



Emily Newman, M.S.
Environmental Scientist

Research Planning, Inc.

Ms. Newman is an environmental scientist specializing in coastal ecology, restoration, and environmental compliance. She has experience working in coastal and nearshore habitats in the U.S. Gulf Coast and Atlantic regions and in desert and alpine ecosystems in California. Prior to joining RPI, Ms. Newman worked in a research role overseeing and conducting laboratory, greenhouse, and field experiments on coastal restoration with an emphasis on dune plants and ghost crabs. She also has experience working with coastal vegetation inventory and identification, coastal wetlands, aquatic and terrestrial invertebrates, and is an accomplished birder.

EDUCATION

M.S., Biology, University of South Alabama, Mobile, AL (2023)

Thesis Title: Soil fungi in Alabama coastal dunes.

B.S., Biology, University of South Alabama, Mobile, AL (2020)

PROFESSIONAL EXPERIENCE

2024 – Present: Environmental Scientist/Ecologist, Research Planning Inc., Tallahassee, FL

2023 – 2024: Research Technologist III, Tulane University and University of South Alabama, Mobile, AL

2022, 2023: Teaching Assistant, Dauphin Island Sea Lab, Dauphin Island, AL

2021 – 2023: Graduate Teaching Assistant, Biology Dept., University of South Alabama, Mobile, AL

2021: California Leadership Corps Member, Student Conservation Association/AmeriCorps

SELECTED PROJECT EXPERIENCE

NOAA Marine Debris Program Infrastructure Grant Environmental Compliance Support: 2024 – Ongoing. Ecologist. Ms. Newman provides environmental compliance support for grants that are being funded for marine debris assessment, removal, disposal, interception, and restoration efforts. The support includes identifying and assessing the potential environmental impacts associated with NOAA-funded marine debris activities, which have included multiple locations across the U.S., Territories, and Freely Associated States. RPI conducts the analysis, documentation, and interagency coordination and/or consultation for Endangered Species Act (ESA) Section 7 with USFWS and NMFS; Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) with NMFS; National Historic Preservation Act Section 106 consultation with States and Tribes; coastal zone management consistency reviews with States under the Coastal Zone Management Act (CZMA); Coastal Barrier Resource Act (CBRA) reviews with USFWS; permitting with NOAA National Marine Sanctuaries; and various other environmental review and coordination activities as needed.

U.S. Coast Guard (USCG) Programmatic Environmental Impact Statement (PEIS) for Shipping Safety Fairways along the U.S. Atlantic Coast: 2024 – Ongoing. Ecologist. Ms. Newman assists in preparing the PEIS that addresses the USCG's proposed establishment of shipping safety fairways and other routing measures along the Atlantic Coast of the U.S. The fairways are designed to keep traditional navigation routes free from fixed structures that could impact navigation safety and impede other shared offshore activities, but their use is not required. She is responsible for conducting analyses on biological resources (e.g., vegetation including seagrasses, birds and bats, invasive species, and designated protection areas),

including assisting in preparation of the relevant chapters and analysis of impacts under ESA, MSA (EFH), Marine Mammal Protection Act (MMPA), Migratory Bird Treaty Act (MBTA), and CZMA consultations with corresponding State agencies.

Louisiana Trustee Implementation Group (TIG) Restoration Plan and Environmental Assessment (RP/EA) for the Chandeleur Islands: 2024 – Ongoing. Ecologist. The Louisiana TIG is preparing Restoration Plan (RP) #9 for the Chandeleur Islands to address wide-ranging injuries to natural resources that resulted from the *Deepwater Horizon* (DWH) oil spill, refine and analyze preliminary design alternatives, and identify and analyze the proposed final design alternative under the Oil Pollution Act of 1990 (OPA) and National Environmental Policy Act (NEPA). The RP/EA includes the development of a Monitoring and Adaptive Management Plan to support and document restoration success. The draft RP/EA will be released for public input for consideration in development of the final RP/EA. The RP/EA is presenting and analyzing alternatives for the restoration of specific resource types for the Chandeleur Islands, including beaches and dunes, coastal wetlands, seagrasses, birds, sea turtles, and federally managed areas.

ReCoast: Recycle for the Coast, Coastal Restoration Applications: 2023 to 2024. Research Technologist. Under funding provided by the National Science Foundation Convergence Accelerator, Ms. Newman was part of an interdisciplinary research team based out of Tulane University. In this role, she designed, conducted, and supervised field and greenhouse experiments to determine the viability of recycled glass sand as sediment source in coastal restoration.

