A Message from the Director

Welcome to the Graduate Degree Program in Ecology 2010-2011 Newsletter! This has been a successful year for us at GDPE, as we continue to attract strong new students and provide opportunities for our current students to excel. This year we admitted a record cohort of 27 new students in Fall 2010 and another 5 in Spring 2011. This brings our current enrollment to some 130 students. With at least 30 incoming students for Academic Year 2011, GDPE will be pushing 160 students (up from 140 last year)!

(Continued on page 2)
We also have graduated 11 MS and 5 PhD students since last summer, bringing our alumni count to over 265. In addition, our faculty continues to expand as we increase the size of the ecology tent at CSU – the 9 faculty affiliates who joined us in the last year bring our total to some 163!

Highlights of the year included an August orientation for incoming students at the Mishawaka Inn in the Poudre Canyon and a community-wide Fall picnic at City Park in Fort Collins, attended by nearly 100 faculty, students, friends and family. We had a very successful year with our 32nd annual Distinguished Ecologist series, beginning with an honored GDPE alumnus, Peter Adler and a resident GDPE Distinguished Ecologist, Diana Wall, in the fall. This spring we hosted three distinguished visitors, Neil Adger (Kathy Galvin host), John Bardgett (Diana Wall host), and Stephanie Carlson (Cameron Ghalambor host). The 17th annual Front Range Student Ecology Symposium (FRSES) was again a smashing success, with record attendance of 350 student participants and 81 oral and poster presentations. (See the FRSES article on pages 3 & 4 of this newsletter).

Other accomplishments of the year were further improvement of our updated website http://www.ecology.colostate.edu/ and a revision of the GDPE curriculum, scheduled to go into effect Fall 2011 (and now viewable on the website).

A truly notable achievement of the GDPE this year was being ranked as one of the leading programs in the nation for Ecology. A report commissioned by the National Research Council identified GDPE as ranking as high as number 7 in overall program quality and number 4 in faculty research productivity among the 78 public and 18 private university programs (many much larger and/or better funded) nationwide. This report confirms the GDPE’s excellence and further solidifies our international reputation as a leading program of education and research in ecology. This commitment to excellence is also recognized by CSU’s designation of GDPE as a Program of Research and Scholarly Excellence (PRSE), a program that allowed us to award $15,000 in scholarship awards to incoming students in the past year.

GDPE’s continuing success is only possible because of the many contributions and participation of faculty and students across the entire CSU campus (and beyond). I wish to personally thank all of the GDPE community for their commitment to our outstanding program. Particular thanks go to those who are most actively involved in keeping the program running smoothly, especially Program Coordinator Jeri Morgan and the GDPE Executive Committee. Thanks also to Dean Jan Nerger (CNS), Dean Joyce Berry (WCNR), Interim Vice Provost for Graduate Affairs Peter Dorhout (Graduate School) and Provost Rick Miranda for their unflagging encouragement and support of GDPE.

In celebration of our successful year, please join us at our Annual Meeting at Avogadro’s Number on Thursday, May 5 from 4:30-7:30 for an evening of food and fun for GDPE members and their families. And for our newest graduates and faculty affiliates, do not forget about our GDPE Graduation Reception on May 13 in the Grey Rock room in the Lory Student Center.

Have a fun, productive summer and see you at the Fall picnic! Best, LeRoy Poff.
Each year, our Symposium aims to capture the brilliant research and academic achievements underway across Colorado’s Front Range. In line with this goal, we strive to select a Symposium theme that strongly links cutting-edge topics with research and encourages participation from a range of academic disciplines. In light of the predicted change in climatic conditions over the course of the next century, many researchers are steering their research toward understanding and predicting potential changes to a range of species and ecosystems. The theme for the 17th annual Front Range Student Ecology Symposium was “Changing Ecosystems: Creating a Sustainable Future through Science and Stewardship” with a panel lunch discussion titled “Hands on or Hands off: Defining our Role as Ecological Stewards.” This year’s Symposium took place over the course of two days, beginning with a keynote address by Dr. Eric Menges on Tuesday, February 22nd and ending with a day of unparalleled student presentations on Wednesday, February 23rd.

The 17th annual Front Range Student Ecology Symposium (FRSES) was built on last year’s planning model and grew to unexpectedly impressive numbers, with 81 presenters and over 350 attendees. Due to this dramatic increase in participation, student presentations were increased from eight to twelve sessions and from two to three concurrent sessions at each time slot. This growth is strongly attributable to attendance and participation of students from beyond CSU’s ecology program, representing: 8 Colleges and Universities from the Front Range and beyond, 11 CSU departments and professional organizations such as the Wilderness Society, USFS and USGS.
Our two-day event was packed with activity. Beyond a full day of presentations, this year’s Symposium also included an intriguing keynote address, an insightful discussion on our role in land management and conservation, and a casual, well-attended social gathering. Dr. Eric Menges, director of the Archbold Biological Research Station’s Plant Ecology Laboratory (Lake Palcid, Florida), presented this year’s keynote address. Dr. Menges’ talk focused on his ongoing research into the demography and life history of rare plant populations, specifically concentrating on the response of native Florida scrub-shrub communities to prescribed fire and restoration. Our panel lunch discussion was led by keynote speaker Dr. Menges and three local research scientists, Drs. Paul Alaback, Greg Aplet, and Jill Baron. Discussion centered on the role of management in sustaining natural ecosystem composition, structure, and function in light of predicted changes. The panel discussed the use and misuse of terminology, perceptions related to management and conservation, and their thoughts on the long-term sustainability of our natural systems. The Symposium ended with a lively reception, including a fantastic performance by local band Jababa, a fully catered buffet, an accessible cash bar, an FRSES-themed cake, and an awards ceremony. The awards ceremony highlighted the incredible research accomplished by Front Range researchers. This year’s presentations were apparently so strong that rather than the twelve students typically acknowledged for excellence, sixteen graduate and undergraduate students emerged as top presenters.

We are so extremely proud of the drive and dedication of our planning committees. The success of this event is truly thanks to their unwavering commitment to their respective committees and fellow students. We are also incredibly appreciative of those who donated their time and supported these pre-career ecologists by providing constructive feedback and support. Thank you again! See you in 2012!

Sarah Bisbing
President, Executive Committee
Front Range Student Ecology Symposium

2011 FRSES Officers:
Hannah Wilbur, Kristen Kaczynski, Sarah Bisbing and Kelly Hopping

Photo Awards *
1. Best Photo Overall
   Kelly Hopping CSU GDPE
2. Best Study Organism
   Kate Schoenecker CSU GDPE
3. Best Landscape
   Sarah Bisbing CSU GDPE
4. Best Research-in-Action
   Todd Reeves CSU FWCB

* Photos found throughout Newsletter

2011 FRSES Acknowledgements

The 2011 Executive Board: Sarah Bisbing, Hannah Wilbur, Kristen Kaczynski, and Kelly Hopping; the 2011 Committee Chairs: Laura Dev, Kirstin Holfelder, Ryan McShane, Kristen Pelz, Katie Renwick, Amber Shanklin, Jonathan Straube, Jeremy Sueltenfuss; the members of the 2011 Planning Committees; and our faculty advisors: Dr. LeRoy Poff and Jeri Morgan.
Diana Wall
GDPE Resident Ecologist

A soil ecologist and environmental scientist, Diana Wall is a University Distinguished Professor and Director of the School of Global Environmental Sustainability at Colorado State University. Diana is actively engaged in exploring how microbial and invertebrate diversity contribute to healthy, productive soils and the global effects of human activities on soil biodiversity and ecosystems. Her research involves 20+ seasons in the Antarctic Dry Valleys examining the response of soil life and ecosystem processes to climate warming. Diana has served in a science advisory and leadership roles, including with UNESCO, DIVERSITAS-International, and the Millennium Ecosystem Assessment. She is a former president of the Ecological Society of America and American Institute of Biological Sciences and was chair of the Council of Scientific Society Presidents. Diana is also an Aldo Leopold Fellow and Fellow of the AAAS.

