

# Exploring Biodiversity at Delcastle Technical High School

## Nate Nazdrowicz



PhD Graduate Student  
University of Delaware  
Department of Entomology and Wildlife Ecology

## Brian Gross



Biology Teacher  
Delcastle Technical High School



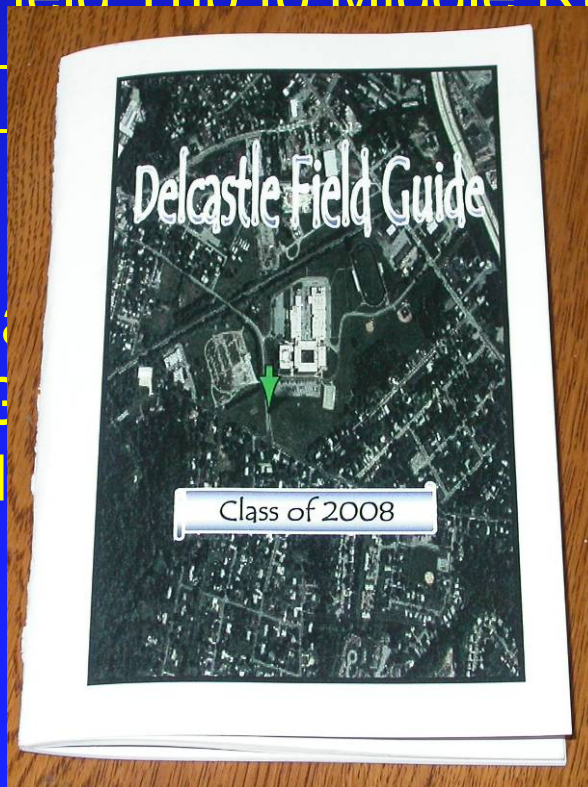
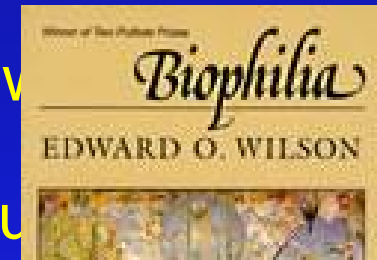
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# Advanced Biology (12<sup>th</sup> Grade)

## Biodiversity Unit









- Read E. O. Wilson's Biophilia
- Created a field guide to plants and v on Delcastle property
- Field Trip to Middle Run Valley Natu



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| HERBACEOUS PLANTS  |  |
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| <p><b>Chicory</b><br/><u><i>Cichotium intybus</i></u><br/><b>Habitat preference:</b><br/>It originated in Europe but was naturalized in North America where it has become a roadside plant. Often found in the fields and open ground.</p>                 | <br>                 |
| <p><b>Cool Stuff:</b><br/>The roots are baked, ground, and used as a coffee substitute. It's also known as coffee weed, succoby, and blue sailors.</p>   | <p><b>Description:</b><br/>Blue or lavender flowers. Green stems and roots are hardy and thick.</p>  |
| <p><b>Daisy</b><br/><u><i>Bellis simplex</i></u><br/><b>Habitat preference:</b><br/>Daisies can be found almost any where in meadows, pastures, roadsides, and wastelands.</p>   | <br>             |
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| <p><b>Daisy</b><br/><b>Cool Stuff:</b><br/>These commonly found flowers are noticeably white with yellow centers. They consist of many small petals.</p>   | <p><b>Description:</b><br/>These commonly found flowers are noticeably white with yellow centers. They consist of many small petals.</p>   |
| <p><b>Pokeweed</b><br/><u><i>Phytolacca americana</i></u><br/><b>Habitat preference:</b><br/>It grows in rich pasture lands, in recently cleared areas, along fence-tows, in waste places and open spots in woodland.</p>                                  | <br>                |
| <p><b>Cool Stuff:</b><br/>Animals do not voluntarily eat this plant unless there is no other forage available. Poisonous plant, the roots are the most poisonous. The Declaration of Independence was written in fermented pokeweed ink.</p>               | <p><b>Description:</b><br/>Can grow from 1 to 10 feet tall. Stems are often pink or red. The flowers that are greenish white will develop into black berries. This shrub is poisonous.</p> |
| <p><b>Wool Grass</b><br/><u><i>Scirpus cyperinus</i></u><br/><b>Habitat preference:</b><br/>Wool grass is commonly located in both sandy and non-sandy wetlands, including marshes, swamps, slough, sedge meadows, gravelly seeps and border of ponds.</p> | <br>             |
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# Measuring Insect Diversity Lab

## Study Objective:

- Compare effect of disturbance on insect diversity between Delcastle and Middle Run
  - Emphasis on proper scientific data collection and analyses

Delcastle



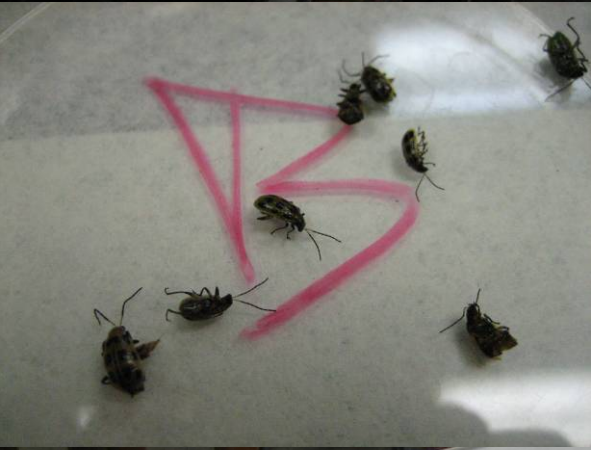
Middle Run



## Tasks:

- Collect 16 sweep net samples per site
- Sort all insects to “species” level
- Analyze data
  - Species richness
  - Species diversity
  - Community similarity
- Summarize results in a scientific report





# Conclusions

Many students struggled with task

Students worked together

Subdivided work to fit each student's strengths

## Attitudes Toward Biodiversity

### Pre-course

- Wide range: very interested to not at all interested
- “I’m not a wildlife person, I’m more of a purse and mall type girl.”

### Post-course

- “At first I didn’t care anything about the biodiversity in our environment, but after our lessons, I’ve learned a lot and care for it more.”
- “There were over 100 types of bugs from a couple swipes of a butterfly net. It was just insane.”

# Acknowledgments

- Advisor: Dr. Jake Bowman
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