

## Bibliography

- Abella, S.R. and W.W. Covington. 2006. Vegetation-environment relationships and ecological species groups of an Arizona *Pinus ponderosa* landscape, USA. *Plant Ecology* Vol. 185.  
<https://library.eri.nau.edu:8443/handle/2019/268>
- Abrams, Jesse and Kimberly Lowe. 2005. Public Perceptions of forest restoration in the southwest: A synthesis of selected literature and surveys, Ecological Restoration Institute, Northern Arizona University, Flagstaff, Arizona.
- Agee, J.K. 1993. *Fire Ecology of Pacific Northwest Forests*. Island Press, Washington, D.C.
- Ahlgren, C.E. 1974. Fire and Ecosystem-Introduction. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Ahlstrom, Richard V. N., David E. Purcell, M. Zyniecki, Dennis Gilpin, and Virginia L. Newton. 1993. An Archaeological Overview of Grand Canyon National Park. SWCA Archaeological Report No. 93-92. SWCA, Inc., Environmental Consultants, Flagstaff.
- AirNOW 2006a. Ozone and Your Health. At <http://www.airnow.gov/index.cfm?action=static.ozone2#3>
- Alexander, R.R. 1987. Ecology, silviculture, and management of the Engelmann spruce-subalpine fir type in the central and southern Rocky Mountains. U.S. Department of Agriculture, Forest Service, *Agricultural Handbook* 659, Washington, D.C.
- Allen, C. D., M. Savage, D. A. Falk, K. F. Suckling, T. W. Swetnam, T. Schulke, P. B., Stacey, P. Morgan, M. Hoffman, and J. T. Klingel 2002b. Restoration of southwestern ponderosa pine ecosystems: a broad perspective. *Ecological Applications*, 12(5), pp. 1418-1433.
- Allen, C.D. 1984. Montane grasslands in the landscape of the Jemez Mountains, New Mexico. Thesis, University of Wisconsin, Madison, Wisconsin.
- Allen, C.D. 1989. Changes in the landscape of the Jemez Mountains, New Mexico. University of California, Berkeley, California.
- Allen, C.D. 2002. Lots of lightning and plenty of people: an ecological history of fire in the upland Southwest. p. 143-193 In T. R. Vale, editor. *Fire, native peoples, and the natural landscape*, Island Press, Covelo, California.
- Allen, C.D. and D.D. Breshears. 1998. Drought-induced shift of a forest-woodland ecotone: rapid landscape response to climate variation. *Proceedings of the National Academy of Sciences* 95:14839-14842.
- Allen, C.D., M. Savage, D.A. Falk, K.F. Suckling, T.W. Swetnam, T. Schulke, P.B. Stacey, P. Morgan, M. Hoffman, and J.T. Klingel. 2002. Ecological restoration of southwestern ponderosa pine ecosystems: a broad perspective. *Ecological Applications* 12:1418-1433.
- Allen, C.D., R. Touchan, and T.W. Swetnam. 1995. Landscape-scale fire history studies support fire management action at Bandelier. *Park Science* 15:18-19.
- Anderson, D.E., O.J. Rongstad, W.R. Mytton. 1990. Home-Range Changes in Raptor Exposed to Increased Human Activity Levels in Southeastern Colorado. IN *Wildlife Society Bulletin* 18: 134-142. Online at <http://www.jstor.org/view/00917648/ap070070/07a00080/0> (accessed July 2007)
- Arizona Administrative Code: Available online at  
[http://www.azsos.gov/public\\_services/Title\\_18/18\\_table.htm](http://www.azsos.gov/public_services/Title_18/18_table.htm)
- Arizona Department of Commerce. Statistics available online at: <http://www.azcommerce.com>
- Arizona Department of Environmental Quality. 2000. Grand Canyon Air Quality Advisory Issued. Arizona Department of Environmental Quality News Release May 18.
- Arizona Department of Environmental Quality. 2004. 303(d) List, Assessment Categories, and TMDL Schedule, <http://www.azdeq.gov/environ/water/assessment/download/305-02/5lists.pdf> (accessed February 23, 2007)
- Arizona Department of Transportation. 2005. Noise Abatement Policy. Environmental and Enhancement Group, Phoenix, Arizona.
- Arizona Game and Fish Department (AGFD). 2003d. *Lasiurus blossevillei*. Unpublished abstract compiled and edited by the Heritage Data Management System, Phoenix, Arizona. Online at: [http://www.azgfd.com/w\\_c/edits/hdms\\_abstracts\\_mammals.shtml](http://www.azgfd.com/w_c/edits/hdms_abstracts_mammals.shtml) (accessed May 2004)

- Arizona Game and Fish Department 2001c. *Gopherus agassizii*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix. Online at: [http://www.azgfd.com/w\\_c/edits/hdms\\_abstracts\\_reptiles.shtml](http://www.azgfd.com/w_c/edits/hdms_abstracts_reptiles.shtml) (accessed May 2004)
- Arizona Game and Fish Department. 1997. *Myotis volans*. Unpublished abstract compiled and edited by Heritage Data Management System, Phoenix, Arizona. Online at: [http://www.azgfd.com/w\\_c/edits/hdms\\_abstracts\\_mammals.shtml](http://www.azgfd.com/w_c/edits/hdms_abstracts_mammals.shtml) (accessed 11 May 2004)
- Arizona Game and Fish Department. 2001d. *Idionycteris phyllotis*. Unpublished abstract compiled and edited by Heritage Data Management System, Phoenix, Arizona. [http://www.azgfd.com/w\\_c/edits/hdms\\_abstracts\\_mammals.html](http://www.azgfd.com/w_c/edits/hdms_abstracts_mammals.html) (accessed May 2004)
- Arizona Game and Fish Department. 2001e. *Gila cypha*. Unpublished abstract compiled and edited by Heritage Data Management System, Phoenix, Arizona. Online at: [http://www.azgfd.com/w\\_c/edits/hdms\\_abstracts\\_fish.shtml](http://www.azgfd.com/w_c/edits/hdms_abstracts_fish.shtml) (accessed May 2004)
- Arizona Game and Fish Department. 2002a. *Rana pipiens*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix. Online at: [http://www.azgfd.com/w\\_c/edits/hdms\\_abstracts\\_amphibians.shtml](http://www.azgfd.com/w_c/edits/hdms_abstracts_amphibians.shtml) (accessed May 2004)
- Arizona Game and Fish Department. 2002b. *Eumops perotis californicus*. 1 Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Arizona. Online at: [http://www.azgfd.com/w\\_c/edits/hdms\\_abstracts\\_mammals.shtml](http://www.azgfd.com/w_c/edits/hdms_abstracts_mammals.shtml) (accessed May 2004)
- Arizona Game and Fish Department. 2002c. *Xyrauchen texanus*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix. Online at: [http://www.azgfd.com/w\\_c/edits/hdms\\_abstracts\\_fish.shtml](http://www.azgfd.com/w_c/edits/hdms_abstracts_fish.shtml) (accessed May 2004)
- Arizona Game and Fish Department. 2003b. *Accipiter gentilis*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix. 8 pp. Online at: [http://www.azgfd.com/w\\_c/edits/hdms\\_abstracts\\_birds.shtml](http://www.azgfd.com/w_c/edits/hdms_abstracts_birds.shtml) (accessed May 2004)
- Arizona Game and Fish Department. 2003c. *Corynorhinus townsendii pallescens*. Unpublished abstract compiled and edited by the Heritage Data Management System, Phoenix, Arizona. Online at: [http://www.azgfd.com/w\\_c/edits/hdms\\_abstracts\\_mammals.shtml](http://www.azgfd.com/w_c/edits/hdms_abstracts_mammals.shtml) (accessed May 2004)
- Arizona Game and Fish Department. 2004. *Arenaria aberrans*. Unpublished abstract compiled by the Heritage Data Management System. Arizona Game and Fish Department. Phoenix, Arizona.
- Arnold, J.F., D.A. Jameson, and E.H. Reid. 1964. The pinyon-juniper type of Arizona: effects of grazing, fire, and tree control. U.S. Department of Agriculture, Forest Service Production Research Report No. 84, Washington, D.C.
- Ashcraft, G. C. 1979. Effects of Fire on Deer in Chaparral. Cal-Neva Wildlife Transactions. pps. 177-189. IN Wildland Fire in Ecosystems: Effects of Fire on Fauna. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Backer, Dana M., S.E. Jensen, and G.R. McPherson. 2004. Impacts of Fire-Suppression Activities on Natural Communities. Conservation Biology. Vol. 18, No. 4.
- Backlund, Erik, and William P. Stewart, Zwi Schwartz, Cary MacDonald. 2006. Backcountry Day Hikers at Grand Canyon National Park. Park Planning and Policy Lab. Department of Recreation, Sport and Tourism, University of Illinois at Urbana-Champaign. Champaign, Illinois.
- Baker, R. H. 1940. Effects of Burning and Grazing on Rodent Populations. Journal of Mammalogy 21: 223
- Baker, W.L. and D. Ehle 2001. Uncertainty in surface-fire history: the case of ponderosa pine forests in the western United States. Canadian Journal of Forest Research 31:1205-1226.
- Baker, W.L. and D.J. Shinneman. 2004. Fire and restoration of piñon-juniper woodlands in the western United States: a review. Forest Ecology and Management 189:1-21.
- Bakker, Gail. April 2007 Personal Communication. Address: U.S. Forest Service A.M.S.E.T., 631 Coyote Street, Nevada City, CA 95959.
- Balda, R. P. 1975. The relationship of secondary cavity nesters to snag densities in western coniferous forests. USDA Forest Service, Southwestern Region; Wildlife Habitat Technical Bulletin No. 1.
- Barkeley, T.M., L. Brouillet, and J.L. Strother. 1993. Asteraceae. IN Flora of North America North of Mexico. New York and Oxford. Vol. 19. *Ericameria cervina*. Available online at

- [http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=250066512](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=250066512) (accessed March 2007)
- Barney, M.A. and N.C. Frischknecht. 1974. Vegetation changes following fire in the pinyon-juniper type of west-central Utah. *Journal of Range Management* 27:91-96.
- Bartos, D.L. 2001. Landscape dynamics of aspen and conifer forests. p. 5-14 In W.D. Shepperd, D. Binkley, D.L. Bartos, T.J. Stohlgren, and L.G. Eskew, compilers. *Sustaining aspen in western landscapes: symposium proceedings*. U.S. Department of Agriculture, Forest Service Proceedings RMRS-P-18, Rocky Mountain Research Station, Fort Collins, Colorado.
- Bastian, H.V. 2001. The effects of a low intensity fire on a mixed-conifer forest in Bryce Canyon National Park, Utah. p. 49-53 In R.K. Vance, C.B. Edminster, W.W. Covington, and J.A. Blake, compilers. *Ponderosa pine ecosystems restoration and conservation: steps toward stewardship*; 2000 April 25-27; Flagstaff, Arizona. U.S. Department of Agriculture, Forest Service Proceedings RMRS-P-22, Rocky Mountain Research Station, Ogden, Utah.
- BCI (Bat Conservation International, Inc.) 2002. U.S. bat species. Online at: <http://www.batcon.org/discover/species/usspecies.html> (accessed March 16, 2004)
- Beale, E.F. 1858. Wagon road from Fort Defiance to the Colorado River. 35th Congress, 1st Session, Senate Executive Document 124, Washington, D.C.
- Bebi, P., D. Kulakowski, and T.T. Vale. 2003. Interactions between fire and spruce beetles in a subalpine Rocky Mountain forest landscape. *Ecology* 84:362-371.
- Beier, P. and J. Drennan. 1997. Forest structure and prey abundance in foraging areas of northern goshawks. *Ecological Applications* 7(2):564-571.
- Belnap, J. and O.L. Lange, editors. 2001. *Biological soil crusts: structure, function, and management*. Springer-Verlag, New York, New York.
- Bennett, P.S. 1974. The ecological role of fire in North Rim forests, Grand Canyon National Park. *Quarterly of the Museum of Northern Arizona* 46:168-181.
- Bernard, Stephen R. and Kenneth F. Brown. 1977. *Distribution of Mammals, Reptiles, and Amphibians by BLM Physiographic Regions and A.W. Kuchler's Associations for the Eleven Western States*. Tech. Note 301, 169 p. U.S. Department of the Interior, Bureau of Land Management, Denver, Colorado.
- Bertolette, D and Spotskey, D. 2001. Remotely sensed burn severity mapping. p. 45-51. In D. Harmon, editor. *Crossing boundaries in park management: Proceedings of the 11<sup>th</sup> conference on research and resource management in parks and on public lands*. The George Wright Society, Hancock, Michigan.
- Betancourt, J.L., E.A. Pierson, K.A. Rylander, J.A. Fairchild-Parks, and J.S. Dean. 1993. Influence of history and climate on New Mexico piñon-juniper woodlands. p. 42-62 In E.F. Aldon and D.W. Shaw, editors. *Managing piñon-juniper ecosystems for sustainability and social needs*. U.S. Department of Agriculture, Forest Service General Technical Report RM-236, Rocky Mountain Research Station, Fort Collins, Colorado.
- Beymer, R.J. and J.M. Klopatek. 1992. Effects of grazing on cryptogamic crusts in pinyon-juniper woodlands in Grand Canyon National Park. *American Midland Naturalist* 127:139-148.
- Biondi, F. 1996. Decadal-scale dynamics at the Gus Pearson Natural Area: evidence for inverse (a)symmetric competition? *Canadian Journal of Forest Research* 26:1397-1406.
- Block, William M., Joseph L. Ganey, Peter E. Scott, and Rudy King. 2005. Prey Ecology of MSOs in Pine-Oak Forests of Northern Arizona. *Journal of Wildlife Management* 69(2):618. Available online at: <http://www.bioone.org/archive/0022-541X/69/2/pdf/i0022-541X-69-2-618.pdf> (accessed April 2007)
- Bock, C.E. and J.F. Lynch. 1970. Breeding Bird Populations of Burned and Unburned Conifer Forest in the Sierra Nevada. *The Condor* 72:182-189.
- Bogert, C.M. 1932. Herpetological problems at Grand Canyon National Park. *Grand Canyon Nature Notes* 7(6):61-65.
- Bond, M.L., R.J. Gutierrez, A.B. Franklin, W.S. LaHaye, C.A. May, and M.E. Seamans. 2002. Short-term Effects of Wildfires on Spotted Owl Survival, Site Fidelity, Mate Fidelity, and Reproductive Success. *Wildlife Society Bulletin* 30(4):1022-1028.

