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Stockholm University  
SE-106 91 Stockholm  
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## Book reviews

G.A. Aristodemou & T.P. Tassios (eds.), *Great waterworks in Roman Greece. Aqueducts and monumental fountains. Function in context* (Archaeopress Roman Archaeology, 35), Oxford: Archaeopress Publishing Ltd 2018. IV + 258. ISBN 978-1-78491-764-7.

<https://doi.org/10.30549/opathrom-12-13>

This edited volume by Georgia A. Aristodemou and Theodosios P. Tassios aims to be the first comprehensive presentation of what they view as “great waterworks in Roman Greece”, i.e. aqueducts and large-scale nymphaea. As such it is intended to fill what the authors consider an essential research gap. They also aim to show that large-scale water works were a striking novelty, changed the architectural landscape and environment, improved living standards and the water supply, introduced the concept of urban luxury, and formed a link between utility and design, political ambition, and regional development. In order to achieve these ambitious aims the volume collects 16 freestanding chapters by 14 authors arranged in three sections: introduction (three chapters), aqueducts (eight chapters), and nymphaea (five chapters).

The introductory section (pp. iii–12) is formed by three texts. First, a brief preface is significant as it lays out the background to the volume as well as the aims. Here the editors state that there is a strong scholarly interest in water supply systems, but lack of such studies in the area of modern Greece. The preface is followed by two stylistically diverging introductions. Tassios’ text is a crude overview of aqueduct technology including construction techniques, channel cross-sections, average slopes, and bridge structures. A list of known Roman aqueducts in Greece is also included, but this is difficult to use as it lacks references (for such a list, see Lolos, *Hesperia* 66, 1997, 271–314). Aristodemou’s introduction to nymphaea, on the other hand, outlines briefly (again) why the volume is needed and its aim (again to fill a gap in current scholarship

in regards to nymphaea), followed by short summaries of the chapters on nymphaea.

Following the introduction, Part I of the book (pp. 15–169) consists of eight chapters dealing with aqueducts in 1) Macedonia, 2) Actian Nicopolis, 3) Thessaloniki, 4) Athens (Hadrianic line), 5) Corinth (Hadrianic line), 6) Mytilene, 7) Samos, and 8) Lyttos on Crete. Overall these chapters are focused on empirical material with little interpretation in terms of how the aqueducts affected society.

In the first chapter Asimina Kaiafa-Saropoulou focuses on vaulted-roof aqueducts in Roman Macedonia. While it remains unclear why this is a suitable analytic category the brief chapter provides insights into material otherwise rarely discussed in languages other than Greek. Generally, the homogeneity of these aqueducts is highlighted; they are all of similar dimensions and waterproofed by a lining, including the use of quarter rounds, in order to prevent leaks. Some differences also existed, however, such as the presence or absence of manholes or inspection shafts. In the second, more substantial chapter ‘The aqueduct of Actian Nicopolis’, Konstantinos Zachos and Leonidas Leontaris take a different approach by discussing a single aqueduct, its two terminal nymphaea, and some installations in the urban distribution system. The text on the aqueduct is well-structured and informative with good illustrations, a presentation of the water source, construction technique of the aqueduct, and its course to the city. The section on the nymphaea is comparably short, but that is expected as it is explicitly preliminary. Overall the inclusion of the fountains reinforce their tight interconnection with aqueducts, an aspect which is otherwise largely, and surprisingly, lost in the volume.

The third chapter, ‘The water supply of Roman Thessaloniki’ by Manolis Manoledakis, focuses on the Hortiatis aqueduct, its date of construction (absolute and relative to the city’s other aqueducts), the chronology of subsequent phases

and repairs, as well as which area of Thessaloniki it supplied. Beginning with a short overview of the Retzki and Lembet aqueducts it explores the route of Hortiatis, the so-called qanat section (underground gallery), and surviving aqueduct bridge. The article has both strengths and weaknesses. Lacking a map is problematic when discussing the line of the aqueduct and the article could have benefited from a more holistic approach rather than exploring only two sections. On the other hand, it includes a discussion regarding what a qanat is, which is welcome as the term is often used as a catch-all for underground aqueduct tunnels.

