

WINTER 2013

# PACIFIC CURRENTS

MEMBER MAGAZINE OF THE AQUARIUM OF THE PACIFIC



SEALS &  
SEA LIONS

# WINTER RAINY SEASON WASHES TRASH INTO WATERWAYS



**W**HEN THE RAINY SEASON HITS IN SOUTHERN CALIFORNIA, reports of mudslides, flooded streets, and an uptick in car accidents are not uncommon. Beach closures and poor water quality also come with this season, particularly in Long Beach. Here, both the Los Angeles and San Gabriel Rivers connect to the ocean. When it rains, trash and pollution from cities all the way up the Los Angeles Basin are washed into the rivers and channels, eventually entering the ocean in Long Beach. This flow of water demonstrates watersheds in action.

A watershed is an area of land that drains all of the surface water and groundwater to the same place. Three watersheds drain into the San Pedro Bay along Long Beach: the San Gabriel River Watershed, Los Angeles River Watershed, and Dominguez Channel Watershed. The confluence of these three watersheds makes Long Beach a hotspot for water quality issues during the rainy season.

In 2010 Long Beach Mayor Bob Foster worked with fifteen other cities to trap trash further upstream. The participating cities formed the Los Angeles Gateway Authority and worked to retrofit 12,000 storm drain catch basins in a \$10 million project paid for with federal stimulus funds. By November 2011 the project was completed, with storm drains outfitted with full-capture devices to block trash while allowing storm water to flow through. As a result, an estimated 840,000 pounds of trash per year are kept out of the ocean.

In addition to trash, other examples of pollution that can be washed into waterways during the rainy season include animal waste, pesticides, motor oil, and fertilizers. Individuals can do their part to keep these items out of storm water runoff by picking up after their pets, avoiding the use of pesticides on home landscaping, disposing of motor oil and other hazardous wastes properly, and not overwatering their yards. At the municipal level, the City of Long Beach requires regular street sweeping to reduce the amount of trash washed into storm water systems. In addition, the Long Beach Environmental Services Bureau provides oil recycling and household hazardous waste collection facilities.

Visitors to the Aquarium can learn more about watersheds and how to keep water systems clean at the *Our Watersheds: Pathway to the Pacific* exhibit. At the push of a button, you can “make it rain” over a three-dimensional model of the Los Angeles basin and see how rain flows from the mountains, through cities, and out to sea.



Virtual Exhibit

To view the Our Watersheds interactive player, visit [aquariumofpacific.org/awatershed](http://aquariumofpacific.org/awatershed) or capture this QR code with your smartphone.

The confluence of three watersheds makes Long Beach a hotspot for water quality issues during the rainy season.



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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 | Contributors: Heather George, Holly Piper

**AQUARIUM HOURS** | Open daily from 9:00 a.m.-6:00 p.m. except Dec. 25 and during the Grand Prix of Long Beach

**MEMBERSHIP OFFICE HOURS**  
8:00 a.m.-5:30 p.m. daily



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.



Aquarium Founding Sponsor

COVER: Bixby, the Aquarium's harbor seal pup.  
ROBIN RIGGS

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(Note: \$2 service charge per ticket, up to \$10.)  
Group Reservations.....590-3100

## LETTER FROM THE CEO

DEAR MEMBERS,

**T**HROUGH ITS AQUATIC FORUMS, the Aquarium of the Pacific builds connections with important figures in the realms of science, academia, policy, and conservation to investigate complex issues and work together to solve problems.



Recently the Aquarium of the Pacific released a report from a forum that gathered ocean experts, policymakers, and other stakeholders to discuss the future of Southern California's urban ocean. Forum participants debated the driving forces, predetermined elements, and critical uncertainties that will be in play by the year 2050 in the Southern California Bight—the section of coastline and ocean waters between Santa Barbara and Mexico.

Forum attendees used scenario planning to explore alternative pathways to the future and made recommendations to get closest to the desired future. Once break-out groups were formed and scenario planning got under way, the driving forces the participants used to frame the discussion were the level of education, awareness, and ocean ethic among Southern Californians and population growth and resulting consumption of resources.

Coastal and marine spatial planning (CMSP) was among the solutions proposed for addressing future uses of the ocean in the Southern California Bight. CMSP is a process designed to allocate legitimate and important uses to appropriate coastal and ocean areas in an effort to benefit both environmental health and economic prosperity.

At the forum's end, participants submitted a list of recommendations for policy changes and actions that would get Southern California closest to the desired outcome in 2050: a rich mosaic of healthy, productive coastal and marine ecosystems existing with a diverse and robust ocean economy.

The scenarios and recommendations are collected in the forum report, *Using Scenario Planning to Shape the Future of the Southern California Bight and the Southern California Urban Ocean*. The report is available for download on the Aquarium's website at [aquariumofpacific.org/makingwaves](http://aquariumofpacific.org/makingwaves).

The Aquarium's subsequent Aquatic Forum, held in November, focused on extreme weather-related events in Southern California, such as heat waves, water shortages, flooding, wildfires, and coastal inundation. Participants drafted action plans to reduce our vulnerability to such events by increasing our preparedness and by increasing our resiliency following them.

Our Aquatic Forums help build a community of experts across disciplines and promote the Aquarium as a source of science-based recommendations in the face of complex environmental problems. It is my hope that the forum reports we produce will inform decision-making at local, state, and national levels. This is just one of the many ways that we are redefining the role of the modern aquarium.

Thank you for your ongoing support.

Sincerely,

Jerry R. Schubel



Forum Report

To view the scenario planning forum report, visit [aquariumofpacific.org/aopmcr20121](http://aquariumofpacific.org/aopmcr20121) or capture this QR code with your smartphone.



ROBIN FIGGES

## LAUGHING KOOKABURRA

*Dacelo novaeguineae*

**J**OINING THE AQUARIUM'S bird collection is a female Laughing Kookaburra, on exhibit outside the entrance to Lorikeet Forest. Found in Australia, Tasmania, and New Zealand, Laughing Kookaburras live in woodland areas like eucalyptus forests. They hunt for small lizards, fish, rodents, and snakes, as well as worms, snails, and insects.

These birds, the largest members of the kingfisher family, have a lifespan of about eleven years. Males and females have similar plumage, with dark brown wings, a white head and underside, and reddish tail patterned with black stripes. The birds can reach up to one pound in weight and 18 inches in length, with a beak 4 inches long. Breeding pairs nest in tree cavities and usually have one or more helpers, usually young born the previous year. The Laughing Kookaburra is known for its distinctive "laughing" call, which can be heard in the Australian bush at dawn and dusk.

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*The Laughing Kookaburra is on exhibit near the Lorikeet Forest entrance. Kookaburras are known for their distinctive "laughing" call, which can be heard in the Australian bush.*

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BRITTANY WINTEREE

## FLAMBOYANT CUTTLEFISH

*Metasepia pfefferi*

**T**HE AQUARIUM has acquired several flamboyant cuttlefish, and aquarists are raising a second generation from eggs behind the scenes. These animals are cephalopods and are related to octopuses and squid. In the wild, flamboyant cuttlefish can be found in the Philippines, Indonesia, Northern Australia, and Papua New Guinea. They feed on mollusks, crustaceans like shrimp and crabs, and small fish.

Flamboyant cuttlefish are fast-growing animals that live approximately one year. Adult females are larger than males, reaching up to 3.5 inches and 2.5 inches in length, respectively. They have eight arms with two rows of suckers along each arm and two feeding tentacles tipped with a tentacular club. The tentacles and tentacular club capture prey and pull it back to the animal's beak-like mouth. Flamboyant cuttlefish generally "walk" along the sea floor as their primary mode of locomotion.

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*Look for the Aquarium's flamboyant cuttlefish in the Jewels of the Pacific exhibit in the Tropical Pacific gallery.*

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These animals have organelles in their skin cells called chromatophores that control rapid color changes. These are thought to aid in communication, hunting, and camouflage. Flamboyant cuttlefish can also change the texture of their skin to look smooth or bumpy, which can help with camouflage.

The Aquarium's flamboyant cuttlefish are on display in the *Jewels of the Pacific* exhibit in the Tropical Pacific gallery.



ROBIN RIGGS



ROBIN RIGGS

## COLLARED ARACARI

*Pteroglossus torquatus*

**T**HE AQUARIUM has acquired a female Collared Aracari (pronounced ar-uh-SAR-ee), a small, social member of the toucan family of birds. The female has joined the Aquarium's male aracari, Kevin, in the outdoor enclosure between Shark Lagoon and Lorikeet Forest. Aquarium bird biologists hope the Collared Aracaris will breed and produce offspring.

Collared Aracaris are found in forested areas of Central and South America, including Costa Rica, Panama, southern Mexico, and western Ecuador. They eat fleshy fruits, insects, small lizards, eggs, and bird nestlings. Although not officially considered threatened, the wild population has decreased over the last decade.

*The Collared Aracaris can be found in the outdoor exhibit between Shark Lagoon and Lorikeet Forest. With their colorful plumage and large beaks, these birds are recognizable as members of the toucan family of birds.*

## BLACK-BACKED MAGPIE

*Gymnorhina tibicen tibicen*

**A** MALE BLACK-BACKED MAGPIE is now on exhibit at the Aquarium near the Lorikeet Forest entrance.

The Black-Backed Magpie, a subspecies of the Australian Magpie, is native to Australia and Southern New Guinea. It is also found in Fiji and New Zealand. These birds prefer grassland and savannah habitats, where they feed on insects, berries, grains, and small animals.

They are typically between 15 and 17 inches long, weigh 8 to 12 ounces, and with their long legs, spend a good deal of their time walking on the ground. The Black-Backed Magpie is known for its wide variety of complex calls.

*The Black-Beaked Magpie is housed in the exhibits near the Lorikeet Forest entrance. Native to Australia and Southern New Guinea, these birds prefer grassland habitats.*

“By supporting the Aquarium, I am helping to raise the public's awareness of the beauty, the power, and the fragility of this magnificent portion of the ecosystem that is our Earth.”

— GEOFFREY GARTH, PACIFIC CIRCLE MEMBER SINCE 2005



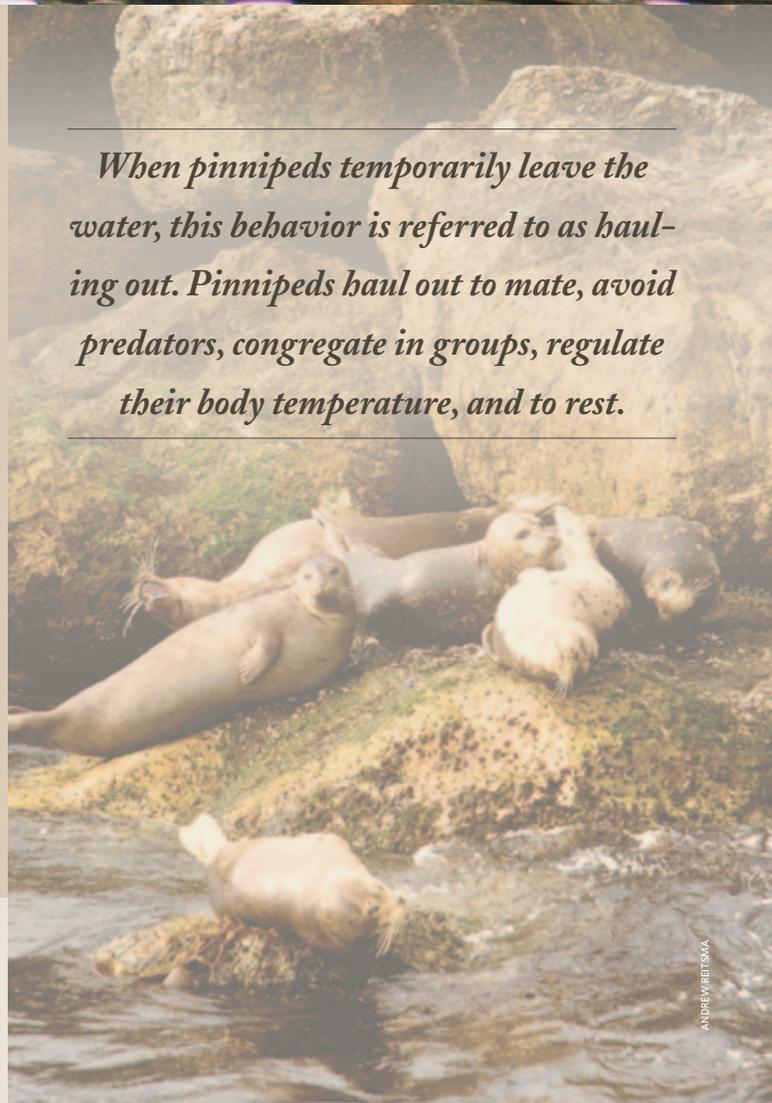
# SEALS & SEA LIONS

Off the coast of California on a sunny afternoon, a sleek harbor seal dives from the warmer water at the ocean's surface into colder, darker waters in pursuit of a school of fish. The seal relies on its keen eyesight and hearing, as well as sensing vibrations caused by the movements of other animals in the water nearby, to track its prey. These and other adaptations help seals and sea lions thrive in the Pacific Ocean.