Disturbance and Resources Across Global Grasslands (DRAGNet): 2021 to 2024. Research Technologist and Graduate Assistant. Ms. Newman worked with a team at the University of South Alabama as part of a global research network, Disturbance and Resources Across Global Grasslands (DRAGNet), to assess factors influencing plant community assembly, recovery, and ghost crab and insect population dynamics in Gulf Coast dune ecosystems following physical disturbance and nutrient addition.

Tick Prevalence and Abundance Across Alabama: 2022 to 2023. Research Assistant. In collaboration with the U.S. Centers for Disease Control and Prevention, Ms. Newman assisted a research team in tick field collection and identification to assess population density and prevalence of spotted fever in 5 Alabama state parks.

Soil Fungi in Alabama Coastal Dunes: 2021 to 2023. As a graduate student at the University of South Alabama from 2021 to 2023, Ms. Newman explored how arbuscular mycorrhizal fungi shape survival and growth of dune host plants and the feasibility of incorporating fungi into dune restoration. This work was funded by Alabama Audubon and published in the *Journal of Coastal Research*.

Aquatic Stream Insects in the Mobile-Tensaw Delta: 2021 to 2023. Research Assistant. Ms. Newman assisted a research team in aquatic stream insect collection and water quality assessments across 4 freshwater streams in the Mobile-Tensaw Delta to measure insect diversity, abundance, and stream conditions.

California Desert and Alpine Habitat Restoration and Management with the Student Conservation Association/AmeriCorps: 2021. Crew Leader. Partnered with the U.S. Bureau of Land Management (BLM), Ms. Newman led backcountry field crews in the Mojave Desert to restore desert tortoise habitat at off-highway vehicle incursions. Restoration work included soil decompaction, seed pitting, and barrier construction. In addition, partnered with the U.S. Forest Service (USFS), Ms. Newman led crews in Shasta County, California, to maintain and restore recreational hiking trails.

Apple Snail Invasive Species Monitoring: 2020. Research Assistant. Ms. Newman worked as a researcher in collaboration with the Mobile Bay National Estuary Program to monitor apple snail

population dynamics at the point of invasion in south Alabama (Langan Park, Mobile). Density and location data were collected before chelated copper treatments to establish a population baseline.

RELEVANT SKILLS AND CERTIFICATIONS

- Data entry, management, and analysis (R, RStudio, MiniTab, ImageJ, MS Office)
- GIS data collection, analysis, mapping (GPS, ArcGIS Pro, ArcGIS Online, ArcMap)
- YSI water quality monitoring
- Bird identification (by sight and sound)
- 4WD and boat operation
- Wetland Rapid Assessment Procedure (WRAP) certification – Grand Bay National Estuarine Research Reserve
- Biological Responsible Conduct of Research – Collaborative Institutional Training Initiative
- Alabama Boating Vessel License

AWARDS AND FELLOWSHIPS

Life Sciences Thesis of the Year (2023), University of South Alabama, Conference of Southern Graduate Schools.

Alabama Audubon, Walter F. Coxe Research Grant (2021). Predicting recovery and resilience to ongoing global change in Alabama coastal dune ecosystems. (Principal Investigator: Dr. Jeremiah A. Henning). \$1,000.

PUBLICATIONS

Newman, E.D., J.B. Rowland, T.G. Hammer, L.A. Frost, C.Y. Lumibao, and J.A. Henning. 2024. Trade-offs in arbuscular mycorrhizal fungal responses to drought and salinity stress in *Panicum amarum* (United States Gulf Coast). *Journal of Coastal Research*, 40(1), 51–63. Charlotte (North Carolina), ISSN 0749-0208. <https://doi.org/10.2112/JCOASTRES-D-23-00050.1>.

PRESENTATIONS

Hammer, T.G., **E. Newman**, and J.A. Henning. 2023. Disturbance in the Delta: Examining plant community response to physical disturbance in the Mobile-Tensaw Delta. Bays & Bayous Symposium.

Newman, E., J. Rowland, T.G. Hammer, and J.A. Henning. 2023. Gulf Coast dune mycorrhizae improve salinity tolerance of a common coastal dune grass. Graduate Research Symposium, University of South Alabama.

Newman, E., J. Rowland, T.G. Hammer, and J.A. Henning. 2023. Gulf Coast dune mycorrhizae improve salinity tolerance of a common coastal dune grass. Bays & Bayous Symposium.

Henning, J.A. and **E. Newman**. 2023. Impacts of disturbance and resource availability on coastal dune ecosystems. Bays and Bayous Symposium.