The article 'The Hadrianic aqueduct of Athens and the underlying tradition of hydraulic engineering' by Eustathios Chiotis begins with a treatment of the aqueduct and in particular its tunnel, followed by a discussion about the urban distribution system. Overall the contribution provides a useful overview of the available empirical material for both parts of the system, although more space is allocated to the urban side than the aqueduct. Moreover, Chiotis' contribution also contains an appendix on the definition of qanats. While unlikely to end the current discussion on this point it is an important contribution to the debate. The fifth article, 'The Hadrianic aqueduct in Corinth' by Yannis Lolos, is largely a complement to the author's previous studies of the structure (*Hesperia* 66, 1997, 271–314). Characteristically, the author provides an empirically strong contribution with a number of useful illustrations and maps. All in all the article adds knowledge about minor, but important and previously unknown, elements of the aqueduct and sheds light on its final approach to the city along Acrocorinth.

The volume continues with a chapter on the aqueduct of Mytilene by Yannis Kourtzellis, Maria Pappa and George Kakes. Following a brief introduction of Mytilene the article focuses on the route of the aqueduct (previously not completely mapped), the construction technique, and chronology. Particular attention is given to two bridges at Moria and Paspalas as well as the water channel. Conveniently, an informative map as well as several qualitative photographs showing various parts of the aqueduct are included. Following this Telauges Dimitriou discusses the aqueduct at Samos in the seventh chapter. As for many of other aqueducts in Greece the date of construction and use is uncertain. While the presentation of the aqueduct is welcome the bibliography consists of only three works, two of which are from the 19th century. There is consequently a lack of interaction with modern scholarship, making the results difficult to assess. For example, when discussing the volume of water with which the aqueduct would need to supply the city of Samos, the figure of 50 litres per person/day is used without reflection, despite a lively scholarly discussion on the matter. Yet, the article is still useful as the knowledge of the water supply on Samos is currently expand-

ing rapidly, thanks to an excellent project, run by the German Archaeological Institute (DAI), exploring water management at the Heraion.

The final paper of Part I is 'An aqueduct through the Highlands—securing the water supply for elevated Lyttos' by Amanda Kelly. It begins with an introduction to the exploration of Lyttos and an overview of Roman baths on Crete (although none has been found at Lyttos) stressing their strong association with aqueducts. Following this the route of the aqueduct and how it has been conflated with the Chersonisos aqueduct is treated. Here it should be noted that the two maps (figs. 3 and 4) showing the route of the Lyttos and Chersonisos aqueducts are almost impossible to locate in the landscape and in relation to each other. The last part of the chapter is dedicated to describing the aqueduct, in particular the interesting inverted siphon, as well as a note on how much water the structure would facilitate. While the author tends to lean a bit too much on the accounts of early travellers, sometimes leading to digressions, Kelly should be complemented for making a serious attempt to put the aqueduct in a functional context.

Following Part I on aqueducts the book turns to Part II: Nymphaea (pp. 173–258). This consists of five chapters on 1) approaches to the public water supply in Roman Greece, 2) sculptural display programmes, 3) the monumental fountain at the Athenian Agora, 4) the development of the Arsinoe fountain in Messene, and 5) the fountain sculptures from the nymphaeum at Gortyn. In comparison to Part I, Part II is considerably shorter and more diverse as it contains both heavily empirical studies and analytic chapters.

The first contribution is Dylan Rogers' 'Shifting tides: approaches to the public water-displays of Roman Greece'. In the article the author briefly discusses the terminology of water displays and previous research before exploring water displays in three different contexts: the sanctuary of Apollo Maleatas, the forum of Philippi, and water displays at theatres. This is a well-chosen approach as it stresses both the different ways in which water-display installations were viewed and functioned in different contexts, and how the material from Greece largely followed Empire-wide trends. It is also welcome as it adheres to the volume's aim of putting fountains in context. Finally, a view towards how future research can advance the study of water display in Roman Greece is included, arguing for greater interest in less-monumental water displays and the contextualization of these. The second contribution to nymphaea is written by Georgia Aristodemou: 'Fountain figures from the Greek provinces: monumentality in fountain structures of Roman Greece as revealed through their sculptural display programs and their patrons'. After a summary of previous research the author outlines her definitions for what a fountain figure is. However, the three categories (a. sculp-

tures from fountains with a water outlet, b. sculptures with a water outlet, and c. sculptures from fountains) are rather two in practice. These three categories are then divided into “two main groups” based on “whether the figure remains intact, or has been perforated so as to function as a spout” (p. 198) as well as those that later had grooves cut in them in order to channel water. However, it is difficult to follow the distinction between these “two main groups” in the text, and several of the examples fit in both categories. An iconographic analysis and interpretation follows, as well as a discussion highlighting how the uniqueness of each assembly reflects different purposes. Finally, the article benefits from an extensive bibliography.

