Montana Fish and Wildlife Conservation Office

BILLINGS–BOZEMAN–LEWISTOWN, MT

December 2019

As fall wanes and the water starts to freeze…

It is that time of year when fisheries folks are forced out of the field as the water becomes hard. During December, most staff were on holiday taking much needed and deserved breaks to spend time with friends and family. That said, a fair amount was still accomplished and is summarized below.

Tribal Fisheries:

Biologist Andrew Gilham, with help from technician Geoff Popken and biologist Michael (Josh) Melton, prepared Rainbow Trout (RBT) otoliths and Walleye spines. These boney structures were the result of 2019 surveys on the Blackfeet Reservation (Four Horns, Duck, and Kipp lakes). While we have been collecting RBT otoliths since 2017, this was the first year we collected and sectioned Walleye Spines (n=74).

Rainbow Trout Otolith collected from Kipp Lake (Transverse Section, 5x magnification). Photo: *USFWS/Andrew Gilham*

Age data, along with length and weight data, are being developed to establish a baseline data set for growth, survival, and population age structure. These data will feed into a revised Blackfeet Management Plan for 2020.

Because the Walleye in Four Horns are self-sustaining and therefore not related to USFWS stocking, we have not intensively analyzed population data. However, planned dam renovations dictate a new road be built into the remote lake. Because Four Horns supports a trophy population of Walleye, and an improved road will likely increase Walleye fishing pressure, future catch regulations on Walleye should be imposed if the tribe wants to conserve the trophy size fish.

Age and growth data will be crucial to develop adequate Walleye regulations (i.e. catch limits, or slot limits).

Preliminary data analysis suggests that the Four Horn Walleye are relatively long-lived and it is likely catch will need to be regulated to conserve the large individuals. Many of the 600+ mm Walleye were greater than 10 years old at capture (Figures 1 and 2).

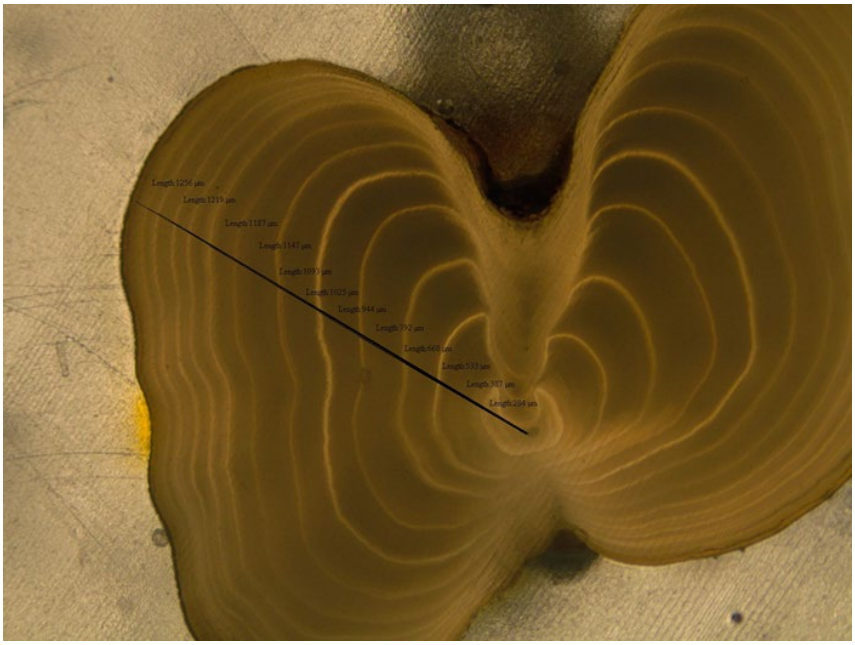

Figure 1. Sectioned Walleye Spine from Four Horns Reservoir (5x magnification). Photo: *USFWS/Andrew Gilham*

