## **Bull Trout in the Flathead Watershed** Wade Fredenberg, Fish Biologist, US Fish and Wildlife Service Craig N. Kendall, Hydrologist, Flathead National Forest

he bull trout (Salvelinus confluentus) is L the largest native fish in the Flathead Watershed. Bull trout are predatory fish that can grow up to three feet long and

After 2-3 years, the fingerlings migrate downstream from the spawning and rearing tributaries to much more productive rivers and lakes and grow to maturity. At

> maturity (at age 5 or 6), adult fish swim

as far as 150 miles

upstream to spawn

in the same streams

where they emerged

several years before.

Bull trout in the

North and Middle

Forks of the Flat-

head River system

migrate to Flathead

Lake, and Swan

River bull trout mi-

grate to Swan Lake



weigh over 20 pounds! This species colonized the Columbia Basin headwaters soon after the glaciers receded, over 10,000 years ago, and they have been here ever since. Here in the Flathead, bull trout populations are generally migratory. Adult fish ascend the coldest small tributary streams every fall and bury their eggs, to hatch the following spring. Once the fry emerge, they grow slowly in the sterile smaller streams.

Source: Faye Eklund



Angler Dallas Eklund with a large bull trout caught in the North Fork of the Flathead River in the 1950s

to mature. The upper South Fork Flathead River system is also home to a bull trout population historically linked to Flathead Lake, but that now migrates to Hungry Horse Reservoir. Other populations in Glacier National Park also migrate to Bowman, Kintla, Logging, Quartz, Harrison and McDonald Lakes.

Bull trout are unique because they use the entire Flathead Watershed to complete their life cycle. Flathead Lake bull trout travel up the Flathead River and then up the North or Middle Forks to reach spawning habitat as far away as British Columbia or the Great Bear Wilderness, respectively. They spawn in low, clear water in streams that are relatively small and have abundant beds of clean gravel and cobble. To observe a brilliantly-colored mated pair of large bull trout digging a nest in a small spawning stream in September is a unique wildlife spectacle.

Bull trout were once considerably more plentiful in the Flathead than they are today. Early residents referred to bull trout as "salmon trout" because of their large size

and lengthy migration through the river systems. For most of the 20th century, bull trout provided a very popular sport fishery in Flathead Lake and rivers upstream. Older generations remember "plugging" for bull trout in the Flathead River and its tributaries.

In April and May, bull trout begin leaving Flathead Lake to work their way upstream. Anglers would follow the fish upstream through the spring and summer to catch them using large spoons or "plugs", which are wooden lures with very large treble hooks that imitate crippled whitefish or cutthroat trout. By late June and into July adult bulls reach the Middle and North Forks, where they reside in deep holes and runs until September spawning season. "Plugging for bulls" was very popular among fishermen in the Flathead Watershed up until the late 1980s. Bull trout are still present, but today their numbers are very low. As bull trout numbers declined, part of our cultural heritage declined with them.

In 1998, bull trout were listed as "threatened" under the Endangered Species Act, not only in the Flathead, but throughout the Columbia River Basin. Here in the Flathead Watershed, bull trout numbers have declined primarily due to presence of non-native species and habitat alteration. The most significant impact to bull trout is the presence of lake trout, which were introduced to the Flathead Watershed early in the 20th century. Following the 1970's introduction of Mysis shrimp, the lake trout population exploded in Flathead Lake. Since that time, the lake trout population in Flathead Lake has continued to grow, to nearly half a million fish by recent estimates.

In recent decades, lake trout have migrated upstream and invaded Swan Lake as well as most of the lakes on the west side of Glacier National Park. Lake trout have a

Bull trout

competitive edge over bull trout because they reside year around and can spawn every year in lakes, and they can live up to 40 years. The few thousand remaining bull trout, now seriously outnumbered, must undertake an arduous spawning migration and seldom live to the age of 20. Because the lake trout population in Flathead Lake has grown so large, bull trout returning to the lake from their natal streams face predation and competition, which further limits the ability of the population to rebound.

Source: Flathead Beacon



Kalispell angler Lou Kis holds a bull trout caught on the Flathead River near Blankenship Bridge in 1983

Recovery of bull trout and native westslope cutthroat trout in the Flathead Watershed is attainable because the habitat is still largely intact, but not without significant challenge. In order to thrive, bull trout require the "Four C's: Clean, Cold, Complex, and Connected" habitat. Bull trout numbers can increase by reducing the proliferation of non-native species and maximizing the productive capacity of the headwaters habitat. This work requires close cooperation among State and Federal agencies and the support of the general public. More information about bull trout recovery is available at:http://www.fws.gov/pacific/ bulltrout/Recovery.html.