2018 Summer Advisory Board Meeting
Wildlife and Range Research Update
Ben Geaumont and Dan Graham

Strategic Plan Aim - **Conduct applied research that investigates the compatibility of agriculture and wildlife**

Graduate Students – Co-Advised

Jonathan Spiess, PhD – Range Sciences, Evaluate livestock selection and fire behavior within patch-burn grazing research (Devan McGranahan).

Jasmine Cutter, M.S. – Range Sciences, Evaluate pollinators in our patch-burn grazing research (Torre Hovick).

Alex Rischette, M.S. – Range Sciences, Evaluate wildlife response to patch-burn grazing on Post-CRP (Torre Hovick).

Additional Graduate Student Committees

Adrienne Antonsen, M.S. – Entomology, Statewide pollinator survey.

Chyna Pei, PhD – Range Sciences, Statewide pollinator survey.

Cameron Duquette, PhD – Range Sciences, Grassland bird response to patch-burn grazing in mixed-grass prairie.

Current Research Projects

1. **The utility of unmanned aerial systems for monitoring sharp-tailed grouse leks** (Hovick, Graham, and Nowatzki).
    a. evaluate the feasibility of using UAS to locate and monitor leks of sharp-tailed grouse.
2. **Restoring disturbance to old Conservation Reserve Program Fields to Promote Ecosystem Services**. (C. Schauer, T. Hovick, R. Limb, and D. McGranahan)
    a. Evaluate the effects of patch-burn grazing in Conservation Reserve Program grasslands on livestock, vegetation, pollinators and wildlife in western North Dakota.
        i. Livestock, birds, vegetation, bees and butterflies
    b. Six, 160 acre pastures
        i. 3 with sheep
        ii. 3 with cow/calf pairs
    c. Six burns completed in October 2018

2a. Evaluate the ability of over seeding native forbs following prescribed fire to enhance habitat for pollinators.

a. Seeded (5), 1 acre plots within each prescribed fire area in mid-March 2018

3. **Annual forage mixes for southwest North Dakota: influence of planting date on forage production and pollinator communities.**
    a. Interested in how incorporating annual forages into food plots for wildlife and forage for livestock may benefit pollinators and other insects.

b. Hammered by hail.

4. **Monitoring native pollinator communities throughout North Dakota: Status and Management considerations for bees and butterflies.** (CO-PIS: R. Limb, T. Hovick, and J. Harmon)
    a. Conducting statewide pollinator surveys. Access land use, floristic resources and pollinator associations. Funded by ND Department of Agriculture.

Strategic Plan Aim 5 - **Integration of Livestock, Wildlife, Agronomy, and Weeds research programs into a farm-scale interdisciplinary research project.**

Evaluate a livestock-crop integrated system using annual forages, winter wheat and sheep. Determine livestock gains, crop production, insect use, and changes to soils.

a. Winter wheat was a complete failure
b. Annual forages were set back by hail

Peer Reviewed Publications

McGranahan, D.A., **B.A. Geaumont**, and J.W. Spiess. 2018. Livestock GPS collars based on an open-source datalogger, survives field conditions and informs best practices for logging intensity. Ecology and Evolution 8:5649-5660.

Norland, J.E., C.S. Dixon, D.L. Larson, K.L. Askerooth, and **B.A. Geaumont**. 2018. Prairie reconstruction unpredictability and complexity: What is the rate of reconstruction failures? Ecological Restoration: Accepted July 2018.

Geaumont, **B.A**. W. Mack, A.R. Lipinski, T.J. Hovick, R. Limb, and K.K. Sedivec. 20XX. Plant and bird community dynamics in mixed-grass prairie grazed by native and domestic herbivores. Rangeland Ecology and Management, (revision 1).

Geaumont, B.A. and J. Norland. 20XX. Influence of seed mixtures on native plant establishment in the badlands region of North Dakota. (submitted 4/16/2018)