Peter Adler
GDPE Honor Alumnus

Peter Adler received a PhD from GDPE in 2003 and is now an Assistant Professor in the Department of Wildland Resources at Utah State University. He teaches an undergraduate course called “Wildland Ecosystems” and a graduate course in plant community ecology. Peter's research focuses on patterns of species diversity, the mechanisms that maintain diversity, climate change, and plant-animal interactions. His research uses long-term data sets and models to show how we can predict when species interactions will influence the ecological impacts of climate change.

Peter Adler & advisor Bill Lauenroth

Meg Steinweg & Andrew Tredennick can’t contain their excitement about soil biodiversity!

2010-2011 Resident Distinguished Ecologist Diana Wall
2011 Distinguished Ecologists

Neil Adger
Dr. Adger conducts research, teaches and supervises graduate students on issues such as: social vulnerability, resilience and adaptation to environmental change; on justice and equity in decision-making; and the application of economics to global environmental change. He is a member of the Resilience Alliance. He leads the research programme on adaptation in the Tyndall Centre for Climate Change Research. He has participated in the Intergovernmental Panel on Climate Change in its assessment of adaptation to climate change. He edits the journal Global Environmental Change with Katrina Brown and Mike Hulme. Finally Dr Adger was awarded a Philip Leverhulme Prize from the Leverhulme Trust in 2001 for his research achievements.

Richard Bardgett
Professor Bardgett’s research explores how linkages between plant and belowground communities regulate the structure and function of terrestrial ecosystems, and their response to global change. Much of his recent research is focussed on understanding the role that plant-soil interactions play in the delivery of ecosystem services, especially soil carbon sequestration and nutrient cycling. He authored "The Biology of Soil: A Community and Ecosystem Approach" (2005), which won the Marsh Ecology Book of the Year Award, and "Aboveground-Belowground Linkages: Biotic Interactions, Ecosystem Processes and Global Change" with David Wardle (2010).

“Rising Star” Ecologist Stephanie Carlson
Dr. Carlson, who received her Ph.D. from the University of Washington in 2006, is an evolutionary ecologist studying the causes and consequences of selection in the wild. With a focus on anthropogenic selection and the evolutionary challenges facing species and populations of concern, her research can help guide management and conservation efforts. She has published several original contributions in Ecology, Ecology Letters, Evolution, and Evolutionary Applications. According to Dr. Carlson, "My general interest is in understanding the dynamics of freshwater fish populations, particularly the factors that shape these populations and influence their persistence. Much of my research is field-based and incorporates elements of behavioral, population, community, and evolutionary ecology. My research combines various field techniques including the tagging and tracking of individually-marked fish, experimental manipulations in the field, and direct observations.”
Kelly Hopping, GDPE PhD student with Julia Klein, came to CSU in February, 2008 with a BA in Biology and a BA in Philosophy from the University of Montana. One of Kelly’s goals after graduation was to learn a new language, so she began sitting in on Mandarin Chinese classes while still in Missoula. This experience helped her in her first trip to China and Tibet in the summer of 2008. She observed people “living in the way that she had been studying”. Having only peripheral knowledge of the culture at that time, she found it to be more amazing than she had even thought. To learn more about the Tibetans’ life and to convey ecological concepts with trust and open-mindedness, she knew she had to be able to talk to them.

When she returned to Tibet for three weeks in October to identify representative field sites, the time was spent immersed in translation, with lots of pointing, pantomiming, and translating through three languages, to agree upon an area in which to set up her experiment.

In the summers of 2009 and 2010, Kelly spent three months in Tibet, working directly with the herders on their land at the field site that had been established on the previous trips. These were eventful summers building relationships and establishing trust with local families. She really couldn’t communicate verbally. She memorized patterns of speech and phrases, knowing she was only scratching the surface. The families who were her closest neighbors were incredibly patient with her and took a genuine interest in teaching her colors, numbers, and names of things that she could see. The well-educated grandfather, probably in his seventies, enjoyed flipping through her Tibetan language book and would go through the glossary with her, reading words. His grandchildren would hang out at the field site, helping adjust warming chambers and taking readings. These became lessons in numbers and colors. Their uncles took time to write the spoken word on sample bags to further her learning. Their father was the village leader and observed Kelly’s efforts to communicate in their language. He came to know and believe her (even sharing livestock numbers which helped Kelly’s data immensely). He trusted that what she was doing was going to help them. The community members became advocates for the project and would stop by her research site on a daily basis. They would closely observe what she was doing, and on her breaks from working, the women would teach Kelly phrases and word rhymes that a young child would use.

Kelly returned to Fort Collins, wanting to mature her vocabulary and use of the language. She befriended a Tibetan monk, Lhoppon Rechung, living in Boulder who agreed to take her as a student, believing in her dedication and sincerity. Whether they studied at the temple or strolled Pearl Street discussing shoes or cars in Tibetan, being in this different space offers balance to busy and pressured life, something that all PhD students can relate to. Although the future in Tibet is uncertain, Kelly is hoping to demonstrate her new verbal skills with her Tibetan friends. She also looks forward to expanding her efforts through the CCC fellowship she recently received.

Why Tibet? “I have a strong draw to cold places. The way Tibetans live feels imbued with a demonstration of how to live a good life.” Kelly understands that she has as much to receive as she has to contribute.
Kirstin Holfelder has been a GDPE student for almost four years and is the current GDPE webmaster. Her love of ecology began at the University of Denver, where her research explored nitrogen dynamics in pine stands. After receiving her BS in Biology, she came to CSU and began a project to assess the effects of biosolid application (aka sewage sludge dumping) on the shortgrass steppe. With Dr. Indy Burke's guidance, she obtained her Masters in Ecology. Kirstin then immediately began a PhD with Dr. John Moore. She now models soil macroinvertebrate communities. Her work also includes an environmental literacy component that makes use of her computer skills.

Despite her myriad professional interests, Kirstin has become involved in a hobby that takes her far from ecological science. It began when her parents purchased a ranch. Since they had trouble with the idea of actually killing any of the animals they raised, they decided to start a small alpaca herd and harvest their fleeces for yarn. Only one problem: no one knew how to turn that pile of dirty hair into something usable. Most alpaca farmers ship their fleeces across the country to a fiber mill. What they get back months later has been processed by at least six industrial machines, and the character of the fiber has been utterly destroyed.

Never one to be intimidated, Kirstin promptly bought a hand spindle and taught herself to spin fiber into yarn (YouTube has a how-to video for everything). After making yarn using the same technology that produced the wrappings of Egyptian mummies, she upgraded to the medieval period and purchased a spinning wheel. She has now spun over 2000 yards of yarn. Every yard has passed through her hands at least six times: the initial quality sorting, carding, spinning, plying, washing, and winding are all done by hand. The only machine to touch the fiber is the shearer. Her mom, grandma, and aunt knit with the handspun yarn.

