BOOK REVIEW

Ancient Botany. By GAVIN HARDY AND LAURENCE TOTELIN. New York, NY: Routledge, 2016. Pp. xiii + 238. Paperback, $51.95. ISBN: 978-0-415-31120-5.

Gavin Hardy and Laurence Totelin's labor of love, *Ancient Botany*, is one of a series of books published by Routledge about the sciences in antiquity. Initially the book was to be written by Gavin Hardy and science historian Roger French, but after the death of French, Hardy eventually turned to Laurence Totelin, an ancient science historian, to help complete the project. The result is an excellent introduction to ancient botany, which by its very nature straddles several disciplines – classical literature, the history of medicine, late antique literature and botany itself.

Because of the complexity of this interdisciplinary nature, Hardy and Totelin first outline the various methods of classical citations (for example, how the style of Theophrastus' citations differs from those of Plato or Aristotle), as well as delineating the botanical naming conventions used throughout the book. This provides a solid foothold for non-specialists, allowing them to understand textual notes and citations in the ensuing chapters. To ground the reader geographically, maps are also included and referenced throughout.

In the introduction, Hardy and Totelin discuss the modern divisions of "pure" botany and "applied" botany. This distinction was not made in the ancient world, as all botany was applied botany - the study of plants was primarily concerned with the function of plants. They also review the main Greek and Latin literary sources pertaining to botany, ranging from the Hippocratic corpus through medieval anthologies. Beyond texts, they introduce the importance of visual representations of plants through wall paintings, coins and archaeological remains.

The ensuing five chapters deal with different approaches to botany. The first of these chapters examines how ancient writers of botany acquired their knowledge about the natural world. The chapter is divided into three different methods: personal observation, anecdotes and written sources. Out of all three methods, the most suspect would seem to be anecdotes. Hardy and Totelin make clear, however, that these should not be dismissed as mere botanical folklore.

Instead, they note that there were many professionals (farmers, wreath makers, perfume makers, etc.) who all could supply writers with new and different information about the plants they worked with daily.

In the next two chapters Hardy and Totelin discuss the various ways in which ancient botanical authors classed different plants in a pre-Linnaean taxonomy, as well as how plants were named, described and depicted. Hardy and Totelin are clear about the aims of these chapters; there is no desire to develop new or updated plant identifications, but rather to describe the practices of ancient writers who class and name plants. These chapters underscore how the non-standardized terminology used by ancient sources partially obscures plant classification and descriptions, though the authors show that much can be learned from careful readings of the ancient texts. Hardy and Totelin also consider visual depictions of plants both occurring in texts (the Vienna Dioscorides, among others) and in the material culture of the classical world, like wall paintings of Pompeiian houses and Livia's Prima Porta villa.

Chapter 5 moves into a study of the ways ancient authors describe the life cycle of plants. It begins with seed generation, grafting and spontaneous generation, progressing to the annual flowering and fruiting, the old age and death of plants and concluding with plant diseases. Here, Hardy and Totelin show that although ancient authors knew remarkably much about plant physiology, they describe their knowledge in terms of animal physiology or in human terms (plants marry, give birth to kin, adopt others, etc.).

In their final chapter, "Airs, Waters and Plants: Plants and their environments in antiquity," Hardy and Totelin touch on several points. They first focus on the ancient distinctions of wild and cultivated spaces and the plants found therein. They then consider plant transplantation from foreign lands and the resulting shift in vocabulary and metaphor writers use to talk about these plants and their success or failure in new locations. From there, Hardy and Totelin turn to aquatic plants, which, although not unknown to ancient people, occur less frequently in texts. The chapter concludes with a note about conservation in the ancient world, which cautiously discusses the impact of people and animals on the ancient climate and environment. This last chapter seems the least cohesive, simply because so many topics are addressed in less detail than in the previous chapters. What this chapter does show, however, are areas for further study in the expansive topic of "ancient botany."

Overall, Gavin Hardy and Laurence Totelin's *Ancient Botany* is set up to acclimate a non-specialist to this rich interdisciplinary subject, and scholars interested

in the topic will find the breadth of the study provides paths to new research. Although Hardy and Totelin set up specific parameters to maintain the focus of their work, they still manage to provide a wealth of knowledge and reveal their contagious love of plants.

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