

Cause of Marine Bird Deaths Still a Mystery

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By James Longton

With several species of birds affected, scientists are working to find an explanation.

HUNTINGTON BEACH - Early last month, the beaches of Orange County saw the onset of a rash of illness and death among a variety of species of marine fowl. With many different birds found suffering within only a week's time, scientists are still looking for a cause.

The first two affected birds brought into the Wetlands and Wildlife Care Center in Huntington Beach were a California gull and a Brandt's cormorant. After five days of blindness and seizures, and three days of recovery, the gull was released into the wild. Despite intensive treatment, the cormorant died after just a few days.



TLC - With intense care and close attention, workers at the Wetlands and Wildlife Care Center were able to save a protected American avocet.

Photo by: Susan Kaveggia photo

Five days later, the care center received three more seizing birds within an hour. An American avocet had fallen from the sky into the yard of a private residence next to the Santa Ana River in Costa Mesa, an eared grebe was found near the Newport Beach Pier, and a Western grebe was brought in from just north of the Santa Ana River mouth in Huntington Beach.

Over the next few days, the center received numerous calls from the public about dead and dying birds along the shore. An estimated 25 to 30 dead cormorants were reportedly found in Newport Beach between the Santa Ana River and the city's pier. The public brought in these animals, though already dead, making it difficult to assess the cause of the problem.

The first to offer help was the research team from the Caron Laboratory at the University of Southern California (USC).

Research assistant Professor Astrid Schnetzer ran domoic acid analyses on the blood and stomach contents of several of the birds brought into the care center that were seizing and displaying other symptoms potentially indicative of toxic algae poisoning. Algal species that produce domoic acid can bloom along the Orange County coastline, and if planktivorous fish, such as sardines and anchovy, consume the algae, they can become a domoic acid-contaminated food source for seabirds and sea lions.

Only one of seven samples tested positive for domoic acid, Schnetzer said.

"It's not enough to suggest that this is algal toxin-related," she said. "Most of the birds that came in had been dead for days, which makes it very hard to detect this water-soluble neurotoxin. We really need a fresh sample to make an accurate assessment."

Debbie McGuire, wildlife director at the care center, sent samples to other toxicologists and tissue samples were sent to the ANTECH Diagnostics Laboratory in

Irvine for microscopic evaluation in hopes of identifying a pattern. Lab techs were looking for evidence of fungal bacteria, and tests came back negative for organic phosphates and neoplasia.

Of the birds that were brought in alive, only 10 percent recovered and were released into the wild.

"As of yet, we do not know the exact cause of these deaths, but what we do know is that something acute and neurological happened to the affected birds," McGuire said. "It's interesting that we had 14 different species that were affected the same way by the incident, and yet they all have different eating habits."

With the heavy rainfall that came just before the onset of the illness in these different indigenous species to the Santa Ana River mouth, scientists are speculating that the problem may be riverborne and could have originated as far up the river as the Prado Dam.
