

The 5 Species of Pacific Salmon Also a Steelhead and a Cutthroat

SALMON FACTS

What is the difference between a salmon and a trout?

There are many differences, but one major difference is that salmon are anadromous while most trout are not. *Anadromous* fish hatch in freshwater, then at some point they migrate to the ocean to feed and grow into an adult. This can take 1-5 years depending on species. Then they return to their freshwater home streams to spawn and produce offspring. Anadromous salmon die after they spawn. Trout stay in freshwater their whole lives and can spawn multiple times. Steelhead are unique because they are an anadromous type of rainbow trout. Steelhead can spawn more than once, though many die after their first spawning event. The Coastal Cutthroat Trout is also anadromous.

How big is the biggest salmon?

How small is the smallest? The Chinook is the largest salmonid. Chinook can grow to be up to 58 inches long and 120 pounds! The smallest salmon is the Pink, which is usually between 3.5-5 pounds.

How fast can salmon swim?

A migrating sockeye salmon can swim for long periods at an estimated speed of one body length per second. For a 24 inch fish that is 1.4 miles per hour! However, over short distances of burst swimming, the speed can be five or more body lengths per second, which is at least 7.0 miles per hour. That's a fast fish! However, when the salmon is swimming upstream against a strong river current the speed can be much less.

How high can a salmon leap?

Chinook, Coho, and Sockeye can jump as high as eight feet. Chum and pink salmon usually jump no more than three feet.

What predators eat salmon?

Juvenile Salmon: larger trout, adult salmon, sculpins, squawfish, crows, northern pikeminnow, mergansers, osprey, kingfishers, terns, gulls, other birds, seals, and harbor porpoise. Adult Salmon: Eagles, gulls, seals, whales, halibut, dolphins, porpoises, wolves, bears, and people.

Why do salmon turn different colors when they spawn?

In the ocean salmon are a silvery color. When they leave the ocean to head back to their native streams, other skin pigments appear. Scientists think that spawning colors may help salmon find members of their own species to mate with.

How does a salmon find its home stream?

Scientists believe salmon use an inner magnetic compass to navigate at sea. Salmon can also sense day length, which tells them when the seasons are changing. As a migrating salmon approaches its home stream, it uses its sense of smell to find the familiar smell of the stream it lived in as a juvenile. This migration back to their home is a result of "*home stream imprinting*" that occurred as the juvenile salmon grew in its home stream and began its migration to the ocean.

What habitat conditions do salmon need?

Different types of salmon need slightly different habitat conditions to spawn. However, they all need water that is clear, clean, and cool.

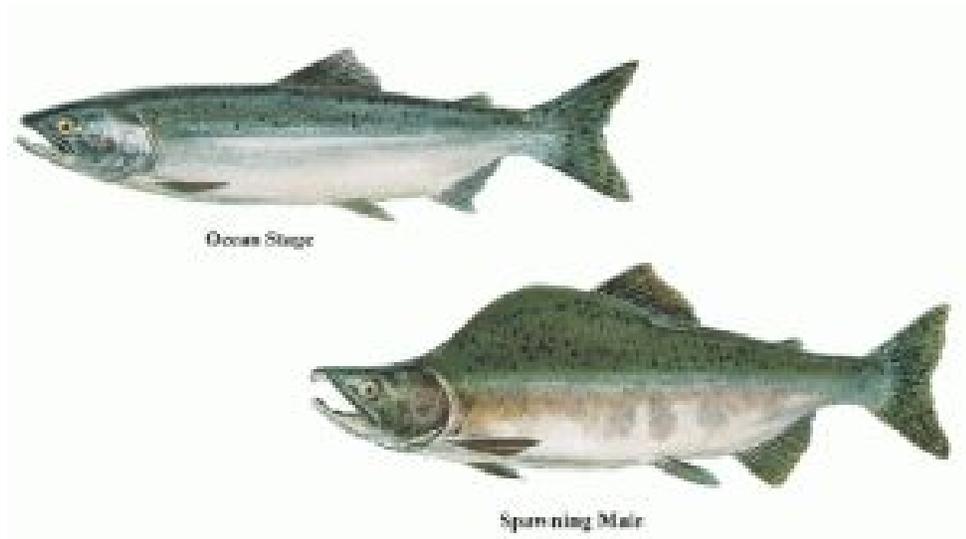
How long do salmon stay at sea?

