

# RGS-IBG Thesiger- Oman Fellowship Recipients

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**Year:** 2009 (Physical Geography)

**Principal Investigator:** Mike Rogerson

**Project Title:** Understanding the Libyan “Monsoon”

**Abstract:** Today, the majority of Libya is occupied by the Sahara. However, vast areas of the Sahara may have been occupied by savannah-like plains and river valleys in the past, supporting a diverse fauna and potentially, important populations of hominids. The aim of this project is to perform fieldwork in north-eastern Libya in order to investigate surface carbonate bodies from which the history of rainfall in central North Africa can be revealed, giving new insights into the history of this hyper arid region, which may change our thinking on early human migration “Out of Africa”.

**Year:** 2009 (Human Geography)

**Principal Investigator:** Henning Bjornlund, University of Lethbridge, Alberta, and University of South Australia, Adelaide

**Project Title:** An analysis of institutional arrangements of the *falaj* irrigation systems in Oman

**Abstract:** This project explores the institutional settings of the Omani falaj systems because it has a number of distinctive features which provide important lessons for arid regions in developing countries and it was developed within a closed and stagnant society. Since the 1970s Oman has opened up to foreign influences and consequently demand for water is increasing and modern technology is encroaching on the flaj systems causing many to dry out. There is a need to reform the institutions to be better suited to meet future challenges. An institutional analytical framework with quantitative and qualitative techniques was used.

**Year:** 2008 (Physical Geography)

**Principal Investigator:** Dr Philip Hughes

**Project Title:** Pleistocene Climates of the Northwest Sahara Desert: Evidence from the Glacial Record in the Atlas Mountains, Morocco

**Abstract:** The Atlas Mountains of Morocco display evidence of extensive Pleistocene glaciation. Glaciation in these mountains has major implications for understanding moisture transfer between the North Atlantic Ocean and the Sahara Desert during Pleistocene cold stages. The glacial record of the High Atlas and Anti Atlas effectively reflects moisture supply to the north-western Sahara Desert and can provide an indication of shifts between arid and pluvial conditions. Extensive glacial geomorphological mapping and sample collection around the highest peaks of the High Atlas and Anti Atlas will provide new and novel data toward understanding the history and evolution of the largest desert region on Earth. The principal aim of this project is to establish the timing, palaeoclimatic significance and wider environmental impact of glacial conditions in the Atlas Mountains, Morocco. The main research questions of this project are: 1. What was the distribution, extent and timing of glaciation in the Atlas during different Pleistocene cold stages?; 2. What does the glacial record reveal in terms of precipitation gradients along a transect from the Atlantic slopes of the High Atlas to the Saharan slopes of the Anti Atlas?; 3. What does the glacial record from the High Atlas tell us about the transfer of moisture between the North Atlantic Ocean and the Sahara Desert during different Pleistocene cold stages?

**Year:** 2008 (Human Geography)

**Principal Investigator:** Professor Andrew Smith

**Co-Investigators:** Khaldoon Al-Qudah (Yarmouk University), Jennifer Ramsay (Simon Fraser University), Caroline Durand (University of Lyon), Adolfo Muniz (University of California, San Diego)

**Project Title:** Agricultural Practices in the Desert Environs of Wadi Araba, Jordan: Exploring New, Sustainable Approaches to Modern Economic Development

**Abstract:** One response to a royal initiative to promote economic development in Wadi Araba, Jordan, has been to tap the region's depleting aquifer to expand agricultural farms in the arid zone. The ancient inhabitants of the region faced similar circumstances, but their responses varied. By utilizing different water harvesting technologies and mastering dry-farming techniques, the ancients supported a vast agricultural regime in the Araba. This project seeks to examine the remnants of their activities to determine whether ancient methods can inform present-day practices. The aims of this project are to analyze the economic and cultural landscape of the central Wadi Araba by documenting all evidence of ancient agricultural activity in relation to human settlement activity in the region (especially in the Roman and Byzantine periods) and to assist others in determining whether modern applications of ancient techniques are viable. The project is a major component of the Bir Madhkur Project, an archaeological study of the central Araba and the role of the ancient site of Bir Madhkur as a regional, administrative hub. The objectives of the proposed project are: 1) based on analyses of aerial photographs to document the terraces, field walls, and other agricultural features in the region and to incorporate this data into the project's GIS; 2) to begin small-scale excavations of some of these features, in addition to rural farm-houses, to understand construction techniques and to identify production aims; and 3) to begin an ethnographic survey of Bedouin in the region to understand present socio-economic conditions and their on-going relationship with the desert landscape.

