

## **Erik A. Lehnhoff, Ph.D.**

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### **EDUCATION**

PhD, Ecology and Environmental Science, Montana State University, 2008  
MS, Civil and Environmental Engineering, Tennessee Technological University, 1994  
BS, Civil Engineering, Clemson University, 1993

### **RESEARCH EXPERIENCE**

#### **New Mexico State University - Assistant Professor** *2015 – Present*

My research focuses on the ecology of weeds in natural, range, and cropping systems, with an emphasis on understanding multi-trophic interactions and their implications for crops and other desirable species. Select recent projects include:

- Assessing impacts on herbicide for mesquite (*Prosopis glandulosa*) on native insects, the plant community and the soil seedbank.
- Evaluating the integration of mowing or herbicide with biological control to improve saltcedar (*Tamarix* spp.) management.
- Assessing a cover crop mixtures impacts on weed and microbial communities, soil quality and weed-crop interactions in irrigated cropping systems.
- Evaluating factors influencing distribution of cheatgrass (*Bromus tectorum*) distribution in New Mexico.
- Determining minimal water requirements to produce adequate stands of cover crops to provide agroecosystem services.
- Development and evaluation of herbicide programs for weed control in Chile.
- Discovering the biotic and abiotic drivers of Lehmann lovegrass (*Eragrostis lehmanniana*) invasion in the Chihuahuan Desert.

#### **Montana State University – Assistant Research Professor** *2008 – 2015*

##### **Department of Land Resources and Environmental Sciences**

Research focused on the ecology of plant communities in both agricultural and rangeland settings, with the aim of improving weed management through understanding plant-plant interactions, multi-trophic interactions, and fitness tradeoffs. Select projects include:

- Assessing the ecology of, and management strategies for, wild oat (*Avena fatua*) populations that have evolved multiple herbicide resistance.
- Investigating integrated practices for cultural weed management including cover crops, crop rotations, including altered row orientations, crop densities, and nutrient levels, and use of sheep to manage weeds.
- Evaluating the impacts of a changing climate and fire regime on the invasiveness of annual

grasses in the Northern Rocky Mountains and the Northern Great Plains.

- Assessing tri-trophic interactions between spotted knapweed (*Centaurea stoebe*), its pollinators, biological control agents, and parasitoids, and the resulting impacts on *C. stoebe* and native plants.

### **TEACHING EXPERIENCE**

#### **New Mexico State University – Assistant Professor**

2015 – Present

#### **Department of Entomology, Plant Pathology and Weed Science (EPPWS)**

- Develop and teach Introduction to Experimental Design, Data Collection, Interpretation and Analysis, fall 2018. Graduate special topics class.
- Develop and teach Invasive Plant Ecology and Management, fall 2017. Graduate special topics class.
- Teach Introduction to Integrated Pest Management, EPWS 100 (every fall). This class introduces students to the EPPWS major and to the main skills needed to be successful in the program.
- Teach the EPPWS seminar, EPWS 447. Students learn how to prepare scientific abstracts, posters and presentations and practice giving presentations.

#### **Montana State University – Assistant Research Professor & Adjunct Instructor** 2008 – 2015

#### **Department of Land Resources and Environmental Sciences (LRES)**

- Teach an online plant ecology graduate course that I created (LRES 540, The Ecology of Plants and Plant Communities, 2012-2016, ~14 students). This course is targeted to working professionals desiring to further their education in the environmental sciences.
- Instruct freshman seminar course (College of Letters and Sciences 101, Fall 2010-13, average of 15 students) which focuses on teaching critical thinking, dialogue, and writing skills.
- Developed and taught sustainable agriculture course (LRES 480, Sustainable Food and Bioenergy Production, Fall 2010, six students). Course covered theoretical and applied considerations for sustainable production of food and bioenergy and methods for quantifying sustainability.
- Taught undergraduate weed ecology class and laboratory (LRES 443, Weed Ecology and Management, Fall 2007 and 2008, average of 15 students). Focused on plant identification, the ecology of invasive plant species, methods of surveying, monitoring and modelling population demographics, and ecologically based weed management. Delivered guest lectures in subsequent years.
- Contributed guest lectures in soils class (LRES 201, Soils) for units on *soil and the hydrologic cycle* and *soil aeration and temperature*.
- Taught “Texts and Critics” (UH201US) in the Honors College (Fall of 2013). In this small (14 students) class we read and critically discuss a variety of texts including The Illiad (Homer), The American Scholar (R.W. Emerson), and The Origin of Species (Darwin).

#### **Montana State University – National Science Foundation Graduate Fellow**

2006 – 2008

- Developed inquiry-based science curricula and implemented lessons in three rural K-8 classrooms in schools near Bozeman, MT. Focused on plant identification, plant ecology, invasive plant species, soil science, riparian ecology, and water quality.

