

**Spring 2020
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Dakota Chapter *American Fisheries Society* *Newsletter*



President's Message

Greetings Dakota Chapter members! Hard to believe we are already approaching the summer solstice when it seems like we just wrapped up our first ever virtual meeting. I'm sure by the time you read this we'll be past peak daylight and the days will start getting shorter, but that's not a bad thing for those who like to hit the morning bite or the evening bite and still get a good's night sleep!

I think the chapter's first (and hopefully last) ever virtual meeting was an overall success. We had a good turnout, ranging from 58 to 85 presenters and guests at all three sessions by my count, and I was told that several "guests" joined the meeting as a group from a single computer. I would say our attendance was approximate to that of an in-person meeting. One advantage of a virtual meeting is the elimination of travel and we had guests logging in from the comforts of their home, office or ice house (I know at least one guy was fishing during the meeting). I'm proud that we were able to offer a venue free of charge where students and professionals could share their research findings and interact with each other during a time when interaction seemed so difficult.

Thanks to all the presenters who took part in one of our three sessions. Your content is the primary reason chapter members tuned in to see what is going on in fisheries research and helped make our meeting a success. One of the benefits of a virtual meeting is the ability to also engage with Society leaders who are typically pulled in many different directions during winter "meeting season". This year we were able to hear from Parent Society President Brian Murphy who gave a nice presentation on some Society history, and Executive Director Doug Austen who gave a short update on some of the Society's programs.

Last but not least, a huge thanks to our chapter EXCOM for their input and help with preparations leading up to this year's meeting. Our Vice-President Joe Nett deserves most of the credit for putting together the meeting program. Joe put together a very good program, scheduled speakers on available days, and did most of work behind the scenes to make sure the virtual meeting ran smoothly and efficiently.

As we've all transitioned from a busy spring to a busy summer, we're seeing the effects of drought across our states. Warm weather and loss of water has us concerned in North Dakota, and as long as this drought persists we may lose water and start seeing problems with access and increased potential for summer kill. But that's life in the Northern Plains, and one thing I know for sure is that every drought is followed by rain and our dried out lakes and reservoirs will surge with productive fisheries once again. In the meantime I hope everyone is getting out to enjoy the great fishing and outdoor recreation Dakota's have to offer. Have a safe, fun and productive summer!



*Scott Gangl, President
Dakota Chapter AFS*

2021 Annual Meeting Recap

Officer's Reports

President Report - Scott Gangl

- Discussion on the 2021 TEAMS virtual meeting. The meeting was rather successful given the circumstances
- The Dakota Chapter signed a letter in support of the Recovery of America Wildlife Act
- Working on getting the Klumb account registered with the ND Secretary of State

Vice President Report - Joe Nett

- 85 attendees on the 2021 Dakota Chapter's first TEAMS meeting and around 60 attendees each for the second and third TEAMS meetings

Secretary/Treasurer Report - Aaron Slominski

- Checking - \$1,318.76
- Edward Jones - \$ 6,609.50
- Klumb - \$7,871.50
- Schmulback - \$12,696.36
- \$1,000 donation to the WTC Symposium Publication efforts

President-Elect Report - BJ Schall

- In the process of working to schedule the 2022 Dakota Chapter meeting in Sioux Falls, SD with February 21-25 as tentative dates

Committee Reports

Awards and Nominations - Jeremy Kientz

- 2021 David Willis Outstanding Young Professional award winner Ben Holen, Aquatic Nuisance Species Coordinator for the ND Game and Fish Department
- 2021 Best student paper award winner Liz Renner
- 2021 Best professional paper award winner Ryan Rasmus
- No applicants for Schmulbach Scholarship in 2021
- No applicants for Klumb Scholarship in 2021

Continuing Education - Dan James

- 66 complete online surveys for future continuing education subjects
- Top 3 subjects according to online survey were statistics and modeling for fisheries, data management, and fish marking and analysis techniques

Membership - Matt Ward

- 100 members at the 2020 meeting
- 85 attendees on the first 2021 meeting and around 60 attendees each for the second and third meetings

Information - Dylan Turner

- Website will be updated in the next few months, looking for content for the newsletter
- Looking for presenters in the future for potential environmental concerns

