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***Human Adaptation in the Asian Palaeolithic: Hominin Dispersal and Behaviour during the Late Quaternary*, by Ryan J. Rabett, 2012. Cambridge: Cambridge University Press; ISBN 978-1-107-01829-7 hardback £65.00 & US\$99.00; xii + 372 pp., 73 figs., 10 tables**

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In the Euro- and Afro-centric worlds that we inhabit as Palaeolithic archaeologists, southeast Asia has long been marginalized. Not only is it on the other side of the world from western Europe and East Africa, its Palaeolithic record is mostly late Pleistocene, and lacking in the standardized stone tool assemblages prevalent in much of Europe, southwest Asia and Africa at this time. Additionally, it lacks any evidence for mobiliary and parietal art, elaborate burials, or the other eye-catching facets of late Palaeolithic records elsewhere. The long shadow of Movius (1948) still falls across southeast Asia as a region whose inhabitants were (in his view) somehow primitive and developmentally stagnant because they lacked Acheulean handaxes. When southeast Asia is noticed, it is because of the early presence of *Homo erectus* at Sangiran, Java, c. 1.6 Ma, and its possible — but now unlikely (Indriati *et al.* 2011) — persistence into the late Pleistocene. The discovery of the hobbit, *Homo floresiensis*,

on the island of Flores has created enormous interest, but that has not extended to the rest of southeast Asia. For these reasons, this book valuable in redressing this neglect of a region larger than western Europe, and with a Palaeolithic record no less fascinating than that of better-known regions. Ryan Rabett has extensive field experience of southeast Asia, having worked at Niah Cave, Borneo, on Graeme Barker's project, and also in the Malaysian Peninsula, and since 2007 in northern Vietnam. He thus has the field experience and background to write an authoritative account of the later Palaeolithic record of mainland and island southeast Asia.

His book has eight chapters, a lengthy (and very useful) appendix of radiocarbon and calendar dates from late Pleistocene and Holocene southeast Asia, and over 1000 references. After a short introduction (Chapter 1), he provides in Chapter 2 a succinct (16-page) overview of Pleistocene chronology and climate, with emphasis on short-term changes best exemplified in the last glacial cycle by Heinrich and Dansgaard-Oeschger Cycles, and which likely had profound consequences on human populations by creating very short-term (decadal or generational) climatic and ecological instabilities. Chapter 3 covers hominin dispersals outside Africa in the Lower and Middle Pleistocene. I should confess my own bias here as an Asian prehistorian, having recently written my own overview of the Asian record up to the last interglacial (Dennell 2009). I thus read this chapter more quickly than the others, as its contents were largely familiar to me. I have no complaints — it was sound and thorough, but did not take me into new territory.

What I wish he had done instead was to replace Chapter 3 with one that provided an overview of the geography, climate, vegetation and fauna of southeast Asia as that is the region that forms the core of this book: it is not a region I (or probably most readers) know well, and some basic information on its main physical features would have been useful. As a general but fairly minor criticism, more maps would have been useful; readers should not have to rely on Google Earth to locate places such as the northern Maluku islands; and the index could usefully have listed islands like Flores or Sulawesi, rather than just the main archaeological sites on them. But enough of the grumbles, and onto the good points.

The book really takes off in Chapter 4 when he starts to focus on *Homo sapiens* and the associated debates over 'modernity' and the origins and early manifestations of 'modern behaviour', however defined. The evidence for the 'Human Revolution' *sensu* Mellars and Stringer (1989) in Europe is presented, in particular, a standardized blade-based lithic technology, abundant mobiliary and parietal art, elaborate burials, and evidence of specialized hunting etc. after 35–40 kya. As I (and others, including Rabett) have commented elsewhere, the European tail has tended to wag the Asian dog by projecting itself as the standard against which other regions are judged. Europe was one of the last parts of Eurasia to be colonized by *Homo sapiens*, which was in Tasmania when Neanderthals were still in western Europe, and our species had at least 10–20,000 years in southern Asia and Australia in which to develop the type of 'modern' traits and types of behaviour seen in Europe. More recently, the seminal paper by McBrearty and Brooks (2000) projected a different perspective, of the deep roots of

European ‘modern’ traits in the African Middle Stone Age that were then taken to other regions after *Homo sapiens* left Africa. In sharp contrast, Habgood and Franklin (2008) have argued that no ‘package’ of modern traits accompanied the first colonists of Australia; instead, these were invented independently over subsequent millennia. A key question thus to ask about southeast Asia is whether it conforms more closely to the African or Australian example: did the earliest *Homo sapiens* populations in southeast Asia arrive with an African-derived package, or develop one independently?