**Montana State University – Graduate Teaching Assistant**  
**Department of Land Resources and Environmental Sciences**

- Head teaching assistant for soil science laboratory (LRES 201, Soils, Fall 2002 – 2004).
- Teaching assistant for nutrient cycling class and laboratory (LRES 351, Nutrient Cycling, Spring 2005).

**OTHER WORK EXPERIENCE**

**Assistant Director for Research** 2008 – June 2010  
**Center for Invasive Plant Management, Montana State University, Bozeman, MT.**

Developed an invasive species research program focused on generating science-based information on invasive plant ecology and management. Specific activities included writing research grants, conducting collaborative field research, coordinating an early detection mapping project, and providing research based invasive plant management information to land managers and conservation groups through meetings, workshop trainings, and presentations.

**Project Engineer** 1996 – 2002

**TriAD Environmental Consultants, Inc., Nashville, TN.**

Professional engineer in charge of investigation and remediation of sites contaminated with hazardous or solid waste. Worked with clients, attorneys, and concerned citizens to implement environmental remediation projects.

**PUBLICATIONS**

- Buerdsell, S., Milligan, B., **Lehnhoff, E. A.** (in press). Extreme drought induces rapid declines in co-occurring native *Bouteloua eriopoda* and invasive *Eragrostis lehmanniana*. *Ecosphere*.
- Agarwal, P., Schutte, B. J., Idowu, J., Steiner, R., **Lehnhoff, E. A.** 2022. Weed suppression versus water use: Efficacy of cover crops in water limited agroecosystems. *Weed Research* 62:24-37.
- Lehnhoff, E. A., Indacochea, A., Beck, L. and Neher, P. 2022. Electricity as an effective weed control tool in non-crop areas. *Weed Research* <https://doi.org/10.1111/wre.12523>
- Schutte, B. J., Rashid, A., Marquez, I., **Lehnhoff, E. A.**, Beck, L. L. 2021. Seaside petunia (*Calibrachoa parviflora*) susceptibility to herbicides used in dry bulb onion. *HortTechnology*, 31, 679-687.
- Larson, C., Menalled, F., **Lehnhoff, E. A.**, Seipel, T. (2021). Plant community responses to integrating livestock into a reduced-till organic cropping system. *Ecosphere* 12.
- Buerdsell, S., Milligan, B., **Lehnhoff, E. A.** (2021). Invasive plant benefits a native plant through plant-soil feedback but remains the superior competitor. *Neobiota*, 64, 119-139.
- Lehnhoff EA** and Creamer R. 2020. Prediction of early season beet leafhopper populations in southern New Mexico. *Plant Health Progress*, 21:71-76. <https://doi.org/10.1094/PHP-08-19-0051-FI>
- Antosh E\*, Idowu J, Schutte BJ and **Lehnhoff EA**. 2020. Effects of Winter Cover Crops on Soil Quality and Sweet Corn Yield in Semi-Arid Irrigated Systems. *Agronomy Journal* 112:92-106. <https://doi.org/10.1002/agj2.20055>
- Metier EP\*, **Lehnhoff EA**, Mangold J, Rinella MJ and Rew LJ. 2020. Control of downy (*Bromus tectorum*) and Japanese brome (*Bromus japonicus*) using glyphosate and four graminicides: effects of herbicide rate, plant size, species, and accession. *Weed Technology*, 34:284-291.