- Bowden, Tim. 2006. Breeding Ecology of Mexican spotted owls (*Strix occidentalis lucida*) in Grand Canyon National Park; 2006 Summary Report (unpublished confidential internal report containing sensitive species data). Grand Canyon National Park, Arizona.
- Bowden, Tim. 2006. Breeding Ecology of Mexican spotted owls (*Strix occidentalis lucida*) in Grand Canyon National Park; 2006 Summary Report (unpublished confidential internal report containing sensitive species data). Grand Canyon National Park, Arizona.
- Bowman, C. 2003. Draft smoke management plan, Grand Canyon National Park, Grand Canyon, Arizona.
- Bowman, C. 2007a. Fire Treatment Schedule Spreadsheet. On file, Division of Science and Resource Management, Grand Canyon National Park, Grand Canyon, Arizona.
- Bowman, C. 2007b. Fire Treatment Schedule Spreadsheet. On file, Division of Science and Resource Management, Grand Canyon National Park, Grand Canyon, Arizona.
- Bradley, T. and P. Tueller. 2001. Effects of Fire on Bark Beetle Presence on Jeffrey Pine in the Lake Tahoe Basin." *Forest Ecology and Management*. 142: 205-214.
- Bradley, Tim, Jennifer Gibson, and Windy Bunn. 2006. Fuels Management and Non-Native Plant Species: An Evaluation of Fire and Fire Surrogate Treatments in a Chaparral Plant Community. Final report to the joint fire science program. Project Number: JFSP 01B-3-3-27. National Park Service. Whiskeytown National Recreation Area.
- Brawn, J.D., W.J. Boecklen and R. P. Balda. 1987. Investigations of density interactions among breeding birds in ponderosa pine forests: correlative and experimental evidence. *Oecologia* 72:348-357
- Breshears, D.D., N.S. Cobb, P.M. Rich, K.P. Price, C.D. Allen, R.G. Balice, W.H. Romme, J.H. Kastens, M.L. Floyd, J. Belnap, J.J. Anderson, O.B. Myers, and C.W. Meyer. 2005. Regional vegetation die-off in response to global-change-type drought. *Proceedings of the National Academy of Sciences* 102:15144-15148.
- Brian, N.J., P.G. Rowlands, and D.A. Jameson. 1999. Resurvey of the vegetation and soils of Fishtail Mesa: a relict area in Grand Canyon National Park, Arizona. p. 113 In S.B. Monsen and R. Stevens, compilers. *Proceedings: ecology and management of pinyon-juniper communities within the Interior West*. U.S. Department of Agriculture, Forest Service Proceedings RMRS-P-9, Rocky Mountain Research Station, Ogden, Utah.
- Brian, Nancy J. 2000. A Field Guide to the Special Status Plants of Grand Canyon National Park. Science Center, Grand Canyon National Park. Grand Canyon, Arizona.
- Brookes, M.H., R.W. Campbell, J.J. Colbert, R.G. Mitchell, and R.W. Stark, technical coordinators. 1987. Western spruce budworm. U.S. Department of Agriculture, Forest Service, Technical Bulletin 1694. Washington, D.C.
- Brown, B. T., S. W. Carothers, and R. R. Johnson. 1984. *Grand Canyon Birds*. University of Arizona Press, Tucson. 302 pp.
- Brown, D.E. 1994a. Alpine and subalpine grasslands. p. 109-111 In D.E. Brown, editor. *Biotic communities: southwestern United States and northwestern Mexico*. University of Utah Press, Salt Lake City, Utah.
- Brown, D.E. 1994c. Montane meadow grassland. p. 113-114. *Biotic communities: southwestern United States and northwestern Mexico*. University of Utah Press, Salt Lake City, Utah.
- Brown, D.E., editor. 1994b. *Biotic communities: southwestern United States and northwestern Mexico*. University of Utah Press, Salt Lake City, Utah.
- Brown, P.M., M.W. Kaye, L.S. Huckaby, and C.H. Baisan. 2001. Fire history along environmental gradients in the Sacramento Mountains, New Mexico: influences of local patterns and regional processes. *Ecoscience* 8:115-126.
- Brown, S., C. Hickey, and B. Harrington, editors. 2000. *The U.S. Shorebird Conservation Plan*. Manomet Center for Conservation Sciences. Manomet, Massachusetts.
- Brown, Timothy K. and Larry Bright. 1997. Wildlife Habitat Preservation and Enrichment During and after Fires. IN Greenlee, Jason M., ed. *Proceedings, 1st conference on fire effects on rare and endangered species and habitats; 1995 November 13-16; Coeur d'Alene, ID*. Fairfield, Washington: International Association of Wildland Fire, pps. 65-68. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report.

- RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Bull, Evelyn L. and Arlene K. Blumton. 1999. Effect of Fuels Reduction on American Martens and their Prey. Res. Note PNW-RN-539, 9 p., U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, Portland, Oregon. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Bunn, Windy. March 3, 2009. Fire Effects on MSO restricted habitat in Grand Canyon National Park. Unpublished internal report. Grand Canyon National Park, Arizona.
- Bunnell, Fred L. 1995. Forest-Dwelling Vertebrate Faunas and Natural Fire Regimes in British Columbia: Patterns and Implications for Conservation. *Conservation Biology* 9(3): 636-644. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Bureau of Reclamation (BOR). 2002. Grand Canyon National Park Water Supply Appraisal Study, Coconino, Mohave, and Yavapai Counties, Arizona. 63 pp.
- Busse, M. D., and L. F. DeBano. 2005. Chapter 4 Soil Biology. IN *Wildland Fire in Ecosystems: Effects of Fire on Soil and Water*. USDA Forest Service RMRS-GTR-42-Vol.4, Rocky Mountain Research Station, Ogden, Utah.
- Butterfield, K., B.T. Brown, R.R. Johnson, N. Czaplewski. 1981. Checklist of mammals of the Grand Canyon region. Grand Canyon Natural History Association.
- Cartledge, Thomas R. 1996. Heritage resources and fire management: a resource management crossroads. IN Allen, Craig D., ed. *Fire effects in Southwestern forests: Proceedings, 2nd La Mesa Fire Symposium; 1994; Los Alamos, NM*. RM-GTR-286. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station: 206-214.
- Caton, Elaine L. 1996. Effects of Fire and Salvage Logging on the Cavity-Nesting Bird Community in Northwestern Montana. Missoula, MT: University of Montana. Dissertation. 115 p. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Center for Plant Conservation. n.d. CPC National Collection Plant Profile *Clematis hirsutissima* var. *arizonica*. CPC national Collection of Endangered Plants online at [http://www.centerforplantconservation.org/asp/CPC\\_ViewProfile.asp?CPCNum=1001](http://www.centerforplantconservation.org/asp/CPC_ViewProfile.asp?CPCNum=1001) (accessed February 2007)
- Chambers, C.L., and S.S. Germaine. 2003. Vertebrates. Pages 268-285 in P. Friederici (ed.). *Ecological restoration of southwestern ponderosa pine forests*. Island Press, Washington, D.C.
- Chornesky, E.A. and J.M. Randall. 2003. The threat of invasive alien species to biological diversity: setting a future course. *Annals of the Missouri Botanical Garden* 90:67-76.
- Clary, W.P. and P.F. Ffolliott. 1969. Water holding capacity of ponderosa pine forest floor layers. *Journal of Soil and Water Conservation* 24:22-23.
- Cobb, N.S., D.F. Gori, and T.G. Whitham. 1996 The Effects of Prescribed Burning on the Rare Plant *Chrysothamnus molestus*. IN *Southwestern Rare and Endangered Plants: Proceedings of the Second Conference*. September 11-14, 1995, Flagstaff, Arizona. U.S. Department of Agriculture. General Technical Report RM-GTR-283.
- Coder, Christopher M. 2000. An Introduction to Grand Canyon Prehistory. Grand Canyon National Park, Arizona: Grand Canyon Association.
- Cohen, J.D. 2000. Preventing Disaster: Home Ignitability in the Wildland-Urban Interface. *Journal of Forestry* 98(3):15-21
- Cole, D. N. 1990. Trampling Disturbance and Recovery of Cryptogamic Soil Crusts in Grand Canyon National Park. *Great Basin Naturalist* 50:321-325.
- Cole, K.L. 1990. Late Quaternary vegetation gradients through the Grand Canyon. p. 240-258 In J.L. Betancourt, T.R. Van Devender, and P.S. Martin, editors. *Packrat middens: the last 40,000 years of biotic change*. University of Arizona Press, Tucson, Arizona.

- Cole, Kenneth L., Kirsten Ironside, Phillip Duffy, and Samantha Arundel. 2005. Transient Dynamics of Vegetation Response to Past and Future Climatic Changes in the Southwestern United States. Poster for U.S. Climate Change Science Program workshop Climate Science in Support of Decision Making, November 14-16, 2005. Available at: [http://www.climatescience.gov/workshop2005/posters/P-EC4.2\\_Cole.pdf](http://www.climatescience.gov/workshop2005/posters/P-EC4.2_Cole.pdf)
- Cole, Kenneth L., no date, "Projecting 21<sup>st</sup> Century Plant Distributions in Southern Colorado Plateau Parks." NRPP proposal.
- Conover, M.R., W.C. Pitt, K.K. Kessler, T.J. Dubow and W.A. Sanborn. 1995. Review of Human Injuries, Illnesses and Economic Losses Caused by Wildlife in the United States. *Wildlife Society Bulletin* 23:407-414.
- Core, John E. and Janice L. Peterson. 2001. Public Health and Exposure to Smoke. IN Hardy et al. 2001.
- Cothran, Cheryl Cole, Thomas E. Combrink and Melinda Bradford. 2005. *Grand Canyon National Park Northern Arizona Tourism Study*. Arizona Hospitality Research and Resource Center, School of Hotel and Restaurant Management, Northern Arizona University, April.
- Covert, K.A. 2004. Hairy woodpecker winter ecology following wildfire: effects of burn severity and age. M.S. Thesis, Northern Arizona University, Flagstaff, Arizona.
- Covington, W. W. and S. S. Sackett. 1986. Effects of Periodic Burning on Soil Nitrogen Concentrations in Ponderosa Pine. *Soil Society of America Journal* 50:452-457.
- Covington, W.W. and M.M. Moore. 1994. Southwestern ponderosa pine forest structure: Changes since Euro-American settlement. IN Draft Environmental Assessment, Grand Canyon Forest Restoration Research. National Park Service. Science Center, Grand Canyon National Park.
- Covington, W.W. and M.M. Moore. 1994a. Postsettlement changes in natural fire regimes and forest structure: ecological restoration of old-growth ponderosa pine forest. *Journal of Sustainable Forestry* 2:153-181.
- Covington, W.W. and M.M. Moore. 1994b. Southwestern ponderosa forest structure: changes since Euro-American settlement. *Journal of Forestry* 92:39-47.
- Covington, W.W. and S.S. Sackett. 1984. The effect of a prescribed burn in southwestern ponderosa pine on organic matter and nutrients in woody debris and forest floor. *Forest Science* 30:183-192.
- Covington, W.W. and S.S. Sackett. 1986. Effect of periodic burning on soil nitrogen concentrations in ponderosa pine. *Soil Science Society of America Journal* 50:452-457.
- Covington, W.W. and S.S. Sackett. 1990. Fire effects on ponderosa pine soils and their management implications. p. 105-111. IN J.S. Krammes, technical coordinator. Effects of fire management of southwestern natural resources. U.S. Department of Agriculture, Forest Service General Technical Report RM-191, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Covington, W.W. and S.S. Sackett. 1992. Soil mineral nitrogen changes following prescribed burning in ponderosa pine. *Forest Ecology and Management* 54:175-191.
- Covington, W.W., M.M. Moore, P.Z. Fulé, and H.B. Smith. 2000. Grand Canyon Forest Restoration. Research objective 1: Landscape studies of fire regimes and forest structure. Ecological Restoration Institute, College of Ecosystem Science and Management, Northern Arizona University, Flagstaff, Arizona. 196 pp.
- Covington, W.W., P.Z. Fulé, M.M. Moore, H.B. Smith, A.E.M. Waltz, T.A. Heinlein. 1999. Ecological Restoration Marking Guidelines for Ponderosa Pine Restoration Areas. Northern Arizona University, Flagstaff, Arizona.
- Covington, W.W., P.Z. Fulé, M.M. Moore, S.C. Hart, T.E. Kolb, J.N. Mast, S.S. Sackett, and M.R. Wagner. 1997. Restoring ecosystem health in ponderosa pine forests of the Southwest. *Journal of Forestry* 95:23-29.
- Crane, M.F. 1990. *Rosa acicularis*. IN Fire Effects Information System, online. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available at: <http://www.fs.fed.us/database/feis/index.html> (accessed April 2007)
- Crawford, J.A. In review. Five years of vegetation change following high-severity fire and fire-fighting activities in Grand Canyon National Park. Submitted to Proceedings of the 8th Biennial Conference of Research on the Colorado Plateau. University of Arizona Press, Tucson, Arizona.

- Crawford, Julie A., and K. Straka. 2004. The Outlet Fire of 2000: Results from Five Years of Vegetation Monitoring, North Rim, Grand Canyon National Park. Grand Canyon National Park Arizona, internal report. National Park Service, U. S. Department of the Interior.
- Crawford, Julie A., N. Juarez-Cummings, G. Whitchurch, and S. Meitz. 2003. Non-Native Plant Presence in the Backcountry of Grand Canyon National Park, Arizona. Grand Canyon National Park Arizona, internal report. National Park Service, U. S. Department of the Interior.
- Crocker-Bedford, D. C. 1986. Long-term carrying capacities relative to subpopulations of the North Kaibab deer herd. North Kaibab Ranger District; Kaibab National Forest, internal report.
- Crocker-Bedford, D. C. and B. Chaney. 1988. Characteristics of goshawk nesting stands. IN Proceedings of the Southwest Raptor Management Symposium and Workshop. National Wildlife Federation Scientific and Technical Series No. 11.
- Crocker-Bedford, D.C., J.L. Vankat, D.R. Bertolette, P. Leatherbury, T. McKinnon, and C.L. Sipe. 2005a. Apparent increases in mixed conifer characteristics since 1935 in ponderosa pine – mixed conifer transition forests of Grand Canyon National Park. p. 131-140 In C. van Riper III and D.J. Mattson, editors. The Colorado Plateau II: biophysical, socioeconomic, and cultural research. Proceedings of the 7th Biennial Conference of Research on the Colorado Plateau. University of Arizona Press, Tucson, Arizona.
- Crocker-Bedford, D.C., J.L. Vankat, D.R. Bertolette, P. Leatherbury, T. McKinnon, and C.L. Sipe. 2005b. Apparent reductions in large-diameter trees since 1935 in ponderosa pine forests of Grand Canyon National Park. p. 141-149. IN C. van Riper III and D.J. Mattson, editors. The Colorado Plateau II: biophysical, socioeconomic, and cultural research. Proceedings of the 7th Biennial Conference of Research on the Colorado Plateau. University of Arizona Press, Tucson, Arizona.
- Cronk, Q.C.B. & Fuller, J.L. 2001. Plant Invaders: the Threat to Natural Ecosystems Earthscan Publications, London.
- Crooks, K. R. 2002. Relative sensitivities of mammalian carnivores to habitat fragmentations. *Conservation Biology* 16: 488-502.
- Cunningham, J. B, R. P. Balda, and W. S. Gaud. 1980. Selection and Use of Snags by Secondary Cavity-Nesting Birds of the Ponderosa Pine Forest. USDA Forest Service, Research Paper RM-222.
- Dahms, C.W. and B.W. Geils. 1997. An assessment of forest ecosystem health in the Southwest. U.S. Department of Agriculture, Forest Service General Technical Report RM-GTR-295, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Davis, W.B., and D.J. Schmidly. 1994. The mammals of Texas – online edition. Online at <http://www.nsrl.ttu.edu/tmot1/Default.htm> (accessed February 3, 2004)
- DeBano, L. F. 2000. The Role of Fire and Soil Heating on Water Repellence in Wildland Environments: A review. *Journal of Hydrology* 231:195-206.
- Delaney, David K., Terryl G. Grubb, Paul Beier, Larry L. Pater, and M. Hildegard Reiser. 1999. Effects of Helicopter Noise on MSOs. *Journal of Wildlife Management* 63: 60-76.
- Despain, D.W. and J.C. Mosley. 1990. Fire history and stand structure of a pinyon-juniper woodland at Walnut Canyon National Monument, Arizona. U.S. Department of the Interior, National Park Service Technical Report No. 34. Cooperative National Park Resources Studies Unit, University of Arizona, Tucson, Arizona.
- Dick-Peddie, W.A. 1993. New Mexico vegetation: past, present, and future. University of New Mexico Press, Albuquerque, New Mexico.
- Dickson, L.L., R.V. Ward, D.W. Willey, and D.B. Spotskey. 2000a. Progress report on an inventory of the avifauna of Grand Canyon National Park: January 2000. Grand Canyon Science Center, Grand Canyon, Arizona.
- Dickson, L.L., R.V. Ward, D.W. Willey, and D.B. Spotskey. 2000b. Progress report on an inventory of the avifauna of Grand Canyon National Park: November 2000. Grand Canyon Science Center, Grand Canyon, Arizona.
- Dickson, L.L., R.V. Ward, D.W. Willey, and D.B. Spotskey. 2001. Progress report on an inventory of the avifauna of Grand Canyon National Park: June 2001. Grand Canyon Science Center, Grand Canyon, Arizona.
- Dieterich, J.H. 1983. Fire history of southwestern mixed conifer: a case study. *Forest Ecology and*

