

STRANDING EVALUATION OF SOUTHERN RESIDENT KILLER WHALE L-112, BY THE NORTHWEST MARINE MAMMAL STRANDING NETWORK

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ABSTRACT

On February 11, 2012, a juvenile female southern resident killer whale, L-112, stranded just north of Long Beach, Washington. The whale was in good nutritional condition. Autonomous passive acoustic recorders off the coasts of Washington, Oregon and California indicated that the L subgroup to which L112 belonged were near Pt. Reyes, CA on January 30, 2011, Ft. Bragg, CA on January 31, off Westport, WA on February 5, 2012 and near Newport, OR on February 20-21, 2012. These data and drift patterns for coastal Oregon and Washington waters suggested that L-112 had likely died off northern Oregon or in the Columbia River plume. An intensive series of diagnostic studies were initiated. Gross examination revealed extensive subcutaneous bruising on the dorsolateral aspects of the head, tracking to the throat and anterior insertion of the right pectoral fin. Microscopic assessment of sampled tissues was hindered due to advanced autolysis; there was generalized gas accumulation in most major organs. Nematodes (*Crassicauda* sp.) were evident in the right peribullar space with associated chronic inflammation. There was mild nonspecific and multisystemic chronic inflammation. Results from extensive bacterial, viral, molecular and toxicological tests were inconclusive. Head imaging studies (CT scans) and subsequent gross dissection revealed disruption of the cerebral hemispheres with marked accumulation of clear fluid and variably extensive hemorrhage. Examination of the axial skeleton revealed incomplete ossification of the dorsal vertebral process of C7 and Computed Tomography (CT) suggested that this defect was a congenital anomaly and likely unrelated to its death. PCR of feces indicated the presence of Chinook and halibut L-112's diet. *Anisakis* sp. Cf. *A. simplex* also were identified in the stomach. Blunt trauma to the head and neck is the prime consideration for the immediate cause of death of this whale. In contrast to initial media reports, no military activities involving sonar or explosives were undertaken in the immediate vicinity of this animal, at the time of death. There was no gross indication of fisheries interaction. While the extensive evaluations were all consistent with

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trauma being the cause of death, the exact type or source of the traumatic injuries remains unknown.

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