

July–September 2005

## What's Inside . . .

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- *Forest and rangelands: public's survey responses*
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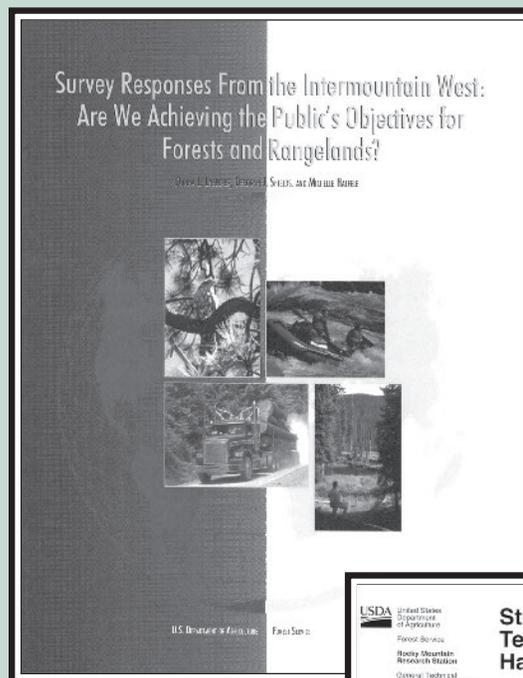
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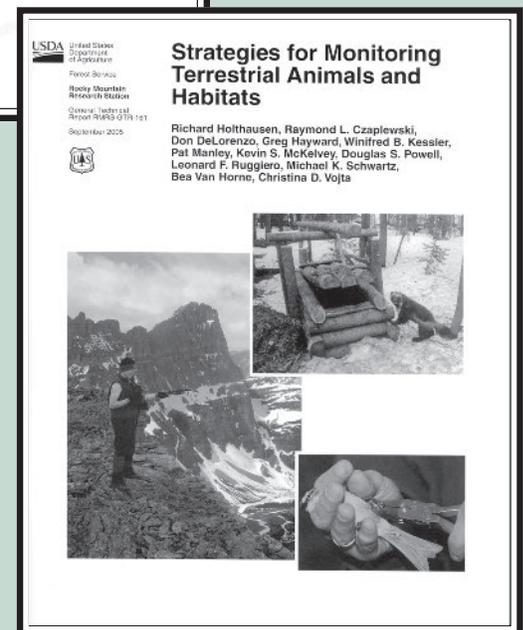
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	Order No.	
<b>Grassland ecosystem</b>	15	<p><b>Assessment of grassland ecosystem conditions in the Southwestern United States: wildlife and fish—volume 2.</b> Finch, Deborah M., ed. 2005. Gen. Tech. Rep. RMRS-GTR-135-vol. 2. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 168 p.</p> <p>This report is volume 2 of a two-volume ecological assessment of grassland ecosystems in the Southwestern United States. Broad-scale assessments are syntheses of current scientific knowledge, including a description of uncertainties and assumptions, to provide a characterization and comprehensive description of ecological, social, and economic components within an assessment area. Volume 1 of this assessment focused on the ecology, types, conditions, and management practices of Southwestern grasslands. Volume 2 (this volume) describes wildlife and fish species, their habitat requirements, and species-specific management concerns, in Southwestern grasslands. This assessment is regional in scale and pertains primarily to lands administered by the Southwestern Region of the USDA Forest Service (Arizona, New Mexico, western Texas, and western Oklahoma). This volume should be useful to State, municipal, and other Federal agencies, and to private landowners that manage grasslands in the Southwestern United States.</p>
<b>Medicine Bow National Forest</b>	16	<p><b>Historic range of variability for upland vegetation in the Medicine Bow National Forest, Wyoming.</b> Dillon, Gregory K.; Knight, Dennis H.; Meyer, Carolyn B. 2005. Gen. Tech. Rep. RMRS-GTR-139. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 85 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr139.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr139.html</a></p> <p>This report provides an HRV analysis for the upland vegetation of the Medicine Bow National Forest in southeastern Wyoming. The variables include live tree density, dead tree (snag) density, canopy cover, abundance of coarse woody debris, species diversity, fire return intervals, the abundance of various diseases, the proportion of the landscape in different land cover types, and the degree of patchiness in the landscape.</p>