NCD Committee Reports

Walleye Technical Committee - Mark Fincel

- 2021 WTC meeting planned July 19-21 in Woodruff WI

Centrarchid Technical Committee - BJ Schall

- No report, looking for a new chapter representative

Esocid Technical Committee - Brian Blackwell

- New award for students doing Esocid research, \$250 a student up to 3 grants given per year
- Ictalurid Technical Committee - Cameron Goble
- Will award two separate \$350 travel grant awards for students doing catfish research

Old Business – No old business

New Business

Membership dues

- Evaluate whether we need to charge membership dues
- EXCOMM voted in earlier meeting not to charge membership dues in 2021
- Membership dues may be needed to have a financial buffer to host future meetings
- Motion made to table membership dues discussion for future meetings
- Discussion on whether to change bylaws to eliminate Resolution Committee with a motion made to table this discussion for future meetings

Election of officers

- President elect Paul Bailey (ND Game and Fish)
- Vice President Dave Lucchesi, (SD Game, Fish and Parks)

Committees

- Mark Fincel gave update for the NCD Committee



Ben Holen (right) is presented with the David W. Willis Outstanding Young Professional Award.

Happenings around the Dakotas

South Dakota

SDGFP hires new AIS Coordinator

My name is Tanner Davis, as of February 9th, 2021 I was hired by South Dakota Game, Fish and Parks (SDGFP) to fulfill the role of Statewide Aquatic Invasive Species (AIS) Coordinator, stationed in Sioux Falls. My decision to be stationed in Sioux Falls came easy since I grew up here and I have already worked as a fisheries intern and seasonal through this office. I received my Bachelor of Science at South Dakota State University (SDSU) in the Wildlife and Fisheries program. I am currently finishing up my Master of Science at SDSU within the Natural Resource Management department with an emphasis in Fisheries Management. My master's project looked at movement and mortality of Walleye in Lake Sharpe. Our goal is to better understand where Walleye utilize their time within the reservoir, how angling pressure affects the population, to what degree entrainment affects annual walleye stock, and how we can improve the fishery.



I am fortunate enough to have a job that allows me to improve the resources I use and enjoy in my personal life. I am an avid outdoorsman and love spending my free time hunting, fishing and golfing. Come fall, you will more than likely find me stalking big game west river, chasing upland game and waterfowl, or patiently waiting for a buck of my dreams in a tree stand. As winter approaches, I divert my attention to ice fishing for walleye and perch in our eastern prairie lakes. My enthusiasm for fishing stays strong through spring walleye fishing. Since I still haven't invested in a boat, I switch gears in the summer where golfing becomes my main focus. My passion for the outdoors has driven me to pursue my career in the fisheries world. Thankfully I have a loving wife that supports me in my hobbies and encourages me to pursue my career goals. My wife and I are also very happy to announce we had our first child in April.

Zebra mussels, Asian carp, and curly-leaf pondweed are all examples of invasive species that pose negative biological, economic, and recreational impacts within our state. We hope to build on our solid foundation and grow our AIS program, focusing on public outreach and education. With continued diligence, our goal is to slow the spread of multiple AIS species that threaten our aquatic resources in South Dakota.

Herculean Walleye Spawn Efforts Northeast Spawning – Mark Ermer

A total of 148 shifts were filled by 33 staff members from April 15th to April 30th to meet the spawning needs in the northeast portion of the state. Crews consisted of fish biologist from the Webster office and Blue Dog State Fish Hatchery, habitat biologists, wildlife biologists, conservation officers,

parks staff, and non-paid volunteers. Between the two operations we handled 4,019 males, 689 green females, and spawned 1,232 females. Over 102 million eggs were collected in the northeast!

Mobridge Spawning Efforts

Efforts to secure enough eggs to meet statewide needs forced a pause to non-spawning activities across the state in an effort to meet staffing needs on the Missouri River. Staff from around the state participated in spawning activities on the Grand and Moreau rivers out of Mobridge. Spawning activities ramped up on April 17th and continued through May 1st. Fisheries full-time and seasonal staff from Mobridge, Fort Pierre, Sioux Falls, Chamberlain, and Rapid City participated with 6-person crews operating on most days on each river. Over 76 million eggs were taken during the Mobridge spawning activities!

