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NRM Newsletter

Department of Natural Resource Management

Spring 2019

Department of Natural Resource Management Newsletter

Department of Natural Resource Management

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Faculty

- ◇ Michele Dudash ... Department Head & Professor
- ◇ Alexander (Sandy) Smart ... Assistant Dept. Head & Professor
- ◇ Mike Brown ... Professor
- ◇ Steven Chipps ... Volunteer Professor/Unit Leader USGS
- ◇ Krista Ehlerst ... Asst. Professor/Extension Range Specialist
- ◇ Bruce Eichhorst ... Instructor/OLFS Assistant Director
- ◇ Larry Gigliotti ... Volunteer Asst. Professor/Asst. Unit Leader USGS
- ◇ Brian Graeb ... Associate Professor
- ◇ Jonathan Jenks ... Distinguished Professor
- ◇ Kent Jensen ... Associate Professor
- ◇ Patricia Johnson ... Professor
- ◇ Maribeth Latvis ... Assistant Professor
- ◇ Joshua Leffler ... Assistant Professor
- ◇ Robert Lonsinger ... Assistant Professor
- ◇ Don McCrea ... Instructor
- ◇ Lora Perkins ... Associate Professor
- ◇ Onja Razafindratsima ... Assistant Professor
- ◇ Joshua Stafford ... Volunteer Assoc. Prof/Asst. U.L USGS
- ◇ Lan Xu ... Professor
- ◇ Charles Fenster ... NRM Affiliate Professor/OLFS Director
- ◇ Stella Liu ... NRM Affiliate Assistant Professor

SDState Extension Specialists

- ◇ Pete Bauman ... Range Field Specialist
- ◇ James Doyle ... NRM Fields Specialist
- ◇ Katherine Jaeger ... Youth Outdoor Education Field Specialist
- ◇ Sean Kelly ... Range Management Field Specialist
- ◇ Leslie Vincent ... Remote Advisor

Staff

- ◇ Beth Byre ... Accountant
- ◇ Jiyoun Kim ... Support Staff
- ◇ Thomas Reeves ... Field Station Grounds Keeper
- ◇ Kathryn Tvedt ... Support Staff

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<http://www.sdstate.edu/nrm>

<https://www.facebook.com/sdstateNaturalResourceManagement>

<https://www.facebook.com/pages/SDSU-Natural-Resource-Job-Announcements/699103456779362?sk=timeline>

Dear NRM Alumni and Friends,



I hope that this departmental update finds you well and that the weather challenges we have all faced in this last 6 months are behind you! Once again, we have had a very busy spring semester, with our courses, annual meeting attendance and planning for our field seasons. We have successfully graduated many undergraduate and graduate students in the last 6 months as well! As of today we have 93 new student orientations scheduled, which should maintain our overall enrollment and perhaps exceed our highest enrollment to date. We will keep you posted!

NRM has a number of new individuals contributing to its leadership team. Professor Sandy Smart is the new Assistant Department Head as of June 22. Professor Charlie Fenster is the new Director of Oak Lake Field Station and Dr. Bruce Eichhorst is the new Assistant Director. Additionally, I am pleased to share that we have hired a new Assistant Professor to help lead the Conservation Planning and Park Management program starting in Fall 2019, Dr. Onja Razafindratsima, who also brings spatial ecology research expertise to NRM! Stay tuned about other future faculty hires. Our first priority is a wetland ecologist.

In terms of infrastructure, we are now building a new NRM support facility at the Wildlife Research Farm with a move in date by November! At Oak Lake Field Station, we have a new house for researchers to reside and a full basement for safety. We also added 30 new dissecting scopes with light sources to the classroom. We are once again offering our Natural Resources Camp at Oak Lake Field station in July that is being led by Bruce Eichhorst. Thanks to Bruce we now have a very active Facebook page and here is the link: <https://www.facebook.com/OakLakeFieldStation>

As you will see we are trying a new format and will continue to share worthy news of our tri-fold mission: research/scholarship in the pursuit of new knowledge, training at both the undergraduate and graduate levels, and service/outreach to our community and stakeholders locally and beyond. Please feel free to reach out if you are in the area! We love hearing about you as well!

