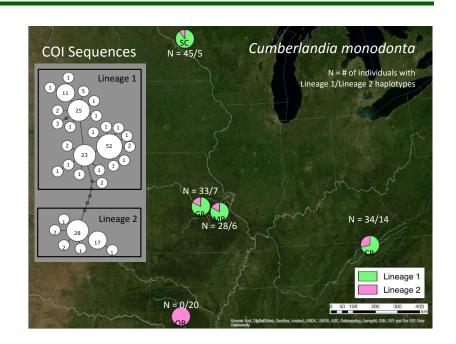


# Newsletter of the Freshwater Mollusk Conservation Society Volume 17 – Number 3 September 2015

Cover Story	1
Society News	3
Announcements 10	)
Regional	
Meetings 13	3
Jpcoming	
Meetings 13	3
Contributed	
Articles 14	ŀ
MCS Officers 22	2
Committee Chairs	
and Co-chairs 23	3
Parting Shot 24	ŀ



2016 FMCS Workshop: Population Genetics and Freshwater Mollusk Conservation

National Conservation Training Center, Shepherdstown, West Virginia February 16-19, 2016

The use of genetic information in the conservation and management of organisms is becoming more widespread. This two-day Workshop will provide a basic understanding of population genetic tools and their application in the conservation of freshwater mollusks. The Workshop curriculum will include morning lecture sessions providing a basic understanding of population genetic theory, and afternoon sessions built around case

studies that will allow attendees to apply their new knowledge using actual data on freshwater mollusks. The Workshop also will include a series of presentations from experts in conservation genetics, a poster session, and mixers with opportunities for conversation among presenters and attendees.

**Location:** This Workshop will be held at the U.S. Fish and Wildlife Service National Conservation Training Center (NCTC), located in Shepherdstown, West Virginia. Approximately one hour from the Washington, DC metropolitan beltway, NCTC is a self-contained community with 17 buildings located on a 533-acre campus. The dining room, social lounge, gymnasium/workout room, and overnight accommodations for guests are all located within walking distance of the instructional facilities. Travel to NCTC is via Washington Dulles International Airport, Washington National Airport, or Baltimore-Washington International Airport.



**Registration:** Consult the FMCS Events page (<a href="http://molluskconservation.org/Events.html">http://molluskconservation.org/Events.html</a>) for information on registration and further details regarding the Workshop. Early registration begins on **November 1, 2015**, and will close on **December 31, 2015**.

**Poster Session:** In conjunction with the Workshop, a poster session entitled *Advances in Freshwater Mollusk Conservation* will be held the night of February 17. See the Call for Abstracts on the Workshop web page (<a href="http://molluskconservation.org/Events.html">http://molluskconservation.org/Events.html</a>) for details regarding poster and abstract formats. Abstracts should be emailed, in Word format, to <a href="mailto:fmcs2016workshop@gmail.com">fmcs2016workshop@gmail.com</a> no later than **December 31, 2015.** 

**Sponsorships:** The FMCS is a not-for-profit society, dedicated to the advocacy and conservation science of freshwater mollusk resources. Our Workshops provide great opportunities to network and build relationships with conservation professionals from state and federal government, industry, universities, and conservation organizations. The Society has a membership of 500, of which about 150 generally attend the biennial Workshops. Instructors for the workshops are members of the Society and other leaders in conservation. These professionals are constantly working to conserve freshwater mollusks, and we need your help. We are requesting monetary sponsorships to help cover the costs of the Workshop facilities.

All Sponsor Contributions Include Recognition in the Workshop Program				
River	>\$1000	One Complimentary Registration, Logo on Website Registration Page		
Stream	\$500-\$1000	One Registration Reduced by 25%, Logo Displayed at the Welcome Mixer, Logo on Website Registration Page		
Eddy	\$100-\$499	Logo on Website Registration Page		
Mussel	<\$100	Recognition in the Workshop Program		

**Further Information:** For further information about the Workshop and inquiries about sponsorships, please contact the Workshop co-chairs: Dave Berg (bergdj@miamioh.edu) and Curt Elderkin (elderkin@tcnj.edu).

## **Society News**

## Minutes of Summer 2015 FMCS Board Meeting Teleconference Monday, July 20, 2015

**Attendees:** Teresa Newton, Emily Grossman, Heidi Dunn, Janet Clayton, Patty Morrison, John Jenkinson, Tom Watters, Art Bogan, John Harris, Manuel Lima, Braven Beaty, Curt Elderkin, Rachael Hoch, Becca Winterringer, Mary McCann, Jennifer Archambault, Steve McMurray, Dave Berg, Megan Bradley, Nathan Whelan, Emy Monroe.

All committees were represented except for the Nominations Committee.

March 22, 2015 Board Meeting Minutes (published in the June 2015 *Ellipsaria*)

Motion made to approve minutes by Teresa Newton; seconded by John Jenkinson. Minutes approved

## **Treasurers Report - Emily Grossman**

## 2015 symposium summary

- Total income from registrations: \$102,488.25
- \$15,230.00 in sponsorships
- FMCS earned a total of \$6522 toward next symposium's student awards:
  - o The joint raffle earned \$3,757. Based on attendance of FMCS & UMRCC members, ¼ of the proceeds (\$940) were given to UMRCC.
  - Auction proceeds were split into FMCS/UMRCC based on who purchased each item. FMCS earned \$3,705 in the auction; UMRCC earned \$310.
- Other misc. income (t-shirts, hats, etc.): \$635.35
- Symposium expenses totaled \$99,581.35. Student award expenses were \$3,851.29.
- As of early April, we showed an overall profit of about \$4000 on the symposium (not including sponsorships). Based on that and overall meeting attendance by FMCS/UMRCC, we sent UMRCC \$1000 of that profit, plus their proceeds from the auction/raffle (thus, total sent to UMRCC was \$2250). A couple more bills trickled in after that, but we still came out nearly \$3000 ahead on the symposium not including the over \$15,000 in sponsorships. Thanks to all the sponsors!

## Other income/expenses, March through end of June 2015

## Income

\$555.00 Vests

\$4660.00 Memberships \$53.29 Interest

Total income, excluding symposium: \$5268.29

Expenses	
\$406.12	Vests
\$100.00	Regional meeting sponsorships (VA Atlantic Slope mollusk meeting)
\$1000.00	External meeting sponsorships (Buffalo State College mollusk meeting)
\$6320.00	Webpage expenses – Sophie's management plus renewed Wild Apricot service for 2 years to lock in our current rate
\$1712.73	Credit card machine/Paypal fees
\$893.75	Contribution to UMRCC mussel guide booklets
\$1700.00	New journal setup & name change

Total expenses, excluding symposium: **\$12,132.60** We currently have **\$132,973.99** in the bank.

## Other discussion items

By October 2015, all vendors that accept credit cards (CC) must be able to process the new chip cards that have been coming out. Our current CC machine does not have this capability. If we choose to keep this system, we either need to purchase a PIN pad for our current machine (~\$250) or upgrade to a new machine (~\$650). We may be able to get a partial credit since we've had our old machine for a certain number of years.

