



The Lateral Line

Arkansas Chapter of the American Fisheries Society
Fall/Winter 2020 Newsletter

A message from the President: Justin Homan

Greetings everyone! I hope you are doing well and enjoying this fall weather. As I write this letter, I'm in the midst of packing up for a weekend camping/hunting trip for the youth deer hunt. I hope that you are able to find some time to get outside as well!

As you'll read in this newsletter, the EXCOM has decided that the annual Chapter meeting will be virtual rather than an in-person meeting. I'm sure some folks have had plenty of virtual meetings over the past eight months but this will be the path forward for now. Given the overabundance of virtual meetings that most folks have had to attend this year, we also decided to keep the presentations limited to student presenters only. We recognized that, for some students, this is their first and/or only opportunity to present their research. I can remember the amount of effort spent on a graduate project for two years and the satisfaction I had to be able to present what we studied to our peers in the state. *The meeting will be Thursday, February 11th, 2021.*

Here are some details for the meeting and things to look for ahead of time:

- ⇒ Student presentations will be available ahead of time to watch before the meeting
- ⇒ There will be a live question and answer session for folks that want to ask the students about their research.
- ⇒ We will hold a chapter meeting after the question and answer period on the 11th.
- ⇒ Officer elections will be similar to last year via a Google Forms vote ahead of the meeting so be watching for an email to vote.

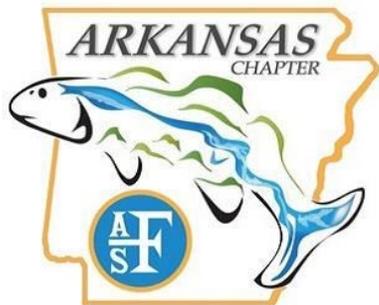
I know the meeting will be different this year, but I'm hopeful that we can still help promote the work of our students. I've always felt like I got the most help in starting my career from AFS, especially the Arkansas Chapter and Southern Division. I feel that it is critical for our students to engage in this network to get their careers on a good path. As part of that effort, I plan to work with Dylan Hann, our webmaster, to add a page with sampling opportunities for student volunteers. The idea would be that if a professional in the state has an upcoming project that a student could help out with to gain some experience, that project would be posted on the page with contact information so a student can reach out to the professional to volunteer to help. I'm hoping this will be a way for students to gain more experience and develop relationships with professionals in the field. I hope that you will consider contributing to this page.

This year has not been what anyone expected, especially for an organization like this that is so socially oriented. I will miss gathering together but hope we will be able to do so once again soon. With the lack of an on-site meeting, we are anticipating very little cost to the Chapter compared to normal meetings. As you'll see in the treasurer's report we have quite a bit of money we earned from hosting the 2020 SDAFS meeting in Little Rock. We still plan to implement the programs that we started with funds from the 2013 Society Meeting in Little Rock (partial reimbursement of certification, workshops, etc.). However, if you have additional ideas on how the Chapter might use this money please let me know. I plan to form an Ad Hoc Committee to research ways to use this money responsibly. If you are interested in working on this please let me know.

I want to thank you for the opportunity to serve as Chapter president this year. As I've said, it has not been what I expected, but it has still be rewarding. I hope that you will watch our student presentations and support them by attending the question and answer session in February. I look forward to seeing you on the meeting, even if it will be over the computer. Finally I'd like to thank our EXCOM and Committee Chairs for their support this year. I know I didn't really adjust to virtual meetings all that well and it was a challenge to maintain a formal meeting in a virtual setting. However, these folks did a great job to adapt to these changes and stay positive. Thank you so much J.J. Gladden, Matt Schroeder, Brie Olsen, Matt Horton, Jessie Green, Jessica Feltz, Jordan Lindaman, Chelsea Tucker, and Dylan Hann. Thank you and see you in February!

2021 VIRTUAL ARKANSAS CHAPTER MEETING

February 11, 2021



The virtual meeting will include pre-recorded student presentations, a live Q&A session with presenters, as well as a virtual chapter meeting. Elections and awards will be conducted as usual. Please check the Arkansas Chapter website for updates about meeting registration and attendance links.

FIRST CALL FOR ABSTRACTS: Student's that are interested in presenting should email abstracts to JJ.Gladden@agfc.ar.gov. The deadline is January 15, 2021.

CHAPTER ANNOUCEMENTS

ATTENTION STUDENTS

Please remember to email Chelsea Tucker, Education Committee chair (Chelsea.Tucker@agfc.ar.gov), with changes to your list of current sub-unit officers!

