

Snake River Cutthroat Trout - *Oncorhynchus clarkii*

Abundance: Common within a limited range

Status: NSS4 (Cb)

NatureServe: G4T1T2Q
S1

Population Status: Populations are stable and widely distributed throughout its historic range within the Snake River drainage of Wyoming.

Limiting Factor: Habitat: Limiting factors are severe, but are not increasing significantly. Habitats in the Snake River have been impacted by flow regulation, channel stabilization and floodplain modifications. Other large river habitats are impacted by agriculture and suburban development.

Comment:

Introduction

Snake River cutthroat trout are native to the upper Snake River above Palisades Reservoir (Baxter and Stone 1995). They have been introduced into other drainages as a sport fish. Snake River cutthroat trout are typically distinguished from other Wyoming cutthroat trout by their profuse and very fine spotting (Baxter and Stone 1995, Behnke 1992). Their diet consists of insects and other fish (Kiefling 1978). Spawning generally begins in late March and continues until early July.

See the Snake/Salt River Basin aquatic basin chapter in the current SWAP for more information relative to this fish.

Habitat

Snake River cutthroat trout are found in larger rivers but also occur in reservoirs, lakes, and small streams (Baxter and Stone 1995, Kiefling 1978). They prefer areas with good overhead or instream cover (Kiefling 1978). Snake River cutthroat trout typically use smaller tributary streams or spring creeks for spawning (Hayden 1967, Kiefling 1978).

Problems

- h Habitat alterations are believed to be responsible for declines of Snake River cutthroat trout. Habitat alterations include manipulation of the hydrograph due to Jackson Lake Dam, altering available habitats in summer and winter, loss of connectivity due to the construction of Jackson Lake Dam, dewatered reaches caused by irrigation diversions, and impassable irrigation diversions, construction of an extensive levee system along the Snake River that has altered aquatic habitat between the levees and prevented flushing flows to adjoining spring creek systems, and land use practices in certain watersheds may increase bank erosion and siltation.
- h In localized areas, nonnative species have contributed to the decline of Snake River cutthroat trout either through direct predation or competition for food and spawning sites. Hybridization also occurs between Snake River cutthroat and rainbow trout though it is not a current concern.

Conservation Actions

- h Continue efforts to maintain flows and connectivity.
- h Continue to educate landowners and the public about the importance of maintaining habitat for native fish
- h Continue efforts to restore populations within native ranges where opportunities to remove competing or hybridizing species exist

Monitoring/Research

Population estimates are conducted annually on the Snake, Gros Ventre, Hoback, and Salt rivers. Populations will continue to be monitored during routine sampling of other waters. Basin surveys have been initiated and will be continued in 2010 in the Hoback River and Spread and Cub creek drainages.

Recent Developments

In 1998, YSC were petitioned for listing as a threatened species under the Endangered Species Act. The petition was rejected in February 2001, but in December 2004, U.S. District Court for the District of Colorado ruled that the U.S. Fish and Wildlife Service (FWS) illegally rejected the petition. The FWS conducted a 12-month status review of the species and found listing unwarranted. After the FWS decision was announced, proponents for listing filed an Intent to Appeal Brief within 60 days of the decision but have completed no further actions since.

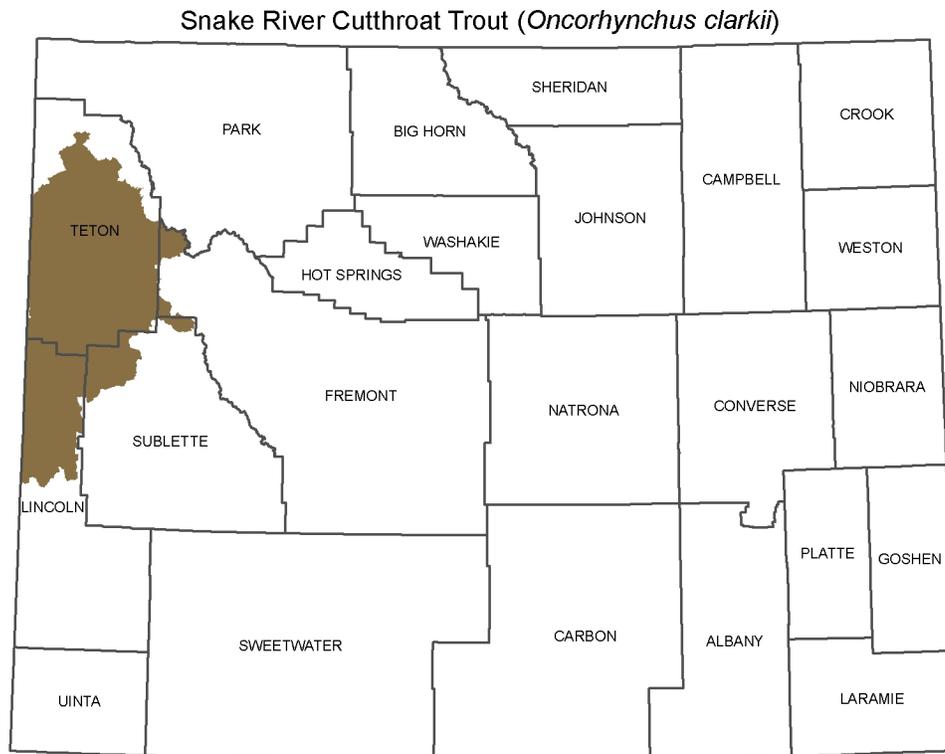
A study conducted by Sweet (2009) looked at twelve parental crosses from fine and large-spotted cutthroat trout from the Snake River cutthroat trout brood stock at the Jackson National Fish Hatchery. The study found that the expression of spotting pattern is not entirely heritable and may be influenced by other factors.

New rangewide Conservation Agreement and Conservation Strategy were completed (YCT Range-wide Conservation Team 2009).

New rangewide status assessment was completed (May et al. 2007).

References

- YCT Range-wide Conservation Team. 2009. Conservation agreement for Yellowstone cutthroat trout (*Oncorhynchus clarkii bouvieri*) in the States of Idaho, Montana, Nevada, Utah and Wyoming. Montana Fish, Wildlife & Parks.
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- Hayden, P.S. 1967. Snake River cutthroat trout study: the reproductive behavior of the Snake River cutthroat trout in three tributary streams in Wyoming. Wyoming Game and Fish Commission Cooperative Research Project 4. Cheyenne, Wyoming.
- Behnke, R. 1992. Native Trout of North America. American Fisheries Monograph 6. American Fisheries Society. Bethesda, MD.
- Sweet, D. 2009. Variation in spotting patterns within the cutthroat trout of the Upper Snake River drainage, Wyoming. Wyoming Game and Fish Department Administrative Report. Cheyenne, Wyoming.
- Baxter, G.T., and M.D. Stone. 1995. Fishes of Wyoming. Wyoming Game and Fish Department, Cheyenne.
- Kiefling, J.W. 1978. Studies on the ecology of the Snake River cutthroat trout. Wyoming Game and Fish Department administrative report, Cheyenne, Wyoming. 198pp.



SOURCE: Digital maps of ranges for Wyoming Species of Greatest Conservation Need: April 2010. Wyoming Game and Fish Department. Note that brown indicates the current known range of the species.