The third chapter about nymphaea is Shawna Leigh’s ‘The monumental fountain in the Athenian Agora: reconstruction and interpretation’. The article begins with a reconsideration of the empirical material and discusses the water technology used. Following this Leigh discusses the problems associated with the way in which the monument has been reconstructed based on the fountain of Herodes Atticus in Olympia. Refreshingly, the author takes a rather critical stance, arguing that the architectural similarities are not enough to attribute the two structures to the same architect. Moreover, the author concludes that it cannot be definitively ascertained whether the fountain had one or two storeys. The chapter is concluded by a brief analysis of the monument in context. Overall, Leigh’s contribution is the empirically most detailed in the volume, adding to its value. However, despite the careful empirical treatment, there are gaps in the modern literature. For example, the old (Archaic) date for the SE Fountain House at the Athenian Agora is given, despite being recently revised to the Early Classical period by Jessica Paga (*Hesperia* 84, 2015, 355–387).

The penultimate article is ‘New water from old spouts: the case of the Arsinoe fountain of Messene’ by Mario Trabucco della Torretta. While the article focuses on the 1st-century AD iteration of the fountain, the various phases are at times difficult to follow. First the architecture is treated, then the social mechanics of restoration projects in Roman Messene, and finally a discussion about the identity of the specific donor. The final contribution to the volume is Brenda Longfellow’s ‘Reflecting the past: the nymphaeum near the so-called Praetorium at Gortyn’. The aim is to elucidate why a Late-Antique patron would re-erect the fountain’s (rather incoherent) 2nd-century AD sculptural group. In order to do this the two main phases of the monument are explored. Dismissing purely economic motivations, the author holds that it was illegal to remove the sculptures in Late Antiquity, citing several imperial laws and suggesting that such legislation was applicable in Gortyn. The notion is attractive, although repeated legislation may also be interpreted as previous laws being ineffective.

Turning to the volume as a whole it is difficult to avoid the impression that this is two books forced into one cover, especially due to the two introductions. There is also little connection between the two parts, which is unfortunate as monumental fountains were almost always fed by aqueducts. There would thus have been great potential for further integration between the contributions. Additional contextualization of how these “great water works” functioned in the urban landscape and were used would also have been welcome—in fact, it may even be expected by readers as contextualization is suggested by the subtitle of the book *Function in context*. The choice of subtitle is made even more curious as it echoes Claudia Dörl-Klingenschmid’s (2001) *Prunkbrunnen in kleinasiatischen Städten. Funktion im Kontext*, known to the editors.

The strength of this volume lays in the presentation of empirical material, in particular of the aqueducts. Much of this has not been previously available or only in abbreviated form and almost always in Greek. Some of the material, for example that about the nymphaea at Nikopolis and Hadrian’s aqueduct to Corinth, is completely new and contributes to the value of the volume. Furthermore, the bibliographies for each chapter facilitates further studies. The volume is therefore a most welcome addition as it allows scholars to consult one book when studying Roman aqueducts in Greece before turning to more specialised literature. In this respect the book clearly fills an important research gap, in line with the editors’ aim. Part II about Nymphaea is somewhat less significant. This is, however, not because the studies are necessarily inferior to those about aqueducts but because they do not bring the field forward in the same sense. There is simply considerably more research concerning monumental fountains.

Overall the individual chapters would have benefited from being more detailed. In particular those about aqueducts are not comprehensive enough to consider the structures properly published, while simultaneously too extensive to be viewed as general overviews. The volume would also have been improved by a somewhat stricter approach in terms of what each chapter should include, for example qualitative maps and plans. It is, however, most welcome to see many Greek scholars publishing fairly comprehensive studies in English, giving their work considerably larger outreach. It is only to be hoped that this continues.

The book would also have profited from further editing and proofreading. There are many typographical errors (some rather notable e.g. pp. 124, 195, and 235), sometimes figures are of doubtful quality (e.g. pp. 17 and 159), and the many paragraphs made up by one sentence (e.g. pp. 7, 139, and 243) occasionally makes the text resemble bullet lists. The language editing is also strange at times. For example the word “homonymous” is used frequently and no fewer than five times on pp. 52–53 alone.

In the end this book, although deserving some criticism, does fill an important research gap. Especially the studies on aqueducts in modern Greece are important. By making this material available the volume will surely be sought after by students and scholars interested in the Roman water supply in the area.

PATRIK KLINGBORG  
Swedish Institute at Athens  
Mitseon 9  
117 42 Athens, Greece  
patrik.klingborg@sia.gr

L. Badre, E. Capet & B. Vitale, *Tell Kazel au Bronze Récent. Études céramiques* (BAH, 211), Beyrouth: Institut français du Proche-Orient 2018. 252 pp., 195 figs., 59 pls. and 2 plans. ISBN 978-2-35159-740-8.