Though the Holfelder family has sold some products, their present work is being donated to benefit a sustainable wild horse sanctuary in New Mexico. Kirstin hopes to expand the business eventually to include an environmentally friendly mill. She has far-fetched plans for bicycle powered carding and spinning machines, and fiber washers that reduce water use. For now, however, she is happy to spin. She enjoys the magic of creating something with her hands, and the rhythmic creak of the wheel seems to slow the hectic pace of grad student life.
New Students Fall 2010

Timothy Assal - PhD
I am a new student working with Jason Sibold. I have a BS from The George Washington University and an MS from the University of Wyoming. I have worked in a variety of natural resource related positions over the years, usually with a geospatial tilt. Recently I have worked under contract to the US Geological Survey and hope to incorporate some of my work into my dissertation research. I plan to investigate the role that ecological disturbance, climate variability and human land use have played in shaping patterns of aspen islands on the landscape in Wyoming and Colorado. I have general interests in landscape ecology, biogeography, GIS, remote sensing, and the role of humans in landscape change from local and global scales.

Kevin Blecha - MS
I received my B.S. at Kansas State University in wildlife biology. I then worked for that university immediately after graduating for about three years, working under a wide range of research projects involving tall-grass prairie communities, river otters, and white-tailed deer. I am now working under a project with the Colorado Division of Wildlife, with Randy Boone as my advisor. I will be conducting my M.S. thesis project on examining the effects of landscape fragmentation and urbanization on the behavior of mountain lions in the front range.

Nell Campbell - PhD
I am a new PhD student joining Keith Paustian's lab. I moved here from New Hampshire, and while at CSU I will focus on methods to assess the environmental impacts of biofuel production and use. I majored in ecology at Dartmouth College, took a few years off to teach biology, and then became interested in biofuels while earning a M.S. in natural resources at the University of Vermont. I'm starting off as a MAS Bioenergy IGERT fellow this fall. I am hoping that the broader understanding of the biofuel field gained through this fellowship will help me develop assessment methods, rooted in ecological principles, that can help better direct biofuel development.

Chris Davis - PhD
I am a new PhD student starting my studies this fall in Cini Brown's lab. I am a native of Scranton, Pennsylvania and I graduated with my BS from Arizona State University where I conducted undergraduate research in molecular ecology and plant physiology. This summer I am living and working at Rocky Mountain National Park where I am monitoring the effectiveness of the revegetation efforts of the restoration crew. My broad research interests include the invasion of disturbed habitats by exotic plant species, range expansion of exotic species, and the restoration of areas before and after exotics invasion. My research in the Brown lab will likely involve studying the impact of prescribed fires on native shrub communities in areas that are heavily infested with cheatgrass. When I'm trying to not think about science, I like to hike, bike and brew.

Adam Dillon - PhD
Although a New Yorker by birth I grew up in Texas. After receiving my Bachelor’s from the University of Texas I moved around the country working on a variety of mammal research projects. I then earned my M.S. in Fisheries and Wildlife from Virginia Tech studying ocelot density in Belize. Since then I’ve worked with coyotes in Chicago, mule deer in Oregon and more recently teaching college ecology courses in Belize, New Zealand and the Pacific Northwest. Although my ecological interests are varied, I specialize in carnivore population dynamics and conservation. As a new PhD student I’ll be working with Kevin Crooks studying the population dynamics and recovery of Channel Island Foxes and Spotted Skunks on Santa Cruz Island off the coast of California.
Barbara Fricks - PhD
I came to CSU from DC, where I spent time working in policy and the government. I received my M.S. in Soil Science from Penn State in 2007 (thesis: Nutrient Cycling in Agroecosystems). I started at CSU in 2009 with a NSF IGERT fellowship to study biofuels. I am interested in examining ecosystem processes for solutions to industrial breakdown of lingo-cellulosic feedstocks, specifically enzymatic degradation of switchgrass in natural systems. I recently switched to GDPE from horticulture to work with Matt Wallenstein and focus on ecology.

Nathan Galloway - PhD
I grew up in Wyoming and received my Bachelor's in Biology from Iowa State University. Since then I have worked as a laboratory technician both at Johns Hopkins University School of Medicine and the Medical College of Virginia. As a PhD student working with Mike Antolin, I will be working on a large project on Chronic Wasting Disease in mule deer. This project is led by Dr. Hobbs and has several other professors involved. I am currently working on population genetics and its relation to disease transmission and prevalence.

David Gwenzi - MS
I hail from a landlocked Southern African country, Zimbabwe. I grew up with a great passion for the Environment and hence my undergraduate degree was Environmental Science, specialising in Forestry, obtained from Bindura State University, Zimbabwe. I went on to study for an MSc in Geo-information Science and Earth Observation for Natural Resources Management, again specialising in Forestry at the University of Twente, The Netherlands. I will be advised by Michael Lefsky and will study the application of GIS and Remote Sensing tools, mainly spaceborne Lidar, in forest canopy assessment. My main interests are in modelling forest canopy height to determine the amount of aboveground biomass within forests and hence how much carbon they can sequester.

Dylan Harrison-Atlas - PhD
A New Englander by birth, I have followed my interests westward to study conservation planning under the guidance of Dave Theobald. My PhD research aims to prioritize the protection of critical wildlife habitat threatened by land use change, energy development, and a changing climate. Using spatially explicit methods to evaluate potential habitat loss and modification through residential development, I am conducting a statewide build-out analysis to identify areas of primary concern to conservation objectives. Ultimately, this information will contribute to a decision support system for the state of Colorado.

Osman Handen - PhD
I grew up in Sudan, studied forestry (BSc) and environmental science (MSc) and worked for nine years as a professional forester in north, central and southwestern Sudan. I studied forestry economics and policy (Doctorate) in the forestry school at Tharandt, the oldest academy of forestry in Germany. In 2004, I came to Denver where I earned an MA in economics from the Colorado University at Denver. In my PhD research at CSU, I study the socioeconomic and environmental impacts of agricultural intensification and individualization of livestock ownership. I am particularly interested in investigating the socioeconomic and ecological impacts of declining extensive livestock systems due to increased land privatization and ecosystem fragmentation. I am guided in this research by Dana Hoag and Randall Boone.
New Students Fall 2010

Steve Hasstedt - PhD
I am a new PhD student working with Dan Binkley and Bill Romme on historical forest structure/composition and restoration treatments for ponderosa pine and mixed conifer forests. I’m interested in landscape ecology, disturbance regimes, and the incorporation of science into land use policy. I’m an Air Force Lieutenant Colonel, a Colorado native, and upon completion of my GDPE program I’ll re-join the Biology faculty at the US Air Force Academy. I earned a BS from the AF Academy, a MS in Environmental Science from Southern Illinois University-Edwardsville, and a MS in Global Mobility/Logistics from the Air Force Institute of Technology. I’m thrilled to be part of the GDPE community with my wife Anne-Mare and our two daughters, Maddy and Leah. I enjoy reading, gardening, hunting, fishing, and playing ‘Captain Hook’ with our girls!

Clint Leach - PhD
I am a new PhD student joining the lab of Colleen Webb. I’m originally from Colorado, but I got my undergraduate degree in mathematical biology from Harvey Mudd College in Claremont, CA. My experience thus far has been focused on marine ecology, looking at food web structure in the North Pacific, but I’m broadly interested in theoretical and quantitative ecology. To start out, I will be working with the USGS on a project modeling chronic wasting disease in elk.

