

## **Appendix B - Facts about Lolita and the species *Orcinus orca***

The killer whale, also known as orca, is the largest species within the family *Delphinidae* (*Cetacea, Odontoceti*), and the world's most widely distributed marine mammal. This species (*Orcinus orca*) has been reported from the tropics to the ice edge, in all oceans and many coastal habitats, occasionally venturing into estuaries and large rivers. Killer whales are not considered threatened or endangered worldwide. However, man-induced disturbances and environmental contaminants put some communities of this top predator species at risk, including Lolita's cultural community, known as the Southern Resident Killer Whales (SRKW), which were listed as endangered under the Endangered Species Act in 2005.

There is pronounced sexual dimorphism in body size, flipper size, and height of dorsal fin within populations. There is wide variation in weight and length and pigmentation among various cultural communities worldwide, but on average adult females' average body length is just over 20 feet and males average about 23.5 feet long. On average females weigh around 7,000 pounds, while males average about just under 9,000 pounds.

Newborns are approximately 6 to 7 feet long and usually weigh just over 300 pounds. Typically a single calf is born after a gestation period of about 17-18 months, and is nursed for about 18 months (Asper, et al, 1988).

Over the past four decades, beginning in the Pacific Northwest, several populations of these whales have been extensively studied employing individual recognition (photo-identification) methods. As a result, they are now among the best known species of cetacean. The species has been maintained in marine parks since the mid-1960's (Hoyt, 1990; Small and DeMaster, 1995).

Some populations travel through thousands of miles of habitat, while others are more residential. Within a geographic area, more than one population may occur sympatrically (in overlapping ranges) utilizing different prey resources, and differing in several aspects of morphology (size, body proportion and pigmentation) and vocalization patterns.

Depending on local attitudes, killer whales may be perceived as competitors for resources or charismatic neighbors and indicators of a healthy ecosystem. In the Pacific Northwest over the past four decades, the general perception of these animals has gradually shifted from that of dangerous competitor to fellow inhabitant.

Drawing from evidence concerning adult Pacific Northwest resident killer whales during the capture era (1965-76), combined with the extensive field studies from two decades, Olesiuk, et al, (1990) derived vital parameters as follows: females have a mean life expectancy of 50.2 years, typically give birth to their first viable calf at 14.9 years of age, produce an average of 5.35 viable calves over a 25.2 year reproductive lifespan, and have a maximum longevity of about 80-90 years. Males have a mean life expectancy of

29.2 years, typically attain sexual maturity at 15.0 years of age and physical maturity at 21.0 years, and have a maximum life expectancy of about 50-60 years.

The mating system in this population is apparently polygynous, in a social structure that is formed along matriline with both male and female offspring remaining in the maternal subgroup for life. Matkin (1994) has found a similar social structure in Alaskan resident (fish-eating) whales.

In British Columbia and Washington, approximately 263 killer whales were caught from three orca communities during 1965-76, of which 50 were kept for marine parks or military service. At least twelve died during capture operations, and the remainder escaped or were released.

Lolita was captured on August 8, 1970, during a roundup of all the members of her community, including all three pods. The capture team used boats and aircraft, including underwater explosives, to drive the orcas into Penn Cove on Whidbey Island. The intended destination was Holmes Harbor about 20 miles earlier in the chase, but the whales split into two groups creating a diversion that prevented the group with the young from being herded into the first chosen inlet. Over the course of about two weeks seven young ones of suitable size were kept while the adults were removed from the enclosure. These young orcas were transported by flatbed truck to Seattle and into holding pens along the waterfront, where buyers from marine parks selected from them. The Seaquarium was represented by the late Dr. Jesse White, who chose Lolita because she was "courageous, and yet so gentle." Dr. White first gave his chosen whale the name *Tokitae*, which he understood was an Indian word that meant "beautiful lady." "Tokitae" was reportedly 430cm in length at the time of her arrival in Miami, indicating an age of approximately six years, but subsequent information from Dr. Terry Newby, a marine biologist on site at the time of the captures, indicates that none of the whales removed were that large.