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*When pinnipeds temporarily leave the water, this behavior is referred to as hauling out. Pinnipeds haul out to mate, avoid predators, congregate in groups, regulate their body temperature, and to rest.*

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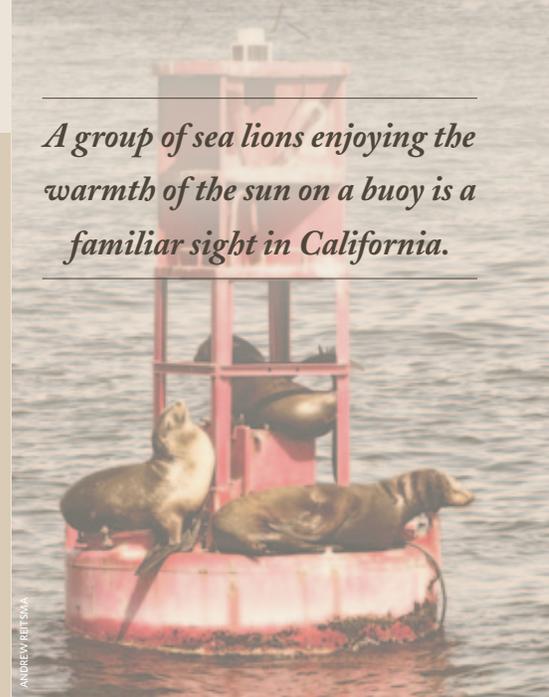


## There are many places to see seals and sea lions along our coast, from the elephant seal colony near San Simeon along the central coast to the harbor seal colony on Children’s Pool beach in La Jolla.

California’s coast is dotted with haul-out sites for six species of seal and sea lion, including the California sea lion (the most common pinniped in California), Guadalupe fur seal, harbor seal, northern elephant seal, northern fur seal, and Steller sea lion. The Channel Islands, which have limited human activity, provide important habitat and largely undisturbed breeding grounds.

*A group of sea lions enjoying the warmth of the sun on a buoy is a familiar sight in California.*

ANDREW FLETCHER



## Seal and Sea Lion Biology

Seals and sea lions comprise the order of animals called *Pinnipedia*, which means “fin-footed” in Latin. The thirty-three species of pinnipeds are all marine mammals—they are warm-blooded, have hair, breathe air, give birth to live young, and feed their babies milk. The milk produced by pinniped mothers is about 40 to 50 percent fat, compared to human breast milk, which is about 3 percent fat. This high fat content helps young pinnipeds quickly build a layer of blubber, which keeps them warm in cold water.

Pinnipeds have a torpedo-like or fusiform body shape that allows them to move smoothly and quickly through the water. Their front and back flippers are designed for creating maximum propulsion and minimal drag. A complex circulatory system helps them maintain their body temperature. They molt each year, shedding their fur to remove the old, worn coat and allowing a new one to grow in.

Seals and sea lions have keen eyesight and hearing under water. They also have sensitive whiskers, or vibrissae, which aid them in hunting for food and maneuvering in constricted areas and deep, dark waters.

Like most marine mammals, pinnipeds do not drink fresh water. They get water mostly from their food. Their teeth are designed to catch and hold fish and other slippery sea life, which they swallow whole. They are opportunistic feeders, eating whatever food is available, including many types of fish, cephalopods like squid, and crustaceans such as crabs.

## Species Spotlight: California Sea Lion

*Zalophus californianus*

California sea lions live along the west coast of North America, from British Columbia to Baja California. They haul out on sandy beaches, offshore rocks, and on man-made structures such as jetties and buoys. They also congregate on shore for breeding and birthing in colonies of several hundred individuals, where they lie next to and on top of each other. Sea lions also travel and play together in the water in groups of twelve or more called rafts. They may spend between several days and several weeks at sea foraging for food.

Sea lions usually hunt for food in cool, upwelling waters near the coast. They are fast and agile swimmers and are often seen riding

waves and porpoising, or jumping out of the water like dolphins. Sea lions live between fifteen to twenty-five years in the wild and can reach thirty in zoos and aquariums. Their predators include orcas and sharks.

Mature males have a prominent bump on their heads called a sagittal crest. Larger than mature females, males reach nearly eight feet in length and weigh 700 to 1,000 pounds. Females reach about six-and-a-half feet in length and a weight of 240 pounds. Sea lions’ prominent front flippers are used for propulsion underwater, while their shorter hind flippers are used for steering. They also use their front flippers to help regulate body temperature while swimming by resting on the surface with a flipper above the water. While there are some slightly lighter color variations, sea lions are usually dark brown.

Males establish territories that include several females to mate with during the

Mature male sea lions, like Parker at the Aquarium, have a prominent bump on their heads called a sagittal crest.



ROBIN RIGGS



Bixby, the newest addition to the Seals & Sea Lions Habitat at the Aquarium, is a curious young harbor seal.



Milo, one of the Aquarium's sea lions, executes one of his behaviors in response to a trainer's cue.

breeding season, which generally lasts from May to August. The males defend their territories with aggressive physical displays and barking. Females give birth on land to one pup in the summer after an eleven-month gestation period. The pups stay with their mothers and nurse for about six months. Adult females begin foraging at sea for food about ten days after giving birth. They locate their pups by smell and vocalization when they return to shore.

## Species Spotlight: Harbor Seal

*Phoca vitulina*

Harbor seals live in coastal habitats, where they haul out onto rocks, reefs, beaches, and glacial ice. They are found on the east coast of North America, from the Canadian Arctic to the mid-Atlantic coast of the United States. On the west coast, they are found as far north as Alaska and as far south as Baja California. Harbor seals are also native to the coasts of Japan and northern Europe. Harbor seals in the Pacific Ocean are generally larger than those found in the Atlantic Ocean.

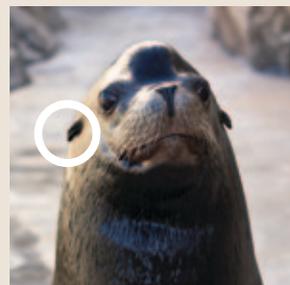
Color and markings vary from one harbor seal to another and by latitude. They may be gray, silver, brown, or black in coloration with silver or black rings, spots, or blotches. Their markings are unique, like a human fingerprint. They weigh about 245 pounds and reach about six feet in length. Harbor seals use their hind flippers for propulsion by sweeping them from side to side while swimming and steering with their front flippers.

Unlike other pinnipeds, harbor seals are less tolerant of close contact with other seals. When hauled out in a group, they will clear a small space around themselves and protect it from others. They can become agitated, grunting or growling, or even head-butting or biting when another seal approaches. They dislike being disturbed and will quickly vacate an area they feel is unsafe.

Harbor seals may spend days at sea without hauling out, even sleeping in the water. They accomplish this by floating vertically with just their heads above the surface. This behavior is called bottling, because they resemble a corked bottle floating in the water. They consume 5 to 6 percent of their body weight in food

per day and spend up to 85 percent of the day diving for food. Their predators at sea include orcas, Steller sea lions, and sharks. On land, juvenile seals are sometimes preyed on by coyotes and eagles.

Harbor seals mate at sea, and females give birth on land during the spring and summer. Males mate with more than one female, though not as many in a breeding season as sea lions. Females generally give birth to one pup, but twinning does occur on rare occasions. The Aquarium's harbor seal Troy is a twin. Pups can swim within an hour or two after birth. They gain weight and strength at a rapid rate, more than doubling in weight by the time they are weaned at four to six weeks old. Harbor seals live for twenty-five to thirty years.



One of the ways to distinguish a sea lion (left) from a seal (right) is the presence or absence of external ear flaps. Sea lions have them, and seals do not.

## Telling Seals and Sea Lions Apart

There are a few easy ways to tell a seal from a sea lion at a glance. Sea lions have external ear flaps, while seals do not. Sea lions have long, flexible necks, and seals have shorter, less flexible necks. Finally, sea lions use their large front flippers to support their bodies on land and walk or gallop on all four flippers. Seals, however, cannot rotate their hind flippers under their bodies, so they undulate like an inch-worm for locomotion on dry land. Seals also have noticeable claws on their front flippers while sea lions do not.

## Pinnipeds at the Aquarium

There are four harbor seals in the Aquarium's Seals & Sea Lions Habitat: Ellie, Troy, Shelby, and Bixby. Ellie and Shelby have been at the Aquarium since 1998, and Troy arrived in 2007. Bixby was born in 2012.

Ellie is a female Atlantic harbor seal and at 158 pounds, is smaller than the Pacific harbor seals, Shelby and Troy. She has smaller spots on her fur. Shelby weighs 227 pounds. Troy is the only male harbor seal at the Aquarium and weighs about 160 pounds.

Parker, Harpo, and Milo are the Aquarium's three California sea lions. Parker, the Aquarium's largest and heaviest animal at 588 pounds, has been a resident since 2003, and Harpo and Milo arrived in 2007. Harpo and Milo are the same age and nearly the same size, both weighing in at about 260 pounds. Harpo can be distinguished by his darker fur and blunt muzzle.

The Aquarium's marine mammal trainers say that every training session with the seals and sea lions is different. Because the pinnipeds are wild animals, it is important to remember that their behaviors may be unpredictable. The daily shows held at the Seals & Sea Lions Habitat educate guests about pinnipeds and conservation.

Aquarium mammalogists say that caring for the seals and sea lions requires a great deal of attention to detail. For example, planning the diet of each individual requires knowing the caloric value of their food. Trainers vary the amount of food given based on variables such as gender, age, activity level, and motivation. The pinnipeds are fed herring, capelin, and squid.

## Bixby's Birth Story

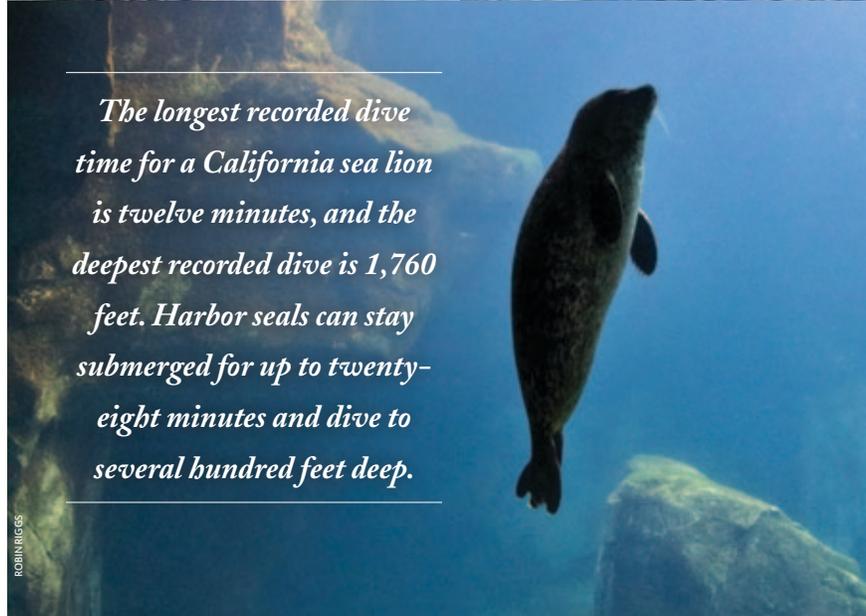
Bixby the harbor seal pup was born at the Aquarium on April 26, 2012. While most female harbor seals give birth to young starting at four or five years of age, Bixby's mother Shelby was sixteen years old. Shelby's pregnancy was discovered during a routine exam by Aquarium Veterinarian Dr. Lance Adams. Shelby went into labor at about 8:00 a.m. and gave birth shortly after noon that day.