Blue Dog Hatchery Summary – Matt Ward

SD GFP personnel conducted walleye spawning operations on 7 lakes in eastern South Dakota and 2 locations on Lake Oahe that resulted in collection of 187,530,000 eggs during April (6-30th). Egg survival at the hatchery was higher than the anticipated 50% with 108,813,000 walleye fry being hatched and stocked into over 90 waters across South Dakota between April 30 and May 18th. In addition, hatchery ponds were stocked with newly hatched fry for fingerling production that will occur throughout the summer.

Other activities

Unexpected water temperature fluctuations and dense filamentous algae mats limited egg collection by crews in the southeast.

During walleye tagging efforts in the western SD reservoirs, eggs were collected for experimental rearing in recirculating

tanks at Cleghorn Hatchery. Additionally, eggs from Mobridge were delivered to McNenny Hatchery to continue experimentation using recirculating systems, and fry from those experiments were stocked in the western reservoirs.

For a quick video recap of some spawning activities on the Moreau River, visit https://www.youtube.com/watch?v=Abx_CD50kpY.

North Dakota

Greg Power update

If you're an experienced Dakota fish squeezer, you know firsthand the importance of weather patterns in dictating our day to day jobs. The northern plains are well known for its weather extremes including wind, wind, wind, flooding, and the 'D' word – drought. Our resource (the Dakotas waterscape) has gone from rags to riches to rags to riches, countless times. However, what we've experienced in the past 20 or so months is again record setting. In Sept-Oct. 2020, extreme rainfall (and snow) broke about every daily and weekly moisture record in North Dakota. In a 60 or so day period many of our substantial prairie lakes rose 4-6 feet. As we entered the 2019-20 winter, legitimate concerns were expressed by all about the potential for absolute catastrophic flooding the following spring. Who would know at the time, that 20 months later (summer 2021) we would instead be experiencing the opposite – an extreme drought. How long this will last and how it will impact our fisheries resources is anyone's guess – but our collective concern is very real.

Despite the extreme dry conditions of late, there is a lot of positive news when it comes to our managed fisheries and one of these matters is this past springs field

activities in North Dakota. Once again, we had the normal succession of field activities starting with the northern pike egg take. Similar to recent years and despite an extended pike spawning season, collecting the needed eggs for both pike (primarily from the Devils Lake complex) and walleye (most again came from Lake Sakakawea) was relatively easily attainable. Also, similar to past years, our fisheries staff were able to trap 285,000 (34,000 lbs.) adult pike, walleye, yellow perch, black and white crappie, bluegill and channel catfish and transported them to numerous lakes around the state including dozens of community lakes. (Note - these community lakes will continue to receive Department emphasis as part of an ongoing R3 initiative). And around 85,000 (37,000 lbs.) rainbow and brown trout were stocked into our traditional trout waters.

Missouri River System crews continued their efforts to capture and tag 40+” northern pike. 2021 was the fifth year of this effort focusing on trophy pike in Lakes Sakakawea and Oahe. In addition to the walleye spawn on Sakakawea, crews again tagged another 3000+ walleye (3rd year in this ongoing effort). Adult walleye were also tagged at Rice Lake, near the South Dakota border to obtain a mark-recapture walleye population estimate. Lastly, staff also continued their long-term tagging efforts of adult paddlefish above lakes Sakakawea and Oahe.

One can't give a 'fisheries update' without again touching on aquatic nuisance species (ANS) efforts. With one additional FTE coupled with a modest increase to its budget, ANS information/education, monitoring, watercraft inspections, etc. have all increased substantially in the past few years. Last year, one new water body (Lake LaMoure) was added to the ANS (zebra mussel) infested list – hopefully

sampling efforts and public observations in 2021 will result in a big goose egg for new infestations!

As always, there's never a bad time to go fishing. Even though the summer heat has come early and has been intense, find some time and get out and wet a line! And while you're at it – help ensure the future of fishing and introduce someone 'new' to the fishing world!!!

