

McCloud River Redband Trout

Oncorhynchus mykiss stonei

chances for survival:
poor

2



The McCloud River redband trout is one of two types of redband trout found in Northern California. These are small rainbow trout with a brick-red band along the sides.

The uncertain taxonomic status of California populations reflects the diversity of forms and the long isolation of many populations. McCloud redbands now exist only in a few small streams. Within this group, the population at Sheepheaven Creek is so distinctive that some have suggested it be classified as a separate subspecies. The life history of the McCloud River redband trout is similar to that of other rainbow trout in small streams. Redband trout caught from Sheepheaven Creek were in spawning condition in June. The largest fish caught during a 1973 survey was about eight inches in length and the population at that time was estimated at 250 fish more than three inches long.

DISTRIBUTION: McCloud River redband trout were once

present in the mainstem McCloud River above Middle Falls. They were also perhaps present in the lower river and its tributaries, residing especially in areas inaccessible to anadromous steelhead. Trout from Sheepheaven Creek were transplanted to Swamp and Trout Creeks. Currently, unhybridized populations are present only in Sheepheaven, Trout, Swamp, and Edson Creeks, with populations also possible in Tate, Moosehead, Raccoon, Blue Haron, Bull, and Dry Creeks. The trout's total permanent habitat is estimated to be about 15 to 16 stream miles, less in dry years.

ABUNDANCE: Surveys conducted on redband trout creeks from 1975 to 1992 indicate that populations are variable and fluctuate widely with the water year type. Total populations

are estimated to be around 2,500 fish, although this number could be much higher in wet years and much lower in dry years, making climate change a potential problem for the conservation of McCloud River redbands.

FACTORS AFFECTING STATUS: The factors, past and present, that threaten the McCloud River redband trout include, (1) competition with alien trout, (2) hybridization, (3) logging, (4) grazing, and (5) angling pressure. McCloud River redbands have only small populations in tiny streams that are highly vulnerable to local impacts from grazing, logging and take by anglers. The McCloud River has received substantial plants of stocked hatchery rainbow trout to support recreational fisheries. Generally, where alien trout are present, redband trout are absent. The exact cause of the disappearance of redband trout has not been documented in the McCloud and smaller streams, but presumably it is a combination of predation on young by non-native brown trout, competition for space by all fish species, disease introductions from other fish, and hybridization with rainbow trout.

STATUS 2: Because of the heightened level of interest and management for McCloud River redband trout, there seems to be no immediate risk of extinction. However, since redband trout populations are small and exist in small isolated habitats, their status could change in as few as five to ten years. Therefore, conserving these fish requires eradication of non-native trout from its historic habitats, followed by reintroduction. Conservation of McCloud River redband trout is active and ongoing, thanks to the leadership of California Trout, Shasta-Trinity National Forest, and the California Department of Fish and Game. The forging of a new Redband Trout Conservation Agreement in 2007 is the latest step towards protecting these fish and their habitats.

In the past, most management attention focused on the Sheepheaven Creek population, but current fishery management focuses on all populations. Because the conservation agreement is an effort to provide a systematic framework for all restoration and management activities in the watershed, it is crucial that the agreement be finalized as the working plan to improve conditions for McCloud River redband trout.

CONSERVATION RECOMMENDATIONS: A Redband Trout Conservation Agreement was reached in 2007 which recommends several actions to protect the McCloud River redband trout, including establishing a McCloud redband refuge, maintaining and enhancing existing habitats, and protecting the genetic integrity of existing populations by eliminating all planting of hatchery fish in streams of the upper McCloud Basin. Additional recommendations are to develop and enforce angling regulations for the protection of redbands, a complete genetic evaluation of all redband populations, and establishing a regular population monitoring program. The Agreement needs to be fully implemented.



McCloud River Redband Trout, Historically Found Throughout The McCloud Watershed Shown Here, Are Now Confined To A Few Small Isolated Streams



PHOTO: RACHEL SIMMONS

California Trout is There for the Fish!

California Trout has been extremely active in protecting the McCloud River redband trout through funding provided by the National Fish and Wildlife Foundation and Orvis for the McCloud Redband Core Group—a collaborative of natural resource agencies, private landowners, community members and nonprofit organizations—to pay for the costs of genetic studies and creating educational outreach programs about this distinctive native fish.

CATEGORY	SCORE	EXPLANATION
Range	2	These trout occupy just one small watershed but the isolation of at least four populations provides some security, assuming the Sheepheaven Creek population is not a taxon distinct from the rest of the McCloud redbands
Population size	3	Minimum total population today is probably more than 1,000 adults, although individual populations have 100 to 500 fish in drought years
Intervention needs	3	McCloud redbands require continual monitoring and habitat protection and improvement
Tolerance	3	Physiological tolerances have not been studied, but it is likely they are fairly tolerant of high temperatures and low dissolved oxygen
Genetic risk	2	They have high hybridization risk with rainbow trout
Climate change	1	McCloud redbands are vulnerable in all streams because of small population size
Overall status	2	
Reliability	3	Existing current information is mainly for the Sheepheaven Creek population



Sheepheaven Creek. PHOTO: PETER MOYLE