species factsheet

| species introduction |

Common name: Killer whale or Orca

Scientific name: *Orcinus orca*

Killer whales inhabit all oceans of the world. They are the most cosmopolitan of all cetaceans and may be, after humans, the most wide-ranging mammal species on the planet.

Killer whales live in cohesive, long-term social units called pods. A pod is a group of individuals which travel together the majority of the time. Within a pod killer whales establish strong social bonds, of which the association bond is between mother and calf. The hierarchy within a group of killer whales is female-dominant.

Experts identify killer whale populations based on the individual whales' call pattern, body shape, and coloration. As a management tool, scientists categorize a geographically isolated and genetically distinct group of whales as a whale *stock*. Researchers have identified four forms of killer whales in the Antarctic waters which they characterize as "type A", "type B", "type C" and "type D", each with a different distribution. In the eastern North Pacific Ocean, observers have recognized that various groups of killer whales show physical and behavioural differences. These pods of killer whales are categorized into three ecotypes: "transient", "resident" and "offshore".

In some areas, seasonal movements of killer whales are influenced by migration of their prey. In the Antarctic, some populations of killer whales appear to make considerable seasonal movements in response to the advance and retreat of pack ice.

Image by Gerard Lacz from National Geographic

| status in the wild |

The species is listed as “Data Deficient” in the IUCN Red List. The worldwide population of killer whales is unknown. Estimating abundance is difficult due to their vast distribution and their aquatic habits. Nevertheless, a few regional groups of killer whales have been studied rather thoroughly. Experts have estimated killer whale abundance for these regional groups.

| species reproduction |

Killer whales are polygamous: they mate with several partners. After a gestation period of 17 months, a killer whale calf is born in the water. Calves nurse underwater but close to the surface. They generally nurse for about a year, but may continue to nurse occasionally for as long as two years. A female may bear a calf every three to five years.

| species habitat |

Killer whales can be seen in virtually any marine region, from the Equator to polar waters. They have been sighted in the tropics, but they are much more abundant in the Arctic, the Antarctic, and areas of cold-water upwelling. Although they are generally more common in near shore areas and in higher-productivity areas and/or higher latitudes, there appears to be no hard and fast restrictions of water temperature or depth on their range. Although not generally deep divers, foraging killer whales can dive at least 242 meters.

| species food |

Killer whales are opportunistic feeders: they generally eat prey that is most available to them. This includes a wide variety of fishes, squids and marine mammals. The diet of killer whales varies from one region to another. For example type A, type B and type C killer whales eat mostly minke whales (Balaenoptera *spp.*), seals and Antarctic toothfish (*Dissostichus mawsoni*), respectively. Killer whales often hunt cooperatively in pods for food. Using this method they have been witnessed to attack a blue whale (*Balaenoptera musculus*) over 18 meters long. They also hunt individually. For example, in the Antarctic killer whales slide out onto the ice floes to hunt penguins. Or they may slide up onto sand bars or beaches to hunt sea lions.

Killer whales are a top predator. Healthy adult killer whales have no predators. Sharks, however, may prey on older, younger, or sick killer whales.

| threats |

Killer whales have never been consistently exploited on a large-scale basis. They have been hunted on a small scale for their meat, hides, blubber and internal organs. Killer whales are still taken in small numbers in coastal fisheries in Japan, Greenland, Indonesia, and the Caribbean islands. The International Whaling Commission (IWC) declared a moratorium on commercial whaling in 1986. This moratorium allows for the possibility of regulated commercial whaling.

In some areas, killer whales feed in connection with fishing operations, “stealing” fish from the fisherman. Consequently intentional shooting of whales is known to occur.

Both natural and human-made toxins can harm killer whales. Some pollutants enter the ocean food chain and become concentrated in the bodies of killer whales and other marine predators. Persistent bio-accumulating contaminants have been found to present a serious potential risk to some killer whale subpopulations. The total PCB (Polychlorinated biphenyl) concentrations were very high in three killer whales subpopulations. The southern resident and transient killer whales of British Columbia and Washington can be considered among the most contaminated cetaceans in the world.

Habitat disturbance may be a matter for concern in areas inhabited by killer whales and supporting whale-watching industries. Moving boats can disrupt activities such as foraging and resting. Underwater boat noise could affect social and echolocation signals of the whales or otherwise interfere with foraging. Fast-moving boats in the proximity of killer whales also present a risk of collision or injury from propellers.

Large-scale catastrophic oil spills have the potential to cause significant mortality of killer whales. Oil spills may also have an indirect effect by reducing prey abundance.

Due to their dietary specialisation, some populations of killer whales could be especially vulnerable to a reduction of their food supply. Predicted impacts of global climate change on the marine environment may negatively affect certain killer whale subpopulations more than others through changes in prey availability.

| conservation |

The species is in Appendix II of CITES and Appendices I and II of Convention on Migratory Species (CMS). The eastern North Atlantic as well as the eastern North Pacific subpopulations are included in Appendix II of CMS.

Further studies on subpopulation structure, abundance and life history are needed for most regions. Regional subpopulations of killer whales can be small and highly specialised, and therefore vulnerable to over-exploitation and habitat deterioration. Several small subpopulations have already been recognized as having a high risk of extinction. Many similar small subpopulations may exist worldwide but have not yet been fully identified and described. There are likely several subpopulations that qualify for a threatened category, and steps should proceed to assess their status.

| find out more |

- 2013 the IUCN red list of threatened species (2013). www.iucnredlist.org
- Killer whales, a Seaworld Education & Conservation Department publication

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