

Literature cited

- Ådahl, E., P. Lundberg, and N. Jonzén. 2006. From climate change to population change: the need to consider annual life cycles. *Global Change Biology* 12:1627-1633.
- Agee, J.K. 1993. *Fire Ecology of Pacific Northwest Forests*. Island Press, Washington, D.C.
- Allen, C.D., M. Savage, D.A. Kalk, 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(5): 1418–1433.
- Anderson, D.R., and K.P. Burnham. 1992. Demographic analysis of northern spotted owl populations. Pages 319–328 in *Draft final recovery plan for the northern spotted owl*. U.S. Fish and Wildlife Service, Portland, Oregon.
- Anthony, R.G., and F.F. Wagner. 1999. Reanalysis of northern spotted owl habitat use on the Miller Mountain Study Area. Unpublished report. Submitted to Bureau of Land Management, Medford District and Forest and Rangeland Ecosystem Science Center, Biological Resources Division, U.S. Geological Survey.
- Anthony, R.G., E.D. Forsman, A.B. Franklin, D.R. Anderson, K.P. Burnham, G.C. White, C.J. Schwarz, J. Nichols, J.E. Hines, G.S. Olson, S.H. Ackers, S. Andrews, B.L. Biswell, P.C. Carlson, L.V. Diller, K.M. Dugger, K.E. Fehring, T.L. Fleming, R.P. Gerhardt, S.A. Gremel, R.J. Gutiérrez, P.J. Happe, D.R. Herter, J.M. Higley, R.B. Horn, L.L. Irwin, P.J. Loschl, J.A. Reid and S.G. Sovern. 2006. Status and trends in demography of northern spotted owls, 1985–2003. *Wildlife Monograph* No. 163.
- Aubry, K.B., C.B. Halpern, and C.E. Peterson. 2009. Variable-retention harvests in the Pacific Northwest: A review of short-term findings from the DEMO study. *Forest Ecology and Management* 258:398-408.
- Baker, S. 2011. Seeking a balance between forestry and biodiversity the role of variable retention silviculture. *Forest & Wood Products Australia Limited PDG167-0910*.
- Barrowclough, G.F., and R. J. Gutiérrez. 1990. Genetic variation and differentiation in the spotted owl. *Auk* 107:737–744.
- Barrowclough, G.F., R.J. Gutiérrez and J.G. Groth. 1999. Phylogeography of spotted owl (*Strix occidentalis*) populations based on mitochondrial DNA sequences: gene flow, genetic structure, and a novel biogeographic pattern. *Evolution* 53:919–931.
- Barrowclough, G.F., J.G. Groth and R.J. Gutiérrez. 2005. Genetic structure, introgression and a narrow hybrid zone between northern and California spotted owls (*Strix occidentalis*). *Molecular Ecology* 14:1109–1120.
- Barrows, C. and K. Barrows. 1978. Roost characteristics and behavioral thermoregulation in the spotted owl. *Western Birds* 9(1): 1-9.

- Bean, M.J. 2002. Overcoming unintended consequences of endangered species regulation. *Idaho Law Review*. 38:409-420.
- Betts, M.G., J.C. Hagar, J.W. Rivers, J.D. Alexander, K. McGarigal, and B.C. McComb. 2010. Thresholds in forest bird occurrence as a function of the amount of early-seral broadleaf forest at landscape scales. *Ecological Application* 20(8):2116-2130.
- Bingham, B.B. and B.R. Noon. 1997. Mitigation of Habitat "Take": Application to Habitat Conservation Planning. *Conservation Biology* 11(1): 127-139.
- Blakesley, J.A. 2004. Habitat Associations. Chapter 5 in S.P. Courtney, J.A. Blakesley, R.E. Bigley, M.L. Cody, J.P. Dumbacher, R.C. Fleischer, A.B. Franklin, J.F. Franklin, R.J. Gutiérrez, J.M. Marzluff and L. Sztukowski. Scientific evaluation of the status of the northern spotted owl. Sustainable Ecosystems Institute, Portland, Oregon.
- Blakesley, J.A., A.B. Franklin and R.J. Gutiérrez. 1992. Spotted owl roost and nest site selection in northwestern California. *Journal of Wildlife Management* 56(2):388-392.
- Blate, G.M., L.A. Joyce, J.S. Littell, S.G. McNulty, C.I. Millar, S.C. Moser, R.P. Neilson, K. O'Halloran and D.L. Peterson. 2009. Adapting to climate change in United States national forests. *Unasylva* 231/232. Vol. 60:57–62.
- Bond, M.L., R.J. Gutiérrez, 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* 30:1022–1028.
- Boyd, C., T.M. Brooks, S.H.M. Butchart, G.J. Edgar, G.A.B. da Fonseca, F. Hawkins, M. Hoffmann, W. Sechrest, S.N. Stuart, and P.P. van Dijk. 2008. Spatial scale and the conservation of threatened species. *Conservation Letters* 1:37-43.
- Brook, A., M. Zint, and R. De Young. 2003. Landowner's responses to an endangered species act listing and implications for encouraging conservation. *Conservation Biology*. 17:1638-1649.
- Buchanan, J.B. 2004. Managing habitat for dispersing northern spotted owls – are the current management strategies adequate? *Wildlife Society Bulletin* 32:1333–1345.
- Buchanan, J.B., L.L. Irwin, and E.L. McCutchen. 1993. Characteristics of spotted owl nest trees in the Wenatchee National Forest. *Journal of Raptor Research*. 27:1-7.
- Burnham, K.P., D.R. Anderson and G.C. White. 1994. Estimation of vital rates of the northern spotted owl. Colorado Cooperative Fish and Wildlife Research Unit, Colorado State University, Ft. Collins, Colorado.

