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Summer 2020

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Center for Grassland Studies

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Grazing Livestock Systems | PGA Golf Management | Integrated Beef Systems |
Grassland Ecology and Management

Summer 2020
Volume 26, Issue 2

Nebraska Grazing Conference Goes Virtual: August 11-12

by Daren Redfearn, Chair, Nebraska Grazing Conference Steering Committee / Associate Professor, Agronomy and Horticulture Department, University of Nebraska-Lincoln

Challenges from COVID-19 have required changes to this year's 20th Nebraska Grazing Conference (NGC), according to **Daren Redfearn**, chair of the NGC Steering Committee. The changes reflect guidelines from the University of Nebraska and the Center for Disease Control related to large groups and social distancing in this uncertain environment. The health and safety of conference participants is important to conference organizers.

The major change to the conference is that it will be held as a virtual event instead of the traditional in-person event. The online conference will be held from 11:30 AM to 5:00 PM on both Tuesday, August 11 and Wednesday, August 12. There are no registration costs to attend this year's conference. However, you must register online to receive a link to participate in this virtual event. Conference details are being finalized and will be posted at <https://grassland.unl.edu/ngc-virtual> as they become available.



Themes for this year's conference include Weather Ready Ranches, Ranch of the Future, and Invasive Woody Plant Management. Speakers from around the country, as well as the University of Nebraska-Lincoln, will address managing forage shortages, using new technologies on the ranch, past, current and future trends on rangeland production, quality and vegetation responses, and managing red cedar using prescribed fire management. The 2019 Leopold Conservation Award Recipients, **Russ and Angela Sundstrom**, are highlighted in this year's conference.

Organizers hope the online version of the conference will be a convenience to a broader audience who will be able to participate from their home or office. Opportunities for interaction among participants and to ask follow-up questions of speakers have been built into the online event. Additionally, several watch parties have been organized around the state for groups of 25 or less to gather at Extension offices or elsewhere and participate in this virtual conference. This option may assist those who do not have stable Internet service in their area. Photo by Allie on Uplash.

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within the University of Nebraska-Lincoln
Institute of Agriculture and Natural
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Note: Opinions expressed in this newsletter are
those of the authors and do not necessarily
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To simplify technical terminology, trade names
of products or equipment sometimes are used.
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Director's Column by Walt Schacht, Interim Director, Center for Grassland Studies

The Center is making changes to increase its value as a source of information in grassland ecology and management for our audience of practitioners, advisors, scientists, educators, students, and enthusiasts. To identify the most relevant and current information needed by our stakeholders, we are in the midst of conducting listening sessions with partners and stakeholders across Nebraska in collaboration with the Center for Resilience for Agricultural Working Landscapes and the Nebraska Integrated Beef Systems Initiative. We are meeting with stakeholders (including ranchers, community leaders, and staff of NRCS, NRDs, Nebraska Game and Parks Commission, US Fish and Wildlife Service, US Forest Service and non-government conservation groups) to learn about their views of grasslands, including their environmental concerns, knowledge and needs related to the management and use of grasslands, and socio-economic impacts of grasslands in their area. We have held sessions in the Sandhills and the Panhandle and have others planned for central and northeastern Nebraska in July and August.

As a primary means of delivering information to our audience, we are redesigning our website to effectively provide information in the resource areas of interest to our audience (for example, prairie restoration, conservation practices, grassland management tools). Experts are interviewed in these resource areas and interviews are made available through the Center for Grassland Studies Podcast on the Center's website (see podcast article on Page 8). Within each of these resource areas we will list the Center's affiliates who have expertise in each area and publications that provide further information.

We are also expanding our prairie/grassland management program. With the Nine-Mile Prairie at the center of this program area, the Center contracted the Flatwater Group to develop a Master Plan for the Nine-Mile Prairie Environs, which is a strategic plan that looks at grassland conservation, education, and research for Nine-Mile Prairie and the surrounding prairie landscape (roughly 1000 acres). Collaborators include the neighboring private landowners, City of Lincoln, Lincoln Airport Authority, Lower Platte NRD, NRCS, and UNL's Campus Recreation. The Center has also taken on the management and the coordination of research and education at the newly-recognized Dalbey Prairie, owned by the NU Foundation and located southeast of Beatrice. The infrastructure (e.g. fencing) of the Dalby Prairie is being developed this year in preparation for initiation of research and education projects in 2021. The Center is also taking the lead with the Center for Resilience for Agricultural Working Landscapes, along with the Department of Agronomy and Horticulture and School of Natural Resources, to implement a collaborative adaptive management approach to research and education programs at the Barta Brothers Ranch. Stakeholders will be integrally involved in the process of framing hypotheses, implementing treatments, collecting data, and interpreting results.

If you would prefer to receive an electronic copy of this newsletter instead of a print copy, please let us know by emailing mmckendree14@unl.edu. Thank you.

