ANIMAL & RANGE SCIENCES NEWSLETTER

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Farewell Message from Dr. Glenn Duff, Department Head



It has been a pleasure serving as the Department Head for Animal and Range Sciences. It is bittersweet to leave such a great department, however, Donna and I are leaving on a positive note. The department is on an upward trajectory and I envision it to continue to grow.

As I reflect on what has been accomplished over the last 5 years, I realize that it has been a team effort. The department had just moved into the Animal Bioscience Building. The first 2 to 3 years was filled with tours of producers and various groups. Funding for approximately 50% of the building has come from private support and this support is appreciated. Without the support, we would not have realized the impact that a new facility has on a program. Thank you to all that have made this happen.

The undergraduate program continues to thrive. With the addition of base funding for the equine sciences program, this program continues to be one of the fastest growing program on campus. We have added classes in equine ethology, equine exercise physiology, and equine diseases. The faculty continue to stress that the equine science program is a science program and should help students secure positions after graduation. For the colt starting classes, we have been fortunate for the last 2 years to have a world class instructor. Thanks for supporting this valuable set of classes. We were also fortunate to receive funding to hire a non-tenure tract faculty member to teach the "hands-on" livestock courses and coach the livestock judging team and beef management classes. It has been quite some time since we have had an on-campus instructor dedicated to coaching the team. This will continue to benefit the department for years to come. There is also a class dedicated to feeding the steer-a-year cattle to provide financial support for the livestock judging program. Thank you for all that have donated. The department had external review of the program and it was not surprising that the undergraduate program in animal and range sciences was a strength of the department. For several years, we have discussed getting the range science program accredited with SRM and the site visit will happen this fall.

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Farewell Message from Dr. Glenn Duff (cont'd)

The undergraduate students have been engaged in extra-curricular activities. The undergraduate range management exam (URME) teach has excelled in the competition over the last few years. In addition, a plant identification team has been initiated with students coming close to placing this last year. When I first started, MSU did not have an academic quadrathalon (AQ) team and with the help of all the faculty and in particular Rachel Endecott, our AQ team won the WSASAS two years in a row. The undergraduate equitation teams and clubs continue to be active in different venues. The livestock judging team will benefit from having a full time faculty member. Our other student organizations have been active in several capacities and the Collegiate Cattlewomen won a national competition last year and received a truckload of chicken for the local food bank. I hope that the undergraduates at MSU continue to excel not only in the classroom but also in extracurricular activities.

We have been very successful in faculty receiving national and regional awards. Three of our faculty have received fellow awards (Jeff Mosley, John Paterson, and Don Kress), one received a teaching award (Jim Berardinelli), one received an Extension award (Rachel Endecott), and one received a distinguished service award (Pat Hatfield). I appreciate all that have worked on these nominations and of course offer congratulations to the recipients.

The A & RS faculty continue to be grant active and have received several highly competitive grants. There is an effort to expand the research capability at the area farms.

I have had the pleasure of traveling throughout the state both as department head and as interim dean. I have made several friends in the state and hopefully not too many enemies.

Again, I don't think this is a one person job and it has been a team effort to get the department where it is today. I appreciate all of your support and for now say ADIOS!

New Head Selected for Department of Animal and Range Sciences

Dr. Patrick (Pat) Hatfield, professor of Animal Science at Montana State University, has been selected as Head of the Department of Animal and Range Sciences in the MSU College of Agriculture and Montana Agricultural Experiment Station.

Pat had served as the Interim Department Head for Animal and Range Sciences during the 2013-2014 academic year.

He received a bachelor degree from MSU in Range Sciences, a master's degree in Range Sciences from New Mexico State University and doctorate from the University of Nebraska-Lincoln in Animal Science.



Pat has published numerous articles on animal and range science topics and his research is largely focused on the nutritional management of sheep and incorporating livestock into sustainable crop production for insect and pest control and residue management. As Principle Investigor and Co-PI, he has received over \$8 million in extramural funding to support his research program. MSU awarded him an award for meritorious research in 2011 and 2012. In 2013, Pat received the Distinguished Service Award from the Western Section American Society of Animal Science.

Pat is a native of Billings.

