

The following application was submitted to the MARGINS Office:

Name:

Hannah Brackley

Category: Other: Research Scientist & Postgrad Student

Address:

n/a

Landcare Research NZ Ltd

Private Bag 11-052

Palmerston North, n/a n/a

New Zealand

E-mail: brackleyh@landcareresearch.co.nz

Phone: ++64 6 356 7154

Fax: ++64 6 355 9230

Statement of interest:

I would like to register my interest in attending the MARGINS source-to-sink workshop on the Waipaoa focus area in May. I am employed by Landcare Research NZ Ltd in Palmerston North, New Zealand, and am also 18 months into a PhD study. Landcare Research's programme 'Reducing uncertainty in the effect of soil erosion on the national carbon budget' was developed to determine nationally, how much soil carbon is being lost annually by erosion from the terrestrial to the atmospheric (as CO₂) and marine (as C) environments, and what proportion of these fluxes is anthropogenic. My PhD research is providing information toward some aspects of this programme, as it identifies transformations the carbon is undergoing during its storage in the terrestrial and marine environments, particularly within the Waipaoa Sedimentary System.

The two main storage sites I am focusing on are the Waipaoa River floodplain and the Poverty Bay shelf. Previous analyses of sediment cores from these environments indicate a decrease in the amount of carbon with depth, and my research will determine the reason for this. By analysing the sediments for particle size, surface area (SA) and organic carbon content, the loading of carbon on the particles (OC:SA) will be determined, and the following questions addressed:

- What does the loading of organic carbon on the particles infer about the sediment source over time?
 - How have anthropogenic changes affected the carbon loading on particles?
- Temporal OC:SA trends will be interpreted within the floodplain and marine cores, and spatial trends across the floodplain and continental shelf will also

be analysed. $\delta^{13}C$ trends will be interpreted within each core and across the floodplain and shelf, for further indications of changing sediment sources.

I am excited by the prospect of future research being conducted in the Waipaoa Sedimentary System as a result of the MARGINS Source-to-sink programme, and would love the opportunity to be involved.

Short resume:

RESUME

HANNAH BRACKLEY – JANUARY 2003

Current Employer:Landcare Research NZ Limited
Private Bag 11-052
Palmerston North
New Zealand

Tel: ++64 6 356 7154
Fax: ++64 6 355 9230
Email: brackleyh@landcareresearch.co.nz

Academic qualifications:

Master of Science, MSc (Hons), Massey University (Quaternary Science), 2000
Bachelor of Science, BSc, Massey University (Earth Science), 1995

Honours/distinctions/membership of societies, institutions, committees:

Recipient, Curtis-Gordon Scholarship, Victoria University, 2002
Recipient, Commonwealth Science Council Travel Fund, 2001
Recipient, Landcare Research NSOF Training Funding, 2001-2004
Recipient, NSF Funding to attend MARGINS Lake Tahoe Workshop, 2000
Recipient, Helen E Akers Scholarship, Massey University, 1998
Recipient, Affinity Card Alumni Scholarship, Massey University, 1998
Recipient, Murray Scholarship, Massey University, 1997
Recipient, Geological Society of New Zealand Student Research Award, 1997
Member of the Geological Society of New Zealand
Member of the New Zealand Geochemistry Group
Member of the American Geophysical Union

Professional positions held:

2000-present Research Scientist, Landcare Research
1999-2000 Research Assistant, Landcare Research

Present research/professional specialities:

Geochemistry; Sedimentology; Stratigraphy.

List of achievements:

1. Publications

Page, M.J.; Trustrum, N.A.; Brackley, H.L.; Baisden, W.T. (Submitted): Erosion-related soil carbon fluxes in a pastoral steepland catchment, New Zealand. *Agriculture, Ecosystems and Environment*.

Brackley, H. L.; Palmer, A.S. (In Review): Stratigraphy and depositional environments of the Pohangina Anticline sediments, eastern Wanganui Basin, New Zealand. *New Zealand Journal of Geology and Geophysics*.

Page, M.; Trustrum, N.; Brackley, H.; Gomez, B.; Kasai, M.; Marutani, T. (2001): Waipaoa River. In: *Source-to-Sink Sedimentary Cascades in Pacific Rim Geo-Systems* (eds) T. Marutani, G. J. Brierley, N. A. Trustrum & M. Page. Matsumoto Sabo Work Office, Ministry of Land, Infrastructure and Transport, Japan. 86-100.

Brackley, H.L. (1999): *The Stratigraphy and Environments of Deposition of Early-Mid Pleistocene Sediments of the Pohangina Region, Eastern Wanganui Basin, New Zealand*. MSc Thesis, Massey University, Palmerston North, New Zealand.

2. Conference Presentations

Trustrum, N.A.; Page, M.J.; Tate, K.R.; Sidorchuk, A.; Baisden, W.T.; Brackley, H.L.; Preston, N.J.; Basher, L.R.; Hicks, D.M. (2002): Erosion-related soil carbon fluxes from river basins to the ocean: A national perspective. New Zealand Soil Science Society Conference, Wellington, New Zealand, 25-29 November 2002.

Brackley, H. (2002): The fate of carbon in storage sites within the Waipaoa Sedimentary System, New Zealand. Western Pacific Geophysics Meeting, Wellington, New Zealand, 9-12 July 2002.

Brackley, H. (2001): Geochemical transformations of organic carbon in land-marine storage environments of the Waipaoa catchment, New Zealand. 5th International Conference on Geomorphology, Tokyo, Japan, 23-28 August 2001.

Page, M.; Trustrum, N. A.; Brackley, H. (2001): Erosion-related soil carbon losses in the Lake Tutira catchment, New Zealand. 5th International Conference on Geomorphology, Tokyo, Japan, 23-28 August 2001.

Brackley, H. (2000): Age and development of the Pohangina Anticline, northeastern Manawatu, New Zealand. Australia-New Zealand Geomorphology Group Conference, Wanaka, 11-15 December 2000.

Page, M.; Trustrum, N.; Brackley, H. (2000): Erosion-related soil carbon losses in the Tutira catchment since European settlement. Australia-New Zealand Geomorphology Group Conference, Wanaka, 11-15 December 2000.

Brackley, H.L. (1999): The Stratigraphy and Environments of Deposition of Early-Mid Pleistocene Sediments of the Pohangina Region, Eastern Wanganui Basin, New Zealand.
Geological Society of New Zealand Conference, Massey University, November 1999 (see GSNZ Miscellaneous Publication 107A, Page 19).

Brackley, H.L. (1998): Early Pleistocene Stratigraphy and Sedimentology of the Pohangina Anticline, Northeastern Manawatu. Massey University Institute of Natural Resources Postgraduate Colloquium, November 1998. Winner of best oral presentation.

Brackley, H.L. (1998): Early Pleistocene Stratigraphy and Sedimentology of the Pohangina Anticline, Northeastern Manawatu. Geological Society of New Zealand Conference, November 1998 (see GSNZ Miscellaneous Publication 101A, Page 50).

- - - - - * - - - - -

ABSTRACT

Title:

Authors:

Abstract:

Wish to include graphics:

Server protocol: HTTP/1.0

Remote host: poxy.landcareresearch.co.nz

Remote IP address: 202.27.240.6