	Order No.	
<b>Bighorn National Forest</b>	17	<p><b>Historic range of variability for upland vegetation in the Bighorn National Forest, Wyoming.</b> Meyer, Carolyn B.; Knight, Dennis H.; Dillon, Gregory K. 2005. Gen. Tech. Rep. RMRS-GTR-140. Fort Collins, CO: Department of Agriculture, Forest Service, Rocky Mountain Research Station. 94 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr140.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr140.html</a></p> <p>This report provides an HRV analysis for the upland vegetation of the Bighorn National Forest in north-central Wyoming. The variables include live tree density, dead tree (snag) density, canopy cover, abundance of coarse woody debris, species diversity, fire return intervals, the abundance of various diseases, the proportion of the landscape in different land cover types, and the degree of patchiness in the landscape.</p>
<b>Root diseases</b>	18	<p><b>Root diseases in coniferous forests of the Inland West: potential implications of fuels treatments.</b> Rippey, Raini C.; Stewart, Jane E.; Zambino, Paul J.; Klopfenstein, Ned B.; Tirocke, Joanne M.; Kim, Mee-Sook; Thies, Walter G. 2005. Gen. Tech. Rep. RMRS-GTR-141. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 32 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr141.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr141.html</a></p> <p>This paper provides examples of how fuels treatments may increase or reduce specific diseases and demonstrates their importance as considerations in the fuels management planning process. Several root diseases prevalent within Inland West of North America are addressed: Armillaria root disease, annosus root disease, laminated root rot, black stain root disease, Schweinitzii root and butt rot, Tomentosus root disease, Rhizina root rot, and stringy butt rot. For each disease, general information is provided on disease identification, management options, and potential effects of fuels treatments.</p>
<b>Ungulate grazing</b>	19	<p><b>Assessment of native species and ungulate grazing in the Southwest: terrestrial wildlife.</b> Zwartjes, Patrick W.; Cartron, Jean-Luc E.; Stoleson, Pamela L. L.; Haussamen, Walter C.; Crane, Tiffany E. 2005. Gen. Tech. Rep. RMRS-GTR-142. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 74 p. plus CD. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr142.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr142.html</a></p> <p>This report documents a project designed to assemble information on aspects of the fundamental biology for terrestrial wildlife in Arizona and New Mexico that have the potential to be negatively impacted by grazing or range management practices. The resulting database contains accounts for 305 species and subspecies of amphibians, reptiles, birds and mammals, including a computer database that allows managers to search and query the species accounts based on geographic distribution as well as shared ecological and life history characteristics.</p>
<b>Recreation modeling</b>	20	<p><b>Computer simulation modeling of recreation use: current status, case studies, and future directions.</b> Cole, David N., comp. 2005. Gen. Tech. Rep. RMRS-GTR-143. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 75 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr143.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr143.html</a></p> <p>This report compiles information about recent progress in the application of computer simulation modeling to planning and management of recreation use, particularly in parks and wilderness. Early modeling efforts are described in a chapter that provides an historical perspective. Another chapter provides an overview of modeling options, common data input requirements, and useful model outputs. The bulk of the report consists of case studies that illustrate a broad array of recreational situations and modeling work.</p>

