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NRM Newsletter

Department of Natural Resource Management

Spring 2020

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Faculty

- ◇ Michele Dudash ... Department Head & Professor
- ◇ Alexander (Sandy) Smart ... Assistant Dept. Head & Professor
- ◇ Steven Chipps ... Volunteer Professor/Unit Leader USGS
- ◇ Alison Coulter ... Assistant Professor
- ◇ Krista Ehler ... Asst. Professor/Extension Range Specialist
- ◇ Bruce Eichhorst ... Instructor/OLFS Assistant Director
- ◇ Jonathan Jenks ... Distinguished Professor
- ◇ Kent (KC) Jensen ... Associate Professor
- ◇ Maribeth Latvis ... Assistant Professor
- ◇ Joshua Leffler ... Assistant Professor
- ◇ Robert Lonsinger ... Assistant Professor
- ◇ Don McCrea ... Instructor
- ◇ Lora Perkins ... Associate Professor
- ◇ Onja Razafindratsima ... Assistant Professor
- ◇ Christopher Saunders ... Associate Professor
- ◇ Joshua Stafford ... Volunteer Assoc. Prof/Asst. Unit Leader USGS
- ◇ Lan Xu ... Professor
- ◇ Charles Fenster ... NRM Affiliate Professor/OLFS Director
- ◇ Maaz Gardezi ... NRM Affiliate Assistant Professor
- ◇ Stella Liu ... NRM Affiliate Assistant Professor
- ◇ Candace May ... NRM Affiliate Assistant Professor
- ◇ Christopher Saunders ... NRM Affiliate Associate Professor
- ◇ Brian Graeb ... Adjunct Faculty

SDSU Extension Specialists

- ◇ Peter Bauman ... Range Field Specialist
- ◇ Katherine Jaeger ... Youth Outdoor Education Field Specialist
- ◇ Sean Kelly ... Range Management Field Specialist

Staff

- ◇ Beth Byre ... Accountant
- ◇ Jiyoung Kim ... Support Staff
- ◇ Duane Olson ... Field Station/WLRU Grounds Keeper
- ◇ Katie Tvedt ... Support Staff

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- <http://www.sdstate.edu/nrm>
- <https://www.facebook.com/SDStateNRM>
- <https://www.facebook.com/SDState-Natural-Resource-Job-Announcements-699103456779362/>



Dear Alumni, Donors and Friends,

For the last couple of weeks we have been educating our students on campus and virtually amidst a global pandemic. The NRM faculty have successfully transitioned their courses to online learning or a hybrid form (in person and virtual instruction). We completed advising and new student orientation via Zoom and our departmental seminar attendance has been growing now that it is remote! In addition to their efforts in the classroom, our dedicated faculty's research projects continued or were initiated under new stricter guidelines. The Covid-19 situation was especially difficult for our UGs, hoping to have internship or work experiences over the summer, and as well as for our recent graduates. Please know that NRM is committed to providing the best experience possible for our students even in the face of our ongoing Covid-19 challenges, and is ready to help in any way that we can!

Transitions are part of an academic department and we are sorry to see our valued colleagues depart and wish them all well in the next phase of their careers as we welcome in new ones. In our Wildlife and Fisheries program, Professor Mike Brown retired in May after more than 26 years of service to SDSU, and Distinguished Professor Jon Jenks has formally shared that he is retiring in January 2021 after almost 30 years at SDSU! NRM and the USGS Coop Unit also said goodbye to Dr. Larry Gigliotti who retired in July. Assistant Professor Dr. Onja Razafindratsima is also leaving us for a tenure track position at U C Berkeley.

As we are committed to rebuilding our department, I am delighted to officially welcome Dr. Alison Coulter as a new Asst. Professor in Fisheries effective January 2021. Additionally, we have Dr. Chris Cheek joining us as a second Fisheries Asst. Professor in fall 2021. Furthermore, Dr. Jennifer Zavaleta Cheek is joining us as an Asst. Professor to lead our Conservation Planning and Park Management program. Dr. Dave Coulter, also a Fisheries scientist, is joining us as an Adjunct this coming year.

Please all stay well and safe during this challenging period!

Michele

2020-2021 STUDENT CLUB & ADVISOR

- American Fisheries Society (AFS) Student Chapter Steve Chipps
- Ecology Club Lan Xu
- Botanical Society of America (BSA) Student Chapter ... Maribeth Latvis
- Natural Resource Law Enforcement (NRLE) Club Don McCrea
- Range Club Sandy Smart
- Wildlife and Fisheries Conservation Club (WFCC) Bruce Eichhorst

NRM YouTube Channel

https://www.youtube.com/channel/UCng4HeZ0Nr6r_XUtkRI_bg

You can watch all the NRM related videos.

- Recruitment Video
- Faculty & Field Specialist Video
- Graduation Video
- Award & Scholarship Video
- Why do I need a 4 year degree by Don McCrea

