13 May 2013

**Curriculum Vitae**

George Patrick Malanson

Coleman - Miller Professor

Department of Geography

University of Iowa

Iowa City, IA 52242

**Education**:

1968-1972, B.A. Williams College

(Art, w/Williams-in-India) Williamstown, MA

1973, language school U.S. Department of State

(Hindi) Foreign Service Institute

US Army (rank PFC-SP4) Rosslyn, VA

1974-1975, part-time Georgia State University

(Geography) Atlanta, GA

1976-1978, M.S. University of Utah

(Geography) Salt Lake City, UT

(Thesis: "Distribution of plant species in hanging gardens of the Narrows, Zion National Park, Utah" under J. Kay)

1978-1983, Ph.D. University of California

(Geography) Los Angeles, CA

(Dissertation: "A model of post-fire succession in Californian coastal sage scrub" under W.E. Westman)

**Awards and honors:**

1971-72 Dean's List, Williams College

1978 Outstanding Graduate Student Award, Department of Geography, University of Utah

1981 University Fellowship, University of California

1990 University of Iowa Faculty Scholar Award

1998-99 Intergraph Professor of Landscape Ecology, Department of Geography, University of Iowa

2003-present Mary Sue Coleman - F. Wendell Miller Professor, University of Iowa

2003 elected Fellow, American Association for the Advancement of Science

2004 James J. Parsons Distinguished Career Award, AAG Biogeography Specialty Group

2006 Henry C. Cowles Award for outstanding publication, with K.J. Alftine, AAG Biogeography Specialty Group

2007 Henry C. Cowles Award for outstanding publication, with J.A. Kupfer and S.B. Franklin, AAG Biogeography Specialty Group

2008 Sagarmatha Career Award, AAG Mountain Geography Specialty Group

**Academic employment experience:**

1977-78 Research assistant, Dept. of Geography, University of Utah (NASA grant to M.K. Ridd and R.M. McCoy, PIs)

1978-80 Teaching assistant, Dept. of Geography, UCLA

1980-81 Research assistant, Dept. of Geography, UCLA ( NSF grant to W.E. Westman, PI)

1982-84 Visiting Assistant Professor, Dept. of Geography, Oklahoma State University

1985-86 Visiting Assistant Professor, Dept. of Geography, University of Iowa

1986-89 Assistant Professor, Dept. of Geography, University of Iowa

1989-96 Associate Professor, Dept. of Geography, University of Iowa

1996-present Professor, Dept. of Geography, University of Iowa

2000-2001 Professor, Dept. of Geography, Southwest Texas State University

**Nonacademic employment experience:**

1974-1975 Illustrator/draftsman, Graphics Branch and Emergency Operations Center, Ft. McPherson, GA (US Army, rank SP4-SP5)

1976 Cartographic draftsman, Wm. Moore Survey and Mapping Co., Shrewsbury, MA

1980 Biogeographer, Archaeology Division, ESCA-Tech Corp., Costa Mesa, CA

1984-85 Visiting scientist, Section d'Etudes des Systemes Ecologiques, Centre d'Etudes Phytosociologiques et Ecologiques Louis Emberger, Centre National de la Recherche Scientifique, Montpellier, France

**Membership and service in professional groups:**

American Association for the Advancement of Science

Association of American Geographers

Nystrom Award Committee, 1990 (Chair), 1993, 1997

Biogeography Specialty Group

Chair, 1997-1999; Board of Directors, 1987-89; Student Paper Award Judge, 1992, 1996; Student Research Grants Panel, 1992, 1994

Mountain Geography Specialty Group, Awards Committee 2002-2005,

Secretary-Treasurer 2005-2006, Chair 2006-2007

Scientific Freedom & Responsibility Committee, 2007-present

Binghamton Symposium in Geomorphology Steering Committee, 2000-2003

Co-organizer, Mountain Geomorphology, October 2001

Ecological Society of America

International Association for Landscape Ecology

International Association for Vegetation Science

International Biogeography Society

International Geosphere-Biosphere Program (IGBP)

Global Change in Terrestrial Ecosystems (GCTE) Core Project

Focus 2: Ecosystem structure / Activity 2: Landscape processes

Task 3: Dispersal modeling - Task Leader, 1997-1999

Co-organizer, Activity 2 workshop, San Diego, October, 1997

Organizer, Task 3 workshop, Iowa City, December, 1997

Organizer, Task 3 workshop, Barcelona, March, 1998

**Other extramural professional service**:

North American Editor, *Progress in Physical Geography*, 2010-present

Editor for Biogeography, *Physical Geography*, 2006-present

NIH Social Sciences and Population Studies Study Section, ad hoc 2005, 2006, regular member 2007-2011

National Commission on Science for Sustainable Forestry, research proposals panel, 2004

National Science Foundation, Biocomplexity: Coupled Human & Natural Systems panel, 2002

National Academies/NRC Committee on Research Priorities in Geography at the USGS, 2000-02

NSF Geography & Regional Science Program review panel, 1998-1999

Associate Editor: *Arctic, Antarctic, and Alpine Research*, 2005-2013

Biogeography Editor, *Geography Compass*, 2008-2009

Other Editorial Boards:

*Physical Geography,* 1994-2006

*Geographical & Environmental Modelling*, 1996-2002

*Landscape Ecology*, 1997-2005

*Geography Compass*, 2006-2007

*Annals, Association of American Geographers*, 2000-present

*Advances in Water Resources*, 2004-2009

Faculty of 1000 – Biology, Spatial and Landscape Ecology section, 2006-2010

Reviews of manuscripts for many journals; of proposals for NSF, Swiss and Israeli NSF-equivalents, Nature Conservancy, Netherlands Foundation-Advancement Tropical Research, Royal Society of New Zealand, USGS

**Intramural professional service:**

Department:

2011-present: chair, Undergraduate Program Committee (~Director, Undergraduate Studies)

2012: Chair, review committee for R. Rajagopal

2010: Chair, promotion committee for M. Linderman

2009: Chair, promotion committee for D. Bennett

2009: Chair, review committee for M. Linderman

2007: Chair, Environmental geography faculty search committee

2006: Chair, Environmental geography faculty search committee

2006: Chair, review committee for R. Rajagopal

2006: Chair, review committee for Rex Honey

2003-05 Search committee chair, remote sensing

1992-98, 2001-2011 chair, Graduate Program Committee (~Director, Graduate Studies)

2002-03 Search committee chair, East Asia environment

2002 acting DEO for Bennett tenure case; DCG for Mutersbaugh tenure case

1999 – 2000 DEO

1996-98 TA/RA allocation committee

1998 Graduate recruitment committee

1980s, 90s – terms as Faculty Assembly representative

College:

2011-2012: developed new major – Environmental Policy & Planning

2003-2007: Dean’s ad hoc committee on named chairs

1996-1999: Interdepartmental Studies Committee

1998: University Honors Council

1998: Dean’s Scholar Review Committee

1996-1998, 2001-present: Environmental Science Executive Committee/Advisory Panel

1996: Unified-Program Review Committee

1994: College Development Assignment Review Committee

University:

2010-present Advisory board, Leopold Center for Sustainable Agriculture

2010-present Faculty, Interdisciplinary Graduate Program in Informatics

2008-2011 Flood Mitigation Task Force

2005-2008, 2009-2010 University Research Council

2006 Jakobsen Graduate Conference, judge

2004, 2006, 2007, etc. CGRER Seed Grant reviews

1999: Organized symposium – *The Science of Global Climate Change* – for the Center for Global and Regional Environmental Research

1990-2000 Center for Global and Regional Environmental Research, executive committee

1994: Carver Scientific Initiative Program, reviewer

1986-1988: Human Subjects Committee D

**Research grants:**

2012-2014 NSF Geography & Spatial Sciences, Multiscale Context for Change in Alpine Tundra, lead PI with D. Fagre and D. Zimmerman, $219,719

2009-2012 NSF Geography & Spatial Sciences, Implications of an Invasive Forest Pathogen for Alpine Treeline Dynamics co-PI with L. Resler and D. Tomback, $439,006

2006-08 Modeling Dynamism of Human Settlement Frontiers, NASA, co-I, with S.J. Walsh, $42,000 of $178,756

2007 Geography and Regional Science Program Proposal Development on the Social and Ecological Impacts of the Three Gorges Dam, China; NSF, co-I with M.A. Linderman, Z. Shen; $18,320

2004-09 USGS, Western Mountain Initiative, Alpine Treeline; with D.R. Butler and S.J. Walsh; $376,000

2004-07 NSF Biocomplexity, Coupled Human and Natural Systems: Feedbacks Among Patterns and Processes of Land Use and Land Cover Dynamics in the Northern Ecuadorian Amazon, co-PI with S.J. Walsh; $320,000

2004-07 NSF Biocomplexity, Coupled Human and Natural Systems: Virtual Watershed: Agricultural Landscape Evolution in an Adaptive Management Framework, subcontract with Jerry Schnoor on grant to Chris Lant; $130,000 of $450,000

