

Southern Resident Killer Whale L112 Stranding Progress Report

May 15, 2012

The Northwest Region Marine Mammal Stranding Network, administered by NOAA Fisheries, Protected Resources Division in Seattle, Wash., continues to investigate the death of a juvenile killer whale that stranded on the Long Beach peninsula on Feb. 11, 2012 and identified as Southern Resident, L112.

Investigative Team: Dr. Deborah Duffield, Portland State University; Jessie Huggins, Cascadia Research Collective; Dyanna Lambourn, Washington Department of Fish and Wildlife Marine Mammal Investigations; Amy Traxler, The Whale Museum; Dr. Joe Gaydos, University of California SeaDoc Society; Dr. Stephen Raverty, Animal Health Center in British Columbia; Tori McKlveen, VCA Veterinary Specialty Center of Seattle; and Brad Hanson, NOAA Northwest Fisheries Science Center. The Investigative Team met at NOAA on May 10, 2012, to review environmental and diagnostic findings to date and to discuss the case.

Gross Examination: Gross examination disclosed extensive bruising and swelling on both sides of the head and neck, more pronounced on the right, and continuing down the right side of the body. Although no skull fractures were seen during examination of the head, there was fragmentation of the brain and increased fluid in the right side of the skull. The significance of this finding is under investigation.

Sample Analysis:

Microscopic Examination: Due to advanced tissue degradation, the presence of hemorrhage (blood outside of vessels) couldn't be confirmed by microscopic evaluation. Further tests are pending that might assist with our ability to confirm hemorrhage microscopically and gain further insights as to the time of injury and subsequent death of the animal, as well as the detection of possible fat embolization (dislodged blubber fat cells can be transported by blood to internal organs). The latter has been associated with traumatic injuries in cetaceans and would indicate antemortem trauma.

Bacteria and Viruses: A complete screen for infectious agents did not detect any significant disease-causing organisms. The advanced decomposition may have hindered detection or recovery of some agents; however, there was no indication of significant inflammation or infection within the examined tissues.

Additional pending studies: Review of environmental conditions and possible presence of algal blooms at the time and in the vicinity of the stranding have been requested. Sources of acoustic data have been identified and the analysis of this

data will not be available until late summer 2012. Laboratory analysis to determine the presence of algal toxins, contaminant loads, and heavy metal burdens in tissues are underway. A closer examination of the skeleton for evidence of blunt force trauma will be conducted after cleaning is complete.

CT Scan: The head was collected, frozen, and scanned at the VCA Veterinary Speciality Center of Seattle. The computed tomography (CT) data has been collected and reviewed by veterinary radiologists Dr. Tori Mcklveen, VCA, and Dr. Sophie Dennison-Gibby, NOAA Fisheries. The scan of the head was completed and did not show any fractures of the skull. A recent secondary CT scan of ear bones confirmed findings consistent with the presence of parasites observed during the gross examination. Parasites are common in cetaceans and their presence in this case are considered incidental and unlikely related to the cause of stranding.

Environmental Conditions: Ocean current conditions at the time this animal died were largely influenced by eddies flowing northward from the mouth of the Columbia River. This indicates that the animal likely died near the Columbia River or to the south and drifted before being cast ashore on Long Beach.

Requests for Information on Human Activities: NOAA Fisheries has contacted a variety of government agencies and other sources in an attempt to identify whether human activities may have contributed to the injuries that were observed. The United States Navy responded to our request for information, and has no records indicating that Navy units used sonar or explosives between Feb. 1 and Feb. 11 within the Northwest Training Range Complex, which includes the coastal area between Newport, Ore., and Cape Flattery, Wash. The Royal Canadian Navy confirmed the use of sonar and two small under water charges by HMCS Ottawa on Feb. 6, 2012, as part of an anti-submarine warfare exercise near Constance Bank and in the Strait of Juan de Fuca. HMCS Ottawa activities included following a Marine Mammal Mitigation Policy prior to and during the period when they were using ships' sonar and prior to deploying the charges. Whales were not observed during that time. The Department of the Army confirmed with all military organizations resident on Joint Base Lewis-McChord (JBLM) that no military training involving JBLM units took place during the timeframe of the stranding. The Fishing Vessel Owners' Association responded that vessels are not typically on the water and fishing in February, and reported no interactions between whales and fishing vessels. Responses are pending from the United States Coast Guard and the United States Army Corp of Engineers.

Preliminary Conclusion: The grossly noted hemorrhage around the head and neck is consistent with physical trauma, which would have been sufficiently severe to account for the loss of this animal. The cause of this injury remains undetermined and investigations are ongoing.

Media Requests: Information collected by the Stranding Network and NOAA Fisheries Protected Resources Division is being shared with the NOAA Fisheries Office for Law Enforcement, which is conducting an independent enforcement investigation of the event. Media inquiries for this case can be directed to NOAA Public Affairs, [Brian Gorman](#), at 206-526-6613, who can provide updates as information becomes available.