Matt Bisk, Ash Sward, Sarah Wood, and Joshua Lisbon

Session 1: June 12th - July 7th Session 2: July 17th - August 11th



The Bitterroot Wildlife Internship (BWI) allows high school students from across the U.S. to engage in meaningful ecological research and conservation service work. Summer 2022 saw twelve students from Montana, Idaho, Washington, New Mexico, and New York work and live on MPG Ranch for four weeks as part of their experience. Interns partner with research mentors to collaborate on data collection, culminating in the creation of a poster presentation. They also learn about restoration and conservation through engagement with various service projects at MPG Ranch.



Interns split the majority of their time between service projects, research with mentors, groupwide research engagements, and curriculum. This summer, interns spent 254 hours in the field with researchers, 290 hours performing conservation service at the ranch, and 149 hours engaging with ecology-based curriculum.









Interns participated in various service projects during their time at MPG, including the removal of introduced species such as cheatgrass from 12,643 m<sup>2</sup> of ranch land. Interns also repaired and placed reflective tags on barbed wire fence on the ranch's borders. This process makes the fences safer for moving wildlife such as deer, elk, and sharp-tailed grouse. Altogether, interns impacted nearly 2 miles of fencing!











Interns also worked on the Bee Lawn, a project spearheaded by MPG's Mike Ormandy and started by 2021 interns. This summer, BWI interns continued working to create a space that will demonstrate the benefits of native species-rich, pollinator-filled yards. Interns cleared dead weeds, hauled stone to fill in paths, put down fabric, and planted six new trees.





Throughout their time on the ranch, interns joined several different researchers in the field. Marirose Kuhlman took Session 1 interns on an adventure to capture and identify butterflies. What began as a mellow stroll turned into frantic sprints after Swallowtails and other colorful butterfly friends. Marirose taught interns about native pollinators and helped them learn to identify many of the Bitterroot's native flowers.





Session 2 interns worked with moth expert Mat Seidensticker to characterize moth species in the Education Garden. Interns braved nosefuls of caddisflies to observe moths of all shapes and sizes From hawkmoths to bird poop moths, the moth diversity was nearly endless!







MPG Ranch Education Director Joshua Lisbon took time to teach a Native Studies lesson to our interns. The lesson included a natural and cultural history of the Bitterroot Valley, a surveying of handmade tools and clothing, and a demonstration in rope making. Joshua also took each group on a tracking session in search of elk and other friends that call the ranch their home.





Interns witnessed several different types of bird banding: songbirds, hummingbirds, nighthawks, and nightjars! Researchers Kate Stone, Mary Scofield, William Blake, Eric Rasmussen, and a team from the University of Montana Bird Ecology Lab (UMBEL) all graciously shared time with interns over the course of the summer.





Interns managed some non-research related projects in their time on the ranch too. Session 2 interns spent an afternoon collecting Saskatoon berries and making them into delicious patties! Dried in Jacob's car, word has it the car still smells like berries.







Intern Annabelle traveled from Los Alamos, New Mexico to work with Maggie Blake. She conducted her research on ground nesting bird species on the grasslands of the ranch. Field work included early morning rope dragging to detect nests and nest monitoring. She specifically looked at vesper sparrow nest success as it relates to the nest substrate and nest construction. Upon reflection of her experience, Annabelle said this program "added on to my desire to pursue ecology or conservation as a career."



NO RTI FACE



Intern Ava, coming all the way from Manhattan, took right to the ranch and its landscape. She worked with Sasha Victor and investigated the impact on soil and native plant growth by introduced species such as cheatgrass, leafy spurge, and spotted knapweed. Ava demonstrated careful and diligent research practices throughout her time and determined native grass species may grow better on plots that previously hosted spotted knapweed.

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IN HED







Natalie, hailing from Moscow, ID, worked with researcher Morgan McLeod to research how berms impact plant growth. Berm baby berm! Long days in the field measuring ground cover resulted in some outstanding results and some promising data that indicates berms may positively impact plant growth. Natalie also read nearly a book a week over the course of her session and is a budding author!