- Management 6:13-31.
- Dockery, D.W., C.A. Pope, III, X. Xu., J.D. Spengler, J.H. Ware, M.E. Fay, B.G. Ferris, Jr., and F.E. Speizer. 1993. An association between air pollution and mortality in six U.S. cities. *New England Journal of Medicine* 329:1753–1759.
- Dodd, N. L., S. S. Rosenstock, C. R. Miller, and R. E. Schweinsburg. 1998. Tassel-eared squirrel population dynamics in Arizona: index techniques and relationships to habitat condition. Arizona Game and Fish Department Tech.l Rep. 27.
- Dodd, Norris L. 1988 “Fire Management and Southwestern Raptors.” IN: Proceedings of the Southwest Raptor Symposium and Workshop, May 21-24, 1986; Tucson, Arizona, edited by R. L. Glinski, Beth Giron Pendleton, Mary Beth Moss, [and others]. NWF Scientific and Technology Series. Washington, DC: National Wildlife Federation 11: 341-347. IN Fire Effects Information System. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (producer). Available at <http://www.fs.fed.us/database/feis> (accessed April 2007)
- Dore, S., T.E. Kolb, M. Montes-Helu, B.W. Sullivan, W.D. Winslow, S.C. Hart, J.P. Kaye, G.W. Koch and B.A. Hungate. 2008. “Long-term impact of stand replacing fire on ecosystem CO<sub>2</sub> exchange of a ponderosa pine forest.” *Global Change Biology*, (2008) 14, 20 pp.
- Douglas, L.P. and R.E. Stevens. 1979. Mountain pine beetle infestation characteristics in ponderosa pine, Kaibab Plateau, Arizona, 1975-1977. U.S. Department of Agriculture, Forest Service Research Note RM-367, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Drost, C., L. Gelczis, R. O'Donnell, K. Mock, J. Baker, and C.M. Culumber. 2008. Population status and viability of leopard frogs (*Rana pipiens*) in Grand Canyon, Glen Canyon, and Canyonlands. Final report submitted to Bureau of Reclamation, Grand Canyon National Park, and Glen Canyon National Recreation Area. 41p.
- Dutton, C.E. 1882. The physical geology of the Grand Cañon district. p. 49-166. IN J.W. Powell. Second Annual Report of the United States Geological Survey to the Secretary of the Interior 1880-'81. Government Printing Office, Washington, D.C.
- Dye, A.J. and W.H. Moir. 1977. Spruce-fir forest at its southern distribution in the Rocky Mountains, New Mexico. *American Midland Naturalist* 97:133-146.
- EA Engineering, Science and Technology, Inc. 2002: 2000 Air Emission Inventory, Grand Canyon National Park, Arizona, prepared for the National Park Service WASO – Air Resources Division, September 2002
- Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1988. The birder's handbook. Simon & Schuster, New York.
- Eininger, S. 1990. Long Mesa Fire 1989, archaeological survey and post-fire assessment. Mesa Verde National Park, Research and Cultural Resources Management.
- Elliot, Bill. 2006. USDA, Forest Service, Soil and Water Engineering. Available online at <http://forest.moscowfsl.wsu.edu/fswepp/>. Accessed July 2007.
- Elliot, Michael and Michelle Ensey, Elizabeth Oster, Samantha Ruscavage-Barz and Lisa Schub. 1999. The Dome Fire Archeology Project of 1996-1997: Cultural Resources Damage Assessment and Treatment. National Park Service and New Mexico Historic Preservation Division
- Ellis, D. H., C. H. Ellis, and D. P. Mindell. 1991. Raptor Responses to Low-Level Jet Aircraft and Sonic Booms. *Environmental Pollution* 74: 53-83.
- Ellis, D.H. 1981. Responses of Raptorial Birds to Low Level Military Jets and Sonic Booms. Results of the joint USAF-USFW Study. National Technical Information Service, Springfield Virginia.
- Englin, Jeffrey, John Loomis, and Armando Gonzalez-Caban. 2001. The Dynamic Path of Recreational Values Following a Forest Fire: A Comparative Analysis of States in the Intermountain West. *Canadian Journal of Forest Research* 31(10): 1837-1845
- Erdman, J.A. 1970. Piñon-juniper succession after natural fires on residual soils of Mesa Verde, Colorado. Brigham Young University Science Bulletin Biological Series Volume XI, Provo, Utah.
- Erwin, William J. and Richard H. Stasiak. 1979. Vertebrate Mortality during the Burning of Reestablished Prairie in Nebraska. *American Midland Naturalist* 101(1) IN Wildland Fire in Ecosystems: Effects of Fire on Fauna. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.



- Etchberger, Richard C. 1990. Effects of Fire on Desert Bighorn Sheep Habitat. IN Managing Wildlife in the Southwest Symposium, edited by Paul R. Krausman and Norman S. Smith, pps. 53-57. IN Wildland Fire in Ecosystems: Effects of Fire on Fauna. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, UT.
- Euler, R.C. 1979. In Search of the Ancient Ones: Preserving the Cultural Resources of the Grand Canyon. National Parks and Conservation Magazine. National Parks Association. Washington D.C.
- Evans, William G. 1971. The Attraction of Insects to Forest Fires. IN Proceedings, Tall Timber Conference of Ecological Animal Control by Habitat Management, February 26-27, 1971. Number 3, pps. 115-127; Tall Timbers Research Station, Tallahassee, FL. IN Wildland Fire in Ecosystems: Effects of Fire on Fauna. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Falk D.A., T.W. Swetnam. 2003. Scaling rules and probability models for surface fire regimes in ponderosa pine forests. In: Omi P.N., Joyce L.A., Eds. Fire, Fuel Treatments, and Ecological Restoration. U.S. Forest Service, Rocky Mountain Research Station, Ft. Collins. Pp 301-17.
- Federal Highway Administration. 1983. Visual impact assessment for highway projects
- Feeney, S.R., T.E. Kolb, W.W. Covington, and M.R. Wagner. 1998. Influence of thinning and burning restoration treatments on presettlement ponderosa pines at the Gus Pearson Natural Area. Canadian Journal of Forest Research 28:1295-1306.
- Fellin, D.G., W.H. Moir, J.F. Linnane, and A.M. Lynch. 1990. Western spruce budworm in Arizona and New Mexico: outbreak history and effects of direct suppression programs. U.S. Department of Agriculture, Forest Service manuscript on file, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Finch, D.M., and S.H. Stoleson (eds). 2000. Status, ecology, and conservation of the southwestern willow flycatcher. RMRS-GTR-60. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Ogden, Utah. 131 pp. Online at: [http://www.fs.fed.us/rm/pubs/rmrs\\_gtr60.pdf](http://www.fs.fed.us/rm/pubs/rmrs_gtr60.pdf) (accessed May 2004)
- Finch, Deborah M., Joseph L. Ganey, Wang Yong, Rebecca T. Kimball, and Rex Sallabanks. 1997. Effects and Interactions of Fire, Logging, and Grazing. IN Songbird Ecology in Southwestern Ponderosa Pine Forests: A Literature Review. Edited by William M. Block and Deborah M. Finch, Gen. Tech. Rep. RM-GTR-292. U.S. Department of Agriculture, Forest Service, Fort Collins, Colorado: IN Wildland Fire in Ecosystems: Effects of Fire on Fauna. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Fites, J.A. 2007. Vegetation Specialist Report for the Grand Canyon Fire Management Plan.
- Fites-Kaufman, J., A.F. Bradley, and A.G. Merrill. 2006. Fire and Plant Interactions. IN Fire in California Ecosystems, edited by N.G. Sugihara, J.W. van Wagtendonk, K.E. Shaffer, J. Fites-Kaufman, and A.E. Thode. University of California Press, Berkeley, California.
- Fites-Kaufman, J.A. and E. Noonan-Wright. n.d. In review. Evaluation of Wildland Fire-use fires: Effects in Relation to Historic Fire Regimes and Resource Benefits.
- Floyd, M.L., D.D. Hanna, and W.H. Romme. 2004. Historical and recent fire regimes in piñon-juniper woodlands on Mesa Verde, Colorado, USA. Forest Ecology and Management 198:269-289.
- Foote, E.I.D. 1994. Structural Survival on the 1990 Santa Barbara Painted Cave Fire: A Retrospective Study of Urban-Wildland Interface Fire Hazard Mitigation Factors. Master of Science Thesis. University of California, Berkeley, California
- Ford, William M., M. Alex Menzel, David W. McGill, Laerm French, Marilyn Gibbs, Steven P. French. 1996. Large Mammal Mortality in the 1988 Yellowstone Fires. IN The Ecological Implications of Fire in Greater Yellowstone. Proceedings, 2nd Biennial Conference on the Greater Yellowstone Ecosystem, September 19-21, 1993; Yellowstone National Park, Wyoming, edited by Jason M. Greenlee. Fairfield, Washington: International Association of Wildland Fire. IN Wildland Fire in Ecosystems: Effects of Fire on Fauna. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report.

- RMRS-GTR-42-Vol 1. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Fowler, Cynthia T. 2003. Human Health Impacts of Forest Fires in the Southern United States. *Journal of Ecological Anthropology* 7:39-63
- Fradkin, P. L. 1981. *A River No More, the Colorado River and the West*. Alfred A. Knopf, New York, New York.
- Frandsen, W. H. 1987. The Influence of Moisture and Mineral Soil on the Combustion of Smoldering Forest Duff. *Canadian Journal of Forest Research* 17: 1540-1544.
- Frazer, J.D., L.D. Franzel, and J.G. Mathisen. 1985. The Impacts of Human Activity on Breeding Bald Eagles in North-Central Minnesota. *Journal of Wildlife Management* 49:585-592.
- French, M.G., and S. French. 1996. Large Mammal Mortality in the 1988 Yellowstone Fires. Pps 113-115 *The ecological implications of fire in Greater Yellowstone: proceedings of the second biennial conference on the Greater Yellowstone Ecosystem, September 19-21, 1993*. Edited by J. Greenlee. International Association of Wildland Fire, Fairfield, Washington.
- Fried, J.S., J.K. Gilles, W.J. Riley, T.J. Moody, C.S. de Blas, K. Hayhoe, M. Moritz, S. Stephens, M. Tom. 2006. Predicting the Effect of Climate Change on Wildfire Severity and Outcomes in California: Preliminary Analysis. White paper prepared for the California Climate Change Center, sponsored by the California Energy Commission and the California Environmental Protection Agency. Available at [http://www.climatechange.ca.gov/research/impacts/pdfs/CEC\\_500-2005-196-SF.pdf](http://www.climatechange.ca.gov/research/impacts/pdfs/CEC_500-2005-196-SF.pdf)
- Fulé, P.Z., and D.C. Laughlin. 2007. Wildland Fire Effects on Forest Structure over an Altitudinal Gradient, Grand Canyon National Park, USA. *Journal of Applied Ecology* 44: 136-146.
- Fulé, P.Z. and W.W. Covington. 1995. Changes in fire regimes and forest structures of unharvested Petran and Madrean pine forests. p. 408-415 IN L.F. DeBano, P.F. Ffolliott, A. Ortega-Rubio, G.J. Gottfried, R.H. Hamre, and C.B. Edminster, technical coordinators. *Biodiversity and management of the Madrean archipelago: the sky islands of southwestern United States and northwestern Mexico*. U.S. Department of Agriculture, Forest Service, General Technical Report RM-GTR-264. Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Fulé, P.Z., J.E. Crouse, A.E. Cocke, M.M. Moore, W.W. Covington. 2004. Changes in canopy fuels and potential fire behavior 1880-2040: Grand Canyon, Arizona. *Ecological Modelling* 175:231-248.
- Fulé, P.Z., J.E. Crouse, M. Daniels, J. Springer, T.A. Heinlein, M.M. Moore, W.W. Covington, and G. Verkamp. 2002b. Mixed-severity fire regime in a high-elevation forest: Grand Canyon, Arizona. Final Report to the Joint Fire Science Program, CA-1200-99-009-NAU 04 (Part 1).
- Fulé, P.Z., J.E. Crouse, T.A. Heinlein, M.M. Moore, W.W. Covington and G. Verkamp. 2003a. Mixed-severity fire regime in a high-elevation forest of Grand Canyon, Arizona, USA. *Landscape Ecology* 18:465-486.
- Fulé, P.Z., T.A. Heinlein, W.W. Covington, and M.M. Moore. 2000. Continuing fire regimes in remote forests of Grand Canyon National Park. p. 242-248 IN D.N. Cole, S.F. McCool, W.T. Borrie, and F. O'Loughlin, compilers. *Proceedings: wilderness science in a time of change conference, volume 5: wilderness ecosystems, threats, and management, May 23-27, 1999, Missoula, Montana*. U.S. Department of Agriculture, Forest Service Proceedings RMRS-P-15-VOL-5, Rocky Mountain Research Station, Ogden, Utah.
- Fulé, P.Z., T.A. Heinlein, W.W. Covington, M.M. Moore. 2003b. Assessing fire regimes on Grand Canyon landscapes with fire-scar and fire-record data. *International Journal of Wildland Fire* 12:129-145.
- Fulé, P.Z., W.W. Covington, and M.M. Moore. 1997. Determining reference conditions for ecosystem management of southwestern ponderosa pine forests. *Ecological Applications* 7:895-908.
- Fulé, P.Z., W.W. Covington, H.B. Smith, J.D. Springer, T.A. Heinlein, K.D. Huisinga, M.M. Moore. 2002b. Comparing ecological restoration alternatives: Grand Canyon, Arizona. *Ecology & Management* 170:19-41.
- Fulé, P.Z., W.W. Covington, M.M. Moore, T.A. Heinlein, and A.E.M. Waltz. 2002a. Natural variability in forests of the Grand Canyon, USA. *Journal of Biogeography* 29:31-47.
- Fulé, Peter Z., Joseph E. Crouse, Thomas A. Heinlein, Margaret M. Moore, W. Wallace Covington and Greg Verkamp. 2003. Mixed-severity fire regime in a high-elevation forest of Grand Canyon, Arizona, USA. *Landscape Ecology*. 18: 465–486, Kluwer Academic Publishers.

- Ganey, J.L. and Rullell P. Balda. 1994. Habitat Selection by Mexican Spotted Owls in Northern Arizona. *The Auk* 111(1): 162-169.
- Ganey, Joseph L. 2004. Thermal Regimes of Mexican Spotted Owl Nest Sites. *The Southwestern Naturalist* 49(4):478-481.
- Ganz, D.J., D.L. Dahlsten, and P.J. Shea. 2003. The Post-Burning Response of Bark Beetles to Prescribed Burning Treatments. Forest Service Proceedings, RMRS-P-29. U.S. Department of Agriculture, Forest Service, Fort Collins, Colorado.
- Garber, S. 1998. Barn Owl Populations as Reflected in Data from John F. Kennedy International Airport. *Kingbird* 48(1):22-25.
- Garding, E., and E. Leslie. 2004. Lions. Presentation at Grand Canyon National Park Natural Resources Branch Symposium. February 11.
- Gedney, D.R.; Azuma, D.L.; Bolsinger, C.L.; McKay, N. 1999. Western juniper in eastern Oregon. Gen. Tech. Rep. NW-GTR-464. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 53 p.
- Gilpin, D., and D. A. Phillips, Jr. 1998. The Prehistoric to Historic Transition Period in Arizona, circa A.D. 1519 to 1692. SWCA Report No. 97-4. Arizona State Historic Preservation Office.
- Gloss, S.P., J.E. Lovich, and T.S. Melis. 2005. The State of the Colorado River Ecosystem in Grand Canyon. IN U.S. Geological Survey Circular 1282, 220 p.
- Goodwin Jr., J. G., and C. R. Hungerford. 1979. Rodent Population Densities and Food Habits in Arizona Ponderosa Pine Forests. USDA Forest Service Research Paper RM-214. Fort Collins, Colorado.
- Grafe, T.U., S. Do"bler, and K.E. Linsenmair. 2002. Frogs Flee from the Sound of Fire. *Proceedings of the Royal Society*:269, 999-1003.
- Graham, Russell T., Alan E. Harvey, Martin F. Jurgensen, Theresa B. Jain, Jonalea R. Tonn, and Deborah S. Page-Dumroese. 1994. Managing Coarse Woody Debris in Forests of the Rocky Mountains. Res. Pap. INT-RP-477, 13 p. U.S. Department of Agriculture, Forest Service, Intermountain Research Station, Ogden, Utah. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Gramann, J. H. 1999. The effect of mechanical noise and natural sound on visitor experiences in units of the National Park System. Social science research review, v.1, no. 1. Washington, D.C.: U.S. Dept. of the Interior, National Park Service, Social Science Program.
- Grand Canyon Visibility Transport Commission (GCVTC). 1996. Recommendations for Improving Western Vistas: Report of the Grand Canyon Visibility Transport Commission to the United States Environmental Protection Agency.
- Greer, R. D. 1982. Avian community structure of North Rim, Arizona. M.S. Thesis, University of Idaho, Moscow, Idaho.
- Grissino-Mayer, H.D. and T.W. Swetnam. 2000. Century-scale climate forcing of fire regimes in the American Southwest. *The Holocene* 10:213-220.
- Grissino-Mayer, H.D., C.H. Baisan, and T.W. Swetnam. 1995. Fire history in the Pinaleno Mountains of southeastern Arizona: effects of human-related disturbances. p. 399-407 IN L.F. DeBano, P.F. Ffolliott, A. Ortega-Rubio, G. J. Gottfried, R.H. Hamre, and C.B. Edminster, technical coordinators. *Biodiversity and management of the Madrean archipelago: the sky islands of southwestern United States and northwestern Mexico*. U.S. Department of Agriculture, Forest Service, General Technical Report RM-GTR-264, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Grubb, T.G. and R. M. King. 1991. Assessing Human Disturbance of Breeding Bald Eagles with Classification Tree Models. *Journal of Wildlife Management* 55:501-512. IN *Fire Effects Information System*, [online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (producer). Available online at <http://www.fs.fed.us/database/feis> Accessed April 2007 (accessed July 2007)
- Gustke, L. D. and R. W. Hodgson. 1980. Rate of Travel along an Interpretive Trail: The Effect of an Environmental Discontinuity. *Environment and Behavior* 12(1): 53-63

