

Brian A. Mealor

Assistant Professor and Extension Weed Specialist; Department of Plant Sciences

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ACADEMIC TRAINING

<i>Degree</i>	<i>Year</i>	<i>Institution</i>	<i>Major</i>
PhD.	2006	University of Wyoming	Rangeland Ecology & Watershed Mgt.
M.S.	2003	University of Wyoming	Rangeland Ecology & Watershed Mgt.
B.S.	1999	N. Georgia College & State University	Biology

PROFESSIONAL EXPERIENCE

<i>Date</i>	<i>Position</i>	<i>Institution</i>
11/09-present	Assistant Prof. / Weed Specialist	University of Wyoming
1/07-9/09	Director of Stewardship	The Nature Conservancy in Wyoming
8/06-1/07	Post-doctoral Research Scientist	University of Wyoming
7/04-12-04	Visiting Research Assistant	USDA-ARS Forage and Range Lab

TEACHING CONTRIBUTIONS

Invasive Plant Ecology (REWM/AECL 4400/5400, 3 credits), Fall 2010. Team-taught with Tim Collier, Renewable Resources

Commercial Pesticide Applicator's Training (PLNT 1150, 1 credit). Spring 2009, 2010. Invasive Weeds, Factors affecting herbicide uptake, Rights-of-way.

Guest Lecturer, Invasive Weeds, Rangeland Restoration Ecology

Rangeland Restoration Ecology (REWM 4580/5580; 3 credits), Spring 2007. Modified existing course to include significant online component.

Guest Lecturer, Grazing and Biodiversity, U.W. Range Resource Management (REWM 5000; 3 credits), Fall 2005.

Guest Lecturer, Genetic Considerations in Rangeland Restoration, Rangeland Restoration Ecology (REWM 4580/5580; 3 credits), Spring 2004

Co-lecturer; Seminar in Invasive Species Ecology (RNEW 5985 – 2 credits), Fall 2003. Developed course with co-lecturer from pre-existing course.

Teaching Assistant; Rangeland Resource Management (REWM 5000; 3 credits), Lectures on invasive species, stocking rates, grazing systems, state and transition theory, biological diversity, etc. Fall 2002

PUBLICATIONS

Refereed

Pocewicz, A., J.M. Kiesecker, G.P. Jones, H.E. Copeland, J. Daline and **B.A. Mealor**. 2010. Effectiveness of conservation easements for reducing development and maintaining biodiversity in sagebrush ecosystems. *Biological Conservation*. (2010), doi:10.1016/j.biocon.2010.10.012

- Bergum, K., A.L. Hild and **B.A. Mealor**. 2010. Phenotypic traits of *Sporobolus airoides* from invaded and non-invaded exotic invasions after two generations of greenhouse seed increase. Restoration Ecology. (2010), doi:10.1111/j.1526-100X.2010.00754.x
- Ferrero-Serrano, A.L. Hild and **B.A. Mealor**. 2009. Can invasive species enhance competitive ability and restoration potential in native grass populations? Restoration Ecology (2009), doi:10.1111/j.1526.100X.2009.00611.x
- Ferrero-Serrano, A., T.R. Collier, **B.A. Mealor**, T. Smith and A.L. Hild. 2008. Integration of insect herbivory and competition from cool and warm season grasses on Canada thistle (*Cirsium arvense*). Rangeland Ecology and Management. 61: 529-534.
- Tyrer, S.J., A.L. Hild, **B.A. Mealor** and L.C. Munn. 2007. Establishment of native species in soils from Russian knapweed (*Acroptilon repens*) invasions. Rangeland Ecology and Management. 60: 604-612.
- Kinter, C.L., **B.A. Mealor**, N.L. Shaw and A.L. Hild. 2007. Post-fire invasion potential of rush skeletonweed (*Chondrilla juncea*). Rangeland Ecology and Management. 60: 386-394.
- Mealor, B.A.** and A.L. Hild. 2007. Post-invasion evolution of native plant populations: a test of biological resilience. Oikos. 116: 1493-1500.
- Mealor, B.A.** and A.L. Hild. 2006. Potential selection in native grasses by exotic invasion. Molecular Ecology. 15:2291-3000.
- Ferrero-Serrano, A., T. Collier, **B.A. Mealor**, T. Smith, and A.L. Hild. 2006. Interactions between native grass competition and biological control for Canada thistle control. Ecological Restoration. 24: 201-202.
- Mealor, B. A.**, A.L. Hild, & N. L. Shaw. 2004. Native plant community composition and genetic diversity associated with long term weed invasions. Western North American Naturalist. 64:503-513.

