PETER B. ADLER
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Academic Training

2003	PhD	Colorado State University	Ecology
1994	A.B.	Harvard College	Environmental Studies

Professional experience

2008-present	Adjunct assistant professor, Dept. Forest, Range and Watershed Stewardship, Colorado State University
2006-present	Assistant professor, Dept. Wildland Resources, Utah State University
2005-2006	Post-doctoral fellow, National Center for Ecological Analysis and Synthesis (NCEAS), Santa Barbara, California
2003-2005	Post-doctoral fellow, University of California, Santa Barbara
1998-2003	Graduate research assistant, Colorado State University

Fellowships and Awards

2005-2006	NCEAS Post-doctoral Fellowship
2003-2005	NSF Bioinformatics Post-doctoral Fellowship
2000	Organization of American States, Regular Training Fellow
1998-2001	NSF Graduate Fellowship
1996	U.S. Fulbright Fellowship (Argentina)
1994	Magna cum laude, Harvard College

Competitive grants

2010	CAREER: Forecasting the community impacts of climate change—When do species interactions matters? NSF (PI)
2010	"Diminishing snowpacks, nutrient cycling, and vegetation change," NSF, pending (co-PI)
2010	"Climate change and cheatgrass invasion in sagebrush steppe rangelands," Utah Agriculture Experiment Station, $20,000 (PI)
2010	"Bison, cattle, and rangeland degradation: Replacing perceptions with data," Berryman Institute, $16,500 (PI)
2010	Gardner Junior Faculty Travel Fellowship, $2,000 (PI)
2009	"CAREER: Climate variability and community dynamics," NSF, not funded (PI)
2009	"Biodiversity and climate change: Challenges for research and management in sagebrush steppe," USDA, not funded (PI)
2009	"Nonlinear environmental responses and the ecological consequences of altered climate variability," NSF, not funded (PI)
2008	"Climate change effects on rangeland resources: Using the past to predict the future,"USDA Rocky Mountain Research Station, $52,000 (PI)
2008	Supplement to "Coexistence in a changing environment," NSF, $37,000 (PI)

2008	"LTREB: Comparison of population and community dynamics under historical and future climate regimes," NSF, not funded (PI)
2007	"How will future changes in precipitation regimes impact plant species diversity?" Utah State University, New Faculty Grant, $15,000 (PI)
2007	"Forecasting changes in rangeland vegetation under future climate and grazing management," Utah Agriculture Experiment Station, $80,000 (PI)
2006	"Demographic inertia: Persistence of plant populations under climate change," NSF, $50,000 (PI)
2006	"Coexistence in a changing environment," NSF, $170,000 (PI)
1999	NSF Dissertation Improvement Award, PI, $18,000 (PI)

Teaching

Utah State University:

WILD3800: Wildland Ecosystems, Utah State University, 35-40 students, Spring 2007-2010

WILD6770: Plant Community Ecology, Utah State University, 9-16 students, Spring 2007-2010

WILD6960: Graduate Ecology, Utah State University, guest lectured 4 contact hours, 20-30 students, Fall 2006, 2007

Colorado State University:

RS-332: Range Measurements, Colorado State University (Co-Instructor), 2002

Advising

Primary advisor:

Current advisees

- Aldo Compagnoni, PhD, 2008-present
- Joanna Hsu, MS, 2008-present
- Ian Ware, MS, 2010-present

Past advisees

- Harmony Dalgleish, post-doctoral, 2007-2009
- Jayanti Mukherjee, PhD (co-advised), 2006-2010
- Luke Zachmann, MS, 2007-2009

Graduate committees:

Tanushree Biswas (PhD 2010), Kristen Pekas (MS 2009), Julie Ripplinger (MS 2009), Sarah Mohlman (PhD), Drew Rayburn (PhD), Beth Ross (PhD), Glenda Yenni (PhD), Xiao Xiao (PhD), Kerry Byrne (PhD, Colorado State University)

Undergraduate mentoring:

Daniel Anaya, Sarah Sampson, Isaac Ashby, Anthony Frenzel, Camilla Frenzel, Cody Howard, Erik Andrus, Mindi Lundberg, Kim Dutter, SanShi Glover, Jed Anderson

Service

Professional:

- Organized a symposium on "Climate change and potential natural vegetation" for the 2010 Society of Range Management meeting.

