

**MAPAIS Spring 2021 Meeting (Virtual)**

**April 28 – April 29, 2021**

**DAY 1**

Roger Mann	Ian Pfingsten	Sarah Whitney	Paul Owen-Smith
Katie Zipfel	Susan Pasko	Amy Benson	Tim Campbell
Matt Shenk	Sara Mirabilio	Chris Smith	Tara Whitsel
Justin Shapiro	Megan Ossmann	Rona Kobell	Karl Blankenship
Steven Pearson	Carolyn Junemann	Michael Fulcher	Tim Campbell
Mike Allen	Matthew Neilson	W Daniel	Edna Stetzar
Aaron Henning	Jonathan McKnight	Sara Stahlman	Heather Desko
Mandy Bromilow	Tim Ellis	Christine Densmore	Sean Hartzell
Megan Schall	Ray Fernald		

**Call to Order** (*Edna Stetzar, Panel Chair*)

- Welcome/Introductions
  - Julianna Greenberg, former panel coordinator, left the Chesapeake Bay Program. Megan Ossmann, Chesapeake Bay Program Habitat Goal Team Staffer, will provide support for the panel until Julianna's replacement is hired. Justin Shapiro, NOAA Chesapeake Bay Office, is also providing technical support for the panel meeting.
  - Jonathan McKnight motioned to nominate Steven Pearson as vice-chair to the Executive Committee
    - Unanimous consensus by the panel to approve
- Review and approve fall 2020 meeting agenda/minutes
  - Jonathan McKnight moved to accept minutes
  - Steven Pearson seconded
- Fall 2020 meeting action items: status of state AIS plan reports, ANSTF Expert Database
  - State management plans are all posted on the ANSTF website
    - Annual reports should be sent to Edna to post on the website- Edna will send a reminder after the meeting.
  - Make sure ANSTF expert database is updated for your state

**Budget and Funded Projects Update** (*Mike Allen, MD Sea Grant*)

- 2021 budget update



- In year 3 of award (September 2018 – 2023)
- Significant COVID impacts on travel - some travel \$ remaining in budget unspent
- Eight small grants are part of this award
  - Outstanding balance on awards: \$52,000 (most of this is projects that have recently started and not yet billed)
- Update on funded grants
  - Three projects have closed:
    - Amy Fowler
    - George Merovich
    - Kate Fleming
- Update on ongoing/completed projects
  - Five open projects, 2 ending this year:
    - Keryn Gedan (8/2021)
    - Jenny Carney (5/2022)
    - Roger Mann (2/2022)
    - Megan Kepler Schall (8/2021)
    - Andy Fowler (8/2022)
- Funds available for FY starting 9/1/21
  - Carryover
    - \$30 forfeitures
    - \$3,871 unassigned subawards
  - Direct expenses
    - \$39,683 presuming \$50,000 allocation
    - \$10,317 indirect
  - Assuming \$1,000 to meetings and travel, \$42,584 for small grants
  - *Susan Pasko – We are planning on announcing next year’s funding opportunity in the next few weeks, anticipating that \$50,000 will be available for the upcoming year.*

**New Business and Decision Items (Edna Stetzar/Panel Chair/Steve Pearson/Vice Chair/ Mike Allen)**

- December 2020 ANSTF meeting update
  - ANSTF requested that each panel nominate someone to act as a liaison between the panel and the task force communication, education, and outreach subcommittee
    - *Susan Pasko: We are still putting together a formal charge for the education outreach committee. There was a request to have a representative from each of the regional panels. We are looking for someone to mainly sit on the calls about once a month and review documents between meetings. Additional activities would be optional.*
  - ANSTF also requested a research priorities list from each regional panel – do we already have one?



