# MARTIN ROBERT GIBLING

### ADDRESS

Dept. of Earth Sciences, Dalhousie University, 1459 Oxford St., P.O. Box 15000, Halifax, N.S. B3H 4R2, Canada, Tel (902) 494-2358; Fax (902) 494-6889; mgibling@dal.ca

### **POSITIONS HELD**

2015-	Emeritus Professor, Dept. of Earth Sciences, Dalhousie University
2013-2015	Research Associate, National Museum of Natural History, Smithsonian Institution
2001-2002	Visiting Professor, Dept. of Geography, Exeter University, U.K.
1997-2015	Professor, Dept. of Earth Sciences, Dalhousie University
1986-1997	Associate Professor, Dalhousie University
1981-1986	Assistant Professor, Dalhousie University
1978-1981	Lecturer, Dept. of Geol. Sciences, Chiang Mai Univ., Thailand
1988-89, 1994-95	Visiting Professor, Dept. of Geology, University of Wollongong, Australia

### **EDUCATION**

1973-1978Ph.D., University of Ottawa1970-1973B.A. (Honours), Balliol College, Oxford University, U.K.

### **PAPERS IN REFEREED JOURNALS, SYMPOSIA & BOOKS**

(past 10 years, since 2008)

- 154. Gibling, M.R. River systems and the Anthropocene: A Late Pleistocene and Holocene timeline for human influence. Quaternary, revisions accepted, 28 Sept. 2018.
- 153. Poursoltani, M.R., Gibling, M.R. & Pe-Piper, G. Diagenesis, burial history, and hydrocarbon potential of Cambrian sandstone in the northern continental margin of Gondwana: a case study of the Lalun Formation in Central Iran. In press, Journal of Asian Earth Sciences, 3 Sept 2018.
- 152. Gao, L., Wang, X., Yi, S., Vandenberghe, J., Gibling, M.R. & Lu, H. Episodic sedimentary evolution of an alluvial fan (Huangshui catchment, NE Tibetan Plateau). In press, Quaternary, 28 Aug. 2018.
- 151. Davies, N.S., Liu, A.G., Gibling, M.R. & Miller, R.F. 2018. Reply to comment on the paper by Davies et al. "Resolving MISS conceptions and misconceptions: A geological approach to sedimentary surface textures generated by microbial and abiotic processes" (Earth Science Reviews, 154 (2016), 210-246. Earth-Science Reviews, v. 176, p. 344-386.
- 150. Simon, S.S.T., Gibling, M.R., DiMichele, W.A., Chaney, D. & Koll, R. An exhumed fine-grained meandering channel in the lower Permian Clear Fork Formation, north-central Texas: Processes of mud accumulation, and the role of vegetation in channel dynamics. Accepted for IAS Special Publication, 5 January 2018.
- 149. Davies, N.S., Gibling, M.R., McMahon, W.J., Slater, B.J., Long, D.G.F., Bashforth, A.R., Berry, C.M., Falcon-Lang, H.J., Gupta, S., Rygel, M.C. & Wellman, C.H. 2017. Discussion on "Tectonic and environmental controls on Palaeozoic fluvial environments: reassessing the impacts of early land plants on sedimentation". Journal of the Geological Society, <u>https://doi.org/10.1144/jgs2016-063</u>