Keeping Prairie Grouse on the Prairie

by Danielle Berger, Master's Student, University of Nebraska-Lincoln, School of Natural Resources, Department of Fisheries and Wildlife



Danielle Berger

As the grey of the April predawn sky is splashed with warm hues of yellow and pink by the first feeble rays of light, a low, bubbling chorus rings out across an undulating sea of grass. The song is a rhythmic exploration of a deep, hollow bass note. The music flows over the dunes of the Nebraska Sandhills, announcing that the dance has begun and inviting all within earshot to join in the revelry.

The melodious summons is to one of springtime's most exquisite sights in Nebraska- the lekking ritual of the greater prairie-chicken. Each year, male prairie-chickens gather at a flat, open location known as a lek to partake in an elaborate mating dance. Their party attire appears almost cartoonish with conspicuous orange air sacs adorning their necks, bright, tangerine eyebrows and pinnae feathers that when erected, resemble rabbit ears. The males rapidly stamp their feet and click their tail fans open and shut, as their air sacs ripple with a deep, booming melody. Each is hoping to impress a female and be rewarded with the opportunity to mate with her.

It is during these elaborate spring mating displays each year that the Nebraska Game and Parks Commission (NGPC) counts prairie-chickens and sharp-tailed grouse, the second species of prairie grouse that lives in the Sandhills and performs a similarly complex mating ritual. The goal of these breeding ground surveys is to determine how populations of prairie grouse are doing in the state. Prairie grouse populations are declining throughout extensive portions of their range due to the loss of grassland habitat. However, archival breeding ground survey data reveals that Nebraska's prairie grouse populations have taken a remarkably different trajectory. Greater prairie-chicken populations have increased over their historical levels, while sharp-tailed grouse populations have declined slightly (Figure 1).

The fluctuation of prairie grouse populations over time is likely explained, in part, by changes in their environment. Danielle's research attempts to quantify long-term environmental changes in the Sandhills that may affect prairie grouse abundance. Preliminary results indicate that grazing pressure, the number of acres of cropland, and bird of prey populations have all increased in the Sandhills since the 1950s. The number of acres of hay harvested, CRP acres and prairie grouse hunting pressure have all declined during the same time period. Weather variables have fluctuated cyclically. The next step is to explore the relationship between these environmental variables and breeding ground survey data to determine which factors have the greatest influence on Nebraska's prairie grouse populations.

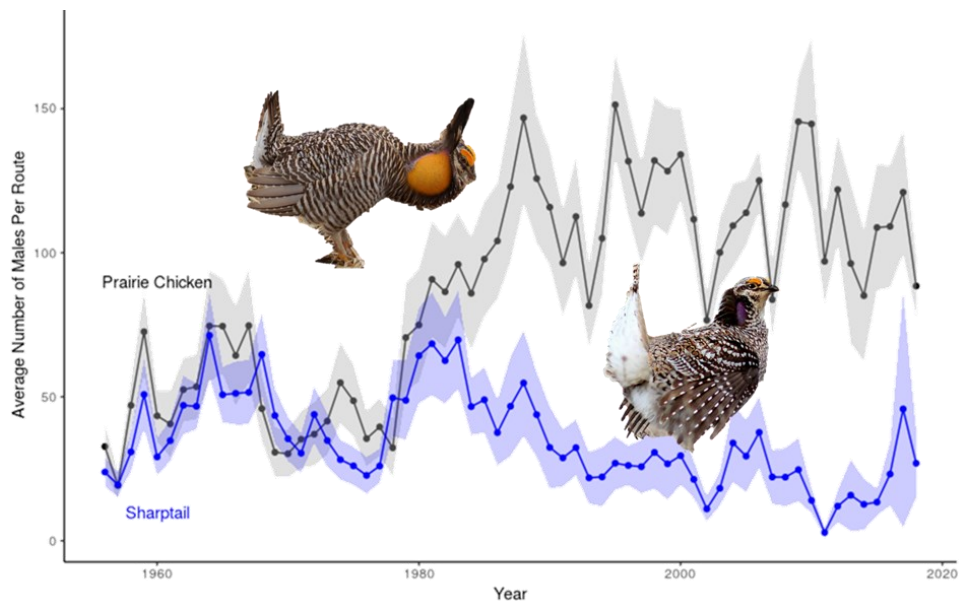


Figure 1. Sandhills' prairie grouse breeding ground survey time series. Values represent the average number of male prairie grouse, by species, seen on breeding grounds along a 20-mile survey route.

Understanding why greater prairie-chickens are doing better in the Sandhills than other portions of their range could provide key insight into how to improve conservation efforts for these birds. It could also help the NGPC anticipate declines and take preemptive action to ensure prairie grouse remain a fixture of the Sandhills. Danielle's hope is that her work will help the delightful revelries of prairie grouse remains a hallmark of springtime in Nebraska for years to come.