	Order No.	
<b>Great Basin Experiment Station history</b>	21	<p><b>Beginnings of range management: an anthology of the Sampson-Ellison photo plots (1913 to 2003) and a short history of the Great Basin Experiment Station.</b> Prevedel, David A.; McArthur, E. Durant; Johnson, Curtis M. 2005. Gen. Tech. Rep. RMRS-GTR-154. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 60 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr154.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr154.html</a></p> <p>This publication contains a collection of 12 recurring sets of photographs that started in 1913 on depleted high-elevation watersheds on the Wasatch Plateau. The sites were rephotographed in the 1940s, 1972, 1990, and 2003. After 90 years, plant community changes on these high-elevation watersheds has led to a vegetation composition significantly different than the original condition. New plant communities have reached thresholds where yearly vegetative composition appears to be climate driven. Many of the higher elevation areas remain in unsatisfactory watershed health with active erosion.</p>
<b>Public response: Region 3</b>	22	<p><b>Survey responses from Region 3: Are we achieving the public's objectives for forests and rangelands?</b> Haefele, Michelle; Shields, Deborah J.; Lybecker, Donna L. 2005. Gen. Tech. Rep. RMRS-GTR-156. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 27 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr156.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr156.html</a></p> <p>The survey on values, objectives, beliefs, and attitudes, implemented as a module of the National Survey on Recreation and the Environment, asked over 7,000 respondents nationwide about their values with respect to public lands, objectives for the management of these lands, beliefs about the role the USDA Forest Service should play in fulfilling those objectives, and attitudes about the job the agency has been doing.</p>
<b>Public response: Region 5</b>	23	<p><b>Survey responses from Region 5: Are we achieving the public's objectives for forests and rangelands?</b> Lybecker, Donna L., Shields, Deborah J. 2005. Gen. Tech. Rep. RMRS-GTR-157. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 32 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr157.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr157.html</a></p> <p>The survey on values, objectives, beliefs, and attitudes, implemented as a module of the National Survey on Recreation and the Environment, asked over 7,000 respondents nationwide about their values with respect to public lands, objectives for the management of these lands, beliefs about the role the USDA Forest Service should play in fulfilling those objectives, and attitudes about the job the agency has been doing.</p>
<b>Public response: Region 8</b>	24	<p><b>Survey responses from Region 8: Are we achieving the public's objectives for forests and rangelands?</b> Shields, Deborah J.; Haefele, Michelle; Lybecker, Donna L. 2005. Gen. Tech. Rep. RMRS-GTR-158. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 31 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr158.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr158.html</a></p> <p>The survey on values, objectives, beliefs, and attitudes, implemented as a module of the National Survey on Recreation and the Environment, asked over 7,000 respondents nationwide about their values with respect to public lands, objectives for the management of these lands, beliefs about the role the USDA Forest Service should play in fulfilling those objectives, and attitudes about the job the agency has been doing.</p>

	Order No.	
<b>Public response: Region 9</b>	25	<p><b>Survey responses from Region 9: Are we achieving the public's objectives for forests and rangelands?</b> Haefele, Michelle; Shields, Deborah J.; Lybecker, Donna L. 2005. Gen. Tech. Rep. RMRS-GTR-159. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 28 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr159.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr159.html</a></p> <p>The survey on values, objectives, beliefs, and attitudes, implemented as a module of the National Survey on Recreation and the Environment, asked over 7,000 respondents nationwide about their values with respect to public lands, objectives for the management of these lands, beliefs about the role the USDA Forest Service should play in fulfilling those objectives, and attitudes about the job the agency has been doing.</p>
<b>Public response: Intermountain West</b>	26	<p><b>Survey responses from the Intermountain West: Are we achieving the public's objectives for forests and rangelands?</b> Lybecker, Donna L.; Shields, Deborah J.; Haefele, Michelle. 2005. Gen. Tech. Rep. RMRS-GTR-160. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 35 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr160.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr160.html</a></p> <p>The survey on values, objectives, beliefs, and attitudes, implemented as a module of the National Survey on Recreation and the Environment, asked over 7,000 respondents nationwide about their values with respect to public lands, objectives for the management of these lands, beliefs about the role the USDA Forest Service should play in fulfilling those objectives, and attitudes about the job the agency has been doing.</p>
<b>Monitoring terrestrial animals</b>	27	<p><b>Strategies for monitoring terrestrial animals and habitats.</b> Holthausen, Richard; Czapplewski, Raymond L.; DeLorenzo, Don; Hayward, Greg; Kessler, Winifred B.; Manley, Pat; McKelvey, Kevin S.; Powell, Douglas S.; Ruggiero, Leonard F.; Schwartz, Michael K.; Van Horne, Bea; Vojta, Christina D. 2005. Gen. Tech. Rep. RMRS-GTR-161. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 34 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr161.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr161.html</a></p> <p>This report addresses monitoring strategies for terrestrial animals and habitats. Primary topics covered include monitoring requirements; ongoing monitoring programs; key monitoring questions and measures; balancing three necessary and complementary forms of monitoring (targeted, cause-and-effect, and context); sampling design and statistical considerations; use of the data that result from monitoring; and organizational and operational considerations in the development and implementation of monitoring programs. The report concludes with a series of recommendations for the ongoing improvement of monitoring of terrestrial animals and their habitat.</p>
<b>PACFISH/INFISH</b>	28	<p><b>PACFISH/INFISH biological opinion (PIBO): Effectiveness monitoring program seven-year status report 1998 through 2004.</b> Henderson, Richard C.; Archer, Eric K.; Bouwes, Boyd A.; Coles-Ritchie, Marc S.; Kershner, Jeffrey L. 2005. Gen. Tech. Rep. RMRS-GTR-162. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 16 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_gtr162.html">http://www.fs.fed.us/rm/pubs/rmrs_gtr162.html</a></p> <p>The PACFISH/INFISH Biological Opinion (PIBO) Effectiveness Monitoring Program was initiated in 1998 to provide a consistent framework for monitoring aquatic and riparian resources on most Forest Service and Bureau of Land Management lands within the Upper Columbia River Basin. This 7-year status report gives our funding sources, partners, and the public an overview of past activities, current business practices, products and publications, and future program directions.</p>