- Habeck, J. R. and R. W. Mutch. 1973. Fire-Dependent Forests in the Northern Rocky Mountains. Quaternary Research 3: 408-424. IN Wildland Fire in Ecosystems: Effects of Fire on Fauna. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Halloran, M.E., and M. Bekoff. 1994. Nesting Behavior of Abert squirrels, *Sciurus aberti*. Ethology 97:236-248. Abstract online at: <http://spot.colorado.edu/~halloran/nest.html> (accessed May 2004)
- Hanes, Richard. 2001. Fire Effects Guide: Cultural Resources. National Wildfire Coordinating Group. [http://fire.fws.gov/ifcc/monitor/EFGuide/cultural\\_resources.htm](http://fire.fws.gov/ifcc/monitor/EFGuide/cultural_resources.htm)
- Hardy, Colin C, Roger D. Ottmar, Janice L. Peterson, John E. Core, Paula Seamon. 2001. Smoke Management Guide for Prescribed and Wildland Fire, 2001 Edition. National Wildfire Coordinating Group, Fire Use Working Team, also available electronically at <http://www.nwccg.gov>
- Harper, K.T., S.C. Sanderson, and E.D. McArthur. 2003. Pinyon-juniper woodlands in Zion National Park, Utah. Western North American Naturalist 63:189-202.
- Harrington, M.G. and S.S. Sackett. 1990. Using fire as a management tool in southwestern ponderosa pine forests. p. 122-133 IN J.S. Krammes, technical coordinator. Effects of fire management of southwestern natural resources. U.S. Department of Agriculture, Forest Service General Technical Report RM-191, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Harrington, M.G., and S.S. Sackett. 1998. Past and present fire influences on southwestern ponderosa pine old-growth. IN J.J. Wolf and J.N. Mast. Fire History of Mixed-conifer Forests on the North Rim, Grand Canyon National Park, Arizona. Physical Geography. 19, 1, pp. 1-4. V.H. Winston & Son, Inc.
- Harrington, Michael G.; Sackett, Stephen S. 1992. Past and present fire influences on Southwestern ponderosa pine old growth. IN Old-growth Forests in the Southwest and Rocky Mountain Regions: Proceedings of a Symposium; 1992 March 9-13; Portal, AZ, pp.44-50. Kaufmann, Merrill R.; Moir, W. H.; Bassett, Richard L., technical coordinators Gen. Tech. Rep. RM-213. U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado
- Harris, G.R. and W.W. Covington. 1983. The effect of a prescribed fire on nutrient concentration and standing crop of understory vegetation in ponderosa pine. Canadian Journal of Forest Research 13:501-507.
- Hart, Stephen. 1998. Beetle Mania: An Attraction to Fire. BioScience 48(1): 3-5. IN Wildland Fire in Ecosystems: Effects of Fire on Fauna. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Hawbecker, A.C. 1936. Check-list of plants of the Grand Canyon National Park. Bulletin No. 6. Revised edition. 75 pages.
- Heffernon, R., Andereck, K. L., Rex, T. R., Vogt, C. A. 2000. Destination Flagstaff: How Important is the Flagstaff-area Tourism Cluster? Tempe, Arizona. Morrison Institute for Public Policy, School of Public Affairs, College of Public Programs, Arizona State University.
- Heinlein, T.A, M.M. Moore, P.Z. Fulé, and W.W. Covington. 2005. Fire history and stand structure of two ponderosa pine-mixed conifer sites: San Francisco Peaks, Arizona, USA. International Journal of Wildland Fire 14:307-320.
- Hellmich-Brian, Judy. 2005. E-mail to Carl Bowman, copy in files. Science Center, Grand Canyon National Park, Grand Canyon, Arizona.
- Hiatt, Ed. 2006, J. Fites personal conversation with Ed Hiatt, North Rim Fire Management Officer. Grand Canyon National Park in May 2006.
- Hill, L. B. 2000. Out of Sight: Haze in Our National Parks. Cambridge, Massachusetts. ABT Associates.
- HMMH. 1993. Acoustical Data Collected at Grand Canyon, Haleakala and Hawaii National Parks. Report No. 290940. Harris Miller Miller and Hansen, Inc. Prepared for the NPS. <http://www.hmmh.com>
- HMMH. 2003. Acoustic Data Report for Colorado River Trip. Prepared for the NPS, Job No. 295860.420, Harris Miller Miller and Hansen, Inc. <http://www.hmmh.com>

- Hodgson, R.W., and R.L. Thayer Jr. 1980. Implied human influence reduces landscape beauty. *Landscape Planning* 7(2), 171-179.
- Hoffmeister, D.F. 1971. *Mammals of Grand Canyon*. University of Illinois Press, Chicago. 183 pp.
- Hoffmeister, D.F. 1986. *Mammals of Arizona*. University of Arizona Press, Tucson. 602 pp.
- Horn, Amy and Jan Balsom. 2004. Ruins Preservation: More than Stuffing Mud. IN Harmon, David, Bruce M. Kilgore, and Gay E. Vietzke, eds. *Protecting Our Diverse Heritage: The Role of Parks, Protected Areas, and Cultural Sites*. Proceedings of the 2003 George Wright Society/National Park Service Joint Conference. The George Wright Society, Hancock, Michigan.
- Horton, S.P. and R. W. Mannan. 1988. Effects of Prescribed Fire on Snags and Cavity-Nesting Birds in Southeastern Arizona Pine Forests. *Wildlife Society Bulletin* 16:37-44.
- Howard, W. E., R. L. Fenner, and H. E., Childs, Jr. 1959. Wildlife Survival in Brush Burns. *Journal of Range Management* 12: 230-234. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Huisinga, K.D., D.C. Laughlin, P.Z. Fulé, J.D. Springer, C.M. McGlone. 2005. Effects of an intense prescribed fire on understory vegetation in a mixed-conifer forest. *Journal of the Torrey Botanical Society* 132:590-601.
- Hungerford RD, Frandsen WH, Ryan KC. 1995. Ignition and burning characteristics of organic soils. IN *Fire in Wetlands: A Management Perspective*. Proceedings of the Tall Timbers Fire Ecology Conference no. 19. Eds. SI Cerulean, RT Engstrom. pp. 78-91. Tallahassee, Florida.
- Hungerford, C.R. 1970. Response of Kaibab Mule Deer to Management of Summer Range. *Journal of Wildlife Management* 34, No. 4:852-862
- Huntoon, P. W. 1974. The karstic groundwater basins of the Kaibab Plateau, Arizona. American Geophysical Union. Washington, D.C.
- Huntzinger, Mikaeta. 2003. Abstract. Effect of Fire Management Practices on Butterfly Diversity in the Forested Western United States. *Biological Conservation* 113-1:1-12.
- Hurst, M. 1977. An ecological description of forest communities on the North Rim of Grand Canyon National Park. U.S. Department of the Interior, National Park Service manuscript on file, Grand Canyon National Park, Arizona.
- Ingles, L. G., R. Clothier, and L. A. Crawford. 1949. Methods of estimating pocket gopher populations. *Journal of Wildlife Management* 13(4):311-312.
- Jameson, D.A., J.A. Williams, and E.W. Wilton. 1962. Vegetation and soils of Fishtail Mesa, Arizona. *Ecology* 43:403-410.
- Jenness, J.S., Paul Beier, and Joseph L. Ganey. 2004. Associations between Forest Fire and Mexican Spotted Owls. *Forest Science* 50(6):765-772.
- John Milner Associates. 2004. Grand Canyon Village National Historic Landmark District: Cultural Landscape Report. John Milner Associates, with History Matters, Rivanna Archaeology, in association with the van Dijk Westlake Reed Leskosky Architects. Charlottesville, Virginia.
- John Milner Associates. 2004b. West Rim Drive, Trail and Overlooks Area: Grand Canyon National Park. Cultural landscape assessment and treatment recommendations. John Milner Associates, in association with Woolpert Associates, LLP. Charlottesville, Virginia.
- John Milner Associates. 2004c. North Rim Bright Angel Peninsula Developed Area Cultural Landscape Report. John Milner Associates, with History Matters, Rivanna Archaeology, in association with the van Dijk Westlake Reed Leskosky Architects. Charlottesville, Virginia.
- John Milner Associates. 2005. Indian Garden: Grand Canyon National Park Cultural Landscape Report, June 2005. John Milner Associates, Inc., with Rivanna Archaeology, History Matters, SWCA, Inc., in association with van Dijk Westlake Reed Leskosky Architects. Charlottesville, Virginia.
- John Milner Associates/OCULUS. 2004a. Desert View: Cultural Landscape Inventory and Treatment Recommendations. Charlottesville, Virginia.
- Johnsgard, P.A. 1990. *Hawks, eagles, and falcons of North America*. Smithsonian Institution Press, Washington, D.C. 403 pp.
- Johnson, C.L. and R.T. Reynolds. 2002. Responses of MSOs to Low-flying Military Jet Aircraft. 4p. Research Note RMRS-RN-12. U.S. Department of Agriculture, Forest Service, Rocky Mountain

- Research Station. Fort Collins, Colorado. Available online at [http://www.fs.fed.us/rm/pubs/rmrs\\_rn012.pdf](http://www.fs.fed.us/rm/pubs/rmrs_rn012.pdf) (accessed July 2007)
- Jones, Anne Trinkle and Robert C. Euler. 1986. Effects of Forest Fires on Archaeological Resources at Grand Canyon National Park. *North American Archaeologist*, Vol 7, No 3, p243-254.
- Jones, J.R. 1974. Silviculture of southwestern mixed conifer and aspen: the status of our knowledge. U.S. Department of Agriculture, Forest Service Research Paper RM-122, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Kahn, Walter C. 1960. Observations on the Effect of a Burn on a Population of *Sceloporus occidentalis*. *Ecology*. 41: 358-359. Available online at <http://www.jstor.org/view/00129658/di960162/95p07626/0> (accessed July 2007)
- Kaufman, G.A. and W.W. Covington. 2001. Effect of prescribed burning on mortality of presettlement ponderosa pines in Grand Canyon National Park. p. 36-42 IN R.K. Vance, C.B. Edminster, W.W. Covington, and J.A. Blake, compilers. *Ponderosa pine ecosystems restoration and conservation: steps toward stewardship*; 2000 April 25-27; Flagstaff, Arizona. U.S. Department of Agriculture, Forest Service Proceedings RMRS-P-22, Rocky Mountain Research Station, Ogden, Utah.
- Kaufman, Glennis A., Donald W.; Kaufman, and Elmer J. Finck. 1988. Influence of Fire and Topography on Habitat Selection by *Peromyscus maniculatus* and *Reithrodontomys megalotis* in Ungrazed Tallgrass Prairie. *Journal of Mammology* 69(2): 342-352. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Keeley, Jon E. 2006. Fire Management Impacts on Invasive Plants in the Western United States. *Conservation Biology* 20(2):375-384.
- Keith J.O. 1965. The Abert Squirrel and its Dependence on Ponderosa Pine. *Ecology*. 46(1-2):150-163. Available online at <http://www.jstor.org/view/00129658/di960181/96p0016b/0> (accessed 2007)
- Klinger, R.C., M.L. Brooks, and J.M. Randall. 2006. Fire and Invasive Plant Species. IN *Fire in California Ecosystems*, edited by N.G. Sugihara, J.W. van Wagtendonk, K.E. Shaffer, J. Fites-Kaufman, and A.E. Thode. University of California Press, Berkeley, CA.
- Knight, Richard L. and K. J. Gutzwiller. 1995. *Wildlife and Recreationists: Coexistence Through Management and Research* edited by Richard L. Knight and Kevin J. Gutzwiller. pps. 51-69. Island Press, Washington, D.C.
- Knox, Shawn C., Carol Chambers, and Stephen S. Germaine. 2001. Habitat Associations of the Sagebrush Lizard (*Sceloporus graciosus*): Potential Responses of an Ectotherm to Ponderosa Pine Forest Restoration Treatments. Pages 95-98 IN Vance, Regina K., Edminster, Carleton B., Covington, W. Wallace, Blake, Julie A, editors. *Proceedings of the conference on ponderosa pine ecosystems restoration and conservation: steps toward stewardship*; 2000 April 25-27, Flagstaff, AZ. RMRS-P-22. Ogden, UT; U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- Komarek, E. V., Sr. 1969. Fire and Animal Behavior. IN *Proceedings Annual Tall Timber Fire Ecology Conference*, April 10-11, 1969. pps. 161-207. Tall Timber Research Station, Tallahassee, Florida.
- Koronkiewicz, T.J., M.A. McLeod, B.T. Brown, and S.W. Carothers. 2004. Southwestern willow flycatcher surveys, demography, and ecology along the lower Colorado River and tributaries, 2003. Annual report submitted to U.S. Bureau of Reclamation, Boulder City, Nevada, by SWCA Environmental Consultants, Flagstaff, Arizona. 125 pp.
- Krivitski, I.A. 1991. About a Clash of the Long-eared Owl with an Aeroplane. *Ornithologiya* 25:197-198.
- Kruse, Arnold D. and James L. Piehl. 1986. The Impact of Prescribed Burning on Ground-Nesting Birds. IN *The prairie: Past, Present and Future: Proceedings, 9th North American Prairie Conference*; July 29-August 1, 1984, pps. 153-156. Edited by Gary K. Clambey and Richard H. Pemble, Tri-College University Center for Environmental Studies, Moorhead, MN. Fargo, ND. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.

- Lamp, R.E. 1987. Monitoring the Effects of Military Air Operations at NAS Fallon on the Biota of Nevada. IN Job Progress Report for the Year 1986-87. Governor's Office of Community Services, Carson City, Nevada.
- Landers, J. Larry. 1987 "Prescribed Burning for Managing Wildlife in Southeastern Pine Forests." IN Managing Southern Forests for Wildlife and Fish: A Proceedings; [Date of conference unknown]; [Location of conference unknown], edited by James G. Dickson and O. Eugene Maughan. Gen. Tech. Rep. SO-65, pps. 19-27.: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station, New Orleans, Louisiana.
- Landres, P., Boutcher, S., Merigiano L., Barns, C., Davis, D., Hall, T. Henry, S., Hunter, B., Janiga, P., Laker, M., McPherson, A., Powell, D., Rowan, M., Sater, S. 2005. Monitoring Selected Conditions Related to Wilderness Character: A National Framework. Gen. Tech. Rep. RMRS-GTR-151. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- Lang, D.K. and S.S. Stewart. 1910. Reconnaissance of the Kaibab National Forest. U.S. Department of Agriculture, Forest Service, unpublished report.
- Laughlin, D.C., J.D. Bakker, and P.Z. Fulé. 2005. Understory plant community structure in lower montane and subalpine forests, Grand Canyon National Park, USA. *Journal of Biogeography*, in press.
- Laughlin, D.C., J.D. Bakker, M.T. Stoddard, M.L. Daniels, J.D. Springer, C.N. Gildar, A.M. Green, and W.W. Covington. 2004. Toward reference conditions: wildfire effects on flora in an old-growth ponderosa pine forest. *Forest Ecology and Management* 199:137-152.
- Lawes, Timothy, RV Ward. 2006. Inventory of small mammals in selected habitats of the north and south rims of Grand Canyon National Park. Internal Report. Grand Canyon National Park, Arizona.
- Lehman, Robert N. and John W. Allendorf. 1989. The Effects of Fire, Fire Exclusion and Fire Management on Raptor Habitats in the Western United States. Western Raptor Management Symposium and Workshop, pps. 236-244. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Leiberg, J.B., T.F. Rixon, A. Dodwell. 1904. Forest conditions in the San Francisco Mountains Forest Reserve, Arizona. USGS Series H, Forestry 7, Professional Paper No. 22, Washington, D.C.
- Lentz, S. C., Gaunt, J. K., Willmer, A. J., & Buchanan, L. 1996. Fire effects on archaeological resources. Phase I, The Henry Fire, Holiday Mesa, Jemez Mountains, New Mexico. Fort Collins, Colo: U.S. Dept. of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station.
- Leopold, A. S., S. A. Cain, C. M. Cottam, I. N. Gabrielson, and T.L. Kimball. 1963. Wildlife Management in the National Parks. IN *Administrative Policies for Natural Areas of the National Park System*. 14 p. U.S. Department of the Interior, National Park Service, Washington, DC. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Leslie, E.F. 2001. Schmutz Spring report. Unpublished internal report. Grand Canyon National Park.
- Linnane, J.P. 1986. Integrated forest protection guide, western spruce budworm in the Southwest. U.S. Department of Agriculture, Forest Service Southwestern Region Forest Pest Management Report R3-86-7, Albuquerque, New Mexico.
- Linnell, M.A., M.R. Conover, and T.J. Ohashi. 1996. Analysis of Bird Strikes at a Tropical Airport. *Journal of Wildlife Management* 60(4): 935-945.
- Littlejohn, Margaret A. and Steven J. Hollenhorst. 2004. Grand Canyon National Park South Rim Visitor Study. Visitor Services Project Report 144, 136 p. University of Idaho Parks Studies Unit, National Park Service, US Department of Interior, Moscow, Idaho.
- Littlejohn, Margaret A., Ken Weber, and Steven J. Hollenhorst. 2004. Grand Canyon National Park North Rim Visitor Study. Visitor Services Project Report 143, 132 p. University of Idaho Parks Studies Unit, National Park Service, US Department of Interior, Moscow, Idaho.
- Logan, K. A. and L. L. Sweanor. 2001. Desert Puma: Evolutionary Ecology and Conservation of an Enduring Carnivore. Island Press, Washington D.C. 463 pp.
- Lynch, A.M. and T.W. Swetnam. 1992. Old-growth mixed-conifer and western spruce budworm in the southern Rocky Mountains. p. 66-80 IN M.R. Kauffman, W.H. Moir, and R.L. Bassett, technical

