



YELLOWSTONE CUTTHROAT TROUT, YELLOWSTONE RIVER BY PAT CLAYTON/FISHEYGUYPHOTOGRAPHY.COM



*Ye gods! This is restoring
trout habitat*

Spawning tributary improvements in the Paradise Valley
are helping conserve Rudyard Kipling's "small tigers."

By Glenn Phillips

In July 1890, four years before publishing his famous *The Jungle Books* collections of stories, British author and poet Rudyard Kipling traveled to Yellowstone National Park by train from Livingston up the Paradise Valley.

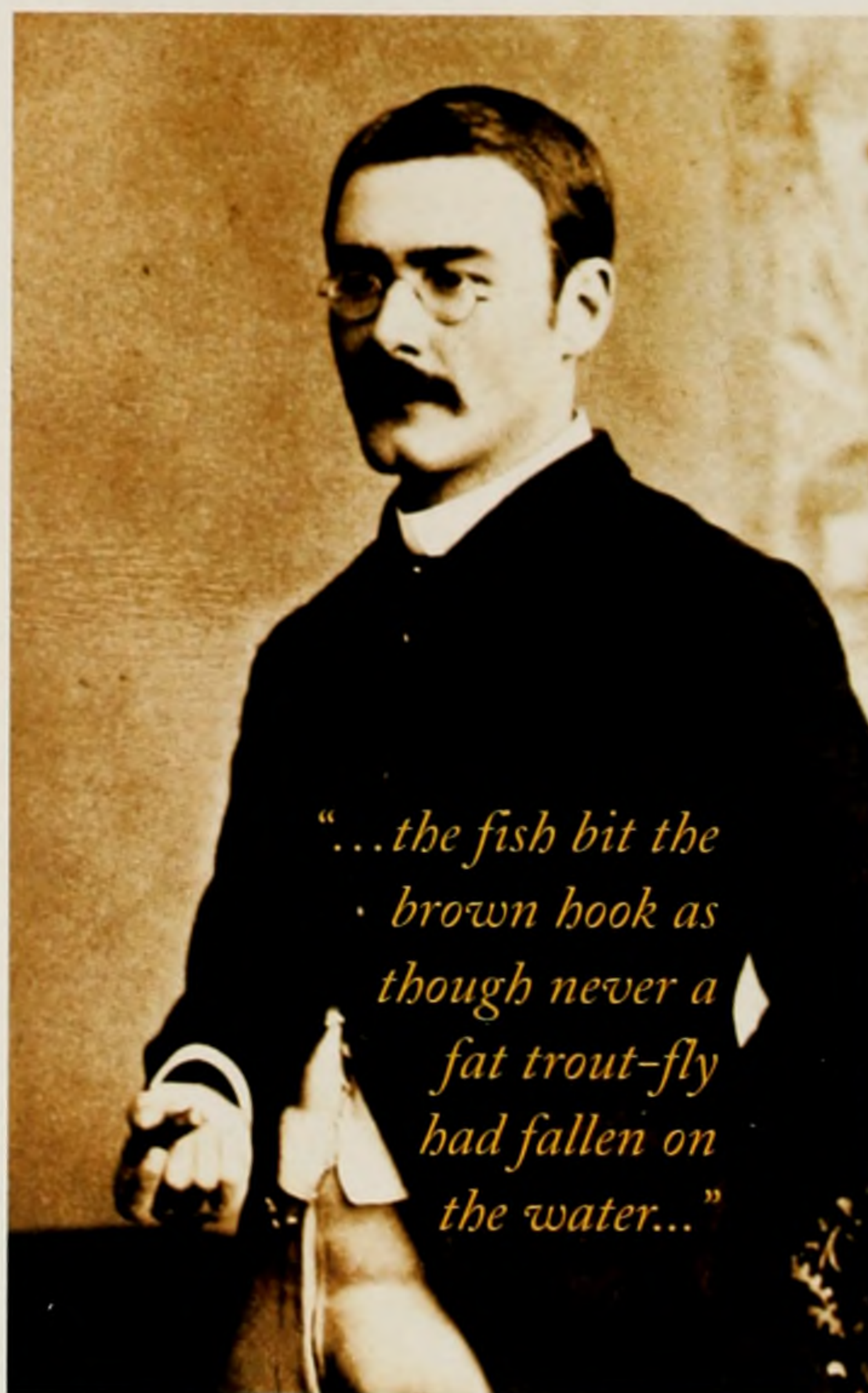
An avid angler, Kipling departed the train near Yankee Jim Canyon and spent the day fishing the big river's pools and rapids before heading into the park the next morning. Later recalling his day on the Yellowstone, Kipling wrote: "...the fish bit the brown hook as though never a fat trout-fly had fallen on the water.... At the fortieth trout I gave up counting, and I had reached the fortieth in less than two hours.... They fought like small tigers, and I lost three flies before I could understand their method of escape. Ye gods! That was fishing...."