	Order No.	
<b>Nursery proceedings: 2004</b>	29	<p><b>National proceedings: Forest and Conservation Nursery Associations 2004;</b> 2004 July 12–15; Charleston, NC; and 2004 July 26–29; Medford, OR. Dumroese, R. Kasten; Riley, Lee E.; Landis, Thomas D., tech. coords. 2005. Proc. RMRS-P-35. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 142 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_p035.html">http://www.fs.fed.us/rm/pubs/rmrs_p035.html</a></p> <p>This proceedings is a compilation of 30 papers that were presented at the regional meetings of the Forest and Conservation Nursery Associations in the United States in 2004. Subject matter for both sessions included nursery history, conifer and hardwood nursery culturing, greenhouse management, fertilization, pest management, restoration, and native species propagation.</p>
<b>Riparian rehabilitation</b>	30	<p><b>Planting aspen to rehabilitate riparian areas: a pilot study.</b> Shepperd, Wayne D.; Mata, Stephen A. 2005. Res. Note. RMRS-RN-26. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 5 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_rn026.html">http://www.fs.fed.us/rm/pubs/rmrs_rn026.html</a></p> <p>We planted 742 greenhouse-grown containerized aspen seedlings in the riparian area of Hurd Creek on the Arapaho National Forest east of Tabernash, Colorado. Objectives were to (1) determine whether aspen seedlings can be planted in an operational setting and survive in sufficient numbers to successfully establish a mature aspen stand and (2) determine the effectiveness of fencing on aspen seedling survival.</p>
<b>Mountain pine beetle</b>	31	<p><b>Mountain pine beetle emergence from lodgepole pine at different elevations near Fraser, CO.</b> Tishmack, J; Mata, S. A.; Schmid, J. M. 2005. Res. Note. RMRS-RN-27. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 5 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_rn027.html">http://www.fs.fed.us/rm/pubs/rmrs_rn027.html</a></p> <p>Mountain pine beetle emergence was studied at 8,760 ft, 9,200 ft, and 9,900 ft near Fraser, CO. Average numbers of beetles emerging ranged from 5 to 256/ft<sup>2</sup> of bark per tree with the means for each elevation not significantly different. Attack densities averaged between 6 and 9/ft<sup>2</sup> of bark for the three elevations. Population trend ratios were computed for each tree and ranged from 0.4 to 32.0. Trend ratios varied substantially among trees but were not significantly different among elevations due to the significant variation among trees. The emergence period and population trend ratios are discussed in relation to suppression/survey projects and a stand susceptibility system.</p>
<b>Sagebrush bird counts</b>	32	<p><b>Bird counts in stands of big sagebrush and greasewood.</b> Welch, Bruce L. 2005. Res. Note RMRS-RN-28. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 15 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_rn028.html">http://www.fs.fed.us/rm/pubs/rmrs_rn028.html</a></p> <p>Total numbers of birds and numbers of bird species were significantly (<math>p = 0.05</math> percent) higher in stands of big sagebrush than in stands of greasewood. This was especially true for Brewer's sparrow, lark sparrow, and mourning dove. The big sagebrush ecosystem appears to support greater numbers of birds and more species of birds than does the greasewood ecosystem.</p>