2020 Nebraska Grazing Conference

Registration

No fees will be charged for participation in the 2020 Nebraska Grazing Conference webinar. However, **all participants are required to register in advance. Please register for each day of the conference (and watch parties, if attending) separately. Registration opens on August 1** and may be found on the Nebraska Grazing Conference website, grassland.unl.edu/ngc-virtual.

- ❖ **Option 1:** Register for the day(s) of the conference you wish to attend at the above link to participate from your home or office.
- ❖ **Option 2:** Participate in a watch party (see below). Note additional registration instructions for this option.

Watch Parties

In-person watch party sites have been organized around the state for those without stable Internet service in their home or office. The watch parties will comply with the University of Nebraska and the Center for Disease Control guidelines on large group limits and social distancing protocols.

To attend a watch party you must: 1) register for the conference (either one or both days) and 2) contact a watch party site host to reserve your spot in advance of the webinar (let them know which day(s) you plan to attend. Space is limited to 25 people per site, with no exceptions being made once the site limit has been reached. Watch party sites include:

- ❖ *Northeast Research & Extension Center*, 1010 E Centre, Hartington, NE. Host, **Ben Beckman**, Beef Systems Assistant Extension Educator, Nebraska Extension, (402) 254-6821 or ben.beckman@unl.edu
- ❖ *Zion Lutheran Church*, 318 E 4th Street, Ainsworth, NE. Host, **Hanna Greenwell**, Beef Systems Extension Educator, Nebraska Extension, (402) 387-2213 or hgreenwell2@unl.edu
- ❖ *Panhandle Research & Extension Center*, 4502 Avenue I, Scottsbluff, NE. Host, **Mitchell Stephenson**, Panhandle, Forage Management Specialist/Extension Specialist, Nebraska Extension, (308) 632-1230 or mstephenson3@unl.edu
- ❖ *Buffalo County Extension*, 1400 E 34th Street, Kearney, NE. Host, **Brent Plugge**, Extension Educator, Nebraska Extension, (308) 236-1235 or brent.plugge@unl.edu

- ❖ *Fillmore County Fairgrounds*, 641 N 5th Street, Geneva, NE. Host, **Sydney O'Daniel**, Beef Systems Extension Educator, Nebraska Extension, (402) 746-3417 or sydney.odaniel@unl.edu

Sponsor Opportunity

Individuals and organizations interested in sponsoring a watch party are encouraged to provide financial support in the amount of \$100. The money will be used to provide refreshments at watch party sites. Sponsors will be recognized throughout the webinar for their contribution.

Mail checks to: Center for Grassland Studies—Watch Party, University of Nebraska-Lincoln, 203 Keim Hall, Lincoln, NE 68583-0953.

Vendors

Due to the online format of this year's conference, vendor booths will not be an option. However, vendors are invited to submit their organization logo to conference planners, along with a brief info paragraph, contact name, email and phone. A PowerPoint will be developed with each vendor having a slide for their information. The PowerPoint will run during breaks. Logos should be emailed to mmckendree14@unl.edu no later than August 5.

Proceeding Material

The 2020 Nebraska Grazing Conference proceeding will be uploaded to the Center's website at grassland.unl.edu/nebraska-grazing-conference as soon as possible. Print copies of the proceeding are available for \$20 each. **Mail checks to:** Center for Grassland Studies—Proceeding, University of Nebraska-Lincoln, 203 Keim Hall, Lincoln, NE, 68583-0953. Include a complete address for mailing.

Podcasts

Podcast episodes have been developed with some of the Nebraska Grazing Conference speakers to provide a preview of their webinar presentations. Go to grassland.unl.edu/ngc-virtual to see the schedule of speakers and listen to available podcasts.

The Center for Grassland Studies also offers podcast episodes related to other topics, including its Fall Seminar Series presentations. These podcasts may be accessed at media-hub.unl.edu/channels/25356.

2020 Nebraska Grazing Conference Schedule

August 11, Tuesday

- 11:30 PM **Virtual Lunch and Updates** with **Walt Schacht**, Interim Director, Center for Grassland Studies
- 12:30 PM **Welcome and Opening Remarks** with **Daren Redfearn**, Chair, Nebraska Grazing Conference Steering Committee / Associate Professor, Agronomy and Horticulture, University of Nebraska-Lincoln

- 4:30 PM **GrassSnap Update and Direction** with **Ben Beckman**, Beef Systems Assistant Extension Educator, Nebraska Extension, Hartington, NE
- 4:45 PM **Grazing Tool (NGLC / NRCS)** with **T. L. Meyer**, Beef Systems Extension Education, Nebraska Extension, Thedford, NE
- 5:00 PM **Virtual Breakout Rooms for Q & A**