Cheers,
 Michele

AFS (American Fisheries Society Student Chapter)

Advisor: Mike Brown, Steve Chipps
 President: Cade Lyon
 Vice President: J Dalton Flahaven
 Treasurer: Tanner Davis
 Secretary: Brandt Boekhout

Ecology Club

Advisor: Lan Xu
 President: Bailey Beauchamp
 Co-Vice President: Emily Knutson, Madeline St.Clair
 Secretary: Zoey Huntley
 Treasurer: Paul Fogarty

Natural Resource Law Enforcement Club ... NEW (NRLE Club)

Advisor: Don McCrea
 President: Kyle Sim
 Vice President: Maria Guzzetta
 Treasurer: Kayla Pring
 Secretary: Joseph Kretchman
 Public Relations: Daniel Fraser

Range Club

(Founded in 1980's.)
 Advisor: Sandy Smart
 President: Ryan Swanson
 Vice President: Eric Puetz
 Secretary/Treasurer: Elle Moon
 Prexy Council/Social Media: Aubrey Weishaar

Wildlife and Fisheries Conservation Club

(Founded in 1940.)
 Advisor: KC Jensen
 President: Nicholas Peterson

CONGRATULATIONS ON YOUR GRADUATION!



UNDERGRADUATE STUDENTS

Fall 2018

Ecology/Environmental Sciences

Lindsey Meiers, Tea, SD
Rebecca Wilson, Lu Verne, IA

Natural Resource Law Enforcement

Travis Bechen, Sioux Falls, SD

Rangeland and Management

Rosie Douglas, Kirkcolm Stranraer (United Kingdom)

Wildlife/Fisheries Sciences

Cole Beecher Badger, IA
Joshua Cadwell, Hermosa, SD
Katelin Frerichs, Buffalo Center, IA
Kevin Frick, Canton, SD
Taylor Greenlun, Ramsey, MN
Jared Hintz, Norfolk Nebraska
Kristina Laska, Brookings, SD
Corey Lee, Spencer, IA
Ryan Lovro, Harrisburg, SD
Wesley Mann, Grand Rapids, MN
Wyatt Peschges, Avoca, MN

Wildlife/Fisheries Sciences & NRLE

Thomas Cobb, Correctionville, IA
Justin DeSchepp, Jefferson, SD
Garrett Zimmer, Crofton Nebraska
Gavin Zimmer, Crofton Nebraska

Spring 2019

Ecology/Environmental Sciences

Jennifer Dailey, Jefferson, SD
Kristen Giefer, Rochester, MN
Jenna Hayungs, Orange City, IA
Vance Jones, Brookings, SD
Gabriel McKinney, Sioux Falls, SD
Ashlee Nilson, Sioux Falls, SD
Nolan Rine, Columbus Nebraska

Natural Resource Law Enforcement

Aaron Cuthrell, Early, IA
Craig Fishel, Humboldt, IA
Dylan Herr, Sioux Falls, SD
Harley Hoogendoorn, Kennebec, SD
Antonio Topete, Hawarden, IA
Samantha Williams, Volga, SD

Rangeland Ecology & Management

Blake Roetman, Sheldon, IA

Wildlife/Fisheries Sciences

Brianna Becher, El Paso, TX
Kaitlyn Cihoski, Fairmont, MN
Jasmine Cisneros, Brookings, SD
Alexander Colling, New Prague, MN
Elisabeth Else, Webster, SD
David Flanery, Britton, SD
Eric Flanigan, Brandon, SD
Landon Giles, Willow Lake, SD
Logan Hammer, Wilmot, SD
Benjamin Hanzen, Sioux Falls, SD
Matthew Harpestad, Wells, MN
Emily Hermesen, Carroll, IA
Jennifer Huber, Canton, SD
Patrick Hybertson, Beresford, SD
Aaron Muehler, Mitchell, SD
Dylan Riedl, Winner, SD
Zachary Schwartz, Sioux Falls, SD
Christopher Seylar, Estherville, IA
Derek Soukup, Wagner, SD
Julia Stueven, Pierre, SD
Abigail Toft, Worthing, SD
Samantha Toft, Worthing, SD
Daniel Tomasello, W Sacramento, CA
Tyler Warren, Lamoure ND
Rebecca Watkins, Sioux Falls, SD

GRADUATE STUDENTS

Summer 2018

Tom Kasiga (WFS-F PhD)
Tyler Garwood (WFS-W MS)
Mandy Orth (WFS-F PhD)

Fall 2018

Joshua Harvey (BIOS MS)
Travis Rehm (WFS MS)
Mark Hendrix (BIOS MS)
Stephen Jones (WFS-F MS)

Spring 2019

Michael Bredeson (BIOS PhD)
Bailey Gullikson (WFS MS)
Rebecca Kolstrom (BIOS MS)

NRM Award & Scholarship

We celebrated our faculty, staff and graduate student awards at the 3rd Appreciation & Graduation Reception on May 3rd. Congratulations all!

