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.

Animal Ecology

Differences in timing of parturition, birthing sites, and bedding sites of fawns in sympatric populations of deer. D. A. Butler, S. P. Haskell, W. B. Ballard, M. C. Wallace, C. M. Britton, and M. H. Humphrey. 2009. *Southwestern Naturalist* 54:261–271. (W. Ballard, Dept of Natural Resources Management, Texas Tech Univ, Lubbock, TX 79409, USA). In west-central Texas, mule deer fawns bedded at higher elevations in shorter hiding cover and commonly under juniper trees, whereas whitetail fawns commonly bedded under honey mesquite trees or in herbaceous vegetation.

Distribution and interspecies contact of feral swine and cattle on rangeland in South Texas: implications for disease transmission. S. M. Cooper, H. M. Scott, G. R. de la Garza, A. L. Deck, and J. C. Cathey. 2010. *Journal of Wildlife Diseases* 46:152–164. (Texas AgriLife Research, 1619 Garner Field Rd, Uvalde, TX 78801, USA). Direct contacts between feral swine and cattle were rare and occurred primarily at water sources.

Grassland bird associations with introduced and native grass Conservation Reserve Program fields in the Southern High Plains. T. R. Thompson, C. W. Boal, and D. Lucia. 2009. *Western North American Naturalist* 69:481–490. (C. Boal, Dept of Natural Resources Management, Texas Tech Univ, Lubbock, TX 79415, USA). During the breeding season, bird abundance did not differ between CRP fields of native vs. introduced grasses, but in winter birds were more abundant in the native CRP fields.

Nesting success of grassland birds in shinnery oak communities treated with tebuthiuron and grazing in eastern New Mexico. L. A. Smythe and D. A. Haukos. 2009. *Southwestern Naturalist* 54:136–145. (D. Haukos, Dept of Natural Resources Management, Texas Tech Univ, Lubbock, TX 79409, USA). Density of grassland bird nests was unaffected by either short-duration cattle grazing or tebuthiuron herbicide application.

Potential effects of the United States–Mexico border fence on wildlife. A. D. Flesch, C. W. Epps, J. W. Cain, M. Clark, P. R. Krausman, and J. R. Morgart. 2010. *Conservation Biology* 24:171–181. (Division of Biological Science, Univ of Montana, Missoula, MT 59812, USA). Female desert bighorn sheep crossed valleys up to three miles wide.

Small mammals and ground-dwelling invertebrates associated with active and controlled colonies of blacktailed prairie dogs (*Cynomys ludovicianus*). R. E. McCaffrey,

M. C. Wallace, and J. D. Ray. 2009. *Southwestern Naturalist* 54:300–306. (School of Natural Resources, Univ of Arizona, Tucson, AZ 85721, USA). In shortgrass prairie of the Texas Panhandle, total abundance of small mammals did not differ between active black-tailed prairie dog colonies and sites where black-tailed prairie dogs were controlled via aluminum phosphide (phostoxin).

Yearling greater sage-grouse response to energy development in Wyoming. M. J. Holloran, R. C. Kaiser, and W. A. Hubert. 2010. *Journal of Wildlife Management* 74:65–72. (Wyoming Wildlife Consultants, 4402 Cheyenne Dr, Laramie, WY 82072, USA). Yearling females avoided nesting within 0.6 miles of the infrastructure of natural-gas fields.

Grazing Management

Integrated warm- and cool-season grass and legume pastures: I. Seasonal forage dynamics. D. J. Hudson, R. H. Leep, T. S. Dietz, A. Ragavendran, and A. Kravchenko. 2010. *Agronomy Journal* 102:303–309. (Dept of Crop and Soil Science, Michigan State Univ, East Lansing, MI 48824, USA). Integration of switchgrass or big bluestem pastures into cool-season grass grazing systems probably will not improve livestock gain in summer.

Persistence of native C4 grasses under high-intensity, short duration summer bison grazing in the eastern tallgrass prairie. R. D. Jackson, L. K. Paine, and J. E. Woodis. 2010. *Restoration Ecology* 18:65–73. (Dept of Agronomy, Univ of Wisconsin, Madison, WI 53706, USA). Switchgrass, little bluestem, big bluestem, Indiangrass, and sideoats grama all declined over a six-year period of bison grazing in a short-duration grazing system.

Potential of warm-season annual forages and *Brassica* crops for grazing: a Canadian review. D. McCartney, J. Fraser, and A. Ohama. 2009. *Canadian Journal of Animal Science* 89:431–440. (A. Ohama, Lacombe Research Centre, Agriculture and Agri-Food Canada, 6000 C&E Trail, Lacombe, AB T4L 1W1, Canada). Several annual crops, including corn, golden German foxtail millet, kale, forage rape, and turnip, show promise for extending the grazing season and reducing the cost of production on Canadian cow-calf operations, but the costs and benefits of grazing these crops need to be compared with using oat, barley, or fall rye instead.