- Lehnhoff EA** and Creamer R. 2020. Prediction of early season beet leafhopper populations in southern New Mexico. 21:71-76, Plant Health Progress. <https://doi.org/10.1094/PHP-08-19-0051-FI>
- Antosh E\*, Idowu J, Schutte BJ and **Lehnhoff EA**. 2020. Effects of Winter Cover Crops on Soil Quality and Sweet Corn Yield in Semi-Arid Irrigated Systems. Agronomy Journal 112:92-106. <https://doi.org/10.1002/agj2.20055>
- Murray L\*, Schutte B, Sutherland C, Beck L, Ganguli A and **Lehnhoff EA**. 2019. Integrating biological control and conventional methods for improved tamarisk management. Invasive Plant Science and Management 12:176-185.
- Murray L\*, Schutte BJ, Ganguli A and **Lehnhoff EA**. 2019. Impacts of *Tamarix* Litter and Mycorrhizal Amendments on *Baccharis salicifolia* Competitiveness and Mycorrhizal Colonization. Agronomy, 9, 453; doi:10.3390/agronomy9080453.
- Schutte, BJ, **Lehnhoff, EA** and Beck, LL. 2019. Evaluation of POST-directed applications of flumioxazin in New Mexico Chile Pepper. Weed Technology, 33:135-141.
- Metier EP\*, **Lehnhoff EA**, Mangold J, Rinella MJ and Rew LJ. Control of downy (*Bromus tectorum*) and Japanese brome (*Bromus japonicus*) using glyphosate and four graminicides: effects of herbicide rate, plant size, species, and accession. Weed Technology, 34:284-291.
- Lehnhoff EA**, Rew LJ, Mangold J, Seipel TF, and Ragen D. 2019. Integrated management of cheatgrass with sheep grazing and herbicide. Agronomy, 9, 315; doi:10.3390/agronomy9060315.
- Burns, E, **Lehnhoff, EA**, McKenzie, S, Maxwell, B, Dyer, WE, Menalled, FD. You cannot fight fire with fire: a demographic model suggests alternative approaches to manage multiple herbicide-resistant *Avena fatua*. Weed Research. Online June 19, 2018. DOI: 10.1111/wre.12315.
- Davis, S, Mangold, J, Menalled, F, Orloff, N, Miller, Z and **Lehnhoff, E**. 2018. A Meta-Analysis of Field Bindweed (*Convolvulus arvensis*) Management in Annual and Perennial Systems. Weed Science 66:540-547.
- Davis, S, Mangold, J, Menalled, F, Orloff, N, Miller, Z and **Lehnhoff, E**. 2018. A meta-analysis of Canada thistle (*Cirsium arvense*) management. Weed Science 66:548-557.
- Ranabhat, N, Seipel, T, **Lehnhoff, EA**, Miller, Z, Menalled, F, Burrows, M. 2018. Temperature and alternative hosts influence *Aceria tosichella* infestation and Wheat streak mosaic virus infection. Plant Disease. 102:546-551.
- Seipel, TF, Rew, LJ, Taylor, KT, Maxwell, BD, **Lehnhoff, EA**. 2018. Disturbance type influences plant community resilience and resistance to *Bromus tectorum* invasion in the sagebrush steppe. Applied Vegetation Science. <https://doi.org/10.1111/avsc.12370>
- Larson, C, **Lehnhoff, EA**, Rew, LJ. 2018. Competition between cheatgrass and bluebunch wheatgrass is altered by temperature, resource availability, and atmospheric CO<sub>2</sub> concentration. Oecologia 186:855-868. <https://apsjournals.apsnet.org/doi/abs/10.1094/PDIS-06-17-0782-RE>
- Larson, C, **Lehnhoff, EA**, Rew, LJ. 2017. A warmer and drier climate in the northern sagebrush biome does not promote cheatgrass invasion or change its response to fire. Oecologia 185:763-774.
- Lehnhoff, EA**, Miller, Z, Miller, P, Johnson, S, Scott, T, Hatfield, P and Menalled, FD. 2017. Organic Agriculture and the Quest for the Holy Grail in Water-Limited Ecosystems: Managing Weeds and Reducing Tillage Intensity. Agriculture, 7:33; doi:10.3390/agriculture7040033.

- Ishaq, SL, Johnson, SP, Miller, ZJ, **Lehnhoff, EA**, Olivo, S, Yeoman, CJ and Menalled, FD. 2017. Impact of cropping systems, soil inoculum, and plant species identity on soil bacterial community structure. *Microbial Ecology*, 73:417-434.
- Johnson, S, Miller, ZJ, Miller, P, **Lehnhoff, EA**, Menalled, FD. 2017. Cropping systems modify the impacts of biotic plant-soil feedbacks on wheat (*Triticum aestivum*) growth and competitive interactions. *Weed Research*, 57:6-15.
- Herron-Sweet, CR, Mangold, JM, **Lehnhoff, EA**, Burkle, LA, and Littlefield, JL. 2016. Temporal- and density-dependent impacts of an invasive plant on pollinators and pollination services to a native plant. *Ecosphere* 7:1-13.
- Miller, ZJ, **Lehnhoff, EA**, Menalled, FD, and Burrows, M. 2015. Effects of nitrogen and CO<sub>2</sub> fertilization on the epidemiology of *Wheat streak mosaic virus*. *Plant Disease*, 99:1803-1807.
- Lehnhoff, EA**, Miller, ZJ, Menalled, FD, Ito, D, and Burrows, M. 2015. Wheat and barley susceptibility and tolerance to multiple isolates of *Wheat streak mosaic virus*. *Plant Disease*, 99:1383-1389.
- Keith, B, **Lehnhoff, EA**, Burns, E, Menalled, FD, and Dyer, W. 2015. Characterization of *Avena fatua* L. populations with resistance to five herbicide modes of action. *Weed Research*, 55:621-630.
- Barroso, J, Miller Z., **Lehnhoff, EA**, Hatfield, PG, and Menalled, FD. 2015. Impacts of cropping system and management practices on the assembly of weed communities. *Weed Research*, 55:426-435.
- Herron-Sweet, CR, Mangold, JM, **Lehnhoff, EA**, Littlefield, JL, and Burkle, LA. 2015. Native parasitoids associated with the biological control agents of *Centaurea stoebe* in Montana, USA. *Biological Control* 86:20-27.
- Ward, S., R.D. Cousens, M.V. Bagavathiannan, J.N. Barney, H.J. Beckie, R. Busi, A.S. Davis, J.S. Dukes, F.Forcella, R.P. Freckleton, E.R. Gallandt, L.M. Hall, M. Jasieniuk, A.Lawton-Rauh, **E.A. Lehnhoff**, M. Liebman, B.D. Maxwell, M.B. Mesgaran, J.V. Murray, P. Neve, M.A. Nuñez, A. Pauchard, S.A. Queenborough, B.L. Webber. 2014. Agricultural weed research: a critique and two proposals. *Weed Science* 62: 672-678.
- Lehnhoff, EA**, ZJ Miller, MJ Brelsford, S White, and BD Maxwell. 2013. Relative canopy height influences wild oat (*Avena fatua*) seed viability, dormancy, and germination. *Weed Science*, 51:564-569.
- Irvine, KM, VM Backus, MG Hohmann, **EA Lehnhoff**, BD Maxwell, K Michels, and LJ Rew. 2013. A comparison of adaptive sampling designs and estimation methods for autologistic regression: a simulation study using a census of *Bromus inermis*. *Environmentrics* 24:407-417.
- Lehnhoff, EA**, BK Keith, WE Dyer, and FD Menalled. 2013. Impact of biotic and abiotic stresses on the competitive ability of multiple herbicide resistant wild oat (*Avena fatua*). *PLOS One* Volume 8, Issue 5.
- Lehnhoff, EA**, BK Keith, WE Dyer, RK. Peterson, and FD Menalled. 2013. Characterization of multiple herbicide resistance in wild oat (*Avena fatua*) and its impacts on physiology, germinability, and seed production. *Agronomy Journal*, 105:854-862.
- Lehnhoff, EA**, FD Menalled. 2013. Impacts of Tamarix-mediated soil changes on restoration plant growth. *Applied Vegetation Science*, 16:438-447.
- Murray, JV, **EA Lehnhoff**, P Neve, SL Poggio and BL Webber. 2012. 'Raising the bar': improving the standard and utility of weed and invasive plant research. *New Phytologist* 196:678-680.

