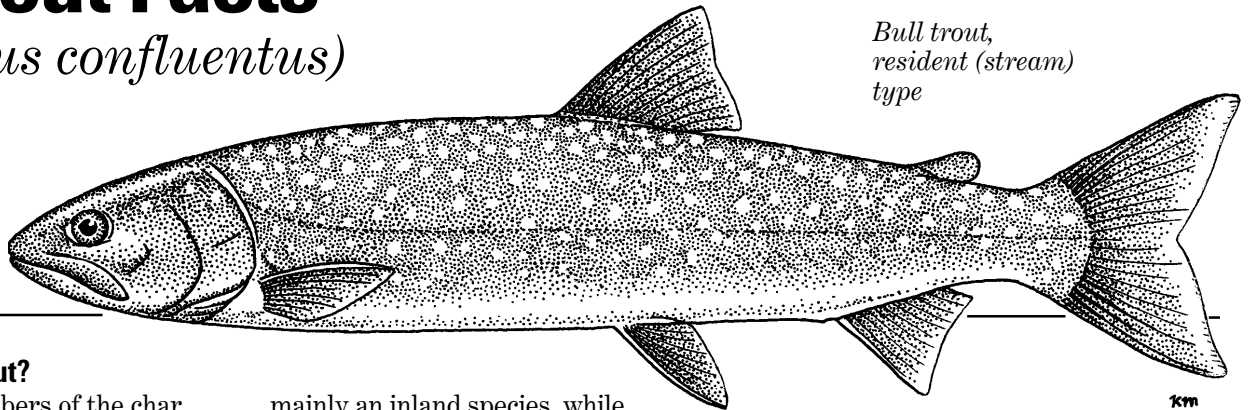


Bull Trout Facts

(*Salvelinus confluentus*)



Bull trout, resident (stream) type

What is a bull trout?

Bull trout are members of the char subgroup of the salmon family, which also includes the Dolly Varden, lake trout, and Arctic char. They can grow to more than 20 pounds (9 kg) in lake environments. Bull trout that live in streams rarely exceed 4 pounds (2 kg).

Bull trout and Dolly Varden look very similar, and were once considered the same species. Both have small, pale yellow to crimson spots on a darker background, which ranges from olive green to brown above, fading to white on the belly. Spawning adults develop varying amounts of red on the belly. Both species also exhibit differences in size, body characteristics, coloration, and life history behavior across their range.

Taxonomic work, published in 1978 and accepted by the American Fisheries Society in 1980, identified bull trout as distinct from the Dolly Varden. Compared to Dolly Varden, bull trout are larger on average, with a relatively longer and broader head. Bull trout are

mainly an inland species, while Dolly Varden are more common in coastal areas. In Washington, both species are present in the Puget Sound area.

How are char different from other salmonids?

Char (genus *Salvelinus*) are distinguished from trout and salmon by the absence of teeth in the roof of the mouth, presence of light colored spots on a dark background (trout and salmon have dark spots on a lighter background), absence of spots on the dorsal fin, small scales, and differences in the structure of their skeleton. Char are distributed farther north than any other group of freshwater fish except Alaskan blackfish, and are well adapted for life in very cold water.

What was the historic range of bull trout?

Historically bull trout occurred throughout the Columbia River Basin, east to western Montana, south to the Jarbidge River in northern Nevada, the

