

CURRICULUM VITAE

GLEN MICHAEL MACDONALD

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Educational Background

Ph.D.	1984	Toronto	Botany (Geol. Minor)
M.Sc.	1980	Calgary	Geography
B.A. (Hon.)	1978	California, Berkeley	Geography

Thesis Titles

Ph.D., Postglacial Plant Migration and Vegetation Development in the Western Canadian Boreal Forest.

M.Sc., Postglacial Palaeoecology of the Morley Flats and Kananaskis Valley Region, Southwestern Alberta.

Hon., The Impact of 19th Century Redwood Logging on the Bolinas Lagoon Watershed, Marin County, California.

Honors and Distinguished Lectures

Fellow of the American Geophysical Union (2015)
Member of the National Academy of Sciences (2015)
James J. Parsons Distinguished Career Award, Biogeography Specialty Group, AAG (2015)
UCLA Geography John Muir Memorial Chair (2014)
Rockefeller Bellagio Fellowship (2013)
UCLA Distinguished Professor (2011)
UC Presidential Chair (2009)
Visiting Fellow, St. Catherine's College, Oxford (2009)
Guggenheim Fellow (2008-2009)
Fellow of the American Association for the Advancement of Science (2006)
UCLA Friends of Geography Atlas Award (2005)
UCLA Vasa Cube Award for Fiat Lux Seminars (2005)
Discover Magazine Top 100 Science Story in 2005
Cowles Award for Excellence in Publication (AAG) – 2nd time 2004
UCLA Distinguished Teaching Award (2001)
Cowles Award for Excellence in Publication (AAG) – 1st time 1999
University of Helsinki Medal (1995)
Visiting Fellow and Life Member, Clare Hall, Cambridge University (1989)

McMaster University Award for Teaching Excellence (1987)
 McMaster Faculty of Science Award for Teaching Excellence (1987)
 McMaster Departmental Undergraduate Award for Teaching Excellence (1987)
 Graduation with Highest Honors and Distinction, University of California (1978)
 Member of University of California Berkeley Honor Student's Society (1976-78)

Miller Lecture, Pennsylvania State University (2015)
 American International Landscape Ecology Society Keynote Plenary Lecture (2013)
 Comeaux Lecture, Arizona State University (2011)
 American Association of Geographers Plenary Lecture (2009)
 Haynes Lecture, Texas AM University (2009)
 Marshack Lecture, UCLA (2009)
 Atwood Lecture, Clark University (2009)
 Bjerknes Lecture, University of Bergen, Norway (2008)
 Hilldale Distinguished Lecture, University of Wisconsin at Madison (2007)
 Mayer Lecture, University of Wisconsin, Milwaukee (2006)
 Brown Day Lecture, University of Minnesota (2005)
 Astor Visiting Lecturer, Oxford University (2003)

Professional Organizations

American Association for the Advancement of Science
 American Geophysical Union
 Association of American Geographers
 Association of Pacific Coast Geographers
 Canadian Association of Geographers
 International Biogeographical Society (Founding Treasurer)

Current Status at UCLA

John Muir Memorial Chair
 Full Distinguished Professor – Geography
 Full Distinguished Professor – Ecology and Evolutionary Biology
 Full Distinguished Professor – Institute for the Environment and Sustainability

Employment History

<u>From</u>	<u>To</u>	<u>Employer</u>	<u>Position</u>
2014	Present	UCLA	John Muir Memorial Chair
2011	Present	UCLA	Distinguished Professor
2009	2014	UCLA	Presidential Chair
2009	2014	UCLA	Director of the UCLA IoES
2002	2006	UCLA	Chair of Geography
1998	2002	UCLA	Vice Chair of Geography
1995	Present	UCLA	Full Professor
1994	1995	McMaster University	Full Professor
1991	1994	McMaster University	Associate Chair

1988	1995	McMaster University	Associate Professor
1984	1988	McMaster University	Assistant Professor
1980	1984	University of Toronto	TA/ Graduate Student
1981	1981	Geological Survey of Canada	Research Assistant
1980	1980	Geological Survey of Canada	Research Assistant
1978	1980	University of Calgary	TA/Graduate Student

Areas of Interest

Research:	Climate Change, Environmental Change, Environmental Reconstruction, Water Resources, Environmental Change and Societal Impact, Biogeography
Teaching:	Environmental Changes and Impacts, Paleoclimatology, Biogeography
Consulting:	Water Resources, Ecological Restoration, Palynology, Dendrochronology, Climate Change, Geographical Sciences