MEMBERS MATTER

If you are interested in joining the Arkansas Chapter, renewing your membership (or updating your member contact info), or would like to be reimbursed 50% the cost of certification, please contact Chapter Treasurer, Matt Horton (Matt.horton@agfc.ar.gov).

Information Request

Please consider contributing your stories, research or project highlights, or member updates to feature in the Lateral Line! Please email any material (and photos) to Jessica.Feltz@agfc.ar.gov.

CURRENT OFFICERS

President — Justin Homan
Justin.Homan@agfc.ar.gov

President-Elect — JJ Gladden
JJ.Gladden@agfc.ar.gov

Secretary — Brie Olsen
olsen@adeq.state.ar.us

Treasurer — Matt Horton
Matthew.Horton@agfc.ar.gov

Past-President — Matt Schroeder
Matthew.Schroeder@agfc.ar.gov

COMMITTEES

Nominating & Awards - Matt Schroeder
Matthew.Schroeder@agfc.ar.gov

Education Liaison - Chelsea Tucker
Chelsea.Tucker@agfc.ar.gov

Environmental Affairs - Jessie Green
jessie@whiteriverwaterkeeper.org

Activities and Raffle - Jordan Lindaman
Jordan.Lindaman@agfc.ar.gov

Webmaster - Dylan Hann
Dylan.Hann@agfc.ar.gov

Newsletter Editor - Jessica Feltz
Jessica.Feltz@agfc.ar.gov

UPCOMING EVENTS

2021 Annual SDAFS Meeting: The annual Southern Division AFS meeting is being hosted, virtually, by the Virginia Chapter. The meeting is April 6-9, 2021. Symposium, papers, poster, and workshop abstracts are being accepted. Please visit the website for meeting updates and information: <https://units.fisheries.org/va/2021-sdafs-home/>

2021 Annual AFS Meeting: The 151st annual meeting of the American Fisheries Society will be held in Baltimore, August 8-12, 2021. The theme is "Investing in People, Habitat, and Science". Abstracts will be accepted through March 8, 2021.

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TREASURY REPORT

Balance Brought Forward (2/14/2020): **\$14,386.66**

INCOME

Interest (Simmons Bank), Apr - May 2020	\$4.31
ARAFS Membership Dues	\$120.00
Growler Sales at 2020 SDAFS Meeting	\$90.00
Reimbursement for 2020 SDAFS Hospitality Room Supplies	\$249.54
2020 SDAFS T-Shirt Sales Cash	\$1,077.00
2020 SDAFS Silent Auction & Raffle Cash	\$1,095.00
SDAFS Reimbursement (Affinipay, Chapter Dues, \$500 for Hosting SDAFS 2020, T-shirt sales, \$5,000 SDAFS Meeting Seed Money, 2020 Meeting Expenses, Raffle and Silent Auction Profit)	\$9,971.00
2020 SDAFS Profit Share	\$12,379.05
2020 Catfish & SDAFS Meeting (Registration, Workshops, T-shirts, etc.)	\$24,744.59

Total Income **\$49,730.49**

SUBTOTAL **\$64,117.15**

DISBURSEMENTS

AffiniPay Transaction Fees (2.9%/transaction)	\$797.74
2020 SDAFS Meeting Income (Transferred to SDAFS Acct.)	\$24,690.00
2020 Chapter Award Plaques and Frames	\$394.36
2019 Chapter Tax Filing Fee	\$75.00
2020 SDAFS Meeting Hospitality Room Supplies	\$918.91
2020 SDAFS Raffle Item (Kayak)	\$583.00
Food for 2020 Chapter Meeting	\$149.39
Past President's Lunch	\$330.32
Sub-unit Member Awards	\$250.00
Jimmie Pigg Scholarship Donation	\$500.00
Member AFS Professional Recertification Reimbursement (50%)	\$100.00

Total Disbursements **\$28,788.72**

Balance of November 2, 2020* **\$35,410.64**

**This balance is \$50 less than the Chapter's Simmons Bank account due to an outstanding \$50 check (#984) awarded at the 2020 meeting that has not been cashed.*

Prepared by Matt Horton

FEATURE ARTICLE

Reviving the Dead Sea: A Grassroots Effort to Restore Aquatic Vegetation in DeGray Lake

Sean Lusk

Arkansas Game and Fish Commission

As I wipe the sweat from my brow, I lean over the side of the boat and fasten another zip tie binding orange snow fencing to a floating cube constructed of PVC pipe. The cube is full of aquatic plants and on top there's a sign that reads "Habitat Restoration". Underneath the cube, through the clear lake water, I can see a barren lake bottom reminiscent of the surface of the moon. It's the dog days of summer 2020 and it's finally time to transfer hundreds of aquatic plants from two large greenhouses to DeGray. As I reach for another zip tie I take a brief moment to look at the plants inside the cube, slowly swaying side to side with wave action, and reflect on a time when the barren lake bottom of DeGray was full of life and a vibrant plant community.