The object of Kipling's angling excitement was the Yellowstone cutthroat trout, a close relative of Montana's other cutthroat, the westslope. Also known as the black-spotted trout, the Yellowstone cutthroat has large dark spots concentrated toward the tail and a bright orange or red "cutthroat" slash under each side of the lower jaw.

Kipling wasn't the only early angler who marveled at Yellowstone cutthroats. Walter Trumbell, an angler and member of the famous Washburn Party that explored the Yellowstone Plateau in 1870, wrote: "...and such trout!... Few of them weighed less than two pounds, and many were over three... when their attention was respectfully solicited to a transfixed grasshopper, they seldom failed to respond."

Kipling and Trumbell would see a different cutthroat trout fishery if they were to make the same trip these days. Yellowstone cutthroats were once abundant, and the native fish was the only trout species in the Paradise Valley. Today, numbers of the native trout there and elsewhere in its his-

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RUDYARD KIPLING/CORBIS IMAGES

toric range (see map on opposite page) are much reduced. The decline is due to habitat degradation caused by irrigation, grazing, road building, and various other human activities. The native trout have also been displaced, out-competed, or hybridized by non-native brown, rainbow, and brook trout.

Fortunately, there is some good news to report. Over the past few years, many of the degraded spawning tributaries in the Paradise Valley have been restored. And work is now under way on several other streams to improve spawning habitat and maintain adequate water flows. These projects are the result of a unique combination of public funding, public interest, and legislative support. Most important to the restorations has been the cooperation of farmers and ranchers, who are often leery of state-sponsored conservation initiatives that can affect their operations.

FIXING THE PROBLEM

Montana Fish, Wildlife & Parks and federal biologists working in the Paradise Valley have known for years that the Yellowstone River's cutthroat rely heavily on tributaries for spawning and rearing. They've also known that tributary degradation—dewatering for irrigation, diversion dams that block trout from spawning habitat, and

channel alterations and land management practices that damage and diminish habitats—have contributed to the Yellowstone cutthroat decline. But not until recently has FWP had the money and staff to do much about those problems.

