

Ellipsaria



Newsletter of the Freshwater Mollusk Conservation Society

Vol. 24 – No. 4

ISSN 2689-2936

December 2022

Cover Story 1

Society News . . . 3

Announcement . 24

Upcoming
Meetings 25

FMCS Officer . . 26

Committees . . . 27

Parting Shot . . 28



FMCS Officer Election

Readers of this newsletter have probably noticed that a Call For Officer Nominations article has appeared in each issue of *Ellipsaria* this year. Even now, we do not have enough candidates to offer choices for each of the three Executive Committee positions (President-elect, Treasurer, and Secretary). In a final attempt to fill the slate of candidates, we are extending the deadline for nominations/volunteers to January 20, 2023. After that, candidate statements will be posted in the March issue of *Ellipsaria*, the online election will be held during March, and results of the election will be announced in April during the FMCS Symposium in

Portland, Oregon. The Election Committee Chair and members of the Executive Committee thank the current nominees for their willingness to serve and for their patience. We strongly encourage other Society members to consider running for one of these positions. Please email your nominations or willingness to volunteer for these offices to the Elections Committee Chair, Wes Daniel at wdaniel@usgs.gov.

Here are the duties and estimated time requirements associated with each of these positions:

As President-elect (first and second years of the six-year term):

- Chairs the Symposium Committee, which includes helping to secure the location, hosts, and topic for the even-year Workshop and odd-year Symposium.
- Can spend a few hours a week when it comes time to start planning the Workshop and Symposium and zero hours most other times.

As President (third and fourth years):

- Presides over both yearly meetings of the Board of Directors and the biennial Symposium.
- Ensures that committees make progress on their tasks, keeping their respective pages on the FMCS website updated, and reporting their progress to the membership.
- Coordinates work on various personal initiatives.
- The amount of time needed is highly variable and, honestly, depends on what you want to put into it.

As Past-President (fifth and sixth years)

- Coordinates the review and update to the Society Bylaws and Procedures Manual.
- Helps identify potential presidential candidates.
- Maybe spends 30 minutes or so a week, just to check in with people.

Treasurer

- Oversees and manages memberships and meeting registrations, society's management system, and debit and credit systems.
- Enters and reconciles financial transactions (income and expenses) in our financial management system (QuickBooks).
- Compiles, reports, and submits annual budget reports, IRS 990 tax form filings, renewal of society registrations/memberships.
- Attends (ex-officio) and provides guidance at FMCS committee meetings.
- Spends a few hours a month on the position.

Secretary

- Ensures Board Meetings are effectively organized and reported in the Minutes.
- Maintains membership records and administrative files.
- Handles Society communications and correspondence.
- Spends a few hours a month on the position, potentially more during the Workshop and Symposium.

As you can see, these are important jobs within this Society; however, each of them can be performed in reasonable amounts of time. These positions also allow the officeholders to see and hear about the wide variety of freshwater mollusk research and conservation measures being conducted by our members, in addition to providing valuable connections for personal growth and recognition. Please email your nominations or willingness to volunteer for these offices to the Elections Committee Chair, Wes Daniel at wdaniel@usgs.gov.

Society News



More Specifics about the 13th FMCS Biennial Symposium, April 10 -- 14, 2023 (Monday – Friday) in Portland, Oregon, USA

As the date gets closer, we on the Local Committee are becoming more excited to welcome you to the first West Coast FMCS Symposium in beautiful Portland, Oregon! This Symposium will be held Monday through Friday, April 10-14 at the DoubleTree

Hilton Hotel. The theme for this meeting is *From the Mountains to the Sea and the Mollusks Between* and our goal is for this Symposium to highlight the unique natural history, mollusks, Tribal culture, and compelling river and landscape features that form the Pacific Northwest. This will be the first opportunity in four years for FMCS members to gather in person at a symposium; however, for those unable to attend, our event will allow for virtual participation in some aspects of the symposium.



We are pleased to announce two plenary speakers, together offering valuable perspectives on the environmental, biological, and cultural setting of the Symposium. Attendees will have the incredible opportunity to hear from **Eric Quaempts**, Director of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Natural Resources Department, who developed the Tribe's visionary First Foods Program. More information about the First Food Program is available at [First foods lead the way in Confederated Tribes of the Umatilla Indian Reservation natural resource management - OPB](#) and more about Mr. Quaempts is available at [Eric Quaempts, Indigenous Leadership Award honoree - Ecotrust](#).



We are also delighted to announce plenary speaker **Janine Castro**, Project Leader for the Columbia River Fish and Wildlife Conservation Office (CRFWCO) in Vancouver, Washington. Janine has expertise in river science, including fluvial geomorphology and stream restoration, and supervises the CRFWCO's Science Communication and Outreach program. More information about CRFWCO is available at [Columbia River Fish and Wildlife Conservation Office](#) and more information about Dr. Castro is available at [FWS Scholar: Janine Castro](#).



Schedule Overview

2023 Symposium Schedule at-a-Glance				
Monday 4/10	Tuesday 4/11	Wednesday 4/12	Thursday 4/13	Friday 4/14
Workshop: Underwater Photography and Filmography	Plenary Session	Concurrent Sessions	Concurrent Sessions	Field Trips
	Concurrent Sessions			
	Committee Meetings	Committee Meetings	Business Meeting and Awards Luncheon	
Board Meeting	Concurrent Sessions	Concurrent Sessions	Concurrent Sessions	
Student-Mentor Mixer				
Welcome Reception	Poster Session and Mixer	Dinner and Auction	Explore Portland	
	Movie Presentation			

Registration

Registration is now open at the event website:
https://molluskconservation.org/EVENTS/2023SYMPOSIUM/2023_FMCS-SYMPOSIUM.html
 Early registration will end on January 27, and late registration will end on March 31, 2023.
 Registration rates are:

Attendee Status	Early Registration (Ends 1/27/23)	Late Registration (1/28/23--3/31/23)	Virtual Ends 3/31/23)
Member	\$415.00	\$465.00	\$275.00
Non-member	\$500.00	\$550.00	\$355.00
Student/Retiree Member	\$275.00	\$325.00	\$185.00
Student/Retiree Non-member	\$315.00	\$365.00	\$225.00

As mentioned above, this event will provide both in-person and virtual attendance options. The plenary talks and oral presentation sessions will be made available for virtual registrants via Zoom. The oral presentations, including lightning talks, will be a mixture of in-person and pre-recorded talks. Virtual attendees may provide digital versions of posters, but the poster session will be in-person only. Virtual attendees also may register for the Workshop and participate via Zoom. More information about the virtual meeting components will be updated on the Symposium webpage.

Location, Transportation, and Lodging

This symposium will be held at the **DoubleTree by Hilton Hotel Portland**, 1000 NE Multnomah Street, Portland, Oregon, USA 97232. The hotel is easily accessible in northeast Portland via the MAX light rail system directly from the Portland airport (PDX), Amtrak/Union Station, and Portland Transit Mall, so it is not necessary to rent a vehicle. You can plan your trip using the following resources: <https://www.travelportland.com/plan/>, <https://trimet.org/>, and <https://www.amtrak.com/stations/pdx>. For those arriving by car, we have negotiated a discounted rate for the onsite parking structure at the DoubleTree Hotel. As you plan your travel, don't forget that the Workshop and some other symposium events begin on Monday morning!



Lodging rates at the hotel are based on the prevailing federal per diem rate for the area, under which the standard room rate for Portland in April 2023 is \$152/night. Note that the rates are available for three days prior to and three days following the symposium, so consider extending your stay! The room block for the symposium includes standard single queen, single king, or double queen guestrooms, and you can request a microwave and fridge in the room for no additional charge. All rates include complementary basic guestroom WIFI. You can make your reservations online at: [Available Rooms - DoubleTree by Hilton Hotel Portland](#). If you reserve your room by phone, be sure to ask for the “**Freshwater Mollusk Conservation Society group rate**” to ensure you receive the reduced rate. More information on the venue is available at: [DoubleTree Hotel Portland - Hotels in Portland Oregon \(hilton.com\)](#).

Room Rate (per night)	Single	Double	Triple	Quad
Standard Single Queen	\$152	\$152	N/A	N/A
Premium Single King or Double Queen	\$172	\$172	\$187	\$202

There are many things to see, taste, and do in Portland and the efficient TriMet public transportation system (<https://trimet.org/howtoride/>) and pedestrian-friendly city streets make getting around in Portland hassle free and budget friendly. For information on many ways to enjoy Portland's music, art, food, beer, outdoors, and cultural opportunities during your visit, check out Travel Portland: <https://www.travelportland.com/>.

