Missouri River Fish & Wildlife Conservation Office

Bismarck, North Dakota

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Interior Region 5
Who we are:

Steve Krentz
Supervisory Fish Biologist

Stephanie Hauge
Administrative Assistant (ES/FAC)

Wade King
Fish Biologist

Ryan Wilson
Fish and Wildlife Biologist

Tait Ronningen
Fish and Wildlife Biologist

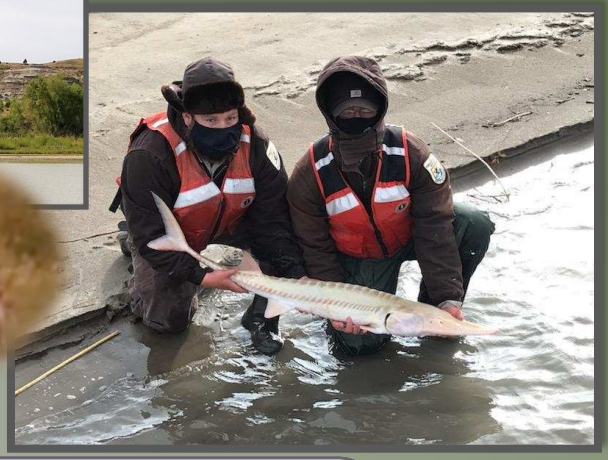
Amanda Goldstein
Fish and Wildlife Biologist

Beth Davies
Fish and Wildlife Biologist

Biological Technicians:
Matthew Gardner
Kelsey Lovernick
Melissa Martin
Kathryn Padgett
Robert Weiland

Contact Us
3425 Miriam Ave.
Bismarck, ND 58501
(701)355-8547
Missouri River FWCO

Editor: Beth Davies



Did you know?
Pallid sturgeon haven't changed much in 70 million years, and their ancestors go back more than 200 million years. They truly are "living dinosaurs."

Species Recovery

A significant portion of our fisheries work involves the federally endangered pallid sturgeon, *Scaphirhyncus albus,* native to the Missouri and Mississippi River systems. There are several key aspects of recovery work including research, population assessments and augmentation, as well has habitat protection and restoration.

Due to covid19 concerns, the Pallid Sturgeon Population Assessment crew was only able to spend 7 weeks on the Missouri River this summer. The first trip occurred in mid-June to conduct a telemetry sweep below the confluence of the Yellowstone River. Over 50 radio implanted wild and hatchery origin pallid sturgeon (HOPS) were located.

The next trip to the field did not take place until the week of August 24th. We spent this week and the following three weeks into September sampling age – 0 sturgeon with the otter trawl. Eighteen wild age – 0 sturgeon were captured. In addition, 28 HOPS were captured in the otter trawl along with 5 survivors from last years' embryo release that took place on the Missouri River near Wolf Point, MT.

Finally, the field season wrapped up in October with two weeks of mark/recapture sampling of pallid sturgeon. Twenty six HOPS were sampled in the trammel net while an additional 21 were captured with trotlines in 4 random bends. One HOPS was recaptured.

A big thank you to Matt Gardner and Robert Weiland for their hard work and keeping a positive attitude while dealing with constantly changing situations and adversity during this field season!

Learn More:
Pallid Sturgeon Recovery Program

Did you know?
As a long lived species living in excess of 50 years, pallid sturgeon reach sexual maturity relatively late with males possibly reaching maturity at ages of 5 to 7 years, while females are believed to become capable of reproduction when they are 15 years old or more. The average interval between spawning for females is three years, while males are suspected of being able to spawn each year.

Grand Forks Air Force Base

Minot Air Force Base 5th Bomb Wing

Minot Air Force Base 91st Missile Wing

Naval Radio Transmission Facility LaMoure

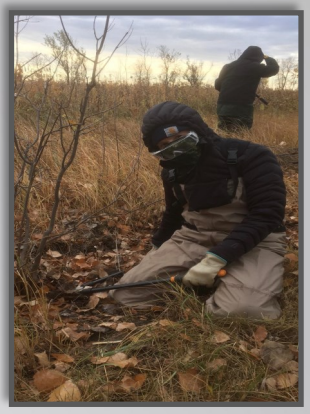
Partnerships

Sikes Act

Enacted in 1960, the Sikes Act enhances cooperation between the Department of Defense, U.S. Fish and Wildlife Service and state wildlife agencies to promote fish and wildlife conservation on military lands while continuing to support the military mission.

Learn More: Sikes Act

The field work component of our Sikes Act projects wrapped up in early October with a bit of woody encroachment removal on Grand Forks AFB as part of a larger grassland enhancement project. When the original plan of working with the crew from the Air Force Wildland Fire Center out of Ellsworth AFB in South Dakota didn't work out due to staffing needs for the ongoing wildfires out west, our



staff headed to base to remove small seedlings and saplings using hand tools instead. Russian olive surveys were also conducted in previous treatment areas around the base to check for regrowth. Signs of winter came early to the northern plains as snow flurries occurred almost every day to the delight of our seasonal staff from southern states while those from the north were not as impressed.

