

## **RGS-IBG Annual International Conference 2006**

### **MOBILITIES, CATCHMENTS, AND QUATERNARY LANDSCAPES: GEOGRAPHY, ARCHAEOLOGY, AND THE WORK OF E. S. HIGGS**

Friday 1<sup>st</sup> September 2006 at 14.15 (Room to be confirmed)

Convenors: Jamie Woodward and Clive Gamble

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The Quaternary has been a meeting point for geographers and archaeologists. This session will explore the changing relationship between the disciplines over the last 50 years. In particular it will assess the contribution of Cambridge archaeologist E.S. Higgs. Higgs' innovative interdisciplinary work on the Palaeolithic record of Northwest Greece led to new ideas about prehistoric economy, human mobility and archaeological site catchments - with a strong appreciation of the need to consider the dynamics of the Quaternary landscape to provide an improved understanding of the human past. His fieldwork was conducted and published with geographers (Claudio Vita-Finzi) and in his excavation teams were students who would later revolutionise the study of the Quaternary (N.J. Shackleton). These joint approaches led to new research agendas and fresh perspectives on the value of a close relationship between the disciplines of geography and archaeology. Higgs' ideas have been expanded by the diaspora of students that he supervised and who now hold many academic positions both in the UK and around the world. Thirty years after his death, and as geography and archaeology move into new relationships through the scientific study of the Quaternary, this provides a timely moment to assess his legacy and see through current work how his ideas on mobilities, catchments and Quaternary landscapes have been developed and how a new agenda is being forged.

#### **Friday 1<sup>st</sup> September 2006**

The session will open at 14.15 with a brief welcome and introduction by the convenors. We will then show "The Springs of St George" a BBC film of Eric Higgs in the field in Epirus that was broadcast in 1965. The film lasts for 30 minutes and will be followed by 10 papers of 20 minutes each. A tea break will follow the fourth paper.

#### **Oral Papers:**

##### **1) Eric Higgs and Epirus: time, the place and the man**

Geoff Bailey (*University of York, UK*)

In this presentation I will examine the influence of the Epirus landscape on the development of Higgs' ideas on interactions between human populations and landscape change — 'in the long term', and the ways in which those ideas evolved in a subsequent generation of field research in the region. It was during the course of his investigations into the Palaeolithic archaeology of Epirus in the 1960s that Higgs' ideas crystallised about palaeogeography and palaeoeconomy, forming the launch pad for investigations over a much wider territory as part of the Early History of Agriculture Project in the following decade. There is good reason to suppose that many of those who were most receptive to his ideas and influence and went on to apply, develop or modify them elsewhere did so as a result of exposure to his ideas in the field in Epirus in the 1960s or in the subsequent phase of research that carried forward the

investigation of the Epirus landscape in the 1980s. An investigation of Higgs the man and his thought is inseparable from an understanding of Epirus the place and the powerful hold of that distinctive landscape on the archaeological imagination. Higgs's work is often viewed as an exercise in the development of methods for reconstructing prehistoric economies or in the advocacy of an economic perspective on human development. A less well articulated theme is the way in which his thinking began to address the need for new methods and concepts appropriate to the distinctive properties of an archaeological record composed of material residues with relatively poor chronological resolution but greatly expanded time depth quite unlike anything available in any other human discipline. The differences of time scale inherent in a palaeogeographical study continue to pose a challenge to archaeological thinking and specifically to expectations founded on the assumption that archaeology deals essentially with the past tense of behavioural principles best identified in the 'present' of the ethnologist, the social historian or the cultural geographer.

Bailey, G. (ed.) 1997. *Klithi: Palaeolithic Settlement and Quaternary Landscapes in Northwest Greece*. 2 vols. Cambridge, McDonald Institute for Archaeological Research.

Bailey, G.N. 1999. Eric Higgs (1908–1976). In T. Murray (ed.) *Encyclopedia of Archaeology: the Great Archaeologists*, pp. 531–65. Santa Barbara: ABC-CLIO.

