

2014 Heidi Lynn Sculthorpe Summer Research Grants

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Heidi Lynn Sculthorpe Summer Research Grants are given in her memory. A lifelong resident of the Monmouth County shore area, she loved to surf and spend time at the beach. Her father, Robert Sculthorpe, is a graduate of Monmouth University and Former Chairman of the University of the Board of Trustees. The grants are awarded based on the students' achievements and his or her research goals.

Rezwan Ahmed – *Shore Revenue Mismanagement and Unequal Distribution within Asbury Park.*

The city of Asbury Park has witnessed a renaissance within the last decade. Housing prices have gone up, businesses have returned to the boardwalk and tourists flock to the gorgeous beach. However, the southwest corridor of Asbury Park is one of the poorest neighborhoods within the State. This study examines if Asbury Park is doing enough with their new financial resources to alleviate the socioeconomic problems within the rest of the city or if a policy of forced gentrification is occurring.

Mentor: Dr. Charles Cotton

Mara Cige and Mitch Mickley – *Zooplankton in the Barnegat Bay.*

Assisting with zooplankton sampling in Barnegat Bay and oyster habitat restoration in western Raritan Bay and Barnegat Bay. Continuously reading water level gauges were installed in Lake Takanassee and Wreck Pond to track water level changes over time and the effect of rainfall. The main project was monitoring water quality and sediment depths along the Whale Pond Brook watershed. From the data that was collected and observed from years, they determine the overall stability of the ecosystem and to establish future remediation plans.

Mentor: Mr. Jim Nickels, UCI Marine Scientist

Toni Ann Keiling and Taylor Rodenberg – *Challenges in Viticulture.*

Viticulture is the art and study of growing grapes for wine production. During this past summer, some of the vines have become infected with a fungus. They employed a fungicide regime to reduce the infection and prevent spread of fungal spores. Explored various pest management strategies to deal with herbivore pressures. After implementing all of these measures to ensure the health of our vineyard, we are hopeful for the vineyard's first successful crop to be harvested this fall.

Mentor: Dr. Pedram Daneshgar

Megan O'Donnell – *The Eastern Oyster, *Crassostrea virginica*.*

The Eastern oyster, *Crassostrea virginica*, is a species that has been nearly eradicated from the Hudson River Estuary due to past poor water quality. This study was undertaken to determine the optimal restoration area for the eastern oyster in the Hudson River Estuary (HRE). Megan's research consisted of documenting and collecting oysters by foot during low tide in various parts of the estuary. Areas include the Hackensack River, Arthur Kill, East River, Hudson River and Raritan Bay. Collected oysters were shucked and measurements of shell height, length, weight and wet and dry meat weight were recorded to be used for statistical analyses.

Mentor: Dr. Tiffany Medley