

LRES Newsletter

Spring 2018

Stacy Davis
RedRock Lakes NWR

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Land Resources and
Environmental Sciences



Department of
Land Resources & Environmental Sciences

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Congratulations Graduates!

The Spring issue is dedicated to celebrating our outstanding students, staff, and faculty. I hope you enjoy reading about our department's many accomplishments as well as the many examples of excellence and classroom engagement.

"We are all inventors, each sailing out on a voyage of discovery, guided each by a private chart, of which there is no duplicate. The world is all gates, all opportunities."

-Ralph Waldo Emerson

We would like to recognize those graduating this academic year, which includes 33 undergraduates, 22 M.S. recipients and 7 Ph.D. recipient. Students, my warmest regards to each and every one of you; please stay in touch to let us know about the great things you are doing.

Tracy Sterling, Professor & Department Head

MSU Excellence in Service Award

Ann de Meij and **Jeff Holmes** were recognized during the 29th annual Celebrating Excellence in Service and Employee of the Year awards in a ceremony held on April 19, 2018 for the Safety and Reliability categories, respectively. They were individually recognized with a gold pin and a \$500 gift.



Ann de Meij has worked for the past 20 years as a research assistant at the MSU Biological Control Containment Facility on campus. This is a unique laboratory, one of approximately 10 in the US. The primary objective is to prevent the escape or introduction of potentially destructive or undesirable organisms. Ann's work environment creates a certain amount of isolation from other employees and the University Community and much of her work is tedious and meticulous. Ann has shown herself to be a good ambassador through her efforts to maintain good working relationships and friendships.

While on a locust project in Madagascar, Ann was disheartened by the widespread poverty of women and orphan children – those at great risk. Upon her return, not only did she adopt two Malagasy girls, but also established Aid to Orphans of Madagascar, a non-profit organization striving to improve the lives of Malagasy children and their families by providing education, the opportunity to develop vocational skills and programs that sustain nutrition and health of children. This organization now has internships available for students at universities, including MSU.

MSU Excellence in Service Award

Continued ...

Jeff Holmes is cool. Cool is someone you don't have to worry about. He'll be there, ready and willing to handle the work until it is complete. Jeff Holmes just keeps going!

Jeff is the person that has the tractor ready with seed and fertilizer prepared for planting. He is there early to prepare soil sampling equipment. He ensures that everyone use protective equipment from wide-brimmed hats and long sleeves to gloves and boots. You can be sure that he will also have ear plugs and dust masks on hand.

We can rely on Jeff to always be professional, always ready to listen and discuss methods and procedures. His willingness to cooperate and assist others is a valuable character trait which exemplifies the cooperative nature of MSU. Jeff's commitment to inter-disciplinary teamwork is a daily positive reminder about the true value of MSU's mission of discovery and engagement.



NACTA Awards

The North American Colleges and Teachers of Agriculture (NACTA) Teaching Award of Merit recognizes those individuals whose efforts represent the very best in agricultural higher education and inspire all of us to achieve the highest levels of excellence. The department recognized the following awardees, chosen by the College of Agriculture, at our LRES Graduation Celebration on May 4th.

College of Agriculture Graduate Student Awardees



Ms. **Florence Miller**, M.S. LRES candidate, received the NACTA Graduate Student Teaching Award of Merit for her role as Lead TA for our Soil Pedology (ENSC454) course in Fall 2016 and 2017. Her soils expertise coming in to our program is unmatched in my experience. Many students commented that it was like having “a second professor” on field trips. She was tireless in helping students with problem sets and inspirational in lecturing on her undergraduate research project. This class can be challenging in terms of student dynamics, and requires a unique combination of intellectual, physical and interpersonal capability, but Florence handled this beautifully. Her quiet command of the subject matter is a model for all students in our soils program. Florence was nominated by Stephanie Ewing.