Bailey, G.N. 2004. Higgs, Eric Sidney (1908–1976). In *Oxford Dictionary of National Biography*. Oxford: Oxford University Press.  
[<http://www.oxforddnb.com/view/article/67871>]

## **2) Movement, activity and interaction: an ecosystemic approach to prehistory**

Fiona Coward (*Royal Holloway, University of London, UK*)

Social and humanistic strands of archaeology have strongly criticised a perceived deterministic approach to geography and the environment, emphasising instead the need for an experiential, embodied perspective. However, these two perspectives need not be mutually exclusive: this paper will argue that both hominid and human populations were inevitably immersed within a four-dimensional world as a fundamental fact of their existence and that, crucially, these ecosystems are not individual and discrete but are inescapably shared with others with whom interactions occur on a daily basis. Thus the archaeological record represents the patterns of movement, activity and interaction described in the course of peoples' habitual, daily activities: such patterns and their situated histories can be seen as constituting the identities and personhoods of their creators. Analysis of the faunal assemblages from the Middle Palaeolithic levels of the cave of Amalda in northern Spain demonstrates that the archaeological record contains the signatures of certain kinds of interaction, providing clues to the specific places and times at which they occurred, and therefore to the kinds of movement and interaction engaged in by the people who deposited material at the site. Such an ecosystemic approach, I argue, builds on Eric Higgs' pioneering work to embed perception and experience firmly in a two-way relationship between the individual – whether human or hominid – and its environment.

## **3) From catchments to landscapes: a geographical appreciation of the palaeoeconomy of Eric Higgs**

Clive Gamble (*Royal Holloway, University of London, UK*)

The challenge that Eric Higgs presented to archaeologists forty years ago was twofold. First, he questioned how they understood economic change and in particular the appearance of

agriculture. Second, he made them raise their eyes from their excavations and consider the causal relationship between the wider environment and the site. I will argue that his first challenge led, unwittingly, to a lively debate about the Human Revolution that has occupied archaeologists ever since. Higgs would not have approved of this development, just as he was scathing in his criticisms of a later Neolithic Revolution, and I will examine why. He would have been more impressed by the development of his ideas of site catchment and exploitation territory that he developed in conjunction with Claudio Vita-Finzi, and his own students, and which owed much to the geographical models of Von Thünen and Chisholm, and the ethnography of Lee. I will explore how these ideas have developed since 1976 through concepts such as landscapes of habit and social landscapes and where Higgs' legacy is apparent. I will conclude that geographers can benefit from considering the timescales of prehistory and the material traces of mobility in their investigations of place and landscape.

#### **4) The importance of staying local: lithic transport distances in the Indian early Palaeolithic**

Robin Dennell (*University of Sheffield, UK*)

One of the most enduring legacies of Higgs was his insistence on the importance of focussing on the local environments of prehistoric settlements rather than large scale distribution maps of tool types and styles. As enshrined in numerous Ph.D.'s and derived publications, the 5 km radius around farming settlements, and 10 km one around earlier ones, became icons of palaeoeconomic investigations of that era. Although fewer circles are drawn around prehistoric settlements these days, catchment analysis – in the general sense of considering the local vicinity of sites – has become an integral part of any investigations in prehistoric subsistence.

One body of literature that documents local procurement activities in some detail is that on the Indian early Palaeolithic (i.e. Acheulean and early Middle Palaeolithic). Investigations of Indian Palaeolithic sites are seriously hampered by the near or total absence of faunal remains. However, Indian archaeologists have shown in numerous studies over the last 30 years the intensely localised lives of early stone age groups through studies of lithic transport distances. The best examples are from the Hunsgi-Baichbal valleys in southern central India, but others are from the cave site of Bhimbetka, from a remarkable group of >90 Acheulean sites in the Raisen area, and recently from the Kortallyar basin in southern India. These consistently show that raw materials were overwhelmingly derived from a radius of 4-5 km, with only a few items as far as 25 km. These results mirror those from Lower to Middle Palaeolithic sites in Europe, and a smaller body of evidence from the Levant. The paradox raised by the Indian data – and one never satisfactorily tackled by the Higgs school – was how groups that led such localised lives nevertheless repeatedly made artefacts that were near identical to those found hundreds or even thousands of miles away by contemporaneous groups. Here, the ideas of Wobst on mating networks that were subsequently developed by Gamble probably provide the most pragmatic way of reconciling the evidence for small-scale local lives with large-scale regional interactions.