Ken Reardon will act as my temporary advisor pending my identification of a permanent dissertation advisor. In my spare time I like to backpack, run, and learn ancient languages.

Jeff Kent - PhD
I am a student in GDPE as well as CSU’s interdisciplinary MAS Bioenergy training program, which brings together a range of disciplines to surmount obstacles facing the emerging bioenergy industry. My primary research experiences have been oriented toward genetics and molecular-scale biological processes, and I am interested in both the biotechnological challenges of optimizing feedstocks for cellulosic biofuel production, as well as the ecological impacts of large feedstock monocultures, and how these impacts can be minimized. Ken Reardon will act as my temporary advisor pending my identification of a permanent dissertation advisor. In my spare time I like to backpack, run, and learn ancient languages.

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Monica Paez - PhD
I am a new PhD student working with Chris Funk. Raised in Ecuador, I obtained my BS in Biology at Pontificia Universidad Catolica del Ecuador. I will study the evolutionary and ecological processes that generate and shape biodiversity patterns in amphibians and other vertebrates, particularly in highly complex tropical ecosystems, such as the Amazon and cloud forests. These ecosystems are ideal for studying diversification and speciation because of their complex topography and climate dynamics. They also exhibit high levels of endemism associated with undiscovered diversity. Studying the factors that have influenced ecosystems in the past can be very insightful in predicting how ecosystems can be altered by current and future environmental phenomena, namely, climatic change, habitat fragmentation and emerging diseases.

Ashley Shaw - MS
I grew up in the beautiful rolling hills of Louisville, KY where I also received my undergraduate degree in biology from Bellarmine University. Past research experiences have included genetic studies of giant ragweed (Ambrosia trifida), as well as physiological studies of the ventral eversible gland of the velvet bean caterpillar (Anticarsia gemmatalis). I am now switching gears to study soil biodiversity as a graduate student in Diana Wall’s lab. My research will focus on nematode diversity in soil samples from the Konza Prairie LTER.

Students Not Pictured:
Mabruka Abubaira - PhD with Jill Baron
Dave Millar - PhD with David Cooper
Heather Scott - MS with Mike Ryan
New Students Fall 2010

Florenzia Pezzutti - PhD

I’m a new PhD student working with Chris Fisher from the Anthropology Department. I received a MA from Colorado State University in Anthropology with focus in Archaeology, and a BA from Kent State University in Anthropology. I am a native Argentinean and prior to studying in the U.S I attended the University of Buenos Aires (UBA) for two years in the Facultad de Filosofía y Letras. My interests include: Mesoamerican states and empires, agricultural landscapes, agricultural intensification, maguey cultivation, GIS, and human-environmental interactions in the context of early urbanism and socio-political complexity. My MA research focused on agricultural terraces in the Lake Pátzcuaro Basin. I have participated in four archaeological projects in the Lake Pátzcuaro Basin, Michoacán, Mexico since 2006.

Zach Sylvain - PhD

I’m a PhD candidate working with Diana Wall in the Department of Biology and the Natural Resource Ecology Lab. I attended McGill University, earning a BSc in Biology and an MSc in Entomology, during which I studied the community ecology of oribatid mites. My research interests lie in how communities of soil invertebrates will be altered due to climate change, and what impacts this will have on ecosystem functioning: my project is looking at the effects of soil moisture in structuring soil invertebrate communities in order to understand how altered precipitation regimes may impact these animals.

Katie Renwick - PhD

Since graduating from Colby College in Maine I have worked as a sort of migrant biologist studying a wide variety of organisms: first trees in Acadia National Park, then alewives along the coast of Maine, followed by mice in eastern NY, and finally giant moths in my hometown of Ithaca. My primary interest lies in forest ecology, however, and I am particularly intrigued by disturbances that affect landscape-scale vegetation patterns. I’ll be joining Monique Rocca’s lab at CSU and studying the impacts of the recent bark beetle outbreak in Colorado.

Hongzhao Tang - PhD

I am a new PhD student starting my studies this fall in the Center of Remote Sensing and Modeling for Agricultural Sustainability, Natural Resource Ecology Laboratory, Colorado State University. I received my M.S. at Peking University in Remote Sensing. I am now working under a project in USDA UV-B Monitoring and Research Program, with Wei Gao as my advisor.

Syed Shah - PhD

I'm originally from Pakistan. I received my MS in Agricultural Economics from Agricultural University Peshawar (Pakistan). I'm currently doing PhD in Ecology and Dana Hoag is my advisor. I'm generally interested in sustainable agro-ecosystem management; impacts of global climate change and current agricultural practices on agro-ecosystem services; balancing the environmental, social and economic dimensions of agro-ecosystems, using integrated modeling approach. Apart from studies I love to play volleyball, cricket, and racquetball.

Jeremy Sueltenfuss - MS

I am a new master’s student working with Rick Knight and Reagan Waskom. I am a Colorado native and received my degree in Biology from Colorado College and focused my thesis research on the response of avian and small mammal communities to various forest thinning techniques. My research interests focus on how humans impact local ecosystems and how we can restore those ecosystems to a fully functional level. My wife and I have spent the past two years living in Venezuela teaching in an international school. After teaching middle school and high school students the wonders of science, and learning the art of patience as a teacher, I am excited to be back in Colorado. My project will be looking at how ranching and flood irrigation play a role in creating wetlands and what ecosystem services these wetlands provide.
### Glory Sumay - MS

I am a new master’s student from Tanzania, East Africa. I completed my Bachelor’s degree in Environmental Studies from University of Dar es Salaam. I have been working with the Ecology department at Tarangire National Park since 2007. I was engaged in various ecological monitoring activities in the Park. It was because of being there that I decided to pursue graduate study in Ecology. My research project will be on Human-wildlife interaction (Impacts of migratory wild animals on human lives) in **Randy Boone’s** lab.

### Kevin Wilcox - PhD

I am a new PhD student in **Alan Knapp’s** lab. Raised in the Pacific Northwest, I obtained my BS in Biology at Central Washington University while specializing in Ecology. After undergrad I participated in a number of research projects taking me from the coniferous forests of the Cascade Mountains to the rain forests of Puerto Rico to the tallgrass prairie in northeastern Kansas. For my dissertation I will be looking for ecological generality in savanna grassland ecosystems. To accomplish this, I will be working at the Konza Prairie Biological Station in northeastern Kansas and at Kruger National Park in South Africa.

### David Gebben - PhD

I came to CSU from Michigan State University where I completed my MS in Agricultural Economics. Prior to that I had worked for 2 and a half years in Haiti in development. My primary area of research interest is the intersection of ecosystem services in a development context. Some of my current research looks at the valuation of dryland ecosystem services. I recently switched to GDPE from Agricultural Economics and my advisor is **John Loomis**.
Cheryl Lindsay - PhD
I am a PhD student under the direction of Paul Ode. I received my B.S in biology from the University of Kentucky where I discovered insects were neat little guys and therefore went to the University of Georgia for my master’s in entomology. Currently, I’m researching the tritrophic relationship involving parsnip, parsnip webworm, and its parasitoid. This system is native to Europe, but has gradually made its way to the United States, where things have started to get interesting. I hope to explain patterns of establishment and maintenance among these trophic associations.

