Hybridization with Invasive Fish Accelerated by Climate Change

A recent paper by the USGS, the University of Montana and Montana Fish, Wildlife and Parks highlights how climate change is reducing biodiversity in fish species throughout the west. Research conducted in the North Fork of the Flathead River shows that as our waters warm and flow regimes change and as invasive rainbow trout expand their range, the threat of hybridization with our native westslope cutthroat trout is increasing.

Examining data for the past 30 years “during a period of accelerated warming, hybridization spread rapidly and was strongly linked to interactions between climatic drivers—precipitation, and temperature—and distance to the source populations.”

Over the past century, rainbow trout were planted extensively throughout the Rocky Mountain West and within the Flathead River System. Rainbows spawn in the spring spawning and can overlap the same time as spawning occurs in the population of our native westslope cutthroat trout. Rainbows prefer slightly warmer water temperatures, lower spring flows and earlier runoff. Until recent years, the spatial distribution of the two species has limited hybridization to a small portion of the population. Increased summer stream temperatures, a decrease in springtime precipitation and streamflows, and an increase in habitat disturbance due to wildfires, all factors connected to climate change, have begun to change spawning patterns favoring the rainbow trout. This change in reproductive patterns causes more overlap in the timing of spawning and is causing an increase in hybridization between the two species.

As we see increasingly earlier snowmelt in the Flathead, reduced spring and summer streamflows, warmer and drier summers along with warmer water temperatures, we can expect to see a significant change in the genetic makeup of our native fish populations and possible loss of one of the greatest genetic treasures in the northwest.

Officers
- President......... Larry Timchak
- Vice President....... Jim Johnson
- Secretary.........Chris Schustrom
- Treasurer.......... Glen Anacker
- Banquet Chair........ Dan Short
- Conservation Chair... Lucky Sultz

www.warriorsandquietwaters.org

“ar two best times to fish
is when it’s rainin’ and
when it ain’t”
~Patrick F. MacManus
From Our President

I always begin the summer with a list of adventures to pursue, focusing on places where I have not been. Jewel Basin, floating the Swan River, hiking into the Middle Fork of the Flathead and exploring more Mission Mountain lakes are a few of the destinations on this year’s list.

The good news is that I never worry about running out of places to explore here in Northwest Montana. We are fortunate to enjoy a lifetime’s bounty of outdoor opportunities in our abundant wildlands.

Our annual banquet and fundraiser, held each May at Grouse Mountain Lodge in Whitefish, is the culmination of months of hard work by board members and volunteers. Tasks include acquiring raffle and auction items, designing and printing tickets programs and posters, planning meetings, tracking attendance and who’s paid for what package, the list goes on and on.

While this work is essential to a successful banquet, the ultimate success depends on attendance and support from our members and the community. In addition to thanking our board members and volunteers for their time and effort, I want to personally thank all of you who attended and supported the Chapter at this year’s banquet. On top of all the great food, good times, and lucky raffle and auction winners, the Chapter raised enough funds to support our important conservation work for the next year. We are fortunate to have many important conservation partners who generously contributed artwork, guided fishing trips and gear to help with our fund-raising efforts.

Two final pieces of good news; The membership of the Flathead Valley Chapter of Trout Unlimited is approaching 400 conservation-minded folks. Also, as I write the rivers are finally dropping and will soon be fishable. Be careful out there on our waters and have a great summer!

Larry Timchak—FVTU President

Thanks To All of Our Great Supporters

We know you like fishing, we know you like wild trout, we highly suspect that you are a fan of good science and we know you enjoy TU bling. Here is your chance to combine all your passions, advance our knowledge, and do a good deed all at the same time.

Trout Unlimited recently launched an initiative aimed at enlisting everyday anglers to help the organization catalog and map healthy populations of wild and native trout all across North America. And, all anglers need to do is go fishing.

TU will announce prizes for anglers who provide the most observations and for those who catalog the most diverse number of trout species and subspecies. Prizes will include free TU gift memberships, TU hats, decals and the chance to win other prizes provided by TU sponsors.

We strongly encourage our readers to get involved. Please visit the TroutBlitz website to learn how.

Trout Unlimited TroutBlitz

Newsletter content does not necessarily reflect the views of Flathead Valley Trout Unlimited, it’s membership or Montana Trout Unlimited.