- 148. Minter, N.J., Buatois, L.A., Mangáno, M.G., Davies, N.S., Gibling, M.R., MacNaughton, R.B. & Labandeira, C.C. 2017. Early bursts of diversification defined the faunal colonization of land. Nature Ecology and Evolution, DOI: 10.1038/s41559-017-0175, 10 pp.
- 147. Simon, S.S.T. & Gibling, M.R. 2017. Pedogenic mud aggregates preserved in a fine-grained meandering channel in the Lower Permian Clear Fork Formation, north-central Texas, USA. Journal of Sedimentary Research, v. 87, p. 230-252.
- 146. Simon, S.S.T. & Gibling, M.R. 2017. Fine-grained meandering systems of the Lower Permian Clear Fork Formation of north-central Texas, USA: Lateral and oblique accretion on an arid plain. Sedimentology, v. 64, p. 714-746.
- 145. Simon, S.S.T., Gibling, M.R., DiMichele, W.A., Chaney, D.S., Looy, C.V. & Tabor, N.J. 2016. An abandoned-channel fill with exquisitely preserved plants in redbeds of the Clear Fork Formation, Texas, USA: An Early Permian water-dependent habitat on the arid plains of Pangea. Journal of Sedimentary Research, v. 86, p. 944-964.
- Minter, N.J., Buatois, L.A., Mángano, M.G., MacNaughton, R.B., Davies, N.S. & Gibling, M.R.
  2016. Chapter 5, The Prelude to Continental Invasion. In: Mángano, M.G. & Buatois, L.A. (Eds.), The Trace-Fossil Record of Major Evolutionary Events, vol. 1: Precambrian and Paleozoic, Springer Topics in Geobiology, v. 39, p. 157-204.
- 143. Minter, N.J., Buatois, L.A., Mángano, M.G., Davies, N.S., Gibling, M.R. & Labandeira, C. 2016. Chapter 6, The Establishment of Continental Ecosystems. In: Mángano, M.G. & Buatois, L.A. (Eds.), The Trace-Fossil Record of Major Evolutionary Events, vol. 1: Precambrian and Paleozoic, Springer Topics in Geobiology, v. 39, p. 205-324.
- 142. Smith, N.D., Morozova, G.S., Pérez-Arlucea, M. & Gibling, M.R. 2016. Dam-induced and natural channel changes in the Saskatchewan River below the E.B. Campbell dam, Canada. Geomorphology, v. 269, p. 186-202.
- 141. Davies, N.S., Liu, A.G., Gibling, M.R. & Miller, R.F. 2016. Resolving MISS conceptions and misconceptions: A geological approach to sedimentary surface textures generated by microbial and abiotic processes. Earth-Science Reviews, v. 154, p. 210-246.
- 140. Falcon-Lang, H.J., Bashforth, A.R., Gibling, M.R., Minter, N.J., & Miller, R.F. 2015. Mid-Carboniferous diversification of continental ecosystems inferred from ichnocoenoses in the Tynemouth Creek Formation of New Brunswick, Canada. Palaeogeography, Palaeoclimatology, Palaeoecology, v. 440, p. 142-160.
- 139. Falcon-Lang, H.J., Pufahl, P.K., Bashforth, A.R., Gibling, M.R., Miller, R.F. & Minter, N.J. 2015. A marine incursion in the Lower Pennsylvanian Tynemouth Creek Formation, Canada: Implications for paleogeography, stratigraphy and paleoecology. Palaios, v. 30, p. 7779-791.
- 138. Forde, T.C., Nedimović, M.R., Gibling, M.R. & Forbes, D.L. 2015. Coastal evolution over the past 3000 years at Conrads Beach, Nova Scotia: the influence of local sediment supply on a transgressive system. Estuaries and Coasts, published online 4 Sept., 2015.
- 137. Ielpi, A., Gibling, M.R., Bashforth, A.R., Dennar, C.I. 2015. Impact of vegetation on Early Pennsylvanian fluvial channels: insight from the Joggins Formation of Atlantic Canada. Journal of Sedimentary Research, v. 85, p. 999-1018.
- 136. Rygel, M.C., Lally, C., Gibling, M.R., Ielpi, A., Calder, J.H. & Bashforth, A.R. 2015. Sedimentology and stratigraphy of the type section of the Pennsylvanian Boss Point Formation, Joggins Fossil Cliffs, Nova Scotia, Canada. Atlantic Geology, v. 51, p. 1-43.