Alternately, I've been looking into some of the mobile CC readers, such as Square. For those who are unfamiliar, Square is an independent CC processing company. The system works through a point-of-sale (POS) app and a little CC reader that plugs into a device like a phone or iPad. A mobile device would be convenient, and the accompanying POS app would, I think, greatly simplify things for registration desk volunteers, etc. Their CC processing fees are similar to or less than what we pay now, and the app and card reader are free. We may even be able to integrate it into our webpage such that folks could pay online through that rather than Paypal, which may save government employees some trouble. My biggest concern would just be to ensure that this is a system government employees are able to use, so that would be the main thing to figure out before making a switch. I welcome any input from the board and membership, either during the meeting or by phone/email anytime.

Teresa recommended getting more information on the Square as it appears to address the credit card issue for the long haul rather than just a short term fix. Teresa will check and make sure that pay system will work within the federal system.

Megan Bradley noted that she works with one on the state level and has had no issues. Emily noted that the transaction actually shows up as coming from FMCS which paypal does not. Heidi questioned whether Square was acceptable for international transactions. If a CC is international, the Square should be ok.

## Secretary Report - Janet Clayton

As notified in May, I had completed going through the nearly 1000 folks on the membership list. Some of these had lapsed memberships as of 2011. I updated the membership status of all lapsed members to reflect this status. At the time, it appeared we only had about 380 active members. I worked with Emily to rectify a few folk's outstanding balances. I sent emails notifying the lapsed membership that their dues were overdue and the ones that had been lapsed as of 2013 were given until June 1 to renew or be dropped from the mailing list. The list was cleaned again and everyone that had lapsed more than two years has been archived. A couple of exceptions were made where I noted that the individual had recently logged onto the website but failed to renew. I have not archived these yet. As of July 20, we have:

- 547 on mailing list
- 392 active members
  - o 305 Regular Members
  - o 10 Lifetime Members
  - 8 Contributing Members
  - o 66 Student Members
  - o 3 Author-nonMembers
- 93 Lapsed Regular Members
- 43 Lapsed Student Members

## **Old Business**

## Long term investment and funding strategies for the Society - Heidi Dunn

• Will publish a request in *Ellipsaria* for members with financial expertise and convene an expert panel. (See Notice on Page 10)

## **New Business**

## Interaction with European malacologists; potential for joint meetings?

- Manuel Lima participated in the teleconference [from Portugal] and is coordinator for the international meeting coming up in October in Buffalo, New York. Manuel noted that it is difficult for many countries to get together to fight a mutual cause and he has been working towards this goal. He noted that the current group is mostly from Europe. The group decided to continue holding meetings and cooperate on freshwater bivalve conservation.
- FMCS is primarily North American and trying to get more international interaction.
- Manuel noted that his group could conduct all meetings inside FMCS, in which he proposed in FMCS's off year (our workshop year), they would have a meeting outside the United States, and during our symposium years, joint meeting with FMCS.
- The international group is currently focused on freshwater bivalves but could expand to all freshwater mollusks. Nathan Whelan later addressed the need for including gastropods.
- Heidi and Teresa suggested the need for an international committee.
- Manuel will try and get international folks to be members of FMCS.
- Question was raised as to what FMCS could do in South America? John Jenkinson wanted to know if it is going to be an FMCS meeting would the society fund some folks to participate in an international meeting. Manuel's response was that they would first organize, solicit funds and then solicit participants.
- Art Bogan commented that Unitas was started in 1985 and wanted to become international and thus needed to have international meetings. This is a European group. Used World Malacology Congress as an example. He suggested approaching Jackie Vangoo in Brussels. Suggested not limit group to Europe and South America but include Asia, Africa, and others.
- Manuel noted that these groups are to be included in the Buffalo meeting; He was approaching the Europeans first since he was familiar with folks there. He feels FMCS is the perfect target to host this and is willing to help us.
- Teresa noted that it seemed to be the consensus of the group that we should have an *ad hoc* committee look into this. Overwhelming support was voiced. We will continue to look at this. Committee or panel to work with Manuel, maybe try one in a central location and see how it goes. She reemphasized the desire to continue to work together as many have wanted to do this for a while.
- Becca Winterringer bought up the possibility of a webcast of our meetings to open up participation to those who would like to participate internationally but are unable to.

• Discussion continued as to whether to form an *ad hoc* committee. Names brought forward as possibilities were Art Bogan who noted that Kevin Cummings said he was also willing. A notice will be placed in *Ellipsaria* requesting additional interested folks (on Page 10).

<u>Committee Reports</u> (Focus on Action Items needing attention by the Board). <u>Underlined cochair</u> provided the report.

## 1. Environmental Quality and Affairs - Steve McMurray, Braven Beaty

Braven said that their committee is largely reactive and no issues have been brought forward recently and thus they have nothing to report. At the 2015 symposium, they decided to provide short informative issue documents to put on the FMCS website. Currently, a template has been created for one and they are working on a second. These are on environmental flows and hydrofracking issues. There are four topics total.

John Jenkinson was concerned as to how far the statements were going. Are they something that the President is going to have to defend? Braven assured the group that they are only one to two page documents describing the topic, what impact they have to mussels, not position statements just informational, things that could happen, not that fracking is bad. Teresa suggested running them through the EXCOM first just so they are aware of it.

## **2. Genetics –** Dave Berg, Curt Elderkin

Group has been working with NCTC in planning for the Genetics workshop. Thus far, room and board from Tuesday social and registration through Friday breakfast, \$137/day includes all meals. NCTC will provide two meeting rooms and two computer rooms. Planning for two socials, travel for 1-2 plenary speakers, and student travel. Asking NCTC to donate some time. Will be making a call for abstracts in the September issue of *Ellipsaria*. Abstracts for posters only will be accepted, which will help folks that need justification for travel. Venue for poster/social was discussed. Committee was advised that website stuff goes to Megan. Committee expressed need for help with sponsorships which many suggested they get in touch with Steve Alhstedt.

Heidi noted that they should get registration up by November 1 as November is the cutoff point; whoever joins up after November gets the next year's registration. She also suggested they get at least general information such as date, theme, location up on the FMCS website with a note to check back for more information. Should also get this information into the September issue of *Ellipsaria* which has August 15 submission date. (See article on Page 1)

Committee requested a spreadsheet from previous workshop to assist with organizing this workshop. Mary McCann said she would supply this. Teresa also noted there is documentation in the FMCS procedures manual on the website of what to do when for workshop.

