

Book Review

BAN CHIANG, A PREHISTORIC VILLAGE SITE IN NORTHEAST THAILAND, VOLUME 1: THE HUMAN SKELETAL REMAINS

Michael Pietrusewsky & Michele Toomay Douglas (eds). University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia, 2002. 493pp. ISBN 0-924171-92-8. £70.00.

Contemporary European prehistorians and classical archaeologists are blessed with an archaeological record of extraordinary richness. We have within our reach thousands of documented and excavated sites, and probably hundreds of skeletal collections associated with them. Imagine then, a parallel universe in which the 3000 year period ending in the early first millennium AD was known only from a handful of well excavated sites, and only two substantial skeletal collections. The challenge of shedding light on the ancient societies would be huge—and the rewards exhilarating. So it is with Thai archaeology today. Thanks to the efforts of the Fine Arts Department of Thailand and their colleagues from around the world, new revelations about the ancient past of this beautiful and gracious country are gradually coming to light. Pietrusewsky & Douglas's monograph is a long-anticipated contribution to this literature, and one that has opened the door to a wealth of new research opportunities.

The site of Ban Chiang lies in the northern part of the Khorat Plateau in northeast Thailand. Excavated in 1974–1975 by the late Chester Gorman and colleagues, it is thought to date from the late third millennium BC to the early first millennium AD. Some may consider this date to be controversial (Higham & Thosarat, 1998), but the site certainly includes pre-metal, Bronze Age and Iron Age assemblages. The University of Pennsylvania Museum of Archaeology and Anthropology, which has a long history of collaboration with Thai anthropologists,

has created a new Thai Archaeology Series that will present monographs on all aspects of the excavation of Ban Chiang. This volume, on the human skeletal remains, is the first in this series.

It is difficult to overestimate the importance of this monograph to the osteoarchaeology of Southeast Asia. The Ban Chiang collection is one of the largest comprehensively analysed skeletal series from the region (142 individuals). The only comparable collection in terms of scale, state of preservation, and depth of study is that of Khok Phanom Di, also published very recently (Choosiri, 1988; Tayles, 1999). Those who already have an interest in the Asian record will be aware that limited information about the collection has surfaced in the literature sporadically over the past 20 years. The initial analyses from the 1970s appeared in an unpublished report (Pietrusewsky, 1980) and a number of papers (e.g. Pietrusewsky, 1981, 1982). The Ban Chiang material has been well curated and made available to a number of researchers over the years (e.g. Turner, 1979; Hanihara, 1992; Ishida & Dodo, 1997). Much of this work has been focused on the reconstruction of past biological relationships between groups in Southeast Asia, a topic which is still of core interest to the field. As the authors of the current volume make clear, by 1987 ongoing archaeological research on the material record required a revision of the chronology of the site, which in turn led to the reassessment of the skeletal material presented in the monograph. This then, becomes the definitive primary account of the skeletal collection of Ban Chiang.

The volume consists of 13 chapters, four appendices within the book and one computerized file of raw data on an enclosed CD ROM. Following the introduction, chapter 2 presents the methods. Although clear and concise, this is one of the weakest sections of the volume, and provides barely enough detail for an informed assessment of the research protocol. Perhaps this is most surprising in the section on palaeopathology, where referencing is kept to a minimum and seems slightly dated. In fairness, most of the following chapters contribute more to the

bibliography, but a student of osteology reading this volume should not rely on it as a guide to the current literature.

Chapters 3–10 include detailed evidence of skeletal condition, metric and non-metric variation recorded in crania, dentition and postcrania, and palaeopathology. In all sections the evidence is well described, illustrated, and tabulated. In some cases, such as that of palaeopathology, illustrations of scales of severity of conditions as observed on this collection would have been welcomed but unfortunately are not included. For instance, the description of shoulder OA in the male burials 23 and 35 is reminiscent of rotator cuff disease, but it is not possible to confirm this. However, generally the presentation of these data is of the highest quality, with well integrated tables and sharp photographs. At no point is the reader overwhelmed by information, and the text is straightforward and authoritative. Where longer tables are required the appendices take over, and in fact the whole volume is an unexpectedly accessible resource.

Throughout these sections the authors run several interweaving themes, to which they return in the concluding chapters. These are; the peopling of Thailand; palaeodemography, morbidity and subsistence; ancient lifestyle, and biological variability. Chapter 11 focuses explicitly on temporal and spatial variation within the site, and chapter 12 looks at the Ban Chiang skeletal series from a regional perspective. The question of population origins is a core concern to many Asian anthropologists, and one to which Pietrusewsky has returned in other publications many times. His approach is to compare patterns of metric and non-metric traits between geographically distinct populations to assess biodiversity. In this monograph it is concluded that the Ban Chiang skeletal collection represents a single continuous population that is morphologically consistent with the extant peoples of Southeast Asia. In comparison with more northerly neighbours the Ban Chiang people were characterized by high and narrow cranial vaults, narrower and more prognathic faces, and more generalized dentition. Unlike the modern Thai, however, they were tall and relatively robust. Comparing Ban Chiang with other archaeological populations, the authors conclude that it is most similar to Non Nok Tha, but shares a number of features also with Bronze Age northern Chinese (Angyang) and the Japanese Jomon. This conjures up a very complex pattern of relationships which the authors quite conspicuously choose not to represent graphically in tree-like form. Perhaps wisely, they instead go on to suggest that drift and isolation of populations was a key force in the

evolutionary history of these peoples, citing the morphologically distinct Kok Phanom Di populations as evidence for potentially distinct genetic sources. They are happy, however, to confirm that all these Southeast Asian skeletal series are sharply differentiated from Australian and Melanesian groups. It is clear that there is no evidence for population replacement here, nor for rapid demographic expansion in the late third millennium (contra Higham, 1996).

Debates over the genetic origin of the Thai populations are closely linked with those concerning the appearance and character of agriculture in the region. Until the late 1980s many archaeologists favoured an *in situ* origin of agriculture, but by the later years of that decade the colonization model championed by Bellwood (e.g. 1985, 1993, 1996) and more recently by Higham (1996) and Glover (Glover & Higham, 1996) began to dominate. Pietrusewsky & Douglas contribute to this debate by showing that skeletal material spanning this period may provide evidence for population history, patterns of migration, and changing patterns of health and activity. The archaeological evidence at Ban Chiang may suggest a change in subsistence strategy including the introduction of inundated rice paddies during the Middle Period, but the palaeodemographic reconstruction of the skeletal series presented here does not. The numerous aspects of the reconstruction of health and disease described are consistent with a mixed hunter gatherer/cultivator economy, with a population relatively stable in size with a relatively low infection load. There is no clear evidence presented for a decline in health over time or for significant interpersonal violence.

In summary, this volume makes an extremely important contribution to our understanding of human settlement in eastern Asia. There are some drawbacks—readers may have reservations about the adequacy of the description of methodology, particularly if they are concerned with palaeopathology such as osteoarthritis. Also the population sample is rather small, and may be further biased by the site taphonomy, which the authors acknowledge. Nevertheless, this is a beautifully presented work which provides rare primary data from a region which remains largely unknown. On closing the volume, I challenge any reader not to be inspired by the opportunities for future research which this and the recent publication of Khok Phanom Di (Tayles, 1999) have opened up. Bone chemistry, aDNA, and biomechanical studies have yet to make a significant impact in the region but will surely do so in the near future. This volume is essential reading for anyone interested in the 'Ever-mysterious East' (Pietrusewsky & Douglas, 2002; 257).

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