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This book stems from an article that was programmed to be included in the third and final volume of the series *Céramiques de l'âge du Bronze en Syrie* published in the BAH Beyrouth series by the Institut français du Proche-Orient (p. 9). While the enterprise is to be lauded because of the unfortunate situation in Syria and the resulting lack of fresh archaeological data available from the country, this book demonstrates the pitfalls of formatting hastily an article into a book.

The book has two main sections: one mainly dedicated to the local ceramic material authored by L. Badre and E. Capet (with two brief contributions on the Cypriot [pp. 45–47] and Mycenaean pottery [pp. 47–50] by B. Vitale and R. Jung) and the other to the Cypriot Bronze Age ceramics penned by the late B. Vitale who died a few weeks before the book was published. As it is stated in the Avant-propos (p. 9), the book proposes a catalog of 500 pottery vessels found at Tell Kazel and the neighboring Tell Arqa (Lebanon) located on the southern edge of the Akkar Plain.

The main forte of this publication is the pottery presentation and discussion which is the essence of the enterprise. Any scholar working on the Late Bronze Age—the period between 1550/1500 and 1175 BC—will welcome the abundant pottery catalog offered in this publication as well as the detailed discussion on the different types and their manufacturing and finishing techniques. Photographs of objects are also included and offer a concrete visual appreciation of their corresponding drawings.

However, there are quite a few hindrances that impede the valid abovementioned achievements of the book. Because of space constraint, only the main ones are listed in this review.

It is particularly unfortunate that there is barely any discussion on the stratigraphy of Tell Kazel where the authors have worked for more than 25 years. Only one page (p. 14)

gives a glance at the rich architecture of the *Chantiers* II and IV. The addition would have been particularly welcome for better contextualizing the *Tableau* 2 (p. 20) listing the proposed chronostratigraphy of the Akkar Plain as well as the ceramics. One can understand that stratigraphical discussions will be included in future final excavations reports (such as B. Chiti's forthcoming publication *Tell Kazel (Syria)*, for which she has received in 2016 a Shelby White-Leon Levy Publication Grant) but pottery studies particularly warrant an accompanying presentation of the related architecture and of the contexts where pottery types in particular first appeared/disappeared. A listing of contexts included in an annex would have offered an easy way to check the find-spot of each vase.

The authors start with a brief overview (pp. 11–14) of the historical and political situation in the Akkar area which is assimilated to the *Trouée de Homs*. While the main topic of the book is not history *per se*, this section would have benefitted from adding a few more references that would have better appraised the archaeology of this region. For example, the authors write that the *Trouée* of Homs is “a province méridionale de l'empire Hittite” during the middle of the 14th century BC (p. 12) relying mainly on the research work of I. Singer. Unlike Tell Kazel that has yielded Hittite/Hittite-like objects (such as the fusiform bottles), Tell Arqa has yet to offer any archaeological layers or objects that substantiate this claim, raising thus the question on the extension of the Hittite influence south of the Nahr el-Kebir. In footnote 7 of p. 12, the authors suggest that Arqa was also the capital of the kingdom of Amurru under Abdi-Ashirta according to the Amarna Tablets. This theory was put forth in the book *Inscribed in clay* (Tell Aviv 2004) in which Y. Goren, I. Finkelstein and N. Na'aman offered this possibility based on the petrographic analyses of the Amarna Tablets sent from Tell Arqa. It is quite surprising that this book is not even cited by Badre *et al.* in their discussion of the role of Arqa during the 14th century BC.

On p. 13, the overview of the surveys done in the Akkar Plain does not mention the German surveys undertaken in 1997 and 1998 or cite K. Bartl's preliminary reports ('Akkar Survey 1997', *Bulletin d'Archéologie et d'Architecture Libanaises* 3, 1998–1999, 169–179; 'Archäologische Untersuchungen der südlichen Akkar-Ebene, Nordlibanon', in *Ausgrabungen und surveys im Vorderen Orient* 1, ed. R. Eichmann, Rahden 2002, 23–48; 'Ancient settlements in the Plain of Akkar/Northern Lebanon', *Occident et Orient*, 2002, 2–4).

The authors write on p. 13 that Tell Arqa was excavated by J.-P. Thalmann since 1972. This is incorrect as the Arqa excavations started in 1972 under the directorship of E. Will, then director of the Institut français du Proche-Orient, until Thalmann took over in 1978.