



## Algal Identification in the Environment

### Part 1: Workshop Description:

This workshop is designed as an introduction to the general groups of freshwater algae, their ecology and diversity. We will review key features distinguishing the major algal groups: cyanobacteria, chlorophytes, diatoms, dinoflagellates, red algae, euglenophytes, etc. and spend some time looking at specimens under the scope. Have a specimen you wish to identify that is common in your lakes? Participants are encouraged to BYOA- Bring Your Own Algae sample and test your newly gained taxonomic skills!

### Part 2: Workshop Description:

This workshop has a special focus on harmful and nuisance algae (focusing on cyanobacteria) in freshwater systems. We will dive into the ecology of both planktonic and benthic members of this group, while identifying major problematic taxa (genera and species). Together, we will identify morphological features that are used to discern these genera. Depending on weather, field collection for various specimens will be collected where aspects of toxicity and control can be discussed.

### Workshop Presenters:

Dr. Dail Laughinghouse, Assistant Professor and Dr. David Berthold, Biological Scientist III – Applied Phycology, University of Florida/IFAS, Fort Lauderdale Research and Education Center.

## **Dr. H. Dail Laughinghouse**

**Assistant Professor - Applied Phycology  
University of Florida/IFAS  
Fort Lauderdale Research and Education Center**

Dr. Laughinghouse is a broadly trained phycologist working with both basic and applied algal research from Tropical to Polar Regions. His background includes systematics, ecology, HABs, cyanotoxins, phycoremediation, biofuels, metagenomics and metatranscriptomics of marine, freshwater and terrestrial environments. Some of the current research in the Laughinghouse Lab focuses on diversity and toxicity of cyanobacteria, environmental influences on macroalgae and microbial photoautotrophs, novel applied uses for algae, bioremediation, and the detection and effects of bioactive compounds. Research on testing different algal treatment methods with the industry is ongoing in the lab where Dr. Laughinghouse uses different approaches, bridging chemistry, genetics, diversity, and environment. The Laughinghouse Lab is always welcome to new ideas and collaborative research



## **Dr. David Berthold**

**Biological Scientist III - Applied Phycology  
University of Florida/IFAS  
Fort Lauderdale Research and Education Center**

Dr. Berthold is dedicated to uncovering marine, terrestrial, and freshwater cyanobacteria diversity, chemical, and compound production potential through classical culturing and contemporary methods. His main research goals are to simplify the mass cultivation of *Fistulifera alcalina* for omega fatty acids used in medicine and biofuel. Another focus is the question of algaecidal chemicals for the treatment or reduction of target cyanobacteria.