- 135. Prescott, Z.M., Stimson, M.R., Dafoe, L.T., Gibling, M.R., MacRae, R.A., Calder, J.H. & Hebert, B.L. 2014. Microbial mats and ichnofauna of a fluvial-tidal channel in the Lower Pennsylvanian Joggins Formation, Canada. Palaios, v. 29, p. 624-645.
- 134. Gibling, M.R., Davies, N.S., Falcon-Lang, H.J., Bashforth, A.R., DiMichele, W.A., Rygel, M.C. & Ielpi, A. 2014. Palaeozoic co-evolution of rivers and vegetation: a synthesis of current knowledge. Proceedings of the Geologists' Association, v. 125, p. 524-533.
- 133. Harrison, C., Barr, S., Blakey, R., Gibling, M., Haidl, F., Lavoie, D., Monger, J., van Staal, C., Bamber, W., Boyce, D., Calder, J., Colpron, M., Dewing, K., Fensome, R., Gensel, P., Knight, I., Malo, M., Melchin, M., Jutras, P., Nelson, J., Nowlan, G., Price, R., Rudkin, D., Sanford, B., Williams, G., Young, Y. & Zonneveld, J-P., 2014. "Chapter 8: Crossing the equator: Canada 444 to 251 million years ago", in "Four Billion Years and Counting: Canada's Geological Heritage. Fensome, R., Williams, G., Achab, A., Clague, J., Corrigan, D., Monger, J. and Nowlan, G. eds., Canadian Federation of Earth Sciences / Nimbus Press, p. 130-159.
- 132. Corenblit, D., Davies, N.S., Steiger, J., Gibling, M.R. & Bornette, G. 2014. Considering river structure and stability in the light of evolution: feedbacks between riparian vegetation and hydrogeomorphology: Earth Surface Process and Landforms, published online Aug. 21, 2014, DOI:10.1002/esp.3643
- 131. Smith, N.D., Morozova, G.S. & Gibling, M.R. 2014. Channel enlargement by avulsion-induced sediment starvation in the Saskatchewan River. Geology, v. 42, p. 355-358.
- 130. Allen, J.P., Fielding, C.R., Gibling, M.R. & Rygel, M.C. 2014. Recognizing products of paleoclimate fluctuation in the fluvial stratigraphic record: an example from the Pennsylvanian to Lower Permian of Cape Breton Island, Nova Scotia. Sedimentology, doi: 10.1111/sed.12012.
- 129. Ielpi, A., Gibling, M.R., Bashforth, A.R., Lally, C., Rygel, M.C. & Al-Silwadi, S. 2014. Role of vegetation in shaping Early Pennsylvanian braided rivers: Architecture of the Boss Point Formation, Atlantic Canada. Sedimentology, v. 61, p. 1659-1700.
- 128. Hidy, A.J., Gosse, J.C., Blum, M.D. & Gibling, M.R. 2014. Glacial-interglacial variation in denudation rates from interior Texas, USA, established with cosmogenic nuclides. Earth and Planetary Science Letters, v. 390, p. 209-221.
- 127. Kennedy, K.L., Gibling, M.R., Eble, C.F., Gastaldo, R.A., Gensel, P.G., Werner-Zwanziger, U. & Wilson, R.A. 2013. Lower Devonian coaly shales of northern New Brunswick, Canada: plant accumulations in the early stages of terrestrial colonization. Journal of Sedimentary Research, v. 83, p. 1202-1215.
- 126. Bashforth, A.R., Cleal, C.J., Gibling, M.R., Falcon-Lang, H.J. & Miller, R.F. 2014. Paleoecology of Early Pennsylvanian vegetation on a seasonally dry tropical landscape (Tynemouth Creek Formation, New Brunswick, Canada). Review of Palaeobotany and Palynology, v. 200, p. 229-263.
- 125. Davies, N.S. & Gibling, M.R. 2013. The sedimentary record of Carboniferous rivers: Continuing influence of land plant evolution on alluvial processes and Palaeozoic ecosystems. Earth-Science Reviews, v. 120, p. 40-79.
- 124. Allen, J.P., Fielding, C.R., Rygel, M.C. & Gibling, M.R. 2013. Deconvolving signals of tectonic and climatic controls from continental basins: an example from the Late Palaeozoic Cumberland Basin, Atlantic Canada. Journal of Sedimentary Research, v. 83, p. 847-872.
- 123. Kermode, S.J., Gibling, M.R., Jones, B.G., Cohen, T.J., Price, D.M. & Daley, J.S. 2013. Determining the impact of the Holocene highstand at the coastal-fluvial interface, Shoalhaven River, southeastern Australia: Earth Surface Processes and Landforms, v. 38, p. 1481-1495.

- 122. Waldron, J.W.F., Rygel, M.C., Gibling, M.R. & Calder, J.H. 2013. Evaporite tectonics and the late Paleozoic stratigraphic development of the Cumberland basin, Appalachians of Atlantic Canada. Geological Society of America Bulletin, v. 125, p. 945-960.
- 121. Kennedy, K., Miller, R.F. & Gibling, M.R. 2012. Palaeoenvironments of Early Devonian fish and other aquatic fauna of the Campbellton Formation, New Brunswick, Canada: Palaeogeography, Palaeoclimatology, Palaeoecology, v. 361-362, p. 61-72.
- 120. Davies, N.S. & Gibling, M.R. 2012. Discussion of "Early Cambrian metazoans in fluvial environments, evidence of the non-marine Cambrian radiation" by M.J.Kennedy and M.L.Droser. Geology, June 2012, p. e270.
- 119. Kennedy, K., Gensel, P.G. & Gibling, M.R. 2012. Paleoenvironmental inferences from the classic Early Devonian plant-bearing locality of the Campbellton Formation, New Brunswick, Canada: Palaios, v. 27, p. 424-438.
- 118. Miller, R.F., Kennedy, K. & Gibling, M.R. 2012. A eurypterid from the lacustrine facies of the Early Devonian Campbellton Formation, New Brunswick, Canada: Atlantic Geology, v. 48, p. 14-19.
- 117. Gibling, M.R. & Davies, N.S. 2012. Palaeozoic landscapes shaped by plant evolution. Nature Geoscience, v. 5, p. 99-105. Published online 1 Feb 2012, DOI:10.1038/NGEO1376.
- 116. Roy, N.G., Sinha, R. & Gibling, M.R. 2012. Aggradation, incision and interfluve flooding in the Ganga Valley over the past 100,000 years: Testing the influence of monsoonal precipitation: Palaeogeography, Palaeoclimatology, Palaeoecology, v. 356-357, p. 38-53.
- 115. Kennedy, K. & Gibling, M.R., 2011. The Campbellton Formation, New Brunswick, Canada: paleoenvironments in an important Early Devonian terrestrial locality: Canadian Journal of Earth Sciences, v. 48, p. 1561-1580.
- 114. Davies, N.S. & Gibling, M.R. 2011. The co-evolution of fixed-channel alluvial plains and Carboniferous vegetation: Nature Geoscience, v. 4, p. 629-633. DOI:10/1083/NGEO1237.
- 113. Davies, N.S., Rygel, M.C. & Gibling, M.R. 2011. Marine influence in the Upper Ordovician Juniata Formation (Potters Mills, Pennsylvania): Implications for the history of life on land: Reply (to Discussion by G.Retallack): Palaios, v. 26, p. 674-676.
- 112. Poursoltani, M.R. & Gibling, M.R. 2011. Composition, porosity, and reservoir potential of the Middle Jurassic Kashafrud Formation, northeast Iran: Journal of Marine and Petroleum Geology, v. 28, p. 1094-1110. doi:10.1016/j.marpetgeo.2010.11.004
- 111. Davies, N.S., Gibling, M.R. & Rygel, M.C. 2011. Alluvial facies evolution during the Palaeozoic greening of the continents: Case studies, conceptual models and modern analogues: Sedimentology (Special Decadal Issue), v. 58, p. 220-258.
- 110. Allen, J.P., Fielding, C.R., Gibling, M.R. & Rygel, M.C. 2011. Fluvial response to paleo-equatorial climate fluctuations during the Late Paleozoic Ice Age: Geological Society of America Bulletin, v. 123, p. 1524-1538. published online 11 Feb 2011, doi 10.1130/B30314.1
- 109. Dolby, G., Falcon-Lang, H.J. & Gibling, M.R. 2011. A conifer-dominated palynological assemblage from Pennsylvanian (late Moscovian) alluvial drylands in Atlantic Canada: implications for the vegetation of tropical lowlands during glacial phases: Journal of the Geological Society, v. 168, p. 571-584. doi: 10.1144/0016-76492010-061
- 108. Gibling, M.R., Fielding, C.R. & Sinha, R., 2011, Alluvial valleys and alluvial sequences: Towards a geomorphic assessment: In From River to Rock Record: The Preservation Of Fluvial Sediments And Their Subsequent Interpretation, edited S.Davidson, S.Leleu, and C.North, SEPM Special Publication 97, p. 423-447.
- 107. Bashforth, A.R., Drábková, J., Opluštil, S., Gibling, M.R., & Falcon-Lang, H.J. 2011. Landscape

