



MONTEREY BAY
AQUARIUM



TABLE OF CONTENTS
Monterey Bay Aquarium Sea Otter Programs Press Kit

Click on headings below to go directly to a specific release within the press kit.

[1. Main news release](#)

[2. Profile Sheet – Meet the Exhibit Otters](#)

[3. Fact Sheet – Sea Otter Research and Conservation Program](#)

[4. Fact Sheet – Southern Sea Otter Natural History](#)



MONTEREY BAY
AQUARIUM

FOR IMMEDIATE RELEASE

For information contact

Ken Peterson, (831) 648-4922; kpeterson@mbayaq.org

Angela Hains, (831) 647-6804; ahains@mbayaq.org

**SEA OTTERS RETURN TO DELIGHT AQUARIUM VISITORS ON EXHIBIT,
PLAY VITAL ROLES BEHIND THE SCENES IN RECOVERY OF SPECIES**

The playful antics of California sea otters have delighted more than 50 million visitors to the Monterey Bay Aquarium. But these active marine mammals are more than engaging ambassadors for a threatened species. They're working moms that play a key role in sea otter recovery efforts.

They return to their two-story exhibit on March 23 in an upgraded home that also includes new interactive features where visitors can learn more about California's sea otters and the aquarium's pioneering efforts to bring them back from the brink of extinction.

Their efforts are documented in new ways at the aquarium's upgraded sea otter exhibit. The story is told in live narrations during feeding and training sessions at the two-story exhibit, and through nearby interactive displays. It's also the focus of a new auditorium program, "Luna: A Sea Otter's Story," which follows a sea otter pup's journey from rescue to release.

And visitors can check out wild otters in Monterey Bay off the aquarium's back decks at a new Otter Spotter station. There, they can use binoculars, telescopes and a radio tracking device to find and watch sea otters being monitored by the aquarium's field research team.

Monterey Bay Aquarium, through its Sea Otter Research and Conservation program, is home to the only center that rescues and releases California sea otters. Since 1984, the aquarium team has responded to every sea otter that comes ashore in distress along the California coast – animals that wouldn't survive without their help.

More than 600 ill, injured and orphaned sea otters have come through the program over the years. Until the nonprofit aquarium began caring for stranded sea otter pups, no one knew how to keep pups alive once they became separated from their mothers.

On exhibit, sea otters are captivating creatures whose story sparked a visiting legislator to author a bill that has enabled California taxpayers to make more than \$1 million in voluntary contributions toward sea otter research programs.

Behind the scenes, the aquarium's five resident sea otters and their predecessors have raised dozens of orphaned pups – pups that are back in the wild and having babies of their own.

The exhibit animals have also been companions for dozens of stranded pups that couldn't be released. Those animals, too are contributing to sea otter awareness. Today, 32 rescued pups from Monterey are inspiring millions of people at a dozen top aquariums and zoos in North America: in Vancouver and Atlanta, New Orleans and New York, in Chicago and southern California.

At the Monterey Bay Aquarium, exhibit otters have helped researchers learn how much energy sea otters expend diving for their food, develop effective medical and surgical procedures, gather baseline data about otter growth and development, and document how sea otters show signs of exposure to environmental stressors.

Several with seizure disorders and other diseases contracted in the wild have contributed insights into how human activities are affecting the otters' comeback from the fur trade, which decimated sea otters in the 18th and 19th centuries.

“Our sea otter exhibit is an integral part of our entire Sea Otter Research and Conservation program,” said Andrew Johnson, manager of sea otter programs. “Every animal on exhibit is contributing to the recovery of California sea otters.”

The aquarium's five sea otters – Rosa, Abby, Kit, Gidget and Ivy – will rotate through the exhibit, charming visitors when they're not taking on behind-the-scenes responsibilities as caregivers for stranded pups. From time to time, visitors may see one of the adults caring for a rescued pup on exhibit.

