



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

**Attracting native pollinators.** E. Mader, M. Shepherd, M. Vaughan, S. H. Black, and G. LeBuhn. 2011. North Adams, MA, USA: Storey Publishing. 371 p. (\$30; The Xerces Society, 628 NE Broadway, Suite 200, Portland, OR 97232, USA.) This comprehensive guidebook describes how to create and manage native pollinator habitat in North America.

**Does small-perimeter fencing inhibit mule deer or pronghorn use of water developments?** R. T. Larsen, J. A. Bissonette, J. T. Flinders, and A. C. Robinson. 2011. *Journal of Wildlife Management* 75:1417–1425. (Dept of Plant and Wildlife Sciences, Brigham Young Univ, Provo, UT 84602, USA.) In western Utah, small-perimeter fencing around water developments affected mule deer much more than pronghorns. Authors recommend eliminating fencing around water developments whenever possible or fencing a large area to avoid inhibiting mule deer.

**Partitioning of anthropogenic watering sites by desert carnivores.** T. C. Atwood, T. L. Fry, and B. R. Leland. 2011. *Journal of Wildlife Management* 75:1609–1615. (USDA Wildlife Services, National Wildlife Research Center, 4101 LaPorte Ave, Fort Collins, CO 80521, USA.) In western Texas, gray foxes, coyotes, and bobcats rarely visited the same water developments at the same time. Few encounters occurred between carnivore species.

## Grazing Management

**Annual medic forage and seed evaluations for the semiarid regions of the Great Plains.** T. J. Butler, S. M. Interrante, D. P. Malinowski, and K. Widdup. 2011. Online. *Forage and Grazinglands* doi:10.1094/FG-2011-0912-01-RS. (The Noble Foundation, 2510 Sam Noble Parkway, Ardmore, OK 73401, USA.) Several species of annual medics were evaluated in northern Texas and southern Oklahoma. Results indicate that button medic (*Medicago orbicularis*) may be the best suited to supply forage in the southern Great Plains.

**Grazing for change. 2nd edition.** T. Schohrr. 2011. Sacramento, CA, USA: California Cattleman's Association. 30 p. (California Rangeland Conservation Coalition, P.O. Box 73470, Davis, CA 95617, USA.) This book features stories of ranchers from throughout California who are preserving and enhancing California's grasslands.

**Integrating green manure and grazing systems: a review.** J. R. T. Martens and M. H. Entz. 2011. *Canadian Journal of Plant Science* 91:811–824. (Dept of Plant Science, Univ of Manitoba, Winnipeg, MB R3T 2N2, Canada.) Economic and biological advantages exist for livestock to graze green manure crops on cropland rather than tilling them into the soil. A lack of livestock management knowledge and infrastructure are barriers to farmers adopting this practice.

**In vitro analysis of the anthelmintic activity of forage chicory (*Cichorium intybus* L.) sesquiterpene lactones against a predominantly *Haemonchus contortus* egg population.** J. G. Foster, K. A. Cassida, and K. E. Turner. 2011. *Veterinary Parasitology* 180:298–306. (USDA-ARS, 1224 Airport Rd, Beaver, WV 25813, USA.) ‘Grasslands Puna’ may be a better forage chicory cultivar than ‘Forage Feast’ for parasite control in grazing livestock, given that the concentration of sesquiterpene lactones is greater in ‘Grasslands Puna.’

## Hydrology/Riparian

**Elevated sensitivity: riparian vegetation in upper mountain zones is especially vulnerable to livestock grazing.** G. M. Samuelson and S. B. Rood. 2011. *Applied Vegetation Science* 14:596–606. (Dept of Biological Science, Univ of Lethbridge, Lethbridge, AB T1K 3M4, Canada.) In the Rocky Mountains of southern Alberta, mountain valerian (*Valerian sitchensis*) was found to be especially sensitive to cattle grazing in riparian areas.

**Environmental quality of Lower Little Bow River and riparian zone along an unfenced reach with off-stream watering.** J. Miller, D. Chanasyk, T. Curtis, T. Entz, and W. Willms. 2011. *Agricultural Water Management* 98:1505–1515. (Agriculture and Agri-Food Canada, 5403 First Ave South, Lethbridge, AB T1J 4B1, Canada.) Off-stream watering improved riparian health, decreased river pollution by cattle, decreased bare ground, increased vegetative cover, and increased mulch cover.

## Plant Ecology

**Does superior competitive ability explain yellow starthistle’s (*Centaurea solstitialis*) successful invasion of annual grasslands in California?** D. Spencer, S. Enloe, P. S. Liow, G. Ksander, and R. Carruthers. 2011. *Invasive Plant Science and Management* 4:284–295. (USDA-ARS, 1 Shields Ave, Davis, CA 95616, USA.) “Yellow starthistle’s invasion of grasslands in California does not appear to be due to superior competitive ability, but may be due to its ability to access deeper soil moisture. These results support the empty niche hypothesis that implies that invasive species

are successful in new habitats because they access resources not available to resident species.”