Graduation 2019-2020

UNDERGRADUATE STUDENTS

Fall 2019

Donald Allaway (Le Mars, IA) - NRLE

Brian Clemen (Milford, IA) - WFS

Rosie Douglas (N Ireland, United Kingdom) - REM

Elisabeth Else (Webster, SD) - WFS

Daniel Fraser (Bellingham, MA) - NRLE

Tyler Frideres (Algona, IA) - EES

Conner Hanson (Marcus, IA) - WFS

Aaron Jenkins (Cottage Grove, MN) - WFS

Hannah Kast (Crofton, NE) - WFS

James Kleinschmit (Hartington, NE) - WFS

Alexander Luke (Sioux Falls, SD) - NRLE & WFS

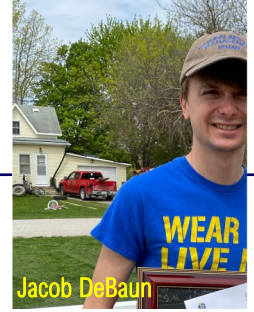
Adam McCarthy (Estherville, IA) - WFS



Devin Mounce



Adam Franck



Jacob DeBaun

Chase Meyer (Bushnell, SD) - NRLE

Reed Mitchell (Merville, IA) - NRLE & WFS

Cole Moderegger (Yankton, SD) - WFS

Liam O'Connor (Hopkinton, IA) - WFS

Nicholas Peterson (Olivia, MN) - WFS

Kyle Reeves (Omaha, NE) - NRLE

Christopher Seylar (Estherville, IA) - WFS

Allison Shorter (New Prague, MN) - WFS & EES

Sierra Stendahl (Lindstrom, MN) - WFS & EES

Jake Ure (Lake Preston, SD) - WFS

Spring 2020

Cole Glanzer (Sioux Falls, SD) - WFS

Alexis Grams (Hector, MN) - WFS

Nathan Gubbels (Bemidji, MN) - NRLE & WFS

Maria Guzzetta (New Brighton, MN) - NRLE

Quinn Hanisch (Hartford, SD) - WFS

McKenzie Hansen (Rapid City, SD) - WFS

Cristian Haskins (Lindstrom, MN) - WFS

Sasia Heitkamp (Wyndmere, ND) - WFS

Desirae Hertling (New Ulm, MN) - NRLE & WFS

Annie Hoerth (Tyndall, SD) - NRLE

Dylan Hyronimus (Lennox, SD) - WFS

Tanner Jenks (Mitchell, SD) - REM

Isaac Johnson (Alexandria, MN) - WFS

Blaze Jones (Britton, SD) - REM

Cody Kneip (Elk Point, SD) - EES

Joseph Kretchman (Aberdeen, SD) - NRLE & WFS

Thomas Mitzel (Tyndall, SD) - WFS

Devin Mounce (Holden, MO) - WFS

Branden O'Connor (Heron Lake, MN) - EES

Jakob Pettit (Buffalo Lake, MN) - WFS

Colten Plooster (Platte, SD) - WFS

Kayla Pring (Morris, MN) - NRLE & WFS

Anthony Richards (Ogden, UT) - WFS

Micah Schlomer (Moorhead, MN) - WFS

Jacob Schmitt (Winthrop, IA) - WFS

Shyanne Seidel (Lemmon, SD) - REM

David Shepherd (Valley, NE) - NRLE

Kyle Sim (Sioux Falls, SD) - NRLE

Jay Skaar (Albert Lea, MN) - WFS

Madeline St. Claire (Galena, IL) - EES

Jared VanRyswyk (Lake Crystal, MN) - EES

Adam Walter (Adel, IA) - WFS

Benjamin Witte (Clear Lake, SD) - EES & WFS

Lorna Wright (Mankato, MN) - WFS

Victoria Zephier (Phoenix, AZ) - WFS

Graduation 2019-2020

GRADUATE STUDENTS

Summer 2019

Lindsey Bischoff-Parsons
(Boulder, MT) - PhD in WFS

Joseph Mrnak
(New London, WI) - MS in WFS-F

Aaron Sundmark
(Litchfield, MN) - PhD in WFS

Katherine Wollman
(Pierre, SD) - MS in WFS-Fisheries

Fall 2019

Jameson Brennan
(Black Hawk, SD) - PhD in BIOS-NRM

Jessica Richert
(Freeburg, IL) - MS in BIOS-NRM

Brandon Vanderbush
(Onalaska, WI) - MS in WFS-Fisheries

Lucas Zilverberg
(Bell Plaine, MN) - MS in BIOS-NRM

Spring 2020

Brandi Felts-Crider
(Fredericksburg, TX) - PhD in WFS

Nicholas Kludt
(Hettinger, ND) - PhD in WFS

Jennifer Lutze
(Lone Pine, CA) - MS in BIOS-NRM

Kaj Lynöe
(Umea, Sweden) - MS in BIOS-NRM

Kathryn Schlafke
(White Bear Lake, MN) - MS in WFS-F

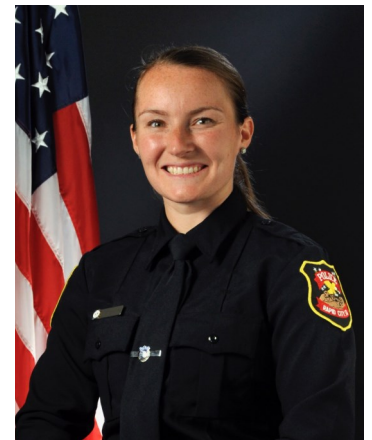
Hilary Syvertson
(Kalispell, MT) - MS in WFS-Wildlife

Great Success in our Natural Resource Law Enforcement Program

Our recent NRLE grads are having great success obtaining permanent employment or conditional offers in a variety of jobs!

- ◇ Donald Allaway – Conservation Officer with SD GFP
- ◇ Daniel Fraser – Conservation Officer with SD GFP
- ◇ Samantha Williams – Police Officer with Rapid City PD
- ◇ Connor Folkers – Conditional offer as Conservation Officer with ND Game and Fish
- ◇ Taylor Gerdes – Conditional offer as Conservation Officer with SD GFP
- ◇ Joseph Kretchman – Conditional offer as Conservation Officer with SD GFP
- ◇ Kyle Reeves – Conditional Offer as Conservation Officer with SD GFP

Others have been given offers with the SD Highway Patrol, etc. It'll be interesting to see how things fall out in the end. Our NRLE program and graduates have been receiving a lot of attention from both natural resource and traditional law enforcement agencies! We have NRLE graduates who are receiving several job offers at the same time and have the difficult decision of selecting the agency they want to work for. What a great "problem" to have.



(from left) Donald Allaway, Daniel Fraser
& Samantha Williams

SDSU Extension Range

During the corona virus period, SDSU Extension range faculty and staff have produced a few new articles/fact sheets related to range and pasture diversity, goals-driven livestock leases, and financial management and return on investments for pasture infrastructure.

Dr. Krista Elhert's recent article on rangeland biological diversity can be found at <https://extension.sdstate.edu/biodiversity-rangelands-what-role-does-grazing-have> . Here Krista explains the positive role of maintaining and enhancing range and pasture diversity and some of the drivers that can both enhance and diminish diversity.

Pete Bauman's fact sheet on leases can be found at <https://extension.sdstate.edu/sites/default/files/2020-06/P-00174.pdf>. This fact sheet describes the benefits of setting and including ranch goals and objectives in grazing leases and the importance of clear communication between landowners and lessees. The fact sheet discusses improved lease structures like a per head (or per lbs.) per day lease. This is written for all audiences with special emphasis on non-operating landowners, those with limited experience, or those livestock operators who are working with a new landlord. The fact sheets appendix includes lease statements taken from actual leases that are arranged by subject matter to help build or restructure a lease that reflects resource goals and objectives.

Sean Kelly's fact sheet <https://extension.sdstate.edu/sites/default/files/2020-06/P-00170.pdf>. This fact sheet focuses on understanding net present value and cost averaging of rangeland infrastructural improvements (water, fence, etc). This is an excellent resource for anyone considering adding physical resources to their farm or ranch.



(from left) Krista Elhert, Pete Bauman & Sean Kelly
(below from left) Onja Razafindratsima & Bruce Eichhorst

Project LIFEPLAN – A Planetary Inventory of Life

Bruce Eichhorst and **Onja Razafindratsima** applied to a new global inventory of life project called LIFEPLAN and they have been selected participants. Now under the co-leadership of **Charlie Fenster**, Director of Oak Lake Field Station, and **Bruce Eichhorst**, the Assistant Director, where Oak Lake Field Station will be the “natural” site for monitoring and McCrory Gardens will be the “urban” monitoring site. The project is scheduled to run for six years starting this fall.

What is LIFEPLAN?

(Source: <https://www.helsinki.fi/en/projects/lifeplan>)



At present, an estimated 80% of all species on Earth still await discovery. At the same time, we are losing biodiversity at an alarming rate. There is an urgent need to make sense of patterns and processes in biodiversity – while dealing with the unknown in an efficient way. Through LIFEPLAN, we aim to establish the current state of biodiversity across the globe, and to use our insights for generating accurate predictions of its future state under future scenarios. In LIFEPLAN, we thus characterize biological diversity through a worldwide sampling program, and develop the bioinformatic and statistical approaches needed to make the most out of these data. Together, we will generate the most ambitious, globally distributed and systematically collected data set to date on a broad range of taxonomical groups. Importantly, we will employ modern sampling methods that do not require taxonomical expertise from those collecting the data, and that will result in data that are directly comparable among different locations.

Ecological Society Honors Carter Johnson

Carter Johnson, a distinguished professor emeritus at South Dakota State University, has been named by the Ecological Society of America as one of its 22 fellows in the Class of 2020.

Johnson, who joined the Department of Natural Resource Management in 2011 until his retirement in 2017, is being honored for his research on river regulation and riparian forest ecology, climate change and prairie wetlands, and climate reconstruction using tree rings. In addition, Johnson was cited for being an inspiring researcher, teacher, mentor and friend.

Johnson served as head of the Department of Horticulture, Forestry, Landscape and Parks from 1989 to 1995, and then maintained a combined teaching and research position. He remains active in writing and research. Johnson and a co-author are completing a book on the ecology of Dakota landscapes to be published by Yale University Press in early 2021.

Fellows are members who have made outstanding contributions to any of a wide range of fields served by the Ecological Society of America, which is the world's largest community of professional ecologists with 9,000 members.



Bighorn Sheep Research at SDSU by Jon Jenks

January and February are the months for capturing big game in the Northern Great Plains because the colder temperatures keep captured animals cooler and snow cover will buffer the fall once captured. Over the past three years, SDSU has been involved with the capture of bighorn sheep in the Wildcat Hills and Pine Ridge Region of Nebraska, the Black Hills, and Badlands National Park.

Objectives of these projects have been to remove diseased ewes from herds in the Pine Ridge and Black Hills to increase lamb survival. Other herds in the Badlands and the Wildcat Hills have served as controls as those herds are primarily healthy. However, diseased herds in this region and throughout the west have suffered from a pneumonia disease caused by the bacterial pathogen, *Mycoplasma ovipneumoniae*.

