

Species Traditionally Utilized by First People of BC

# Sea Otters

Mina & Hailey

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# Introduction

Sea otters, one of the world's most important species. Knowing that is quite unfortunate, because the sea otter happens to be one of the species that are becoming extinct. "In the past, sea otters were believed to be numerous, with populations thought to be between 150,000 and 300,000 specimens. Presently, they're considered to be an endangered group of animals, as indicated by the 2011 IUCN Red List of Threatened Species' report. This categorization is a result of extensive drops in population over a lengthy period of time." ([animals.mom.me](http://animals.mom.me)) Hunting for their fur , oil spills, infections, fishing and other risks are partially why the species is becoming extinct. According to [bcbooklook.com](http://bcbooklook.com), the sea otter population as of June 8th, 2019 has dropped to approximately 6,000 which has dropped an incredible amount. Considering all this information, we will continue onto our Earth Science project.

## Name of the species

**Domain:**

Eukarya

**Kingdom:**

Animalia

**Phylum:**

Chordata

**Class:**

Mammalia

**Order:**

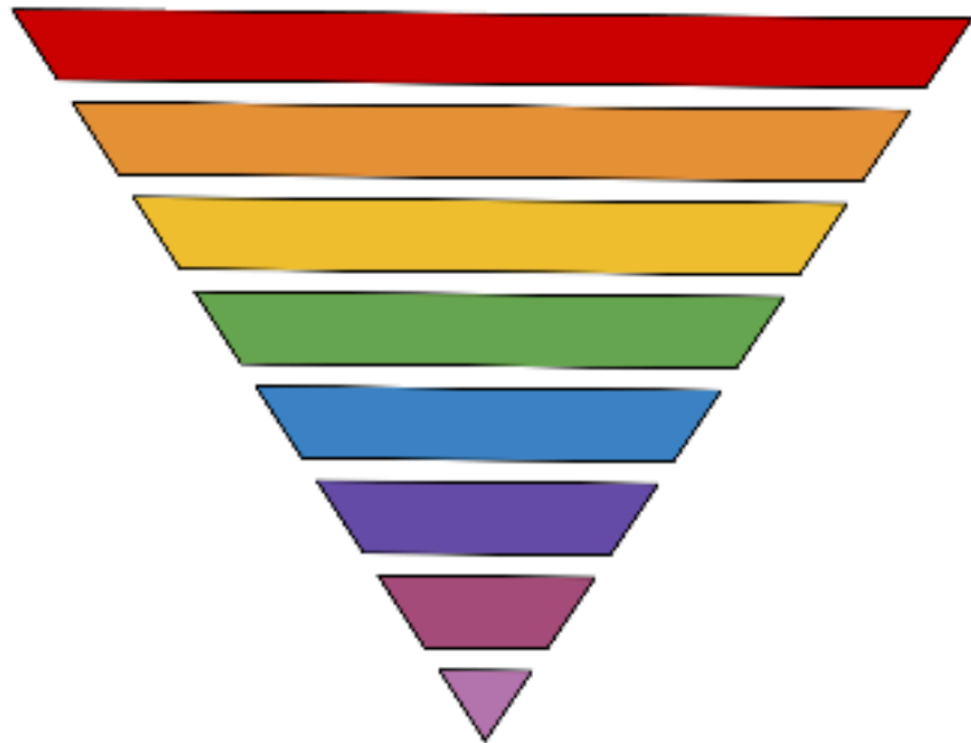
Carnivora

**Family:**

Mustelidae

**Genus:**

Enhydra



### [Common English Name]

Sea Otter

### [Indigenous Language Name]

Sea Otters “are considered lucky animals in many Native American cultures and the otter is a symbol of loyalty and honesty in some West Coast tribes, but in northern British Columbia and the Alaskan coast, river otters (usually called "land-otters") were associated with ghosts and drowning and were regarded by the people with awe and dread. It was taboo to eat land-otters in many Pacific Northwest tribes, and in colonial times, the trapping of land-otters to sell their furs to non-Natives became a source of tension in some communities.”