- *Jonathan McKnight: I don't think we have one, but it is worth doing.*
- *Susan Pasko: The research subcommittee is working on a national priorities list, so the regional list will help inform the national priorities list. We're hoping the research committee will finish this list by the June meeting – I will share it with you for feedback on how you think it may inform regional priorities.*
- Potential agenda item for fall meeting
- Other updates from the meeting:
  - The top states for new AIS occurrences were all in our region
  - National framework is being developed for early detection and rapid response
  - USFWS plan for Asian carp – need for partnership between sub-basins
  - Incidental command system training - possible national guidelines being drafted
- New MAPAIS recommendations to ANSTF?
  - Previous recommendation from the Panel to ask the task force to support Virginia's nutria management fiscal request at the December meeting. The task force was not able to support or act on the request at this time.
  - New recommendations:
    - Jonathan McKnight would like to restate the VA nutria recommendation
    - Susan Pasko will follow up with how to strengthen the recommendation
- Website – adding state plans, 'alert' tab
  - Several alerts this year of emerging species in the region
  - DE has an invasive species council and puts an alert on their website to inform the public- could the panel put something similar on our website?
    - Mike Allen offered to get an update of the website activity to determine how much it is used. It is due for a security update. There have been lots of downloads of material on the site, indicating significant use.
  - *Jonathan McKnight: Who is responsible for updating website?*
    - EPA coordinators
    - Mike Allen will look into the security update and what is required
- Next meeting (Fall 2021 MAPAIS)
  - Likely in November, hopefully in person. Need to decide what state the meeting will be hosted in.
    - Most recent in-person meeting was in NY
  - Matt Shank suggested that whatever plans we make should be hybrid and have a virtual option
  - Sarah Whitney suggested looking for free meeting spaces in case of the need to cancel
  - Most panelists do not know when they will be expected to return to their offices or be authorized to travel out-of-state
  - Will revisit this over email as the time for the next meeting approaches

**Aquatic Nuisance Species Task Force Update** (*Susan Pasko, USFWS*)

- Aquatic Nuisance Species Task Force is a federally mandated intergovernmental organization solely dedicated to preventing and controlling aquatic invasive species
- The recently passed Strategic Plan will cover 2020 to 2025 and has six goals: Coordination, Control and Restoration, Prevention, Research, Early Detection and Rapid Response, Outreach and Education
- Coordination Goal Objectives:
  - Strengthen ANS Task Force operations to provide effective communication, information sharing, and decision-making
  - Strengthen the capacity for ANS management at State and regional levels
  - Construct a national assessment of the ANS Program for waters of the US
- Prevention Goal Objectives:
  - Evaluate and refine risk analysis procedures to assess potential ANS and pathways for introduction
  - Identify priority pathways and species of concern
  - Encourage implementation of measures to manage high priority pathways and species
- Early Detection and Rapid Response Objectives:
  - Facilitate monitoring efforts to detect and report new sightings of ANS
  - Develop processes to rapidly assess new species detections and determine appropriate management actions
  - Facilitate the development of capacities to respond to new invasions
- Control and Restoration Goal Objectives:
  - Coordinate the development and implementation of ANS Management and Control Plans
  - Identify and communicate effective control and restoration techniques
  - Identify gaps in available control and restoration measures and encourage innovation
- Research Goal Objectives:
  - Establish ANS Task Force research priorities and identify prospective partners
  - Facilitate activities that support priority ANS research needs
  - Track and disseminate study results to incorporate into ANS management decisions and activities
- Education and Outreach Goal Objectives:
  - Evaluate ANS communication, education, and outreach efforts to ensure they are consistent and effective
  - Develop processes to share information and consistently implement ANS outreach strategies
  - Raise the profile and communicate priorities of the ANS Task Force
- *Heather Desko: Will the eDNA report be posted on the ANSTF website?*