Mr. **Guta Abeshu**, Ph.D. ESEC candidate, received the NACTA Graduate Student Teaching Award of Merit for his role in teaching students in ENSC 445/LRES 545, Watershed Analysis, in 2017 and 2018 spring semesters. He has gone above and beyond the normal expectations of a teaching assistant, always making sure the students get sufficient help and guidance. In particular, he has helped design and lead the computer labs, volunteered to offer extra sessions for students needing additional help, helped grading the assignments with insightful and patient comments, and delivered a guest lecture. Guta was nominated by HongYi Li.

College of Agriculture Faculty NACTA Teaching Award of Merit



Dr. **Rob Payn**, Assistant Professor of Hydrology, received the NACTA Teaching Award of Merit for his strong commitment to contributing to student success and educational excellence, by developing courses with hands-on experiences, modernizing our facilities, and helping shape our Environmental Science curriculum for our growing number of majors. He teaches Watershed Hydrology and developed the graduate course Principles of Environmental Monitoring which blends hydrological theory with field methods. Students value his ability to explain complex topics clearly and for his responsiveness. Comments from students include “great class – one of the best I have taken” and “you are a ‘river of knowledge’ for your students”. Rob is also recognized as an excellent advisor, graciously guiding and inspiring our students to engage in meaningful learning opportunities while developing their future selves. Congratulations Rob!

LRES Outstanding Senior Award

Every year the department recognizes an outstanding senior and given the amazing undergrads this year, we awarded three! The Department's criteria for this award are steep and includes strong scholarly standing, demonstrated interest in any aspect of environmental sciences, involvement and commitment in the classroom, leadership, participation and/or membership in scholarly and community groups and potential to contribute to environmental sciences in the future.



Mathew Bain is graduating with highest honors in Environmental Sciences with a minor in Hispanic Studies, as well as an Honors degree. His awards include the Award of Excellence for MSU's top seniors in 2018, a prestigious Udall Scholarship in 2017, and being a finalist for both the Rhodes and the Truman Scholarships. Mathew dedicates his time working with the MSU Office of Sustainability and the club Sustainability Now, which he co-founded in 2015. He also conducted research in Dr. Geoff Poole's lab to generate the code necessary to create "constraint based" biogeochemical simulation models. He plans to attend graduate school to attain both an M.S. Degree in Environmental Science/Management and an LL.M. in Environmental Law.

Nominated by: Geoffrey Poole



Emma Lathrop is graduating with highest honors in Environmental Biology with a minor in Mathematics boasting a GPA of 3.94. Emma has been very engaged in undergraduate research with the Los Alamos National Laboratory as well as Dr. Ewing's laboratory in LRES where she contributed to biogeochemistry research efforts in a range of settings, from alpine catchments, to Arctic rivers, and to agronomic contexts. Emma also was an Undergraduate Teaching Assistantship for Soils for two years helping a diversity of undergraduates learn about soil science. Emma serves as president of the undergraduate LRES Club, which she helped revitalize, creating service day activities and organizing Research Mixers to match undergraduates interested in gaining research experience with professor laboratories. Emma plans to attend graduate school and work on interdisciplinary opportunities in the environmental sciences.

Nominated by: William Inskeep, Stephanie Ewing, Anthony Hartshorn, and Amy Trowbridge



Braden Leach graduated with a B.S. in Environmental Sciences and a minor in Hispanic Studies, earning a 3.96 GPA and a Highest Distinction Honors Degree. During his time at MSU, Braden volunteered for the MSU's Sustainability Now Club, assisting with research and writing of student government resolutions aimed at more responsible investing. He also was a member of the Citizens Climate Lobby which allowed him to attend the CCL National Conference in DC. He conducted research with Dr. Payn to explore how impervious surfaces around the Big Sky resort may influence stream water quality. He now works for Western Justice Associates, a law firm with a focus on environmental protection and has been accepted to UC Berkeley Law School this fall, where he will study environmental law.

Promotion and Tenure

Nominated by: Clain Jones

Congratulations to **Rick Engel**, **Clain Jones** and **Geoffrey Poole** for earning promotion to Professor. Congratulations to **Anthony Hartshorn** for earning tenure and promotion to Associate Professor. Their achievements were recognized at President Cruzado's Celebratory Dinner receiving a plaque and President Cruzado's gold pin on May 1st. Please take a moment to congratulate our accomplished faculty! Please join us as we continue our tradition of celebrating these milestones together at Colombo's on May 7th at 4:30 pm.