Bixby was born weighing approximately 20 pounds. After two months, Bixby had nearly doubled in weight and transitioned to solid food. As she began eating fish, Bixby also began receiving basic training cues from the Aquarium's marine mammal trainers. Teaching Bixby basic cues helps create a safe environment when the trainers interact with her and prepared the young pup for her public debut in the Seals & Sea Lions Habitat. Bixby joined the rest of the pinnipeds in the exhibit in August 2012.

The Aquarium's marine mammal trainers report that Bixby is still very curious about her surroundings and the other animals in the exhibit. Like other young animals, she has a limited attention span, which poses a training challenge. But husbandry staff members say their patience is rewarded, and it is fun watching Bixby explore and learn. At just 72 pounds at the end of 2012, she has learned to hold her own amongst the bigger animals. Aquarium Mammalogist Debbie Quihuis was particularly excited about Shelby's pregnancy because Quihuis was on staff at the facility where Shelby was born and helped care for the seal as a baby sixteen years ago.

## On Your Next Visit

Be sure to visit the Seals & Sea Lions Habitat at the Aquarium on your next visit. You can view these marine mammals underwater from the Seals & Sea Lions tunnel on the first floor in the Southern California/Baja Gallery or above water in the outdoor portion of the exhibit up the stairs between the first and second floors near Shark Lagoon. Seals & Sea Lions shows are held twice daily, where visitors can learn more about the animals and observe as they respond to trainer's cues. Visitors can also schedule an animal encounter with a seal or sea lion and participate in a feeding and training session. For more information, visit [aquariumofpacific.org/education/info/animal\\_encounter\\_seals\\_and\\_sea\\_lions](http://aquariumofpacific.org/education/info/animal_encounter_seals_and_sea_lions). ■



*The longest recorded dive time for a California sea lion is twelve minutes, and the deepest recorded dive is 1,760 feet. Harbor seals can stay submerged for up to twenty-eight minutes and dive to several hundred feet deep.*

The Aquarium of the Pacific offers programs and events for all ages and interests. With exclusive events for our members, cultural festivals, a guest speaker series, and educational classes for families and children, there is something for everyone.

# GREAT AQUARIUM ACTIVITIES!

## MEMBER EVENTS

Please join us for one of these select events just for our members and their guests.

### **M SENIOR MEMBER AFTERNOON** WEDNESDAY, JANUARY 30 | 2:00 p.m.-3:00 p.m.

Mark your calendars for the next installment of Senior Member Afternoon, back by popular demand. Join us in the Ocean Theater for an afternoon of cooking demonstrations featuring organic products. Chef Debbi Dubbs of Deb's Kitchen will discuss what "organic" actually means, how to cook with the best organic products, and the numerous benefits of cooking with these products. Look for your postcard invitation in early January or online for more information.

**COST** | Free for senior members. Reservations are required as space is limited.

**RSVP** | (562) 437-FISH (3474) by January 27

### **M DINOSAUR TRAIN DAY & KIDS ACTIVITY NIGHT** FRIDAY, FEBRUARY 22 | 9:00 a.m.-6:00 p.m. & 6:30 p.m.-9:30 p.m.

All aboard, member kids! Join us for *Dinosaur Train* activities throughout the day and evening on February 22, featuring Buddy the adorable Tyrannosaurus Rex and PBS SoCal. During the day families can explore the Aquarium with the *Dinosaur Train* Discovery Tour, which is an interactive digital resource connecting Aquarium animals to their prehistoric counterparts. Members are encouraged to bring web-enabled smartphones or tablets for personal access to the Discovery Tour. During the *Dinosaur Train* Kids Activity Night, members will also have the opportunity to meet Buddy and participate in *Dinosaur Train* crafts and activities.

**COST** | Free for members. Member guests receive 20% off regular admission. Reservations are required for the evening activities as space is limited.

**RSVP** | (562) 437-FISH (3474) by February 19.

## MEMBER EVENTS

### **M FAMILY MEMBER LATE NIGHT** TUESDAY, MARCH 12 | 6:30 p.m.-9:30 p.m.

Visit your favorite animals that call the Aquarium home, and stroll through the galleries during this exclusive Family Member Late Night featuring live musical entertainment. The Coffee Cart will be open with snacks, coffee, and other beverages available for purchase. The entire Aquarium will be open for viewing, with the exception of Lorikeet Forest. Exhibit lighting will begin to dim at 8:30 p.m. to ensure the animals get a good night's sleep.

**COST** | Free for members. Member guests receive 20% off regular admission. Reservations are required as space is limited.

**RSVP** | (562) 437-FISH (3474) by March 9

## SPECIAL EVENTS

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

### **SE SHARK LAGOON NIGHTS** FRIDAYS, FEBRUARY 1-APRIL 26, EXCEPT FEBRUARY 15 & 22 AND APRIL 19 | 6:00 p.m.-9:00 p.m.

Shark Lagoon is open for everyone for free after 6:00 p.m. Guests can touch and learn about sharks and enjoy live music on select nights.

**COST** | Free for everyone  
**INFO** | (562) 590-3100, ext. 0

## SPECIAL EVENTS

### **SE VALENTINE'S DAY LATE NIGHT & DINNER** THURSDAY, FEBRUARY 14 | 5:00 p.m.-9:00 p.m.

Celebrate Valentine's Day with someone special or the whole family at the Aquarium of the Pacific. The Aquarium will be open until 9:00 p.m. on Valentine's Day and will feature a unique, one-stop Valentine's Day experience. Admission after 5:00 p.m. is just \$14.95. The Pacific Collections gift store will feature jewelry and a selection of plush baby seals, polar bears, penguins, and other stuffed animals for that perfect gift. Cash bars will be open at 6:30 p.m. For an additional charge, enjoy a multi-course, gourmet dinner at 7:30 p.m. Advance dinner reservations are highly recommended, as this event sells out early.

**COST** | Late Night: \$14.95 after 5:00 p.m. Dinner-Admission Combo: \$64/adult (12+), \$54/child; \$54/member adult, \$44/member child  
**INFO** | (562) 590-3100, ext. 0

### **SE NIGHT DIVE** FRIDAY, FEBRUARY 15 | 7:00 p.m.-11:00 p.m.

Take in the Aquarium at night, when the lights go down and the bubble curtain goes up in Honda Blue Cavern. In the usual Night Dive tradition, enjoy music from local bands, groove to DJs spinning in the Aquarium's galleries, and view works of art.

**COST** | Free for members, \$14.95/public  
**AGES** | 18+  
**INFO** | (562) 590-3100, ext. 0

### **SE NOCHE DE ESTRELLAS** FRIDAY, MARCH 1 | 6:30 p.m.-10:30 p.m.

Noche de Estrellas (Night of the Stars), the Aquarium's all ages Latin-themed night, will feature live bands, DJs, bilingual underwater dive shows, and more. The Aquarium will remain open until 10:30 p.m. Mexican cuisine will be available for purchase. The Aquarium will honor PADRES Contra El Cancer with its Heritage Award in recognition of the organization's service to Latino children with cancer and their families.

**COST** | Free for members, \$14.95/public  
**INFO** | (562) 437-FISH (3474)

**SPECIAL EVENTS**
**SE NEIGHBORHOOD STREET CLEAN-UP**  
**SATURDAY, MARCH 9 | 9:00 a.m.-noon**

Join us at our tenth annual Neighborhood Street Clean-Up at Cesar Chavez Park in Long Beach. Pitch in by picking up trash and helping to prevent pollution from entering the ocean and affecting marine life and our beaches. Each participant will receive an Aquarium discount coupon. Be sure to bring a water bottle.

**COST** | Free

**LOCATION** | Cesar Chavez Park, 401 Golden Ave., Long Beach

**INFO** | (562) 590-3100, ext. 0

**SE BEST OF THE WEST CHOWDERFEST**  
**SATURDAY, MARCH 9 | 11:00 a.m.-3:00 p.m.**

Taste seafood chowders prepared by the Aquarium of the Pacific's Seafood for the Future partner chefs. Guests with Chowderfest tickets will get to taste and judge the chowders and interact with local fishermen and farmers. Proceeds from Chowderfest ticket sales will benefit the Aquarium's Seafood for the Future program.

**COST** | \$10/member adult, \$8/member child, free for children under 3. Aquarium admission-Chowderfest combo: \$29.95/adult, \$19.95/child (3-11).

**INFO** | (562) 590-3100, ext. 0

**SE AUTISM FAMILIES NIGHT**  
**SUNDAY, MARCH 24 | 5:00 p.m.-9:00 p.m.**

Join us for a special evening at the Aquarium 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 a peaceful evening when guests can enjoy the tranquility of our exhibits and meet 11,000 animals from the world's largest ocean.

**COST** | Free for members, \$7/public

**INFO** | (562) 590-3100, ext. 0

**SE EASTER BRUNCH**  
**SUNDAY, MARCH 31 | 10:30 a.m.-1:00 p.m.**

Enjoy an elegant Easter brunch and a day at the Aquarium. Your whole family can delight in meeting over 11,000 animals and sitting down to a gourmet brunch on this special holiday. Tickets will go on sale February 20.

**COST** | \$48/adult (12+), \$38/child; \$38/member adult, \$28/member child

**INFO** | (562) 590-3100, ext. 0

**SPECIAL EVENTS**
**SE SPECTORDANCE PRESENTS OCEAN**  
**SUNDAY, APRIL 7 | 7:00 p.m.-9:00 p.m.**

*Ocean*, a new dance media project about the ocean and climate change, is a collaboration of artists, scientists, educators, and presenters working to contribute original solutions to the challenges facing one of the Earth's most critical resources. Choreographed by Fran Spector Atkins, this performance includes music and video projection.

**COST** | Pricing to be available online.

**INFO** | (562) 590-3100, ext. 0

**SE JIM HELLEMN | UNDERWATER PHOTOGRAPHY EXHIBIT**  
**APRIL 22 THROUGH MAY 22, 2013**

Photographs by underwater photographer Jim Hellemn will be featured in the Great Hall. Hellemn's large-scale photo of a kelp forest will be used on the glass windows of the Aquarium's remodeled gift store opening in May. His photography has appeared in *National Geographic* magazine and the American Museum of Natural History.

**COST** | Free for members; members' guests receive 20% off regular admission.

**INFO** | (562) 590-3100, ext. 0

**SE AQUARIUM CLOSED**  
**FRIDAY THROUGH SUNDAY, APRIL 19-21**

Please note that the Aquarium will be closed because of the Grand Prix of Long Beach street closures.

**FESTIVALS**

To honor the rich diversity of Southern California, the Aquarium of the Pacific hosts cultural and family festivals throughout the year. Check our website for more details and additional family festivals.

**F FESTIVAL OF HUMAN ABILITIES**  
**SATURDAY & SUNDAY, JANUARY 26-27**  
**9:00 a.m.-5:00 p.m.**

This year marks the tenth annual Festival of Human Abilities, a celebration highlighting the creative talents and abilities of people with disabilities. This event will feature wheelchair dance, signing choirs, art, accessible SCUBA diving demonstrations, and more. Sign language interpreters will be present at all major shows, and an audio tour is available for those who are blind.

**COST** | Free for members; members' guests receive 20% off regular admission.

**INFO** | (562) 437-FISH (3474)

**FESTIVALS**
**F AFRICAN AMERICAN FESTIVAL**  
**SATURDAY & SUNDAY, FEBRUARY 23-24**  
**9:00 a.m.-5:00 p.m.**

Celebrate Black History Month with jazz music, Mardi Gras dancers, interactive drum circles, art, children's crafts, storytelling, and dance performances from hip hop to West African during this annual festival.

