

## BOOK REVIEW

Hugh Cagle. *Assembling the Tropics: Science and Medicine in Portugal's Empire, 1450–1700*. Cambridge: Cambridge University Press, 2018. 364 pp.

ISBN: 978-1-107-19663-6

**Luís Tirapicos**

Centro Interuniversitário de História das Ciências e da Tecnologia (CIUHCT),  
Universidade de Lisboa

latirapicos@fc.ul.pt

In this book Hugh Cagle makes a significant contribution to a growing literature seeking to situate Portugal's empire, and more broadly Iberian empires, in a more prominent place within the English language historical narratives on the emergence of modern science. In effect, as Cagle remarks, “unanticipated encounters overseas, no less than telescopic observations of the heavens at home, expanded Europeans' sense of what was possible in nature. The intensification of global trade, which placed a premium on discerning eyes, noses, mouths, and hands, further eroded the bookish predilections of naturalists and enhanced the value of evidence drawn from the senses” (p. 18). Moreover, this book is noteworthy for another reason: it focuses in Portugal's empire rather than in the Spanish dominions, the subject of most studies produced in North America, symptomatic of a proximity, or engagement, with the Spanish cultural and linguistic legacy.

By analysing case studies from Africa, India, and Brazil, the author argues that the common climatic and epidemiological features of these places led to the rise of a coherent vision of the

tropics in the Portuguese empire, in the sense of a shared conceptualization of the intertropical zone by physicians and natural history practitioners. After the introduction, chapter 2 discusses the unknown origins and distribution of fevers in the intertropical region, and the many reactions to an apparently Edenic, verdant and wealthy nature revealed by fifteenth-century voyages, as well as the strategies adopted by travelers to cope with strange diseases. Cagle uses not only the traditional printed and manuscript sources, but also cartographic and material ones such as ivory objects made by craftsmen in Benin, commissioned and acquired by Iberian travelers. Although the author does not perform an in-depth analysis of each object, the evidence from the material and visual realms enriches the narrative and allows to capture the ways in which pervasive or common ideas about the tropics and the Portuguese empire crystallized in these artefacts produced both in the metropolis and the colonies.

Chapters 3 to 5 concentrate in the work of Garcia de Orta to examine the networks that shaped medicine and natural history in the Portuguese Indian colony of Goa. At the centre of Portugal's trading empire in Asia, the production of Orta's book *Colóquios dos simples e drogas e coisas medicinais da Índia* (Ioannes de endem, 1563) is taken as a paradigmatic example of the sort of enquiry permitted by the specific context of the Portuguese empire in the region. Cagle claims that this was not a case of unmediated transmission of South Asian therapeutic knowledge, passed off as Orta's own, but the connected contributions of Renaissance Italian naturalists, Portuguese apothecaries in India, Abyssinian priests, Hindus and Muslims, ayurveda and unani experts, as well as Javanese midwives and Konkani servants. The knowledge assembled by Orta in the *Colóquios* resulted, as Cagle puts it, of a collection of both plants and people (p. 62). Cagle's approach reflects recent historiographical trends focused in the multilateral circulation of knowledge of which Kapil Raj is a noted representative. Here the author benefits from recent research by international scholars on Orta's work, such as Teresa Nobre de Carvalho's *Os desafios de Garcia de Orta. Colóquios dos Simples e Drogas da Índia* (Esfera do Caos, 2015), and Palmira Fontes da Costa's edited volume *Medicine, Trade and Empire: Garcia de Orta's Colloquies on the Simples and Drugs of India (1563) in Context* (Ashgate, 2015), but he also draws heavily on a detailed analysis of primary sources – starting with the main source concerning Orta, the *Colóquios* itself.

Finally, chapters 6 to 8, encompassing a larger number of historical actors, from Jesuits and physicians to planters and diplomats, deal with Brazil and the Portuguese Atlantic in the period spanning from 1550 to 1700. With these case studies Cagle takes the opportunity to “critique a set of dominant narratives in the history of science,” for instance the idea that “discovery fuelled inquiry, invited curiosity, and begot empiricism” (p. 172). Judging by the first years of Jesuit missionary presence in Portuguese America it seems that the systematic study of natural phenomena by which the members of the Society of Jesus would be later known was absent. In this regard, Cagle argues that Jesuits encouraged what he calls a “learned ignorance” of Brazil's unfamiliar fauna and flora, dismissing concomitantly epidemic disease

as a medical concern, and helping to delay efforts to catalogue the exuberant Brazilian nature. Only in the early seventeenth century the practices of natural enquiry in Portuguese America would challenge such views of colonial epidemiology and expand the record of animals and plants.

According to Cagle, it was only in the late seventeenth century that, in the Portuguese empire, shared and concordant views of the intertropical environment and diseases became central to a metropolitan imperial learned medicine in which intertropical nature and medicinal chemical modifications played the dominant roles.

This book would have benefited from a better copy editing, especially of names, references and excerpts in Portuguese. Also, the date written by Flemish naturalist Carolus Clusius on his copy of Orta's *Colóquios*, "vi. Calend. Januarias.," corresponds in fact to December 27, 1564, instead of January 6, 1564, as read by the author (p. 105) – it is known that Clusius stayed in Portugal from September 1564 to early January 1565, as shown by Charles Boxer's *Two Pioneers of Tropical Medicine: Garcia d'Orta and Nicolás Monardes* (Wellcome Historical Medical Library, 1963). These minor flaws, however, in no way diminish the overall quality of the volume.

In sum, the original and thought-provoking arguments put forward by Cagle deserve a wide readership and the attention of all students and scholars interested in the origins of modern science and medicine – especially in the processes by which the global Portuguese seaborne empire reacted to the explorations and diseases of the "torrid zone," assembling on the way a new, and coherent, vision of the tropics.