Scholarly and Professional Activities

President

Canadian Association of Palynologists (1995)

Vice President

Association of American Geographers (2015)

Chair-Elec, Chair, Past Chair AAAS Geography and Geology Section (2011-13)

Chair

PARCS – NSF Program (2001-2005)

Biogeography Specialty Group of the AAG (1999-2001)

IsoTrace Laboratories Board, Physics Department, University of Toronto (1993-1995)

Committee on the Future of the Association of Canadian Universities for Northern Studies (1989)

Founding Treasurer

International Biogeographical Society (2001-2002)

International Coordinator

International Boreal Forest Research Association (Global Change) (1991-93)

Executive

IsoTrace Laboratories, Physics Department, University of Toronto (1992-1995)

Board/Committee Member

Canadian Heritage Trust (2014-Present)

NAS-NRC Transformative Research in the Geographical Sciences Committee (2014-Present)

NAS-NRC Geographical Sciences Committee (2011-Present)
NAS-NRC Strategic Directions in Geographical Sciences Committee (2008-2010)
AAAS Geography-Geology Nominating Committee (2005-2008)
NSF ARCSS Advisory Committee (2002-2006)
NSF PALE/PARCS Steering Committee (1998-2005)
Panel to Develop a New PAGES Core Project on Arctic Climate Change (1995)
Canadian Association of Geographers Global Change Committee (1991)
North American Pollen Data Base (1991-1995)
IsoTrace Laboratories, Physics Department, University of Toronto (1990-95)
Hamilton-Wentworth Archaeological Foundation Board of Directors (1991-92)
Committee for the Professional Registration of Geoscientists (Ontario) (1990-92)
International Panel on Boreal Forest Research (Moscow) (1990-91)
Association of Canadian Universities for Northern Studies (1987-1990)

Elector

Oxford University (2008 and 2010)

Invited Panel Member/Moderator/Workshop Participant

Conservation International Water Health Index Workshop (2015)
University of Waterloo Trans-Boundary Water Workshop (2012)
Aspen Climate Change Institute Workshop on Climate Change Issues and Perspectives (2012)
UN University Workshop on Climate Change and Waterborne Disease (2009)
NSF Earth Systems History Workshop (2005)
Royal Society Workshop Evolution and the Quaternary (2004)
Holocene Climate Change Research (2000)
NSF Earth Systems History Panel (1998-2000)
PALE Workshop on Laminated Sediments (1996)
NSF Arctic Systems Sciences All Hands Workshop (1996)
NSF ARCSS Russian Shelf Interface Planning Workshop (1996)
Ontario Ministry of Environment Fire Workshop (1995)
PAGES Multi-Proxy Workshop (1994)
NSF PALE Workshop (1993-95)
NOAA Grant Selection Panel (1994)
COHMAP Workshop (1994)
Society of American Foresters Boreal Forest Plenary Session (Moderator) (1994)
NATO World Biomass Burning Workshop (Moderator) (1994)
Geological Survey of Canada 6ka Workshop (1991)

Editorial Board / Advisory Board

World Agriculture (2010-Present)
Annals of the American Association of Geographers (1996-2000)
Arctic, Antarctic and Alpine Research (2000-Present)
Ecological Applications (2000- 2003)
Geography Compass (2005-2007)
Great Lakes Geographer (1993-1997)

Journal of Biogeography (2004-2006)
Physical Geography (2002-2010)
Review of Palaeobotany and Palynology (1989-2007)
Quaternary International (1997-)

Associate Editor

Arctic, Antarctic and Alpine Research (2006-)

Guest Editor

PNAS Special Feature (2010)
Journal of Paleolimnology (2000)
Review of Palaeobotany and Palynology (1993)
Canadian Geographer Focus Section (1988)

Special Session Organizer

American Geophysical Union (2007)
American Geophysical Union (1998)
INQUA (1995)
American Association of Geographers (1990)
Canadian Association of Geographers (1986)

Fieldtrip Organizer

Association of American Geographers (2002)
Canadian Association of Geographers (1987)
International Palynological Conference (1984)

Science Advisor

National Atlas of Canada (1989)
Operation Raleigh Canadian Arctic Expedition (1988)

Invited Speaker (Universities)