- Service to SDState Award
 - ... Peter Bergmann
 - Mike Brown
 - KC Jensen
 - Lan Xu
- *smithii* Award for Range Science
 - ... Shyanne Siedel (Undergraduate)
- Outstanding Bios MS students
 - ... Rebecca Kostrom (MS)
 - Jessica Richert (MS)
 - Lucas Zilverberg (MS)
- Outstanding Grassland Graduate Student Award
 - ... Jameson Brennan (PhD)
- Great Plains Fishery Workers Association Award
 - ... Joseph Mrnak (MS)
- Lloyd & Alice Fredrickson Memorial Scholarships
 - Fisheries ... Seth Fopma (PhD)
 - Wildlife ... Samantha Fino (PhD)
- Robert A. Klumb HAMMS Award
 - ... Nicholas Kludt (PhD)
- Waterfowl Specialty-Gay Simpson Award
 - ... Fred Oslund (MS)
- Outstanding Wildlife MS Student Award
 - ... Cynthia Anchor (MS)



(from left) Lan Xu, Mike Brown, Pete Bergmann & John Killefer (Dean of CAFES)



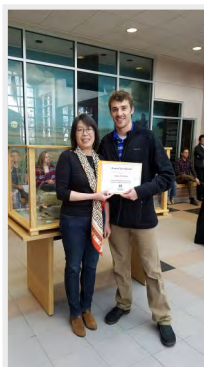
Shyanne Siedel (right) with Sandy Smart



Rebecca Kolstrom w/ Larry Gigliotti (left) & Tammy Wilson (right)



(right) Jessica Richert w/ Joshua Leffler



Lucas Zilverberg w/ Lan Xu



Jameson Brennan w/ Pat Johnson (right)



Joseph Mrnak w/ Steve Chipps (right)



Seth Fopma (right) w/ Brian Graeb



Samantha Fino w/ Joshua Stafford



Nicholas Kludt (right) w/ Steve Chipps



Cynthia Anchor w/ Joshua Stafford



Austin Wieseler receives local Wildlife Society chapter award

Austin Wieseler, who is pursuing a master's degree in the Department of Natural Resource Management, received the 2019 Outstanding M.S. Graduate Student Award from the South Dakota chapter of The Wildlife Society. The award recognizes students who demonstrate excellence in the study of wildlife ecology and management. Congrats Austin! More can be found on this site:

<https://www.sdsu.edu/news/2019/03/sdsu-graduate-student-receives-local-wildlife-society-chapter-award?>



2019 Outstanding Advisor Nominee

Don McCrea, our Instructor has been recognized on his nomination for the 2019 Outstanding Advisor award by the Office of Student Activities.

The application for this award seeks to "recognize a faculty or staff member who demonstrates excellent support and dedication to an officially recognized SDState student organization. This individual is engaged in the activities of the group, encourages growth and self-efficacy, and celebrates student successes."

His nominator wrote an impressive statement describing his exceptional impact and dedication to our department.

Congratulations to Don!

UG Research, Scholarship & Creative Activity Day (URSCAD)

was held in Volstorff Ballroom on April 9th. NRM undergraduate students accomplished their poster show.

David Flanery - *Bud Bank: A Novel Ecological and Managerial Approach to Improve Biomass Production*

Kaitlyn Cihoski - *Examination of Fire and Grazing-Induced Vegetation Heterogeneity on Trophic Level Relationships—Small Mammal Diversity*

Alyssa Vachino - *Impacts of Patch-Burn Grazing and Winter-Patch Grazing on Arthropod Community Heterogeneity*

2019 GSD Annual Poster Competition

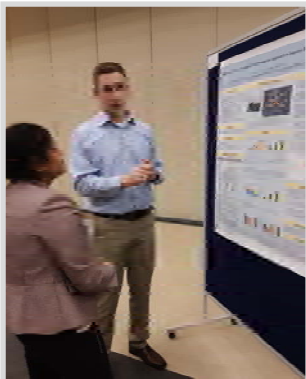
We had a wonderful turnout at the 2019 Gamma Sigma Delta Annual Poster Competition. 38 posters and 31 judges! Congratulations, here are the results.