New Faces in Our Hallways

Sue Ishaq Pellegrini Postdoc Research Associate (Carl Yeoman)

Sue moved to Bozeman during a spring snowstorm in April 2015 with her boyfriend, Lee, to join the Yeoman lab as a postdoctoral researcher in bioinformatics. Originally from Worcester, MA, Sue graduated in May with a Ph.D. in Animal, Nutrition and Food Science from the University of Vermont in Burlington, VT, where she'd lived for the past twelve years. She graduated with a BS in Animal Science with a minor in Nutrition from UVM in 2007, and worked as a technician at a small animal veterinary clinic for three years before starting her Ph.D. Her doctoral work focused on the microbial composition of the moose rumen and how it could be applied as a probiotic in lambs, as well as the digestive tract microbiology of humans, rats, beavers, black bears, cattle, alpaca, horses, reindeer, and a variety of African wild ruminants. She also specialized in DNA analysis and high-throughput bioinformatics. Her current position involves the analysis of a variety of metagenomic and metabolic projects in the Yeoman lab. She will also be teaching the lab portion of BIOM 405 this



fall, which will center on learning bioinformatics and DNA analysis workflow. In their spare time, Sue and Lee are methodically hiking their way through the many trails in the Gallatin Valley with Izzy, a husky/shepherd mix they adopted in June, and all three are eagerly awaiting the famed Montana winter snow storms.

Sarah Olivo Research Assistant (Carl Yeoman)



Sarah grew up in Bozeman and graduated from MSU in 2014 with a Bachelor's degree in Animal Science and a minor in Microbiology. She has previous undergraduate research experience in equine parasite management with Dr. Shannon Moreaux. Currently, Sarah is collaborating on projects with several researchers, including Dr. Brian Aldridge of the University of Illinois (studying calf microbiota and colonization) and Dr. Fabian Menalled of Montana State University (studying soil microbiota). Sarah is in charge of much of the lab work for Dr. Yeoman and his research group, and she coordinates with other researchers on campus to provide genome sequencing services with the lab's Miseq sequencer. In her free time, Sarah enjoys gardening, listening to George Carlin, and raising and showing her Mini Lop rabbits. She is currently working on earning her judging license with the American Rabbit Breeders Association.

Awards, Publications & Presentations

Jennifer Thompson and Mike Frisina will be receiving an additional \$10,000 over 2-years from the Wild Sheep Foundation to expand our Kyrgyzstan argali taxonomy project to include argali in Tajikistan. With this funding, a total of \$19,000 is committed for analyzing DNA samples.

Whit Stewart was named a Young Scholar at the 2015 Western Section Meeting in Ruidoso, N.M. (June 2015). The Young Scholars Recognition Program acknowledges accomplishments of current

and/or recent Ph.D. and M.S. students in the Western section of ASAS. Scholars provide an abstract and proceedings paper and give a 30-minute invited presentation about their graduate program at the Western Section Meeting.



Michael Tess, Professor Emeritus, has been recognized with the prestigious 2015 World Simmental Fleckvieh Federation (WSFF) Golden Book Award. Mike's long and productive career has been a benefit to countless students, a wide range of beef producers, fellow animal scientists, state and national beef-based organizations, and the entire beef community. Congratulations Mike!

Rodney Kott, Professor Emeritus, received the American Wool Council's Wool Excellence Award during the American Sheep Industry's Annual Convention in Reno, NV, January 28-31, 2015. Rodney spent more than three decades implementing sheep and wool educational programs as the Montana State University extension sheep specialist and was instrumental in the development and continuing evolution of the National Sheep Improvement Program. Congratulations Rodney!

Glenn Duff was selected as an Advanced Graduate of Distinction in the Department of Animal Science at the University of Arkansas. Glenn was presented this award at their annual Departmental Awards Banquet on Wednesday, April 22, 2015.

New publication: **McNew, L.B.**, V.L. Winder, J.C. Pitman, and B.K. Sandercock. 2015. Alternative rangeland management and the nesting ecology of greater prairie-chickens. Rangeland Ecology and Management 68: 298–304. http://

www.sciencedirect.com/science/article/pii/S1550742415000615

New publication: **McNew, L.B.,** and C.M. Handel. 2015. Evaluating species richness: biased ecological inference results from spatial heterogeneity in detection probabilities. Ecological Applications: doi.org/10.1890/14-1248.1.