MSU Awards for Excellence



LRES regularly produces a crop of outstanding students, and this year is no exception. Senior, **Mathew Bain**, Environmental Science, Soil and Water Science option, was recognized at the 36th Annual Awards for Excellence sponsored by the MSU Alumni Foundation. Forty MSU seniors are recognized each year for their 3.5 or greater grade point average, their campus leadership, and their community service. Students

select a mentor to be honored with them; Bain selected Director **Kristin Blackler**, Office of Sustainability.

Pure Gold



Terry Rick was one of this year's PURE GOLD award recipients. A colleague notes that Terry is a stellar research associate because she possesses both field and lab expertise; she has soil sampling, observation and description skills; can

fix lab and field equipment; can respond to medical emergencies; and has produced thousands of robust soil analyses in support of research. As shown by Terry's smile in the accompanying picture, Terry's cheeriness and positive attitude is infectious, making her delightful to work with, and making me want to strive for her level of excellence, curiosity and positivity.

LRES Recognition



Drs. Tracy Dougher (COA), Tracy Sterling, (LRES), Lisa Rew (LRES), Jane Mangold (LRES), Irene Grimberg (CLS), and Heather Estrada (FVCC)

Six female professors at Montana State University and Flathead Valley Community College hope to increase the percentage of women agricultural scientists, engineers and policymakers by way of a \$94,000 USDA National Institute of Food and Agriculture grant, "Empowering Women in Agriculture."

<http://www.montana.edu/news/17372>



Shelly Mills, MSU Extension agent in Valley County, received the Anne Wiprud Memorial Award for outstanding achievement from a professional with fewer than 10 years of experience.

<http://www.montana.edu/news/17386>



Entomological Society of America Vice President **Bob Peterson** comments on mosquito impact at Bates Middle School.

College of Agriculture: Trivia

Question 1: Prior to the 1965 name change to Montana State University, what was our school called?

Question 2: Which campus building was the original home of the Montana Agricultural Experiment Station? Hint- Known as the first building on campus with construction starting in 1893, this hall was completed in 1896 for a total cost of ~\$20k

Question 3: Which two of our Agricultural Research Centers Started in 1907? Your choices are: Moccasin, Sidney, Havre, Creston, Huntley, Corvallis, and Conrad.

Answers on Page 9

LRES Recognition

Continued ...



William Kleindl was awarded a grant to research consequences of forest management decisions.

<http://www.montana.edu/news/17375>



Professor **William Inskeep** gave a talk on “Exploring Hot Spots for Thermophiles” as part of the Institute on Ecosystems Distinguished Lecture Series on February 21st.



Gabe Bromley will be a visiting student for the summer at the National Center for Atmospheric Research. He will be working on modeling the climate response to agricultural land use change in the Northern Great Plains.



Professor **Paul Stoy** was featured in ScienceMag for an EPSCoR grant to fund research on bioenergy plantations to combat climate change.



LRES graduate student, **Carolynn Harris**, was selected as the student spotlight for the group Women in Science and Engineering (WISE).

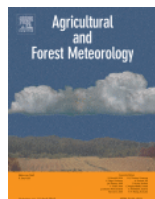
<http://www.montana.edu/wise/>



Mallory Morgan, Ph.D. candidate, received the National Science Foundation’s Graduate Research Fellowship.



LRES undergrad, **Miles Maxcer**, won the Outstanding Sophomore Leadership Award.



LRON graduate students co-author paper titled, “On the exchange of sensible and latent heat between the atmosphere and melting snow” in Agricultural and Forest Meteorology.

Dr Bob / Greater Yellowstone Ecosyst...
@GYInsects
According to his mom, all 8-yr-old Jasper wanted for XMAS was to meet an #entomologist and see some cool bugs. Well, he got to meet 5 entomologists and see lots of insects @montanastate. Thanks for visiting us @MSUCollegeofAg, Jasper!



