Washington Conservation Corps Intern

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STUDENT SIGNATURE: [Signature]

DATE: 11/1/23
This summer I was on a work crew for the Washington Conservation Corps. WCC is an Americorps organization of paid volunteers, ages 18-25, who serve various environmental sponsor organizations. These sponsor organizations can include the Washington State Park Service, the United States Forest Service, and the Washington Department of Natural Resources to name a few. While crew members have an opportunity to serve for 11 months or 9 months, I took a seasonal 3 month position. Crew members work 40 hours a week from Monday to Thursday and receive a bimonthly stipend for living expenses. In addition to this stipend, WCC volunteers also receive a scholarship toward educational institutions upon successful completion of their term.

My crew was based out of Mt. Vernon, WA and we spent most of our time working in Skagit county. Including me, there were 5 members of the crew and a supervisor. A typical day would involve meeting in Mt. Vernon at 7am, piling in the work
truck, and heading off to wherever our sponsor for the week needed us. There were also opportunities to be a part of what was called a “spike”, either a 4 or 8 day backcountry trip that usually involves trail maintenance. Throughout the summer I got the opportunity to be on 2 different “spikes”. While these were great adventures, unexpected storms, illnesses, and crewmember injuries made them less productive than most of our day-to-day work.

The main sponsor for our crew this summer was the Northwest Straits Commission, which is an organization that is involved with multiple marine conservation efforts in the Puget Sound, Strait of Juan de Fuca, and the San Juan Islands. This included the surveying and trapping of the invasive European green crab that I was a part of. European green crabs have been declared an environmental state of emergency in Washington because of their detrimental effects on the native species along our shorelines. Their high tolerance for different water salinities and temperatures gives them the potential for a widespread expansion. Green crabs are more aggressive than our native crab species and out-compete our natives for food and other resources. They also eat our eelgrass, which is detrimental to the habitats of other crab species and smaller fish. While eradication of green crabs is out of the picture, population control was the goal of our efforts this summer. My crew was responsible for catching and documenting 121 green crabs, some of whom were gravid, and turning them over to the Department of Fish and Wildlife for further testing. NWSC also employs a crew to survey crab populations in Drayton Harbor in Blaine, WA, in addition to private trapping efforts from local businesses such as Taylor Shellfish.
Through the summer, every other week was spent surveying. We would meet at Padilla Bay National Estuarine Research Reserve to collect our traps every Monday morning. The number of traps would depend on the site, but it was usually around 40 traps per site. Depending on the week, we would also bring 10-20 extra traps with us to prospect for potential green crab locations independent of the core array of traps we used every week. Mondays involved baiting the traps with mackerel and setting them out along the site selected by the NWSC. The trap types were alternated between minnow style crab traps and Fukui style crab traps. Shrimp traps were also placed in unique areas with GPS coordinates noted, in the case that a green crab was caught. If we were setting traps in a prospective site, the coordinates for each trap were taken down. The locations of our trapping included Pigeon Point, Colony Creek, and the Edison Slough.

Tuesday and Wednesday of each week were the days where we needed to check all of the traps and record the number of each species we had caught. Frequently caught crab species were hairy shore crab, purple shore crab, dungeness crab, graceful crab, and hairy helmet crab. Frequently caught species of fish were stickleback, sculpin, midshipmen, and pipefish. Aside from these species we also caught different snails, sand shrimp, and a few jellyfish. Each trap and species was added to a spreadsheet for data to be recorded in. If a green crab was caught, a picture was taken with the trap it was caught in, the crab was measured, characterized by sex and limb status, and placed into a small bag to be brought back to Padilla Bay. Thursdays also involved checking our traps, but also collecting them all and bringing them back to Padilla Bay to
be cleaned. At the end of our day on Thursday we would add the pictures and
information of all the green crabs to a log of every green crab caught this summer.

One of my learning objectives for this internship was to learn the realistic process
of an ecological survey and the unique opportunity my WCC crew was involved with
completely fulfilled that. While it wasn’t glamorous, the experience I got this summer
was perfect for me to work towards being a wildlife biologist. Being in the field makes
me happy and learning to take data is important for my future. There were positive
impacts made by my team this summer. I’d like to think we were genuinely contributing
to the effort to keep green crab populations at bay, especially in a region that relies on
its waters as heavily as ours. Though our immense physical effort only translates to a
small improvement in our environment, I am proud of the work I did. There were some
negative impacts, such as animals dying in the traps from the heat and losing traps into
the Samish Bay. Our crew made an effort to go check traps sooner after the tide went
out to minimize the time the traps stood in the heat. The traps that were lost were never
recovered, but the site they were placed on was deemed unfit for our work due to the
strong currents and the potential for uprooting the stakes that held the traps to the
ground.

