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Conservation Internship 2007
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I headed into my internship for the summer of 2007 feeling a little differently than had many of my predecessors. Their reports uses words liked apprehensive, and excited tempered with nervousness. Truthfully, I headed to Picabo, ID with one clear and unwavering emotion: Desire. It was the desire to catch huge trout! I had never been to Idaho before and all I knew about Idaho was potatoes, trout, and Hemingway. And Silver Creek preserve had close ties to two of the three items (though I did eat vast quantities of the famous potatoes throughout the summer-including some delicious roasted red ones with the Blumensteins). I headed into the summer figuring that I would gauge my success by the pound weight of fish I caught, but in the end realized that it was what I learned about conservation, successful administration of a non-profit and the hard work that it takes to make it happen that defined this as a successful summer. And the fishing wasn't too bad either!

I arrived in Picabo, ID on May 26th along with 141 other fisher folks for opening day of fishing season at Silver Creek Preserve. This date also marked the arrival of some special local celebrities: the famous brown drakes. Brown Drakes are the largest species of mayflies found on Silver Creek. Their emergence and subsequent spinner fall cause both local trout and fly fishermen to go absolutely nutty. So every night for the first week at the preserve, I could be found out on the water until 2am setting the hook by sound, untangling my line by headlamp and catching some of the biggest and healthiest trout of my life.

But alas, the summer wasn't all moonlit trout for me. The Nature Conservancy's mission is to "Preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive" and fulfilling my small part of this mission took hard work. My responsibilities included: water quality, habitat, and biological monitoring, irrigation, weed control, design and implementation of a personal project, preserve maintenance, outreach, and miscellaneous other duties.

Water quality, habitat and biological monitoring: Successful management of a nature preserve requires attention to minute details and a good historical record of changes. Collecting data to update these records were a large part of my job. Measuring water quality on Silver Creek happened twice monthly at 5 different locations on the creek and its tributaries. Flow rates, depth and width measurements were taken to determine discharge. Turbidity, temperature, pH, dissolved oxygen, concentrations of nitrates, and phosphates were also measured to portray an in depth view of stream health.

The spring of 2006 brought flooding across the Wood River Valley and changed the look and layout of Silver Creek. Most notably the floods scoured the once silty bottom of Stalker Creek down to rocks and re-deposited the silt in banks along Silver Creek. I participated in the mapping of these silt banks by measuring their areas, GPSing their locations, and taking photos to document their appearance. The preserve's watershed manager believes that the creek is trying to narrow itself and the growth of these silt banks indicates that. She hopes that we can aid its process by planting silt banks with native grasses and sedges in order to keep the silt from continuing to wash down the creek and filling in Kilpatrick Pond. The silt bank mapping is necessary to determine the quantity of plants that would be necessary to carry out this project and to what extent re-vegetation is occurring naturally.

USGS and Idaho Fish & Game conduct fish monitoring on Silver Creek every three years and 2007 was in the cycle. This meant two weeks of an electrofishing "mark and recapture study", some of which occurred in the middle of the night. Electrofishing may have been my favorite job requirement. Netting the floating fish was fun and wet, and measuring and weighing the fish gave a good view of what sort of fish were in the creek. As a huge proponent of "catch and release", I was torn when they asked me to kill a large portion of the fish we caught. Ultimately, I understood the importance of getting an accurate age for the fish (by measuring the layers on its ear bone) to look at survival rates for different brood years.

The last area of monitoring involved invertebrate sampling. Dayna, the Preserve's manager had each intern write a goal for the summer at the beginning of the internship. My goal focused on learning about the macro-invertebrates found in Silver Creek so as to help me better understand the diversity of aquatic life, hatch cycles and ultimately make me better at flyfishing. So invertebrate sampling interested me a great deal. I liked scrubbing the insects off the rocks and picking through the algae. The samples had to be sent off for identification by professionals, but the folks from USGS helped me with basic identification to family and genus.

In the end, all of the data we collected is kept for use by the Watershed and Preserve Managers for determining management action and also available to the public online. We also created graphs of water quality data and posted them at the visitor's center.

Irrigation: Much of the land in the lower Wood River Valley is crop land growing alfalfa. However, this past spring, the alfalfa field that abutted the Preserve's office was turned over to the Nature Conservancy to be reestablished with native plants. By the time I arrived, it had already been seeded and so my job was limited to irrigation, specifically moving wheel-lines. Twice a day we unhooked the hoses, rolled the wheel-lines 3 turns ahead, and re-hooked the hoses to the next pipe. It was wet and muddy and the wheel lines always needed adjusting, but happily I can say that I saw the field go from dirt to green in my 12 weeks in Idaho. Although, some of the growth was in the form of weeds, there was also good establishment of the native grasses and a positive outlook for greater establishment next year.