Popular Press

- Mealor, B.A.** and R.D. Mealor 2010. Strategic Weed Management, Part 4. Turning Liabilities into Assets. Wyoming Livestock Roundup December 11, 2010
- Mealor, B.A.** 2010. You Can Help Keep Invasive Weeds at Bay. Barnyards and Backyards, Fall 2010 17-17.
- Mealor, B.A.** 2010. Strategic Weed Management, Part 3. Ensuring Correct Herbicide Application. Wyoming Livestock Roundup October 23, 2010
- Mealor, B.A.** 2010. Strategic Weed Management, Part 2. Control Options. Wyoming Livestock Roundup September 7, 2010.
- Mealor, R.D. and **B.A. Mealor**. 2010. Picking plants: How to collect and preserve plants for identification. Barnyards & Backyards, Summer 2010: 23-25.
- Mealor, B.A.** 2010. Strategic Weed Management, Part 1. Assessing impacts of weeds on your property. Wyoming Livestock Roundup July 10, 2010.
- Mealor, B.A.** 2010. The Cost of Doing Nothing. Wyoming Livestock Roundup May 15, 2010.
- Mealor, B.A.** 2010. Correct identification of weeds a critical step. Barnyards & Backyards Insert April 2010.
- Tyrer, S., **B.A. Mealor**, and A.L. Hild. 2006. Triple threat approach by researchers swats Russian knapweed. Reflections. University of Wyoming, Laramie.

Publications in Prep

Smith, M., H. Copeland, A. Pocewicz, **B.A. Mealor**, J.M. Kiesecker, D. Naugle and I. Valencia. *In revision*. Sagebrush vegetation condition and greater sage-grouse abundance across a gradient of anthropogenic impact.

Sebade, B., A.L. Hild and **B.A. Mealor**. *In prep*. Resistance and resilience of *Sporobolus airoides* from invaded and non-invaded histories transplanted into *Acroptilon repens* and *Cirsium arvense* invasion.

Other Outreach Products

Mealor, B.A., R.D. Mealor and D. Smith. 2010. "Collecting plant specimens for identification and vouchering" – YouTube instructional video available at:
<http://www.youtube.com/watch?v=NhZZDx0vc2k>

PRESENTATIONS

Professional meeting presentations

Knezevic, S.Z., A. Datta, R.E. Rapp, J. Scott, **B.A. Mealor**, R.G. Lym, K.G. Beck and J. Zawierucha. 2010. Control of leafy spurge with imazapic and saflufenacil (poster). North Central Weed Science Society Annual Meeting. Lexington, KY.

Mealor, B.A., D.T. Booth, S. Cox, H.E. Copeland. 2010. Post-fire cheatgrass dynamics in the southern Wind River Range of Wyoming (paper). Western Society for Weed Science Annual. Waikoloa Village, HI.

Mealor, B.A., D.T. Booth and S. Cox. 2010. Invasion of the highlands: Post-fire *Bromus tectorum* dynamics at high elevations in the southern Wind River Range, Wyoming (poster). International meeting Society for Range Management. Denver, CO.

Sebade, Brian, A. Hild, **B. A. Mealor** and T. Smith. 2010. Resilience of native grasses from invaded and non-invaded sites transplanted into weed invasions. International Society for Range Management Annual Meeting. Denver, Co.

Mealor, B.A. 2010. Impacts of exotic weed invasion and restoration potential of shrubland wildlife habitats in the Intermountain West (paper). Wildland Shrub Symposium. Logan, UT.

Sebade, B., A.L. Hild and **B.A. Mealor**. 2009. Resistance and resilience of native grasses competing with exotic species (poster). SERDP & ESTCP Partners in Environmental Technology Technical Symposium & Workshop. Washington D.C.

Pocewicz, A., M.L. Smith, H.E. Copeland, **B.A. Mealor**, J.M. Kiesecker. 2009. Effects of the cumulative human footprint on sagebrush vegetation and greater sage-grouse abundance (paper). Annual Meeting of The Wildlife Society, Wyoming Chapter. Cody, WY.

