



Contacts: Connie Barclay (301) 713-2370
Wende Goo (808) 983-5333

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NOAA FISHERIES SERVICE RELEASES FINAL REPORT ON 2004 STRANDING OF MELON-HEADED WHALES IN HAWAII

NOAA Fisheries Service released the final report today on the mysterious stranding event of melon-headed whales off the coast of Hawaii in July 2004. Although the exact cause of the stranding is unknown, scientists concluded that navy sonar exercises may have played a role in the stranding.

“This event happened very quickly and the response to assist these animals was outstanding,” said Dr. Bill Hogarth, NOAA Fisheries Service Director. “There was a successful team effort to get these whales out of the bay. Following this event we have carefully completed the analyses of the necropsy results to determine the cause for this stranding.”

On July 3, 2004, more than 150 melon-headed whales congregated in the shallow waters of Hanalei Bay, Kauai, Hawaii. NOAA Fisheries notified the local marine mammal stranding network, and placed veterinarians and a response team onsite to assist the whales. The response team used canoes and kayaks to form a flotilla and gently urge the whales back to open water. The whales were successfully moved out of the bay, with the exception of a single young calf that was found dead on July 5, 2004.

Veterinary experts conducted a full necropsy on the calf, and NOAA Fisheries scientists investigated several potential causes for the stranding event, including weather and oceanographic conditions, as well as the U.S. Navy’s RIMPAC sonar exercises, which took place off the coast of Hawaii on July 2 and 3, 2004.

“Our analyses indicate there was no significant weather, natural oceanographic event, or known biological factors that would explain the animals’ movement into the bay nor the group’s continued presence in the bay,” said Dr. Teri Rowles, NOAA Fisheries Service’s lead marine mammal veterinarian and lead author of the report. “Results from the necropsy of the calf suggest that it died as a result of malnutrition, dehydration, and stranding-related stress. We don’t know why the calf was malnourished or left behind when the group was herded out of the bay.”

At the time of the stranding, the Navy was conducting RIMPAC exercises in the area, and NOAA Fisheries Service formally requested that the Navy suspend its activities temporarily, in hopes that the whales would move farther out to sea. The Navy cooperated and ceased operations of its active sonar, and the stranding network proceeded to herd the animals out of the bay.

“Sound propagation models suggest that sonar transmissions were likely detectable over a large area around Kaua’i for many hours on the day prior to the stranding, as well as within Hanalei Bay when the animals were there,” said Dr. Brandon Southall, NOAA Fisheries Service’s Acoustics Program Director. “Active sonar transmissions on the 2nd and 3rd of July are a plausible, if not likely, contributing factor to the animals entering and remaining in the bay.”

NOAA Fisheries Service worked with their partners around the country to conduct a multi-organizational, interdisciplinary investigation into the circumstances surrounding this anomalous event and the potential cause(s). Since the event, scientists from several organizations have been analyzing data, evaluating environmental parameters including acoustic sources and oceanographic conditions, and interpreting the results to determine the circumstances surrounding this event.

According to NOAA Fisheries Service scientists, in many cases, scientists never learn the exact cause of a stranding event. However, over the past decade they have found a number of things can cause marine mammals to strand including: diseases such as parasite or viral infections, malnutrition, biotoxins from harmful algal blooms, traumatic injuries due to ship strikes or fishery entanglements, acute noise in the ocean, tidal fluctuations, or extreme weather events.

In cases of mass strandings, NOAA Fisheries Service works with partners from around the country to coordinate stranding response and necropsy examinations, to try to determine the circumstances and cause(s) for stranding events.

Melon-headed whales are deep-water cetaceans, and it is unusual for them to gather so close to shore. Although melon-headed whales have mass stranded in other parts of the world, there have been no reported incidents in Hawaii.

NOAA Fisheries Service is dedicated to protecting and preserving our nation’s living marine resources and their habitat through scientific research, management and enforcement. NOAA Fisheries Service provides effective stewardship of these resources for the benefit of the nation, supporting coastal communities that depend upon them, and helping to provide safe and healthy seafood to consumers and recreational opportunities for the American public.

NOAA, an agency of the U.S. Department of Commerce, is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and providing environmental stewardship of the nation's coastal and marine resources. Through the emerging Global Earth Observation System of Systems (GEOSS), NOAA is working with its federal partners, 61 countries and the European Commission to develop a global network that is as integrated as the planet it observes, predicts and protects.

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NOAA: <http://www.noaa.gov>

NOAA Fisheries Service: <http://www.nmfs.noaa.gov>

<http://www.nmfs.noaa.gov/pr/health/mmume/event2004jul.htm>

<http://www.nmfs.noaa.gov/strandings.htm>