- coordinators. Old growth forests in the Southwest and Rocky Mountain regions, proceedings of a workshop, March 9-13, 1992, Portal, Arizona. U.S. Department of Agriculture, Forest Service General Technical Report RM-213, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Lyon, L. Jack, Hewlette S. Crawford, Eugene Czuhai, R. L. Frederiksen, R. F. Harlow, L. J. Metz, and H. A. Pearson. 1978. Effects of Fire on Fauna: A State of Knowledge Review. Gen. Tech. Report WO-6. U.S. Department of Agriculture, Forest Service, Washington, DC. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Lyon, L.J. 1977. Attrition of Lodgepole Pine Snags on the Sleeping Child Burn, Montana. Forest Service, Intermountain Forest and Range Experiment Station Research Note, INT-219. Ogden, Utah.
- MacFarland, K. K, William Malm, and John Molenar. 1983. An Examination of Methodologies for Assessing the Value of Visibility. IN *Managing Air Quality and Scenic Resources at National Parks and Wilderness Areas*. Eds. Robert D. Rowe and Lauraine G. Chestnut, Westview Press, Boulder, Colorado
- Madany, M.H. and N.E. West. 1983. Livestock grazing – fire regime interactions within montane forests of Zion National Park, Utah. *Ecology* 64:661-667.
- Martin, R.S., R.N. Hunsaker, C.J. Popp, S. Huang, O. Wingenter, 2002: The Western States Visibility Assessment Program: Diurnal and Seasonal Measurements of TSP, PM<sub>2.5</sub>, CO, SO<sub>2</sub>, NO<sub>x</sub>, and O<sub>3</sub> at Grand Canyon and Canyonlands National Parks. IN *Eos Trans. AGU*, 83(47), Fall Meet. Suppl., Abstract A61A-0059
- Marzluff J. M., M. S. Vekasy, and C. Coody. 1994. Comparative Accuracy of Aerial and Ground Telemetry Locations of Foraging Raptors. *Condor* 96:447-454.
- Mast, J.N. 2003. Tree Health and Forest Structure. Pages 215-232 IN P. Friederici (ed.). *Ecological restoration of southwestern ponderosa pine forests*. 2003. Island Press, Washington, D.C. 561 pp.
- Mast, J.N. and J.J. Wolf. 2004. Ecotonal changes and altered tree spatial patterns in lower mixed-conifer forests, Grand Canyon National Park, Arizona, U.S.A. *Landscape Ecology* 19:167-180.
- Mazaika, Rosemary, Paul R. Krausman, and Richard C. Etchberger. 1992. Forage Availability for Mountain Sheep in Pusch Ridge Wilderness. Arizona. *Southwestern Naturalist* 37(4): 372-378. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, UT.
- McCloskey, M. 1999. Changing views of what the wilderness system is all about. *Denver University Law Review* 76:369-381.
- McDougall, W.B. 1947. Plants of Grand Canyon National Park, revised checklist. In *Bulletin 10. Grand Canyon Natural History Association*, Grand Canyon, Arizona.
- McGee, John Michael. 1976. Some Effects of Fire Suppression and Prescribed Burning on Birds and Small Mammals in Sagebrush. Dissertation, University of Wyoming, Laramie, Wyoming. IN *Fire Effects Information System*. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (producer). <http://www.fs.fed.us/database/feis> (accessed April 2007)
- McHugh, C. W., T. E. Kolb, and J. L. Wilson. 2003. Bark Beetle Attacks on Ponderosa Pine following Fire in Northern Arizona. *Environmental Entomology* 32:510-522. Available online at [http://www.bioone.org/perlserv/?request=get-document&doi=10.1603%2F0046-225X\(2003\)032%5B0510%3ABBAOPP%5D2.0.CO%3B2](http://www.bioone.org/perlserv/?request=get-document&doi=10.1603%2F0046-225X(2003)032%5B0510%3ABBAOPP%5D2.0.CO%3B2) (accessed July 2007)
- McKenzie, d., A.E. Hessi, and Lara-Karena B. Kellogg. 2006. Using neutral models to identify constraints on low-severity fire regimes. *Landscape Ecology* 21:139-152.
- Mead, P. 1930. An ecological description of the Kaibab Plateau, Arizona. Thesis, University of Chicago, Chicago, Illinois.
- Means, D. Bruce and Howard W. Campbell. 1981. Effects of Prescribed Burning on Amphibians and Reptiles. IN *Prescribed Fire and Wildlife in Southern Forests: Proceedings of a Symposium*, April 6-8, 1981; pp 89-96. Edited by Gene W. Wood, The Belle W. Baruch Forest Science Institute of



- Clemson University, Myrtle Beach, SC. Georgetown, South Carolina. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, UT
- Mejia, J. 1999. *Sciurus aberti*. Online at: [http://animaldiversity.ummz.umich.edu/site/accounts/information/Sciurus\\_aberti.html](http://animaldiversity.ummz.umich.edu/site/accounts/information/Sciurus_aberti.html). Accessed May 2004.
- Menzel, J.P. and W.W. Covington. 1997. Changes from 1876 to 1994 in a forest ecosystem near Walnut Canyon, northern Arizona. p. 151-172 59 IN C. van Riper III and E.T. Deshler, editors. *Proceedings of the Third Biennial Conference of Research on the Colorado Plateau*. U.S. Department of the Interior, National Park Service Transactions and Proceedings Series NPS/NRNAU/NRTP-97/12.
- Merkle, J. 1953. An ecological analysis of the meadows on the Kaibab Plateau, Arizona. *Year Book of the American Philosophical Society*:157-160.
- Merkle, J. 1954. An analysis of the spruce-fir community on the Kaibab Plateau, Arizona. *Ecology* 35:316-322.
- Merkle, J. 1962. Plant communities of the Grand Canyon area, Arizona. *Ecology* 43:698-710.
- Merrill, A. 2006. *Fire Effects on Soils: Report for the Grand Canyon Environmental Impact Statement*.
- Merrill, Amy. 2006. *Fire effects on soils: report for the Grand Canyon Environmental Impact Statement*. Unpublished draft provided by author. On file Grand Canyon National Park.
- Meyer, C.L. and T.D. Sisk . 2001. Butterfly Response to Microclimate Conditions Following Ponderosa Pine Restoration. *Restoration Ecology* 9(4):453-461.
- Michigan. 2005. *Noise Exposure Levels for Workers in the Michigan Wood Industry*. Central Michigan University (Michael Stewart, Kari Koltes, Mark Lehman) and M-Tec at Bay College (Angelo St. Juliana, James Dougovito, Joseph Pryal); funded through a Consultation Education and Training grant by State of Michigan, Department of Labor and Economic Growth.
- Mileti, Dennis, Sarah Hathe, Paula Gori, Marjorie Greene, and Elizabeth Lamersal. 2004. *Public Hazards Communication and Education: The State of the Art. (Update) Natural Hazards Informer, Number 2*. Natural Hazards Research and Applications Information Center, University of Colorado, Boulder, Colorado.
- Miller, D. and R. Young. 1981. *Checklist of the reptiles and amphibians of the Grand Canyon Area*. Southern Illinois University; Carbondale, Illinois.
- Miller, D.M., R.A. Young, T.W. Gatlin, and J.A. Richardson. 1982. *Amphibians and reptiles of the Grand Canyon*. Grand Canyon National History Association; Monograph Number 4.
- Miller, J.M. and F.P. Keen. 1960. *Biology and control of the western pine beetle: a summary of the first fifty years of research*. U.S. Department of Agriculture, Forest Service Miscellaneous Publication No. 800. Washington, D.C.
- Miller, K.K. and M.R. Wagner. 1989. Effect of pandora moth (Lepidoptera: Saturniidae) defoliation on growth of ponderosa pine in Arizona. *Journal of Economic Entomology* 82:1682-1686.
- Miller, M.E. 2005. *The structure and function of dryland ecosystems – conceptual models to inform long-term ecological monitoring*. U.S. Geological Survey, Biological Resources Discipline, Scientific Investigations Report 2005-5197.
- Miller, N. P. 1999. *Mitigating the Effects of Military Aircraft Overflights on Recreational Users of Parks: Final Report for the Period December 1995 to July 1999*. Wright-Patterson AFB, OH: Human Effectiveness Directorate.
- Miller, R. F., & Wigand, P. E. 1994. Holocene Changes in Semiarid Pinyon-Juniper Woodlands. Response to climate, fire, and human activities in the US Great Basin. *BioScience*. 44(7), 465.
- Miller, R.F. and R.J. Tausch. 2001. The role of fire in juniper and pinyon woodlands: a descriptive analysis. p. 15-30. In K.E.M. Galley and T.P. Wilson, editors. *Proceedings of the invasive species workshop: the role of fire in the spread and control of invasive species*. Fire Conference 2000: the First National Congress on Fire Ecology, Prevention and Management. Miscellaneous publication no. 11, Tall Timbers Research Station, Tallahassee, Florida.
- Moir, W.H. 1967. The subalpine tall grass, *Festuca thurberi*, community of Sierra Blanca, New Mexico. *Southwestern Naturalist* 12:321-328.

- Moir, W.H. 1993. Alpine tundra and coniferous forest. IN W.A. Dick-Peddie. New Mexico vegetation: past, present, and future. University of New Mexico Press, Albuquerque, New Mexico.
- Moir, W.H. and J.A. Ludwig. 1979. A classification of spruce-fir and mixed conifer habitat types of Arizona and New Mexico. U.S. Department of Agriculture, Forest Service Research Paper RM-207, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Moir, W.H. and J.O. Carleton. 1987. Classification of pinyon-juniper (P-J) sites on the National Forests of the Southwest. p. 216-226. In R.L. Everett, compiler. Proceedings pinyon-juniper conference. U.S. Department of Agriculture, Forest Service General Technical Report INT-215. Intermountain Research Station, Ogden, Utah.
- Moir, W.H., B. Geils, M.A. Benoit, and D. Scurlock. 1997. Ecology of southwestern ponderosa pine forests. p. 3-27 IN W.M. Block, and D.M. Finch, technical editors. Songbird ecology in southwestern ponderosa pine forests: a literature review. U.S. Department of Agriculture, Forest Service General Technical Report RM-GTR-292, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Monroe, S. A., et al. 2005. Chemical characteristics of ground-water discharge along the South Rim of Grand Canyon in Grand Canyon National Park, Arizona, 2000-2001. U.S. Geological Survey Scientific Investigations Report 2004-5146. 59 pp.
- Moore, M.M. 1994. Tree encroachment on meadows of the North Rim of Grand Canyon National Park. Final Report submitted to U.S. Department of the Interior, National Park Service.
- Moretti, M. and S. Barbalat. 2003. The Effects of Wildfires on Wood-Eating Beetles in Deciduous Forests on the Southern Slope of the Swiss Alps. *Forest Ecology and Management* 187: 85-103.
- Moretti, M., M.K. Obrist and P. Daelli. 2004. Arthropod Biodiversity after Forest Fires: Winners and Losers in the Winter Fire Regime of the Southern Alps. *Ecography* 27: 173-186.
- Muleady-Mechan, Nancy, Martha E. Lee, Brent D. Burch. 2004. A Public Opinion Survey on Wildland Fire in Grand Canyon National Park. *The George Wright Forum*. Vol. 21 No. 4, pp. 12-21
- Nash, O.J., and R.N. Seaman. 1977. *Sciurus aberti*. *Mammalian Species* 80:1-5. Online at <http://www.science.smith.edu/departments/Biology/VHAYSEN/msi/default.html> (accessed May 2004)
- National Wildfire Coordinating Group. 2001. Fire Effects Guide. National Interagency Fire Center, Great Basin Area Cache. Available online at <http://www.nwcg.gov/pms/RxFire/FEG.pdf> (accessed July 2007)
- NatureServe Explorer: An online encyclopedia of life. 2002. Version 1.6 . Arlington, Virginia, USA: NatureServe. Available at <http://www.natureserve.org/explorer> (accessed April 1, 2003)
- NatureServe. 2006. NatureServe Explorer: An Online encyclopedia of life. Version 6.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer> (accessed: May 7, 2007)
- Neal, Lynn A., and Dennis Gilpin, editors. 2000. Cultural Resources Data Synthesis within the Colorado River Corridor, Grand Canyon National Park and Glen Canyon National Recreation Area, Arizona. SWCA Cultural Resources Report No. 98-85. Prepared for the Grand Canyon Monitoring and Research Center. SWCA, Inc., Environmental Consultants, Flagstaff, Arizona.
- Nichols, R. and J. Menke. 1984. Effects of Chaparral Shrubland Fire on Terrestrial Wildlife. IN *Shrublands in California: Literature Review and Research Needed for Management*, edited by Johannes J. DeVries. Contribution No. 191, pps. 74-97. Water Resources Center University of California, Davis, California. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Omi, Philip N., Martinson, E.J., and Chong, G.W. 2006. Effectiveness of Pre-Fire Fuel Treatments. Final Report JFSP Project 03-21-1-07. Submitted to the Joint Fire Science Program Governing Board.
- Painter, M.L. (Kaibab National Forest). 2002. Personal communication to M.A. McLeod, SWCA Environmental Consultants, Flagstaff, Arizona. September 16.
- Painter, M.L. (Kaibab National Forest). 2004. Personal communication to M.A. McLeod, SWCA Environmental Consultants, Flagstaff, Arizona. March 11.
- Parish, Christopher 2007 (Personal communication) California Condor Recovery Program Leader for Arizona. The Peregrine Fund. Mormon Lake, Arizona. May 2007.