Workshop: Underwater Filmography and Photography

A picture is worth a thousand words, especially in today's visually driven world of social media. Are you interested in improving your underwater filmography, photography, and communication skills to better capture and share the importance of freshwater mussels and snails? Join us for this Workshop led by experts from Freshwaters Illustrated ([Freshwaters Illustrated](#)) and Laura Tesler and Tim Akimoff from the Oregon Department of Fish and Wildlife. From stunning films highlighting freshwater mollusks and aquatic ecosystems ([All Projects — Freshwaters Illustrated](#)) to spectacular underwater photography ([@laurateslerphotography](#) on Instagram and [LAURA TESLER \(laurateslerphotography.com\)](#) on Facebook) to forging connections between digital media and the public ([Twitter.com/MyODFW](#), [Facebook.com/MyODFW](#), and [Instagram.com/MyODFW](#)), our presenters will provide

information and training to inspire and educate you in the development and use of filmography and photography in your own work.

You can sign up for the **Monday Morning** Workshop on the event website: https://molluskconservation.org/EVENTS/2023SYMPOSIUM/2023_FMCS-SYMPOSIUM.html. The cost is \$55. While we plan to make the workshop accessible to virtual attendees, we encourage you to join us in person for greater engagement with our incredible presenters.

Bonus: Movie Presentation

After you've been inspired by the Workshop, be sure you don't miss a special film showing by Freshwaters Illustrated! This local Oregon nonprofit is dedicated to raising awareness about the life, study, and conservation of freshwater ecosystems through immersive visual media and stories, and providing imagery and resources to scientists, educators, and media producers. Their vision is to help inspire a world that is more conscious of freshwater life and more sympathetic to the cause of freshwater conservation. We will have a special screening of one of their incredible feature films on Tuesday night following the poster session and mixer. We can't wait to see you there!

Field Trips

Field trips this year will occur on Friday, April 14. Join us to travel and learn from the mountains to the sea! Trips 1, 2, and 4 each cost \$100 and include transportation and a boxed lunch. Trip 3 is accepting names for those interested; transportation and plans for that trip will be developed from interest received. As you pack, please prepare for all possible weather, as April in Portland can change from rain to snow to sun, hour by hour!

Trip 1: Waterfalls, Sturgeons, and Dams

This field trip will take participants along the Columbia River corridor in Oregon, stopping at Multnomah Falls [Multnomah Falls Visitor Center \(go-oregon.com\)](https://go-oregon.com/multnomah-falls-visitor-center), then traversing on to Bonneville Dam [Bonneville Dam | The Official Guide to Portland \(travelportland.com\)](https://travelportland.com/bonneville-dam) and Bonneville Fish Hatchery. Attendees can take a tour of the dam, see the fish ladder, visit Herman the Sturgeon (<https://myodfw.com/articles/herman-sturgeon>), and take a short self-guided hike to nearby Wahclella Falls. The trip is less than an hour's drive from the hotel and will allow time for participants to enjoy some of the highlights of the Oregon side of the Columbia River.



Underwater shot of red-lipped gooseneck barnacles by Laura Tesler.



Trip 2: Conservation and Restoration Successes of the lower Columbia in Washington

This field trip will take participants along the Columbia River corridor in Washington, first heading to Steigerwald Lake National Wildlife Refuge (<https://www.fws.gov/refuge/steigerwald-lake>), recently reopened following a 2- year closure and a \$31 million floodplain habitat restoration project. The site is home to native freshwater mussels, salmon and steelhead trout, and a variety of bird species. Following the tour hosted by USFWS staff, the field trip will continue on to Cape Horn for stunning views of the Columbia Gorge (hike optional, with stops at the overlook: <https://gorgefriends.org/hike-the-gorge/cape-horn.html>). The trip also is less than an hour's drive from the hotel and will allow time for participants to enjoy some of the highlights of the Washington side of the Columbia River.

**Trip 3: Astoria and the Oregon Coast**

A trip to Oregon is never complete without a visit to the Pacific coast. This field trip will take participants to Fort Stevens State Park on the Oregon coast [Fort Stevens State Park - Oregon State Parks](#), followed by an afternoon in Astoria [Visit the Historic Coastal City of Astoria, Oregon \(traveloregon.com\)](#). Attractions can include a historic shipwreck, the Astoria Column (<https://astoriacolumn.org/>), and the Columbia River Maritime Museum (cost is \$16, to be paid by attendee; [Columbia River Maritime Museum - Home \(crmm.org\)](#)). Astoria is approximately 2 hours from the hotel.

**Trip 4: Willamette River Field Trip**

This field trip will take participants on an urban canoe trip around Ross Island in the Willamette River. This is a great opportunity to see the river up close and view the City of Portland from a different perspective. Join Willamette Riverkeeper staff at the Portland Boathouse Boatyard (directions to come) and learn about restoration efforts on Ross Island, mussel work that is occurring upstream, and some of the ongoing riverine issues in the City of Portland. Bring a waterproof shell and insulating layers. The trip will take about three hours depending on water levels. Please note that, depending on conditions, cancellation is possible.



The Auction is Back, and Auction Items are Needed, Too!

Auction/raffle items are needed for the world famous FMCS auction/raffle for the Symposium in Portland, Oregon! Books, art, photos, edibles/drinkables, field gear, clothing, collectibles, and other rare and unusual things are all welcome. Proceeds from our auction/raffle go to the FMCS student travel awards. See how creatively you can pack if you are flying and drop off your items at the registration desk when you arrive. If you can't make the meeting or would rather ship, please contact Emilie Blevins (Emilie.Blevins@xerces.org) to coordinate. If you have any questions, just get in touch!



Help Sponsor the Symposium

We are actively seeking sponsorships for this symposium. Monetary sponsorships help cover the costs of the symposium facilities and activities. We understand that grants and budgets aren't what they used to be, but we need all the support you or your organization can provide. We appreciate any and all donations. Sponsorship levels are presented in the following table. To become a sponsor, go to: https://molluskconservation.org/EVENTS/2023SYMPOSIUM/2023Symposium_SPONSORSHIP.html. For more information, contact Courtney Newlon (courtney_newlon@fws.gov) or Alan Christian (achristian@ursinus.edu).

Sponsorship Level	Amount	Benefits
River	> \$2000	Two Complimentary Registrations (Virtual or In-Person), Logo on Website Registration Page, and Recognition in the Program
Stream	\$1000 - \$2000	One Complimentary Registration (One Virtual and One In-Person), Logo on Website Registration Page, and Recognition in the Program
Eddy	\$500 - \$999	Logo on Website Registration Page and Recognition in the Program
Mussel	\$100 - \$499	Recognition in the Program

Volunteers Needed

Looking for ways to be more involved in FMCS? Here is your chance! The 2023 Symposium Planning Committee needs workers to help. If you are interested or want more information, please contact Daelyn Woolnough (wooln1d@cmich.edu) or Michele Weaver (michele.h.weaver@odfw.oregon.gov).

For More Information

For general information about the symposium, please contact one of the following symposium planning committee members: FMCS Meeting Chair Megan Bradley: megan_bradley@fws.gov; Local Committee Co-Chairs Emilie Blevins Emilie.Blevins@xerces.org and Michele Weaver michele.h.weaver@odfw.oregon.gov; or Program Committee Co-Chairs Patty Morrison pearlymussel@gmail.com and Alexa Maine alexamaine@ctuir.org.

Second Call for Abstracts for the FMCS 2023 Symposium

The 13th FMCS Biennial symposium will be held from April 10-14, 2023, at the Hilton DoubleTree hotel in Portland, Oregon. The theme for the symposium is *From the Mountains to the Sea and Mollusks in Between*. Traditional topics for past presentations have included: Life History & Ecology, Status and Distribution of Mollusks, Surveys and Monitoring, Propagation, Ecosystems and Community Ecology, Genetics and Phylogeny, Ecosystem Services, Habitat and Mollusk Community Restoration, Contaminants and Ecotoxicology, Outreach, Climate Change, Invasive Mollusks, and Mollusk Kills.



Instructions for Authors

Abstracts will be due by 11:59 pm Eastern U.S. on Friday, **January 27, 2023**. Virtual attendees must indicate that their presentation will be pre-recorded when they submit an abstract (see below). In addition, we will offer opportunities for 5-minute “lightning talks,” for those who want to share quick updates or just early results on a project. Please email Patricia Morrison at pearlymussel@gmail.com if you are interested in presenting a lightning talk. No full abstract is required, and virtual attendees may submit pre-recorded talks.

Submittal

Abstracts should be submitted as an email attachment in Microsoft Word® or Rich Text format to Patricia Morrison at pearlymussel@gmail.com. The file name should include the presenter’s last name and initials (e.g., jonesjm.doc). Acknowledgment of abstract receipt, if requested, will be provided by e-mail.

