



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

**Adaptability of pregnant Merino ewes to the cold desert climate in Nevada.** W. M. Rauw, D. S. Thain, M. B. Teglas, T. Wuliji, M. A. Sandstrom, and L. Gomez-Raya. 2010. *Journal of Animal Science* 88:860–870. (Dept of Animal Biotechnology, Univ of Nevada, Reno, NV 89557, USA). Sheep with greater Merino influence in their breeding produced more lambs and wool under rangeland conditions in winter.

**Probable causes of increasing brucellosis in free-ranging elk of the Greater Yellowstone Ecosystem.** P. C. Cross, E. K. Cole, A. P. Dobson, W. H. Edwards, K. L. Hamlin, G. Luikart, A. D. Middleton, B. M. Scurlock, and P. J. White. 2010. *Ecological Applications* 20:278–288. (US Geological Survey, 229 A.J.M. Johnson Hall, Montana State Univ, Bozeman, MT 59717, USA). Increased elk-to-elk transmission of *Brucella abortus* in unsupplemented elk herds is occurring due to larger aggregations of elk in winter. Some Montana populations of elk were five to nine times larger in 2007 than in the 1970s, with some aggregations comparable to the Wyoming feeding-ground populations.

**Transmission of bovine viral diarrhea virus among white-tailed deer (*Odocoileus virginianus*).** T. Passler, S. S. Ditchkoff, M. D. Givens, K. V. Brock, R. W. DeYoung, and P. H. Walz. 2010. *Veterinary Research* 41(2):Article No. 20. (P. Walz, College of Veterinary Medicine, Auburn Univ, Auburn, AL 36849, USA). Bovine viral diarrhea virus can be transmitted and maintained among white-tailed deer.

## Grazing Management

**Effects of targeted cattle grazing on fire behavior of cheatgrass-dominated rangeland in the northern Great Basin.** J. M. Diamond, C. A. Call, and N. Devoe. 2009. *International Journal of Wildland Fire* 18:944–950. (Dept of Wildland Resources, Utah State Univ, Logan, UT 84322, USA). Targeted cattle grazing of cheatgrass during the boot stage (May) dramatically reduced cheatgrass biomass and cover in late summer–fall, thereby reducing the potential for catastrophic wildfire.

**Grazing influence, objective development, and management in Wyoming's greater sage grouse habitat.** E. Bainter, B. Budd, J. Cagney, T. Christiansen, V. Herren, M. Holloran, B. S. Rashford, M. Smith, and J. Williams. 2010. University of Wyoming Cooperative Extension Service Bulletin No. B-1203; Laramie, WY 82071, USA. 57 p.

(<http://www.uwyo.edu/ces/PUBS/B1203.pdf>). Synthesized effects of grazing on sage grouse habitats in Wyoming.

**Grazing corn residue.** D. Samples and J. McCutcheon. 2010. Ohio State Univ Extension Fact Sheet ANR-10-02. 4 p. Columbus, OH 43210, USA. (<http://ohioline.osu.edu/anr-fact/pdf/0010.pdf>). Discusses tips for grazing cattle on harvested corn residue. Grazing corn crop residue is practical for dry beef cows in mid-gestation, provided cows have average or better body condition.

## Hydrology/Riparian

**Biology, ecology and management of Eurasian water-milfoil (*Myriophyllum spicatum* L.).** H. Parkinson, J. Mangold, J. Jacobs, J. Madsen, and J. Halpop. 2010. Montana State University Extension Bulletin EB193. 15 p. (Montana State University Extension Publications, 115 Culbertson Hall, Bozeman, MT 59717, USA). Eurasian watermilfoil is a submersed, aquatic perennial that roots in the bottom of water bodies. Eurasian watermilfoil is listed as noxious or has special status in Alberta, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, and Washington.

**Carbon exchange and water loss from two evergreen trees in a semiarid woodland.** M. Bendevis, M. K. Owens, J. L. Heilman, and K. J. McInnes. 2010. *Ecology* 3:107–115. (K. Owens, Dept of Natural Resource Ecology and Management, Oklahoma State Univ, Stillwater, OK 74078, USA). On the Edwards Plateau of Texas, water-use efficiency was greater for Ashe juniper than for live oak, suggesting that juniper trees may sequester more carbon than oak trees for a given amount of water.

***Elaeagnus angustifolia* elevates soil inorganic nitrogen pools in riparian ecosystems.** J. J. F. Shah, M. J. Harner, and T. M. Tibbets. 2010. *Ecosystems* 13:46–61. (Dept of Biology, Duke Univ, Durham, NC 27708, USA). Inputs of nitrogen-rich leaf litter from Russian olive trees can increase nitrogen availability in riparian soils.

**Impacts of wildfire on the composition and structure of riparian forests in southern California.** J. Bendix and C. M. Cowell. 2010. *Ecosystems* 13:99–107. (Dept of Geography, Syracuse Univ, Syracuse, NY 13244, USA). Three years after a severe wildfire, alder was largely eliminated and replaced with increased amounts of cottonwood, willow, and oak.

