Salmon Life Cycle

Freshwater 🡺 Salt Water 🡺 Freshwater!



Eggs

* Salmon **eggs stay in the \_\_\_\_\_\_\_for** 2-3 months before hatching.
* During this time they develop into embryos, and the baby salmon’s eyes can be clearly seen.
* Average number of eggs deposited per hen (*Female*) is around 3,000 eggs.

***Why is Erosion so bad for Salmon?***

Alevin

* After hatching from the egg, young salmon, known as alevin
* Remain in **the gravel and feed off the \_\_\_\_\_\_\_\_\_\_\_\_\_still attached to their bodies.**
* Alevins remain in the gravel for another 1-2 months before swimming up from the gravel to live in the stream.

Fry

* Young \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ salmon that **recently left the gravel** are known as fry.
* Fry are typically 1-2 inches in length.
* When they emerge from the gravel they are called “Sac Fry” as a small amount of the yolk sack continues to nourish them until they learn to feed.
* Pink and Chum salmon out-migrate to the ocean as fry while other species may stay in freshwater for many months or years.

Parr

* Young salmon typically between 2-5 inches that are not yet smolts are known as parr (or fingerlings) due to the **\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_(parr marks**) along their bodies.
* As salmon mature into a smolt, the parr marks disappear.
* Different species can be distinguished by the pattern of parr marks.

Smolt

* When salmon prepare to migrate from freshwater to the ocean, they become smolts.
* To manage **the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between \_\_\_\_\_\_\_\_\_\_\_\_\_\_and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,** salmon fry must go through a physical change known as smolting.
* Smolting begins in freshwater and sees the young salmon through the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and into the ocean** when it is time.
* Smolts loose their parr marks

***Why are estuaries important to the development of salmon, specifically to which life stage?***

***How do salmon learn where to return? (From the ocean, they go back to their birthplace to spawn)***

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Adult

* Most salmon spend more than **80% of their lives in the \_\_\_\_\_\_\_\_** where they grow big on the prey species available in the ocean.
* Salmon spend 1-5 years in the ocean, depending on species and environmental conditions.
* Salmon travel vast distances to Alaska and even Russia or Japan, yet still return home.
* Commercial and sport fishing for salmon provides millions of dollars to CALIFORNIAS economy.

Spawn

* After spending 1-5 years in the ocean, adult salmon **\_\_\_\_\_\_\_\_\_to the stream (or hatchery) they were \_\_\_\_\_\_\_\_in to spawn.**
* They remember the \_\_\_\_\_\_\_\_\_\_\_\_\_ and can find it again.
* Adults change significantly once they enter freshwater. They change color, stop eating, males develop a kype (hooked jaw), and they stop drinking.
* Adults **overcome many \_\_\_\_\_\_\_\_\_\_\_\_**during their return migration. Dams, waterfalls, culverts, low water, pollution, sediment, and predators can impact their success.

***What is an example of a man made obstacle that they encounter while spawning? What does it look like?***

Die

* After making their return journey and going through the hurdles and physical changes all salmon and many steelhead adults **will \_\_\_\_\_\_after spawning.**
* Fortunately this death will bring life.
* The carcasses play an important role in the food web**.**
* **The carcasses feed many organisms including \_\_\_\_\_\_\_\_\_\_ some of which in turn provide food for the young salmon.**
* The carcasses bring nutrients from the ocean that benefit the stream and riparian vegetation.

Redd

* **Adult salmon create \_\_\_\_\_\_\_ \_\_\_\_\_\_ known as redds to deposit fertilized eggs in the gravel.**
* Salmon species spawn in the fall or winter, regardless of when they enter the river.
* **Redds are typically constructed in clean \_\_\_\_\_\_ with good flow of clean water, otherwise the eggs would suffocate (\_\_\_\_) and die.**
* The eggs are deposited and then covered with rocks that are on average 2-4 inches in size. The eggs are hidden and incubate in the spaces between the rocks.