

NEWSLETTER

Fall 2022 Geography Alumni Social in St. Louis



Dean's Message

DR. CHARLENE WOLF-HALL

Spring semester has been off to a busy start. Spring Break will already be here next month. This issue highlights several of the activities and events that start off the new year for the College of Natural Sciences.

As we push to complete all our goals for this academic year, take time for self-care, help a friend or colleague in stress, and please be kind to all. These are websites for resources that may be helpful for students, faculty, and staff:

- <https://www.sdstate.edu/wellness-center/counseling-services>
- https://bhr.sd.gov/benefits/FY22Files/EF_SoSD.pdf

Note that the images from the Science as Art competition presented in the Awards & Recognition section will be on display in the Dean's Office. Please consider stopping by and seeing all the pieces on display in room 131 of the Avera Health & Science Center. We love to have visitors. Our office has warm welcomes and hot beverages to help you get through the coldest part of winter.

Spring semester goes by fast, and before you know it, we will be preparing for graduation ceremonies. For those in their final semester at SDSU, savor those moments that make this place special while you can. Enjoy the beautiful winter scenery, learn, succeed, experience, and stay warm.



**SOUTH DAKOTA
STATE UNIVERSITY**

College of Natural Sciences

Awards & Recognition



AISES National Awards

American Indian Science & Engineering Society

South Dakota State University's AISES student organization received three top national awards at the national conference. The chapter has two CNS students and is advised by Physics faculty member **Dr. Larry Browning**.

Advocacy Partner Service Award
Recruitment and Retention Award
Chapter of the Year Award

Harley Fischer, Human Biology
Aubre Westover, Human Biology
Read more on page 8!

Celebrating Work Anniversaries

November 2022 - December 2022 - January 2023

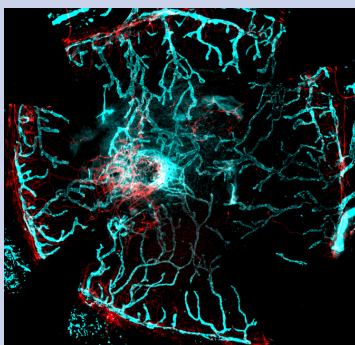
Fathi Halaweish - 27 years
Bruce Millett - 25 years
Andy Ellis - 21 years
Robert McTaggart - 19 years
Jess Mediger - 16 years

Liping Gu - 14 years
Ruanbao Zhou - 14 years
Fangjun Li - 9 years
Charlene Wolf-Hall - 4 years
Matt Nixon - 2 years

College of Natural Sciences "Science as Art" Awards



1st place (\$300) - **Armaan Sandhu**,
Microbiology PhD student



2nd place (\$200) - **Ahana Majumder**, Biology PhD student



3rd place (\$100) - **Hannah Markman**,
Human Biology B.S. student

Research Endowment

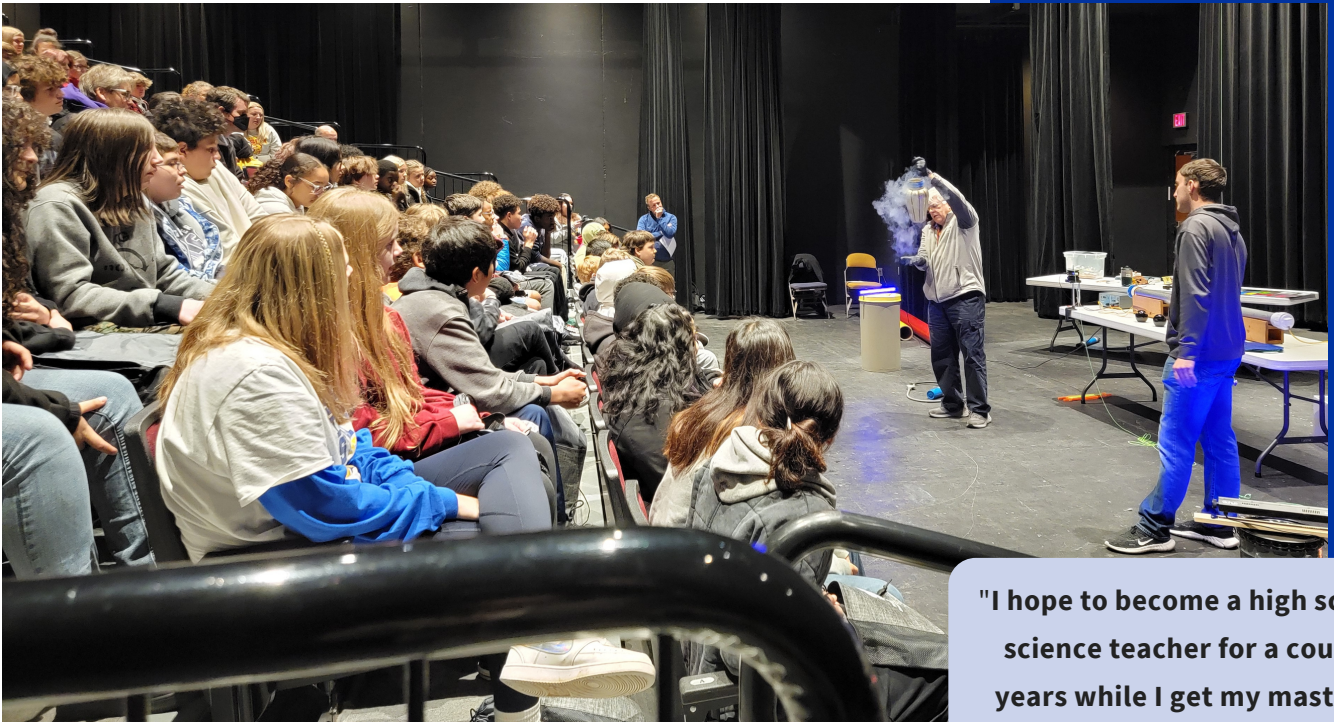
William S. Wadsworth Jr. & Nancy Wadsworth Award