Dave Barnett - PhD
I earned a BA from Colorado College and a masters in the Graduate Degree Program in Ecology from Colorado State University. Prior to joining the National Ecological Observatory Network as a spatial ecologist, I designed systems to inventory and monitor plant species invasion and associated impacts on native species for public and private shareholders from Hawaii to Alaska at NREL. Advised by Tom Stohlgren, my research focuses on understanding patterns of plant species diversity and how relationships between pattern and process change at different scales through space and time.

Christy Cleaver - MS
I received a BS in Forest Biology from Colorado State University. As an undergraduate I had the opportunity to conduct research in 11 different National Parks to investigate firewood as a pathway for exotic insects and pathogens. Loving hiking and the outdoors, I took a year off to hike the 2,179 miles of the Appalachian Trail. Now I am back in Bill Jacobi’s lab as a Masters student in BSPM, studying limber pine stand conditions, regeneration, the extent and severity of mountain pine beetle and white pine blister rust in the central and northern Rockies.

Jamie Fuller - PhD
Originally from Illinois, I ventured from the flatlands to the University of Vermont to acquire a degree in Environmental Studies and Anthropology. After some years of exploring the West and working outdoors, I found myself enrolled at CSU in Watershed Science. My Master’s degree entails quantifying wind and blowing snow trends for two alpine sites in the Front Range. I am currently a doctoral student with Steven Leisz from the Anthropology Department. My PhD research is to identify biogeographical relationships, distributions and patterns on the island of Papua New Guinea using Remote Sensing and GIS techniques. In conjunction with biota mapping, I will assess how the use of coastal and land resources will change under the context of climate change.

Shane Siers - PhD
I finished off my B.Sc. in Biology at UMASS Boston and got my M.Sc. in Biology at the University of Missouri-St. Louis. Upon finishing my M.Sc., I began work as Research Manager for the USGS Brown Treesnake Project on Guam for 3.5 years. I will be working on my PhD under Julie Savidge, studying how geographic variation in invasive Brown Treesnake populations and movement rates affect prospects for successful landscape-level suppression efforts. My primary interests are landscape ecology and invasive vertebrate control. I’m also an avid SCUBA diver and underwater photographer/videographer, getting therapy for landlock-fever on the snowboard slopes.
Michelle Betsill – Political Science

My research focuses on the politics of global climate change, from the local to the global level. I’m particularly interested in the various policy approaches to controlling greenhouse gas emissions. I’m involved with the university’s School of Global Environmental Sustainability and will help lead the Environmental Governance Research Working Group within the school. I have been a long-time observer of international climate change negotiations and am currently working on a project that traces the evolution of emissions trading markets as a policy instrument for mitigating greenhouse gas emissions. In this project, we are examining how the idea of emissions trading developed and spread through more than 30 policy venues, how trading rules reflect the specific context of each venue, and the broader implications for the global politics of climate change. I received my doctorate in political science from the University of Colorado-Boulder. Prior to coming to CSU, I was a post-doctoral fellow with the Global Environmental Assessment project at Harvard’s Kennedy School of Government. I spent my sabbatical, 2006-07 academic year, as a visiting scientist with the Institute for the Study of Society and the Environment at the National Center for Atmospheric Research.

Dean Biggins - USGS

I have been interested in grassland ecology since 1981, but within that broad topic my research has involved varied themes, including aspects of behavioral ecology, predator-prey relationships, rodent-soil relationships, and ecology of wildlife diseases. Most investigations have been motivated by their application to conservation and recovery of federally listed species. In that context, I have worked at field study sites from Montana to Chihuahua, and in Inner Mongolia and the Tibetan Plateau. Research has involved students at various universities (in CA, CO, MI, MO, TX, WY, France, and China). Taxa of interest have been carnivores (e.g., black-footed ferrets, Siberian polecats, weasels, foxes), rodents (prairie dogs, voles, wood rats), arthropods (fleas, ticks), and bacteria (Yersinia pestis). My present research emphasis is on ecology of plague, including its hosts and vectors, concentrating on maintenance of plague and its chronic effects on wildlife during inter-epizootic periods.

Robert Reed – USGS

I was trained as a herpetologist and ecologist, and now employ those skills in my position as an invasive species biologist with the USGS. Introduced reptiles and amphibians are a growing concern at a global scale, increasing exponentially in recent decades (largely as a result of international trade in live animals). The bulk of my research focuses on Brown Treesnakes on Guam and Burmese Pythons in Florida, but I am also involved with projects on introduced reptiles in California, Puerto Rico, the Florida Keys, and elsewhere. Our research group investigates the ecology of introduced reptiles in order to understand their impacts on native species and identify traits that may render them vulnerable to control or eradication. We then apply these results to design and validation of control tools for achievement of management objectives.

Mevin Hooten – FWCB

Having an academic background in both Ecology and Statistics, I work primarily on building and implementing stochastic models for ecological and environmental processes. From an applied perspective, my research area has been broadly distributed across both plant and animal ecology. My lab has primarily been focused on spatial and spatio-temporal ecological applications such as identifying drivers of animal movement and space use, geographic barriers and corridors to gene flow, and the spread of epidemics and invasive species. From a methodological perspective, much of my work is at the interface between applied mathematics and statistics. We are continually finding ways to merge scientific mathematical models and data-based statistical models to better answer contemporary ecological questions.

New Faculty Not Pictured:
Rob Hubbard-USFS

Graduate Degree Program in Ecology Newsletter May 2011
Jessica Thompson – HDNR

Dr. Jessica Thompson is a member of the CCC Design and Development Team. She is an Assistant Professor in the Human Dimensions of Natural Resources Department at Colorado State University. Her current research and teaching is focused on communicating and managing environmental conflict and organizational change in the face of complex ecological issues such as global climate change. She is also the PI on a series of National Park Service research projects related to developing and integrating climate change communication and organizational change within the National Park Service.

Skip Smith – FRWS

Skip Smith studies the ecology of forest productivity and silviculture of forest stands for multiple outputs. Recent research efforts include leaf area, production, and carbon allocation relations in single and mixed species forest stands, manipulation of forest structure to create wildlife habitat, and long-term development of subalpine forest communities. My responsibilities at Colorado State include undergraduate teaching in silviculture and growth and yield prediction, graduate instruction in ecology of forest production, and administer mid-career training program for USDA Forest Service foresters.

David Augustine – USDA-ARS

David Augustine is an ecologist with the Rangeland Resources Research Unit, in the USDA’s Agricultural Research Service. His interests include plant-herbivore interactions, the ecology and management of semiarid rangelands, and conservation biology. David works closely with public rangeland managers (USFS, BLM, USFWS) and private rangeland managers to focus research on the challenges they face in balancing livestock production with wildlife conservation. His current research is examining interactions among cattle, prescribed fire, and prairie dogs in the western Great Plains, and the effects of these disturbance processes on vegetation heterogeneity and grassland bird habitat. David also has long-term studies in semiarid Kenyan rangeland addressing effects of native and domestic herbivores on one another.