New publication: Winder, V.L., A.J. Gregory, **L.B. McNew**, and B.K. Sandercock. 2015. <u>Responses</u> of male greater prairie-chickens to wind energy development. Condor 117: 284–296.

Lance McNew presented a talk titled: *Embracing imperfection: managing rangelands for heterogeneity to improve wildlife habitat.* at the Montana Cattle Producer School, Miles City, MT.

New grant: **Carl J. Yeoman** was awarded \$35,000 to continue work on the Wheat Stem Sawfly endosymbiont, Spiroplasma spp. from the Montana Wheat & Barley Committee

New grant: **Carl J. Yeoman** was awarded funding from the Bair Ranch Foundation to extend research into the role of early gut microbes in the maturation of the immune system and animal health to beef cattle.

Awards, Publications & Presentations (cont'd)

New grant: **McNew, L.B**. 2015. Developing and evaluating population estimation methods for threatened prairie grouse species. Faculty Excellence Grant, Montana State University, \$5,000. July 2015 – June 2016.

New grant: **Mosley, J.,** A. Litt, **B. Roeder**, T. Mosley, J.P. Tanner, **L. McNew**, and D. Dahlgren. 2015. Targeted Cattle Grazing to Enhance Sage-Grouse Brood-Rearing Habitat. Bair Ranch Foundation, \$56,746, July 2015 — June 2018.

New grant: **McNew, L.B**. 2015. Effects of electric fence permeability on grizzly bears in the Blackfoot Valley. Montana Outdoor Legacy, \$16,500, May 2015 – August 2017.

New grant: **McNew, L.B.**, and C. Frost. 2015. Habitat selection, movements, and survival of dispersing juvenile beavers in Southwestern Montana. Northwestern Energy, \$50,000, August 2015 – December 2017.

New grant: **Glunk, E., L. McNew, R. Endecott, J.** 155: 652 – 664. **Thomson, J. Boles,** D. Boss, and **C. M**arlow. 2015. Are Feedlot-based performance cattle limiting ecological services for rangeland ecosystems in northern mixed-grass prairies? Western SARE Professional-Producer Grant, \$50,000, July 2015 – August 2017.

New Publication: Kapheim K. M., V. D. Rao, C. J. Yeoman, B. A. Wilson, B. A. White, et al. 2015. <u>Caste-specific differences in hindgut microbial communities of honey bees (Apis Mellifera)</u>. PLoS One 10: e0123911

New Publication: Gomez A, Petrzelkova K, Yeoman CJ, Vickova K, Mrazek J, et al. 2015. Gut microbiome composition and metabolomic profiles of wild western lowland gorillas (Gorilla gorilla gorilla) reflect host ecology. Mol. Ecol. 24: 2551 - 65

New Publication: **Ham, B.** R., Myrick, C. A., Bararows, F. T., **Yeoman, C.J, Duff, G.C.**, Mark G.

Maskill, Wendy M. Sealey. 2015. Feed Characteristics Alter Growth Efficiency of Cutthroat Trout. J. Fish Wildlife Management 6: e1944-687

New Publication: Grinberg I.R., Yin G., Borovok I., Miller M.E., **Yeoman C.J.**, Dassa B., Yu Z., Mizrahi I., Flint H.J., Bayer E.A., White B.A., Lamed R. 2015. Functional phylotyping approach for assessing intraspecific diversity of Ruminococcus albus within the rumen microbiome. Microbiol. Lett. 362: 1 – 10.

New Publication: **Ham, B**. R., F. T. Barrows, A. Huttinger, **G. C. Duff, C. J. Yeoman**, Mark G. Maskill, Wendy M. Sealey. 2015. Evaluation of dietary soy sensitivity in Snake River Cutthroat trout. N. Am. J. Aquaculture. 77: 195-205.

New Publication: Amato, K. R., Leigh, S. R., Kent, A., Mackie, R. I., **Yeoman, C. J.**, et al. 2014. <u>The role of gut microbes in satisfying the nutritional demands of adult and juvenile wild, black howler monkeys (Alouatta pigra).</u> Am. J. Phys. Anthropol. 155: 652 – 664.