Dr. Jihong Cole-Dai, Chemistry & Biochemistry

Sioux Falls Middle School Visit

On November 17, 140 students from both the Ben Reifel and George McGovern middle schools came to Brookings for a campus visit. Their trip included a science demonstration, academic fair, tours, SDSU ice cream, and more!

Pictured below: Dr. Larry Browning and Harrison Wegner put on a science demo in the OLPAC



The students' first stop was the Oscar Larson Performing Arts Center, where Dr. Larry Browning, Physics faculty, and Harrison Wegner, Biology Education B.S., conducted several exciting science experiments. "My favorite part of the show was the stuff we put in liquid nitrogen. I especially loved the part where Dr. Browning threw a racket ball against the wall and it shattered," Wegner said.

As the middle school visitors moved through the academic fair in the Student Union, they got a chance to learn about our programs in Natural Sciences. Several CNS student ambassadors were on hand to answer questions and demo some VR (virtual reality) headsets.

"During the event, I realized how important it is for students in middle school to gain exposure to ideas after K-12 education," said Madison Higbee, Biology B.S., pictured below. "My advice for junior high students who are thinking about their next steps after K-12 would be to explore their school's extracurricular activities! You can learn a lot about yourself by actively engaging in a sports team, community service event, clubs, and other events hosted by your school."



"I hope to become a high school science teacher for a couple years while I get my master's degree. After I get my master's degree, I hope to become a high school principle."

-Harrison Wegner

L to R: Tyffani Hanson, Paige Wood, and Madison Higbee at the academic fair



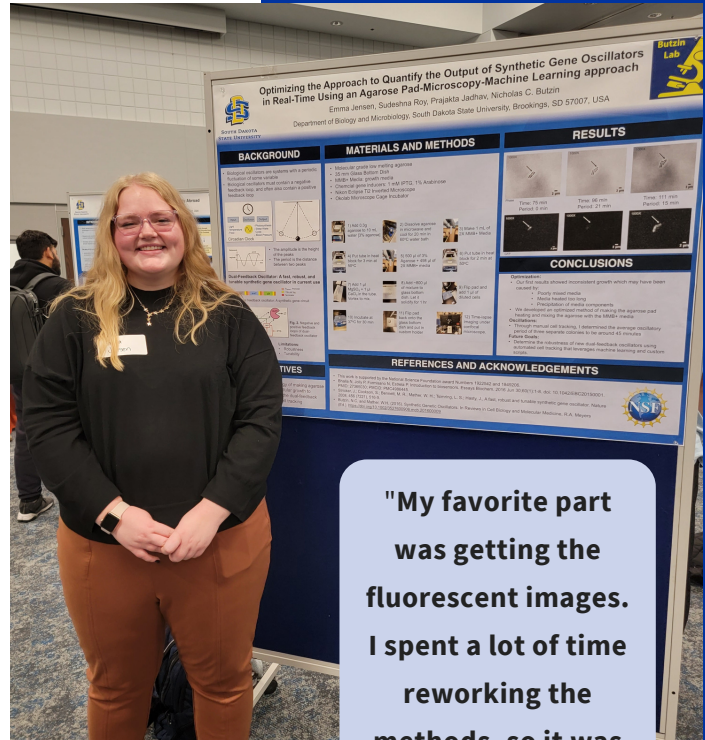
Bio-Micro Day of Scholars

Mark your calendar!

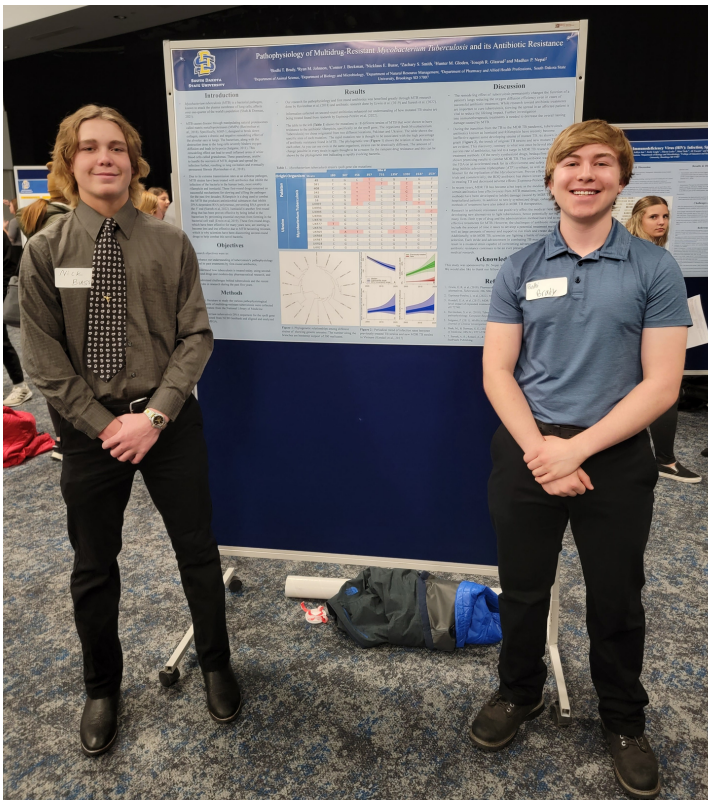
The Spring 2023 Day of Scholars is scheduled for April 18, 2023.