8:35 AM - 15 Dec 2017



Ph.D. ESEC candidate, **Miranda Margetts** was awarded the Montana Water Center Graduate Student Research Fellowship.



LRES Faculty recognized at Center for Faculty Excellence Celebration

Spirit of Discovery Awardees:
*Anthony Hartshorn (LRES),
Scott Powell (LRES), and
Douglas Fischer (Honors)*

We’d love to hear from you!

To share your research and/or professional accomplishments in an upcoming newsletter, please contact:

Tracy Sterling, Department Head,
tracy.sterling@montana.edu

Jessie Sheperd, Administrative Associate,
Iresfrontdesk@montana.edu

Entomologists in Action

Using beetle pheromones to combat invasive Tamarisk

According to Gaffke, scientists have known about the beetle pheromone for a decade or more. But for the first time, his research team has demonstrated the potential for using the odor as a tool for combating the spread of tamarisk — the non-native shrub that the beetles feed on.

By attaching small dollops of a waxy, putty-like substance containing the pheromone, the researchers found that they could more than double the number of tamarisk beetles congregating on the bushes, which often doubled the die-back of the plants as the beetles consumed the leaves and twigs. The researchers published the results of their multi-year study, which took place along the Bighorn River in Wyoming, in the journal of Pest Management Science in January.

The invasive shrub — also called saltcedar — crowds out cottonwoods and other native vegetation, consumes inordinate amounts of water and forms thickets so dense they contribute to flooding.

Starting in 1999, the U.S. Department of Agriculture released northern tamarisk beetles from Kazakhstan and China as a form of biocontrol at the Wyoming study site and across the western U.S.

[What] makes the results of the study particularly important for Montana... is the findings suggest that the pheromone could be used to concentrate migrating beetles in areas that are priorities for tamarisk control. Compared to other methods of battling tamarisk, which include herbicides and mechanical removal, the synthetic pheromone would be a more precise, lower-cost method to use in areas where tamarisk is starting to colonize but hasn't yet dominated, such as along the Yellowstone River near Billings...



Adapted from:
<http://www.montana.edu/news/17572>

Bozeman's Family Science Day: A Bug's World



Miles Maxcer (above) and Adrian Massey (to the right) participated in the Family Science Day event at the Bozeman Children's Museum on April 12, 2018.

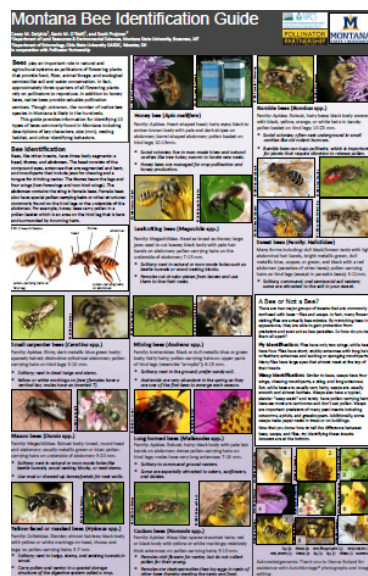
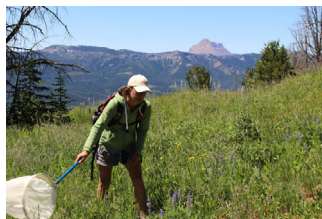


RKD Peterson

Montana Bee Identification Guide

Kevin O'Neill and Casey Delphia, in collaboration with Pollinator Partnership, developed this colorful Montana Bee Identification Guide. The guide can be viewed at:

<http://www.pollinator.org/PDFs/MontanaBeeGuide-Final.pdf>



MSU Host to USDA Western SARE Regional Program



Fabian Menalled, professor of weed ecology and integrated pest management in the Department of Land Resources and Environmental Sciences in MSU's College of Agriculture, has been named the Western SARE regional coordinator. Menalled is also Montana's state SARE coordinator, a position that calls for him to help promote sustainable agriculture locally through noncompetitive grants operated through SARE. "It's a challenge to start a new program at MSU, given Western SARE's long history," Menalled said. "However, we're committed to continuing the trusted SARE brand and improving the mission of ground-up, producer-led sustainable agriculture research

for the Western region. The goal is to help the administrative council be successful in supporting grassroots research that will meet the agricultural challenges of today and tomorrow." "The Western region of the United States is incredibly diverse, in agricultural economies, demographics and geography," Menalled said. "As we look to the future, our common challenges are certainly water, a warming climate, urban and rural interfaces, and generational and demographic shifts in agriculture. These are pressing issues and they present opportunities for producer-led, collaborative research across the West."