Bergum, K. E., A. L. Hild and **B. A. Mealor**. 2009. After invasion: genetic and phenotypic variation of remnant natives in greenhouse production (paper). International meeting Society for Range Management. Albuquerque, NM.

Bartlett, F. P., A. L. Hild, K. E. Bergum, **B. A. Mealor** and T. Smith. 2009. Assessing Competitiveness of alkali sacaton genotypes exposed to invasive weeds (paper). International meeting Society for Range Management. Albuquerque, NM.

- Bartlett, F., A.L. Hild, **B.A. Mealor**, and T. Smith. 2008. Selection of alkali sacaton genotypes as competitors with Russian knapweed and Canada thistle. SERDP & ESTCP Partners in Environmental Technology Technical Symposium & Workshop. Washington D.C.
- Bergum, K.E., A.L. Hild, F.P. Bartlett, and **B.A. Mealor**. 2008. Genetic and phenotypic diversity of remnant invaded native grass after two generations (poster). Ecological Society of America Annual Meeting. Milwaukee, WI.
- Bartlett, F., A.L. Hild, **B.A. Mealor**, and T. Smith. 2008. Methods to select promising native grass genotypes as competitors with introduced invasive weed species (poster). Joint meeting; American Forage and Grassland Council and the Society for Range Management Annual Meetings. Louisville, KY.
- Bergum, K.E., A.L. Hild, **B.A. Mealor**, and T. Smith. 2008. Genetic variation within genotypes of two native grass species after two generations of greenhouse seed source improvement (poster). Joint meeting; American Forage and Grassland Council and the Society for Range Management Annual Meetings. Louisville, KY. Poster.
- Ferrero-Serrano, A., T. R. Collier, **B. A. Mealor**, A. L. Hild and T. Smith. 2007. Integrated application of biocontrol and native species for invasive plant control: implications for restoration ecology (paper). International Phytotechnologies Conference. Proceedings of the International Phytotechnology Society meetings. Denver, CO.
- Ferrero-Serrano, A., T. Smith, **B. A. Mealor**, T. Collier, S. Enloe, S.D. Miller and A.L. Hild. 2007. Combined action of a stem-boring weevil and native grass competition for control of Canada thistle (poster). Sustainable Military Readiness Conference. Orlando, FL.
- Mealor, B.A.**, C.L. Kinter, N.L. Shaw and A.L. Hild. 2007. Ecological characteristics of sites invaded by rush skeletonweed (*Chondrilla juncea*) on the Snake River Plain (paper). Society for Range Management 60th Annual Meeting. Reno/Sparks, Nevada.
- Ferrero-Serrano, A., T. Smith, **B.A. Mealor**, T. Collier, S. Enloe, S. Miller, and A.L. Hild. 2006. Combined Action of a stem-boring weevil and native grass competition for control of Canada thistle (*Cirsium arvense*) (paper). NatureServe Leadership Conference Proceedings. Baltimore, MD.
- Ferrero-Serrano, A., A.L. Hild, **B.A. Mealor**, T. Collier, S.F. Enloe, S.D. Miller. 2006. Synergistic action of native plants and a stem boring weevil (*Ceutorhynchus litura*) for control of Canada thistle (*Cirsium arvense*) – an invasive weed (poster). Society for Range Management International Meetings. Vancouver, BC.
- Smith, T., **B.A. Mealor**, A. Ferrero-Serrano, A.L. Hild and T.R. Collier. 2006. Evaluation of selected native plant populations for competition against exotic weeds (poster). SERDP-ESTCP Partners in Environmental Technology Technical Symposium & Workshop. Washington, D.C.
- Tyrer, S.J., A.L. Hild, L.C. Munn, **B.A. Mealor**, S.F. Enloe. 2006. Soil chemical changes associated with Russian knapweed invasions (poster). Society for Range Management International Meetings. Vancouver, BC.
- Mealor, B.A.** and A.L. Hild. 2006. There goes the neighborhood...or does it? Population resilience to exotic invasion (poster). Society for Range Management International Meetings. Vancouver, BC.
- Mealor, B.A.**, and A.L. Hild. 2006. Native plant population resilience to exotic invasion. UW Graduate Student Symposium (paper). Laramie, Wyoming.