The Department of Biology & Microbiology held its Fall 2022 Day of Scholars event on November 15th in the Volstorff Ballroom. This event takes place once a semester, giving student researchers a chance to practice presenting their work. Freshmen in the Department are required to attend, giving them an idea of what to expect later in their programs.

Nick Busse, pictured left below, and Bodhi Brady, pictured right below, conducted research on tuberculosis with Dr. Madhav Nepal, Department of Biology & Microbiology. "It's interesting to understand how TB permanently harms people, and how we can efficiently combat it," Brady said. "Further investigation into immunotherapeutic treatments is necessary, essentially slowing the symptoms and stopping the damage."



"My favorite part was getting the fluorescent images. I spent a lot of time reworking the methods, so it was rewarding to get the final results."
-Emma Jensen



Left to right: Nick Busse is an Ecology / Environmental Science major, Bodhi Brady is a Human Biology / pre-med major, and Emma Jensen is also Human Biology / pre-med.

Georgia Hirschey, pictured right, is a Human Biology pre-dental major. She took part in a study abroad trip to Finland which was led by Ashley McConnell, advisor for the College of Natural Sciences. Hirschey's poster examined the topics of recovering lost indigenous languages and accessibility of healthcare for indigenous populations. The group also visited tribes in South Dakota, which allowed her to compare similarities across continents.

Her favorite part of the trip was visiting locals in Finland. "We got to witness how a Sami family lives. They hosted us in their home with coffee and biscuits and discussed their values and traditions with us."



GIS Day at USGS EROS

A group from the Department of Geography & Geospatial Sciences and GSCE (Geospatial Sciences Center of Excellence) visited the EROS (Earth Resources Observation and Science) Center near Sioux Falls in November. EROS is part of the USGS (United States Geological Survey) and many SDState alumni work there.

The visit was for GIS Day during Geography Awareness Week and included poster presentations. Graduate student Mohammad Maruf Billah presented his work on estimating winter wheat yield and protein, and was able to receive valuable feedback on his research from EROS scientists!

"Early estimation of wheat yield and protein is very important for local and global food demand and security. In our research, we used Unmanned Aerial Vehicles (UAV)-based multispectral remote sensing and machine learning approaches for wheat yield and protein estimation," Billah said. "So, our study aimed to investigate the potential of UAV-based multi-temporal multispectral images for early season estimating wheat yield and protein."

