

Colorado River Cutthroat Trout - *Oncorhynchus clarkii*

Abundance: Rare

Status: NSS2 (Ba)

NatureServe: G4T3 S1

Population Status: Greatly restricted in numbers and distribution - extirpation is not imminent.

Limiting Factor: Other: habitat availability is limited by the presence of introduced, non-native salmonids and introgression continues to be an issue. Although significant population gains have been made by eliminating introduced, non-native species and reintroducing Colorado River cutthroat trout, non-native species still occupy much of the historic range of Colorado River cutthroat trout.

Comment:

Introduction

The Colorado River cutthroat trout (CRC) is the only trout native to the Green and Little Snake river drainages in Wyoming. This subspecies of cutthroat trout is also native to Utah and Colorado. At the completion of the systematic review by members of the Colorado River cutthroat trout interagency team it was determined that 21,386 miles of stream habitat were identified as having the potential of being historically (circa 1800) occupied by CRC. The estimated amount of historical range in Wyoming is 4,185 miles. CRC currently occupy 552 miles in Wyoming (18% of total current; 13% of Wyoming historical) (Hirsch et al. 2006).

Colorado River cutthroat trout were petitioned for listing under the endangered species act (ESA) in 1999. The FWS concluded in a 90-day finding in 2004 that the petition did not have sufficient or substantial information to warrant listing (FR 69(76):21151-21158, 04/20/04).

Colorado River cutthroat trout are spectacularly colored during spawning. The spots are large and somewhat concentrated in the caudal area (Baxter and Stone 1995). Spawning typically starts after peak flows which is usually during June and as late as early July for higher elevation streams and lakes. They feed mostly on aquatic and terrestrial invertebrates. Colorado River cutthroat trout historically occupied large rivers and lakes but are now typically found in headwater streams.

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

Habitat

In Wyoming, the Colorado River cutthroat trout can be found in the Green River, Black's Fork and Little Snake River drainages. Some of the healthiest and purest populations of this subspecies occur in small stream tributaries of the Little Snake River in Carbon County and in the Wyoming Range of Sublette County. This fish prefers cold, clear water.

Problems

- h Nonnative species have contributed to the decline of this fish either through hybridization, competition for habitat, or competition for food and spawning sites.
- h Past and current livestock grazing practices have altered riparian habitat, water quality and sediment transport regimes. Ramifications of this practice includes loss of instream cover and channel complexity, increased water temperature, bank erosion and loss of preferred substrate.
- h Land management actions such as oil and gas exploitation, roads, culverts, domestic grazing, and timber harvest have had negative impacts to watersheds.
- h Lack of aspen regeneration has impacted beaver persistence in these watersheds.
- h Habitat fragmentation caused by dams, road crossings, grade control structures, diversions, etc. are in some cases limiting gene flow and threatening the persistence of this fish.

Conservation Actions

- h Implementation of the Conservation Strategy for Colorado River cutthroat trout will eliminate or reduce threats to this subspecies of cutthroat trout (CRCT Coordination Team 2006).
- h Represent the WGFD on the interagency Colorado River cutthroat trout conservation team and help implement the Range-wide Conservation Agreement and Strategy for Colorado River cutthroat trout (CRCT Coordination Team 2006). Complete CRC accomplishment reports annually and present this information to the CRCT Coordination Team annually..
- h Complete next 5 year CRC Status Assessment.
- h Evaluate potential restoration opportunities on public and private lands.
- h Identify populations of Colorado River cutthroat trout or habitat that will support Colorado River cutthroat trout that would benefit from isolation by a fish migration barrier and/ or chemical rehabilitation to remove non-native species.

Monitoring/Research

Continue to complete basin wide habitat and population surveys for those watersheds that support CRC populations.

Continue to supplement some CRC populations with hatchery fish as needed and continue to monitor the success of those stocks.

Continue to complete WHAM habitat surveys for all CRC watersheds and identify potential restoration opportunities.

Recent Developments

Wyoming Game and Fish summarized actions, including changes to historic and current range that have been discovered, habitat enhancement that have occurred (whether those actions were completed by the WGFD or in cooperation with other state and federal agencies), current harvest regulations to protect CRC, current fish disease status, threats to CRC populations from exotic organism such as *Myxobolus cerebralis* (Whirling Disease parasite, WD), and other management actions taken to protect or enhance existing CRC populations (WGFD 2007).

Colorado River cutthroat trout have been reestablished in the LaBarge watershed which includes 58 stream miles. More information on this watershed and restoration plan can be located in the LaBarge Watershed Fisheries Management Plan for Colorado River Cutthroat Trout (Sexauer 2000) and the LaBarge Creek Rehabilitation Plan (Sexauer 2006).

The conservation agreement and strategy for Colorado River cutthroat trout was updated (CRCT Coordination Team 2006).