## Biological information about the species

### [Habitat]

Now the habit amongst the variety of sea otters differs depending on the different locations that they inhabit. For instance, the fewer of the general population reside within British Colombia in the North Pacific, along coastal waters close to reefs, islands, inlets, bays, and kelp forests. However, they spend the majority of their time in the sea (hence their name). Nonetheless, the other part of the population occupies the west coast of Victoria island along with the central coast, with Bella Bay neighboring the region. Now taking a look at specifically Vancouver, you will be able to locate 4 sea otters, which can all be found the Vancouver Aquarium. Furthermore, with having mentioned that sea otters inhabit different parts of the world, it results in different numeric populations.

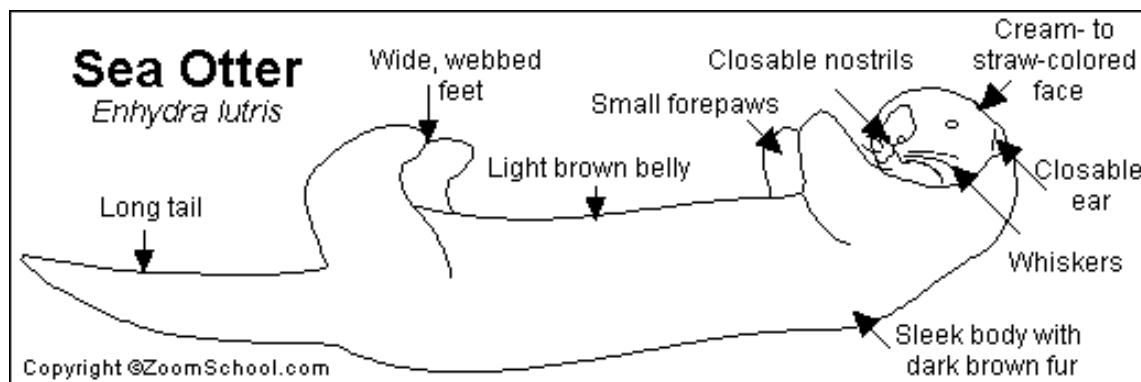
Russia	Approximately - 22, 500
Alaska	Approximately - 71, 500
California	Approximately - 2,500
Washington	Approximately - 550
British Colombia	Approximately - 6,000

Though habitat may vary from location to location, similar to the environment of British Colombia, sea otters tend to stay within a miles’ reach of the coastline. Furthermore, they like to reside in places along the harbor that offer a secure shelter-like habitation that can protect them from natural

threats such as harsh waters, and wind. Nevertheless, many of the otters also look for habitats containing a surface of a rocky texture where much of their food can be found.

### [Have sea otters always lived in the BC region?]

Now referring back to the history of sea otters making their habitat within B.C. through the 17<sup>th</sup> and 18<sup>th</sup> centuries; they happened to exist near the shoreline, and with having the knowledge that they “built” their habitat around the area; many people involved in the fur trade would hunt them, in order to use them as “recourses”. Unfortunately, this resulted in the extinction of sea otters within the British Colombia region till 1969, when some (89) sea otters living on the Alaskan coast were transferred to “regrow” the species.



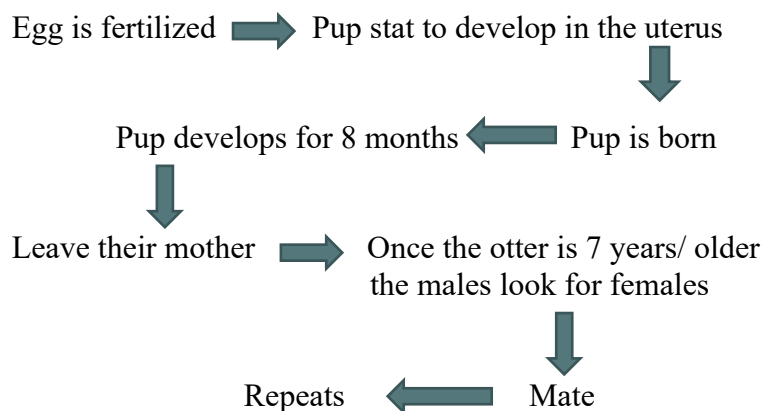
### [Reproductive cycle]

