

**Title:** Data Visualization in R using ggplot for Ecological Modeling

**Abstract:** Visualizing data is a key component of ecological modeling and management. Visualizing data can help elucidate important ecological patterns, guide aspects of project planning and management, and communicate key information to various stakeholders. The ability to produce high quality graphics featuring diverse data types is a key strength of the R environment, and the ggplot package is one of the most powerful pieces of plotting software currently available. In this workshop, we will describe the fundamental elements of using ggplot for data visualization. Then, we will demonstrate the use of ggplot using long-term environmental data collected to inform ecological management and restoration. Attendees will learn how to make various types of plots and style them for use in reports or publications. Data visualization is a fundamental element of ecological modeling and planning, and using ggplot enables users to create a wide variety of powerful, professional plots that can be used in numerous contexts.

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**Bio:** Ed Stowe is an ORISE Postdoctoral Fellow with the U.S. Army Engineer Research and Development Center (ERDC) Environmental Lab. He holds a B.S. in Biology from Yale University and a PhD in Ecology from the University of Georgia. His research focuses on using quantitative tools and models to evaluate the effects of management and restoration activities on freshwater fish and other organisms.