Undergraduate

1st place: **David Flanery (NRM)** (left below)

2nd place: Dorothea Clark (AS)

3rd place: **Kaitlyn Cihoski (NRM)** (right below)



Graduate (MS)

1st: **Jacob Comer (NRM)** — — —>

2nd: Douglas Fiedler (AHPS)

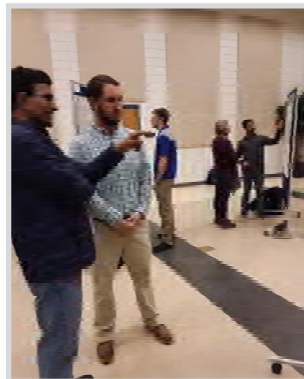
3rd: JaeYoung Sim (DFS)

Graduate (PhD)

1st: Paul Gaillard (AHPS)

2nd: Kaavya Rathnakumar (DFS)

3rd: Roshin Mohan (DFS)



The Golden Saw Traveling Trophy

The Minnesota Sharp-tailed Grouse Society (MSGs) holds two annual volunteer brush cuts one in NW Minnesota and the other in NE Minnesota. Volunteer power serves as a match for a Conservation Partner Legacy Grant. Colleges from across Minnesota, and now SDState participate in the events. The golden saw is awarded to the college which brings the most students to each brush cut.

The NE cut this year was held on March 23rd 2019 on the Kroschel WMA near Hinckley, MN. Last year was the first year the SDState Wildlife and Fisheries Conservation Club (W&FCC) participated at the events. This year W&FCC brought back the trophy! This is a fun and rewarding opportunity to not only conserve habitat for native open landscape birds, but also connect with professionals and friends in creating a new tradition so the traveling golden saw can stay here at SDState.



NRLE Club

Natural Resource Law Enforcement Club has been launched and we now have 5 student clubs in our department. Daniel Fraser, Public Relations of the Club, said. "The picture below is from my internship teaching huntsafe. That is one of our goals for NRLE club to help teach hunt safe courses for youngsters."

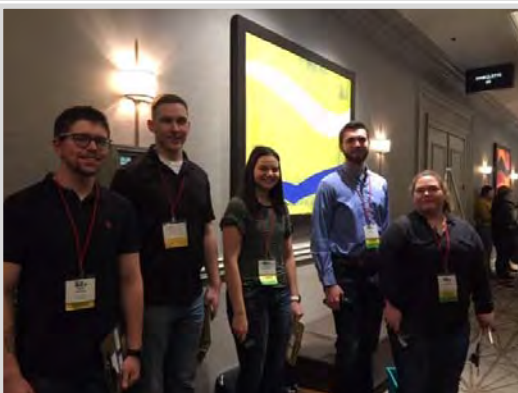


Huntsafe courses typically happen in the summertime. Locations vary for different counties and Conservation Officers. The purpose of Hunt-Safe courses fulfills a requirement to buy hunting licenses. In addition, hunting is a healthy lifelong hobby/tradition that will continue to be passed down to future generations. It teaches people to be patient and passionate in what they are doing.

"Another aspect of our club is to learn proper boating safety and regulations; how to navigate on a vessel, backing up a boat, and boat safety requirements. Everything and more you need to know as a Conservation Officer enforcing statutes and regulations on the water."

He added. "Every NRLE club meeting there is a delicious home cooked meal. We recommend anyone interested in joining our club should come check it out. While you're at our meeting you will have great company and a great meal to eat." All are welcome and encouraged to attend.

2019 Society of Range Management Meeting in Minneapolis, MN



2019 The Wildlife Society SD Chapter Annual Meeting, Oacoma

All Alumni from our departmental undergraduate or graduate programs!



Honorable Mention in 2019 NSF Graduate Research Fellowship Program (GRFP) competition



Sarah Herzog, our MS student, has been accorded an Honorable Mention in the 2019 National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP) competition, a significant national achievement. NSF publishes lists of Fellowship candidates and Honorable Mention recipients on the GRFP website at <https://www.research.gov/grfp/Login.do>.

NRM Camp 2019



NRM is hosting a Natural Resources Camp, July 22-26 at Oak Lake Field Station in Astoria, SD.

The Natural Resource Camp is a great way to gain exposure to the world of natural resources, including fish, plants, wildlife, soils, invertebrates, and water. The camp offers opportunities to gain hands-on experiences in natural resource ecology and management. The camp is intended for high school students, entering grades 9, 10, 11 and 12, who have a strong desire to learn more about the natural world or who have an interest in pursuing a career related to natural resources. Permission of a parent or guardian is required. Activities the camp offers include; fish sampling, aquatic invertebrate sampling, stream ecology, prairie plant, diversity, mammal capture, soil health, orienteering, nocturnal invertebrates, vegetation sampling and careers in natural resources.

