



By Jeff Mosley

# Browsing the Literature

This section reviews new publications available about the art and science of rangeland management. Personal copies of these publications can be obtained by contacting the respective publishers or senior authors (addresses shown in parentheses). Suggestions are welcomed and encouraged for items to include in future issues of Browsing the Literature. Contact Jeff Mosley, [jmosley@montana.edu](mailto:jmosley@montana.edu).

## Animal Ecology

**Bovine tuberculosis in Canadian wildlife: an updated history.** G. Wobeser. 2009. *Canadian Veterinary Journal* 50:1169–1176. (Dept of Veterinary Pathology, Univ of Saskatchewan, 52 Campus Dr, Saskatoon, SK S7N 5B4, Canada). Summarizes current knowledge of tuberculosis prevalence in bison, deer, elk, and moose in Canada and discusses the challenges for managing the disease in wildlife-cattle interactions.

**DNA genotyping suggests that recent brucellosis outbreaks in the Greater Yellowstone area originated from elk.** A. Beja-Pereira, B. Bricker, S. Y. Chen, C. Almendra, P. J. White, and G. Luikart. 2009. *Journal of Wildlife Diseases* 45:1174–1177. (G. Luikart, Division of Biological Sciences, Univ of Montana, Missoula, MT 59812, USA). Elk, not bison, appear to be the origin of recent outbreaks of brucellosis in cattle in the Greater Yellowstone area of Montana, Idaho, and Wyoming.

**Ecological factors influencing nest survival of greater sage-grouse in Mono County, California.** E. J. Kolada, M. L. Casazza, and J. S. Sedinger. 2009. *Journal of Wildlife Management* 73:1341–1347. (Dept of Natural Resources and Environmental Science, Univ of Nevada, Reno, NV 89512, USA). Percent cover of shrubs other than sagebrush was the variable most related to nest survival of sage-grouse. Nest survival increased with increasing cover of shrubs other than sagebrush.

**Environmental factors affecting bee diversity in urban and remote grassland plots in Boulder, Colorado.** C. A. Kearns and D. M. Oliveras. 2009. *Journal of Insect Conservation* 13:655–665. (Dept of Biology, Santa Clara Univ, Santa Clara, CA 95053, USA). Bee abundance decreased with increased cattle grazing pressure, but species richness of bees was unaffected by cattle grazing.

**Nest site selection by greater sage-grouse in Mono County, California.** E. J. Kolada, J. S. Sedinger, and M. L. Casazza. 2009. *Journal of Wildlife Management* 73:1333–1340. (Dept of Natural Resources and Environmental Science, Univ of Nevada, Reno, NV 89512, USA). Shrub cover, but not understory vegetation, was important for selecting nest sites. “Our results suggest that managers should consider managing for greater shrub cover in Mono County than what is currently called for in other parts of sage-grouse range and that management for sage-grouse habitat may need to be tied more closely to local conditions.”

**Nonlinear effects of distance to habitat edge on Sprague's pipits in southern Alberta, Canada.** N. Koper, D. J. Walker, and J. Champagne. 2009. *Landscape Ecology* 24:1287–1297. (Natural Resources Institute, Univ of Manitoba, Winnipeg, MB R3T 2N2, Canada). Sprague's pipit, a grassland obligate songbird, was most abundant within 0.6 miles of croplands or forage crops.

**Oral vaccination with microencapsulated strain 19 vaccine confers enhanced protection against *Brucella abortus* strain 2308 challenge in red deer (*Cervus elaphus elaphus*).** A. M. Arenas-Gamboa, T. A. Ficht, D. S. Davis, P. H. Elzer, M. Kahl-McDonagh, A. Wong-Gonzalez, and A. C. Rice-Ficht. 2009. *Journal of Wildlife Diseases* 45:1021–1029. (Dept of Veterinary Pathobiology, Texas A&M Univ, College Station, TX 77845, USA). Authors report a potential new way to immunize wild elk against brucellosis.

### Grazing Management

**Defoliation management of bahiagrass germplasm affects cover and persistence-related responses.** S. M. Interrante, L. E. Sollenberger, A. R. Blount, S. W. Coleman, U. R. White, and K. Liu. 2009. *Agronomy Journal* 101:1381–1387. (L. Sollenberger, Dept of Agronomy, Univ of Florida, Gainesville, FL 32611, USA). A new cultivar ('Cycle 4') that is more productive during the cool season requires longer regrowth intervals and taller residual heights than other cultivars of bahiagrass such as 'Pensacola' and 'Argentine'.

**Soil moisture and plant growth responses to litter and defoliation impacts in Parkland grasslands.** E. S. Deutsch, E. W. Bork, and W. D. Willms. 2010. *Agriculture Ecosystems and Environment* 135:1–9. (W. Willms, Agriculture and Agri-Food Canada, 5403 1st Ave South, Lethbridge, AB T1J 4B1, Canada). In native grassland, total growing season production was reduced by either removing all litter or by doubling the amount of litter present in control plots.