To learn more about the aquarium's Sea Otter Research and Conservation program, visit

<http://www.montereybayaquarium.org/cr/sorac.aspx>.

For details about the sea otter exhibit and to see the animals via a streaming webcam from the exhibit, visit <http://www.montereybayaquarium.org/efc/otter.aspx?c=ln>.

The mission of the Monterey Bay Aquarium is to inspire conservation of the oceans.

- 30 -

Editors: Please contact Public Relations for images of sea otters. You can also view thumbnail images at http://montereybayaquarium.org/aa/aa_pressroom/photos.asp

[Back to Top](#)

[Sea Otters](#) [Exhibit Animal Profiles](#)

The southern sea otter (*Enhydra lutris nereis*) is one of the most popular animals at the Monterey Bay Aquarium. Our five female exhibit animals help inspire conservation of the oceans in two key ways. As ambassadors representing wild sea otters, our exhibit animals offer visitors a more intimate look at this charming marine mammal and their vital role in the kelp forest habitat.

Our exhibit animals also work behind the scenes for our Sea Otter Research and Conservation program as surrogate mothers for stranded wild pups, and companion animals for older animals we rescue and treat, mostly for injuries and effects of disease, with the goal of release back to the wild.

Meet the five exhibit sea otters:

Rosa was rescued in 1999 as a 4-week-old pup, and raised in the public eye as part of “The Inside Story” special exhibition, which let visitors peek behind the scenes at aquarium operations. The next year we released the young Faye (her original name) back into the wild, where she unfortunately began to interact with scuba divers. That behavior can be dangerous for all concerned, so we recaptured Faye in 2002 and she became a permanent member of our sea otter exhibit that June. She was renamed Rosa because another animal was called Mae, and our staff thought two similar-sounding names could cause confusion during training sessions. Besides being a mellow exhibit animal, Rosa was a companion to wild sea otters under our care, and now serves as a surrogate mother to stranded pups. Several of her “young” are still thriving in the wild, and have given birth to pups of their own.

At 5 years old, **Abby** shows good maternal instincts but is still perfecting a few motherly skills, like how to turn live crabs into meals quickly and efficiently. Abby was rescued as a newborn on July 21, 2007 in northern Santa Barbara County and transported to SeaWorld San Diego, where she was hand-raised as an exhibit animal. She came to the aquarium in June 2012 on indefinite loan as an exhibit animal and potential surrogate mother.

In 2010 **Kit** debuted on exhibit at 11 weeks old – at that time she was the youngest pup to be raised on exhibit. She was rescued in Morro Bay in January 2010 by a sea otter biologist with the California Department of Fish and Game who observed her vocalizing and trying to climb on some of the adults, with none responding positively. We featured Kit in our “Otter U” stories and videos, and she became a successful companion to many rescued sea otters that we eventually returned to the wild. We transferred Kit to SeaWorld San Diego in June 2011 to hone her social skills. Now she’s back as a young adult. Earlier this year, we were thrilled when Kit bonded to her first-ever stranded pup.

We rescued 4-year-old **Gidget** in October 2008 and transferred her to Aquarium of the Pacific about two weeks later after determining she couldn’t be raised for release to the wild. Now she’s back in Monterey as an exhibit animal and another potential surrogate mother. We’re working with this shy animal to improve her mothering skills, such as efficiently handling a live crab to feed herself and a pup without getting pinched.

Ivy’s our youngest animal and has a lot to learn. At nearly 1½ years old, she must adapt to the frequently changing dynamics of the exhibit population, especially when other animals leave to raise wild pups behind the scenes, then rejoin the exhibit months later. If Ivy adjusts well, she too will become a companion to wild otters behind the scenes. We rescued Ivy in November 2011 as a 2-week-old pup. For a variety of reasons we determined that it was best for her to be raised as an exhibit animal. We hope when she becomes an adult at 3 years old that she displays appropriate maternal behavior and can also serve as a surrogate mother.