- Camp, A.E., C.D. Oliver, P.F. Hessburg and R.L. Everett. 1997. Predicting late-successional fire refugia from physiography and topography. *Forest Ecology and Management* 95:63–77.
- Carey, A.B. 1985. A summary of the scientific basis for spotted owl management. Pp. 100-114 in R.J. Gutierrez and A.B. Carey, (technical editors), *Ecology and management of the spotted owl in the Pacific Northwest*. U.S.D.A. Forest Service General Technical Report PNW-185. Pacific Northwest Forest and Range Experiment Station, Portland, Oregon.
- Carey, A.B. 1995. Sciurids in Pacific Northwest managed and old-growth forests. *Ecological Applications* 5(3):648–661.
- Carey, A.B. 2000. Effects of new forest management strategies on squirrel populations. *Ecological Applications* 10(1):248–257.
- Carey, A.B. 2003. Biocomplexity and restoration of biodiversity in temperate coniferous forest: inducing spatial heterogeneity with variable-density thinning. *Forestry* 76:127–136.
- Carey, A.B. 2006. Active and passive forest management for multiple values. *Northwest Naturalist* 87(1):18-30.
- Carey, A.B., and K.C. Peeler. 1995. Spotted owls: resource and space use in mosaic landscapes. *The Journal of Raptor Research*. 29:223-239.
- Carey, A.B., S.P. Horton and B.L. Biswell. 1992. Northern spotted owls: influence of prey base and landscape character. *Ecological Monographs* 62(2):223–250.
- Carey, A.B., C.C. Maguire, B.L. Biswell and T.M. Wilson. 1999. Distribution and abundance of *Neotoma* in western Oregon and Washington. *Northwest Science* 73(2):65–80.
- Carroll, C. 2010. Role of climatic niche models in focal-species-based conservation planning: assessing potential effects of climate change on northern spotted owl in the Pacific Northwest, USA. *Biological Conservation*. 143:1432-1437.
- Carroll, C., D.C. Odion, C.A. Frissell, D.A. Dellasala, B.R. Noon, and R. Noss. 2009. Conservation implications of coarse-scale versus fine-scale management of forest ecosystems. Klamath Center for Conservation Research, Orleans, CA. 39 pgs. Available at www.klamathconservation.org.
- Carroll, C., J.R. Dunk and A. Moilanen. 2010. Optimizing resiliency of reserve networks to climate change: multispecies conservation planning in the Pacific Northwest. *Global Change Biology* 16:891-904.
- Case, M.J., and D.L. Peterson. 2009. Growth-climate relations of lodgepole pine in the North Cascades National Park, Washington. *Northwest Science* 81:62–74.

- Chow, N. 2001. Distribution and habitat associations of northern spotted owls in Marin County, California. Master's thesis, Humboldt State University. 56 pages.
- Chutter, M.J., I. Blackburn, D. Bonin, J. Buchanan, B. Costanzo, D. Cunnington, A. Harestad, T. Hayes, D. Heppner, L. Kiss, J. Surgenor, W. Wall, L. Waterhouse and L. Williams. 2004. Recovery strategy for the northern spotted owl (*Strix occidentalis caurina*) in British Columbia. British Columbia Ministry of Environment, Victoria, Canada.
- Clark, D.A. 2007. Demographic and habitat selection of northern spotted owls in post-fire landscapes of southwestern Oregon. Thesis, Oregon State University, Corvallis, Oregon.
- Conley, J.L., M.E. Fernandez-Gimenez, G.B. Ruyle, and M. Brunson. 2007. Forest Service grazing permittee perceptions of the Endangered Species Act in southeastern Arizona. *Rangeland Ecology and Management*. 60:136-145.
- Courtney, S.P., J.A. Blakesley, R.E. Bigley, M.L. Cody, J.P. Dumbacher, R.C. Fleischer, A.B. Franklin, J.F. Franklin, R.J. Gutiérrez, J.M. Marzluff and L. Sztukowski. 2004. Scientific evaluation of the status of the northern spotted owl. Sustainable Ecosystems Institute, Portland, Oregon.
- Crouse, D.T., L.A. Mehrhoff, M.J. Parkin, D.R. Elam, and L. Y. Chen. 2002. Endangered species recovery and the SCB study: a U.S. Fish and Wildlife Service perspective. *Ecological Applications*. 12:719-723.
- Crozier, M.L., M.E. Seamans, R.J. Gutiérrez, P.J. Loschl, R.B. Horn, S.G. Sovern and E.D. Forsman. 2006. Does the presence of barred owls suppress the calling behavior of spotted owls? *Condor* 108: 760–769.
- Davis, R.J., and K.M. Dugger. 2011. Chapter 3: Habitat status and trend. Pp. 21-62 in Davis, R.J., K.M. Dugger, S. Mohoric, L. Evers, and W.C. Aney. Northwest Forest Plan—the first 15 years (1994-2008): status and trends of northern spotted owl populations and habitats. U.S.D.A. Forest Service General Technical Report PNW-GTR-850. Pacific Northwest Research Station, Portland, Oregon.
- Davis, R., and J. Lint. 2005. Habitat status and trends. Pages 21–82 in J. Lint, technical coordinator. Northwest Forest Plan—the first 10 years (1994–2003): status and trends of northern spotted owl populations and habitat. General Technical Report PNW-GTR-648, Pacific Northwest Research Station, U.S. Department of Agriculture, Forest Service, Portland, Oregon.
- Drever, C.R., G. Peterson, C. Messier, Y. Bergeron and M. Flannigan. 2006. Can forest management based on natural disturbances maintain ecological resilience? *Canadian Journal of Forest Research* 36:2285–2299.