gradients and patchiness in riparian vegetation on a Middle Pennsylvanian braided river-plain prone to flood disturbance (Nýřany Member, Central and Western Bohemian Basin, Czech Republic): Review of Palaeobotany and Palynology, v. 163, p. 153-189.

- 106. Fielding, C.R., Allen, J.P., Alexander, J., Gibling, M.R., Rygel, M.C., and Calder, J.H. 2011. Fluvial systems and their deposits in the seasonal tropics and subtropics: modern and ancient examples. In From River to Rock Record: The Preservation Of Fluvial Sediments And Their Subsequent Interpretation, edited S.Davidson, S.Leleu, and C.North, SEPM Special Publication 97, p. 89-111.
- 105. Quann, S.L., Young, A.B., Laroque, C.P., Falcon-Lang, H.J. & Gibling, M.R. 2010. Dendrochronological dating of coal mine workings at the Joggins Fossil Cliffs, Nova Scotia, Canada: Atlantic Geology, v. 46, p. 185-194.
- 104. Sinha, R., Tandon, S.K., and Gibling, M.R. 2010. Shallow sub-surface stratigraphy of the Ganga basin, Himalayan Foreland: Present status and future perspectives: Quaternary International, v. 227, p. 81-86.
- 103. Falcon-Lang, H.J., Gibling, M.R. Miller, R.F., Benton, M.J., & Bashforth, A.R. 2010. Diverse tetrapod trackways in the Early Pennsylvanian Tynemouth Creek Formation, southern New Brunswick, Canada: Palaeogeography, Palaeoclimatology, Palaeoecology, v. 296, p. 1-13.
- 102. Davies, N.S., Rygel, M.C. & Gibling, M.R. 2010. Marine influence in the Upper Ordovician Juniata Formation (Potters Mills, Pennsylvania): Implications for the history of life on land: Palaios, v. 25, p. 527-539.
- 101. Bashforth, A.R., Falcon-Lang, H.J. & Gibling, M.R. 2010. Vegetation heterogeneity on a Late Pennsylvanian braided-river plain draining the Variscan Mountains, La Magdalena Coalfield, northwestern Spain. Palaeogeography, Palaeoclimatology, Palaeoecology, v. 292, p. 367-390.
- 100. Gibling, M.R., Bashforth, A.R., Falcon-Lang, H.J., Allen, J.P. & Fielding, C.R. 2010. Log jams and flood-sediment buildup caused channel abandonment and avulsion in the Pennsylvanian of Atlantic Canada: Journal of Sedimentary Research, v. 80, p. 268-287.
- 99. Davies, N.S. & Gibling, M.R. 2010. Paleozoic vegetation and the Siluro-Devonian rise of fluvial lateral accretion sets: Geology, v. 38, p. 51-54.
- 98. Davies, N.S. & Gibling, M.R. 2010. Cambrian to Devonian evolution of alluvial systems: The sedimentological impact of the earliest land plants: Earth-Science Reviews, v. 98, p. 171-200.
- 97. Catuneanu, O., Bhattacharya, J.P., Blum, M.D., Dalrymple, R.W., Eriksson, P.G., Fielding, C.R., Fisher, W.L., Galloway, W.E., Gianolla, P., Gibling, M.R., Giles, K.A., Holbrook, J.M., Jordan, R., Kendall, C.G.St.C., Macurda, B., Martinsen, O.J., Miall, A.D., Nummedal, D., Posamentier, H.W., Pratt, B.R., Shanley, K.W., Steel, R.J., Strasser, A. & Tucker, M.E. 2010. Sequence Stratigraphy: common ground after three decades of development: First Break, v. 28, p. 21-34.
- 96. Catuneanu, O. Abreu, V., Bhattacharya, J.P., Blum, M.D., Dalrymple, R.W., Eriksson, P.G., Fielding, C.R., Fisher, W.L., Galloway, W.E., Gibling, M.R., Giles, K.A., Holbrook, J.M., Jordan, R., Kendall, C.G.St.C., Macurda, B., Martinsen, O.J., Miall, A.D., Neal, J.E., Nummedal, D., Pomar, L., Posamentier, H.W., Pratt, B.R., Sarg, J.F., Shanley, K.W., Steel, R.J., Strasser, A., Tucker, M.E., & Winker, C. 2009. Reply to the comments of W.Helland-Hansen on "Towards the Standardization of Sequence Stratigraphy: Earth-Science Reviews, v. 94, p. 1-33.
- 95. Fielding, C.R., Allen, J.P., Alexander, J., & Gibling, M.R. 2009, Facies models for fluvial systems in the seasonal tropics and subtropics: Geology, v. 37, p. 623-626.

