

The World from Beginnings to 4000 BCE

Ian Tattersall

New York: Oxford University Press, 2008, 143 pp. (paperback), \$19.95.

ISBN-13: 978-0-19-533315-2.

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My personal view of anthropology is very much rooted in the idea that anthropology is the history of our species, and consequently that any discourse on human history must begin with the events that shaped our species thousands and millions of years before the beginnings of recorded history. Given this perspective, I was delighted to see that the series, *The New Oxford World History*, begins chronologically with Tattersall's book that covers the major events of human evolution from our bipedal origins through the origin of agriculture and civilization. This is a lot of ground to cover in 124 pages of text but Tattersall does a very nice job. Given the proposed scope of the series and book, I see this book as intended for a general audience, and have written this review with that goal in mind.

The book consists of seven chapters, along with a two-page chronology of major events over the past 6.5 million years, a list of further readings, and a list of human evolution web sites. The first chapter reviews basic principles of evolutionary processes, particularly the definition and evolution of species. I found this the least satisfying chapter, with discussions of the debate over the nature of species and the relationship of microevolution and macroevolution not being as balanced as I would prefer, and sometimes difficult to follow for someone unfamiliar with evolutionary theory. Chapter 2 is a nice review of methodology, including useful and clear exposition of dating methods and on reconstructing evolutionary relationships.

Subsequent chapters move on to discuss the fossil and archaeological records of human evolution. Chapter 3 covers the fossil record from *Sahelanthropus* through the robust australopiths. The focus here is not a species-by-species breakdown, but is instead a general discussion of what the fossil record tells us about this phase of human evolution, namely that although our earliest ancestors were ape-like in many ways, they were bipedal (at least on the ground). The fact that features that make us human did not all appear at the same time and that our ancestors were bipeds millions of years before major brain expansion or stone tool technology is the most important lesson to be learned from this time of our history. Tattersall presents this lesson clearly, with ample discussion of why bipedalism might have evolved. The importance of the fossil record in addressing these concerns is laid out nicely and not obscured by excessive detail on taxonomic issues.

Chapter 4 deals with the emergence of the genus *Homo* and the beginning of stone tool technology, the origin of *Homo habilis* and *Homo ergaster*, and the expansion of *Homo* into Southeast Asia and the fringes of Eastern Europe. Tat-

tersall introduces an important lesson (that comes up again in later chapters) regarding the disconnect between biological and cultural human evolution. New forms of stone tool technology did not appear with the birth of a new species, but occurred somewhat later in time. Thus, the appearance of Acheulean tools postdates the initial appearance of *H. ergaster/H. erectus*, just as the appearance of prepared core tools postdates the initial appearance of *Homo heidelbergensis*.

Chapter 5 is titled "Getting Brainier," and focuses on the origin and evolution of *H. heidelbergensis* and the Neandertals, covering both the fossil and archaeological record. Discussion of morphology and behavior is clear, and the argument for separate species is clearly stated. Chapter 6 moves on to the question of modern human origins, first discussing genetic evidence for an African origin, followed by a review of the fossils and archaeology of modern humans. The chapter concludes with discussion of the fate of the Neandertals, in which Tattersall concludes, not surprisingly, that the Neandertals were completely replaced. Although many would agree with this conclusion, and while I am more sympathetic to this view than I was a few years back, I believe that the issue has not been settled beyond a reasonable doubt. For a new reader, it would have been useful to consider the possibility of assimilation, and adaptive introgression, just to give more of a flavor of the ongoing debates.

Chapter 7 reviews the history of our species from 12,000 to 6,000 years ago, summarizing the origins of agriculture and the rise of complex urbanized societies, including the important lesson that agriculture independently developed across the world and not through diffusion from a single source. The inclusion of this chapter is important. Too often, books on human evolution end with the origin and geographic expansion of modern humans during the Paleolithic. Including coverage of the origins of agriculture and civilization makes a transition that more clearly ties together our species' ancient and more recent history. This material also clarifies how much more quickly our species' cultural evolution has been, compared with our physical evolution over the past 10,000 years or so. All of recent human history (including subsequent volumes in this series) builds from these beginnings, which in turn build upon the earlier evolutionary history of our species.

As noted above, writing about the entire history of humanity (up to 6,000 years ago) in a short space for a general audience is a daunting task, and I was most impressed by the overall quality of this book. I liked how major trends,

such as the origin of bipedalism, larger brains, and so forth, were given central focus rather than excessive anatomical or taxonomic details. Tattersall is skilled at describing the anatomical characteristics of various species without throwing jargon at the reader. This task would be easier, however, with a few more drawings or photographs. The book is rather sparse in this regard, with only one photograph each of *H. erectus* and Neandertals, for example. A few more pictures would have been useful. For instance, the one photograph of a Neandertal is a comparison of the reconstruction of the complete skeleton next to that of a modern human. While useful for illustrating the post-cranial differences, the picture does not illustrate the many craniofacial differences between Neandertals and modern humans described in the text, and an additional comparative photograph would be useful for readers who are not familiar with the fossil evidence.

Topical coverage is quite good, and many different ideas, concepts, and findings are discussed in the short space available. Many debates and issues are discussed with appropriate admission of what we do and do not know. A good example is the discussion of change over time in the kind of animals hunted by Neandertals, and how it is not clear whether this change reflects changes in hunting methods (p. 86). Likewise, the idea that male and female

Neandertals led somewhat separate lifestyles is considered with the appropriate statement that "... we simply do not know." On the other hand, Tattersall sometimes sees more clarity in a situation than I might, such as the statement that Neandertals did not have language. I am not necessarily disagreeing with this idea, but would have liked to see it framed as a debate and not as a definitive conclusion. There are also a few sections that seem a bit out of place in a book intended for a general audience. For example, when talking about the reaction to the species name *Homo habilis* after it was first proposed, Tattersall correctly notes that there was opposition to the species name because of a perceived lack of morphological space between the australopiths and *H. erectus*, and that this objection no longer holds any sway. I wonder, however, how apparent it is to a new reader from this passage what exactly is meant by "morphological space" if they were not already familiar with the historical debate.

These minor quibbles aside, I did very much enjoy the book. While not agreeing with every conclusion, I found it was quite thorough given its brevity and enjoyable to read. I am often asked for recommendations for a short and current introduction to human evolution, and it has often been difficult to find something that is both complete and clear. This book fills that niche and I will be recommending it.