**Year:** 2007 (Physical Geography)

**Principal Investigator:** Dr Mark Powell, University of Leicester

**Co-Investigators:** Prof. Ian Reid (Loughborough University), Prof. John Laronne (Ben Gurion University), Dr George Heritage (Salford University)

**Project Title:** Channel Morphology and Sedimentology in Upland Dryland Environments, Negrev, Israel: Characteristics and Controls

**Abstract:**

This project aimed to characterise the morphological and sedimentological characteristics of upland gravel beds in the Negrev Desert, Israel and also to seek genetic explanations for the distinct channel morphologies identified. The study adopted the framework of Montgomery and Buffington (1997) and can be viewed as a test of that model in a dryland environment. There were 4 specific objectives: 1. To identify, classify and map the occurrence of distinctive channel morphologies in upland rivers in the Northern Negrev Desert; 2. To characterise the diagnostic morphological and sedimentological features of each channel type; 3. To compare and contrast channel types with those characteristic of humid-temperate environments; and 4. To test the observations against the genetic framework of Montgomery and Buffington (1997).

**Year:** 2007 (Human Geography)

**Principal Investigator:** Dr William Rowe, Louisiana State University

**Project Title:** An Analysis of the Economic and Environmental Resurgence of the Historic Region of Herat, Afghanistan and its Desert Environs after Twenty-Five Years of Conflict

**Abstract:**

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This project aimed to analyze the economic and environmental geographic situation of an isolated desert river valley. The objectives were to see how different levels of local society at the city, village, and nomadic levels have fared after twenty-five years of conflict and occupation and how they are emerging into a (relatively) more peaceful existence within the larger framework of Afghanistan and post-Soviet Central Asia and the Middle East. The research followed a general cultural/political ecological framework with emphases on historical archival work and on site work taking into consideration local adaptations and changes to meet the new reality of post-Taliban Afghanistan and Western institutions that have a new relevance for the area under study.

**Year:** 2006 (Physical Geography)

**Principal Investigator:** Dr Conall MacNiocaill, University of Oxford

**Co-Investigators:** James Hollingsworth (Cambridge), Dr Richard Walker (Oxford), Ali Eshraghi (Geological Survey of Iran)

**Project Title:** Mountain Building in North Eastern Iran

**Abstract:**

This project aimed to determine the history and topographic evolution of the desert region of NE Iran in response to the uplift of the region at the northernmost part of the Arabian-Eurasia continental collision. The project was performed in collaboration with the Geological Survey of Iran. The project planned to deliver important constraints on how the region accommodates the shortening on active faults. In particular, the team investigated the rates and duration of mountain building, and the impacts the mountains have had on the physical environment. The project combined observations on the geomorphology with palaeomagnetic analysis of rocks from NE Iran. The results are important for geographic and geological studies of Iran, and will provide important constraints on the hazard posed to local populations by active faults.

**Year:** 2005 (Physical Geography)

**Principal Investigator:** Professor David S G Thomas, University of Oxford

**Co-Investigators:** Professor Andrew Goudie (University of Oxford), Dr Adrian Parker (Oxford Brookes University), Dr Asma Al-Farraj (UAE University).

**Project Title:** Arabian Quaternary Climate Changes

**Abstract:**

The aim of the project was to significantly advance knowledge of the late Quaternary dynamics of Aeolian and hydrological systems in the desert environments of south-eastern Arabia, focusing upon the temporal interplay under fluctuating atmospheric circulation dynamics. The research investigated key sedimentary proxies in the UAE and Oman, utilising traditional and new field sampling techniques and robust laboratory procedures to further understanding of climate change in south-eastern Arabia, particularly monsoon dynamics in the late glacial period to present.

**Year:** 2005 (Human Geography)

**Principal Investigator:** Dr Heba Abdel Aziz, Alexandria University, Egypt.

**Co-Investigators:** Ahmed Ali M.al-Mikhaini, Majlis a'Shura (Lower House of the Omani parliament)

**Project Title:** Reconstructing Omani Nomadic Landscape

**Abstract:**



... This research assesses the impact of tourism on the nomadic lifestyle existing in the eastern province of Oman. The province has witnessed a significant increase in tourist numbers recently, thus it is expected there will be higher demand on the cultural and natural assets of the region represented by the indigenous nomadic communities and their habitats. This research assesses the impact of tourism on the nomadic lifestyle existing in the eastern province of Oman. The province has witnessed a significant increase in tourist numbers recently thus it is expected there will be higher demand on the cultural and natural assets of the region represented by the indigenous nomadic communities and their habitats