- Dugger, K.M., F. Wagner, R.G. Anthony and G.S. Olson. 2005. The relationship between habitat characteristics and demographic performance of northern spotted owls in southern Oregon. *Condor* 107:863–878.
- Dugger, K.M., R.G. Anthony and L.S. Andrews. 2011. Transient dynamics of invasive competition: barred owls, spotted owls, habitat, and the demons of competition present. *Ecological Applications*. 21:2459-2468.
- Dunk, J. R., B. Woodbridge, D. LaPlante, N. Schumaker, B. Glenn, B.C. White, K. Halupka, S. Livingston, M. M. Zwartjes and J. Peters. 2012. Modeling and analysis procedures used to identify and evaluate potential critical habitat networks for the northern spotted owl. Unpublished report, U.S. Fish and Wildlife Service, Portland, Oregon. 48 pp.
- Ellis, T.M., and M.G. Betts. 2011. Bird abundance and diversity across a hardwood gradient within early seral plantation forest. *Forest Ecology and Management*. 261:1372-1381.
- Everett, R.L., R. Schellhaas, D. Keenum, D. Spurbeck and P. Ohlson. 2000. Fire history in the ponderosa pine/Douglas-fir forests on the east slope of the Washington Cascades. *Forest Ecology and Management* 129:207–225.
- Fiedler, C. E., P. Friederici, M. Petruncio, C. Denton, and W. D. Hacker. 2007. Managing for old growth in frequent-fire landscapes. *Ecology and Society* 12(2):20.
- Folliard, L.B., K. Reese, and L.V. Diller. 2000. Landscape characteristics of Northern Spotted Owl nest sites in northwestern California. *Journal of Raptor Research* 34: 75–84.
- Forest Management Strategy. 2005. A Forest Management Strategy for the Fort Lewis Military Reservation, Washington 2005. Forestry Program, Environmental and Natural Resources Division. U.S. Army, Installation Management Agency, Fort Lewis Military Reservation. Revised May 2005. 95 pp.
- Forsman, E.D., E.C. Meslow and H.M. Wight. 1984. Distribution and biology of the spotted owl in Oregon. *Wildlife Monographs* 87:1–64.
- Forsman, E.D., I.A. Otto, S.G. Sovern, M. Taylor, D.W. Hays, H. Allen, S.L. Roberts and D.E. Seaman. 2001. Spatial and temporal variation in diets of spotted owls in Washington. *Journal of Raptor Research* 35:141–150.
- Forsman, E.D., R.G. Anthony, J.A. Reid, P.J. Loschl, S.G. Sovern, M. Taylor, B.L. Biswell, A. Ellingson, E.C. Meslow, G.S. Miller, K.A. Swindle, J.A. Thrailkill, F.F. Wagner and D.E. Seaman. 2002. Natal and breeding dispersal of northern spotted owls. *Wildlife Monographs* 149:1–35.
- Forsman, E.D., R.G. Anthony, E.C. Meslow and C.J. Zabel. 2004. Diets and foraging behavior of northern spotted owls in Oregon. *Journal of Raptor Research* 38:214–230.

- Forsman, E.D., T.J. Kaminski, J.C. Lewis, K.J. Maurice, C. Ferland and E. M. Glenn. 2005. Home range and habitat use of northern spotted owls on the Olympic Peninsula, Washington. *Journal of Raptor Research* 39(4):356-377.
- Forsman, E.D., R.G. Anthony, K.M. Dugger, E.M. Glenn, A.B. Franklin, G.C. White, C.J. Schwarz, K.P. Burnham, D.R. Anderson, J.D. Nichols, J.E. Hines, J.B. Lint, R.J. Davis, S.H. Ackers, L.S. Andrews, B.L. Biswell, P.C. Carlson, L.V. Diller, S.A. Gremel, D.R. Herter, J.M. Higley, R.B. Horn, J.A. Reid, J. Rockweit, J. Schaberl, T.J. Snetsinger and S.G. Sovern. 2011. Population demography of northern spotted owls: 1985–2008. *Studies in Avian Biology*. No. 40. Cooper Ornithological Society.
- Franklin, A.B. and R.J. Gutiérrez. 2002. Spotted owls, forest fragmentation, and forest heterogeneity. *Studies in Avian Biology* 25: 203-220.
- Franklin, A.B., K. P. Burnham, G.C. White, R.G. Anthony, E.D. Forsman, C. Schwarz, J.D. Nichols and J. Hines. 1999. Range-wide status and trends in northern spotted owl populations. Colorado Cooperative Fish and Wildlife Research Unit, Colorado State University, Fort Collins, Colorado.
- Franklin, A.B., D.R. Anderson, R.J. Gutiérrez and K.P. Burnham. 2000. Climate, habitat quality, and fitness in northern spotted owl populations in northwestern California. *Ecological Monographs* 70:539–590.
- Franklin, J.F., and C.T. Dyrness. 1988. *Natural vegetation of Oregon and Washington*. Oregon State University Press, Corvallis, OR. 452 pp.
- Franklin, J. F. and D. B. Lindenmayer. 2009. Importance of matrix habitats in maintaining biological diversity. *Proceedings of the National Academy of Sciences* 106(2):359-350.
- Franklin, J.F., T.A. Spies, R. Van Pelt, A.B. Carey, D.A. Thornburgh, D.R. Berg, D.B. Lindenmayer, M.E. Harmon, W.S. Keeton, D.C. Shaw, K. Bible and J. Chen. 2002. Disturbances and structural development of natural forest ecosystems with silvicultural implications, using Douglas-fir forests as an example. *Forest Ecology and Management* 155:399–423.
- Franklin, J.F., R.J. Mitchell, and B.J. Palik. 2007. *Natural disturbance and stand development principles for ecological forestry*. General Technical Report NRS-19. U.S.D.A. Forest Service, Northern Research Station, Newtown Square, Pennsylvania.
- Gaines, W.L., R.J. Harrod, J. Dickinson, A.L. Lyons and K. Halupka. 2010. Integration of Northern spotted owl habitat and fuels treatments in the eastern Cascades, Washington, USA. *Forest Ecology and Management* 260:2045–2052.
- Ganey, J.L., R.P. Balda and R.M. King. 1993. Metabolic rate and evaporative water loss of Mexican spotted and great horned owls. *Wilson Bulletin* 105(4):645-656.

