coastline

As part of California's annual Coastal Clean-Up Day, the Aquarium hosted a beach clean-up on the Long Beach Peninsula on September 21, 2019. Nearly 200 volunteers, almost twice as many as the previous year, removed 315 pounds of trash from the beach.

About half of the participants were corporate volunteers, including a group of thirty from New York Life. Jason DePetris of New York Life also serves as an Aquarium Trustee and was among the volunteers on hand. The company's volunteer grant program provides funding to the Aquarium in recognition of New York Life employees' hours spent volunteering.

As one of the Aquarium's corporate partners, New York Life also provides grant funding to support the Aquarium's needs-based scholarship program.

# Donor Highlight

Read about the donors who have made contributions in support of the Aquarium's education, conservation, and animal care programs.

## Field Trip Face Campaign

WITH OVER 100 DONORS, THE AQUARIUM'S FIELD TRIP FACE CAMPAIGN held last August raised over \$22,000 to provide scholarship funding for area schools. More than 3,000 additional students will experience an Aquarium field trip this school year, thanks to the members, employees, volunteers, and other Aquarium supporters who contributed. "On behalf of all of us at the Aquarium, I want to send a huge thank you to the Whitney Young Children's Foundation, the Schulzman-Neri Foundation, and the Mike and Diane Jensen Family for their matching gifts that will allow more students to discover the wonder of Pacific Ocean through these educational field trips," Aquarium Director of Education David Bader said.



## Longtime Volunteer Recognized for Nautilus Society Gift

Ivolou Corston was involved with the Aquarium since its opening in 1998. She donated to and supported the Aquarium in many ways, including as a volunteer with over 6,000 hours of service. As a member of the Aquarium's planned giving group, the Nautilus Society, Corston supported the Aquarium even after her passing in 2018.

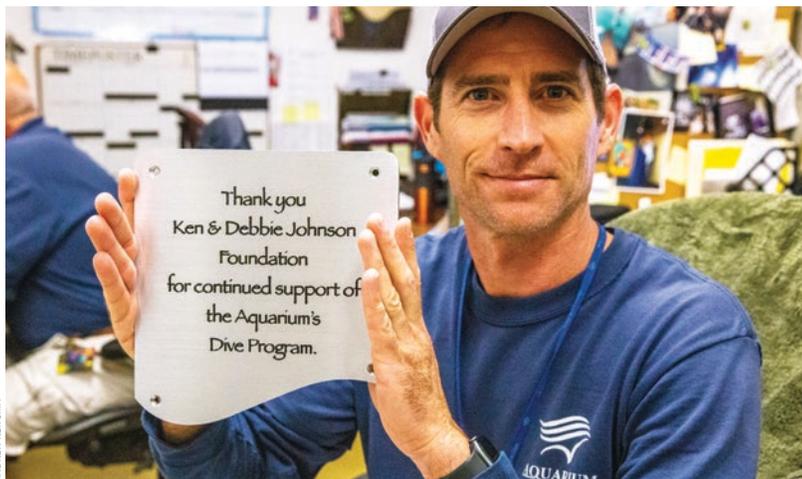
To celebrate Corston's dedication to the Aquarium, her Nautilus Society gift, and her many hours as a volunteer with the education and marketing departments, the Aquarium has updated and enhanced the hands-on, interactive whale cart and named it in her honor. The Aquarium will continue to educate guests and inspire future generations in her memory.

For more information about the Nautilus Society, visit [pacific.to/nautilus-society](http://pacific.to/nautilus-society) or call Ryan Ashton at (562) 951-1701.

In Loving Memory of  
Ivolou R. Corston  
Wife, Mother, Grandmother, & Friend  
6000+ hours as an Aquarium volunteer



Pictured: Ivolou Corston, Vice President of Marketing Cecile Fisher, and Director of Promotions and Group Sales Cindy Armstrong.



Dive Safety Officer Paul Dimeo holds the plaque recognizing the foundation.