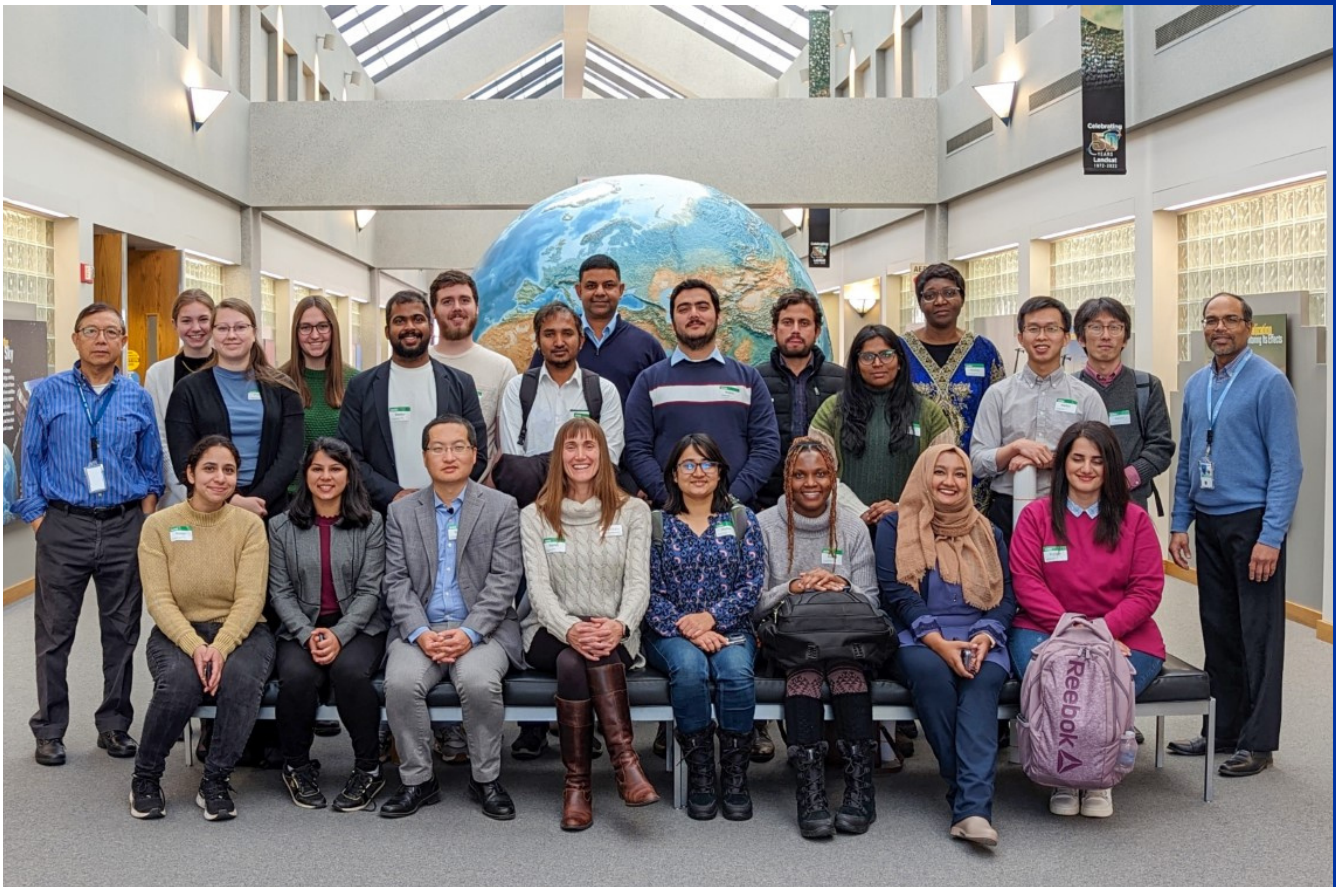
The visit also included tours of the facility.

"During the trip, my favorite part was exploring the EROS Data Archive Center and data server station," Billah said.

Pictured right: Dr. Sen Subramanian, Associate Dean for Research, and Dr. Dapeng Li, Department of Geography & Geospatial Sciences, discuss a poster during the EROS visit.

Mark your calendar!

The 2023 Geography Convention is scheduled for March 30-31. It will be held on campus and feature a wide variety of speakers, student posters, a GeoBowl trivia competition, and more!



Indigenous People's Festival

The first-ever Brookings Indigenous People's Festival was held on November 19, 2022 at Mickelson Middle School. Dr. Derek Brandis and Dr. Matt Miller, Department of Chemistry & Biochemistry, Dr. Larry Browning, Department of Physics, and Harrison Wegner, Biology Education B.S., attended the event to facilitate some fun hands-on science demonstrations!

"We had a variety of activities set up including fluorescence, making slime, showing how a string oscillates, standing in a bubble, and frozen Cheetos to name a few," Brandis said.



SOUTH DAKOTA
STATE UNIVERSITY

College of Natural Sciences

Visiting Jack's Imagination Lab

Three Student Ambassadors from the College of Natural Sciences visited the Washington Pavilion on Saturday, January 28th. They were set up in Jack's Imagination Lab, which is part of the Kirby Science Discovery Center. Museum visitors had a chance to try out virtual reality (VR) headsets and learn more about our programs!

Ambassadors will return three more times this semester, giving many folks in Sioux Falls a chance to interact with CNS. The dates are **February 25th**, **March 25th**, and **April 15th**.

Pictured left to right: Tyffani Hanson is a Human Biology Pre-Med major, DeeDee Cross is a Human Biology Pre-PA major, and Olivia Petrik is a Biotechnology major.



Media Coverage of CNS



Schultes named SDSU Family of Year: "Through three generations, members of the Herbert J. Schulte family have held high their loyalty to South Dakota State University, and now they're being honored as the SDSU Family of the Year."



Dr. Barbara (Schulte) Helton, pictured left in the front row, graduated in 1963 with a chemistry degree. She graduated from USD Medical School in 1965 and was one of only three female graduates from Georgetown University medical school in 1967.

[Click to learn more about the Schulte family!](#)

Research Highlights from Geography & Geospatial Sciences

SDSU researchers' work allow for more accurate air quality forecasts: "The National Weather Service at the National Oceanic and Atmospheric Administration (NOAA) now produces current, first-rate forecasts of air quality conditions throughout the entire country—thanks in part to two researchers from South Dakota State University.

'This new generation fire emissions product developed by our group has made significant contributions to NOAA's mission of air quality forecasting,' Zhang said." Dr. Xiaoyang Zhang is a Professor in Geography & Geospatial Sciences and co-director at the Geospatial Sciences Center of Excellence. [Click to learn more about this new algorithm.](#)

Wildfire season: Improving community evacuation plans using data-driven models: "Wildfires pose a significant risk to residents living in the wildland-urban interface (WUI) in the American West, and a South Dakota State University assistant professor hopes his research can help make resort towns and other communities with high transient populations safer.