#### **Tea Break**

#### **5) Were Pleistocene foragers at Niah Cave (Sarawak, Borneo) able to exploit rainforest? The role of catchment analysis.**

Graeme Barker (*University of Cambridge, UK*)

There has been a long-running debate about whether prehistoric foragers were able to live in tropical rainforest, stimulated by anthropological case studies of the many present-day

foragers who trade with neighbouring agriculturalists for food staples. Niah Cave in Sarawak (northern Borneo) began to be visited by foragers (anatomically modern humans on the evidence of the famous Deep Skull found in 1958) *c.* 45,000 years ago, and there is evidence for intermittent use of the cave thereafter as a place of habitation by foragers through the remainder of the Pleistocene and into the early Holocene prior to its use as a place of Neolithic burial from *c.* 5000 years ago. At the regional scale there are increasingly robust models of landscape change during the late Pleistocene and early Holocene in Southeast Asia, but to investigate the subsistence strategies used by foragers through these periods, and in particular whether or not they had the capability to exploit rainforest as well as other landscape types, necessitates modelling the landscapes to which they had access from their camp sites along the lines of the Site Catchment approach advocated by E. S. Higgs. The paper discusses the likely strategies of the foragers using Niah Cave between 45,000 and 5000 BP, integrating archaeological, geomorphological, and palaeoecological data from excavations in two of the cave entrances (the West Mouth and Lobang Angus) in terms of the likely foraging catchments outside them.

## **6) Mount Carmel revisited**

Claudio Vita-Finzi (*The Natural History Museum, London, UK*)

Reinterpretation of the deposits in the caves on the southwest flank of Mount Carmel, which were first excavated by Dorothy Garrod and others in the 1930s, shows that El Wad and Skhul were occupied by the sea contemporaneously with the local Levallois-Mousterian. When first proposed in 1970 the case was difficult to argue because, besides the usual problem with referees, the relevant deposits were dated by  $^{14}\text{C}$  to about 35,000 yr BP. Allowing for sea-level changes in the interim, this implied uplift at an extravagantly high average rate of  $\sim 1.5$  mm/yr. The application of novel dating methods to the deposits now points to an age of about 110 000 years for the palaeoshore and thus to uplift at 0.4 mm/yr. The result, when compared with geodetic measurements, bears on the assessment of seismic hazard, while evidence for submergence of the coastal corridor linking North Africa with the Levant reinforces the case for transit rather than occupation status for the caves.

## **7) Cryptic cavities and their catchments as records of Quaternary change: rockshelter sediment records in Epirus and beyond**

Jamie Woodward and Mike Morley (*The University of Manchester, UK*)

The excavations by Higgs and his co-workers at the rockshelters of Asprochaliko and Kastritsa did not include systematic study of the sediment matrix as this component of geoarchaeology was still in its infancy in the 1960s. In contrast, the next generation of excavations in Epirus in the 1980s and 1990s incorporated detailed sedimentological analysis of three rockshelters – firstly at Klithi and Megalakkos, and later at Boila. This work led to the development of new approaches to link the on-site sediment and cultural records with the off-site records of Quaternary landscape change (Woodward *et al.* 2001). A key component of this work involved developing methods to establish the provenance of the fine sediments in the rockshelter sediment records (and the long-term dynamics of the fine sediment catchment) and integrating these data with micromorphological analysis of the sediment record. This new approach allows a full assessment of the microstratigraphic features (natural and cultural) within a rockshelter sediment record (which are typically missed with traditional sampling methods) and it allows the site record to be viewed as part of the wider long-term record of Quaternary landscape change. These methods and ideas will be illustrated using recent examples from Greece, Sicily and Montenegro.

Woodward, J.C., Hamlin, R.H.B., Macklin, M.G., Karkanas, P. and Kotjabopoulou, E. (2001) Quantitative sourcing of slackwater deposits at Boila Rockshelter: A record of Lateglacial flooding and Palaeolithic settlement in the Pindus Mountains, Northwest Greece. *Geoarchaeology: An International Journal*, 16 (5), 501-536.