[Back to Top](#)

SEA OTTER RESEARCH AND CONSERVATION AT THE MONTEREY BAY AQUARIUM

The Sea Otter Research and Conservation program at the Monterey Bay Aquarium works to ensure the continued survival of the southern sea otter, a threatened species in California's coastal waters, by supporting the activities outlined in the federal government's *Final Revised Recovery Plan for the Southern Sea Otter*. The aquarium's sea otter team has been studying and trying to conserve the southern sea otter since 1984 by rescuing, treating and releasing ill or injured otters; raising and releasing stranded pups through its surrogate program; caring for sea otters that can't return to the wild; and conducting scientific research. The program employs a staff of nine, including a veterinarian skilled in sea otter medicine and supports a volunteer corps of more than 100 people. The program has three major components: animal care, research and zoological management, conservation and advocacy.

Over the years, the aquarium has fully integrated its sea otter exhibit – home to rescued sea otters that cannot be returned to the wild – with the Sea Otter Research and Conservation program. Exhibit animals serve as surrogate mothers or companions behind the scenes for rescued otter pups and juveniles. Some stranded otter pups are raised on exhibit by surrogate mothers, then find homes at other aquariums and zoos across North America. Studies involving otters in the exhibit contributes to a basic understanding of sea otter physiology, and helps in recovery efforts for the wild sea otter population.

Rescue and Care of Stranded Sea Otter Pups

The aquarium's sea otter program rescues and treats ill, injured and stranded sea otters with the aim of returning them to the wild. Program staff and volunteers respond to all calls regarding sea otters in distress. When a report of a stranded sea otter is received, staff and volunteers, or colleagues at collaborating facilities, go to the scene, assess the physical environment and the condition of the animal, and determine whether the otter requires assistance. If necessary, the animal is placed in a kennel and transported to the aquarium for care. Although the program handles sea otters of all age classes, many of the rescued animals are pups.

The first priority is to reunite a pup with its mother. The rescue team, working from shore or aboard a boat, move around with a vocalizing pup and listens if an adult female responds by vocalizing in return. If so, the team places the pup as close to the adult female as possible and waits until she retrieves the pup and the pair swim away. Only a few reunites have been successful, as usually the pair is irretrievably separated; most pups are brought to the aquarium for assessment.

Pups in the wild cannot survive on their own if they're separated from their mothers by a storm or the mother dies. Once the decision is made to admit the pup into the program staff and volunteers step in to provide around-the-clock care. When rearing young otters for eventual release in the wild caregivers wear a disguise – a welder's mask and a black cloak – to help prevent otter pups from imprinting on humans.

Until the aquarium began caring for stranded southern sea otter pups in 1984, virtually nothing was known about how to keep pups alive once they became separated from their mothers. Over the past quarter century, aquarium staff and veterinarians have developed diets and care protocols that have resulted in a high survival rate for stranded pups.

Human caregivers provide a formula refined over time by the aquarium team, and groom the pups so their fur will provide proper insulation from the chilly water. At about two months of age, pups are fully weaned onto solid food—usually clam meat, shrimp and squid, and eventually live clams, mussels and crabs. Once fully weaned, a pup is introduced to one of the surrogate mothers from the aquarium's sea otter exhibit.

A bond forms between the pups and their surrogate sea otter mothers – one that provides pups with a sense of security and facilitates learning and social development. Pups solicit solid food from their surrogate mothers and climb onto them to stay dry. The surrogates groom the pups and teach them essential behaviors they'll need to survive in the wild.

At about six months of age, juvenile sea otters receive a surgically implanted radio transmitter with a specific frequency that allows the sea otter program staff to track them in the wild. After allowing the pups a week or two to heal from surgery, staff will wean the pup from its mother and prepare the pups for release to the wild.

