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UTAH GREATER SAGE-GROUSE LOCATION DATA COMING TO YOUR FINGERTIPS – SOON !

By Simona Picardi, Utah State University

In the April 2021 Community-based Conservation Program newsletter, we announced the ongoing construction of a next-generation database to consolidate all greater sage-grouse tracking data collected in Utah since 1996. In July 2021, a Memorandum of Understanding was finalized between Utah State University (USU), Brigham Young University (BYU), and the Utah Division of Wildlife Resources that formalizes the process of data sharing, and the creation of a permanent, protected repository for these data. The database will protect the confidentiality of the private



Grouse Tracker

Landing Page for new database

landowners that allowed USU and BYU researchers to access their property to radio-mark and monitor sage-grouse. About 1/2 of the sage-grouse locations are on private land. The agreement is renewable every 5 years.

The agreement also establishes rules for use of data by partners as well as mechanisms for protecting data confidentiality. Access to view the data will be afforded to users with login credentials within partnering institutions. The content of the database will be automatically synchronized with Utah Division of Wildlife Resources Wildlife Tracker, where the data will be displayed as view-only. As of July 2021, the database contains more than 800,000 sage-grouse locations for more than 2000 individuals; new data will be added annually as field research and sage-grouse radio-marking efforts continue. The final release of the database is expected by end of 2021.

Utah is the only state in the range of the greater sage-grouse to now have data on all the state's sage-grouse populations housed in one central location. This would not have been possible without BYUs partnership and IT support. We have had over 40 partners who have supported sage-grouse research in Utah since 1996. Concomitantly, we plan to offer training webinars to all partners regarding access and use of the database. For more information please contact me at simona.picardi@usu.edu.

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BERRYMAN INSTITUTE PARTNERS WITH USDA WILDLIFE SERVICES TO HOST WORKSHOP

By Jessica Tegt, Berryman Institute, Utah State University

This past spring, the USDA Wildlife Services Utah Program joined forces with the Berryman Institute to provide an educational workshop on non-lethal methods for controlling predators. The target audience for the workshop centered around wildlife specialists, landowners and agricultural producers who frequently encounter depredation of livestock from coyotes and other predators. Surprisingly, registrations for the workshop topped 200, many from the western United States, but also from as far away as Zimbabwe. Speakers included a slate of Utah-based scientists who are experts in animal science, human dimensions, and wildlife management. Based upon the high participation and interest in the workshop, additional landowner workshops are in the planning stages and will be offered both in-person and online. For more information contact Jessica Tegt at Jessica.tegt@usu.edu.

Workshop topics included:

- Non-lethal predator control techniques
- Modified husbandry practices
- University Extension resources for producers
- Human-wildlife conflict resolution
- Depredation trends

Featured speakers included:

- Dr. Ken White, Vice President, USU Extension
- Dr. Terry Messmer, Professor of Wildlife and Director of the Berryman Institute
- Dr. Julie Young, Supervisory Research Wildlife Biologist, USDA-APHIS-NWRC
- Mr. Darren DeBloois, Game Mammals Coordinator, Utah Department of Wildlife Resources
- Mr. Chad Heuser, State Director, USDA-APHIS-Wildlife Services, Utah Program
- Dr. Jessica Tegt, Outreach and Education Coordinator, Berryman Institute



The public likes to see appropriate non-lethal methods to manage predation. Photo courtesy of Todd Black.

