

Morgan-Summit Sage-Grouse Field Update – APRIL 1, 2016

Submitted by: Brandon Flack

Graduate Research Assistant

Utah State University

Project: Habitat Use Patterns and Vital Rates of the Morgan-Summit SGMA Greater Sage-grouse Population: Conservation Implications for Managers

Purpose and Background: I am gathering seasonal movement data for greater sage-grouse in Morgan and Summit counties and determining survival rates, nest success rates, and brood success rates. I am also collecting vegetation data around nest, brood, and random sites. All of this information will give us a good baseline to understand the ecology of this population. To do this, I marked 36 greater sage-grouse (31 hens, 5 males) in 2015. Of the 31 hens, 10 are marked with global positioning system (GPS) backpacks and 21 are marked with very high frequency (VHF) radio collars. The males are marked with VHF radio collars. I plan on trapping and marking 4 additional females with VHF radio collars in 2016.

The GPS transmitters communicate location data to a satellite, which I can download remotely to check on movements and survival from the comfort of my field trailer. To obtain these data for sage-grouse marked with VHF radio collars, we have to physically re-locate the birds in the field. This can take considerable effort, depending on the movements.

Vegetation surveys consist of the line-intercept method to quantify shrub cover, Daubenmire frame technique to classify forbs and grasses, and Robel pole measures to quantify visual obstructions at the location sites.

Survival:

I did a telemetry flight in January to locate radio marked birds and determine winter survival up to that point. Of the 24 active VHF radio collars, we found 19 alive, 1 dead, and 4 were not heard. The 1 mortality was a female and I was able to recover the radio collar a few weeks later. I started my field season on March 14 this year and my technician and I discovered 2 additional mortalities right away. Both were males and both were alive when I flew in January. We were able to recover both VHF radio collars and I am planning on re-deploying them on females during the first week of April. Up to this point, there is 1 VHF radio collar that I have not heard or located since October 2015, and 1 radio collar I have not heard since January 4, 2016. Both are females and I am making every effort to locate them.

Movement Data:

This is a quote from my July 2015 Field Update: “I have spoken to some of the landowners and they have seen sage-grouse here in the winter and they say that even in years of good snow,

sagebrush still sticks out above the snow. I'm interested to see what happens this winter but I suspect that most, if not all, of the birds will stay here as long as sagebrush cover remains above the snow line. This is just an educated guess on my part. Let's see what the birds really do before we publish anything".

This winter has been much more normal than last year and there was a lot more snow in the study area. During the flight in January we found the majority of VHF radio collars were in the same general area as they were during the summer and fall with the exception of the 4 radio collars we did not hear. We could see sagebrush sticking out of the snow and many of the birds were located on south facing slopes near hill tops.

It's been really fun and interesting to watch the GPS birds move around the landscape. Of course, I do this from my couch while looking at my computer, but it's still really cool. Two GPS marked females have "disappeared". I haven't received a GPS location from them in several months. We went out yesterday to the last known location of one of them to search for the transmitter or signs of predation. We set up a grid around the point and searched for 2 hours but found no signs of predation (feathers, bones, etc.). There are several possible outcomes: the bird could still be alive but the transmitter has failed; the battery may have lost charge and has not been able to recharge yet; the bird is dead and the collar was damaged during the predation or if the carcass was scavenged; etc.

I'm getting GPS locations from 9 of the transmitters and the birds are congregating near leks as is expected this time of year. 2 of the GPS marked females flew south in November. 1 spent the winter just west of Rockport Reservoir and the other was just south of Jordanelle Reservoir. That is a migration of around 30 miles. Because of this, I felt inspired to name them Amelia (Rockport bird) and Lady Hay (Jordanelle bird) after some famous human female aviators. They both used the same corridor to move south but they moved at different times. In early March, Amelia moved back to the Henefer Divide area and in late March Lady Hay made her way back to the Henefer Divide as well. Again, even though they migrated separately, they used the same migration route to get back to the Henefer Divide. I was very exciting to see this pattern begin to emerge.

Landowners:

The landowners have been great to work with. I appreciate each of the landowners and their willingness to let me do this study on their properties. They are all interested in what we are finding. It has been rewarding to build relationships with each one of them and to gain their trust. This was a part of the study that really intrigued me and I am happy things are working out for the most part. I also really appreciate the help I have received from many individuals at the Utah DWR. The relationships you have already established with landowners, county officials, and

livestock producers have been instrumental in gaining access to properties and working in a productive atmosphere.

The Sage-grouse Local Working Group sponsored a landowner appreciation event that was held in January. I presented on the first year of research. We had a good turn out and a good discussion about different conservation methods (i.e. easements).

****Other Notes:****

- 1) On March 31 I gave a presentation at the Swaner EcoCenter in Park City about the Utah sage-grouse plan and the research I am doing in Morgan and Summit Counties. It was a packed house and the discussions/questions ranged from how Native Americans used nets to capture rabbits and grouse back in the day to ruffed grouse mating rituals to renaming sage-grouse males “dudes” to how the State of Utah was ahead of the curve on habitat improvements and a lot more! It was great! We also had a group of Swaner members come to the Henefer Divide lek this morning to watch the circus and the birds didn't disappoint. Everyone got some great pictures of birds strutting and roosting on the road, chasing each other around, and fisticuffs.
- 2) East Canyon State Park and the Wasatch Audubon Society are hosting “Lek and Loon Day” on April 23rd. We'll be watching the males display at the Henefer Divide lek at 6:30 AM and then we'll head down to the state park and watch loons and many waterfowl species. More information can be found at the website or Facebook page of East Canyon State Park. If you've never seen sage-grouse strut their stuff this is a great opportunity to do so. Hope to see you there.
- 3) Because many of these properties are CWMUs, landowners have requested that we complete our summer field work by July 31 so we don't interfere with the start of hunting season in August. This was not a problem last year and I don't anticipate it being an issue this year either. I'm looking forward to another productive year of field work.