## 3. Information Exchange - Tom Watters, Greg Cope, John Jenkinson

- Update on *Ellipsaria*John noted everything is still on track.
- Update on Freshwater Mollusk Biology and Conservation

Tom noted transition is taking longer than anticipated. He hopes site will go live this week or next. The site is robust and powerful and takes some training. Several manuscripts are in review and several are awaiting to be uploaded and are targeted for the first issue in September. Move to Allen Press has a learning curve but will be greatly beneficial. (See flier on Page 9)

## **4. Nominations and Election –** Leroy Koch (absent)

Nothing to report

## 5. Propagation, Restoration, and Re-Introduction - Dan Hua, Rachael Hoch

- Christopher Owens has stepped down as co-chair; the new elected co-chair is Rachael Hoch.
- The committee is continuing to maintain a propagation/stocking/relocation database. The database is active and updates are currently being compiled. Once updated, the committee plans to make portions of the database available to the public through the FMCS website. Want to post on website, contacts, who and what they are working with. Monte McGregor has the lead for maintaining the database.
- The committee is continuing to develop and compile "best practices" guidelines and white paper.
- Members are assisting the Techniques and Guidelines Committee to develop mussel value estimates for revisions to the American Fisheries Society's Investigation and Monetary Values of Fish and Freshwater Mussel Kills publications.
- At the symposium, the committee discussed splitting into separate groups (Propagation and Restoration/Re-introduction). Group is a mix of both and they decided to stay as one group right now.

## **6. Symposium Committee Updates –** Heidi Dunn and others

- 2016 Workshop on Genetics at NCTC (Dave Berg, Curt Elderkin, February 16-19, 2016 at NCTC); discussed above.
- 2017 Symposium in Ohio (<u>Becca Winterringer</u>, Greg Zimmerman, March 26-30, 2017 in Cleveland, Ohio)
  - o Greg's mom used to be an event planner and is assisting. Marriott room rate is \$129 which is the lowest that they could get two years out. Most of the committees are established: Ryan Schwegman (field trips); Dave Zanatta and Daelyn Woolnough are helping with the program.
  - o They are conducting preliminary budget crunching. Possible workshop topics include: protocol methods, regulatory overview, identification.
- Heidi is soliciting possible topics for the 2018 Workshop. Heidi to put a notice in *Ellipsaria* (See Page 10). Megan Bradley suggested it may be time to host another propagation workshop.

## **7.** Ad hoc Committee on Revising the National Strategy – Patty Morrison, Catherine Gatenby, <u>Teresa Newton</u>

- The manuscript is written and has been reviewed by five FMCS folks internally. It has also been reviewed by two U.S. Geological Survey folks. Greg Cope has been notified and it is ready to upload on website for submission to Freshwater Mollusk Biology and Conservation.
- Revision of FMCS committee structure?? Teresa solicited Patty Morrison and Heidi Dunn to help revise the current committee structure to reflect issues in the revised National Strategy. When drafted, they will submit their proposals to the Board for broader discussion. Finally 1 ½ years later!

## Other Committee Reports or Issues Requiring Board Action?

- 1. Mussel Status and Distribution John Harris, Art Bogan
- J. D. Williams *et al.* Conservation assessment of freshwater mussels of US, Canada and Mexico. This revision of Williams *et al.* (1993) was originally submitted to AFS Fisheries in November 2014 for review, and it was returned to Williams in early December with the request that it be reduced in length and that several of the tables and figures be removed. It was reduced in length and tables and most figures removed and resubmitted to AFS in

January 2015. Since that time, Williams et al. have removed the manuscript from review by AFS Fisheries and intend to submit the manuscript in its <u>original</u> form (more or less) to Freshwater Mollusk Biology and Conservation (formerly Walkerana) when publication and manuscript submittal guidelines are posted.

- Development of Mussel ID App Susan Oetker. We have acquired useable photographs for 206 of 269 extant taxa addressed in the app, and the team continues to search for high quality photos to complete the North American set. As planned, the app allows users to identify to species based on location and any characters they are able to determine. The app was previewed at a FMCS Symposium presentation (Session 19, Platform 92). We are presently conducting a final QA/QC, and the app will be released to an initial group of beta testers for comments in August.
- Atlas of Freshwater Mussels of North America. Currently, 153 of the approximately 365 taxa addressed in the Atlas have volunteer authors for species accounts. We have received 13 first draft accounts as of July 10, 2015. Distribution data for most of these accounts is still being acquired. We are proceeding with reviews of 3 species accounts and hope to have those posted live to the website by Fall 2015. The maps in Google fusion layers. Endangered species blocked to state level. For example, there are 3100 records of *Ligumia costata* and there is a dot with all museum info attached. John Jenkinson says membership would benefit by notice of what is coming and the quality to expect.
- Mussel Scientific and Common Names Subcommittee. John Harris and Paul Johnson drafted guidelines for the mussel and gastropod names subcommittees and distributed this working paper to subcommittee members in February 2015. A joint meeting of the subcommittees was held March 22, 2015 to discuss and finalize guidelines. They have revised the guidelines based on comments received during the meeting and will provide a final draft to the Board in Summer 2015.

## 2. Guidelines and Techniques -- Mary McCann

At the last symposium, this committee discussed preparing a list of professional qualifications. Mary's discussion led into a discussion of professional certification which had previously been tabled. John Jenkinson questioned if we came up with a set of guidelines, would agencies be interested in that list? Teresa suggested the committee come up with a qualifications list and, later, could possibly address certification. Becca said she was willing to put together what is out there from other professional associations.

## **3. Website - Megan Bradley**

Encouraged everyone to check out the website as some things have changed.

## Motion to adjourn made by Heidi Dunn and seconded by Nathan Whelan.

Respectfully submitted: Janet L. Clayton, Secretary



## Introducing the new electronic-only journal

# Freshwater Mollusk Biology and Conservation

**Published by Allen Press** 



- FMBC publishes papers on all aspects of freshwater mollusk biology and conservation.
- FMBC does not publish species descriptions.
- Purely descriptive papers or survey results are acceptable but the relevance of these observations must be clear.
- Manuscripts are accepted as Regular Research Articles, Notes, and Book Reviews. All manuscript categories, except book reviews, will be subject to rigorous peer-review.
- No cost, open access publication begins in September 2015.

### FMBC Editors:

Gregory Cope, North Carolina State University Wendell Haag, U.S.D.A., Forest Service Tom Watters, Ohio State University

### FMBC Editorial Board:

#### Conservation:

Jess Jones, U.S. Fish and Wildlife Service-Virginia Polytechnic Institute and State University

#### **Ecology**

Ryan Evans, Kentucky Division of Water Mike Gangloff, Appalachian State University Caryn Vaughn, Oklahoma Biological Survey, University of Oklahoma

### Freshwater Gastropods:

Paul Johnson, Alabama Aquatic Biodiversity Center Jeff Powell, U.S. Fish and Wildlife Service Jeremy Tiemann, Illinois Natural History Survey

#### Reproductive Biology:

Jeff Garner, Alabama Division of Wildlife and Freshwater Fishes

Mark C. Hove, University of Minnesota/Macalester College

## Survey/Methods:

Heidi Dunn, Ecological Specialists, Inc. Patricia Morrison, U.S. Fish and Wildlife Service Dave Strayer, Cary Institute of Ecosystem Studies Greg Zimmerman, EnviroScience, Inc.