- Maxwell, BD, V Backus, K Irving, M Hohmann, **EA Lehnhoff** and LJ Rew. 2012. Comparison of transect based adaptive sampling methods for invasive plant species. *Invasive Plant Science and Management* 5: 178-193.
- Lehnhoff, EA**, LJ Rew, C Zabinski and FD Menalled. 2012. Reduced impact or longer lag phase? *Tamarix* in the northwestern United States. *Wetlands* 32:497-508.
- Lehnhoff, EA**, FD Menalled and LJ Rew. 2011. Tamarisk (*Tamarix* spp.) establishment in its most northern range. *Invasive Plant Science and Management* 4:58-65.
- Maxwell, BD, **EA Lehnhoff** and LJ Rew. 2009. The rationale for monitoring invasive plant populations as a crucial step for management. *Invasive Plant Science and Management* 1:1-9.
- Lehnhoff, EA**, LJ Rew, BD Maxwell and ML Taper. 2008. Quantifying invasiveness: A case study of *Linaria vulgaris*. *Invasive Plant Science and Management* 1:319-325.
- Lehnhoff, EA**, W Woolbaugh and LJ Rew. 2008. Designing the Perfect Plant: Activities and a game to investigate plant ecology. *Science Scope*. 32:29-35.
- Rew, LJ, **EA Lehnhoff** and BD Maxwell. 2007. Non-indigenous species management using a population prioritization framework. *Canadian Journal of Plant Science*. 87:1029-1036.

### **SELECT RESEARCH GRANTS**

- USDA Crop Protection and Pest Management. 2021. \$191,173, Schutte, BJ, Creamer, RJ, **Lehnhoff, E**, Bundy, CS, Acharya, R and Sanogo, S. Allelopathic Cover Crops for Pest Suppression in Chile Pepper in the Southwest
- Western Integrated Pest Management Center. 2019. \$30,000, **Lehnhoff, E**, Beck, L and Neher, P. Developing a new method for controlling weeds using electricity: An environmentally friendly, non-Herbicidal, tree and weed killing technique.
- USDA Natural Resources Conservation Service. 2018. Thompson, D, Park, I and **Lehnhoff, E**. \$200,000. Influence of mesquite herbicide treatment on soil health and potential native biological control agents.
- WinField Solutions. 2018. \$11,505. **Lehnhoff, E** and Schutte, B. Herbicides and adjuvants for weed control in irrigated fields in New Mexico.
- New Mexico Chile Commission. 2017. Schutte, B, **Lehnhoff, E**, and Morris, E. \$8,033. Evaluation of flumioxazin + pyroxasulfone for pre-emergence control of mid-season weeds in chile.
- WinField Solutions. 2017. \$6,769. **Lehnhoff, E** and Schutte, B. Herbicides and adjuvants for weed control in irrigated fields in New Mexico.
- Jornada Basin LTER, 2016. \$23,000. **Lehnhoff, E** and Pietrasiak, N. Graduate Student Fellowship. Factors influencing the spread of Lehmann lovegrass and its impacts at the Jornada Experimental Range.
- New Mexico State University Agricultural Experiment Station. 2016. \$40,000. Pietrasiak, N. and **Lehnhoff, E**. Lehman lovegrass invasion in New Mexico and resulting feedback on native grasses and soil microbiota.
- Western Integrated Pest Management Center. 2016. \$30,000, **Lehnhoff, E**, Beck, L, Shutte, B and Sutherland, C. Integrating Mechanical or Chemical Control with Biological Control for Improved Saltcedar Management at Southwestern Reservoirs.
- WinField Solutions. 2016. \$4,936. **Lehnhoff, E** and Schutte, B. Herbicides and adjuvants for weed control in irrigated fields in New Mexico.
- New Mexico Chile Commission. 2016. Schutte, B, **Lehnhoff E**, and Morris, E. 2016. \$9,244.

