

Top Predators: Deep Dive

Conservation of Orcas & Great White Sharks

Orcas and great white sharks may be at the top of the ocean food web, but they are also some of the most at-risk or endangered species in the ocean! Some of their greatest threats include historical or contemporary hunting, low prey availability, ocean toxins and pollution, unsustainable fishing practices, and more!

Humans must be aware of the many threats in our oceans to ensure the safety of such important species for our ecosystems. There are many ways for us to help orcas and sharks, even if you do not live near the water. One great way to help both sharks and orcas is to limit your consumption of seafood, and use the [Seafood Watch Guide](#) when you do eat fish!

Transient Orcas in the Salish Sea

While some orca populations are incredibly endangered (e.g. Southern Resident orcas), other orca populations have seen some incredible recovery.

The transient orca population, for example, is an ecotype of orcas that weren't often spotted in the Salish Sea until recent years. Transient orcas have very few physical differences from their geographic neighbors, the Southern Resident orca population, but their diets are much different. Transient orcas feed off various marine mammal species from seals to dolphins. Southern Resident orcas however primarily feed off Chinook salmon.

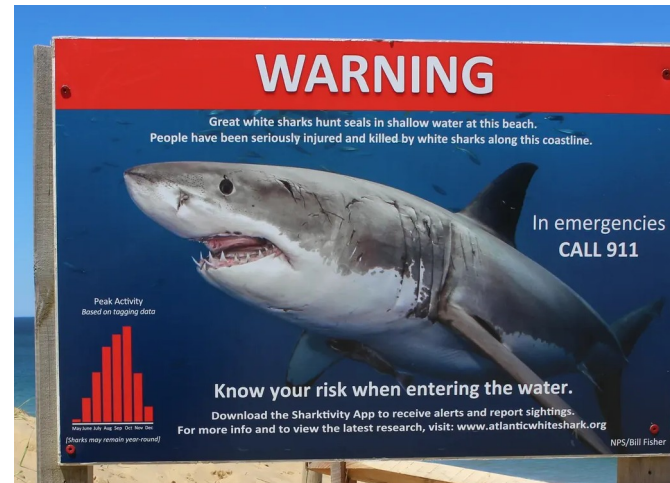
Scientists have been observing these two populations of orcas and their interactions in the Salish Sea for many years, and while the Southern Resident orcas continue to decrease, the transient orca population has significantly increased since 1987. Why do you think that is?



Great Whites & Cape Cod

While many people fear sharks, it is sharks that should fear humans. So many sharks are killed each year by people, unsustainable fisheries, and low prey availability. However, sharks are necessary for healthy and balanced ecosystems. One ecosystem that has seen white sharks return is off the coast of Cape Cod, Massachusetts.

Historically present in the Cape, great white shark sightings have slowly increased in recent years after a long period of absence. Why do you think it is that certain populations of sharks and orcas are increasing?



Conserving Predators is Conserving Ecosystems

Apex predators are necessary for balanced ecosystems, but they are often some of the most at risk animals within a food web. They help to keep prey populations in check and ensure ecological stability. However, if these predators face challenges, it takes much longer for their populations to recover. That is why it is crucial to protect and conserve predator populations, as they will in turn help protect the rest of the ecosystem.

The transient orca population in the Salish Sea, and the great white shark population off the coast of Cape Cod have both shown significant increases in the last 30 years. This is thanks to the Marine Mammal Protection Act of 1972. This law was created to prevent the killing of any marine mammals within United States waters. Since 1972, seal populations have continued to increase dramatically, and have provided a stable food source for top predators such as orcas and white sharks. With healthy seal populations, we have begun to see healthy predator populations as well!



Activity: Conservation Success Story

In this activity, you will research another species that was previously classified as endangered or at risk, and has since recovered due to conservation and protection efforts. Fill out the profile below for the animal of your choosing. This animal could be a marine animal, land animal, or bird, and it can be one that lives close to you or on the other side of the world! These websites can be a great start:

<https://www.marinemammalcenter.org/education/marine-mammal-information/>

<https://www.iucnredlist.org/>

These examples are proof that when we work hard to conserve this planet and its animals, positive changes can be made!

Species Name:

Picture:

Species Facts:

- Geographic Range:
- Preferred Habitat:
- Preferred Prey:

At Risk or Endangered:

- Why was this species considered at risk or endangered?
- What were some of the main threats these animals faced?

Species Conservation:

- What conservation efforts helped this population grow?
- What are some ways that you can help?