Sheeprock Sage-grouse Management Area Translocation Field Update

April 2020

Population Dynamics and Seasonal Movements of Translocated and Resident Greater Sage-Grouse of the Sheeprock Sage-grouse Management Area (SGMA)

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Background

This is the April 2020 field report for the research project studying greater sage-grouse (*Centrocercus urophasianus*; sage-grouse) population translocations, predation and habitat management the Sheeprock Sage-grouse Management Area (SGMA). The SGMA, located in central Utah, consists of 611,129 acres in Tooele and Juab Counties. Key threats to sage-grouse identified in the SGMA include wildfire, invasive species (annual grasses and forbs), potential loss of riparian or mesic areas, predation, habitat fragmentation, dispersed recreation, and conifer encroachment. Since 2016, we have translocated 146 sage-grouse that were captured on the West Box Elder and Parker Mountain SGMA's. In 2020, no additional sage-grouse have been translocated. This year we are continuing to monitor previously-translocated and resident sage-grouse to evaluate how the SGMA population is responding to habitat and predation management. We are also evaluating if habitat selection and vital rates differ for previously-translocated and resident sage-grouse. In addition, we are studying off-highway vehicle (OHV) use patterns of recreationists in the Sheeprock to learn if current use is impacting sage-grouse habitat-use and are also surveying OHV users to determine their specific recreation needs and motivations for coming. Because of the Governor Herbert's COVID-19 directives, we have postponed the OHV surveys until further notice.

Technicians and Training

In February, we hired three technicians for the 2020 field season beginning on March 2. Those hired include J. Coburn Blunt (New Hampshire), Adam Cupito (Ohio), Zack Petrie (New Jersey). Zack is the crew leader for the 2020 team this year. The technicians arrived at the research site in March and have been self-isolating while performing field work. During this time, the technicians received bird handling, telemetry training, vegetation monitoring, vehicle safety training, and COVID-19 mitigation training.

COVID-19 Update

We have embraced the Governor's and Utah State University's (USU) directive regarding the COVID-19 Pandemic. We have filed a field research plan with USU and received approval to conduct our field work. The approval of our plan was contingent on our work being restricted to a remote field site. Our crews have self-isolated at the USU Tintic Field Station which will be our base of operations. We do not have any contact with any outside technicians or workers, so we are adhering to the social distancing, use of PPE, handwashing, and strict personal hygiene.

As mentioned previously, all research involving human subjects has been suspended until further notice. The research involving OHV recreation is included in this because we interview campers and fill out a survey based on their questions. We are following USU guidelines on this and will commence once we have received additional guidance. It appears, this year that early season camping and visitation in the Sheeprock SGMA is higher than previous years. This could be reflective of the closure of other areas because of COVID-19 guidance.

We have already had an incident this year where a technician was forced to direct the ATV he was driving into a ditch to avoid a collision with a driver who driving in the middle of the road and was speeding around a curve. The technician jumped off the ATV before it rolled, received a bruised hip, and the ATV was slightly damaged. We are implementing additional safety precautions to mitigate a repeat of this incident.

2020 Captures

We have captured and radio-marked nine resident sage-grouse this season. The captured birds include two males (1 Fredrickson male, 1 Government male) and seven females (1 Benmore female, 5 Log Canyon females, 1 McIntyre female). We have completed trapping for the 2020 season.

Lek Counts

We have discovered two new leks this year in addition to Little Valley lek becoming an occupied lek again. The new leks include the Log Canyon in the west side of the Government Creek area, and McIntyre Divide south of McIntyre. Peak number of males counted by lek were; Government Creek 11, Benmore 14, Fredrickson 10, McIntyre 8, Little Valley 7, Log Canyon 5, and McIntyre Divide 4. The total number of males counted for 2020 was 59, up from a peak of 37 last year. However, last year's lek counts were impacted because of limited access. Though the peak lek counts appear higher, we stress that lek counts and locations fluctuated this year. We have included a map to show active lek locations in the area below.