- Improving herbicide programs for mid- to late-season weeds in chile pepper.
- Montana Wheat and Barley Committee. 2015. \$11,520. Miller, Z, Maxwell, B, **Lehnhoff, E** and Menalled F. Expanding the understanding of the impacts and management of field bindweed (*Convolvulus arvensis*) in organic grain production.
- Montana Wheat and Barley Committee. 2015. \$14,555. Menalled, F, Mangold, J, **Lehnhoff, E**, Orloff, N and Miller, Z. Assessing integrated approaches to manage Canada thistle (*Cirsium arvense*) and field bindweed (*Convolvulus arvensis*) in small-grain systems. A meta-analysis approach.
- Montana Noxious Weed Trust Fund. 2015. \$45,410. Managing dense cheatgrass infestations on rangeland, and understanding its impacts under an altered climate. **EA Lehnhoff**, LJ Rew, TF Seipel, FD Menalled and J Mangold.
- USDA National Institute of Food and Agriculture – Organic. 2015. \$500,000. Menalled, FD, **Lehnhoff, EA**, Hatfield, P, Miller, P, Gedeon, T, Miller, Z, Burrows, M and Bekkerman, A. Assessing the vulnerability and resiliency of integrated crop-livestock organic systems under current and predicted climate scenarios.
- USDA National Institute of Food and Agriculture. 2015. \$165,000. Dyer, W, Keith, B, **Lehnhoff, E** and Menalled, F. The physiological mechanisms and management of herbicide-resistant *Avena fatua*.
- Montana Noxious Weed Trust Fund. 2014. \$30,000. Mitigating the impact of cheatgrass under a changing climate. **EA Lehnhoff**, LJ Rew, and TF Seipel.
- Montana Noxious Weed Trust Fund. 2013. \$39,273. Impacts of fire and grazing on cheatgrass populations in Montana. **Lehnhoff, EA**, LJ Rew, and TF Seipel.
- National Institute of Food and Agriculture (USDA). 2012. \$150,000. Investigating multi-trophic interactions between invasive plants and insects to enhance native forage production on western rangeland. Mangold, J, **EA Lehnhoff**, L Burkle, and J Littlefield.
- National Institute of Food and Agriculture (USDA). 2012. \$500,000. Molecular, physiological, and ecological characterization of multiple herbicide resistance in *Avena fatua*. Dyer, WE, FD Menalled, BD Maxwell, **EA Lehnhoff** and B Keith.
- Montana Noxious Weed Trust Fund. 2010. \$29,370. Saltcedar effects on mycorrhizal fungal communities and screening of native species for use in restoration of saltcedar degraded sites. **Lehnhoff, EA**, C Zabinski, M Lavin, LJ Rew, FD Menalled, and E Galli-Noble.
- Rocky Mountain Cooperative Ecosystem Studies Unit. 2009. \$14,944. 2010 Non-Native Plant Inventory at Little Bighorn National Monument. **Lehnhoff, EA**.
- Montana Noxious Weed Trust Fund. 2009. \$30,562. Assessing plant community and soil characteristics after saltcedar invasion and treatment. **Lehnhoff, EA**, LJ Rew, FD Menalled and E Galli-Noble.
- The Nature Conservancy, 2008. \$8,000. Non-indigenous plant species survey and probability of occurrence map development for the Centennial Valley and Rocky Mountain Front, MT. **Lehnhoff, EA**.
- USFS Rocky Mountain Research Station, Fire Sciences Laboratory, 2004. \$8,382. The Effects of Disturbance on the Invasiveness of *Linaria vulgaris*. **Lehnhoff EA**, LJ Rew and BD Maxwell.

