

# CURRICULUM VITAE

## Andy J. Ridgwell

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### EDUCATION

Dates		School/University	Qualifications gained, awards, and prizes
From	To		
09/1980	07/1987	Wellington School, Wellington, Somerset	A Levels; Mathematics (A), Further Mathematics (B), Chemistry (A), Physics (A) 1986 Sixth-form Scholarship 1987 British Physics Olympiad Silver Medallist
10/1987	06/1990	Clare College, University of Cambridge, Cambridge	BA in Natural Sciences (2:2) 1989 Clare College Scholarship 1989 Mineralogical Society Student Award
10/1996	09/1997	University of Nottingham, Nottingham	MSc in Environmental Science (Distinction) 1997 Campbell Scientific Prize
10/1997	09/2000	University of East Anglia, Norwich	PhD; "Glacial-interglacial perturbations in the global carbon cycle" Norman Heaps Prize for Best Student Presentation; Marine Science 2000

### EMPLOYMENT HISTORY

Dates		Firm/Organisation	Status and description of work
From	To		
04/2004	Present	University of British Columbia, Vancouver	Canada Research Chair in Global Process Modelling (Assistant Professor)
10/2002	03/2004	UC Riverside	Exchange Visitor; modeling analysis of Precambrian carbon cycling
10/2000	09/2002	University of East Anglia (School of Environmental Sciences)	Senior Research Associate; construction of an ocean carbon cycle model (for The Tyndall Centre for Climate Change Research); modelling the ocean iron biogeochemical cycle and its role in climatic change (EU project "IRONAGES")
07/1993 10/1991	09/1996 03/1992	n/a	Variously; Contract software engineer; software/firmware and integrated system testing Unemployed while developing simple climate models and 'global warming' software for use in schools and further education Unemployed while campaigner on various 'environmental' issues
04/1992	06/1993	ATI-Unicam Ltd., York Street, Cambridge	Physicist/instrumentation scientist; development of a Zeeman-effect atomic absorption spectrometer
09/1990	09/1991	University of Cambridge, Cambridge	Research assistant; infrared and optical spectroscopy of crystalline materials (minerals)