- Glenn, E.M. 2009. Local weather, regional climate, and population dynamics of northern spotted owls in Washington and Oregon. Dissertation. Oregon State University, Corvallis OR, USA. 299 pp.
- Glenn, E.M., M. C. Hansen, and R. G. Anthony. 2004. Spotted owl home range and habitat use in young forests of western Oregon. *Journal of Wildlife Management* 68::33-50.
- Glenn, E.M., R.G. Anthony, and E.D. Forsman. 2010. Population trends in northern spotted owls: associations with climate in the Pacific Northwest. *Biological Conservation* 143: 2543-2552.
- Glenn, E.M., R.G. Anthony, E.D. Forsman, and G.S. Olson. 2011a. Local weather, regional climate, and annual survival of the northern spotted owl. *Condor* 113:159-176.
- Glenn, E.M., R.G. Anthony, E.D. Forsman, and G.S. Olson. 2011b. Reproduction of northern spotted owls: the role of local weather and regional climate. *Journal of Wildlife Management* 75(6):1279-1294.
- Gomez, D.M., Anthony, R.G. and Hayes, J.P. 2005. Influence of thinning of Douglas-fir forests on population parameters and diet of northern flying squirrels: *Journal of Wildlife Management* 69:1670–1682.
- Gremel, S. 2005. Factors controlling distribution and demography of northern spotted owls in a reserved landscape. Thesis, University of Washington, Seattle.
- Groves, C.R., L.S. Kutner, D.M. Stoms, M.P. Murray, J.M. Scott, M. Schafale, A.S. Weakley, and R.L. Pressey. 2000. Owing up to our responsibilities—Who owns lands important for biodiversity? Pages 275–300 in B.A. Stein, L.S. Kunter, and J.S. Adams, editors, *Precious heritage: The status of biodiversity in the United States*. Oxford University Press, New York, New York. 399 pp.
- Gutiérrez, R.J., A.B. Franklin and W.S. LaHaye. 1995. Spotted owl (*Strix occidentalis*) in A. Poole and F. Gill (editors), *The birds of North America*, No. 179. The Academy of Natural Sciences and The American Ornithologists' Union, Washington, D.C.
- Hagar, J.C. 2007. Wildlife species associated with non-coniferous vegetation in Pacific Northwest conifer forests: A review. *Forest Ecology and Management* 246:108-122.
- Haig, S.M., T.D. Mullins, E.D. Forsman, P.W. Trail, and L. Wennerberg. 2004. Genetic identification of spotted owls, barred owls, and their hybrids: legal implications of hybrid identity. *Conservation Biology* 18:1347-1357.

- Halofsky, J.E., D. C. Donato, D. E. Hibbs, J. L. Campbell, M. Donaghy Cannon, J. B. Fontaine, J. R. Thompson, R. G. Anthony, B. T. Bormann, L. J. Kayes, B. E. Law, D. L. Peterson, and T. A. Spies. 2011. Mixed-severity fire regimes: lessons and hypotheses from the Klamath-Siskiyou Ecoregion. *Ecosphere* 2(4):40.
- Hamm, K.A., and L.V. Diller. 2009. Forest management effects on abundance of woodrats in northern California. *Northwestern Naturalist*. 90:97-106.
- Hershey, K.T., E.C. Meslow and F.L. Ramsey. 1998. Characteristics of forests at spotted owl nest sites in the Pacific Northwest. *Journal Wildlife Management* 62(4):1398-1410.
- Herter, D.R., L.L. Hicks, H.C. Stabins, J.J. Millsbaugh, A.J. Stabins, and L.D. Melampy. 2002. Roost site characteristics of northern spotted owls in the nonbreeding season in central Washington. *Forest Science*. 48:437-444.
- Hessburg, P.F., and J.K. Agee. 2003. An environmental narrative of Inland Northwest United States forests, 1800–2000. *Forest Ecology and Management* 178:23–59.
- Hessburg, P.F., B.G. Smith, R.B. Salter, R.D. Ottmar and E. Alvarado. 2000a. Recent changes (1930s–1990s) in spatial patterns of interior northwest forests, USA. *Forest Ecology and Management* 136:53–83.
- Hessburg, P.F., R.B. Salter, M.B. Richmond, and B.G. Smith. 2000b. Ecological subregions of the Interior Columbia Basin, USA. *Applied Vegetation Science*. 3:163-180.
- Hessburg, P.F., J.K. Agee and J.F. Franklin. 2005. Dry forests and wildland fires of the inland Northwest USA: Contrasting the landscape ecology of the pre-settlement and modern eras. *Forest Ecology and Management* 211:117–139.
- Hessburg, P.F., R.B. Salter and K.M. James. 2007. Re-examining fire severity relations in pre-management era mixed conifer forests: inferences from landscape patterns of forest structure. *Landscape Ecology* 22:5–24.
- Hicks, L.L., D.R. Herter, and R. Early. 2003. Clines in life history characteristics of the spotted owl in Washington. *Northwestern Naturalist* 84:57-67.
- Hobbs, R.J., D.N. Cole, L. Yung, E.S. Zavaleta, G.H. Aplet, F.S. Chapin III, P.B. Landres, D.J. Parsons, N.L. Stephensen, P.S. White, D.M. Graber, E.S. Higgs, C.I. Millar, J.M. Randall, K.A. Tonnessen, and S. Woodley. 2010. Guiding concepts for Park and wilderness stewardship in an era of global environmental change. *Frontiers of Ecology and the Environment* 8(9):483–490.
- Holloway, G.L., and W.P. Smith. 2011. A meta-analysis of forest age and structure effects on northern flying squirrel densities. *The Journal of Wildlife Management*. 75:668-674.