Dapeng Li, an assistant professor in the Department of Geography and Geospatial Sciences at SDSU, has been researching ways to improve wildfire evacuation planning in the WUI communities with transient populations. While some research has been conducted on evacuation planning, Li found there has been little to no research done on evacuation planning in towns with an abundance of "second homes." [Click to learn more about this project or read Dr. Li's publication.](#)

Media Coverage of CNS, cont.

Students receive top awards at 2022

AISES National Conference: "South Dakota State University's American Indian Science and Engineering Society student organization received three top national awards—the Advocacy Partner Service Award, the Recruitment and Retention Award, and the Chapter of the Year Award—at the annual AISES National Conference, held Oct. 6-8 in Palm Springs, California."

Aubre Westover, Human Biology Pre-Dentistry major, is the club's Treasurer. Harley Fischer, pictured second from the left, is a Human Biology Pre-Med major and is the club's Tribal Outreach Chair.

"AISES faculty adviser Larry Browning said the SDSU chapter has had remarkable leadership in the past few years, with officers who have been dedicated in their approach to community involvement and improvement.

'Led by Cierra Sazue this year, Traelene Fallis last year and Danielle Arpan the year before, AISES members have developed ways to support each other, have a sense of purpose and community service, and have fun while moving forward,' Browning said." [Click to read the whole story!](#)



SDSU's remote sensing program earns world ranking: "South Dakota State University's remote sensing program has been ranked as one of the top academic programs in the world by the Shanghai Ranking's 2022 Global Ranking of Academic Subjects.

SDSU's program, housed in the Geospatial Sciences Center of Excellence, Department of Geography and Geospatial Sciences, came in at 22nd in the world and the fifth-best program in the United States. It trails only the University of Maryland, College Park; California Institute of Technology, Boston University and Mississippi State University.

'Our scientists, including postdoc and Ph.D. students, at the GSCE use various satellite observations with a spatial footprint from three meters to 500 meters and a temporal revisit time from five minutes to 16 days to monitor variation of the earth surface,' said Xiaoyang Zhang, co-director and senior scientist of the GSCE.

This year's edition contains rankings of universities in 54 subjects across natural sciences, engineering, life sciences, medical sciences and social sciences. The ranking methodology uses a variety of indicators, including research output, international collaboration, research quality and influence, and international academic awards."

Open PRAIRIE Data

NOVEMBER 2022

Data across the whole College of Natural Sciences:

- 3,115 downloads at 479 institutions in 108 countries
- 3 new works posted
- *Teaching DNA Extractions from Fruits (Strawberry, Banana, Kiwi, and Watermelon)* was the most frequently downloaded piece at 192 downloads. It was written in 2022 by a group including Dr. Madhav Nepal and graduate student Dillon Nelson, both in the Department of Biology & Microbiology, for the iLEARN program.

DECEMBER 2022

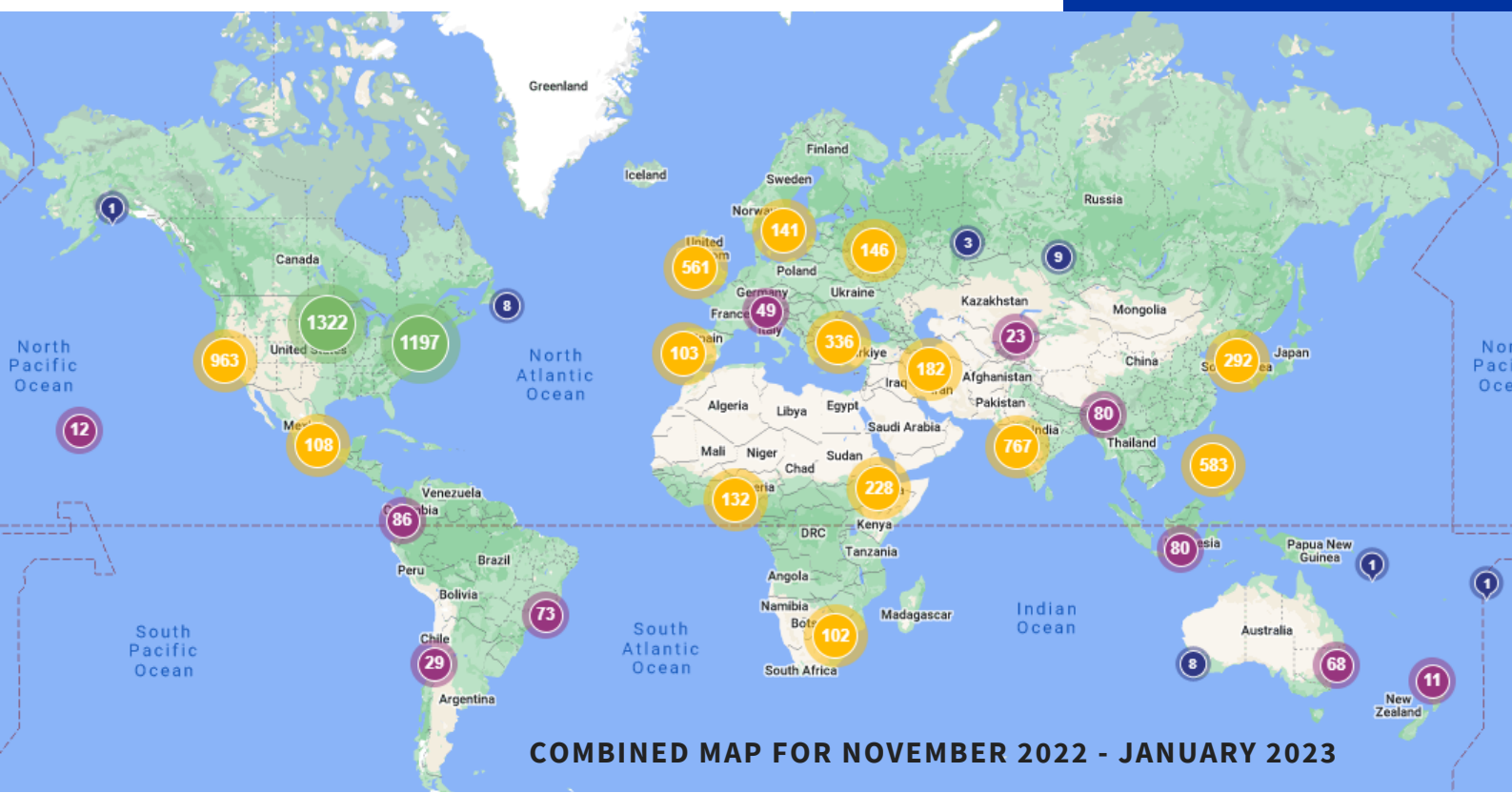
Data across the whole College of Natural Sciences:

- 2,326 downloads at 324 institutions in 94 countries
- 0 new works posted
- *Characterization of Landsat-7 to Landsat-8 Reflective Wavelength and Normalized Difference Vegetation Index Continuity* was tied with November's top article at 131 downloads. It was written in 2016 by a GSCE group including Dr. Hankui Zhang, Department of Geography & Geospatial Sciences.

JANUARY 2023

Data across the whole College of Natural Sciences:

- 2,471 downloads at 367 institutions in 110 countries
- 4 new works posted
- *Teaching DNA Extractions from Fruits (Strawberry, Banana, Kiwi, and Watermelon)* was the most frequently downloaded piece at 130 downloads.
- *Characterization of Landsat-7 to Landsat-8 Reflective Wavelength and Normalized Difference Vegetation Index Continuity* was the second most downloaded piece at 108 downloads.



Recent Publications from CNS

Author	Department	Journal	Title
Charles Fenster	Biology & Microbiology	Evolutionary Ecology	Analysis of the leaf metabolome in <i>Arabidopsis thaliana</i> mutation accumulation lines reveals association of metabolic disruption and fitness consequence
Fathi Halaweish	Chemistry & Biochemistry	Nucleosides, Nucleotides & Nucleic Acids	Synthesis of novel pyridine and pyrimidine thioglycoside phosphoramidates for the treatment of COVID-19 and influenza A viruses
Brian Logue	Chemistry & Biochemistry	Environmental Toxicology and Chemistry	The Prevalence of Opioids in US Drinking Water Sources Detected Using Direct-Injection High-Performance Liquid Chromatography-Tandem Mass Spectrometry
Doug Raynie	Chemistry & Biochemistry	Journal of Molecular Liquids	Acidic and basic amino acid-based novel deep eutectic solvents and their role in depolymerization of lignin
Fangjun Li & Xiaoyang Zhang	Geography & Geospatial Sciences	Science of the Total Environment	Pronounced increases in nitrogen emissions and deposition due to the historic 2020 wildfires in the western US
Volker Brözel	Biology & Microbiology	Microorganisms	Microbial Interactions in Soil
Radhey Kaushik	Biology & Microbiology	Journal of Medical Virology	Development and characterization of an inducible assay system to measure Zika virus capsid interactions
Xiuqing Wang	Biology & Microbiology	Faseb Journal	TNF-alpha-dependent lung inflammation upregulates PD-L1 in monocyte-derived macrophages to contribute to lung tumorigenesis
Yajun Wu	Biology & Microbiology	Journal of Environmental Management	Effect of freezing temperature on dewatering, consolidation properties, and microstructure of landfill sludge
Jihong Cole-Dai	Chemistry & Biochemistry	Atmospheric Chemistry and Physics	On the potential fingerprint of the Antarctica ozone hole in ice-core nitrate isotopes: a case study based on a South Pole ice core
Dapeng Li	Geography & Geospatial Sciences	Expert Systems With Applications	Automatic concrete sidewalk deficiency detection and mapping with deep learning
Fangjun Li	Geography & Geospatial Sciences	Expert Systems With Applications	Improved estimation of fire particulate emissions using a combination of VIIRS and AHI data for Indonesia during 2015-2020
Maitiniyazi Maimaitjiang	Geography & Geospatial Sciences	Remote Sensing	Estimating Crop Seed Composition Using Machine Learning from Multisensory UAV Data
Parashu Kharel	Physics	Journal of Magnetism & Magnetic Materials	Localization effects and anomalous hall conductivity in a disordered 3D ferromagnet

Recent Publications from CNS, cont.