Miller Lecture Penn State University (2015)
Concordia College, Orange County (2015)
CSU Fullerton (2012)
Orange Coast College (2012)
University of Toronto (2012)
Queens University – International Visiting Scholar Open Lecture (2011)
Arizona State University - Comeaux Lecture (2011)
University of Western Ontario (2010)
Texas AM University – Haynes Lecturer (2009)
Clark University – Atwood Lecturer (2009)
Queen’s University Belfast (2009)
United Nations University (2008)
University of Bergen (2008)
University of Arkansas (2008)

Cornell University (2007)
University of Wisconsin, Madison – Hilledale Lecture (2007)
University of Arizona (2007)
Lehigh University (2006)
Lamont-Doherty Earth Observatory, Columbia University (2006)
Stanford University (2006)
University of Wisconsin, Milwaukee - Mayer Colloquium Speaker (2006)
UC Irvine (2006)
University of Helsinki (2005)
University of Minnesota - Brown Day Lecture (2005)
University of Maryland - Annual Departmental Distinguished Speaker (2005)
Oxford University – Astor Lecture (2004)
University College London (2004)
Uppsala University (2004)
Ohio State University (2003)
Universite Laval (2002)
UC Santa Barbara (2001)
University of Arizona (2000)
UC Berkeley (1999)
University of Pennsylvania (1999)
University of Washington (1997)
University of Iowa (1997)
USC (1996)
UCLA-Biology (1996)
University of Helsinki – Helsinki Medal Lecture (1995)
McMaster University (1995)
University of Virginia (1995)
Guelph University (1995)
UCLA-Geography (1995)
Queen's University (1993)
Universite Laval (1993)
Cambridge University (1993)
University of Alberta (1991)
University of Calgary (1991)
Cambridge University (1989)
University of Toronto (1989)
University of Western Ontario (1988)
University of Waterloo (1987)
University of Alaska (1987)
University of Alberta (1986)
Guelph University (1986)
University of Calgary (1985)
York University (1985)

Interviewed Scientist/Commentator

Fever (Book on Climate Change (2013)
 Los Angeles Times (2013)
 KNX Business Report (2013)
 Pacific Currents Magazine (2011)
 FOX News Radio (2010)
 NPR (2009,2010)
 BBC Television (2009)
 Financial Times of London (2009)
 Los Angeles Times (2007)
 ABC – KGO World News (2006)
 Numerous Local LA News Channels
 And Newspapers (2000 -)
 National Geographic (2007)
 Discovery Channel (2004; 2008)
 Science News (2004)
 Toronto Star (2003)
 NBC National News (2000)
 Discovery Channel (2000)
 Canadian Geographic (1995)
 Globe and Mail (1995)
 Toronto Star (1995)
 Star Phoenix (1995)
 Western Report (1995)
 Insight (1995)
 University Affairs (1995)
 Courier (1994)
 CHCH TV (1992)
 CBC Manitoba (1991)
 CBC Ideas (1989)
 CBC North (1986)

Courses Taught

UCLA Geography

<u>Year</u>	<u>Course Units</u>	<u>Topic</u>
2005-	297 4	Evolution and Geography
2002-	2 5	Biogeography
1996-	131 4	Environmental Change
1996-	5 4	Environmental Studies
1996-	108 4	World Vegetation
1996-	217 4	Quaternary Studies
1996-	213 4	Biogeography Seminar
1996-	208 4	Advanced Biogeography

UCLA EEB

<u>Year</u>	<u>Course Units</u>	<u>Title</u>
1999-	M200A 4 (team taught course)	Evolutionary Biology

McMaster

<u>Year</u>	<u>Course</u>	<u>Units</u>	<u>Title</u>
1992-94	1A6*	1 1/2	Environmental Science
1992	4V6	3	Environmental Science
1988-89	2U3*	3	Environmental Science
1987	1B6	6	Intro. Physical Geog.
1986-94	4P3-6P3*	3	Advanced Biogeography
1985-94	3P3*	3	Biogeography
1985-90	732*	2	Graduate Biogeography
1984-86	3M3	3	Glacial and Periglacial Geomorphology
1984-90	3V3	3	Remote Sensing
1984-85	2M3	3	Landforms of Canada

