

James D. A. Millington

PhD · MSc · BSc (HONS)

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EDUCATION

PhD Geography

Department of Geography, King's College London, July 2007

MSc Environmental Monitoring, Modelling and Management, Distinction

Department of Geography, King's College London, September 2003

BSc (Hons) Geography, First Class

Department of Geography, King's College London, July 2002

EMPLOYMENT

Leverhulme Early Career Fellow

Department of Geography, King's College London, Jan. 2011 – Present

Visiting Research Associate

Center for Systems Integration & Sustainability, Michigan State University, May 2007 – Nov. 2010

Adjunct Instructor

Department of Fisheries and Wildlife, Michigan State University, Aug. 2008 – Dec. 2008

Undergraduate Personal Tutor

Department of Geography, King's College London, Sept. 2005 – June 2006

Teaching Assistant

Department of Geography, King's College London, Sept. 2003 – June 2006

Fieldwork Instructor

Department of Geography, King's College London, Dec. 2003

PUBLICATIONS

Peer-Review Journal Articles

Millington, J.D.A., Walters, M.B., Laurent, E.J., Hall, K.R. and Liu, J. (2011) Combined effects of timber management and variable tree regeneration on songbird habitat *Forest Ecology and Management* 262 718-729 [doi: 10.1016/j.foreco.2011.05.002]

Millington, J.D.A. and Perry, G.L.W. (2011) Multi-model inference in biogeography *Geography Compass* 5(7) 448-530 [doi: 10.1111/j.1749-8198.2011.00433.x]

Matonis, M.S., Walters, M.B. and **Millington, J.D.A.** (2011) Gap-, stand-, and landscape-scale factors contribute to poor sugar maple regeneration after timber harvest *Forest Ecology and Management* 262 286-298 [doi: 10.1016/j.foreco.2011.03.034]

Millington, J.D.A., Demeritt, D. and Romero-Calcerrada, R. (2011) Participatory evaluation of agent-based land use models *Journal of Land Use Science* 6(2) 195-210 [doi: 10.1080/1747423X.2011.558595]

Wainwright, J. and **Millington, J.D.A.** (2010) Mind, the Gap in Landscape-Evolution

Modelling *Earth Surface Processes and Landforms* 35(7) 842-855 [doi: 10.1002/esp.2008]

Millington, J.D.A., Walters, M.B., Matonis, M.S. and Liu, J. (2010) Effects of local and regional landscape characteristics on wildlife distribution across managed forests *Forest Ecology and Management* 259 1102-1110 [doi: 10.1016/j.foreco.2009.12.020]

- Romero-Calcerrada, R., Barrio-Parra, F., **Millington, J.D.A.** and Novillo, C.J. (2010) Spatial modelling of socioeconomic data to understand patterns of human-caused wildfire ignition risk in the SW of Madrid (central Spain) *Ecological Modelling* 221(1) 34-45 [doi: 10.1016/j.ecolmodel.2009.08.008]
- Millington, J.D.A.**, Wainwright, J., Perry, G.L.W., Romero-Calcerrada, R. and Malamud, B.D. (2009) Modelling Mediterranean landscape succession-disturbance dynamics: A landscape fire-succession model *Environmental Modelling and Software* 24 1196-1208 [doi: 10.1016/j.envsoft.2009.03.013]
- Millington, J.D.A.**, Romero-Calcerrada, R., Wainwright, J. and Perry, G.L.W. (2008) An agent-based model of Mediterranean agricultural land-use/cover change for examining wildfire risk *Journal of Artificial Societies and Social Simulation* 11(4)
<http://jasss.soc.surrey.ac.uk/11/4/4.html>
- Romero-Calcerrada, R., Camacho, C.J., **Millington, J.D.A.** and Gomez-Jimenez, I. (2008) GIS analysis of spatial patterns of human-caused wildfire ignition risk in the SW of Madrid (Central Spain) *Landscape Ecology* 23 341-354 [doi: 10.1007/s10980-008-9190-2]
- Perry, G.L.W. and **Millington, J.D.A.** (2008) Spatial modelling of succession-disturbance dynamics in terrestrial ecological systems *Perspectives in Plant Ecology, Evolution and Systematics* 9(3-4) 191-210 [doi: 10.1016/j.ppees.2007.07.001]
- Millington, J.D.A.**, Perry, G.L.W. and Romero-Calcerrada, R. (2007) Regression techniques for examining land use/cover change: A case study of a Mediterranean landscape *Ecosystems* 10(4) 562 – 578 [doi: 10.1007/s10021-007-9020-4]
- Malamud, B.D., **Millington, J.D.A.** and Perry, G.L.W. (2005) Characterizing wildfire regimes in the USA *Proceedings of the National Academy of Science* 102(13) 4694 – 4699 [doi: 10.1073/pnas.0500880102]
- Millington, J.D.A.** (2005) Wildfire risk mapping: considering environmental change in space and time *Journal of Mediterranean Ecology* 6(1) 33 – 42

