

## Saving California's seals and sea lions

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Credit: PLOS Blogs

We tend to think of famine in human terms. But animal populations also experience wide-spread hunger, and the hundreds of emaciated <u>young</u> <u>seals and sea lions stranded</u> on California beaches in the past year were a poignant example.

Fortunately, a large team of citizen scientists at <u>The Marine Mammal</u> <u>Center</u>—an animal hospital and research institute north of San Francisco—were ready for the challenge. Twenty-eight crews of 15-20 people worked day and night shifts to rescue and rehabilitate the starving



pups and yearlings. By July, 2016, about 1200 volunteers and 50 staff members had fought to save 380 sea lions, 220 elephant seals, 120 harbor seals, and 20 Guadalupe fur seals.

Dr. Shawn Johnson, Director of Veterinary Science at the Center, says the age of the animals was often hard to determine, with nine-month old pups weighing not much more than newborns. "They were all skin and bones and no fat," he said. "Their organs had stopped working. Their GI tract wasn't working. They might have severe ulcers and hypoglycemia."

The problem can be traced to a <u>prolonged period of unusually warm</u> <u>water temperatures</u> lingering near the coast of California. In response, temperature-sensitive fish like anchovies and sardines –important food sources for sea lions – migrate further north or further off shore, away from the warm waters. As a result, adult <u>sea lion</u> females have to hunt farther and have less milk to nurse their young. El Niño patterns have caused these warm waters to persist and also result in severe storms sweeping across beaches and separating mothers and pups.





California sea lion adult female with underweight pup. Credit: NOAA Fisheries

Significantly, 2016 is the fourth consecutive year of mass sea lion strandings along the coast of California. Experts at NOAA (National Oceanic and Atmospheric Administration) Fisheries call this an <u>unusual mortality event</u> because of how early in the year the pups were stranding and how many there were. Moreover, researchers visiting sea lion breeding areas in the Channel Islands in 2015 found that pup weights were the lowest ever documented in forty years of research.

Center volunteers rescue sick, orphaned or injured marine mammals and bring them to the Center. At the center, veterinarians clean the animals' wounds and give them IV fluids and medications. Volunteers also tube-feed young seal pups up to four times a day and train them to hunt fish and survive on their own, with a goal of releasing them to the wild as their conditions improve.

Neither the rescue nor the research could be done without the Center's staff of volunteers. Giancarlo Rulli, who now works full-time at the Center, started some ten years ago when he was in high school, caring directly for animals—and helping with the pile of dishes that accumulates when you feed so many every day. "Volunteers are the backbone of what we do," Giancarlo says. "Last year, they logged in 170,000 hours!"

Veterinary interns and visiting scientists also do research at the Center. Today, 40% of research papers in North America on marine mammal health comes from work done here. Moreover, the innovative techniques pioneered at the Center are being used to help marine mammals around



the world—including the endangered monk seal in Hawaii, harbor seals in Alaska, and the gray seal in the Atlantic Ocean.

For more information about The Marine Mammal Center, for tours, as well as opportunities to volunteer and donate, call (415) 289-7325 or go to their website. To report a stranded seal, call (415) 289-SEAL. For those who visit or live along the California coast, the Center reminds you that the best thing you can do for wild animals is to keep your distance and alert experts if you see one in distress.

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