Abstract format

The abstract should be typed in Calibri 12-pt font, and contain the title in **BOLD CAPITAL LETTERS**, followed by the author(s), and address(es). Underscore the presenter's name. Skip one line and begin the text including a clear summary of presentation including objectives, results, and conclusions. Please keep abstracts to 300 words or less (see example below) and be sure to include the information at the bottom for us.

DROUGHT-INDUCED MASS MORTALITY OF FRESHWATER MUSSELS ALTERS ECOSYSTEM FUNCTION: A MESOCOSM EXPERIMENT. Traci P Dubose¹, Carla L Atkinson², Caryn C Vaughn¹ & Stephen W Golladay³. ¹University of Oklahoma, Norman, OK; ²University of Alabama, Tuscaloosa, AL; ³Jones Center at Ichauway, Newton, GA.

Droughts are becoming more frequent and intense globally. As sedentary organisms, native freshwater mussels are vulnerable to the high water temperatures and shrinking aquatic habitat caused by extreme events. While drought-driven die offs have been documented in the southern Great Plains, the ecosystem impacts of these droughts have not been completely quantified. To better quantify impacts of mussel mass mortality events on ecological function, we conducted a mesocosm experiment that simulated a mussel die-off. We created three scenarios in eighteen 946L mesocosms: nine control

mesocosms without freshwater mussels, four mesocosms with a live mussel community, and five mesocosms with a mussel community that experienced a die-off. We measured water column nutrients, primary production, and the macroinvertebrate community before (3 samples over 20 days) and after (4 samples over 39 days) the mussel mortality event. We also measured mussel decomposition following the die-off. In the week after the die-off, ammonium increased by 94% in the mortality mesocosms and was significantly higher than the control mesocosms, but not the live mesocosms. Soluble reactive phosphorus increased in mortality mesocosms but was not significantly different than the control or live mesocosms. The rapid nutrient release following mussel mortality likely stimulates both the autotrophic and heterotrophic components of river food webs. Benthic gross primary production was greater in mortality and live mesocosms than in control mesocosms. Decomposition of organic matter increased immediately following mussel death in mortality mesocosms and was statistically different than live mesocosms. We combined our mesocosm experiment results with field observations and the literature to build a conceptual model of how unionid mass mortality events likely impact ecosystem function across short and long time scales. This conceptual model should aid development of conservation and management strategies that sustain stream structure and function in the face of drought-driven mussel losses.

Presentation format:

select one: **Oral Platform** (15 minutes plus 5 minutes for questions) or **Poster**?

Student: Yes/No *?

Willingness to switch formats (platform to poster or vice versa): Yes/No

Submitting as a pre-recorded talk (virtual registrant): Yes/No

*Note: All students submitting abstracts, provided they meet eligibility requirements, will be judged for the best student platform or poster presentation, unless otherwise indicated.

Awards Announcements for Upcoming Symposium

The Awards Committee has several items for membership attention in preparation for the upcoming Symposium in Portland. Please note the deadlines; they are coming up sooner rather than later!

Call for 2023 FMCS Professional Award Nominations

Do you know someone who has made worthwhile contributions to mussel conservation or to the Society, either through donating their professional time or expertise or through their scientific endeavors? If so, consider nominating them for one of the three following FMCS Professional Awards.

The Meritorious Service Award—given to an individual for singular accomplishments or long-term contributions to the Society. The recipient of this award must be a past or present FMCS member who has performed long-term, exceptionally high-quality service to the Society.

The William J. Clench Memorial Award—given to an individual for singular accomplishments or long-term contributions that have advanced the natural history and understanding of freshwater mollusks at an academic or non-academic level. The recipient of this award must have had (1) activity in one or more aspects of freshwater mollusks for a substantial period of time, with a recommended minimum guideline of 20 years, and (2) made substantial contributions to the field of freshwater malacology.

Lifetime Achievement Award—given to an individual for singular accomplishments or long-term contributions that have advanced the conservation and science of freshwater mollusks at a national or international level. The recipient of this award must have had (1) activity in one or more aspects of freshwater mollusk research and/or conservation for a substantial period of time, with a recommended minimum guideline of 20 years, and (2) made substantial contributions to the scientific understanding of freshwater mollusks and/or their conservation.

Nominations and supporting documentation for each of these awards are due by **January 31, 2023**. See the Awards Committee web site at: https://molluskconservation.org/Mservices_awards.html for procedures and requirements. For more information or answers to questions about this nomination process, contact Susan Oetker, Susan_Oetker@fws.gov, Curt Elderkin, curtelderkin@gmail.com, or David Hayes david.hayes@eku.edu.

Early Career Professional Travel Awards **NEW!!******

The Freshwater Mollusk Conservation Society is pleased to announce the Early Career Professional Travel Award. Two individuals with less than five years of post-graduate service and in good standing as members of the Society will be awarded free registration to attend our upcoming Symposium. To apply for this award, send an email application to Susan Oetker at susan_oetker@fws.gov. In this application, provide a short statement (350-500 words) that addresses your: 1) financial need for this assistance and any other source(s) of support for attending, 2) conference participation plan (e.g., presentation, committee meetings), 3) anticipated benefits on future work to your employer, and 4) intended plan to disseminate your experience to others (e.g., post-conference presentation, etc.). Make sure to include your name, present affiliation, years of post-graduate service, and any previous involvement within FMCS (This information will not be counted as part of the word limit). The deadline for submitting these applications is **January 31, 2023**. If you have any questions, please feel free to contact Jeremy Tiemann (jtiemann@illinois.edu), Curt Elderkin (elderkin@tcnj.edu), Susan Oetker (susan_oetker@fws.gov), or David Hayes (david.hayes@eku.edu).

Student Travel Awards Available

CALLING ALL STUDENTS - To facilitate your participation in the Portland Symposium, travel awards are being offered by the FMCS. Support is provided in the form of Society-paid lodging accommodations for the duration of the meeting at the DoubleTree hotel. It is anticipated that up to nine awards will be made for this Symposium. A complete application package must be submitted by e-mail as a PDF file to Dave Hayes on or before **January 31, 2023**. Please see the Awards Committee web site at https://molluskconservation.org/Mservices_awards.html for application forms and procedures or contact Dave Hayes (david.hayes@eku.edu), phone 859/622-1016, for more information. Please use “FMCS 2023 Student Travel Award” as the subject line in your email.

Call for Judges of Student Presentations

The Awards Committee needs judges for the Best Student Platform and Poster Awards during the Portland Symposium. If you are interested in serving as a judge for these awards, please reply to Curt Elderkin (curtelderkin@gmail.com). Please note that all student presentations are scheduled as early as possible during the meeting so that we can finalize results in time for the awards presentation during the banquet. With that in mind, please indicate which general topics [sorry no list of session titles yet] you would prefer to judge, and if you are arriving late to the conference (so I don't schedule you to judge before you arrive). Once the meeting schedule is out, please let me know of any conflicts that will not be obvious to me in the schedule, and if you request any changes in the schedule. The Awards Committee greatly appreciates the

volunteer judges who make it possible to recognize outstanding student contributions at the meeting. Thank you for considering this request.

If you are a student interested in having your platform paper or poster judged, please indicate that on your abstract. If you are presenting more than once, please select only one for judging.

Call for Formal Change Petitions Concerning Scientific and Common Names

The Gastropod and Bivalve working groups of the FMCS Common and Scientific Names Subcommittee will review proposed changes to their respective lists of scientific and common names for the United States, Canada, and Mexico (gastropods only) during the 2023 FMCS Portland Symposium. For names to be considered, a formal petition must be received by **January 13, 2023** (~ 90 days before the working group meetings in mid-April). Any FMCS member may submit a proposed new name or name change following the subcommittee rules and using the submission form found on the Names page on the FMCS website [2021 Subcommittee Petition Form.docx \(live.com\)](#). If multiple petitions are received for the same name, the chairs may require petitioners to combine their submittals for the sake of brevity. Questions or comments can be submitted to the working group chairs: John Harris (omibob1@gmail.com) chair of the bivalve working group, and Paul Johnson (paul.johnson@dcnr.alabama.gov) chair of the gastropod working group.

Minutes of the FMCS Fall 2022 Board Meeting Thursday, November 17, 2022

Call to order at 9:06 AM (Central) by Steve McMurray

In attendance: Steve McMurray, Alan Christian, Sarah Veselka, Amy Maynard, Becca Winterringer, Bob Anderson, Braven Beaty, Dan Symonds, Don Hubbs, Emilie Blevins, Jason Wisniewski, Jeremy Tiemann, Lisie Kitchel, Michele Weaver, Lisie Kitchel, Robert Bringolf, Nate Johnson, Sara Craft, Wesley Daniel, John Jenkinson, Susan Oetker, and Kentaro Inoue.