- Parker, P. L., and King, T. F. 1998. Guidelines for Evaluating and Documenting Traditional Cultural Properties. U.S. Department of the Interior, National Park Service, National Register, History and Education, National Register of Historic Places. Washington, D.C. Revised 1992; 1998.
- Pase, C.P. and D.E. Brown. 1994a. Rocky Mountain (Petran) and Madrean montane conifer forests. p. 43-48 In D.E. Brown, editor. Biotic communities: southwestern United States and northwestern Mexico. University of Utah Press, Salt Lake City, Utah.
- Pase, C.P. and D.E. Brown. 1994b. Rocky Mountain (Petran) subalpine conifer forest. p. 37-39 In D.E. Brown, editor. Biotic communities: southwestern United States and northwestern Mexico. University of Utah Press, Salt Lake City, Utah.
- Patton, D. R., R. L. Wadleigh, and H. G. Hudak. 1985. The effects of timber harvest on the Kaibab squirrel. *J. Wildlf. Manage.* 49:14-19.
- Patton, D.R. 1977. Managing Southwest Ponderosa Pine for the Albert Squirrel, *Journal of Forestry*. 75: 264-267.
- Paysen, T.E., R.J. Ansley, J.K. Brown, G.J. Gottfried, S.M Haase, M.G. Harrington, M.G. Narog, S. S. Sackett, and R.C. Wilson. 2000. Fire in western shrubland, woodland, and grassland ecosystems. p. 121-159. In J.K. Brown and J.K. Smith, editors. *Wildland fire in ecosystems: effects of fire on flora*. U.S. Department of Agriculture, Forest Service General Technical Report RMRS-GTR-42-vol. 2, Rocky Mountain Forest and Range Experiment Station, Ogden, Utah.
- Pearson, G.A. 1923. Natural reproduction of western yellow pine in the Southwest. U.S. Department of Agriculture Bulletin 1105. Washington, D.C.
- Pearson, G.A. 1950. Management of ponderosa pine in the Southwest, as developed by research and experimental practice. U.S. Department of Agriculture Agricultural Monograph 6, Washington, D.C.
- Pederson, J.C., R. C. Farentinos, and V. M. Littlefield. 1987. Effects of logging on habitat quality and feeding patterns of Abert squirrels. *Great Basin Naturalist* 47:252-258.
- Peet, R.K. 2000. Forests and meadows of the Rocky Mountains. p. 75-121 In M.G. Barbour and W.D. Billings, editors. *North American terrestrial vegetation*. 2nd edition. Cambridge University Press, New York, New York.
- Peterson, R.T. 1990. A field guide to western birds. Houghton Mifflin Company, Boston, Massachusetts. 432 pp.
- Phillips III, A.M., and D. Weage. 1996. Monitoring and Population Biology of *Talinum validulum* on the Kaibab National Forest, Arizona. Rocky Mountain Research Station. General Technical Report RM 278-283. U.S. Forest Service. Fort Collins, Colorado.
- Pollock, M.M. and K. Suckling. 1997. Presettlement conditions of ponderosa pine forests in the American Southwest. Southwest Center for Biological Diversity, Tucson, Arizona.
- Price, G. L., 1999. An Introduction to Grand Canyon Geology, Grand Canyon Association, Grand Canyon, Arizona, 63 pp.
- Pyne, S.J. 1996. Nouvelle Southwest. p. 10-16 In W.W. Covington and P.K. Wagner, technical coordinators. Conference on adaptive ecosystem restoration and management: restoration of cordilleran conifer landscapes of North America. U.S. Department of Agriculture, Forest Service General Technical Report RM-GTR-278, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Pyne, Stephen J. 1982. Fire in America, A Cultural History of Wildland and Rural Fire. 654 p. University of Washington Press, Seattle, Washington. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Quinby, P.A. 1991. Self-replacement in Old-growth White Pine Forest of Temagami, Ontario. *Forest Ecology and Management* 41:95-109.
- Quinn, Ronald D. 1979. Effects of Fire on Small Mammals in the Chaparral. *Cal-Neva Wildlife Transactions* 1979: 125-133. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Randall, J.M. 1996. Weed control for the preservation of biodiversity. *Weed Technology* 10:370-383.

- Raphael, M.G., M. L. Morrison, M.P. Yoder-Williams. 1987. Breeding bird populations during twenty-five years of postfire succession in the Sierra Nevada. *Condor*. 89:614-626.
- Rasmussen, D.I. 1941. Biotic communities of Kaibab Plateau, Arizona. *Ecological Monographs* 11:229-275.
- Rasmussen, Mary. July 7, 2006. Memo to files. Biological soil crusts. Fire Management Office, Grand Canyon National Park.
- Rasmussen, Mary. 2007. Personal communication with Mary Rasmussen, Fire Ecologist, Grand Canyon National Park.
- Reed, S., and E. Leslie. 2003. Patterns of carnivore species co-occurrence in North Rim, Grand Canyon National Park, Arizona. Unpublished report to the Grand Canyon National Park Foundation.
- Reed, William R. 1993. *Rosa nutkana*. IN Fire Effects Information System, online. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available at: <http://www.fs.fed.us/database/feis/index.html> (accessed April 2007)
- Renschler, C. S. 2006. Landscape-based Environmental System Analysis and Modeling (LESAM) Laboratory. Department of Geography, State University of New York (SUNY), Buffalo, New York. Available online at <http://www.geog.buffalo.edu/~rensch/geowepp/> (accessed July 2007)
- Reynolds, R. T. and B. D. Linkhart. 1992. Flammulated owls in ponderosa pine: evidence of preference for old growth. In: Workshop on old-growth forests in the Southwest and Rocky Mountain Region.
- Reynolds, R.T., R.T. Graham, M.H. Reiser, R.L. Bassett, P.L. Kennedy, D.A. Boyce, Jr., G. Goodwin, R. Smith, and E.L. Fisher. 1992. Management recommendations for the northern goshawk in the southwestern United States. RM-GTR-217. U.S. Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado. 90 pp. Online at [http://www.fs.fed.us/rm/pubs\\_rm/rm\\_gtr217.html](http://www.fs.fed.us/rm/pubs_rm/rm_gtr217.html) (accessed May 2004)
- Rihs, J. n.d. Analysis of the March 1995 Bright Angel Creek Flood Event, Grand Canyon National Park. Internal report. On file, Division of Science and Resource Management.
- Robbins, Louise E. and Ronald L. Myers. 1992. Seasonal Effects of Prescribed Burning in Florida: A Review. Misc. Pub. No. 8. 96 p. Tall Timbers Research, Inc. Tallahassee, Florida. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Roberts, Alexa, Richard M. Begay, and Klara B. Kelley. 1995. Bitsiis Nineezi (The River of Neverending Life): Navajo History and Cultural Resources of the Grand Canyon and the Colorado River. Navajo Nation Historic Preservation Department, Window Rock, AZ.
- Roberts, R.P., Urbatsch, and J.L. Anderson. 2004. New Species and New Combinations in *Ericaria* (Asteraceae: Astereae). *Sida* 21:243-257.
- Rogers, A. (Arizona Game and Fish Department). 2004. Personal communication to M.A. McLeod, Environmental Consultants, Flagstaff, Arizona. January 6.
- Rohlf, D., and D.L. Honnold. 1988. Managing the balance of nature: the legal framework of wilderness management. *Ecology Law Quarterly* 15:249-279.
- Romme, W.H., L. Floyd-Hanna and D.D. Hanna. 2003. Ancient piñon-juniper forests of Mesa Verde and the West: a cautionary note for forest restoration programs. p. 335-350 In P.N. Omi and L.A. Joyce, editors. *Fire, fuel treatments, and ecological restoration: conference proceedings*, April 16-18, 2002, Fort Collins, Colorado. U.S. Department of Agriculture, Forest Service Proceedings RMRS-P-29, Rocky Mountain Research Station, Fort Collins, Colorado.
- Romme, William, L. Floyd-Hanna, and M. Conner. 1993. Effects of fire on cultural resources at Mesa Verde National Park. *Park Science* 13: 28-30.
- Rosenstock, S. S. 1996. Habitat Relationships of Breeding Birds in Northern Arizona Ponderosa Pine and Pine-Oak Forests. Arizona Game and Fish Tech. Report #23.
- Roth, L.F. 1974. Juvenile susceptibility of ponderosa pine to dwarf mistletoe. *Phytopathology* 64:689-692.
- Rowlands, P.G. and N.J. Brian. 2001. Fishtail Mesa: a vegetation resurvey of a relict area in Grand Canyon National Park, Arizona. *Western North American Naturalist* 61:159-181.
- Rude, Trisha and Anne Trinkle Jones. 2001. Bibliography of Fire Effects on Cultural Resources. National Park Service Western Archeological and Conservation Center 1415 N. Sixth Avenue Tucson, AZ

- Russell, John C. and Peggy A. Adams-Russell. 2006. Values, Attitudes and Beliefs toward National Forest System Lands: The Kaibab National Forest (Draft), 52 p. Adams-Russell Consulting, Placerville, California. Available online at <http://www.fs.fed.us/r3/kai/plan-revision/documents/KaibabABV-Focus-Group-Draft-2006-06.pdf> (accessed July 2007)
- Russell, Kevin R., David H Van Lear, and David C. Guynn, Jr. 1999. Prescribed Fire Effects on Herpetofauna: Review and Management Implications. *Wildlife Society Bulletin* 27(2): 374-384. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Ryan, K. 2001. Evaluating Fire Effects on Cultural Resources. Paper presented at Cultural Resources Protection and Fire Management Planning training course, Western Archeological and Conservation Center, Tucson. Sponsored by Stephen T. Mather Training Center, Harpers Ferry, West Virginia. Ms. on file, Western Archeological and Conservation Center, Tucson.
- Ryan, M.G. and W.W. Covington. 1986. Effect of a prescribed burn in ponderosa pine on inorganic nitrogen concentrations of mineral soil. U.S. Department of Agriculture, Forest Service Research Note RM-464, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Ryan, Robert L. 2005. Social Science to Improve Fuels Management: A Synthesis of Research on Aesthetics and Fuels Management. Gen. Tech. Rep. NC-261, 58 p. U.S. Department of Agriculture, Forest Service, North Central Research Station, St. Paul, Minnesota.
- Ryerson, D.E., T.W. Swetnam, and A.M. Lynch. 2003. A tree-ring reconstruction of western spruce budworm outbreaks in the San Juan Mountains, Colorado, U.S.A. *Canadian Journal of Forest Research* 33:1010-1028.
- Saab, Victoria A. and Jonathan G. Dudley. 1998. Responses of Cavity-Nesting Birds to Stand-Replacement Fire and Salvage Logging in Ponderosa Pine/Douglas-Fir Forests of Southwestern Idaho. Res.Pap. RMRS-RP-11. 17 p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fort Collins, Colorado. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Sánchez-Martínez, G. and M.R. Wagner. 2002. Bark beetle community structure under four ponderosa pine forest stand conditions in northern Arizona. *Forest Ecology and Management* 170:145-160.
- Savage, M. 1991. Structural dynamics of a southwestern pine forest under chronic human influence. *Annals of the Association of American Geographers* 81:271-289.
- Savage, M., P.M. Brown, and J. Feddema. 1996. The role of climate in a pine forest regeneration pulse in the southwestern United States. *Ecoscience* 3:310-318.
- Schmid, J.M. and R.H. Frye. 1977. Spruce beetle in the Rockies. U.S. Department of Agriculture, Forest Service General Technical Report RM-49, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Schmid, J.M. and T.E. Hinds. 1974. Development of spruce-fir stands following spruce beetle outbreaks. U.S. Department of Agriculture, Forest Service Research Paper RM-131, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Schmutz, E.M., C.C. Michaels, and B.I. Judd. 1967. Boysag Point: a relict area on the North Rim of Grand Canyon in Arizona. *Journal of Range Management* 20:363-369.
- Scott, Joe H. and Robert E. Burgan 2005. Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model. General Technical Report. RMRS-GTR-153. Fort Collins, Colorado. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- Scott, V.E. 1978. Characteristics of Ponderosa Pine snags used by cavity-nesting birds in Arizona. *Journal of Forestry* 76:26-28.
- Seitz, John S, 1998. Guidance on Assessing the Impacts of May 1998 Mexican Fires on Ozone Levels in the United States. Memorandum, November 10,1998, available at <http://www.epa.gov/ttn/naaqs/ozone/ozonetech/mexfires.htm>.

- Shafer, Sarah L, Patrick J. Bartlein and Robert S. Thompson. 2001. Potential Changes in Distributions of Western North America Tree and Shrub Taxa under Future Climate Scenarios. *Ecosystems* (2001) 4:200-215.
- Sharky, Brian. 1997. Health Effects of Exposure. IN Sharkey, Brian, ed. 1997. Health hazards of smoke: recommendations of the April 1997 Consensus Conference. Tech. Rep. 9751-2836-MTDC. Missoula, MT: U. S. Department of Agriculture, Forest Service, Missoula Technology and Development Center.
- Siders, M.S., M.J. Rabe, T.K. Snow, and K. Yasuda. 1999. Long foraging distances in two uncommon bat species (*Euderma maculatum* and *Eumops perotis*) in northern Arizona. Pages 113–122 IN C. van Riper, III., and M.A. Stuart (eds.). *Proceedings of the Fourth Biennial Conference of Research on the Colorado Plateau*. Report Series USGS/FRESC/COPL/1999/16. U.S. Geological Survey.
- Simons, Lee H. 1991. Rodent Dynamics in Relation to Fire in the Sonoran Desert. *Journal of Mammalogy* 72(3): 518-524. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Simovich, Marie A. 1979. Post Fire Reptile Succession. *The Wildlife Society. Cal-Neva Wildlife Transactions* 1979: 104-113. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Singer, Francis J. and Paul Schullery. 1989. Yellowstone Wildlife: Populations in Process. *Western Wildlands* 15(2): 18-22. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Sipe, Carmen. 2005. Summary of Survey Efforts for Mexican spotted owls 1991 to Present; North Rim, Grand Canyon National Park. Unpublished internal report. Grand Canyon National Park, Arizona.
- Sitgreaves, L. 1853. Report of an expedition down the Zuni and Colorado Rivers. 32nd Congress, 2nd Session, Senate Executive Document 59, Washington, D.C.
- Smith, D. G. and J. R. Murphy. 1973. Breeding Ecology of Raptors in the Eastern Great Basin of Utah. *Brigham Young University Science Bulletin. Biological Series*. 18(1): 1-76. IN *Fire Effects Information System*. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (producer). Available online at <http://www.fs.fed.us/database/feis> (accessed April 2007)
- Smith, Edward B. 1994. Assessing the Impacts of Timber Harvest on Northern Arizona Rare Plant, *Clematis hirsutissima* var. *arizonica*, through Canopy Manipulation and Matrix Demographic Analysis. IN *Sustainable Ecological Systems: Implementing and Ecological Approach to Land Management*. July 12-15, Flagstaff, Arizona. General Technical Report RM-GTR-247.
- Smith, Jane Kapler (Editor). 2000. *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Gen. Tech. Report RMRS-GTR-42-vol 1. 83 p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Ogden, Utah.
- Sogge, M.K., R.M. Marshall, S.J. Sferra, and T.J. Tibbitts. 1997. A southwestern willow flycatcher natural history summary and survey protocol. National Park Service Technical Report NPS/NAUCPRS /NRTR-97/12. Online at: <http://www.avianweb.com/flycatchers.htm> (accessed May 2004)
- Solomon, S., D. Qin, M. Manning, R.B. Alley, T. Berntsen, N.L. Bindoff, Z. Chen, A. Chidasong, J.M. Gregory, G.C. Hegerl, M. Heimann, B. Heritson, B.J. Hoskins, F. Joos, J. Jouzel, V. Kattsov, U. Lohmann, T. Matsuno, M. Molina, N. Nicholls, J. Overpeck, G. Raga, V. Ramaswamy, J. Ren, M. Rusticucci, R. Somerville, T.F. Stocker, P. Whetton, R.A. Wood and D. Wratt. 2007. "Technical Summary" in *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (Eds.). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

