

## BOOK REVIEW

*Philo Mechanicus: On Sieges: Translated with Introduction and Commentary.* By DAVID WHITEHEAD. Historia Einzelschriften, Band 243. Stuttgart, GR.: Franz Steiner Verlag, 2016. Pp. 1-510. Hardcover, €84. ISBN 978-3-515-11343-4.

Philo of Byzantium, generally known as Philo Mechanicus, has been a frequently neglected classical author. Part of the neglect may come from the fact that he was a Hellenistic author, one of many too often considered as second rate at best. Part of the neglect may also have been caused by the subject of his work, primarily engineering, of which notably the parts in the field of *poliorcetics* (the science of siege warfare) have been preserved. All this could explain why, until now, no full text with accompanying translation into English and/or a full commentary in English of his work has been published.<sup>1</sup>

This void has now been filled by David Whitehead. After previous volumes in the same series—one on Athenaeus Mechanicus (together with H. Blyth, *Historia Einzelschriften*, 2004, vol. 182), another on ‘Siege-matters’ by Apollodorus Mechanicus (*Historia Einzelschriften*, 2010, vol. 216)—Whitehead now turns to the oeuvre of Philo of Byzantium, more specifically his engineering compendium (the *Syntaxis*) which deals with warfare. This basically consists of three books, one, the *Belopoiika* (Artillery Construction, book IV), a technical treatise on catapult-design, and two associated ones, regrettably only surviving as (lengthy) epitome: the *Paraskeuastika* (Defensive Preparations, book VII) and *Poliorketika* (*Siegecraft*, book VIII), addressing broader aspects of siege-warfare.

Though in general *poliorcetics*-texts tend to focus on bringing men to the walls of a besieged city and undermining walls, the work of Philo of Byzantium clearly stands out by his detailed description of heavy siege-machinery, specifically catapult design. As such, he is probably following in the footsteps of Diades and Charias, both pupils of Polyidus of Thessaly and engineers in the army of Alexander the Great (and as such referred to by Athenaeus Mechanicus). During several sieges on its expedition, the army of Alexander made use of relatively heavy siege machines and was, notably at Halicarnassus and especially at Tyre, confronted

<sup>1</sup> The most recent commentary is that by Garlan, Y., *Recherches de poliorcétique grecque* (Paris 1972) (series: Bibliothèque des écoles françaises d’Athènes et de Rome, vol. 223).

with fierce resistance and counter-measures by the defenders. Diades and Charias together and Diades also alone wrote treatises on their work, now lost: they may have laid the foundation for Philo's work.

After the preface, Whitehead provides his audience with a brief review of the conventions and abbreviation he uses throughout his work, as well as a useful one of measures, weights, and volumes. They are followed by the introduction (15–65), detailing, in six sections, the so-called “Basics”; the “Work and its Author”; the “Style, Tone and Terminology” that typify Philo; a review of “The Besieged Community in Aeneas Tacticus and Philo”; the “Internal (Dis)Organisation of the Treatise”; and “Some Textual Issues”. It seems straightforward, but already in this introduction Whitehead provides the reader with much useful information that may help her/him to benefit optimally from Philo's text and Whitehead's translation. Text and Translation form the next part of this volume (65–131). The Greek text and the English translation have been printed on opposing pages, greatly facilitating the use of the book. I found the translation accurate, generally understandable (certainly for readers familiar with technical treatises), and a real pleasure to read. In this respect, also the publisher should be praised for taking care that text and translation do not (or hardly) step out of line.

The real core of Whitehead's effort to open Philo's work is the commentary which, including five appendices, comprises the largest part of this work (133–427). Following Diels and Schramm (see below, note 2), the commentary (like the work) has been divided in four parts, respectively paying attention to ‘Fortifications’ (133–218); “Provisioning and Preparation” (219–271); “Defensive Measures” (272–332); and “Attacking Measures” (333–403). The five appendices discuss ‘Vitruvius, *de architectura* 1.5.1–8’ (404–408); “Athenaeus Mechanicus 15.13–18.7 (and Vitruvius 10.14.1–3)” (409–411); “Philo-derived Passages in the *Parangelmata Poliorketika*” (a work by Hero of Byzantium) (412–416); “The Walls of Skotoussa” (a city of Pelasgotic Thessaly) (417–424); and finally “Granaries and Grain-Preservation in *Geoponica* 2.27–3” (a twenty-book collection devoted to assembling agricultural lore, just like the so-called *Excerpta historica* compiled on the orders of Emperor Constantine VII *Porphyrogenitus*) (425–427).

Starting with remarks on the appendices, I regret that, in appendix 4, Whitehead (or the publisher) did not succeed to print text and translation of the second century BCE commissioner's report on the situation at Skotoussa (taken from *Supplementum Epigraphicum Graecum* 43.311) on opposing pages, which would have facilitated its consultation. The report is a fascinating text and should, in the context of this book, have been treated better. A similar remark, i.e. to place the

Greek, respectively Latin, text and translation on opposing pages, also pertains to appendix 2, the one discussing passages of Athenaeus Mechanicus and Vitruvius. As for appendices 1, 3, and 5: the fact that texts and translations there are not printed on opposing pages is much less inconvenient as these passages are much briefer.

As regards the core of this book, the text, translation, and commentary: clarity could, I believe, have been served sometimes by inserting some figures to illustrate either the text or, better perhaps, the commentary. Since it is the book's aim (and I quote from its blurb) "to elucidate the multifarious matters arising ...," I believe that illustrations could have been an asset. As it is now, some passages remain too obscure, like -for example- the commentary on D48.(1-4) (368), even though Whitehead makes a brave attempt to make the best of a potentially confusing text. The book is concluded with a 'Gazeteer' [sic!]; a solid 'Bibliography'; an elaborate 'Index of Passages Cited'; a 'Greek Index (Select)'; and a 'General Index'. The book has been excellently taken care of and only contains few typos.

In conclusion, in spite of some slight imperfections, Whitehead has succeeded in presenting his audience with a useful edition. The fact that Whitehead maintained the numeration (in bold) of the so-called Diels-Schramm edition<sup>2</sup> (now accessible through the TLG) as well as the pagination (in italic and square brackets) of Thévenot c.s.<sup>3</sup> (and maintained by Schoene<sup>4</sup>) is extremely convenient—ensuring both upward and downward compatibility—and an asset for the user of this book. It all resulted in a book that fully deserves to be included in the library of anyone interested in the military history of the ancient world.

JAN P. STRONK

*Universiteit van Amsterdam, jpstronk@planet.nl*

<sup>2</sup> Diels, H. and E. Schramm (eds.), *Exzerpte aus Philons Mechanik B. VII und VIII (vulgo fünftes Buch). Griechisch und Deutsch* (Berlin 1919 [1920]).

<sup>3</sup> Thévenot, M., J. Boivin, and P. de la Hire (eds.), *Veterum mathematicorum Athenaei, Apollodori, Philonis, Bitonis, Heronis et aliorum opera Graeca et Latinae ex manuscriptis codicibus Bibliothecae Regiae pleraque nunc primum edita* (Paris 1693).

<sup>4</sup> Schoene, R. (ed.), *Philonis Mechanicae Syntaxis libri quartus et quintus* (Berlin 1893).