*New courses introduced by G.M. MacDonald

Graduate Supervisorships

UCLA

<u>Student</u>	<u>Year</u>	<u>Program</u>	<u>Theses/Project Title</u>
Scott Lydon	2014-	Ph.D.	Utah Climate Change
Stacie Fejtek	2012-	D Env Sci/Eng (Co)	Marsh Management Policy
Jordan Rosencranz	2012-	D Env Sci/Eng (Co)	California Coastal Marches
Mike Antos	2011-	Ph.D. (Co)	California Water Policy
Kate Glover	2012-	Ph.D.	California Climate Change
Marcus Thompson	2012-	Ph.D.	Utah Climate Change
Kate Willis	2009-	M.A./Ph.D	Siberia Peat/Calif. Landscape
James Holmquist	2008-2013	Ph.D. (EEB)	James Bay Peatlands
Elyse Zavar	2007-2009	MA	Russian Peatland Dyn.
Christine Zuhlsdorf	2007-	MA	Utah Paleoclimate

Abbie Tingstad	2005-2009	Ph.D.	Utah Paleoclimate
Stephanie Pau	2005-2009	Ph.D. (Co-Adv)	Hawaii Paleovegetation
Laruen Paladino	2005-2009	M.A. (AOS Co-Adv)	So. Calif. Paleoclimate
Dave Beilman	2002-2006	Ph.D.	Siberian Carbon
Jon Campbell	2001-2005	Ph.D.	Mesquite Ecology
Aaron Potito	2000-2005	Ph.D.	Calif. Veg. History
Sigrid Rian	2000-2006	Ph.D.	Malaria in Mali
Amanda Petel	1999-2005	Ph.D.	Sierra Veg. And Fire
Alex Aguilar	1998-2002	Ph.D.	Honduran Pine Dynamics
Judy King	1998-2003	M.A.	Western Drought
David Porinchu	1998-2002	Ph.D.	Sierra Paleolimnology
Sigrid Rian	1998-2000	M.A.	L.A. Basin Drought
Bruce Gervais	1997-2001	Ph.D.	Kola Treeline History
Roslyn Case	1996-2000	Ph.D.	Spatial and Temporal Patterns of Prairie Drought

McMaster

<u>Student</u>	<u>Year</u>	<u>Program</u>	<u>Theses/Project Title</u>
Michael Pisaric	1994-96	M.Sc.	Treeline History in Yakutia, Northeastern Siberia
Roslyn Case	1992-94	M.Sc.	Dendroclimatology of Prairie Drought
Katherine McLeod	1988-91	M.Sc.	Postglacial Population Dynamics of Three Boreal Conifers.

Julian Szeicz	1987-89	M.Sc.	Palaeoecology of the Ontario Oak Plains.
	1990-94	Ph.D.	Treeline History of the Mackenzie Mts., N.W.T.
Chris Larsen	1986-89	M.Sc.	Variations in Boreal Forest Fire Frequency
	1989-94	Ph.D.	Annual Pollen and Charcoal Deposition in a Meromictic Lake
Katrina Moser	1986-88	M.Sc.	Treeline History North of Yellowknife, N.W.T.
	1992-96	Ph.D.	Boreal Paleolimnology

Lifetime Publications

Books and Monographs

Murphy, A.B., Colleton, N., Downs, R.M., Goodchild, M.F., Hanson, S., Lawson, V., MacDonald, G., Magilligan, F.J., Moseley, F.J., Polsky, C., Seto, K.C. and Wright, D.J. 2010. *Understanding the Changing Planet: Strategic Directions for the Geographical Sciences*. National Academies Press, Washington, DC. 220 p.

Moser, K.A., Smol, J.P. and MacDonald, G.M. 2004. *Ecology and Distribution of Diatoms from Boreal Forest Lakes in Wood Buffalo National Park, Northern Alberta and Northwest Territories, Canada*. The Academy of Natural Sciences, Philadelphia 59 p.

MacDonald, G.M. 2002. *Biogeography: Space, Time and Life*. John Wiley and Sons, New York. 518 p. (Cowles Award Winner)

Peer Reviewed Contributions to Books

MacDonald, G.M. 2014. Carbon Dioxide, Climate Change, and Crops in the Twenty-First Century: The Dawn of a New World. In Pessaraki, Mohammad, ed. *Handbook of plant and crop physiology*. CRC Press, 2014. 817-826.

Overpeck, J., G. Garfin, A. Jardine, D. E. Busch, D. Cayan, M. Dettinger, E. Fleishman, A. Gershunov, G. MacDonald, K. T. Redmond, W. R. Travis, and B. Udall. 2013. "Summary

for Decision Makers.” In *Assessment of Climate Change in the Southwest United States: A Report Prepared for the National Climate Assessment*, edited by G. Garfin, A. Jardine, R. Merideth, M. Black, and S. LeRoy, 1–20.