Because there is no cure for the disease and some adults become chronically infected with the bacteria, lambs become infected as they have no immunity at birth and generally die within about 60 days after they are born. Herds that have the pathogen generally have lamb survival rates around 2% meaning almost all lambs become infected and die.

Recent research conducted by SDSU in both captive and wild herds has provided support for management which removes these diseased individuals and results in significant improvement in lamb survival. For example, lamb survival in treated herds in Custer State Park improved to approximately 40%, which provides for population growth and eventually, production of quality rams.

Prior to this research the only options available to state agencies were to remove entire herds and repopulate ranges with healthy bighorn sheep. However, these new management procedures allow for removal of only a few of these bighorns. As a result of these research projects conducted by SDSU in conjunction with USGS, Idaho Game and Fish, and Washington State University, other western state agencies are now using these management procedures to remove this disease from their infected bighorn sheep herds and increase recreational and viewing options for these majestic species throughout western North America.





Scientific Reports' Top 100 in Earth Science

A research article by **Jonathan Jenks**, Distinguished Professor in the Department of Natural Resource Management, [Effects of Neonicotinoid Insecticides on Physiology and Reproductive Characteristics of Captive Female and Fawn White-tailed Deer](#) received 6, 989 article downloads in 2019, placing it as one of the top 100 downloaded Earth science papers for Scientific Reports in 2019.* (His article placed as the 13th on the list.)

Scientific Reports published more than 769 Earth science papers in 2019, and so a position in the top 100 most downloaded articles is an extraordinary achievement – his science is of real value to the research community. You can access all the most downloaded articles within this category by visiting Top 100 in Earth Science page (<https://go.nature.com/361pYgr>).

Marlin Receives International Wildlife Scholarship

Marlin Dart, a graduate student in the South Dakota State University Department of Natural Resource Management, has received a \$1,250 Wild Felid Legacy Scholarship from the Wild Felid Association. The international scholarship is awarded to up to three graduate-level students conducting research with wild felids, otherwise known as wild cats, each year.

Pursuing a master's degree in wildlife and fisheries with a wildlife specialization under **Robert Lonsinger**, Assistant Professor in the Department of Natural Resource Management, Dart's thesis research focuses on better understanding the spatial ecology of bobcats in the Northern Great Plains. He chose the subject based on the threat human expansion poses to wild felid habitat loss.



"With no end to human expansion in sight, conservation of wild felids will require a thorough understanding of how landscape and community patterns influence the occurrence and persistence of wild felids," Dart said.

By using camera trapping and occupancy modeling, Dart evaluates the influence of landscape patterns, land-cover features and intraguild interactions on the spatial and temporal ecology of bobcats.

"All in all, Marlin has been an outstanding graduate student and has excelled in both his coursework and research; he works diligently to meet and exceed expectations in his research and coursework, offer guidance and assistance to his peers and support his family," Lonsinger said.

Originally from Boulder City, Nevada, Dart obtained his bachelor's degree in zoology from North Dakota State University with an emphasis in wildlife, fisheries, ecology and behavior. Dart says that without his mentors, including Amber N. Wright from University of Hawaii at Manoa, John L. Hoogland from University of Maryland and Lonsinger, or his family members supporting him along the way, his achievements would not have been possible.

"Wildlife biology is very competitive, and I think about the great wild felid research that is taking place around the world and to be recognized by the great scientists at the Wild Felid Research and Management Association is an honor and manifestation of my hard work and professional development," Dart said.

Dart also serves as the student representative for North Dakota and South Dakota on the Wild Felid Research and Management Association and is a member of the Wildlife Society, further proving his dedication to wildlife research and commitment to the industry.

"The Department of Natural Resource Management is very proud of Marlin Dart and his research accomplishments toward his M.S. degree under the skilled mentorship of Assistant Professor Rob Lonsinger," said SDSU Natural Resource Management Department Head Michele R. Dudash.

(Source: <https://www.sdstate.edu/news/2020/06/natural-resource-management-graduate-student-receives-international-wildlife>)

Wokini Challenge Grant 2021

Consultation and Consent: Incorporating Indigenous Methodologies into Best Practices for Natural History Collections

Maribeth Latvis & Mark Freeland
(American Indian Studies)



Indigenous peoples are stewards of approximately 4% of land in the United States, and these land holdings contain more wildlands than national parks or nature conservancy areas (Kimmerer¹). Within South Dakota, the percentage is much higher, with reservation or trust lands occupying over 12% of land within the boundaries of the state. Tribal communities possess detailed knowledge of the biota of their homelands, and this Traditional Ecological Knowledge (TEK) has been recognized as having equal status with more “standard” scientific knowledge (UNEP²) but has been historically marginalized by the scientific community (Salmon³). Land management, restoration, and conservation issues will require input from these communities, and federal agencies are required to consult with tribal governments on these policies. Thus, there is an important need for guidelines on how to integrate TEK, or natural history information coming from tribal lands, into “best practices” in the scientific community.

The C. A. Taylor Herbarium (SDC, <https://www.sdstate.edu/herbarium>) at South Dakota State University (SDSU) is partnering with the Wokini Initiative (<https://www.sdstate.edu/wokini>) to organize a data sovereignty workshop with Indigenous communities in South Dakota. There is limited information on culturally sensitive best practices on how Traditional Ecological Knowledge (TEK) is obtained and recorded from Indigenous communities. This project will address this problem by working with Indigenous communities to develop a dialog with natural history collections. To accomplish this, we will assemble members

of the Oceti Sakowin who can help to identify best practices for collection, storage, and dissemination for TEK, medicinal plants, and other culturally sensitive material at the Spring 2021 Spring Indigenizing Spaces Research Summit at SDSU. We aim to address the following questions:

- Should such cultural info be made publicly available, or should it be restricted to particular stakeholders?
- How often are tribal stakeholders consulted regarding how this information should be handled?
- What pieces of information would be most useful to tribal stakeholders and how should we integrate this into existing digitization platforms?
- Do any formal permitting procedures exist for obtaining biological collections from tribal lands?

We will also provide training opportunities through the C. A. Taylor Herbarium for Indigenous students on herbarium digitization and curation. This research will provide the basis for the dissemination of these best practices and a case study for how other Indigenous and non-Indigenous researchers can go about negotiating similar relationships in other areas of the world. These long-term efforts will fill important biodiversity and cultural gaps in our natural history collections, especially in significantly under-collected wildlands, and make natural history collections more relevant to stakeholders that have been historically left out of the conversation (in terms of data organization, collection practices, etc.). Moving forward, we also hope to establish infrastructure at Tribal Colleges and Universities in South Dakota for the establishment of their own herbarium collections, furthering the impact of this Wokini Challenge project.

¹ Kimmerer, R. W. 2002. Weaving Traditional Ecological Knowledge into Biological Education: A Call to Action. *BioScience* 52(5): 432-438.

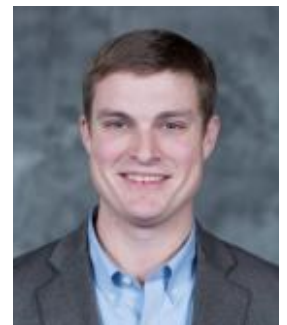
² UNEP (United Nations Environment Programme). 1998. Report of the fourth meeting of the parties to the convention on biodiversity. Nairobi, Kenya. United Nations Environment Programme UNEP/CBD/COP/4/27

³ Salmon, E. 1996. Decolonizing our voices. *Winds of Change Summer*: 70-72.

Institute for Wetland and Waterfowl Research Award by Ducks Unlimited Canada

Each year the Institute for Wetland and Waterfowl Research (IWWR) of Ducks Unlimited Canada presents a graduate student publication award. This award is given to raise awareness of the IWWR student program, reward our students for successfully publishing their research, and to recognize a publication that makes a significant contribution to waterfowl and wetland research.

