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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*.

Animal Ecology

Cattle grazing in a national forest greatly reduces nesting success in a ground-nesting sparrow. C. E. Walsberg. 2005. *Condor* 107:714–716. (School of Life Sciences, Arizona State University, Tempe, AZ 85287). In open ponderosa pine forests and pine savannas of northern Arizona, cattle grazing in late June and July significantly reduced nesting success by Dark-eyed Juncos.

Nest-site selection patterns and the influence of vegetation on nest survival of mixed-grass prairie passerines. S. K. Davis. 2005. *Condor* 107:605–616. (Canadian Wildlife Service, 300-2365 Albert Street, Regina, SK S4P 4K1, Canada). In southern Saskatchewan, Chesnut-collared Longspurs selected nest sites where the vegetation was relatively short and sparse, whereas Western Meadowlarks selected nest sites where vegetation was relatively tall and dense. Nest sites for Sprague's Pipits, Savannah Sparrows, and Baird's Sparrows were intermediate in vegetation height and density. All 5 species preferred to build their nests where there was more litter and less bare ground.

Sonoran pronghorn use of anthropogenic and natural water sources. J. R. Morgart, J. J. Hervert, P. R. Krausman, J. L. Bright, and R. S. Henry. 2005. *Wildlife Society Bulletin* 33:51–60. (P. Krausman, School of Natural Resources, University of Arizona, Tucson, AZ 85721). Contrary to published reports, Sonoran pronghorns regularly drink from livestock water developments, and water developments may be an important tool for recovering the endangered Sonoran pronghorn.

Grazing Management

Effects of summer grazing strategies on organic reserves and root characteristics of big bluestem. E. M. Mousel, W. H. Schacht, C. W. Zanner, and L. E. Moser. 2005. *Crop Science* 45:2008–2014. (Department of Agronomy and Horticulture and School of Natural Resources, University of Nebraska, Lincoln, NE 68583). Grazing at the elongation stage of big bluestem should be rotated among paddocks in successive years and the recovery period following grazing at internode elongation should exceed 40 days.

Foraging ecology of goats and sheep on wooded rangelands. T. G. Papachristou, L. E. Dziba, and F. D. Provenza. 2005. *Small Ruminant Research* 59:141–156. (National Agricultural Research Foundation, Forest Research Institute, Thessaloniki 57006, Greece). Discusses how knowledge of plant defense mechanisms and diet selection by small ruminants can be integrated into grazing management strategies for shrublands, savannas, and grazable woodlands.

Herbage nitrogen recovery in a meadow and loblolly pine alley. D. M. Burner and C. T. MacKown. 2005. *Crop Science* 45:1817–1825. (USDA-ARS, Dale Bumpers Small Farms Research Center, 6883 South State Highway 23, Booneville, AR 72927). In loblolly pine–tall fescue silvopastures, annual fertilizer applications should not exceed 89 pounds of nitrogen per acre in shaded areas and 267 pounds of nitrogen per acre in unshaded areas.

Hydrology/Riparian

Patterns of willow seed dispersal, seed entrapment, and seedling establishment in a heavily browsed montane riparian ecosystem. E. A. Gage and D. J. Cooper. 2005. *Canadian Journal of Botany* 83:678–687. (D. Cooper, Department of Forest, Rangeland, and Watershed Stewardship, Colorado State University, Fort Collins, CO 80523). Excessive elk browsing reduced seed production by willows in Rocky Mountain National Park.

Plant/Animal Interactions

Effect of pocket gophers on aspen regeneration. S. T. Coggins and M. R. Conover. 2005. *Journal of Wildlife Management* 69:752–759. (Department of Forest, Range, and Wildlife Science, Utah State University, Logan, UT 84322). Results indicated that the effect of pocket gophers on aspen regeneration is minimal compared to the effects of browsing by wild and domestic ungulates.

Effects of conifers and elk browsing on quaking aspen forests in the central Rocky Mountains, USA. M. W. Kaye, D. Binkley, and T. J. Stohlgren. 2005. *Ecological Applications* 15:1284–1295. (School of Forest Resources, The Pennsylvania State University, University Park, PA 16802). Conifer encroachment and elk browsing both decreased aspen recruitment, and heavy elk browsing decreased overall aspen growth by 30%.

Evaluating lek occupancy of Greater Sage-grouse in relation to landscape cultivation in the Dakotas. J. T. Smith, L. D. Flake, K. F. Higgins, G. D. Kobriger, and C. G. Homer. 2005. *Western North American Naturalist* 65:310–320. (Box 212, Lawton, IA 51030). Rangeland lost to cultivation from 1972 to 2000 was not related to lek abandonment by Sage-grouse in North and South Dakota.

Grassland songbird nest-site selection and response to mowing in West Virginia. K. A. Warren and J. T. Anderson. 2005. *Wildlife Society Bulletin* 33:285–292. (U.S. Fish and Wildlife Service, Wertheim National Wildlife Refuge, P.O. Box 21, Shirley, NY 11967). In a comparison of mowed and unmowed grasslands on the Canaan Valley National Wildlife Refuge, there was no difference in nest success for the 4 dominant grassland songbirds (ie, Bobolinks, Savannah Sparrows, Red-winged Blackbirds, and Eastern Meadowlarks). Mowing may provide long-term advantages to

grassland bird nesting success by suppressing encroachment of trees and shrubs.

Plant Ecology

A comprehensive ecological land classification for Utah's West Desert. N. E. West, F. L. Dougher, G. S. Manis, and R. D. Ramsey. 2005. *Western North American Naturalist* 65:281–309. (Department of Forest, Range, and Wildlife Science, Utah State University, Logan, UT 84322). Presents a hierarchical land classification that incorporates Ecological Sites into ECOMAP, a national land classification system endorsed by the Federal Geographic Data Committee that is designed to improve communication across ownership boundaries.