### **SELECT PRESENTATIONS**

- Lehnhoff, EA**, Agarwal, P, Steiner, R, and Idowu, J. Cover Crops Grown with Minimum Irrigation Improve Agricultural Soil Properties in New Mexico. Soil Science Society of America Annual

- Meeting, Soil Science Society of America, Salt Lake City, UT, November 10, 2021.
- Lehnhoff, EA**, Schroeder, R, and Reichenborn, M. Mesquite control across a land degradation gradient. New Mexico State Land Office, Virtual, February 10, 2021.
- Lehnhoff, EA** and Faist, AM. Mesquite Ecology and Restoration Ecology. Native Plant Society of New Mexico Annual Conference, Native Plant Society of New Mexico, Alamogordo, NM, August 21, 2021.
- Lehnhoff, EA**, Thompson, D, Faist, A and Webb, N. The challenge of mesquite management Jornada. Short Course, USDA ARS - Jornada Basin Long Term Experimental Research, Las Cruces, NM, June 28, 2021.
- Lehnhoff, EA**, Mesquite Management: A field perspective. Jornada Short Course, USDA ARS - Jornada Basin Long Term Experimental Research, Las Cruces, NM, June 28, 2021.
- Buerdsell, SL, Milligan, B and **Lehnhoff, EA**. Lehmann lovegrass ecology and interactions with native grama species. Oral presentation. New Mexico State University, Department of Biology. Biosymposium, March 7, 2020.
- Agarwal, P and **Lehnhoff, EA**. Impacts of Winter Cover Crops on Weeds in Southwest Irrigated Agriculture. Poster Presentation. Weed Science Society of America / Western Society of Weed Science. Maui, HI, March 4, 2020.
- Lehnhoff, EA**, Pietrasiak, N, Dominquez, A and Buerdsell, S. Lehmann Lovegrass (*Eragrostis lehmanniana*) Ecological Impacts and Management Opportunities. Invited talk. Symposium on Invasive Grass Impacts and Management, Weed Science Society of America / Western Society of Weed Science. Maui, HI, March 3, 2020.
- Lehnhoff, EA**, Bailey, D, and Neher, P. Reimagining the Use of Electricity to Kill Weeds. Poster Presentation. Weed Science Society of America / Western Society of Weed Science. Maui, HI, March 10, 2020.
- Lehnhoff, EA**, Rew, LJ, Mangold, J, and Seipel, T. Integrated cheatgrass (*Bromus tectorum*) management with herbicide and sheep. Poster presentation. Poster pod 12:67, *Society of Range Management Meeting*, Denver, CO, February 17-20, 2020.
- Lehnhoff, EA**, Murray, L, Sutherland, CA, Ganguli, A, Schutte, BJ and Beck, L. (2019). Integrating Mechanical or Chemical Control with Biological Control for Improved Saltcedar Management at Southwestern Reservoirs. Western Society of Weed Science. Denver, CO.
- Dominguez, A, Pietrasiak, N, **Lehnhoff, EA**, and Kyker (2018). ACES Open House, New Mexico State University, College of ACES, New Mexico State University, "A comparison of the rhizosphere microbial communities of the invasive Lovegrass and native Black grama", April 14, 2018.
- Antosh, E, Idowu, J, Schutte, B and **Lehnhoff, EA** (2018). ACES Open House, New Mexico State University, College of ACES, New Mexico State University, "Cover crop benefits for soil improvement and weed management in southern New Mexico", April 14, 2018.
- Murray, L, Schutte, BJ, Sutherland, CA, Ganguli, AC, **Lehnhoff, EA** (2018). Society of Range Management, Society of Range Management, Reno, NV, "Integrating Tamarix Biocontrol Management with Conventional Management in Southwestern Reservoirs", January 29, 2018.
- Lehnhoff, EA** and Murray, L (2018). Integrating Herbicide or Mowing with Biological Control for Improved Tamarisk Control. *Proceedings of the Western Society of Weed Science*. Anaheim, CA, March 13, 2018.
- Pierson-Metier, E, Lehnhoff, **EA**, Rinella, M, Mangold, J and Rew, LJ (2018). Evaluating the