Book Chapters

- Millington, J.D.A.**, Wainwright, J. and Mulligan, M. (2012) Representing human activity in environmental modelling *In: Wainwright, J. and Mulligan, M. (Eds.) Environmental Modelling: Finding Simplicity in Complexity* (2nd Edition)
- O'Sullivan, D., **Millington, J.D.A.**, Perry, G.L.W. and Wainwright, J. (2012) Agent-based models – because they're worth it? *In: Heppenstall, A.J., Crooks, A.T., See, L.M. and Batty, M. (Eds.) Agent-Based Models of Geographical Systems* Springer, London [doi: 10.1007/978-90-481-8927-4_6]
- Millington, J.D.A.**, Perry, G.L.W. and Malamud, B.D. (2006) Models, data and mechanisms: quantifying wildfire regimes *In: Cello, G., Malamud B. D., & Davey, P. (Eds.) Fractal Analysis for Natural Hazards*. Geological Society, London [doi: 10.1144/GSL.SP.2006.261.01.12]

Other Articles

- McConnell, W.J., **Millington, J.D.A.** *et al.* (2011) Research on Coupled Human and Natural Systems (CHANS): Approach, Challenges, and Strategies. *Bulletin of the Ecological Society of America* 92 218-228 [doi: 10.1890/0012-9623-92.2.218]

Book Reviews

- New models for ecosystem dynamics and restoration. Hobbs, R.J. and Suding, K.N. (Eds.) *Landscape Ecology* 24(9) 1269-1270 [doi: 10.1007/s10980-009-9394-0]
- A companion to environmental geography. Castree, N., Demeritt, D., Liverman, D. and Rhoads, B. (Eds.) *Progress in Physical Geography* 33(3) 445-447 [doi: 10.1177/0309132509341428]
- Engaging the future: forecasts, scenarios, plans, and projects. Hopkins, L.D. and Zapata, M.A. (Eds.) *Environment and Planning A* 39 2797-2798

In Preparation

Millington, J.D.A. (in press) Breaking the ‘hierarchical relationship’ between physical and social causes of land degradation; invited book chapter section for *‘Patterns of land degradation in drylands. Understanding self-organized ecogeomorphic systems’*

Millington, J.D.A. (in press) Definitions: when is a pattern a pattern?; invited book chapter section for *‘Patterns of land degradation in drylands. Understanding self-organized ecogeomorphic systems’*

Millington, J.D.A., Walters, M.B., Matonis, M.S. and Liu, J. (accepted, in revision) Modelling for forest management synergies and trade-offs: Tree regeneration, timber and deer; research manuscript accepted, subject to corrections, by *Ecological Modelling*

Millington, J.D.A., O’Sullivan, D. and Perry, G.L.W. (in review) Narrative explanation in generative simulation modelling; research manuscript in review at *Geoforum*

Millington, J.D.A., Walters, M.B., Matonis, M.S. and Liu, J. (in prep.) A forest gap regeneration composition model: Parameterization and evaluation; research manuscript in preparation for submission to *Ecological Modelling*