Alumnus **Adam Janke**'s paper, “Prairie wetlands confer consistent migrant refueling conditions across a gradient of agricultural land use intensities. Janke, A., M.J. Anteau, and J.D. Stafford. 2019. *Biological Conservation* 229: 99-112.” was selected as one of two winners for the 2019 publication year for a value of US \$500. Janke obtained his PhD degree in Wildlife and Fisheries Sciences under **Joshua Stafford** in 2016 and serves as Assistant Professor at Iowa State Univ. (<https://iwwr.ducks.ca/fellowships/additional-awards/>)



2020-2021 Graduate Scholarship Recipients

- ◇ Outstanding Biological Sciences in Natural Resource Management MS Award ... Sarah Herzog & Kaj Lynöe
- ◇ Outstanding Grassland Science Graduate Student Award ... Abigail Blanchard
- ◇ Great Plains Fishery Workers Association Scholarship Award ... Austin Galinat
- ◇ Robert A. Klumb HAMMS Award ... Cade Lyon
- ◇ Waterfowl Specialty - Gay Simpson Award ... Will Gallman
- ◇ David W. Willis Fisheries Research Endowment ... Travis Schaeffer

Check out the video in NRM YouTube Channel for more info.
(<https://youtu.be/Ula-I-LmB0>)



Will Gallman



Travis Schaeffer



Sarah Herzog (right) with Michele Dudash



Abigail Blanchard (right) with Sandy Smart

SDGC Outstanding Grassland Graduate Student Award by Dr. Sandy Smart

Abby Blanchard, recently received the Grassland Coalition Outstanding Grassland Graduate Student Award this spring. Unfortunately, we were not able to formally recognize Abby at the SDSU Natural Resource Management Department's annual scholarship and awards banquet due to COVID-19, so we presented her with the award pictured here in June. Abby received her recognition and a \$250 award sponsored by the SDGC.

Abby, hails from Petoskey, MI and graduated with a B.S. degree in Fisheries and Wildlife Management from Northern Michigan University. Abby came to SDSU in 2018 and started working with Dr. Lora Perkins on a project aimed at restoring saline-sodic soils back to native grassland plants.

Saline-sodic soils have become a growing problem in the Northern Great Plains, often leaving the soil unvegetated which decreases soil health and increases erosion. Abby's research project looks at identifying suitable native plants for revegetating these areas. Abby also has a passion for wildlife and her research project helps to expand her practical knowledge regarding habitat restoration. This is a critical nexus, especially in the Prairie Pothole Region which has been prone to land conversion and the focus of "Every Acre Counts".

Here is excerpt from Abby's application letter which highlights the significant impact this opportunity has had on her educational pathway.

"Throughout my undergraduate and graduate career, my research interests have broadened. Initially, I was focused on wildlife ecology and management, with an interest in becoming a wildlife biologist. Volunteering at deer check stations, conducting waterfowl surveys, and learning radio telemetry techniques spurred this passion during my undergraduate years. After my Research Experiences for Undergraduates (REU) program, I expanded my interest to encompass habitat ecology, with a focus on climate change, ecosystem function, and invasive species. I searched for graduate programs with an ecology and natural resource focus, looking for projects that were habitat ecology centered with aspects of wildlife ecology. I was fortunate enough to get a graduate assistantship with Dr. Perkins, working on revegetating salt-impacted soil using native plants. My project combines my research passions and allows me to gain valuable experience working with plants, further expanding my research repertoire. As I begin to wrap up my graduate program, I have realized that my initial plans of becoming a wildlife biologist have transformed into becoming a wildlife habitat ecologist. I find that this position would better suit my passions and help achieve my goal of working within the natural resource profession. As a wildlife habitat ecologist or a related position, I will be able to combine my initial interest of wildlife ecology with a central focus on habitat and ecosystem function. I believe that in the face of climate change, habitat ecologists will be crucial to the future of wildlife and I look forward to assisting with this challenge." *Abby Blanchard*

HAPPENINGS

Don McCrea - State of Georgia Blue Ribbon Committee on Police Use of Force Reform

After the Rayshard Brooks shooting in Atlanta, GA, the Georgia Peace Officer's Association contacted **Don McCrea** and requested his presence on the State of Georgia Blue Ribbon Committee on Police Use of Force Reform. Reviewing and redeveloping training needs and priorities associated with ALL aspects of police training, including use of force, from basic academy level through agency field training programs and in-service training is the goal. Don caught the attention of the state of Georgia from his national webinar he presented at the end of April, 2020 for the National Sheriff's Association entitled "Are Current Training Models Failing Officers and Communities Alike?".

Over 1100 law enforcement and criminal justice professionals nationwide signed up and viewed my webinar, which led to the appointment to Georgia's Blue Ribbon Committee.

Native Plant Initiative - Plant Sale

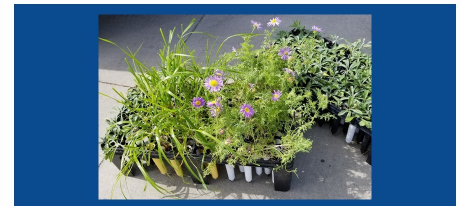
Native Plant Initiative sold more than 20 different kinds of wildflowers and grasses at Six Mile Nursery on Saturday, May 16. **Lora Perkins**, lead faculty to NPI (Native Plant Initiative) organized this event to support the SDSU Range Club and the NPI. All prairie plants are native to South Dakota.

2020 SDSU Native Plant Initiative Plant sale

Latin name	Common name	Latin name	Common name
<i>Agastache foeniculum</i>	blue giant hyssop or Anise hyssop	<i>Helopsis helianthoides</i>	smooth oxeye
<i>Agastache nepetoides</i>	yellow giant hyssop	<i>Hieracloa hirta</i>	northern sweetgrass
<i>Agastache scrophulariifolia</i>	purple giant hyssop	<i>Liatris ligulistylis</i>	Rocky Mountain blazing star
<i>Antennaria neglecta</i>	field pussytoes	<i>Machaeranthera tanacetifolia</i>	Tahoka daisy
<i>Artemisia ludoviciana</i>	white sagebrush	<i>Mentha arvensis</i>	wild mint
<i>Cleome serrulata</i>	Rocky mountain bee plant	<i>Monarda fistulosa</i>	wild bergamot
<i>Dalea purpurea</i>	purple prairie clover	<i>Penstemon albidus</i>	white penstemon
<i>Echinacea angustifolia</i>	blacksamson echinacea	<i>Potentilla arguta</i>	tall cinquefoil
<i>Erysimum asperum</i>	western wallflower	<i>Pulsatilla patens</i>	eastern pasqueflower
<i>Gentiana puberulenta</i>	downy gentian	<i>Symphoricarum lanceolatum</i>	white panicle aster
<i>Geum triflorum</i>	old man's whiskers or prairie smoke	<i>Tradescantia occidentalis</i>	prairie spiderwort



Native Plant Sale



- More than 20 different kinds of wildflowers and grasses
- All prairie plants native to South Dakota
- Support the SDSU Range Club and the Native Plant Initiative

Date: May 16, 2020

Time: 10 am - 3 pm

Location: Six Mile Nursery, 810 W Hwy 14, Brookings, SD

The plant sale will be outside. Please follow proper social distancing and personal protection guidelines.

Contact for Questions:
Email: lora.perkins@sdsu.edu

 SOUTH DAKOTA STATE UNIVERSITY
Department of Natural Resource Management

 SOUTH DAKOTA STATE UNIVERSITY
Native Plant Initiative

 SOUTH DAKOTA STATE UNIVERSITY
Department of Agronomy, Horticulture and Plant Science

Earth Day's 50th Anniversary

April 22 was Earth Day's 50th Anniversary. It was a wonderful time to focus on our earth from our own homes. McCrory Gardens and SDSU Facilities & Services - Sustainability shared all some earth conscious activities we could do at home. Throughout the day they posted 4 videos/tutorials to the event page and hosted 1 live webinar class. Videos included various topics, "Tips for Sustainability", "Planting your Own Garden", "DIY Bee Houses", and "DIY Reusable Bags". The live webinar "Water Conservation and You: An Earth Day Discussion and Rain Barrel Workshop" was presented by John McMaine,



Assistant Professor and SDSU Extension Water Management Engineer, and Jeremiah Bergstrom, South Dakota State University Instructor. This was not an event our department organized but we endeavored to promote this event broadly sharing on Facebook. Please visit the webpage to learn more!