Different species stay at sea for different periods of time. However, keep in mind that juvenile salmon migrate to the estuary or ocean in the spring, and after spending 1-6 years in the ocean, they typically return to their native streams in the late summer or fall. So, if a salmon spends one year at sea, what that really means is they spent two complete summers at sea, spring through fall of the next year.

What anadromous fish are in the Skagit River?

The Skagit River is the only river in Washington that has spawning populations of all 5 species of pacific salmon as well as coastal cutthroat trout and steelhead.

Pink: *Oncorhynchus gorbuscha*



Also known as **humpies**, due to the large hump males get just behind the head during the spawning. Although they are the smallest of the species, they are the most *abundant* in number. They spend the least amount of time in freshwater, spawning every two years, humpies stay very close to the mouth of streams with little to no upstream *migration*. In the ocean they appear to have steel blue to blue green backs, silver sides, and a white belly with large oval spots covering their back, *adipose* fin and the *caudal* fin. During the spawning phase pinks have dark backs with a pinkish wash and green blotches on their sides.

Humpies generally live for 2 years, are about 18-24 inches in length and weigh about 3.5 - 5lbs.

SOCKEYE: *Oncorhynchus nerka*



Ocean



Spawning

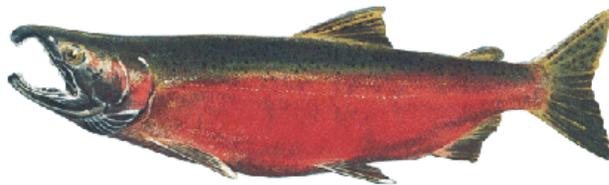
Also known as the **redfish**, or **reds**, they are the most important commercial species. This is the third-most common Pacific salmon species. The farthest inland sockeye salmon travel is to Redfish Lake Idaho over 900 miles. Sockeye primary feed on plankton when in the ocean. They can spend anywhere from 3 months to 3 years in freshwater. They will spawn near shorelines, the bottom of lakes, or hundreds of miles upstream. While in the ocean they are greenish blue on top of the head and back, silvery on the sides, and white to silver on the belly. During the spawning the head and *caudal* fin become bright green and the body turns scarlet. *Landlocked* sockeye live their entire lives in freshwater, and are known as **kokanee**.

Sockeyes generally live 2-6 years, are about 21-26 inches in length and weigh about 4-7lbs.

COHO: *Oncorhynchus kisutch*



Ocean

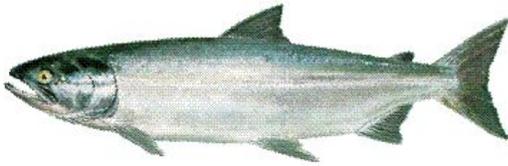


Spawning

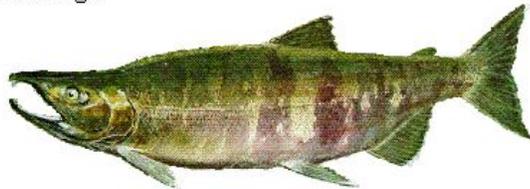
Also known as **silver**, coho are the second least *abundant* salmon. While they are one of the most commercially sought after species they make up only 7-10% of the commercial salmon fishery. They spend 1-2 years in freshwater, and prefer near shore feeding grounds. Coho usually travel less than 100 miles from the mouth of their stream for reproduction with the exception of a few populations that do travel over a thousand miles. While in the ocean they have dark metallic blue or greenish backs with silver sides and a light belly. They have small black spots on their backs and the upper part of the tail. Another distinguishing feature is their gum line, which is white. Spawning colors are dark with reddish coloration on their sides.

Silvers usually live 3-5 years, are about 24-28 inches in length and weigh about 3-5lbs.

