

Although Gray's coverage of primate socio-biology is impressive, it is not exhaustive. In general, the papers cited in this volume are those that explicitly mention sociobiological predictions. Given the wide-ranging scope of his efforts, this was probably a necessary constraint. However, it is sometimes unfortunate because relevant studies that were conducted within different theoretical frameworks are thereby neglected. A more thorough and insightful analysis of the factors that influence maternal investment patterns, for example, would draw more extensively upon the detailed studies of mother-infant relationships conducted by Robert Hinde, Leonard Rosenblum, Carol Berman, and many others. However, in other areas this problem does not arise. For example, most studies of the relationship between female dominance rank and reproductive success were conducted with sociobiological questions in mind, and all of the relevant studies of which I am aware are reviewed

here. Moreover, they are discussed with considerable accuracy. Primate Sociobiology also contains a very comprehensive review of sociobiological analyses of the behavior of contemporary humans. Gray has done us a considerable service by compiling studies published in anthropology, psychology, and sociology.

Gray's book is a valuable resource for primatologists. My copy is already well-thumbed, annotated, and frequently consulted. The empirical data provided here provide ample ammunition for new skirmishes between supporters and opponents of sociobiology. With Gray's book, there is reason to hope, however, that the issues will become more substantive, and the debates will become more productive.

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PALAEOANTHROPOLOGY AND PALAEOLITHIC ARCHAEOLOGY IN THE PEOPLE'S REPUBLIC OF CHINA. Edited by Wu Rukang and John W. Olsen. Orlando: Academic Press. 1985. xxvii + 293 pp., figures, tables, index. \$54.00 (cloth).

A combination of broad coverage and excellent translation makes this one of the most useful compilations of Chinese paleoanthropology and paleolithic archaeology ever published. By covering a number of recent discoveries and developing ideas about human evolution in China as seen through the eyes of the top scholars in the People's Republic, the sources for so many ideas that have come into the Western literature by various means can now be properly credited.

The "Paleoanthropology" section (perhaps more properly a "biological anthropology" section since paleolithic archaeology is often included within paleoanthropology) begins with a review of paleoanthropological (broad meaning) research in China by Wu Rukang and Lin Shenglong, including an extraordinarily useful bibliography. This chapter is followed by a brief review of chronology, as it is currently understood, by Wu Xinzhi and Wang Linghong. This review includes the latest radiometric determinations and prop-

erly credits the redating of Yuanmou, with implications that are important because 1) the incisors from the site are the earliest known from China and the redating halves their age, and 2) other faunal dates such as those of the *Gigantopithecus* caves in south China depend on the Yuanmou age. As with other chapters in this volume, it is critical to read the text as well as the tables to reach a full understanding of what is being presented. Dates presented for Zhoukoudian and Xujiayao are also absolutely critical as context for understanding human evolution in China.

Following these introductory chapters there are two reviews of the thick enameled hominoids by Wu Rukang and Xu Qinghua and by Zhang Yinyun. The former deals with the fossil apes from Lufeng, *Ramapithecus* and *Sivapithecus*, which are regarded as either two sexes or two closely related species. The latter reviews the relation of early and late *Gigantopithecus* remains and attributes the so-called *Australopithecus* specimens to an early form of *Homo erectus*. The remains of *Homo erectus* discovered since liberation are briefly discussed by Wu Rukang and Dong Xingren and include some (but not enough) commentary on the Hexian vault and an unfortunately weak description of dental remains from Longgudong and Bai-

longdong. Only Longgudong is published in any detail elsewhere in the Chinese literature, leaving aspects of dental evolution in China unknown in the West.

Early (archaic) *Homo sapiens* is discussed in a chapter by Wu Xinzhi and Wu Maolin, while more recent remains are covered by Wu Xinzhi and Zhang Zhenbiao. The archaic remains are seen as precursors for the living and recent Chinese populations (see, especially, the discussion of Dali), and as distinct from early *Homo sapiens* in other areas of the world, thus carrying on Weidenreich's traditional interpretation of human evolution in the Far East. Moreover, the virtually complete skeleton from Yingkou, discovered after the Wu and Wu chapter was written, adds even more fuel to the regional continuity argument.

The more recent remains (a sample now much larger than the Zhoukoudian Upper Cave materials) are shown to fit this scheme far better than Weidenreich thought. Moreover, evolutionary trends within the large Neolithic samples are shown, and it is clear that research in all aspects of human evolution is proceeding at the fastest rate one could expect when the number of times the same name appears on different papers (an indicator of the small number of Chinese paleoanthropologists) is taken into account.

The second half of the book, almost exactly half by page count, reviews the progress and prospects for paleolithic archaeology in China. The authors, perhaps less familiar to the readers of this journal, also occupy the fourth floor of the IVPP in Beijing (Zhou Mingzhen once pointed out to me that the institute reflected the evolutionary process, with the invertebrate paleontologists below the vertebrate paleontologists, who in turn are below the paleoanthropologists).

The archaeological sequence is discussed in serial order, perhaps reflecting chronology. Jia Lanpo describes the earliest Paleolithic remains, supporting the redating of Yuan-

mou, which makes it younger than the Lower Pleistocene materials from Xihoudu. Zhang Senshui, who like Jia has extensive experience at many of the archaeological sites, presents a long and very useful chapter on the early Paleolithic. Chapters on the middle (Qiu Zhonglang) and late (Jia Lanpo and Huang Weiwen) Paleolithic tend to be primarily descriptive and site oriented, although like all the chapters in this compilation they include more discussion and interpretation than is usual in that part of the Chinese scientific literature available in English. More specialized chapters describe microlithic industries (Gai Pei), the Paleolithic of Inner Mongolia (Wang Yuping and J.W. Olsen), and the mammalian faunas of China (Han Defen and Xu Chunhua). Finally, Jia Lanpo and Huang Weiwen place the understanding of China's Paleolithic in a historic context.

This book is an absolute must for anybody interested in the course of human evolution in East Asia. Indeed, given some of the recent publications asserting that Chinese *Homo erectus* has nothing to do with the evolution of later humans and the use of these publications by geneticists claiming to show a recent replacement of all human populations by a very small population from Africa, this book could well be required reading for everybody interested in the origins of modern populations. The East Asian fossil evidence should be understood, and the uninterpreted opinions of our Chinese colleagues at the IVPP read first hand, so that these can be considered in an accurate and valid way. This book provides the opportunity to do so. It will no doubt foster a better understanding of Chinese paleoanthropology than currently exists.

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METRIC AND NON-METRIC CRANIAL VARIATION IN AUSTRALIAN ABORIGINAL POPULATIONS COMPARED WITH POPULATIONS FROM THE PACIFIC AND ASIA. By M. Pietrusewsky. Canberra, Australia: Australian Institute of Aboriginal Studies. 1984. xi + 113 pp., maps, figures, tables, references. \$9.95 (paper).

The biological variation within Australian Aboriginal populations, the presumed Asian origin of the founding population, and the presence of temporal trends within Australia are the subjects of protracted debate. Despite an increased effort in the last two decades, this debate is after 200 years of research still some distance from resolution. Pietrusewsky