
Théophraste. Les causes des phénomènes végétaux. Tome I. Livres I et II
edited and translated by Suzanne Amigues

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Theophrastus, student and successor of Aristotle at the head of the Lyceum, composed two major treatises on plants that are preserved to this day: *Historia plantarum* (*Enquiry into Plants*) in nine books, and *De causis plantarum* (*Causes of Plant Phaenomena*), of which six books are preserved (see below). Both treatises complement each other: the *Historia* describes plant species, while the *De causis* deals with questions such as plant generation, growth, other plant physiological phaenomena, and plants' interaction with their environment. Theophrastus cross-referenced both treatises, indicating that he considered them to be part of the same enterprise, namely, to study plants as thoroughly as Aristotle had studied animals.

Suzanne Amigues has devoted most of her academic career to editing and studying the *Historia*, producing the Belles Lettres edition in five volumes, which is undoubtedly a feat of scholarship [1988–2006]. Her French translation has also been reprinted as a single volume, beautifully illustrated with numerous photographs [2010]. In addition, many of her articles relating to the study of ancient botany are gathered in a single volume [2002]. So far, however, Amigues had paid far less attention to the *De causis* than to the *Historia*. With the present volume, Amigues rectifies the situation by offering the first edition, translation, and commentary of books 1 and 2 of the *De causis* since the Loeb edition by Benedict Einarson and George K. K. Link [1976–1990] in three volumes.

The *De causis* as it is preserved includes six books. Books 1 and 2 deal with 'natural' plant physiology, that is, phaenomena that pertain to φύσις (nature). Book 1 covers modes of plant 'generation' (which include both what modern botanists would consider to be sexual plant reproduction and

asexual plant propagation), including grafting and spontaneous generation; and plant growth, budding, flowering, and fruiting. Book 2 deals with the impact of the environment (winds, nature of water, nature of the soil) on the natural generation and growth of plants. Books 3 and 4, on the other hand, examine the impact of the art (τέχνη) of agriculture on plant functions. Book 5 discusses diseases and death of plants. Book 6, finally, examines issues relating to the taste of plants. The original *De causis* may also have included a book on plant smells (a theme developed in the independent Theophrastean treatise *On Smells*), and a book on wine and oil.

The *De causis* was an important source for the Roman agronomists and for the encyclopedist Pliny the Elder. However, from the Middle Ages onwards, it has attracted less scholarly attention than the *Historia*. One of the reasons for this comparative neglect in the modern period might be the fact that most physiological theories expounded in the *De causis* have been discredited, while botanists still admire the descriptive work Theophrastus achieved in the *Historia*—a work that has earned him the title of ‘Father of Botany’. It is important, however, to judge ancient science on its own terms. In this non-positivist context, the *De causis* is extremely rich and worthy of extensive study by historians of science. Here Theophrastus engages with the theories of numerous Presocratic philosophers whose works are lost save for short fragments. He also develops his own brand of Aristotelian biological thinking. Thus, like Aristotle, he draws numerous comparisons between plants and animals. For instance, at *De causis* 1.16.4, he argues that, in both plants and animals, the over-consumption of food leads to under-production of seed/seed. Theophrastus also borrows Aristotle’s notion of ‘coction’ (πέψις), a notion most prominent in the *Meteorology*, and posits it as central in plant physiology: it is coction that is responsible for plant growth and for plant generation. Theophrastus’ thinking, like Aristotle’s, is teleological: plants have as their final cause the survival of humans as well as their own propagation.

Hopefully Amigues’ magisterial work will contribute to a revival of scholarly interest in the *De causis*. Amigues offers a definitive edition of the text, one that is in many ways superior to Einarson’s edition. Indeed, Einarson had on numerous occasions ‘corrected’ the text of Theophrastus in order to make it more elegant. Amigues allows Theophrastus’ text to be elliptic, idiosyncratic, and grammatically divergent from the norms of Attic prose. She argues that

Theophrastus wrote in a rather loose style in the botanical treatises because neither the *Historia* nor the *De causis* were meant for publication. Rather, they were both sets of lecture notes, destined to be delivered orally. I would warn against too neat a dichotomy between ‘notes’ and ‘editable’ text in the ancient context but it remains that Amigues has made the right choice in refusing to ‘improve’ Theophrastus’ prose. Amigues’ French translation is lucid and consistent. However, it is in the notes that Amigues’ extraordinary scholarship really comes to the fore. She has fascinating notes that clarify both ancient and modern understandings of plant physiological processes, etymological explanations, grammatical clarifications, historical insights (including insights into the history of science), references to archaeological discoveries of plant remains, and so on and so forth. Amigues’ work is admirable and I very much look forward to the next installments in the Belles Lettres edition of the *De causis*.

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