- Efficacy of Four Graminicides on *Bromus tectorum* and *Bromus japonicas*. *Proceedings of the Western Society of Weed Science*. Anaheim, CA, March 13, 2018.
- Burns, EE, **Lehnhoff, EA**, Dyer WE and Menalled FD (2017). Impacts of environmental and biological stressors on the population dynamics of multiple herbicide resistant *Avena fatua* (L.). *Proceedings of the Weed Science Society of America*. Tuscon, Arizona, February 6-9, 2017.
- Murray, LM, **Lehnhoff, EA**, Schutte, BJ and Sutherland, CA (2017) Integrating biological control with conventional methods for enhanced *Tamarix* management. *Proceedings of the Weed Science Society of America*. Tuscon, Arizona, February 6-9, 2017.
- Rew, LJ, Larson, C and **Lehnhoff, EA** (2017) Differing impacts of CO<sub>2</sub> and drought due to competitive interactions between annual and perennial grass. *Proceedings of the Weed Science Society of America*. Tuscon, Arizona, February 6-9, 2017.
- Lehnhoff, EA**, Rew, LJ, and Mangold, J (2017) Integrated management of *Bromus tectorum* (cheatgrass) with sheep and herbicide. *Proceedings of the Weed Science Society of America*. Tuscon, Arizona, February 6-9, 2017.
- Rew, LJ, **Lehnhoff, E**, Seipel T, Mangold J and Hatfield P (2017) Integrated weed management of dense cheatgrass on productive rangeland. *Montana Weed Control Association Annual Meeting*, Great Falls, January 8-11, 2017.
- Lehnhoff, EA**. Invasion Ecology, Saltcedar and Lehmann Lovegrass in New Mexico. A presentation for The Science Café, presented by Sigma Xi, Las Cruces, NM, December 1, 2016.
- Lehnhoff, EA**. The Ecology of Plant Invasions. Sierra County Pesticide Applicators Training, Truth or Consequences, NM, December 1, 2016.
- Lehnhoff, EA**. Invasion Ecology, Saltcedar and Lehmann Lovegrass in New Mexico. EPPWS Departmental Seminar, Las Cruces, NM, October 26, 2016.
- Rew, LJ, Larson, C and **Lehnhoff, EA**. The role of climate and fire on plant composition in the currently cooler, moister regions of the sagebrush biome. Ecological Society of America, Fort Lauderdale, FL, August 11, 2016.
- Lehnhoff, EA**, Maxwell, BD, Taylor, K and Rew, LJ. Plant community resistance and resilience to local scale perturbations. Ecological Society of America, Fort Lauderdale, FL, August 11, 2016.
- Lehnhoff, EA**. Weed ecology – traits and invasiveness. Southwest Noxious Weed Short Course, Farmington, NM, July 20, 2016.
- Lehnhoff, EA**, Seipel, T and Rew, LJ. Fire and fire management impacts on cheatgrass (*Bromus tectorum*) in Montana. *Proceeding of the 69<sup>th</sup> Meeting of the Western Society of Weed Science*, Albuquerque, NM, March 7-10, 2016.
- Rew, LJ, Larson, C and **Lehnhoff, EA**. Plant community interactions are stronger drivers than climate in cheatgrass invasion of Montana's sagebrush steppe. *Proceedings of the 56<sup>th</sup> Meeting of the Weed Science Society of America*, Puerto Rico, February 8-11, 2016.
- Lehnhoff, EA**, Seipel, T, Mangold, K, Regan, D and Rew, LJ. Integrated management of *Bromus tectorum* (cheatgrass) with sheep and herbicide. *Proceedings of the 56<sup>th</sup> Meeting of the Weed Science Society of America*, Puerto Rico, February 8-11, 2016.
- Burns EE, Keith, BK, **Lehnhoff, EA**, Menalled, FD and Dyer, WE. Characterizing the transcriptome and proteome of multiple herbicide resistant *Avena fatua* L. *Proceedings of the 56<sup>th</sup> Meeting of the Weed Science Society of America*, Puerto Rico, February 8-11, 2016.
- Lehnhoff, EA**, Rew, LJ, Seipel, TF. Ecology and Management of Alien Plant Invasions, Fire does

