Domoic Acid in Sea Lions

Thursday June 15th is a special day as it’s the Birthday of all California sea lions—this species has synchronized births and they are all born on or within two weeks of June 15th.

This year, the 15th also marks a difficult time for sea lions as we are experiencing a Domoic Acid (DA) bloom in Southern California and the marine mammal stranding and response network are all reporting adult sea lions who are suffering from DA poisoning.

Domoic Acid, also known as “Red Tide” is a toxin created when the warmer water encourages the accelerated growth of Pseudo-nitzschia, an algae found in coastal waters. The blooms are red in color and actually make the water appear red. DA blooms are dangerous for marine mammals and can occur when a perfect storm of warm sea surface temperatures, nutrient rich upwelling and runoff from farms and yards reach the ocean. California Sea Lions are the sentinels of the sea and often present with symptoms prior to analysis of water quality samples show a bloom. The algae are eaten by fish and shellfish, making them toxic to the larger mammals who feed on the original consumers in large numbers. Much like rodenticide, which becomes increasingly deadly with each step up the food chain as concentrations increase, DA is deadly to sea lions, dolphins, and whales. In fact, people are discouraged from eating shellfish (especially oysters, mussels, crabs, squid) captured during a Red Tide as they can cause vomiting, nausea, diarrhea and even death. The California Department of Public Health and the California Department of Fish and Wildlife manage the monitoring of DA in human-consumed foods.

For sea lions, the effects of DA poisoning can manifest in sea lions suffering brain damage. The animals may have seizures, or be seen “stargazing” as in the photo above. They have difficulty finding food and may appear lethargic and disoriented. Females bearing young may lose their fetus or give birth prematurely.

In May and June of 2023, we have responded to 16 calls for sea lions needing help, all of whom were suffering from domoic acid poisoning.

If you see an adult California sea lion in distress, do not approach them. DA causes erratic movement and your safety is first and foremost. Instead, call us or the marine rescue team in your area so that we may come out to the beach and help the animal.