August 12, Wednesday

SESSION 1: Weather-Ready Ranches

- 12:45 PM **Past, Current, and Future Climate Trends** with **Martha Shulski**, Director, Nebraska State Climate Office and Associate Professor, School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE
- 1:15 PM **Past, Current, and Future Climate Trends on Rangeland Production and Quality** with **Justin Derner**, Research Leader, USDA ARS Rangeland Resources and Director, Central Plains Experimental Range Long-term Agroecosystem Research, Cheyenne, WY
- 1:45 PM **Nebraska Sandhills: Examples of Long-term Vegetation Responses and Quality Trends** with **Mitchell Stephenson**, Range Management Specialist, Nebraska Extension, Scottsbluff, NE
- 2:15 PM **Producer Panel** with **Melinda Sims**, Sims Cattle Company, McFadden, WY and **John Halstead**, Ranch Manager, Fawn Lake Ranch, Gordon, NE
- 3:00 PM **Break**
- 3:15 PM **2019 Leopold Conservation Award Recipients**, with **Russ and Angela Sundstrom**, Broken Box Ranch, Moorefield, NE

SESSION 2: Ranch of the Future

- 3:30 PM **Using New Technology on the Ranch** with **Travis Mulliniks**, Assistant Professor, Nebraska Extension, North Platte, NE
- 4:00 PM **GrassCast** with **Dannele Peck**, Director, Northern Plains Climate Hub/Agricultural Economist, USDA ARS Crops Research Lab, Fort Collins, CO

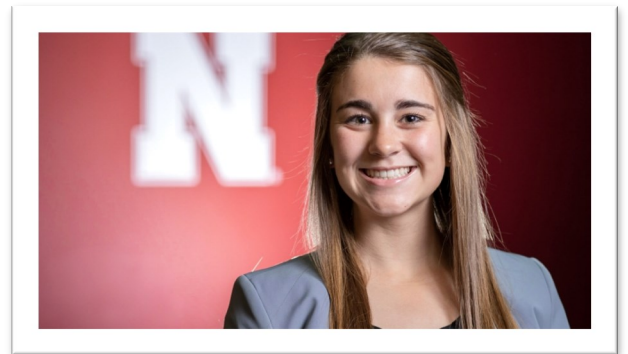
SESSION 3: Invasive Woody Plant Management

- 11:30 PM **Virtual Lunch and Updates** with **Walt Schacht**, Interim Director, Center for Grassland Studies
- 12:30 PM **Can Fire Be Replaced in Rangelands to Manage Eastern Redcedar** with **Dirac Twidwell**, Department of Agronomy and Horticulture, University of Nebraska-Lincoln, Lincoln, NE
- 1:00 PM **Scaling up Management for Resilient Grazing Lands: Outcomes for Livestock and Wildlife** with **Caleb Roberts**, Post-doctoral Researcher, Department of Agronomy and Horticulture, University of Nebraska-Lincoln, Lincoln, NE
- 1:30 PM **Fire Management** with **Chad Bladow**, Prescribed Fire Coordinator, The Nature Conservancy—Nebraska Program, Johnstown, NE
- 2:00 PM **Break**
- 2:30 PM **Managing Re-sprouting Woody Plants** with **Scott Bodie**, Consultant, Environment and Natural Resources Management, Burchard, NE
- 3:00 PM **Precision Conservation: Increase Farm Profitability While Conserving Soil, Water, and Wildlife** with **Andrew Little**, Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE
- 3:30 PM **Wildlife Use of Habitat in Response to Prescribed Fire** with **Dave Londe**, Graduate Research Assistant, Oklahoma State University, Department of Natural Resources Ecology and Management, Stillwater, OK
- 4:00 PM **Final Comments, Evaluations, Virtual Breakout Rooms for Q & A**

PGA Golf Management Student Awarded National PGA WORKS Scholarship by PGA WORKS

Breanna Reynolds, a PGA Golf Management undergraduate from Parker, SD, is one of ten recipients selected by PGA REACH to be awarded a scholarship through the PGA WORKS Golf Management University Scholarship Program for the 2020-2021 academic school year. These \$8,000 scholarships are designed to improve the recruitment and retention of talented and motivated students from diverse backgrounds, who are pursuing PGA Membership through PGA Golf Management University Programs nationwide.

The PGA WORKS initiative is designed to evolve the demographic composition of the golf industry's workforce and the PGA of America's Membership. Scholarship recipients will pursue full-time undergraduate studies at one of the 18 accredited PGA Golf Management Universities during the 2020-2021 academic year, with the ultimate goal of obtaining PGA Membership.



Breanna Reynolds, PGA WORKS Golf Management University Scholarship recipient. Photo by B. Goetsch

"PGA REACH is proud to award these outstanding students with a PGA WORKS Golf Management University Scholarship, as they pursue their dream of earning PGA Membership and a college degree," said PGA President Suzy Whaley. "We congratulate them for their academic success, and we're delighted that they represent an exciting future for the game and our industry."