- Hunter, J.E., R.J. Gutiérrez and A.B. Franklin. 1995. Habitat configuration around spotted owl nest sites in northwestern California. *Condor* 97:684-693.
- INRMP, 2007. Final Integrated Natural Resources Management Plan, 2007-2011. Department of Defense (Army). Fort Lewis, Washington. June 2007.
- Irwin, L.L., D.F. Rock and G.P. Miller. 2000. Stand structures used by northern spotted owls in managed forests. *Journal of Raptor Research* 34:175–186.
- Irwin, L. L., T. L. Fleming, and J. Beebe. 2004. Are spotted owl populations sustainable in fire-prone forests? *Journal of Sustainable Forestry* 18:1–28.
- Irwin, L.L., L.A. Clark, D.C. Rock, and S.L. Rock. 2007a. Modeling foraging habitat of California spotted owls. *The Journal of Wildlife Management*. 71:1183-1191.
- Irwin, L.L., M. Stephens, D. Rock, and S. Rock. 2007b. Spotted owl habitat selection and home range in California coastal forests: draft summary report. National Council for Air and Stream Improvement. Corvallis, OR.
- Irwin L. L., D.F. Rock and S. C. Rock. 2012. Habitat selection by northern spotted owls in mixed-coniferous forests. *Journal of Wildlife Management*. 76:200-213.
- James, S.M. 2002. Bridging the gap between private landowners and conservationists. *Conservation Biology*. 16:269-271.
- Johnson, K.N., and J.F. Franklin. 2009. Restoration of Federal forests in the Pacific Northwest: strategies and management implications. Unpublished manuscript. August 15, 2009. 120 pp. Available online at <<http://www.cof.orst.edu/cof/fs/PDFs/RestorationOfFederalForestsInThePacificNorthwest.pdf>>. Accessed 3 March 2011.
- Karl, T.R., J.M. Melillo, and T.C. Peterson. 2009. *Global Climate Change Impacts in the United States*. Cambridge University Press. Cambridge, UK.
- Kelly, E.G., E.D. Forsman and R.G. Anthony. 2003. Are barred owls displacing spotted owls? *Condor* 105:45–53.
- Kennedy, R.S.H., and M.C. Wimberly. 2009. Historical fire and vegetation dynamics in dry forests of the interior Pacific Northwest, USA, and relationships to northern spotted owl (*Strix occidentalis caurina*) habitat conservation. *Forest Ecology and Management*. 258:554-566.
- King, G. 1993. Habitat Characteristics of Northern Spotted Owls in Eastern Washington. Master's thesis; Univ. of California, Berkeley. 81 pp.

- Knight, R.L. 1998. Ecosystem management and conservation biology. *Landscape and Urban Planning* 40:41-45.
- Krebs, C.J. 1972. *Ecology*. Harper and Row. New York, NY. 694 pp.
- Kuchler, A.W. 1977. *The Map of the Natural Vegetation of California*. University of Kansas, Lawrence.
- LaHaye, W.S., and R.J. Gutiérrez. 1999. Nest sites and nesting habitat of the northern spotted owl in northwestern California. *Condor* 101:324-330.
- LaHaye, W.S., R.J. Gutiérrez and J.R. Dunk. 2001. Natal dispersal of the spotted owl in southern California: Dispersal profile of an insular population. *Condor* 103:691-700.
- Lamberson, R.H., R. McKelvey, B.R. Noon and C. Voss. 1992. A Dynamic Analysis of Northern Spotted Owl Viability in a Fragmented Forest Landscape. *Conservation Biology* 6(4):505-512.
- Lamberson, R.H., B.R. Noon, C. Voss, and K.S. McKelvey. 1994. Reserve design for territorial species: the effects of patch size and spacing on the viability of the northern spotted owl. *Conservation Biology*. 8:185-195.
- Lehmkuhl, J.F., L.E. Gould, E. Cazares and D.R. Hosford. 2004. Truffle abundance and mycophagy by northern flying squirrels in eastern Washington forests. *Forest Ecology and Management* 200:49-65.
- Lehmkuhl, J.F., K.D. Kistler, J.S. Begley and J. Boulanger. 2006. Demography of northern flying squirrels informs ecosystem management of western interior forests. *Ecological Applications* 16:584-600.
- Lindenmayer, D., R.J. Hobbs, R. Montague-Drake, J. Alexandra, A. Bennett, M. Burgman, P. Cale, A. Calhoun, V. Cramer, P. Cullen, D. Driscoll, L. Fahrig, J. Fischer, J. Franklin, Y. Haila, M. Hunter, P. Gibbons, S. Lake, G. Luck, C. MacGregor, S. McIntyre, R.M. Nally, A. Manning, J. Miller, H. Mooney, R. Noss, H. Possingham, D. Saunders, F. Schmiegelow, M. Scott, D. Simberloff, T. Sisk, G. Tabor, B. Walker, J. Wiens, J. Woinarski and E. Zavaleta. 2008. A checklist for ecological management of landscapes for conservation. *Ecology Letters* 11:78-91.
- Lindenmayer, D.B., M.L. Hunter, P.J. Burton, and P. Gibbons. 2009. Effects of logging on fire regimes in moist forests. *Conservation Letters*. 2:271-277.
- Loehle, C.L., L. Irwin, J. Beebe, and T. Fleming. 2011. Factors influencing the distribution of northern spotted owls in the eastern Cascades, Washington. *Northwestern Naturalist*, 92(1):19-36.