<https://www.sdsu.edu/sustainability>

<https://www.facebook.com/McCroryGardens/videos/2288544601439760/UzpfSTc4NzY0OTAwNDYyNjY0OToyOTk3NTc0OTU2OTY3MzY1/>

HAPPENINGS

WFCC's Utah Trip by Katie Tvedt

Early on March 3, 2020, a crisp Tuesday morning, nine undergraduate students from the Department of Natural Resource Management, along with their driver & chaperone **Katie Tvedt**, loaded into a van at Motor Pool and ventured down the road to Snow Canyon State Park in St George, Utah. The van, filled with tents, sleeping bags, hiking gear, cell phones, expensive cameras, snacks, and students made the trek in two days, stopping for restroom breaks, restocking food stuffs, and a comfortable stay at a hotel in Glenwood Springs, CO. The group arrived at their campsite Wednesday, March 4th, around 6:00 PM (Mountain Time) to attend the Central Mountains and Plains Conclave for students from the surrounding states majoring in Wildlife and Fisheries or members of The Wildlife Society Student Club. For students from South Dakota, the days were full, the nights were short and cool after some very high daytime temperatures the beginning of March. Several activities were packed into the three days of the Conclave: fish sampling and electrofishing in the Virgin River and birding, herping, and hiking in the Lytle Ranch Preserve, Beaver Dam Wash National Conservation Area, Red Cliff Tortoise Reserve, the Mojave Desert, and Snow Canyon State Park. The final morning big game biologists from the Utah Division of Wildlife introduced radio telemetry collars to the Conclave attendees which included an exercise in tracking the collars. After hiking in the foothills west of Zion National Park, the van full of students departed Utah around 5:00 PM (MT) and traveled through the night arriving at the SDSU Motor Pool Sunday afternoon at 4:00 PM (CST). The nine students attending the Conclave were **Bridget Ragan, Wyatt Hamer, Alexis Grams, Nathaniel De Jong, Allison Shorter, Isaac Johnson, Kayla Pring, Drake Laverack, and Kaden Kneifl**. They arrived tired and ready for a break (Spring Break started March 7, 2020) yet many of them interviewed for jobs, took educational courses or went back to their jobs instead of "taking a break". Central Mountains and Plains Conclave was a great experience for everyone. The trip was a revelation for the students. They discovered the Department of NRM has wonderful instructors and experiential opportunities to learn the skills that were presented at the Conclave. Bridget Ragan, SDSU Wildlife Conservation Club President reflected, "This trip allowed me to realize how much field experience and techniques we learn at SDSU. Many of the topics presented on this trip our club had knowledge about already."

Snow Canyon State Park Campground



(left to right) Drake, Isaac, Kaden, Wyatt, Nathaniel, Bridget, Allison, Alexis & Kayla



Katie Tvedt

Botanical Outreach at McCrory Gardens

On February 20, 2020, members of the **SDSU Botanical Society of America Student Chapter** presented at the "Third Thursday" seminar series at McCrory Gardens in Brookings, SD. They provided the community with exciting updates on botanical research and initiatives, spanning topics such as restoration ecology and invasion genomics. **Abby Blanchard** (MS student with Dr. Lora Perkins, NRM) introduced the SDSU Native Plant Initiative as a resource for restoration, **Izzy Vilella-Arnizaut** (MS student with Dr. Charles Fenster, Department of Biology & Microbiology) presented her research on the stability of plant-pollinator interactions, and **Dr. Maribeth Latvis and Deva Raj Khanal** (MS student with Dr. Latvis, NRM) presented on the utility of herbarium collections in genetic and ecological research, including how they may be used to track invasive species through time.

ALUMNI NEWS

Donation of Cougar from Barb and Luverne Crosser

Be sure to check out the Cougar donated by Barb and Luverne Crosser. The Cougar is now located in the McFadden Biostress Atrium.

Luverne August Crosser (July 16, 1931 - June 12, 2020) graduated from South Dakota State University in 1954 with a Bachelor of Science degree in Ag Business.

He was inducted into the South Dakota Cooperative Hall of Fame in 2012. He enjoyed outdoor activities including hunting, and fishing. Luverne was a true outdoorsman. He was a member of several hunting organizations, including being a habitat partner for RMEF.

His funeral information can be found in <https://www.eidsnessfuneralhome.com/obituary/luverne-crosser>.



Above and Beyond: Jennifer McLaughlin

(source: Monday Morning Message, Feb. 18)

Above and Beyond recognizes individuals and groups of SDSU employees, faculty and students for individual and team efforts that go Above and Beyond to make the campus community a better place. This week's Above and Beyond recognizes SDSU sustainability specialist Jennifer McLaughlin.

Because of the sustainability efforts McLaughlin and other faculty and staff have made, SDSU received a silver rating from the Sustainability Tracking, Assessment and Rating System (STARS).

The rating shows that SDSU received high scores for research, public engagement, purchasing, coordination and planning and diversity and affordability.

The highest score at SDSU was research receiving 17 out of 18 points, putting SDSU in the third quartile of other universities that qualified for this rating. This score was determined by scholarship, support and access. Scholarship and support received perfect scores and access received one of two possible points. According to the information submitted for this rating, more than 85% of research-producing departments on campus are engaged in sustainability research.

SDSU's STARS rating received four bonus points for the Passive House, Jack's Cupboard, the Wokini Initiative and for being a tobacco-free campus.

Thank you Jennifer for submitting information to STARS to receive a rating and to campus for your work to make SDSU more sustainable.



Golf Course Butterfly Habitat by Marcus Gray

Marcus Gray (MS in Wildlife and Fisheries Sciences, 2009) presented a webinar about Audubon International and his work to create pollinator habitat on golf courses across North America. 712 properties committing 1020 acres so far.

Webinar: <https://youtu.be/T4GqMd8RODU>

Facebook: <https://www.facebook.com/AudubonInternational/>

Patricia Johnson's Retirement Reception

The NRM honored **Pat Johnson** on her retirement after 33 years of service to SDSU with a retirement reception on Friday, January 31, 2020 in the Atrium of McFadden Biostress Laboratory. Pat Johnson was one of the first five women in the world to achieve a Ph.D. in Range Science and Ecology and the second woman in the world to be hired into a Range Science faculty position. Dr. Johnson was also awarded the title of Professor Emeritus of Range Science for all of her impactful work in range sciences. We wish her well during retirement and all her future endeavors!



(left to right) John Killefer, Michele Dudash, Pat Johnson & Barry Dunn



Patricia Johnson retires after 33 years of dedicated work in range science

(June 4, 2020 by CAFES Marketing)

The second woman in the world to be hired into a range science faculty position, Patricia Johnson served as an essential educator and impactful researcher at South Dakota State University for 33 years.

"Pat has been a trailblazer and a role model for women in her discipline throughout her career," said Dr. Michele Dudash, head of the Natural Resource Management Department.

As a professor, Johnson taught 14 different undergraduate and graduate range science courses, influencing hundreds of students at SDSU. She also served as a mentor for 15 doctoral and master's students and served on the committees for over 40 students.

"Working with and teaching students, both in the class and in the field, was definitely a highlight of my career," Johnson said. "Not only did I get to see them learn, but I loved their excitement. Seeing my former students succeed, making significant impacts on rangeland management and enjoying their careers, is one of my greatest joys."

Johnson conducted research focused on grazing management, plant and animal interactions, ecology of prairie dog towns, and plant responses to herbivory and livestock and wildlife interactions. She was based on campus in Brookings until 1998 and then transferred to the SDSU West River Research and Extension center in Rapid City where she worked until her retirement.

"I had the privilege of participating in one of the longest grazing studies in the world at SDSU's Cottonwood Field Station located near Philip," she said. "The data from that study, which continues to this day, is a rich resource for evaluating not only the effects of stocking rate on rangelands, but also for evaluating changes in climatic factors on mixed grass prairie ecosystems."

Throughout her career, Johnson collaborated with faculty at SDSU and other universities, state and federal agencies, and non-profits, resulting in \$9.92 million in grant awards during her time at SDSU.

To read the full article, please visit the link below.