Unlike many organisms which have a specific period in which they mate/ reproduce. (For instance, with countless organisms that reproduce asexually during the spring season). The main components that the females take into consideration when deciding to start their reproductive cycle consists of, climate, location, and the amount of obtainable nourishment. However, the process of reproducing does not occur until both genders are approximately 7 years or older. For they have not fully developed yet. Nevertheless, once both have fully developed and are ready to mate, the males will start to look for females who have reached the oestrus process, and once the male has located a female, it will start to “amuse”/ sniff her. If the male ends up successful, they will disperse themselves from their “group” to mate. However, if the male ends up unsuccessful, the female will push him away and they’d both continue their journeys. Now when the male and female intervene, the male will cling its teeth onto the female and cling its legs over her chest as well. From there, the course takes 15-30 minutes; and an interesting aspect in of this cycle, is that that due to the effects of the female developing a noticeable redness within its nose, they are put

metaphorically as Rudolph.

Now once the female starts to undergo the development of the cub, the egg will start to travel through the fallopian tubes into the uterus where it will then start the period of “*blastocyst*” after having been distributed several times. Following this phase is “*delayed implantation*” which approximately 2-3 months’ time; where the growth of the cub is temporarily “postponed”. In summary, this whole process takes around 4-12 months. (“*gestation period*”)

Once the cub has fully developed within the uterus, the female will begin their birthing process in the water; and once they are born, the cubs will usually stay close to their mother’s for nearly 8 months. Now right after coming out the womb, unlike other species, where they are able to do lots for themselves, newborn sea otter cubs are weak, and completely dependent on their mother for they are visionless, and not agile. Similar to humans, their development takes quite a while. For instance, the process of learning how to swim is not handled until they are a few months old. Then, when the cub starts to acquire some skills, it will start to shadow its mother during hunting sessions; and finally forge for itself.



## Interdependence

[In what ways is this species dependent on other species? / In what ways do other pieces depend on this species to survive?]

- A sea otter's diet mainly consists of urchins, abalones, mussels, crabs, clams, snails, sea stars, chitons, and about 40 other species.
- They also have a high metabolism, and because of it they eat a lot. Around 25% of their weight is food.
- Not only are sea otters a predator, they are also prey for many other species such as... rockfish, gulls, sea lions, whales, seals, terns and snowy egrets. This also means sea otters are secondary consumers.
- Most of the information above means that sea otters happen to be a keystone species, meaning that if they were pulled out of an ecosystem it would have a large effect on the whole ecosystem itself. "As predators, sea otters are critical to maintaining the balance of the near-shore kelp ecosystems. Without sea otters, sea urchins would devour the kelp forests off the coast that provide cover and food for many other marine animals. As such, sea otters also indirectly help to reduce levels of atmospheric carbon dioxide, a prevalent greenhouse gas, as kelp forests play an important role in capturing carbon in coastal ecosystems.

[In what ways do the abiotic features of British Columbia and this species interact?]

- The water temperature can sometimes be up to -60 degrees below a sea otters actual body temperature.
- The sunlight is needed in case of an oil spill, meaning that when an oil spill occurs, the oil coats the sea otter's fur taking away all the insulating properties so the sea otter's die of cold.
- "Sea Otters need sunlight and space to survive. If they don't have any space, then they won't have anywhere to reproduce. Also, without sunlight then the sea otters won't have any food."



## First Peoples' utilization on the species

Looking back to the history of our land who it belonged to, the First Nations'; many natural resources such as the sea otter were very valuable to tribes (some more than others). For instance, those who had lived closer to the habitat of the otters consumed it more than others (1° P).