Chapters 5 to 7 form the core of the book. Chapter 5 covers the initial expansion of *Homo sapiens* outside Africa, with most of it on southeast Asia. Like myself (Dennell & Petraglia 2012), he is sceptical over whether the early presence of *Homo sapiens* in the Levant denotes a failed dispersal, and raises the possibility that there may have been dispersals of *Homo sapiens* that have left no imprint in modern human populations. If so, genetic data may under-estimate the date(s) when our species first dispersed across southern Asia. He also rightly argues how little is still known about early Asian demography: ‘Dmanisi, Denisova, Ngandong, Narmada, Liang Bua and Callao evidence all demonstrate emphatically that there is much here that we do not yet have a handle on’: with that I am in total agreement, as there is no relevant fossil evidence for *Homo sapiens* between the Levant and Laos (Demeter *et al.* 2012).

In Chapters 6 and 7, Rabett discusses the southeast Asian evidence from the last termination (= LGM) to the early Holocene. Chapter 6 provides a detailed overview of the climatic, environmental and archaeological evidence from mainland and island southeast Asia as well as genetic evidence from modern populations for population contractions and dispersals in the late Pleistocene. Chapter 7 focuses upon subsistence strategies at the end of the last glacial, and draws heavily upon the author’s own experience as a faunal analyst in northern Borneo at Niah Cave, in northern Vietnam at Trang An, and peninsular Malaysia at Gua Sagu and Gua Tengek, where he re-analysed the faunal assemblages. Both these chapters are superb: I learnt more here about the late Palaeolithic record from southeast Asia than from ten years of patchy reading. These chapters clarified for me the type of differences between the later Palaeolithic of western Europe and southeast Asia: in the former, people used a complex technology in a simple environment for killing, skinning, defleshing a small range of high-density ground-dwelling mammals (followed by extensive skin and hide working), whereas in southeast Asia, they used a simple lithic technology in a complex environment for extracting a high diversity of low-density resources that were vertically stratified, from tree-canopy to sub-soil. Evidence from Niah Cave shows that Palaeolithic groups were also extracting starch in large amounts, as well as detoxifying plants that would otherwise poison them (and by what process of trial and error was detoxification discovered?).

Chapter 8 is entitled ‘ex levis terra’, which the author informs us means ‘out of the unstable earth’. Here, the author integrates his interpretations of the southeast Asian evidence with that from Europe to explain how and why our species is the only surviving member of the genus *Homo*. Put briefly, the key factors (as set out in Chapter 1) are climatic

and environmental instability, and the ability of human groups to adapt constantly to inconstant conditions; in other words, flexibility and innovation in knowing how, when and what to change: ‘The later Pleistocene history of humanity, its movements, behaviours and regionalism, can be thought of in terms of evolutionary selection for increasingly short-term, localized and material culture-dominated adaptations in the face of compounded environmental disequilibrium’ (p. 288). This outlook also helps explain why other hominin species became extinct, notably Neanderthals in Europe and central Asia: the combined effects of climatic and ecological instability and competition with a species slightly smarter at dealing with change may have tipped them into extinction. This chapter is outstanding, and should be read by anyone interested in the later Palaeolithic of western Europe as well as southeast Asia; indeed, it should be read by anyone interested in human adaptations in the last glacial cycle.

Overall, this book will stand as the port of entry into the Pleistocene record of an enormous, complex and fascinating part of the Palaeolithic world, and no-one can now have the excuse that southeast Asia can be ignored because little is known about it. This is a tremendous piece of scholarship that should stand as the basic text on the subject for a generation.

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