Though the season was laced with unknowns and changing priorities due to covid19, a great deal of work was still accomplished thanks to the great seasonal biological technicians who showed up ready to get to work. The following is a brief synopsis of their contributions towards our work with the Air Force under the Sikes Act.

Minot AFB

- 11,547 trail camera videos totaling 32 hours were reviewed and quantified by Melissa Martin.
- 15 acres treated for noxious weeds.
- 6 weeks of apoidea vane trapping completed.

Grand Forks AFB

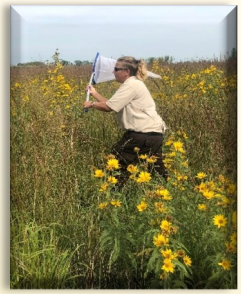
- 725 acres of grassland mapped for noxious weed presence.
- 200 moth specimens collected over two survey nights.
- 175 meters of the Turtle River electrofished, documenting 11 species of fish.
- Surveyed 125 meters of the Turtle River for freshwater mussels documenting four species of mussels.
- 19 herptile visual monitoring points searched for 30 minutes each.
- 16 butterfly survey transects monitored at least twice.
- 11 frog calling survey locations monitored twice.
- 8 monarch and milkweed surveys completed.
- 6 weeks of apoidea vane trapping completed.

Ecological Services

Through a series of laws including the Endangered Species Act, Fish and Wildlife Coordination Act and several others, Americans have declared that we need to collectively protect landscapes, fish, wildlife, and plants. While there are several agencies in the federal government that put our country's conservation laws into action, the Ecological Services Program of the USFWS has offices in all 50 states to help lead the way. The North Dakota field office provides leadership in conserving grasslands and wetlands, restoring natural resources injured by hazardous substances, environmental reviews of federal projects, and listing and recovery of threatened and endangered species.

Learn More: ND Ecological Services

This year, our biological technicians had additional opportunities to work with ES biologists on a variety of sensitive North Dakota wildlife species. The following is a brief recap of their accomplishments.



- Western bumble bee surveys completed at 14 sites in western North Dakota.
- 36 Piping plover surveys completed in central North Dakota.
- 80 prairie dog colonies mapped with the Standing Rock Sioux Tribe.
- 15 regal fritillary surveys completed with the Pierre, SD ES field office.
- Raw data compiled by Kelsey Lovernick for western prairie fringed orchid trend reports.

Native Fish / Aquatic Habitat

Fish Passage

Over the past month, exciting discussions commenced between the USFWS, The Southeast Aquatic Resources Partnership (SARP) and the Great Plains Fish Habitat Partnership (GPFHP) regarding the potential expansion of the SARP fish passage barrier database into the Intermountain and Great Plains states.

SARP is a regional collaboration of natural resource and science agencies, conservation organizations and private interests developed to strengthen the management and conservation of aquatic resources in the southeastern United States. The rivers and streams of the southeastern U.S. contain a large number of at-risk freshwater fish and invertebrates. The presence of dams and other man-made barriers fragment the river network, contributing to habitat loss, and movement impediments that negatively impact the aquatic biodiversity. With funding from the U.S. Fish and Wildlife Service and the National Fish Habitat Partnership, SARP supports on-the-ground aquatic habitat restoration projects in the Southeast including the development of a fish barrier database.

Similarly, the GPFHP was created to avert and reverse aquatic habitat loss with the philosophy that by working together, sufficient fiscal and human resources can be strategically focused on rivers and streams for conservation. Included in the GPFHP are the Missouri River watershed, the Arkansas River watershed within the State of Kansas, and the Souris and Red River watersheds within the State of North Dakota and western Minnesota. The area includes 28 species of fish, mussels, amphibians, and riparian plants that are federally listed or candidates for listing. State Wildlife Action Plans in the area also identify 198 fish species and 66 mussel species as being of greatest conservation need, of special concern, or listed.

Because aquatic connectivity is widely recognized as one of the highest conservation priorities for most aquatic species across the landscape, the expansion of the SARP fish passage barrier database to include the Intermountain and Great Plains states would be the first comprehensive effort to reflect the level of aquatic habitat fragmentation due to dams and road crossings across a broad geographic area. Identification of priority barriers for removal or restructuring to benefit listed, at-risk and recreational aquatic species would have significant conservation impacts.

Learn More:

- National Fish Passage Program
- Southeast Aquatic Resource Partnership
- Great Plains Fish Habitat Partnership