Author	Department	Journal	Title
Christopher Crawford	Geography & Geospatial Sciences	Inland Waters	The not-so-dead of winter: underwater light climate and primary productivity under snow and ice cover in inland lakes
Parashu Kharel	Physics	Physica Scripta	Experimental and theoretical investigation of FeCrVAL and related compounds
Dapeng Li	Geography & Geospatial Sciences	Journal of Environmental Sciences (China)	Significant coal combustion contribution to water-soluble brown carbon during winter in Xingtai, China: Optical properties and sources
Fathi Halaweish & Trevor Ostlund	Chemistry & Biochemistry	Drug Development Research	Novel EGFR-MAPK kinase and ABC transporter inhibitors for HepG2 resistant to Erlotinib
Nizam Uddin	Chemistry & Biochemistry	Journal of Molecular Structure	Discovering biological efficacy of new thiadiazole as effective inhibitors of urease, glycation, and (DPPH) scavengers: Biochemical and in silico study
Gergely Imre	Biology & Microbiology	Cells	The E3 Ligase TRIM25 Impairs Apoptotic Cell Death in Colon Carcinoma Cells via Destabilization of Caspase-7 mRNA: A Possible Role of hnRNPH1
Wanlong Li	Biology & Microbiology	Plant Biotechnology	CRISPR-induced miRNA156-recognition element mutations in TaSPL13 improve multiple agronomic traits in wheat
Xiuqing Wang	Biology & Microbiology	BMC Pulmonary Medicine	Association between psoriasis and lung cancer: twi-sample Mendelian randomization analyses



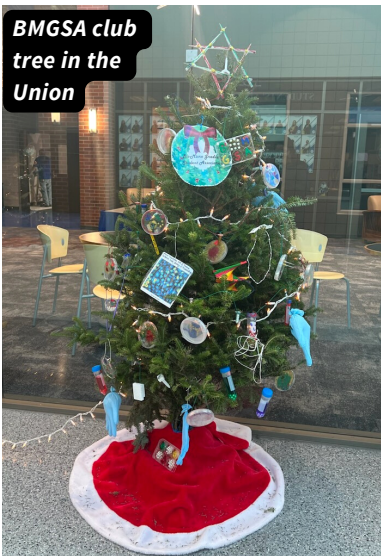
Class Field Trip

Dr. Natalie Thiex took her Introduction to Biotechnology class, BIOL 235, to Prairie AquaTech's facility for a tour in November 2022. [Prairie AquaTech](#) (also known as Houdek) is a local [company](#) which was formed out of research happening at SDState. They were founded in 2012 and have grown substantially since then! They use a natural, biological process to convert soybean meal to a high-quality ingredient for animal feed and sell to customers all around the world.

CNS Holiday Snaps



Left: a group toured the new Dakota Bioproducts Institute at Research Park during the CNS holiday party.
Right: fun activities at an NSTA club meeting.



We ♥ Jacks

Valentine's Food Drive

Jack's Cupboard is in need of self-care items!

Suggested donation items:

Candy	Soap
Chocolate Chips	Loofahs
Brownie Mix & Cake Mix	Shampoo & Conditioner
Popcorn	ToothPaste & ToothBrushes
Lotion	Feminine Hygiene Products

Reminder!

The College of Natural Sciences is adopting Jack's Cupboard, the on-campus food pantry for students. CNS faculty and staff can bring donations to these locations:

- Dairy Science 228
- Northern Plains Biostress 252
- Avera 246
- Wecota 109
- Daktronics Engineering 255