- Mealor, B.A.** and A.L. Hild. 2004. Native plant population genetics response to long-term coexistence with Russian knapweed (paper). Society for Range Management National Meetings. Salt Lake City, UT.
- Mealor, B.A.** and A.L. Hild. 2004. Can native plants become competitive with exotic weeds (poster)? Invasive Plants in Natural and Managed Systems. Fort Lauderdale, FL.
- Mealor, B.A.** and A.L. Hild. 2004. When the going gets tough: native plant population response to long term weed invasion (paper). University of Wyoming Graduate School Research Symposium, Laramie, WY.
- Mealor, B. A.,** A. L. Hild, and N. L. Shaw. 2003. Native plant community response to long term invasion of *Centaurea repens* and *Cardaria draba*. Society for Range Management National Meetings (paper). Casper, WY.
- Mealor, B. A.,** A. L. Hild, and N. L. Shaw. 2002. Native plant community response to long-term invasion by *Centaurea repens* and *Cardaria draba* in Wyoming and Idaho, USA (paper). Biological Invasions in Terrestrial Ecosystems: An Evolutionary Perspective Workshop. Halle, Germany.
- Mealor, B. A.,** A. L. Hild, N. L. Shaw, and D. Kazmer. 2001. Do long-term weed infestations select for competitive natives? (poster) Great Basin Biological Research Conference. Provo, UT.
- Mealor, B. A.,** A. L. Hild, N. L. Shaw, and D. Kazmer. 2001. Do long-term weed infestations select for competitive natives? (poster) SRM-Wyoming Section Meeting. Casper, WY.

Invited extension and outreach presentations

- Mealor, B.A.** 2010. Principles of Weed Control in Reclamation. Reclamation 101 Workshop, Cody, WY.
- Mealor, B.A.** 2010. Principles of Weed Control in Reclamation. University of Wyoming Cooperative Extension In-Depth Training, Laramie, WY.
- Mealor, B.A.** 2010. Pre-disturbance inventory: Risk assessment for invasive weeds. Reclamation 201 Workshop. Rock Springs, WY.
- Mealor, B.A.** 2010. Invasive weeds and the sagebrush ecosystem. NRCS Sagebrush Workshop. Lander, WY.
- Mealor, B.A.** 2010. Aminocyclopyrachlor research update – Wyoming Rangeland Weeds. DuPont Research Summit. Denver, CO.
- Mealor, B.A.** and J. Kraft. 2010. Identification of WY noxious weeds. Detect-Assess-Respond Training. Big Piney, WY.
- Mealor, B.A.** 2010. Integrated Weed Management – importance of calibration. Small ruminant grazing workshop. Baggs, WY.
- Mealor, B.A.** and R.D. Mealor. 2010. Performing a vegetation inventory. Voices of the Valley Field Days. Saratoga, WY.
- Mealor, B.A.** and R. Lockman 2010. Identification of forbs and shrubs. Wyoming Youth Resource Education Days. Hillsdale, WY.
- Mealor, B.A.** 2010. Plant identification. Heart Mountain Community Hike. Powell, WY.
- Mealor, B.A.** 2010. Crop Weed Control, Right-of-way weed control, Range weeds. Commercial Pesticide Applicator's Training. Wheatland, WY.