Supplementation of Colorado River cutthroat trout in several tributary streams located within the Wyoming Range and Wind River mountain range.

Wyoming Range forage reserve and Triple Peak Forage reserve are providing protection to the headwaters of several Colorado River cutthroat trout streams.

References

Hirsch, C.L., S.E. Albeke, and T.P. Nesler. 2006. Range-Wide Status of Colorado River Cutthroat Trout (*Oncorhynchus clarkii pleuriticus*): 2005. Colorado River cutthroat trout Conservation Team Report. Colorado Division of Wildlife, Fort Collins, Colorado. 200 p.

CRCT Coordination Team. 2006. Conservation agreement for Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*) in the States of Colorado, Utah, and Wyoming. CRCT Conservation Team. 2006b. Conservation strategy for Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*) in the States of Colorado, Utah, and Wyoming. CRCT Conservation Team document. 24 p. CRCT Conservation Team document. 12 p.

CRCT Coordination Team. 2006. Conservation strategy for Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*) in the States of Colorado, Utah, and Wyoming. CRCT Conservation Team document. 24 p.

Sexauer, H.M. 2000. LaBarge watershed fisheries management plan for Colorado River Cutthroat trout. Wyoming Game and Fish Department.

Baxter, G.T., and M.D. Stone. 1995. Fishes of Wyoming. Wyoming Game and Fish Department, Cheyenne.

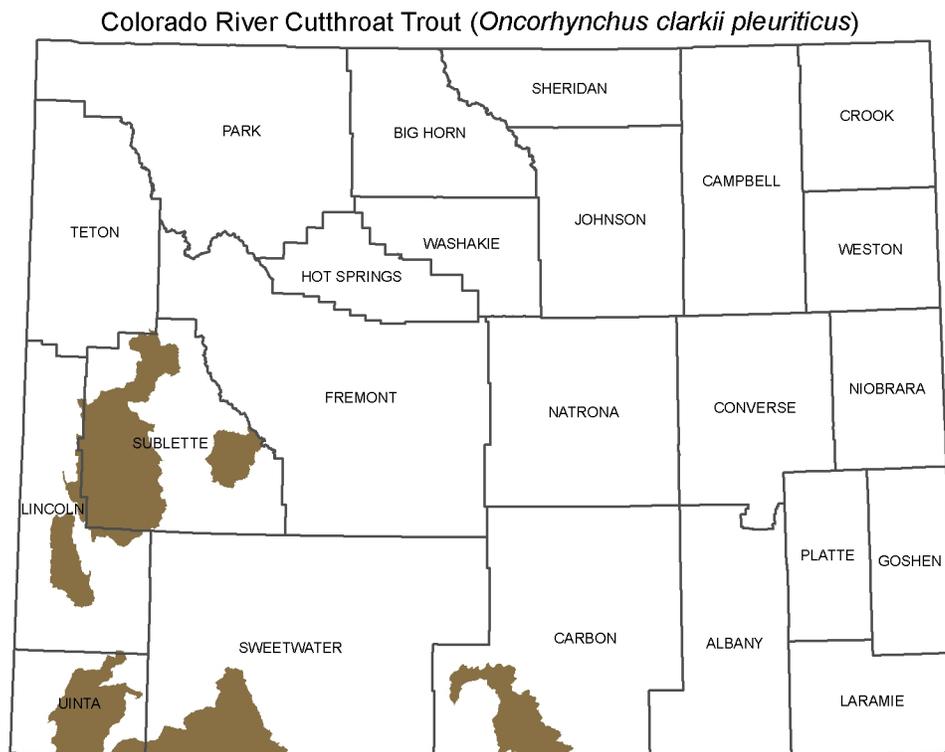
Behnke, R.J. 1979. Monograph of the native trouts of the genus *Salmo* of western North America. U.S. Fish and Wildlife Service, Denver. 215pp.

Binns, A. 1977. Present status of indigenous populations of cutthroat trout, *Salmo clarki*, in Southwestern Wyoming. Fish Tech. Bull. No. 2. Wyoming Game and Fish Department, Cheyenne. 58pp.

Jespersion, D.M. 1981. A study of the effects of water diversion on the cutthroat trout, *Salmo clarki pleuriticus*, in the drainage of the North Fork of the Little Snake River in Wyoming. M.S. thesis. Univ. Wyoming. 99pp.

Quinlan, R.E. 1980. A study of the biology of the Colorado River cutthroat trout (*Salmo clarki pleuriticus*) population in the North Fork of the Little Snake River drainage in Wyoming. M.S. thesis. Univ. Wyoming. 49pp.

Wyoming Game and Fish Department. 1987. Comprehensive management and enhancement plan for Colorado River cutthroat trout in Wyoming. Wyoming Game and Fish Department, Cheyenne.



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.