

Prof. Stefan Grab

Associate Professor at School of Geography, Arch. & Environ. Studies, University of the Witwatersrand, South Africa

University of the Witwatersrand
P/Bag 3, WITS, 2050
South Africa
www.wits.ac.za/geography

Field of Expertise: Periglacial geomorphology and climate change analysis in African Mountain Environments

Educational background:

1986: Matriculated with full exemption at Carter High School, Pietermaritzburg, S.A..

1989 : Bachelor of Arts, from the University of Natal, Pietermaritzburg.

1990 : Higher Diploma in Education, from the University of Natal, Pietermaritzburg.

1992 : B.Sc(Hons) - Honours in Geography (cum laude), University of Natal, Pietermaritzburg, S.A.

1996 : M.Sc. passed and cum laude awarded from the University of Natal, Pietermaritzburg. The M.Sc. was converted to a Ph.D. registration in April 1996.

1998: Ph.D. awarded from the University of Natal, Pietermaritzburg. Thesis Title: An Evaluation of the Periglacial Morphology in the High Drakensberg and Associated Environmental Implications. Supervisor: Prof. Kevin Hall, Univ. of Northern British Columbia, Canada. Examiners: Prof. B. Whalley, Queens Univ. of Belfast, Northern Ireland; Prof. A. Lewkowicz, Univ. of Ottawa, Canada; Dr. I. Meiklejohn, Univ. of Pretoria, South Africa

Professional experience:

1996 - Appointed Lecturer in Geography & Environmental Studies

1999 - Promoted onto the Special list of Lecturers

2000 - Nominee for the University "Excellence in Teaching" award.

2001 - Promoted to Senior Lecturer in Geography & Environmental Studies

2005 - Promoted to Associate Professor in Geography & Environmental Studies

Main research activities:

1993 - 1997 : Drakensberg, Lesotho and South Africa - for thesis fieldwork (to assess past and present cryogenic activity and associated environmental implications).

1995 : Mount Kenya, Kenya - to assess the periglacial geomorphology, slope geomorphology and Quaternary environmental change.

1996 : Sub-Antarctic Marion Island with the South African National Antarctic Programme - to assess the environmental controls, active processes and resulting landforms of geomorphological phenomena on Marion Island, which have a high paleoclimatic indicator value as relict landforms in southern African mountains (work as a research assistant).

1998 : Simien and Bale Mountains, Ethiopia - To assess the periglacial geomorphology and Quaternary environmental change.

1998 to present : Past and present environmental change in Lesotho - In collaboration with the Universities of Pretoria, The Western Cape and Cape Town.

1998 to 2000 : High Altitude Environmental Change Analysis over East Africa - A collaborative research initiative with the Institute of Nuclear Science, Univ of Nairobi, Kenya. The study involves the long term monitoring of atmospheric and ground thermal conditions at high altitude sites on Mt Kenya and permits such analyses as the correlation of atmospheric conditions with ground thermal conditions/responses, an analysis of ground thermal altitudinal variability and a long-term assessment of ground thermal indices as indicators of climatic change.

1999 to 2001 : Human-ecological Investigations for Resource Management and Recent Landscape Dynamics in the High Mountains of Southern Africa - A multi-disciplinary study which combines human and physical geographical aspects of high mountain research - in collaboration with Dr. Marcus Nüsser (University of Bonn, Germany).

1999 to 2000 : Setting up an air temperature monitoring programme in the high Drakensberg for future climate change analysis.

2004 onwards : Recording, mapping and researching Drakensberg landforms for landscape tourism interests – in collaboration with the KwaZulu-Natal Ezemvelo Wildlife Services.

2005: Geocology projects in the 'Rock and Pillar' and 'Old Man' Ranges, South Island New Zealand.

2006 onwards : Assessing 19th century climate change in Lesotho based on documentary evidence.

2007 onwards : Establishing a snow disaster risk potential map for Lesotho based on spatial analysis and change analysis of snow occurrence (Remote Sensing).

Selected list of relevant publications:

Grab, S. W. (1997). Analysis And Characteristics Of High Altitude Air Temperature Data From Northern Lesotho: Implications For Cryogeomorphic Occurrences. *Geoökoplus*, 4, 109-118.

Grab, S. & Simpson, A. (2000). Climatic And Environmental Impacts Of Cold Fronts Over Kwazulu-Natal And The Adjacent Interior Of Southern Africa. *South African Journal Of Science*, 96, 602-608.

Grab, S. (2002). Characteristics And Palaeoenvironmental Significance Of Relict Sorted Patterned Ground, Drakensberg Plateau, Southern Africa. *Quaternary Science Reviews*, 21, 1729-1744.

Grab, S. (2002). Periglacial Phenomena In Ethiopia: A Review. *Permafrost And Periglacial Processes*, 13, 71-76.

Mulder, N. & Grab, S. (2002). Remote Sensing For Snow Cover Analysis Along The Drakensberg Escarpment. *South African Journal Of Science*, 98, 213-217.

Grab, S. And Deschamps, C. (2004). Geomorphological And Geocological Controls And Processes Following Gully Development In Alpine Mires, Lesotho. *Arctic, Antarctic And Alpine Research*, 36, 49-58.

Grab, S.; Gatebe, C.K. & Kinyua, A.M. (2004). Ground Thermal Profiles From Mtkenya. *Geografiska Annaler*, 86A, 131-141.

Grab, S. (2004). Thermal Regime Through A Sorted Circle And Stone-Banked Lobe, Drakensberg, Southern Africa. *Zeitschrift Für Geomorphologie*, 48, 501-518.

Mills, S. & Grab, S. (2005). Debris Ridges Along The Southern Drakensberg Escarpment As Evidence For Quaternary Glaciation In Southern Africa. *Quaternary International*, 129, 61-73.

- Grab, S. (2005). Earth Hummocks (Thufur): New Insights To Their Thermal Characteristics And Development In Eastern Lesotho, Southern Africa. *Earth Surface Processes And Landforms*, 30, 541-555.
- Grab, S., Van Zyl, C. & Mulder, N. (2005). Controls On Basalt Terrace Formation In The Eastern Lesotho Highlands. *Geomorphology*, 67, 473-485.
- Grab, S., Scott, L., Rossouw, L. & Meyer, S. (2005). Holocene Palaeoenvironments Inferred From A Sedimentary Sequence In The Tsoaing River Basin, Western Lesotho. *Catena*, 61, 49-62.
- Grab, S. (2007). Landforms Of The High Drakensberg, Southern Africa: Indicators Of Climate Change. *Geography Review*, 20, 8-12.
- Grab, S., Dickinson, K.J.M., Mark, A.F. & Maegli, T. (2008). Ploughing boulders on the Rock and Pillar Range, south-central New Zealand: their geomorphology and alpine plant associations. *Journal of the Royal Society of New Zealand*, 38, 51-70.