- Long, J.N. 2009. Emulating natural disturbance regimes as a basis for forest management: A North American view. *Forest Ecology and Management* 257:1868–1873.
- Lubowski, R.N., M. Vesterby, S. Bucholtz, A. Baez, and M.J. Roberts. 2006. Major uses of land in the United States, 2002. U.S. Department of Agriculture, Economic Research Service, Economic Information Bulletin Number 14. Washington, D.C.
- MacDonald, T.L., F.J. Bryan, R.M. Manly, and L.V. Diller. 2006. Discrete-choice modeling in wildlife studies exemplified by northern spotted owl nighttime habitat selection. *The Journal of Wildlife Management*, 70(2): 375-383.
- Main, M.B., F.M. Roka, and R.F. Noss. 1999. Evaluating costs of conservation. *Conservation Biology*. 13:1262-1272.
- McNab, W.H., and P.E. Avers. 1994a. Ecological subregions of the United States: Chapter 25. Publication WO-WSA-5. USDA Forest Service, Washington, D.C. Downloaded December 21, 2011 from <http://www.fs.fed.us/land/pubs/ecoregions/ch25.html>.
- McNab, W.H., and P.E. Avers. 1994b. Ecological subregions of the United States: Chapter 32. Publication WO-WSA-5. USDA Forest Service, Washington, D.C. Downloaded December 21, 2011 from <http://www.fs.fed.us/land/pubs/ecoregions/ch32.html>.
- McNab, W.H., and P.E. Avers. 1994c. Ecological subregions of the United States: Chapter 33. Publication WO-WSA-5. USDA Forest Service, Washington, D.C. Downloaded December 22, 2011 from <http://www.fs.fed.us/land/pubs/ecoregions/ch33.html>
- McNab, W.H., D.T. Cleland, J.A. Freeouf, J.E. Keys, Jr., G.J. Nowacki, and C.A. Carpenter (comps). 2005. Description of ecological subregions: sections of the conterminous United States. U.S. Department of Agriculture, Forest Service, Washington, D.C.
- Messier, M.S., J.P.A. Shatford, and D.E. Hibbs. 2012. Fire exclusion effects on riparian forest dynamics in southwestern Oregon. *Forest Ecology and Management* 264: 60-71.
- Meyer, J.S., L.L. Irwin and M.S. Boyce. 1998. Influence of habitat abundance and fragmentation on northern spotted owls in western Oregon. *Wildlife Monographs* 139:1–51.
- Miller, G.S. 1989. Dispersal of juvenile spotted owls in western Oregon. Thesis, Oregon State University, Corvallis.
- Miller, G.S., R.J. Small, and E.C. Meslow. 1997. Habitat selection by spotted owls during natal dispersal in western Oregon. *Journal of Wildlife Management*. 61:140-150.
- Mills, S.L., R.J. Fredrickson, and B.B. Moorhead. 1993. Characteristics of old-growth forests associated with northern spotted owls in Olympic National Park. *Journal of Wildlife Management* 57(2): 315-321.

- Mitchell, S.R., M.E. Harmon and K.E.B. O'Connell. 2009. Forest fuel reduction alters fire severity and long-term carbon storage in three Pacific Northwest ecosystems. *Ecological Applications* 19:643–655.
- Moilanen A., and H. Kujala. 2008. Zonation: software for spatial conservation prioritization. User Manual v2.0. Metapopulation Research Group, University of Helsinki, FI. Available at <<http://www.helsinki.fi/bioscience/consplan/software/Zonation/index.html>>. Accessed 3 March 2011.
- Moilanen, A., A.M.A. Franco, R.E. Early, R. Fox, B. Wintle, and C.D. Thomas. 2005. Prioritizing multiple-use landscapes for conservation: methods for large multi-species planning problems. *Proceedings of The Royal Society B*. 272:1885-1891.
- Mori, A. S. 2011. Ecosystem management based on natural disturbances: hierarchical context and non-equilibrium paradigm. *Journal of Applied Ecology* 48:280–292.
- North, M.P., J.F. Franklin, A.B. Carey, E.D. Forsman, and T. Hamer. 1999. Forest stand structure of the northern spotted owl's foraging habitat. *Forest Science* 45(4):520-527.
- Noss, R.F., J.F. Franklin, W.L. Baker, T. Schoennagel, and P.B. Moyle. 2006. Managing fire-prone forests in the western United States. *Frontiers in Ecology and the Environment*. 4:481-487.
- ODF (Oregon Department of Forestry). 2010a. Northwest Oregon State Forests Management Plan. Revised Plan April 2010. Oregon Department of Forestry. Salem, Oregon.
- ODF (Oregon Department of Forestry). 2010b. Southwest Oregon State Forests Management Plan. Revised Plan April 2010. Oregon Department of Forestry. Salem, Oregon.
- ODF (Oregon Department of Forestry). 2011. Elliott State Forest Management Plan. Final Plan Draft. Oregon Department of Forestry. Salem, Oregon.
- Olson, G.S., E.M. Glenn, R.G. Anthony, E.D. Forsman, J.A. Reid, P.J. Loschl and W.J. Ripple. 2004. Modeling demographic performance of northern spotted owls relative to forest habitat in Oregon. *Journal of Wildlife Management* 68:1039–1053.
- Olson, G.S., R.G. Anthony, E.D. Forsman, S.H. Ackers, P.J. Loschl, J.A. Reid, K.M Dugger, E.M. Glenn and W.J. Ripple. 2005. Modeling of site occupancy dynamics for northern spotted owls, with emphasis on the effects of barred owls. *Journal of Wildlife Management* 69:918–932.
- Perry, D.A., P.F. Hessburg, C.N. Skinner, T.A. Spies, S.L. Stephens, A.H. Taylor, J.F. Franklin, B. McComb and G. Riegel. 2011. The ecology of mixed severity fire regimes in Washington, Oregon, and Northern California. *Forest Ecology and Management*, Volume 262, Issue 5, 1 September 2011, Pages 703-717.

