

Project Title: Analysis of land-use effects on landscape patterns and biological diversity in Pacific Northwest forests: 1972-1992.

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Publications:

- Cohen, W.B., and M. Fiorella. In Press. Comparison of methods for detecting conifer forest change with Thematic Mapper imagery. Invited Book chapter, Pages 89-102 In: Lunetta, R.S. and C.D. Elvidge (Eds.) Remote Sensing Change Detection: Environmental Monitoring Methods and Applications. Ann Arbor Press, Chelsea MI.
- Maiersperger, T. W.B. Cohen, and L. Ganio. In Press. A TM-based Hardwood-Conifer mixture index for forests of the Oregon Coast Range. *International J. of Remote Sensing*.
- Cohen, W.B., M. Fiorella, J. Gray, E. Helmer and K. Anderson. 1998. An efficient and accurate method for mapping forest clearcuts in the Pacific Northwest using Landsat Imagery. *Photogrammetric Engineering and Remote Sensing* 64:293-300.
- Zheng, D., D.O. Wallin and Z. Hao. 1997. Use of remote sensing to detect rates and patterns of landscape change in the Changbai Mountain area of China and Korea: 1972-1988. *Landscape Ecology*. 12(4): 241-254.
- Wallin, D.O., F.J. Swanson, B. Marks, J. Kertis and J. Cissel. 1996. Comparison of managed and pre-settlement landscape dynamics in forests of the Pacific Northwest, U.S.A.. *Forest Ecology and Management* 85:291-310.
- Cohen, W.B., T.A. Spies and M. Fiorella. 1995. Estimating the age and structure of forest in a multi-ownership landscape of western Oregon, U.S.A. *International J. of Remote Sensing* 16:721-746.
- Cohen, W.B., T.A. Spies, F.J. Swanson and D.O. Wallin. 1995. Land cover on the western slopes of the central Oregon Cascade Range. *International Journal of Remote Sensing* 16:595-596.
- Wallin, D.O., F.J. Swanson and B. Marks. 1994. Landscape pattern response to changes in the pattern-generation rules: land-use legacies in forestry. *Ecological Applications* 4(3):569-580.
- Swanson, F.J., J.A. Jones, D.O. Wallin and J. Cissel. 1993. Natural variability: Implications for ecosystem management. Pages 89-103 In: Jensen, M.E. and Bourgeron, P.S. (eds.) Eastside forest ecosystem health assessment--Volume II: Ecosystem management: principles and applications. Portland, OR: U.S. Dept. of Agriculture, Forest Service, Pacific Northwest Research Station.

Manuscripts in Preparation:

- Wallin, D.O., A. Boyce, A. Hansen, W. McComb, M. Huff, J. Lehmkuhl, W.B. Cohen and others. Landuse Effects on Forest Bird Communities in Pacific Northwest Forests (1972-1991): Mapping Potential Habitat Using Satellite Data
- Wallin, D.O., A. Boyce, S.K. Nelson, T.A. Spies and W.B. Cohen. Mapping potential habitat for the marbled murrelet (*Brachyramphus marmoratus*) in the Oregon Coast Range using satellite data.

- Wallin, D.O., A. Boyce, W. McComb, M. Huff, J. Lehmkuhl, W.B. Cohen and others. Landuse Effects on Bird Communities in the Oregon Coast Range (1972-1991): Mapping potential Habitat Using Satellite Data
- Cushman, S. and D.O. Wallin. 1998. Rates and patterns of landscape change in the central Sikhote-alin Mountains of the Russian far east.
- Richards, W.H., D.O. Wallin, N.H. Schumaker and W.B. Cohen. 1998. A Regional-Scale Analysis of Wildlife Dispersal Success in a Forested Landscape.
- Wallin, D.O. and A. Boyce. Rates and patterns of timber harvest on public and private lands in the North Cascades of Washington and British Columbia.

Presentations:

- Wallin, D.O., A. Boyce, S. K. Nelson, T.A. Spies and W.B. Cohen. 1998. Mapping potential habitat for the marbled murrelet (*Brachyramphus marmoratus*) in the Oregon Coast Range using satellite data. Annual meeting of the U.S. chapter of the International Association for Landscape Ecology, East Lansing, MI. March, 1998.
- Richards, W.H., D.O. Wallin, N.H. Schumaker and W.B. Cohen. 1998. A Regional-Scale Analysis of Wildlife Dispersal Success in a Forested Landscape. Annual meeting of the U.S. chapter of the International Association for Landscape Ecology, East Lansing, MI. March, 1998.
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- Wallin, D.O., A. Boyce, D. Zheng, M. Huff, A. Hansen, L. Ganio, W. McComb, M. Hunter, J. Lehmkuhl, W.B. Cohen and M. Fiorella. 1997. Landuse Effects on Bird Communities in the Oregon Coast Range (1972-1991): Mapping potential Habitat Using Satellite Data. Annual meeting of the U.S. chapter on the International Association for Landscape Ecology, Durham, N.C. March, 1997.
- Wallin, D.O. 1996. Pattern and process in PNW forests: lessons for ecosystem management **(Invited paper)** Ecosystem management for wildlife conservation in the Pacific Northwest, Olympia, WA; October 24-25, 1996.
- Wallin, D.O., D. Zheng, M. Huff, A. Hansen, L. Ganio, W. McComb, M. Hunter, J. Lehmkuhl, W.B. Cohen, and M. Fiorella. 1995. Land-use effects on bird communities in U.S. Pacific Northwest forests (1972-1992): mapping potential habitat using satellite data. Annual meeting of the Ecological Society of America; Snow Bird, Utah; August 1995.
- Hansen, A., R. Patten, R. Redmond, Z. Ma, W. Cohen, J. Wilson and D.O. Wallin. 1995. Landscape heterogeneity under natural and human disturbances in Greater Yellowstone. Annual meeting of the Ecological Society of America; Snow Bird, Utah; August 1995.
- Hao, Z., D. Zheng and D.O. Wallin. 1995. Detecting rates and patterns of landscape change in the Changbai Mountain area of China and North Korea: 1972-1988. (poster), Annual meeting of the Ecological Society of America; Snow Bird, Utah; August 1995.
- Purnell, C.S., D.O. Wallin and W.B. Cohen. 1995. Analysis of riparian vegetation and land use in the Oregon Cascades using Landsat TM data. (poster), GIS '95, Ninth Annual Symposium on GIS in Natural Resource Management, Vancouver, British Columbia, March 27-30, 1995.
- Wallin, D.O., F.J. Swanson, B. Marks, J. Kertis and J. Cissel. Landscape dynamics in Pacific Northwest forests: a comparison of 400 years of pre-settlement conditions to current and

- alternative future conditions. **(Invited paper)** American Association for the Advancement of Science, Pacific Division, June 20, 1995, Vancouver, British Columbia.
- Wallin, D.O., D. Zheng, A. Hansen, W. McComb, M. Huff, J. Lehmkuhl, W.B. Cohen and M. Fiorella. 1994. Use of satellite data to map potential forest bird habitat in the central Oregon Cascade Range: land use effects on habitat abundance between 1972 and 1991. Annual meeting of the U.S. chapter on the International Association for Landscape Ecology, Minneapolis, Minn. April, 1995.
- Wallin, D.O., F.J. Swanson, B. Marks, J. Kertis and J. Cissel. Natural variability as a management paradigm: implications for conserving biological diversity. **(Invited paper)** International Forest Biodiversity Conference: Conserving biological diversity in temperate forest ecosystems - Towards sustainable management; Canberra, Australia, December, 1994.
- Wallin, D.O., D. Zheng, A. Hansen, W. McComb, M. Huff, J. Lehmkuhl, W.B. Cohen and M. Fiorella. 1994. Land use effects on bird communities in forests of the U.S. Pacific Northwest: Mapping potential habitat using satellite data. International Forest Biodiversity Conference: Conserving biological diversity in temperate forest ecosystems - Towards sustainable management; Canberra, Australia, December, 1994.
- Purnell, C.S., D.O. Wallin and W.B. Cohen. 1994. Analysis of riparian vegetation and land use in the Oregon Cascades using Landsat TM data. (poster), p. 332, Fifth Biennial USDA Forest Service Remote Sensing Applications Conference. Portland, Oregon. April 12-15, 1994.
- Wickland, D.E., M.L. Imhoff, C. Ladd, W.B. Cohen, D.O. Wallin et al.. 1994. Ecosystem management--the NASA perspective. **(Invited poster)**, Symposium on Ecosystem Management, Congressional Research Service, Library of Congress, March 24, 1994, Washington, D.C..
- Wallin, D.O., J. Cissel, J. Kertis and B. Marks. Comparison of landscape patterns generated by timber harvesting and a natural fire regime in Pacific Northwest Forests. (Creating a Forestry for the 21st Century; Portland, OR, August 1993).
- Wallin, D.O., J. Kertis, B. Marks and J. Cissel. Comparison of landscape pattern dynamics generated by a natural fire regime and timber harvesting in Pacific Northwest Forests. **(Invited paper)** GIS and Spatial Analysis Workshop, USDA Forest Service; Ft. Collins, CO, June 1993.
- Wallin, D.O., B. Marks, J. Kertis and J. Cissel. Comparison of landscape pattern dynamics generated by a natural fire regime and timber harvesting in Pacific Northwest Forests. (International Association of Landscape Ecologists, Annual Meeting; Oak Ridge, TN March 1993).

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