Carl J. Yeoman was an invited speaker for the National Center of Toxilogical Research, FDA seminar series at Jefferson, AK on 3/18/2015 presenting a talk entitled *From the vagina to the gut: Exploring the ecological development, function, and dysfunction of host-associated microbiota.*

Carl J. Yeoman was an invited speaker at the 9th International Society for Applied Biological Sciences conference in Bol, Croatia on 06/20/2015 presenting a talk entitled *Vaginal Microbiome In Health And Disease*.

New publication: **Mosley, J**. 2015. <u>Can cows and fish coexist?</u> Big Sky Small Acres: Rural Living in Montana 8(3):2-3.

Awards, Publications & Presentations (cont'd)

Tommy Bass has been named as the 2015 recipient Newsletter article: Mosley, J. 2015. Range Rumiof the Soil and Water Conservation Society's President's Leadership Award. This award is given at the discretion of the SWCS President in recognition of exemplary assistance to the Society in helping to carry out its goals and objectives. His award was presented at the SWCS 2015 Annual Conference July 26-28 in Greensboro North Carolina. SWCS is a nonprofit scientific and educational organization -- founded in 1943 -- that serves as an advocate for conservation professionals and for science-based conservation practice, programs, and policy. SWCS has over 4,000 members around the world. They include researchers, administrators, planners, policymakers, technical advisors, teachers, students, farmers, and ranchers.

New publication: Luginbuhl, J.M., and J.C. Mosley. 2015. Pastures for meat goats, p. 199-232. In: R. Merkel (ED.) Meat Goat Production Handbook, Second Edition. Langston, OK, USA: American Institute for Goat Research.

Presentation at national meeting: Mosley, T, D. Lucas, and J. Mosley. 2015. Montana State University Extension Range Management Institute. National Association of County Agricultural Agents Annual Meeting, Sioux Falls, SD.

nations: How much grass will I have this summer? Montana Stockgrowers Association Newsletter, May, page 18.

Newsletter article: Mosley, J. 2015. Range Ruminations: Is "take half, leave half" a good way to calculate stocking rate? Montana Stockgrowers Association Newsletter, July, pages 11-12.

New grant: Cattle grazing strategies to sustain and enhance sage-grouse habitat. J. Mosley, A. Litt, B. Roeder, T. Mosley, and J. Tanner. USDA National Institute of Food and Agriculture, \$149,924.

New grant: Can targeted cattle grazing and biocontrol insects work together to suppress spotted knapweed? J. Mosley, B. Roeder, R. Kittle, J. Pauley, A. Gearhart, T. Mosley, J. Marks, and D. Lucas. Montana Department of Agriculture, \$28,723.

New grant: Targeted cattle grazing to suppress spotted knapweed. J. Mosley, B. Roeder, R. Kittle, J. Pauley, A. Gearhart, T. Mosley, J. Marks, and D. Lucas. Missoula County Weed District, \$9,997.

Congratulations to Dr. Robert E. Lee

Robert E. Lee, former Chair of the Department of Animal & Range Sciences Advisory Committee and respected leader in the agricultural community, received an honorary doctorate in Animal Science from Montana State University on May 9, 2015. Bob delivered the charge to graduates at the university's morning commencement ceremony. Bob and his wife, Kathy, own and operate the Robert E. Lee Ranch Company, a diversified cattle and grain operation located in the footlhills of the Snowy Mountains in Central Montana. The ranch has been recognized for its approach to managing in natural resources, including rangeland and water resources. It is also well-known for the



tours it offers to groups from across the state and nation, as well as around the globe. A well deserved honor, congratulations Bob!

Administrative Team Highlight: Sharon Henderson



Sharon Henderson has recently joined the Department of Animal & Range Sciences as the Administrative Associate for Extension Specialists.

Born and raised in a small town in East Texas, Sharon's family had a small farm with cattle and horses. As a member of 4-H, she raised a sheep named "Bo" that became more of a pet than a project; however, she won a blue ribbon despite her reluctance to let him go to the highest bidder.