Robin Reid – HDNR

Dr. Robin Reid is the Director of the Center for Collaborative Conservation, an initiative of CSU’s Warner College of Natural Resources. She comes from the International Livestock Research Institute (ILRI) in Nairobi, Kenya, where she led research, education and outreach on conservation and development issues in Africa, Latin America, Asia and the western United States. Robin has been a senior research scientist at Colorado State's Natural Resource Ecology Laboratory since 2002, and is on the faculty of the Department of Human Dimensions of Natural Resources. She is a CSU alumnus, having received her PhD in Rangeland Ecosystem Science here in 1992.
### Summer 2010 Graduates

<table>
<thead>
<tr>
<th>Name</th>
<th>Deg</th>
<th>Thesis or Dissertation</th>
<th>Advisor(s)</th>
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<tbody>
<tr>
<td>Jim Bromberg</td>
<td>MS</td>
<td>Changes in the Distribution and Predictive Modeling of Downy Brome (Bromus Tectorum L.) at High Elevations</td>
<td>Cini Brown</td>
</tr>
<tr>
<td>Gabriela Bucini</td>
<td>PhD</td>
<td>Woody Cover in African Savannas: Mapping Strategies and Ecological Insights at Regional and Continental Scales</td>
<td>Niall Hanan</td>
</tr>
<tr>
<td>Katie Driver</td>
<td>MS</td>
<td>Distinguishing the Hydrologic Regimes and Vegetation of Fens and Wet Meadows in the Rocky Mountains</td>
<td>David Cooper</td>
</tr>
<tr>
<td>Stacey Elmore</td>
<td>MS</td>
<td>A Review of Toxoplasma Gondii focusing on the Sylvatic Cycles and Parasite Prevalence in the Circumpolar North</td>
<td>Chet Moore</td>
</tr>
<tr>
<td>Stacy Lynn</td>
<td>PhD</td>
<td>Cultivating the Savanna: Implications of Land Use Change for Maasai Livelihoods and Wildlife Conservation in East Africa</td>
<td>Mike Coughenour</td>
</tr>
<tr>
<td>Patty York</td>
<td>MS</td>
<td>Differentiating Existing Habitat of the Invasive Tamarisk from Potential Habitat of the Endangered Southwestern Willow Flycatcher (<em>Empidonax Traillii Extimus</em>) Through Maximum Entropy Modeling</td>
<td>Tom Stohlgren</td>
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## Fall 2010 & Spring 2011 Graduates

<table>
<thead>
<tr>
<th>Name</th>
<th>Deg</th>
<th>Thesis or Dissertation</th>
<th>Advisor(s)</th>
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<tr>
<td><strong>Fall 2010</strong></td>
<td></td>
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</tr>
<tr>
<td>Casey Brown</td>
<td>MS</td>
<td>The effects of anthropogenic noise and human activities on ungulate behavior</td>
<td>Lisa Angeloni, Kevin Crooks</td>
</tr>
<tr>
<td>Tobah “Toby” Gass</td>
<td>PhD</td>
<td>Drought, death, and diurnal cycles: Playing with precipitation in a semi-arid woodland</td>
<td>Dan Binkley</td>
</tr>
<tr>
<td>Dirk Hobman</td>
<td>MS</td>
<td>The Next West</td>
<td>Rick Knight</td>
</tr>
<tr>
<td>Julie Kray</td>
<td>MS</td>
<td>Response of native phreatophytes to changes in precipitation regime in the San Luis Valley, Colorado</td>
<td>David Cooper</td>
</tr>
<tr>
<td>William “Carl” Saunders</td>
<td>PhD</td>
<td>Effects of riparian grazing on terrestrial invertebrate subsides that feed trout in central Rocky Mountain streams</td>
<td>Kurt Fausch</td>
</tr>
<tr>
<td>Rodney “Rod” Simpson</td>
<td>PhD</td>
<td>Soil Organic Matter and Aggregate Dynamics in an Arctic Ecosystem</td>
<td>John Moore</td>
</tr>
<tr>
<td><strong>Spring 2011</strong></td>
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<tr>
<td>Katherine “Kate” Cueno</td>
<td>MS</td>
<td>Is Thin and Chip an Ecologically Viable Fuels Reduction Option? Initial Results in Black Hills Ponderosa Forests</td>
<td>Monique Rocca</td>
</tr>
<tr>
<td>Craig Judd</td>
<td>MS</td>
<td>Impact of Methanotroph Ecology on Upland Methane Biogeochemistry in Grassland Soils.</td>
<td>Joe von Fischer</td>
</tr>
<tr>
<td>Heidi Jo Erickson</td>
<td>MS</td>
<td>Herbaceous and Avifauna Responses to Prescribed Fire and Grazing Timing in a High-Elevation Sagebrush Ecosystem.</td>
<td>Cameron Aldridge &amp; Tom Hobbs</td>
</tr>
</tbody>
</table>
Spotlight on Alumni

Julian Olden

GDPE Fall 2004

Assistant Professor Aquatic and Fishery Sciences, University of Washington

Upon graduating from the University of Toronto in 2000, I made the faithful leap from my homeland of Canada to the Colorado Front Range to work with LeRoy Poff. Indeed, it was a rather large leap (trading in my dog and sled for an automobile … kidding!), but it was perhaps the best thing that has ever happened in my life. My four years in GDPE were formative and shaped my desire to contribute science that directly informs the conservation of freshwater ecosystems.

After GDPE, I was fortunate to be awarded a David H. Smith Conservation Post-doctoral Fellowship from the Society of Conservation Biology. I headed to the University of Wisconsin – Madison to embark on a two-year project working with Jake Vander Zanden at the Center for Limnology. This provided the additional opportunity to practice my lack lustre ice-fishing skills and consume unhealthy amounts of cheese curds. My research focused on the invasion dynamics of rusty crayfish, specifically the development of quantitative models that forecasted the vulnerability of lakes and streams across the state to the introduction and ecological impacts of this invasive species. Additionally, online mapping tools were developed to help communicate the results to natural resource managers, with the goal of allowing the state to prioritize their invasive species education and prevention efforts (e.g., signage on boat launches, monitoring efforts, etc.).

In Fall 2008 I moved to University of Washington – to start a faculty position in the School of Aquatic and Fishery Sciences. This was definitely a dream job as it provided an opportunity to build my research program focusing on the interface between basic and applied science. My group focuses on a number of issues related to freshwater conservation, including invasive species ecology, water resource management and conservation planning. Over the past 4+ years my lab has grown, and now I find myself working with a wonderful group of graduate students and post-docs, concentrating on the very thing that first hooked me (no pun intended) many years ago as an undergrad – a passion for all things aquatic.

FRSES Best Research-in-Action Photo by Kate Schoenecker GDPE
Student Awards

Hamdan Receives Livestock-Climate Change Fellowship

Osman Hamdan has been selected to receive a Fellowship from the Livestock-Climate Change Collaborative Research Support Program. This grant provides support for outstanding graduate students contributing to research regarding the adaptation of livestock systems to climate change in the LCC CRSP countries of focus (Mali, Senegal, Ethiopia, Kenya, Nepal, and Tajikistan). Hamdan, a Ph.D. student in the Graduate Degree Program in Ecology at CSU, is conducting research in collaboration with faculty at Addis Ababa University in Ethiopia. His project, titled “Improving Adaptive Capacity and Market Participation of the Borana Pastoralists: A Value Chain Analysis of Live Camel and Camel Products in the Borana Plateau,” aims to define the live camel value chain in the Borana Plateau of southern Ethiopia and identify constraints and barriers to marketing live camels. In this region, pastoralists have been impacted by climate change induced droughts and reduced grassland productivity. In response, they have diversified their herds with drought-tolerant camels. Camels require less grass, typically browsing on shrubs, bushes, and trees, and can survive without water for longer than any other domestic animals. By raising camels, pastoralists have reduced their vulnerability to climate shocks and improved their resilience. However, pastoralists are still hampered by barriers to market access that constrain their income potential. Based on his research, Hamdan will recommend policy strategies and development interventions with the potential to increase income stability for camel keepers in the region and help them transition from subsistence-based production to a more market oriented one.