2002-03 NSF Geography & Regional Science, SGER: Effects of Avalanches on Local Carbon Budgets and Regional Forest Dynamics, with D.R. Butler, D. Fagre, and S.J. Walsh; $29,512

2002-03 National Commission on Science for Sustainable Forestry, Forest Fragmentation, with J.A. Kupfer and S. Franklin; $60,000

# 2002-03 UI Center for Global and Regional Environmental Research, Factors Affecting the Adoption and Conservation Value of Certified Organic Coffee Production in Oaxaca, Mexico, with T. Mutersbaugh, $19,700

2000-03 NSF Geography & Regional Science, Uncovering the Spatial Pattern of Feedback Effects at Alpine Treeline; $99,946

1999-03 USGS Biological Resources Division, with D.G. Brown, D.R. Butler, D.M. Cairns, D. Fagre, and S.J. Walsh; Invasibility of Alpine Tundra; $416,730

1997-99 NSF, Geography & Regional Science, co-PI with D.G. Brown; Pattern and Process at Alpine Treeline; $194,168

1997-98 DOE National Institute for Global Environmental Change; Developing rules for transience in DGVMs based on migration rates; $5000

1997-98 NASA, CI with M.P. Armstrong (PI), J.R. Brown and G.R. Carmichael; Project LIVE: Laboratory for the Immersive Visualization of the Environment; $230,000

1994-97 DOE National Institute for Global Environmental Change, co-PI with M.P. Armstrong; Spatial Scaling and Maintaining Information in Models of Response to Climatic Change; $111,800

1993-94 Iowa Energy Center, CI with R. Brown (PI) et al.; Biomass Production and Conversion in Iowa; $22,330 of $145,634 total

1991-92 NSF Geography & Regional Science, co-PI with D.R. Butler and S.J. Walsh; Topological Relationships at Alpine Treeline; $72,000

1991-92 DOE National Institute for Global Environmental Change, co-PI with M.P. Armstrong; Simulation Experiments of Inertia in Forest Response to Climatic Change; $55,000

1988-90 Subcontracts on EPA grants to W.E. Westman; Modeling the Response of California Shrublands to Climatic Change; $48,800

1988-90 National Science Foundation, Geography & Regional Science; Forest Dynamics of Riparian Corridors; $84,000

1988 National Geographic Society, co-PI with D.R. Butler; $3975

1988 Old Gold Award, University of Iowa; $3,500

1987 Old Gold Award, University of Iowa; $3,500

1984-85 Centre National de la Recherche Scientifique and the National Science Foundation, U.S.-France Exchange Award; 70,000 FF +US$1650

1983 Burlington Northern Foundation, with D.R. Butler; $10,000

1983 Association of American Geographers, with D.R. Butler; $500

1982 Chancellor's Patent Fund, UCLA

1979-81 Graduate Division, UCLA (4 research and travel grants)

1977-78 University of Utah Student Research Grant in Geography (2)

1977 Sigma Xi, the Scientific Research Society of North America

**Other grants:**

1988 Instructional Improvement Award, University of Iowa Council on Teaching, $500

1990 Hewlett-Packard University Equipment Program; for GIS center $275,000

1992 Ford Foundation UI-Grinnell College Bridging Project in International Education; for study group on biodiversity and sustainable development; $20,000

1997-99 Center for Global and Regional Environmental Research; $45,000 for Iowa Land Cover - Past and Future: GIS Infrastructure Development

**Consultancies**:

2001-05 Consultant on NSF-BioComplexity grant, Simulating Complexity in a Dynamic Landscape: Land-Use and Land-Cover Change in Nang Rong, Thailand, to R.R. Rindfuss, S.J. Walsh, & B. Entwisle

2002-05 Consultant on NASA grant, Modeling the Scale Dependent Drivers of LCLU Dynamics in Northeastern Ecuador, to S.J. Walsh & R.E. Bilsborrow

2004 Consultant on National Park Service geoindicators grant, Correct and Complete Surficial Mapping of Glacier National Park, to D.R. Butler

2007-2012 Consultant on NIH R21, Modeling Household Dynamics and Land Use; NIH R21, Dynamically Integrating Macro and Micro Processes; and NSF DHB: Marginality in a Marginal Environment, all to B. Entwisle, PI.

**Theses and Dissertations Supervised:**

M.A. Theses:

Rex, K.D. 1990. Fractal Analysis of Woodland Patches Along the Iowa and Cedar Rivers.

Kupfer, J.A. 1991. Structure, Composition, and Successional Dynamics of a Riparian Edge Community

Craig, M.R. 1992. Colonization on Point Bars by Woody Riparian Species.

Finley, S.D. 1993. Investigation of Factors Influencing Species Diversity of Remnant Forest Patches in Northeast Iowa.

Hougen, D. 1994. Effects of Accessibility and Isolation on the Structure and Composition of Lakeshore Forest Sites in Voyageurs National Park, Minnesota.

Ph.D. Dissertations:

Kupfer, J.A. 1995. The Effects of Edge Vegetation on Interior Gap-Successional Processes.

Liu, Z.J. 1995. Impact of Climate and Management Practices on Nitrate Contamination in Groundwater: Spatial and Temporal Analyses in the Big Spring Basin, Iowa.

Cairns, D.M. 1995. Carbon Balance Modeling at the Alpine Treeline Ecotone in Glacier National Park, Montana.

Chen, G. 2001. Relating Landscape Patterns to Hydrological Processes in a Watershed Hierarchy

Alftine, K.J. 2002. The Relationship Between Tree Establishment Patterns and Positive Feedback at Alpine Treeline.

Bekker, M. F. 2002. Effects of Biotic Feedback on the Pattern and Rate of Subalpine Forest Advancement.

Wang, Q. 2007. Effects of the Representation of Landscape Pattern on Species Dynamics in Colonization-Competition Models.

Yadav, V. 2008. Soil Carbon Dynamics in the Big Creek Basin in Southern Illinois, USA.

Goshit, S. 2009. Synoptic Influence on Winter Temperature and Precipitation in Western Montana.

Zeng, Y. 2010. Modeling complex dynamics at alpine treeline ecotones.

Grafius, D.R. 2011. Distribution and biomass dynamics of the alpine treeline ecotone across the western United States.

**Publications**:

**Books:**

Malanson, G.P. 1993. *Riparian Landscapes*, Cambridge Studies in Ecology, Cambridge University Press, Cambridge, 296 pp.

National Research Council (W.L. Graf, B.P. Buttenfield, C. Harden, J.R. Jensen, G.P. Malanson, P.F. McDowell, S. McLafferty, R. Palm, N.P. Psuty, H.J. Vaux). 2002. *Geography in the Critical Zone: Research Opportunities for the U.S. Geological Survey*. National Academies Press, Washington, 130 pp.

**Edited books and special issues:**

Malanson, G.P. editor. 1989. *Natural Areas Facing Climate Change,* SPB Academic, The Hague.

Butler, D.R., Walsh, S.J. & Malanson, G.P. 2003. Mountain Geomorphology – Integrating Earth Systems. Special issue of *Geomorphology*, also published as

Butler, D.R., Walsh, S.J. & Malanson, G.P. 2003. *Mountain Geomorphology – Integrating Earth Systems*. Elsevier, Amsterdam.

Butler DR, Malanson, GP, Walsh SJ & Fagre DB, eds. 2009. *The Changing Alpine Treeline: The Example of Glacier National Park, Montana*, *USA*. Elsevier, Amsterdam.

**Articles in refereed journals, book chapters, and symposia proceedings:**

Malanson, G.P. 1980. Habitat and plant distributions in hanging gardens of the Narrows, Zion National Park, Utah. *Great Basin Naturalist* 40: 178-182.

Malanson, G.P. & Kay, J. 1980. Flood frequency and the assemblage of dispersal types in hanging gardens of the Narrows, Zion National Park, Utah. *Great Basin Naturalist* 40: 365-371.

Rogers, G.F., Travis, R.W. & Malanson, G.P. 1980. An insular geography approach to equilibrium number of physician specialties across urban centers. *Social Science & Medicine* 14D: 45-54.

Westman, W.E., O'Leary, J.F. & Malanson, G.P. 1981. The effects of fire intensity, aspect, and substrate on postfire growth of Californian coastal sage scrub. In N. S. Margaris & H. A. Mooney, eds. *Components of Productivity of Mediterranean Regions.* The Hague: W. Junk, pp. 151-179.

Malanson, G.P. 1982. The assembly of hanging gardens: effects of age, area, and location. *American Naturalist* 119: 145-150.

Malanson, G.P. & O'Leary, J.F. 1982. Post-fire regeneration strategies of Californian coastal sage shrubs. *Oecologia* 53: 355-358.

Malanson, G.P. 1982. Modeling postfire succession in coastal sage scrub. In C.E. Conrad & W.C. Oechel, eds. *Dynamics and Management of Mediterranean-type Ecosystems. U.S. Forest Service General Technical Report PSW-58*, p. 616.