Sharon's true love became riding horses, especially around the wooded trails of the Pineywoods. While working for a cutting horse trainer, she took the opportunity to improve her riding skills and competed in cutting horse competitions.

Sharon graduated from Texas Christian University in Ft. Worth, TX with a degree in Radio-TV-Film. As digital technology developed, she became more involved in graphic design, advertising and marketing.

Along with working for cutting horse trainer Barbra Schulte, Sharon has also worked as a veterinary assistant at two animal clinics in Texas, as a graphic designer at the Texas Forestry Museum, The Lufkin Daily News and Walco Animal Health. After moving to Montana, Sharon worked in marketing at Barnard Construction.

Five years ago, Sharon fulfilled her longtime dream of living in Montana and moved to Bozeman, where she enjoys hiking the many trails in the summer and snowshoeing in the winter. She and her partner, Denise, recently purchased 21 acres where they plan to have horses and hope to establish a plentiful garden. They have a blended family that includes three kids (two currently at the University of Arizona and one in Texas) a grandson, four corgis and a cat.

Sharon is looking forward to the opportunity to combine her love for animals, her concern for land stewardship and her administrative skills in order to contribute to the success of the Animal & Range Sciences family.

Upcoming Dates

August 24, 2015 MSU Fall Semester Classes Start

September 7, 2015 Labor Day Holiday (No Classes, MSU Offices Closed)

September 8-11, 2015 SRM Accreditation Visitation Team Visit

November 5, 2015 Department of Animal & Range Sciences Advisory Committee Meeting

November 6-7, 2015 MSU Celebrate Agriculture

November 11, 2015 Veteran's Day Holiday (No Classes, MSU Offices Closed)

November 25-27, 2015 Thanksgiving Day Holiday (No classes from Nov. 25-27, Office closed Nov. 26-27)

December 11, 2015 Fall Semester Ends

December 25, 2015 Christmas Holiday (Offices Closed)
January 13, 2016 MSU Spring Semester Classes Start

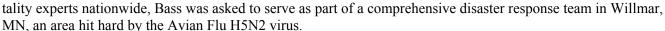
Extension Highlight: Tommy Bass' Work on the Midwest Avian Influenza Outbreak

Animal and Range Extension Specialist Deployed to Midwest Avian Influenza Outbreak

Story By: Jodie DeLay, MSU Extension Public Relations

Why are egg prices so high? How long will the cost be elevated? Will there be enough turkey for everyone come Thanksgiving? These are common questions related to the Avian Influenza H5N2 outbreak that hit the United States over the past several months.

As part of the solution, Montana State University Extension livestock environment associate specialist Tommy Bass was called to the epicenter of the outbreak by a representative from the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS). One of a small community of animal mor-





On his first day, a farm with two million laying hens tested positive for the virus, meaning all would be humanely euthanized to prevent further spread. By the end of June, the H5N2 would claim the lives of around 48 million birds, mostly egg layers and turkeys and in fifteen states, including Montana (small non-commercial flock), though predominately in Iowa and Minnesota. According to agricultural economists, the economic loss including to feed suppliers, trucking companies, processing plants and other related businesses is expected to top \$1 billion.

Key to bringing back the industry is the safe disposal of carcasses followed by disinfecting facilities and repopulation of the flocks. This is where Bass and his colleagues were needed. Proper disposal of millions of carcasses is a monumental task.

Bass was deployed by USDA to Minnesota from May 14 - 19 as a subject matter expert responsible for advising and educating on proper mortality compost management and inspecting facilities to insure compliance. Since returning, he has continued taken part in weekly conference calls with other composting experts and the USDA administrator

While Bass found he had good familiarity and skills related to composting and emergency management, he found the scope of response to be immense. "There was a huge team rapidly put in place. Each individual had clear responsibilities. I had a very specific role and scope", he said. "I was a small cog in a huge operation that functioned very smoothly. It was really invigorating to see so many experts working together in real time to develop real solutions."

Depending on the situation, carcasses were disposed of using in-house composting, outdoor/onsite composting, limited burial, and off-site composting. Composting in this response requires a minimum of 28 days, after mixing with wood-shavings and manure, with careful daily monitoring throughout. Temperatures in the compost windrows reach 130 to 150 degrees Fahrenheit, deactivating the virus. Following composting, a sanitation team takes over and sanitizes facilities. After 21 more days there is extensive environmental testing to insure the facility is virus free. The first facilities to be infected are now beginning the process of repopulation.