The Sea Otter Research and Conservation program has developed alliances with other aquariums and wildlife rescue facilities in California and beyond to assist in sea otter rescue and care efforts. In 1989, the aquarium helped establish sea otter recovery centers in Alaska following the *Exxon Valdez* oil spill and brought two orphaned pups to Monterey for care. As a participant in the Oiled Wildlife Care Network, the aquarium's sea otter staff stands ready to contribute its expertise if an oil spill or other environmental catastrophe threatens sea otters along California's coast.

Sea Otter Research

A second major component of the program is sea otter research. The aquarium's exhibit otters have helped researchers learn how much energy sea otters expend diving for food, develop effective medical and surgical procedures, gather baseline data about sea otter growth and development, and document how sea otters are affected by exposure to environmental stressors. Additionally, researchers track sea otter movements along California's central coast, collecting data on time spent diving, socialization and mating behaviors, dietary preferences, tool use and foraging techniques, and births and deaths. Radio telemetry and flipper tag identification helps researchers distinguish each individual otter in the wild. The aquarium also collaborates with several partners – universities, state and federal agencies, and wildlife advocacy organizations – on sea otter research and conservation projects.

Aquarium researchers have completed and published results from several long-term studies of wild otters, and continue to study basic sea otter biology by concentrating on research with captive populations. The researchers continually analyze statistics on sea otter care techniques and share results with other institutions housing sea otters, so that protocols can be refined and improved.

Researchers regularly assist biologists with the U.S. Geological Survey, California Department of Fish and Wildlife and U.S. Fish and Wildlife in capturing, tagging and obtaining biological samples from sea otters along the Central Coast to establish baseline data on blood parameters and disease.

The aquarium's sea otter staff and volunteers participate in the comprehensive biannual census of California sea otters. To help understand the many causes of mortality among the wild sea otter population, the aquarium assists in retrieving sea otters that die and wash ashore, and helps facilitate post-mortem examination of these otters.

Zoological Management, Conservation and Advocacy

The Sea Otter Research and Conservation program is a leader in establishing zoological management programs for southern sea otters in U.S. zoos and aquariums. The program is responsible for coordinating a network of other zoos and aquariums that either house sea otters or participate in sea otter conservation. This network is crucial for improving general care programs, cooperative research programs and live-stranding programs. Today, more than 30 pups rescued by Monterey Bay Aquarium staff are inspiring millions of people at a dozen top aquariums and zoos across the U.S.

The aquarium team has advanced a comprehensive federal permit and authorization process, through the U.S. Fish and Wildlife Service, which makes it easier for zoos and aquariums to contribute toward the recovery of the southern sea otter population.

The aquarium also participates in policy and legislative activities that support sea otter conservation and recovery by providing information to lawmakers, supporting or opposing specific legislation, and undertaking outreach initiatives with the public. The aquarium's sea otter exhibit inspired legislation that created the California Sea Otter Fund on the state's income tax form, allowing California taxpayers to make voluntary contributions in support of sea otter research aquarium.

Program Funding

The Monterey Bay Aquarium allocates nearly \$1 million each year to its Sea Otter Research and Conservation programs. Support comes from donations, contributions from sponsoring individuals, the aquarium's endowment fund and from grants by businesses and foundations.

You can find out more about the aquarium's sea otter research and conservation work by visiting the Research and Conservation link at www.montereybayaquarium.org/cr/sorac.aspx?c=ln.

[Back to Top](#)

FACTS ABOUT SOUTHERN SEA OTTERS

RANGE: Sea otters (*Enhydra lutris*) once ranged along the Pacific Rim from Japan to Baja California, numbering 150,000 to 300,000 animals. Fur traders seeking their lush pelts hunted them to the brink of extinction in the 18th and 19th centuries. Sea otters now range from Alaska to California's central coast. The populations in Alaska (northern sea otters, *Enhydra lutris kenyoni*) and in California and Oregon (southern sea otters, *Enhydra lutris nereis*) are considered geographically separate subspecies.

