

Charles McBurney Geoarchaeology Laboratory

Although no new PhD researchers joined the laboratory in 2004, both existing and new research projects around the world have seen further development.

Two MPhil students undertook geoarchaeological dissertation projects. Federica Sulas explored the use of a geoarchaeological approach to investigating the Aksumite agricultural landscape in northern Ethiopia; and Heejin Lee conducted micromorphological analyses of house-floor deposits from two prehistoric settlement sites in western Sicily, the Bronze Age site of Mokarta and the Iron Age site of Monte Polizzo. Julie Miller prepared two fabulous posters on her joint project with Charles French on Holocene riparian landscape change in New Mexico with the US Rocky Mountain Research Station (USDA Forest Service) to take to the geoarchaeology session of the Association of American Geographers conference in Denver in March, 2005. Unfortunately, this project was cancelled mid-stream in the early spring of 2005 by the U.S. government and our partner, Dr Richard Periman, made redundant. It is now a question of re-configuring this project with new collaborators, in particular French's former research student, Dr Melissa Goodman-Elgar, who is based at the University of Washington, Pullman. Congratulations are due to Fraser Sturt who has just begun a new lectureship in maritime archaeology at the Department of Archaeology at Southampton, and a former researcher in this laboratory, Dr Jenny Heathcote, who has been appointed English Heritage's Regional Scientific Advisor for East Anglia as from April 2005.

New projects were initiated in Brazil and Wiltshire. The former project by Manuel Arroyo-Kalin is using micromorphological analysis to investigate the formation of dark earth deposits associated with shifting agricultural settlements in the Amazon basin. The latter project is a geoarchaeological survey and palaeo-environmental analysis of the River Avon valley between the great Neolithic henge sites of Durrington Walls and Stonehenge in collaboration with Professor Mike Parker Pearson, Dr Mike Allen and Dr Rob Scaife (see p. 33).

New fieldwork plans are being formulated for geoarchaeological surveys: in the Benta valley of Hungary with Tim Earle of Northwestern University and Gabriella Kovacs to investigate the

PUBLICATIONS

Charles French

- 2005 (with G. Ayala). Erosion modeling of past land use practices in the Fiume di Sotto di Troina valley. *Geoarchaeology* 20(2), 149–67.
- 2005 (with G. Ayala). Introduction (to special issue). *Geoarchaeology* 20(2), 91–2.
- 2005 Analysis of soil deposits at Barnhouse and Maeshowe, in *Dwelling Among the Monuments: Excavations at Barnhouse and Maeshowe*, ed. C. Richards. Cambridge: McDonald Institute, 371–80.
- 2005 (with H. Lewis, with contributions by R. Scaife & M. Allen). Archaeological and palaeoenvironmental investigations of the upper Allen valley, Cranborne Chase, Dorset. *Geoarchaeology* 20(2), 109–34.
- 2005 (with F. Pryor). *Archaeology and Environment of the Eton Landscape*. (East Anglian Archaeology 109.) Peterborough: Fenland Archaeological Trust.
- 2005 (with G. Kovács). Reconstruction of the former environment and investigation of human activity at Százhalombatta-Földvár Bronze Age tell settlement, in *Százhalombatta Archaeological Expedition (SAX) Annual Report 2*, eds. I. Poroszlai & M. Vicze. Százhalombatta, 125–34.

Andrea Balbo

- 2004 (with P. Miracle & D. Komšo). Geoarchaeological survey of Čepičko Polje and part of its hydrological basin (Istria, Croatia): report on the first field season. *Histria Archaeologica* 33(2002), 265–76.