The national compost team has developed a suite of resources for future outbreaks regarding mortality management. The recommendations and testimonials are being reviewed and best management practices specifically for avian influenza outbreaks are being determined.

Extension Highlight: Tommy Bass' Work on the Midwest Avian Influenza Outbreak (cont'd)

For his part, Bass called the entire process an incredible learning experience. "I feel like I did help, and I'm proud of that", he said. "I've improved my critical thinking and ability to make decisions in a rapidly changing environment. I will be a better teacher because of it and I am more cognizant of how important real, applied experiences are. It's very important not only to have emergency plans in place, but to conduct training exercises so that people can properly execute them."

The United States is already recognized as having the strongest Avian Influenza surveillance program in the world. Extensive research has happened over the last three months to learn more about how the Avian Influenza virus moves and how to prepare against it. While there is some worry that the virus could return with the fall migration of wild fowl, much has been learned and precautions are in place to try to lessen any impact. For now, egg prices should begin falling and experts suggest there won't be any problem finding turkey for Thanksgiving dinner.

Welcome our Newest Faculty Member: Dr. Whit Stewart

Dr. Whit Stewart is our new Assistant Professor of Sheep and Wool Production/Extension Sheep Specialist. Whit grew up on a small farm in Forestville, NY where his family raised sheep and cattle and specialized in a branded meat product.

Between high school and college, Whit completed a two -year mission to Ecuador (becoming fluent in Spanish), worked as a ranch hand in Rexburg, ID, and ran a Holstein feeder steer venture in Johnston, SC. He received his B.S. in Ag Education from Brigham Young University-Idaho and a Masters of Animal Science from Ore-



gon State University. His M.S. research examined the effects of Selenium source and supplementation rate to ewes on transfer of selenium to lambs, ewe and lamb growth performance, and immune function.

After his M.S. Whit worked as an Area Livestock Extension Educator for the University of Wyoming in northeast Wyoming. He was instrumental in starting the Northeast Wyoming Sheep Symposium, working with forage kochia, facilitating livestock marketing and forage production workshops, and organizing and coaching 4-H Wool Judging Teams. In 2012 Whit worked as a research associate for Texas A&M AgriLife Research in San Angelo, TX conducting research in small ruminant nutrition.

Whit received his Ph.D. in Animal Science (May 2015) through a joint program with TX A&M AgriLife Research and New Mexico State University in small ruminant nutrition and production. Whit's dissertation research focused on utilization of ground juniper in small ruminant diets and its effects on rumen function and metabolism. Whit also writes a monthly column for The Shepherd Magazine.

Whit and his wife Lindsay have two children (Grant and Thomas) and they enjoy working and playing outdoors.

Whit can be reached at (406) 994-3758 or by Email at whitney.stewart1@montana.edu.

Student News

Both graduate and undergraduate student posters were judged at the 2015 Nutrition Conference held in Bozeman April 28-29.

Graduate Student Poster Awards:

1st Place: Andrew Williams

Poster title: Assess Potential Gender Difference in Temperament of Feedlot Cattle & Evaluate Chute Side Physiological Measurements to Improve Classification of Temperament.

2nd Place: Jasmine Westbrook

Poster title: Sheep Grazing for Cover Crop Termination: Grazing Field Pea and Yellow Sweetclover Cover Crop

in a Winter Wheat System.

3rd Place: Molly Butler

Poster title: Effects of Confinement Finish and Cover Crop Grazed Lambs on Performance, Carcass Quality and

Parasite Loads.

Undergraduate Student Poster Awards:

1st Place: A. R. Newhouse

Poster title: Effects of Rumen-protected Niacin on Cold Stress in Neonatal Beef Calves.

2nd Place: Alyson R. Hicks-Lynch

Poster title: Preliminary Study of the Influence of 2, 4-D on the Digestibility of Ensiled Lawn Clippings and the

Level of Acceptance by Lambs.

3rd Place: A. M. Desjardins

Poster title: Effects of Niashure Supplementation on Newborn Calves Subjected to Cold Stress.