**Prescribed fires as ecological surrogates for wildfires: a stream and riparian perspective.** R. S. Arkle and D. S. Pilliod. 2010. *Forest Ecology and Management* 259:893–903. (US Geological Survey, 970 Lusk St, Boise, ID 83706, USA). A low severity prescribed fire typical of those being

implemented in ponderosa pine forests throughout the western United States did not mimic the riparian or in-stream ecological effects observed following a nearby wildfire.

**Soil water repellency: a method of soil moisture sequestration in pinyon-juniper woodland.** D. A. Robinson, I. Lebron, R. J. Ryel, and S. B. Jones. 2010. *Soil Science Society of America Journal* 74:624–634. (R. Ryel, Dept of Wildland Resources, Utah State Univ, Logan, UT 84322, USA). Pinyon pine and Utah juniper trees create water repellency under the trees that reduces potential water uptake by shallow-rooted herbaceous plants.

**The fire pulse: wildfire stimulates flux of aquatic prey to terrestrial habitats driving increases in riparian consumers.** R. L. Malison and C. V. Baxter. 2010. *Canadian Journal of Fisheries and Aquatic Sciences* 67:570–579. (Flathead Lake Biological Station, Univ of Montana, 32125 Biological Station Lane, Polson, MT 59860, USA). Five years after fire, aquatic productivity was higher where the riparian-stream environment had experienced a high-severity fire compared with either a low-severity fire or unburned areas.

## Plant-Animal Interactions

**Small-mammal seed predation limits the recruitment and abundance of two perennial grassland forbs.** M. Bricker, D. Pearson, and J. Maron. 2010. *Ecology* 91:85–92. (Division of Biological Sci, Univ of Montana, Missoula, MT 59812, USA). Seed predation primarily by deer mice limited seedling establishment of two perennial grassland forbs (lupine and stoneseed) in western Montana.

## Plant Ecology

**Biology, ecology and management of blueweed (*Echium vulgare* L.).** M. Graves, J. Mangold, and J. Jacobs. 2010. Montana State University Extension Bulletin EB195; 11 p. (Montana State University Extension Publications, 115 Culbertson Hall, Bozeman, MT 59717, USA). Blueweed, or viper's bugloss, is listed as a noxious weed in Montana, Washington, and three counties in Wyoming. Blueweed is present throughout western Canada and in every western US state except Arizona, California, Nevada, and North Dakota.

**Biology, ecology and management of hoary alyssum (*Berteroa incana* L.).** H. Parkinson, J. Mangold, and J. Jacobs. 2010. Montana State University Extension Bulletin EB194. 15 p. (Montana State University Extension Publications, 115 Culbertson Hall, Bozeman, MT 59717, USA). Hoary alyssum is listed as a noxious weed in Montana and is considered noxious or has a special status in British Columbia, Idaho, and Washington. Hoary alyssum is present in every western Canadian province and every western US state except Arizona, California, and Texas.

## Rehabilitation/Restoration

**Effects of prescribed fire on winter assemblages of birds in ponderosa pine forests of northern Arizona.** T. L. Pope and W. M. Block. 2010. *Southwestern Naturalist* 55:22–28. (Dept of Wildlife and Fisheries, Texas A&M Univ, College Station, TX 77843, USA). “. . . Assemblages of birds in winter were similar among areas treated by prescribed fire and unburned areas of ponderosa pine forests in northern Arizona.”

**Set-backs in replacing *Phalaris arundinacea* monotypes with sedge meadow vegetation.** M. T. Healy and J. B. Zedler. 2010. *Restoration Ecology* 18:155–164. (J. Zedler, Dept of Botany and Arboretum, Univ of Wisconsin, Madison, WI 53706, USA). Application of a graminicide (sethoxydim) for 3 consecutive years, with or without seeding, did not effectively control reed canary grass.

**Successful restoration of severely disturbed lands: overview of critical components.** J. Norton, A. Krzyszowska-Waitkus, and T. Loubsky. 2009. University of Wyoming Cooperative Extension Service Bulletin B-1202; Laramie,

WY 82071, USA. (<http://ces.uwyo.edu/PUBS/B1202.pdf>). Describes ways to reclaim land following topsoil removal and replacement during energy development, mining activities, pipeline and road construction, residential development, and other activities.

**Response of grassland birds in sand shinnery oak communities restored using tebuthiuron and grazing in eastern New Mexico.** L. A. Smythe and D. A. Haukos. 2010. *Restoration Ecology* 18:215–223. (Kofa National Wildlife Refuge, 9300 E. 28th St, Yuma, AZ 85365, USA). Avian species density and diversity did not differ between ungrazed and cattle-grazed plots. Bird density was 40% greater in tebuthiuron-treated plots than in untreated plots.

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