

Rachel B. McDonald

Dauphin Island Sea Lab
101 Bienville Blvd
Dauphin Island, AL 36528
251-861-2141 x5076
rmcdonald@disl.edu

Education

2010-2014, University of South Alabama, Mobile, AL. M.S., Marine Sciences
2006-2009, Samford University, Birmingham, AL. B.S., Marine Biology

Current appointment

Marine Outreach Coordinator - Discovery Hall Programs

Prior appointments

ROV Competition Coordinator: January 2014 – present. Dauphin Island Sea Lab, Dauphin Island, AL.
NOAA/NGI Internship Coordinator: June 1 – August 7, 2015. Dauphin Island Sea Lab, Dauphin Island, AL.
Graduate Assistantship: January 2010 – December 2013. Dauphin Island Sea Lab, Dauphin Island, AL.

Relevant Products**Publications:**

McDonald R.B., J. Cebrian, K. L. Heck Jr. (2016) Fish, Macroinvertebrate and Epifaunal Communities in Shallow Coastal Lagoons with Varying Seagrass Cover of the Northern Gulf of Mexico. *Estuaries and Coasts*, 39(3), 718-730

Presentations:

- R. McDonald (December 8, 2020). *Building STEM skills in students through ROV Competitions*. Presented at the virtual Southern Educational Robotics Conference.
- R. McDonald (October 17, 2019). *Building water current trackers: A fun STEM activity*. Presented at the Alabama Association for Gifted Children (AAGC) Conference in Birmingham, AL.
- R. McDonald & C. Flight. (March 2018). *Shining a light in the deep sea*. Co-presented at the National Science Teachers Association Conference in Atlanta, GA.
- R. McDonald & T. Miller-Way. (February 2018). *Growing a marine technology program for middle and high school students*. Presented at the Underwater Intervention Conference in New Orleans, LA.

Curricula/Activities/Programs:

GO-ROVing! ROV Loaner kit program. Program launching in October 2021. DHP website, documents/videos, and request form in progress. This program was made possible from an Ingalls STEM grant.

STEAM bioluminescent circuit art activity, McDonald, RG and Chris Flight, March 2018, NSTA.

Relevant activities

Professional Development:

Alabama Environmental Education Summit (AEES) Virtual Meeting. May 3-4, 2021. Focused on how to better use inquiry-based education in our teaching with an emphasis on diversity and inclusion.

Bays and Bayous Virtual Symposium. December 1-3, 2020. Listened to virtual talks on coastal research, extension, and education in the northern Gulf coast.

Because Learning! Astroschool. February 16 – March 20, 2020. Educator training revolving around a sensor kit that uses a breadboard and various additional sensors, including a seeduino Arduino board. Exercises and experiments involved hands-on real-world problem using circuits, coding, data and more. 20 hour program.

Reflecting on Practice training. August 27-28, 2019. Training on Module 1 and Module 2 on the Reflecting on Practice Program. Led by Kristen Evans and held at the Dauphin Island Sea Lab.

National Science Teachers Association (NSTA) 2018 Atlanta National Conference. March 15-18, 2018. Georgia World Congress Center, Atlanta, GA. Attended conference sessions/workshops and presented.

Workshops & Outreach Events:

Copiah-Lincoln Community College ROV Workshop. March 20, 2021. Workshop held at Co-Lin Community College for teachers, parents, and students interested in learning about ROVs and the DISL competitions. 5 hours.

Annual MATE ROV Competition. April 23-24, 2021. Dauphin Island Sea Lab, Dauphin Island, AL. Northern Gulf Coast Regional Coordinator for the Marine Advanced Technology Education (MATE) Competition network regional student ROV competition.

Alabama Regional SeaPerch Competition. February 8, 2020. UMS-Wright Preparatory School, Mobile, AL. Regional competition coordinator for the SeaPerch / Robonation competition network.

ROV Travelling Outreach Exhibit. 2015- present. Developed a hands-on ROV travel outreach exhibit to take to schools, events, conferences, etc. Presented at Jubilee and South's BEST, Loachapoaka High School STEM Day, Sanford Middle School STEM day, AMSTI Science Festival, SAWDC Worlds of Opportunity, Discovery Day at the Dauphin Island Sea Lab and in several middle and high school science and robotics classrooms across the state.

Certifications

Child Abuse Mandated Reporters Training

CPR, AED, and First Aid Training

Dimensions of Success STEM Training

Paddle Sports Facilitator Training

SSI Scuba Certification