

Silver Creek Preserve  
The Nature Conservancy of Idaho  
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When I was informed that I was accepted as the Charlie Blumenstein Intern for 2005 I was very excited. It was nearing the end of my senior year and I felt very fortunate that my first job, my biology degree fresh in hand, would be to actually work in the field and put into practice the techniques and ideas that I had studied in school. In addition, I would get to see new conservation techniques and learn how a non-profit organization such as The Nature Conservancy makes conservation decisions and how they are able to manage an area that is both environmentally sensitive and a popular recreational area.

My great excitement, however, was tempered with some apprehension. I had never done much fieldwork. Would I be cut out for clearing trails, repairing fence, analyzing stream hydrology, and spraying weeds? Despite the fact that I had lived in Idaho my entire life I had never heard of the town of Picabo. Where was this place? Would I need to load up on three months supplies and wave goodbye to civilization for the summer? And there would be running water...right? They told me that this is the "graduate school of fly-fishing" while I didn't really know how fly-fishing was different from any other type of fishing. What would I tell people when they asked me advice on which fly to use or what hatches were coming off? (Tip #1: Call it a fly rod, not a fishing pole.)

Fortunately, my fears were exaggerated and my hopes understated. This internship did call for a lot of hard work but each project was rewarded with the knowledge of a new skill, the understanding of an ecosystem process, an insight into public policy or "people skills," or simply the exploration of another beautiful corner of the outdoors. Our living conditions were somewhat rustic (although there was water and electricity) but when you live on a fishing stream and are only about 30 minutes from a world-class resort town you very quickly adjust to the lack of television and learn how to keep yourself entertained. While I am certainly not a master fly-fisherman, I was able to land a few fish before I left and at least now know what people mean when they ask, "What hatches are coming off?"

Work on the preserve included a wide variety of activities. Some were more exciting than others but each was necessary to help the preserve fulfill its mission. The responsibilities of the preserve interns included:

- Invasive weed mapping and control
- Reed Canary-grass test plot monitoring and implementation
- Independent project: Preserve herbarium update and additions
- Other biological and environmental monitoring
- Supervise Visitor Center and visit with the public

- Miscellaneous: Maintenance, office work, visit other preserves, etc.

## **Invasive Weed Mapping and Control**

Invasive weeds were recently recognized as one of the top five future threats to western states. Silver Creek is no exception to the widespread invasion of several weed species and The Nature Conservancy is taking steps to ensure that the problem of invasive weeds does not grow. One of the first steps in this struggle is to map exactly what species are present on the preserve and where they are growing. To create this map the preserve employs software specifically designed to utilize data gathered in the field. It was my task on several days over the summer to walk through the preserve and record the weed species with a GPS receiver that would then be downloaded into the weed mapping software. The most common weeds on the preserve included Canada Thistle (*Cirsium arvense*), Mullein (*Verbascum thapsus*), Hound's Tongue (*Cynoglossum officinale*), Cheat Grass (*Bromus tectorum*), and Reed Canary-grass (*Phalaris arundinacea*). There were also isolated occurrences of Bull Thistle (*Cirsium vulgare*) and Dalmatian Toadflax (*Linaria dalmatica*).

Information gained from the weed-mapping program will be used to assess the current status of weeds on the preserve and will serve as the basis for decisions regarding weed restriction.

For particularly sensitive areas (mostly along stream banks) manual removal of weeds was necessary and so on several afternoons the interns could be seen, clippers and trash bags in hand, pulling and clipping away at the various patches of weeds that needed removal. While this was hard work you could measure your success at the end of the day by how much area you had cleared or how many bags filled the back of the truck.

## **Reed Canary-grass Test Plot Monitoring and Implementation**

One of the most severe weed invasions on the preserve comes from Reed Canary-grass: a large grass that grows rapidly and vigorously along stream banks and in wet, open areas. In addition to mapping the extent of this weed The Nature Conservancy is performing several tests of various methods of removal and control of this grass. In one experiment test plots were marked where all the vegetation would be removed (via mowing and spraying) and then various revegetation efforts would be employed and monitored to see which most effectively repelled future invasion. When I arrived the plots had already been marked and mowed. It was the interns' job to spray the plots and monitor the vegetation both before and after spraying. The revegetation treatments were to be implemented after my departure.

