

and dangerously abundant. A wider-ranging second section moves from Atlantic cosmopolitanism in the age of revolutions (chapter 3) and the naturalist William Bartram as “philosophical pilgrim” (chapter 4) to analyses of Jefferson’s *Notes on the state of Virginia* (1785) and Audubon’s *Birds of America* (1827–1838) in the final two chapters.

These chapters focus on texts that will likely be familiar to readers of *Archives of natural history*, but which are given new life by Iannini’s thoughtful close readings. *Fatal revolutions* also achieves the difficult task of weaving these “snapshots” of specific texts and historical moments into a coherent narrative. Iannini’s overarching claim is that European conceptions of the tropical New World were progressively challenged by Creole naturalists and planters who used natural history to assert “patriotic epistemologies” (to borrow a phrase from Jorge Cañizares-Esguerra’s cognate work on Spanish American Creole debates). Iannini argues further that his subjects used American nature as a framework for exploring and justifying the cruelties of chattel slavery.

Iannini’s emphasis on close readings of representative texts is not without drawbacks. He sometimes appears too eager to force his chosen texts into the confines of a single interpretive angle. For instance, his reading of Bartram’s journal as a form of “pilgrimage” and a “spiritual imperative to study nature” (p. 198) convinces in its general outlines, yet also leads to missed opportunities. Bartram’s vision of “cruel civilization . . . [that] refines and sublimates humanity” leaving behind “a subtle, restless fiery Spirit” is glossed by Iannini merely as a “moralizing commentary on avarice and ambition” (p. 200). Yet it is also a clear reference to alchemy – a link that, if developed, could have clarified the early modern intellectual heritage of Iannini’s Enlightenment-era naturalists. The book’s discussion of Hans Sloane would similarly have been strengthened by casting a broader net in the archives of the Royal Society. Finally, closer engagement with the historiography of science in colonial Latin America could have provided interesting parallels and contrasts.

These quibbles aside, *Fatal revolutions* is a book of outstanding scholarship that will be of interest to a wide range of readers interested in Atlantic history, colonial nature, slavery, and “plants and empires”. It is also a beautifully produced volume, sporting numerous striking illustrations that Iannini analyses with acumen and skill.

DOI: 10.3366/anh.2013.0160

BENJAMIN BREEN

PIETSCH, T. W. *Trees of life. A visual history of evolution*. The Johns Hopkins University Press, Baltimore: 2012. Pp xi, 358; illustrated. Price US\$ 69.95, £ 36.50 (hardback). ISBN 9781421404790.

Conceptualizations of nature’s order have changed considerably over time. So too have attempts to represent this order graphically. Roughly until the end of the eighteenth century and in the shape of ladders and maps, tables and keys, nature was understood as static and divinely ordained. But as natural history was transformed in the nineteenth century, relationships in nature were re-conceptualized as the outcome of long-term development. Tentatively before and expressly after Darwin, genealogy became the guiding principle of the natural system. As a result, natural historians began to draw trees.

Following Darwin’s evocative description of a family tree of all life in his *Origin of species* (1859), evolutionary trees became known as “trees of life”. This is also the title of a new book, in which Theodore W. Pietsch has collected 230 diagrams of nature’s order and history, or aspects of it, from the sixteenth century to the present. The diagrams are organized chronologically and sometimes thematically. A certain tilt toward fish is explained by the author’s expertise: Pietsch is professor at the School of Aquatic and Fishery Sciences, as well as Curator of Fishes at Burke Museum, both at the University of Washington.

The book testifies to Pietsch’s encyclopaedic ambition and his unmistakable passion for the subject. His collection is rich and wide in scope; we find diagrams ranging from Duchesne’s “genealogy of strawberries” (1766) to Czelusniak and Morris’s phylogeny of haemoglobin (1982).

Because of this diversity, the book provides a very stimulating overview of (Western) attempts to make graphic sense of life and its history on this planet. It has no rival as an introduction to the subject.

The visual wealth, however, comes with methodological problems. Pietsch writes: “The focus of this book is on diagrams that resemble trees in the botanical sense” (p. ix). But this statement does not sit well with the actual content. A substantial portion of the diagrams should not, for a variety of reasons, be described as trees – they were not named trees by their authors, they do not resemble trees, and so on – and the majority are certainly not “trees of life”, at least not in Darwin’s sense of a family tree of all life. Even so, Darwin remains the point of reference. Rather ahistorically, Pietsch applies his term “tree of life” to the entire, complex and diversified tradition. This has the unhelpful effect of reinforcing an insufficiently nuanced grand narrative of natural history in terms of before and after Darwin.

It also has the effect of turning the reader’s eyes away from fascinating variations. Natural historians have indeed produced many “diagrams that resemble trees in the botanical sense”. But this was mainly a phenomenon of the late nineteenth and early twentieth centuries. Even as later phylogenies were referred to as trees, they were typically more abstract; recently there has even been a turn toward circular “trees”. Perhaps Pietsch has failed to discern such incongruities because he believes in an actual tree of life. Introducing the last diagram in his book, by Hillis, Zwickl and Gutell (2003), Pietsch writes that it was based on rRNA sequences “from about three thousand species from throughout the tree of life” (p. 312). Here the metaphor is the model for itself.

Many have attempted to write histories of the evolutionary tree, including this reviewer (*Archives of natural history* 39 (2): 234–252 (2012)). But most scholars so far have privileged content over visual expression, which makes Pietsch’s study a welcome contribution. His book will not only be consulted by historians, but will also please a broader readership, who will enjoy it for the perspectives it offers as well as for its lavish illustrations and handsome presentation.

The objects of study are indeed beautiful and inspiring in their own right and I know of only one tree-history that is visually richer: Christiane Klapisch-Zuber’s *L’arbre des familles* (2003), a lush genealogy of the genealogical tree. The evolutionary tree has deep roots and anyone hoping to understand its history must cross disciplinary boundaries. After all, Pietsch’s evolutionary phylogenies are only late descendants of the trees once drawn for aristocratic pedigrees.

DOI: 10.3366/anh.2013.0161

NILS PETTER HELLSTRÖM

CHAMBERS, N. (editor). *The Indian and Pacific correspondence of Sir Joseph Banks, 1768–1820*. Volume 4 *Letters 1792–1798*. Pp xvii, 458. Volume 5 *Letters 1798–1801*. Pp xviii, 643. Pickering & Chatto, London: 2011, 2012. Price £ 100.00 per volume. ISBN 9781851968381 and 9781851968398.

The 664 letters gathered together for these volumes, to and from a total of 139 correspondents, have come from numerous repositories worldwide to which they were dispersed after Joseph Banks’s death, and are part of a projected eight-volume series to be completed in early 2013. A mighty work of research and synthesis simply to compile, the letters themselves have all been transcribed in full and to a splendid level of accuracy throughout. This high level of coverage and accuracy is matched by the editorial interpretation and annotation also incorporated in each volume. There is, too, a professionally written index, and a biographical calendar of all correspondents – a formidable work of scholarship in its own right. The volumes are handsomely produced and the page layout is easy to read and attractive. The overall impression is of a wealth of richly complex material, thoroughly edited and now admirably presented for the first time to grateful scholars around the world.

The eight years spanned by these letters find Joseph Banks in the fifth decade of his long and active life as a central figure in British science and exploration, with influence among a fascinating range of national institutions that included the Royal Society (of which he was president from 1778 until his death); the British Museum; the Royal Gardens at Kew; the Home Office; the Admiralty, the Navy