	Order No.	
<b>Mountain pine beetle-caused tree mortality</b>	33	<p><b>Mountain pine beetle-caused tree mortality in partially cut plots surrounded by unmanaged stands.</b> Schmid, J. M.; Mata, S. A. 2005. Res. Pap. RMRS-RP-54. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 11 p. Available: <a href="http://www.fs.fed.us/rm/pubs/rmrs_rp054.html">http://www.fs.fed.us/rm/pubs/rmrs_rp054.html</a></p> <p>Mountain pine beetle activity was monitored in one set of 2.5-acre plots in the southern portion of the Black Hills National Forest over a 17-year period. Beetles attacked 77 percent of the trees in the uncut control, 48 percent of the trees in the growing stock level (GSL) 100/110, 53 percent of the trees in the GSL 80/90, and 9 percent of the trees in the GSL 60/70. Partial cutting to reduce beetle-caused mortality may be ineffective for partially cut parcels of &lt;10 acres if the partially cut stands are surrounded by unmanaged susceptible stands. To increase the effectiveness of partial cutting, stands should be managed on a landscape basis.</p>
<b>Range management: beginnings</b>	34	<p><b>Beginnings of range management: Albert F. 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.</b> Prevedel, David A.; Johnson, Curtis M. 2005. R4-VM 2005-01. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Region. 94 p.</p> <p>This report details the early photographic Forest Reserve survey conducted by Albert F. Potter. In 1901, Albert F. Potter was hired as a grazing expert and in 1902 completed a survey of the potential Forest Reserves in Utah. During the summer of that year, he traveled over 2,000 miles of which approximately 1,650 were on horseback. He visited 42 towns seeking input on the designation of forest reserves and refined the boundaries outlined by the GLO. Potter's diary and report of this survey survive intact today.</p>

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## Atmosphere/climate

**The importance of canopy structure in controlling the interception loss of rainfall: examples from a young and an old-growth Douglas-fir forest.** Pypker, Thomas G.; Bond, Barbara J.; Link, Timothy E.; Marks, Danny; Unsworth, Michael H. 2005. *Agricultural and Forest Meteorology*. 130: 113–129

**Observational evidence of the complementary relationship in regional evaporation lends strong support for Bouchet's hypothesis.** Ramírez, Jorge A.; Hobbins, Michael T.; Brown, Thomas C. 2005. *Geophysical Research Letters*. 32(L15401): 1–4.

## Fire

**Field validation of burned area remote classification (BARC) products for the purpose of rapid response.** Hudak, Andrew; Evans, Jeff; Robichaud, Pete; Clark, Jess; Lannom, Keith; Morgan, Penelope; Stone, Carter. [2004]. Submitted to the Proceedings of the Tenth Biennial Forest Service Remote Sensing Applications Conference. Available: <http://www.cnrhome.uidaho.edu/default.aspx?pid=70495> [October 4, 2005].

**The relationship of field burn severity measures to satellite-derived burned area reflectance classification (BARC) maps.** Hudak, Andrew; Robichaud, Pete; Jain, Terrie; Morgan, Penelope; Stone, Carter; Clark, Jess. [2004]. Submitted to the International Archives of Photogrammetry and Remote Sensing. Available: <http://www.cnrhome.uidaho.edu/default.aspx?pid=70495> [October 4, 2005].

**Wildfire management in the U.S. Forest Service: a brief history.** Donovan, Geoffrey H.; Brown, Thomas C. 2005. *Natural Hazards Observer*. 29(6): 1–3

## Ecosystem management

**Naturalization of host-dependent microbes after introduction into terrestrial ecosystems.** McDonald, GERAL I.; Zambino, Paul J.; Klopfenstein, Ned B. 2005. In: Lundquist, J. E.; Hamelin, R. C., eds.

*Forest pathology: from genes to landscapes*. St. Paul, MN: The American Phytopathological Society Press: 41–57.

## Fish and wildlife

**Predicting cutthroat trout (*Oncorhynchus clarkii*) abundance in high-elevation streams: revisiting a model of translocation success.** Young, Michael K.; Guenther-Gloss, Paula M.; Ficke, Ashley D. 2005. *Canadian Journal of Fisheries and Aquatic Science*. 62: 2399–2408.

## Pests/diseases

**Application of molecular genetic tools to studies of forest pathosystems.** Kim, Mee-Sook; Klopfenstein, Ned B.; Hamelin, Richard C. 2005. In: Lundquist, J. E.; Hamelin, R. C., eds. *Forest pathology: from genes to landscapes*. St. Paul, MN: The American Phytopathological Society Press: 9–20.