Adapted from Winter 2011 Livestock-Climate Change CRSP Newsletter ©.

In August, several GDPE students and their colleagues participated in the 2010 Wild West Relay, a 200 mile relay race from Fort Collins to Steamboat Springs. Running under the name Pretty Hot Doctors (PhD), the team finished strong in 36 hours. Standing from left to right: Sarah Evans (GDPE), Meg Steinweg (GDPE), Jennifer Jones (GDPE), Kristen Kaczynski (GDPE), Michelle Reed (National Renewable Energy Lab), Jessica Salo (GDPE), Kath Rathcliff (National Renewable Energy Lab), and Jessica Ernakovich (GDPE). Kneeling are two graduate students from the Department of Statistics, Erin Schliep and Stacy Edmondson.
Our GDPE students are nationally, regionally, and locally recognized for their outstanding work. Below, we list just a sample of recent awards our students have received:

Five GDPE PhD students were awarded National Science Foundation Graduate Research Fellowships. A synopsis of their research proposals is included below:

- **Dale Broder**’s proposes to take advantage of a recent introduction of Trinidadian guppies to a new environment to study the role of behavioral plasticity in early adaptation. Using field observations and laboratory common garden experiments, she will observe changes in behavior over time and tease apart plastic versus genetic effects.

- **Laura Dev** will investigate the interaction between seasonal water availability and grazing on grassland plant communities using a two-pronged approach. She will conduct a global meta-analysis exploring how grazing responses differ between climates with primarily winter precipitation and primarily growing season precipitation. She will also use a climate manipulation experiment to elucidate mechanisms behind these broad-scale patterns.

- **Justin Dohn** will examine how growth of woody and herbaceous components in savanna communities is impacted by the presence of the putative competitor, and how these impacts are mediated by abiotic factors and disturbance. The study aims to improve our understanding of underlying mechanisms and to inform management decisions regarding the sustainability of ecosystem services vital to adjacent communities.

- **Jenny Soong** will study the effect of black carbon on soil organic carbon dynamics. In grassland fires, aboveground biomass that normally contributes to soil carbon stocks annually is replaced by black carbon (charcoal). Jenny will use isotope enriched black carbon to understand how burning affects soil carbon dynamics in the tallgrass prairie.

- **Clint Leach** will develop a simulation model to investigate the relationship between food web structure and the structure of the underlying spatial network of available habitat and how that relationship affects the overall stability of the integrated spatial-trophic network with respect to habitat and species loss.

Dylan Harrison-Atlas was awarded an NSF IGERT Fellowship for CSU's Integrated Water Atmosphere Ecosystems Education and Research (I-WATER) program.

Barbara Fricks received a C2B2 Chevron Fellowship

Nell Campbell received the CSU Sustainable Bioenergy Development Center Travel Grant Program award for a summer internship in Brazil studying the soil impacts of sugarcane bioenergy production. Nell was also selected as a facilitator for a Fulbright Enrichment Seminar series in Denver, titled "Greening the Planet".

Kelly Hopping was awarded a fellowship from the Center for Collaborative Conservation at CSU.

GDPE student Christa Fettig and Marques Munis, developed, organized, and presented at the Colorado Agricultural Experiment Station Invasive Plant Research Meeting on March 22 at CSU.

Several GDPE students, including Jenny Soong, Jocelyn Lavallee, Hannah Birge, Kate Wilkins, Laura Dev, Jessica Salo, Sarah Bisbing, Sophia Linn, and Dale Broder organized a field trip for the girls science club at Preston Middle School in Fort Collins, in collaboration with the GK-12 program at CSU. (It's going to happen on April 27.) About 50 6-8th grade girls were expected to participate. The field trip focused on introducing the girls to different science/ecological research groups here on campus and talking with them about careers in science for women.

Amanda Hardy was honored to be selected as one of the 2011 Environmental Science Communication Fellows

Laura Dev received the NSF East Asia and Pacific Summer Institute fellowship which will support travel and research in Tibet.

Kristen Kaczynski received the Neal B. Kindig Fellowship from the Colorado Mountain Club in 2010.

Seema Sheth and Megan DeMarche both received the Rosemary Grant Student Research Award from the Society for the Study of Evolution.

Jenny Soong was awarded the 2011 Martin Luther King Jr. Scholarship from CSU.

Katie Renwick received Honorable Mention honors from the NSF Graduate Research Fellowship.

Osman Hamdan is the recipient of the Livestock-Climate Change Collaborative Research Program Fellowship this year (see page 20 for more information).

Sarah Evans and Matt Wallenstein were awarded an NSF Doctoral Dissertation Improvement Grant for their work on long-term drought and the response of microbial communities to moisture.

Kate Wilkins received a Center for Collaborative Conservation Fellowship to research local community perceptions toward Great Sand Dunes National Park of Colorado. This funding will allow her to assist fellow GDPE student Gloria Sumay conduct similar research at Tarangire National Park in Tanzania. The project's goal involves improving each park's wildlife management actions by improving dialogue between their staff and local communities.

Sarah Bisbing and Kristen Kaczynski, both members of David Cooper’s lab, were selected as recipients of a 2011 National Park Service George Melendez Wright Climate Change Fellow.
Environmental Science Communication Fellows -

Nine GDPE students have been selected 2011 Environmental Science Communication Fellows by the School of Global Environmental Sustainability (SoGES), GDPE, and the Center for Multiscale Modeling of Atmospheric Processes (CMMAP). As a 2011 Environmental Science Communication Fellow, selected PhD students and Post Docs will participate in a hands-on communication training workshop led by Nancy Baron, the Lead Communications Trainer for the Aldo Leopold Leadership Program, along with other nationally prominent journalists.

2011 Environmental Science Communication Fellows:

- **Daniel Auerbach**, 4th year GDPE PhD student advised by **LeRoy Poff**
- **Amanda Hardy**, 4th year GDPE PhD student in Fish, Wildlife, & Conservation Biology advised by **Kevin Crooks**
- **Kelly Hopping**, 3rd year GDPE PhD student advised by **Julia Klein**
- **Kristen Kaczynski**, 5th year GDPE PhD Forest, Rangeland, and Watershed Stewardship advised by **David Cooper**
- **Katie Langin**, 4th year GDPE PhD student in the Department of Biology advised by **Cameron Ghalambor**
- **DeAna Nasseth**, GDPE PhD student Forest, Rangeland & Watershed Stewardship advised by **Michael Coughenour**
- **Jessica Salo**, 3rd year GDPE PhD student in the Department of Fish, Wildlife, and Conservation Biology advised by **Dave Theobald**
- **Helen Sofaer**, 6th year GDPE PhD student in the Department of Biology advised by **Cameron Ghalambor**
- **Zachary Sylvain**, 3rd year GDPE PhD student in the Department of Biology advised by **Diana Wall**

Student Notes -

- In March, **Kate Cueno** traveled to the Black Hills, SD to present her Master's thesis results to federal land managers regarding the "ecological effects of using thinning & chipping techniques for fuels reduction." She met with the Wind Cave NP superintendent as well as fire and resource management staff to deliver the current research study results. Kate also presented her results to a wider audience from the region at the 9th Annual Black Hills Botanist and Ecologist Workshop held in Rapid City, SD.