- 94. Sinha, R., Kettanah, Y., Gibling, M.R., Tandon, S.K., Jain, M., Bhattacharjee, P., Dasgupta, A. & Ghazanfari, P. 2009, Craton-derived alluvium as a major sediment source in the Himalayan Foreland Basin of India. Geological Society of America Bulletin, v. 121, p. 1596-1610.
- 93. Catuneanu, O. Abreu, V., Bhattacharya, J.P., Blum, M.D., Dalrymple, R.W., Eriksson, P.G., Fielding, C.R., Fisher, W.L., Galloway, W.E., Gibling, M.R., Giles, K.A., Holbrook, J.M., Jordan, R., Kendall, C.G.St.C., Macurda, B., Martinsen, O.J., Miall, A.D., Neal, J.E., Nummedal, D., Pomar, L., Posamentier, H.W., Pratt, B.R., Sarg, J.F., Shanley, K.W., Steel, R.J., Strasser, A., Tucker, M.E., & Winker, C. 2009. Towards the Standardization of Sequence Stratigraphy: Earth-Science Reviews, v. 92, p. 1-33.
- 92. Tandon, S.K., Sinha, R., Gibling, M.R., Dasgupta, A.S., & Ghazanfari, P. 2008. Late Quaternary evolution of the Ganga Plains: Myths and misconceptions, recent developments and future directions: In Gupta, H. & Fareeduddin (Eds.), Recent Advances in Earth System Science, Golden Jubilee Memoir of the Geological Society of India, No. 66, p. 259-299.
- 91. Gibling, M.R., Sinha, R., Roy, N.G., Tandon, S.K., & Jain, M. 2008. Quaternary fluvial and eolian deposits on the Belan River, India: paleoclimatic setting of Paleolithic to Neolithic archeological sites over the past 85,000 years: Quaternary Science Reviews, v. 27, p. 391-410.
- 90. Gibling, M.R. & Rygel, M.C. 2008. Late Paleozoic cyclic strata of Euramerica: Recognition of Gondwanan glacial signatures during periods of thermal subsidence. In Fielding, C.R., Frank, T.D. and Isbell, J.L. (Eds), Resolving the Late Paleozoic Ice Age in Time and Space, Geological Society of America Special Publication 441, p. 219-233.
- 89. Gibling, M.R., Culshaw, N., Rygel, M.C., & Pascucci, V. 2008. The Maritimes Basin of Atlantic Canada: Basin Creation and Destruction in the Collisional Zone of Pangea. In A.D.Miall (Editor) "The Sedimentary Basins of the United States and Canada", Elsevier, p. 211-244.

### **GUEST EDITORSHIPS**

- Sinha, R, Tandon, S.K. & Gibling, M.R. (Guest Editors), 2010. Shallow sub-surface stratigraphy of the Ganga Basin, India: Approaches and implications for fluvial processes, climate change and active tectonics in the late Quaternary. Quaternary International, v. 227, issue 2, 15 Nov. 2010.
- Calder, J.H. & Gibling, M.R. (Guest Editors), 1994. Palaeogeography, Palaeoclimatology, Palaeoecology, issue in volume 106 on the Euramerican Coal Province.