FVTU welcomes submission of photos or content from our valued members. The newsletter is published quarterly throughout the year. Publication dates will be approximately Oct. 1, Jan. 1, Apr. 1, and July 1. Please send contributions at least ten days prior to publication to the newsletter editor at:

lucky@flatheadtu.org

www.flatheadtu.org

Newsletter editor: Lucky Sultz

Larry Timchak—President, FVTU
CSKT begins gillnetting on Flathead Lake to restore native fish populations.

Following the direction of the Flathead Reservation Fish and Wildlife Board, the CSKT Tribal Council and public comments received during the preparation of EIS: Proposed Strategies to Benefit Native Species by Reducing the Abundance of Lake Trout in Flathead Lake, CSKT fisheries biologists recently completed the first round of gillnetting on Flathead Lake. The netting was conducted using a 28-foot boat and equipment owned by the Tribes under the guidance of experienced commercial gillnetters who are being used in successful restoration efforts on Yellowstone Lake and Lake Pend Oreille. Current netting was conducted only on waters south of the CSKT Reservation boundary.

5,232 lake trout were removed from the lake this spring. The target for this first round as outlined in the 2014 Implementation Plan was 5,000 to 10,000 lake trout. Native bull trout bycatch mortality was predicted to be zero fish in this first round. One bull trout was inadvertently captured and released alive during the netting. The Implementation Plan predicted a bycatch of 16,200 Lake Superior Whitefish during the netting. 2,487 whitefish were actually netted and donated to local food banks and the Tribes report that they have discovered additional ways to limit the bycatch of whitefish which make up about 70% of the biomass in Flathead Lake.

The goal of the overall harvest effort is to remove 90,000 to 100,000 lake trout in 2014 using Spring and Fall netting as well as the Spring and Fall Mack Days events and the general recreational lake trout harvest throughout the year. This year initiates a flexible harvest effort that is intended to achieve the goals of the Flathead Lake and River System Co-Management Plan in a deliberate and adaptive manner. The goal of the Co-Management Plan, in place from 2000 to 2010 is to increase native trout abundance in both Flathead Lake and the Flathead River system. This first year will focus on evaluation of gillnetting, minimizing bull trout and lake whitefish bycatch, determination of the cost of the netting effort and distribution methods for harvested fish.

CSKT estimates that a harvest of 90,000 to 100,000 lake trout in 2014 would be about 25% greater than the average of the last four years and should increase overall mortality to about 31%. Two population estimates will be generated each succeeding year using mark-recapture methods. These estimates, along with bull trout redd counts, will provide valuable estimates of trends in abundance of each species.

Progress of the Implementation Plan will be evaluated annually and the Tribes will seek input from all stakeholders through annual public meetings. In addition, the Inter-Disciplinary technical team (IDT), CSKT staff, and a panel of fisheries professionals will summarize and review all data collected. The report by the IDT will be presented to the Flathead Reservation Fish and Wildlife Board, who will develop recommendations, presented to the Tribal Council, on modification, harvest targets or termination of the program. The first stage of the program will run through 2016 and adaptive changes will be continually evaluated and implemented as appropriate.

Flathead Valley Trout Unlimited has supported the decision by the CSKT to implement a science-based netting plan and we fully support this process of adaptive management as the plan moves forward. We congratulate the CSKT on this first step and look forward to being a part of the continuing process.

Flathead Valley Trout Unlimited holds monthly meetings on the third Tuesday of each month October through April. Meetings are held at the Montana Fish, Wildlife and Parks conference room at 490 N. Meridian in Kalispell beginning at 7pm. Please join us for our regular meetings and program.

FVTU Calendar

- September 20: State Council Meeting in Missoula, MT.
- September 20: Join Montana TU in Missoula for their gala 50th Anniversary Celebration. Watch MontanaTU.org for details as this milestone approaches.
- Our next general meeting won’t happen until October, but we hope to see you there and in the mean time, we’ll see you on the river.
During our annual spring banquet this year at Grouse Mountain Lodge in Whitefish, Flathead Valley Trout Unlimited recognized U.S. Forest Service fisheries biologist Beth Gardner for her years of distinguished fisheries work benefitting the native fish of Northwest Montana. Beth was our honored guest at the banquet and was presented with a plaque. Her work is greatly appreciated by the Chapter.

