Undergraduate Internship Project #3 of 10 for FY08

Intern Erin Dilworth’s project, co-sponsored by the DWRC and the UD’s College of Agriculture and Natural Resources, was titled “The Effect of Riparian Forested Corridors on Fish Biodiversity in Suburban and Agricultural Landscapes.” She was advised by Dr. Christopher Williams of the UD’s Department of Entomology and Wildlife Ecology.

Abstract

Vegetative riparian corridors have proved to be essential to protecting the health of aquatic ecosystems, and consequently, the biodiversity within such systems. However, there is no cited data that demonstrate how wide a riparian zone needs to be in order to most efficiently protect these ecosystems. Fish were sampled in first and second order streams in the White Clay Creek watershed in order to compare riparian corridor width with diversity and richness. It was found that stream temperature range decreased with increased buffer width and canopy coverage; and species richness and diversity increased with increased stream temperatures. The latter results could be in part due to the increased presence of more generalist fishes with increasing stream temperature. These results should be taken into consideration for future development in suburban and agricultural landscapes.