Malanson, G.P. 1984. Linked Leslie matrices for the simulation of succession. *Ecological Modelling* 21: 13-20.

Malanson, G.P. 1984. Intensity as a third factor of disturbance regime and its effect on species diversity. *Oikos* 43: 411-413.

Malanson, G.P. 1984. Fire history and patterns of Venturan subassociations of Californian coastal sage scrub. *Vegetatio* 57: 121-128.

Malanson, G.P. & Butler, D.R. 1984. Transverse pattern of vegetation on avalanche paths in the northern Rocky Mountains, Montana. *Great Basin Naturalist* 44: 453-458.

Malanson, G.P. & Butler, D.R. 1984. Avalanche paths as fuel breaks: implications for fire management. *Journal of Environmental Management* 19: 229-238.

Malanson, G.P. 1985. Simulation of competition between alternative shrub life history strategies through recurrent fires. *Ecological Modelling* 27: 271-283

Malanson, G.P. 1985. The rise and fall of the Uintah Valley Indian Reservation: perception and policy. In M.D. Picard, ed. Geology and Energy Resources, Uinta Basin of Utah. Salt Lake City: *Utah Geological Association Publication* 12: 11-15.

Malanson, G.P. & Westman, W.E. 1985. Post-fire succession in Californian coastal sage scrub: the role of continual basal sprouting. *American Midland Naturalist* 113: 309-318.

Malanson, G.P. & O'Leary, J.F. 1985. Effects of fire and habitat on regeneration in Mediterranean-type ecosystems: *Ceanothus spinosus* chaparral and coastal sage scrub. *Oecologia Plantarum* 6: 183-195.

Malanson, G.P. 1985. Fire management in coastal sage scrub, southern California, USA. *Environmental Conservation* 12: 141-146.

Malanson, G.P. & Butler, D.R. 1985. Ordinations of species and fuel arrays and their use in fire management. *Forest Ecology & Management*  12: 65-71.

Malanson, G.P. 1985. Spatial autocorrelation and distributions of plant species on environmental gradients. *Oikos* 45: 278-280.

Butler, D.R. & Malanson, G.P. 1985. A reconstruction of snow avalanche characteristics in Montana, USA, using vegetative indicators. *Journal of Glaciology* 31: 185-187.

Butler, D.R. & Malanson, G.P. 1985. A history of high-magnitude snow avalanches, southern Glacier National Park, Montana, USA. *Mountain Research & Development* 5: 175-182.

Malanson, G.P. & Butler, D.R. 1986. Floristic patterns on avalanche paths in the northern Rocky Mountains, USA. *Physical Geography* 7: 231-238.

Butler, D.R., Malanson, G.P. & Oelfke, J.G. 1987. Tree-ring analysis and natural hazard chronologies: minimum sample sizes and index values. *Professional Geographer* 39: 41-47.

Malanson, G.P. 1987. Diversity, stability, and resilience: effects of fire regime. In L. Trabaud, ed. *Role of Fire in Ecological Systems.* SPB Academic, The Hague, pp. 49-63.

Malanson, G.P. & Trabaud, L. 1987. Ordination analysis of components of resilience of *Quercus coccifera* garrigue. *Ecology* 68: 463-473.

Malanson, G.P. & Trabaud, L. 1987. Post-fire development of canopy structure in a mediterranean shrub, *Quercus coccifera* L. *Physical Geography* 8: 266-274.

Malanson, G.P. & Trabaud, L. 1988. Vigour of post-fire resprouting by *Quercus coccifera* L. *Journal of Ecology* 76: 351-365.

Malanson, G.P. & Trabaud, L. 1988. Computer simulations of fire behavior in garrigue in southern France. *Applied Geography* 8: 53-64.

Butler, D.R. & Malanson, G.P. 1989. Periglacial patterned ground, Waterton-Glacier International Peace Park, Canada and USA. *Zeitschrift fur Geomorphologie* 33: 43-57.

Walsh, S.J., Bian, L., Brown, D.G., Butler, D.R. & Malanson, G.P. 1989. Image enhancement of Landsat thematic mapper digital data for terrain evaluation, Glacier National Park, Montana, USA. *Geocarto International* 4: 55-58.

Hanson, J.S., Malanson, G.P. & Armstrong, M.P. 1989. Spatial constraints on the response of vegetation to climate change. in G.P. Malanson, ed. *Natural Areas Facing Climate Change,* SPB Academic, The Hague, 1-23.

Hanson, J.S., Malanson, G.P. & Armstrong, M.P. 1990. Landscape fragmentation and dispersal in a model of riparian forest dynamics. *Ecological Modelling* 49: 277-296.

Malanson, G.P. & Butler, D.R. 1990. Woody debris, sediment, and riparian vegetation of a subalpine river, Montana, USA. *Arctic & Alpine Research* 22: 183-194.

Butler, D.R. & Malanson, G.P. 1990. Non-equilibrium geomorphic processes and patterns on avalanche paths in the northern Rocky Mountains, U.S.A. *Zeitschrift fur Geomorphologie* 34: 257-270.

Malanson, G.P. & Armstrong, M.P. 1990. Improving environmental simulation models to assess climate change impacts. *University of Iowa, Department of Geography Discussion Paper No. 43,* 35 pp.

Rex, K.D. & Malanson, G.P. 1990. The fractal shape of riparian forest patches. *Landscape Ecology*  4: 249-258.

Malanson, G.P., Butler, D.R. & Walsh, S.J. 1990. Chaos theory in physical geography. *Physical Geography* 11: 293-304.

Malanson, G.P. & Westman, W.E. 1991. Modeling interactive effects of climate change, air pollution, and fire on a California shrubland. *Climatic Change* 18: 363-376.

Butler, D.R., Malanson, G.P. & Oelfke, J.G. 1991. Potential catastrophic flooding from landslide-dammed lakes, Glacier National Park, Montana, USA. *Zeitschrift fur Geomorphologie (supplementband)* 83: 195-209.

Butler, D.R., Walsh, S.J. & Malanson, G.P. 1991. GIS applications to the indirect effects of forest fires in mountainous terrain. in S.C. Nodvin & T.A. Waldrop, eds. *Fire and the Environment: Ecological and Cultural Perspectives*. U.S. Forest Service General Technical Report SE-69, 202-211.

Malanson, G.P. & Westman, W.E. 1991. Climate change and the modeling of fire effects in chaparral. in S.C. Nodvin & T.A. Waldrop, eds. *Fire and the Environment: Ecological and Cultural Perspectives*. U.S. Forest Service General Technical Report SE-69, 91-96.

Malanson, G.P. & Butler, D.R. 1991. Floristic variation among gravel bars in a subalpine river, Montana, USA. *Arctic & Alpine Research 23*: 273-278.

Butler, D.R., Malanson, G.P. & Walsh, S.J. 1991. Identification of deltaic wetlands at montane finger lakes. *Environmental Professional* 13: 352-362.

Butler, D.R. & Malanson, G.P. 1992. Effects of terrain on excessive travel distance by snow avalanches. *Northwest Science* 66: 77-85.

Liu, Z-J. & Malanson, G.P. 1992. Long-term cyclic dynamics of simulated riparian forest stands. *Forest Ecology & Management* 48: 217-231.

Westman, W.E. & Malanson, G.P. 1992. Effects of climate change on Mediterranean-type ecosystems in California and Baja California. In R.L. Peters & T. Lovejoy, eds. *Global Warming and Biological Diversity.* Yale University Press, New Haven, 258-276.

Butler, D.R., Malanson, G.P. & Walsh, S.J. 1992. Snow-avalanche paths: conduits from the periglacial-alpine to the subalpine-depositional zone. In A. Abrahams and J. Dixon, eds. *Periglacial Geomorphology*, J. Wiley, London, 185-202.

Walsh, S.J., Malanson, G.P. & Butler, D.R. 1992. Pattern of alpine treeline, Glacier National Park, Montana, USA. in D.G. Janelle, ed. *Geographical Snapshots of North America*, Guilford Press, New York, 167-171.

Malanson, G.P., Butler, D.R. & Georgakakos, K.P. 1992. Nonequilibrium geomorphic processes and deterministic chaos. *Geomorphology* 5: 311-322.

Malanson, G.P., Westman, W.E. & Yan, Y-L. 1992. Realized versus fundamental niche functions in a model of chaparral response to climatic change. *Ecological Modelling* 64: 261-277.

Malanson, G.P. 1992. Ecology of fragmented natural landscapes: disturbance intensity and spatial pattern and scale. *Ekistics* 356: 280-286.

Malanson, G.P. 1993. Comment on modeling ecological response to climatic change. *Climatic Change* 23: 95-109.

Malanson, G.P. & Kupfer, J.A. 1993. Simulated fate of leaf litter and woody debris at a riparian cutbank. *Canadian Journal of Forest Research* 23: 582-590

Butler, D.R. & Malanson, G.P. 1993. Characteristics of two landslide-dammed lakes in a glaciated alpine environment. *Limnology and Oceanography* 38: 441-445.