Declaration of quorum – Steve McMurray

Approval of the Fall/Winter 2021 Board Meeting Minutes – motion by Wesley Daniels, second by Nate Johnson, and passed with no opposition

Treasurer's Report – Report submitted and presented by Alan Christian (see Page 14) Motion to accept by Jason Wisniewski, second by Wesley Daniels, and passed with no opposition

Secretary's Report – Report submitted and presented by Sarah Veselka (see Page 15) Motion to accept by Nate Johnson, second by Jason Wisniewski, and passed with no opposition

Old Business

Request for members to serve on Finance Committee – Steve McMurray
Need 3-5 members in good standing to serve on the committee to keep non-profit status. Looking for nominations. Sara Croft has agreed to served on the committee.

FMCS Freshwater Gastropod Poster – Amy Maynard

Will bring printed copy of the poster to the symposium with QR code for folks to access.

FMCS Funding Requests – Heidi Dunn (not present)

Steve will follow up with Heidi on this topic.

New Business**Society Google Account** – Megan Bradley (not present)

Establish gmail accounts for officers, newsletter editor, etc?

We have officer email capabilities currently in Wild Apricot; however, how will this be affected with the website transition? We do have one gmail account for google document sharing.

Committee Reports**Functional Committees:****Awards** – committee report submitted by Curt Elderkin (see Page 15) and presented by Susan Oetker*Motion presented by Jeremy Tiemann:*

Seeking approval for two early professional travel awards up to the cost of member registration for the FMCS Portland Symposium with the understanding that the Awards and Finance Committees will work together to determine funding mechanisms for this symposium and future symposiums. Applicants must be a member in good standing with the Society and with less than five years of post-graduate professional experience.

*Motion passed with no opposition.*Committee will provide updates to this travel award description and submit to John Jenkinson for December *Ellipsaria*. (see Page 11)**Chapters** – committee report submitted (see Page 15) and presented by Emilie Blevins. No questions or follow up discussion.**Diversity, Equity, and Inclusion** – committee report provided (see Page 15) and presented by Kentaro Inoue.

Sara Craft provided an update on the Diversity, Inclusivity, Value, and Equity (DIVE) mentorship program. Two mentors have volunteered and been selected for the pilot program in 2023. Asking for \$5K for each student. Funding mechanism in question. Need to look into IRS regulations for these payments. Finance committee will investigate this.

Elections – committee report provided (see Page 16) and presented by Wesley Daniel

Need brief job descriptions for each position including time commitment. Typically, the statements from candidates are posted in the December *Ellipsaria*, the election is held in January, and winners are announced at the symposium. Due to limited nominations, the current proposal is to accept candidate nominations until January 20th, announce candidates in March *Ellipsaria*, vote over one month, and announce winners at the Portland Symposium. Suggestion to establish a three-member election committee. Another call for volunteers will be in the December *Ellipsaria* (see Page 1).

Guidelines and Techniques Committee - Report submitted and presented by Lisie Kitchel (see Page 17). No questions or follow up discussion.**Outreach** - Report submitted by Amy Maynard and Dan Symonds (see Page 17) and presented by Amy MaynardMussel App has been updated for current taxonomy. Version 2 is out and available. Nate Johnson will send summary about this to be posted in the December *Ellipsaria*, Sarah Veselka can send out a membership email, and JeremyTiemann can put out on social media.

Professional Development – Becca Winterringer submitted and reviewed the committee report (see Page 17). Becca will send out final SOP draft to the Board. This will be put on the agenda for the Portland symposium.

Publications – Wendell Haag submitted the committee report (see Page 18) and Robert Bringolf provided the summary. No follow up questions or discussion.

Symposia and Workshops

2023 Symposium – Report submitted and presented by Emilie Blevins (see Page 19) Group decided to have presenters “opt in” if they will allow for photo sharing of their presentations. Group decided to have programs available only electronically.

2024 Workshop – committee report not submitted, and committee not represented at meeting. Steve will follow up.

Technical Committees:

Conservation and Restoration – committee report submitted by Madeline Pletta (see Page 20), no representation at board meeting

Environmental Quality and Advocacy – committee report provided (see Page 20) and presented by Braven Beaty
CASS – committee will present to the entire board about potential FMCS future participation

Field Studies and Ecosystem Services – committee report not submitted, and committee not represented at meeting

Genetics – committee report provided (see Page 21) and presented by Kentaro Inoue. No follow up questions or discussions.

Mollusk Status and Distribution – Jason Wisniewski provided an update on the mussel atlas. No committee report submitted.

Motion to Adjourn at 11:39 AM (Central) by Alan Christian, second by Jeremy Tiemann, and passed with no opposition.

Board and Committee Reports Submitted for the Fall FMCS Board Meeting – November 17, 2022

Treasurer’s Report - Report provided and presented by Alan Christian

For this calendar year through 10/31/2022, FMCS assets total \$147,325.43 broken into major assets of Bank of America savings (\$10,017.15) and Bank of America checking (\$135,262.06). In terms of liability and equity, we have no liability, and our equity is broken down into \$126,484.24 in retained earnings and \$20,841.24 in net income.

The FMCS 2022 Profits & Losses through 10/31/2022 included a total income of \$72,863.54 and total expenses of \$52,022.35 resulting in a net income of \$20,841.19. Major incomes from memberships (\$3,880.00), a refund from the 2022 JASM meeting (\$16,893.00), and income from the 2022 Workshop (\$50,302.13). Major expenses included Third-party payment processing

fees (\$2,722.89), web page maintenance (\$4,588.56), 2023 symposium expenses (\$4,299.00), 2022 Workshop expenses (\$32,788.43), and Walkerana/FMBC expenses (\$6,342.25).

Secretary's Report - Report provided and presented by Sarah Veselka

There are currently 840 members in the Society, including 537 active members, 290 renewals overdue, 295 lapsed, and 7 new members.

Functional Committees:

Awards Committee - Report submitted by Curt Elderkin and presented by Susan Oetker

The Awards Committee met several times in the past months and corresponded by email. The Awards committee members also met with a member of the DEI committee (Dr. Jer Pin Chong) to discuss a Mid-Career Award for Diversity and Inclusion for members of FMCS. We discussed the Award and its requirements, the committee felt this was a great idea but also felt the requirements for the award were not clear at this time.

The Committee has received one application for the Lifetime Achievement Award. The Committee also sent an awards announcement to be posted in the December issue of *Ellipsaria* with the requirements for the achievement awards, and student travel awards for the upcoming Symposium in April.

Jeremy Tiemann sent us a call for the Young Professional Awards. This award was meant to be a travel award at the symposia (and workshops?) but has not been awarded due to the pandemic. Two of these should be awarded for the April meeting.

The Awards Committee sent a notice to the Symposium planning committee of these upcoming awards and deadlines. We also will coordinate the member Professional Awards, Best Student Poster, Best Student Platform Presentation Awards at the Symposium, those calls should go out with the Call for Abstracts soon.

Chapters Committee - Report submitted and presented by Emilie Blevins

Manuel and Emilie held a meeting with members of the Executive Committee on March 3, 2022, to follow up on discussion of subgroups within FMCS (originally described as “chapters,” but later revised to “divisions” to more closely match AFS’ subgrouping approach). Manuel shared that he has been working with other European malacologists to organize research and collaboration through a COST (European Cooperation in Science and Technology; <https://www.cost.eu/actions/CA18239/>) network that will run until the end of 2023. After this period, the development of this group may be consolidated into a chapter or division of FMCS, if the legal framework will be ready by then. Ex Comm members also shared concerns about additional burden on existing membership if chapters or divisions were to form without the participation of existing regional groups and their leadership. To date, no other regional groups have expressed the need for organization through an FMCS subgroup, with the exception of the Pacific Northwest Native Freshwater Mussel Workgroup. There was general agreement by the Ex Comm and Chapters Committee that it would be good to assess the geography of FMCS membership to better understand possible regional needs or networking interest. At this time, it is the recommendation of the committee to assess FMCS membership’s geography and revisit the idea of chapters or divisions should there be increased interest in the future, perhaps 2024 to coincide with conclusion of the COST network activities.

Diversity, Equity, and Inclusion Committee - Report submitted and presented by Kentaro Inoue

The last group meeting via phone call was November 3, 2022. We continue to meet monthly via calls/Teams/Zoom. Our next call will be in December with date to be decided via only polling

to our mailing list. All are welcome. Please email (Tamara_Smith@fws.gov) to be added to the mailing list.

Committee Tasks (April - December):

Keeping DEI issues on the forefront.

