



By Jeff Mosley

# Browsing the Literature

This section reviews new publications 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

**Bottom-up and top-down influences on pregnancy rates and recruitment of northern Yellowstone elk.** K.M. Proffitt, J.A. Cunningham, K.L. Hamlin, and R.A. Garrott. 2014. *Journal of Wildlife Management* 78:1383-1393. (Montana Dept of Fish, Wildlife, and Parks, 1400 S. 19th St, Bozeman, MT 59718, USA). Data from 1985 to 2008 illustrate that elk calf recruitment decreased as the wolf-to-elk ratio increased.

**Demography, reproductive ecology, and variation in survival of greater sage-grouse in northeastern California.** D.M. Davis, K.P. Reese, and S.C. Gardner. 2014. *Journal of Wildlife Management* 78:1343-1355. (US Fish and Wildlife Service, 911 NE 11th Ave, Portland, OR 97232, USA). Grass height did not affect nest success, and nest success was greater when they were located under vegetation other than sagebrush.

**Effect of wind turbine proximity on nesting success in shrub-nesting birds.** V.J. Bennett, A.M. Hale, K.B. Karsten, C.E. Gordon, and B.J. Suson. 2014. *American Midland Naturalist* 172:317-328. (School of Geology, Energy and the Environment, Texas Christian Univ, Fort Worth, TX 76129, USA). Wind turbine proximity did not affect reproductive success except for the blue-gray gnatcatcher, which had greater nest success nearer turbines due to less parasitism by brown-headed cowbirds.

**Nest survival of red-winged blackbirds in agricultural areas developed for wind energy.** M.K. Gillespie and S.J. Dinsmore. 2014. *Agriculture Ecosystems and Environment* 197:53-59. (Dept of Natural Resource Ecology and Management, Iowa State Univ, Ames, IA 50011, USA). Wind turbine proximity did not affect reproductive success.

**Pygmy rabbit (*Brachylagus idahoensis*) habitat selection: does sagebrush (*Artemisia* spp.) age influence selection?** R.J. Edgel, J.L. Pierce, and R.T. Larsen. 2014. *Western North American Naturalist* 74:145-154. (Dept of Plant and Wildlife Sciences, Brigham Young Univ, Provo, UT 84602, USA). Sagebrush age did not differ between occupied and unoccupied habitat, but occupied sites had more hiding cover.

## Grazing Management

**Bison grazing increases arthropod abundance and diversity in a tallgrass prairie.** M.D. Moran. 2014. *Environmental Entomology* 43:1174-1184. (Dept of Biology, Hendrix College,

Conway, AR 72032, USA). Bison grazing increased herbivorous and carnivorous assemblages of arthropods, but not detritivores.

#### **Impacts of wildlife baiting and supplemental feeding on infectious disease transmission risk: a synthesis of knowledge.**

A. Sorenson, F.M. van Beest, and R.K. Brook. 2014. *Preventive Veterinary Medicine* 113:356–363. (R. Brook, Dept of Animal and Poultry Science and Indigenous Land Management Institute, Univ of Saskatchewan, Saskatoon, SK S7N 5A8, Canada). Warns that providing food to wildlife through supplemental feeding or baiting can harm wildlife health.

**Is differential use of *Juniperus monosperma* by small ruminants driven by terpenoid concentration?** R.E. Estell, S.A. Utsumi, A.F. Cibils, and D.M. Anderson. 2014. *Journal of Chemical Ecology* 40:285–293. (USDA Agricultural Research Service, MSC JER 3, Box 30003, Las Cruces, NM 88003, USA). Total terpenoid concentration in one-seed juniper was greater in spring than summer and less in short versus taller saplings. Sheep and goats selected leaves with lower concentrations of terpenoids.

