

Sea Otter

The **sea otter** (*Enhydra lutris*) lives in shallow water areas along the shores of the North Pacific. Its range once extended from Baja California north then west through the Aleutian Islands, to the Kamchatka Peninsula, and south to the northern islands of Japan. In 1742, Vitus Bering's men returned with sea otter pelts from the historic voyage of discovery of Alaska. Interest in these rich furs initiated an era of exploitation which almost wiped out the sea otter. The Tlingit name for sea otters is *Yáxwch'*.

The early Russian settling of Alaska was largely a result of the sea otter fur industry. In 1867, when Russian exploitation had greatly reduced the numbers of sea otters, Alaska was sold to the United States. The few conservation measures that had been instituted by the Russians in their final years of occupation were dropped by the Americans, and hunting intensified. Sea otters became alarmingly scarce. Finally in 1911, when so few animals were left that it was no longer profitable to hunt them (in many areas they were completely exterminated), sea otters were given full protection under the Fur Seal Treaty. The treaty was signed by the United States, Great Britain, Russia, and Japan.

In 1960, the state of Alaska assumed management authority for sea otters. The management program conducted by the state included the successful reintroduction of sea otters to unoccupied habitat in Southeast Alaska, British Columbia, and Washington. The Marine Mammal Protection Act transferred management authority to the U.S. Fish and Wildlife Service in 1972.

Recovery of the Alaska sea otter population in the 1900's was dramatic. Perhaps as few as 2,000 total animals existed in 1911, but by the mid-1970s the Alaska population numbered between 110,000 and 160,000. However, in the last two decades, the south-west Alaska stock of sea otters has declined sharply (over 80% in many locales), most likely due to predation by killer whales. In other parts of Alaska (south-central and southeast), populations generally appear to be stable or increasing. Most of the sea otter habitat in Alaska has now been repopulated. Sea otter populations also exist in the Commander and Kurile islands, British Columbia, Washington, and California.

General Description: Sea otters are members of the weasel family (Mustelidae) and are related to mink and river otters. Adult males weigh 70 to 90 pounds (32-41 kg) with some individuals weighing 100 pounds. Females average 40 to 60 pounds (18-27 kg). Adults may reach a length of 4.5 feet (1.4 m). The hind feet are webbed and are adapted for swimming. The toes on the forefeet are short and stiff, enabling the animal to deftly handle food. Although they will at times haul out to rest on shorelines, they can spend their entire life in the water and have no need to go ashore. On land their gait is clumsy. Probably because of this vulnerability, they rarely are found more than a few yards from water.

The fur, which is possibly the finest in the world, consists of a very dense underfur of inch-long fibers and sparse guard hairs. The underfur ranges from brown to almost black. Guard hairs may be black, pale brown, or silver, often giving a veiled effect of silvery hairs on a dark background. Older animals often develop a silvery head. This, combined with the prominent whiskers, leads to the nickname of "Old Man of the Sea."

Unlike seals, which rely on a heavy layer of blubber for protection against the cold North Pacific waters, sea otters depend on air trapped in their fur for maintaining body temperature. If the fur becomes soiled or matted by material such as oil, the insulation qualities are lost. This results in loss of body heat and eventual death. For this reason, otters spend much time grooming their fur to keep it clean.

Food Habits: Sea urchins, crabs, clams, mussels, octopus, other marine invertebrates, and fishes make up the normal diet of sea otters. They usually dive to the bottom in 5 to 250 feet of water and return with several items of food, roll on their backs, place the food on their chests and eat it piece by piece using their forepaws, with sometimes a rock to crack shells. In the wild, sea otters never eat on land.

The search for food is one of the most important daily activities of sea otters, as large amounts are required to sustain the animal in healthy condition. Feeding dives generally last about 1 - 1½ minutes although some otters are capable of staying underwater for five minutes or more. Captive animals require a daily food intake equal to one-quarter of their body weight. In order to obtain the 8 to 15 pounds (4-7 kg) of solid food needed, an otter may have to bring up 40 to 50 pounds (18-23 kg) of whole shellfish. Their feeding habits may result in conflicts with subsistence, recreational, and commercial fishers when otters move into areas that support important shellfish resources.

Life History: Sea otters mate at all times of the year, and young may be born in any season. However, in Alaska most pups are born in late spring. Like other marine mammals, they have only one pup during each breeding cycle. A pup weighs 3 to 5 pounds (1.4-2.3 kg) at birth and is light brown in color. The female's maternal instinct is very strong and she seldom leaves her pup except when diving for food. When the female travels or sleeps, the pup usually rides its mother's chest as she floats on her back. The pup may weigh 30 pounds (14 kg) or more when weaned and looks almost as big as its mother. Females can produce one pup a year, but in areas where food is limited, they may produce pups less frequently. Many sea otters live for 15 to 20 years.

Seasonal movements: Sea otters usually do not migrate. They seldom travel far unless an area has become overpopulated and food is scarce. The home range of individual sea otters can vary from only a few km² to over 40 km².

Behavior: Sea otters are gregarious and may become concentrated in an area, sometimes resting in groups of fewer than 10 to more than 1,000 animals. Breeding males are territorial, and will drive nonbreeding males out of areas where females are concentrated. In some areas, the nonbreeding males will concentrate in "male areas" which are usually at the edge of occupied areas, and often off exposed points of land where shallow water extends offshore.

Population size: Currently, the number of sea otters in Alaska is thought to be around 70,000.

Predators, hunting, and other mortality: In much of their range, predation on sea otters is of little significance. However, predation by killer whales has been observed, and in the last two decades appears to be the primary cause of precipitous population declines in south-west Alaska. Bald eagles also can prey on newborn pups, and sea otters are sometimes caught and drowned in fishing nets. Sea otters are hunted by Alaska Natives for subsistence and products used in handicrafts. The 1989 *Exxon Valdez* oil spill dramatically demonstrated the effects of oil contamination on sea otters, as about 1,000 carcasses were found after the



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spill, and it is likely that the total number that died was considerably greater. Thus, while sea otters will thrive in Alaska's waters under good conditions, it is clear that they can be susceptible to both human activities and shifts in predation behavior by other species.

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