

Westslope Cutthroat Trout

RESOURCE BRIEF

Importance

Historically the most abundant and widely distributed subspecies of cutthroat trout, the westslope cutthroat trout (*Onchorhynchus clarkii lewisii*, WCT) currently occupies less than 5% of its former range in the upper Missouri River drainage (Fig. 1). During the first half of the 20th century, the stocking of nonnative brook and brown trout and interbreeding rainbow trout and Yellowstone cutthroat trout (YCT) reduced genetically pure WCT populations. In 2004, the Montana Natural Heritage Program designated the WCT a Species of Concern because it is considered vulnerable to extinction. The US Fish and Wildlife Service has designated WCT a Species of Special Management Concern, but determined that listing the WCT as threatened under the Endangered Species Act was not warranted. The issue is being considered by the US District Court for the District of Columbia.



Discussion

To lower the risk of extinction in the park and southwest Montana, park staff have begun a project to restore WCT in the East Fork Specimen Creek. This creek is fed by small headwater lakes that were fishless until 1937, when they were stocked with YCT, which are not native to the area. As YCT moved downstream and introduced rainbow trout moved upstream from the Gallatin River, interbreeding resulted in a WCT population less than 80% genetically pure. As part of the restoration project, piscicide treatments were used to remove all fish from High Lake, the only headwater lake that continued to support YCT after stocking ended, and in 2007 WCT were relocated there from the park's two pure populations. In 2008, a barrier was constructed in the creek to prevent non-native and hybridized trout from moving into the restoration area from downstream, and the creek will be restocked with WCT after the nonnative fish have been eradicated. In 2010, the first reproduction of the WCT in High Lake was documented. Restocking of WCT also began in East Fork Specimen Creek.

Status and Trends

Although approximately 641 stream miles within the park originally supported genetically pure westslope cutthroat trout (WCT), the species has been extirpated from an estimated 36% (231) of stream miles and exists in a hybridized form in most of the remaining habitat. One of two known genetically pure WCT populations in the park is in a tributary to Grayling Creek in the Madison River drainage, where an estimated 700 WCT reside. It is one of only three known genetically pure WCT populations remaining in the Gallatin and Madison drainages of southwest Montana. Another pure population resides in

the Oxbow/Geode creek complex, tributaries to the Yellowstone River in the park. These WCT are not within the native range and were likely introduced between 1922–24.



Figure 1. Historical range of WCT (from Behnke 2002).

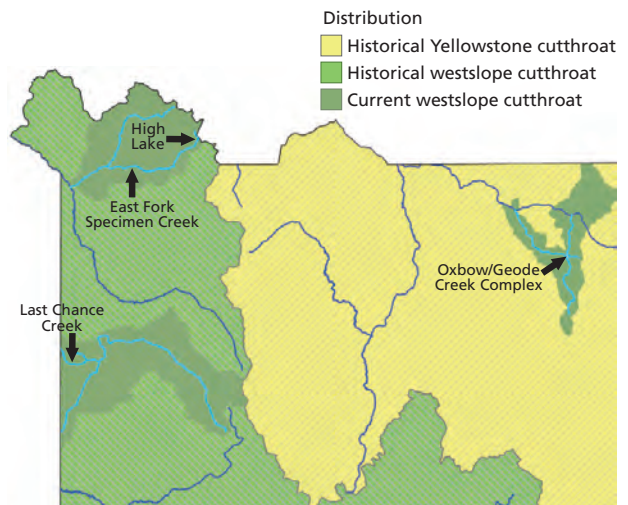


Figure 2. Historical cutthroat trout distribution in the park and locations of known remaining WCT populations.