Kupfer, J.A. & Malanson, G.P. 1993. Structure and composition of a riparian forest edge. *Physical Geography* 14: 154-170.

Kupfer, J.A. & Malanson, G.P. 1993. Observed and modeled directional change in riparian forest composition at a cutbank edge. *Landscape Ecology* 8: 185-199.

Butler, D.R. & Malanson, G.P. 1993. An unusual early-winter flood and its varying geomorphic impact along a subalpine river in the Rocky Mountains of Montana, USA. *Zeitschrift fur Geomorphologie* 37: 145-155

Malanson, G.P., Pavlik, C.E. & Ceilley, D.E. 1993. Introducing students to plant geography: polar ordination applied to hanging gardens. *Journal of Geography* 92: 129-138.

Craig, M.R. & Malanson, G.P. 1993. River flow events and the colonization of point bars in Iowa. *Physical Geography* 14: 436-448.

Butler, D.R. & Malanson, G.P. 1994. Canadian landform examples - beaver landforms. *Canadian Geographer* 38: 76-79.

Nealson, E.N. & Malanson, G.P. 1994. Farm chemicals as indicators of sediment sources in Iowa rivers. *Geographical Bulletin* 36: 44-49.

Malanson, G.P. and Butler, D.R. 1994. Tree - tundra competitive hierarchies, soil fertility gradients, and the elevation of treeline in Glacier National Park, Montana. *Physical Geography* 15: 166-180.

Walsh, S.J., Butler, D.R., Allen, T.R. and Malanson, G.P. 1994. Influence of snow patches and snow avalanches on the alpine treeline ecotone. *Journal of Vegetation Science* 5: 657-672.

Brown, D.G., Cairns, D.M., Malanson, G.P., Walsh, S.J. and Butler, D.R. 1994. Remote sensing and GIS techniques for spatial and biophysical analyses of alpine treeline through process and empirical models. In W.K. Michener, S. Stafford, and J. Brunt, eds. *Environmental Information Management and Analysis: Ecosystem to Global Scales*. Taylor and Francis, Philadelphia, 453-481.

Butler, D.R., Malanson, G.P. & Cairns, D.M. 1994. Stability of alpine treeline in northern Montana, USA. *Phytocoenologia* 22: 485-500.

Post, D.P. & Malanson, G.P. 1994. Reinterpretation of relations between vegetation removal and water yield. *Geographical Bulletin* 36: 94-102.

Malanson, G.P. & Cairns, D.M. 1995. Effects of increased cloud-cover on a montane forest landscape. *Ecoscience* 2: 75-82.

Malanson, G.P. & O'Leary, J.F. 1995. The coastal sage scrub - chaparral boundary and response to global climatic change. In J. Moreno & W.C. Oechel, eds. *Global Change and Mediterranean-type Ecosystems*. Springer-Verlag, New York, 203-224.

Butler, D.R. & Malanson, G.P. 1995. Sedimentation rates and patterns in beaver ponds in a mountain environment. *Geomorphology* 13: 255-269

Malanson, G.P., Armstrong, M.P. & Bennett, D.A. 1996. Fragmented forest response to climatic warming and disturbance. in M.F. Goodchild, L.T. Steyaert, B.O. Parks, M.P. Crane, C.A. Johnston, D.R. Maidment & S.J. Glendinning, eds. *GIS and Environmental Modeling: Progress and Research Issues*. GIS World, Ft. Collins, CO, 243-247.

Malanson, G.P. & Armstrong, M.P. 1996. Dispersal probability and forest diversity in a fragmented landscape. *Ecological Modelling* 87: 91-102.

Malanson, G.P. 1996. Effects of dispersal and mortality on diversity in a forest stand model. *Ecological Modelling* 87: 103-110.

Schwarz, W.L., Malanson, G.P. & Weirich, F. 1996. Effect of landscape position on the sediment chemistry of abandoned-channel wetlands. *Landscape Ecology* 11: 27-38.

Malanson, G.P. 1996. Modelling forest response to climatic change: issues of time and space. in S.K. Majumdar, E.W. Miller and F.J. Brenner, eds. *Forests - A Global Perspective*. Pennsylvania Academy of Sciences, Easton, PA, 200-211.

Butler, D.R. & Malanson, G.P. 1996. A major sediment pulse in a subalpine river caused by debris flows. *Zeitschrift fur Geomorphologie* 40: 525-535.

Kupfer, J.A., Malanson, G.P. and Runkle, J.R. 1997. Factors influencing species composition in canopy gaps: the importance of edge proximity in Hueston Woods, Ohio. *Professional Geographer* 49:165-178.

Malanson, G.P. 1997. Effects of feedbacks and seed rain on ecotone patterns. *Landscape Ecology* 12: 27-38.

Malanson, G.P. & Armstrong, M.P. 1997. Issues in spatial representation: effects of number of cells and between-cell step size on models of environmental processes. *Geographical & Environmental Modelling* 1: 47-64.

Malanson, G.P. 1997. Simulated responses to hypothetical fundamental niches. *Journal of Vegetation Science* 8: 307-316.

Pitelka, L.F. and the Plant Migration Workshop Group (Ash, J., Berry, S., Bradshaw, R.H.W., Brubaker, L., Clark, J.S., Davis, M.B., Dyer, J.M., Gardner, R.H., Gitay, H., Hengeveld, R., Hope, G., Huntley, B., King, G.A., Lavorel, S., Mack, R.N., Malanson, G.P., McGlone, M., Noble, I.R., Prentice, I.C., Rejmanek, M., Solomon, A.M., Sugita, S. and Sykes, M.T.) 1997. Plant migration and climate change. *American Scientist* 85: 464-473.

Malanson, G.P. & Cairns, D.M. 1997. Effects of dispersal, population delays, and forest fragmentation on tree migration rates. *Plant Ecology* 131: 67-79.

Cairns, D.M. & Malanson, G.P. 1997. Examination of the carbon balance hypothesis of alpine treeline location, Glacier National Park, Montana. *Physical Geography* 18: 125-145.

Walsh, S.J., Butler, D.R. & Malanson, G.P. 1997. An overview of scale, pattern, process relationships in geomorphology: a remote sensing and GIS perspective. *Geomorphology* 21: 183-205.

Liu, Z-J., Hallberg, G.R. & Malanson, G.P. 1997. Structural equation modeling of dynamics of nitrate contamination in groundwater. *Journal of the American Water Resources Association* 33: 1219-1235.

Butler, D.R., Malanson, G.P., Wilkerson, F.D. and Schmid, G.L. 1998. Late Holocene sturzstroms in Glacier National Park, Montana, USA. in J. Kalvoda, ed. *Geomorphological Hazards in High Mountain Areas*. Kluwer, Dordrecht, 149-166.

Cairns, D.M. & Malanson, G.P. 1998. Environmental variables influencing carbon balance at the alpine treeline ecotone: a modeling approach. *Journal of Vegetation Science* 9: 679-692.

Butler, D.R. & Malanson, G.P. 1999. Site locations and characteristics of miniature patterned ground, eastern Glacier National Park, Montana, USA. *Landform Analysis* 2: 45-50.

Malanson, G.P. & Cramer, B.E. 1999. Ants in labyrinths: lessons for critical landscapes. *Professional Geographer* 51: 155-170.

Malanson, G.P. & Cramer, B.E. 1999. Landscape heterogeneity, connectivity, and critical landscapes for conservation. *Diversity and Distributions* 5: 27-40.

Malanson, G.P. 1999. Considering complexity. *Annals, Association of American Geographers* 89: 746-753.

Malanson, G.P., N. Xiao, K. Alftine, M. Bekker, D.R. Butler, D.G. Brown, D.M. Cairns, D. Fagre, & S.J. Walsh. 2003. Abiotic and biotic controls of spatial pattern at alpine treeline. In Parks, BO, Clarke KM, Crane MP, editors. *Proceedings of the 4th International Conference on Integrating Geographic Information Systems and Environmental Modeling: Problems, Prospects, and Needs for Research*. CIRES, University of Colorado, Boulder. [CD-ROM, ISBN: 0-9743307-0-1]

Bekker M.F., Malanson, G.P., Alftine, K.J. & Cairns, D.M. 2001. Feedback and pattern in computer simulations of the alpine treeline ecotone. In Millington, A.C., Walsh, S.J. & Osborne, P.E., eds. *GIS and Remote Sensing Applications in Biogeography and Ecology*. Kluwer, Dordrecht, 123-138.

Malanson, G.P., Xiao, N. & Alftine, K.J. 2001. A simulation test of the resource averaging hypothesis of ecotone formation. *Journal of Vegetation Science* 12: 743-748.

Malanson, G.P. 2001. Complex responses to global change at alpine treeline. *Physical Geography* 22: 333-342.

Malanson, G.P.& Butler, D.R. 2002. The Western Cordillera. In *Physical Geography of North America*, A. Orme, ed. Oxford University Press, Oxford, pp. 363-379.