**COST** | Free for members; members' guests receive 20% off regular admission.

**INFO** | (562) 437-FISH (3474)

**F DIVERS DAY**  
**SATURDAY, MARCH 23 | 9:00 a.m.-5:00 p.m.**

Learn about recent advances in diving, and learn more about volunteer diving and other opportunities with dive-related organizations in Southern California. Divers who present valid proof of certification with their photo I.D. will receive free admission.

**COST** | Free for members and SCUBA divers with valid proof of certification and photo I.D. Members' guests receive 20% off admission.

**INFO** | (562) 437-FISH (3474)

**F EARTH DAY FESTIVAL**  
**SATURDAY & SUNDAY, APRIL 13-14 | 9:00 a.m.-5:00 p.m.**

Learn what you can do to help our ocean planet at the Aquarium's eleventh annual Earth Day Festival. Celebrate the Earth while learning easy, everyday tips to protect the environment. Visit booths from various Earth-friendly organizations and participate in hands-on learning demonstrations for people of all ages.

**COST** | Free for members. Members' guests receive 20% off admission.

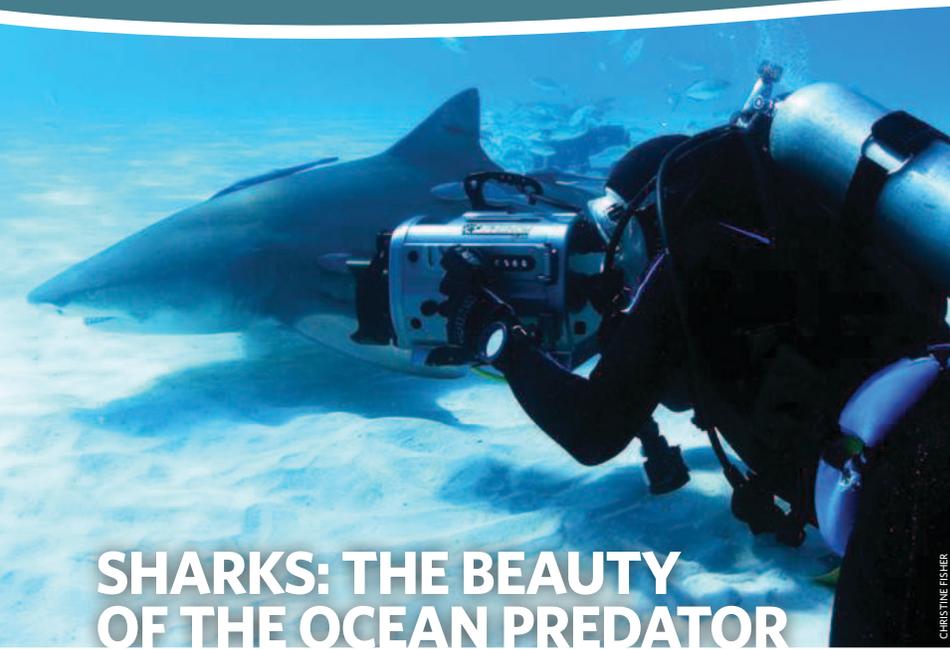
**INFO** | (562) 437-FISH (3474)

**F INTERNATIONAL CHILDREN'S DAY FESTIVAL**  
**SATURDAY & SUNDAY, APRIL 27-28 | 9:00 a.m.-5:00 p.m.**

This festival will feature music and dance performed by children representing Hispanic, Asian, African American, Pacific Islander, Native American, and other cultures. The Aquarium will also present its Young Hero Award in recognition of one young person's efforts to make this planet a better place.

**COST** | Free for members. Members' guests receive 20% off admission.

**INFO** | (562) 437-FISH (3474)



# SHARKS: THE BEAUTY OF THE OCEAN PREDATOR

CHRISTINE FISHER



Victor Douieb

## GUEST SPEAKERS

The Aquarium hosts guest lectures on a variety of topics from experts across the country.

**65 AARON QUINTANAR |**  
*The Fall of the Sea of Cortez*  
TUESDAY, JANUARY 29 | 7:00 p.m.

Aaron Quintanar will discuss the history of environmental impacts and lost conservation opportunities in Baja California and the Sea of Cortez from 1994 to 2008. Quintanar is a conservationist and former lifeguard who led conservation efforts in Baja California, where development pressure, overfishing, and other human activities threaten ecosystems.

**65 CHARLES YARISH |** *Nutrient Bioextraction and Seaweed Aquaculture*  
THURSDAY, FEBRUARY 7 | 7:00 p.m.

Charles Yarish will discuss the bioextraction of inorganic nutrients from coastal waters using native seaweeds. His study, conducted on the East Coast in 2011, demonstrated this process. Results suggested that seaweed aquaculture can be a useful technique for nutrient bioextraction in urbanized coastal waters. This process would help remove inorganic nutrients introduced into the ecosystem by humans. These nutrients can cause toxic algal blooms. Yarish is a professor in the department of ecology and evolutionary biology at the University of Connecticut.

## GUEST SPEAKERS



Charles Yarish

**65 PANEL DISCUSSION |**  
*Solutions to Plastic Pollution*  
TUESDAY, FEBRUARY 12 | 7:00 p.m.

Anna Cummins and Marcus Eriksen, cofounders of the 5 Gyres Institute, will share the results of the first global survey of plastic pollution in the ocean's five subtropical gyres. Panelists will discuss ecological impacts and realistic solutions to the problem of plastic pollution.

**65 JOEL PRIMACK & MARY ELLEN ABRAMS |** *The New Universe and the Human Future*  
THURSDAY, FEBRUARY 21 | 7:00 p.m.

Philosopher Nancy Ellen Abrams and physics professor Joel Primack will discuss a new vision of the universe based on dark matter, dark energy, and cosmic evolution set forth in their book, *The New Universe and the Human Future: How a Shared Cosmology Could Transform the World*. This multimedia lecture will feature astronomical videos, and the authors will be signing copies of the book after the lecture. A speaker reception for Pacific Circle members will be held at 6:15 p.m.

## GUEST SPEAKERS

**65 DAVID HELVARG |** *The Golden Shore: California's Love Affair with the Sea*  
THURSDAY, FEBRUARY 28 | 7:00 p.m.

Author David Helvarg will share the history, culture, and changing nature of California's coasts and ocean. He will discuss and sign copies of his book, *The Golden Shore*, which examines the spirit of the Californian coast, its mythic place in American culture, and the state's connection with the sea. Helvarg is the executive director of Blue Frontier Campaign, editor of the *Ocean and Coastal Conservation Guide*, and a former journalist and war correspondent.

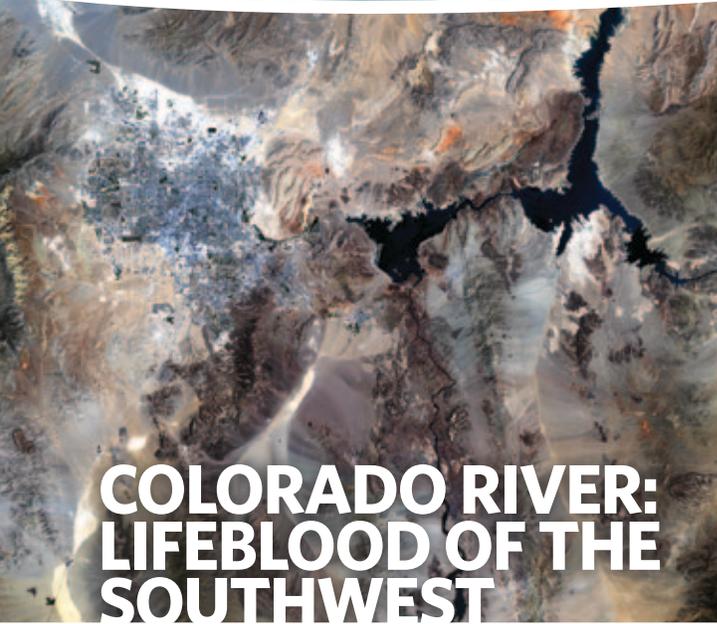
**65 RICHARD THEISS & VICTOR DOUIEB |**  
*Sharks: The Beauty of the Ocean Predator*  
TUESDAY, MARCH 5, THURSDAY, MARCH 7 & WEDNESDAY, MARCH 13 | 7:00 p.m.

In a series of three lectures, underwater cinematographer Richard Theiss and sculptor Victor Douieb will discuss their personal experiences with sharks, shark conservation, and their work documenting sharks. *Sharks: The Beauty of the Ocean Predator*, an exhibit of Douieb's shark sculptures, will be on display at the Aquarium from March 5 through May 5.



### Live Lecture Webcasts

Tune in to a live lecture webcast by visiting [aquariumofpacific.org/aquariumlive](http://aquariumofpacific.org/aquariumlive) or capture the QR code above with your smartphone.



## COLORADO RIVER: LIFEBLOOD OF THE SOUTHWEST



## THE FALL OF THE SEA OF CORTEZ

### GUEST SPEAKERS

**GS JEANINE JONES | *Colorado River: Lifeblood of the Southwest***  
WEDNESDAY, MARCH 20 | 7:00 p.m.

Shared among seven states and Mexico, the Colorado River is an important water supply for Southern California. The river basin, now experiencing long-term drought conditions, faces an expected future shortage as climate change increases water demands and lessens mountain runoff. Jeanine Jones will discuss the basin's complex legal and institutional framework, together with efforts under way to mitigate the impacts of shortages, including innovative binational partnerships. She will also provide background on basin hydrology and water management. Jones is the inter-state resources manager for the California Department of Water Resources.

**GS WILLIAM SARGENT | *Beach Wars***  
TUESDAY, APRIL 2 | 7:00 p.m.

Take a tour of the last ten thousand years of history on Cape Cod's Nauset Beach, and learn about glaciers, pirates, rum running, coastal geology, and sea level rise, among other topics. William Sargent will sign copies and reveal compelling stories from his book *Beach Wars*, including what the 1626 wreck of the *Sparrowhawk* can tell us about the fate of coastal houses threatened by sea level rise today. He will also tell how a lovelorn pirate became the basis for Johnny Depp's character in *Pirates of the Caribbean*. Sargent is the director of the Coastlines Project in Ipswich, Massachusetts, and a consultant for the NOVA Science television series.

### GUEST SPEAKERS

**GS LESLIE HARRIS | *Hitchhiking Aliens: Unexpected Consequences of the Japan Tsunami***  
TUESDAY, MAY 7 | 7:00 p.m.

After the earthquake and resulting tsunami that struck Japan in 2010, ocean currents and wind brought debris across the Pacific Ocean to the shores of the Pacific Northwest of the United States. Learn about the non-native plant and animal species attached to the debris that hitched a ride to our shores. Leslie Harris is the collections manager for the Los Angeles County Natural History Museum's polychaete collection, which she has worked with since 1988. She is one of the founders of the Southern California Association of Marine Invertebrate Taxonomists.

**GS CHRIS LOWE | *The Recovery of Apex Marine Predator Populations***  
TUESDAY, MAY 14 | 7:00 p.m.

Rapid coastal development, water and air pollution, overfishing, bycatch, and habitat loss have all contributed to declines in shark populations. Chris Lowe, of California State University, Long Beach's Shark Lab, will discuss federal and state agencies and regulations and how they have helped sharks recover.



JODY MARTIN

### GUEST SPEAKERS

**GS GERRIE SCHIPSKE | *Early Long Beach***  
TUESDAY, MAY 28 | 7:00 p.m.

Gerrie Schipske will discuss her book, *Early Long Beach*, and the natural assets, the people, and the events that shaped the first fifty years of history in Long Beach, California, her native city. She will cover its residents, from the Tongva people to the Spanish, to real estate speculators; its history as a resort area, a landing strip for early aviators, a fishing industry site, a port for shipbuilding and trade, and a location for the United States Navy to anchor its battle fleet in 1919; the discovery of oil in 1921; and its role in the Southern California war effort after 1938. Schipske serves on the Long Beach City Council and is the author of *Rosie the Riveter in Long Beach* and *Early Aviation in Long Beach*.

