Mid-Atlantic Panel on Aquatic Invasive Species

Annual Report for USFWS Grant F18AP00243

Date: 11/30/2020

Annual Report Due: 12/29/2020

Fiscal Agent: Maryland Sea Grant College

Annual Report to the Aquatic Nuisance Species Task Force for 2020

The mission of the Mid-Atlantic Panel is to assist state and federal agencies and other stakeholders in developing and implementing strategic, coordinated, and action-oriented approaches for the prevention and control of aquatic invasive species in the mid-Atlantic region, and to coordinate and communicate these activities with the other Regional Panels, the ANSTF, and other partners.

Funding from USFWS is used to support MAPAIS business, including coordination and logistics for MAPAIS meetings, travel for MAPAIS participants at ANSTF meetings and regional panel meetings, the MAPAIS website, the MAPAIS small grants competition, and indirect recovery for the fiscal agent (Maryland Sea Grant).

Panel Coordination

Jay Kilian of the Maryland Department of Natural Resources is the current chairperson of the Mid-Atlantic Panel. Edna Stetzar of the Delaware Department of Natural Resources and Environmental Conservation serves as vice-chair. As the panel representative to the ANSTF, Kilian has participated in the national meetings for the last two years. At the fall 2020 meeting of the Mid-Atlantic Panel, Stetzar was elected as incoming chair for 2020-2022. Maryland Sea Grant has continued to serve as fiscal agent during this time.

Due to the COVID-19 pandemic, the spring 2020 MAPAIS meeting was held virtually on the Google Meet platform on 29 April 2020. The Panel meeting focused on routine business items including budget and funded project updates, a report out from the ANSTF, membership requests and updates, and recommendations that should be brought forth to the ANSTF. Additionally, we received informational briefings on invasive catfish in the Chesapeake Bay, the Pennsylvania aquatic invaders app, New York State cryptic invasions, and new sighting alerts on the NAS database. An investigator funded by the MAPAIS, George Merovich (Juniata University), also provided a report on his project "Quantifying threats to the upper Juniata River from invasive Rusty Crayfish." The afternoon session was dedicated to review of grant proposals submitted to the MAPAIS 2020 RFP. The agenda and minutes from this meeting are maintained on our website, www.midatlanticpanel.org.

The fall 2020 meeting was also held virtually on the WebEx platform on November 18, 2020. The panel's routine business included a review of minutes and action items, welcome of new representatives from member organizations, recommendations for the ANSTF, a review of the upcoming 2021 MAPAIS RFP, and a budget and funded projects update. The panel agreed to one recommendation for the ANSTF related to the nutria eradication program. The panel heard updates on the ANSTF, the USGS NAS species alerts, northern snakehead in the Susquehanna River, and carbon dioxide as an aquatic fish management tool. Several investigators presented updates on their funded projects, including Keryn Gedan (George Mason University, Mapping forest edge *Phragmites* using LiDAR data) and Kate Fleming (Delaware Sea Grant, Aquatic invasive species outreach and education to Delawareans). The panel also held elections for a new chairperson (Edna Stetzar elected) and solicited additional nominations for vice chairperson, reviewed all of the active state management plans, and heard updates from all member organizations.

During the past year, panel funds were also spent to support the joint MAPAIS/NEANS meeting in December 2019 in Delmar, NY. No funds were spent for the virtual meetings in April and November 2020. No funds were spent for travel for the chair to attend ANSTF meetings (which were either cancelled or held virtually). Minimal funds were spent on web resources. Hence, the Panel has travel and meeting support funding to carry over into next project year.

Small Grants Competition

The Panel conducted its annual grants competition to fund activities addressing MAPAIS's mission and regional priorities between January and April 2020. Between 2007 and 2019, the Panel awarded $516,469 in project funding. At the spring meeting, grantees were selected for 2019. Several continuing and these new projects are outlined below. Annual reports for projects are attached.

Maryland Sea Grant administers the subawards for all projects, including the projects in the chart below. As of November 2020, the panel awarded $118,601 in MAPAIS funds for small grants projects across the first three years of the award. A total of $45,887 has been spent (years 1 and 2 projects only). Year 3 projects started September 1, 2020 and thus have not billed yet.

Current Small Grants Portfolio

Impacts of two functionally distinct invaders on facilitation and community succession	George Mason University (PI: Amy Fowler)	This project will assess the co-distributions of Didymo and New Zealand mud snail (and its parasite loads) in a freshwater system in Baltimore County Maryland.	Ended September 2020
Quantifying multiple ecosystem-level threats to the upper	Juniata College (PI: George Merovich)	This project will integrate undergraduate class students into a study of	Ended August 2020

Juniata River system from the invasion and occupation of rusty crayfish		hybridization of rusty crayfish.	
Early detection of invasive *Phragmites australis* at the tidal marsh-forest ecotone with airborne LiDAR	George Washington University (PI: Keryn Gedan)	This project will validate the use of LiDAR data to assess canopy understory for early *Phragmites* invasion	September 2019 to August 2021
Promoting tidal and marine invasive species awareness and response in DE among diverse stakeholders	University of Delaware (PI: Kate Fleming)	This project will increase recreational anglers' awareness of and ability to identify, handle, and respond to encounters with three priority invasive fishes in Delaware (i.e. Blue Catfish (*Ictalurus furcatus*), Flathead Catfish (*Pylodictis olivaris*), and Northern Snakehead (*Channa argus*)).	September 2019 to February 2021
Assessing the potential impact of Dominion Cove Point LNG export facility on ballast mediated invasions in Chesapeake Bay	Smithsonian Environmental Research Center (PI: Jenny Carney)	This project will assess potential introductions following a new source of ballast water discharge coming online in Chesapeake Bay.	September 2019 to May 2021
Revisiting *Rapana venosa* in Hampton Roads as TBT abates	Virginia Institute of Marine Science (PI: Roger Mann)	This project will assess invasive rapa whelk populations in lower Chesapeake Bay as part of a study on the toxin TBT in sediments.	September 2020 to February 2022
An integrative approach to studying Flathead Catfish invasion in the Susquehanna River Basin: linking ecological field studies and public perception for effective outreach on aquatic invasive species	Penn State University (PI: Megan Schall)	This project will administer a human dimensions survey of angler attitudes on flathead catfish to inform improved outreach materials.	September 2020 to August 2021

Marine Bioinvasions of the Mid-Atlantic Coast: Rapid Assessment Survey for Introduced Marine Organisms from NJ to VA	George Mason University (PI: Amy Fowler)	This project will conduct a rapid assessment of several marinas for aquatic invasive species along the Mid-Atlantic coast.	September 2020 to August 2022

Small Grants Project Reports

1. **Final Report:** Impacts of two functionally distinct invaders on facilitation and community succession
2. **Final Report:** Quantifying multiple ecosystem-level threats to the upper Juniata River system from the invasion and occupation of rusty crayfish
3. **Annual Report:** Early detection of invasive *Phragmites australis* at the tidal marsh-forest ecotone with airborne LiDAR
4. **Annual Report:** Promoting tidal and marine invasive species awareness and response in DE among diverse stakeholders
5. **Annual Report:** Assessing the potential impact of Dominion Cove Point LNG export facility on ballast mediated invasions in Chesapeake Bay