Space is limited and admission is available on a first-come, first-serve basis. Lodging and meals are included in the registration. Registration is \$300 and closed June 15, 2019. More info on the camp can be found on our website. <https://www.sdstate.edu/natural-resource-management/natural-resource-camp>

Pulled Pork & Chicken Sandwich Feed

The Wildlife & Fisheries Conservation Club had a Pulled Pork & Chicken Feed as a free will donation on April 9 noon in the Atrium of Biostress Laboratory Building. Thanks to all who made this event a success.

SDState AFS Student Subunit Chili Feed

The SDState American Fisheries Society and Student Subunit hosted a Chili feed on Thursday March 28th, located in the Biostress Atrium.

Awards and prizes were also offered. Best Chili winner (Dr. Mike Brown) won a \$25 gift card from Running's while the Most Creative Chili was awarded to Aaron Sundmark, a PhD student. He was awarded an AFS Yellow Perch shirt. Thanks to all who made this event a success.



(from the top left, clockwise) Brandt Boekhout, Cade Lyon, Tanner Davis & David Flanery



Field and Stream

In the 10 best colleges for hunters and anglers, SDState ranked 6th.

"Jackrabbits can sign up for both the **SDState Fishing Club** and **Ducks Unlimited** Chapter. The latter group, which is chaired by Jake Pettit, is one of the most popular outdoor groups on campus." "It feels like everyone at SDState participates in something outdoors."

[https://www.fieldandstream.com/10-best-colleges-for-hunters-and-anglers?](https://www.fieldandstream.com/10-best-colleges-for-hunters-and-anglers?BHTq7zsOpfWYevB1.01&fbclid=IwAR0z9o_Gz3C2RYMS1JNTFDQrKSGliwXx5vKaTlrM76owyVqfz1_ZBypg9A0#page-6)

[BHTq7zsOpfWYevB1.01&fbclid=IwAR0z9o_Gz3C2RYMS1JNTFDQrKSGliwXx5vKaTlrM76owyVqfz1_ZBypg9A0#page-6](https://www.fieldandstream.com/10-best-colleges-for-hunters-and-anglers?BHTq7zsOpfWYevB1.01&fbclid=IwAR0z9o_Gz3C2RYMS1JNTFDQrKSGliwXx5vKaTlrM76owyVqfz1_ZBypg9A0#page-6)



Retirement Receptions

Carol Johnston's Retirement

Carol Johnston has retired after 16 years of teaching. Along with teaching Carol directed the Center for Bio Complexity Studies from 2003-2006. Carried the title of Professor Emeritus.



Michele (left) and Carol (right)



Carol with her husband, Boris



Nels Troelstrup's Retirement

- 26 years of service at SDState
- Director of Oak Lake Field Station throughout his whole academic career
- 6 years as Assistant Department Head for NRM
- Has published 72 peer reviewed articles, books, reviews and technical documents
- Developed and taught 32 undergraduate and graduate courses
- Carried the title of Professor Emeritus of Ecology in recognition of his service and scholarship.



Nels with his wife, Cindy



SDState Fishback Summer Scholars Program 2019

Was held July 8-12. The first day focused on Natural Resource Management. **KC Jensen** led Bird banding at McCrory Gardens and **Mike Brown** hosted a Visit to Prairie Aquatech. Planned Activities and Learning Objectives:

- ◆ Assist a federally permitted scientist in attaching unique identification tags to captured birds.
- ◆ Learn how capture and banding are done with safety, respect, and minimal stress.
- ◆ Learn how bird banding information is shared with a national database to monitor trends and status of residential and migratory bird populations.
- ◆ Learn how commercial fish farming will help meet growing consumer demands for fish and seafood, easing the stress on declining wild populations.
- ◆ See how a Brookings facility is developing new feed sources for commercial fish and seafood and how this can benefit crop farmers by using soy-based feeds.

Thank you KC and Mike!

About Oak Lake Field Station

- A new House with 3 bedrooms and 1 full bath, is now ready to use in the Oak Lake Field Station. It also has a washer & dryer in the basement.
- Book it now on the **Online Reservation Form**: <https://www.sdstate.edu/oak-lake/online-reservation-form>



- Please visit our Oak Lake **Facebook page** to see more photos and videos of the Station. (<https://www.facebook.com/OakLakeFieldStation/>)

Alumni News

2019 Presidential Migratory Bird Stewardship Award Winner (Council for the Conservation of Migratory Birds)

James Ray (MS in 1990) who works for DOE/NNSA shared his alma mater.