**COST** | Free for members, teachers, seniors 62+, and students with valid I.D. and advanced reservations. \$5/non-members.

**INFO** | (562) 437-FISH (3474)

**WEB** | All lectures are streamed live on the aquarium's website.

Guest speaker sponsor:





ANDREW RETSMA



ANDREW RETSMA

## AQUARIUM TOURS

These programs are opportunities to see the Aquarium and its animals in a different light.

### AT BEHIND-THE-SCENES TOURS

DAILY | times vary

Guests will go above our largest exhibit to feed the fishes, get a glimpse of areas behind Shark Lagoon, and see our Molina Animal Care Center.

**COST** | \$15/member | \$19/non-member does not include Aquarium admission. Combo price: \$39.95/adult, \$36.95/senior, \$28.95/child

**AGES** | 7+ years

**LENGTH** | one hour

**GROUP SIZE** | maximum 10 participants

**RSVP** | (562) 951-1630, online, or sign up on day of visit

### AT ANIMAL ENCOUNTERS

THURS.-FRI. & SAT.-SUN. | see times below

Join us for a very special experience to learn about feeding and caring for some of our marine animals. Roll up your sleeves, prepare some food, and get ready to be up close and personal for a feeding with a seal, sea lion, sea otter, shark, or penguin. There are lots of surprises along the way, so be prepared to get your hands wet! Please note that penguin encounters will go on hiatus March through May for the breeding season.

**THURS. & FRI.** | *Penguins* 8:00-10:00 a.m.

**SAT. & SUN.** | *Seals & Sea Lions* 9:30-11:30 a.m. | *Sharks* 12:30-2:30 p.m. | *Sea Otters* 2:45-4:45 p.m.

**COST** | \$90/member | \$100/non-member includes Aquarium admission

**AGES** | 10+ years: *Seals & Sea Lions*, *Sea Otters*, *Penguins* | 13+ years: *Sharks*

Some height restrictions apply. Participants under 16 years must be accompanied by an adult.

**RSVP** | (562) 951-1630

## AQUARIUM TOURS

### AT HARBOR TOUR

DAILY | times vary

Tour the Long Beach/Los Angeles Harbors with Harbor Breeze Cruises for a 45-minute narrated cruise around one of the most active ports in the world. See the downtown shoreline, ocean vistas, ships from around the world, and even sea lions. Tours are offered throughout the day on a daily basis. Tickets may be purchased in advance or at the ticket window upon arrival. Meet 15 minutes prior to departure at Dock #2. This program is led and staffed by Harbor Breeze Cruises.

**COST** | Members: \$12/adult, \$10/senior (62+), \$6/child (3-11) | Non-members: \$36.95/adult, \$31.95/senior, \$19.95/child includes Aquarium admission

**RSVP** | (562) 951-1630

### AT DIVE IMMERSION

BASED ON AVAILABILITY | 3:00 p.m.-5:30 p.m.

Certified divers can dive in our warm 350,000-gallon Tropical Reef Habitat with over 1,000 animals. Tour the dive program, dive in our exhibit, and receive a certificate of completion, souvenir towel, use of an underwater camera, and a memory card of your photos. All equipment is provided.

**COST** | \$279/member | \$299/non-member

**AGES** | 15+ years | ages 15-17 require participating adult chaperone

**RSVP** | (562) 590-3100

## AQUARIUM SLEEPOVERS

Pack your sleeping bag and toothbrush for a night of adventure at the Aquarium of the Pacific. These programs include a pizza dinner, snack, craft, cereal breakfast, and T-shirt.

### SL BIRTHDAY PARTY SLEEPOVER

BASED ON AVAILABILITY | 5:00 p.m.-7:00 a.m.

Join us for an all-night celebration with a special birthday party sleepover featuring animal touch time, a feeding opportunity, presentations, a behind-the-scenes tour, and crafts. Please bring your own birthday cake.

**COST** | \$60/member | \$70/non-member

**AGES** | 5+ years | one adult required per 10 children

**THEMES** | *Sharks*, *Marine Mammals*, or *Turtles*

**GROUP SIZE** | 20-50 participants

**RSVP** | (562) 951-1630

### SL ADULT SLEEPOVER

BASED ON AVAILABILITY | 6:00 p.m.-9:00 a.m.

Enjoy the tranquility and serenity of the Aquarium at night. Unwind with yoga and meditation before meeting an animal, hearing an informal lecture by a marine educator, taking guided tours, seeing special presentations, and sleeping next to one of our large exhibits. Included are a gourmet pizza dinner with wine, beer, or soda, and a continental breakfast.

**COST** | \$60/member | \$70/non-member

**AGES** | 18+ years

**GROUP SIZE** | 20-60 participants

**RSVP** | (562) 951-1630



ANDREW RETSMA



ANDREW RETSMA

## AQUARIUM SLEEPOVERS

**SL YOUTH GROUP SLEEPOVERS**  
 MONDAY OR WEDNESDAY EVENINGS, BASED ON AVAILABILITY | 5:00 p.m.-7:00 a.m.

Anchors aweigh as we become sailors in search of the missing treasures of the sea. Investigate the fascinating aquatic food web and follow a treasure map in search of ocean knowledge!

**COST** | \$50/member | \$60/non-member  
**AGES** | 5+ years, plus adult chaperone  
**GROUP SIZE** | 20-60 participants  
**RSVP** | (562) 951-1630

**SL FAMILY SLEEPOVER**  
 BASED ON AVAILABILITY | 5:00 p.m.-7:00 a.m.

Bring your whole family and spend an evening exploring the Aquarium after dark. Discover the unique relationships and habitats of our ocean critters through hands-on activities and gallery observations.

**COST** | \$50/member | \$60/non-member  
**AGES** | 5+ years, plus adult chaperone  
**RSVP** | (562) 951-1630



STACY CAIN

## SPECIAL PROGRAMS

**SP BIRTHDAY PARTIES**  
 AVAILABLE BY RESERVATION ONLY

Let us make your child's next birthday celebration special. The Aquarium will supply all the ingredients for an unforgettable party, including a themed one-hour classroom program featuring animal touch time, biofact discovery, and a take-home souvenir craft project. The party concludes with an additional half hour in the classroom for the birthday celebration. Please bring your own birthday cake. Aquarium admission is included. All you need to do is call us at least two weeks prior to reserve a date (subject to availability), and then invite your guests. We also offer birthday sleepovers.

**COST** | \$33/member | \$39/non-member | 15 person minimum, includes Aquarium admission  
**AGES** | All ages, one adult required per 10 children  
**THEMES** | Sharks, Marine Mammals, or Turtles  
**GROUP SIZE** | 15-45 participants  
**INFO** | (562) 951-1630

**SP AQUARIUM ON WHEELS**  
 AVAILABLE BY RESERVATION ONLY

The Aquarium on Wheels is dedicated to developing children's appreciation for the wonders of the ocean environment. Along with an educational presentation, hands-on activities, and environmental message, our outreach educational program provides children the chance to touch sharks, sea stars, anemones, urchins, and other marine inhabitants. This mobile tidepool exhibit is not just for schools—it is also great for display at festivals, fairs, and even birthday parties. Aquarium on Wheels will deliver a memorable experience for all!

**INFO** | (562) 951-1630

## OUTDOOR ADVENTURES

Go beyond the Aquarium to participate in offsite experiences in the great outdoors.

**QA GRAY WHALE WATCHING TRIPS**  
 DAILY, WINTER/SPRING SEASON

Take a voyage with Harbor Breeze Cruises in search of whales as they migrate along our coastline. Learn about these gentle giants from an onboard Aquarium educator.

**COST** | Members: \$25/adult, \$20/senior, \$15/child | Non-members (includes Aquarium admission): \$45.95/adult, \$41.95/senior (ages 62+), \$30.95/child (ages 3-11)  
**AGES** | Children under 16 must be accompanied by an adult.

**LENGTH** | 2-2.5 hours  
**RSVP** | (562) 951-1630

## BOOK A VIDEOCONFERENCE with an Aquarium Educator



Call (562) 951-1630 or visit [aquariumofpacific.org/aovideoconferencing](http://aquariumofpacific.org/aovideoconferencing) for more information.

**YOUTH PROGRAMS**

**YP JUNIOR BIOLOGIST PROGRAM**

**SATURDAYS | 9:30 a.m.-11:30 a.m.**  
 topics vary, see below

Participants will independently investigate marine life during this exploratory program. This class offers hands-on animal touch time, Aquarium animal observation, and activities relating to each topic. Select the topic that is most interesting, or take all the classes to learn about the variety of animals found at the Aquarium.

**TOPIC |** *Marine Mammals* .....February 9 (ages 7-12)  
*Invertebrates* .....March 9 (ages 7-12)  
*Fish* .....April 13 (ages 7-12)

**COST |** \$19/member | \$24/non-member  
 does not include Aquarium admission.

**AGES |** 7-12

**RSVP |** (562) 951-1630

**YP JOB SHADOW**

**SATURDAYS | 9:00 a.m.-noon**  
 topics vary, see below

This program is for students who are interested in animal husbandry or marine biology careers. Students will learn what it takes to run a world-class aquarium and get a hands-on opportunity to participate in everyday activities that help maintain the Aquarium. Students will go behind the scenes, shadowing education and husbandry staff.

**TOPIC |** *Veterinarian* .....  
 Wednesday, January 30, 3:30 p.m.-6:30 p.m.  
 Saturday, February 2, 9:00 a.m.-12:00 p.m.  
*Marine Biologist* .....  
 Wednesday, February 27, 3:30 p.m.-6:30 p.m.  
 Saturday, March 2, 9:00 a.m.-12:00 p.m.  
*Mammalogist* .....  
 Wednesday, April 3, 3:30 p.m.-6:30 p.m.  
 Saturday, April 6, 9:00 a.m.-12:00 p.m.

**COST |** \$29/member | \$35/non-member  
 does not include Aquarium admission

**AGES |** Grades 7-12

**RSVP |** (562) 951-1630

**SATURDAY FAMILY FUN PROGRAMS**

Children, along with a parent or adult chaperone, will investigate the ocean world in a structured classroom program that includes interactive and hands-on activities. These programs foster the students' discovery as well as interaction with adults and peers.

**FP SEA JELLIES AND OTHER INCREDIBLE INVERTEBRATES**

**SATURDAY, JANUARY 26 | 10:00 a.m.-11:30 a.m.**

They may be spineless, but they are the backbone of nature. Join us as we learn all about jellies and their invertebrate relatives that inhabit the ocean.

**FP TOTALLY TURTLES**

**SATURDAY, FEBRUARY 23 | 10:00 a.m.-11:30 a.m.**

You may enjoy a sweet treat of Jelly Bellies, but a sea turtle prefers having a belly full of jellies! Discover fun facts and turtle trivia as we explore these reptiles.

**FP SHARK SLEUTHS**

**SATURDAY, MARCH 23 | 10:00 a.m.-11:30 a.m.**

Discover how sharks' amazing adaptations make them excellent predators. Get an up-close view of these creatures and others as we learn all about sharks!

**FP MAGNIFICENT MARINE MAMMALS**

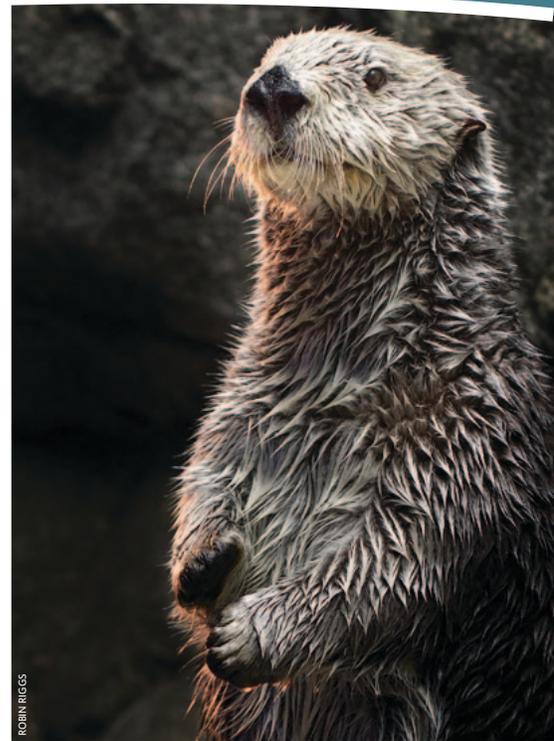
**SATURDAY, APRIL 27 | 10:00 a.m.-11:30 a.m.**

Who is warm-blooded, hairy, breathes air, and lives in the ocean? Marine mammals! Join us as we learn the special ways sea otters, seals, sea lions, whales, and other marine mammals survive in the sea.