## PUBLICATIONS (on-line at: <http://tracer.env.uea.ac.uk/e114/publications.html>)

- Ridgwell, A. J., Changes in the mode of carbonate deposition: Implications for Phanerozoic ocean chemistry, *Marine Geology*, submitted.
- Ridgwell, A. J., and M. J. Kennedy, Secular changes in the importance of neritic carbonate deposition as a control on the magnitude and stability of Neoproterozoic ice ages, in *Multidisciplinary Studies Exploring Extreme Proterozoic Environmental Conditions*, in press.
- Ridgwell, A. J., M. J. Kennedy, and K. Caldeira, Carbonate deposition, climate stability, and Neoproterozoic ice ages, *Science* **302**, 859-682, 2003.
- Ridgwell, A. J., A. J. Watson, M. A. Maslin, and J. O. Kaplan, Implications of coral reef buildup for the controls on atmospheric CO<sub>2</sub> since the Last Glacial Maximum, *Paleoceanography* **18**, doi:10.1029/2003PA000893, 2003.
- Ridgwell, A. J., Implications of the glacial CO<sub>2</sub> “iron hypothesis” for Quaternary climate change, *Geochem. Geophys. Geosys.* **4**, doi:10.1029/2003GC000563, 2003.
- Ridgwell, A. J., An end to the ‘rain ratio’ reign?, *Geochem. Geophys. Geosys.* **4**, doi:10.1029/2003GC000512, 2003.
- Ridgwell, A. J., Dust in the Earth system: The biogeochemical linking of land, air, and sea, *Philosophical Transactions of the Royal Society A* **360**, 2905-2924, 2002.
- Ridgwell, A. J., and A. J. Watson, Feedback between aeolian dust, climate and atmospheric CO<sub>2</sub> in glacial time, *Paleoceanography* **17**, doi: 10.1029/2001PA000729, 2002.
- Ridgwell, A. J., A. J. Watson, and D. A. Archer, Modelling the response of the oceanic Si inventory to perturbation, and consequences for atmospheric CO<sub>2</sub>, *Global Biogeochemical Cycles* **16**, doi: 10.1029/2002GB001877, 2002.
- Ridgwell, A. J., M. A. Maslin, and A. J. Watson, Reduced effectiveness of terrestrial carbon sequestration due to an antagonistic response of ocean productivity, *Geophys. Res. Lett.* **29**, doi: 10.1029/2001GL014304, 2002.
- Ridgwell, A. J., Glacial-interglacial perturbations in the global carbon cycle, PhD thesis, 134 pp., Univ. of East Anglia at Norwich, UK, 2001.
- Ridgwell, A. J., Climatic effect of Southern Ocean Fe fertilization: Is the jury still out?, *Geochem. Geophys. Geosys.* **1**, doi: 10.1029/2000GC000120, 2000.
- Watson, A. J., D. C. E. Bakker, A. J. Ridgwell, P. W. Boyd, and C. S. Law, Effect of iron supply on Southern Ocean CO<sub>2</sub> uptake and implications for glacial atmospheric CO<sub>2</sub>, *Nature* **407**, 730-733, 2000.
- Ridgwell, A. J., A. J. Watson, and M. E. Raymo, Is the spectral signature of the 100 kyr glacial cycle consistent with a Milankovitch origin? *Paleoceanography* **14**, 437-440, 1999.
- Ridgwell, A. J., S. J. Marshall, and K. Gregson, Consumption of atmospheric methane by soils: a process-based model. *Global Biogeochemical Cycles* **13**, 59-70, 1999.
- Salje, E. K. H., A. Ridgwell, B. Güttler, B. Wruck, M. T. Dove, and G. Dolino, On the displacive character of the phase transition in quartz: A hard mode (infrared) spectroscopic study. *J. Phys. Condens. Matter* **4**, 571-577, 1992.

## ARTICLES, PRESS, AND EDUCATIONAL

- “Anti-freeze for snowball Earth”, *Planet Earth*, winter, 2003.
- “Planète poussiéreuse, planète heureuse!”, *Met Mar*, No. 200, pages 24-25, 2003.
- “A dirty planet is a happy planet”, *The Marine Observer*, vol. 73, no. 359, pages 25-27, 2003.
- “The role of feedbacks in the Earth System: Past changes in dust and iron fertilization of the ocean”, IGBP ‘Global Change’ Newsletter, Issue no. 51, pages 2-5, 2002.
- “Trees that bite the dust”, *The Guardian*, August 15<sup>th</sup> 2002.
- “Robbing Peter to pay Paul”, NERC Annual Report 2001-2002.
- “The ‘inconvenient ocean’ – Undesirable consequences of terrestrial carbon sequestration”, *Ocean Challenge*, vol. 12, no. 1, pages 28-32, 2002.
- “A dirty planet is a happy planet”, *Planet Earth*, summer, 2002.
- Educational modeling program on the ‘Greenhouse Effect’, ‘Acorn User’ computing magazine, 1994.
- “Daisy World” simple homeostatic climate model, ‘Acorn User’ computing magazine, 1994.

## INTERESTS/ACTIVITIES

- Attempting to defy an inverse square law of attraction on a shear granite face with the aid of sticky rubber boots and a pair of daft-looking trousers. Ideally the relevant experiments are carried out on Yorkshire grit in the sunshine with a warm beer or five close at hand.
- Hiking and generally ambling about in the mountains in summer; skiing into snowdrifts at speed and eating snow in the winter.
- Not watching Norwich City Football Club (players of so-called ‘football’ or ‘soccer’) now that I live in the other side of the Pond (and therefore have an excellent excuse for actually enjoying my Saturday afternoons for a change).