#### **Reproductive success and habitat characteristics of golden-winged warblers in high-elevation pasturelands.**

K.R. Aldinger and P.B. Wood. 2014. *Wilson Journal of Ornithology* 126:279–287. (Cooperative Fish and Wildlife Research Unit, West Virginia Univ, PO Box 6125, Morgantown, WV 26506, USA). In and around the Monongahela National Forest in West Virginia, reproductive success of golden-winged warblers was unaffected by cattle grazing.

**To feed or not to feed? Evidence of the intended and unintended effects of feeding wild ungulates.** J.M. Milner, F.M. van Beest, K.T. Schmidt, R.K. Brook, and T. Storaas. 2014. *Journal of Wildlife Management* 78:1322–1334. (Dept of Forestry and Wildlife Management, Hedmark Univ, Campus Evenstad, NO-2480 Koppang, Norway). "...we found limited evidence of the effectiveness of diversionary feeding to protect crops, forestry, and natural habitats, with positive effects often undermined by increases in ungulate density."

### **Hydrology/Riparian**

**Synergistic interactions between leaf beetle herbivory and fire enhance tamarisk (*Tamarix* spp.) mortality.** G.M. Drus, T.L. Dudley, C.M. D'Antonio, T.J. Even, M.L. Brooks, and J.R. Matchett. 2014. *Biological Control* 77:29–40. (Saint Francis Univ, 117 Evergreen Dr, Loretto, PA 15940, USA). In Nevada, summer burning killed more saltcedar trees than fall burning, and effects from burning and herbivory by the saltcedar leaf beetle appeared synergistic.

**Use of native and nonnative nest plants by riparian-nesting birds along two streams in New Mexico.** D.M. Smith and D. M. Finch. 2014. *River Research and Applications* 30:1134–1145. (US Forest Service, 333 Broadway SE, Suite 115, Albuquerque, NM 87102, USA). Many bird species nested in

nonnative trees and shrubs, but some bird species (i.e., riparian obligates and species of conservation concern in the canopy and cavity guilds) depended on native cottonwood and Arizona sycamore trees for nesting.

### **Plant Ecology**

**Estimating climate change effects on net primary production of rangelands in the United States.** M.C. Reeves, A.L. Moreno, K.E. Bagne, and S.W. Running. 2014. *Climatic Change* 126:429–442. (US Forest Service, PO Box 7669, Missoula, MT 59807, USA). Rangeland plant productivity is predicted to decline 7% in the Desert Southwest and Southwest by the year 2100, whereas productivity will increase more than 25% in the Northern and Southern Great Plains, Intermountain West, and eastern prairies.

#### **Fire dynamics distinguish grasslands, shrublands and woodlands as alternative attractors in the central Great Plains of North America.**

Z. Ratajczak, J.B. Nippert, J.M. Briggs, and J.M. Blair. 2014. *Journal of Ecology* 102:1374–1385. (J. Blair, Division of Biology, Kansas State Univ, Manhattan, KS 66506, USA). Transitions from grassland to shrubland occur when 1- to 3-year fire-return intervals increase to 3 to 8 years. Fire return intervals of 10 years or more result in transitions to woodlands.

#### **Historical patterns of oak population expansion in the Chautauqua Hills, Kansas.**

T.R. Rogers and F.L. Russell. 2014. *Journal of Biogeography* 41:2105–2114. (F. Russell, Dept of Biological Sciences, Wichita State Univ, Wichita, KS 67260, USA). Oak woodlands expanded during droughts of the 20th century, forming stable communities on xeric slopes but undergoing succession to mixed hardwood-forests on mesic slopes.

#### **Remote sensing analysis of vegetation recovery following short-interval fires in southern California shrublands.**

R. Meng, P.E. Dennison, C.M. D'Antonio, and M.A. Moritz. 2014. *PLOS One* 9:e110637; doi: 10.1371/journal.pone.0110637; 12 p. (Dept of Geography, Univ of Utah, Salt Lake City, UT 84112, USA). Burning twice in less than 8 years did not prevent reestablishment of southern California chaparral.