## **8) Lithics, Space, and the Central Place**

Matt Grove (*Royal Holloway, University of London, UK*)

The notion of the central place in archaeology has had a long and varied history. Throughout that history, from the original formulation of early human food-sharing models to more recent research rooted in optimal foraging theory, there has been a difficulty in establishing the conceptual validity of the term and its use. Part of this difficulty has arisen from the problem of defining the characteristics of the central place as a consistent archaeological entity. The current paper employs two techniques, discriminant function analysis and normal bivariate kernel analysis, in an attempt to distinguish the technological and spatial signatures of central places from those of other archaeological site types. A study of the intrasite spatial relationships of Oldowan sites and their lithic assemblages is employed to demonstrate the application of such techniques to archaeological data. Within the context of a wider investigation of hominin group sizes and range areas, the paper examines the importance of site specialization for the reconstruction of land use patterns in prehistoric populations. It is suggested that concepts such as site catchment areas and home ranges are of considerably greater use to archaeologists when employed in conjunction with investigations of site variability and the internal dynamics of hominin populations.

## **9) Was there a ‘beginning’ to either agriculture or domestication? – new approaches to an old theme**

David Harris (*University College London, UK*)

Thirty-seven years ago in the pages of *Antiquity* Higgs and Jarman posed the question quoted in the title of this paper, and launched a radical critique of the then prevailing assumption that the transition from the wandering life of hunter-gatherers to the settled life of farmers (the so-called Neolithic Revolution) constituted a profound and relatively sudden change in human history. They criticized the distinctions made between agricultural and non-agricultural societies, and between the wild and the domestic, as classificatory conveniences that obscured the complexity of past human relationships with animals and plants. They even suggested that “there may not have been a hunter/gatherer age” at all, and argued that human-animal/plant relationships amounting to domestication could be traced back at least as far as the Middle Palaeolithic. Since Higgs’ time, the amount and diversity of data on domestication and ‘agricultural origins’ has increased vastly with the application of novel techniques to the analysis of archaeologically recovered plant and animal remains, and with data from genetic studies of crops and domestic animals. But interpretation of the new evidence is still constrained by the forager/farmer dichotomy, by confusion over the meaning of domestication, and by the enduring influence of the Vavilovian construct of a few primary centres of origin. In this contribution, those constraints will be examined and a different conceptual framework proposed for the comparative worldwide study of past human subsistence.

## **10) Catchment and territory in agricultural landscapes: revisiting the birth of a concept (Vita-Finzi and Higgs 1970) in the light of current research in landscape archaeology**

John Bintliff (*Leiden University, The Netherlands*)

Catchment Analysis was born in print in 1970, and its applications proliferated globally during the following decade. From the 1980's onwards however it was increasingly marginalized in the changing world of Archaeological Theory, critiqued as an outdated statement of a deterministic and mechanistic worldview inappropriate to the emergent humanistic approaches of Post-Processualism. Even enthusiasts for economic and geographical analysis of settlement location found problems in applying it, even in modified form, to settlement systems, both in practice and in interpretation. Contemporary use of the methodology is extremely rare for agricultural societies.

Despite this rather gloomy case-history, the fundamental insights of Catchment Analysis remain of extraordinary value, once we enrich the early papers with the knowledge now available from subsequent settlement and landscape studies, and we make some major but necessary changes to theory and practice (cf. Bintliff 1999, 2000). This paper will demonstrate how this can be done, and why contemporary landscape archaeologists of all persuasions will profit from a revitalized Catchment Analysis.

Vita-Finzi, C. and E. S. Higgs (1970). Prehistoric economy in the Mt.Carmel area of Palestine: site catchment analysis. *Proceedings of the Prehistoric Society* 36, 1-37.

Bintliff, J. (1999). Settlement and Territory. In: G. Barker (ed) *The Routledge Companion Encyclopedia of Archaeology*. London, Routledge: 505-545.

Bintliff, J. et al. (2000). Deconstructing 'The Sense of Place'? Settlement systems, field survey, and the historic record: A case-study from Central Greece. *Proceedings of the Prehistoric Society* 66, 123-149.

**General Discussion and closing remarks**