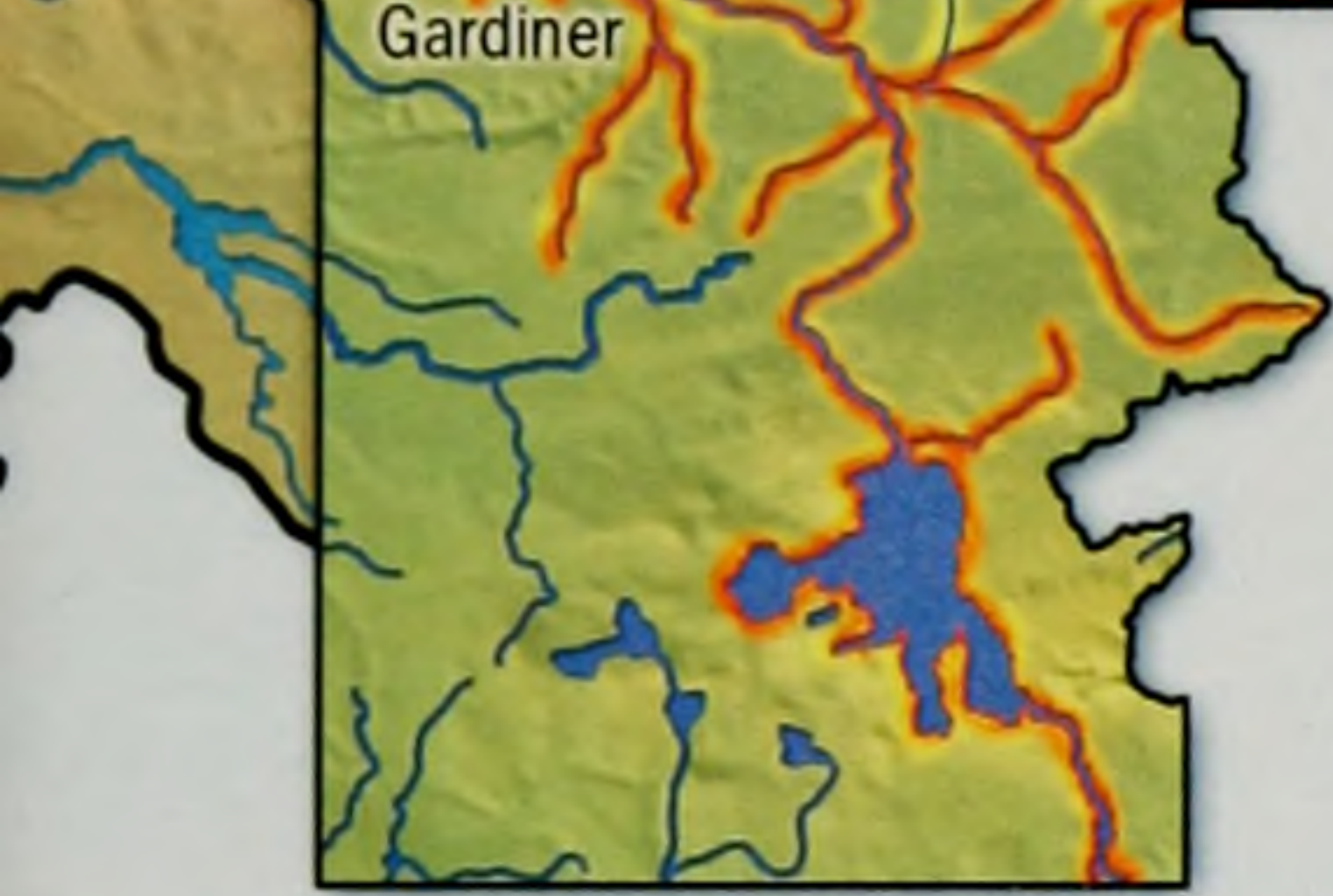
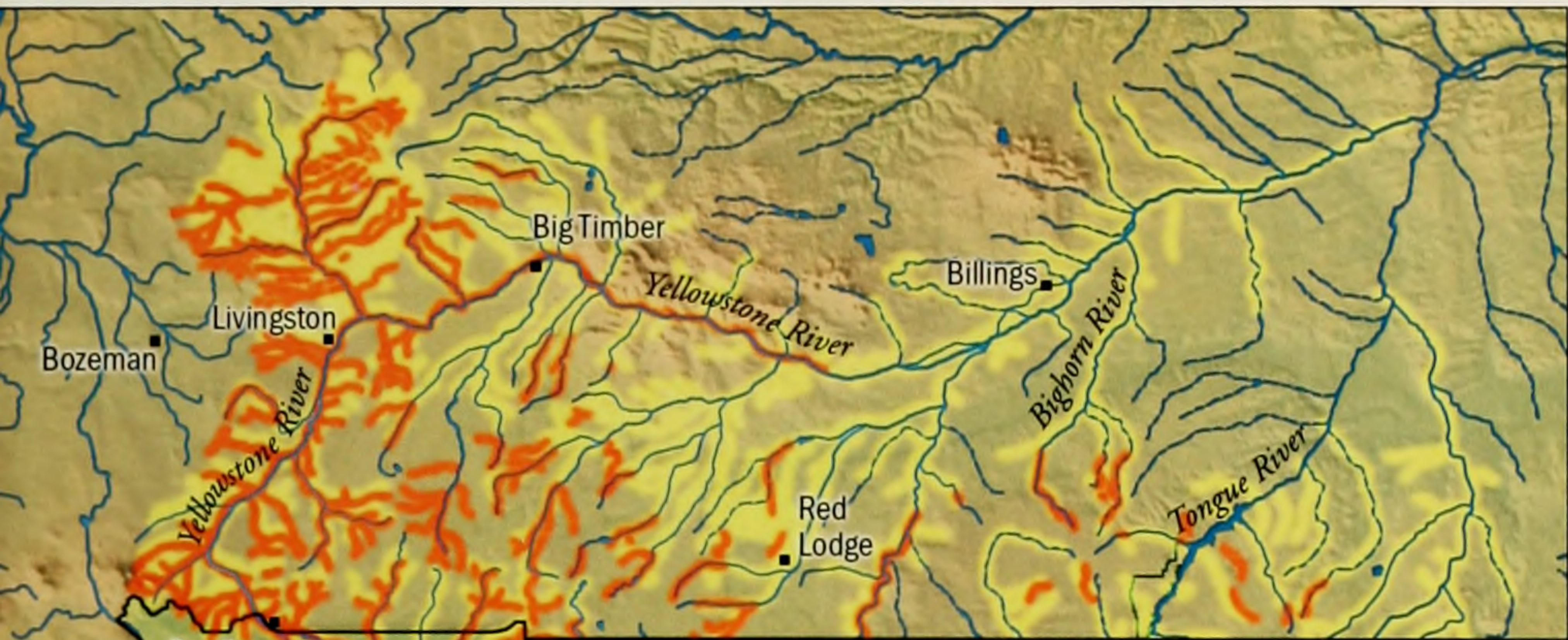
In 2002, using funding from a new U.S. Fish and Wildlife Service program, FWP hired fisheries biologist and 14-year department veteran Pat Byorth to work on Yellowstone cutthroat trout restoration. During his four-year tenure in the Livingston area, Byorth and other state and federal biologists identified most of the streams where healthy populations of pure-strain Yellowstone cutthroats remain. They next delineated specific projects to solve problems thwarting cutthroat survival and spawning success.