### **Rehabilitation/Restoration**

#### **An ecosystem services perspective on brush management: research priorities for competing land-use objectives.**

S.R. Archer and K.I. Predick. 2014. *Journal of Ecology* 102:1394–1407. (School of Natural Resources and the Environment, Univ of Arizona, Tucson, AZ 85721, USA). Current brush management strategies can suppress woody plant encroachment into grasslands and savannas, but recovery of key ecosystem services may be short-lived or absent.

**Effects of grassland restoration efforts on mound-building ants in the Chihuahuan Desert.** M.M. McAllister, R.L. Schooley, B.T. Bestelmeyer, J.M. Coffman, and B.J.

Cosentino. 2014. *Journal of Arid Environments* 111:79-83. (R. Schooley, Dept of Natural Resources and Environmental Sciences, Univ of Illinois, Urbana, IL 61801, USA). Two species of ants were favored and two species disfavored where creosotebush encroachment was suppressed with herbicides 10 to 30 years earlier.

**Evaluation of aminopyralid applied PRE to control western ragweed (*Ambrosia psilostachya*) in Oklahoma pastureland.** E.R. Funderburg, J.M. Locke, and J.T. Biermacher. 2014. *Weed Technology* 28:395-400. (The Noble Foundation, 2510 Sam Noble Parkway, Ardmore, OK 73401, USA). Good to excellent control of western ragweed was achieved in pastures when aminopyralid (Milestone) was applied pre-emergence at 1.27 ounces acid equivalent per acre or greater.

**Identifying practical, small-scale disturbance to restore habitat for an endangered annual forb.** C. Niederer, S.B. Weiss, and L. Stringer. 2014. *California Fish and Game* 100:61-78. (Creekside Center for Earth Observation, 27 Bishop Lane, Menlo Park, CA 94025, USA). Treating during fall, after annual grasses had germinated, either by scraping or flaming reduced annual grasses and mulch and increased native forbs, including clarkia.

**Limits to understory plant restoration following fuel-reduction treatments in a pinon-juniper woodland.** M.D. Redmond, T.J. Zeilkova, and N.N. Barger. 2014. *Environmental Management* 54:1139-1152. (Dept of Ecology and Evolutionary Biology, Univ of Colorado, Boulder, CO 80309, USA). Mechanical mastication coupled with seeding and wildlife exclusion was the most effective strategy for reducing pinon-juniper encroachment in southeastern Utah.

**Long-term effects of seeding after wildfire on vegetation in Great Basin shrubland ecosystems.** K.C. Knutson, D.A. Pyke, T.A. Wirth, R.S. Arkle, D.S. Pilliod, M.L. Brooks, J.C.

Chambers, and J.B. Grace. 2014. *Journal of Applied Ecology* 51:1414-1424. (D. Pyke, US Geological Survey, 3200 SW Jefferson Way, Corvallis, OR 97331, USA). Drill-seeding native perennial grasses was effective when mixtures did not include competitive non-natives. Seeding sagebrush and other native shrubs was ineffective.

## Soils

**Ecological site-based assessments of wind and water erosion: informing accelerated soil erosion management in rangelands.** N.P. Webb, J.E. Herrick, and M.C. Duniway. 2014. *Ecological Applications* 24:1405-1420. (USDA Agricultural Research Service, MSC JER 3, Box 30003, Las Cruces, NM 88003, USA). Wind and water erosion in southern New Mexico was effectively controlled where bare ground was less than 20% or where the cover of shrub canopy interspaces more than 39 inches in length was no more than 35%.

**Spatial and temporal patterns of dust emissions (2004-2012) in semiarid landscapes, southeastern Utah, USA.** C.B. Flagg, J.C. Neff, R.L. Reynolds, and J. Belnap. 2014. *Aeolian Research* 15:31-43. (US Geological Survey, 2290 S. West Resource Blvd, Moab, UT 84532, USA). Sites dominated by blackbrush or sagebrush lost more sediment to dust than grasslands, saltbush-dominated sites, or woodlands.

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