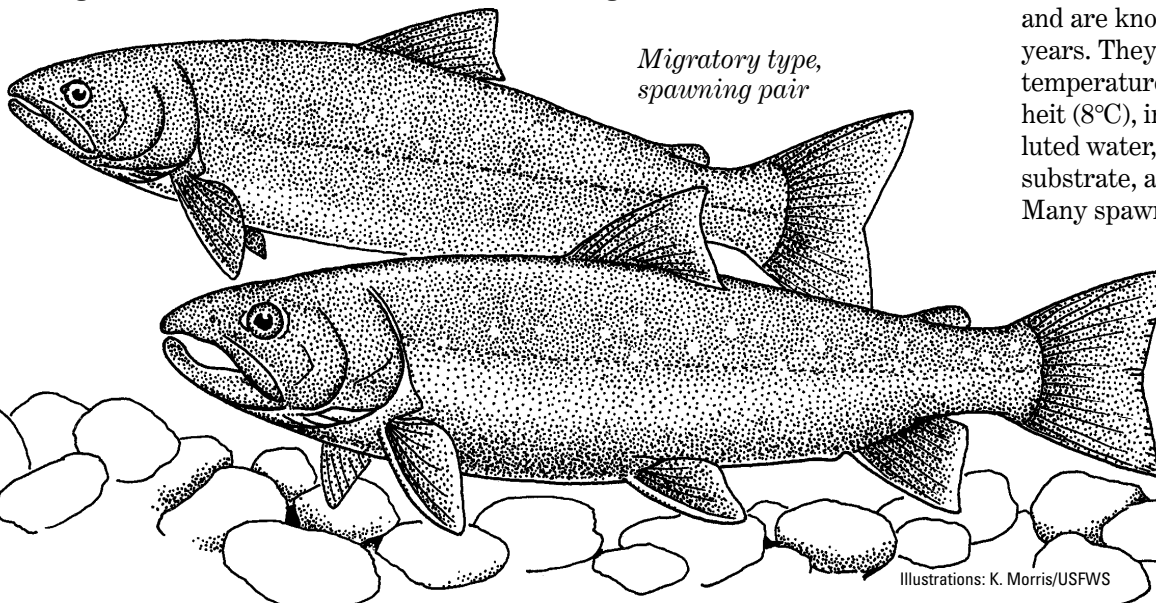
Klamath Basin in Oregon, the McCloud River in California and north to Alberta, British Columbia, and possibly southeastern Alaska. Today bull trout are found primarily in upper tributary streams and several lake and reservoir systems; they have been eliminated from the main stems of most large rivers. The main populations remaining in the lower 48 states are in Montana, Idaho, Oregon and Washington with a small population in northern Nevada. Bull trout are now extinct in northern California.

What do bull trout eat?

Small bull trout eat terrestrial and aquatic insects but shift to preying on other fish as they grow larger. Large bull trout are primarily fish predators. Bull trout evolved with whitefish, sculpins and other trout and use all of them as food sources.

What is the life cycle of a bull trout?

Bull trout reach sexual maturity at between four and seven years of age and are known to live as long as 12 years. They spawn in the fall after temperatures drop below 48° Fahrenheit (8°C), in streams with cold, unpolluted water, clean gravel and cobble substrate, and gentle stream slopes. Many spawning areas are associated with cold water springs or areas where stream flow is influenced by groundwater. Bull trout eggs require a long incubation period compared to other salmon and trout (4-5 months), hatching in late winter or early spring. Fry remain in the stream bed for up to



Migratory type, spawning pair

(continued from front)

three weeks before emerging. Juvenile fish retain their fondness for the stream bottom and are often found at or near it.

Do bull trout migrate?