- Developed and sent out the 2nd DEI survey. This survey is a follow-up to the 2020 pilot survey and is intended to repeat every other year.
 - Sent to 854 people; 113 responses as of November 3.
 - Survey will close at the end of the year. (See article on Page 21)
- Develop short social media posts to keep diversity issues on the forefront. Ongoing posts to social media.
- Develop DEI content for *Ellipsaria*. *Ongoing.*
 - JASM update in the 2022 September issue.
- Develop resource guide and links that people interested in racial equity, diversity and inclusion issues can access that will be available on the FMCS DEI webpage. *Progress: Developed a resource link. Resource guide has been published on DEI web page.*

Foster a welcoming environment for FMCS members (and other interested people)

- Developed a student fellowship program—Diversity, Inclusivity, Value, and Equity (DIVE) Fellowship.
 - The DIVE program provides paid research opportunities to students whose communities have been historically excluded from the field of biology. The program is an 8-week fellowship in which high school students (current 11th or 12th graders) pair with scientific mentors to conduct research.
 - Xenia, Sara and Kaelyn finalized a proposal for the program, presented draft to ExCom in Dec 21, 2021, and later the FMCS Board. The Board was supportive. Pilot year will be 2023.
- FMCS DEI Award
 - A proposal for a DEI Award to be given to a FMCS member was presented to the Awards subcommittee, likely will become an award with DEI committee input.
- Continue to develop a presence on the FMCS website
- Improve accessibility of FMCS website. *On hold.*
- Explore ways to make future meetings/symposiums/workshops more inclusive
 - DEI committee members presented a poster at the 2022 FMCS Workshop
 - Progress: DEI committee members assisting with the planning the 2023 Symposium.
- Participate in DEI committees of other scientific societies to share resources and ideas.
 - FMCS DEI committee presented a poster at the 2022 JASM conference, to highlight the results of the demographic survey and the work of the DEI committee
 - International malaco-diversity survey – Tam is working with an international group to establish a world-wide malacologist demographic (and attitudes to DEI issues) survey, with plans to publish results.

We occasionally revisit our draft strategic plan and draft a strategy for our committee with step down goals and actions.

Elections Committee - Report submitted and presented by Wesley Daniel

In our search for new Executive Committee nominations, we placed three calls for nominations in *Ellipsaria* (our traditional method) and sent a member-wide email request. We currently have single nominations for President-elect and Treasurer, and two nominations for

Secretary. Jeremy Tiemann and I continue to reach out to members to find a second nomination for, at least, President-elect. (See article on Page 1)

John Jenkinson has suggested expanding the Election Committee to include more members. Jeremy Tiemann, other ExCom members, and I have done our best to personally contact FMCS members to run for Executive Committee positions, but with little success. I concur that we should expand the Election Committee to have more voices. I will start looking for volunteers at the upcoming FMCS Symposium. The inclusion of a team with new ideas can only aid the process of finding candidates into the future.

Guidelines and Techniques Committee - Report submitted and presented by Lisie Kitchel

The Guidelines and Techniques Committee conducted the Survey Guidelines and Techniques Workshop at Henry Horton State Park in Chapel Hill, Tennessee, from August 8-11, 2022. It was attended by over 200 participants and provided sessions ranging from introductory field sampling to advanced topics addressing implementation and evaluation of data and conservation considerations for mussels. All sessions went well, although the weather and Duck River were not entirely cooperative for field sampling and the field trip had to be cancelled due to high water. A big disappointment for those wanting to get a chance to sample the illustrious Duck River and its mussel fauna. Abstracts are available on the FMCS Events page. Thanks to the Planning Committee for doing a great job of putting it all together!

The Guidelines and Techniques Committee is evaluating input received during a session of the Workshop regarding whether FMCS should establish guidance for standard protocols for “Standardized assessment guidelines and techniques” as a professional society. This session involved much discussion and will be pursued further by the Committee and brought to the FMCS Board for future consideration.

The Committee continues to contact state, federal, tribal, and other entities to update the Mussel Survey Guidelines and Protocols provided on the FMCS website. Many contacts have changed or are no longer available and new contacts not readily available, the search goes on to keep these Guidelines and Protocols current and to add any new materials as they become available.

Outreach Committee - Report submitted by Amy Maynard and Dan Symonds and presented by Amy Maynard

The Outreach Committee produced a flyer for dissemination at the October 2022 SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) meeting. The flyer highlighted opportunities for students within FMCS. The flyer may be adapted for use at other events that arise.

We continue to compile a list of mollusk-related outreach materials to share on our website and have begun to plan the student/mentor mixer that will take place at the 2023 Symposium.

Since our last board meeting in January, committee volunteers have made 44 posts to Facebook, 36 to Twitter, and 8 to Instagram.

Professional Development Committee - Report submitted and presented by Becca Winterringer

The Professional Development Committee has reviewed and incorporated final comments received on the Mollusk Professional Certification, Guidelines and Procedures Draft document. A committee meeting was held in early June 2022 to cover final talking points and discuss the scoring alignment with certification levels; several volunteers, including committee members self-scored to evaluate the validity of the point structure and ranking system. The outcome of that meeting warranted a few updates to the document as well as the scoring criteria. The final

version is about complete and will be provided to the Board in the upcoming weeks. Action steps of the certification program we hope to achieve in early include:

1. Outline Implementation
2. Committee structure and identifying sub-committee needs (i.e., Mollusk Certification, Review Panel, Professional Development)
 - a. Amanda Rosenberger resigned from the committee due to other obligations and time commitments.
3. Developing a strategy for establishing a Certification Review Panel
4. Roll out a beta-testing and presentation of the certification at the Portland Symposium

If any FMCS members have interest in serving on this committee, please contact Becca Winterringer (beccawint6@gmail.com).

Publications Committee - Report submitted by Wendell Haag; presented by Robert Bringolf **Freshwater Mollusk Biology and Conservation (FMBC)**

Editor in Chief: Wendell Haag, Managing Editor: Ani Escobar, Associate Editors: David Berg, Robert Bringolf, Serena Ciparis, Daniel Hornbach, Caryn Vaughn, and Alexandra Zieritz. Website posting and maintenance: Sophie Binder

New managing editor

Megan Bradley has stepped down as Managing Editor after serving in this role for several years. We truly appreciate her hard work for the journal. Ani Escobar (Georgia Department of Natural Resources) has graciously agreed to take Megan's place. We are very excited about working with Ani, and we appreciate her willingness to take on this duty.

Recent, Current, and Upcoming issues

Volume 25, Number 1 (March 2022) was published on time, for perhaps the first time in the history of FMBC. We were very proud of this. The issue had five papers.

The current issue, Volume 25, Number 2 (September 2022), was published about three weeks late (October 25, 2022). We can't blame this on Allen Press this time; they seem to have recovered from Covid challenges and have been prompt about returning proofs. Rather, the lateness was due almost exclusively to the Editor in Chief's busy field and travel schedule this past summer.

Volume 26, Number 1 (March 2023) is underway. We have one accepted paper for this issue and about 12 other live manuscripts at some point in the review process.

Copy editors

We continue to be pleased with the copyediting service provided by Two Herons Consulting. Our copy-editing procedures are running smoothly and effectively.

Early View

We have established an Early View page within the FMBC portion of the FMCS website (<https://molluskconservation.org/FMBC-early.html>). We post here the final version of all accepted papers after copyediting. We first post a final pdf version of the manuscript, then we replace this with unpaginated proofs when they become available. This is important to give authors and readers earlier access to accepted papers.

Impact Factor

This issue has been in limbo for some time, but Dave Berg recently agreed to revisit this issue with Clarivate Analytics.

Editorial Structure

Our new editorial structure, which was implemented last year, is working well. It results in a lighter workload for the Assistant Editors, and it has a clearer chain of command and division of responsibilities.

Additional Discussion Item:

FMBC has documentation related to the initial founding of the journal, including contracts and agreements with Allen Press and other documents that should be preserved and available. Greg Cope currently is in possession of these documents. Other committees or groups within FMCS probably also have documentation that should be preserved. FMCS should consider establishing a repository for such documents.

Ellipsaria

Outgoing Editor: John Jenkinson. Incoming Editors: Don Hubbs and Bob Anderson

The newsletter continues to be posted on schedule.

The December 2022 issue will be John Jenkinson's last offering as Editor of *Ellipsaria*. The new Co-Editors will be Don Hubbs and Bob Anderson. Bob presently leads the endangered species section of the Pennsylvania Field Office of the U.S. Fish and Wildlife Service. He served as FMCS President from 2005 to 2007. Don is presently manager of DJH Environmental Services. He retired from the Tennessee Wildlife Resources Agency in 2020 after serving for 28 years as the statewide mussel recovery coordinator. Their combined knowledge about freshwater mollusks, state and federal activities, and the goals of this society make them excellent choices to serve as Co-Editors of the newsletter. (See articles on Page 23.)

Symposium Committee - Report submitted and presented by Emilie Blevins

The Symposium Committee has been hard at work on tasks associated with planning the 2023 Symposium in Portland, Oregon. We are especially pleased to note that neither the registration prices, nor the hotel room rates, have increased since we first budgeted in 2019.

