Week 10: Wrapping Up

Posted on July 31, 2015 by kap252@cornell.edu

“As Summer into Autumn slips
   And yet we sooner say
‘The Summer’ than ‘the Autumn,’ lest
   We turn the sun away,

And almost count it an Affront
   The presence to concede
Of one however lovely, not
The one that we have loved —

So we evade the charge of Years
   On one attempting shy
The Circumvention of the Shaft
Of Life’s Declivity.”

-Emily Dickinson

7/31/2015

This week was my last week working for Cornell Cooperative Extension, the lab, and the Plantations. This summer has really flown by!

To finish my time here, I did another check on the plants (they are going to stay in the ground even after I’m gone), and entered the data on their presence/absence and whether they had been browsed. I helped some more with the cattle tanks, and I helped Amiri again with his project on rodent herbivory. Other than the very hot (90 degrees!) day we had on Wednesday, I was out in the field working every day on one project or another. It felt good to be helpful during my last week.
Per usual, I found some more cool critters this week.

Juan, Amiri, and I working on setting up cattle tanks

A baby praying mantis out at the cattle tanks.

Though I’m having a hard time believing it, it’s already almost August. School starts in less than a month, and my internship is just about over. Before long, I will be a senior, taking my final classes at Cornell and worrying about what I’m going to do after graduation. It’s all happened so fast!

But before I get too ahead of myself, I still have a few weeks before the first day of classes. It’s time to relax, and recharge before senior year begins!
Week 9: A lot of sneezing

Posted on July 27, 2015 by kap252@cornell.edu

7/24/2016

This week, I was out sick for two days with a rough cold. But, the other three days of the week were productive, and I made progress on developing the soil allelopathy study that I’m undertaking with the lesser celandine.

On Monday, my boss Carrie and I went to Filmore Glen State Park to meet with the regional biologist and director of FORCES (Friends of Recreation, Conservation, and Environmental Stewardship). We discussed current issues involving invasive species in State Parks, and ways to get college students engaged in the fight.

Though I was out sick on Wednesday and Thursday, Tuesday and Friday I worked more on the cattle tanks, and on getting my plans ready for collecting soil from sites with lesser celandine and preparing the study. Hopefully next week I won’t be sick again, and can make some more progress on the project as the summer nears its end…

— Me filling up another cattle tank
7/17/2016

After a nice relaxing week of vacation, I am happy to be back in Ithaca, continuing work on my project and on other projects in the lab.

For starters, this week was Invasive Species Awareness Week! To celebrate and to raise awareness, I set up a booth at the Nevin Welcome Center in the Plantations. More than 800 people visited over the week, and all of my pamphlets and handouts about invasive species were happily taken! Hopefully, this display helped spread the word about invasive species in New York, and what residents can do to help stop the invasion.

As for my transplants, this week I took the first measurements for my data records. I recorded presence and absence of each plant, and whether or not they had been browsed. For the most part, my plants were still present and not browsed. This was great news, because I was expecting all of them to be eaten by deer, quickly!

In addition to checking in with my plants and taking measurements, I spent some time in the field with another person in the lab, Amiri, working on his project on rodent herbivory. We set up cages with sunflower seeds inside at four different sites, with 40 cages at each site. They were long days with a lot of hiking and carrying cages, but at the end of the week, it feels great to have made so much progress. And, we found some cool creatures in the woods, which is always fun for me!
A baby newt, an eft, we found in the field while setting up cages

Week 6: A lot of planting

Posted on June 26, 2015 by kap252@cornell.edu

6/26/2015

This week, I transplanted 160 seedlings into their new home at a Cornell Plantations’ natural area near Beebe Lake. After setting up the plots for this site a few weeks ago, I was ready for the next step! But, before the plants could go in, they all had to be measured, recorded, and allowed to grow a little bit bigger before being transplanted.
The transplanting process took an entire day, but after the first few locations I got into a rhythm. It was very systematic, with each species at the same orientation by alphabetical order at each location, and each marked by a golf tee, one of four colors, in the same way at each location (again, by alphabetical order). So, the first plant at each pipe was my *Eurybia divaricata*, planted in the upper left corner, marked with a green golf tee. The second was *Solidago flexicaulis* in the upper right corner, marked with an orange golf tee, *Thalictrum pubescens* in the bottom left with a pink tee, and *Zizia aurea* in the bottom right with a white golf tee.
Even though my back hurt a bit after planting four plants each at 40 different locations, I was proud of everything I had accomplished up to this point. I’m happy to be putting plants in the ground and moving forward with the research!

— A close up of *Thalictrum pubescens*, marked with a pink golf tee

— All of my plants in the ground at their respective locations!
This week, I spent much of the week returning to sites and flagging out potential tree lines for fencing. This involved measuring areas of 30 meters by 30 meters, and finding suitable trees that could be used once the fencing comes in for posts. It was a great chance to spend some more time outside, and to continue to familiarize myself with my sites.