##### Malanson, G.P. 2002. Effects of spatial representation of habitat in competition-colonization models. *Geographical Analysis* 34: 141-154.

Malanson, G.P. 2002. Extinction debt trajectories and spatial pattern of habitat destruction. *Annals, Association of American Geographers* 92: 177-188.

Malanson, G.P., Butler, D.R., Cairns, D.M., Welsh, T.E., Resler, L.M. 2002. Variability in a soil depth indicator in alpine tundra. *Catena*. 49: 203-215.

Cairns, D.M., Butler, D.R. & Malanson, G.P. 2002. Geomorphic and biogeographic setting of the Rocky Mountains. In J.S. Baron, ed. *Rocky Mountain Futures*. Island Press, Washington, DC, 27-39.

Malanson, G.P. 2003. Habitats, hierarchical scales, and nonlinearities: an ecological perspective on linking household and remotely sensed data on land-use/cover change. In Fox, J. Rindfuss, R.R., Walsh, S.J. and Mishra, V., eds. *People and the Environment: Approaches for Linking Household and Community Surveys to Remote Sensing and GIS*. Kluwer, Dordrecht, 265-283.

Walsh, S.J., Butler, D.R., Malanson, G.P., Crews-Meyer, K.A., Messina, J.P. & Xiao, N. 2003. Mapping, modeling, and visualization of the influences of geomorphic processes on the alpine treeline ecotone, Glacier National Park, Montana, USA. *Geomorphology* 53: 129-145.

Butler, D.R., Malanson, G.P., Bekker, M.F. and Resler, L.M. 2003. Lithologic, structural, and geomorphic controls on ribbon forest patterns. *Geomorphology* 55: 203-217.

Butler, D.R., Walsh, S.J. & Malanson, G.P. 2003. Introduction to the special issue: mountain geomorphology – integrating earth systems, *Geomorphology* 55: 1-4.

Malanson, G.P. 2003. Dispersal across continuous and binary representations of landscapes. *Ecological Modelling* 169: 17-24.

Alftine, K.J., Malanson, G.P. & Fagre, D.B. 2003. Feedback-driven response to multi-decadal climatic variability at an alpine forest-tundra ecotone. *Physical Geography* 24: 520-535.

Kupfer, J.A., Malanson, G.P. & Franklin, S.B. 2004. *Identifying the Biodiversity Research Needs Related to Forest Fragmentation*. National Commission on Science for Sustainable Forestry (www.ncseonline.org/ewebeditpro/items/O62F3754.pdf)

Alftine, K.J. & Malanson, G.P. 2004. Directional positive feedback and pattern at an alpine tree line. *Journal of Vegetation Science* 15:3-12.

Malanson, G.P., Butler, D.R. & Walsh, S.J. 2004. Ecological response to global climatic change. In *WorldMinds.* (D.G. Janelle, B. Warf, & K. Hansen, eds.) Kluwer, Dordrecht, 469-473.

Kupfer, J.A. & Malanson, G.P. 2004. The biodiversity crisis. In *WorldMinds.* (D.G. Janelle, B. Warf, & K. Hansen, eds.) Kluwer, Dordrecht, 273-277.

Walsh, S.J., Weiss, D.J., Butler, D.R. & Malanson, G.P. 2004. An assessment of snow avalanche paths and forest dynamics using Ikonos satellite data. *Geocarto International* 19: 85-94.

Marion, D. & Malanson, G.P. 2004. Ordination of woody vegetation in a Ouachita National Forest watershed. US Forest Service General Technical Report SRS-74, pp. 198-204.

Butler, D.R., Malanson, G.P. & Resler, L.M. 2004. Turf-banked terrace treads and risers, turf exfoliation, and possible relationships with advancing treeline. *Catena* 58: 259-274.

Allen, T.R., Walsh, S.J., Cairns, D.M., Messina, J., Butler, D.R. and Malanson, G.P. 2004. Geostatistics and spatial analysis: characterizing form and pattern at the alpine treeline. In M. Bishop and J. Shroder, eds. *Geographic Information Science and Mountain Geomorphology*. Springer Verlag-Praxis Scientific, London, 189-214.

Malanson, G.P. & Zeng, Y. 2004. Uncovering spatial feedbacks at alpine treeline using spatial metrics in evolutionary simulations. In *GeoDynamics*, P.M. Atkinson, G. Foody, S. Darby & F. Wu, eds. CRC Press, Boca Raton, FL, 137-150.

Resler, L.M., Butler, D.R. & Malanson, G.P. 2005. Topographic shelter and conifer establishment and mortality in an alpine environment, Glacier National Park, Montana. *Physical Geography* 26: 112-125.

Butler, D.R. and Malanson, G.P. 2005. The geomorphic influences of beaver dams and failures of beaver dams. *Geomorphology* 71: 48-60.

Kupfer, JA, Malanson, GP & Franklin, SB. 2006. Not seeing the ocean for the islands: The mediating influence of matrix-based processes on forest fragmentation effects. *Global Ecology & Biogeography* 15: 8-20.

Malanson, G.P., Zeng, Y. & Walsh, S.J. 2006. Complexity at advancing ecotones and frontiers. *Environment & Planning A* 38: 619-632.

Malanson, G.P., Scott, K., Fagre, D. & Holzer, K. 2006. Ordination Context of GLORIA Sites in Glacier National Park, USA. In M.F. Price, ed. *Global Change in Mountain Regions*. Sapiens Publishing, Duncow, UK, pp. 154-155 (extended abstract).

Zeng, Y. & Malanson, G.P. 2006. Endogenous fractal dynamics at alpine treeline ecotones. *Geographical Analysis* 38: 271-287.

Malanson, GP, Zeng, Y. & Walsh, SJ. 2006. Landscape frontiers, geography frontiers: lessons to be learned. *Professional Geographer* 58: 383-396.

Malanson, G.P., Wang, Q. & Kupfer, J.A. 2007. Ecological processes and spatial patterns before, during and after simulated deforestation. *Ecological Modelling* 202: 397-409.

Malanson, G.P., Butler, D.R. and Fagre, D.B. 2007. Alpine ecosystem dynamics and change: a view from the heights. In: *Sustaining Rocky Mountain Landscapes: Science, Policy and Management of the Crown of the Continent Ecosystem* (T. Prato and D. Fagre, eds.), RFF Press, Washington D.C., 85-101.

Yadav, V. & Malanson, G.P. 2007. Progress in soil organic matter research: Litter decomposition, modelling, monitoring and sequestration. *Progress in Physical Geography* 31: 131-154..

Zeng, Y., Malanson, G.P. & Butler, D.R. 2007. Geomorphic limits to self organization in alpine forest-tundra ecotone vegetation. *Geomorphology* 91: 378-392.

Wang, Q. and Malanson, G.P. 2007. Patterns of correlation among landscape metrics. *Physical Geography* 28: 170-182.

Malanson GP, DR Butler, DB Fagre, SJ Walsh, DF Tomback, LD Daniels, LM Resler, WK Smith, DJ Weiss, DL Peterson, AG Bunn, CA Hiemstra, D Liptzin, PS Bourgeron, Z Shen, and CI Millar. 2007 Alpine treeline of western North America: Linking organism-to-landscape dynamics. *Physical Geography* 28: 378-396.

Butler DR, Malanson GP, Walsh SJ, Fagre DB. 2007 Influences of geomorphology and geology on alpine treeline in the American West – more important than climatic influences? *Physical Geography* 28: 434-450.

Malanson GP, Butler, DR. 2007. Introduction – alpine treeline, climate, and environmental changes. *Physical Geography* 28: 375-377.

Yadav, V. and Malanson, G.P. 2008. Spatially explicit land use land cover and soil organic carbon transformations in southern Illinois. *Agriculture, Ecosystems & Environment* 123: 280-292.

Wang, Q. and Malanson, G.P. 2008. Neutral landscapes: bases for exploration in landscape ecology. *Geography Compass* 2: 319-339; 10.111/j.1749-8198.2008.00090.x [online only].

Walsh SJ, Messina, JP, Mena CF, Malanson GP, Page PH. 2008. Complexity theory, spatial simulation models, and land use dynamics in the Northern Ecuadorian Amazon. *Geoforum* 39: 867-878.

Wang, Q. and Malanson, G.P. 2008. Spatial hyperdynamism in a post-disturbance simulated forest. *Ecological Modelling* 215: 337-344.

Rindfuss, R.R. and 24 coauthors. 2008. Land use change: complexity and comparisons. *Journal of Land Use Science* 3: 1-10.

Parker, D.C., B. Entwisle, R.R. Rindfuss, L.K. Van Wey, S. Manson, E. Moran, L. An, P. Deadman, T.P. Evans, M. Linderman, S.M.M. Rizi and G. Malanson. 2008. Case studies, cross-site comparisons, and the challenge of generalization: Comparing agent-based models of land-use change in frontier regions. *Journal of Land Use Science* 3: 41-72.

