## Greenback cutthroat trout restoration

## **Dave Gibson** Colorado

Recognized by the sanguine "slash" on their throats, there are three types of native cutthroat trout residing in Colorado: the Rio Grande River cutthroat, Colorado River cutthroat, and greenback cutthroat. Historically ranging throughout the South Platte River basin as far as eastern Colorado, the greenback cutthroat trout was officially declared extinct in 1937.

Beginning in the mid-1800s, mining, logging, agriculture, and unregulated fishing contributed to their demise. Introduction of non-native salmonids that closely followed was devastating as the more aggressive rainbow, brook, and brown trout outcompeted the greenbacks that readily interbred with rainbows and other types of cutthroats.

In 1952, Colorado University student William Howard Rickard Jr. was fishing Como Creek at the Rocky Mountain Research Station (RMRS) just north of Nederland. The trout he landed were unfamiliar. Suspecting that his specimens from the small tributary of North Boulder Creek might be the long-lost greenback cutthroat trout, he took them first to CU and then CSU where fish biologist Howard Tanner submitted the trout to the National Museum of Natural History where they matched their samples of the fish. With Colorado River, Rio Grande River, and greenback cutthroat trout extremely difficult to visually differentiate, the specimen at the museum collected during the late 19th century may have in fact been a Rio Grande River cutthroat. Nothing ever came of William Rickard's apparent discovery except an article written by him for Colorado Outdoors that didn't appear until ten years later.

Enter Dr. Robert J. Behnke of CSU in 1969. Based on scientific rumor, institutional archives, and Rickard's article, he accompanied his own team of the researchers to investigate at RMRS. Just as in 1952, the suspected greenback cutthroats were present in the rugged creek and newly-developed DNA technology seemed to confirm their existence and genetic lineage. With an ecology movement afoot that resulted in the 1973 Endangered Species Act, the greenback was listed as "endangered." From the a brood stock was established that flies and lures.



PHOTO BY DAVE GIBSON

## In full spawning colors

When I caught this fish 25 years ago at Mitchell Creek in the Indian Peaks Wilderness Area, it was believed to be a reintroduced greenback cutthroat trout. Modern DNA samples have proven it to have been a Colorado River cutthroat

became the foundation of today's population. After removing nonnative species of trout, the supposed greenbacks were "reintroduced" to select headwater streams and highmountain lakes with natural obstacles such as waterfalls or added barriers to protect the integrity of the trout. Rocky Mountain Park, Indian Peaks Wilderness Area, Arapaho National Forest, and Roosevelt National Forest lands were major recipients.

By 1978, greenback cutthroats were down-listed to "threatened" and twenty years later, there were self-sustaining populations stemming from the program. In 1994, the greenback cutthroat trout was designated Colorado's state fish. It was announced in 2005 that greenbacks could be found at 61 locations. Catch-and-release fishing is allowed at 47 of those spots. Male cutthroats display flaming crimson on their gill plates, lower fins, and bellies during the spring spawning season. Growing to about 2 lbs. at fish at Como Creek and another site, high altitudes, they readily pursue milt, and fertilized eggs, facilities

Heralded as an unmitigated success story, over the course of more than three decades, tens of millions of dollars and countless man hours had been devoted to the effort. Everything was going swimmingly until in 2007 when through advancements in DNA sequencing technology applied to contemporary trout samples and older than previously tested samples it was revealed by Dr. Jessica Metcalf and Dr. Andrew Martin of Colorado University that the "reintroduced" fish weren't greenback cutthroats at all but rather transplanted Colorado River cutthroat trout. Believed again to be extinct, most fortunately in 2012 a small population of pure greenbacks was discovered in Bear Creek near Colorado Springs. Ironically, the very last vestige of greenback cutthroat trout in existence weren't indigenous to the area but had been stocked by innkeeper Joseph Jones 130 years ago in ponds along the creek for his guests.

After collecting live specimens. at Leadville National Fish Hatchery and Mt. Shivano Trout Rearing Unit in Salida began a second attempt at restoring the greenback trout. Carefully nurtured, tender 1-inch hatchlings and 1-year-old 5-inch native greenbacks have been released yearly in Herman Gulch, Dry Gulch, and Zimmerman Lake at the headwaters of Clear Creek since 2014. The fish in Herman and Dry Gulches are now stable and selfsustaining.

U.S. Fish and Wildlife Service, U.S. Forest Service, Colorado Parks and Wildlife, and a bevy of Colorado Trout Unlimited volunteers were instrumental in introducing another home for our state fish in Roaring Creek (a tributary of the Poudre River) in July of 2020. Each volunteer and staff member hauled 15 to 17 fish apiece in backpacks up the steep grade depositing a total of 771 fish. The process will repeat itself in subsequent years until hopefully in three to four years new greenbacks will have been born there. Plans are being reviewed that include reintroducing the fish to more locations. There are estimated to be 4,000 greenback cutthroat trout living in the wild today.

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