## Systematics/Phylogeny:

Art Bogan, North Carolina Museum of Natural Sciences Dan Graf, University of Wisconsin- Stevens Point Randy Hoeh, Kent State University

## Toxicology/Water Quality:

Tom Augspurger, U.S. Fish and Wildlife Service Robert B. Bringolf, University of Georgia John Van Hassel, American Electric Power Teresa Newton, U.S. Geological Survey

**Website:** http://molluskconservation.org/FMBC-journal.html

## **Announcements**

## **Financial Advice Needed!**

FMCS is forming a Finance Committee to consider how to best invest funds not being used for day-to-day operations. Some members also have expressed an interest in donating or bequeathing funds to the society. We are looking for expertise on potential tax issues and investments. Anyone interested in serving on this committee, please contact President-elect Heidi Dunn at HDunn@ecologicalspecialists.com

## Attention!! Attention!!

## International Members, Members with International Experience, and Members Interested in International Mollusk Issues

## **Workshop Topics Needed for 2018!**

Hi all of you enthusiastic FMCS members. We have had some great Workshops in the past and are now planning for another great Workshop concerning Genetics in 2016. We also have groups working on Society symposia for 2017 (Cleveland, Ohio) and 2019 (Austin, Texas). Now, we are looking for potential Workshop topics and volunteers to organize those workshops for 2018. If you have a topic you would like to see addressed in a FMCS Workshop and/or would like to assist with planning the 2018 Workshop, please send your ideas to Heidi Dunn at HDunn@ecologicalspecialists.com. I look forward to seeing some great ideas.

## **NiSource Mitigation Panel Update**

The December 2014 issue of *Ellipsaria* included an article (on pages 14-15) indicating that FMCS had accepted an invitation to participate on the NiSource Habitat Conservation Plan (HCP) Mitigation Panel. That panel was established to help select projects that would mitigate for impacts to 10 Federal endangered species by activities associated with their gas pipeline

business. The second meeting of the Mitigation Panel occurred in late July 2015 and there is some news to report.

Probably of lesser interest to FMCS members, NiSource has split into two entities and the HCP is being modified to indicate that the activities it covers are now being conducted by **Columbia Pipeline Group** (CPG), a strictly gas transmission company. The HCP still addresses maintenance and new construction activities in the same 14 states (ranging from Louisiana to New York) on approximately 6.4 million acres of land, mostly along 15,500 miles of gas pipelines, that were described and mapped here last December.

The more important news is that CPG will soon issue the first of a series of requests for preproposals (RFPs) for land acquisition or conservation easement projects to mitigate for their effects on nine endangered species (five of which are freshwater mussels). This first RFP probably will be most receptive to projects in eastern Ohio, southwestern Pennsylvania, and northern West Virginia, areas where recent CPG maintenance activities have occurred. Details of the RFP, the timing of its release, and where it will be posted are still being determined by CPG and their consultants, including the Mitigation Panel. When the RFP is issued, a link to it will be posted on the FMCS website and, time permitting, in *Ellipsaria*. If you have questions about the Mitigation Panel or the pending RFP, please contact our representative on the Panel, John Jenkinson, jijenkinson@hotmail.com.

## FMCS Facebook Page is Moving Up! Jennifer Archambault, Outreach Committee Co-Chair

Our Society has had a Facebook page since 2011, so we have been a tech savvy organization for a few years now. Recently, though, we have experienced quite a growth spurt in Facebook fandom, and I wanted to share with you the power of social media in reaching out, not only to like-minded malacologists, but to all sorts of people all over the world! Also, it's not just a tool for a few page administrators to share news; it is a communication venue for all of us. Read on to find out more about how you can tap in to our Facebook presence. Don't worry, if social media isn't your cup of tea, you can still make use of our audience. I'll explain along the way.

First, a few statistics on just how big the FMCS Facebook community is getting. Since the beginning of this year, we have grown from 310 to 437 Likes! For folks new to or unfamiliar with Facebook, that means 437 people have decided they want our updates to show up in their News Feed. When our fans interact with our page by "Liking," "Sharing," or "Commenting" on the stories we post, we have the potential to reach many, many more people. In fact, our posts have reached more than 1,100 people this week, and, earlier this month, a single story about the rediscovery of the oblong rocksnail (inset on right) reached more than 2,800 people! "Reach" is defined as the number of unique people who have seen any content associated with our page, meaning we are already reaching, educating, and engaging with folks far beyond our malacological community of ~400 active members!



So, who are all of these people? Well, Facebook Insights tells us admins a bit about our fans and others we have reached. Most of our fans and people we reach are in the USA, as shown in the Top 5 list (top on right), but we are a diverse crowd nonetheless. We have fans in 41 countries and have reached people in 45 countries... <u>FORTY-FIVE COUNTRIES!!!</u> Here are a couple interesting notes on the demographics of our current fans: 61% are between ages 25 and 44; 15% are over 55 (I think this means we have a tech savvy bunch!); and almost 43% are female. One surprising note is that only ~7% of our fans are under 24. Either we still have a lot of work to do to in reaching college-aged people, or they are using other social media platforms (probably a bit of both).

With all those people reached from around the globe, it's obvious that our page is a great place for public outreach. But it's also a great place to for members to make use of our social media resources by submitting photos, field stories, event announcements, job announcements, or even local aquatics news stories from your neck of the woods. It's a great and informal way to quickly share information!

Country	Your Fans
United States of America	321
Brazil	18
Mexico	12
Canada	9
United Kingdom	8
Country	People Reached
Country United States of America	People Reached
United States of America	2,583
United States of America United Kingdom	2,583 176

## How to Use the FMCS Facebook Page (even if you are not on Facebook!):

Our page is set up so that anyone else on Facebook can share content to the page, so please post your stories and photos. We administrators also can share your posts to ensure maximum visibility and reach. Posts that include photos grab attention and perform best – so please include a photo if you can!

Certainly, you may have pertinent content to share with everyone even if you are not on Facebook. Here's how: send an email directly to me at <a href="marcham@ncsu.edu">jmarcham@ncsu.edu</a> with your story, photo, or link to local news, and I will share it with our fans. My inbox is waiting!! An important reminder – our page and all posts are publicly available, so you can access them anytime even if you don't have a Facebook account and never care to get one. Just click on the Facebook icon on the FMCS website home page.



## **Last But Not Least** We have no cover photograph for our Facebook page!!!

Do you have a fabulous image that would make a good cover photo for our Facebook page? I've seen your photos; I know you do! Please share! Scenery, snails, mussels, fishes, and other critters are great; and pictures with people doing the good work of freshwater malacology are especially welcome. Share your cover photo directly to our page with permission to use it, or email it to me(<u>imarcham@ncsu.edu</u>). We would love to have several submissions so that we can rotate cover photos now and then. [In the meantime, I'm working to change our profile picture to match our updated logo!]

