

What's Up Down There?

Finding fish in "fishless" prairie streams

By Dwayne Andrews

It's early morning on a warm June day as Brad Tribby, Margo Taylor, Mike King, and I head to Birney, a small town in southeastern Montana near the Tongue River Reservoir.

The pickup sends out a plume of gravel dust as we make our way to Hanging Woman Creek, about 35 miles north of the Wyoming border. Our mission is to verify a piece of a puzzle that has been perplexing state fisheries biologists for a long time. They know this stream has flowing water, which in southeastern Montana can be a rare thing, and that it supports several fish species. But the stream hasn't been surveyed in years, and no one knows exactly what's in the water now.

The excitement grows as we near the stream and begin unloading our survey gear. Working upstream from the bridge near Birney, we wade into the creek, two of us holding 5-foot-long poles between which extends a 30-foot-wide seining net submerged in the water. Slowly we begin to work our way up the creek, stopping as the net fills with fish to pull it to a bank and transfer them into buckets of fresh water. Under the blazing sun, sweat drips down our backs as we

struggle to pull our legs from the mucky stream bottom and wade upstream.

After several sweeps of the seining net, covering roughly 300 yards of stream, we have collected hundreds of fish of all sizes. On the final sweep, the net sags under the weight of what seems to be a massive creature. Is it an errant paddlefish that swam up from the Yellowstone River? A monster catfish or carp? Our hearts race as we reach down into the cloudy water and pull up a none-too-happy snapping turtle. Though it's no easy chore removing a grumpy turtle from a net while its jaws snap near our fingers, we finally get the big reptile back into the stream, unhappy but unharmed.

We climb onto the stream bank and begin to identify, measure, and release what turns out to be a treasure trove of warmwater fish. In a stream that, to many, appears empty of life, we find smallmouth bass, black crappies, white suckers, river carspsuckers, common carp, channel catfish, bluegills, pumpkinseeds, green sunfish, black bullheads, and various tiny fish, which (after consult-

ing our fish guide) we identify as fathead minnows, golden shiners, and emerald shiners.

"It's amazing how diverse the fish species are in warmwater streams," says Tribby.

In stream surveys across eastern Montana, other crews found similar smorgasbords of warmwater fish life. In theory, many crews should not have found anything. Several thousand miles of eastern Montana streams previously had been labeled as "fishless," but only because no one had ever taken a look. According to Ken McDonald, chief of the FWP Fisheries Division's Special Projects Bureau, the department completed a comprehensive search of its fisheries database in 2001 and found that more than 18,000 miles of mapped prairie streams in the eastern half of Montana had never been surveyed. Biologists knew what lived in the major rivers such as the Tongue and the Yellowstone, but not in most small prairie streams that crisscross the region.

The survey crews were hired with funds from the federal State Wildlife Grants Program (SWG) to survey eastern Montana prairie streams in 2003 and '04. Last year's discovery of 46 different species (26 of them native) among the various streams surprised even

veteran fisheries biologists.

"We had no idea that some of these streams would be so biologically rich," says Brad Schmitz, FWP southeastern region fisheries manager in Miles City. "Compared to coldwater streams, which have just a few different fish species, prairie streams are hugely diverse."

Why does FWP care what's in



WARMWATER SMORGASBORD Last summer, survey crews found 46 fish species in prairie streams, some previously designated as "fishless."

the state's prairie streams? Data collected from the surveys will be used by the department to help develop a comprehensive prairie fish and wildlife plan that outlines the status and needs of prairie species and ecosystems.

"We really don't have much information about the prairie streams in eastern Montana," says Schmitz. "We inventoried some of them 30 years ago but haven't had the funds to do anything else."

The surveys will also help FWP and other agencies as they review land-use proposals such as highway construction that could affect the streams and aquatic life. There's no way to

know what harm—or benefit—development might have on prairie stream life in the future until industries, landowners, FWP, and other public agencies know what's living there now.

What's more, the surveys offer a rare glimpse into Montana's prairie past. "Many of the surveyed streams have intact native fish communities that haven't been ruined by introduced species such as northern pike," says McDonald. "These streams are the same as what American Indians and explorers saw 200 or more years ago."

The SWG funding allowed FWP to hire seasonal employees and buy seines, waders, GPS units, and other survey

gear. The crews traveled across large expanses of eastern Montana to survey prairie streams. By summer's end, 299 sites had been surveyed.

On some surveys sites, crews found little or no water in the stream course. Other sites had deep pools and strong currents. At every site, crews measured the depth and width of the water and examined the stream bottom to see if it was mostly gravel, muck, or other material.

The exact position of each site was recorded with a GPS unit so it could be located in the future. Crews also measured water temperature, dissolved oxygen, salinity, and pH. Fish not positively identified or

those requiring additional analysis were sent to Bob Bramblett, a Montana State University scientist.

Most of the streams, randomly selected by computer, coursed through private land. Crew leaders discussed the survey with property owners and got permission to cross private land to reach selected sites. When the field surveys were finished, landowners received copies of the findings. Schmitz says landowners appreciate knowing more about the environment they live in, including the types of fish swimming in prairie streams running through their property.

On Hanging Woman Creek, we finish identifying and measuring the fish before returning them to the stream. The catfish and bullheads have sharp spines that require careful handling. And the minnows are so small and slippery we have a hard time picking up the little fish from the measuring board before releasing them back into the stream.

What good are all these fish our survey crew and others have found? Some have value as food for sport species, such as sauger, walleye, and northern pike, or as prey for herons, kingfishers, mink, and other wildlife. Some are indicator species that provide clues to the health of a stream and its surrounding watershed. And some are big enough to lure young anglers to the streams, where they will learn about the natural world while wetting a line. There also may be values to prairie stream fish not yet understood.

What is now known, however, is that these inhabitants of Montana's prairie streams are far more abundant and diverse than anyone imagined. 🐾

