

# PERIPHYTON AND MACROINVERTEBRATE ANALYSIS

Mississippi, USA

## Client

Michael Pisani & Associates

## Key Services Provided

- Benthic macroinvertebrate taxonomy
- Periphyton identification and enumeration

## Project Duration

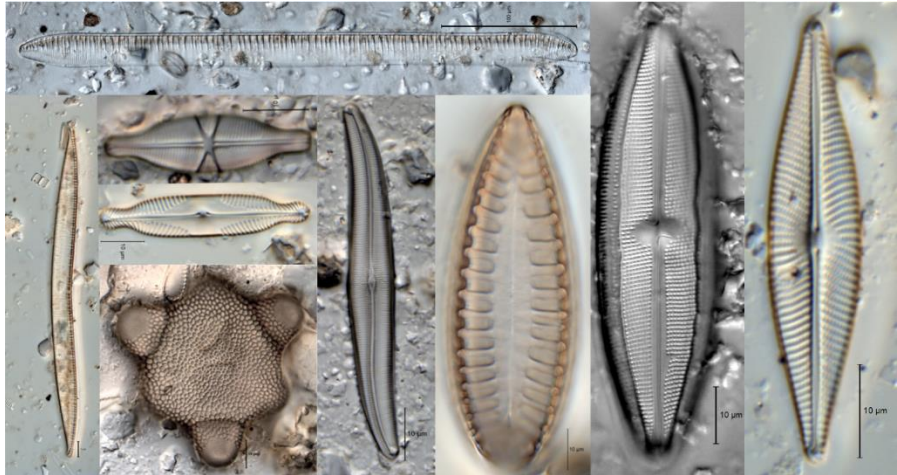
December 2015

## ES Project Cost

\$7,800.00

## ES Key Staff

Brad Bartelme  
Melissa Vaccarino  
Rhonda Mendel  
Nicole Jordan



EnviroScience, Inc. provided sorting, identification, and analysis of benthic macroinvertebrate and periphyton samples collected from several streams located in the southeastern bioregion of Mississippi. EnviroScience effectively completed analyses in an expedited time frame of 20 days for the periphyton samples and 45 days for the macroinvertebrate samples.

Macroinvertebrate biologists processed biological samples following protocols within USEPA's Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers, Chapter 7: Benthic Macroinvertebrate Protocols (EPA 841-B-99-002). Benthic macroinvertebrates from kick samples were sorted and identified to the lowest practical level of taxonomic resolution (in most cases, genus/species).

Fifty-nine macroinvertebrate taxa were identified, including *Dubiraphia*, *Polypedilum*, *Argia*, and *Tanytus*. Samples were analyzed using the Mississippi Benthic Index of Stream Quality (M-BIQ).

Phycologists processed samples following protocols within USEPA's Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers, Chapter 6: Periphyton Protocols (EPA 841-B-99-002). Algae from composite samples were subsampled for analysis of soft algae and diatoms, and all algal taxa were identified to the lowest practical taxonomic level. Overall, forty-eight algal genera were identified, including *Pseudostaurosira*, *Navicula*, *Amphora*, *Achnanidium*, and *Leptolyngbya*. All taxa were identified to genus and most individuals were identified to species level. Species abundance was expressed in terms of relative abundance. Following completion of laboratory analyses, EnviroScience provided all macroinvertebrate and periphyton data in spreadsheet format.