The other experiment involved a detailed monitoring of streams with various levels of Canary-grass invasion. Several transects were measured across these streams and the vegetation communities, soil composition, and stream morphology were measured. The Conservancy will use this information in cases where stream rebuilding or channel alteration may be necessary to be able to create a stream that naturally repels Canary-grass.

## **Independent Project: Preserve Herbarium Update and Additions**

In addition to the assigned projects that we were to work on each intern was able to pursue an independent project of his or her choosing. Silver Creek Preserve houses a small herbarium onsite that was begun in 1991. However, it appeared that active upkeep of the herbarium had not continued beyond that point. For my personal project I decided to update and reorganize the herbarium, add plants that had not been previously catalogued, and make the herbarium more “user friendly” so that personnel without herbarium experience could utilize it. This was an enjoyable project that allowed me to use training I had gained in school.

I was able to add ten new species to the herbarium focusing both on weedy and rare plants. I was able to kick off my collecting efforts by finding the beautiful and somewhat rare Yellow Lady’s-Slipper orchid (*Cypripedium calceolus*) (collected via photo vouchers). I was also able to add several invasive weed species, which should be very helpful to future staff members in proper identification of noxious weeds. I also included an updated species list, a list of noxious weeds in the herbarium, and information on how the herbarium is organized.

### **Other Biological and Environmental Monitoring**

Silver Creek Preserve has a regular schedule for ongoing monitoring of several environmental factors throughout the property. The quality of the stream itself is measured twice a month. Factors including flow rate, stream depth, pH, temperature, dissolved oxygen, biological oxygen demand, nitrate levels, and suspended solids are measured. Biological monitoring is also performed on the preserve: Bird counts are done monthly with the help of local bird enthusiasts and fish counts are performed with the help of Idaho Fish and Game. Assisting in these counts was especially exciting for me because I was unfamiliar with both fields and learned many new skills.

### **Supervise Visitor Center and Visit with the Public**

The preserve maintains a Visitor Center that contains interpretive displays and some merchandise. Interns would occasionally be needed to man this center. This was an enjoyable job since it provided ample time to communicate with the public. The preserve also offered nature walks and an activity-filled Day at Silver Creek to engage the public.

While most visitors are there to fish you could also meet birders, hikers, photographers, artists, folks on a canoe trip, or often a combination of the above. Each person has a unique perspective on the preserve and visiting with them is often fun and enlightening.

### **Miscellaneous**

While the above activities may sound like enough to keep anyone busy for a summer much of the time was filled with more mundane tasks: Trails needed to be cleared, signs fixed, lawns mowed, fences repaired (several times due to some large cows), papers filed, barns cleaned, snail-stations filled (so fishers would not spread invasive snails), etc. Often a trip into town would be necessary to pick up an item. Or, a

visit to the Nature Conservancy's state office would provide an interesting glimpse into the administrative side of the organization. Work was occasionally needed at other Nature Conservancy Preserves allowing fresh views of other beautiful areas in Idaho.

## **Conclusion**

When I began my senior year at Colorado College I was very curious to know what I would be doing in nine short months. I certainly did not think that I would be helping preserve an area renowned for a sport I knew nothing about and that had been one of Ernest Hemingway's favorite haunts. I thought (hoped) that I would be putting to use the skills I had gained while earning my degree. While I did indeed put those skills to use, I didn't imagine that I would be gaining a wide variety of new skills that I will carry with me for the rest of my life. My time at Silver Creek was much more than a summer job, it was an experience that helped shape my views on conservation and will influence me for years to come.

I would like to thank the family of Charlie Blumenstein for providing me with this wonderful opportunity. They have told me about Charlie's passion for conservation and for understanding humanity's place in nature and the outdoors. Although I did not know him, I feel that this award is a fitting legacy and an excellent means of spreading his commitment and passion to future generations.