Invasive carp funding comes to the Dakotas

Beginning in 2020, the US Fish and Wildlife Service received additional funding to implement the Management and Control of Bighead, Black, Grass, and Silver Carps in the United States. This marked the first time that dedicated funding was provided to state partner agencies in the Missouri River basin. In 2020 and 2021, approximately \$2.6 million have been allocated directly to state partners in the Missouri River basin and additional funds have been utilized directly by the USFWS. Here is a recap of how those funds are being implemented in the Dakotas:

Missouri River Basin eDNA Sampling

A team comprised of members from South Dakota Game Fish and Parks, North Dakota Game and Fish Department, University of South Dakota, and the United States Fish and Wildlife Service kicked off a novel pilot study to determine silver (*Hypophthalmichthys molitrix*) and bighead carp (*H. nobili*) environmental DNA (hereafter, eDNA) detection probabilities in areas of known occurrence within the James, Vermillion, and Big Sioux rivers of North and South Dakota. The pilot study will shine light on the potential ability to use eDNA of invasive *Hypophthalmichthys spp.* as an early detection tool within Missouri River tributaries. The original plan was to sample within 1 to 3 kilometers downstream of known bighead and silver carp locations on the James, Big Sioux, and Vermillion Rivers during June.



Downstream of the Lake Vermillion Spillway, Vermillion River South Dakota. Photo Credit: Katie Lieder

As with any field sampling event, weather can cause a wrench in your plans. In this case, James River flows remained near or below the 25th percentile through the end of May. Due to abnormally low flows and *Hypophthalmichthys spp.* not being recently observed near proposed sampling locations on the James River in North Dakota, sampling was called off at those locations.



eDNA sampling in Falls Park, Big Sioux River South Dakota. Photo Credit: Tait Ronningen

Although sampling was called off at the James River sites, eDNA sampling was completed on June 15th and 16th at the Big Sioux (Falls Park) and Vermillion Rivers (Lake Vermillion Spillway). Samples collected were shipped to United States Fish and Wildlife Service Bozeman Fish Health Center for analysis. Tentatively, additional eDNA sampling efforts are scheduled for September near the confluences of the Big Sioux, James, and Vermillion Rivers in conjunction with a September dozer trawling effort. The upcoming sampling effort will provide a comparison study between eDNA detection probabilities and *Hypophthalmichthys* spp. abundance. This was a great first step for the pilot work and we all look forward to seeing the outcomes.

Invasive Carp telemetry and eDNA (USD)

University of South Dakota (USD) biologists Jeff Wesner and Hugh Britten, MS student Lindsey LaBrie, and intern Taya DeVine have teamed up with BJ Schall and others at the SD Department of Game, Fish and Parks (SDGFP) as part of the USGS National Invasive Carp Plan in the Missouri River for FY 2021. The aim of this work is to evaluate Silver Carp movements and determine if invasive carp inhabit areas upstream of potential barriers to fish movement in three main tributaries of the Missouri River in SE South Dakota: the James, Vermillion, and Big Sioux Rivers. The USD team is taking a two-pronged approach to answering this question. First, they are expanding a network of acoustic receivers in the James River. Fifty Vemco V16 transponders were deployed in Silver Carp (*Hypophthalmichthys molitrix*) in early June. Passive tracking of carp will continue throughout the next two years. The second approach is to use environmental DNA (eDNA) techniques to detect presence of invasive carp above and below putative barriers in the Vermillion and Big Sioux Rivers. This work is being done in collaboration with the USFWS Whitney

Genetics Lab in La Crosse, WI, and the USFWS Bozeman Fish Health Lab in Bozeman, MT. The USD team will take environmental DNA samples three times between July and October 2021, above and below the putative barriers. The samples will be analyzed at USD in the fall and winter using a combination of filtration and qPCR methods. Collectively, the results from both detection techniques should provide SDGFP and USFWS with timely data that can be used to take any necessary control actions on the three tributaries.



Graduate student Lindsey LaBrie inserts a Vemco tag into one of fifty silver carp.