Fleishman, E., J. Belnap, N. Cobb, C. A. F. Enquist, K. Ford, G. MacDonald, M. Pellant, T. Schoennagel, L. M. Schmit, M. Schwartz, S. van Drunick, A. L. Westerling, A. Keyser, and R. Lucas. 2013. “Natural Ecosystems.” In *Assessment of Climate Change in the Southwest United States: A Report Prepared for the National Climate Assessment*, edited by G. Garfin, A. Jardine, R. Merideth, M. Black, and S. LeRoy, 148–167.

MacDonald, G.M. 2012. Climate change and the central Canadian treeline. in H. French and O. Slaymaker (eds.) *Changing Cold Environments: A Canadian Perspective*, First Edition. John Wiley & Sons, Chichester. 185-199.

MacDonald, G.M. 2011. Global climate change. in J.A. Agnew and D.N. Livingstone (eds.) *Geographical Knowledge*. Sage, London, 540-548.

MacDonald, G.M. 2010. Art, architecture, artifice and the imagined landscape: reflections on Los Angeles and Denis Cosgrove. in V. Della Dora, S. Digby and B. Basdas (eds.) *Visual and Historical Geography*. Historical Geography Research Series, Royal Geographical Society – Institute of British Geographers, London. 130-136.

Gillespie, T.W. and MacDonald, G.M. 2010. Vegetation. in B. Gomez and J.P. Jones III (eds.) *Research Methods in Geography*, Wiley-Blackwell, London, 137-154.

MacDonald, G.M. 2006. Plant Macrofossil Methods and Studies: Megafossils. in S.A. Elias (ed.) *Encyclopedia of Quaternary Science Vol 3*. Elsevier, Oxford, 2298-2307.

MacDonald, G.M. 2006. Arctic treeline. in *McGraw-Hill Yearbook of Science and Technology*. McGraw-Hill, New York, 16-19.

Gajewski, K. and MacDonald, G.M. 2004. Palynology of North American Arctic Lakes. in R. Pienitz, M.S.V. Douglas and J.P. Smol (eds.) *Long Term Environmental Change in Arctic and Antarctic Lakes*. Springer, Netherlands, 89-116.

MacDonald, G.M., Edwards, T.W.D., Gervais, B., Laing, T.E., Pisaric, M.F.J., Porinchu, D.F., Snyder, J.A., Solovieva, N., Trasov, P. and Wolfe, B.B. 2004. Paleolimnological research from northern Russian Eurasia. in R. Pienitz, M.S.V. Douglas and J.P. Smol (eds.) *Long Term Environmental Change in Arctic and Antarctic Lakes*. Springer, Netherlands, 349-380.

MacDonald, G.M. 2002. The boreal forest. in *The Physical Geography of North America*, A.R. Orme (ed.) Oxford University Press, Oxford, 270-290.

MacDonald, G.M. 2001 Conifer stomata. in Tracking Environmental Change Using Lake Sediments, J.P. Smol, H.J.B. Birks and W.M. Last (eds.) Kluwer Academic Publishers, Dordrecht, 33-47.

Kremenetski, K.V., Liu, Kam-Biu and MacDonald, G.M. 1998. The late Quaternary history of pines in northern Asia. in The Pines, D. Richardson (ed.): Cambridge University Press, Cambridge, 95-106.

MacDonald, G.M., Cwynar, L.C. and Whitlock, C. 1998. The late Quaternary history of pines in northern North America. in The Pines, D. Richardson (ed.): Cambridge University Press, Cambridge, 122-136

Scott, P.A., Lavoie, C., MacDonald, G.M., Sveinbjornsson, and Wein, R.W. 1997. Climate change and the future position of the arctic treeline. in Global Change and Arctic Terrestrial Ecosystems, W. Oechel et al. (eds.). Springer, Berlin, 245-265.

Sugita, S., MacDonald, G.M. and Larsen, C.P.S. 1997. Reconstruction of fire disturbance and forest succession from fossil pollen in lake sediments: potential and limitations. in Sediment records of biomass burning, J. Clark et al. (eds.). Springer-Verlag, Berlin, 387-412.

MacDonald, G.M., 1996. Quaternary palynology in Stratigraphic Palynology, J. Jansonius and D.C. McGregor (eds.); American Association of Stratigraphic Palynologist, Houston, Texas, 879-910.

MacDonald, G.M. and Gajewski, K., 1992. The northern treeline of Canada in Geographical Snapshots of North America, D.G. Janelle (ed); Guilford Press, New York, 34-37.