Yadav, V., Del Grosso, S.J., Parton, W.J. and Malanson, G.P. 2008. Adding ecosystem function to agent-based land use models. *Journal of Land Use Science* 3: 27-40.

Entwisle, B., Malanson, G.P., Rindfuss, R.R. and Walsh, S.J. 2008. An agent based model of household dynamics and land use change: getting inside the black box. *Journal of Land Use Science* 3: 73-93.

Malanson GP. 2008. Extinction debt: origins, developments, and applications of a biogeographic trope. *Progress in Physical Geography* 32: 277-291.

Bekker, MF & Malanson, GP. 2008. Linear forest patterns in subalpine environments. *Progress in Physical Geography* 32: 635-653.

Entwisle, B., J. Edmeades, G. Malanson, C. Podhisita, P. Prasartkul, R.R. Rindfuss, S.J. Walsh. 2008. Village settlement, deforestation, and the expansion of agriculture in a frontier region: Nang Rong, Thailand. In A. Millington & W. Jepson, eds. *Land-Change Science in the Tropics*. Springer, New York, 165-179.

Tang, W., Malanson, G.P., Entwisle, B. 2009. Simulated village locations in Thailand using a multi-scale model including a neural network approach. *Landscape Ecology* 24: 557-575.

Malanson GP, Brown DG, Butler DR, Cairns DM, Fagre DB, Walsh SJ. 2009. Ecotone dynamics: invasibility of alpine tundra by tree species from the subalpine forest. In DR Butler, GP Malanson, SJ Walsh & DB Fagre, eds. *The Changing Alpine Treeline: The Example of Glacier National Park, Montana, USA*. Elsevier, Amsterdam, 35-61.

Bekker, MF & Malanson, GP. 2009. Modeling feedback effects on linear patterns of subalpine forest advancement. In DR Butler, GP Malanson, SJ Walsh & DB Fagre, eds. *The Changing Alpine Treeline: The Example of Glacier National Park, Montana, USA*. Elsevier, Amsterdam, 167-190.

Butler DR, Malanson GP, Resler LM, Walsh SJ, Wilkerson FD, Schmid GL & Sawyer CF. 2009. Geomorphic patterns and processes at alpine treeline. In DR Butler, GP Malanson, SJ Walsh & DB Fagre, eds. *The Changing Alpine Treeline: The Example of Glacier National Park, Montana, USA*. Elsevier, Amsterdam, 63-84.

Schmid GL, Butler DR, Malanson GP, Resler LM. 2009. Soils and pedogenesis at alpine treeline. In DR Butler, GP Malanson, SJ Walsh & DB Fagre, eds. *The Changing Alpine Treeline: The Example of Glacier National Park, Montana, USA*. Elsevier, Amsterdam, 107-108.

Butler DR, Malanson GP, Walsh SJ. 2009. The future of treeline. In DR Butler, GP Malanson, SJ Walsh & DB Fagre, eds. *The Changing Alpine Treeline: The Example of Glacier National Park, Montana, USA*. Elsevier, Amsterdam, 191-194.

Yadav V, Malanson GP. 2009. Modeling impacts of erosion and deposition on soil organic carbon in the Big Creek Basin of southern Illinois. *Geomorphology* 106: 304-314.

Grafius, D.R. and Malanson, G.P. 2009. Precipitation and temperature estimation error at alpine treeline ecotones using the Mountain Climate Simulator model (MT-CLIM). *Physical Geography* 30: 285-307.

Yadav V, Malanson GP, Bekele EG, Lant C. 2009. Modeling watershed-scale sequestration of soil organic carbon for carbon credit programs. *Applied Geography* 29: 488-500.

Mena CF, Walsh SJ, Frizzelle BG, Yao X, Malanson GP. 2011. Land use change on household farms in the Ecuadorian Amazon: design and implementation of an agent-based model. *Applied Geography* 31: 210-222.

Malanson, GP. 2011. Ecosystem. In J. Agnew and D. Livinsgtone, eds. *Handbook of Geographical Knowledge*. Sage, London, 452-464.

Malanson GP, Resler LM, Bader MY, Holtmeier F-K, Weiss DJ, Butler DR, Fagre DB, Daniels LD. 2011. Mountain treelines: a roadmap for research orientation. *Arctic, Antarctic, and Alpine Research* 43: 167-177.

Malanson GP, Rose JP, Schroeder PJ, Fagre DB. 2011. Contexts for change in alpine tundra. *Physical Geography* 32: 97-113.

Malanson GP. 2011. Simulation. In A. Millington, M. Blumler, G. MacDonald, U. Schickhoff, eds. *Handbook of Biogeography*. Sage, London, 454-468.

Walsh SJ, Malanson GP, Messina JP, Brown DG, Mena CF. 2011. Biocomplexity. In A. Millington, M. Blumler, G. MacDonald, U. Schickhoff, eds. *Handbook of Biogeography*. Sage, London, 469-487.

Peterson, D.L., C.D. Allen, J.S. Baron, D.B. Fagre, D. McKenzie, N.L. Stephenson, A.G. Fountain, J.A. Hicke, G.P. Malanson, C.L. Tague, and P.J. van Mantgem. 2011. Response of Western mountain ecosystems to climatic variability and change: a collaborative research approach. In J. Belant and E. Beever (eds.), *Ecological Consequences of Climate Change: Mechanisms, Conservation, and Management*. Taylor and Francis, New York, 163-190.

Grafius, D.R., Malanson, G.P. and Weiss, D.J. 2012. Secondary controls of alpine treeline elevations in the western USA. *Physical Geography* 33: 146-164.

Malanson, GP, Bengtson, LE, Fagre, DB. 2012. Geomorphic determinants of species composition of alpine tundra, Glacier National Park, USA. *Arctic, Antarctic, and Alpine Research* 44: 197-209.

Rose JP, Malanson GP. 2012. Microtopographic heterogeneity constrains alpine plant diversity, Glacier National Park, MT. *Plant Ecology* 213: 955-965.

Yadav, V & Malanson, GP. 2013. A spatially explicit scheme for tracking and validating annual landscape scale changes in soil carbon. *Applied Geography* 37: 101-113.

Malanson GP, Walsh SJ. 2013. A geographical approach to optimization of response to invasive species. In Walsh SJ & Mena C, eds. *Science and Conservation in the Galapagos Islands: Frameworks and Perspectives*. Springer, New York, 199-215.

Walsh SJ, Malanson GP, Entwisle B, Rindfuss RR, Mucha PJ, Heumann BW, McDaniel PM, Frizzelle BG, Vergery A, Williams N, Yao X, Ding D. 2013. Design of an agent-based model to examine population-environment interactions in Nang Rong District, Thailand. *Applied Geography* 39: 183-198.

**Letters:**

Malanson, G.P., Other climate changes. Letter to the editor, *New York Times*, 12/8/97, p. A22.

**Book reviews:**

"Woodland Conservation and Management." George Peterken. *Environmental Professional* 8: 179-184, 1986.

"Biogeomorphology." Heather Viles, ed. *Annals, Association of American Geographers* 80: 481-483, 1990.

"A Systems Analysis of the Global Boreal Forest." H.H. Shugart, R. Leemans, and G.B. Bonan, eds. *Geographical Analysis* 25: 171-175, 1993.

"Faith in a Seed." Henry David Thoreau. *Annals, Association of American Geographers* 84: 746-747, 1994.

"Geographical Population Analysis: Tools for the Analysis of Biodiversity." Brian A. Maurer. *American Scientist* 83: 576, 1995.

**Other:**

Butler, D.R., Malanson, G.P. & Walsh, S.J. 2007. Glacier National Park, Montana (US). In P. Robbins, ed. *Encyclopedia of Environment & Society*. Sage Publications, Thousand Oaks, CA, 770-771.

**Presentations and published abstracts:**

1978: Malanson, G.P.: Dissimilarity of hanging garden communities. Association of American Geographers, New Orleans

1978: Van Pelt, N.S., Malanson, G.P., & Petersen, J.F.: Ecological studies in the Utah canyonlands: a review and appraisal. Association for Arid Lands Studies, Denver.

1979: Malanson, G.P.: Perception of the Uintah Valley Indian Reservation. Association of Pacific Coast Geographers, Santa Barbara.

1979: Travis, R.W., Rogers, G.F. & Malanson, G.P.: An insular geography approach to equilibrium numbers of physician specialties across urban centers. Association of American Geographers, Philadelphia.

1980: Malanson, G.P.: Simulation of species importance values in succession. Association of American Geographers, Louisville.

1981: Malanson, G.P.: A multiple pathway model of post-fire succession in Californian coastal sage scrub. Association of American Geographers, Los Angeles.

1981: Malanson, G.P.: Modeling post-fire succession in coastal sage scrub. USFS Symposium on dynamics and management of Mediterranean type ecosystems, San Diego

1982: Malanson, G.P. & Westman, W.E.: Fire management in Californian coastal sage scrub. Association of Pacific Coast Geographers, Long Beach.