**Assessing forest-pathogen interactions at the population level.** Richardson, Bryce; Klopfenstein, Ned B.; Peever, Tobin L. 2005. In: Lundquist, J. E.; Hamelin, R. C., eds. *Forest pathology: from genes to landscapes*. St. Paul, MN: The American Phytopathological Society Press: 21–30.

**Host physiological condition regulates parasitic plant performance: *Arceuthobium vaginatum* subsp. *cryptopodum* on *Pinus ponderosa*.** Bickford, Christopher P.; Kolb, Thomas E.; Geils, Brian W. 2005. *Oecologia*. (Online First). 6 p.

**Spatial distributions of *Cephus cinctus* Norton (Hymenoptera: Cephidae) and its braconid parasitoids in Montana wheat fields.** Weaver, David K.; Nansen, Christian; Runyon, Justin B.; Sing, Sharlene E.; Morrill, Wendell L. 2005. *Biological Control*. 34: 1–11.

**Within-field spatial distribution of *Cephus cinctus* (Hymenoptera: Cephidae) larvae in Montana wheat fields.** Nansen, Christian; Weaver, David K.; Sing, Sharlene E.; Runyon, Justin B.; Morrill, Wendell L.; Grieshop, Matthew J.; Shannon, Courtney L.; Johnson, Megan L. 2005. *The Canadian Entomologist*. 137: 202–214.

## Theses and Dissertations

These may be difficult to obtain, but are listed for your information. Please contact the named university if you are interested in obtaining a copy.

- Covariation between prey abundance and northern goshawk fecundity on the Kaibab Plateau, Arizona.** Salafsky, Susan Rebecca. 2004. Fort Collins, CO: Colorado State University. 52 p. Thesis. (970) 491-1101.
- Current status and habitat use of Gunnison's prairie dogs (*Cynomys gunnisoni*) in Arizona.** Wagner, David M. 2002. Flagstaff: Northern Arizona University. 77 p. Dissertation. (520) 523-2171.
- Exploring subsurface flowpaths at the Low pass field site, Oregon, USA.** Retter, Matthias. 2003. Freiburg: University of Freiburg, Institute of Hydrology. 96 p. Plus appendices. Thesis. University library web site: <http://www.ub.uni-freiburg.de/>
- First year postfire erosion rates in Bitterroot National Forest, Montana.** Spigel, Kevin Malone. 2002. Madison: University of Wisconsin. 147. Thesis. (608) 262-3242.
- Fungal diversity in woody roots of east-slope Cascade ponderosa pine (*Pinus ponderosa*) and Douglas-fir (*Pseudotsuga menziesii*).** Hoff, Jill Anne. 2002. Pullman: Washington State University. 76 p. Thesis. (509) 335-9671.
- Hairy woodpecker winter ecology following wild-fire: effects of burn severity and age.** Covert, Kristin A. 2003. Flagstaff, AZ: Northern Arizona University. 87 p. Thesis. (520) 523-2171.
- Improving the efficiency of helicopter operations on large wildland firs by including helicopter performance information in the decision process.** Trethewey, Diane. 2004. Missoula, MT: University of Montana. 135 p. Thesis. (406) 243-6860.
- Minding the meaning of wilderness: investigating the tensions and complexities inherent in wilderness visitors' experience narratives.** Glaspell, Brian S. 2002. Missoula: University of Montana. 240 p. Dissertation. (406) 243-6860.
- Northern goshawk habitat on the Kaibab national Forest in Arizona: factors affecting nest locations and territory quality.** Joy, Suzanne Merideth. 2002. Fort Collins: Colorado State University. 223 p. Dissertation. (970) 491-1101.
- Pinus albicaulis* seedling regeneration after fire.** Perkins, Judy L. 2004. Missoula, MT: University of Montana. 151 p. Thesis. (406) 243-6860.
- The restoration of historical variability in the ponderosa pine type on the Boise Basin Experimental Forest.** Frank, Adrian C. 2003. Moscow, ID: University of Idaho. 119 p. Thesis. (208) 885-6559.
- Size variation and fitness consequences in age 0 westslope cutthroat trout.** McGrath, Kathleen E. 2003. Moscow, ID: University of Idaho. 182 p. Dissertation. (208) 885-6559.
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- Wildlife use of witches' brooms induced by dwarf mistletoe in ponderosa pine forests of northern Arizona.** Garnett, Gregg N. 2002. Flagstaff: Northern Arizona University. 75 p. Thesis. (520) 523-2171.