## Dive Volunteer Helps Her Favorite Program Thrive

The Ken and Debbie Johnson Foundation, with the stewardship of Sonja Johnson, an Aquarium dive volunteer, has supported the Aquarium's dive program since 2014. This funding has allowed the program to update the SCUBA tank fill station, purchase office supplies and dive equipment, and make improvements to the dive locker room. "Dedicated and passionate donors like The Ken and Debbie Johnson Foundation are what make the Aquarium special," Aquarium Vice President of Development Ryan Ashton said.

# Aquarium Accolades

The Aquarium presents awards to individuals and organizations in recognition of their service to the community and achievements in conservation.



Heritage Award honoree Claudia Cecilia G. Olimon pictured here with Aquarium Director of Education David Bader.



Heritage Award honoree Christopher Diaz and Aquarium VP of Marketing Cecile Fisher.



Heritage Award honoree Gorlia Xiong and Aquarium VP of Development Ryan Ashton.



Heritage Award honoree Wendy Fujihara Anderson and Aquarium VP of Husbandry Dr. Sandy Trautwein.

## Claudia Cecilia G. Olimon

### Heritage Award

The Aquarium presented the Heritage Award to Claudia Cecilia G. Olimon on September 28, 2019, during the Baja Splash Festival for her work with local communities to protect the endangered vaquita porpoise in the Upper Gulf of California. Her goal is to help empower local fishermen to take an active role in marine conservation, taking social issues and how they relate to conservation into account. The principal threat to the vaquita's survival is entanglement in fishing gear. Olimon is the general coordinator of the Ghost Fishing Gear Removal Initiative at the Upper Gulf of California. This group led in the removal of more than twelve hundred nets from the vaquita's habitat. She is also the executive director of Pesca ABC, the Alternative Fishers of Baja California, a non-governmental organization whose mission is to contribute to the well-being of local families and to the conservation of the Upper Gulf.

## Christopher Diaz

### Heritage Award

The Aquarium presented the Heritage Award to Christopher Diaz during the 2019 Moompetam Native American Festival. Diaz shares Native culture and builds connections between communities through education.

For the past thirty years, Diaz has presented California Mission history from a Native perspective to students throughout greater Los Angeles. He serves as advisor for Long Beach City College's Native American Club. He is a monitor for the Tongva people, maintaining the sacred site of Puvungna, which occupies the land where California State University, Long Beach, now stands.

Diaz is a primary interpreter for the Office of Native American Ministries for the Archdiocese of Los Angeles. He has also worked with the archdiocese's Ethnic Community Council and Native American Concerns group.

## Gorlia Xiong

### Heritage Award

The Aquarium presented the Heritage Award to Gorlia Xiong at the 2019 Southeast Asia Day festival in recognition of her leadership, community service, and dedication to sharing and celebrating Hmong culture.

Xiong is the director of Qeej Not Gangs, a program founded in 1998 by the Hmong Association of Long Beach. The program's name comes from the qeej (pronounced like "gang"), a traditional Hmong musical instrument. Qeej Not Gangs provides activities and classes to help connect people in the community with Hmong culture. Xiong has participated in the group since the age of five and became the group's director at nineteen.

Xiong teaches weekly Hmong dance and drumming classes for all age groups at the Homeland Cultural Center in Long Beach and coordinates performances at local events and at Hmong New Year celebrations across the state.

## Wendy Fujihara Anderson

### Heritage Award

The Aquarium presented the Heritage Award to Wendy Fujihara Anderson during the 2019 Autumn Festival.

For ten years, Anderson produced The Cherry Blossom Festival SoCal. She founded the festival as a tribute to her parents, who spent time at the Manzanar Internment Camp during World War II. Anderson is also the creator and producer of two touring multimedia presentations on Japanese internment. She led the effort in Pasadena for the establishment of Fred Korematsu Day in recognition of his efforts to protest the government's internment of Japanese Americans.

For ten years Anderson was president of the board for East West Players, a theater company dedicated to raising visibility of the Asian-American experience.

As the president of WOW! Event Productions, Anderson has worked with the Aquarium to produce the Autumn Festival for all eighteen years of its history.