**COST |** ADULT-CHILD PAIR: \$28/member  
 \$40/non-member  
 EXTRA PERSON: \$15/member  
 \$17/non-member  
 (includes Aquarium admission)

**AGES |** 4-6 years, plus adult chaperone

**RSVP |** (562) 951-1630



ROBIN RIGGS

**AQUA TOTS**

Toddlers team up with their parent or chaperone for a first look into ocean life. Each of the Aqua Tots programs focuses and expands on a particular concept while encouraging adult and child interaction.

**AQ SOUNDS OF THE SEA**

**SATURDAY, JANUARY 19 | 10:00 a.m.-11:30 a.m.**

Shake, rattle, and roll as we listen to the sounds of the ocean. Experience the wonderful world of sea sounds, from the songs of a big blue whale to the barking of a sea lion.

**AQ SUPER SENSES OF THE SEA**

**SATURDAY, FEBRUARY 16 | 10:00 a.m.-11:30 a.m.**

Smell the salty air and feel the cool breeze as we use our senses to explore how ocean animals use their sight, taste, touch, and hearing in their watery home. Immerse yourself in the wonder and discovery of this interactive program.

**AQ COLORS OF THE OCEAN**

**SATURDAY, MARCH 16 | 10:00 a.m.-11:30 a.m.**

Below the surface of the blue ocean are animals with amazing colors. Some are bright and flashy while others blend into the ocean bottom. Discover some of these colorful animals, and search for those that may be hiding.



ANDREW REIT SMAR



HUGH HONG

# MAGNIFICENT MARINE MAMMALS

## AQUA TOTS

### **AO** MOVIN' AND GROOVIN' BENEATH THE SEA

SATURDAY, APRIL 13 | 10:00-11:30 a.m.

Roll like an otter and slide like a snail as we discover animals through movement. Explore the world of sea creatures by taking a closer look at the way they move. Join us as we move and groove like the animals beneath the sea!

**COST** | ADULT-CHILD PAIR: \$28/member \$38/non-member | EXTRA PERSON: \$15/member, \$17/non-member (includes Aquarium admission)

**AGES** | 2-3 years, plus adult chaperone

**RSVP** | (562) 951-1630

## AQUATIC ACADEMY

### ARE WE FACING AN ENVIRONMENTAL CLIFF?

FEBRUARY 6, 13 & 27 | 7:00 p.m.-9:30 p.m.

In this series of three evening classes, attendees will hear presentations and panel discussions from scientists and other experts, getting in-depth information about pressing environmental topics and the most current data and interpretation from the speakers. This session will answer the questions: Are we facing an environmental cliff? And, if we are, how can we avoid it? The course will explore a number of topics, including retreat- ing ice around the globe, ocean acidification, biodiversity loss, and California and carbon credits: a courageous move or a meaningless gesture. During the course, we will come up with a 10 point action plan to move back from the cliff, existing or potential.

**COST** | \$30/non-member, \$25/member

**INFO** | Adina Metz, ametz@lbaop.org

**RSVP** | aquariumofpacific.org | 562-590-3100, ext. 0

## AQUATIC ACADEMY

### THE INTEGRATION OF ART AND SCIENCE TO ENHANCE ENVIRONMENTAL COMMUNICATION

THURSDAYS, APRIL 25, MAY 2, 9 & 16 | 7:00 p.m.-9:00 p.m.

The Aquarium of the Pacific is a leader in integrating the arts in all their modalities with the sciences to create and deliver environmental messages. It does so in ways that engage, entertain, educate, and make emotional connections that lead to changes in attitude and behavior. Join leading artists and scientists in exploring the power of partnerships in addressing major environmental issues. Aquatic Academy includes a series of four evening classes fostering dialogue on complex and pressing issues related to the ocean and environment.

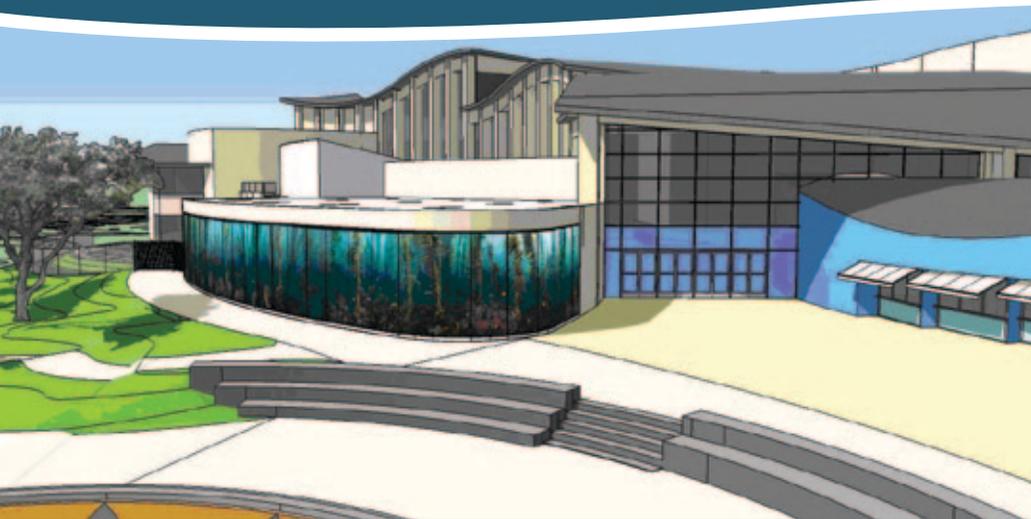
**COST** | \$50/non-member, \$40/member; \$10 extra for CEU credit

**INFO** | Adina Metz, ametz@lbaop.org

**RSVP** | aquariumofpacific.org | 562-590-3100, ext. 0

“ I love all parts of the Aquarium but the sea lions and seals are my favorite to watch from below or above. I love supporting the Aquarium of the Pacific because bringing awareness of oceanic creatures and protecting them in their habitats is very important.”

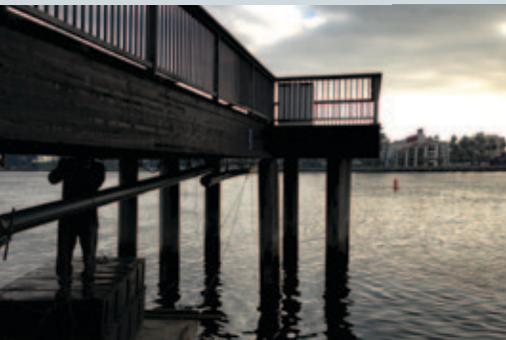
— MICHAEL B., MEMBER SINCE 2012



## AQUARIUM EXPANDS PACIFIC COLLECTIONS GIFT STORE

**C**ONSTRUCTION on the Aquarium's front façade began this past September to expand the Pacific Collections gift store from 4,000 to 6,000 square feet. The store's new glass façade will feature a large-scale photo mural of a kelp forest. A larger, remodeled Pacific Collections will better serve Aquarium guests, allowing for an improved selection of merchandise and better visitor circulation.

The new space will also help strengthen the Aquarium's connection to the arts. We will showcase local artisans, fine art, and new types of merchandise in Pacific Collections. Aquarium visitors will be able to choose from a larger selection of Earth-friendly, locally produced, high-quality gifts and souvenirs. The newly expanded store is slated to open in the spring.



## NEW SALTWATER INTAKE SYSTEM CUTS EMISSIONS AND BOOSTS EFFICIENCY



**T**HE AQUARIUM has installed an intake system that draws water directly from the ocean to supply the institution's tanks, eliminating 1,100 diesel truck trips per year by tankers that previously delivered ocean water to the Aquarium. The new system was approved by the California Coastal Commission in 2012.



Pictured: Board member Dr. J. Mario Molina, Trustee Michelle Molina, and Board Member John Molina.

## SEA FARE A SUCCESS

**T**HE AQUARIUM'S annual Sea Fare sold out for the second year in a row in 2012, with more than 820 ticket holders in attendance. The event—which features food and beverages from local chefs and vendors, as well as music, live and silent auctions, and games—raised over \$164,000 to benefit the institution's education, ocean conservation, and animal care programs. The Aquarium will hold its tenth annual Sea Fare on Saturday, October 19, 2013.



# CITY OF LONG BEACH SUPPORTS AQUARIUM EXPANSION

A \$1.5 million commitment from the City of Long Beach will go toward the front expansion of the Aquarium campus.

**T**HE AQUARIUM received new major support from the City of Long Beach through a \$1.5 million commitment toward the front expansion of the Aquarium campus. This pledge comes with a matching challenge, meaning that the Aquarium must raise an equal amount in donated funds. The City and the Aquarium have a strong partnership, and together offer several special opportunities for residents such as District and Mayor Nights, when admission is free to all.

When complete, the expansion will further the role the Aquarium plays as an institution dedicated to creating a better future for the city, region, and ocean through education and connecting the public to science, policymakers, and stakeholders. "The City of Long Beach's support will enable the Aquarium to further its status as a major national destination and one of the city's leading cultural institutions. We are proud to partner with the City to redefine the modern aquarium and the role it plays as a transformational institution that benefits the entire region," said John Fielder, chair, Aquarium Board of Directors.

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*"We are proud to partner with the City to redefine the modern aquarium and the role it plays as a transformational institution that benefits the entire region."*

— John Fielder, chair, Aquarium Board of Directors

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Above right: Aquarium President and CEO Jerry Schubel presents Long Beach Mayor Bob Foster with the Ocean Conservation Award in June 2012.

# Blubber Glove

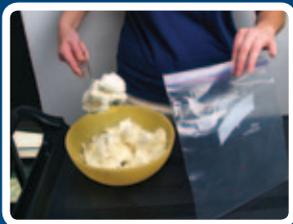


**YOU CAN USE A BLUBBER GLOVE** to see how a layer of fat helps keep marine mammals like seals and sea lions warm in cold ocean waters.

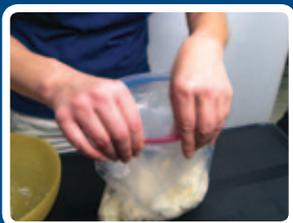
## MATERIALS:

- 6 to 8 cups shortening
- heavy duty, gallon-sized zip-lock bags
- duct tape
- spatula
- ice
- water
- bucket

## INSTRUCTIONS:



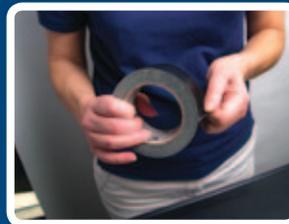
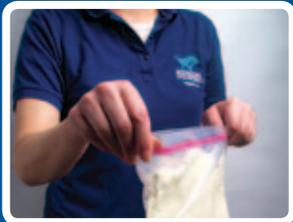
1. Using a spatula, fill a zip-lock bag one-third to halfway full with shortening.



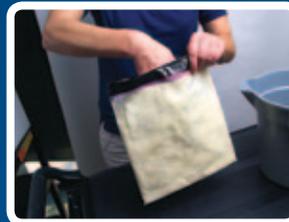
2. Turn a second bag inside out and place inside the first bag. Make sure that the zip-lock sealers line up.



3. Massage the shortening to distribute it evenly in the space between the two bags. There should now be a large glove-type opening to place your hand in.



4. Seal the tops together with the layer of shortening in between the bags. To ensure that the seals stay closed, duct tape the top of the bags together while still leaving the center open for a hand to slip in.



5. Fill a large bucket with ice and water. Place both hands in the bucket of icy water for a short moment, one exposed and the other wearing the blubber glove. Which hand stayed warmer? Why?