BERRYMAN INSTITUTE SPONSORS MONARCH FESTIVAL

By Jessica Tegt, Berryman Institute, Utah State University

On June 24th, The Monarchs of Bridgerland Utah Society hosted their first ever “Monarch’s and Other Winged Wonders” Festival in Nibley, Utah. The festival featured vendors and booths from across Utah that showcased the importance of pollinators in our ecosystems. The goal of the festival was to bring attention to the decreasing numbers of pollinators, namely the monarch butterfly, and to give attendees ideas on how to create landscapes that will attract these creatures. Over 1000 people participated in the festival and conference organizer Becky Yeager hopes to continue the efforts for years to come. Yeager, a trained wildlife biologist, is a long-time resident of Nibley City and one of the founders of Monarchs of Bridgerland. “To have state wildlife agencies, nature centers, university organizations, UPR all willingly participate in this event is confirmation that we need to focus on education and conservation to make sure we don’t lose these important and beautiful winged animals”, Yeager said about the festival. The Berryman Institute helped to sponsor the event, taking a unique spin on the ‘winged wonder’ theme by centering their education around bat conservation. Dr. Jessica Tegt, Outreach and Education Coordinator for the Berryman Institute led the teaching efforts by displaying real bat specimens for participants to view and conducting educational sessions surrounding the misconceptions of bats as well as safely attracting bats to your property. The festival was a tremendous community engagement event both increasing visibility for the efforts of the Berryman Institute and also highlighting a wildlife species in need of conservation.



Photos courtesy of Jesse Walker.

MEET THE GRADUATE STUDENTS WORKING IN SOUTHERN UTAH

Aidan Beers is a PhD candidate in the Wildland Resources Department at Utah State University with a focus in Wildlife Ecology. His major professor is Dr. Nicole Frey. His research focuses generally on the ways in which topography, land cover, and climate impact the potentially threatened greater sage-grouse on their fragmented southern range margin. Along the southern edge of their range in southern Utah and Nevada, sage-grouse habitat tends to be fragmented and of lower quality than in the core of their range. These isolated populations are likely more prone to the effects of habitat loss and climate change. However, it is not clear to what degree each population is threatened by changes to their habitat. In his research, he is seeking to elucidate the ways in which sage-grouse use the landscape, including how they seek shelter from avian predators.

Much of the sage-grouse habitat lost has been due to pinyon-juniper forest encroachment. Those trees provide perches for avian predators and displace the sagebrush that sage-grouse need. We used data from GPS transmitters on >120 sage-grouse to evaluate how they respond to trees and other factors on the landscape. Despite the potential risk of predation, we have found that sage-grouse use areas close to trees when they can use moderately rugged topography and contiguous sagebrush patches, likely to block the sightlines of potential predators in the trees. This means that management actions, such as removing pinyon-juniper stands, should prioritize areas that are more open and with less sagebrush, where sage-grouse have little shelter. Further, we have found that the strength of this effect varies greatly across this range margin. Individual sage-grouse make decisions at local scales, so their greatest perceived threat depends on their local landscape. A sage-grouse using an area very far from trees is unlikely to use rugged terrain and can more safely venture out of dense sagebrush. This suggests that conservation planning must account for local-scale conditions in addition to state or regional-scale drivers.

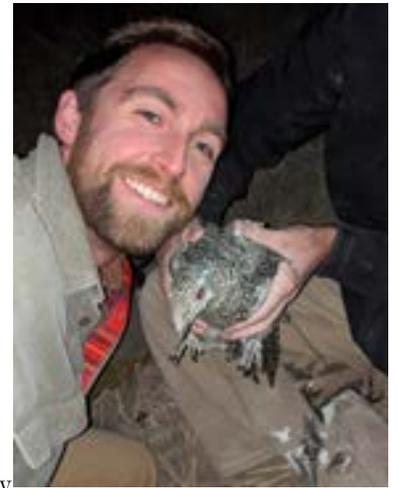


Photo of Aidan Beers.



Benjamin Donnelly is pursuing a master's degree in the Department of Wildland Resources at Utah State University. His major professor is Dr. Nicole Frey. His research is observing the long-term response to the juniper pinyon removal treatments that were conducted in the Alton area in 2005 and the effects on the greater sage-grouse. The study will help determine if the habitat has been restored and meets new Utah State guidelines for greater sage-grouse habitat. Greater sage-grouse are being monitored using GPS transmitters. The research will help determine habitat use by greater sage-grouse and if greater sage-grouse are using the treated areas where juniper and pinyon were removed. If greater sage-grouse are not using the treated areas as expected, the research will compare the areas used by sage-grouse to treated areas to try and determine why the greater-sage-grouse are using other habitats.