To make these projects happen, land-owner cooperation was essential. "Many were willing to work with us once they understood the department wasn't trying to regulate their activities," says Byorth, who has since gone on to law school. "And many were genuinely concerned about the status of the fish, fearing that if the cutthroat is listed under the Endangered Species Act, they'll face difficult federal restrictions. They saw cooperating with us on projects that require little of their own money and resources as an attractive option."

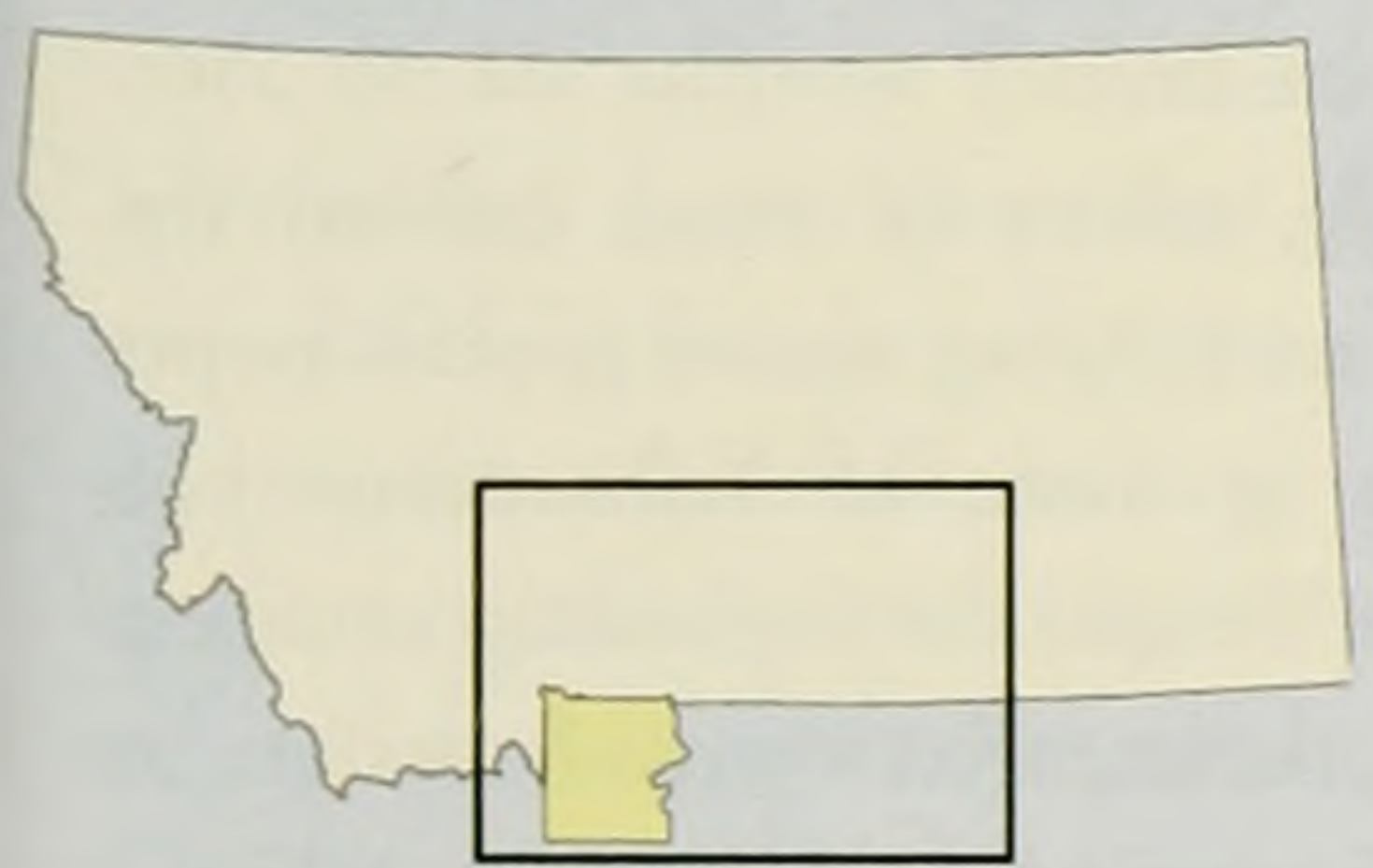
NO MORE STUCK CALVES

Before it reaches the Yellowstone River, Emigrant Spring Creek flows its entire length, about half a mile, through Richard and Druska Kinkie's Emigrant Peak Ranch. To free land for growing hay, previous owners had straightened the stream, reducing stream bends that create vital trout habitat. Some stretches had also become too shallow for trout survival due to cattle trampling the banks. Byorth worked with the Kinkies to restore the stream by re-establishing the natural stream bends and narrowing and deepening the channel to speed the current and wash away sediment that was covering spawning gravel. The stream was fenced, and off-stream cattle watering troughs fed by new wells were installed.

After the project was completed in 2004, the number of Yellowstone cutthroat trout



■ Current Yellowstone cutthroat distribution
■ Historic Yellowstone cutthroat distribution



Yellowstone Cutthroat Trout Distribution

Historically, Yellowstone cutthroat ranged in the Yellowstone River drainage in Montana and Wyoming from its headwaters in Yellowstone National Park as far east as the Tongue River. Today the range of this cutthroat subspecies is just half that of a century ago. Illegally introduced lake trout have devastated the cutthroat trout's stronghold in Yellowstone Lake. And in many other waters, the native fish has been displaced, out-competed, or hybridized by non-native brown, rainbow, or brook trout. Adding to the problem have been irrigation, cattle grazing, and other human activities that damage Yellowstone cutthroat trout spawning tributaries or draw water needed by the trout.

MONTANA OUTDOORS. SOURCE: MONTANA FWP

STREAM STEWARD Tiny North Fork Fridley Creek was an important spawning tributary to the Yellowstone River until an irrigation canal cut it off in the 1930s. In 2002, rancher Sean Murphy (below) and wife, Maggie, worked with FWP and Trout Unlimited to build a culvert under the canal and reconnect the stream to the Yellowstone. Elsewhere in the Paradise Valley, landowners are opening their gates to trout conservationists working to restore cutthroat spawning tributaries and forestall federal listing under the Endangered Species Act.



LAURA ZIEMER/TROUT UNLIMITED

using spawning sites, called redds, doubled. “And we expect the number will increase in the future,” Byorth says. Druska Kinkie adds that fencing the spring creek has helped the family’s cattle operation. “We no longer have to worry about pulling calves out of the mud,” she says. “We also enjoy the greater variety of wildlife attracted to the area and, of course, we want to see the fish do well.”