- Phillips S.J., and M. Dudik. 2008. Modeling of species distributions with Maxent: new extensions and a comprehensive evaluation. *Ecography* 31:161–175.
- Phillips, S.J., R.P. Anderson and R.E. Schapire. 2006. Maximum entropy modeling of species geographic distributions. *Ecological Modeling* 190:231–259.
- Pious, M. 1995. Home range and habitat use of spotted owls in managed redwood/douglas-fir forests, California. Report to the California Dept. of Fish and Game. Louisiana-Pacific Corp. Calpella, CA. 49 pp.
- Prather, J.W., R.F. Noss, and T.D. Sisk. 2008. Real versus perceived conflicts between restoration of ponderosa pine forests and conservation of the Mexican spotted owl. *Forest Policy and Economics*. 10:140-150.
- Ricklefs, R.E. 1979. *Ecology*. Chiron Press, New York, NY, USA. 966 pp.
- Rieman, B.E., P.F. Hessburg, C. Luce, and M.R. Dare. 2010. Wildfire and management of forests and native fishes: conflict or opportunity for convergent solutions? *BioScience*. 60:460-468.
- Ripple, W.J., P.D. Lattin, K.T. Hershey, F.F. Wagner, and E.C. Meslow. 1997. Landscape composition and pattern around northern spotted owl nest sites in southwest Oregon. *Journal of Wildlife Management*. 61:151-158
- Rosenberg, D. K., and R.G. Anthony. 1992. Characteristics of northern flying squirrel populations in young second- and old-growth forests in western Oregon. *Canadian Journal of Zoology* 70:161–166.
- Rosenberg, D.K., and K.S. McKelvey. 1999. Estimation of habitat selection for centralplace foraging animals. *Journal of Wildlife Management* 63:1028–1038.
- Rosenberg, D.K., C.J. Zabel, B.R. Noon, and E.C. Meslow. 1994. Northern spotted owls: influence of prey base—a comment. *Ecology*. 75:1512-1515.
- Rosenvald, R., and A. Lohmus. 2008. For what, when, and where is green-tree retention better than clear-cutting? A review of the biodiversity aspects. *Forest Ecology and Management* 255:1-15.
- Sakai, H.F., and B.R. Noon. 1993. Dusky-footed woodrat abundance in different-aged forests in northwestern California. *Journal of Wildlife Management* 57:373–382.
- Sakai, H.F., and B.R. Noon. 1997. Between-habitat movement of dusky-footed woodrats and vulnerability to predation. *Journal of Wildlife Management*. 61:343-350.

- Schumaker, N.H. 2008. HexSim (Version 1.3.6.9). U.S. Environmental Protection Agency, Environmental Research Laboratory, Corvallis, Oregon. Available online at <<http://www.epa.gov/hexsim>>. Accessed on 3 March 2011.
- Seymour, R.S., and M.L. Hunter, Jr. 1999. Principles of ecological forestry. Pages 22-61 in M.L. Hunter, Jr. (editor), *Maintaining Biodiversity in Forest Ecosystems*. Cambridge University Press, Cambridge, United Kingdom.
- Sierra Legal Defence [sic] Fund and Western Canada Wilderness Committee. 2005. In defence [sic] of Canada's spotted owl. Sierra Legal Defence Fund, Vancouver, British Columbia, Canada.
- Singleton, P.H., J.F. Lehmkuhl, W.L. Gaines, and S.A. Graham. 2010. Barred owl space use and habitat selection in the eastern Cascades, Washington. *Journal of Wildlife Management* 74:285–294.
- Sisco, C.L. 1990. Seasonal home range and habitat ecology of spotted owls in northwestern California. Thesis, Humboldt State University, Arcata, California.
- Sisk, T.D., M. Savage, D.A. Falk, C.D. Allen, E. Muldavin, and P. McCarthy. 2005. A landscape perspective for forest restoration. *Journal of Forestry*. 103:319-320.
- Skinner, C.N. 1995. Change in spatial characteristics of forest openings in the Klamath Mountains of northwestern California, USA. *Landscape Ecology*. 10:219-228.
- Skinner, C.N., and A.H. Taylor. 2006. Southern Cascades bioregion. Pages 195–224 in N.G. Sugihara, J.W. van Wagtendonk, K.E. Shaffer, J. Fites-Kaufman and A.E. Thode (editors), *Fire in California's Ecosystems*. University of California Press, Berkeley.
- Skinner, C.N., A.H. Taylor and J.K. Agee. 2006. Klamath Mountains bioregion. Pages 170–194 in N.G. Sugihara, J.W. van Wagtendonk, K.E. Shaffer, J. Fites-Kaufman and A.E. Thode (editors), *Fire in California's Ecosystems*. University of California Press, Berkeley.
- Smith, F.A. 1997. *Neotoma cinerea*. *Mammalian Species* 564:1–8.
- Solis, D.M. 1983. Summer habitat ecology of spotted owls in Northwestern California. Thesis, Humboldt State University, Arcata, California.
- Solis, D.M., and R.J. Gutiérrez. 1990. Summer habitat ecology of northern spotted owls in northwestern California. *Condor* 92:739–748.
- Spies, T.A., M.A. Hemstrom, A. Youngblood, and S. Hummel. 2006. Conserving old-growth forest diversity in disturbance-prone landscapes. *Conservation Biology*. 20:351-362.

