

St. Norbert Abbey: Between Year Comparison of Small Mammal Species Dynamics

Mya McDaniel, Olivia Hanson (Olivia.hanson@snc.edu), and Adam L. Brandt; St. Norbert College

Long term biological studies spanning several years are rare but a key part in analyzing trends which may not be obvious in a single season of research. Here we examine data collected between 2017 and 2019 concerning small mammal populations dynamics at the St. Norbert College Field Station (De Pere, WI). Using a mark and recapture method, small mammals were measured and tagged to supply data representative of the populations residing around the field station. With this data, we determine how small mammal populations vary from year to year and respond to changes occurring in and around the ecosystem that the St. Norbert College Field Station offers. The main goal of this research project is to monitor the population dynamics and trends occurring over time. Through this work we aim to provide stakeholders with the necessary data to ensure proper conservation measures are taken.

Anuran occurrences in high and low water within the Lower Green Bay and Fox River AOC

Britney Hirsch (hirsbl11@uwgb.edu), Erin E. Gnass Giese, and Robert Howe; UW-Green Bay's Cofrin Center for Biodiversity

Great Lakes water levels fluctuate by a few centimeters across hours or by over a meter across years due to precipitation, seiche, and other climatic factors, which can lead to challenges in restoration and land management in the coastal zone. These water fluctuations can affect coastal wetlands and the organisms that use them, including anurans (frogs/toads). We analyzed anuran point count data collected for the Great Lakes Coastal Wetland Monitoring Program at 15 sites in the Lower Green Bay and Fox River Area of Concern (AOC) along Green Bay, Lake Michigan from April through June. Using these data, we examined how low (2011-2014) and high (2016-2019) water levels affect the occurrences of American toads (*Anaxyrus americanus*) and green frogs (*Lithobates clamitans*). American toads responded negatively to increasing water levels with occurrences declining dramatically along the west shore in the AOC; whereas green frogs showed an opposite trend and increased in occurrence as water levels increased. These results can assist with restoration efforts and the assessment of ecological conditions in the Great Lakes coastal zone and the AOC. To provide adequate breeding anuran habitat across varying water levels, it is important to protect and manage a variety of wetlands, some that experience natural water level fluctuations and others that are more protected or have artificial water control structures (e.g., dikes, pumps).

See a bonus video of Britney explaining her poster: <https://www.youtube.com/watch?v=m3b20OseMYg>