## **Regional Meetings**

## FMCS Regional Mollusk Meeting Assistance Award Program

As described in the December 2012 issue of *Ellipsaria*, the FMCS has established a Regional Mollusk Meeting Assistance Award Program to facilitate regional mollusk meetings that address local and regional concerns with freshwater mollusk conservation and management. Our interest in assisting with these meetings is to bring people together who work with freshwater mollusks to exchange information on how to conserve and protect this faunal group. These meetings are often attended by a variety of individuals, including agency personnel, academia, private citizens, scientists, and others, some of whom may not be FMCS members. Therefore, a secondary goal of this program is to increase the awareness of, and membership in, FMCS among individuals in these groups. Support is provided via a cash award of \$100 to the regional group to help defray the costs (e.g., meeting room rental, speaker travel, break refreshments, etc.) associated with holding their meeting. It is anticipated that about 15-20 awards will be made in a given calendar year.

The complete program description and application form may be obtained from the Awards Committee website at <a href="http://www.molluskconservation.org/Mservices\_awards.html">http://www.molluskconservation.org/Mservices\_awards.html</a>. One copy of the completed application must be received by the Chair of the Awards Committee at least two months prior to the Regional Mollusk Meeting to allow for application and payment processing.

## **Upcoming Meetings**

- **October 4 8, 2015** Second International Meeting on Biology and Conservation of Freshwater Bivalves, Buffalo, New York, USA <a href="http://greatlakescenter.buffalostate.edu/">http://greatlakescenter.buffalostate.edu/</a>
- **November 24 26, 2015** 2nd International Seminar; Rearing of unionoid mussels, Centre Culturel Château de Clervaux (Castle Clervaux) L-9712, Clervaux, Luxembourg <a href="http://www.unio.lu">http://www.unio.lu</a>
- **February 16 19, 2016** FMCS Workshop: Population Genetics and Freshwater Mollusk Conservation, National Conservation Training Center, Shepherdstown, West Virginia <a href="http://molluskconservation.org/Events.html">http://molluskconservation.org/Events.html</a>
- **February 22 26, 2016** National Shellfisheries Association 108<sup>th</sup> Annual Meeting, Los Vegas, Nevada, USA Theme: "All in for Aquaculture" <a href="http://www.shellfish.org/annual-meeting">http://www.shellfish.org/annual-meeting</a>.
- **May 21 26, 2016** Society for Freshwater Science Annual Meeting, Sacramento Convention Center, Sacramento, California Theme: "*Running on Empty.*" <a href="http://sfsannualmeeting.org/SFS2016.cfm">http://sfsannualmeeting.org/SFS2016.cfm</a>
- **July 2016** Society for Conservation Biology North American Sectional Meeting, Madison Wisconsin http://scbnorthamerica.org/naccb2016/
- **March 26 30, 2017** FMCS 10th Biennial Symposium, Cleveland, Ohio venue and theme yet to be determined

## **Contributed Articles**

The following articles have been contributed by FMCS members and others interested in freshwater mollusks. These contributions are incorporated into Ellipsaria without peer review and with minimal editing. The opinions expressed are those of the authors.

## Three Public Ponds in Israel Have Turned out to be Infested with the Apple Snail Pomacea maculata From the Same Source

## Henk K. Mienis<sup>1</sup>, Svetlana Vaisman<sup>2</sup> and Oz Rittner<sup>3</sup>

- <sup>1</sup> The Steinhardt Museum of Natural History Israel National Center for Biodiversity Studies, Tel Aviv University, IL-6997801 Tel Aviv, Israel *and* National Natural History Collections, Berman Building, Hebrew University of Jerusalem, IL-9190401 Jerusalem, Israel. mienis@netzer.org.il
- <sup>2</sup> Plant Protection and Inspection Services, Ministry of Agriculture & Rural Development, P.O. Box 78. IL-5025002 Bet Dagan, Israel. <a href="mailto:svetak@maog.gov.il">svetak@maog.gov.il</a>
- <sup>3</sup> The Steinhardt Museum of Natural History Israel National Center for Biodiversity Studies, Tel Aviv University, IL-6997801 Tel Aviv, Israel. <u>israelbutterflies@gmail.com</u>

The Apple Snail *Pomacea maculata* Perry, 1810, until recently better known as *Pomacea insularis* (d'Orbigny, 1839), is a well-known invasive species. It has moved from its original natural distribution in South America to many parts of the world primarily by means of the aquarium trade. Where the climatic conditions turned out favourable, escapees managed to establish viable colonies in many tropical and subtropical countries. Especially in the Far East, this species and the closely related *Pomacea canaliculata* (Lamarck, 1819) have become pest species in rice fields and other (semi-)aquatic crops and serious competitors of native freshwater molluscs.

Apple snails are known to occur in Israel at least since 1986. At that time, they were up for sale in aquarium shops and were also kept at several universities. Later on they also became available in so-called garden centres, where these snails were promoted as excellent natural destroyers of algae and other excess plant growth. In this way, the demand for Apple snails started to increase and soon at least four different species were offered for sale: Pomacea canaliculata, Pomacea maculata, Pomacea diffusa (Blume, 1957) (better known as bridgesi auct.) and Pomacea paludosa (Say, 1829) (Milstein et al., 2012). Most species were available in two colour forms: the natural coloured banded one and the cultivated "golden" one (Figure 1).

The establishment of viable populations of Apple snails in Spain has aggravated the situation to such an extent in Europe that Apple snails have been



Figure 1. Crawling adult specimens of *Pomacea* maculata. Photo: Oz Rittner.

outlawed completely in the European Union. Since then, any shipment of plants or plant-products grown in water from Israel to countries belonging to the European Union has to be accompanied by a statement that the merchandise had been grown without the presence of Apple snails. This means an extra burden for inspectors of the Plant Protection and Inspection Services in Israel (Mienis, 2012).

Today, Apple snails are also outlawed in Israel, although an official statement of it has still not been published. Therefore, it has so far remained almost impossible to enforce the new recommendations (Mienis, 2013).

In the meantime, the transfer of Apple snails to ponds in public gardens is still going on. In most cases, e-mail messages were received from worried citizens who saw strange reddish-coloured masses attached to the stems of emerging aquatic plants (Figure 2). In this way, we were rushed to ponds in the public garden "Gan HaNetzach" in Ramat HaSharon (Mienis & Rittner, 2015), to a pond near Yad Lebanim, Kefar Saba (Mienis et al., 2015) and, most recently, to an artificial wetland consisting of numerous interconnected ponds and canals in the Ariel Sharon Park on the former Hiriya waste dump east of the Tel Aviv-Yafo conglomerate. In all three cases, the ponds turned out to be heavily infested with Apple snails and reddish egg masses were found everywhere on the concrete walls of the ponds and on the stems and leaves of emerging aquatic



Figure 2. Typical egg-masses attached to emerging Lotus stems. Photo: Oz Rittner.

plants. All the Apple snails turned out to belong to a single species *Pomacea maculata* and all the ponds had been stocked with aquatic plants, fish, and snails by the same company! Acts are being carried out not only in order to eradicate all these colonies of Apple snails but also to thwart any further stocking of additional ponds with Apple snails by that company.

### References

Mienis, H.K. 2012. Europe is banning the import of any Apple snails, but what about Israel? *Ellipsaria*, 14(4):36-37.

Mienis, H.K. 2013. A second note on Europe is banning the import of any Apple snails, but what about Israel? *Ellipsaria*, 15(1):12-13.