DEADLINE: 3pm on February 13th



Fall 2022 Dean's List

Cole Adam	Hannah Cooper	Emily Gadker	William Hummel
Joseph Anders	Makayla Courtney	Lily Geffre	Morgan Huntington
Mara Andersen	Deirdre Cross	Megan Gerhart	Madeline Jacobson
Kuol Arop	Mason Crow	Elizabeth Gillingham	Natalie Jacobson
Ann Babits	Kallie Crowl	Joseph Glasrud	Natalie Janssen
Gavin Baker	Courtney Currier	Vanessa Granstrom	Emma Jensen
Joshua Balster	Jackson Dana	Libby Gregg	Lauren Johnson
Joshua Bartscher	Robyn Dayton	Nicole Greyer	Emily Johnson
Chiara Bassi	Evan DeBates	Connor Groen	Bryce Johnson
Jaidyn Bauman	Joseph Dembouski	Savannah Gruber	Noah Johnson
Tacey Baustian	Charles Dendinger	Dru Gylten	Caden Johnson
Trista Baustian	Erin Denevan	Paige Haakenson	Emma Jorgensen
Brady Beck	Kaylee Derickson	Claira Hall	Hannah Jussel
Biftu Benti	Mackenzie Deschler	Thailan Hallman	Alex Kandolin
Hayden Bentz	Halle Determan	Zachary Handberg	Colby Karline
Ashlyn Beyer	Aftyn DeWit	Madison Hansen	Bidhi Kasu
Claire Beyers	Lindsey Dockendorf	Tyffani Hanson	Devyn Keller
Jenna Blogg	Nathan Doering	Hailey Hanson	Lauren Keller
Austin Bonn	Jeremiah Donahoe	Torry Harding	Shawn Kessler
Blake Borwege	Aidan Donelan	Caleb Harthoorn	Reem Khalaf
Bodhi Brady	Maggie Donner	Emily Hedge	Mohammed
Caitlin Bright	Avery Dooley	Jackson Hegg	Elizabeth Klabunde
Cole Brown	Marissa Driesen	Taryn Heibult	Connor
Cayden Budd	Kyliee Dunn	Trey Heiderscheidt	Klinkhammer
Zachary Budden	Nathaniel Dvorak	Olivia Heim	Miriam Knoble
Rachel Burke	Thomas Ebrahim	Riley Hellmann	Luke Knutson
Jenna Bush	Mitchal Eichacker	Mato Henderson	Elizabeth Kooiker
Cassidy Carda	Hunter Eide	Mackenzie Henning	Carter Koons
Kenzie Carlson	Jenna Eischens	Kelli Henricks	Isaac Kovash
Kyerra Carter	Gabrielle Engbarth	Madison Higbee	Brady Kruse
Jaritzca Cazares Cruz	Sarah Erickson	Zoe Hillmer	Hallie Kueter
Reese Cerney	Mary Fanta	Nicole Hintz	Thomas LaFave
Andrew Chesak	Alexis Fickbohm	Kyra Hintz	Nathaniel Lanthier
Haley Christensen	Jennifer Findlay	Georgia Hirschey	Shannon Lasey
Kayla Christopherson	Harley Fischer	Halle Hoekstra	Avery Lewison
Alex Clemons	Julie Fischer	Kevin Holmes	Madalyn Limesand
Nicholas Coad	Mary Fites	Alicen Honner	Emma Lusk
Madison Cocker	Derek Follett	Rylee Honomichl	Alexandra Madsen
Ellie Colbeck	Aubrie Franken	Elise Hotzler	

Fall 2022 Dean's List, cont.

Daniel Magee	Nora Peterson	Darratu Salesa	Natalie Toben
Kenadie Martinsen	Olivia Pfeifle	Addisyn Sargent	Luke Tunge
Jessica Masgai	Andrew Pick	Alexis Saunders	Nathan Tuttle
Madison Mathiowetz	Gabrielle Pietila	Matthew Schell	McKenna Tvedt
Anders Mattecheck	Hannah Polejewski	Alex Schemek	Olivia Ulmer
Nicole Matter	Jolie Pond	Kiara Schilling	Sarah Urevig
Alissa Maurer	Kristen Poppen	Makenna	Chloe Van Heuveln
Carson Max	Jordyn Post	Schlumbaum	Wendy van Nes
Levi McKinley	Madison Preston	Jayne Schmidt	Jared Volesky
Erinn McSherry	Ryan Prohofsky	Codi Schmidt	Emma Von Hagel
Jaclyn Meier	Cole Prunty	Sidney Schroeder	Mackenzie Voss
Ashton Merrill	Cael Pudenz	Kristen Schulte	Madelyn Walsh
Jacob Merxbauer	Jack Rabern	Megan Schulte	Kirsten Walz
Max Miller	Vaughn Raimo	Sydney Schultz	Neka Watson
Caitlyn Miller	Matthew Rattenborg	Malia Schumacher	Harrison Wegner
Samantha Miller	Anna Rauber-Ramos	Wyatt Seagren	Mason Weidenbach
Jorja Muller	Cale Reeder	Katelyn Severson	Jacson Welte
Parker Murphy	Alyvia Reese	Hattie Shaffer	Kaden Westergaard
Megan Nelson	Coby Reetz	Isabella Shepherd	Marissa Whitehead
Whitly Netland	Jessica Reinhardt	Cora Shull	Matthew
Emily Nikolaus	Justin Reinschmidt	Megan Sitts	Wieberdink
Kadin Norris	Claire Reith	Jessica Skare	Ella Williams
Katelynn Noteboom	Miles Retzer	Lason Smith	Rylan Willis
Samantha Oehlke	Jacob Reynolds	Landon Smith	Rachel Wilner
Shelby Olson	Dylan Richey	Tanner Smith	William Wilson
Drew Olson	Jonathan Ricke	Paige Snell	Jared Wipf
Tyler O'Neill	Gracee Ringling	Owen Snethen	Cole Withrow
Erin O'Reilly	Amanda Roesler	Alexander Sohl	Vanessa
Emma Osmundson	Kennedy Roland	Jacob Spreng	Wittenberg
Samara Overvaag	Kylie Rosenau	Alec Steever	Codie Wolfe
Jacob Paulson	Kaitlyn Roskens	Isaac Suchor	Breeanna
Josie Pearson	Abigail Rost	Lauren Tereshinski	Wolkerstorfer
Tessa Pederson	Alexis Roth	Amelia Thoennes	Paige Wood
Ryan Peldo	Ashur Rouleau	Aaron Thomas	Carlie Woodall
Katherine Percival	Kristin Rud	Kylee Thorpe	Tucker Wookey
Gavin Perrell	Tiana Rupp	Riley Thorpe	Makira Wrage
Jadyn Perry	Joslyn Russell	Mara Tiede	Jax Wysong
Allison Peters	Faith Saewert	Logan Tlam	Shimin Yunker
John Petersen	Hannah Salas		