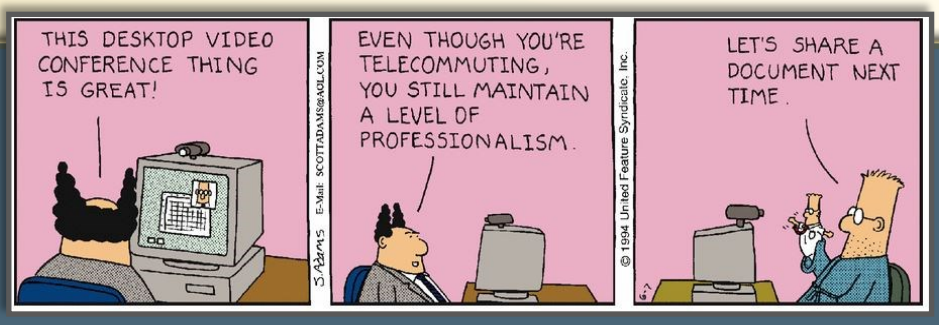
Field Season Recap

As part of a strategic planning exercise, fish passage barrier surveys began in North Dakota on the Elm River Watershed in August to further our understanding of fish habitat connectivity issues in North Dakota. However, due to travel restrictions related to covid19, fish passage surveys were limited to public right-of-ways, primarily road stream crossings. A total of 125 potential fish passage barriers (114 culverts & bridges, 9 no structures, 2 dams) were mapped by the biological technicians on the Elm River watershed, while another 164 potential fish passage barriers (127 culverts & bridges, 28 no structures, 6 dams, 3 fords) were mapped in the Pembina River watershed in October. Without the help of the biological technicians and their adaptability during the difficult season this preliminary work would not have been possible! **THANK YOU!**

Moving Forward

As we transition from the excitement and heavy schedules of field work back into the season of meetings, conferences, and report writing, our newsletter will also transition to a bi-monthly release until our crews head back into the field for more heavy lifting. There is still much to be done during the cold winter months in preparation for next seasons activities. Plans will have to include a range of alternatives from lessons learned this year as we continue to deal with covid19.

As the pandemic presses on into another winter, the MRFWCO staff will maintain the maximum social distancing possible by working remotely away from the office setting. Stay tuned for our next update in January!



A Special Thanks

At the end of the month our seasonal biological technicians will be returning to their home states around the country. For the love of the work that they do, our seasonal staff trek to North Dakota, find themselves a place to live for a few months then pack it all up and head home once again. The journey to permanent biologist status is one that no one envies. We would like to take a moment to recognize our seasonal staff for their sacrifices, and important contributions to the work that we do at the USFWS for the American people.

Matt Gardner I have enjoyed my time here at the USFWS MRFWCO. I have had the privilege to be involved with multiple projects including; pallid sturgeon recovery, fish passage surveys, sport fish surveys, and noxious weed control. I have especially enjoyed capturing pallid sturgeon, along with other native fish species, while working to better understand their populations and ecology. This position has allowed me to gain many new skills within the fish and wildlife sciences. COVID19 presented a challenge this field season, however the adaptability and perseverance of this office has inspired me to become as passionate about my future career as my co-workers are about theirs. This winter, I will be moving back to Ohio where I will continue to seek opportunities in the fish and wildlife field while enjoying many of its great outdoor resources.

Kelsey Lovernick This was my third field season with the USFWS FWCO in Bismarck and it was particularly unique and challenging with the additional complexities related to covid19 however, we were able to safely work on many different projects. I am proud of the work our team accomplished and that I could be a part of it. A few of my favorite experiences this season included conducting fish population assessments, fish barrier surveys, pollinator, moth and mussel surveys as well as mapping prairie dog towns. With another busy season coming to a close, I will be heading home to Minnesota to help run the family business as I continue to pursue additional opportunities with the Service. Covid19 permitting, I also plan to spend a couple weeks skiing in Colorado!

Melissa Martin My year started with delineating wetlands in GIS with the HAPET team. When spring sprang, teleworking was in full swing due to COVID, but some field work was allowed. I rejoined the FWCO team for a second field season and butterflies, bees, and piping plovers were surveyed. Prairie dog towns and plants were mapped. But some of my fondest memories will be running zig zag and jumping in 90 degree heat trying to catch regal fritillaries in South Dakota and a late night of being subject to scare tactics by a giant water bug on a moth cloth at Grand Forks Air Force Base! I have learned so much, worked with great people, and have seen some beautiful scenery. I will take all these memories, photos, and videos back with me to Georgia to share with family and friends. Thanks to the USFWS for a one-of-a-kind experience!

Kat Padgett As this field season comes to an end, I am grateful to have had the opportunity to work with the Bismarck FWCO team. Although I am a recent graduate of marine biology, I found myself chasing bees and butterflies across the prairie for various surveys, conducting aquatic inventories of non-game fishes and mussels, driving UTVs around Standing Rock Reservation to map prairie dog colonies, conducting fish passage surveys amongst the changing leaves of Pembina Gorge, and many other exciting projects. While it was amazing to come here and have a wonderful adventure, I am looking forward to heading home to coastal North Carolina where I will spend time with family and friends during these winter months while looking ahead to next seasons exploits!

Bobby Weiland This past winter I came on board with the USFWS as a member of the HAPET team where I spent time working with GIS delineating wetlands. In in the spring, I rejoined the FWCO team for a second field season where I spent the majority of my time conducting population assessments on pallid sturgeon, sturgeon chub, and sicklefin chub. I also enjoyed diversifying my experience while working on fish passage surveys and fish population assessments on refuge lakes as well as weed mapping and weed spraying with the Sikes Act crew. At the conclusion of this field season I plan to return home to California where I will continue my pursuit of a fish and wildlife career.