Scholarship recipients were selected on the basis of: academic record; demonstrated leadership and participation in school and community activities; honors and work experience; a statement of goals and aspirations; unusual personal or family circumstances; an outside appraisal; demonstrated active participation in the game of golf; and playing ability.

One of the 18 accredited PGM Schools, the University of Nebraska-Lincoln (UNL), has had one winner each of the past two years. Beth Hildebrandt was the recipient in 2019. Both Breanna and Beth recently sat down with PGA WORKS Program Specialist Rachel Mabee and UNL PGM Instruction Coordinator Brad Goetsch to discuss what it's like to become a member of the PGA WORKS family, and how winning the award has impacted their life. You can listen to their conversation on the PGA Golf Management "Launch!" podcast: <https://mediahub.unl.edu/channels/37782>.

Congratulations Graduates!

The Center for Grassland Studies wishes the following May 2020 graduates much success on their future endeavors.

- ❖ *PGA Golf Management:* **Ryan Krugler**, Adel, IA. Ryan has accepted the assistant professional's position at the Preston Trail Golf Club in Dallas, TX. **Trevor Svec**, Omaha, NE. Trevor has accepted the assistant professional's position at Indian Trails Country Club in Beemer, NE.
- ❖ *Grazing Livestock Systems:* **Colten Bergt**, Amherst, NE and **Ronald Kramer**, West Point, NE.
- ❖ *Grassland Ecology and Management:* **Grant Carstens**, Lincoln, NE and **Justin Weissling**, Waverly, NE.

Grassland Livestock Systems Degree Gets Facelift by Jessica Windh,

Doctoral Student, Agricultural Economics and Undergraduate Recruiter, Center for Grassland Studies

Grazing Livestock Systems, the first major offered through the Center for Grassland Studies, is getting a facelift starting in Fall 2021! This facelift will take the two grassland-focused majors that CASNR offers, Grassland Ecology and Management (GECM) and Grazing Livestock Systems (GRLS), and move them under the umbrella of a single major: Grassland Systems (GRAS). Before anyone panics, be assured that the majors themselves aren't undergoing changes - they are just becoming **options** under the Grassland Systems major. What are these two undergraduate programs and why bother with this change you ask?



A fall trip to Stock Seed farms in Murdock, NE, organized by the Range Club, drew interest from both GLS and GECM students.

Grassland Ecology and Management focuses primarily on ecology and multiple uses of grasslands: the historical use of grasslands, how they function, and how to properly manage them for multiple uses with resilience in mind. Students are taught about the foundational components of grasslands, including ecology, soil science, plant physiology, and plant identification, and then how to use this foundation to learn about integrated grassland management for multiple uses, including water, wildlife, plant community production, recreation, and aesthetics. These students graduate with all the skills necessary for a career in a number of alternative including habitat management, grassland/rangeland management, conservation, ecosystem restoration, and environmental consulting.

Grazing Livestock Systems looks at the systems approach of grassland management from a producer's point of view. Not only do students learn the principles of grassland ecology, they also take courses in animal science and agricultural economics. The purpose of this undergraduate program is to prepare students to work in more agricultural production positions such as ranch managers and consultants, staff of USDA agencies, financial advisors, and research and extension technicians/assistants.

At the inception of Grazing Livestock System in 1999, the livestock production industry was less holistic than it is now and the major had a different curriculum than it does today. Today's landowners have evolved to incorporate more ecosystem services management into their land use plans, which has driven the two majors to overlap even more. Also, over the past 20 years, new careers have emerged that have diversified what was once available to our graduates. Given these changes in the realm of grassland systems and to prepare our students for the breadth of career opportunities, the merger of the two majors into Grassland Systems was a logical direction. The development of the new Grassland Systems degree program will not affect students currently enrolled in Grassland Ecology and Management or Grazing Livestock Systems; the designated degree program at their graduation will be either Grassland Ecology and Management or Grazing Livestock Systems.

Students will benefit from this change as the new "official" shared ground between the two academic options will open doors for collaboration and exploration of the overlap in their programs. The two student clubs associated with the two academic options, the Range Management Club and Grazing Livestock Systems Club, will remain separate entities, but have also acknowledged the benefits of working together in their areas of commonality to provide the best opportunities for their members.

To learn more, we encourage current students to contact their academic advisors and prospective students to contact Margo McKendree in the Center for Grassland Studies (mmckendree14@unl.edu). Students interested in the student clubs should contact Asha Scheideler (asha.scheideler@huskers.unl.edu), President of the Range Management Club and Nelson Paul (npaul4@huskers.unl.edu), President of the Grazing Livestock Systems Club.