### Deep Divers

Seals and sea lions can hold their breath to dive hundreds of feet deep in pursuit of food or to escape a predator.

## Fishing for KNOWLEDGE!



1. Seals and sea lions are members of the \_\_\_\_\_ family. The name comes from the Latin word for fin-footed.
2. Mature male sea lions have a prominent bump on their heads called a \_\_\_\_\_ crest.
3. When pinnipeds temporarily leave the water to avoid predators or rest, this behavior is referred to as \_\_\_\_\_ out.

#### Last Issue's Questions and Answers:

1. Crested Auklets, a type of diving bird, produce a unique tangerine-like **scent** during the breeding season.
2. Shorebirds play an important role in their wetlands ecosystems. One way they help the plants and animals there stay in balance is by **aerating** the soil with their beaks as they hunt for food.
3. Lorikeets' tongues are covered with special **papillae** that help them soak up nectar when they feed. .

### CALIFORNIA SEA LION

*Zalophus californianus*



SOUTHERN CALIFORNIA/BAJA

### HARBOR SEAL

*Phoca vitulina*



SOUTHERN CALIFORNIA/BAJA

### BLUE WHALE

*Balaenoptera musculus*



GREAT HALL

## CALIFORNIA SEA LION

*Zalophus californianus*



### FUN FACT

Sea lions may ingest rocks to help them sink to the sea floor to find food.

### PHYSICAL CHARACTERISTICS

Males can weigh up to 1,000 pounds and grow to a length of 8 feet. Females are considerably smaller, with an average weight of 220 pounds and 6 feet in length.

### HABITAT

Found from southeast Alaska to Baja California within temperate water ecosystems. Breeding grounds are throughout the West Coast of the continental United States.

### DIET

California sea lions spend much of their days foraging for small bait fish, squid, and clams along the coastline alone or in groups called rafts.

## HARBOR SEAL

*Phoca vitulina*



### FUN FACT

Harbor seal pups can swim at birth and dive for up to two minutes at just two or three days old.

### PHYSICAL CHARACTERISTICS

Adults can weigh up to 290 pounds and grow to about 6 feet long. Females live thirty to thirty-five years while males live twenty to twenty-five years.

### HABITAT

Found along rocky subtidal and intertidal zones. They are mainly solitary animals.

### DIET:

They can hold their breath for up to twenty-eight minutes while foraging for bottom-dwelling organisms like flounder, anchovy, and herring in shallow water kelp forests and rocky areas.

## BLUE WHALE

*Balaenoptera musculus*



### FUN FACT

A blue whale's heart is the size of a small car, and its tongue weighs the same as an African elephant, around three tons.

### PHYSICAL CHARACTERISTICS

Blue whales are approximately the size of three school buses, growing to more than 100 feet long and weighing between 200,000 and 300,000 pounds.

### HABITAT:

Blue whales have been seen in all of the world's oceans. Their exact migratory patterns are still unknown, but about 2,000 blue whales visit Southern California waters every year during their journey to Mexico and Costa Rica.

### DIET:

Blue whales can consume two to four tons of small shrimp-like plankton, called krill, per day. A baby blue whale drinks about fifty tons of milk a day from its mother and can gain around 9 pounds an hour.

## Member Specials

# 15th Anniversary Celebrations!

**Charter Member Evening - Thursday, June 27, 2013**  
**All Members Welcome - Friday, June 28, 2013**  
**7:00 p.m.-10:00 p.m.**

The Aquarium is celebrating its 15th anniversary this year! Your membership support allows the Aquarium to continue to grow, with new exhibits like the June Keyes Penguin Habitat, and more opportunities to learn about the ocean and our planet. We hope you will join us on this special occasion. Our members-only celebrations will feature the newly debuted Ocean Exploration exhibits and programs, live music performed by Ronny and the Classics, a special member giveaway, and much more. Please look for your exclusive member invitation this spring.

## SAVE THE DATE



## VALENTINE'S SPECIAL

Purchase your adoption at our \$50 level or above between now and February 28, and we'll include a sweet treat!



# Adopt an Animal and Seal it with a Kiss this Valentine's Day!

Show that special someone you care by adopting an animal!

Starting at just \$25, your donation will include a certificate of adoption and a beautiful color photo of your animal. Additional levels feature plush animals, complimentary Aquarium admission tickets, Behind-the-Scenes Tours, and Animal Encounters. Adopt an Animal sponsorships are fully tax deductible and include free shipping!

[WWW.AQUARIUMOFPACIFIC.ORG/ADOPT](http://WWW.AQUARIUMOFPACIFIC.ORG/ADOPT) • (562) 437- FISH (3474)



## SAVE 20% this winter on all merchandise!

Present your membership card along with this coupon to receive an additional 10% discount in conjunction with your member discount, for a total of 20% off merchandise in our gift store.

This coupon is valid through 5/30/13 inside Aquarium gift stores. Valid as a one-time offer. Cannot be combined with any other offer. No cash value. Restrictions may apply. N-53013-A





## SPECIAL EVENTS AT THE AQUARIUM

### **A** S VALENTINE'S DAY APPROACHES, make plans to spend the holiday at the Aquarium for a romantic evening.

The Aquarium will be open until 9:00 p.m. on February 14, and couples and families alike can enjoy the festivities. Onsite food and beverage provider SAVOR...Long Beach has a tempting gourmet dinner planned, with cash bars and dessert stations to top off the evening.

Some couples may even get engaged on Valentine's Day. The Aquarium can also help create the perfect proposal, engagement party, or wedding ceremony and reception. From the Honda Blue Cavern exhibit in the Great Hall, to the outdoor Harbor Terrace with a view of Rainbow Harbor, the

Aquarium has several venues for special events.

SAVOR...Long Beach and the Aquarium can provide personalized event tickets, a buffet or sit-down dinner menu, cake cutting and a champagne toast, china, tables, linens, and even lighting and digital projectors. To learn more, visit [aquariumofpacific.org/aquariumweddings](http://aquariumofpacific.org/aquariumweddings).

The facility is also available for birthday parties, picnics, family reunions, holiday parties, high school proms, and corporate events. To start planning your Aquarium event, call (562) 951-1663 or visit [aquariumofpacific.org/specialevents](http://aquariumofpacific.org/specialevents) for menu ideas, floor plans, guest occupancy numbers, and more.

“People raved about the food and were just in awe of the location and the entire event. It is really a one-of-a-kind place to have a wedding and it turned out beautifully. We had a great time and the evening was everything we dreamed of and more! Thank you for working with us and making it easy for us.”

— CHRISTINE L.



## SEAFOOD FOR THE FUTURE NAMES TOP FISH RECIPE

**T** HIS PAST FALL the Aquarium of the Pacific's sustainable seafood program, Seafood for the Future (SFF), held its Top Fish cooking competition in partnership with Primal Alchemy Catering and the Long Beach Gazettes. Five finalists were selected to compete in the public Top Fish cook-off at the Primal Alchemy kitchen at the Belmont Pier. The first prize in the competition was a private dinner for six hosted by Primal Alchemy's Chef Paul Buchanan.

*Finalists in the cook-off prepared dishes with ingredients from Seafood for the Future's recommended list of sustainable seafood.*

All seafood used in the finalists' recipes was selected from SFF's recommended list of choices that were fished or farmed sustainably. Judges in the competition included Buchanan and SFF Program Manager Kim Thompson. Long Beach resident Doug Brand's recipe for cedar-planked salmon took the top prize. Brand paired his dish with peach chutney and a lemon dill yogurt dressing. Salmon for the cook-off was donated by SFF partner Skuna Bay. All other seafood used in the competition was donated by SFF community partner Culinary Liberation Front.

Other finalists included A.J. Dale, who prepared Greek-style Pacific halibut with lemon feta yogurt sauce; Marnie Shiels, who submitted a "Bananas About Sole" recipe; Dominique Smith, who prepared green halibut ceviche; and Nikol ZumMallen, who entered her Mediterranean stuffed squid.

### Cedar Plank Salmon



*1 cedar plank, soaked overnight or at least one hour\**

*2/3 cup olive oil*

*1 clove garlic, finely chopped*

*6 wild salmon filets, 6 to 8 ounces*

*1 Tbsp garam masala*

*1 Tbsp coarse salt*

In a bowl, combine olive oil and garlic. Rub the mixture all over the salmon. Sprinkle with garam masala and season lightly with salt. Cover and refrigerate for up to two hours.

Preheat grill on medium-high heat until chamber reaches about 500°F. Rinse plank and place it on the grate. Cover grill and heat the plank until it starts to smoke and crackle. Reduce heat to medium.

Place the salmon filets on the plank, making sure there is room between each filet for heat circulation. Cook for 10 to 15 minutes or until the fish has an internal temperature of 135°F and flakes easily with a fork.

*\*Culinary-grade cedar planks for cooking can be found at kitchen supply stores.*

# FUNDRAISING HIGHLIGHTS

The Aquarium of the Pacific relies on support from individuals, corporations, foundations, and government partners to support its mission with contributions to the operating budget and to a diverse range of projects.

## ■ Pacific Life Foundation Funds Exhibit Update

The Pacific Life Foundation awarded \$200,000 to the Aquarium to update with UCSD's Scripps Institution of Oceanography the interactive *Whales: Voices in the Sea* exhibit and website, adding new content and updating the look and feel of the exhibit. Also, the exhibit will be installed in three additional museums, bringing the total numbers of museums featuring this exhibit to nine. The foundation's total Aquarium support since 2003 is \$557,000.

## ■ Windsong Trust Renews its Commitment

The Aquarium's partnership with the Windsong Foundation continued in 2012 with a grant of \$150,000 that will provide \$50,000 in support of the Aquarium's Videoconferencing Lesson Program and \$100,000 in support of the Ocean Science Education Program. This grant will help the Aquarium expand the reach of its educational programming.

## ■ Tyler Foundation Funds Exhibit Upgrade

With a \$66,000 grant from the Tyler Perpetual Trust, the Aquarium of the Pacific will redesign the signs and space around an existing live coral exhibit in its Tropical Gallery. The Aquarium will develop stories and specific messaging for the new Coral Triangle exhibit with the aim of raising awareness of the importance of the Coral Triangle as a hotspot of biological diversity.

## ■ BCM Foundation Continues Scholarship Support

The Aquarium received a \$30,000 grant from the BCM Foundation. This support provides scholarship visits for underserved schools and community groups in the Whittier area, such as Boys and Girls Clubs. Transportation costs often stop such groups from visiting, but these funds will cover busing fees along with admission to the Aquarium.

## ■ The Kenneth T. and Eileen L. Norris Foundation Renews its Commitment to Education

Located in the City of Long Beach, the Kenneth T. and Eileen L. Norris Foundation has played a critical role in the development of the Aquarium's educational programs. Recently this organization awarded a grant of \$30,000 toward the Aquarium's Ocean Science Education Program.

## ■ Long-Term Partner Employees Community Fund of Boeing California Renews Support

Local Boeing employees awarded a grant of \$25,000 that will go toward the Aquarium's Ocean Science Education Program, ensuring visiting students receive high-quality science instruction and further their relationship with the natural world. This award also helps supply Aquarium educators with vital materials and resources. A funder since 1999, the Employee Community Fund of Boeing California has become a long-term partner in the pursuit of education advancement.

## ■ Oxy Long Beach, Inc. Promotes New Technology

Oxy Long Beach, Inc. continues its support for the Long Beach community by awarding the Aquarium a grant of \$25,000. These funds will go to scholarship visits and the Aquarium on Wheels program. It will also help establish the Aquarium's videoconferencing program within the Long Beach public school system. The videoconferencing program allows K-12 students restricted by financial or geographical limitations to experience the Aquarium's educational programs remotely.

## ■ Thomas and Dorothy Leavey Foundation Boosts Education Programming

The Aquarium received \$25,000 benefitting the Ocean Science Education Program from the Thomas and Dorothy Leavey Foundation. This is the second grant awarded to the Aquarium by this foundation, which is committed to educational initiatives across Southern California. With this support, the Aquarium will continue to introduce students to the wonders of the undersea world and develop further ways to integrate current science into its educational programming.



