



FRESHWATER FISH OF AMERICA

STEELHEAD TROUT

Onchorhynchus mykiss, (Walbaum, 1792)



Steelhead trout. Photo credit: John Heil/USFWS

Natural History

Steelhead trout are migratory rainbow trout. They are born in freshwater, migrate to the ocean for their adult lives, and then return to freshwater to reproduce. The offspring of two steelhead parents may become a purely freshwater form of rainbow trout, and the offspring of two resident freshwater rainbow trout might evolve into migratory steelhead trout.

It is not always possible to tell a steelhead from a rainbow trout just by looking at the fish. Often steelhead trout are more silver in color and grow larger than rainbow trout. The only way to confirm a steelhead trout is to look at its scales or analyze the chemical composition of its ear bones.

This species of trout are iteroparous, meaning they can spawn multiple times during their life. Steelhead live in estuaries or oceans and return to the stream where they were born each time they spawn. Some steelhead spawn in consecutive years, while other steelhead may skip a year between spawning cycles.

Steelhead trout have unique life cycles, and their migration patterns are not yet fully understood. They may spend only a few months or possibly up to several years in the ocean before returning to spawn. Additionally, some juvenile steelhead trout may spend up to a year in freshwater before migrating to the ocean, while others may leave freshwater within months of hatching.

These fish are one of the top five recreational fish species in North America and are culturally important to Native American tribes.

FACTS AT A GLANCE

Size: Steelhead normally reach lengths of 18-24 inches but have been reported reaching lengths of 45 inches.

Range: Historically, steelhead trout are native to North America, west of the Rocky Mountains.

Habitat: Depending on what phase of their life history strategy they are in, steelhead live in freshwater rivers and streams, estuaries, and marine environments. Steelhead trout occupy freshwater streams or lakes during spawning and then migrate back through brackish water to the open ocean to live during their adult non-spawning phase of their life cycle. Steelhead trout spend most of the year in estuaries or open ocean and only return to fresh water to spawn.

Diet: Steelhead normally feed on zooplankton when they are young. As they mature, they begin to include fish eggs, crustaceans, mollusks, small fish, and even mice in their diet.

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Conservation

Steelhead are very susceptible to human-induced changes within their habitat. Native populations of steelhead are threatened by habitat degradation, fishing pressure, and diseases. Unfortunately, steelhead are also very susceptible to hybridizing with other trout, which might include non-native species.

The National Marine Fisheries Service has designated 12 distinct population segments (DPS) of steelhead on the west coast of the United States. Currently there is one endangered DPS, 10 threatened DPS, two experimental populations, and one species of concern population segment protected under the Endangered Species Act.

The National Fish Hatchery System of the U.S. Fish and Wildlife Service raises over six million steelhead each year for recreational fishing, commercial fishing, tribal or subsistence harvests, and to help recover threatened steelhead populations.



Fertilized steelhead trout eggs. Photo credit: Ryan Hagerty/USFWS