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Forest Inventory and Monitoring Environmetrics <http://www.fs.fed.us/rm/ftcol/index.shtml>

Natural Resource Assessment and Analysis <http://www.fs.fed.us/rm/analytics/>

Research on Sustaining Social, Biological and Physical Components of Colorado Front Range Ecosystems <http://www.fs.fed.us/rm/main/labs/ftcollins/rmrs4653.html>

Social and Economic Values in Natural Resource Planning <http://www.fs.fed.us/rm/value/>

Stream Systems Technology Center <http://www.stream.fs.fed.us/>

Sustaining Alpine and Forest Ecosystems <http://www.fs.fed.us/rm/landscapes/>

### Logan Forestry Sciences Laboratory, UT

Aspen Restoration in the Western United States <http://www.fs.fed.us/rm/aspen/>

Restoration Ecology of Disturbed Lands <http://www.fs.fed.us/rm/logan/4301/>

Biology, Ecology, and Management of Western Bark Beetles <http://www.usu.edu/beetle/>

### Missoula, MT

Aldo Leopold Wilderness Institute <http://leopold.wilderness.net/>

Bitterroot Ecosystem Management Project <http://www.fs.fed.us/rm/ecopartner/>

Ecology and Management of Northern Rocky Mountain Forests <http://www.fs.fed.us/rm/ecology/>

Economic Aspect of Forest Management on Public Lands <http://www.fs.fed.us/rm/missoula/4802/>

Fire Effects Information System <http://www.fs.fed.us/database/feis/>

Missoula Fire Sciences Laboratory <http://www.firelab.org/>  
Fire Behavior: Fundamentals and Systems Development  
Fire Chemistry and Emission Characterization  
Fire Effects: Prescribed Fire and Wildfire

Wildlife Habitats <http://www.fs.fed.us/rm/main/labs/missoula/rmrs4201.html>

### Moscow Forestry Sciences Laboratory, ID

<http://forest.moscowfsl.wsu.edu/index.html>

Effects of Environmental Variability and Forest management on Ecosystems Processes  
Microbial Processes that Affect Ecosystem Function  
Soil and Water Engineering

### Ogden Forestry Sciences Laboratory, UT

<http://www.fs.fed.us/rm/ogden/>

Interior West Forest Inventory and Analysis Program

### Provo Shrub Sciences Laboratory, UT

<http://www.fs.fed.us/rm/provo/>

Shrubland Biology and Restoration

### Rapid City Forestry Sciences Laboratory, SD

<http://www.fs.fed.us/rm/sd>

Center for Great Plains Ecosystem Research Rapid City <http://www.fs.fed.us/rm/rapidcity/>

### Reno Forestry Sciences Laboratory, NV

<http://www.fs.fed.us/rm/main/labs/reno.html>

Ecology, Paleocology, and Restoration of Great Basin  
Great Basin Ecology <http://www.ag.unr.edu/gbem/aboutGbem.htm>



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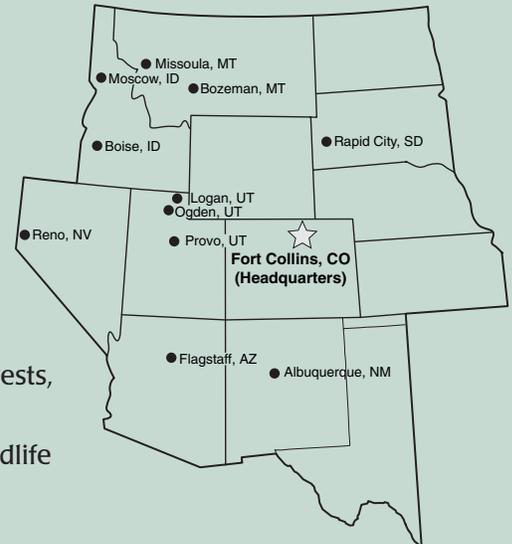
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