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The Marine Mammal Center Participates in National Scientific Symposium

Dr. Frances Gulland to speak about Domoic Acid Intoxication of California sea lions

(SAUSALITO, Calif. – February 17, 2006) - Dr. Frances Gulland, Director of Veterinary Science at The Marine Mammal Center in Sausalito, California, will speak at the American Association for the Advancement of Science (AAAS) Annual Meeting in St. Louis, Missouri on February 17. In this symposium entitled: *Rising Tide of Ocean Plagues*, Dr. Gulland will present a look at domoic acid intoxication in California sea lions and the concern over the increasing numbers of harmful algal blooms that negatively impact sentinel species like sea lions as well as the potential impacts these blooms have on human health.

The first recognized outbreak of domoic acid toxicity in humans happened in Canada in 1987. Approximately 150 people were reported ill with neurological and gastrointestinal symptoms after ingesting contaminated cultivated blue mussels. In 1998, the first confirmed domoic acid poisoning of marine mammals occurred on the California coast. During a month long period, 70 California sea lions stranded along the central California coast near San Luis Obispo – all suffered from the clinical symptoms of the poisoning, which include head weaving, tremors and convulsions. The majority of the affected animals were adult females of which 50 percent were pregnant. No adult males were affected. Two years later a similar outbreak occurred in the same region – this time 187 sea lions stranded with the poisoning. More than half of the sea lions affected with the biotoxin in both of those years died. Outbreaks continue in southern and central California waters with nearly 1,000 sea lions affected in 2005.

The origin of the domoic acid responsible for this mortality event was a bloom of *P. australis* that developed in Monterey Bay in May of 1998. Anchovies collected during the peak of the bloom had high levels of domoic acid in tissues. “California sea lions are high level predators, feeding on species that often enter the human seafood market such as anchovies, sardines, salmon and squid,” said Dr. Frances Gulland. “These sub-lethal effects of domoic acid on California sea lions are likely to be similar to effects that could occur in humans if they were to be exposed to similar levels of this toxin by eating contaminated seafood.”

Since 1994, Dr. Gulland has provided medical care for thousands of seals and sea lions at The Marine Mammal Center, has published over 100 peer-reviewed articles, and is coeditor of the *CRC Handbook of Marine Mammal Medicine*. She chaired the working group on Marine Mammal Unusual Mortality Events for six years, sits on Recovery Teams for the Hawaiian monk seal and southern sea otter programs, and is a member of the committee of scientific advisors to the Marine Mammal Commission.

The Marine Mammal Center is a nonprofit hospital headquartered in Sausalito, California. Staff and volunteers are dedicated to the rescue and rehabilitation of ill and injured marine mammals, to research about their health and diseases and to public education about marine mammals. Since 1975, more than 11,000 California sea lions, elephant seals, porpoises, and other marine life have been treated, rescued along 600 miles of coastline from Mendocino County to San Luis Obispo County. Staff and volunteers uniquely combine rehabilitation with scientific discovery and education programs to advance the understanding of marine mammal health, ocean health and conservation.

On the Web: www.marinemammalcenter.org

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