### Hydrology/Riparian

**Mapping giant reed with QuickBird imagery in the Mexican portion of the Rio Grande Basin.** C. H. Yang, J. A. Goolsby, and J. H. Everitt. 2009. *Journal of Applied Remote Sensing* 3: Article Number 033530. (USDA-ARS, 2413 East Highway 83, Weslaco, TX 78596, USA). The total area infested with giant reed, a perennial invasive weed, was estimated to be 11,800 acres, and the ratio of giant reed-infested area to river length was 7 acres per mile.

**Public values for river restoration options on the Middle Rio Grande.** M. A. Weber and S. Stewart. 2009. *Restoration Ecology* 17:762–771. (Dept of Hydrology and Water Resources, Univ of Arizona, Tucson, AZ 85721, USA). Near Albuquerque, New Mexico, the strongest public sentiment related to river restoration favored reestablishment of native trees such as cottonwoods, and eradication of nonnative trees such as saltcedar.

### Plant Ecology

**Elevated CO<sub>2</sub> reduces losses of plant diversity caused by nitrogen deposition.** P. B. Reich. 2009. *Science* 326:1399–1402. (Dept of Forest Resources, Univ of Minnesota, Saint Paul, MN 55108, USA). In grass plots over 10 years, increased levels of nitrogen reduced species richness by 16% at ambient levels of atmospheric carbon dioxide, but nitrogen deposition decreased species richness only 8% at elevated levels of carbon dioxide.

**Holocene vegetation and climate change on the Colorado Great Plains, USA, and the invasion of Colorado pinon (*Pinus edulis*).** R. S. Anderson and E. Deiler. 2009. *Journal of Biogeography* 36:2279–2289. (School of Earth Science and Environmental Sustainability, Northern Arizona Univ, Flagstaff, AZ 86011, USA). Pinyon-juniper woodland in southeastern Colorado is expanding its range eastward.

**Plant species composition and biofuel yields of conservation grasslands.** P. R. Adler, M. A. Sanderson, P. J. Weimer, and K. P. Vogel. 2009. *Ecological Applications* 19:2202–2209. (USDA-ARS, Building 3702, Curtin Road, University Park, PA 16802, USA). In Conservation Reserve Program grasslands of the northeastern United States, biofuel yield per unit land area decreased 77% as plant species richness increased from 2 to 11 species per square yard.

**Restoration of Midwestern US savannas: one size does not fit all.** C. L. Dettman, C. M. Mabry, and L. A. Schulte. 2009. *Restoration Ecology* 17:772–783. (C. Mabry, Dept of Natural Resource Ecology and Management, Iowa State Univ, Ames, IA 50011, USA). "... These historical savannas were not characterized exclusively by large, scattered oak trees but rather by trees of many oak species and nonoak species in a wide range of size classes."

### Rehabilitation/Restoration

**Competition between *Schizachyrium scoparium* and *Buchloe dactyloides*: the role of soil nutrients.** J. K. Bush and O. W. Van Auken. 2010. *Journal of Arid Environments* 74:49–53. (Dept of Biology, Univ of Texas at San Antonio, San Antonio, TX 78249, USA). Differences in competitive abilities suggest that during seedling establishment, buffalograss would dominate in shallow-high nutrient soils, whereas little bluestem and buffalograss would coexist in low nutrient soils.

**Functionally similar species confer greater resistance to invasion: implications for grassland restoration.** S. L. Young, J. N. Barney, G. B. Kyser, T. S. Jones, and J. M. DiTomaso. 2009. *Restoration Ecology* 17:884–892. (J. DiTomaso, Dept of Plant Science, Univ of California, Davis, CA 95616, USA). In the Central Valley of California, plant communities that contained the perennial grass blue

wildrye, which is functionally similar to yellow starthistle, better resisted invasion by yellow starthistle.

**Vegetation changes in Conservation Reserve Program lands in interior Alaska.** S. S. Seefeldt, J. S. Conn, M. C. Zhang, and P. N. Kaspari. 2010. *Agriculture Ecosystems and Environment* 135:119–126. (USDA-ARS, 355 O'Neill Building, Univ of Alaska, Fairbanks, AK 99775, USA). CRP fields are transitioning from grasslands to shrub-dominated plant communities. Woody vegetation control is necessary to keep CRP fields in compliance with CRP requirements that fields be “maintained in a condition that permits easy conversion to cropland.”

**Water treatment residuals and biosolids long-term co-applications effects to semi-arid grassland soils and vegetation.** J. A. Ippolito, K. A. Barbarick, M. E. Stromberger, M. W. Paschke, and R. B. Brobst. 2009. *Soil Science Society of America Journal* 73:1880–1889. (USDA-ARS, 3793 North 3600 East, Kimberly, ID 83341, USA).

Water treatment residuals and biosolids are byproducts from municipal water treatment processes. Long-term co-applications of biosolids and water treatment residuals did not adversely affect a Colorado grassland.

### Socioeconomics

**The price of tolerance: wolf damage payments after recovery.** A. Treves, R. L. Jurewicz, L. Naughton-Treves, and D. S. Wilcove. 2009. *Biodiversity and Conservation* 18:4003–4021. (Nelson Institute for Environmental Studies, Univ of Wisconsin, Madison, WI 53706, USA). In a statewide survey of Wisconsin residents, most respondents endorsed compensation for wolf damages to livestock, even when wolves are no longer endangered.

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