Supplementation strategies effects on performance of beef heifers grazing stockpiled pastures. J. M. B. Vendramini and J. D. Arthington. 2010. *Agronomy Journal* 102:112–117. (Range Cattle Research and Education Center, 3401 Experiment Station Rd, Ona, FL 33865, USA). When concentrate supplement is expensive, part-time grazing of annual ryegrass may be a viable supplementation option for beef cattle grazing stockpiled warm-season grasses.

Hydrology/Riparian

Cattle trampling of simulated bull trout redds. J. S. Gregory and B. L. Gamett. 2009. *North American Journal of Fisheries Management* 29:361–366. (Gregory Aquatics, 5306 Zollinger Rd, Mackay, ID 83251, USA). Bull trout populations were likely unaffected by cattle trampling of bull trout redds in streams where 12% or 33% of simulated bull trout redds were trampled by cattle.

Habitat characteristics of winter roost sites of wild turkeys in Trans-Pecos, Texas. K. B. Perlichek, L. A. Harveson, B. J. Warnock, and B. Tarrant. 2009. *Southwestern Naturalist* 54:446–452. (L. Harveson, Borderlands Research Institute of Natural Resource Management, Sul Ross State Univ, Alpine, TX 79832, USA). Wild turkeys in the Trans-Pecos region depend on large trees in riparian corridors for roosting. Exotic tree species such as saltcedar should be controlled to benefit wild turkeys.

Measurements

Influences of transect relocation errors on line-point estimates of plant cover. C. D. Bonham and R. M. Reich. 2009. *Plant Ecology* 204:173–178. (Dept of Forest, Rangeland, and Watershed Stewardship, Colorado State Univ, Fort Collins, CO 80523, USA). Recommends that changes in plant cover over time should be monitored by sampling a large number of transects placed at each time within a monitored area rather than by sampling and resampling a small number of permanently located transects.

Review of approaches to evaluate the effectiveness of weed biological control agents. L. Morin, A. M. Reid, N. M. Sims-Chilton, Y. M. Buckley, K. Dhileepan, G. T. Hastwell, T. L. Nordblom, and S. Raghu. 2009. *Biological Control* 51:1–15. (CSIRO, Division of Entomology, GPO Box 1700, Canberra, ACT 2601, Australia). Discusses ways for practitioners to evaluate the effectiveness of weed biological control agents and urges more investment in long-term post-release documentation of biological control treatments.

Rehabilitation/Restoration

Plant community changes after the reduction of an invasive rangeland weed, diffuse knapweed, *Centaurea diffusa*. A. E. A. Stephens, P. G. Krannitz, and J. H. Myers. 2009. *Biological Control* 51:140–146. (Dept of Zoology, Univ of British Columbia, Vancouver, BC V6T 1Z4, Canada). The introduced weevil, *Larinus minutus*, successfully decreased diffuse knapweed, but plant community diversity did not increase.

Pocket gophers and the invasion and restoration of native bunchgrass communities. S. M. Watts. 2010.

Restoration Ecology 18:34–40. (Dept of Ecology, Evolution, and Marine Biology, Univ of California, Santa Barbara, CA 93106, USA). Pocket gopher foraging may inhibit the establishment of bunchgrass plants into the open spaces between bunchgrass clumps. Short-term reductions in pocket gopher populations would help restoration of bunchgrass plant communities.

The effect of *Puccinia jaceae* var. *solstitialis* on the yellow starthistle biological control insects *Eustenopus villosus* and *Chaetorellia succinea*. J. M. O'Brien, G. B. Kyser, D. M. Woods, and J. M. DiTomaso. 2010. *Biological Control* 52:182–187. (J. DiTomaso, Dept of Plant Science, Univ of California, Davis, CA 95616, USA). A recently introduced fungal rust agent for controlling yellow starthistle does not interact significantly with the insect biological control agents for yellow starthistle.

Socioeconomics

Effects of community-based collaborative group characteristics on social capital. C. L. Wagner and M. E. Fernandez-Gimenez. 2009. *Environmental Management* 44:632–645. (M. Fernandez-Gimenez, Dept of Forest, Rangeland, and Watershed Stewardship, Colorado State Univ, Fort Collins, CO 80523, USA). Trust and other forms of social capital among members of collaborative groups are more common in groups that perceive themselves as successful.

Investing in rangeland restoration in the arid West, USA: countering the effects of an invasive weed on the long-term fire cycle. R. Epanchin-Niell, J. Englin, and D. Nalle. 2009. *Journal of Environmental Management* 91:370–379. (Dept of Agricultural and Resource Economics, Univ of California, Davis, CA 95616, USA). Authors conclude that intensive post-fire revegetation will reduce long-term management costs of cheatgrass-invaded ecosystems.

Soils

Development of soil microbial communities during tallgrass prairie restoration. K. Jangid, M. A. Williams, A. J. Franzluebbers, J. M. Blair, D. C. Coleman, and W. B. Whitman. 2010. *Soil Biology & Biochemistry* 42:302–312. (Dept of Microbiology, Univ of Georgia, Athens, GA 30602, USA). Soil microbial communities in Kansas tallgrass prairie were largely unaffected by annual burning.

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