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.

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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