POPULATION: Historically, as many as 20,000 southern sea otters may have lived along the California coast and Baja California. Wild populations have struggled to recover after being decimated by the fur trade. In January 1977, the southern sea otter was listed as "threatened" under the federal Endangered Species Act. The 2012 census recorded 2,865 total southern sea otters, bringing the three-year running average to just below 2,800 animals. Long-term trends suggest the population recovery has reached a plateau.

THE SURVIVORS: Today's California sea otters are descended from a small colony found along the isolated Big Sur coast that survived fur hunters. Biologists discovered them in the early 1900s near Point Sur; their existence became widely known in 1938, after the opening of U.S. Highway 1.

HABITAT: Sea otters are found in coastal waters including rocky shores, wetlands and sandy sea bottoms; in ocean depths less than 130 feet where there's an abundance of food and kelp canopy.

A RECENT SPECIES: Sea otters evolved as a species only 5 to 7 million years ago. They are one of the smallest marine mammals but one of the largest members of the Mustelidae family, a group that includes freshwater otters, weasels and badgers. Adult male southern sea otters weigh approximately 65 pounds; females weigh about 45 pounds. They can grow to be 4 ½ feet long.

THICK FUR: Sea otters have the world's densest fur – up to a million hairs per square inch in some places. By comparison, humans have about 100,000 hairs in total on the head. Unlike other marine mammals, sea otters lack an insulating layer of blubber, and are dependent on their thick fur to maintain a body temperature of approximately 100°F in ocean waters that can be 35°F to 60°F.

UNIQUE PHYSIQUE: Sea otters' long whiskers help them detect vibrations in murky waters; sensitive forepaws with retractable claws aid in grooming, locating and capturing prey underwater and in using tools; webbed hind feet act more like flippers, helping propel sea otters through the water; the long, flat tail is used as a rudder and offers additional propulsion; they have blunt teeth designed for cracking and crushing shellfish; and the ability to close their nostrils and small ears prevents water from entering these openings during dives.

HEFTY EATERS: A high metabolic rate lets sea otters convert food into warmth. It also means otters must eat a lot to maintain their body temperature in cold ocean waters – up to one-quarter of their body weight a day in the wild (11 to 16 pounds) just to stay alive.

DEEP DIVERS: When diving for food, sea otters have been known to go as deep as 330 feet, and to remain underwater for up to five minutes. A typical feeding dive lasts just a minute or two, in waters less than 60 feet deep.

VARIED DIET: California sea otters eat a variety of marine invertebrates including shellfish, sea urchins, sea stars, squid and snails. Aquarium researchers have learned that many individual otters specialize in only two to four of the more than 30 food animals available to them – and that food preferences may be passed on from mother to pup.

KEYSTONE SPECIES: Sea otter are considered a keystone species because they are critical to the health and stability of the nearshore marine ecosystem. The species is an apex predator of this ecosystem, living at the surface and underneath the water, often in kelp forests, consuming the bottom-dwelling bivalves and invertebrates in rocky crevices or on the sandy seafloor. Sea otters are also considered a sentinel species since they feed and live near the coast, and often are the first predators exposed to pollutants and pathogens washed down from the coastlands. Their health reflects the health of the nearshore ecosystem.

TOOL USERS: Sea otters use rocks to crack open hard-shelled prey on the surface, either setting a rock on their stomachs while floating on their backs or holding rocks between their forepaws to pound their prey. Abalone- and urchin-eating otters also use rocks to dislodge these tenacious animals from their underwater footholds.

THE FUTURE: The recovery of sea otters in California remains uncertain. Because of their small population and limited geographic distribution, sea otters remain vulnerable to infectious diseases and environmental pollutants, along with the impacts from a major oil spill. Recently there have been increased white shark mortalities too. Scientists and wildlife managers are troubled by the lack of increase in the wild sea otter population, despite decades of protection.

[Back to Top](#)