Emerald Shiner Habitat Conservation and Restoration Study in the Upper Niagara River:

Importance for Sport Fish, Common Terns and Public Education

Buffalo State
The State University of New York

Research Team

BUFFALO STATE
The State University of New York

Great Lakes Center
Buffalo State

Principal Investigators:

A. Pérez-Fuentetaja, M. Clapsadl, R. Snyder

Collaborators:

T. DePriest, M. Wilkinson, D. Einhouse

A. Hannes

R. Kraft

D. Potts, K. Hastings

S. Delavan

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

US Army Corps of Engineers

BUFFALO NIAGARA RIVERKEEPER

BUFFALO STATE
The State University of New York

University at Buffalo

The Emerald Shiner Connects the Niagara Ecosystem

Habitat Modifications

- Damming
- Water Diversions
- River-Channel Modifications
- Shoreline Alterations

Impacts on Shiners

- Migration Obstacles
- Water Velocity (e.g. Broderick Park)
- Water Temperatures
- Mass Mortality (Tributaries)

What we don’t know

- Habitat Use
- Timing of Migration
- Reproductive Success
- Year-Class Formation
- Migration Success

Research Objectives:

- Determine how the emerald shiners utilize the river.
- Determine their importance in the diets of sport fish and common terns.
- Determine the genetic make-up of the shiners that migrate in the upper Niagara River.
- Migration routes for adults and juveniles.
- Determine key habitats for the life-stages of the shiners.
- Public education about the importance of the emerald shiner in the river ecosystem.

Outcomes

- Restoration Needs
- Fish Management
- Outreach and Education

Proposed Sampling Sites for Emerald Shiners in the Upper Niagara River

by Kathleen Hastings, Great Lakes Center, 2013