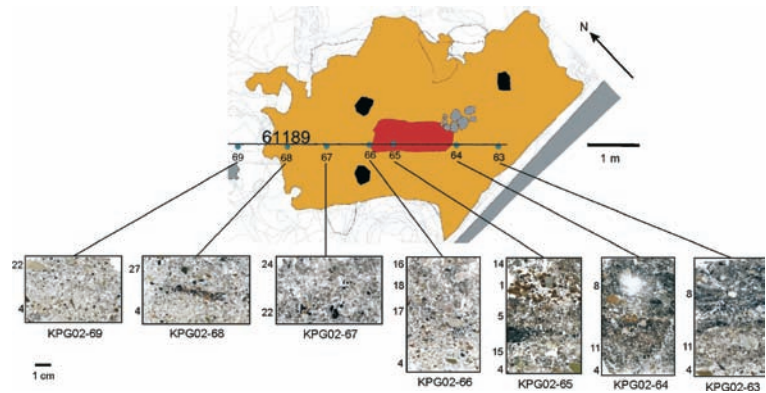
Karen Milek

- 2005 Methodologies: soil micromorphology, in *A Norse Farmstead in the Outer Hebrides: Excavations at Mound 3, Bornais, South Uist*, ed. N. Sharples. Oxford: Oxbow, 35–6.
- 2004 Trench F: the occupation of the kiln/barn (F/D): soil micromor-

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Karen Milek (cont.)

- 2005 phology, in *A Norse Farmstead in the Outer Hebrides: Excavations at Mound 3, Bornais, South Uist*, ed. N. Sharples. Oxford: Oxbow, 98–104. (with N. Sharples & H. Smith). Trench F: the occupation of the kiln/barn (F/D): discussion, in *A Norse Farmstead in the Outer Hebrides: Excavations at Mound 3, Bornais, South Uist*, ed. N. Sharples. Oxford: Oxbow, 115–16.
- 2005 (with I. Simpson, J. Barrett & K. Milek). Interpreting the Viking Age to medieval period transition in Norse Orkney through cultural sediment analyses. *Geoarchaeology* 20(4), 355–77.



Transect of micromorphology samples across house A302 at Kaupang, Norway. Post-depositional bioturbation and leaching of the archaeological sediments had made it difficult for the excavators to distinguish the limits of floors (tentatively indicated in yellow). Thin-section analysis identified multi-laminated floors southeast of the central hearth (red), a storage area northwest of the hearth, and the edge of the house between samples 67 and 68.

impacts of tell settlements and their economy on the loessic landscape; in the Aksum area of Ethiopia with the Universities of Naples and Boston and Federica Sulas to examine the pre-Aksumite agricultural soils and the subsequent erosion record; in the Tell Brak area in northeastern Syria with Tony Wilkinson and Miranda Semple to establish the record of alluviation and land use; in southern Chile with Manuel Arroyo-Kalin; and the central part of Portugal with Professor Chris Scarre, in both these latter cases to investigate how subsistence agriculture functioned in these increasingly semi-arid landscapes.

Karen Milek, whilst completing her PhD, continued her collaboration with the University of Oslo on the Viking Age project at Kaupang, Norway (with Charles French) and has completed a major micromorphological analysis of the midden and floor deposits for publication. In the summer of 2005, Karen directed the International Field School in North Atlantic Archaeology, and co-directed excavations at the tenth-century farmstead at Vatnsfjörður, in northwest Iceland.

Ann-Maria Hart, whilst continuing to work on her PhD, completed soil analyses of the effects of Bronze Age barrow mound building on old land surfaces in Denmark at Skelhøj 2, Skelmantle 1 and Skelhøjcore 1. This research project will contribute to her aim of developing a set of criteria by which to gauge the preservation of organic material on archaeological sites both within Britain and Denmark.

Lastly, Andrea Balbo has continued his geoarchaeological and palynological investigations of polje Čepić in Istria, Croatia, through further fieldwork and analyses in Bergen and Cambridge. New sites have been discovered of both Upper Palaeolithic or the Aurignacian at Ivšiče (p. 43), and an open-air Mesolithic site at Kostadini.

STAFF: Dr Charles French (Laboratory director), Julie Miller (Senior research technician)

PhD students: Manuel Arroyo-Kalin, Andrea Balbo, Ann-Maria Hart, Gabriella Kovacs, Karen Milek, Miranda Semple, Fraser Sturt

MPhil students: Heejin Lee, Clea Paine, Ekaterina Papagiannis, Federica Sulas

Affiliated researchers: Nicole Boivin, Helen Lewis (University of Oxford), Laurence Smith