Great Plains Fish and Wildlife Conservation Office diversifies portfolio

The U. S. Fish and Wildlife Service Great Plains Fish and Wildlife Conservation Office (GPFWCO; Pierre and Yankton, SD) is collaborating on a new project with state and federal agency partners to improve our understanding of silver and bighead carp

populations in the lower Missouri River and its tributaries. In May 2021, we implanted acoustic telemetry transmitters into 80 silver carp in the Vermillion (n=40) and Big Sioux (n=40) rivers and deployed passive telemetry receivers to monitor silver carp movements and tributary use. Collaboration with other agencies (e.g., Iowa Department of Natural Resources, South Dakota Department of Game, Fish, and Parks, Nebraska Game and Parks Commission, Missouri Department of Conservation, U.S. Geological Survey, and U.S. Army Corps of Engineers) has resulted in an extensive passive telemetry receiver network that will allow us to monitor fish movements throughout the lower Missouri River basin. In the summer and fall of 2021, we plan to sample bighead and silver carp at major Missouri River tributary confluences using an electrified dozer trawl (a combination of electrofishing and a push trawl) to collect population demographic information. Information gained from this project will inform management actions to control silver and bighead carp populations and reduce their impacts on the lower Missouri River ecosystem.



GPFWCO staff collect silver carp with electrofishing in the Vermillion River for our new telemetry project.

Assessing bait shop risk with eDNA

One project slated to begin in 2022 will examine the risk of Silver and Bighead Carp spread via the live bait trade by searching for environmental DNA (eDNA) in bait shops in South Dakota and other states in the Missouri

River Basin. A graduate student working at South Dakota State University under the direction of Dr. Alison Coulter will lead this research. Based on eDNA results, the project will then examine whether factors, such as proximity to Silver and Bighead Carp invasive populations, may lead to increased risk of invasive fishes occurring in the bait trade.

Assessing natal origins of Silver Carp in eastern South Dakota Rivers

A project slated to begin in late 2021 will examine the natal origins of Silver Carp in the Missouri River and its three eastern South Dakota tributaries: the Big Sioux, Vermillion, and James rivers. Large 2019 and 2020 year classes of Silver Carp have been observed in these river systems and likely correspond to strong recruitment following extended flood conditions. Otolith microchemistry will be used to compare chemical signatures of otoliths collected primarily from juvenile Silver Carp with water chemistry signatures. This project will be a collaborative effort between the SD Game, Fish and Parks and South Dakota State University.



Sarah Weaver (GPFWCO) holds a silver carp prior to surgery.

Upcoming Dakota Chapter Meeting Winter 2022

Dakota Chapter 2022 will be in Sioux Falls!

Start Date: Monday, February 21st

Location: Downtown Holiday Inn

Rooms available to reserve now!



More details to come later!



Student Subunit News

South Dakota State University (Chuck Mordhorst, PRESIDENT):

In the spring of 2021, the SDSU Student Subunit met virtually and hosted guest speakers: Brian Blackwell, author Dan Frasier, and PhD candidate from UNL Will Radigan. At the Dakota Chapter meeting, two masters students, Chuck Mordhorst and Cade Lyon, and one undergraduate, Wyatt Jorgensen, presented research. The big winners from our fund-raising raffle were Tanner Davis and Steve Chipps who each scored themselves a fish painting. SDSU students also participated in a student colloquium hosted by the West Virginia State University Chapter with students from 16 institutions across the US. At the colloquium, Cade Lyon and Chuck Mordhorst presented on their research and many of our subunit members joined for discussions on various topics Walleye to Whale Sharks.



Valley City State University (UPDATE FROM CASEY WILLIAMS):

The Valley City State University subunit was not active this year. With the online classes last spring and all of the COVID-19 restrictions this fall, the decision was made to postpone elections until this spring. Hopefully, we will get back to normal early next fall.



National AFS Conference - November 6-10, 2021



INVESTING IN PEOPLE, HABITAT, AND SCIENCE

Registration is now open for the [151st Annual Meeting in Baltimore](#). This historic conference will feature [more than 50 symposia](#), [a dozen continuing education courses](#), exhibits of the latest fisheries technology, evening networking events (including a not-to-be-missed event at the National Aquarium), and [celebration of 150 years of the American Fisheries Society](#). For virtual attendees, this hybrid event will also offer livestreamed plenary sessions, on-demand symposium and contributed paper presentations, and virtual networking events.

