Summer 2023

Sound Salmon Solutions

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Internship Title: Salish Scientists Summer Camp Intern 2023

Organization Worked For: Sound Salmon Solutions

Student Name: Chloe Lindstrom

Internship Dates: 7/6/23  8/10/23

Faculty Advisor Name: Ed Weber

Department: ESCI

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STUDENT SIGNATURE

DATE: 8/17/20
My internship took place from July 2023 to August 2023, and was at Sound Salmon Solutions. Sound Salmon Solutions is a non-profit organization located in Mukilteo, Washington. Specifically, I helped at a summer camp they hosted called the Salish Scientists Summer camp where campers learned about stewardship, explored the wetland ecosystem of the Edmonds Marsh, and got the opportunity to look into water quality as well. The camp took place at the Sound Salmon Solutions hatchery, which is also known as the Willow Creek Salmon and Watershed Education Center located in Edmonds, Washington. Sound Salmon Solutions works with hands-on stewardship, habitat restoration efforts, and interactive education to expand on the relationship between the environment and people to assist in the recovery of pacific northwest salmon.

Kaelie Spencer and Brittany Ahmann were the two supervisors I worked under for the summer camp. Kaelie is the hatchery program manager and Brittany is the Education and Stewardship specialist. A few hopes I had with the completion of this internship were to expand my personal understanding of the freshwater ecosystem I have grown up around, to improve on how I engage with others on topics of conservation and awareness, and to learn how I can better educate those around me.

Through this internship, one of my learning goals was to get a better and deeper understanding of the flora and fauna of the Edmonds watershed system. I have primarily had courses in oceanography and marine biology and have yet to take one that is ecologically based. Through this internship, however, I feel as though I was able to get a pretty good understanding of the flora and fauna that live within this watershed system. I got many chances to observe and learn about the coho salmon which are raised at the hatchery in the winter and
released in early spring. I also got an opportunity to view other fish species that I didn’t know lived in the creek, and engaged with the campers I was teaching about the differences these fish have in their adaptations to the environment with which they both reside.

Another intention I had for this internship was to improve on how I educate others, and how I can better engage with people of all ages on a variety of topics. Kaelie and Brittany, from the initial portions of this internship, told me about inquiry-based learning. Inquiry-based learning is expanding from questions with further questions. Often, people learn better when they are answering something or figuring out the answer themselves. Getting to watch the students throughout the week with this inquiry-based learning was super helpful in figuring out how I can be a better educator. It was also quite rewarding to see they begin to start answering their own questions later throughout the week of camp.

My role as an intern for the Salish Scientists summer camp came with quite a variety of tasks and activities. Monday was the day that was focused on aquatic science. After introducing the children to the grounds and having them create nature-themed name tags, they were led in a story and activity on two-eyed seeing. Two-eyed seeing was a thought process we wanted to encourage them to think about throughout the week and was a though process I think helped me with how I can better engage in the environment myself. I then, alongside the other college intern and the high school volunteers, led the campers in a lesson with a watershed model before they ate lunch. After lunch I helped them with water quality testing on willow creek to assess how healthy it is for salmon. The campers were then split into two groups, one of which was with me where they learned about the scientific method by instructing me on how to make a peanut butter and jelly sandwich. The other half learned about how important fair testing is
with dropping balls made from different materials and from different heights to see which bounced the most. On Monday, all the campers chose a project topic that they would work on for the duration of the week and then present on Friday to their parents. I helped some of them do research for these projects, and helped others go conduct portions of their experiments.

On Tuesday, the focus was on wildlife. The other college intern left students in an activity on macroinvertebrates where they learned how to collect them as well as got the opportunity to analyze them; determining stream health from the macroinvertebrates that were collected. Throughout the macroinvertebrate lab, I answered questions the campers had and assisted them with identifying what they were looking at. They then had the opportunity to learn how important camouflage can be by decorating and hiding paper butterflies around the wetland for one of the supervisors to find. After this, the campers had a salmon lesson with Kaelie while Brittany and I went down to willow creek to catch a young coho salmon from the water. The salmon were place in a small fish tank- using an icepack below the tank to keep the water cold and an aerator to add oxygen to the water, which is shown in figure 1. I then used a photarium, as seen in figure 2, to show the campers a more up-close look at the salmon. This allowed them
to better see the parr marks, the countershading, and the different fins that the fry has as well as get a sense for how big the fry were.

Wednesday was concentrated on botany, and there were multiple independent activities where the campers learned more about common invasive species, as well as many of the native species in the area. Campers then got the opportunity to decorate a biodegradable plant pot and planted a native plant species to take home. We used dried mud from the bottom of the hatchery which contained dried fish feces and leftover food as a natural fertilizer and taught the campers about the benefits of natural fertilizers as opposed to chemical ones. Thursday was focused on conservation biology, and we took the campers on a field trip across the road to Edmonds city park. There they learned about the importance of dam removal, of limiting fishing, leaving places better than they were found, and of ensuring salmon habitat is conserved. We then taught campers about how much water the average household uses per day, and they then created stewardship posters. To continue to learn about how they can be stewards to the environment, campers got the opportunity to create a rain garden. This helped teach them about the importance of plants in being natural filters for the environment. On Friday, the focus was on ecosystems, and we taught campers about how essential each step of a food web is by making a food web with a ball of yarn. The students then got to reflect on how salmon effect trees, and why trees need salmon before playing a bingo game where they considered how they might be better stewards to the environment, or reflected back on some previous teachings from the week.

Beyond helping at the summer camp, I also assisted with some tasks at the office in Mukilteo. I was helped to create activities for tabling events to engage with the public. While
working on the posters Brittany mentioned to me how important hands-on activity really is. Just like with inquiry-based learning, people often learn best when they are doing an activity pertaining to a given topic, rather than just being talked to about it. To help with engagement at tabling events for Sound Salmon Solutions we created two posters with interactive features to help community members engage with their own learning. One was a poster that has the different species of Pacific salmon on it, and people will match the names of each species with an image of its spawner. The other poster has to do with the lifecycle of the salmon, and people will get to out all the stages of the lifecycle in order.

Through working with Sound Salmon Solutions, my knowledge of wetland ecosystems, as well as native flora and fauna in general, have improved. I also feel more comfortable and confident with how I can go about education and teaching those around me. Completing this internship has also made me consider getting a minor in environmental education. I don’t particularly know where I will go with that minor but found the education aspect of this internship as an overall rewarding experience. I have also since begun keeping my eyes open for similar opportunities, as well as told Kaelie and Brittany of my willingness to volunteer with them at any opportunity they have in the future. Kaelie and Brittany supported me greatly throughout the duration of the internship and were super helpful with ensuring that I, along with the other intern and volunteers, were able to produce a successful camp experience. The Washington Recreation and Conservation Office provided a grant to the camp which allowed me to earn a stipend, as well as multiple campers to attend on scholarship. I would like to acknowledge the Recreation and Conservation Office and thank them for the grant which provided these opportunities.