Population Assessment of the New York State Threatened 
Enneacanthus obesus (Banded Sunfish) Conducted in Zeke’s Pond and the Peconic River.

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Abstract

Enneacanthus obesus (Banded sunfish), the smallest species of sunfish inhabiting rivers, lakes, and ponds along the Atlantic coast, has been declared a threatened species in the state of New York. Approximately 200 sunfish were relocated to Zeke’s Pond in 2004 during the remediation of the Peconic River, which runs through Brookhaven’s property. However, in 2005 a drought nearly eliminated the relocated sunfish population. A population assessment was conducted in the Peconic River, and Zeke’s pond, which is found on the eastern most point of Brookhaven’s grounds. To capture and assess a sampling of the sunfish population, a seine net, a dip net, a bucket, a measuring tape, a pen, and an all weather writing tablet were utilized. The first step was to complete a survey of the aquatic vegetation by calculating the amount of vegetation in the immediate area that was to be seined. The sunfish were collected from the seine net, stored in the bucket, counted, measured, and then returned safely back to the water. No sunfish were found in the Peconic River. An area of approximately 25785.5 ft.² was covered in Zeke’s Pond during a series of thirteen visits resulting in a total of eighty seines. Final fish counts yielded 369 sunfish, sixty-six catfish, and thirteen pumpkinseeds. The estimated total population is 4,027, which is 4% of the previous study’s count of 95,900. Further studies are necessary to document the life cycle and population trends of the Enneacanthus obesus.

Materials and Methods

To capture and assess a sampling of the sunfish population, the materials required included a seine net, a dip net, a bucket, a measuring tape, a pencil, and an all weather writing booklet. Once in the water the preliminary procedure consisted of completing an Aquatic Vegetation Survey (AVS) by calculating the amount of Submerged Aquatic Vegetation (SAV) in the area that was to be seined. The aquatic vegetation survey was conducted by visually observing the quantities and densities of vegetation present in the area to be seined. Upon observation a rubric was utilized to calculate the amount of vegetation present in each seining site.

Results

An area of approximately 25785.5 ft.² was covered in Zeke’s Pond during a series of thirteen visits resulting in a total of eighty seines. Final fish counts yielded 369 sunfish, sixty-six catfish, and thirteen pumpkinseeds.

Discussion/Conclusion

The estimated total population is 4,027, which is 4% of the previous study’s count of 95,900. The sizes of the fish also contrasted between initial and final runs. In runs one through sixty-seven the sizes of the fish caught ranged from 12mm to 57mm. Most of the fish caught in the final runs were very small in length in comparison to the fish caught initially as a result of the fish spawning during the week of July 1, 2007. Schools of fry could be observed during that time. Due to this fact, seining had to be suspended for a week to allow the fry to grow. Further studies are necessary to document the life cycle and population trends of the Enneacanthus obesus.

Acknowledgements

We would like to thank the Department of Energy, National Science Foundation (NSF), Brookhaven National Laboratory, Science Undergraduate Laboratory Internship (SULI) and the Office of Educational Programs (OEP) for facilitating us with this internship. Our gratitude goes out to Dr. Timothy Green, our team leader, and our professor and mentor Dr. Marty Kambhampati for their guidance. We sincerely appreciate the associates and staff of OEP and the Environmental Services Division of Brookhaven National Laboratory for their support and assistance. Lastly, we would like to thank Southern University at New Orleans for this opportunity.

References


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