**Long-term tree cover dynamics in a pinyon–juniper woodland: climate-change-type drought resets successional clock.** M. J. Clifford, N. S. Cobb, and M. Buenemann. 2011. *Ecosystems* 14:949–962. (Dept of Earth and Environmental Sciences, Lehigh Univ, Bethlehem, PA 18015, USA.) Tree canopy cover increased 32% in a pinyon–juniper woodland in northern Arizona from 1936 to the onset of a major drought in 2002. A drought in 2002–2004 reduced tree canopy cover by 55% and eliminated the gains in cover that occurred since 1936.

**Shrublands: wildlands and wildlife habitats.** C. L. Wambolt, S. C. Kitchen, M. R. Frisina, B. Sowell, R. B. Keigley, P. Palacios, and J. Robinson, compilers. 2011. *Natural Resources and Environmental Issues* Volume 16. This volume of the *Natural Resources and Environmental Issues* journal is the published proceedings from the 15th Wildland Shrub Symposium held 17–19 June 2008 in Bozeman, Montana.

**Strong response of an invasive plant species (*Centaurea solstitialis* L.) to global environmental changes.** J. S. Dukes, N. R. Chiariello, S. R. Loarie, and C. B. Field. 2011. *Ecological Applications* 21:1887–1894. (Dept of Forestry and Natural Resources, Purdue Univ, West Lafayette, IN 47907, USA.) If atmospheric concentrations of carbon dioxide and nitrogen increase, yellow starthistle may dramatically increase its presence in western North America.

**The community ecology of barley/cereal yellow dwarf viruses in western US grasslands.** A. G. Power, E. T. Borer, P. Hosseini, C. E. Mitchell, and E. W. Seabloom. 2011. *Virus Research* 159:95–100. (Dept of Ecology and Evolutionary Biology, Cornell Univ, Ithaca, NY 14853, USA.) Evidence is presented that the disease caused by barley/cereal yellow dwarf viruses facilitated the invasion of western US grasslands by European annual grasses.

## Rehabilitation/Restoration

**Biosolids application and long-term noxious weed dominance in the western United States.** R. K. Borden and R. Black. 2011. *Restoration Ecology* 19:639–647. (Rio Tinto, 4700 Daybreak Parkway, South Jordan, UT 84095, USA.) “Given the risk of weed invasion, heavy biosolids applications should be used with caution for reclamation projects in semi-arid climates if perennial species establishment is desired.”

**Controlling saw palmetto with individual plant and broadcast herbicide treatments.** B. J. Fast, J. A. Ferrell, B. A. Sellers, and W. N. Kline. 2011. Online. *Forage and Grazinglands* doi:10.1094/FG-2011-0829-01-RS. (Dow AgroSciences,

9330 Zionsville Rd, Indianapolis, IN 46268, USA.) Individual plant treatments of triclopyr or triclopyr + metsulfuron controlled saw palmetto in Florida. Broadcast treatments of triclopyr + metsulfuron or triclopyr + metsulfuron + aminopyralid also provided acceptable control.

**Control of yellow starthistle (*Centaurea solstitialis*) and coast fiddleneck (*Amsinckia menziesii*) with aminopyralid.**

G. B. Kyser, V. Peterson, S. B. Orloff, S. D. Wright, and J. M. DiTomaso. 2011. *Invasive Plant Science and Management* 4:341–348. (J. DiTomaso, Dept of Plant Sciences, Univ of California, Davis, CA 95616, USA.) A low rate of aminopyralid herbicide applied during the seedling stage provided nearly complete control of yellow starthistle. Coast fiddleneck, a native poisonous plant, was almost completely controlled by aminopyralid applied during the winter growing season.

**Importance of juniper to birds nesting in pinon–juniper woodlands in northwest New Mexico.**

C. D. Francis, C. P. Ortega, and J. Hansen. 2011. *Journal of Wildlife Management* 75:1574–1580. (National Evolutionary Synthesis Center, 2024 W Main St, Suite A200, Durham, NC 27705, USA.) “Because of their importance to nesting birds, managers should avoid preferential thinning of junipers within pinon–juniper woodlands.”

**Regional-scale impact of the weed biocontrol agent *Mecinus janthinus* on Dalmatian toadflax (*Linaria dalmatica*).**

B. H. Van Hezewijk, R. S. Bouchier, and R. A. De Clerck-Floate. 2010. *Biological Control* 55:197–202. (Agriculture and Agri-Food Canada, 5403 First Ave South, Lethbridge, AB T1J 4B1, Canada.) The stem-mining weevil, introduced from Europe, has decreased the density and distribution of Dalmatian toadflax throughout much of southern British Columbia.

**The effect of herbicide on the re-establishment of native grasses in the Blackland Prairie.**

J. R. Mittelhauser, P. W. Barnes, and T. G. Barnes. 2011. *Natural Areas Journal* 31:226–233. (Dept of Biology and Earth Science, Univ of Central Missouri, Warrensburg, MO 64093, USA.) In east-central Texas, applications of imazapic and glyphosate herbicides increased the establishment and growth of native warm-season grasses but did not control the exotic bluestems that continued to dominate all treatment plots.

---

*Jeff Mosley is Professor of Range Science and Extension Range Management Specialist, Dept of Animal and Range Sciences, Montana State University, Bozeman, MT 59717, USA.*