- Spies, T.A., K.N. Johnson, K.M. Burnett, J.L. Ohmann, B.C. McComb, G.H. Reeves, P. Bettinger, J.D. Kline, and B. Garber-Yonts. 2007a. Cumulative ecological and socioeconomic effects of forest policies in coastal Oregon. *Ecological Applications* 17:5–17.
- Spies, T.A., B.C. McComb, R.S.H. Kennedy, M.T. McGrath, K. Olsen, and R.J. Pabst. 2007b. Potential effects of forest policies on terrestrial biodiversity in a multi-ownership province. *Ecological Applications* 17(1):48-65.
- Spies, T.A., T.W. Geisen, F.J. Swanson, J.F. Franklin, D. Lach and K.N. Johnson. 2010. Climate change adaptation strategies for federal forests of the Pacific Northwest, USA: ecological, policy, and socio-economic perspectives. *Landscape Ecology* 25:1185–1199.
- Stalberg, D., K.E. Fehring, L.Y. Pomara, N. Nur, D.B. Adams, D. Hatch, G.R. Geupel, and S. Allen. 2009. Modeling nest-site occurrence for the northern spotted owl at its southern limit in central California. *Landscape and Urban Planning* 90:76-85.
- Stenseth, N.C., A. Mysterud, G. Ottersen, J. W. Hurrell, K-S Chan, and M. Lima. 2002. Ecological effects of climate fluctuations. *Science* 297:1292-1296.
- Swanson, F.J., Kratz T.K., Caine N., and Woodmansee RG. 1988. Landform effects on ecosystem patterns and processes. *BioScience* 38: 92–98.
- Swanson, M.E, J.F. Franklin, R.L Beschta, C.M. Crisafulli, D.A. DellaSala, R.L Hutto, D.B. Lindenmayer and F.J. Swanson. 2010. The forgotten stage of forest succession: early-successional ecosystems on forest sites. *Frontiers in Ecology and the Environment*. doi: 10.1890/090157.
- Swindle, K.A., W.J. Ripple, E.C. Meslow and D. Schafer. 1999. Old forest distribution around spotted owl nests in the central Cascade Mountains, Oregon. *Journal of Wildlife Management* 63:1212–1221.
- Thomas, J.W., E.D. Forsman, J.B. Lint, E.C. Meslow, B.R. Noon and J. Verner. 1990. A conservation strategy for the northern spotted owl. Interagency Scientific Committee to Address the Conservation of the Northern Spotted Owl. U.S. Forest Service, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, and U.S. National Park Service, Portland, Oregon.
- Thomas, J.W., J.F. Franklin, J. Gordon, and K.N. Johnson. 2006. The Northwest Forest Plan; origins, components, implementation experience, and suggestions for change. *Conservation Biology*. 20:277-287.
- Thome, D.M., C.J. Zabel and L.V. Diller. 1999. Forest stand characteristics and reproduction of northern spotted owls in managed north-coastal California forests. *Journal of Wildlife Management* 63(1):44-59.

- Thompson, J.R., S.L. Duncan, and K.N. Johnson. 2009. Is There Potential for the Historical Range of Variability to Guide Conservation Given the Social Range of Variability? *Ecology and Society* 14(1):18. [online] URL: <http://www.ecologyandsociety.org/vol14/iss1/art18/>
- Tidwell, T. 2011. Statement before the Committee on Energy and Natural Resources; U.S. Senate. June 14, 2011
- USDA (U.S. Department of Agriculture). 2010. The Okanogan-Wenatchee National Forest Restoration Strategy: adaptive ecosystem management to restore landscape resiliency. U.S. Forest Service, Pacific Northwest Region. September 2010. 99 pp.
- USDA (U.S. Department of Agriculture), and USDI (U.S. Department of the Interior). 1994a. Record of decision for amendments to Forest Service and Bureau of Land Management planning documents within the range of the northern spotted owl: standards and guidelines for management of habitat for late-successional and old-growth forest related species within the range of the northern spotted owl. U.S. Forest Service and U.S. Bureau of Land Management, Portland, Oregon.
- USDI (U.S. Department of Interior). 1992. Draft final recovery plan for the northern spotted owl. U.S. Fish and Wildlife Service, Portland, Oregon.
- USFWS (U.S. Fish and Wildlife Service). 2004. Northern spotted owl: Five Year Review Summary and Evaluation. U.S. Fish and Wildlife Service, Portland, Oregon.
- USFWS (U.S. Fish and Wildlife Service). 2011a. Revised recovery plan for the northern spotted owl (*Strix occidentalis caurina*). U.S. Fish and Wildlife Service, Portland, Oregon. Xvi + 258 pp.
- USFWS (U.S. Fish and Wildlife Service) 2011b. Biological opinion on Pilot Joe Project, Medford District, Bureau of Land Management, Oregon. August 10, 2011. 77pp.
- USFWS (U.S. Fish and Wildlife Service) and NMFS (National Marine Fisheries Service). 1998. Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act. Washington, D.C.
- Van Gelder, J.J. 2003. Variation in four-note location calls of male spotted owls (*Strix occidentalis*). Thesis, Humboldt State University, Arcata, California.
- Walther, G. R., E. Post, P. Convoy, A. Menzel, C. Parmesan, T. J. C. Beebee, J. Fromentin, O. Hoegh-Guldberg, and F. Bairlein. 2002. Ecological responses to recent climate change. *Nature* 416: 389-395.
- Weathers, W.W., P.J. Hodum and J.A. Blakesley. 2001. Thermal ecology and ecological energetics of the California spotted owl. *Condor* 103:678–690.

Wilcove, D.S., and L.Y. Chen. 1998. Management costs for Endangered Species. *Conservation Biology*. 12:1405-1407.

Wimberly, M.C., T.A. Spies and E. Nonaka. 2004. Using criteria based on natural fire regime to evaluate forest management in the Oregon Coast Range of the United States. Pages 146–157 in A.H. Perera, L.J. Buse, M.G. Weber (editors), *Emulating Natural Forest Landscape Disturbances: Concepts and Applications*. New York: Columbia University Press.

Zabel, C.J., K.M. McKelvey and J.P. Ward, Jr. 1995. Influence of primary prey on home-range size and habitat-use patterns of northern spotted owls (*Strix occidentalis caurina*). *Canadian Journal of Zoology* 73:433–439.

Zabel, C.J., J.R. Dunk H.B. Stauffer, L.M. Roberts, B.S. Mulder and A. Wright. 2003. Northern spotted owl habitat models for research and management application in California (USA). *Ecological Applications* 13:1027–1040.

In Litt. References

Steucke, Paul. 2008. Letter dated December 10, 2008 from Mr. Steucke to Ken Berg. Paul Steucke, Chief, Environmental and Natural Resources Division, Public Works, Joint Base Lewis-McChord.

USFWS (U.S. Fish and Wildlife Service). 2004. Application of the “Destruction or Adverse Modification” Standard under Section 7(a)(2) of the Endangered Species Act. Memo from Acting Director Marshall Jones to Regional Directors. Dated December 9, 2004.