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## GENETIC FINDINGS SHOW ORCA CALF BELONGED TO THE "TRANSIENT" KILLER WHALE POPULATION

**Vancouver, B.C.** – Vancouver Aquarium researchers reveal genetic results from a killer whale calf carcass found near Sooke on May 4. The calf was a member of the so-called *transient* killer whale population. Conservation biologists consider this a positive finding and are relieved the calf is not from the endangered BC *southern resident* killer whale population.

On May 4, Fisheries and Oceans Canada (DFO)'s Marine Mammal Response Network responded to a public call regarding a deceased orca calf washed ashore near Sooke on Vancouver Island. DFO attended the scene to organize the immediate transfer of the carcass to the BC Animal Health Centre in Abbotsford for necropsy.

The calf appears to have died within a day or two of birth. A detailed necropsy showed its lungs were partially inflated and its umbilical cord was still attached. The calf measured 2.4 metres in length and weighed 220 kilograms. A small sample of skin tissue was provided for genetic analysis to Dr. Lance Barrett-Lennard, senior marine mammal scientist at the Vancouver Aquarium.

Barrett-Lennard and his Aquarium research team extracted pure DNA from the skin tissue and compared a portion of the genetic sequence with hundreds of previously-collected samples of transient and resident killer whale DNA. The genetic analysis determined the orca calf to be a transient killer whale.

Dr. Lance Barrett-Lennard says, "While it is always troubling to hear about young killer whales dying, there is some relief that the calf was not a member of the critically-endangered southern resident population, where every death moves the group closer to a breaking point".

There are two types of killer whales found in nearshore waters of BC: mammal-eating transient killer whales and fish-eating resident killer whales. Researchers were concerned the calf was from the endangered southern resident killer whale population because its body was found in a location frequented by residents.

Like most whales, killer whale carcasses usually sink to the ocean floor making it rare to find a beached carcass. In 1999, another transient orca calf body was found in the same general area.

Transient killer whales reside atop the ocean food chain thereby accumulating large amounts of persistent organic pollutants (POP's) in their bodies. When giving birth, a female orca will pass on most of its own organic pollutants onto the calf, decreasing its chance of survival. Orca calves have an average survival rate of 60% in the first six months of life.

DFO began the first systematic research on killer whales in the world in the early 1970's, and has collaborated closely with the Vancouver Aquarium on this work since the early 1980's. In that time, nearly 500 skin samples have been collected from killer whales from throughout the north Pacific. DNA

extracted from these samples showed that resident and transient orcas have not mated for hundreds of generations and are genetically different, despite sharing the same habitat. The DNA has also been used to determine mating patterns and assess inbreeding.

Vancouver Aquarium researchers operate a number of programs related to marine mammal and cetacean research, including the B.C. Cetacean Sightings Network which collects and compiles sightings reports submitted by the public. These sightings data create a clearer picture of cetacean habitat use and aid understanding of these creatures and their requirements. There is further information at [wildwhales.org](http://wildwhales.org).

The Aquarium also operates the B.C. Wild Killer Whale Adoption Program. By joining, members support research on wild killer whales which leads to a better understanding of the whales, their place in the ocean ecosystem, and conservation measures necessary to protect them. To learn more about adopting a killer whale, visit [killerwhale.org](http://killerwhale.org)

#### **About Fisheries and Oceans Canada**

For more info, visit [www.pac.dfo-mpo.gc.ca/index-eng.htm](http://www.pac.dfo-mpo.gc.ca/index-eng.htm)

#### **About Vancouver Aquarium**

The Vancouver Aquarium is a global leader in connecting people to our natural world, and a self-supporting, non-profit association dedicated to effecting the conservation of aquatic life through display and interpretation, education, research, and direct action. Learn more at [www.vanaqua.org](http://www.vanaqua.org).

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