- *Susan Pasko: We will likely link to it on our website. I will include it in the newsletter and make sure it will be sent out to all regional panels.*
- Moss Ball Response
  - Confirmed report by USGS of zebra mussels inside a moss ball in early March
  - After investigation they were found in numerous pet stores - confirmed in 46 states
  - Two primary management objectives:
    - Stop the importation of zebra mussel contaminated moss ball products into the US
    - Properly dispose of the contaminated moss ball products already in the US supply chain, retail stores, etc.
  - Federal action by USFWS, USDA, US Customs and Border Protections, USGS
  - Key changes to moss ball entry into US due to contamination
    - Law enforcement and invasive species staff meet regularly
    - Change in size of commercial shipment
    - All shipments under permit
    - Imports must arrive through NY or CA
    - All filamentous algae moss balls referred to APHIS
    - All moss ball shipments referred to the USFWS
    - Agreement to pursue eDNA testing of shipments
  - Industry action:
    - Pet Industry Joint Advisory Council
    - PetCo/Pet Smart
    - Grocery stores
    - Nurseries
    - Online marketplaces (Amazon, Etsy, eBay)
  - State action:
    - Agricultural quarantines of moss balls
    - Regulate the use, possession, and transport of zebra mussels
    - Contract tracing information and local enforcement of state laws and regulations
    - Facilitating communications between federal and state
  - Going forward:
    - Continue working with industry, USDA, eCommerce, and develop post-incident assessments
- Next task force meeting is scheduled for June 28th
- Contact Susan Pasko: [susan\\_pasko@fws.gov](mailto:susan_pasko@fws.gov)
- *Edna Stetzar: Of the 46 states where zebra mussels were found, were any in the mid-Atlantic region?*
  - *Susan Pasko: Only DE and WV have not confirmed any, as well as Hawaii and RI*



- *Edna Stetzar: Is the water garden protocol available?*
  - *Susan Pasko: It is currently on Habitattitude. We also have a simplified version on the USFWS website.*

**Mid-Atlantic Region AIS Introductions and NAS program updates** (*Ian Pfungsten, USGS NAS Program*)

- USGS Nonindigenous Aquatic Species Database is the central repository for spatially referenced accounts of introduced aquatic species
  - Tracks >1330 aquatic species, over 700k observations
  - NAS Database also has actionable maps and tools
- Need contacts of AIS experts for the ANS Task Force experts database
  - Email Susan Pasko ([susan\\_pasko@fws.gov](mailto:susan_pasko@fws.gov))
- Also need priority AIS list
  - What are the top aquatic invasives in your state? Is the listing tiered?
  - Email Justin Procopio ([jprocopio@contractor.usgs.gov](mailto:jprocopio@contractor.usgs.gov))
- Zebra mussel/moss ball update
  - NAS will not publicly display any privately cultivated moss ball sightings, including those with zebra mussels. However, NAS will notify state contacts of any moss ball and zebra mussel reports.
- NAS alerts - push alerts of new species occurrences (country, state, county, watershed)
- Eight NAS alerts since November 2020 (reported)
  - Pennsylvania: zebra mussel and New Zealand mud snail reports
  - Virginia: Water hyacinth
  - Marine alerts: Australian spotted jellyfish (North and South Carolina)
  - Private pond alert: red swamp crayfish (Virginia)
  - Kentucky (Ohio River): Black Carp
- National Horizon Scan
  - Conduct a global horizon scan to help identify alien vertebrate species within the Organisms in Trade Pathway at greatest risk of entering the country, establishing populations, and becoming invasive in the U.S.
- eDNA in the NAS Database:
  - Seven webinars in the spring, 164 participants
  - In 3rd phase of project (integration)
  - Developing community standards, communication plan, and display of eDNA on the NAS database
- *Ray Fernald: Earlier we discussed several reports of zebra mussels in North and South Carolina - were those only related to the moss balls?*
  - *Ian: As far as I know, yes.*
  - *Amy Benson: To my knowledge, no zebra mussels have been found in the wild in the Carolinas.*

- *Edna Stetzar: Is there anyone opposed to looking into putting the alerts on our website?*
  - *Mike Allen: Not opposed but need to consider the cost.*
- *Edna Stetzar: How often do you send the customized list to the Gulf panel?*
  - *Ian: It's an automated message.*
  - *Matthew Neilson: For the Gulf panel we have an RSS feed set up, which automatically has the 10 most recent alerts with the criteria.*
- *Steven Pearson: Do you have any updates on the flood project?*
  - *Ian: We updated the flood mapper to the second phase for the 20 storms. There was not much to mention for this region.*