- Following his thesis defense, **Eric Bowen** will lead new research and education programs at the non-profit Spring Valley Ecofarms (SVE) in Athens, GA. SVE provides hands-on management experiences for future scientists and scientific management training for future farmers. Contact SVE if you are interested in their new long-term ecosystem monitoring project. For more information contact eric.c.bowen@gmail.com or springvalleyecofarms.org

- **DeAna Nasseth** maintains affiliations in the SoGES Conservation Development Global Challenges Research Team and the Pikes Peak Area Council of Governments Sustainability Project which focuses groups on natural and built environments, water, health, transportation and energy. Nasseth has also been invited to speak about ecosystem services and serve on a panel on Watershed Restoration Strategy and Principles at the Arkansas River Basin Water Forum in Colorado Springs April 27, 2011.

- **Peter Bruss**, GDPE PhD student studying with Kathy Galvin, presented some of the photo and art results and corresponding stories created by the field participants at the end of Phase I of his field research. His field site is in the rural community of Burnt Water on the Navajo Nation in Northern Arizona. His research topic is “A community participatory exploration of the environment, renewable energy, human capacity building and entrepreneurial solutions as seen by the Navajo through photo, art and stories.”
Faculty Honors and Awards

- **Barry Noon** received the 2010 Strategic Environmental Research and Development Program (SERDP), Project of the Year award for research on fragmentation effects on birds and butterflies. **Barry Noon** also received a 2010-11 Senior Fulbright-Nehru Fellowship for his work in India.

- **Rich Conant** was awarded the Queensland Smart Futures Fellow, 2010.

- **Jason Sibold** received the Excellence in Teaching Award from the College of Liberal Arts, Colorado State University.

- **Dan Binkley** received an award for his contributions to the Uncompahgre Plateau Landscape Restoration Project. The collaborative project was selected as one of ten in the nation, and received a commitment of $9 million over the next decade to implement forest restoration treatments.

Faculty Grants:

- **Kathleen Galvin** et al. (Galvin, K. A., R S. Reid, J. Njoka, D. Nkedianye and PK Thornton) received funding from the Climate Change Livestock Collaborative Research Support Program, USAID. Title of the grant is Pastoral Transformations to Resilient Futures: Understanding Climate from the Ground Up. Galvin et al. (Galvin, K.A., J. Roque de Pinho, N Tapia and L Simpson) received further funds to make a video of her project called Maasai Voices on Climate Change: a Participatory Film Project in Kenya. This is jointly funded by Climate Change Livestock CRSP and the Climate Change, Agriculture and Food Security program, CGIAR.

- **Jeff Snodgrass** received NSF funding for his research among Indigenous peoples in an Indian wildlife sanctuary over the next three years. The grant is entitled: Environmental Displacement and Human Resilience: New Explanations Using Data from Central India. Jeff Snodgrass is the PI with Co-PI Sam Zahran (Econ), David Most (Education) and Mike Lacy (Sociology) are Senior Personnel.

- **Rich Conant** received the following grants and awards with collaborators in 2010-2011:
  1. 2011-2012 The abatement potential of soil carbon sequestration in agriculture; UN Food and Agricultural Organization.
  2. 2010-2012 Development of Protocols and Accounting Methods for Carbon Sequestration on US Rangelands; PI with Environmental Defense Fund as lead institution; USDA-CIG.

- **LeRoy Poff** received a 5-year grant from the National Science Foundation entitled: “An Integrative Traits-Based Approach to Predicting Variation in Vulnerability of Tropical and Temperate Stream Biodiversity to Climate Change.” With Cameron Ghalambor, Chris Funk and Boris Kondratieff

- **Jorge Ramirez** is lead PI on a 5-year grant from the National Science Foundation. “IGERT: WATER - Integrated Water Atmosphere and Ecosystem Education and Research.” with LeRoy Poff, Scott Denning, and Neil Grigg.

- **Joe von Fischer’s** received a new grant from the National Science Foundation. “Methane uptake in grassland soils: Biogeochemistry, Microbial Ecology and integrative modeling.” with Colleen Webb, Bill Parton, S. Matzner and D. Wedin.

- **Jason Sibold** received 2 grants from the National Park Service: “Mountain pine beetle altered forest fuels influences on wildfire in Glacier National Park.” and “Regeneration status and dynamics of rare ponderosa pine (Pinus ponderosa) stands in western Rocky Mountain.” Jason also received funding from the Joint Fire Science Program for research on “Pre-settlement fire patterns: Records of natural fire or anthropogenic fire use?”
Faculty Awards and Honors 2010-2011

Faculty Notes:

- **Alan Knapp**, GDPE Senior Ecologist, has been appointed the new editor of *Functional Ecology*, A Journal of the British Ecological Society.

- **Dan Binkley** and **Mike Ryan** were editors of a special issue of Forest Ecology and Management on 'Productivity of Tropical Plantations'.

- **Tom Hobbs** spent the fall semester at the Grimso Wildlife Research Station, a laboratory of the Department of Ecology at the Swedish Agricultural University in Uppsala. He worked on effects of harvest on lynx populations and effects of predation by lynx and wolverine on harvest of reindeer by the Sami.

- **Anna Schoettle's** research was highlighted in the article "Thriving in harsh settings - Old trees may soon meet their match" in the New York Times last fall (September 28, 2010). The article included a discussion of Anna's research on the effects of multiple stresses on the sustainability of high elevation five-needle pines and the management approaches she and her colleagues are developing. The article also featured a photograph by GDPE alumnus **Betsy Goodrich**, of a Rocky Mountain bristlecone pine stand in northern Colorado.

- **Tom Stohlgren** presented a talk on invasions of marine systems at the "Our Changing Oceans” conference that was held in Washington DC, January 19-21, 2011. This was the 11th National Conference on Science, Policy, and the Environment, sponsored by the National Council for Science and the Environment (NCSE).

Left to Right: Ambassador Melanne Verveer, Gillian Bowser, Meagan Smith (Google VP) and Astronaut Mae Jemison

**Gillian Bowser** was one of six public delegates chosen by the US Department of State to the 55th UN Commission on the Status of Women. The 55th CSW focused on women in science and technology and advises the U.S. on the status of negotiations and positions of different countries on women in science. Bowser was joined by US Ambassadors Keri Ann Jones and Melanne Verveer.
Representative Student Publications

**Bold** letters denote GDPE Faculty or Students


Representative Faculty Publications

*Bold* letters denote GDPE Faculty or Students

- Barker, C.M., Bolling, B.G., Black IV, W.C., **Moore, C.G.**, and L. Eisen. Mosquitoes and West Nile virus along a river corridor from prairie to montane habitats in eastern Colorado. J. Vector Ecol. 34:276-293; 2009.


- **Klein, D.A.**, 2010. Have they proven that Mycobacteria are present "in the mist?" ASM "Microbe" 5(5):189.

(continued on next page)
Representative Faculty Publications

*Bold letters denote GDPE Faculty or Students*


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Thanks for all your hard work!
GDPE Program Coordinator Jeri Morgan and GDPE Director LeRoy Poff