The Council for the Conservation of Migratory Birds is pleased to announce the winner of the 2019 Presidential Migratory Bird Federal Stewardship Award. The U. S. Department of Energy/National Nuclear Security Administration (DOE/NNSA) Pantex Plant was honored at this year's Council meeting for their innovative work with Swainson's Hawks, Purple Martins, and other birds across the Western Hemisphere. The Presidential Migratory Bird Federal Stewardship Award annually recognizes a single project or action conducted by or in partnership with a Federal agency that meets the intent and spirit of Executive Order 13186 by focusing on migratory bird conservation.

More of the story can be read in the link.

<https://www.fws.gov/birds/management/bird-conservation-partnership-and-initiatives/council-for-the-conservation-of-migratory-birds/2019-presidential-award.php>



(Sourced by US FWS) Award winners. Pictured (from left to right) are Chris Cantwell, DOE/NNSA Pantex Plant; Beverly Whitehead, DOE; Jerome Ford, U.S. Fish & Wildlife Service; James Ray, DOE/NNSA Pantex Plant; and Josh Silverman, DOE.

Recent Graduate Student's Job Appointments

- Michael Bredeson (PhD): Ecdysis, Minnesota Branch
- Jacob Comer (MS): Wildlife Biologist with Quail Forever, Elizabethtown, NC
- Bailey Gullikson (MS): Conservation Program Specialist, Department of Agriculture, Pierre
- Nicholas Kludt (PhD): Senior Fisheries Specialist for the Red River of the North at Minnesota DNR, Detroit Lakes
- Rebecca Kolstrom (MS): Bat Acoustic Specialist, West Inc.
- Joseph Mrnak (MS): PhD student at U Wisconsin, Madison
- Aaron Sundmark (PhD): Biologist, MN DNR, Brainerd
- Kate Wollman (MS): Biologist, Grand River Dam Authority, Oklahoma

Ed Crozier's hunting experiences

SDState Alumnus Ed Crozier has been interviewed by the Star Tribune. "I would like to express my thanks and appreciation for my SDState Wildlife Management Degree. As a result I had a wonderful career in wildlife management that enabled me to make conservation accomplishments and received ample recognition for them..."

More of the story can be read in the following link.

http://www.startribune.com/ed-crozier-of-burnsville-tells-ales-of-dogs-and-friends-in-book-about-70-years-of-hunting/473698903/?fbclid=IwAR31px8ndE6wQRAX-UH_Lw7-LVIN0mdNgcmijnHxsuNxiiBT2ekkhKmw8Q



Dick Duerre (to Ed Crozier's left, with a haul of pheasants not many years ago in North Dakota. (Source from the Star Tribune)



An Irish setter was Ed Crozier's first dog as a boy growing up in tiny Jasper, Minn (Source from the Star Tribune)

Caryl's & Ed's Memoir

Waking to Mourning Doves



<http://www.carylacrozier.com/ftp.carylacrozier.com/Welcome.html>

A Wildlife Journal

http://edcrozier.com/www.crozierwildlifejournal.com/Dream_Hunter.html

(Cover photo by Scott W. Sharkey)



NRM Faculty Google Scholar Profiles - Please check us out!

Dr. Michael (Mike) L. Brown
(michael.brown@sdstate.edu)

Aquatic Animal Health and Nutrition; Fish Ecology; Fisheries Management

<https://scholar.google.com/citations?user=A3s4thAAAAAJ>

Dr. Steven R. Chipps
(steven.chipps@sdstate.edu)

Aquatic Food Web Ecology; Fish Bioenergetics; Foraging Ecology; Contaminants

<https://scholar.google.com/citations?user=ZV9NKSwAAAAJ&hl=en>

Dr. Michele R. Dudash
(michele.dudash@sdstate.edu)

Evolutionary Ecologist: plant-pollinator interactions, evolution of plant mating systems, conservation genetics

<https://scholar.google.com/citations?hl=en&user=K2oAEEkAAAAJ>

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

Rangeland Ecologist and Management

https://scholar.google.com/citations?user=ESC_GGEAAAAJ&hl=en

Dr. Charles Fenster
(charles.fenster@sdstate.edu)

Evolutionary Biology, Evolutionary and Conservation Genetics, Floral Evolution, Pollinators and Sustainable Agriculture

<https://scholar.google.co.in/citations?hl=en&user=YmpyLbEAAAAJ>

Dr. Larry M. Gigliotti
(larry.gigliotti@sdstate.edu)

Human Dimensions; Survey Methodology; Human-Wildlife Conflicts; Public Involvement; Planning