Clague, J.J. and MacDonald, G.M., 1989: Paleoecology and paleoclimatology (Canadian Cordillera); in Chapter 1 of Quaternary Geology of Canada and Greenland, R.J. Fulton (ed.); Geological Survey of Canada, Geology of Canada, no. 1 (also Geological Society of America, The Geology of North America, v. K-1).

MacDonald, G.M., 1987. Forests of the Hamilton region: Past, present and future in Steel City: A Geography of Hamilton and Region, M.J. Dear, J.J. Drake and L.G. Reeds (eds.); University of Toronto Press, Toronto, 65-84.

Peer Reviewed Journal Articles

Holmquist, J.R., Finkelstein, S.A., Garneau, M., Massa, C., Yu, Z. and MacDonald, G.M., 2016. A comparison of radiocarbon ages derived from bulk peat and selected plant macrofossils in basal peat cores from circum-arctic peatlands. Quaternary Geochronology, 31, pp.53-61.

Holmquist, J. R., Booth, R. K., & MacDonald, G. M. (2015). Boreal Peatland Water Table Depth and Carbon Accumulation During the Holocene Thermal Maximum, Roman Warm Period, and Medieval Climate Anomaly. *Palaeogeography, Palaeoclimatology, Palaeoecology* 444, 15-27.

Rosencranz, J.A., Ganju, N.K., Ambrose, R.F., Brosnahan, S.M., Dickhudt, P.J., Guntenspergen, G.R., MacDonald, G.M., Takekawa, J.Y. and Thorne, K.M., 2015. Balanced Sediment Fluxes in Southern California's Mediterranean-Climate Zone Salt Marshes. *Estuaries and Coasts*, pp.1-15.

Philben, M., Holmquist, J., MacDonald, G., Duan, D., Kaiser, K. and Benner, R. 2015. Temperature, oxygen, and vegetation controls on decomposition in a James Bay peatland, *Global Biogeochemical Cycles*, 29, 729–743. doi:10.1002/2014GB004989.

Willis, K. S., Beilman, D., Booth, R. K., Amesbury, M., Holmquist, J., & MacDonald, G. 2015. Peatland paleohydrology in southern West Siberian Lowlands: Comparison of multiple testate amoeba transfer functions, sites, and Sphagnum $\delta^{13}\text{C}$ values. *The Holocene*, DOI: 10.1177/0959683615585833.

Holmquist, J. R., Reynolds, L., Brown, L. N., Southon, J. R., Simms, A. R., & MacDonald, G. M. 2015. Marine radiocarbon reservoir values in Southern California estuaries: Interspecies, latitudinal, and interannual variability. *Radiocarbon*, 57, 449–458 DOI: 10.2458/azu_rc.57.18389.

Armitage, D., de Loë, R. C., Morris, M., Edwards, T. W., Gerlak, A. K., Hall, R. I., Huitema, D., Ison, R., Livingstone, D., MacDonald, G., Mirumachi, N., Plummer R Wolfe, B. B. 2015. Science–policy processes for transboundary water governance. *Ambio* 2015, 1-14. DOI 10.1007/s13280-015-0644-x

Hargan, Kathryn E., Kathleen M. Rühland, Andrew M. Paterson, James Holmquist, Glen M. MacDonald, Joan Bunbury, Sarah A. Finkelstein, and John P. Smol. 2015. Long-term successional changes in peatlands of the Hudson Bay Lowlands, Canada inferred from the ecological dynamics of multiple proxies. *The Holocene* 25, no. 1: 92-107.

Hargan, K.E., K.M. Rühland, A.M. Paterson, S.A. Finkelstein, J. Holmquist, G.M. MacDonald, W. Keller, and J.P. Smol. 2015. The influence of water table depth and pH on the spatial distribution of diatom species in peatlands of the Boreal Shield and Hudson Plains, Canada. *Botany* 93, 57-74. DOI:10.1139/cjb-2014-0138.

Zhang,Z., Y. Xue, G. MacDonald, P. M. Cox, and G. J. Collatz. 2015. Investigation of North American vegetation variability under recent climate: A study using the SSiB4/TRIFFID biophysical/dynamic vegetation model, *Journal of Geophysical Research: Atmosphere* 120, doi:10.1002/2014JD021963.

Reinemann, S. A., Porinchu, D. F., MacDonald, G. M., Mark, B. G., & DeGrand, J. Q. 2014. A 2000-yr reconstruction of air temperature in the Great Basin of the United States with specific reference to the Medieval Climatic Anomaly. *Quaternary Research*, 82(2), 309-317.