Millington, J.D.A. and Wainwright, J. (in prep.) This is not a paper about modelling; invited for submission to *Dialogues in Human Geography*

Matonis, M.S., **Millington, J.D.A.** and Walters, M.B. (in prep.) Predicting Browse Pressure on Mesic Conifers with Estimates of Deer Density, Snow Depth, and Distance to Lowland Conifer Stands; research manuscript in preparation for submission to *Northern Journal of Applied Forestry*

GRANTS AND AWARDS

Leverhulme Early Career Fellowship

2010 – Three years’ salary and research expenses

University of London Central Research Fund

2006 – Fieldwork grant; £500

ESRC Overseas Institutional Visit Grant

2005 – University of Auckland, New Zealand; £1,800

ESRC / NERC Interdisciplinary PhD Research Studentship

2003 – Three years’ student fees and maintenance

Head of Department Prize

2002 – Department of Geography, King’s College London

TEACHING EXPERIENCE

Postgraduate Courses

Systems Modeling and Simulation

Lecturer, 2008, Michigan State University (16 week class)

Environmental GIS

Teaching Assistant, 2004 – 2005, King’s College London

Undergraduate Courses

Geography Tutorials: Critical Thinking and Techniques

Academic Tutor, 2011-2012, King’s College London (Two-term module)

Geographical Concepts Skills and Methods: Time, Environment and Landscape

Lecturer, 2011-2012, King’s College London (Five week module)

Critical Readings in Development Geography

Academic Tutor, 2005 – 2006, King’s College London (Two-term module)

Fieldwork in Physical Geography

Instructor, 2003-2004, King’s College London (Two-term module with one week fieldtrip)

Teaching Assistant, 2004-2006, King’s College London

Data Analysis in Physical Geography

Teaching Assistant, 2005-2006, King's College London

Guest Lectures

Analysis and Modelling of Environmental Processes

July 2008, University of Auckland, New Zealand

People and Processes in the Mediterranean Landscape

November 2005, King's College London

TECHNICAL SKILLS AND EXPERTISE

Statistics

Numerous frequentist and Bayesian methods for data analysis, hypothesis testing, inference and forecasting

Proficient: R, SPSS, WinBUGS

Programming

Object-oriented languages for development and use of bespoke scientific applications

Proficient: C++, R, SQL, HTML; Basic: Python, JavaScript, XML

Modelling and GIS

Statistical, spatially-explicit, individual- and agent-based, and systems modelling & simulation

Proficient: ArcGIS, R, NetLogo, STELLA, Fragstats; Basic: GRASS, SIMILIE, ENVI,

IDRISI, Google Earth, Google Maps API, Garmin GPS

Other Software

Office suite for productivity and project management; Publication-grade figures

Proficient: MS Word, Excel, PowerPoint, Access, Outlook, Visual Studio; EndNote, Inkscape, TheGIMP; Basic: Linux OS, OpenOffice

CONFERENCES

Over 25 oral and poster presentations at international conferences including: Royal Geographical Society Annual Conference, International Association of Landscape Ecology meetings, and the European Geophysics Union General Assembly. [Full list online: <http://bit.ly/uy20En>]

SEMINARS AND WORKSHOPS

Eight invited research seminars (at institutions in UK, US, Germany and New Zealand) and funded invitation to three European workshops on complexity science. [Details online: <http://bit.ly/tfsasF>]

ACADEMIC SERVICE

Journal Reviewer

Advances in Complex Systems, American Naturalist, Annals of Forest Science, Area, Canadian Journal of Zoology, Ecological Complexity, Ecological Modelling, Ecology and Society, Ecosystems, Environment and Planning A, Environmental Conservation, Environmental Modelling & Software, International Journal of Wildland Fire, Journal of Environmental Policy and Planning, Journal of Geographical Systems, Journal of Land Use Science, Land Use Policy, Landscape Ecology, Mammal Review, Natural Hazards, Tropical Conservation Science

Grant Reviewer

US National Science Foundation – Collaboration in Mathematical Geosciences; UK Economic & Social Research Council