Weed Control: Noxious weeds are one the greatest threats to public lands in today's western states. Idaho is taking a very aggressive stance on their control. In

addition to numerous TV and radio advertisements warning the public about the spread of noxious weeds, Blaine County has a Bureau of Weed Control with a task force that sprays from ATVs and issues citations for not controlling noxious weeds on private property. Previous interns had done a lot of mapping of weed locations. To do our part in their control, 2007 Silver Creek interns suited up in HazMat suits and sprayed weeds. The most prevalent weed on the Preserve is Canada Thistle (*Cirsium arvense*) and as a result of its extensive rhizome system, it is also the most difficult to kill. We sprayed the chemical Curtail. Success could be viewed in the form of curled up, sickly looking plants, but these were almost always surrounded by new, young thistle shot up from the rhizomes. For the future, I hope that more research can be done to find a more effective way to kill the entire plant, so that we can reduce the prevalence of the weed, not just slow its spread.

Design and Implementation of a Personal Project: Each summer intern had the opportunity to design and carry out a personal project. For my project, I created a display for the Visitor's Center. It showcased a collection of flies that I tied, most of which had previously caught fish in Silver Creek or the Big Wood River. The project allowed me to further my summer goal of exploring the different macroinvertebrates found in the area, test my work in a very hands-on way and be creative. I am very pleased with the way it turned out and happy to have it as my legacy at Silver Creek Preserve to share with visitors into the future.

Outreach: Silver Creek Preserve has the stigma in this valley of being a place exclusively for flyfishing. And although flyfishing is and will continue to be incredibly important to the Preserve, the managers are hoping to expand the image. Steps were taken this summer to accomplish this goal mainly through outreach. Silver Creek Day attempted to attract families to the Preserve with a scavenger hunt for kids, bird and nature walks and a canoe float trip accommodating 35 people. A lot of advertising was required throughout the valley to make the day a success.

Outreach also included helping local ranchers with spraying weeds on their property and helping them to clear brush and trails. I was continually impressed by the way that organizations in the area worked together. We participated in the noxious weed "Spray Days" of some local Land Trusts and were happy to see that when we planned a "Spray Day" of our own, about 15 people came out to help us. And when the Environmental Resource Center contacted The Nature Conservancy with a need for medical staff for their weeklong EcoCamp, Dayna happily lent me out to them. As a wilderness EMT, I administered First-Aid, handed out prescription medications and dealt with all medical issues for the week. When I wasn't helping campers I got to attend classes on stream health, birds of the area and night sky viewing. It was a very enjoyable (though quite tiring) week where I learned a lot and represented the Nature Conservancy to the best of my ability.

Maintenance and Miscellaneous Other Duties: It takes a lot of time, effort and money to keep Silver Creek Preserve looking good and running smoothly. This includes cleaning of the snail stations three times per week to stop the spread of New Zealand Mud Snails. Fences needed to be fixed and signs needed to be hung. Plants grew

voraciously which meant that trails needed to be cleared often. And unfortunately, outhouses did need to be cleaned. These duties took a big chunk of my time, but I enjoyed getting to work outside and was ultimately very proud of the farmer's tan I acquired.

Work at Silver Creek Preserve was incredibly varied, which kept it interesting for me. No days were the same and I appreciated the diversity and breadth of things I learned. This summer has not necessarily changed my career plans (I still sent in my Medical School application), but it has made me appreciate the hard work and dedication that goes into the preservation of the "last great places on Earth". And if there was any question as to whether or not this had been a successful summer with respect to all my definitions, the following event sealed the deal. At midnight of the night before my departure, at an undisclosed location on the creek, I hurled a huge fly that resembled a mouse into a good-sized pool. It sounded like someone had dropped a bowling ball in the water when the trout took the fly. He then turned and ran with it. Even with a heavy leader on, the fight took awhile. When my friend Paddy (a fishing guide in Sun Valley for the past 4 years) finally turned on his light to help me net the fish, he just started shouting "OH MY GOD", "OH MY GOD" and shaking. As it turned out, I had just landed a 30-inch, 10-pound Brown Trout (my biggest ever...by far).

So my summer ended on an unforgettably good note. I am thankful to the Blumenstein family for their support of this internship. This was a wonderful experience for me and I can't imagine anything I would have rather done with my summer. I would recommend this internship to anyone who wants to work hard, be outside in a beautiful part of the county and try new things. Or possibly I won't recommend it to anyone and I will try to get it again next year myself!