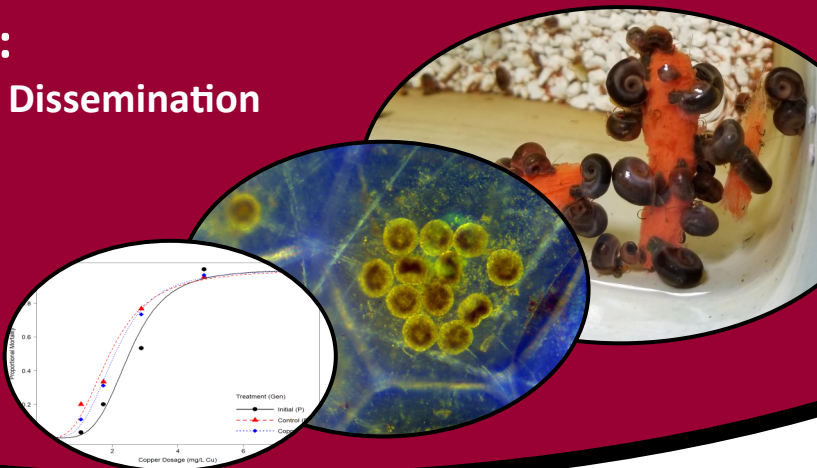# R Syntax and Applications:
Data Analysis, Visualization, and Dissemination

February 18, 2024 — 8:30 - 4:30
Aquaculture America 2024

Workshop Content

The workshop will focus on technical skills and applications using R and RStudio

Morning Session 1:

- **Introduction to R and RStudio**
  - ⇒ What is R and RStudio?
  - ⇒ The wide breadth of applications
  - ⇒ A first glance at RStudio and tidyverse
  - ⇒ Functionality and best practices

Morning Session 2:

- **Your first visualizations**
  - ⇒ Introduction to ggplot2
  - ⇒ Basic plots
  - ⇒ Shapes, colors, groups, and more

Afternoon Session 1:

- **Putting numbers to it - data analysis**
  - ⇒ Data exploration and diagnostics
  - ⇒ Simple hypothesis testing
  - ⇒ Linear models
  - ⇒ Survival analysis
  - ⇒ Dose-response curves

Afternoon Session 2:

- **Share your research with the world!**
  - ⇒ Writing manuscripts with Quarto
  - ⇒ Make science interactive with Shiny

Instructor

Bradley Richardson, PhD

USDA-ARS, Warmwater Aquaculture Research Unit

Bradley Richardson is a research fish biologist with the USDA - Agricultural Research Service. He works in the Warmwater Aquaculture Research Unit (WARU) at Stoneville, MS. His research interests include species interactions, community ecology, and ecosystem resiliency.

For the past 10 years, Bradley has worked extensively in R and RStudio, providing formal and informal trainings to a variety of audiences. Trainings and workshops have included graduate, undergraduate, and high school students, postdocs, research associates, and scientists. He is often sought out to aid in data analysis and visualization by colleagues at WARU, as well as cooperating universities and other research units.

At WARU, Bradley's research primarily focuses on the catfish pond environment and how that relates to disease and management practices. Current research projects center on managing aquatic snails that serve as parasite vectors for catfish, which subsequently reduce production.

Pricing Information

- ◆ Base Price - $300
- ◆ US Chapter of WAS (USAS)** or AFS-FCS Member - $150
- ◆ USAS or AFS-FCS Student Member - $75
  **WAS members can join USAS—only $5.00!

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