Angie Wilson

February 4, 2014

**Past Environmental Studies Class Projects**

**Botany**

The Spring 2014 Botany class is doing research and experiments to decide which species of plants to plant in the landscaping around the new addition, Sanders Hall. The main objectives in choosing the plants are that they will be native, aesthetically pleasing, and they will help to absorb and retain any storm water that runs off the building allowing it to soak into the ground to replenish the ground water supply as opposed to running into the sewer system. All in order gain points for LEED (Leadership in Energy and Environmental Design) certification!

**Ecology and Conservation Biology**

The Ecology and Conservation Biology classes have been participating in an ongoing frog survey at The Nature Conservancy’s constructed wetlands on Franklin Farm near Bloomington-Normal during the Spring 2012, Spring 2013, and potentially the Spring 2014 semester. The students in the classes memorize frog calls, learn how to identify the different species of frogs and toads that are found in the area, and team up with local amphibian experts, Doug Holmes from the Peoria Zoo and Dr. Capparella from Illinois State University, to actually go out into the field at night to try to catch, identify, log, and release the amphibians. The students also use the frog calls to identify what type and approximately how many of the critters are out there.

The point of this survey is to determine if frogs are using constructed wetlands as breeding habitat and if so, which ones. Interestingly, these particular wetlands were built to capture fertilizer and pesticide run-off from agricultural fields so one of the study’s questions is whether the water is affecting the health of the frogs. Excess nitrogen and phosphates in the water has been shown to contribute to deformities, such as extra limbs in frogs. We have only found one frog out of hundreds with an extra leg so far.

**Research Methods of Environmental Studies and Environmental Studies Capstone**

The purpose of these classes was to not only learn how to do research, but also to help others in the community. The Fall 2012 Research Methods class decided to research a topic important to everyone: recycling within the community. The students developed a survey with the help of the City of Eureka, psychology professor Ann Fulop, and staff at ADDWC (Association for the Developmentally Disabled in Woodford County), a local recycling facility. They passed the survey out to a random selection of residents in the City of Eureka to see what the communities’ stance on recycling was. As it turned out a lot of people didn’t even know there was a recycling center in Eureka!

The Spring 2013 Environmental Studies Capstone class decided to continue this project and assisted ADDWC and IDOT with getting a sign posted on Rt. 117 in Eureka to point to the direction of the local recycling center. The class also worked with ADDWC and Eureka High School’s environmental club on electronic recycling awareness. This led to a successful day of electronic recycling at a music festival held by Eureka College’s environmental club (SAGE) on Earth Day last year. By working with all of the different stake holders in regard to waste management and recycling, these classes helped to build stronger relationships within the community and taught the students real life skills in areas that they hope to go into after graduation.

**Microbial Ecology**

During the Fall 2013 semester the Microbial Ecology class not only went on a ton of awesome field trips to better understand how many different things are affected by microbes, like going to a dairy farm to see how cheese is made, visiting Argonne National Laboratories in Chicago, and visiting Illinois State University’s farm to see how they composted food scraps from the university’s dining halls, but they took part in The American Gut Project, which takes pooh samples from people across the country to sequence the DNA of the microbes that inhabit their guts. The class found out what types of microbes call their digestive tract home, and then researched those microbes to learn more about them and to see how they could potentially affect their bodies or the environment.

Although this project did not focus solely on sustainability, it allowed the students to be exposed to the microbial world and see how important these little critters are ecologically, and medically. By going to these different places that use microbes to solve environmental problems (algal blooms, oil spills, and soil content), build businesses (cheese and penicillin production), and reading articles and discussing everything else microbial, the students learned of new areas of study and possible job opportunities, which is always good for graduating college students! ☺