### **INVITED SPEAKER** (since 2008)

2017 Invited presentation "River history and longevity through geological time: an update", International Conference on Fluvial Sedimentology, Calgary, Canada, July 2017. Invited presentation "How plants bent and split rivers: the effects of evolving vegetation on 2015 Palaeozoic landscapes", Royal Holloway University of London, Nov. 2015; and at Dalhousie University, Canada, Jan. 2016. Invited Keynote Conference Presentation, International Conference of Fluvial 2013 Sedimentology, Leeds, UK, July 2013, "Evolving Paleozoic rivers: the co-evolution of landforms, plants and animals." Invited Presentation in Geocycle Symposium Series, Johannes Gutenberg University, 2013 Mainz, Germany, Jan 2013. Invited Presentation on rivers and plants, Smithsonian Institution, Washington, Dec 2012. 2012 Invited Keynote Conference Presentation, "Rivers in Far-Off Times: Landscape Evolution 2012 in the Paleozoic", Geologists Association (UK) Annual Meeting, Exeter, UK, Oct 2012.

- 2011 Invited Conference Presentation on Ganges River history since the LGM, AGU Annual Meeting, San Francisco, Dec 2011.
- 2011 Invited Presentation on Rivers and Plants, Baylor University, Waco, Texas, Dec 1, 2011.
- 2011 Invited Presentation, Nova Scotia Agriculture College, "Lost Rivers", Oct 26, 2011
- 2011 Invited Presentation, Dalhousie Faculty of Science, "Lost Rivers: Natural Causes and Careless Humans", Sept. 27, 2011
- 2010 Invited Presentation, "Invasion of Plants", Univ. of New Mexico, Albuquerque, Nov 2010
- 2010 Invited Presentation on "Invasion of the Plants", University of Toronto, May 2010
- 2010 Banquet Address, Fieldwork in India, Geoscientists of NS, Professional Assoc., Mar 2010.
- 2009 Keynote Address at IAS European Meeting, Alghero, Sardinia
- 2009 Kenote Address at Fluvial geomorphology conference, Aberdeen.

## **POST-DOCTORAL FELLOWS & RESEARCH ASSOCIATES**

Poursoltani, M.R. 2013-14	Funding towards sabbatical leave, Dalhousie Univ.
Morozova, G. 2010-12	Funded from NSERC Discovery Grant (Research Associate)
Davies, N.S. 2007-2011	Funded from NSERC Discovery Grant
Kettanah, Y. 2005	Funded from NSERC Discovery Grant (Research Associate)
Falcon-Lang, H.J. 2001-3	Killam Post-doctoral Fellow
Pascucci, V. 1999	Killam Post-doctoral Fellow
Martel, A.T. 1995-8	Funded from NSERC Strategic Grant

# **THESES & PROJECTS SUPERVISED**

#### **Doctoral Theses** (8 completed)

- Frail-Gauthier, J. 2018. Ecological interactions and geological implications of foraminifera and associated meiofauna in temperate salt marshes of eastern Canada. Unpubl. Ph.D. thesis, Dalhousie University, Halifax, Nova Scotia. (Co-Supervised with S. Sterling).
- Simon, S.S.T. 2016. Sedimentology of the fluvial systems of the Clear Fork Formation in north central Texas: Implications for Early Permian paleoclimate and plant fossil taphonomy. Unpubl. Ph.D. thesis, Dalhousie University, Halifax, Nova Scotia.
- Bashforth, A.R. 2010. The paleoecology of vegetation on Pennsylvanian basin margins: Unpubl. Ph.D. thesis, Dalhousie University, Halifax, Nova Scotia. (Co-Supervised with H. Falcon-Lang).
- Rygel, M.C. 2005. Alluvial sedimentology and basin analysis of Carboniferous strata near Joggins, Nova Scotia, Atlantic Canada: Unpubl. Ph.D. thesis, Dalhousie University, Halifax, Nova Scotia, 489 p.
- Brown, J.P. 1998. Deformation and sedimentation adjacent to Carboniferous diapiric salt structures, Nova Scotia. Ph.D. thesis, Dalhousie University, 486 pp.
- Rehill, T.A. 1996. Late Carboniferous Nonmarine Sequence Stratigraphy and Petroleum Geology of the Central Maritimes Basin, Eastern Canada. Ph.D. thesis, Dalhousie University, 406 pp. (Cosupervisor)
- Calder, J.H. 1991. Controls on Westphalian peat accumulation: the Springhill Coalfield, Nova Scotia. Ph.D. thesis, Dalhousie University, 310 pp.
- Martel, A.T. 1990. Stratigraphy, fluviolacustrine sedimentology and cyclicity of the Late Devonian/Early Carboniferous Horton Bluff Formation, Nova Scotia, Canada. Ph.D. thesis, Dalhousie University, 297 pp.