Our first few off-weeks from crab surveying were spent working for the Whidbey
Camano Land Trust. They manage and preserve sites throughout Island county and
their main priority during the summer was the controlling Canada thistle at these sites.
Canada thistle, or creeping thistle has sharp thistle-like leaves and bright purple flowers
that bud during the summers. It is not native to our area and it tends to take over any
place it is allowed to grow freely. In the beginning of the summer, before the plant
started to bud, we were spraying it with herbicide. Each day, someone permitted to mix the Garlon 3A (also known as tryclopyr) would make a batch and load it into sprayer backpacks. We would transport these backpacks to the site that the land trust had specified and spray as much thistle as we could throughout the day, focusing on their high priority areas. A blue dye was also mixed with the herbicide to mark which plants had already been sprayed.

Later into the summer, the plants begin to bud. At this point, herbicide is not recommended because all the pollinators could potentially be harmed by the chemicals. This is when we started using tri-blade brush cutters to clear large patches of thistle. Once cleared, the thistle would eventually die and wouldn’t have a chance to grow again or spread until the next season. Once the thistle starts to flower, cutting it with power tools would only spread the pollen farther. This was late in the summer and at this point we would “deadhead” the thistle. This simply means coming by with hand pruners and snipping off the meristem, or the part of the plant where the flower is blooming. This leaves the stalk of the plant intact, but it can’t spread. After the flowers had all been chopped off, we were free to use brush cutters to clear the stalks.

The sites we worked at on Whidbey Island were incredible. We worked down near Dugualla bay where we got to see heron, bald eagles, and even a river otter. This site was very large and it was the right time of year, so we ended up brush cutting this whole site clear of thistle. Another site was a property they called “Keystone”. Keystone is 100 acres of historic forest and farmland right on the ocean. There are a few historic buildings and barns on the property as well. This site will become a park within the next
few years, so I am very much looking forward to visiting again. At this site we used every method of thistle removal since we would take trips there throughout the summer.

The short term effects of our work on Whidbey might have been messy, but in the long run there is hope to regain control of these sites and reintroduce native plant species that are nicer to look at, and are better for the local wildlife. We worked long and hard days for the WCLT but we got to see our progress grow. The site near Dugualla Bay was completely devoid of thistle by the time we were done, and that was immensely satisfying to see. The only negative impacts were the use of herbicide and accidental killing of native plants. Herbicide isn’t good for anyone, but Garlon 3A is specifically formulated to break down quickly in water, in the event any was introduced to a water source. This also means that after rain, the area where Garlon is sprayed is very safe. We also did our best to not harm the native plants, but there were a few casualties in the process of clearing out the massive fields of thistle. If I can connect this experience to being a wildlife biologist in the future, I would think that I will definitely have to do some hard physical work at some point in my career.

The third and final sponsor that our crew had was the Washington Department of Natural Resources. They mainly wanted us for trail maintenance in the Morning Star Conservation Area. Our trail work involved clearing the sides of overgrown trails with brush cutters, lopping taller tree limbs, and raking debris off the trail. This was usually done in a line down the trail with the brush cutters walking first, people with loppers coming behind, and people in the back with rakes. We also had a little bit of experience building new trails. This mostly involved clearing out duff, ferns, and leveling out the trail for an excavator to come at a later date.
Two of the sites that DNR managed we spent 4 days backpacking in the backcountry. The trails we worked on were Greider Lake and Gothic Basin. In Gothic Basin we were hit with a severe rainstorm that forced us to find shelter early on the first night. Later that trip, my whole crew and I got sick so hiking down on the last day was a tough undertaking. At Greider Lake it rained the whole week. I've also never seen so many mosquitoes in my life. Even DEET didn't keep them away. One of my crew members also slipped and broke his wrist on that trip. I ended up packing up his stuff for him and hiking him out to the trailhead where he got picked up. Both of these trips were big adventures, but learning the correct way to do trail work was a great experience.

Our third site was in Bellingham on the north side of Lake Whatcom off of Y road. This was where we had the pleasure of creating new trails that were soon to be developed.

In this case, I learned the value of my hard work. I never put much thought into how much work goes into a trail and now I know first hand. It was great to hear people thank you for the work you are doing. Short term, we were really just clearing plants off of the trail. Trail work is a constant fight with growing plants so the only downside is killing plants that are native or possibly disturbing animal habitats. Long term, we are providing a safe, well maintained area for recreation for years to come. When I achieve my goal of being a wildlife biologist, I assume I will be heavily relying on trails to do my job and now I can appreciate all the hard work that goes into them.

All in all, this summer internship was incredible. Based on all of my learning objectives in my application, I have succeeded in every way. The part that was important to me was gaining real field experience on ecological studies. With the unique
opportunity to survey the European green crab, I have accomplished that. Also my job description was spot-on. I was able to take part in all of the tasks I expected.