Over the summer, several members of the committee visited the venue with a hotel representative to tour the space and discuss logistics. We have also worked closely with the web developer to create the event webpage and registration portal, which is now live and open for registration. We sent out the first Call for Abstracts in the September *Ellipsaria* and will send out the second Call for Abstracts in the December issue. Abstracts are due by 1/27/2023, when early registration ends. Late registration ends 3/31/2023. The room block at the hotel is also active and accepting reservations. The event webpage includes the relevant information and links to make reservations under the group rate.

In March and again in June, the local planning committee met with the FMCS Executive Committee to revise and approve the budget originally developed in 2019. We also discussed interest in providing a hybrid event, including both virtual and in-person registration. Following those discussions, we have developed a program that allows for virtual attendance for the workshop, plenary sessions, and platform talks at a registration rate similar to that offered by other societies. We will be using the WHOVA event management system to coordinate the event. The program committee is also encouraging submission of 5-minute "lightning talks" in addition to the typical program offerings. The planning committee is also working with the DEI team closely to make the meeting accessible and inclusive.

We are looking to fill a number of volunteer positions for the event. If you are interested, please reach out to planning committee co-chairs Emilie Blevins (Emilie.blevins@xerces.org) and Michele Weaver (michele.h.weaver@odfw.oregon.gov) or program committee co-chairs Patty Morrison (pearlymussel@gmail.com) and Alexa Maine (alexamaine@ctuir.org). We are also soliciting sponsorships for the event. If you are interested in sponsoring the symposium, or have contacts who may be interested, please visit the sponsorship web page here:

https://molluskconservation.org/EVENTS/2023SYMPOSIUM/2023Symposium_SPONSORSHIP.html. If you have items to contribute to the raffle or auction, please get in touch with Lisie Kitchel (Lisie.Kitchel@wisconsin.gov).

Technical Committees:

Conservation and Restoration Committee - Committee report submitted by Madeline Pletta, no representation at board meeting

Current committee leadership met virtually and discussed plans on a path to accomplish the goals of this committee and its sub-committees. We (Chair and co-chairs) met with former committee leadership and discussed best ways for an information transfer from one administration to the next and presented ideas on data storage to the ExCom. We are still seeking a repository for grey literature to help compile BMP's related to propagation efforts and habitat restoration.

Environmental Quality and Affairs Committee- Committee report submitted and presented by Braven Beaty

FMCS Engagement with CASS

The primary activity for the Environmental Affairs Committee this year has been as liaison with the Consortium of Aquatic Sciences Societies (CASS) hosting of the Joint Aquatic Societies Meeting (JASM) in Grand Rapids, Michigan. The meeting was held from May 14-20 and was well attended by many participating societies. In fact, all nine member societies were represented. Approximately 37 members of FMCS made the trip to Grand Rapids. There were 3,431 registered participants overall with 2,470 attending in person. The meeting generated approximately \$400k in revenue of which FMCS will be allocated an amount proportional to society size and meeting participation. The final amount is not available at this time. There is strong support for hosting another JASM in the future, proposed as 2027.

CASS participating society representatives met to discuss the future goals, structure, and funding of the organization. Currently, the consortium is fully operated and led entirely by volunteer participants from member organizations. Given the current size of the group and level of engagement desired, a proposal was presented to develop a more formal structure and consider a funded staff person to conduct administrative duties. This discussion was led by an objective outside facilitator. No conclusions have been made but some level of funding by each member society is being evaluated and will be shared for society input soon. The current suggested level of funding is circling around \$0.50-1.00 per society member as the CASS support contribution. Other topics of discussion involved developing participant guidelines to ensure active engagement and identify participant responsibilities/expectations.

CASS also supported a booth at the Society for Advancement of Chicanos/Hispanics & Native Americans in Science (SACNAS) conference in San Juan, Puerto Rico, on October 27-29. This conference was very well attended and interest in the CASS booth was high with visitor interest expressed for all CASS societies. This is at a conference that is more strongly oriented toward biomedical sciences.

Finally, the U.S. Supreme Court heard the Sackett vs EPA case oral arguments regarding the Waters of the United States (WOTUS) rule this fall. A decision is not expected until spring. The expectation is a close decision with Judge Roberts likely issuing a deciding vote. This decision will help decide which waters receive federal government protections under the Clean Water Act. This will influence current rulemaking activities of the US EPA and US Army Corps of Engineers. CASS supported submission of comments prior to oral arguments through a *pro bono* attorney, Roy Gardner. CASS is soliciting suitably qualified volunteers to review and comment on the upcoming proposed WOTUS rule when available, likely by the end of this year.

Field Studies and Ecosystem Services Committee - No committee report submitted and no board meeting representation

Genetics Committee - Report submitted and presented by Kentaro Inoue.

An email including all 95 members of the FMCS Genetics Committee was sent in Sept. 2022 asking for feedback on a revised Statement of Purpose (SoP). All feedback was incorporated, and the new SoP has been updated on the FMCS website (thanks Nora). At our meeting in Portland, we plan to discuss several ideas for future committee contributions to the society, including:

- a. Hosting an upcoming FMCS workshop or collaborating with other committees for a joint workshop.
- b. Developing a survey to solicit input from committee chairs and possibly the general membership regarding future workshops and opportunities to collaborate with other FMCS committees.
- c. Developing best practices documents for genetic sampling and DNA vouchering protocols for possible submission to *Ellipsaria*.

Diversity, Equity, and Inclusion (DEI) Survey Reminder

The FMCS DEI Committee sent out an online survey request in late October 2022 to all FMCS members and to those who attended FMCS events in 2021 and 2022. These survey data were requested to evaluate the attitudes and demographics of FMCS members. The data also will be compared to the results from our 2020 survey and will add to our every-other-year database to quantify and assess FMCS progress and opportunities to improve our DEI programs. **If you have not already done so, please complete the survey prior to the end of the year; it should take you no more than 10 minutes.** If you are unsure if you received the email, the subject line is “FMCS DEI Survey.” If you don't have that email any more, don't worry, a second chance email will be coming during December 2022 to give you one more opportunity to participate in the survey before it closes on December 31. If you have any questions about the survey or feel you should be added to participate, please contact FMCS DEI Committee member Sara Craft (sara.andree@ky.gov).

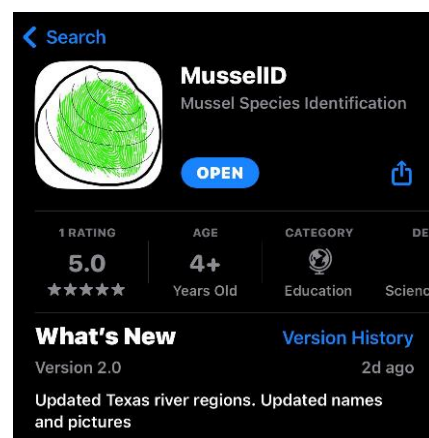
As a reminder, the FMCS DEI Committee, established in 2017, meets multiple times each year (virtually) and has the following mission statement:

“FMCS encourages participation by all individuals regardless of age, culture, ethnicity, gender identity or expression, national origin, physical or mental difference, politics, race, religion, sex, sexual orientation, socio-economic status, or subculture. We aim to cultivate a society built on mutual respect and strive for a welcoming environment for all. FMCS promotes diversity in all areas of societal activity, including fostering diversity in membership, leadership, committees, outreach, public engagement, and recruitment”.

We recognize that race, ethnicity, sexual orientation, and ability, among other factors, lack diverse representation in the STEM sciences, as well as in professional organizations, and FMCS is no exception. If you would like to be added to the DEI committee or have suggestions or ideas about FMCS and DEI topics, please reach out to the Committee Chair, Tam Smith at tamara.smith@fws.gov.

Version 2.0 of Freshwater Mussel App

The North American Freshwater Mussel Identification App version 2.00 is now available. The updated version includes photographs for all taxa, links to distribution maps for taxa in Texas, and updated taxonomy following the FMCS Common and Scientific Names Committee 2021 bivalves names list. The app is available on the web (https://www.scienceapps.org/htmlSite/MusselID/2022_Release_Candidate_1/index.html##mainsub) and on both the Android and Apple app stores. Beta testing is available until Dec 1, 2022 and we ask users to report issues or bugs via email to both Nate Johnson (najohnson@usgs.gov) and Stan Martin (stanmartin@hotmail.com). Many thanks to FMCS for providing the funds to update this App!