#### Masters Theses (14 completed)

Tobey, D. Sedimentology of Halgaito Formation, Permian, Utah, in progress.

- Forde, T. 2014. Coastal evolution over the past 3000 years at Conrads Beach, Nova Scotia, Canada: Understanding the dynamics of transgressive coasts. M.Sc. thesis, Dalhousie University, 196 pp. (Co-supervised with M. Nedimovic).
- Kennedy, K. 2011. The Campbellton Formation, New Brunswick, Canada: A sedimentological and paleoenvironmental description of an Early Devonian (Emsian) vegetated landscape. M.Sc. thesis, Dalhousie University, 147 pp.
- McDonald, H.L. 2004. Sedimentology, stratigraphy and paleoecology of the Late Carboniferous Sydney Mines Formation at Morien Bay, Nova Scotia. M.Sc. thesis, Dalhousie University, 205 pp.
- LaPierre, A.B. 1999. Characterization of discharges from abandoned mines of the Sydney Coalfield, Nova Scotia. M.A.Sc., Dalhousie University, 312 pp. (Co-supervised with D.Hansen)
- Allen, T.L. 1998. Sedimentology, sequence stratigraphy, and source-rock potential of the Upper Carboniferous Colindale Member, Port Hood Formation, western Cape Breton Island, Nova Scotia. M.Sc. thesis, Dalhousie University, 195 pp.
- Batson, P. 1997. Channel bodies of the lower Sydney Mines Formation (Carboniferous), Sydney Coalfield, Atlantic Canada. M.Sc. thesis, Dalhousie University, 142 pp.
- Saunders, K.I. 1995. Sedimentology and depositional environments of the Pennsylvanian Hub Cyclothem, Sydney Mines Formation, Cape Breton, Canada. M.Sc. thesis, Dalhousie University, 171 pp.
- White, J.C. 1992. Late Carboniferous cyclothems and organic facies in the Phalen-Backpit seam interval, Sydney Coalfield, Nova Scotia. M.Sc. thesis, Dalhousie University, 287 pp.
- Douma, M. 1987. Clay mineral distribution in Mesozoic and Cenozoic strata of the Labrador Shelf. M.Sc. thesis, Dalhousie University, 119 pp.
- Noguera, V.H. 1987. Geology and diagenetic history of overpressured siliciclastic reservoirs in the Lower Missisauga-Mic Mac Formations of the Venture Gas Field, Scotian Shelf, Nova Scotia. M.Sc. thesis, Dalhousie University, 208 pp. (Co-supervised with L.Jansa)
- Bird, D.J. 1987. The depositional environment of the Late Carboniferous, coal-bearing Sydney Mines Formation, Point Aconi area, Cape Breton Island, Nova Scotia. M.Sc. thesis, Dalhousie University, 343 pp.
- Myers, R. 1986. Late Cenozoic sedimentation in the northern Labrador Sea: a seismic-stratigraphic analysis. M.Sc.thesis, Dalhousie University, 268 pp. (Co-supervised with D.Piper)
- Smith, W.D. 1985. Composition and depositional environment of oil shales of the Albert Formation, New Brunswick. M.Sc.thesis, Dalhousie University, 286 pp.
- Delure, A.M. 1983. The effect of storms on sediments in Halifax Inlet, Nova Scotia. M.Sc. thesis, Dalhousie University, 216 pp. (Co-supervised with D.Piper)

#### **Visiting Graduate Students**

Lowe, D. 2015-16, Ph.D. student, University of Ottawa, Canada

Ielpi, I. 2012-13, Ph.D. student, University of Siena, Italy

Kermode, S. 2010, Ph.D. student, University of Wollongong, Australia

Poursoltani, M.R. 2005, Ph.D. student, Mashhad University, Iran

#### **B.Sc. Honours theses**

15 theses supervised from 1981 to 1996, plus: L.-A. Broom (2015), C.Price (2014), L.van Drecht (2014),

J. Burg (2013), D.Midwinter (2012), C.Dennar (2012), S. Al-Silwadi (2011), F.Gallacher (2010), D.Haider (2008), S.Doyle (2006), L. Fitzgerald, J.Gardiner (2005), K. Fletcher (2004), C. Melrose (2003)

#### **Summer B.Sc. students**

Z.Prescott, 2011, Shell SELF funding.