<https://scholar.google.com/citations?hl=en&user=BIi9nVkAAAAJ>

Dr. Brian D. S. Graeb
(brian.graeb@sdstate.edu)

Ecology and Management of Lakes, Rivers, and Reservoirs; Foraging Ecology, Competition; Fish Recruitment

<https://scholar.google.com/citations?hl=en&user=VD5QJ58AAAAJ>

Dr. Jonathan A. Jenks
(jonathan.jenks@sdstate.edu)

Wildlife Ecology and Management; Population Dynamics; Wildlife Nutrition; Large Mammal Ecology

<https://scholar.google.com/citations?user=2FZNCsYAAAAJ&hl=en>

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

Avian Ecology and Management; Waterfowl Ecology and Management; Ornithology;

Upland Gamebird Ecology and Management

Dr. Patricia Johnson
(patricia.johnson@sdstate.edu)

Professor – *retiring Fall 2019*

Rangeland Ecology; Plant-Animal Interactions; Grazing Systems; Plant Responses to Grazing;

Prairie Dog-Livestock Interactions

Dr. Maribeth Latvis
(maribeth.latvis@sdstate.edu)

Assistant Professor and Director of the C. A. Taylor Herbarium

Plant Systematics; Plant Conservation Biology; Phylogenetics; Plant Community/Biome Assembly

https://scholar.google.com/citations?hl=en&user=_g09pvUAAAAJ

Dr. A. Joshua Leffler
(alan.leffler@sdstate.edu)

Plant Physiological Ecology; Ecosystem Ecology; Plant and Ecosystem Response to Climate Change

<https://scholar.google.com/citations?hl=en&user=Si6XNjkAAAAJ>

Dr. Stella (Hung-Ling) Liu
(stella.liu@sdstate.edu)

NRM Affiliate Assistant Professor

Survey and evaluation research techniques focus on behaviors in outdoor recreation; human dimension of NRM; and impacts of recreation and tourism for individuals and community

Dr. Robert Lonsinger
(robert.lonsinger@sdstate.edu)

Wildlife Ecologist and Conservation Genetics

<https://scholar.google.com/citations?hl=en&user=xzpLqY8AAAAJ>

Dr. Lora Perkins (lora.perkins@sdstate.edu)

Plant Ecology; Biological Invasions; Plant-Soil Interactions; Restoration Ecology

<https://scholar.google.com/citations?hl=en&user=w8gEwekAAAAJ>

Dr. Onja Razafindratsima
(onja.Razafindratsima@sdstate.edu)

Landscape Ecology, Conservation Biology, Tropical Ecology, Primatology, Seed Dispersal

https://scholar.google.com/citations?hl=en&user=UZvLdb0AAAAJ&view_op=list_works&authuser=1

Dr. Alexander "Sandy" Smart
(alexander.smart@sdstate.edu)

Rangeland Ecology and Management: Grazing, Fire, Range Improvements; Ecosystem Goods and Service

<https://scholar.google.com/citations?hl=en&user=gN13d2kAAAAJ>

Dr. Joshua D. Stafford
(joshua.stafford@sdstate.edu)

Ecology and Management of Waterfowl and Wetlands; Foraging Ecology; Statistics

<https://scholar.google.com/citations?hl=en&user=Si6XNjkAAAAJ>

Dr. Lan Xu (lan.xu@sdstate.edu)

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_qaRiYAAAAJ&hl=en

NRM Faculty Publications

Here are some of our Faculty members' new publications. Details can be found in Open Prairie.

(https://openprairie.sdstate.edu/nrm_pubs/)

Distribution and Productivity of Naturalized Alfalfa in Mixed-Grass Prairie

Lan Xu, Arvid Boe, Patricia Johnson, Roger N. Gates, and Christopher G. Misar

Publication Date: 6-2019

Publication Title: American Journal of Plant Sciences

Volume: 10

Issue: 6

https://openprairie.sdstate.edu/cgi/viewcontent.cgi?article=1292&context=nrm_pubs

Restoration for Multiple Use

Mark W. Paschke, Lora Perkins, and Karl E. Veblen

Publication Date: 4-2019

Publication Title: Restoration Ecology

DOI of Published Version: 10.1111/rec. 12949

<https://onlinelibrary.wiley.com/doi/full/10.1111/rec.12949>

Using Phenological Niche Separation to Improve Management in a Northern Glaciated Plains Grassland

Joe Bennett, Alexander Smart, and Lora Perkins

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<https://onlinelibrary.wiley.com/doi/full/10.1111/rec.12932>

Effects of Neonicotinoid Insecticides on Physiology and Reproductive Characteristics of Captive Female and Fawn White-tailed Deer

Elise Hughes Berheim, Jonathan A. Jenks, Jonathan G. Lundgren, Eric S. Michel, Daniel Grove & William F. Jensen

Over the past decade, abnormalities have been documented in white-tailed deer (*Odocoileus virginianus*) in west-central Montana. Hypotheses proposed to explain these anomalies included contact with endocrine disrupting pesticides, such as imidacloprid.