Photo of Ben Donnelly.

Zoë Moffett is pursuing a master's degree in the Department of Wildland Resources at Utah State University. Her major professor is Dr. Nicole Frey. Her research will fill in some of the gaps in our knowledge of how ravens inhabit sagebrush habitat and how their behaviors impact sage-grouse during different periods of the breeding season. The study sites are in the Bald Hill and Panguitch SGMA's in Southern Utah. Over the past few decades, raven populations have both expanded and grown throughout the West. Ravens are problematic predators for several sensitive species including the greater sage-grouse. A substantial amount of research has investigated ravens in sagebrush habitat and how they have impacted sage-grouse populations via nest predation. Studies show that ravens are more often found in areas that are closely associated with anthropogenic structures and activities including livestock grazing, pipelines, and roads. Her project will involve roadside point-count surveys for ravens, the trapping and tagging of ravens (with cellular transmitters), trail-camera surveys on active leks to detect raven presence, as well as an artificial nest experiment in different sage-brush vegetation treatments. This project is in partnership with the Cedar City BLM office, Hawkwatch International, and Utah State University.



Photo of Zoë Moffett.

LOCAL WORKING GROUP MEMBERS PARTICIPATE IN JOINT WRI FIELD TOUR – AN EXAMPLE OF COORDINATED EFFORTS AT MANY SCALES

By Lorien Belton, Utah State University

On June 30, members of the Community-Based Conservation Program's local working groups (LWGs) in several areas joined in the Watershed Restoration Initiative (WRI) joint northern and northeastern regions' field tour to projects just south of the Wyoming line in eastern Utah.

The projects visited included a vast project (Burnt Beaver) in high elevation timber areas, which showed the scale at which work can be done when multiple partners come together. The project also highlighted the value of working with contractors as project partners, who shared in the task of deciding how to most effectively implement the work. During a surprisingly wet afternoon in the middle of a severe drought, the team stood gratefully in the rain to hear project details presented by project leads at U.S. Forest Service, Utah Division of Wildlife Resources, and the Mule Deer Foundation.

Another project the group visited had potential direct implications for sage-grouse – a wet meadow restoration in a situation where a road cutting across a meadow had reduced flow to the lower part of the meadow. Rock structures on either side of the road helped change the way water infiltrated to the downhill portion of the meadow. The resulting changes in vegetation made the new underground water flow evident. The new structures increased flow under the road, and contrasted dramatically with a small culvert in the area which served a similar flow purpose but had notably different effects ecologically on the meadow.

Among the LWGs represented were West Desert, Uintah Basin, Morgan-Summit, Rich County Coordinated Resource Management (CRM) group, and the West Box Elder CRM. The LWGs and the WRI teams often – though not always – share summer field tours. Although there is considerable overlap in attendance at the WRI project partners groups and the more sage-grouse focused LWGs, the distinct foci of each partnership effort provide opportunities to expand collaboration without duplicating efforts. The LWG focus on sage-grouse allows for more in-depth discussion of research and more partner

development with a wide array of people whose concerns go beyond habitat projects, a dominant focus of WRI. And the WRI focus on a variety of habitat projects provides a venue for specific coordination and sharing of lessons learned with projects, particularly between agencies. Collectively, the existence of both partnerships (WRI teams and LWGs) provide an extraordinary support system for opportunities to help sage-grouse and innumerable other species and habitats.

Utah's Community-Based Conservation Program Mission

Utah's Community-Based Conservation Program is dedicated to promoting natural resource management education and facilitating cooperation between local communities and natural resource management organizations and agencies.

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LWG members and others participate in the WRI field tour, despite an afternoon rainstorm. The Burnt Beaver project is visible in the background. Photo courtesy of Lorien Belton.