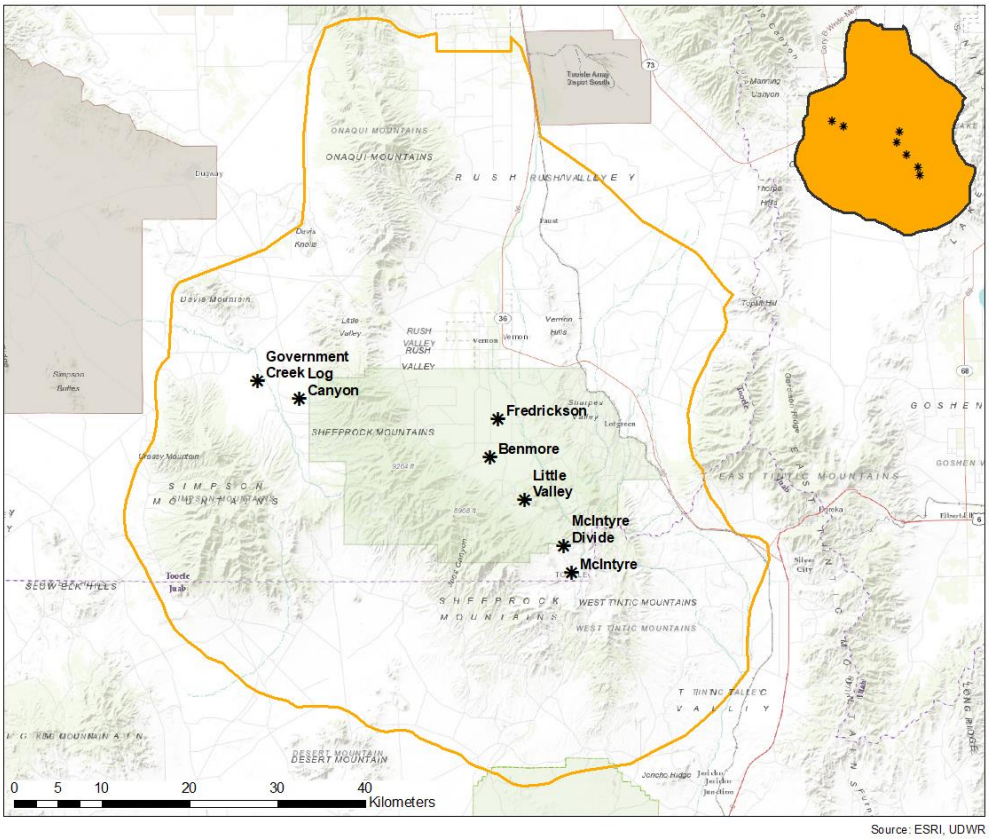

Figure 1. Lek locations including the two new (Log Canyon and McIntyre Divide) and recently reoccupied (Vernon Little Valley) leks in the Sheeprock Sage-grouse Management Area, UT.

Nesting

Of the 21 females we are monitoring, 9 to date have initiated nests. Six are marked with global-position system (GPS) transmitters (1 a 2019 female and 5 are 2020 females). Two are marked with very-high frequency (VHF) transmitters, 1 in 2019 and 1 in 2018. Three of the nine nests have failed, leaving six active nesting females. The nests were all predated by avian predators.

Survival

We have detected 12 mortalities of the 33 birds monitored. Three were marked with GPS transmitters and nine were marked with VHF transmitters. We will continue to monitor the radio-marked sage-grouse and recover any new mortalities as soon as possible.

Genetic Analysis

Genetic analyses have been postponed this year until further notice. We have partnered with USGS in Fort Collins, Colorado to analyze our resident feathers and all egg shell linings to assess integration of the translocated population into the genetics of the Sheeprocks population. To date, we have analyzed all captured and marked resident feathers and all eggs from 2016-2018. After travel is granted again by the university, we will travel to the lab in Fort Collins and analyze the 2019 and 2020 samples.

Wild Horses and Sage—grouse

We have begun discussions with Steve Petersen and Mikiah Carver, from BYU regarding their proposed research to better understand the interactions between wild horses and sage-grouse in the Sheeprock. The concept of the research was presented to the West Desert local working group this winter. We are looking to identify how we can help facilitate the research.

Corvid Management

We have consulted with USDA Wildlife Services (WS) regarding the placement of DRCC-1339 eggs this year in the Sheeprock SGMA to reduced raven predation on sage-grouse nests. WS has been placing the eggs near high priority nesting and brood-rearing area and will continue this work through the 2020 nesting season.

Public and Private Partners

As always, we thank the landowners who allow us access to their properties to capture and monitor birds. We also are extremely indebted to the dozens of volunteers who have helped with the translocation effort. We particularly thank Jason Robinson and Avery Cook, UDWR for coordinating the effort through the public review process and the logistics required to complete the translocation. We also thank the Utah Public Lands Policy Coordination Office, the BLM, the Yamaha Corporation, the West Box Elder CRM, the Parker Mountain and West Desert Adaptive Resources Management Local Working Groups, the Jack H. Berryman Institute, the Quinney Professorship for Wildlife Conflict Management, the UDWR, and the US Geological Service for funding, encouragement, and project support.