- Spence, J.R. 1996. The controlled flood of 1996: Effects on vegetation and leopard frogs 1 (*Rana pipiens*) at RM [REDACTED], Colorado River, Glen Canyon. National Park Service, Glen Canyon National Recreation Area, Resource Management Division, Page, Arizona. 25 pp.
- Spence, John. May 2007. Personal Communication. Address: Glen Canyon National Recreation Area, 691 Scenic View Drive, PO Box 1507, Page, Arizona 86040.
- Springer, J.D., P.Z. Fulé, K.D. Huisinga, M.M. Moore, and W.W. Covington. 2000. Herbaceous and shrub communities in Grand Canyon forests. p. 66-134 In W.W. Covington, M.M. Moore, P.Z. Fulé, and H.B. Smith, editors. Final report on research objective 1, Grand Canyon forest ecosystem restoration.
- States, J. S. and W. S. Gaud. 1997. Ecology of hypogeous fungi associated with ponderosa pine. I. Patterns of distribution and sporocarp production in some Arizona forests. *Mycologia* 89:712-721.
- Stebbins, Robert C. and Nathan W. Cohen. 1995. A Natural History of Amphibians. 332 p. Princeton University. Princeton, New Jersey.
- Stewart, W. 1997. On-site Wilderness Recreation Experiences. Final Report to the Aldo Leopold Wilderness Research Institute. U.S. Department of Agriculture, Forest Service, Missoula, Montana.
- Stockwell, C.A, G.C. Bateman, and J. Berger. 1991. Conflicts in National Parks: A Case Study of Helicopters in Bighorn Sheep Time Budgets at the Grand Canyon. *Biological Conservation* 56:317-328.
- Stohlgren, T.J., Binkley, D., Chong, G.W., Kalkhan, M.A., Schell, L.D., Bull, K.A., Otsuki, Y., Newman, G., Bashkin, M., & Son, Y. 1999. Exotic Plant Species Invade Hot Spots of Native Plant Diversity. *Ecological Monographs*, 69, 25-46.
- Stynes, D.J. 2005. Economic Significance of Recreational Uses of National Parks and Other Public Lands. *Social Science Research Review* 5(1). National Park Service Monograph Series.
- Stynes, Daniel J. and Ya-Yen Sun. 2005. Economic Impact of Grand Canyon National Park Visitor Spending on the Local Economy, 2003, 30p. National Park Service Social Science Program, Department of Community, Agriculture, Recreation and Resources Studies, Michigan State University, East Lansing, Michigan
- Sugihara, N. G., J. W. van Wagtendonk, K. E. Shaffer, J. Fites-Kaufman, and A. E. Thode (eds). 2006. Fire in California's Ecosystems. University of California Press. 596 p.
- Sugihara, N., J.W. van Wagtendonk, and J. Fites-Kaufman. 2006. Chapter 4: Fire as an Ecological Process. IN Fire in California Ecosystems, edited by N. Sugihara, van Wagtendonk, J., Fites-Kaufman, J., Thode, A., and K. Shaffer, pps. 103-134. UC Press, Berkeley, California.
- Sullivan, B.W., T.E. Kolb, S.C. Hart, J.P. Kaye, S. Dore, and M. Montes-Helu, 2008. "Thinning reduces soil carbon dioxide but not methane flux from southwestern USA ponderosa pine forests." *Forest Ecology and Management*, 255 (208) 4047-4055.
- Swarthout, Elliott C., and Robert J. Steidl. 2001 "Flush Responses of Mexican Spotted Owls to Recreationists." *Journal of Wildlife Management* 65(2):312-317.
- Swetnam, T.W. 1987. Western spruce budworm outbreaks in northern New Mexico: tree-ring evidence of occurrence and radial growth impacts from 1700-1983. p. 130-141 In G.C. Jacoby and J.W. Hornbeck, compilers. Proceedings of the international symposium on ecological aspects of tree-ring analysis, August 17-21, 1986, Marymount College, Tarrytown, New York. US Department of Energy, CONF-8608144, Washington, DC.
- Swetnam, T.W. 1990. Fire history and climate in the southwestern United States. p. 6-17 In J.S. Krammes, technical coordinator. Effects of fire management of southwestern natural resources. U.S. Department of Agriculture, Forest Service General Technical Report RM-191, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Swetnam, T.W. and A.M. Lynch. 1989. A tree-ring reconstruction of western spruce budworm history in the southern Rocky Mountains. *Forest Science* 35:962-986.
- Swetnam, T.W. and A.M. Lynch. 1993. Multicentury, regional-scale patterns of western spruce budworm outbreaks. *Ecological Monographs* 63:399-424.
- Swetnam, T.W. and C.H. Baisan. 1996. Historical fire regime patterns in the southwestern United States since AD 1700. p. 11-32 In C.D. Allen, technical editor. Fire effects in southwestern forests:

- proceedings of the second La Mesa fire symposium, Los Alamos, New Mexico, March 29-31, 1994. U.S. Department of Agriculture, Forest Service General Technical Report RM-GTR-286, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Swetnam, T.W. and J.L. Betancourt. 1990. Fire-Southern Oscillation relations in the southwestern United States. *Science* 249:1017-1020.
- Szaro, R. C. and R. P. Balda. 1986. Bird Community Dynamics in a Ponderosa Pine Forest. *Studies in Avian Biology* No. 3.
- Taylor, Dale L. and William J. Barmore Jr. 1980. Post-Fire Succession of Avifauna in Coniferous Forests of Yellowstone and Grand Teton National Parks, Wyoming. IN *Management of Western Forests and Grasslands for Nongame Birds: Workshop Proceedings*; February 11-14, 1980; Salt Lake City, UT. Richard M. DeGraaf, technical coordinator. Gen. Tech. Rep. INT-86. pps. 130-145: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station, Ogden, Utah. IN *Fire Effects Information System*. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (producer). Available online at <http://www.fs.fed.us/database/feis> (accessed April 2007)
- Tesky, Julie L. 1995. Puma Concolor. IN *Fire Effects Information System*, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available online at <http://fs.fed.us/database/feis/animals/mammal/puco/all.html> (accessed July 2007)
- Tewes, Michael E. 1984. Opportunistic Feeding by White-Tailed Hawks at Prescribed Burns. *Wilson Bulletin* 96(1): 135-136. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- The National Science Foundation. n.d. Southwest Environmental Information Network (SEINet), online [Computer program] Available online at <http://seinet.asu.edu/>. Accessed March 2007.
- The Nature Conservancy. n.d. Global Invasive Species Initiative, Element Stewardship Abstracts, online at <http://tncweeds.ucdavis.edu/esadocs.html>. Accessed March 2007.
- The Peregrine Fund (TPF). 2001. California condor releases in Arizona notes from the field; California Condors in the Grand Canyon Area 15 June 2001 – 31 December 2001. Unpublished notes compiled by Sophie Osborn, The Peregrine Fund, Boise, Idaho. 29 pp. Online at: [http://www.peregrinefund.org/archived\\_notes.asp?category=California%20Condor%20Releases%20in%20Arizona&cnoteid=221](http://www.peregrinefund.org/archived_notes.asp?category=California%20Condor%20Releases%20in%20Arizona&cnoteid=221) (accessed October 2007)
- Thill, R.E., P.F. Ffilliott, D.R. Patton. 1983. Deer and elk forage production in Arizona mixed conifer forests. USDA Forest Service, Research Paper RM-248.
- Touchan, R., C.D. Allen, and T.W. Swetnam. 1996. Fire history and climatic patterns in ponderosa pine and mixed-conifer forests of the Jemez Mountains, northern New Mexico. p. 33-46 240 In J.S. Krammes, technical coordinator. *Effects of fire management of southwestern natural resources*. U.S. Department of Agriculture, Forest Service General Technical Report RM-191, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Tress, J.A. and J.M. Klopatek. 1987. Successional changes in community structure of pinyon-juniper woodlands of north-central Arizona. p. 80-85. IN R.L. Everett, editor. *Proceedings: Pinyon-juniper conference*, January 13-16, 1986, Reno, Nevada. U.S. Department of Agriculture, Forest Service General Technical Report INT-215, Intermountain Research Station, Ogden, Utah.
- Turner, G.T. and H.A. Paulsen, Jr. 1976. Management of mountain grasslands in the central Rockies: the status of our knowledge. U.S. Department of Agriculture, Forest Service Research Paper RM-161, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Udall, S. 1995. Letter to the Editor. *Wilderness Watcher* 6(1):7.
- University of Arizona. 2005. Socio-Economic Assessment for the Kaibab National Forest. Tucson, Arizona. Available online at <http://www.fs.fed.us/r3/kai/plan-revision/documents/Kaibab-Socio-Economic-Assessment.pdf> (accessed July 2007)
- University of Arizona. 2005a. Arizona National Forest Socio-Economic Assessments Manager's Summary Report. Tucson, Arizona.



- Valdez, R.A., S.W. Carothers, R.E. Borkan, L.M. Jonas, K.J. Kingsley, W.C. Leibfried, G.W. Monks, and D.L. Wegner. 1998. The aquatic ecosystem of the Colorado River in Grand Canyon: Grand Canyon data integration project synthesis report. SWCA Environmental Consultants, Flagstaff, Arizona. 207 pp.
- Vankat, J.L. In review. Relatively undisturbed, upper-elevation, terrestrial ecosystems of the Colorado Plateau: vegetation- and disturbance-focused literature review, conceptual models, and research needs. Submitted to Proceedings of the 8th Biennial Conference of Research on the Colorado Plateau. University of Arizona Press, Tucson, Arizona.
- Vankat, J.L., D.C. Crocker-Bedford, D.R. Bertolette, P. Leatherbury, T. McKinnon, and C.L. Sipe. 2005. Indications of large changes in mixed-conifer forests of Grand Canyon National Park. p. 121-129 In C. van Riper III and D.J. Mattson, editors. The Colorado Plateau II: biophysical, socioeconomic, and cultural research. Proceedings of the 7th Biennial Conference of Research on the Colorado Plateau. University of Arizona Press, Tucson, Arizona.
- Veblen, T.T., K.S. Hadley, E.M. Nel, T. Kitzberger, M. Reid, and R. Villalba. 1994. Disturbance regime and disturbance interaction in a Rocky Mountain subalpine forest. *Journal of Ecology* 82:125-135.
- VEIEWS (Visibility Information Exchange Web System) 2007. Summary Data: Means for the Best, Middle and Worst Visibility Days available online at [http://vista.cira.colostate.edu/Data/Warehouse/IMPROVE/Data/SummaryData/group\\_means\\_nia\\_20060306.csv](http://vista.cira.colostate.edu/Data/Warehouse/IMPROVE/Data/SummaryData/group_means_nia_20060306.csv). Accessed June 4, 2007
- Villa-Castillo, J. and M.R. Wagner. 2002. Ground Beetle (Coleoptera: Carabidae) Species Assemblage as Indicator of Forest Condition in Northern Arizona Ponderosa Pine Forests. *Environmental Entomology* 31 (2002):242-252.
- Vitousek, P.M., C.M. D'Antonio, L.L. Loope and R. Westbrooks. 1996. Biological invasions as global environmental change. *American Scientist* 84:468-478.
- Wagle, R. F. 1981. Fire: Its Effects on Plant Succession and Wildlife in the Southwest. University of Arizona, Tucson, Arizona. IN Fire Effects Information System, [online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (producer). Available online at <http://www.fs.fed.us/database/feis> (accessed April 2007)
- Wallin K. F., T. E. Kolb, K.R. Skov, and M.R. Wagner. 2003. Effects of Crown Scorch on Ponderosa Pine Resistance to Bark Beetles in Northern Arizona. *Environmental Entomology* 32:652-661. Available online at <http://www.bioone.org/archive/0046-225X/32/3/pdf/i0046-225X-32-3652.pdf> (accessed July 2007)
- Waltz, A. E. M., and W. W. Covington. 2001 Butterfly Response and Successional Change following Ecosystem Restoration. pps. 88-94 IN Proceedings: Ponderosa Pine Ecosystems Restoration and Conservation: Steps toward Stewardship, Flagstaff, Arizona, April 25-27, 2000. Compiled by R. K. Vance, C. E. Edminster, W. W. Covington, and J. A. Blake. USDA Forest Service, Rocky Mountain Research Station, Proceedings RMRS-P-22, Ogden, Utah.
- Ward, J.P., Jr., and W.M. Block. 1995. Mexican spotted owl prey ecology. Chapter 5 (48 pp.) in U.S. Fish and Wildlife Service. Mexican spotted owl recovery plan, supporting documents, Volume II. Albuquerque, New Mexico.
- Ward, R.V. 2000. Abundance and distribution of peregrine falcons in Grand Canyon National Park. Unpublished report. Grand Canyon National Park. February. 19 pp.
- Ward, R.V. 2005. Personal communication with report author and R.V. Ward, Wildlife Biologist, Division of Science and Resource Management and, Grand Canyon National Park, Arizona.
- Ward, R.V. 2007 personal communication with R.V. Ward, Grand Canyon National Park Wildlife Biologist concerning fire below the rim.
- Warren, P.L., K.L. Reichhardt, D.A. Mouat, B.T. Brown, and R.R. Johnson. 1982. Vegetation of Grand Canyon National Park. Technical Report No. 9, Cooperative National Park Resources Study Unit. University of Arizona, Tucson.
- Warren, S.D., C.J. Scifres, and P.D. Teel. 1987. Responses of Grassland Arthropods to Burning: A Review. *Agriculture, Ecosystems and Environment* 19:103-130. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. 83p. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.

- Weaver, H. 1951. Fire as an ecological factor in the southwestern ponderosa pine forests. *Journal of Forestry* 49:93-98.
- Weissshaupt, B.R., M.S. Carroll, K.A. Blatner, W.D. Robinson, and P.J. Jakes. 2005. Acceptability of Smoke from Prescribed Forest Burning in the Northern Inland West: A Focus Group Approach. *Journal of Forestry*. 103(4), 189.
- Wells, C. G., et al. 1979. Effects of Fire on Soil: A State-of-knowledge Review. USDA Forest Service General Technical Report WO-7, 34 p., Washington D.C.
- Weng, C. and S.T. Jackson. 1999. Late Glacial and Holocene vegetation history and paleoclimate of the Kaibab Plateau, Arizona. *Palaeogeography, Palaeoclimatology, Palaeoecology* 153:179-201.
- West, N.E. 1999. Distribution, composition, and classification of current juniper-pinyon woodlands and savannas across western North America. p. 20-23 In S.B. Monsen and R. Stevens, editors. *Proceedings: ecology and management of pinyon-juniper communities within the Interior West*. U.S. Department of Agriculture, Forest Service Proceedings RMRS-P-9, Rocky Mountain Research Station, Ogden, Utah.
- Westerling, A. L., H. G. Hidalgo, D. R. Cayan, T. W. Swetnam. 2006. Warming and Earlier Spring Increases Western U.S. Forest Wildfire Activity. Available on line at <http://www.sciencexpress.org/6 July2006/Page 2/10.1126/science.1128834>
- White, A.S. 1985. Presettlement regeneration patterns in a southwestern ponderosa pine stand. *Ecology* 66:589-594.
- White, C.S. 1986. Effects of prescribed fire on rates of decomposition and nitrogen mineralization in a ponderosa pine ecosystem. *Biology and Fertility of Soils* 2:87-95.
- White, C.S. 1996. The effects of fire on nitrogen cycling processes within Bandelier National Monument, NM. p. 123-139 In C.D. Allen, technical editor. *Fire effects in southwestern forests: proceedings of the second La Mesa fire symposium*, Los Alamos, New Mexico, March 29-31, 1994. U.S. Department of Agriculture, Forest Service General Technical Report RM-GTR-286, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- White, M.A. and J.L. Vankat. 1993. Middle and high elevation coniferous forest communities of the North Rim region of Grand Canyon National Park, Arizona, USA. *Vegetation* 109:161-174.
- Wiley, D. W. 1998. Movements and habitat utilization by Mexican spotted owls within the canyonlands of Utah. Dissertation, Northern Arizona University, Flagstaff, Arizona, USA.
- Williams, B. K., R. C. Szaro, and C. D. Shapiro. 2007. *Adaptive Management: The U.S. Department of the Interior Technical Guide*. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC.
- Williamson, M. 1996. *Biological Invasions* Chapman & Hall, London.
- Williamson, S.H. 2006. Five Ways to Compute the Relative Value of a U.S. Dollar Amount, 1790-2005. *Measuringworth.com*. <http://www.measuringworth.com/calculators/compare/#>
- Wohlgemuth, P., K. Hubbert and M. Arbaugh. 2006. Fire and Physical Environment Interactions- Soil, Water, and Air. IN *Fire in California Ecosystems*, edited by N.G. Sugihara, J.W. van Wagtendonk, K.E. Shaffer, J. Fites-Kaufman, and A.E. Thode. University of California Press, Berkeley, CA.
- Wolf, J.J. and J.N. Mast. 1998. Fire history of mixed-conifer forests on the North Rim, Grand Canyon National Park, Arizona. *Physical Geography* 19:1-14.
- Wolke, H. 2003. National Wilderness Preservation System under siege. *Wild Earth* 13(1):15-19.
- Wolters, G.L. 1996. Elk effects on Bandelier National Monument meadows and grasslands. p. 196-205 In C.D. Allen, technical editor. *Fire effects in southwestern forests: proceedings of the second La Mesa fire symposium*, Los Alamos, New Mexico, March 29-31, 1994. U.S. Department of Agriculture, Forest Service General Technical Report RM-GTR-286, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.
- Woolsey, T.S. Jr. 1911. Western yellow pine in Arizona and New Mexico. U.S. Department of Agriculture, Forest Service Bulletin 101. Washington, D.C.
- World Heritage Committee. 2004. Operational guidelines: Establishment of the World Heritage List. Online at: <http://whc.unesco.org/opgulist.htm>. Accessed May 2004.
- Wright, Henry A. and Arthur W. Bailey. 1982. *Fire Ecology, United States and Southern Canada*. John Wiley and Sons. New York, NY. IN *Wildland Fire in Ecosystems: Effects of Fire on Fauna*. Edited

- by Jane Kapler Smith, 2000 Gen. Tech. Report. RMRS-GTR-42-Vol 1. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Ogden, Utah.
- Yeager, L.E. and L.E. Riordan. 1953. Effects of beetle-killed timber on range and wildlife in Colorado. Transactions of the North American Natural Resources and Wildlife Conference 18:596-616.
- York, Eric. 2006. Grand Canyon National Park Puma Ecology Research; Summary Report; September 2006. Unpublished internal report. Grand Canyon National Park, Arizona.
- Zimmerman, B., and W.C. Leibfried. 1999. Preliminary results of radio-telemetry of razorback suckers in the Colorado River, western Grand Canyon. Page 74 in D.A. Hendrickson and G.P. Garrett (eds.). Proceedings of the desert fishes council symposium, Vol. XXIX: November 20-23, 1997, Death Valley National Park. Desert Fishes Council, Bishop, California.
- Zwicker, F.C. 1992. Blue grouse: *Dendragapus obscurus*. Birds of North America No. 15. American Ornithological Union, Washington D.C.; Academy of Natural Sciences, Philadelphia. 28 pp.