**"This is one of those institutions that promotes health and promotes the preservation of our lands, oceans, and fisheries, of all things that are alive. For myself, for my people and all people on this Earth, thank you for the work you do. Thank you so much for this honor." — Christopher Diaz**

# Aquarium Staff Receives Training to Help Wildlife After Oil Spills

**IN THE WAKE OF MAJOR OIL SPILLS IN THE 1990S**, the California Department of Fish and Wildlife's Office of Spill Prevention and Response (OSPR) established the Oiled Wildlife Care Network (OWCN) to rescue and rehabilitate wildlife in the event of an oil spill. More than forty organizations in the state, including aquariums, universities, and wildlife centers, are part of this network.

OWCN responds to both coastal and inland spills and cares for both marine and terrestrial animals. In recent years OWCN led the wildlife response to the Refugio Spill in Santa Barbara in 2015, three incidents in 2016, and two in 2017. While there are few large-scale catastrophic oil spills each year in California, naturally occurring oil seeps can affect wildlife seasonally and throughout the year.

When an oil spill occurs, OWCN follows a set of steps to respond and care for affected wildlife: reconnaissance, hazing, recovery, field stabilization, intake and processing, pre-wash care, cleaning, conditioning, and release.

During reconnaissance led by OSPR, OWCN assesses the spill and gathers information about the number and location of affected animals. Hazing involves taking measures to keep unoiled animals away from the spill site, and trained responders use a variety of carefully orchestrated methods depending on the species involved. These can include something more passive, like setting up reflective tape, or a more active measure, like using propane cannons to make loud booms. During recovery, trained responders collect oiled wildlife. Field stabilization provides initial medical care, and intake and processing happens once the animals arrive at a medical facility. Pre-wash care prepares the animals for cleaning, as they can be weakened after coming into contact with oil. At this stage, animals are given food and water and provided a warm spot to rest. After cleaning, the animals are



OWCN volunteers and staff clean a California brown pelican during the 2015 Refugio Beach oil spill response at the Los Angeles Oiled Bird Care and Education Center in San Pedro. Photo courtesy of OWCN.

monitored over a period of at least three to five days to ensure their full recovery before being released.

The Aquarium has been an OWCN member organization for nearly twenty years. Curator of Mammals and Birds Brett Long has a long history with OWCN and is trained in field recovery, which involves collecting oiled and injured animals at the site of the spill, whether on land or on the water from a boat. Over recent months additional staff members in the Aquarium's husbandry department have received training with OWCN. These staff members are good candidates for working with oiled wildlife, thanks to their experience working with animals at the Aquarium.

Trainees that will enter the "Hot Zone" (an active spill area) must first go through Hazardous Waste Operations and Emergency Response training required by the Occupational Safety and Health Administration (OSHA) as a prerequisite to OWCN's program. OWCN training is divided into different tracks, helping volunteers specialize in a particular skill set.

Last fall Senior Aviculturist Sara Mandel completed the specialist track for field stabilization, which involves being one of the first people to examine and stabilize an oiled

animal. Treatment at this stage can include giving the animal fluids, cleaning oil from its eyes and mouth, recording its injuries, and recommending treatment once it arrives at the medical facility where it will be cleaned.

The field stabilization team works out of a trailer equipped with items to help stabilize the animals, such as heaters and fans. The team also logs the extent of injuries to the animal and takes samples of the oil for documentation. After stabilization, animals would be sent to a care facility for cleaning. Mandel's training session included a drill in which participants responded to a mock oil spill.

OWCN volunteers receive ongoing annual training to stay on the roster of those who may be called up to respond during an oil spill. In addition to people like staff members at the Aquarium who work with animals in a professional capacity, OWCN also trains the general public in response support if volunteer needs are high. To learn more about OWCN, visit [owcn.vetmed.ucdavis.edu](http://owcn.vetmed.ucdavis.edu).

To report oiled wildlife, call 1-877-UCD-OWCN (877-823-6926).

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