Join us at Baltimore's beautiful Inner Harbor, with attractions including waterside shops and restaurants, the National Aquarium and Maryland Science Center, Fort McHenry, M&T Bank Stadium (which will be hosting a Ravens football home

game), and a myriad of museums and historic sites. The sights of Washington, DC, are also just an hour away via commuter rail.

Abstract submission is open until August 16 – [submit your abstract here](#). All in-person presenters will be asked to upload a pre-recorded version of their presentation which will be viewable on-demand by virtual attendees as well as in-person attendees who are unable to make the session.

Early registration (at a reduced cost) is available until August 31st. To learn more or register, visit <https://afsannualmeeting.fisheries.org/>.

Hutton Junior Fisheries Biology Program

As the [Hutton Junior Fisheries Biology Program](#) dives into its 21st summer of internships, we are launching **ANOTHER** Hutton Funding Challenge! Last year, during our first Hutton Funding Challenge (March-May 2020), we received contributions from **78** individual donors - totaling **\$4,565**! To put that in perspective, individual donations to the Hutton Program **increased by 650%** compared to the past 10 years.

Our goal for the [Hutton Funding Challenge 2.0](#) is to raise \$5,000 from 100 individual donors by September 1. AFS invests 100% of unit and membership donations into the Hutton Program. These funds will be used to offer future Hutton Scholars more opportunities to open their eyes to the many different paths and careers within the fisheries profession. We cannot achieve our goal without your participation!

On behalf of the AFS Staff and the Hutton Program, we hope that you consider joining our campaign by making a donation to our internship program. Without the support from our membership and program partners, we would not be able to offer internship placements and help inspire the next, more diverse, generation of fisheries professionals. You can donate through the "Give Now" button below. Or [click here](#) to donate!



As a reminder all individuals who contributed over \$150 to the Hutton Program are now a part of the [1870 Society](#).

Want to follow along as we launch our [Hutton Funding Challenge 2.0](#) and our summer internship season? Give our Instagram account a follow ([@afshuttonprogram](#))!

Chapter Officers 2020-2021

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Standing Committees

Planning

Scott Gangl (chair, ND)
BJ Schall (SD)
Jeremy Kientz (SD)
Josh Wert (ND)

Continuing Education

Dan James (co-chair, SD)
Greg Power (co-chair, ND)
John Lott (SD)
Dave Lucchesi (SD)

Environmental Concerns

Jake Davis (co-chair, SD)
Michael Johnson (co-chair, ND)

Student Affairs

Chuck Mordhorst (SDSU)
Vacant (VCSU)

Information and Web Support

Dylan Turner (SD)

Membership

Matt Ward (chair, SD)
Casey Williams (ND)
Vacant

Awards and Nominations

Jeremy Kientz (chair, SD)
Joshua Wert (ND)
Steve Chipps (SD)

Resolutions

Chelsey Pasbrig (SD)
Gene Galinat (SD)

Technical Committee Representatives

NCD Walleye Tech Committee

Mark Fincel (SD)
Todd Caspers (ND)

NCD Centrarchid Tech Committee

Will Radigan (Iowa State University)

NCD Escocid Tech Committee

Brian Blackwell (SD)

NCD Ictalurid Tech Committee

Cameon Goble (SD)

NCD Rivers and Streams Tech Committee

Josh Wert (ND)

New Percid book available this fall!



Available November 2021

Bruner, John Clay, DeBruyne, Robin L. (Eds.) 2021. Yellow Perch, Walleye, and Sauger: Aspects of Ecology, Management, and Culture. Springer Fish & Fisheries Series Cham, Switzerland Vol. 41: 1-402 pp.

Walleye, one of the most sought-after species of freshwater sport fishes in North America, have demonstrated appreciable declines in their numbers from their original populations since the beginning of the 20th century. Similarly, Yellow Perch, once the most commonly caught sport fish and an important commercial species in North America, have also shown declines. Compiling up-to-date information on the biology and management of Walleye, Sauger, and Yellow Perch, including research on systematics, genetics, physiology, ecology, movement, population dynamics, culture, recent case histories, and management practices, will be of interest to managers, researchers, and students who deal with these important species, particularly in light of habitat alterations, population shifts, and other biotic and abiotic factors related to a changing climate.

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