Furthermore, similar to many other mammals its fur was also in high demand, providing great insulation and warmth from the cold conditions. Now with being in contact with the Europeans at the time, many First Nations' communities were willing to exchange the fur in return of goods that would not be accessible to them within their region; thus, making it more valuable. Unfortunately, soon after the trade commenced, the population of the sea otters reduced drastically until they went extinct in some regions. Nevertheless, with previously having mentioned that one of the main uses of the animal was to collect fur; another important spiritual aspect that was gathered from the animal, were its paws. A few communities such as the Coastal Montagnais and the Abitibi believed that they brought good intentions; and if it were to land a certain way after being thrown, it would carry out "good fortune".

### [Hunting]

Now with the hunting, typically the males engage in this process; however, as mentioned it all depends on the type of culture/ community. Nevertheless, when coming up with methods to capture the sea otter, all the tribes share similar methods:

Puget Sound	Spears
Salish	Snares, traps (bait=shellfish)
Spokane	Snares, traps
Yukon Ingalik	Bows arrows, deadfalls, snares
Tlingit	Deadfalls
Athapaskan	Deadfalls, bow arrows, nets
Kwakwaka'wakw	Noose traps
Mistissini Creek	Deadfalls, bow arrow, nets.
Western Abenaki	Traps
James Bay Cree	Traps
Abitibi	Traps
Hopedale Inuit	Traps
Mi'kmaq	Traps

With the sea otter occupying the majority of its time in the sea, this meant that the tribes would mainly hunt on waters, and travel through their canoes.



### [Preparing]

Once the otters have been caught and brought back to each household, the families will then proceed to prepare the animal corresponding to their culture. Many such as the Nootka and Tlingit would boil it, as opposed to communities such as the Coast Salish, where they will grill it, or prepare the animal in a stew-like meal. And with storing the meat, it will usually be dehydrated to preserve it during the winter seasons.

## Traditional Practices and Sustainability

[Consider the reproductive process, life cycle and survival needs of the specie. What conditions are necessary for the species to survive?]

- Sea Otters have heat loss very quickly, they aren't able to contain heat very well which means they need either an adaptation to help them with heat loss, or a warm habitat. "The sea otter uses their feet to reduce or maximize heat loss when water temperatures are too hot or too cold. When the water temperatures are too cold sea otters reduce heat loss by floating on their backs with their feet out of the water."
- In part c, it is mentioned that sea otters need space for reproduction, which is another asset for survival.
- They also need sunlight for food, since they have a fast metabolism, they need tons of food daily.

"Several otter species live in cold waters and have high metabolic rates to help keep them warm. European otters must eat 15% of their body weight each day, and sea otters 20 to 25%, depending



on the temperature. In water as warm as 10 °C (50 °F), an otter needs to catch 100 g (3.5 oz) of fish per hour to survive.”

## Current uses and Sustainability

Now as time has advanced, the many of the traditional practices within the First Nations’ have “faded” including utilizing the sea otter as they used to. With the drastic decrease in population, it would also make it much harder to continue their traditions (hunting, etc.). Nevertheless, because



of the low population of them within BC, they are not used for things such as cultivating, but instead are placed in aquariums for amusement or left to be in the wild. Currently in Vancouver however, there are 4 sea otters in which can be located in the Vancouver aquarium.

## Conclusion

Throughout the course of the utilization of sea otters, the First Nations were able to develop great uses of them, such as for spiritual needs, a source of food, and (fur) for trade. Unfortunately, however, with developing a greater understanding to the animal’s lifestyle, reproductive cycle, population, etc. we have learned that because of the amount of otters that were killed due to an increase in trading, it resulted in “extinction” within certain regions. Nonetheless, when obtaining this information, many people were able to take action upon this issue and relocate some otters that had previously been living off the Alaskan region to BC for repopulation. With previously also having mentioned that Vancouver is home to 4 sea otters, where they spend their time in the Vancouver aquarium. Now because First Peoples’ are not utilizing the animal at all/ as much sea otters usually just roam free in the wild or take home in aquariums, etc. for entertainment and such.

In summary through this project, we were able to find information on the sea otter and learn aspects of this animal that we had not known before.