Kent Wasson, farmer and rancher in northern Phillips County, sits on the Western SARE Executive Council. Wasson said MSU being selected as the Western SARE host institution will mean a great deal not only for Montana, but for the western U.S. as well. "The process to be selected as a host institution is hugely competitive," he said. "MSU came out on top, for several reasons, and it's something the university should be very proud of. There were some unbelievably competitive applicants. I think MSU and Western SARE are going to do some very neat, innovative projects that will enhance agriculture in the western U.S."

Functioning in 50 states and supported through competitive grants that are conducted cooperatively by farmers, ranchers, researchers and agriculture professionals, SARE's mission is to advance sustainable agriculture that is profitable, environmentally sound and good for communities. Since 1988, SARE has funded more than 5,000 projects throughout its regions. SARE defines sustainable agriculture as agriculture that is economically viable, socially supportive and ecologically sound. It privileges on-farm research innovation led by producers and multidisciplinary teams of experts and researchers.

Adapted from: <http://www.montana.edu/news/17438/msu-named-regional-host-of-national-sustainable-agriculture-program-western-sare>

Faculty Spotlight

Richard Engel, Professor of Soil Nutrient Management & Cycling

Dr. Rick Engel is a professor of soil nutrient management and cycling with both field and lab research oriented at improving sustainability and environmental quality of Montana agricultural ecosystems. His past research interests have included investigations of fertilizer management strategies for enhancing N recovery by crops using ^{15}N enriched labelled fertilizers; soil emissions of greenhouse gases (nitrous oxide, methane, and carbon dioxide) as affected by cropping systems; soil carbon sequestration and characterization of dissolved organic matter in croplands; urea-fertilizer induced emissions of ammonia and mitigation with urease inhibitors; degradation kinetics of urease inhibitors and chloride nutrient of wheat. Currently, much of his research is focused on an emerging problem of soil acidification and aluminum toxicity of Montana soils. Over the past thirty years nitrogen fertilizer consumption has grown almost three-fold. This fertilizer is sold commonly as urea (86% of total N consumption) which after application to soils undergoes a series of reactions that lead to the production of H^+ ions and acidification of surface soil layer. Soil acidification can lead to aluminum toxicity symptoms of crops affecting both crop yields and quality, and soil health.



Rick received his Master's degree and Ph.D. in Soil Science at North Dakota State University (1978) and University of Minnesota (1983). He has worked at Montana State University since March 1983. The first thirteen years were spent as a scientist at the Southern Agricultural Research Center near Huntley. He joined LRES at the inception of the Department in 1997. In his current position, he carries a 90% research and 10% service appointment. Much of Rick's research work is conducted on-farm and so he experiences considerable time during each summer visiting with Montana farmers and the ag-community. He is aided in his job by the very capable help of Research Associate, Roseann Wallander who he has employed with grants and contract activity since 2001.

Richard Engel

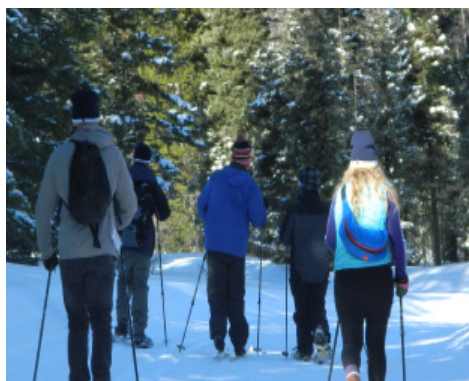
Professor of Soil Nutrient Management & Cycling



Rick's research project on urea-fertilizer induced emissions of ammonia was conducted on dryland farms in Montana.