Additionally, I had to return to the plantations this week to do some more transplanting. A lot of my *Zizia aurea* plants were unhappy with their initial transplants into small cells, so I needed to transplant about 35 new individuals and record their measurements into my data sheet. This only took a day of work, and wasn't too taxing. And again, it gave me an opportunity to be outside, working with plants.

As I was still waiting for my fencing to come in, I had some free time which I spent working on other projects in the lab. One of these projects is on deer herbivory, where oak trees are planted both inside and outside of fenced areas and growth is then compared between the sets of oaks. Another one is with a student who is working to identify local mushroom species. By helping with these projects, I got to visit new sites I hadn’t been to, and learn more about local environments and habitats in Ithaca. I can’t wait to see what other things I learn this summer!
Some mushrooms we found out in the field at Sapsucker Woods!

Week 4: A lot of measuring

Posted on June 26, 2015 by kap252@cornell.edu

6/12/2015

This week, I measured and entered data on over 800 individual plants that are to be transplanted into the field sites for our experiment. After typing up a draft of my methodology, however, others of us at the lab decided that it would be best to drop one of my transplant species, Penstemon digitalis, for fear that it would not survive well in the woodland areas my plots are set up in. While this lightened the load of work I had for the week, it also meant that some time had been spent preparing the *P. digitalis* for no reason. But, as is often the case in science, sometimes things don't always go as planned.
When I wasn’t in the lab measuring plants, I was out looking at more sites for the study. One of these sites turned up at Sapsucker Woods, which is owned by the Cornell Lab of Ornithology. Before finding the *Ranunculus ficaria* I was looking for, I got to enjoy some of the beautiful scenery and all of the birds in their trails. Working with an invasive plant is great, because it gives me so many opportunities to be outside!

Next week, after all of the measuring is done and the last plots are set up, we will be fencing off our sites to prevent deer from eating my transplants, and then getting the transplants into the field. It should be a productive week!
Week 3: Setting up plots

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6/5/2015

This week, much of my days were spent out in the field finalizing plot locations, and then putting PVC pipes into the ground to start marking out plots! I am excited to be starting the field work of this experiment.

So far, we have put in PVC pipes at our site near Beebe Lake, and our site at Palmer Woods. This process consisted of putting 20 PVC pipes on a line transect through an area with lesser celandine, and then an associated set of 20 PVC pipes in an adjacent area without lesser celandine. As the goal of the study is to determine the effects of lesser celandine on native plants, we are going to transplant native seedlings into both the areas with the celandine and the areas without it to compare how they fare.

— One line transect within the lesser celandine at our plot near Beebe Lake.
When I wasn’t setting up plots, I was at the Plantations’ Greenhouses potting my native plants into individual cells so they can get ready to be transplanted into the field sites. But before they’re ready to go, I’ll be setting up more plots in our other study areas, and then taking measurements on the plants. We are making progress!
This week has consisted of more reading (a lot more, as Dr. Blossey has sent me numerous papers…), and more searching for lesser celandine sites. For an invasive plant, it isn’t always that easy to find.

Lesser celandine typically flowers at the beginning of spring, and then senesces at the end of June. So for now, it is just a small green leaf that looks frustratingly similar to garlic mustard, another rampant invasive in the area.

Our luck increased, however, when we came across a very dense carpet of lesser celandine near the Ag. Quad, uphill from Beebe Lake. The site will be perfect for the experiment where we assess the effect of lesser celandine on native plants that are to be transplanted into specific quadrats.
Another great site has also been found in Palmer Woods, another Natural Area belonging to the Plantations. These two, along with the potential sites at Fall Creek, Six Mile Creek, and Renwick Woods, will become very familiar to me in the next few months!

Week 1: A lot of reading

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5/22/2015

“…There is a flower, the lesser celandine,
That shrinks, like many more, from cold and rain;
And the first moment that the sun may shine,
Bright as the sun himself, ‘tis out again!
When hailstones have been falling, swarm on swarm,
Or blasts the green field and the trees distrest,
Oft have I seen it muffled up from harm,
In close self-shelter, like a thing at rest…”

-William Wordsworth

This week was my first week back in Ithaca after a semester abroad in Tanzania, and my first time meeting all of my new bosses in person. After learning everyone’s names and acclimating to Ithaca’s cold weather, I got started with my project.

Lesser celandine, or *Ranunculus ficaria*, is an invasive plant from Europe and Western Asia now found in the Northern U.S. and Canada. It lives primarily in shady, moist areas, and has a network of resistant tubers underground that make it especially hard to eradicate.
In some of the Plantation’s Natural Areas, it has been treated with an herbicide, which has been somewhat successful. However, herbicides are not always the best treatment option, because they may also harm native species. This summer, the focus of my research will be to assess this harm by determining how damaging lesser celandine is to native plants, and to gauge the effects of herbicides on both lesser celandine and surrounding natives.

A few days this week we started looking at sites to locate good areas with lesser celandine for the project, but when I haven’t been out in the field I’ve been reading and analyzing literature about lesser celandine.
and previous studies to insure that I'll be fully prepared for this one!

-Kelsey Poljacik

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