<https://www.sdstate.edu/news/2020/06/patricia-johnson-retires-after-33-years-dedicated-work-range-science>

Mike Brown's Retirement Celebration

A drive-through retirement celebration took place in the SDSU parking lot 158 on Tuesday, June 16, 2020. Our own and newly honored Emeritus Professor of Fisheries, **Mike Brown**, was an honoree as well as other leaders and important contributors to SDSU. We were invited to drive through to congratulate and bid farewell to our recent SDSU retirees.



Mike Brown Leaves Over 26-Year Legacy at SDSU

(June 5, 2020 by CAFES Marketing)

Mike Brown will always cherish the day he hooded his first Ph.D. student or shared in any of his students' successes. After over 26 years at South Dakota State University, Brown recently retired from his career in undergraduate and graduate education, advising and research in wildlife and fisheries and natural resource management.

Brown has been a member of SDSU faculty since January 1994, serving as assistant, associate and professor in the Department of Wildlife and Fisheries Sciences before becoming a professor and distinguished professor in the Department of Natural Resource Management, in addition to serving as the program leader and major adviser in the department.

"Dr. Brown has been an actively engaged and valued faculty member owing to his many contributions in teaching, advising, research and service/outreach throughout his entire career at SDSU," said Natural Resource Management Department Head Michele R. Dudash.

Originally from Ft. Smith, Arkansas, Brown received his bachelor's degree from Arkansas Tech University and master's and doctoral degrees from Texas A & M in wildlife and fisheries sciences with a fisheries specialization.

"Recognizing that the wildlife and fisheries sciences program at SDSU was one of the elite programs in the U.S. led me to jump at the first opportunity for a tenure-track faculty position," Brown said.

Brown's involvement with the university did not stop at his professional and teaching roles; his belief in being involved with advising and mentoring students inside and outside the classroom has driven him to mentor students in their professional goals as well. In 2019, Brown received the J. Walters McCarty award for his excellence in advising students.

"An educator's role does not end outside of the classroom," Brown said.

The J. Walters McCarty award is given in recognition of outstanding academic advisors of undergraduate students in the College of Agriculture, Food and Environmental Sciences. This award is made possible by alumnus David B. Anderson in tribute to his former academic advisor, J. Walters McCarty, a professor of animal and range sciences at SDSU from 1948 to 1986.

To read the full article, please visit the link below.

<https://www.sdstate.edu/news/2020/06/mike-brown-leaves-over-26-year-legacy-sdsu>

Larry Gigliotti's Retirement Gathering

Larry Gigliotti, Assistant Leader to the USGS South Dakota Cooperative Unit and volunteer faculty to the Department of Natural Resource Management, retires after 9 years of outstanding service and dedication. The Unit organized a small, outdoor gathering at Larry's "countryside estate" to wish him well in retirement on July 30, 2020.



(left to right) Joshua Stafford, Larry Gigliotti & Steve Chipps



Michele Dudash

Larry Gigliotti

by Steve Chipps, Leader of South Dakota Coop Unit

Dr. Larry Gigliotti, a nationally recognized leader in human dimensions of wildlife management, retired from the USGS, South Dakota Cooperative Fish & Wildlife Research Unit in July, 2020. Originally from Pennsylvania, Gigliotti received his bachelor's degree from Pennsylvania State University, and his master's and doctoral degrees from Michigan State University. Larry completed post-doctoral research at Cornell University where he worked at the Center for Conservation Social Sciences.

Prior to joining the Coop Unit in 2011, Larry served a critical role as the Planning Coordinator/Human Dimension Specialist for South Dakota Department of Game, Fish & Parks where he was presented the Distinguished Achievement Award in 2010. As an Adjunct Faculty member in NRM, Larry taught graduate courses in human dimensions of wildlife & fisheries, adaptive management and structured decision making, and public involvement.

As a mentor and adviser, Larry enjoyed his time working with NRM students. "Working with graduate students and research technicians was the greatest reward for me. I liked getting to know students by talking about what their career plans were and providing advice on what classes may best suit their needs. The most enjoyable times were taking students to professional conferences, especially when we traveled by vehicle because it provided opportunities to talk about a wide range to topics and really get to know them. I learned a lot myself with talking with students. I liked knowing that I helped some people in getting started in a natural research career."

Asked what advice Larry has for students interested in wildlife management, he replied: "My advice to students who want a career in fish/wildlife management is that it will take getting a graduate degree (MS or PhD) but that process starts while getting their BS degree. In addition to taking useful classes and getting the most out of them, students should take every opportunity to expand their undergraduate education, such as internship opportunities, being active in professional societies, and doing undergraduate research projects."

We wish Larry the best in his retirement. His new residence in the southern Black Hills will be a great place to relax, recreate and take in the views.

Loss of a Retired SDSU Colleague: Dr. Gary Larson

Dr. Gary Larson, world class botanist, author and the former C. A. Taylor Herbarium Director has passed following a long and courageous battle with cancer. Gary retired in May 2015 following 36 years of service to SDSU. He was a frequent contributor to South Dakota Plants and Wildlife, and was generous with his time and deep knowledge of the flora of the Northern Great Plains and Black Hills. He was a wonderful teacher and colleague and a mentor to many, and was an active volunteer in the herbarium following his retirement. Eidsness Funeral Home assisted with the arrangements. (<https://www.eidsnessfuneralhome.com/obituary/gary-larson>)



News from the SD Section of the Society for Range Management by Pat Johnson

A precious resource and great friend of those who love and work in rangelands was lost when Dr. Gary E. Larson passed away on the morning of June 27, 2020 at the age of 69. Gary was a proud and loving husband to wife, Pam, and father of son Ross and daughter Alyssa. His full obituary can be viewed at: <https://www.eidsnessfuneralhome.com/obituary/gary-larson>. Gary was Professor Emeritus in the Natural Resources Department at South Dakota State University. Throughout his 36-year career as professor at SDSU, Gary taught taxonomy to thousands of students and was the director and curator of the C.A. Taylor Herbarium. Even after retirement, Gary provided taxonomic assistance to others and volunteered in the herbarium to continue the work of digitizing the collection.

Gary was a gifted, world-class botanist. He generously shared his deep knowledge of the flora of the Northern Great Plains and the Black Hills of South Dakota with students, colleagues, friends, and the public. He co-authored two books with his friend and colleague, James R. Johnson (Professor Emeritus, Animal and Range Sciences, SDSU): "Grassland Plants of South Dakota and the Northern Great Plains" and "Plants of the Black Hills and Bear Lodge Mountains". These books are the "go-to" rangeland plant ID guides for thousands of professionals and amateurs, filled with beautiful photographs and information for identifying and learning the history and uses of plants in the Northern Great Plains. A dog-eared copy of one or both can be found on the dash, seat, or glovebox of nearly every agency and ranch pickup truck in the region.

Gary was one of the great teachers of our time. His taxonomy courses required considerable hard work and study; he expected much from his students. Many of them felt that those were the hardest courses that they took in their degree programs. However, they absolutely loved Gary. Tributes have poured in from former students describing his kindness, caring, and willingness to help students learn. He stayed late and kept the lab and teaching herbarium open for students needing extra time to master the identification clues and scientific names of the plants in his classes.

Gary proudly followed their careers and became a mentor and friend to them, still teaching and providing ID help long after they graduated. There are many rangeland managers, rangeland management agency personnel, field botanists, wildlife biologists, and others who owe their plant ID skills and love of grassland plants to Gary Larson.

Gary was, for decades, the coach for the SDSU Range Plant ID team that competed at SRM meetings. His teams were always well prepared and very competitive, with over 50% of them placing in the top 5 and 25% in the top 3 teams in the international contest. Gary has been remembered by the other Plant ID coaches as a respected teacher, mentor, colleague, and friend. "He was humble, but extremely prepared and full of knowledge...and his name is pretty darned prominent in the SRM plant ID contest herbarium...he was one of a very few who took the time to challenge other students through the contest" (Barry Irving, U. of Alberta). Many of his students and colleagues continue to stand in awe of his skill, dedication, and successes in teaching students to know and identify rangeland plants.