CROSSCUT

Mountain Sports Center



Third Annual LRES Ski Social

Our third annual LRES Ski Social was held at Crosscut Mountain Sports Center on Monday, January 15th. The event was well attended with nearly 30 faculty, staff, and students. The morning was spent cross-country skiing, snowshoeing, and playing games, including the LRES Winter Olympics! Cravin's catered our lunch at the newly remodeled Warming Hut - thank goodness for the wood stove! Snow conditions were fantastic and overall it was a great day. We are so fortunate to have this beautiful facility here in Bozeman and hopefully we will continue coming back for this annual event!

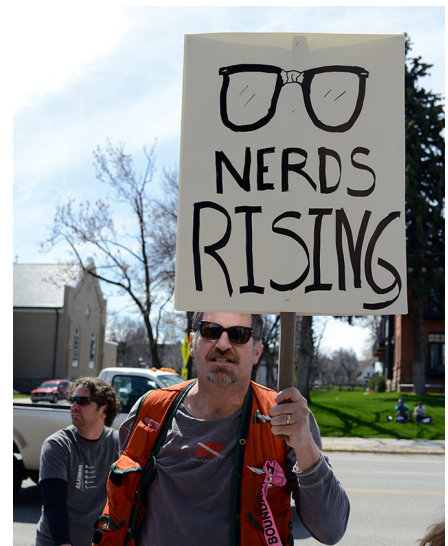
Community Chair, Rick Engel

March for Science- Bozeman



Professor William Kleindl (right) was featured in “Science Not Silence- Voices From The March for Science Movement” book with a caption reading, “The March for Science in Bozeman, Montana had nearly 1,100 participants. That’s approximately 2.5% of the population of Bozeman!”

- Bob Peterson



Hunger and Food Waste Conference



With travel support from the LRES department, the Food Resource Council, a student club dedicated to reducing food insecurity and food waste on campus, sent three leadership members to the 2018 Food Hunger and Waste Summit in Indianapolis, IN, where they presented on the Bounty of the Bridgers, a food pantry at MSU serving students and faculty, and hosted a collaborative problem solving session for others with campus pantries across the country. Attendees were able to connect with innovative student leaders

and professionals to learn about different strategies to fight hunger and food waste and to share the exciting projects being undertaken at MSU.

Hadley Barnard



SFBS Agroecology student, Hadley Barnard, presented at the 2018 Food Hunger and Waste Summit where she attended a Summit Panel Session.

Research in Photos



Early snowfall and long winter calls for changes in research protocols! Stacy Davis (Jane Mangold lab) shovels snow off research plots near Belgrade in November in order to seed native grass for a revegetation study.

College of Agriculture: Trivia Answers

Question 1: Montana State College

Question 2: Taylor Hall

Question 3: Moccasin and Corvallis (1907)

8th Annual LRES Research Colloquium Synopsis

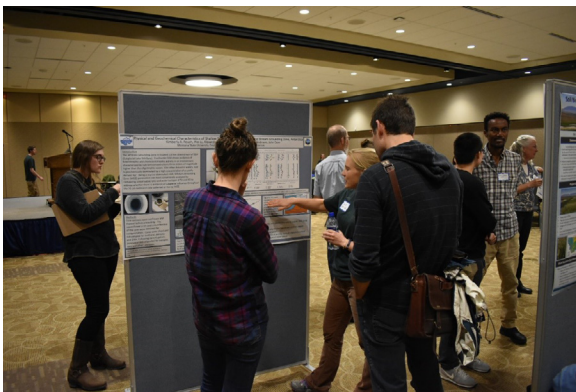


Dr. Michael Reidy, presented keynote speech

On April 11th, 2018, the LRES Graduate Student Organization (GSO) hosted the 8th annual LRES Research Colloquium which was another huge success showcasing the diverse graduate and undergraduate research within the department.