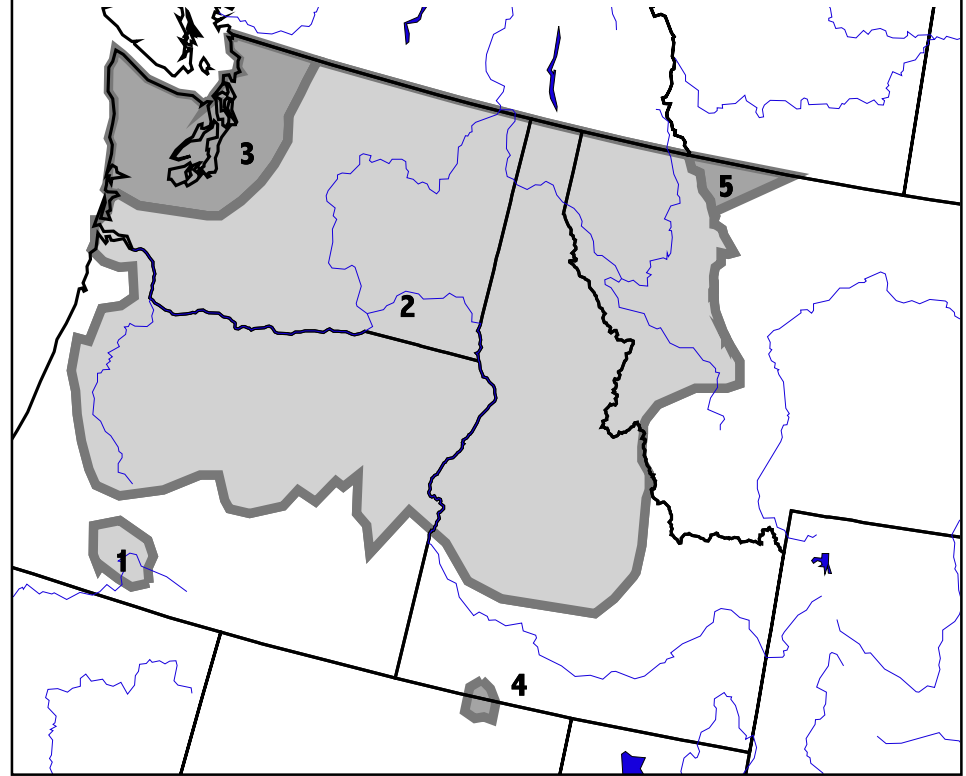
Some bull trout may live near areas where they were hatched. Others migrate from streams to lakes, reservoirs (or, in the case of coastal populations, salt water) a few weeks after emerging from the gravel. Migratory bull trout attain a greater size than resident stream fish. However, lakes and reservoirs are not good spawning habitat, so migratory bull trout may swim considerable distances to spawn when habitat conditions allow. For instance, bull trout in Montana's Flathead Lake have been known to migrate up to 155 miles (250 km) to spawn. Migration is important to maintaining healthy bull trout populations.

Why are they in trouble?

Bull trout are vulnerable to many of the same threats that have reduced salmon populations in the Snake River Basin. Due to their life history requirements, bull trout are more sensitive to increased water temperatures, poor water quality, and low flow conditions than many other salmonids. Past and continuing land management activities have degraded stream habitat, especially along larger river systems and stream areas located in valley bottoms, to the point where bull trout can no longer survive or reproduce successfully. In many watersheds, remaining bull trout are small, resident fish isolated in headwater streams.

Brook trout, introduced throughout much of the range of bull trout, easily hybridize with them, producing sterile offspring. Brook trout also reproduce earlier and at a higher rate than bull trout, so bull trout populations are often supplanted by these non-natives. Hybridization with brown trout and lake trout is a problem in some areas. Dams and other in-stream structures also affect bull trout by blocking migration routes, altering water temperatures and killing fish as they pass through and over dams, or are trapped in irrigation and other diversion structures.

Present Range of Bull Trout in the Contiguous United States






What is being done to protect bull trout?

Many of the actions intended to protect other declining salmonids may also help bull trout. Stream and habitat protection and restoration, reduction of siltation from roads and other erosion sites, and modification of land management practices to improve water quality and temperature are all important. Several state agencies have enacted regulations reducing or prohibiting bull trout harvest. Several states have also drafted or have adopted conservation plans to help bull trout populations recover.

What more can be done to help bull trout?

Besides the measures outlined above, a strong commitment by private citizens, industry, state, Federal, and tribal groups to change, reduce or eliminate activities that degrade streams and rivers will be necessary to truly recover many species of native fish. Much bull trout habitat in mainstream rivers and streams is privately owned, making conservation activities on private lands a key element to restoring aquatic habitat and recovering native fish

Map Key

States and Provinces		Bull Trout Population Segments	
	States and Provinces	1	Klamath River
	Bull Trout	2	Columbia River
	Rivers and Lakes	3	Coastal/Puget Sound
		4	Jarvis River
		5	St. Mary/Belly River

populations. In some areas, reducing the potential for hybridization of bull trout with non-native fish species would enhance bull trout survival and recovery.

For more information, contact:

Public Affairs Office
U.S. Fish and Wildlife Service
911 NE 11th Avenue
Portland, Oregon 97232-4191
503/231-6121



May 1998