1982: Malanson, G.P.: Post-fire succession in Californian coastal sage scrub. Ecological Society of America, University Park, PA.

1982: Malanson, G.P.: Simulation of post-fire succession in Californian coastal sage scrub. Association of American Geographers, San Antonio.

1983: Malanson, G.P.: A critique of ecological similarity indices. Southwest Division, AAG, Hot Springs, AR.

1983: Malanson, G.P.: Analyzing Gaussian distributions of species importance values. Association of American Geographers, Denver.

1984: Butler, D.R. & Malanson, G.P.: Tree-ring dating of high magnitude snow avalanches, Glacier National Park, Montana. Association of American Geographers, Washington.

1984: Malanson, G.P. & Butler, D.R.: The role of avalanche paths in forest fire behavior. Association of American Geographers, Washington.

1986: Malanson, G.P.: Diversity and resilience: effects of fire regime. Ecological Society of America and International Congress of Ecology, Syracuse.

1986: Malanson, G.P.: Diversity: effects of fire regime and ecological resilience. Association of American Geographers, Minneapolis.

1987: Malanson, G.P.: Space in simulations of forest dynamics. Association of American Geographers, Portland.

1987: Westman, W.E. & Malanson, G.P.: Effects of climate change on Mediterranean-type ecosystems in California and Baja California. World Wildlife Fund Symposium, Washington, DC.

1988: Butler, D.R. & Malanson, G.P.: Periglacial patterned ground, Glacier National Park, Montana. Association of American Geographers, Phoenix.

1988: Hanson, J.S. & Malanson, G.P.: Spatial constraints on the response of vegetation to climate change. West-Lakes Division, AAG, St. Paul.

1988: Malanson, G.P.: Processes in riparian forests. Association of American Geographers, Phoenix.

1989: Butler, D.R., Malanson, G.P. & Oelfke, J.G.: Potential catastrophic flooding from landslide-dammed lakes, Glacier National Park, Montana, USA. Second International Conference on Geomorphology, Frankfurt.

1989: Malanson, G.P. & Westman, W.E.: Modelling interactive effects of climate change, air pollution, and fire on California shrublands. Ecological Society of America, Toronto

1990: Butler, D.R., Walsh, S.J. & Malanson, G.P.: Inclusion of temporal and spatial data on forest fires in a geographic information system for potential erosion hazards analysis: an example from Glacier National Park. Fire and the Environment Symposium, Knoxville.

1990: Malanson, G.P. & Westman, W.E.: Modeling the response of California shrublands to change in climate and fire regime. Fire and the Environment Symposium, Knoxville.

1990: Malanson, G.P. & Westman, W.E.: Modeling the response of California shrublands to climate change. Association of American Geographers, Toronto.

1991: Butler, D.R., Malanson, G.P. & Walsh, S.J.: Snow-avalanche paths: conduits from the periglacial-alpine to the subalpine-depositional zone. 22nd Binghamton Symposium in Geomorphology, Buffalo, NY.

1991: Craig, M.R. & Malanson, G.P.: Riparian forest colonization on point bars. International Association of Landscape Ecology, Ottawa.

1991: Kupfer, J.A. & Malanson, G.P.: Vegetational structure, composition and successional dynamics of a riparian forest edge. International Association of Landscape Ecology, Ottawa.

1991: Malanson, G.P., Yan, Y-L. & Westman, W.E.: The realized niche of plant species and modeling their response to climatic change. Ecological Society of America, San Antonio.

1992: Malanson, G.P., Butler, D.R. & Georgakakos, K.P.: Nonequilibrium geomorphic processes and deterministic chaos. 23rd Binghamton Symposium in Geomorphology, Oxford, OH.

1992: Malanson, G.P.: Niche functions and plant community response to climatic change. Association of American Geographers, San Diego.

1992: Malanson. G.P.: Consequences of secondary effects of global climatic change on California shrublands. 19th Natural Areas Conference, Bloomington, IN.

1992: O'Leary, J.F. & Malanson, G.P. Patterns and controls on vegetation distribution and composition of coastal sage scrub. Symposium on Anticipated Effects of a Changing Global Environment on Mediterranean-type Ecosystems. Valencia, Spain.

1993: Butler, D.R. & Malanson, G.P.: Nearest neighbor analysis of miniature polygonal patterned ground, eastern Glacier National Park, Montana. Association of American Geographers, Atlanta.

1993: Kupfer, J.A. & Malanson, G.P.: Forest-stream ecotones: structure, composition, and carbon dynamics along Midwestern cutbank edges. Association of American Geographers, Atlanta.

1993: Malanson, G.P. & Cairns, D.M.: Effects of cloudiness on vegetation processes modeled at two scales. West-Lakes Division, AAG, Milwaukee.

1993: Malanson, G.P., Butler, D.R., Walsh, S.J. & Brown, D.G.: Hierarchical modeling of the position and pattern of alpine treeline. Association of American Geographers, Atlanta.

1993: Malanson, G.P.: Scaling issues in a spatially explicit model of ecological response. International Geosphere-Biosphere Program Workshop on Global Change and Landscape Dynamics in Mediterranean Systems. Toledo, Spain

1994: Butler, D.R. & Malanson, G.P.: Beaver geomorphology and lacustrine sedimentation in Glacier National Park, Montana. Association of American Geographers, San Francisco.

1994: Malanson, G.P. & Armstrong, M.P.: Dispersal probability affects forest richness with climatic change. Global Change II: A Midwest Perspective. Iowa City.

1994: Malanson, G.P., Driessen, C.A. & Butler, D.R.: Pattern of riparian environments of different geomorphic origin. Association of American Geographers, San Francisco.

1995: Butler, D.R. & Malanson, G.P.: Sedimentation patterns and rates in beaver ponds. Association of American Geographers, Chicago.

1995: Butler, D.R. & Malanson, G.P.: Sedimentation rates and patterns in beaver ponds in a mountain environment. 26th Binghamton Symposium in Geomorphology, Charlottesville, VA.

1995: Kupfer, J.A., Runkle, J.R. & Malanson, G.P.: Early gap successional pathways in Hueston Woods Nature Preserve, Ohio: patterns and determinants. Association of American Geographers, Chicago.

1995: Malanson, G.P. & Cairns, D.M.: Calibrating dispersal in a simulation of fragmented forest dynamics. U.S. Landscape Ecology Symposium, Minneapolis.

1996: Butler, D.R. Cairns, D.M., Walsh, S.J. & Malanson, G.P.: Climatic implications of treeline establishment dates, eastern Glacier National Park, Montana. Association of American Geographers, Charlotte.

1996: Malanson, G.P.: Effects of feedback and seed rain on ecotone patterns. Spatio-Temporal Dynamics in Ecological Systems Conference. National Center for Ecological Analysis and Synthesis, Santa Barbara.

1996: Malanson, G.P.: Treeline as pattern on an environmental gradient. Association of American Geographers, Charlotte.

1997: Butler, D.R. & Malanson, G.P.: Repeat photography of the physical landscape, Glacier National Park, MT. US - International Association for Landscape Ecology, Durham

1997: Malanson, G.P.: MAUP in a simulation of forest dynamics. Association of American Geographers, Ft. Worth

1997: Butler, D.R. & Malanson, G.P.: Repeat photography of physical geography, Glacier National Park, MT. Association of American Geographers, Ft. Worth

1997: Walsh, S.J., Butler, D.R. & Malanson, G.P.: Issues of scale in mountain research in Glacier National Park, Montana. USGS-BRD workshop on Human-Induced Environmental Change in the Rocky Mountains, Polson, MT.

1997: Malanson, G.P.: Landscape diversity and landscape function: heterogeneity of conduits. MEDECOS VIII Conference, San Diego.

1997: Malanson, G.P.: Effects of landscape pattern on species migration under changing climates. IGBP-GCTE Focus 2, Activity 2 workshop, San Diego.

1998: Malanson, G.P.: Plant dispersal and migration across fragmented landscapes. IGBP GCTE/LUCC Open Science Conference, Barcelona.

1998: Malanson, G.P.: Simulation of phase changes in ecotone patterns. Association of American Geographers, Boston.

1999: Malanson, G.P., Alftine, K, & Bekker, M.: Finding simplicity in simulations of the alpine treeline ecotone. Association of American Geographers, Honolulu.

1999: Malanson, G.P.: Complex responses to global change at alpine treeline. Plenary session. Southwest Division, Association of American Geographers, San Marcos.

2000: Malanson, G.P. Simulations of the resource averaging hypothesis for alpine treeline. Association of American Geographers, Pittsburgh.

2000: Malanson, G.P., N. Xiao, K. Alftine, M. Bekker, D.R. Butler, D.G. Brown, D.M. Cairns, D. Fagre, and S.J. Walsh. Abiotic and biotic controls of spatial pattern at alpine treeline. 4th International Conference on Integrating GIS and Environmental Modeling, Banff.

2000: Malanson, G.P.: Discrete and continuous representations of habitat quality in ecological simulations. SWAAG, College Station.