#### **MAPAIS Project Update (Megan Kepler Schall/Penn State)**

- Invasive flathead catfish in the Susquehanna River Basin
  - Recent invader (early 2000s) with rapid expansion
  - Large predatory fish causes concern for established communities
- Recreational appeal due to size
  - No size restrictions; 50 fish per day limit with combined species
- Project overview:
  - To develop a project that incorporates anglers and the general public with invasive flathead catfish research efforts in the state of PA
    - Goal 1: survey to angling members of the general public
    - Goal 2: use survey results and diet ecology findings to design an educational forum and outreach communication
  - Timeline:
    - Year 1: Sept 2020 -Sept 2021 - survey development, testing, implementation, and data analysis
    - Year 2: Sept 2021 - Sept 2022 - using survey outcomes and ongoing invasive species research to inform community outreach events
  - Survey development is currently in final stages
  - Survey overview:
    - Main components: General, Invasive, Flathead specific
    - 34 questions; estimating 9.5 minutes long
    - Four objectives:
      - Evaluate current knowledge of invasive species within PA along with level of concern
      - Identify what sources and methods of information dissemination are best
      - Quantify angler behavior when fishing for flathead catfish
      - Evaluate current attitudes PA anglers have towards flathead catfish
- Ongoing Research:

- Research efforts on invasive flathead catfish in Pennsylvania
  - Age and growth studies
  - Range and distribution studies
  - Monitoring and management
  - Molecular-based diet study
  - Genetic analysis/population genetics
- *Edna: How do you plan to capture the demographic that doesn't use the internet?*
  - *Megan: Will hopefully go to tradeshow, other physical areas but haven't been able to due to COVID. We realize this is an issue and hope in the future that we will be able to include these groups.*
- *Edna Stetzar: Is who you're planning to survey going to be based on PA licenses or just anyone?*
  - *Megan: We're sending a link out and anyone can participate – your answers will qualify you into different categories.*
- *Mandy Bromilow: I am the coordinator for the Invasive Catfish Workgroup at the Chesapeake Bay Program. Have you had a chance to talk to any of the folks on our subcommittees? We have some that focus on outreach, marketing, etc.*
  - *Megan: Not yet, but I would definitely like to reach out to that group and make that connection. I will send you a follow up email.*

**MAPAIS Project Update (Roger Mann, VIMS)**

- Revisiting *Rapana venosa* in Hampton Roads as TBT abates
- *Rapana venosa* is a large predatory marine gastropod that likely arrived in the Chesapeake Bay in the 1990s
- Documented distribution through a bounty program with 150+ commercial fishermen – equivalent to >100,000 sampling events/year 1998-2007
- Spread from Pacific Ocean → Mediterranean Sea → Atlantic Ocean → Chesapeake Bay
- Distinctive egg masses, well documented life history
- TBT (tributyl tin) was an anti-foulant on ships
  - Hampton Roads was an epicenter of shipbuilding, leading to a large concentration of TBT in the sediment
  - TBT has been associated with imposex, or deformed females, in mollusks
  - High incidence of imposex in sampled populations in lower Chesapeake Bay from January 1999 - May 2002
- New studies in 2021 by M. Unger building on TBT sampling
  - Research questions:
    - Is there a substantial remnant population of rapa whelks in regions of former thriving initial invaders?
    - What is the incidence of imposex in collected material?

- Is there a threat of an ongoing maintenance and/or expansion of the rapa population?
- Timeline:
  - Project start date September 2020
  - Major field effort March - November 2021 (to align with crab season because whelk collection is a bycatch of crab fishery)
  - Project end date February 2022 with all data shared with MAPAIS, clients, and reported on our website
- Results so far show low levels of imposex but females are still developing it occasionally
- *Jonathan McKnight: What is the salinity range for successful breeding?*
  - *Roger Mann: They can tolerate full salinity and can be found on reefs. In lower salinity during the winter, they move into the deep channels.*
- *Jonathan McKnight: Are you seeing any native or non-native pathogens or parasites with them?*
  - *Roger Mann: We suspect these arrived as a larval culture, so there are no pathogens that arrived with it. They may be susceptible to some local pathogens.*
- *Jonathan McKnight: Are there any pathologies to watch for that could be introduced with this species as an intermediate host?*
  - *There is no data to suggest that they act as an intermediate host at this time.*
- *Edna Stetzar: Is there any evidence that they are still being introduced via ballast water?*
  - *I suspect they are continually introduced.*