Julie Loisel, Zicheng Yu, David W Beilman et al...INCLUDING MacDonald, GM.... 2014. A database and synthesis of northern peatland soil properties and Holocene carbon and nitrogen accumulation. The Holocene DOI 0959683614538073.

Holmquist, J. R. and MacDonald, G.M.. 2014. Peatland succession and long-term apparent carbon accumulation in central and northern Ontario, Canada. *The Holocene* 24, 1075-1089.

Buermann, W., Parida, B., Jung, M., MacDonald, G.M., Tucker, C.J. and Reichstein, M. 2014, Recent shift in Eurasian boreal forest greening response may be associated with warmer and drier summers, *Geophysical Research. Letters* 41, 1995–2002, doi:10.1002/2014GL05945.

Holmquist, J.R., MacDonald, G.M., Gallego-Sala, A.V. 2014. Peatland Initiation, Carbon Accumulation, and 2 ka Depth in the James Bay Lowland and Adjacent Regions. *Arctic, Antarctic, and Alpine Research*, 46(1), 19-39

Yu, Z., J. Loisel, M. R. Turetsky, S.Cobb. Zhao, S. Frolking, G. M. MacDonald, and J. L. Bubier, 2013. Evidence for elevated emissions from high-latitude wetlands contributing to high atmospheric CH₄ concentration in the early Holocene, *Global Biogeochemical Cycles*, 27, 131–140, doi:10.1002/gbc.20025.

Charman, D. J., Beilman, D. W., Blaauw, M., Booth, R. K., Brewer, S., Chambers, F. M., Christen, J. A., Gallego-Sala, A., Harrison, S. P., Hughes, P. D. M., Jackson, S. T., Korhola, A., Mauquoy, D., Mitchell, F. J. G., Prentice, I. C., van der Linden, M., De Vleeschouwer, F., Yu, Z. C., Alm, J., Bauer, I. E., Corish, Y. M. C., Garneau, M., Hohl, V., Huang, Y., Karofeld, E., Le Roux, G., Loisel, J., Moschen, R., Nichols, J. E., Nieminen, T. M., MacDonald, G. M., Phadtare, N. R., Rausch, N., Sillasoo, Ü., Swindles, G. T., Tuittila, E.-S., Ukonmaanaho, L., Väliranta, M., van Bellen, S., van Geel, B., Vitt, D. H., and Zhao, Y.: 2012. Climate-related changes in peatland carbon accumulation during the last millennium, *Biogeosciences*, 10, 929-944, doi:10.5194/bg-10-929-2013.

MacDonald, G.M., Beilman D.W. Kuzmin, Y.V., Orlova, L.A., Kremenetski, K.V., Shapiro, B., Wayne, R.K. and Van Valkenburgh, B. 2012. Pattern of extinction of the woolly mammoth in Beringia. *Nature Communications* DOI: 10.1038/ncomms1881

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Other Publications

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MacDonald, G.M. 2014/15. The Next John Muir Is Chasing Butterflies in the Heart of L.A. The Conservationists of the 21st Century Will Be City Kids. Zocalo (December 24, 2014)
<http://www.zocalopublicsquare.org/2014/12/24/the-next-john-muir-is-chasing-butterflies-in-the-heart-of-l-a/ideas/nexus/> / *Republished as* Opinion - Introduce urban Californians to what John Muir sought to protect. San Francisco Chronicle and SF Gate January 9, 2015
<http://www.sfchronicle.com/opinion/article/Introduce-urban-Californians-to-what-John-Muir-6004911.php> and <http://www.sfgate.com/opinion/article/Introduce-urban-Californians-to-what-John-Muir-6004911.php>

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Research Funding (PI or Co-PI)