Four students from Montana State University's Department of Animal and Range Sciences in the College of Agriculture placed second in the Western Region Academic Quadrathlon, held June 22-23 in Ruidoso, N.M.

The regional contest was held in conjunction with the 2015 Western Section American Society of Animal Science meetings, hosted by New Mexico State University. The MSU team competed with four other universities in the western region, including California State University-Chico, New Mexico State University, Oregon State University and Utah State University.

Elena Combs of Missoula, Bailey Engle of Big Timber, Emily Griswold of Millerstown, Pa., and Alyson Hicks-Lynch of Hood River, Ore. competed in a four-part contest that consisted of a comprehensive written exam, impromptu oral presentation, hands-on lab practicum and a double-elimination quiz bowl tournament.

For more information on the competition, contact Endecott at 994-3747 or Rachel.endecott@montana.edu.



Student News (cont'd)



Andrew Gould (2nd from left) and Dana Dale (3rd from left).

At the 68th Society for Range Management Meeting, Training & Trade Show in Sacramento, CA, Feb. 1-6, 2015, two students from MSU's Department of Animal & Range Sciences were elected to leadership positions of the SRM Student Conclave. The international organization represents undergraduate students from range science academic programs at colleges and universities throughout North America and beyond. Andrew Gould will serve in 2015-2016 as vice-president and Dana Dale will serve as Secretary. Dana also won first place in the undergraduate extemporaneous speaking contest. In addition, several of our students participated in the Undergraduate Plant Identification Exam (coached by Craig Carr) and the Undergraduate Range Management Exam (coached by Merrita Fraker-Marble).

Ft. Ellis Summer Work



The crew (Isaac, Olivia, Miriah and Devon with Shenanigans, the guard donkey.

Devon Ragen, research associate, and her crew of undergraduate students (Isaac Stafstrom, Miriah Reynolds and Olivia Fernandez) have been working hard at the Fort Ellis Research Station this summer. This crew not only helps with general farm maintenance, ground squirrel control, weed management, and taking care of the guard donkey, but also has their hands full managing the 45 research plots on site. Additional duties in the research plots include managing weeds in the conventional and organic cropping systems and using sheep to graze in the grazed-organic research plots. Throughout the summer they will set up grazing enclosures on plots at Fort Ellis for weed control and cover crop grazing and haul sheep to Townes Harvest Gardens, the Post Farm, and an organic farm in Big Sandy, MT to graze cover crops. Twice weekly they collect greenhouse gas samples and

soil samples from the plots and help with biomass sampling in the research plots when necessary. They also helped with moving sheep, weighing, and recording records for all ewes and lambs at Red Bluff this year for turnout.



Sheep grazing on a wheat plot.



sampling.





Current News: Update on Position Searches



Wool Lab Manager

Applications have been reviewed and interviews will be concluded by the end of August.

Assistant or Associate Professor—Animal Science/Sheep Production

Job has been posted (https://jobs.montana.edu/postings/2621) and advertised. Screening of applicants will begin September 1, 2015.

Associate or Full Professor—Nancy Cameron Endowed Chair Beef Physiology

Job has been posted (https://jobs.montana.edu/postings/2623) and advertised. Screening of applicants will begin September 1, 2015.

If you have further questions please contact the Animal and Range Sciences Department at 406-994-3721 or Susan Cooper at scooper@montana.edu.

Facebook

We would like to invite you to "Like us" on Facebook and keep up with the latest postings on the Department of Animal Sciences. You will find job postings, internship opportunities, award announcements, upcoming events, etc.

You can find our page at: https://www.facebook.com/ MSU.Animal.Range.Sciences



Help Support Animal and Range Sciences

A gift to the department is a great way to support student and faculty endeavors. Donations can be earmarked for student scholarship funds, faculty research, the new Animal Bioscience Building, and more.

For more information about making a donation to the department contact:

Kevin Brown Director of Development MSU - College of Agriculture Alumni Foundation, FD 225 Bozeman, MT 59717 PH: 406-994-4815

Email: Kevin.brown@msuaf.org



Animal Bioscience Building

www.animalrange.montana.edu

Newsletter edited and compiled by Susan Cooper