The colloquium offered 19 students the opportunity to present their research to the faculty, staff, and students from the department as well as individuals interested in the event from around campus. Participation and turnout for the event was great and provided a welcoming environment for discussion while enjoying good food and drinks. A poster session kicked off the colloquium followed by oral presentations and wrapped up with an excellent keynote talk presented by Dr. Michael Reidy from the MSU Department of History and Philosophy. Dr. Reidy's talk titled "From Mount Blanc to Mount Everest: How Mountains Transformed Scientific Research", highlighted how explorers shaped early scientific thought and how mountaineering is still pushing science to new levels outside of the laboratory.

Excellent door prizes were donated by local businesses, leading to many event goers leaving with more than they came with, besides a full stomach and a head full of thought. Both oral and poster presentations were also judged for the opportunity to win some great prizes. Poster judges were Dr. Lindsey Albertson and Dr. Arjun



LRES M.S. student and GSO member, Kim Roush, discusses her poster on "Physical and geochemical characteristics of shallow sediments at the grounding zone of Whillans Stream" to Carrie Harris and Professor Jack Brookshire.

Adhikari, from the Ecology Department, Dr. Rebekah VanWieren, from Plant Sciences and Plant Pathology, and Dr. Qian Wang from LRES. Oral presentations were judged by Dr. Hikmet Budak and Dr. Ryan Thum from Plant Sciences and Plant Pathology, and Dr. Barb Keith, from the LRES Department. A huge thank you to all the judges for volunteering their valuable time and energy to make the colloquium a successful event.

Presentations were very competitive and judges were left with difficult decisions in assigning winners for posters and oral talks. The first, second, and third place awards for oral presentations went to Carrie Harris, Sam Leuthold, and Uriel Menalled, respectively. The top two poster awards were given to Gabriel Bromley and Kristi D'Agati. Winners had their pick of several prizes including a personal two-person backpacking tent, a Fitbit, Garmin GPS unit, BioLite wood burning camp stove, and Osprey backpack with a Crazy Creek chair included. Congratulations to this year's winners and thank you to all oral and poster presenters for putting in the time and energy to make the colloquium a success! Everyone did a great job representing the LRES Department!

Thank you to the LRES Department, MSU Office of Student Engagement and the Graduate School for providing generous funding for this great event and for the online student travel grant described on page 11. Many thanks to the GSO for putting in their time and effort to make the 8th Annual LRES Research Colloquium a huge success and to Dr. Jane Mangold for advising the GSO and keeping us in line!

GSO Leadership:

Keenan Brame, Kim Roush, Buddhi Achhami, Mallory Morgan, Chris Caron

2018 Colloquium Winners:

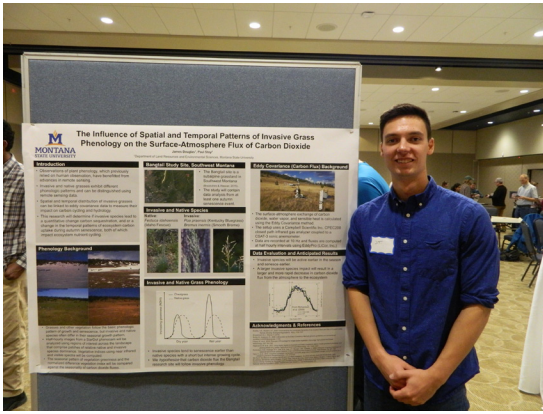
Poster Presentation

1st Place: Gabriel Bromley
2nd Place: Kristi D'Agati

Oral Presentation

1st Place: Carrie Harris
2nd Place: Sam Leuthold
3rd Place: Uriel Menalled

Graduate School Partnership helps fund student from Texas



James (JT) Douglas was invited to participate in the 2018 Spring Colloquium to present both a poster and oral presentation as part of a travel grant provided by the LRES Department, LRES Graduate Student Organization, and MSU Graduate School. JT is an online master's student in the LRES department, who plans to graduate in spring 2019.