## U.S. GOVERNMENT

### U.S. CONGRESS

- 1983 U.S. House Report 98-40 from the Committee on Interior and Insular Affairs, March 18, page 43. U.S. Department of Interior, Washington D.C.

### U.S. DEPARTMENTS OF AGRICULTURE AND INTERIOR

- 2000 Managing the Impact of Wildfires on Communities and the Environment, A Report to the President In Response to the Wildfires of 2000. (Known as the National Fire Plan).
- 2001 Smoke Management Plan for Tusayan and Grand Canyon Village: A Cooperative Plan Developed by U.S. Forest Service, Kaibab National Forest and U.S. National Park Service, Grand Canyon National Park. Available online at [http://www.fs.fed.us/r3/kai/business/fire\\_mgt/d4\\_smoke\\_mgmt\\_plan.pdf](http://www.fs.fed.us/r3/kai/business/fire_mgt/d4_smoke_mgmt_plan.pdf)
- 2009 Guidance for Implementation of Federal Wildland Fire Management Policy. Feb 13, 2009.
- n.d. Grand Canyon National Park and Kaibab National Forest NFD RS Operating Plan.

### U.S. DEPARTMENT OF AGRICULTURE

#### Forest Service (USFS)

- 1979 Effects of Fire on Soil, A State-of-Knowledge Review. Forest Service General Technical Review. WO-7.
- 1999 Final Environmental Impact Statement for Tusayan Growth, Coconino County, Arizona. Williams, Arizona. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). 2007. Fire Effects Information System (FEIS), online at: <http://www.fs.fed.us/database/feis/index.html> (accessed February 2007)
- 2000 Wildland Fire in Ecosystems-Effects of Fire on Flora. Rocky Mountain Research Station. General Technical Report RMRS-GTR-42-volume 2. U.S. Forest Service. Fort Collins, Colorado.
- 2006a Warm Fire Recovery EIS Scoping Letter. North Kaibab Ranger District. Kaibab National Forest. Coconino County, Arizona.
- 2006b Draft Environmental Impact Statement for Jacob Ryan Vegetation Management. North Kaibab Ranger District, Kaibab National Forest Coconino County, Arizona. MB-R3-07-3.
- 2007 Warm Fire Assessment, Post-Fire Conditions and Management Considerations. North Kaibab Ranger District. Kaibab National Forest. Coconino County, Arizona.
- 2007a Fire Effects Information System (FEIS). Rocky Mountain Research Station, Fire Sciences Laboratory. Online at: <http://www.fs.fed.us/database/feis/index.html> (accessed February 2007)
- 2008 Grand Canyon National Park and Kaibab National Forest NFD RS Operating Plan. Ed Hiatt, FMO, North Kaibab District, Kaibab National Forest, Fredonia, Arizona.
- 2008a Warm Fire Recovery Project Final Environmental Impact Statement, due September.
- 2008b Jacob-Ryan Vegetation Management Project Draft Environmental Impact Statement, due September.

- 2008c Kaibab National Forest. Ecological Sustainability Report. Version 1.01. Pages 9-11. At <http://www.fs.fed.us/r3/kai/plan-revision/Kai-ESR-FINAL-v.1.01-plus-errata.pdf>

**Natural Resources Conservation Service (USDA NRCS)**

- 1998 National Forestry Manual.  
2006 <http://soildatamart.nrcs.usda.gov> (accessed December 13, 2006)

**U.S. DEPARTMENT OF COMMERCE**

- 2000 U.S. Census Bureau online at: <http://www.census.gov>

**U.S. DEPARTMENT OF THE INTERIOR**

**Bureau of Land Management (BLM)**

- 2004 Swainson's hawk (*Buteo swainsoni*). Species account prepared by Lower Snake River District. Online at <http://www.id.blm.gov/bopnca/swainson.htm> (accessed August 2004)

**Bureau of Reclamation (BOR)**

- 2002 Grand Canyon National Park Water Supply Appraisal Study: Coconino, Mohave, and Yavapai Counties, Arizona. U.S. Bureau of Reclamation. Denver, Colorado.

**Fish and Wildlife Service (USFWS)**

- 1984 California Condor Recovery Plan. [Revised]. 110 p. [+ appendices]. California Condor Recovery Team. Portland, Oregon.  
1995 MSO Recovery Team. MSO Recovery Plan. 347 p. Albuquerque, New Mexico.  
1995a Recovery plan for the Mexican spotted owl. Albuquerque, New Mexico. Online at: [http://ifw2es.fws.gov/mso/recovery\\_plan.htm](http://ifw2es.fws.gov/mso/recovery_plan.htm). Accessed May 2004.  
1995b Kanab ambersnail (*Oxyloma haydeni kanabensis*) recovery plan. Denver, Colorado. 21pp. Online at [http://ecos.fws.gov/tess\\_public/TESSWebpageRecovery?sort=1#G](http://ecos.fws.gov/tess_public/TESSWebpageRecovery?sort=1#G). Accessed May 2004.  
1996 California condor recovery plan, third edition.  
2001 Brown pelican (*Pelecanus occidentalis californicus*) General Species Information. Arizona Ecological Services Field Office, Phoenix.  
2001a Kanab ambersnail (*Oxyloma haydeni kanabensis*) general species information. Arizona Ecological Services Field Office, Phoenix, Arizona. 1 p.  
2002 Candidate and listing priority assignment form: Relict leopard frog. 14 pp. Online at [http://ecos.fws.gov/species\\_profile/SpeciesProfile?spcode=D00E](http://ecos.fws.gov/species_profile/SpeciesProfile?spcode=D00E). Accessed May 2004.  
2002a Southwestern Willow Flycatcher Recovery Plan. Albuquerque, New Mexico. i-ix + 210 pp., Appendices A-O.  
2003 Mexican spotted owl survey protocol. Albuquerque, New Mexico. 23 pp.  
2003a USFWS Biological Opinion for the Grand Canyon National Park Fire Use Program; June 11, 2003.  
2003b USFWS Biological Opinion for Prescribed Fire in Grand Canyon National Park, Arizona.  
2004 Endangered and Threatened Wildlife and Plants: Final Designation of Critical Habitat for the Mexican Spotted Owl: Final Rule. Federal Register 69(168):53182-53297.  
2006 Sentry Milk-vetch (*Astragalus cremnophylax* var. *cremnophylax*) Recovery Plan. Arizona Ecological Services Office, U.S. Fish and Wildlife Service. Phoenix, Arizona.

**U.S. Geological Survey (USGS)**

- 2006 Canyonlands Research Station, Southwest Biological Science Center, April 24, 2006. An introduction to biological soil crusts. <http://soilcrust.org/crust101.htm>. Accessed February 13, 2007.  
2006a Seaber, P. R., Kapinos, F. P., and Knapp, G. L. Hydrologic Unit Maps: U. S. Geological Survey Water Supply Paper 2294. U. S. Geological Survey. Revisions 2007. <http://pubs.usgs.gov/wsp/wsp2294/>  
2007 <http://waterdata.usgs.gov/nwis>. Accessed February 14, 2007.

- n.d. Southwest Exotic Plant Information Clearinghouse (SWEPIC). Available online at:  
<http://sbsc.wr.usgs.gov/research/projects/swepic/swepic.asp>. Accessed March 2007.

**National Park Service (NPS)**

- 1965 National Registry of Natural Landmarks Handbook. National Natural Landmarks Program. Washington, D.C.
- 1980 Wilderness Recommendation Grand Canyon National Park, Arizona. Grand Canyon, Arizona.
- 1984 Grand Canyon Natural and Cultural Resources Management Plan. Grand Canyon, Arizona.
- 1984 Water Resources Management Plan. 160 pp. Grand Canyon National Park, Grand Canyon, Arizona.
- 1988 Backcountry Management Plan. Grand Canyon National Park, Grand Canyon, Arizona.
- 1992 Fire Management Plan Environmental Assessment. Grand Canyon National Park, Grand Canyon, Arizona.
- 1992a Fire Management Plan as revised through 1998. Grand Canyon National Park, Grand Canyon, Arizona.
- 1993 Wilderness Recommendation, Grand Canyon National Park, Arizona. Revised. Grand Canyon National Park, Grand Canyon, Arizona.
- 1995 General Management Plan and Environmental Impact Statement, Grand Canyon National Park. Denver Service Center. On line at: <http://www.nps.gov/grca/parkmgmt/gmp.htm>
- 1995a Effects of Aircraft Overflights on the National Park System. Report To Congress. Washington, D.C.
- 1996 Invasive Species Management: A Strategic Plan for Managing Invasive Nonnative Plants on National Park System Lands. Available online at  
[http://www.nature.nps.gov/biology/invasivespecies/strat\\_pl.cfm](http://www.nature.nps.gov/biology/invasivespecies/strat_pl.cfm) (accessed April 2007)
- 1996a Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes. Available online at  
[http://www.nps.gov/history/history/online\\_books/hpscontents.htm](http://www.nps.gov/history/history/online_books/hpscontents.htm)
- 1996b Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes  
[http://www.nps.gov/history/HPS/hli/landscape\\_guidelines/index.htm](http://www.nps.gov/history/HPS/hli/landscape_guidelines/index.htm)
- 1997 Resource Management Plan Grand Canyon National Park. Grand Canyon, Arizona.
- 1998 Bright Angel Mechanical Fuel Reduction and Prescribed Fire Project Plan. Branch of Fire and Aviation Management, Grand Canyon National Park, Grand Canyon, Arizona.
- 1998b Final Environmental Statement for a Wilderness Recommendation. Grand Canyon National Park, Grand Canyon, Arizona.
- 1998c Cultural Resource Management Guideline. NPS 28, no. 5. Washington, D.C.: Published in 1997 with Effective Date of June 11, 1998.
- 2000 Grand Canyon Fire Effects Monitoring Plan. On File Branch of Fire and Aviation, Grand Canyon National Park, Grand Canyon, Arizona.
- 2000 National Research Council. Ecological Indicators for the Nation. National Academy Press, Washington, DC.
- 2002 Air quality in the National Parks. Second edition. Air Resources Division, Washington, D.C.
- 2002a Exotic Plant Management Team Annual Report.
- 2003 Biological Evaluation for Prescribed Fire in Grand Canyon National Park, Coconino County, Arizona. Submitted to USFWS by Grand Canyon National Park, April. 66 pp.
- 2003a Upgrade Corridor Area Fire Protection System. Grand Canyon National Park, Arizona.
- 2003b Grand Canyon Exotic Plant List. Available online at:  
<http://www.nps.gov/grca/naturescience/plants.htm> (accessed January 2007) file: Grand Canyon Exotic Plant List, GRCA\_Exotic\_List20030414.xls
- 2003 Cultural Landscape Inventory, West Rim Drive/Hermit Road, Grand Canyon National Park.
- 2004 Grand Canyon project proposal and environmental screening form, park-wide programmatic invasive plant management program (and appendices). Unpublished departmental document. Grand Canyon National Park, Arizona.

- 2005 Fire Management Plan. Grand Canyon National Park, Grand Canyon, Arizona.
- 2005a Colorado River Management Plan. Grand Canyon National Park, Arizona.
- 2006 National Park Service Management Policies. Washington D.C. On line at:  
<http://www.nps.gov/policy/MP2006.pdf>
- 2006a Northern Goshawk Clearance Protocol. Grand Canyon National Park. 2002. Revised 2006.  
Unpublished internal protocol. Grand Canyon National Park, Arizona.
- 2006b Sound Levels in the Primary Vegetation Types in Grand Canyon National Park, July 2005. NPS  
Report No. GRCA-05-02. Ambrose, Skip, Sandhill Company (prepared under contract to NPS).  
Grand Canyon National Park, Arizona.
- 2006c Resource Advisor Guide for Grand Canyon National Park. Unpublished reference guide  
compiled and edited by Carmen Sipe. On file Branch of Fire Management, Grand Canyon  
National Park, Arizona.
- 2006d Draft NPS Invasive Species Action Plan. On file Grand Canyon National Park, Grand Canyon,  
Arizona.
- 2006e Grand Canyon National Park. Electronic database of surface water characteristics.
- 2007 Grand Canyon National Park Exotic Plant Species List. Unpublished departmental document.  
Grand Canyon National Park, Arizona.
- 2007a Sound levels of fire equipment used at Grand Canyon National Park, NPS Report No. GRCA07-  
04, Laura Levy and Sarah Falzarano. Overflights and Natural Soundscape Program. Grand  
Canyon National Park, Arizona.
- 2007b Sound Levels of Helicopters Used for Administrative Purposes at Grand Canyon National Park,  
NPS Report No. GRCA07-05. Sarah Falzarano and Laura Levy. Overflights and Natural  
Soundscape Program. Grand Canyon National Park, Arizona.
- 2008 NPS website on National Natural Landmarks accessed July 14, 2008 at  
[http://www.nature.nps.gov/nnl/Registry/USA\\_Map/index.cfm](http://www.nature.nps.gov/nnl/Registry/USA_Map/index.cfm)
- 2009 NPS Memo, Guidance for Implementation of Federal Wildland Fire Management Policy, dated  
April 9, 2009.
- n.d. Unpublished data. On file, Grand Canyon National Park, Wildlife Files maintained in the office of  
the Wildlife Program Manager.
- n.d. Potential Invasive Exotic Plant Species Compiled from Noxious Weed Lists from Surrounding  
States, Grand Canyon National Park. Available online at  
[http://www.nps.gov/grca/naturescience/upload/potentially\\_invasive.pdf](http://www.nps.gov/grca/naturescience/upload/potentially_invasive.pdf) (accessed January 2007)

## U.S. DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

- 2000 Final Supplemental Environmental Assessment: Special Flight Rules in the Vicinity of Grand  
Canyon National Park. Washington, D.C.
- 2001 Quiet Aircraft Technology for Grand Canyon. Report to the United States Congress pursuant to  
Section 804 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century  
(AIR-21). Washington, DC.

### U.S. Environmental Protection Agency (EPA)

- 1995 Compilation of air pollutant emission factors, AP-42, fifth edition, volume I: Stationary point  
and area sources. Online at: <http://www.epa.gov/ttn/chief/ap42/> (accessed May 2004)
- 1998 Interim Air Quality Policy on Wildland and Prescribed Fires. Office of Air Quality Planning and  
Standards.
- 2003a Guidance for Estimating Natural Visibility Conditions under the Regional Haze Program. EPA-  
454/B-03-005, September 2003
- 2003b Air Quality Index: A Guide to Air Quality and Your Health. U.S. Environmental Protection  
Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina.  
Online at: <http://www.epa.gov/airnow/aqibroch/> (accessed May 2004)
- 2005 Fact Sheet: Proposal to revise the National Ambient Air Quality Standards for particulate matter.

- Webpage available at <http://www.epa.gov/air/particles/fs20051220pm.html>.
- 2006a National Ambient Air Quality Standards for Particulate Matter. In Federal Register, Vol. 71, No. 200, Oct. 17, 2006, pp.61143-61233.
- 2006b Guideline for reporting of daily air quality – air quality index (AQI). EPA-454/R-99-010. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. 25 pp. Online at:  
<http://www.epa.gov/ttn/oarpg/t1/memoranda/rg701.pdf> (accessed September 28, 2007)
- 2007a Proposed Revisions to Ground-Level Ozone Standards. Available on-line at  
<http://www.epa.gov/air/ozonepollution/naaqsrev2007.html> (accessed October 1, 2007)
- 2007b National Ambient Air Quality Standards (NAAQS). Available on-line at  
<http://www.epa.gov/air/criteria.html> (accessed Sept. 27, 2007)

**U.S. Government Accountability Office (GAO)**

- 2001 The National Fire Plan; Testimony Before the Subcommittee on Forests and Forest Health. Committee on Resources, House of Representatives, GAO-01-1022T.