Gary was also a great teacher and resource for his many friends and colleagues throughout the region. "He was unendingly generous with his time and knowledge" (K.C. Jensen, SDSU). So many of us would send him our "unknowns" either as a physical specimen or in a photo (the plants were usually pretty battered and dried up and photos were often poor quality) for help in identification. He always responded, providing common and scientific names (at least to genus, and often to species if the specimen wasn't too badly mangled). He also gave us information on key features to help with future identification and to distinguish plants from similar species. His death leaves a huge hole for many of us and "represents a huge loss to our botanical community and beyond" (Maribeth Latvis, SDSU).

New Graduate Alumni Page on the Website

Visit this new webpage (<https://www.sdstate.edu/natural-resource-management/graduate-alumni>), where you will find our graduate student alumni list: graduates from 2012 to present. Please email SDSU.NRM@sdstate.edu to update information.

Grad Year	Full Name	Degree	Specialty	Advisor	Job Placement After Completion
2018	Surendra Bam	MS	BIOS-NRM	Xu	PhD candidate, La Trobe Univ
2018	Eli Felts	PhD	WFS-F	Graeb	Idaho Fish and Game
2018	Tyler Garwood	MS	WFS-W	Jenks	PhD Student, U of Minnesota
2018	Joshua Harvey	MS	BIOS-NRM	Leffler	Research Associate, Texas A&M AgriLife
2018	Mark Hendrix	MS	BIOS-NRM	Smart	Resource Program Manager, Custer State Park, SD
2018	Elise Hughes Berheim	MS	WFS-W	Jenks	Founder of Environmental Experiences LLC, Colorado
2018	Stephen Jones	MS	WFS-F	Graeb	Biologist, Florida Fish & Wildlife Conservation Commission
2018	Tom Kasiga	PhD	WFS-F	Brown	Postdoc, SDSU
2018	Kyle Kaskie	MS	BIOS-NRM	Wimberly	GIS Program Specialist, SD Game, Fish & Parks, Pierre, SD
2018	Hector Menendez III	PhD	BIOS-NRM	Dudash	Research Agriculturist, USDA-ARS, College Station, TX
2018	Emily Mitchell	MS	WFS-W	Jenks	Area Biologist/Resource Biologist, Montana
2018	Mandy Orth	PhD	WFS	Jensen	Instructor, Dept of Biology & Microbiology, SDSU
2018	Travis Rehm	MS	WFS-F	Chipps	Fisheries Biologist, the Spokane Tribe of Indians
2018	Jill Voorhees	MS	WFS-F	Brown/Chipps	Hatchery Assistant Manager, State of SD, Rapid City
2019	Lindsey Bischoff-Parsons	PhD	WFS-W	Jenks	Deer/Elk Coordinator, Montana Fish, Wildlife & Parks
2019	Michael Bredeson	PhD	BIOS-NRM	Smart/Lundgren	Ecdysis, Minnesota Branch
2019	Jameson Brennan	PhD	BIOS-NRM	Johnson, P.	Assistant Professor, Animal Sci. SDSU, Rapid City, SD
2019	Jacob Comer	MS	WFS-W	Perkins	Wildlife Biologist with Quail Forever, Elizabethtown, NC
2019	Rebecca Kolstrom	MS	BIOS-NRM	Wilson/Gigliotti	The Great Basin Institute, Sacramento, CA
2019	Jennifer Lutze	MS	BIOS-NRM	P. Johnson/Jensen	Bird Conservancy of the Rockies
2019	Joseph Mrnak	MS	WFS-F	Chipps	PhD student, U Wisconsin, Madison
2019	Aaron Sundmark	PhD	WFS-W	Gigliotti	Fisheries Lake IBI Biologist, Minnesota Dept of Natural Resources
2019	Brandon Vanderbush	MS	WFS-F	Brown	Resource Biologist, SD Game, Fish & Parks, Chamberlain, SD
2019	Katherine Wollman	MS	WFS-F	Troelstrup	Biologist, Grand River Dam Authority, OK
2019	Lucas Zilverberg	MS	BIOS-NRM	Lan Xu	Biologist, Pheasants Forever, Sleepy Eye, MN
2020	Brandi Felts (Crider)	PhD	WFS-W	Jenks	Idaho Fish and Game
2020	Bailey Gullikson	MS	WFS-W	Jenks	Conservation Program Specialist, Department of Agriculture, Pierre, SD
2020	Nicholas Kludt	PhD	WFS-F	Graeb	Senior Fisheries Specialist, Minnesota DNR
2020	Jessica Richert	MS	BIOS-NRM	Leffler	Ecosystem-Biomed Health Laboratory, U of Alaska, Anchorage, AL
2020	Kathryn Schlafke	MS	WFS-F	Graeb	Outdoor Education, North Dakota Game and Fish
2020	Hilary Syvertson	MS	WFS-W	Lonsinger/Gregory	GIS Specialist, State of Montana, Helene, MT

NRM Faculty Google Scholar Profiles

— Click on the links to see our most recent publications!

Dr. Steven R. Chipps

(Steven.Chipps@sdstate.edu)

Professor, Leader-USGS SD Coop Unit
Aquatic Food Web Ecology; Fish Bioenergetics;
Foraging Ecology; Contaminants
<https://scholar.google.com/citations?user=ZV9NKSAAAAJ>

Dr. Alison Coulter

(Alison.Coulter@sdstate.edu)

Assistant Professor
Spatial Ecology; Behavior of fishes
<https://scholar.google.com/citations?hl=en&user=Jh1yTyMAAAAJ>

Dr. Michele R. Dudash

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Professor, Head of Department
Evolutionary Ecologist: plant-pollinator interactions, evolution of plant mating systems, conservation genetics
<https://scholar.google.com/citations?user=K2oAEEkAAAAJ>

Dr. Krista Ehler (Krista.Ehler@sdstate.edu)

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Rangeland Ecologist and Management
https://scholar.google.com/citations?user=ESC_GGEAAAAJ

Dr. Charles Fenster

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Evolutionary Biology; Evolutionary and Conservation Genetics; Floral Evolution; Pollinators and Sustainable Agriculture
<https://scholar.google.co.in/citations?user=YmpyLbEAAAAJ>

Dr. Maaz Gardezi

(Maaz.Gardezi@sdstate.edu)

NRM Affiliate Assistant Professor
Climate, food, and water security; Governance of technologies; Climate policy; Advanced statistical methods
<https://scholar.google.com/citations?user=pXh4pm8AAAAJ>

Dr. Jonathan A. Jenks

(Jonathan.Jenks@sdstate.edu)

Distinguished Professor
Wildlife Ecology & Management; Population Dynamics; Wildlife Nutrition; Large Mammal Ecology
<https://scholar.google.com/citations?user=2FZNCSYAAAAJ>

Dr. Kent C. Jensen (Kent.Jensen@sdstate.edu)

Associate Professor

Avian Ecology and Management; Waterfowl Ecology and Management; Ornithology; Upland Gamebird Ecology and Management

Dr. Maribeth Latvis

(Maribeth.Latvis@sdstate.edu)

Assistant Professor/Director of the C. A. Taylor Herbarium
Plant Systematics; Plant Conservation Biology; Phylogenetics; Plant Community / Biome Assembly
<https://scholar.google.com/citations?user=g09pvUAAAAJ>

Dr. A. Joshua Leffler

(Alan.Leffler@sdstate.edu)

Assistant Professor
Plant Physiological Ecology; Ecosystem Ecology; Plant and Ecosystem Response to Climate Change
<https://scholar.google.com/citations?user=SNFaHQAAAAJ>

Dr. Stella (Hung-Ling) Liu

(Stella.Liu@sdstate.edu)

NRM Affiliate Assistant Professor
Survey & evaluation research techniques focus on behaviors in outdoor recreation; Human dimension of NRM; Impacts of recreation and tourism for individuals and community
<https://scholar.google.com/citations?user=8H1rTD4AAAAJ>

Dr. Robert Lonsinger

(Robert.Lonsinger@sdstate.edu)