Beth Gardner
Fisheries Biologist
United States Forest Service
2014

In recognition of your many years of advocacy and efforts on behalf of wild and native fish in the Flathead River watershed. We applaud your commitment to Montana fisheries, and extend sincere thanks from the members of Flathead Valley Trout Unlimited.

The Aquatic Invasive Species check station at Coram is funded this year by FVTU, the City of Whitefish, USBR—Hungry Horse Dam, MFWP, the Flathead Basin Commission, City of Whitefish Water & Sewer District, and MT Dept. of Transportation.

**Soft Hackle**

**HOOK:** 5262, 3761, 900BL, or 200R, sizes 10-18

**THREAD:** To match body

**ABDOMEN:** Floss or Haretron

**THORAX:** Haretron

**LEGS:** Gray or brown partridge tied so fibers extend past hook point

If you are not swinging soft hackles, you are missing out on one of the most effective flies going. Soft Hackles suggest everything from emerging mayflies to caddis pupae or egg-laying caddis. They can be effective when there is no hatch in progress. They are particularly productive on caddis-rich rivers. To imitate caddis, choose abdomen colors that match the natural insects. *From Westfly*
A century ago, tens of thousands of bull trout roamed the waters of Flathead Lake and the Flathead River system. By the mid-1980s a spawning run of 10,000-15,000 fish still provided exciting fishing opportunities. Today there are less than 3,000 adult fish left in Flathead Lake and the North and Middle forks. Due to our misguided actions and inattention, these magnificent fish are on the brink of extinction in our home waters.

FVTU is proud to announce the release of our exciting video, Jewel in The Crown. This DVD examines the plight of native fish in the Flathead with a focus on current problems facing bull trout.

Through conversations with the last generation of anglers who were able to legally fish for bull trout in our home waters and many historical photos as well as interviews with local fisheries biologists and managers, we examine the current situation and where we need to go now to preserve our native fish heritage in the Flathead Basin.

Get your copy today: Jewel in The Crown is available for only $12 (+ $2 shipping and handling) and can be obtained on the FVTU website www.flatheadtu.org, at several participating local fly shops, or at our monthly general meetings.

Black Butte Mine and the Fate of the Smith River

In the 1940s, miners built a large dam, using mine tailings below Mike Horse Creek in the headwaters of the Blackfoot River. They assured Montana that the tailings-laced dam would stop movement of the toxic waste downstream. In 1975, the Mike Horse Dam blew out sterilizing the Blackfoot River for 10 miles downstream. Mining giant ASARCO rebuilt the dam and Montana taxpayers have spent millions dealing with the contained chemical stew, but the Blackfoot has never fully recovered. Today, the new dam is again in serious danger of catastrophic failure.

Montana DEQ is currently preparing a repository for nearly a million cubic yards of Mike Horse tailings about 3 miles west of the mine in hopes that moving the tailings to a drier location will allow long term storage to succeed.

Just east of the mountains on Sheep Creek, a similar tributary to the fabled Smith River, Tintina Resources is preparing to mine a large copper deposit. Tintina is a new exploration company that has never operated a mine. Their plan is to prove out the resource and sell their holdings to another mining company for development. Though the company has not filed official plans for the mine, it’s conceptual plan shows a footprint of around 7,500 acres of private land with a possible addition of another 4,500 acres of public ground.

In January, Montana DEQ approved Tintina’s exploration permit. Tintina now says that it will forgo exploration permitting and instead apply for a full-blown mining permit following further drilling exploration and approval of an environmental impact statement.

Let’s review: The world-famous Smith River and it’s economically important trout fishery lies 17 miles downstream from the proposed mine. Farther down from lies the fabled Missouri River. The Smith fishery operates under a lottery system to protect this important resource. This year more than 7,000 people applied for the 1,100 issued permits to float the famous river. Fully a quarter of the applicants were from outside of Montana. Sheep Creek near the mine is used as a spawning stream not only for Smith River trout, but also for fish from the Missouri. Any mining spill such as occurred on the Blackfoot River could be not only become a major ecological calamity, but an unprecedented economic disaster for Montana.