Beginnings of range management: Albert Potter, first Chief of Grazing, U.S. Forest Service, and a photographic comparison of his 1902 forest reserve survey in Utah with conditions 100 years later. D. A. Prevedel and C. M. Johnson. 2005. *USDA Forest Service R4-VM 2005-01*. 94 p. (Publications Distribution, Rocky Mountain Research Station, 240 West Prospect Road, Fort Collins, CO 80526). This bulletin documents the accomplishments of Albert Potter, the first Chief of Grazing and later Associate Chief of the U.S. Forest Service. Comparisons between recent photos and photos taken by Potter in 1902 illustrate conifer encroachment into sagebrush–grass and aspen communities.

Biology, ecology, and management of western juniper. R. F. Miller, J. D. Bates, T. J. Svejcar, F. B. Pierson, and L. E. Eddleman. 2005. *Oregon State University Agricultural Experiment Station Technical Bulletin* 152. 77 p. (\$3; order by phone 1-800-561-6719). Synthesizes current knowledge about the history, biology, ecology, and management of western juniper. Western juniper woodlands occupy 9 million acres in central and eastern Oregon, northeastern California, southwestern Idaho, and northwestern Nevada, with a few outlying stands in southern Washington.

Canopy dynamics and human caused disturbance on a semi-arid landscape in the Rocky Mountains, USA. D. J. Manier, N. T. Hobbs, D. M. Theobald, R. M. Reich, M. A. Kalkhan, and M. R. Campbell. 2005. *Landscape Ecology* 20:1–17. (Natural Resource Ecology Lab, Colorado State University, 200 West Lake Street, Fort Collins, CO 80523). Repeat photography illustrates that conifers increased in savannas and shrub steppe of western Colorado from 1937 to 1994.

Douglas-fir's effect on mountain big sagebrush wildlife habitats. A. J. Grove, C. L. Wambolt, and M. R. Frisina. 2005. *Wildlife Society Bulletin* 33:74–80. (Montana Fish, Wildlife and Parks, White Sulphur Springs, MT 59645). As Douglas-fir canopy cover increased beyond 20%, mountain big sagebrush canopy cover declined to less than 15%. When Douglas-fir canopy increased beyond 35%, mountain big sagebrush canopy cover declined to less than 5%.

Multi-scale impacts of crested wheatgrass invasion in mixed-grass prairie. D. C. Henderson and M. A. Naeth. 2005. *Biological Invasions* 7:639–650. (Department of Renewable Resources, University of Alberta, Edmonton, AB T6G 2H1, Canada). In crested-wheatgrass-invaded grasslands of Alberta and Saskatchewan, native midgrasses and forbs were less abundant; shortgrasses were unaffected; plant biomass and litter were greater; and belowground organic matter and soil organic carbon, nitrogen, and phosphorus were unaffected.

Structure of historic vegetation on Kerr Wildlife Management Area, Kerr County, Texas. F. H. Wills. 2005. *Texas Journal of Science* 57:137–152. (11322 Two Wells, San Antonio, TX 78245). “Grassland has disappeared from the area over the past 120 years, being replaced by woodland and forest in the contemporary landscape.”

Rehabilitation/Restoration

Differential physiological responses of Dalmation toadflax, *Linaria dalmatica* L. Miller, to injury from two insect biological control agents: Implications for decision-making in biological control. R. K. D. Peterson, S. E. Sing, and D. K. Weaver. 2005. *Environmental Entomology* 34:899–905. (Department of Land Resources and Environmental Science, Montana State University, Bozeman, MT 59717). A stem-boring weevil, *Mecinus janthinus*, had more impact on Dalmation toadflax than did a defoliating moth, *Calophasia lunula*.

Fire and litter effects on seedling establishment in western Oregon upland prairies. M. P. Maret and M. V. Wilson. 2005. *Restoration Ecology* 13:562–568. (M. Wilson, Department of

Botany and Plant Pathology, Oregon State University, Corvallis, OR 97331). In these winter-moist grasslands, litter inhibited seedling establishment. Prescribed burning followed by seeding can be an effective restoration technique.

Grazing management and nitrogen fertilization effects on vaseygrass persistence in limpgrass pastures. Y. C. Newman and L. E. Sollenberger. 2005. *Crop Science* 45:2038–2043. (L. Sollenberger, Department of Agronomy, University of Florida, Gainesville, FL 32611). Continuous grazing by steers to a 6-inch stubble height reduced vaseygrass (an undesirable grass) and increased limpgrass (a desirable grass), and continuous grazing was more effective than rotational grazing.

Socioeconomics

Commentary: wildlife ranching in North America—arguments, issues, and perspectives. M. J. Butler, A. P. Teaschner, W. B. Ballard, and B. K. McGee. 2005. *Wildlife Society Bulletin* 33:381–389. (Department of Range, Wildlife and Fisheries Management, Texas Tech University, Lubbock, TX 79409). Discusses the advantages and disadvantages of fee-hunting and wildlife farming and husbandry.

Soils

Spatial and temporal variation in islands of fertility in the Sonoran Desert. J. D. Schade and S. E. Hobbie. 2005. *Biogeochemistry* 73:541–553. (University of California, Angelo Coast Range Reserve, 42101 Wilderness Lodge Road, Branscomb, CA 95417). Soil organic matter, nitrogen cycling, and microbial biomass were greater under canopies of velvet mesquite trees, regardless of where the trees were found across the landscape.