- Served on NSF site review team to the National Center for Ecological Analysis and Synthesis, January, 2009
- Served on NSF Ecological Biology panel, October 2007
- Ad-hoc reviewer for NSF Ecology proposals (2-4 per year)
- Associate Editor, *Journal of Vegetation Science* 2010-present
- Member of *Journal of Vegetation Science* Editorial Board 2007-2010
- Manuscript reviews for *The American Naturalist*, *Ecology, Ecology Letters, Ecological Applications, Ecosystems, Functional Ecology, Global Change Biology, Global Ecology and Biogeography, Journal of Animal Ecology, Journal of Arid Environments, Journal of Ecology, Journal of Environmental Quality, Journal of Vegetation Science, Nature, Oikos, Oecologia* (approximately 10 per year total)
- Founding member of the Nutrient Network, a globally distributed network of field experiments now funded by NSF
- Presider at "Grasslands" session of Ecological Society of America annual meeting, August, 2008
- Judge, student poster and presentation competitions, Ecological Society of America meetings, 2006 and 2007
- Member of the Ecological Society of America, Society for Range Management

Utah State University:

- Institutional representative to the National Ecological Observatory Network (NEON) for Utah State University, 2007-present
- Information Technology Committee, 2007-present
- Rangeland Ecologist Search Committee, 2010
- Faculty Advisor, Ecology Center seminar series, 2008
- Wildland Resources core curriculum committee, 2006-present
- Judge, Graduate Research Symposium, Utah State University, 2007, 2010

Publications

(* indicates advisee)

Peer-reviewed in review or revision:

Maricle, B. R. and **P. B. Adler**. In review. Effects of precipitation on photosynthesis and water potential in *Andropogon gerardii* and *Schizachyrium scoparium* in a southern mixed grass prairie. Environmental and Experimental Botany.

Onoda, Y., M. Westoby and 26 others (including **P.B. Adler**). In revision. Global patterns of leaf mechanical properties. Ecology Letters.

Zachmann*, L., A. Compagnoni, M. Hooten, D. Peters, and **P. B. Adler**. In revision. Plant population dynamics respond to density-dependence and climate more than community composition.

Mukherjee*, J.R., T.A. Jones, **P.B. Adler**, and T.A. Monaco. In review. Immature seedling growth of two North American native bunchgrasses and the invasive grass *Bromus tectorum.* Rangeland Ecology and Management.

Peer-reviewed published or in press:

32. White, E. P., S.K.M. Ernest, **P.B. Adler**, A.H. Hurlbert, and S.K. Lyons. In press. Integrating spatial and temporal approaches to understanding species richness. Proceedings of the Royal Society B.

31. Mukherjee*, J.R., T.A. Jones, **P.B. Adler**, and T.A. Monaco. In press. Will trade-offs between drought tolerance and growth rate constrain restoration success? A study with two semi-arid, perennial Triticeae bunchgrasses. Plant Ecology.

30. Zachmann*, L., C. Moffet, and **P. B. Adler**. In press. Mapped quadrats in sagebrush steppe: long-term data for analyzing demographic rates and plant-plant interactions. Ecology.

29. Dalgleish*, H.J., C.A. Moffet, D.N. Koons, M.B. Hooten, and **P.B. Adler**. In press. Climate influences the population dynamics of three dominant sagebrush steppe plants. Ecology.

28. **Adler, P.B.** In press. Testing the storage effect with long-term, observational data. In: (Kelly, C, ed.) Temporal Niche Dynamics. Oxford University Press.

27. **Adler, P. B.**, S. P. Ellner and J. M. Levine. 2010. Coexistence in a perennial plant community: an embarrassment of niches. Ecology Letters 13: 1019-1029.

26. Dalgleish*, H.J., D.N. Koons, and **P.B. Adler**. 2010. Can life history traits predict the vulnerability of forb populations to changes in climate variability? Journal of Ecology 98: 209-217.

25. **Adler, P.B.,** J. HilleRisLambers, and J.M. Levine. 2009. Weak effects of climate variability on coexistence in a sagebrush steppe community. Ecology 90: 3303-3312.

24. **Adler, P.B.,** J. Leiker and J.M. Levine. 2009. Direct and indirect effects of climate change on a prairie plant community. PLoSONE 4: e6887. doi:10.1371/journal.pone.0006887.