Kate Krebs: Grassland Systems Ambassador by Jessica Windh, Doctoral

Student, Agricultural Economics and Undergraduate Recruiter, Center for Grassland Studies

The Center for Grassland Studies is pleased to announce Kate Krebs as our new 2020-21 Undergraduate Student Ambassador. Kate will work alongside undergraduate recruiter, Jessica Windh, to recruit students to the Grassland Systems major. Student Ambassadors are an essential part of the recruiting process because future students like to hear from students who are currently experiencing college themselves. In her role as ambassador, Kate will be helping with prospective student on-campus visits, off-campus university events, and will be available via email to answer questions about being a student in the Center for Grassland Studies.

Kate is a junior with a dual major in Grazing Livestock Systems (GLS) and Animal Science and a minor in Engler Agribusiness Entrepreneurship. She is an active member of the Grazing Livestock Systems club and will be serving her second term as club secretary this year. Kate is from Monticello, WI and chose to come to the University of Nebraska-Lincoln because the GLS program offered a diverse curriculum of courses where she could study multiple areas of agriculture.

Kate is very passionate about the program and loves helping other students, especially incoming freshmen, find a community in the Center for Grassland Studies. "I am excited to help recruit students to this unique program and connect them with peers and professionals that can be lifelong friends and mentors."



Kate Krebs, 2020-2021 Grassland Systems Undergraduate Student Ambassador.

Podcast Broadens Centers Outreach by Margo McKendree, Center for Grassland Studies



The Center for Grassland Studies recently developed a podcast to support its efforts in providing current and relevant information to a diverse audience interested in grasslands. This popular and effective means of outreach and information dissemination supports the Center's mission and objectives.

Podcast episodes are developed from questions posed by stakeholders looking for information on issues of importance to them, and Center affiliates are called upon for their expertise to address the questions. This approach keeps the Center's audience abreast of current science and management practices associated with grasslands.

The Center's annual Nebraska Grazing Conference and Fall Seminar Series are also sources for episodes. These events include more than 25 grassland managers, scientists, and advisors who present on grassland topics and issues. The interviews with these individuals provide listeners with a preview of a speaker's future presentation at one of the events.

To listen to current episodes, go to the Center for Grassland Studies Podcast channel on UNL MediaHub at mediahub.unl.edu/channels/25356. New episodes, which average ten to fifteen minutes in length, are uploaded weekly. Eventually, all episodes will be archived in the outreach area of the Center's website for later access by our audience.

Do you have a comment or topic you would like to hear about in an upcoming episode? If so, please email your ideas to mmckendree14@unl.edu.

Fall Seminar Series Focus: Prairie Restoration and New Technologies for Monitoring Grasslands

The Center for Grassland Studies' Fall Seminar Series features guest lecturers from on and off campus who speak on topics related to the Center's mission. The Seminar presentations, which are free and open to the public, can be linked to via Zoom on Mondays during the fall semester from 3:00 to 4:00 p.m. There will be time at the end of each presentation for questions and discussion. A number of the presentations will be made from 150 Keim Hall where there will be limited seating for an audience (to meet UNL social distancing guidelines); the presentations scheduled for 150 Keim Hall will be announced at the beginning of the semester. For those who would like to hear previews of the presentations, a podcast interview with each speaker will be available on the Center's website (grassland.unl.edu) in the week before the presentation. Each presentation also will be recorded and made available on the Center's website within 48 hours following the presentation.

Students wishing to take the Fall Seminar for academic credit are encouraged to contact the Center for Grassland Studies at 402-472-4101. The 2020 presentation schedule is:

August 24	<i>A Watershed in Motion</i> by Ethan Freese , Master of Applied Science Student, School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE
August 31	<i>Why Plant a Prairie?: Restoration Versus Conservation</i> by Dave Wedin , Professor, School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE
September 7	<i>Keeping Prairie Grouse on the Prairie</i> by Danielle Berger , Doctoral Student, Utah State University, Logan, UT
September 14	<i>Hidden Prairie — A Year Photographing A Single Square Meter of Prairie</i> by Chris Helzer , Director of Science, The Nature Conservancy, Aurora, NE
September 21	<i>Precision Conservation: Increase Farm Profitability While Conserving Soil, Water, and Wildlife</i> by Andrew Little , Assistant Professor and Extension Specialist, Landscape Ecology and Habitat Management, School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE
September 28	<i>Prairie Corridor on Haines Branch</i> by Nicole Fleck-Tooze , Special Projects Administrator, Lincoln Parks and Recreation, Lincoln, NE
October 5	<i>Rangeland Analysis Platform: A Web-based Monitoring Tool for Rangeland</i> by Nadine Bishop , State Rangeland Management Specialist, USDA Natural Resources Conservation Service, Imperial, NE
October 12	<i>Tracking Cattle Grazing: GPS and Diet Selection</i> by Mitchell Stephenson , Range Management Specialist, Panhandle Research & Extension Center, Scottsbluff, NE
October 19	<i>Evaluating Soil Responses to Mob Grazing System on Sandhills Sub-irrigated Meadow</i> by Elnaz Hosseiniaghdam , Doctoral Student, Soil and Water Science, Agronomy and Horticulture, University of Nebraska-Lincoln, Lincoln, NE
October 26	<i>Ranch of the Future: Precision Management</i> by Travis Mulliniks , Assistant Professor, West Central Research & Extension Center, North Platte, NE
November 2	<i>Putting Monitoring into Practice: Strategies for Large-scale Conservation</i> by Dirac Twidwell , Associate Professor, University of Nebraska-Lincoln, Department of Agronomy and Horticulture, Lincoln, NE
November 9	(Leu Lecture) <i>Rangeland Ecology, Conservation, Pyric Herbivory, and Monitoring</i> by Sam Fuhlendorf , Regents Professor and Groendyke Chair in Wildlife Conservation, Oklahoma State University, Natural Resource Ecology & Management, Stillwater, OK
November 16	<i>Down the RaBET Hole: The Journey to Develop the Rangeland Brush Estimation Toolbox</i> by Chandra Holifield Collins , USDA Agricultural Research Service, Southwest Watershed Research Center, Tucson, AZ
November 23	<i>Rancher Decision-Making and Climate Risk Management</i> by Tonya Haigh , Project Manager Rural Sociologist, School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE
November 30	<i>Forage Production Models and Predictions for Semi-arid Grasslands</i> by Markéta Podebradska , Doctoral Candidate, School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE
December 7	<i>Legislation in Invasive Species Management</i> by Conor Barnes , Graduate Student, School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE

Early Spring Burning as a Meadow Management Strategy



Tara Harms

When thinking of the Nebraska Sandhills, most people imagine cattle grazing on rolling hills of grass covered sand dunes. However, nestled within the valley regions between these massive dunes lies another unique environment, Sandhills subirrigated meadows. Subirrigated meadows, as their name implies, have natural subirrigation. The water table of these meadows is within rooting depth during most of the growing season. Subirrigation allows meadow vegetation to be more productive than the associated uplands. Productive and high quality forage make these meadows an extremely valuable forage resource to both livestock and wildlife. Many Sandhills ranchers hay these meadows during the summer and use the hay to feed overwintering cattle. The meadows also can provide valuable grazing on re-growth in the fall and winter months, helping to extend the grazing season.

The mesic nature of meadows enables abundant forage but it also provides for some management challenges. In years with high summer precipitation, wet conditions can persist on meadows, being especially evident in areas where the water table is closer to the surface. This can result in haying and grazing being delayed or even not accomplished. This un-used forage eventually dies and begins to accumulate. Excessive accumulation of dead plant material can slow soil warming the

next spring, resulting in delayed growth and associated reductions in future forage production. This dead plant material can also lower forage quality. Reductions in forage production and quality on meadows due to accumulated dead plant buildup has negative implications for cattle production. Due to lack of research into this issue, the most sustainable practice to remove this dead plant material from meadows is unclear.

In hoping to provide some answers to ranchers, **Tara Harms** and advisors, **Mitchell Stephenson** and **Jerry Volesky**, examined the use of spring prescribed burning as an effective practice to remove this standing dead plant material and litter on meadows. Burning has been used in other grasslands to remove not only dead plant material but for control of invasive species and to promote heterogeneity. However, their use in mesic grasslands like subirrigated meadows is less understood. After three years of data collection, they were able to provide some insight into the implications of the use of prescribed burning on meadows. First, they found that spring prescribed burning was effective at dead plant removal. Second, prescribed burning in early-May had no effect on end-of-season forage production compared to unburned controls. The use of prescribed burning on meadows to remove dead plant material without affecting future plant production show that it is a sustainable management practice.

Tara and her advisors look forward to sharing their results with Sandhills ranchers to help them make informed decisions that will provide more options for management on subirrigated meadows.

On a final note, take a moment to enjoy these meadows the next time you travel through the Sandhills. These meadows enhance the diversity in our Sandhills grasslands and sustaining them is vital to ensure the continued use of all the services they provide.

Tara Harms is a graduate student (range and forage science) in the Agronomy and Horticulture Department at the University of Nebraska-Lincoln.



A research plot being burned in early-May to investigate the effects of burning on subirrigated meadows. Photo by M. Stephenson.

UNL PGA Golf Management Coordinator Saves Man from Choking at Country Club

by Liz Husmann, Center for Grassland Studies

On the evening of June 27, Scott Holly, PGA Professional and PGM Internship Coordinator at UNL, and Andrew Robertson, a PGM program alumnus and friend of Holly, were walking in the Plainview Country Club parking lot to put their golf clubs in their trucks following a tournament. “We noticed someone else, neither of us knew, walking in the parking lot and both thought something was off,” explained Holly. “About 15 seconds later he started to walk towards us and gestured with his left hand toward his chest a few times.”