Big Creek, another tributary to the upper

from using it for spawning. In 1998 local irrigator and state legislator Bruce Malcolm and his neighbor Dick Kendall decided they could help cutthroats by installing a new irrigation system that would leave more water in Big Creek. What was once a dry stream bed now flows year-round, and Yellowstone River cutthroats are again migrating upstream to their historic spawning grounds. “It’s a win-win situation,” says

success story. Historically, the creek flowed unimpeded to the Yellowstone, but Park Branch Canal, built in the 1930s, intercepted the creek and cut off its connection to the big river. Though Yellowstone cutthroats remained in upper reaches of North Fork Fridley Creek, the cutthroats in the Yellowstone River could no longer ascend the tributary for spawning.

In 2004, the Murphys teamed with Trout Unlimited and FWP to construct a 105-foot culvert underneath the canal that reconnected the North Fork Fridley to the Yellowstone. The Murphys also modified their irrigation practices, donating the water they conserved back to the stream, and installed streamside fencing to keep cattle out. A series of underwater steps installed in a steep portion of the stream above the culvert also helps trout from the Yellowstone reach historic spawning grounds. Biologists predict that it won’t be long before cutthroats from the Yellowstone resume their spawning runs up the tributary.

“It’s a win-win situation,” says Malcolm. “The trout have their water, and we can continue to irrigate.”

Yellowstone River near Emigrant, supports a healthy resident Yellowstone cutthroat population. But for decades irrigation withdrawals dried up the last mile of stream, preventing trout in the Yellowstone River

Malcolm. “The trout have their water, and we can continue to irrigate.”

North Fork Fridley Creek, which flows through Sean and Maggie Murphy’s Ox Yoke Ranch south of Livingston, is another



JERI FOLGER



GLENN PHILLIPS

NO-COW AREA Another threat to Yellowstone cutthroats (left) are livestock trampling the banks of spawning tributaries. After Emigrant Spring Creek (above) was fenced off, trout spawning sites doubled, and rancher Druska Kinkie says she and her husband no longer have to pull calves out from the mud.

On other tributaries in the upper Yellowstone drainage, property owners have volunteered to sell water leases to FWP, thus keeping more water in the streams. And trout conservationists have worked with landowners to install screens over the entrances to irrigation diversions to prevent cutthroats from being drawn into the ditches. In recent years, FWP has secured state and federal funding to screen irrigation diversions on Mol Heron Creek and Big Creek and install a fish ladder around an irrigation diversion on South Fork Fridley Creek. Elsewhere in the drainage, trout managers have removed brook trout, which out-compete cutthroats for food and hiding areas.

Amy Miller, former coordinator for two watershed groups working to improve the Shields River drainage, believes much of this success can be attributed to agencies and organizations taking the time to develop trusting relationships with landowners. “You need to spend time letting landowners know who you are, what you are trying to accomplish, and, most important, what it means to them,” says Miller. “These folks are neighborly and will treat you like a neighbor if you gain their trust.”

FUTURE FISHERIES

Stream restoration in Montana got a huge financial boost in 1989 when the

state legislature established the River Restoration Program, the first of its kind in the nation. Then-legislator Hal Harper, now Governor Brian Schweitzer’s chief policy adviser, led the charge to invest fishing license dollars into habitat protection and restoration. “We felt that angling pressure was increasing and that we needed to create more fishable miles of stream,” he says. “The state was spending millions of dollars

each year on hatchery operations, and we reasoned that it made sense to also use fishing license money to improve trout spawning areas located in tributaries.”

The state River Restoration Program and its updated versions, the Future Fisheries Improvement Program (established in 1995) and the Bull Trout and Cutthroat Trout Enhancement Program (1999), have funneled over \$8 million in state dollars and \$17 million in matching contributions into more than 400 projects statewide,

improving critical fish habitat in hundreds of miles of streams.

Increasingly, many of those habitat improvements are helping native species populations such as those of Yellowstone cutthroat trout. “People are beginning to recognize and appreciate that native fishes are an important part of Montana’s heritage,” says Byorth. “And not only that, they can be fun to catch.” Rudyard Kipling certainly

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thought so. When he fished the Yellowstone River that July evening in 1890, he wrote of the trout: “They breasted the boiling river for my fly and they got it.”

Yellowstone cutthroat trout have been thrilling and inspiring Montana anglers and visitors to the state for more than a century. Habitat improvement projects in the Paradise Valley and other segments of the species’ native range will help ensure that Kipling’s experiences will be enjoyed by others for years to come. 🐟