Shortly after DeGray was impounded in the 1970's it developed a diverse community of native aquatic vegetation which later transitioned to predominately nonnatives by the end of the 1990's. By the early 2000's Hydrilla had become very abundant and developed dense mats around the majority of the shoreline on the lower half of the lake. This vegetation played an essential role in supporting healthy populations of fish and wildlife. However, by 2009 seemingly all of the vegetation throughout the entire lake suddenly vanished. Currently, it is unknown what caused the vegetation to suddenly disappear or why it has never returned. Unfortunately the negative consequences of the decline in vegetation are still influencing the fishery to this day.

The unproductive nature of DeGray coupled with a lack of littoral cover (e.g. aquatic vegetation) results in extremely poor habitat for a number of species important to the fishery. Shortly after the vegetation vanished in DeGray, Biologists with the Arkansas Game

and Fish Commission (AGFC) began to observe negative impacts on the fishery. A few years after the decline in vegetation, electrofishing catch rates for Large-mouth Bass had dropped to nearly half of what it was when vegetation was abundant. It is hard to understate the importance of habitat in supporting robust fish and wildlife populations and therefore great emphasis should be placed on revitalizing and maintaining healthy aquatic habitats.

During 2019, after a decade without aquatic vegetation in DeGray, Biologists with AGFC began taking steps to reestablish native aquatic plants. After meeting with an aquatic habitat restoration specialist with the Corps of Engineers (COE) Engineering, Research, and Development Center AGFC had a strategy and immediately began renovating two large (30' x 90') greenhouses located on COE property adjacent to DeGray. Upon completing renovation, these greenhouses were capable of growing more than 4,400 quart pots of aquatic plants.



A PVC cube used to grow out aquatic vegetation in DeGray Lake.

The basic strategy for reestablishing DeGray vegetation revolves around growing four species of native aquatic plants (American Pondweed, Coontail, Eelgrass, and Sago Pondweed) in the greenhouses throughout the winter and using those plants to establish “founder colonies” during the subsequent summer. Essentially a founder colony is group of mature plants that spread throughout an area of a lake via seeding, fragmentation and other means.



(Top): Renovation of the COE Degrays Greenhouse

(Bottom): Established aquatic plants grown in the Degrays Greenhouse

In a lake the size of DeGray it is essential to rely on the natural spread of founder colonies to establish aquatic vegetation throughout the lake. Developing founder colonies has been a tried and proven method of successfully establishing vegetation in numerous major impoundments.

Two of the largest obstacles facing our efforts to establish founder colonies in DeGray are: large changes in lake level elevation and herbivory. To combat these obstacles, AGFC biologists developed special floating enclosures used to protect the founder colonies. Floating enclosures protect mature plants from being trapped below turbid spring inflows or from desiccation when lake levels drop during the summer. Additionally, the enclosures are wrapped in snow fencing which protects the plants from herbivory. During the summer of 2020 AGFC Biologists deployed six (3' x 3' x 12') enclosures each holding 192 quart pots of a mix of American Pondweed, Sago Pondweed, and Eelgrass. Additionally sixteen (3' x 3' x 1.5') enclosures were deployed holding roughly 7 cubic feet of free floating Coontail. As these floating founder colonies rise and drop with lake levels, wind and wave action carries seeds and fragments to surrounding areas ideally establishing native plant communities.

Having just completed our second year of growing plants in the greenhouses and transferring those plants to the floating enclosures in DeGray, it is still too early to tell if our efforts are making an impact. This is a large endeavor but fortunately we have had multiple partners who have helped make this project become a reality. We thank the Corps of Engineers for their constant support in providing guidance and assistance with renovating the two greenhouses. We also thank researchers with the University of Arkansas at Pine Bluff for devoting hours to identifying areas where our vegetation has the greatest potential to benefit the fishery and developing methods for evaluating the success of our reestablishment efforts. Over the next several years we plan to continue growing plants in the greenhouses, transferring those plants to DeGray, and modifying our approach to maximize any potential of success. Although we have a long arduous road ahead of us, we are committed to improving habitat for the fish and wildlife that call DeGray Lake home.