JT works as an Industrial Pretreatment Specialist for the city of Denton, Texas, and was thrilled to get the opportunity to visit campus and meet colleagues in the department. The incredibly welcoming atmosphere provided by all individuals within the department made the trip a great experience, in addition to the opportunity to present, and converse with some very knowledgeable individuals. JT would like to thank all of those involved in welcoming him to the area. He really enjoyed his time in Bozeman, where he got to see firsthand an early Montana spring and spend time on campus meeting professors and students.

"The experience has made me very proud to be a member of this department and MSU. I hope that the travel grant continues to give online students the same amazing opportunity in the future."

- JT Douglas,

online MS student visiting from Denton, TX

The GSO hopes to continue this travel grant in the future and expand to additional awardees. A big thank you to the Graduate School, LRES Department, and MSU Office of Student Engagement for supplying funding to allow this idea to come to fruition.

UPDATE: LRES Undergraduate Club

The LRES undergraduate club is a newly developed club, advised by Dr. Amy Trowbridge, that allows undergraduate students in the Department of Land Resources and Environmental Science to socialize with one another as well as serve the community in a positive and environmentally friendly way! This year the LRES undergraduate club hosted the second annual research mixer. This event allowed students from the LRES department, the Earth Science department, and the Ecology department to mingle with each other and with professors within those departments. Professors were also encouraged to advertise their ongoing research or summer research positions directly to the students in attendance. This event was very successful and had a large turnout of students. It allowed for students, faculty, and graduate students to have a very informative, relaxed, and fun evening! This year, the LRES club also participated in the 2018 Bozeman Cleanup Day, during which students helped set up the cleanup event and passed out supplies to community members. After set-up was complete, club members helped pick up trash with everyone participating to help keep Bozeman a clean city! The LRES Club is still looking for fun and helpful ways to engage students and give back to the community. Let us know if you have any suggestions!



Emma Lathrop, LRES Undergraduate Club President

Top Right: The LRES Undergraduate Club's Research Mixer was an opportunity for faculty and students to network, discuss research projects taking place in the department and find employment opportunities for the summer and fall semesters.

Bottom Left: LRES students Todd Schlotfeldt and Toby Leppicello participate in the LRES Research Mixer.

LRES Degrees Awarded 2018

Bachelor's Degrees

Environmental Sciences-Environmental Science

Megan Claire Harrison
Raeleigh Janine Price, with Highest Honors

Environmental Sciences - Environmental Biology

John Patrick Heneghan
John Jensen Howard
Emma Ruddock Lathrop, with Highest Honors
Aden Lee Norris, with Highest Honors

Environmental Sciences - Soil & Water Science

Mathew Tucker Bain, with Highest Honors
Jeremy Adam Ditto, with Honors
Zachary James Gigone
Todd Lorren Schlotfeldt, with Highest Honors

Geospatial & Environmental Analysis

Lee Maren Barbisan, with Honors
Rachel Christine Phipps, with Highest Honors
Jerad Rex Hoy (Summer)

Land Rehabilitation

Riley Lewis Dodson
Bryce Lee Murphy, with Honors
Jeana Marie Ratcliff, with Honors

Sustainable Foods & Bioenergy Systems-Agroecology

Heather St. Clair Ross, with Honors
*Uriel Danilo Menalled, with
Highest Honors (Summer)*

Graduate Degrees

Master of Science

Entomology

Dayane Andrade Reis

Land Rehabilitation

Shannon Leigh Dillard (Summer)

Online Master of Science

Land Resources & Environmental Sciences

Hillary Cimino
Kelly Dalton
Molly Hammond
Rebecca Hosley
Carson Langston
Daniel Rottinghaus
Blair Schackford
Heather Stukas
Eric Trum

Doctor of Philosophy

Ecology & Environmental Sciences

Subodh Adhikari
Alexander Michael Gaffke
Jason Michael Wood

Opportunities to Support LRES

A gift to the department is a great way to support student and faculty endeavors. Donations can be earmarked for student scholarships or internships, graduate fellowships, undergraduate and graduate student programs, endowed professorships, and more. For information about making a donation to the Department, please contact Kevin Peterson, MSU Alumni Foundation, College of Agriculture, Director of Development (406-994-7089) or kevin.peterson@msuaf.org.