Evyn, also working with Morgan McLeod, studied whether the age of berms impacted plant growth. Evyn endured scorching hot field days, allergies, rashes, jalapeno in his eyes, and insect bites to deliver compelling data. This Missoula resident also showcased expertise in butterfly catching and showing empathy. After he finished the program, Evyn said "the connections with the people and the knowledge I gained both will improve my life in the future." Life is his passion!



Despite missing a week, Missoula's own Sophia showed her tenacity by producing a stellar project. Working with MPG filmmaker extraordinaire Jordan Hoffmaster, Sophia helped to create a short film about the BWI program. Her spirit and laughter became an essential component of the Session 1 experience.







Also working with Jordan Hoffmaster, St. Regis, MT native Kiya continually demonstrated how far she would go to get a shot for the sake of her video project. Whether it was hiking out into the field to capture grazing deer or getting up early to film rope dragging, Kiya continually demonstrated the skill set of a successful researcher. Kiya leaves this program thinking, "it's a lot easier to help my planet than I thought."



Resident musician, singer, and goofball, Jennings worked with mentor Mary Scofield on a variety of bird-related projects. From osprey banding to Lewis's woodpecker observation, Jennings absorbed each experience as it came. With his partner Ian, Jennings proposed a future study on genetic analysis of feathers on Lewis's woodpeckers in order to better understand their population dynamics. Jennings claims this experience "rekindled my love for the outdoors," making him want to pursue a school with opportunities in conservation. Whether that be the University of Idaho in his native Moscow or across the pond, the future looks bright for Jennings.



Ian took an incredibly serious approach to his work with mentor Mary Scofield. A resident of Santa Fe, New Mexico, his relentless curiosity and willingness to ask any question that popped into his mind served him well throughout various opportunities in ornithological research. Ian found interactions with mentors and research professionals "the most impactful [part of the experience] because it allowed me to figure out what a career like this would look like." A career in wildlife biology is still on the table, and Ian is hopeful that his research proposal concerning Lewis's woodpecker population dynamics will bear fruit in the future.







Madeline shared a bubbly and effervescent spirit that livened up every moment of this internship. She worked with mentor Mary Ellyn Dupre on a DroughtNet site, observing how 30% reductions in moisture affects forb and grass biomass. Madeline was diligent with her research and produced a beautiful presentation. BWI changed Madeline by making her interested in "implementing more conservation efforts in and around my home town." The community of Pullman, Washington should consider themselves fortunate to have Madeline!









ARKSEN

A resident of the Bitterroot Valley and a speech and debate expert, Jacob partnered with mentor Nathan Schwab to determine the use of talus slopes by bats on MPG Ranch. Jacob spent many sunsets climbing talus slopes, monitoring for bats with both a thermal camera and an acoustic detector. His hard work paid off as bats were observed at three of six sites. On how his BWI impacted him, Jacob claimed the experience "solidified want I want to major in and what I want to do with my life." The wildlife biology field will be lucky to have him.









Ashlee, traveling from St. Ignatius, MT proved a perfect match for mentor Carly Muench. Together, they set up trail cameras and monitored for the presence of Western spotted skunks, a species observed in 2021 after a nearly eight year absence from the Ranch's camera network. While Ashlee spotted no skunks, they learned a great deal about trail camera setup, operation, and data processing. On their experience, Ashlee said this program helped in "reminding me how much I love to be outdoors and learn about conservation." Ashlee heads to the University of Montana with an incredible work ethic, a great taste in music, and a joyful passion for conservation!

Missoula's own Arthur spearheaded an impressive project working with mentors McKenzie Sebastian and Chuck Casper. Arthur looked at germination success of seeds dating back to 2017 among various storage conditions. His work determined that blanket flower seeds stored in conditions without temperature control are viable, potentially impacting the way MPG Ranch stores seeds in the future. Arthur brought a warm smile, a flair for the dramatic, and a love of Shakespeare to this experience. Through this program, he became "more appreciative and knowledgeable of the outdoors." Whether in Missoula or beyond, Arthur looks to continue his engagement with natural spaces.





Through hands-on experiences in ecological research, interns walk away from this program with a newfound appreciation and understanding of their role in conservation. Interns also reflected strongly on the connections they made during their time on the ranch. As one participant wrote, "I am leaving this internship with so many amazing, long-lasting relationships with the other interns and instructors." Those connections will propel these beautiful young people into their bright futures.

