

# Steller Sea Lion

*Eumetopias jubatus*



Photo by Cindy Hansen

## Physical Description:

Adult Steller, or Northern, sea lions are light blonde to reddish brown in color. They exhibit sexual dimorphism with the males visibly larger than the females. Adult males also possess a thick mane of fur around the neck. Females can reach up to 9 feet in length and weigh up to 800 pounds. Males can reach 11 feet in length and weigh up to 2,500 pounds. As with all sea lions, or ‘eared seals’ they have smooth whiskers, hairless flippers, ear flaps, and rear flippers that can rotate forward for walking on land.

## Natural History:

### Species Subtypes:

Steller sea lions are divided into two distinct population segments. These consist of the Eastern population which is found in SE Alaska, British Columbia, Washington, Oregon, and California. The Western population is found west of Cape Suckling, Alaska from the Gulf of Alaska to the Aleutians and into Asia.

### Reproduction:

Steller sea lions gather on rookeries to mate. Dominant males arrive first to establish and hold a territory. The males aggressively defend their territory and harem and may go 1 to 2 months without eating during that time. Females are generally sexually mature around 4 to 6 years old. Males are mature around 7 or 8 years but are usually not large enough to successfully hold a territory until 9 or 10 years old.

Females give birth to a single pup generally in May or June. They stay on land with their pup for 1 to 2 weeks before returning to the sea to forage. They will continue to nurse their pup while alternating between the sea and the rookery. They use smell and vocalizations to bond with their pup at birth and locate it upon their return to land. About 2 weeks after the birth of her pup, a female will mate again, then undergo a delayed implantation whereby the fertilized egg does not implant for approximately 3.5 months in order to optimize the timing of the pup’s birth. Mothers and pups leave the rookeries in the late summer or early fall and begin to use haul-out sites for resting and nursing. Pups nurse for about a year but may stay with their mothers for up to 3 years.

**Life Cycle:**

Steller sea lion pups are about 3 feet long at birth and weigh 35 to 50 pounds. They have dark brown coats until 4 to 6 months old, at which time they begin to molt into their adult coats. Males can live up to 20 years and females can live up to 30 years.

**Range:**

Steller sea lions are found in the North Pacific rim from Japan through the Aleutian Islands and Bering Sea, and in the Eastern Pacific down to California.

**Diet:**

Steller sea lions are opportunistic, feeding on a variety of fish such as cod, herring, pollock, capelin, sand lance, rockfish, and salmon, as well as shellfish, squid and octopus. In the Pribilof Islands, young male Stellers have even been observed killing and eating other pinniped species such as harbor seals and fur seals.

**Behavior:**

Steller sea lions spend about half of their time in the water and half on land, either on rookeries or haul-out areas at beaches or rocky reefs. They propel themselves through the water using their front flippers and can reach speeds of 15 to 20 mph. They can dive to depths of 1,200 feet or more. While at sea they are usually solitary or in small groups as opposed to larger groups at breeding rookeries.

**Status:**

The western stock experienced a 75% decline between 1976 and 1990, and Steller sea lions were declared threatened under the Endangered Species Act in 1990. The western stock continued to decline and they were declared endangered in 1997. Using data collected from 1978 through 2017, there is strong evidence that pup and non-pup counts of western stock Steller sea lions in Alaska were at their lowest levels in 2002 and have increased at 1.78% and 2.14%, respectively, between 2002 and 2017. However, there are strong regional differences across the range in Alaska, with positive trends in the Gulf of Alaska and eastern Bering Sea east of Samalga Pass and generally negative trends to the west in the Aleutian Islands. Pup counts in the eastern and central Gulf of Alaska declined sharply between 2015 and 2017 and there was a subsequent decline in pups, as well, throughout the Gulf of Alaska in 2019, counter to the relatively steady increases observed in both regions since 2002. These declines may have been due to changes in availability of prey associated with warm ocean temperatures that occurred in the northern Gulf of Alaska in 2014-2016. The eastern stock is growing throughout most of its range and was actually delisted in 2013. The eastern stock of Steller sea lions has historically bred on rookeries located in Southeast Alaska, British Columbia, Oregon, and California. However, within the last several years a new rookery has been established on the outer Washington coast (at the Carroll Island and Sea Lion Rock complex). The population of the western stock is approximately 54,000 and the eastern stock is estimated to be over 70,000.

**Threats:**

- **Historical:**

In the 1800s Steller sea lions were hunted for their meat, hides, and oil. In the early 1900s they were subjected to bounty hunting by fishermen who blamed them for stealing their fish. While Steller sea lions are protected under the Marine Mammal Protection Act, in December 2018, the president signed into law legislation that gives state and tribal resource managers from Washington State, Oregon, and Idaho more

flexibility to manage sea lion predation on Columbia River fish populations and allows the lethal removal of Steller sea lions on the Columbia River and tributaries.

- **Current:**

There are several factors that may have contributed to the recent decline in Steller sea lions. They are vulnerable to contaminants and pollutants and susceptible to infectious diseases. Boat strikes, illegal hunting, predation by sharks and transient killer whales, and oil and gas exploration are also direct threats. Fisheries effects could be one of their greatest dangers as they frequently become victims of bycatch or entanglement in fishing gear. In the Bering Sea, Aleutian Islands, and Gulf of Alaska fisheries target the most important food sources for Steller sea lions, including cod and herring. This causes direct competition for food resources and may have led to a prey shift to less nutritious fish like pollock.

### **Fun Facts:**

- Steller sea lions are the largest sea lion and 4<sup>th</sup> largest pinniped in the world.
- The Steller sea lion was named for naturalist George Wilhelm Steller, who first observed and described the animals in 1742.
- The vocalizations of Steller sea lions sound like roars as opposed to the ‘barks’ of California sea lions.
- The scientific name for Steller sea lions means ‘broad forehead’ and ‘having a mane.’
- Steller sea lions, along with their smaller cousins the California sea lions, are the subject of a very controversial issue along the Columbia River. Individuals from both sea lion species have been entering the river each fall and feasting on sturgeon, salmon and trout where they become bottlenecked below the Bonneville Dam. Managers tried non-lethal means such as hazing to remove the sea lions with little success. Since 2008, managers have been given permission to shoot the California sea lions, prompting a series of lawsuits by animal rights groups. In 2018, this permission was expanded to include Steller sea lions. This issue is sure to remain in the headlines in the Pacific Northwest.

### **Sources:**

The Marine Mammal Center [www.marinemammalcenter.org](http://www.marinemammalcenter.org)

Seal Conservation Society [www.pinnipeds.org](http://www.pinnipeds.org)

National Marine Fisheries Service [www.nmfs.noaa.gov](http://www.nmfs.noaa.gov)

Alaska Fisheries Science Center [www.afsc.noaa.gov](http://www.afsc.noaa.gov)

WDFW <https://wdfw.wa.gov/species-habitats/at-risk/species-recovery/columbia-river-sea-lion-management>

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