- Mealor, B.A.** 2010. Rangeland Weed Management Update. Jackson Hole Weed Management Association. Jackson, WY.
- Mealor, R.D. and **B.A. Mealor**. 2010. Ecology and Management of Cheatgrass in Wyoming. Albany County Farm Bureau. Harmony, WY.
- Mealor, B.A.**, R. Gullion, R. Amundson. 2010. Assessing potential impacts of invasive weeds on sage grouse habitat. NRCS sage-grouse habitat workshop. Casper, WY.
- Mealor, B.A.** 2010. Principles of Weed Control in Reclamation. Reclamation 101 Workshop, Buffalo, WY.
- Mealor, B.A.** 2010. Principles of Weed Control in Reclamation. Reclamation 101 Workshop, Pinedale, WY.
- Mealor, B.A.** and R.D. Mealor. 2010. Cheatgrass Ecology and Management on Wyoming's Rangelands. Cody, WY.
- Mealor, B.A.** and R.D. Mealor. 2010. Ecology and Management of Cheatgrass in Wyoming. Powell, WY.
- Mealor, B.A.** 2010. Early Detection/Rapid Response for weed management. BLM Integrated Pest Management Training. Lakewood, CO.
- Mealor, R.D. and **B.A. Mealor**. 2010. Sagebrush Management on Wyoming's Rangelands. Jonah Interagency Field Office. Pinedale, WY.
- Mealor, B.A.** 2009. University of Wyoming Weed Science Update. Wyoming Weed Management Association Annual Rendezvous. Casper, WY.
- Mealor, R.D. and **B.A. Mealor**. 2009. Practical applications for cheatgrass management. Rocky Mountain Cheatgrass Management Project Workshop. Cheyenne, WY.
- Mealor, B.A.** 2009. University of Wyoming Weed Science Update. Wyoming Weed and Pest Council / Wyoming Association of Conservation Districts fall Conference. Cheyenne, WY.
- Mealor, B.A.** 2009. Weed control in reclamation. Carbon County Reclamation 101 School, Rawlins, WY.
- Mealor, B.A.** 2007. Native plant response to invaders (invited presentation). Wyoming Weed Management Association First Rendezvous. Casper, WY.

HONORS & PROFESSIONAL SOCIETIES

- Lawrence Meeboer Outstanding Classroom Teacher Nominee. 2010.
University of Wyoming Graduate School; 2006 Outstanding Doctoral Dissertation.
Society for Range Management; 2006 2nd Place PhD Research Poster.
University of Wyoming Range Club; 2005 Outstanding Graduate Student.
University of Wyoming, Graduate School; 2004, 2006 Best Paper Presentation award, Graduate Student Symposium.
Plummer Scholarship for Environment and Natural Resources Conservation and Management; 2004.
Wyoming Section SRM; 2002-2003 Range Graduate Student Scholarship.
Gamma Sigma Delta, University of Wyoming Chapter; 2002-2003 Outstanding M. S. Student.
North Georgia College and State University; 1999 Best Research Paper in Biology.
Erskine Fellow; 1994.
Sewanee, The University of the South; 1994 Award for Excellence.

Rotary Club; 1994 Rotary Youth Leadership Award
Memberships: Society for Range Management, Wyoming Weed Management Association,
Western Society of Weed Science, Gamma Sigma Delta Agricultural Honor Society, Phi
Kappa Phi Academic Honor Society

PROFESSIONAL SERVICE

National/International activities

Member, The Nature Conservancy Great Plains Initiative. 2009. Rangeland Management Team.
Reviewer/Contributor, Gunnison Sage Grouse Rangewide Conservation Plan. 2005. Threats from
Noxious Weeds Section.

Co-Developer and Co-Chair of the SRM Rangeland Cup Competition. 2006-present. Collaborative,
creative problem solving competition for graduate and undergraduate students.

Presenter, European Science Foundation. 2002. Biological Invasions in Terrestrial Ecosystems: An
Evolutionary Perspective, Halle, Germany.

Invited Moderator, Wildland Shrub Consortium. 2002. Wildland Shrub Symposium, Laramie, WY.

State of Wyoming Activities

Member, Wyoming State Weed Team, 2009-Present.

Member, Wyoming Coordinated Resource Management Program Executive Committee. 2008-
present.

Member, Wyoming Governor's Non-Point Source Task Force. 2008-present.

Member, Wyoming Plant Materials Committee. 2007-present.

University of Wyoming Activities

Member, University of Wyoming Ecological Simulation Laboratory Steering Committee. 2009.

Undergraduate Range Management Exam (URME) Coach, of Renewable Resources. 2005- 2007.

Led team to 1st place finish in international competition.