Mienis, H.K. and Rittner, O. 2015. Malacological fieldwork in Israel. *The Steinhardt Museum of Natural History – Israel National Center for Biodiversity Study, Annual Report 2013/14:*70-87.

Mienis, H.K., Vaisman, S. and Rittner, O. 2015. A first find of the S.E. Asian *Filopaludina martensi* in a pond in a public park in Kefar-Sava, Israel. *Ellipsaria*, 17(1):25-27.

Milstein, D., Mienis, H.K. and Rittner, O. 2012. [A field guide to the molluscs of inland waters of the Land of Israel.] 54 pp. Nature and Parks Authority, Jerusalem. [in Hebrew]

# Additional Information Concerning the Conquest of Europe by the Invasive Chinese Pond Mussel Sinanodonta woodiana, 39. News from Austria, Bulgaria, France, Hungary and Serbia

**Henk K. Mienis**, The Steinhardt Museum of Natural History – Israel National Center for Biodiversity Studies, Tel Aviv University, IL-6997801 Tel Aviv, Israel, *and* National Natural History Collections, Berman Building, Hebrew University of Jerusalem, Edmond J. Safra Campus, IL-9190401 Jerusalem, Israel. <a href="mienis@netzer.org.il">mienis@netzer.org.il</a>

Papers dealing with the presence of the invasive Chinese Pond mussel *Sinanodonta woodiana* (Lea, 1834) in Europe continue to appear. Here is some overlooked and new information from Austria, Bulgaria, France, Hungary and Serbia.

## Austria

Billinger *et al.*, 2014 described the discovery of numerous living specimens of the exotic Chinese Pond mussel in impounded waters of the River Inn downstream of the city of Braunau, some 50 km upstream of its confluence with the Danube.

## Bulgaria

The malacofauna of the Rusenski Lom River in North Bulgaria was studied by Kolev *et al.* (2015) during a period of 12 years (2002-2012). It resulted in the recording of 121 species, among which were 11 species of bivalves. The invasive Chinese Pond mussel was recorded from only two fishponds. In 2011 it was found in fishponds near Basarbovo, while in 2012 specimens were encountered in a fishpond in Katselovo.

#### **France**

In a guide for the identification of bivalves occurring in France, Lamand & Prié (2015) are also dealing with the invasive Chinese Pond mussel. They include good figures of that exotic species and mention the morphological differences between it and the local species of *Anodonta*: anatina and cygnea. According to the authors, reproduction of *Sinanodonta* takes place from June until September.

## Hungary

During an investigation of the macro-invertebrate fauna of the Kis-Sárrét Nature Protection area, which forms an integrated part of the Körös-Maros National Park, the Chinese Pond mussel was encountered only at two localities where it was not abundant (Csabai, 2015).

#### Serbia

Faunistic studies of the macrozoobenthos of the Velika Morava River carried out in 2010 revealed the presence of 84 identified taxa (Marković *et al.*, 2015). Among the molluscs, were only two large bivalve species: the invasive Chinese Pond mussel *Sinanodonta woodiana* and, surprisingly, *Unio crassus*, an IUCN endangered species. Of the latter, abundant populations were found in the river. The presence of *Sinanodonta* had been reported previously by Tomović *et al.*, 2012).

## References

- Billinger, F., Mayr, Ph. and Seeburger, B. 2014. Neues Vorkommen der Chinesischen Teichmuschel Sinanodonta woodiana (Lea, 1834) am unteren Inn. Mitteilungen der Zoologischen Gesellschaft Braunau, 11(2):261-270.
- Csabai, Z., Boda, P., Boda, R., Bódis, E., Danyik, T., Deák, CS., Farkas, A., Kálmán, Z., Lőkkös, A., Nálnás, K., Mauchart, P. & Móra, A. 2015. Aquatic macroinvertebrate fauna of the Kis-Sárrét Nature Protection Area with first records of five species from Hungary. *Acta Biologica Debrecina Supplementum Oecologica Hungarica*, 33:9-70.
- Kolev, I., Georgiev, D. & Dedov, I. 2015. Malacofauna of the catchment area of Rusenski Lom River (North Bulgaria). *ZooNotes*, 76:1-12.
- Lamand, F. & Prié, V. 2015. L'anodonte chinoise: Sinanodonta woodiana (Lea, 1834). In: Guide de détermination des mollusques bivalves de France. Collection guide et protocole de l'ONEMA, 143-144.
- Marković, V., Tomović, J., Atanacković, A., Kračun, M., Ilić, M., Nikolić, V. & Paunović, M. 2015. Macroinvertebrate communities along the Velika Morava River. *Turkish Journal of Zoology*, 39(2):210-224.
- Tomović, J., Zorić, K., Kračun, M., Marković, V., Vasiljević, B., Simić, V. & Paunović, M. 2012. Freshwater mussels of the Velika Morava River. *Water Research and Management*, 2:51-55.

## Operculated Amphibian Snails Assimineidae in the "Great Florianópolis" Region: New Geographical Records for Santa Catarina State/SC, Southern Brazil

A. Ignacio Agudo-Padrón & Jefferson Souza da Luz, Project "Avulsos Malacológicos – AM," Caixa Postal (P. O. Box) 010, 88010-970 Centro, Florianópolis, Santa Catarina / SC, Brasil ignacioagudo@gmail.com & goodcatt30@gmail.com http://noticias-malacologicas-am.webnode.pt

Giving continuity to the regional survey, and based on recent examination of samples obtained in the course of works done in the field, the present contribution incorporates new geographical records of amphibian gastropod mollusks of the family Assimineidae H. Adams & A. Adams, 1856, and genus Assiminea Fleming, 1828. These are minute snails with an operculum that live in brackish water\*, freshwater, or on the land (Agudo-Padrón et al. 2013, 2014c:16). These new records are from the "Great Florianópolis" Municipal District territory in Santa Catarina State/ SC (Figure 1), central portion of southern Brazil, raising to two the number of amphibian species known in the region (Agudo-Padrón 2014 b:21).



Figure 1. Geographical localization of the "Great Florianópolis" region in Santa Catarina State/ SC

In July 2015, the second author found for first time abundant specimens of little amphibian operculated snails Assiminea sp in the "Jardim Eldorado" (27°37'45.23-35"S & 48°39'48.79-85"W), a

neighborhood/ quarter in the process of full urban development on an area originally occupied by extensive wetlands and sandbanks. holders of a rich and diverse wild and aquatic flora and fauna, located in the "Palhoça" Municipal District (Figure 2), continental portion of the malacological region number one (1) of Santa Catarina State/ SC (Agudo-Padrón 2014a:9). The mollusks well reported were found in two environmental situations in the referred locality: July 11 2015, in remote location without water or tributaries around, in residential property/particular ground with much debris and decaying wood, housed beneath wood and bricks (Figure 3) and July 19 2015, in under humid wood and rubbles, near of a ditch for flow/drainage of waters (Figure 4).