The Mussel App as it appears in the Apple App Store

Research Article from FMCS Members and published in FMBC is Featured by BioOne

A research article recently published in *Freshwater Mollusk Biology and Conservation* (FMBC) has been featured in BioOne's October 2022 list of 'Top and Trending Research.' The article "Development and characterization of microsatellite loci in the endangered Catspaw, *Epioblasma obliquata* (Bivalvia: Unionidae)" is featured under the section "Marine & Freshwater Biology" alongside articles from the *Western North American Naturalist* and *Chelonian Conservation and Biology*. Authors Katlyn Ortiz, Jess Jones, and Eric Hallerman developed polymorphic microsatellite loci for the Catspaw. According to their research, the single reproducing population deviates significantly from Hardy-Weinberg equilibrium, which has significant management implications for the species. The DNA microsatellite loci developed in this study will be useful for monitoring the genetic integrity of hatchery-reared stocks and wild populations of the purple catspaw and other endangered species in the genus *Epioblasma*, and will aid in the recovery of North America's most imperiled group of mussels. The full article can be found in the March 2022 issue of FMBC, Vol 25 No. 1. <https://molluskconservation.org/FMBC-current.html>. The BioOne announcement is available at: https://bioone.org/top-and-trending-october-2022?utm_source=mailchimp&utm_medium=email&utm_campaign=trending.



Virginia Tech graduate students Katie Ortiz (left) and Alissa Ganser releasing endangered *Epioblasma* mussels in the Clinch River, Virginia in 2018. Katie is the lead author of the purple catspaw DNA microsatellite article and continues to do genetics research on other mussel species for her Master of Science degree.

A Note from the Retiring Editor

This is the last issue of *Ellipsaria* on which I will serve as Editor. Over the past eleven years, I have had the pleasure to work with and, on occasion, felt the need to impose upon many FMCS members and officeholders. During that time, our Society has more than doubled in size, adopted and expanded a respected malacological journal, and held a regular series of increasingly successful workshops and symposia. The transition of this newsletter into an online format when I became editor made it possible for *Ellipsaria* to be posted quickly and to include color graphics and links to pertinent sites and sources, in addition to eliminating printing and mailing costs. While that transition ran into some issues early on, I am very proud that all of my 44 quarterly issues were posted and announced to the membership on schedule.

Of course, times change and what may have worked well 11 years ago may not be useful or particularly pertinent today. Perhaps rather late, I recognized that the look and structure of *Ellipsaria* had not changed very much during my tenure. I also found that I am not as familiar with present members' interests and research as I was years ago. Rather than trying to bring myself and *Ellipsaria* up to date, last year I decided to let members of a younger generation update this newsletter to match present needs and interests. The new editors, who will assume their roles with the next issue, know how I have edited the newsletter in the past and have had a year to think about ways to improve its coverage and usefulness to members of our Society. I am really curious and excited to see the changes they will make in forthcoming issues of *Ellipsaria*.

Thanks to every person who contributed to *Ellipsaria* over the last 11 years and, especially, to those who suffered through my requests for articles or pictures, and my editorial "suggestions." Hopefully, we all helped provide useful information to FMCS members and enhanced the conservation of freshwater mollusks.

John Jenkinson

. . . And One from the Incoming Co-Editors

Greetings fellow FMCS members. We would like to introduce ourselves to the membership and look forward to serving as the new editors for *Ellipsaria*.

Bob Anderson is a long-time member of FMCS, initially serving as the Chair of the Environmental Quality and Affairs Committee and from 2005 to 2007 as President of the Society. He began his study of freshwater mussels while working toward a M.S. in Biology from Tennessee Technological University, with research focused on the effects of coal mining on the mussels of the upper Cumberland River. Bob began his post graduate career in 1988 as a NonGame Biologist with the Indiana Department of Natural Resources, as lead for developing conservation programs for mollusks, fish, reptiles, and amphibians. In 1993, Bob joined the U.S. Geological Survey's National Water Quality Assessment (NAWQA) Program for the Allegheny-Monongahela Watershed which allowed him to continue to focus on freshwater mussels and gastropods in the Ohio River basin from a water quality monitor perspective. Bob moved to the U.S. Fish and Wildlife Service in 2001 where he currently leads the endangered species section at the Pennsylvania Field Office with a focus on conservation under the Endangered Species Act. This career path included opportunities to identify host fish for endangered species, complete contaminant studies on mussels that lead to better protections, conduct species status assessments, develop species recovery plans, and assisted in the curation of a mussel collection at the Working Man's Institute in New Harmony Indiana. He has facilitated the relocation of several thousand endangered and common mussels to many

locations in the Ohio River basin to better secure highly fragmented populations. Through all of this, Bob values the opportunity collaborate with the many consultants, state and Federal biologists, and academic researchers that made his successes in mollusk conservation possible.

Don Hubbs currently works as a professional biologist and manager of DJH Environmental Services, LLC. founded in August 2020. He provides mussel survey, brood stock collection, and taxonomic identification services for Tennessee Wildlife Resources Agency (TWRA), Dinkins Biological Consultants, Southern Environmental Law Center, Edge Engineering and Environmental Services, Stantec, and other private clients. He retired from TWRA after serving 28 years as the statewide mussel recovery coordinator. During the last 12 years at TWRA, he coordinated the agency's annual mussel restoration activities where he supervised the stocking of ~60,000 mussels of 35 species including 11 federal endangered mussel species into 11 rivers at 20 different sites. He also served as TWRA's Dive Control Board Chairman and was responsible for establishing the agency's scientific and public safety diving program. After graduating with and M.S. in Biology from Tennessee Technological University, he began his career in 1988 as a Senior Staff Scientist/Geographic Information System Manager at Young-Morgan & Associates in Franklin, Tennessee, where he was the project manager of endangered freshwater mussel surveys in Tennessee and Virginia associated with the Tennessee Valley Authority Duck River Columbia Dam Project.

We are not planning to make any immediate changes to how *Ellipsaria* has been operating but we do plan to poll the membership sometime in the coming year about their views of the newsletter and to invite comments and suggestions. With the emergence of FMBC as a peer reviewed professional scientific journal, we hope to bring *Ellipsaria* back to its roots as a source of FMCS news and informal notes about new and emerging mollusk research information. We also hope to serve the Society in this capacity as well as our predecessor has for so many years.

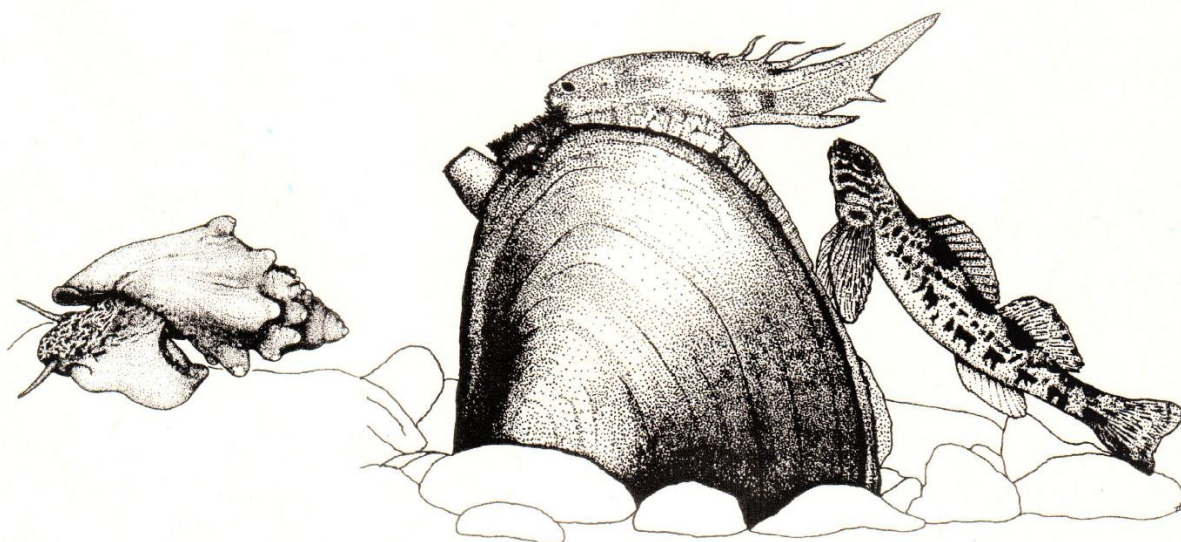
Announcement

New Susquehanna River Basin Mussel Restoration Activities

The Maryland Department of the Environment (MDE) and the Maryland Department of Natural Resources (MDNR) have partnered to undertake significant, multi-state freshwater mussel restoration activities for the Susquehanna River Basin with support provided by Constellation Energy Generation, LLC (Constellation) in connection with the re-licensing of the Conowingo Hydroelectric Dam (FERC License P-405) and the 2019 Conowingo Dam Water Quality Settlement Agreement between MDE and Constellation Energy Generation, LLC (formerly Exelon). Under the Settlement Agreement, Constellation will provide funding during the first three years from the effective date of the FERC license that will be used to assist with the construction of the state of Maryland's first freshwater mussel hatchery. Annual funding will be provided through the remainder of the FERC license term in support of the operation and maintenance costs of the restoration initiative under the Settlement Agreement. Through the partnership with MDE, MDNR has initiated restoration activities including hatchery design and construction planning, restoration and propagation planning, conducting outreach, soliciting regional input, and seeking active partners for the freshwater mussel restoration effort in the Susquehanna River Basin and its tributaries. Among other benefits to be gained by the state's investment in freshwater mussel restoration, the effort to increase the size and distribution of freshwater mussel populations will preserve biodiversity, improve local water quality, and help achieve multijurisdictional Chesapeake Bay restoration nitrogen and phosphorus pollution reduction goals. The facility will be co-located at the MDNR's Joseph Manning Fish Hatchery at 10201 Bee Oak Road, Brandywine, Maryland 20613. For more information or if you or your organization would be interested in involvement with the restoration initiative, please contact the project and hatchery manager Zach Taylor at zachary.taylor@maryland.gov, (410) 271-0749.