Aquarium volunteer and Disney Cast Member Jasen Lewis presents a check from the DisneyVoluntEars program to Maria the Penguin to go toward educational programming at the Aquarium. This is the third consecutive year the Aquarium has been honored with this grant.

# AQUARIUM ACCOLADES

## HERITAGE AWARDS



### Jacob Gutierrez | Moompetam Festival

Jacob Gutierrez is an elder of the Coastal Band of Tongva, Papiimar Dolphin

Nation, and San Gabrieleño Band of Mission Indians. Gutierrez has developed materials and records of Native American languages so they can be preserved for future generations. As the executive director of Keepers of Indigenous Ways, a nonprofit organization based in San Pedro, Gutierrez organizes workshops, special events, and projects to preserve Native American culture, religion, and sacred sites. He has also focused on helping others in the community, serving as an advisor to Changing Spirits, a program that helps Native American men recovering from drug and alcohol addiction. Gutierrez played a significant role in the development of the Moompetam Native American Festival, serving as the primary coordinator for five years and helping to bring many participating groups to the festival. He continues to participate each year as a festival emcee and consultant.

Pictured above: Jacob Gutierrez, Heritage Award honoree, and Jerry Schubel, president and CEO, Aquarium of the Pacific.



### Thanh Le | Southeast Asia Day

Thanh Le was born in Vietnam, graduated from the Theater Arts School

in Saigon, and came to the United States in 1991. Le is dedicated to creating awareness and appreciation of talented people with disabilities and to empowering them through the performing arts. He works to promote artists with disabilities so that they can become professional entertainers. In 2009 Le co-founded Ngoc Trong Tim/Pearl of Heart, a nonprofit organization with the mission of supporting performers with disabilities and connecting with donors, sponsors, and volunteers. Pearl of Heart has produced television programs and released three DVDs showcasing artists with disabilities. Le's efforts were recognized by California State Senator Lou Correa, who awarded Pearl of Heart with a Certificate of Recognition.

Pictured above: Thanh Le, Heritage Award honoree, and Perry Hampton, vice president of husbandry, Aquarium of the Pacific.



### WILD Coast/COSTA-SALVAJE | Baja Splash

In 2007 WILD Coast founded COSTASALVAJE to expand its mission

and conservation programs to Mexico. In Baja California, the organization works to protect and conserve undeveloped coastal habitats. WILD Coast works in joint venture with local community-based organizations, offering them support for land-based conservation projects. Along the United States-Mexico border, they monitor and shut down pollution flows. Working with volunteers, WILD Coast also organizes regular clean-ups to help remove trash from coastal areas and other waterways. WILD Coast launched the "Don't Eat Sea Turtle" campaign to raise awareness of the poaching of sea turtles throughout Mexico and help protect these endangered animals. The organization launched a campaign to protect sharks, which halted shark massacres in Guerrero, Mexico. The establishment of marine protected areas, or MPAs, in California was also a major focus for WILD Coast. In total, WILD Coast has protected more than two million acres of coastal wildlands and wildlife habitats. Fay Crevoshay, WILD Coast communications and policy director, accepted the Heritage Award.

Pictured above: Fay Crevoshay, Heritage Award honoree, and Jerry Schubel, president and CEO, Aquarium of the Pacific.



### Korean Resource Center | Autumn Festival

The Korean Resource Center (KRC) was formed

in 1983. Its mission is to empower immigrants and ethnic minorities—specifically Korean Americans in Los Angeles and Orange Counties—through service, education, advocacy, leadership development, and grassroots organizing. KRC aims to eliminate barriers preventing immigrants from fully integrating into society. Annually KRC serves on average 11,000 community members, including those with low incomes, limited-English-proficient immigrant seniors, working parents, students, and children in Southern California. Its Health Access Project and Social Services offer direct client services on public benefits programs, such as Healthy Families and CalWorks. KRC has also been approved to move forward on a senior housing project. Board Chair Zu Kim accepted the award on behalf of KRC.

Pictured: Zu Kim, Heritage Award honoree, and David Bader, director of education, Aquarium of the Pacific.

## EXECUTIVE OFFICERS

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PRESIDENT AND CEO

**MR. ANTHONY T. BROWN, MBA**  
VP OF FINANCE/CFO

**MS. BARBARA LONG**  
CORPORATE SECRETARY

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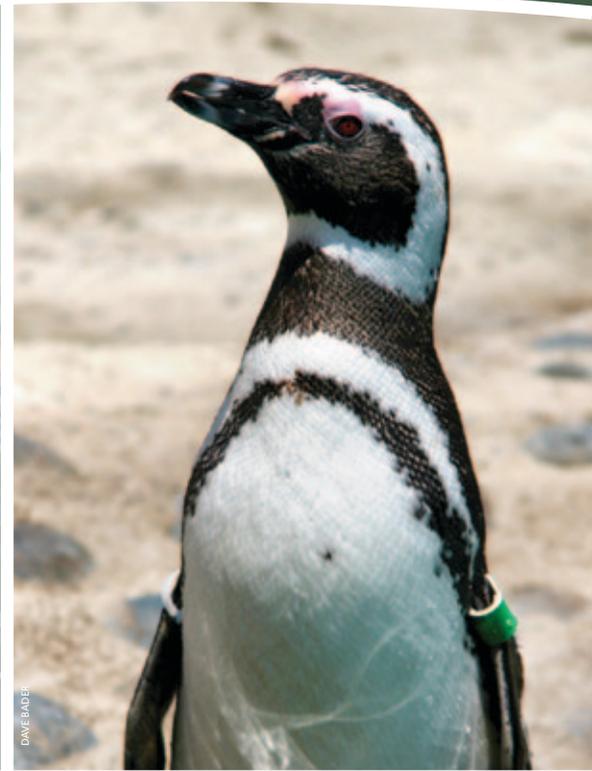
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(AS OF 12/31/12)

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AQUARIUM BOARD OF DIRECTORS



## GROUP ADOPTIONS BENEFIT THE AQUARIUM'S ANIMALS

Funds donated to the Adopt an Animal program support the Aquarium's conservation and education programs, including food, enrichment activities, medical treatment, and housing the institution's 11,000 animals.

**E**ACH YEAR a range of diverse groups—from scout troops to elementary school classrooms—raise money to support the Aquarium's Adopt an Animal program. By combining their efforts, these groups can make a significant contribution benefitting the Aquarium's animals.

Most recently Trevor and Jenny Roth recruited six other families with young children to organize a lemonade stand fundraiser to benefit the Aquarium of the Pacific. "As parents, we were excited about the opportunity to teach our young children a valuable lesson about philanthropy. We found that many fellow parents shared that excitement," Trevor Roth said. The group's fundraising efforts culminated in a visit to the Aquarium, where the children presented a gift of \$200 to adopt a Magellanic Penguin through the Aquarium's Adopt an Animal program and the adults contributed additional funds to support the Aquarium.

Also in 2012 Daisy Troop 572 raised \$700 to adopt a sea otter, and Girl Scout Troop 1100 adopted a sea lion with a gift of \$250. Audra McKinney's preschool classroom at Santa Barbara City College adopted a sea dragon by raising \$250. Mark Jonas, a health and science teacher at James Monroe Elementary School, encouraged his students to become involved in ocean stewardship by supporting an animal at the Aquarium. While he initially estimated a donation totaling \$50, his students ultimately donated over \$400 to sponsor a sea otter.

Funds donated to the Adopt an Animal program support the Aquarium's conservation and education programs, including food, enrichment activities, medical treatment, and housing for the institution's 11,000 animals. To learn more about group adoptions, visit [aquariumof-pacific.org/adopt](http://aquariumof-pacific.org/adopt) or call Brandi Kenney at (562) 951-1662.

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*"A little lemonade can make a big difference."*

— Theresa Duncan, director of development,  
Aquarium of the Pacific

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Pictured, front row: Natasha Clement, Lea Prough, Giulia Prough, Sadie Roth, Madison Glotzer, Chloe Dolkart, Stella Dolkart, Zoe Roth, and Gavin Dolkart. Back row: Liz Shatner-Clement, Stephen Prough, Marina Berti, Trevor Roth, Matt Glotzer, Jonas Dolkart, Jenny Roth, Scott Dolkart, Erin Dolkart, and Kandice Dolkart. Not pictured: the Herriott family.



# SEAL AND SEA LION CONSERVATION

While harbor seals and California sea lions have stable populations in the wild, they sometimes experience illness and injury. Local rescue organizations help rehabilitate these animals for release back into the wild.

**S** EALS AND SEA LIONS are native to the Southern California urban ocean and are a part of the ecosystem. They live in places that are busy with human activity, both recreational and commercial. In fact, they often rest out of the water on human infrastructure like buoys, jetties, docks, and pier pilings. Seals and sea lions also use public beaches as breeding grounds, where they gather in large numbers. All marine mammals are protected under the Marine Mammal Protection Act of 1972, which made it illegal to hunt or harass any marine mammal in United States waters.

Seals and sea lions get caught in fishing gear and nets, are sometimes hit by boats, and are occasional targets for harassment by humans. Seals are particularly sensitive and will vacate an area if they are disturbed.

Pollutants introduced by humans also pose a threat to seals and sea lions. Oil spills and other chemical contaminants in the water can impact their health. Fertilizers and other materials that enter the ocean as runoff can cause harmful algae blooms. Shellfish, sardines, and other small fish that eat the algae accumulate a neurotoxin in their tissues. As larger animals consume these smaller animals, the neurotoxin travels up the food chain and concentrates, causing domoic acid poisoning in predators like sea lions, other marine mammals, and seabirds. Animals

experiencing domoic acid poisoning are often disoriented and lethargic, and some suffer seizures.

Sometimes, individual seals or sea lions may be seen on shore, appearing to be injured, beached, or otherwise ill. If you spot a seal or sea lion in distress, do not approach or touch the animal. Federal regulations require people to keep a 150-foot distance from marine mammals. Do not attempt to push the animal back into the ocean or throw water on it. Notify the lifeguard on duty or local animal control agency, which can contact the marine mammal rescue agency for that area. The Pacific Marine Mammal Center (PMMC) in Laguna Beach, California, serves the Orange County coastline and has been in operation for more than four decades. Each year, PMMC rescues on average between 200 and 250 animals. The Marine Mammal Care Center at Fort MacArthur in San Pedro also rescues and treats marine mammals.

Michele Hunter, PMMC director of animal care, says when people report a marine mammal, her staff appreciates receiving the animal's exact location, observations of the animal's condition and physical characteristics, and a photo taken by cell phone.

By preventing pollutants from entering ocean waters, limiting conflicts with marine mammals, and working with local rescue organizations, we can better coexist with seals and sea lions in our urban ocean.

## CONTACT INFORMATION

**Pacific Marine Mammal Center**  
Laguna Beach, CA  
(949) 494-3050  
pacificmmc.org

**Marine Mammal Care Center at Fort MacArthur**  
San Pedro, CA  
(310) 548-5677  
marinemammalcare.org



**Pictured:** The Pacific Marine Mammal Center (PMMC) is located in Laguna Beach, California. All photos courtesy of PMMC.

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Free for members | \$3.95 for non-members



## Introducing...the all NEW Aquarium of the Pacific Animal Care Wish List!

**Our flippers, furry, feathered, and finned friends need your help! Explore our page at [aquariumofpacific.org/wishlist](http://aquariumofpacific.org/wishlist) to discover new ways to support your favorite Aquarium animals and exhibits.**

**Now through February 28: Make a donation to fund Wish List items for our lorikeets.** Each month we'll feature different animals or exhibits, so check back often, or sign up for our Wish List e-mail at [aquariumofpacific.org/wishlist](http://aquariumofpacific.org/wishlist). Make sure to check back on March 1 to see our newly featured items!

All our animal residents say thanks! In appreciation of your donation, you'll receive exclusive animal updates, personal stories from the animal care staff, e-photos of your favorite exhibits, and more!



**WHAT WILL YOU CHOOSE**  
from our NEW  
Animal Care  
Wish List?

### Lorikeet Wish List

- Wooden nest boxes
- Disco ball bird toys
- Cotton rope bird perches
- More items available online!