Figure 2. Geographical localization of "Palhoça" Municipal District in the continental portion of the "Great Florianópolis" region, Santa Catarina State/ SC

<sup>\*</sup>The coastal species Assiminea succinea (Pfeiffer, 1840), cited for the southeastern region of São Paulo/SP (Agudo-Padrón et al. 2013a), are included in the marine mollusk fauna inventory of the State (Agudo-Padrón 2015:63)





Figure 3. Assiminea sp found in particular ground locality of the "Jardim Eldorado" Quarter, Palhoça Municipal District, Santa Catarina State/ SC





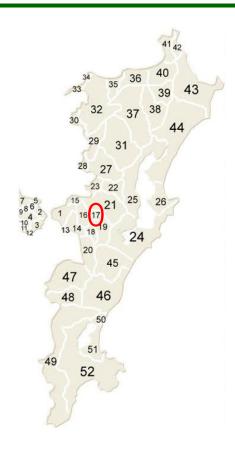


Figure 4. *Assiminea* sp found in a ditch for flow/ drainage of waters of the "Jardim Eldorado" Quarter, Palhoça Municipal District, Santa Catarina State/ SC

Finally, on January 27 2015, some specimens of *Assiminea* sp were encountered in a urban development located on Santa Catarina Island, confirming its occurrence in this insular portion of the "Great Florianópolis" (Agudo-Padrón 2015a:29). In this case, the specimens were found in a backyard garden of the "Santa Mônica" Quarter (Jardim Anchieta), Center region of Florianópolis City (Biol. Fábio Wiggers, 17/03/2015, Pers. Comm.) (Figure 5).



Figure 5. The "Santa Mônica" Quarter (redcircled number 17 on right map) in the insular portion of the Florianópolis Municipal District (red color on lower map), Santa Catarina State/ SC.



#### References:

Agudo-Padrón, A.I.; Funez, L.A. & Zermiani, A.E. 2013. First record of operculated amphibian snails "Assimineidae" in Santa Catarina State/ SC, Central Southern Brazil region. *FMCS Newsletter Ellipsaria*, 15(4):34-37.

Agudo-Padrón, A.I. 2014a. Inventario sistemático de los moluscos continentales ocurrentes en el Estado de Santa Catarina, Brasil/ Inventário sistemático dos moluscos continentais ocorrentes no Estado de Santa Catarina, Brasil. *Bioma*, El Salvador, 2(21):6-23. Available online at: https://www.dropbox.com/s/cbfm6z3jsu1nghk/Bioma%20Julio%20%202014.pdf

Agudo-Padrón, A.I. 2014b. Richness, regional distribution and conservation situation of freshwater and amphibian mollusks in Santa Catarina State/ SC, Central Southern Brazil: a preliminary avaliation. *FMCS Newsletter Ellipsaria*, 16(1):20-23.

Agudo-Padrón, A.I.; Luz, J.S. da and Funez, L.A. & Zermiani, A.E. 2014c. Nine new records to inventory of continental mollusc species from Santa Catarina State, Central Southern Brazil. *Brazilian Journal of Biological Sciences*, 1(1):15-20. Available online at: <a href="https://www.researchgate.net/publication/271647227\_AGUDO-PADRN A.I. LUZ J. S. FUNEZ L. A. ZERMIANI A. E. 2014. Nine new records to inventory of continental mollusc species from Santa Catarina State Central Southern Brazil. Central Southern

ntinental mollusc species from Santa Catarina State Central Southern Brazil. Central Southern Brazil. Braz. J. Biol. Sci. 1%281%29 15-20

Agudo-Padrón, A.I. 2015a. The limnic/ freshwater mollusks found on Santa Catarina Island, Florianópolis/ SC, central southern Brazil region. *FMCS Newsletter Ellipsaria*, 17(2):28-31.

Agudo-Padrón, A.I. 2015b. Inventario sistemático revisado y actualizado de los moluscos marinos ocurrentes en el Estado de Santa Catarina, Brasil. Revista Brasileira de Gestão Ambiental e Sustentabilidade, 2(2):59-75. Available online at: <a href="https://www.researchgate.net/publication/279447596\_Inventario\_sistemtico\_revisado\_y\_actualizado\_de\_los\_moluscos\_marinos\_ocurrentes\_en\_el\_Estado\_de\_Santa\_Catarina\_Brasil</a>

# New Geographical Record of the little Neotropical Freshwater Clam *Pisidium globulus* Clessin, 1888 (Veneroida, Sphaeriidae) for the "Great Florianópolis" Region, Santa Catarina State/SC, Southern Brazil

A. Ignacio Agudo-Padrón and Jefferson Souza da Luz, Project "Avulsos Malacológicos – AM," Caixa Postal (P. O. Box) 010, 88010-970 Centro, Florianópolis, Santa Catarina / SC, Brasil ignacioagudo@gmail.com & goodcatt30@gmail.com; http://noticias-malacologicas-am.webnode.pt

This brief communication presents the first geographic record in the continental "Great Florianópolis" of the freshwater clam Sphaeriidae *Pisidium globulus* Clessin, 1888. This species was previously reported in the literature (Simone 2006:300, Agudo-Padrón 2008:169, 2011:11) in the West sector of the State, in the municipality of Seara, locality of "Nova Teutônia."

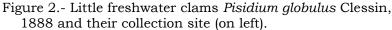
On July 04, 2015, the second author found a total of five specimens of this little clam, in "Jardim Eldorado" (27°37'39.07"S & 48°40'17.30"W), a neighborhood/ quarter in full urban development process located in the "Palhoça" Municipal District (Figure 1), continental portion of the malacological region number one of Santa Catarina State/ SC (Agudo-Padrón 2014:9). This area was originally occupied by extensive wetlands and sandbanks with a rich and diverse wild and aquatic flora and fauna.

The clams, having an approximate size between 1.0 and 1.5 mm, were attached to aquatic plants *Pontederia rotundifolia* L. They had almost transparent soft parts, milky white shells, and emitting a long foot for to move (Figure 2). These specimens were duly preserved in alcohol and reserved for your next deposit and formal registration in scientific malacological collection of museum.

Figure 1. Geographical localization of "Palhoça" Municipal District (red) in the continental portion of the "Great Florianópolis" region, Santa Catarina State/ SC.











This occurrence represents the second known geographic record of the species for the State, beyond the first record in the "Great Florianópolis", bringing to two the number of Sphaeriidae species confirmed in the geographical area of the Palhoça Municipal District (Agudo-Padrón 2011b).