GRANTS and FUNDING

Awarded Research Proposals

University of Wyoming Global Perspectives Grant. 2010. - \$4000

"Internationalization of extension, research and teaching programs in rangeland management,
invasion ecology and reclamation science" – **Brian A. Mealor**, Rachel D. Mealor (Renewable
Resources)

University of Wyoming School of Energy Resources Matching Grant. 2010. - \$85,000

"Developing weed management strategies to improve desirable species establishment in
reclamation of disturbed lands" – **Brian A. Mealor**, Andrew R. Kniss, Anowar Islam

DuPont Crop Protection Research Grant. 2010. - \$90,000

"Developing weed management strategies to improve desirable species establishment in
reclamation of disturbed lands" – **Brian A. Mealor**, Andrew R. Kniss, Anowar Islam

- UW Agricultural Experiment Station Competitive Grant. 2010.** - **\$28,197**
“A Systems Approach for Restoring Cheatgrass Dominated Rangelands” – **Brian A. Mealor**, Rachel D. Mealor (Renewable Resources), Andrew R. Kniss
- UW Agricultural Experiment Station Competitive Grant. 2010.** - **\$52,729**
“Carbon-rich Soil Amendments for Ecological Restoration of Drastically Disturbed Rangeland Sites” – Jay Norton, **Brian A. Mealor**, Matt Anderson, Peter Stahl, Jennifer Faulkner
- Apache Corporation Research Partnership. 2010.** - **\$30,000**
“Developing weed management strategies to improve desirable species establishment in reclamation of disturbed lands” – **Brian A. Mealor**, Andrew R. Kniss, Anowar Islam
- Various Sponsors. 2010.** - **\$39,264**
“Biology and Management of Invasive Weeds in Rangelands” – **Brian A. Mealor**
- UW Major Equipment Grant. 2010.** - **\$21,120**
“Growth Chambers for Plant Science Research” - Kniss, A.R., G. Franc, A. Islam, U. Norton, **B. Mealor** and K. Belden

Other Awarded Proposals

- National Fish & Wildlife Foundation. 2009. Bull Lake Creek Fisheries Enhancement. – Brian A. Mealor
- Foundation for Sustainability and Innovation Project Grant, 2008. Rangeland Conservation Internship Program. – Brian A. Mealor
- Water for Wildlife Foundation Project Grant, 2008. Derby Springs and Dry Lake water developments. – Brian A. Mealor
- USDA-NRI Research Grant. 2008. “Ecological and Economic Risk Assessment Decision Tool for Management of *Bromus tectorum* Invasions” – Cooperator Brian Mealor; PI Cynthia Brown, Colorado State University.
- USDA-CSREES Research Grant, 2003. “Using exotic weed invasions to select competitive native grasses” –Co-Author Brian Mealor; PI Ann Hild
- USDOD Research Grant, 2003. “Effectiveness of Selected Native Plants as Competitors with Non-indigenous and Invasive Knapweed and Thistle Species” –Co-Authors Brian Mealor, Ann Hild; PI Thomas Smith, U.S. Army/CERL.
- Ecological Society of America Travel Grant, 2004.
- University of Wyoming Travel Grants, 2002, 2003, 2005.

Proposals submitted but not awarded

- USDI – Office of Surface Mining. 2010. “Preventing the establishment of invasive species through the creation of resistant communities – Cheatgrass as a model” – Catherine Tarasoff, Tom Pypker (Michigan Tech University), **Brian A. Mealor**, Co-PI’s
- University of Wyoming Agricultural Experiment Station Competitive Grant. 2009. “Evaluation of native plant materials for cheatgrass restoration in Wyoming” **Brian A. Mealor** with Rachel Mealor (Renewable Resources) Co-PI’s.

Student Mentorship

Current Graduate Students

Hergert, Holden. M.S. Agronomy. Co-chair.

Driesen, Cally. M.S. Rangeland Ecology and Watershed Management. Committee Member.

Curran, Michael. M.S. Rangeland Ecology and Watershed Management. Committee Member.

Past Graduate Students

Maan, Lakhvinder. M.S. *Completed December 2010*. Agronomy. Co-chair.

Sebade, Brian. M.S. *Completed December 2010*. Rangeland Ecology and Watershed Management. Committee Member.

Bergum, Karin. M.S. *Completed December 2009*. Rangeland Ecology and Watershed Management. Committee Member.

Bartlett, Franklin. M.S. *Completed May 2009*. Rangeland Ecology and Watershed Management. Committee Member.

Undergraduate Advising

Five undergraduate advisees in the Agroecology program

Two undergraduate research assistants in 2010

Extra-curricular Student Mentorship

Conservation internship mentor, TNC Conservation Internship Program, 2008-9.

Student advisor, University of Wyoming Range Club. 2005-2007.