<https://www.nature.com/articles/s41598-019-40994-9>

A Unifying Approach to Classifying Wetlands in the Ontonagon River Basin

Yanfen Chen, Zhenguo Niu, Carol A. Johnston, and Shengjie Hu

Worked on and contributed to the Canadian Journal of Remote Sensing. The article is titled A Unifying Approach to Classifying Wetlands in the Ontonagon River Basin, Michigan, Using Multitemporal Landsat-8 OLI Imagery.

"Accurate spatial information is critical to the assessment and protection of wetlands in the context of human intervention and global climate change."

The full article can be read through the following link.

<https://doi.org/10.1080/07038992.2018.1526065>

Effects of cropland encroachment on prairie pothole wetlands: numbers, density, size, shape, and structural connectivity

Carol A. Johnston & Nancy E. McIntyre

Results Wetland area decreased by 25% within the study area, density decreased by 16%, and average size decreased from 2.41 to 2.16 ha with no increase in perimeter:area ratios, thus indicating changes more from the splitting of larger wetlands (accounting for 23% of area lost) and "nibbling" at patch area (38%) than from complete wetland elimination (39%).

<https://link.springer.com/journal/10980>

Advocating for Science: Amici Curiae Brief of Wetland and Water Scientists in Support of the Clean Water Rule

Carol A. Johnston & other prominent wetland scientists; Royal C. Gardner, Erin Okuno, Steph Tai, M. Siobhan Fennessy, Marinus L. Otte, Margaret Palmer, James E. Perry, Charles Simenstad, Benjamin R. Tanner, Dan Tufford, R. Eugene Turner, Kirsten Work, Scott C. Yaich, Joy B. Zedler

More info: <https://link.springer.com/article/10.1007/s13157-019-01160-z>



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The Natural Resource Management Department. Funds that enable strategic initiatives in academic and research programs through implementation of the department's strategic plan.

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.

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, and (5) Wildlife and Fisheries Sciences.

-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 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 SDState. 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.)

PLEASE contact us with Alumni Updates. We get more positive feedback from people who appreciate these updates than anything else in the newsletter!

Also, please send email address updates, corrections, and share the newsletter with friends and alumni so we can grow that email address list.

CONTACT US with news, comments or questions!

Career Opportunities with Natural Resources Conservation Agency

“Helping people help the land” is the mission statement for the Natural Resources Conservation Service (NRCS). NRCS is an agency under the Department of Agriculture that offers technical assistance to farmers, ranchers, and private landowners. Financial assistance may also be granted through various programs that are 100% voluntary.

The NRCS was founded back in 1935, during the height of the Dust Bowl. Soil Scientist, Hugh Hammond Bennet testified to congress the need for soil conservation. Congress passed the Soil Conservation Act and hence created the Soil Conservation Service within the USDA. Hugh Hammond Bennet then became the father of Soil Conservation and the first Chief of the agency.

Over the years, the agency evolved into stressing the need to improve not only soils, but water, air, animals, plants, and energy. Also, the NRCS works with many partner groups to achieve it’s mission. Some of the partners we work with in South Dakota include: Soil Conservation Districts, Pheasants Forever, Corn Growers, Ducks Unlimited, tribes, SD Grasslands Coalition, SD Soil Health Coalition, and East Dakota Water Development District.

If working with land managers and the outdoors suits you, please consider working for the NRCS! Numerous job positions are available from biologists, soil conservationists, engineering, range-land management, soil scientists, to even cartographers! We also utilize volunteers to help get our work accomplished as well!

To find out more about SD NRCS, please check out our website at:

<https://www.nrcs.usda.gov/wps/portal/nrcs/site/sd/home/>

To find out more about NRCS and navigate to other states:

<https://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>



Above: Former Soil Quality Specialist Jeff Hemmenway demonstrating the rainfall simulator on various management scenarios. Improving soil health is one of our top priorities in SD NRCS.

Right: Engineer Laura Stern surveying construction on a dam site in Union County.



Natural Resources Conservation Service

“Take care of the land and it will take care of you.”
-Hugh Hammond Bennett

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