### References:

Agudo-Padrón, A.I. 2008. Listagem sistemática dos moluscos continentais ocorrentes no Estado de Santa Catarina, Brasil. *Comunicaciones de la Sociedad Malacológica del Uruguay*, 9(91):147-179. Available online at:

https://www.researchgate.net/publication/41805863\_Listagem\_sistemtica\_dos\_moluscos\_continent\_ais\_ocorrentes\_no\_Estado\_de\_Santa\_Catarina\_Brasil\_

Agudo-Padrón, A.I. 2011a. History of South American continental malacology: The malacological contribution of the German entomologist Fritz Plaumann (1902 - 1994) in Santa Catarina State, southern Brazil. *Boletín de la Sociedad Internacional de Malacologia Médica y Aplicada*, (17):10-13. Available online at:

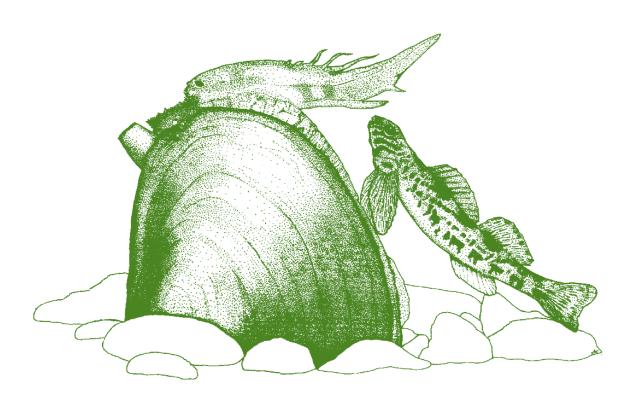
https://www.researchgate.net/publication/272564948\_History\_of\_South\_American\_continental\_mal\_acology\_The\_malacological\_contribution\_of\_the\_german\_entomologist\_Fritz\_Plaumann\_%281902\_-1994%29 in Santa Catarina State southern Brazil

Agudo-Padrón, A.I. 2011b. About *Eupera klappenbachi* Mansur & Veitenheimer, 1975, a very little native freshwater clam (Sphaeriidae) in Santa Catarina, Central Southern Brazil. *FMCS Newsletter Ellipsaria*, 13(4):23-25.

Agudo-Padrón, A.I. 2014. Inventario sistemático de los moluscos continentales ocurrentes en el Estado de Santa Catarina, Brasil/ Inventário sistemático dos moluscos continentais ocorrentes no Estado de Santa Catarina, Brasil, *Bioma*, El Salvador, 2(21):6-23. Available online at:

https://www.dropbox.com/s/cbfm6z3jsu1nghk/Bioma%20Julio%20%202014.pdf

Simone, L.R.L. 2006. Land and freshwater molluscs of Brazil. São Paulo, SP: FAPESP/ MZUSP, 390 p.



## **FMCS Officers**

## **President**

Teresa Newton U.S. Geological Survey Upper Midwest Environ. Science Center 2630 Fanta Reed Road LaCrosse, WI 54603 608-781-6217 tnewton@usgs.gov

## **Secretary**

Janet Clayton West Virginia Division of Natural Resources PO Box 67 Elkins, WV 26241 304-637-0245 Janet.l.clayton@wv.gov

### **Past President**

Patricia Morrison
U.S. Fish and Wildlife Service
Ohio River Islands NWR
3982 Waverly Road
Williamstown, WV 26187
304-375-2923 x 124
patricia\_morrison@fws.gov

## **President Elect**

Heidi L. Dunn Ecological Specialists Inc. 1417 Hoff Industrial Park O'Fallon, MO 63366 636-281-1982; Fax: -0973 Hdunn@ecologicalspecialists.com

## **Treasurer**

Emily Grossman
Ecological Specialists Inc.
1417 Hoff Industrial Park
O'Fallon, MO 63366
636-281-1982
egrossman@ecologicalspecialists.com

Ellipsaria is posted on the FMCS web site quarterly: around the first of March, June, September, and December. This newsletter routinely includes Society news, abstracts, meeting notices, publication announcements, informal articles about ongoing research, and comments on current issues affecting freshwater mollusks. Anyone may submit material for inclusion in Ellipsaria; however, only current duespaying members of FMCS can access the two most recent issues. Older issues are accessible to anyone. 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 15<sup>th</sup> of the month before each issue is posted. MSWord is optimal for text documents but the editor may be able to convert other formats. Graphics should to be in a form that can be manipulated using PhotoShop. Please limit the length of informal articles to about one page of text. Note that submissions are not peer reviewed but are checked for clarity and appropriateness for this freshwater mollusk newsletter. Feel free to contact the editor with questions about possible submissions or transmission concerns.

## FMCS Standing Committees and Their Chairs/Co-chairs

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

### **Awards**

W. Gregory Cope

North Carolina State University

greg\_cope@ncsu.edu

Teresa Newton

Upper Midwest Environ. Science Center

tnewton@usgs.gov

Emy Monroe

University of South Dakota

emy.monroe@usd.edu

## **Environmental Quality & Affairs**

Steve McMurray

Missouri Dept. of Conservation

stephen.mcmurray@mdc.mo.gov

Braven Beaty

The Nature Conservancy

bbeaty@tnc.org

## **Gastropod Status and Distribution**

Nathan Whelan

University of Alabama

nwhelan@crimson.ua.edu

Jeremy Tiemann

Illinois Natural History Survey

jtiemann@illinois.edu

### Genetics

David J. Berg

Miami University

bergdj@miamioh.edu

Curt Elderkin

The College of New Jersey

elderkin@tcnj.edu

## **Guidelines and Techniques**

Mary McCann

HDR, Inc.

mary.mccann@hdrinc.com

Ryan Schwegman

EnviroScience, Inc.

RSchwegman@EnviroScienceInc.com

## **Information Exchange**

Journal -- G. Thomas Watters

OSU Museum of Biological Diversity

Watters.1@osu.edu

W. Gregory Cope

North Carolina State University

greg\_cope@ncsu.edu

Newsletter -- John Jenkinson

Clinton, Tennessee

jjjenkinson@hotmail.com

## **Mussel Status and Distribution**

Arthur E. Bogan

N.C. State Museum of Natural Sciences

arthur.bogan@ncdenr.gov

John L. Harris

Arkansas State University

omibob1@gmail.com

## **Nominations**

Leroy Koch

U.S. Fish and Wildlife Service

lerov koch@fws.gov

## Outreach

Megan Bradley

Virginia Game & Inland Fisheries

Megan.Bradley@dgif.virginia.gov

Jennifer Archambault

North Carolina State University

jmarcham@ncsu.edu

## Propagation, Restoration, & Introduction

Dan Hua

Virginia Tech.

huad@vt.edu

Rachael Hoch

North Carolina Wildlife Resources

Commission

rachael.hoch@ncwildlife.org

### Symposium

Heidi L. Dunn

Ecological Specialists Inc.

Hdunn@ecologicalspecialists.com

## **Parting Shot**



This young Elephantear, *Elliptio crassidens*, was found in the Greenup Pool of the Ohio River, Mason County, West Virginia, during monitoring studies conducted in 2015. Although Patty Morrison and Janet Clayton have seen numerous old and, most likely, senile members of this species in the Ohio River, this is the first juvenile they have encountered in their collective 50 years of field work there. They have attempted to collect gravid individuals the past couple of years for propagation efforts but river conditions have not been cooperative during the short season when this species is gravid. Photograph by Janet Clayton, West Virginia Division of Natural Resources.



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 <a href="mailto:ijjenkinson@hotmail.com">ijjenkinson@hotmail.com</a>.