2000: Walsh, S.J., Butler, D.R., Malanson, G.P., Crews-Meyer, K.A., Messina, J.P., and Xiao, N.: Mapping, Modeling, and visualization of the influences of geomorphic processes on the alpine treeline ecotone, Glacier National Park, Montana, USA. 31st Binghamton Symposium in Geomorphology, Binghamton, NY

2001: Malanson, G.P., Butler, D.R., Welsh, T.E. and Cairns, D.M. Variability of soil depth in alpine tundra and possible effects on tree advance. Association of American Geographers, New York.

2001: Butler, D.R., Malanson, G.P., Bekker, M. and Resler, L.: Lithologic, structural, and geomorphic controls on ribbon forest patterns. 32nd Binghamton Symposium in Geomorphology, Chapel Hill, NC.

2002: Malanson, G.P.: An ecological perspective on linking household and remotely sensed data on land-use change. Linking Households and Remotely Sensed Data, January 2002, East-West Center, Honolulu.

2002: Malanson, G.P., Messina, J.P., Walsh, S.J., Entwisle, B. & Rindfuss, R.R. Linking households and parcels in models of land-use change. US – International Association for Landscape Ecology, Lincoln, NE.

2002: Tang, W. & Malanson, G.P. Representations of habitat and specialization in competition-colonization models. US – International Association for Landscape Ecology, Lincoln, NE.

2002: Zeng, Y. & Malanson, G.P. Genetic programming to explore alpine treeline advance. US – International Association for Landscape Ecology, Lincoln, NE.

2002: Butler, D.R. & Malanson, G.P. 2002. The geomorphic influences of beaver dams and beaver-dam failure. 33rd Annual Binghamton Geomorphology Symposium, Bloomsburg, PA.

2002: Resler, L.M. Butler, D.R. & Malanson, G.P. The role of microtopography in conifer establishment at the alpine treeline ecotone, Glacier National Park, Montana. SWAAG, Laredo

2003: Malanson, G.P., Walsh, S.J., Butler, D.R., Reardon, B., Fagre, D.B., McKnight, S. Effects of avalanches on local carbon budgets and regional forest dynamics Association of American Geographers, New Orleans.

2003: Tang, W., Malanson, G.P. & Entwisle, B. Agent-based modeling of village location in Thailand. Association of American Geographers, New Orleans.

2003: Zeng, Y & Malanson, G.P. Evolutionary computation of nonlinear feedback in alpine treeline advance. Association of American Geographers, New Orleans.

2003: Butler, D.R., Malanson, G.P., Walsh, S.J., Reardon, B., Fagre, D.B. Tree-ring dating of high magnitude snow-avalanche winters and their relationship with Snow-Water Equivalence (SWE). Association of American Geographers, New Orleans.

2003: Malanson, G.P. & Zeng, Y.: Uncovering spatial feedbacks at alpine treeline using spatial metrics in evolutionary simulations. GeoComputation ’03, Southampton, UK.

2003: Malanson, G.P.: Land-use/land-cover change. UNESCO MAB Mountain Research Initiative Workshop, Sörenborg, Switzerland.

2004: Malanson, G.P., Zeng, Y., Walsh, S.J. Frontiers as frontiers. Association of American Geographers, Philadelphia.

2004: Zeng, Y., Malanson, G.P., Walsh, S.J. Searching for complexity on landscapes. Association of American Geographers, Philadelphia.

2004: Weiss, D.J., Walsh, S.J., Hammer, E.S., Butler, D.R., Malanson, G.P. An Assessment of snow avalanche paths using Ikonos satellite data and LAI field data. Association of American Geographers, Philadelphia.

2004: Butler, D.R., Resler, L., Malanson, G.P. Turf-banked terrace treads and risers, turf exfoliation, and possible relationships with advancing treeline. Association of American Geographers, Philadelphia.

2004: Tang, W., Malanson, G.P., Walsh, S.J. Agent-Based Simulation of Pattern Formation of Village Territory in Thailand. Association of American Geographers, Philadelphia.

2004: Malanson GP, Alftine KJ, Bekker MF, Brown DG, Butler DR, Cairns DM, Fagre DF, Resler LM, Schmid GL, Walsh SJ, Zeng Y. Advance of trees into alpine tundra. Mountain Climate Sciences Symposium, North Beach, CA.

2004: Malanson GP, Brown DG, Butler DR, Cairns DM, Fagre DF, Walsh, SJ. Advance of tree species into alpine tundra. Intenational Association for Vegetation Science, Kona, HI.

2004: Malanson, G.P., Zeng, Y., Butler, D.R. & Resler, L,M. Advance of trees and krummholz into alpine tundra. American Geophysical Union, San Francisco

2005: Malanson, G.P.: Complexity and dynamics in biogeography. Association of American Geographers, Denver.

2005: Butler, D.R. & Malanson, G.P.:Active frost processes and fine-scale polygonal patterned ground on turf-banked terrace treads, eastern Glacier National Park, Montana. Association of American Geographers, Denver.

2005: Malanson, G.P., Scott, K., Fagre, D. & Holzer, K.: Ordination Context of GLORIA Sites in Glacier National Park, USA. Global Change in Mountain Regions Open Science Conference, Perth, Scotland

2005: Walsh, S.J., R.E. Bilsborrow, C.F. Mena, C.M. Erlien, A.F. Barbieri, J.P. Messina, G. Medina, G.P. Malanson. 2005. Modeling Deforestation and Agricultural Extensification in the Ecuadorian Amazon. NASA Science Team Meeting, São Paulo, Brazil.

2005: Malanson, G.P. & Bennett, D.A.: Why is land use/land cover change biocomplex? AAG West Lakes Division, Iowa City.

2006: Malanson, G.P., Shen, Z. & Butler, D*.R.:* Dynamic geomorphology affects ecological pattern and process. Association of American Geographers, Chicago.

2006: Malanson and the Alpine Treeline Workshop Group. Treeline dynamics and climate change. MTNCLIM2006, Mt. Hood, OR

2006: Goshit, S. & Malanson, G.P.. Synoptic climatology and winter precipitation variability in western Montana. MTNCLIM2006, Mt. Hood, OR

2006: Walsh, S.J. and the Ecuadorian Amazon LULC Team. Pattern-process relations in coupled human-natural systems: modeling LULC dynamics in the Ecuadorian Amazon. NASA Science Teams Meeting, Brasilia, Brazil.

2007: Goshit, S., Malanson, G.P., & McGinnis, D.L.: Patterns of winter precipitation variability in western Montana. Association of American Geographers, San Francisco.

2007: Wang, Q. & Malanson, G.P.: Analysis of effects of landscape pattern on species dynamics using colonization-competition models. Association of American Geographers, San Francisco.

2007: Zeng, Y. & Malanson, G.P.: Coupling climate change with complex alpine treeline dynamics. Association of American Geographers, San Francisco.

2008: Malanson, G.P., Walsh, S.J., Atkinson, R.J., Milsted, W.B.: Detection and control protocols for invasive plant species in the Galapagos Islands. Association of American Geographers, Boston.

2008: Bekker, M.F., Malanson, G.P.: Linear vegetation patterns in subalpine forests. Association of American Geographers, Boston.

2009: Malanson, G.P.: Biogeography; Progress in Physical Geography Panel on Earth Systems Science. Association of American Geographers, Las Vegas (invited).

2009: Rose, J., Nathanson, R. & Malanson, G.P.: Providing context for alpine tundra response to global climatic change. Association of American Geographers, Las Vegas.

2009: Goshit, S. & Malanson, G.P.: Synoptic influence on daily temperature and precipitation in western Montana. Association of American Geographers, Las Vegas.

2009: Bekker, M.F. & Malanson, G.P.: Feedback and linear forest patterns in subalpine environments: a global view. Association of American Geographers, Las Vegas.

2009: Malanson, G.P. & Honey, R.: Water towers, the metaphor. Association of American Geographers, Las Vegas.

2010: Malanson GP, Rose JP: Neutral vs. niche context for change in alpine tundra. Annual Meeting of the AAG, Washington

2011: Malanson GP, Shen Z: Topography and epistemology: review and prospect. International Association for Landscape Ecology, Beijing.

2012: Malanson GP, Fagre DB: Glacier National Park GLORIA sites in regional context. MtnClim2012, Estes Park, CO (poster)

2013: Malanson GP: Progress in Physical Geography lecture: Missing links. . Annual Meeting of the AAG, Los Angeles

**Invited departmental presentations at:**

UC Santa Barbara, Memphis State Univ., Univ. of Colorado, Univ. of Oklahoma, Univ. of Connecticut, SUNY Albany, Univ. of Kansas, Univ. of Georgia, Univ. of North Carolina, Pennsylvania State Univ., Michigan State Univ., Univ. of Arizona, Iowa State Univ. (3), UC San Diego, Southwest Texas State Univ., Univ. of Minnesota; Peking University (2); Univ. of Nevada-Las Vegas, Kansas State Univ., Univ. of Northern Illinois