<u>Year</u>	<u>Grantor</u>	<u>Amount</u>	<u>Title of Project</u>
2014	Dept. Interior	\$105,050	California Marshes and Sea Level
2014	Govt. Quebec	12,000	Carbon Trade Symposium
2013	National Parks	26,265	Remote Sensing Monitoring
Protocol			
2012	Dept. Interior	202,227	California Marshes and Sea Level
2012	Marisla Fnd.	60,000	California Marsh Restoration
2011	Dept. Interior	684,530	SW Climate Science Center
2009	NSF	181,000	Peatland Biogeochemistry
2007	UC MEXUS	1,400	Drought Session – AGU Mexico
2006	NSF	626,610	Global Peatland Hydrology
2004	NSF	397,002	Canadian Arctic Paleoclimate
2004	NSF	300,000	Utah Paleoclimate
2004	NSF	349,203	Arctic Env. Change and Genetics
2003	NSF	583,114	Siberian Hydrology
2002	NSF	124,000	Sierra Paleoclimate
2002	NSF	238,965	PARCS Committee Grant
1999	NSF	711,000	Siberian Carbon History
1999	NSF	180,000	Sierra Paleolimate
1997	UC Water	27,000	Colorado River Drought
1996	NSF	13,000	PALE Workshop
1996	UCLA	2,467	California Pollen
1996	NSF	100,110	N. Great Plains Paleoclimate
1996	NSF	182,010	Kola Pen. Paleoecology
1995	UCLA	2,300	Tree-ring Density Calibration
1994	PAGES	4,000	Russian Scientific Exchange

1994	NSERC (Equipment)	15,960	Normarski-DIC Microscope
1993	NSERC Special (Collaborative-PI)	1,080,000	Treeline Canada-Russia
1993	McMaster Committee on Northern Studies	3,500	Northern Studies
1993	NSERC (Operating)	94,500	Palaeoclimate Canada-Russia
1993	NSERC (Equipment)	11,300	Thin-Section Saw
1992	NSERC (Special Collaborative)	23,000	Russian Arctic Fieldwork
1992	McMaster Committee on Northern Studies	5,500	Northern Studies
1991	NSERC (Equipment)	23,000	Automated Dendrochronology System
1991	Royal Society of Canada	15,000	Planning Funds Canada-USSR Treeline Project
1991	Department of Indian and Northern Affairs	2,500	Planning Funds Canada-USSR Treeline Project
1991	McMaster President's Committee on Northern Studies	5,400	Northern Studies
1990	NSERC (Operating)	99,150	Treeline History, N.W.T.
1990	NWT Government	5,000	Palaeoecology of the Canol Road Region
1990	McMaster President's Committee on Northern Studies	6,500	Northern Studies
1989	NSERC- Royal Society Exchange Fellowship	6,500	Joint Research at Botany School Cambridge University/Visiting Fellow, Clare Hall
1988	McMaster President's Committee on	2,200	Northern Studies

	Northern Studies		
1987-90	NSERC (Operating) (Northern Supplement)	78,810	Postglacial Plant Population Dynamics and Population Genetics in the Western NWT
1987	NSERC (Equipment)	18,400	Micro-Image Analysis System
1987	NWT Government	1,100	14C Dating Funds
1987	McMaster President's Committee on Northern Studies	4,400	Northern Studies
1985-86	NSERC (Operating) (Northern Supplement)	48,000	Postglacial Plant Population Dynamics at the Northern Treeline
1984	McMaster- Science Eng. Res. Board	15,000	Late Quaternary Palaeoecology of the Northern Great Plains
1984	McMaster- Science Eng. Res. Board	5,500	Late Quaternary Palaeoecology of the Northern Great Plains (Equipment)

NB. Canadian universities do not extract overhead costs or pay PI salary from grants

Major Administrative Responsibilities

UCLA

Chair UCLA Geography Development Committee (2014-)

Chair UCLA Canadian Studies Program (2013-)

Director UCLA IoES (2009-2014)

Undergraduate Committee (2006-2008)

Institute of the Environment Executive (2005-2009)

Chair of Geography (2002-2006)

Vice Chair of Geography (1998-2002)

Graduate Advisor (1997-2002)

Graduate Committee (1995-2002)

General Education Committee (1996-2002)

Institute of the Environment, Research Committee (1995)

Library Committee (1995-1996)

McMaster

Associate Chair (1991-1995)

Committee on Relationship Between Geography and Geology (1994-1995)

Geography Environmental Program Co-ordinator (1993-1995)

Committee on Future of Geography at McMaster (1993-1994)
Science and Engineering Tenure and Promotions Committee (1991-1992)
Committee to Select Chair of Geography (1991)
Chair, Departmental Undergraduate Committee (1991-1995)
Committee to Create an Environmental Program in Geography (1990-1991)
University Awards Committee (1990)
Undergraduate Awards Committee (1989)
University Hiring Committee for Liaison Officer (1989)
Departmental Graduate Committee (1989; 1991-1995)
University Graduate Council (1988-1990)
Chair, President's Committee on Northern Studies (1987-1990)
Faculty of Science Orientation Day Organizer (1986)
Departmental Library Representative (1984-1989)
Departmental Open House Organizer (1985)

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