23. Levine, J.M., **P.B. Adler** and J. HilleRisLambers. 2008. On testing the role of niche differences in stabilizing coexistence. Functional Ecology 22: 934-936.

22. **Adler, P.B.** and J.M. Drake. 2008. Environmental variability, stochastic extinction, and competitive coexistence. The American Naturalist 172: E186-E195.

21. **Adler, P.B.,** and J. HilleRisLambers. 2008. The influence of climate and species composition on the population dynamics of ten prairie forbs. Ecology 89: 3049-3060.

20. Lauenroth, W.K. and **P.B. Adler**. 2008. Demography of grassland plants: Survival, life expectancy, and lifespan. Journal of Ecology 96: 1023-1032.

19. **Adler, P.B.,** Tyburczy, W.R. and W.K. Lauenroth. 2007. Long-term mapped quadrats from Kansas prairie: A unique source of demographic information for herbaceous plants. Ecology 88: 2673.

18. **Adler, P.B.,** HilleRisLambers, J., and J.M. Levine. 2007. A niche for neutrality. Ecology Letters 10: 95-104.

17. **Adler, P.B.** and J. M. Levine. 2007. Contrasting relationships between precipitation and species richness in space and time. Oikos 116: 221-232

16. **Adler, P.B.**, HilleRisLambers, J., Kyriakidis, P., Guan, Q., and J.M. Levine. 2006. Climate variability has a stabilizing effect on coexistence of prairie grasses. Proceedings of the National Academy of Sciences 103: 12793-12798.

15. Busby, P.E., **Adler, P.B.**, Warren, T., and F. Swanson. 2006. Fates of live trees retained in forest cutting units, western Cascade Range, Oregon. Canadian Journal of Forest Research 36: 2544-2549.

14. **Adler, P.B.**, M.F. Garbulsky, J. M. Paruelo, and W.K. Lauenroth. 2006. Do abiotic differences explain contrasting graminoid functional traits in sagebrush steppe, USA and Patagonian steppe, Argentina? Journal of Arid Environments 65: 62-82.

13. White, E.P., **Adler, P.B.**, Lauenroth, W.K., Gill, R.A., Greenberg, D., Kaufman, D.M., Rassweiler, A., Rusak, J.A., Smith, M.D., Steinbeck, J.R., Waide, R.B. and J. Yao. 2006. A comparison of the species-time relationship across ecosystems and taxonomic groups. Oikos 112: 185-196.

12. **Adler, P.B.**, White, E.P., Lauenroth, W.K., Kaufman, D.M., Rassweiler, A. and J.A. Rusak. 2005. Evidence for a general species-time-area relationship. Ecology 86: 2032-2039.

11. **Adler, P.B.** and S.A. Hall. 2005. The development of forage production and utilization gradients around livestock watering points. Landscape Ecology 20: 319-333

10. **Adler, P.B.**, D.G. Milchunas, O.E. Sala, I.C. Burke, and W.K. Lauenroth. 2005. Plant traits and ecosystem grazing effects: comparison of US sagebrush steppe and Patagonian steppe. Ecological Applications 15: 774-792.

9. Levine, J.M., **Adler, P.B.**, and S.G. Yelenik. 2004. A meta-analysis of biotic resistance to exotic plant invasions. Ecology Letters 7: 975-989.

8. **Adler, P.B.**, D.G. Milchunas, W.K. Lauenroth, O. E. Sala, and I. C. Burke. 2004. Functional traits of graminoids in semi-arid steppes: A test of grazing histories. Journal of Applied Ecology 41: 653-663.

7. **Adler, P.B.** 2004. Neutral models fail to reproduce observed species-time and species-area relationships in Kansas grasslands. Ecology 85: 1265-1272.

6. **Adler, P.B.** and W.K. Lauenroth. 2003. The power of time: spatiotemporal scaling of species diversity. Ecology Letters 6: 749-756.

5. **Adler, P.B.** and J.B. Bradford. 2002. Compensation: An alternative method for analyzing diversity-productivity experiments. Oikos 96: 411-420.

4. **Adler, P.B.**, D.A. Raff and W.K. Lauenroth. 2001. The effect of grazing on the spatial heterogeneity of vegetation. Oecologia 128: 465-479.