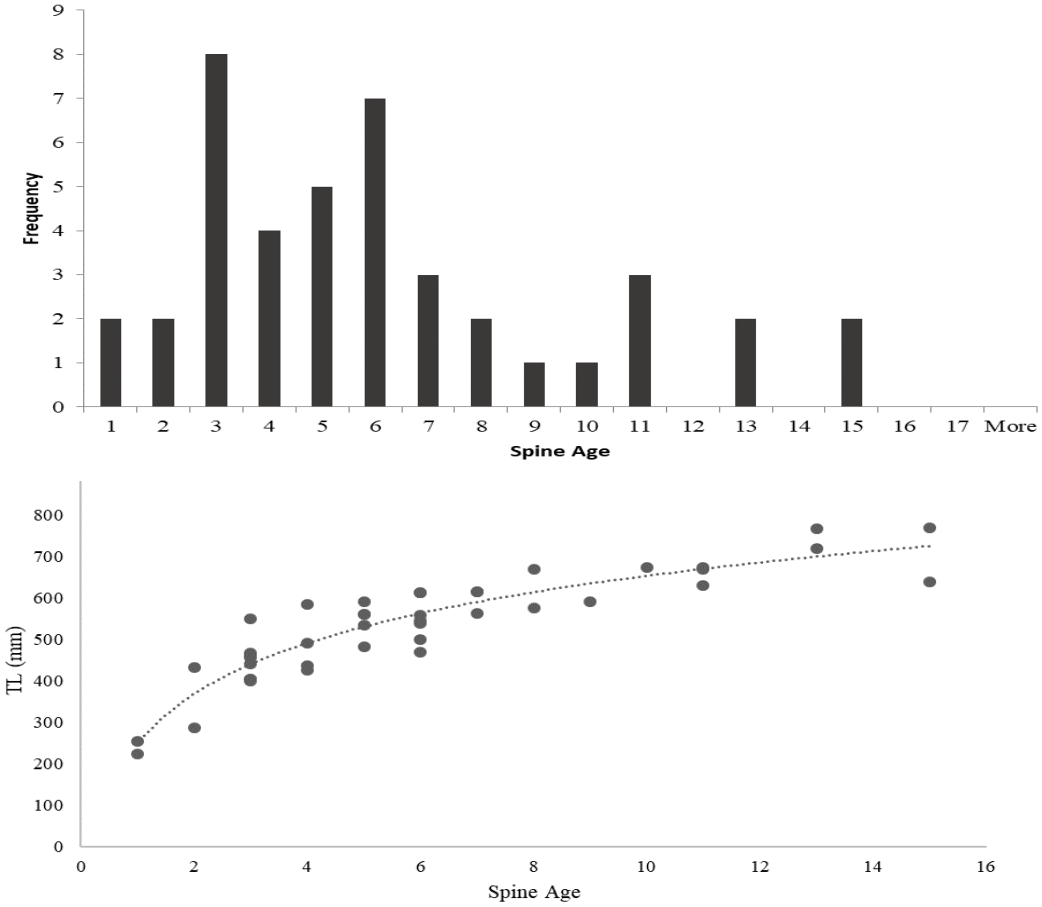

Figure 2. Age-at-capture Frequency Histogram for Walleye Captured in Experimental-mesh Gill Nets in Four Horns Lake (2019) (Top). Length-at-age for Walleye Captured in Experimental-mesh Gill Nets in Four Horns Lake (2019) (Bottom).

St. Mary Bull Trout:

Jim Mogen and George Jordan drafted and presented a revised scope of work to Bureau of Reclamation managers. The proposed project expands on and would increase funding to increase the number of Passive Integrated Transponder detection stations. New stations would be deployed at numerous strategically located sites within Bull Trout migratory corridors throughout the St. Mary drainage.

Jason Marsh evaluated existing data by constructing code using Rstudio to extract survival estimates for age-2 to 3 Bull Trout, and also developed code to create a multi-state model that determines interchange of Bull Trout among different habitat types in the St. Mary drainage.

Additionally, FY 2019 Bull Trout data were tabulated and summarized to comply with USFWS-Ecological Services and Glacier National Park permitting requirements.

Sikes Act work, Malmstrom Air Force Base, MT.

Game Camera Project—

This month, 3,765 video files equating to 31.3 cumulative hours of footage were reviewed as part of our game camera.

Powwow Pond Sampling—

Biologist Josh Melton completed analysis of Powwow Pond fisheries data and completed the draft of the annual summary report.

Prairie Management—

In early December, Montana FWCO staff applied 1,296 pounds of a native grass seed mixture to 72 acres that were treated with a controlled burn earlier in the year. Grass seeds were applied with seed spreaders mounted on ATVs.

Josh Melton and Geoff Popken applying native grass seeds via ATV mounted seed spreaders as a UH-1N helicopter from the 40th Helicopter Squadron passes overhead. Photo: *USFWS-George Jordan*

Other happenings:

Jason Marsh accepted a position as full-time term technician. His start date was December 9.

Station HACCP plans were updated and we coordinated with Bozeman FTC to improve upon our joint station safety committee processes.

George responded to a FOIA request related to pallid sturgeon.

All FWCO staff completed the No FEAR Act Biennial Training Requirement.

George and Jim developed and submitted contributions (Yellowstone Cutthroat Trout and Arctic Grayling, respectively) for the upcoming FAC 150th commemorative book.

For more information, click on the following logos Or feel free to contact any of the Montana FWCO Team members below:

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