Of course, Tintina and state regulators claim that they can protect aquatic resources from damage by mining activities. How many times do we have to hear these hollow claims from mining interests? We only need look to recent examples of the public getting stuck with cleanup and scarred landscapes at closed modern mines like Zortman-Landusky near Malta; at the Kendall Mine near Lewistown; and, at the Beal Mountain Mine near Anaconda. The cherished Smith River and possibly the fishery of the Missouri are much too precious to rely on promises from an industry that has failed Montana time and time again over the past 100 years with aborted promises and ecological catastrophe.
New Rules for Illegal Introductions

During the 1980s some misguided anglers introduced Walleye to Noxon Reservoir in Northwest Montana. By 2000 the population was well established and reproducing. In September of 2013, smallmouth bass were discovered in Seeley Lake. Both of these waters contain not only native Montana fish, but populations of legally introduced game fish. All of the fish populations are now threatened by these invading species.

Introduction of unauthorized fish has become a huge problem in Montana waters. Since the 1980s, Montana Fish, Wildlife and Parks has documented more than 500 incidents of the illegal introduction of fish into state waters. More than half of the illegal activity has occurred in the abundant waters of Northwest Montana and the problem is increasing.

Illegally introduced fish and other aquatic species can harm native, wild and stocked fish populations, spread disease, and create water-quality problems. The consequences of an illegal fish introduction diminish fishing opportunities for everyone and increases management costs by forcing managers to spend their meager funding on fixing problems created by the invasive fish. Illegal introductions also provide an easily accessible source for further introductions.

Until recently, Montana FWP has had little official guidance on how to handle unlawful introductions. New rules for unauthorized introductions were proposed by the Fish, Wildlife and Parks Commission in March. In June, the MFWP Commission voted unanimously to adopt the new administrative rules.

The new rules give MFWP 30 days to respond to any report of illegal introduction, followed by development of a reasonable action plan to deal with the problem by removing the illegal fish.

Montana Trout Unlimited, along with its affiliated chapters across Montana are providing a reward of $10,000 for the arrest and conviction of anyone unlawfully introducing fish. “For the first time, Montana Fish, Wildlife and Parks and angling groups are showing that we’re not taking these introductions lightly,” said Montana TU Conservation Director Mark Ageneus.

At Noxon Reservoir, FWP wrote an environmental analysis that proposed reducing the invasive walleye population using netting. Following an outcry by a small number of local walleye anglers, FWP withdrew the plan and is currently working on a revised EA to deal with the invasive fish. Noxon gives us an example of what happens when an illegal plant is not dealt with in a timely manner. As the population becomes established, the fishery develops a constituency that can be quite vocal in opposing prudent management actions.

Flathead Valley TU wants to thank Montana FWP for adopting a sensible set of rules for dealing with this unlawful activity and for the first time, setting a consistent plan for dealing with this growing problem.

Remember: It is vitally important for anglers, who often have more local knowledge of our water bodies than do fishery managers, to report any suspicious or illegal activity to authorities so the managers can begin to deal with illegal activity to reduce cost of management actions and possibly prevent harm to our home waters before it starts.

Goldfish and Prussian carp threaten Bow River’s ecosys-

tem

The world-famous Bow River fishery in western Alberta is seriously threatened by invasive fish that were illegally planted by amateur aquaculture fans.

According to Trout Unlimited Canada, the majority of the unwelcome species in Alberta’s rivers are the result of pet owners releasing the fish into the river after draining backyard ponds before winter’s arrival.

“\text{They don’t want their pet to perish so they take it down into the river and release it thinking it is just going to go away and it’s isn’t a problem. The reality is (the fish) can be a problem.}"

Will Montana’s Arctic Grayling Survive?

In the next few months, the U.S. Fish and Wildlife Service will decide whether to list Montana’s Arctic grayling as a threatened or endangered species.

This spring, Montana’s Arctic grayling had a visit from Noreen Walsh, regional director of the U.S. Fish and Wildlife Service. She toured the Centennial Valley, where efforts to restore Montana’s only native population of lake-dwelling Arctic grayling in Red Rock Lake are being undertaken, as well as the Big Hole Valley’s river-dwelling grayling.