**Results of MAPAIS Recreational Boating Vector Matrix (Edna Stetzar, Panel Chair)**

- Dedicated program funding varies from state to state
- No information from VA and WV has been received yet. Would like to finalize the results before the next meeting and will share it with the NE panel.
- **Ray Fernald offered to provide the missing data. Edna will share this document with Ray.**

**DAY 2**

Ian Pfungsten	Mark Lewandowski	Christine Densmore	Mandy Bromilow
Heather Desko	Mike Allen	Jay Killian	Amy Benson
Katie Zipfel	Sarah Whitney	Susan Pasko	Megan Ossmann
Jonathan McKnight	Tara Whitsel	Ray Fernald	Sean Hartzell
Justin Shapiro	Steven Pearson	Edna Stetzar	Aaron Henning
Matt Shank	Chris Smith	Mike Allen	Sara Mirabilio

**Call to Order** (*Edna Stetzar*)

- Request to review Alabama's state management plan and provide feedback by May 17th
  - Edna will send it out to everyone – send feedback to her and she will pass it on.

**Review 2021 MAPAIS grant proposals** (*Mike Allen*)

- Received 6 proposals
- Each proposal reviewed by 4 panel reviewers
- Criteria:
  - Technical merit and feasibility (40%)
  - Relevance outreach and impact (40%)
  - Applicants qualifications (20%)
- Reviewer scores combined in two ways: numeric averaging and rank averaging
- Competition
  - Six proposals received from six institutions
  - Two VA, 2 MD, one DE, one CB regional
  - COI: reviewers were not permitted to review proposals from their organizations (go to waiting room)
  - Will summarize each proposal and provide reviewer comments. Reviewer can then provide additional clarifying comments
  - *Jonathan McKnight: What was the total amount for the number applied for?*
    - *Mike Allen: About \$60,000 was requested total*
  - *Steven Pearson: Are there funds currently being spread out over multiple years and how is that being included in the funding?*
    - *I do not believe we have any proposals that need to be funded for a second year.*

The Panel discussed each of the six proposals and considered the reviewer comments, ratings and rankings, and panel priorities. After discussion, Mike Allen moved to fund projects 1 and 2 (Coster and Stangl). The Panel unanimous agreed to fund these two proposals at the full request level. With the remaining funds, the panel considered two proposals. The Panel voted and there was an exact tie. After further discussion and debate on next steps, Mike Allen made a motion that the final decision between the two proposals be moved to and decided by the executive committee after further consideration of the reviews and Panel discussion. Edna Stetzar seconded the motion. The motion carried with unanimous consent of the Panel.

- The executive committee will review these two proposals and make a funding decision after the spring meeting

**Panel member and interested party updates**

New York (*Steven Pearson*)

- State-wide boat steward program at 300 launches across the state (still in planning stages)

- NY continues to manage hydrilla in several locations in partnership with USACE and other local stakeholders
  - 5th year of Croton River Hydrilla Management Project
  - Reservoir upriver will be treated for hydrilla this year
- Peconic River management of ludwigia - pilot treatments in 2021, whole river in 2022

New Jersey (Chris Smith and Heather Desko)

- Chris Smith:
  - Large-scale invasive species workgroup that was recently created - looking at 2008 state plan and deciding what the next step is to update
  - One new species incidence - shipment of marbled crayfish from WI to a resident in Monmouth County, intended for private use. Was not released to our knowledge.
- Heather Desko:
  - Adding one new site to boat stewards' program
  - Continuing management of hydrilla in water bodies
  - We will participate in collecting samples for hydrilla genetics study

Pennsylvania (Sean Hartzell, Sarah Whitney, Aaron Henning, Matt Shank)

- Sean Hartzell:
  - Strategic plan for 2021 to 2023
  - AIS risk assessment ranking system was finalized in late December 2020
  - AIS early detection species work at lakes managed by PA FBC
  - Planning to do NZ mud snail surveys in SE and SC Pennsylvania
  - Installation of boat cleaning stations at various sites
  - Working with partners on moss ball incident
  - AIS communication and outreach plan
  - Virtual early detection trainings
- Sarah Whitney:
  - COVID impact - DCNR and other agencies are not able to have summer interns, which impacts boat steward project
- Aaron Henning:
  - Collected eDNA samples for northern snakehead and round goby
  - Will sample lower Susquehanna in May for blue catfish and snakehead eDNA
  - Conowingo Dam - fish passage operations started April 9th. Conditions have been lower flow than usual, only operating west fish lift right now. Have removed 373 snakehead, 19 flathead catfish, 0 blue catfish, and caught 1200 American Shad
  - Snakehead and blue catfish will be donated to United Way and foodbanks
  - Flathead catfish will support Megan Keppler Schall's research
- Matt Shank:

- Made interactive map of SRBC monitoring results of 2019 and 2020
- Contacted by Great Lakes panel about info session – reach out if you want an invitation

#### Delaware (Edna Stetzar)

- State biologist from PA caught a black salty goldfish in the Delaware River
- DE Natural Resource Police received notice from WI DNR that marbled salamanders were shipped to a resident in DE. NRP contacted resident to discuss issues with releasing.
- DE has a new alternate on the panel - Mike Steiger
- No new invasions since last meeting - snakeheads continue to expand their range, blue catfish report from Blackbird Creek, a tributary of the Delaware River Estuary
- Red swamp crayfish were found in a new drainage in western part of the state
- Contacted by Charles Mullin, who wants to raise Australian red claw crayfish to sell to restaurants live. DE has less restrictions than PA. He may contact other states
- Delaware allows pond owners to stock grass carp with a permit –periodic inspections by state fisheries biologists were added to the permits to evaluate barriers and assess aquatic vegetation control

#### Maryland (Jay Killian, Jonathan McKnight, Mike Allen)

- Jay Killian:
  - Working on environmental risk assessments at DNR on water hyacinth, water lettuce, chinese mystery snail, etc.
  - Still planning on starting a pathway risk assessment on the live bait pathway in Maryland
  - Lots of blue catfish work with fisheries group
- Jonathan McKnight:
  - Maryland’s 2021 funding allocation from the task force includes \$57,000 to...(audio cut out, something about nutria in VA)
- Mike Allen:
  - MD Sea Grant is planning next issue of Chesapeake Quarterly to be on invasive species - hoping to do short story on the panel and some of the work that has been accomplished

#### Virginia (Ray Fernald)

- Nutria - trying to work with CBP and Maryland to provide funding for nutria eradication. Trying to elicit congressional support
- Further expansion of snakeheads into the James River watershed
- Added Alabama bass to predatory and undesirable species list
- Lots of blue catfish work in our agency and others
- *Trapa bispinosa* rapidly spreading in Northern VA (60-70 sites)
  - Workgroup and state eradication plan to take out this species
- Eradicated population of feral hogs in southeast VA

Mid-Atlantic Panel on Aquatic Invasive Species  
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Spring Meeting  
April 28-29, 2021  
*MINUTES*



- Noxious weeds advisory committee – putting some aquatic plants into the framework
- Retiring July 1st, this will be last meeting

West Virginia (Katie Zipfel)

- Working to get state plan updated and approved
- Working with Ohio River Asian carp working group
- We are working on genetics project for black bass, to see if Alabama bass have influenced any of our spotted or smallmouth bass populations
- Working on invasive species webpage and reporting system for public
- In contact with USFWS region 3 about snakehead eDNA on the Potomac River

North Carolina (Sarah Mirabilio)

- There's no one AIS lead in the state, which causes some problems. Several agencies in the state addressing different AIS.
- NC AIS management plan is being updated from original 2014 draft – will be presented to the governor, and hopefully signed and submitted
- Yellow floating heart sightings, infestation of giant salvinia, wooly frogs mouth, hydrilla, blue catfish, river goby, green porcelain crabs, East Asian river prawn

Interested Parties:

- Tara Whitsel (USACE)
  - Research-focused project on hydrilla genotype
  - Invasive species leadership team is responding to Dingell Act and developing invasive species strategic plan and hosting summer webinar series
- Christine Densmore (USGS)
  - Biological threats program
  - New USGS invasive species manager - James English
  - Invasive species community of practice is up and running – will keep an ear out for research and relevant topics to bring back to this group
  - Annual RFP for USGS scientists that are working in collaboration with federal and state partners - 2022 RFP coming out this summer

**Wrap-up**

- Jonathan McKnight moved to adjourn
  - Seconded by Mike Allen