Sick, dying sea otters turn up in Morro Bay
Scientists suspect naturally occurring algae bloom poison

Jane Kay, Chronicle Environment Writer
Thursday, April 15, 2004

More than 20 California sea otters, nearly 1 percent of the wild population, have turned up dead or sick around Morro Bay over the past week, most likely the victims of a natural marine toxin, scientists said Wednesday.

The animals have been discovered suffering from seizures or muscle tremors, or comatose. Wildlife experts believe they may have eaten mussels, clams and scallops contaminated with a naturally occurring toxin sometimes found in algae blooms at this time of year.

"It's really, really sad. Everybody loves the sea otters," said Dr. Michael J. Murray, staff veterinarian at the Monterey Bay Aquarium. "It's sad to read about it. It's said to hear about it. It's even sadder to see seizing and comatose sea otters, and to see them lying out on that stainless steel autopsy table."

State and federal agencies are waiting for results of post-mortem examinations on 12 otters and tests on tissue samples to confirm whether to blame the toxin, called domoic acid.

The state Department of Health Services has issued a health advisory, alerting the public not to eat sport-caught shellfish in San Luis Obispo County.

"Unfortunately, we think it's probably a naturally occurring substance, and there's nothing we can do about it," said Dana Michaels, a spokeswoman for the state Department of Fish and Game.

Other marine mammals, such as sea lions and dolphins, as well as birds and humans, are susceptible to nervous system damage from consuming shellfish and fish containing domoic acid.

The southern sea otter is protected as a threatened species under federal law. A 2003 census counted only 2,505 otters between Santa Barbara and Half Moon Bay, its current range.

Biologists say the population must exceed 3,000 for the government to consider it no longer threatened.

Southern sea otters were once plentiful. But the otter has been hunted for its fur, shot by fishermen, hit by boats, snagged by nets, eaten by sharks and contaminated by PCBs, pesticides, sewage and other pollutants.

A year ago this month, 48 otters died, the highest short-term mortality rate in modern times. Those deaths were attributed to marine toxins; parasites, including one linked to cat waste; and shark bites.

But in just one week this year, the Monterey Bay Aquarium and the Marine Mammal Center have been receiving calls from upset beach-goers around Morro Bay who have found more than 20 sick or dead animals.

"The big thing that is alarming is that we're having so many animals dying in such a short time period. We're seeing in the post-mortems very similar changes, suggesting that the same thing is killing the animals," said Murray, the veterinarian.

"We suspect a marine biotoxin, but we're not sure yet. We need to get confirmation on this. We've got the best minds working on it, and we're searching for answers."

Domoic acid is produced by algae called diatoms that collect in algae blooms on the coast. Lilian Busse, a Scripps post-doctoral researcher, said it's unclear what makes algae produce domoic acid.

In recent years, domoic acid has been found in sea water in Monterey Bay, Santa Barbara and Los Angeles.

On Friday, researchers at the Scripps Institution of Oceanography in La Jolla reported that domoic acid was found in sea water as far south as San Diego. The toxin may be responsible for sea lion strandings in Southern California this year, they said.