“It was clear something was wrong,” said Robertson, “We asked if he was choking and he nodded yes.” Holly quickly performed the Heimlich Maneuver on him, dislodging the piece of steak that was blocking his airway after a few thrusts. “The gravity of the situation didn’t sink in until afterwards when he said that he hadn’t taken a breath in nearly a minute,” said Holly. Robertson pointed out that there was no one else in the parking lot at the time, and that it was a while before they saw anyone else come outside. “I hate to think what would’ve happened had we not been there,” he said.

Many students and graduates from the UNL PGM program have been part of the Plainview Country Club family over the years. Tim Knaak, president of the club, wanted to be sure Holly was recognized for his quick thinking and heroic action to aid a member of their community. “It has been a pleasure for our golf course to host Scott,” he said. “He has been a consummate competitor and professional—and now he gets to add ‘HERO’ to the list.”

For his part, Holly remains humble about the incident. “I certainly don’t feel heroic, I feel like anyone in that situation would have done the same thing,” he said. “I just happened to be the one that was there.”



Scott Holly, PGA Professional and PGM Internship Coordinator at UNL

CGS Awards 2020-2021 Scholarships and Fellowships

The Center for Grassland Studies has several funds available to support academic and professional development for undergraduates pursuing degrees in grassland management and stewardship. Additionally, graduate students with a special interest in pasture and/or range management may apply for a fellowship to support their research efforts. Award recipients for the 2020-2021 academic year include:

- ❖ *Arthur W. Sampson Fellowship*: **Alison Ludwig**, Toledo, OH; **Travis Millikan**, Chadron, NE; **Selby Boerman**, Whitman, NE; and **Dillon Fogarty**, Jordan, MN
- ❖ *Sandhills Task Force Scholarship*: **Maria Harthoorn**, Ainsworth, NE and **Brandon Jelinek**, Atkinson, NE
- ❖ *Stock Seed Farms—Dr. Laurence C. Newell Scholarship*: **Katie Steffen**, Lincoln, NE
- ❖ *Center for Grassland Studies*: **Kate Krebs**, Monticello, WI
- ❖ *Joseph O. Young Scholarship*: **Kaitlyn Dozler**, Albion, NE; **Jacob Harvey**, Holdrege, NE; **Alex Heier**, Kenesaw, NE; **Matthew Hoffman**, Omaha, NE; **Brandon Jelinek**, Atkinson, NE; **Kole Karcher**, Geneva, NE; **Kate Krebs**, Monticello, WI; **Tate Lueth**, Curtis, NE; **Miranda Mueller**, Yutan, NE; **Nickolas Sanders**, Dwight, NE; **Asha Scheideler**, Scotia, NE; **Ryley Spatz**, Brainard, NE; and **Boone Svoboda**, Deweese, NE
- ❖ *Martin and Ruth Massengale Grasslands Scholarship*: **Samuel Steffen**, Beatrice, NE
- ❖ *Leu Scholarship*: **Tate Lueth**, Curtis, NE and **Magdalene O’Brien**, Blair, NE

The Center and our students are very fortunate to have donors passionate about the Nebraska grasslands and committed to the education of our future professionals and grassland stewards. To learn more about CGS scholarships and fellowships, go to grassland.unl.edu/grazing-livestock-scholarships.



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2020 Nebraska Grazing Conference Goes Virtual ... Details Inside!

The 2020 Nebraska Grazing Conference will be held as a virtual event due to the challenges of COVID-19. There is no cost to attend this virtual event, but registration is required. To learn more about the conference look on Pages 4 and 5 inside. Themes and speakers are listed below.

August 11:

Session 1: Weather-Ready Ranches. Speakers include **Martha Shulski**, Nebraska State Climate Office and School of Natural Resources, University of Nebraska-Lincoln, **Justin Derner**, USDA ARS Rangeland Resources and Central Plains Experimental Range Long-term Agroecosystem Research, **Mitchell Stephenson**, Nebraska Extension, **Melinda Sims**, Sims Cattle Company, **John Halstead**, Fawn Lake Ranch, and **Russ and Angela Sundstrom**, Broken Box Ranch.

Session 2: Ranch of the Future. Speakers include **Travis Mulliniks**, Nebraska Extension, **Dannele Peck**, Northern Plains Climate Hub and USDA ARS Crops Research Lab, **Ben Beckman**, Nebraska Extension, **T. L. Meyer**, Nebraska Extension.

August 12:

Session 3: Invasive Woody Plant Management. Speakers include **Dirac Twidwell**, University of Nebraska-Lincoln, **Caleb Roberts**, University of Nebraska-Lincoln, **Chad Bladow**, The Nature Conservancy—Nebraska Program, **Scott Bodie**, Natural Resources Management, **Andrew Little**, School of Natural Resources, University of Nebraska-Lincoln, and **Dave Londe**, Oklahoma State University.