

## David Dahlgren – **Research Needs**

Currently the Parker Mountain sage-grouse population has one of the longest standing data sets (since 1998 to present) in Utah. We have radio-marked over 200 female sage-grouse and over 250 chicks. We hope to continue this research and more into the future. However, even with all that has taken place, more research needs to be done.

Currently the Utah Division of Wildlife Resources (UDWR) has male lek attendance rates as one of the top research needs for sage-grouse in Utah. Currently, it is assumed male sage-grouse lek attendance rates are 0.75. Past research is conflicting, and has higher and lower rates than 0.75. By assessing those rates, and comparing study areas, we might be able to get a handle on what our lek counts really mean for a given population. Additionally, the UDWR currently assumes a 2:1 female to male sex ratio within all populations. This is an arbitrary figure, and the truth has not been assessed yet. By knowing male lek attendance rates along with population level sex ratios, we might be able to estimate population levels with more confidence. This is a major research need in Utah, and throughout sage-grouse range.

We have used pointing dogs to help assess treatments for our research. Sagebrush treatment is taking place throughout Utah all in the name conservation of sagebrush and sage-grouse habitat. Funding is in place for many more projects to take place. Documenting the impact of these treatments on sage-grouse will be critical to our knowledge of how to best conserve sage-grouse. Not all sagebrush treatment is helpful to sage-grouse, and much of the past sagebrush conversion (to grasslands) has been extremely detrimental to sage-grouse. Sage-grouse require large contiguous habitats of sagebrush to persist. Only within these large sagebrush contiguous tracts can sagebrush treatment be considered beneficial, and the specific prescriptions of scale and pattern are essential. Connelly et al. (2000: Guidelines) lay out exactly what percentage of various seasonal habitats can be treated at any given time. Exotic invasion (i.e. cheatgrass) is a serious concern in many low elevation sites. Prescribed treatments in specific seasonal habitats need to be assessed on a population level to aid our adaptive management for the future. Using pointing dogs may help. Recently, European researchers have used pointing dogs along with distance sampling to provide grouse densities across landscapes. Developing these methods for sage-grouse may be an important method for assessing the impact of sagebrush treatment on sage-grouse populations.