Upcoming Meetings

- March 26 - 30, 2023** – National Shellfisheries Association 115th Annual Meeting, Baltimore Marriott Inner Harbor at Camden Yards, Baltimore, Maryland, USA [Annual Meeting \(shellfish.org\)](https://shellfish.org)
- April 10 – 14, 2023** – FMCS Biennial Symposium, Double Tree Hotel, Portland Oregon, USA. Theme: *From the Mountains to the Sea and the Mollusks Between*. [See articles starting on Page 3]
- June 3 – 7, 2023** – Society for Freshwater Science Annual Meeting, Brisbane Convention and Exhibition Centre, Brisbane, Australia <https://www.freshwaterdownunder2023.org/>
- August 1-5, 2023** – American Malacological Society 89th Annual Meeting, Tuscaloosa, Alabama, USA [AMS 2023 Tuscaloosa, Alabama \(wildapricot.org\)](https://ams2023.tuscaloosa.alabama.wildapricot.org)
- August 20-24, 2023** – American Fisheries Society 153rd Annual Meeting, Grand Rapids, Michigan, USA Theme: *Adaptive approaches to understand and manage changes in fisheries* <https://afsannualmeeting.fisheries.org/>
- October 15 – 18, 2023** – Southeastern Association of Fish and Wildlife Agencies 77th Annual Conference, Omni Hotel, Corpus Christi, Texas, USA. <http://www.seafwa.org/conference/overview/>
- July (?) 2024** – Society for Conservation Biology North American Sectional Meeting, [Location and theme not yet posted] <https://scbnorthamerica.org/>
- May (?) 2025** – FMCS Biennial Symposium, somewhere in Michigan, USA. [dates, location, theme, and other details yet to be determined]



FMCS Officers

President

Stephen McMurray

Missouri Department of Conservation
3500 East Gans Road
Columbia, Missouri, USA 65201-8992
stephen.mcmurray@mdc.mo.gov

Secretary

Sarah Veselka

BioSurvey Group
1538 McKinney Cave Road
Reedsville, West Virginia 26547
sarah@biosurveygroup.com

Past President

Jeremy Tiemann

Illinois Natural History Survey
1816 South Oak Street
Champaign, Illinois, USA 61820
jtiamond@illinois.edu

President Elect

Megan Bradley

U.S. Fish and Wildlife Service
322 North East Avenue
Viroqua, Wisconsin, USA 54665
megan_bradley@fws.gov

Treasurer

Alan Christian

Ursinus College
99 E. Ninth Avenue
Collegeville, Pennsylvania 19426
adchristian@ursinus.edu

Ellipsaria is posted on the FMCS web site quarterly: around the first of March, June, September, and December of each year. The newsletter routinely includes Society news, meeting notices, pertinent announcements, and informal articles about ongoing research concerning freshwater mollusks and their habitats. Anyone may submit material for inclusion in *Ellipsaria* and all issues are accessible to anyone on the FMCS website (<http://molluskconservation.org>).

Articles contributed to *Ellipsaria* should be preliminary or initial observations of note (e.g., natural history observations, meaningful new distribution records, interesting finds, etc.) concerning freshwater mollusks, their habitats, and/or their conservation. Articles that include quantitative analyses, draw conclusions based on analyses, or propose taxonomic revisions should not be submitted to *Ellipsaria* and, instead, should be submitted to a peer-reviewed journal such as *FMBC*. Please limit the length of contributed articles to about one page of text (i.e., excluding pertinent tables, figures, and references).

Information for possible inclusion in *Ellipsaria* should be submitted via e-mail to the editor, John Jenkinson, at jjjenkinson@hotmail.com. Contributions may be submitted at any time but are due by the 15th of the month before each issue is posted. MSWord is optimal for text, but the editor may be able to convert other formats. Graphics should be in a form that can be manipulated using PhotoShop. Note that submissions are not peer-reviewed but are edited for clarity and checked for appropriateness for posting in this freshwater mollusk newsletter. Feel free to contact the editor with questions about possible submissions or transmission concerns.

FMCS Committees and Their Chairs/Co-chairs

If you are interested in participating in committee activities, please contact one of the appropriate chairs.

Functional Committees

Awards

Curt Elderkin - elderkin@tcnj.edu
David Hayes - david.hayes@eku.edu
Susan Oetker - susan_oetker@fws.gov

Chapters

Emilie Blevins - emilie.blevins@xerces.org
Manuel Lopes-Lima - manuelpmlopeslima@gmail.com

Diversity, Equity and Inclusion

Tamara Smith - tamara_smith@fws.gov

Elections

Wesley Daniel - wdaniel@usgs.gov

Finance

[vacant at present]

National Strategy

[vacant at present]

Outreach

Amy Maynard - amy.maynard@dwr.virginia.gov
Dan Symonds - daniel.symonds@stantec.com

Professional Development

Rebecca Winterringer - beccawint6@gmail.com
Amanda Rosenberger - arosenberger@tntech.edu

Publications

Robert Bringolf - rbringolf@warnell.uga.edu

Symposia and Workshops

Megan Bradley - megan_bradley@fws.gov

Technical Committees

Conservation and Restoration

Maddie Pletta - madeline.pletta@state.mn.us
Tyler Hern - tyler_hern@fws.gov
Jesse Weininger - jesse.weininger@wisconsin.gov

Environmental Quality and Advocacy

Braven Beaty - bbeaty@tnc.org
Mickey Matthews - mickey.matthews@ardot.gov

Field Studies and Ecosystems

Lisie Kitchel - lisie.kitchel@wi.gov
Carla Atkinson - carlalatkinson@gmail.com

Genetics

Nathan Johnson - floridamussels@gmail.com

Mollusk Status and Distribution

Jason Wisniewski - jason.wisniewski@tn.gov
Wesley Daniel - wdaniel@usgs.gov

Ad-Hoc Committees

[None at present]

Parting Shots



This Parting Shot is rather self-serving but, also, is quite appropriate in this issue of *Ellipsaria*. This picture of me [John Jenkinson] looking for mussels in Halawakee Creek in east-central Alabama was taken in August 1972 [yes, 50 years ago!] as I started working on my Master's project at Auburn University. That project convinced me that I could do useful mussel research and, more importantly, that I really wanted to spend my professional life studying, promoting, and protecting this ancient group of freshwater mollusks. The fact that I have been able to do so for 50 years probably is due more to good timing than to either skill or planning. I worked on my PhD research at Ohio State University while Dave Stansbery was justifying the listing of endangered mussels with Marc Imlay and Jim Williams at the U.S. Fish and Wildlife Service. As I was finishing that research, I was offered a mussel biologist job with the Tennessee Valley Authority because I knew the regulators and might be able to help prevent the demise of their dam building program. During my 26 years of attempting to resolve aquatic endangered species conflicts at TVA, I recognized that mussel biologists were being hired all over the country and was invited to help plan what, eventually, brought many of them together to form this Society. After I retired from TVA and started looking for a way to stay active in FMCS, Chris Mayer decided to end her term as Editor of *Ellipsaria* and agreed to let me take over. That was 11 years ago. Now, as I retire again, I'm really glad I decided to work in this field so long ago. I have learned a lot about freshwater mussels, stream ecology, and government bureaucracies. I also believe I have contributed to the protection of mussel species, the streams in which they occur, and public awareness about the diversity of freshwater life. Photograph by Carolyn Jenkinson, my partner in another 50+ year commitment.

If you would like to contribute a freshwater mollusk-related image for use as a **Parting Shot** in *Ellipsaria*, e-mail the picture, informative caption, and photo credit to jjjenkinson@hotmail.com.