CHUM: *Oncorhynchus keta*



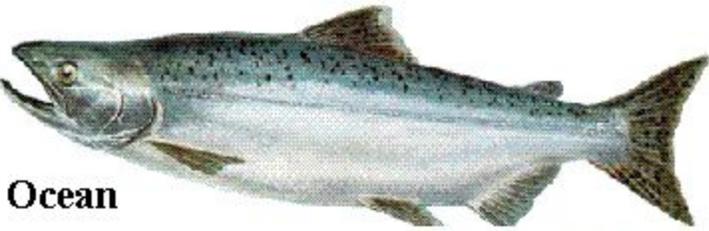
Ocean Stage



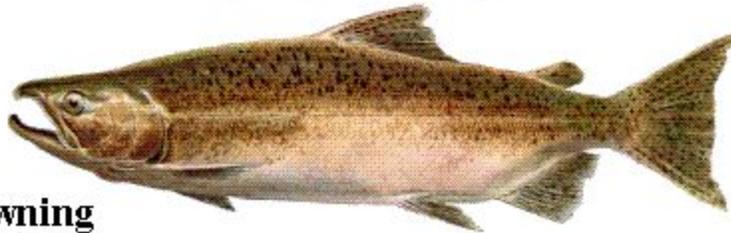
Spawner

This salmon is also known as the **dog**, or **calico** salmon. Chum comes from a word meaning “streaks of color” in the native language. They have the most widely distributed population. They are the second largest salmon (following the Chinook). Most populations reproduce near the mouth of their stream. When in the ocean they are metallic, greenish-blue along the back with black speckles. During spawning, males get stripes in reds, greens, and purples, while females get a black horizontal stripe. Chum generally live 3-5 years, are 21-31 inches in length and weigh about 6.5-12.5lbs.

CHINOOK: *Oncorhynchus tshawytscha*



Ocean



Spawning

Also known as the **king**, or **blackmouth**, the name Chinook came from the native peoples of the Columbia River and is considered a proper noun and thus is always capitalized. They are the largest, but least *abundant* salmon. When in the ocean they have bluish-green backs and silver sides with spots on the back, dorsal fin, and both parts of the tail. Another feature is their black gum line. Spawning colors are olive brown to dark brown in color. Males also develop a hooked snout.

Chinook live about 3-6 years, are 28-40 inches in length and weigh about 10-25lbs.

STEELHEAD: *Oncorhynchus mykiss*



Commonly known as the steelhead trout, or **steelie** this salmon is a famous *trophy game fish*. This species consists of two runs, a winter and a summer. They differ from other salmon species in that they can return multiple times to spawn. However the number of returning spawners decreases from year to year with very few fourth year spawners. They are recognized by their metallic blue backs, silvery sides, and black spots on the back, *dorsal* and *caudal* fins. Spawning colors are darker with males having a pink or red band on the sides. Both winter and summer run steelhead are listed under the Endangered Species Act

Steelhead live about 1-4 years, are usually about 20-30 inches in length and weigh about 6-11 lbs.

CUTTHROAT: *Salmo clarki clarki*



Also known as **sea-run cutthroat trout, coastal cutthroat trout, cutties,** or **sea trout.** This species has three life history options: two types spend their entire lives in freshwater while only one type is *anadromous*. Cutthroat are identified by a red or orange streak along the inner edge of the lower jaw. They have a greenish blue back tending towards metallic blue, silvery sides, and distinct black spots on the back, head, anal fin, tail, and sides. The spots on the sides extend below the lateral line.

Cutthroat live an average of 3-6 years, fourth and fifth year spawners reach 17-19 inches in length and weigh about 1-6lbs.

Fill in this ANADROMOUS fish chart, and return it to your teacher.

Species Name (Common and Scientific)	Average Length	Average Weight	Unique Lifestyle Trait
Pink: <i>Oncorhynchus gorbuscha</i>			
SOCKEYE: <i>Oncorhynchus nerka</i>			
COHO: <i>Oncorhynchus kisutch</i>			
CHUM: <i>Oncorhynchus keta</i>			
CHINOOK: <i>Oncorhynchus tshawytscha</i>			
STEELHEAD: <i>Oncorhynchus mykiss</i>			
CUTTHROAT: <i>Salmo clarki clarki</i>			