- not promote cheatgrass (*Bromus tectorum*) invasion in Montana, USA. EMAPI, September 22, 2015, Waikoloa Village, HI.
- Rew, LJ, Brummer, T, **Lehnhoff, EA**, Maxwell, BD, Bridges, M, Ecology and Management of Alien Plant Invasions, Variable non-native species impact across occurrence gradients offers possibility for site-specific population management. EMAPI, September 21, 2015, Waikoloa Village, HI.
- Ranabhat, NB, Burrows, MB, Miller, ZJ, **Lehnhoff, EA**, Menalled FD. Impact of cover crop termination methods on diseases of wheat and lentil. American Phytopathological Society and APS Pacific Division Joint meeting. August, 2015, Pasadena, CA.
- Seipel, TF, **Lehnhoff EA**, Larson C and Rew LJ. The Performance of Cheatgrass, Native Bunchgrasses, and Winter Wheat in a Changing Climate. Montana State University. Crop and pest management school. Jan, 2015 Bozeman Montana.
- Lehnhoff, EA**, Maxwell, BD, and Rew, LJ. Plant community resilience to disturbance and *Linaria vulgaris* invasion across an environmental gradient. Weed Science Society of America Annual Meeting, February 3-6, 2014. Vancouver, BC.
- Seipel, TF, **Lehnhoff, EA**, and Rew, LJ. The abundance of *Bromus tectorum* in response to fire and fire suppression. Weed Science Society of America Annual Meeting, February 3-6, 2014. Vancouver, BC.
- Dyer, WE, Keith, B, Burns, E, **Lehnhoff EA**, and Menalled, F. Elevated constitutive and inducible expression of a Cytochrome P450 mRNA in multiple herbicide resistant wild oat (*Avena fatua*). Weed Science Society of America Annual Meeting, February 3-6, 2014. Vancouver, BC.
- Dyer, WE, Keith, B, **Lehnhoff, EA**, Menalled, F, and Maxwell, BD. Molecular, physiological, and ecological characterizations of multiple herbicide resistance in *Avena fatua*. Weed Science Society of America Annual Meeting, February 3-6, 2014. Vancouver, BC.
- Rew, LJ, Bridges, M, Brummer, T, **Lehnhoff, EA**, Pollnac, FW, Maxwell, BD, and Skurski, T. Dissecting the drivers of local plant invasions: Disturbance, environment, and propagule pressure. Weed Science Society of America Annual Meeting, February 3-6, 2014. Vancouver, BC.
- Herron-Sweet, C, Mangold, J, **Lehnhoff, EA**, Burkle, L, and Littlefield, J. November 2012. Investigating multi-trophic interactions between invasive plants and insects to enhance native forage production on western rangeland. National Institute of Food and Agriculture, Insects and Nematodes, Principal Investigators meeting, Washington, DC.
- Lehnhoff, EA**, Backus, V. Maxwell, BD and Rew, LJ. March 25, 2011. *Invited Web Seminar*. Alberta Agriculture and Rural Development, Pest Surveillance Update. Non-indigenous Plant Survey Considerations and Methods.
- Lehnhoff, EA**, Menalled, F and Rew, LJ. Weed Science Society of America, Denver, CO. February 10, 2010. Factors influencing *Tamarix* spp. Establishment in Montana. (Poster).
- Lehnhoff, EA**. January 13, 2010. Fundamentals of Nonindigenous Plant Species Inventory/Survey. A Web Seminar Presented by the Center for Invasive Plant Management.
- Lehnhoff, EA**, Maxwell, BD and Rew, LJ. February 3, 2009. Competing Weed Management Strategies: Early Detection – Rapid Response vs. Surveying, Population Monitoring and Prioritization. Wyoming Integrated Pest Management Training, Cody, WY.
- Lehnhoff, EA**, Rew, LJ and Maxwell, BD. June 24, 2008. Plant Community Response to Disturbance in the Presence of *Linaria vulgaris* (yellow toadflax). International Weed Science

Congress. Vancouver, BC.

**Lehnhoff, EA**, Rew, LJ and Maxwell, BD. August 7, 2007. Effects of Disturbance and Environment on Yellow Toadflax (*Linaria vulgaris*). (Poster). Ecological Society of America, San Jose, CA.

**Lehnhoff, EA**, Rew, LJ and Maxwell, BD. February 8, 2007. Disturbance Size and Propagule Pressure Influence Colonization Success of Yellow Toadflax (*Linaria vulgaris*). Weed Science Society of America, San Antonio, TX.

Maxwell, BD, Rew, LJ, Menalled, FD, Hulting, A, Bauer, B and **Lehnhoff, EA**. October 25, 2006. Linking spatial and temporal population dynamics. EWRS workshop on modelling weed population dynamics, Research Centre Flakkebjerg, Denmark.

**Lehnhoff, EA**, Maxwell, BD and Rew, LJ. March 15, 2006. Modelling and Predicting the Invasiveness of Plant Populations. Western Society of Weed Science, Reno, Nevada.

**Lehnhoff, EA**, Rew, LJ and Maxwell, BD. March 8, 2005. Effects of Disturbance and Environment on the Invasion Potential of Yellow Toadflax. Western Society of Weed Science, Vancouver, British Columbia, Canada.

#### **PROFESSIONAL MEMBERSHIPS**

Weed Science Society of America; Western Society of Weed Science; Ecological Society of America; Gamma Sigma Delta honorary agricultural society (NMSU Chapter President 2018-2019); Sigma Xi Scientific Research Society

#### **SERVICE AND VOLUNTEER ACTIVITIES**

Reviewer for: *Basic and Applied Ecology*; *Ecology and Evolution*; *Invasive Plant Science and Management*; *Journal of Sustainable Agriculture*; *Rangelands*, *Restoration Ecology*, *Weed Science*. Reviewer and associate editor for *Weed Research*.

#### **AWARDS AND RECOGNITIONS**

Outstanding Early Career Weed Scientist, Western Society of Weed Science, 2017.

Nominated for President's Excellence in Teaching Award, Montana State University, 2014

Nominated for Outstanding Online Teaching award, Montana State University, 2013

Outstanding Paper in *Invasive Plant Science and Management*, 2008

National Science Foundation, Big Sky Institute Science and Society Fellows Program Fellowship. July 2006 – June 2008 (\$60,000).

3<sup>rd</sup> place, graduate student paper presentation, Western Society of Weed Science Annual Meeting, 2005