Assistant Professor
Wildlife Ecologist and Conservation Genetics
<https://scholar.google.com/citations?user=xzpLgY8AAAAJ>

Dr. Candace May

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NRM Affiliate Assistant Professor
Political economy of sustainable development, natural resources, & environmental governance
<https://scholar.google.com/citations?user=AC8twhwAAAAJ>

Dr. Lora Perkins

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Associate Professor/NPI Lead Faculty
Plant Ecology; Biological Invasions; Plant-Soil Interactions; Restoration Ecology
<https://scholar.google.com/citations?user=w8gEwekAAAAJ>

Dr. Onja Razafindratsima

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Assistant Professor
Landscape Ecology; Conservation Biology; Tropical Ecology; Primatology; Seed Dispersal
<https://scholar.google.com/citations?user=UZvLdboAAAAJ>

Dr. Christopher Saunders

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NRM Affiliate Associate Professor
Mathematical Statistics; Statistical Pattern Recognition
<https://scholar.google.com/citations?user=z6zrlTcAAAAJ>

Dr. Alexander "Sandy" Smart

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Professor, Assistant Head of Department
Rangeland Ecology and Management: Grazing, Fire, Range Improvements; Ecosystem Goods and Service
<https://scholar.google.com/citations?user=gN13d2kAAAAJ>

Dr. Joshua D. Stafford

(Joshua.Stafford@sdstate.edu)

Associate Professor, Assistant Leader-USGS SD Coop Unit
Ecology and Management of Waterfowl and Wetlands; Foraging Ecology; Statistics
<https://scholar.google.com/citations?user=KsM1Gb8AAAAJ>

Dr. Lan Xu

(Lan.Xu@sdstate.edu)

Professor
Plant Ecology; Rangeland Reclamation; Restoration and Improvement; Vegetation Succession; Plant Responses to Stressors; Plant Reproductive Strategy; Soil seed and bud bank
https://scholar.google.com/citations?user=l_gaRiYAAAAJ

Opportunities to support the NRM Department

Your impact: Funds that enable strategic initiatives in academic and research programs through implementation of the NRM department's strategic plan including:

Endowed Professorships in our major research areas. Our initial foci will be in Fisheries and Wetlands.

Clifford H. Fiscus Endowment helps support our NRM Departmental seminar series. Clifford H. Fiscus (B.S. 1950) was a long-time friend of the department. In 2004, he provided an endowment to the department to bring guest speakers to campus. This is an important aspect of our graduate student training and pursuit of scholarly excellence.

NRM Education Fund. This fund enables talented undergraduate students to present their research at local and national meetings.

Undergraduate Program Targeted Scholarships. Gifts can be targeted toward undergraduate scholarship funds in

- (1) Conservation Planning and Park Management,
- (2) Ecology and Environmental Science,
- (3) Natural Resource Law Enforcement,
- (4) Rangeland Ecology and Management,
- (5) Wildlife and Fisheries Sciences.

Expanding competitive graduate student research awards.

If you are interested in donating at the \$1000 level or above, we can work with you to develop a named scholarship. A list of our current named scholarships can be found at: <https://www.sdstate.edu/nrm/academics/scholarships/upload/Undergrad-Scholarships.pdf>

• **Dave Willis Fisheries Research Award Endowment**

This Endowment was established to honor Dr. Willis' life work and to sustain his legacy through promoting excellence in fisheries education and research. We encourage and appreciate your support of Dave's legacy through a donation to support the growth of this endowment. Gift pledges can be made over multiple years or as single donations. Proceeds will be used to provide competitive research awards to graduate and undergraduate fisheries students who have demonstrated scholarly excellence in fisheries science and best personify Dave's exceptional career and service to our nation's natural resources.

• **Kenneth F. Higgins Waterfowl Legacy Research Endowment**

This Endowment honors the life and the distinguished career of Dr. Ken Higgins, a former wildlife research biologist with the U.S. Department of the Interior and the South Dakota Cooperative Fish and Wildlife Research Unit, and a professor emeritus in the Department of Wildlife and Fisheries Sciences at South Dakota State University.

• **Clifford H. Fiscus Waterfowl Research Endowment**

The Fiscus Waterfowl Research Endowment fund honors the life of Mr. Fiscus, who earned a degree in Wildlife Management at South Dakota State College. This endowment provides support for waterfowl research activities which may enhance future management or welfare of waterfowl or other wetland dependent avian species and/or their habitats.

• **Dr. Robert A. Klumb Memorial Endowment**

This Endowment honors the memory of Dr. Robert "Rob" Klumb (1967-2013) by his family. Rob was Project Leader for US Fish & Wildlife Service and an Adjunct Associate Professor at South Dakota State University. This Scholarship is award annually.

• **Kevin Honness Memorial Scholarship Announcement**

The Honness Scholarship is awarded each year to student members of the Great Plains Natural Science Society. Two awards (\$500 each) are currently available, one for graduate and one for undergraduate researchers. Preference will be given to students conducting research in the Great Plains. Applications will be accepted each year from 1 November until 28 February. Interested students can find additional details and an application form at <http://www.sdstate.edu/nrm/organizations/gpnss/kevin-honness-memorial-scholarship.cfm>.

• **Curtis M. Twedt Upland Game Research Endowment**

Curtis M. Twedt, a native of Volga, SD, graduated in Wildlife and Fisheries Sciences in 1959. Dr. Twedt enjoyed a 31-year career with the Nebraska Game and Parks Commission as an upland game and research biologist. The recipient of the Twedt research grant shall be selected by the Department of Natural Resource Management at SDSU. The long-term vision of the Department is to eventually be able to provide a graduate research assistantship from this endowment.

• **Jesse W. West Research Endowment**

This Endowment is intimately tied to the Pond Boss magazine and forum. It honors the life of Jesse W. West, a Mississippian and professor of geology. While teaching geology "summer camp" in the west, including Colorado, California, and the Black Hills (one of his favorite geologic places), he developed a love of the area and its people which he shared with his family. His strong belief in helping others along their journey in applied science is the cornerstone of Jesse's endowment.

Off Campus Research Facilities - Oak Lake Field Station or Wildlife and Fisheries Research Unit (existing resources to which you could contribute are identified below).

Your impact: Expanding endowed undergraduate research opportunities grants for our Oak Lake Field Station and Wildlife and Fisheries Research Unit. Funding to support construction of off-campus teaching and research facilities and/or purchase large research equipment.

Charles and Marcia McMullen Undergrad Research Award.

An Endowment recently established in honor of Dr. Charles and Marcia McMullen who have been long-time supporters of the Oak Lake Field Station. Chuck served as the first director of the Oak Lake Field Station and was instrumental in working with President Robert Wagner to establish the field station as a resource to students interested in the natural sciences. This endowment provides support for NRM undergraduate students interested in conducting undergraduate research at the station.

Oak Lake John Haertel Memorial Research Award

An Endowment established in honor of Dr. Jon Haertel, vertebrate biologist in Biology & Microbiology. Jon's love of vertebrate animals and long-time contributions to the study of vertebrates resulted in establishment of this endowment to support undergraduate research on vertebrates at the Oak Lake Field Station.

Rogen-Trooien Oak Lake Endowment

An Endowment established in honor of Alvera Rogen and the Trooien Family who had a long-time family connection and interest in the Oak Lake Field Station. This fund was established to support long-term maintenance and development of facilities at the Oak Lake Field Station toward the education and development of students interested in South Dakota natural resources.

Oak Lake Field Station Fund

A flexible field station account developed using unrestricted gifts to the Oak Lake Field Station and utilized for newsletters, web site, hospitality expenses and meeting attendance in relation to field station operations and programs.

Endowed Research Faculty positions in Ecology or Environmental Science, Range Ecology or Range Management, Wildlife Biology and Fisheries Biology.

Your impact: Faculty endowments provide funding for perpetuity that will allow the Department to recruit exceptional faculty members and provide them with the resources that are essential to their ability to do their critical work.

(Targeted gifts would also be appreciated to support the purchase of research equipment and enhancement of research lab facilities in each of the areas identified above.)



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Photo by Alex Rosburg

Stay Well and Safe.

Thank You!