# JOURNAL EDITORSHIPS

2005-6	Associate Editor, Canadian Journal of Earth Sciences
2000-16	Associate Editor, Journal of Sedimentary Research.
1995-8	Associate Editor of Sedimentology and Bulletin of Canadian Petroleum Geology
1993-	Associate Editor of <u>Atlantic Geology</u>

# **AWARDS, RECOGNITION & OTHER ACTIVITIES**

- 2018 Awarded 2018 Middleton Medal for career contributions to Sedimentology, Canadian Sedimentology Research Group (a division of the Geological Association of Canada)
- 2015 Allen et al. (2013) received Honorable Mention for Outstanding Paper Award in Journal of Sedimentary Research.
- 2013 Gibling & Davies (2012) identified by editors of Nature Geoscience as one of 10 favourite papers in the first five years of publication of the journal.
- 2012 Carnegie Professor of Geology, Dalhousie University (5-year term)
- 2011 Earth Sciences Professor of the Year, Dalhousie Univ.
- 2010 Earth-Science Reviews lists Cataneanu et al. (2009) as 3<sup>rd</sup> and Davies & Gibling (2010) as 14<sup>th</sup> in their most accessed papers from all publication years, for Oct 2009 to Sept 2010 academic year. Palaios features Davies et al. (2010) on their BioOne site for September 2010, with open access content.
- 2010 Earth-Science Reviews lists Davies & Gibling (2010) as 2<sup>nd</sup> in a list of their 25 hottest papers for Jan to March 2010, and Catuneanu et al. (2009) as 7<sup>th</sup>.
- 2007 Rygel et al. (2004) listed as 6<sup>th</sup> most cited paper published in Sedimentology in 2004 (with 6 citations), out of 63 papers published in the journal that year.
- 2006 Davies & Gibling (2003) listed in top 20 in Sedimentology citation list, including papers from 1979 onwards (Sedimentology website)
- 2004 Killam Professor, Dalhousie Faculty of Science (5 year award)
- 2003 Davies & Gibling (2003) listed as one of 3 most highly cited articles in 2003 published in Sedimentology
- 2002 Gesner Medal, Awarded by Atlantic Geoscience Society for Contributions to the geology of Atlantic Canada
- 2000 Earth Sciences Professor of the Year, Dalhousie Univ.
- 1995 Best Speaker Award, GSA Coal Division (paper presented by T.Rehill)
- 1994 Geological Association of Canada, Volunteer Award
- 1991 Honorable Mention, Best Speaker Award, GSA Coal Division (paper presented by J.Calder)

# **MEDIA ACTIVITIES**

"Thanks to plants, we will never find a planet like Earth", Scientific American (writer Mark Fischetti), 1 Feb, 2012 http://www.scientificamerican.com/article.cfm?id=plants-created-earth-landscapel

"How plants may have helped create Earth's unique landscapes, Universe Today (writer Paul Scott Anderson), 3 Feb. 2012

http://www.universetoday.com/93269/how-plants-may-have-helped-create-earths-unique-landscapes/ "How plants helped make the Earth unique", Live Science (writer Wynne Parry), Feb 1, 2012 http://www.livescience.com/18254-plants-extinction-climate-change-rivers.html

"Plants altered early Earth's rivers", Our Amazing Planet (writer Charles Choi), Feb. 1, 2012 http://www.ouramazingplanet.com/2365-plants-changed-early-earth-rivers.html

"How plants reshaped the rivers of early Earth", MSN, Science on msnbc.com (writer Charles Choi), 1 Feb. 2012

http://www.msnbc.msn.com/id/46221805/ns/technology\_and\_science-science/#.Tyol11z9PFI

M.Gibling interviewed for Swiss National Radio, 3 Feb, 2012

Gibling&Davies (2012) part of Nature Geoscience editorial, Feb 1, 2012

Dalhousie Faculty of Science Lecture "Lost Rivers: Natural Causes and Human Carelessness", videotaped and released on Eastlink TV, Nov. 2011

"Early forests tamed wild rivers", Aug 23, 2011, BBC News, Science & Environment; report on paper by Davies & Gibling (2011, Nature Geoscience)

"Ancient reptile tracks found in N.B.", CBC News, July 30, 2010

"Ancient reptiles make tracks", Science Daily, Aug 2, 2010

"Ancient reptiles make tracks", Red Orbit, 30 Juyly, 2010

"Ancient tracks identify pioneering reptiles", Planet Earth Online, 30 July 2010

"Fossil footprints represent "giant leap" for life on land", Calgary Herald, 30 July, 2010

"Reptile footprints in N.B. re-date evolution", Vancouver Sun, 30 July, 2010

Also reported in numerous media outlets July 30, 2010, including Winnipeg Free Press, and Global News

"If not for plants, could rivers bend?" American Scientist, v. 98 (3), p. 200, May/June 2010, .

"How plants transformed rivers", Frontiers in Ecology", Feb 2010, p. 62

"An evolutionary curveball", Dal News, v. 4, no. 5, 7/02/2010

Neil Davies interviewed on German radio about the rise of plants and rivers, 18/01/2010

"Rise of deep-rooted plants threw curve at ancient rivers", Leader Post, Regina, 11/01/2010

"Canadian scientists unlock ancient mystery of river flows", Vancouver Sun, 11/01/2010

Nature India features study of craton sands, interview with R.Sinha (GSA Bulletin 2009), 29/12/2009

Appeared on CBC TV movie on coal strip-mining in Cape Breton, 2006