3. **Adler, P.B.** and Lauenroth, W.K. 2000. Livestock exclusion increases the spatial heterogeneity of vegetation in Colorado shortgrass steppe. Applied Vegetation Science 3: 231-222.

2. **Adler, P.B.** and J.M. Morales. 1999. Influence of environmental factors and sheep grazing on an Andean grassland. Journal of Range Management 52: 471-481.

1. **Adler, P.B.**, C.M. D'Antonio, and J.T. Tunison. 1998. Understory succession following a dieback of *Myrica faya* in Hawai'i Volcanoes National Park. Pacific Science 52: 69-78.

Presentations

Invited symposia at national and international conferences:

Adler, P.B., J. HilleRisLambers, and J.M. Levine. 2008. "Testing the storage effect using long-term data: Successes and challenges." Ecological Society of America, Milwaukee, Wisconsin.

Adler, P.B. and S.H. Hall. 2003. Spatiotemporal patterns of forage production and utilization along distance from water transects. International Association of Landscape Ecology, Darwin, Australia.

Contributed papers at national and international conferences:

Byrne, K. M., W.K. Lauenroth and **P.B. Adler**. 2010. Precipitation patterns affect soil water content and ecosystem water balance in grasslands in North America. Ecological Society of America, Pittsburgh, PA.

Adler, P. B., S. P. Ellner and J. M. Levine. 2010. Coexistence in a perennial plant community: an embarrassment of niches. Ecological Society of America, Pittsburgh, PA.

Dalgleish*, H.J., C.A. Moffet, D.N. Koons, M.B. Hooten, and **P.B. Adler**. 2010. The influence of historical climate on the population dynamics of three dominant sagebrush steppe plants. Society for Range Management Annual Meeting, Denver, CO.

Adler, P. B. 2010. Introduction: Climate change and potential natural vegetation. Society for Range Management Annual Meeting, Denver, CO.

Adler, P.B., J. Leiker and J.M. Levine. 2009. Direct and indirect effects of climate change on a prairie plant community. Ecological Society of America, Albuquerque, New Mexico.

Dalgleish, H.J.*, Koons, D.N., Moffet, C., Hooten, M. and **P.B. Adler.** 2009. The influence of historical climate on the population dynamics of three sagebrush steppe plants. Ecological Society of America, Albuquerque, New Mexico.

Zachmann, L.* and **P.B. Adler**. 2008. Climate and biotic interactions in plant population dynamics. Ecological Society of America, Milwaukee, Wisconsin.

Dalgleish, H.J.*, Koons, D.N. and **P.B. Adler.** 2008. Bet-hedging traits predict vulnerability of plant populations to changes in climate variability. Ecological Society of America, Milwaukee, Wisconsin.

Adler, P.B., and J. HilleRisLambers. 2007. Population dynamics of ten prairie forbs: the relative influence of climate and species interactions. Ecological Society of America, San Jose, California.

Adler, P.B., J. HilleRisLambers, and J.M. Levine. 2005. Climatic variability and coexistence in a Kansas grassland. Ecological Society of America, Montreal, Quebec.

Adler, P.B., Milchunas, D.G., Sala, O.E. and W.K. Lauenroth. 2004. Rasgos funcionales de gramíneas en estepas semiáridas: evaluación de la historia de pastoreo. II Reunión Binacional de Ecología, Mendoza, Argentina.

Adler, P.B. 2004. Species richness dynamics in a perennial grassland: effects of inter-annual variation in precipitation. Ecological Society of America, Portland, Oregon.

Adler, P.B. and W.K. Lauenroth. 2002. Species time relationships in a Kansas grassland: diversity despite dominance. Ecological Society of America, Tuscon, Arizona.

Adler, P.B., Raff, D.A., and W.K. Lauenroth. 2000. Effects of grazing on the spatial heterogeneity of vegetation. Ecological Society of America, Snowbird, Utah.

Invited seminars:

2010 School of Forestry, Northern Arizona University
2008 Department of Wildland Resources, Utah State University
2006 College of Natural Resources, Utah State University
2006 University of Calgary, Canada
2006 Cambridge University, England
2006 Estación Biológica de Doñana, Seville, Spain
2006 University of Barcelona, Spain
2005 Department of Wildland Resources, Utah State University
2005 Washington State University
2005 University of California, Berkeley
2005 University of California, Merced
2003 University of New Mexico

Languages:

English (native), Spanish (fluent)