

P. JOHNSON and M. MILLETT (EDS), *ARCHAEOLOGICAL SURVEY AND THE CITY* (University of Cambridge Museum of Classical Archaeology Monograph 2). Oxford: Oxbow Books, 2013. Pp. viii + 357, 163 figs, 7 tables. ISBN 9781842175095. £36.00.

Ancient cities have long been a focus of archaeological interest and over the last three decades their investigation through non-invasive techniques of field survey and various forms of remote sensing has become increasingly popular. This volume arises from a conference held at the University of Cambridge in 2010, which brought together a number of advocates of such approaches. With the exception of a brief diversion to Pharonic Egypt, the emphasis is on Roman cities, which form the foci of the different projects discussed.

The volume is divided into three (slightly awkward) sections, with papers concentrating on particular approaches. In a thoughtful opening paper, Paul Johnson argues that we need to advance explicit research agendas for urban survey, and that we need to move beyond defining limits of towns through survey and elucidating plans of buildings and street layouts through geophysical survey. Johnson also makes the point that research is too often driven by the desire to develop new technologies and applications rather than gaining an increased understanding of past societies (an impression that is reinforced by some of the papers in the volume). It could perhaps be noted that this drive for novelty is strongly influenced by research sponsors who encourage methodological and technological innovation in their funding criteria.

Martin Millett assesses geophysical survey work in Italy carried out under the auspices of the Tiber Valley Project and other related projects. He offers an honest appraisal of its successes and failures, and highlights the fact that in treating urban sites as landscapes that include significant extramural areas we are opening up new aspects of their topography. This is followed by a technologically dense paper by Geert Verhoeven examining multi-spectral aerial photography, which makes the important point that although aerial photography has gone digital, our approach to aerial images is largely identical to the days of film in that we use cameras to record what the eye can see from the air rather than what may be visible by using the full spectrum. The examples from the town of Potentia hint at the possibilities of looking for stress in vegetation that is invisible to the naked eye.

The following three papers deal with surface collection. Those of Todd Whitelaw (on Knossos) and Jeroen Poblome *et al.* (on Sagalassos) are characterized by the methodological reflection that traditionally accompanies field survey. Whitelaw, although arguing that survey is the most effective available strategy 'given the practical impossibility of large-scale urban excavation' suggests that survey cannot be considered as an inexpensive alternative to excavation. Indeed, surface collection seems beset by the same sort of problems that characterize excavations in which unmanageable quantities of data lead to non-publication. He also revisits the familiar issues of surface visibility and recovery bias, and the reader is left with the impression that surface collection is best avoided given that the reliability of the results does not seem to justify the effort. This impression is reinforced by the Sagalassos team who go to considerable lengths to demonstrate that interpretation of surface finds is wholly dependent on the analytical methodology employed and that different analyses can produce wildly differing results from the same material. Emanuelle Vaccaro, investigating Philosophiana-Sofiana in Sicily, is a little more positive in his use of ceramic data, and draws attention to a possible early medieval productive site on the edges of the town.

The remaining papers in the volume focus on geophysical survey and other forms of remote sensing and the tone becomes strikingly more confident. Wolfgang Neubauer *et al.* suggest that their work at Carnuntum 'provides a model for modern, time- and cost-efficient archaeology' and the results are undeniably spectacular, particularly the astonishing Ground-Penetrating Radar (GPR) data from the forum. There are further impressive GPR results from the site of Mariana (Corsica), which forms the subject of two papers by Cristina Corsi and Lieven Verdonck respectively. Corsi demonstrates the results of trying to reference spatially antiquarian sources and both papers show the importance of integrating data from fluvial research to establish the environmental context of the town. Frank Vermuelen *et al.* show the results of an integrated approach involving geophysics, aerial photography and surface collection at Picenum. Other contributions provide reports on geophysical surveys from the Egyptian settlement at Amara West (Neal Spencer and Sophie Hay) and Gabii in Italy (S. Kay). Finally, in a substantial paper, Simon Keay *et al.* demonstrate the application of integrated geophysical survey and excavation at Portus. In contrast to Carnuntum, where the terrain, geology and archaeology is ideally suited to geophysics, at Portus, an undulating landscape covers multi-storey, multi-phase buildings with

survey having to deal with densely packed rubble, voids in standing rooms and the results of modern interventions. Keay *et al.* stress the importance of integrating the results of different approaches and the value of on-site visualization of geophysical data.

The volume's stated intention is to focus on the integration of evidence rather than on the technicalities of particular methods, although some papers stick to this brief more successfully than others. It is clear, however, that investigation of ancient urban sites requires the integrated use of multiple methodologies including excavation (emphasized by a number of contributors). Nonetheless, we should not lose sight of the fact that we continue to conceptualize the ancient city in terms of the built environment rather than its inhabitants. Urban survey as presented in this volume is inevitably focused on the recovery of the physical fabric of the town because it is better equipped for this purpose. Most of the papers in this valuable and stimulating volume do not really challenge this agenda but as archaeologists it behoves us continually to re-evaluate the questions that we ask of the ancient city.

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G. W. TOL, *A FRAGMENTED HISTORY: A METHODOLOGICAL AND ARTEFACTUAL APPROACH TO THE STUDY OF ANCIENT SETTLEMENT IN THE TERRITORIES OF SATRICUM AND ANTIUM* (Groningen Archaeological Studies 18). Eelde/Groningen: Barkhuis/Groningen University Library, 2012. Pp. xvi + 405, illus. ISBN 9789491431036. €60.00/US\$87.00.

The latest contribution to over thirty years of work by Dutch universities in the Pontine region, this published PhD thesis re-examines two field survey projects carried out in the areas of Nettuno and the Astura Valley (located about 60 km south of Rome) by the Groningen Institute of Archaeology (GIA) as part of the wider Pontine Region Project (PRP). In this work Tol aims to investigate several biasing factors that limit the analytical and comparative value of survey data, in addition to gauging the suitability of survey work for assessing site chronology and function and wider socio-economic trends — long-standing questions in the field of landscape archaeology. To accomplish this, the author takes a ceramic approach using four methodological case studies to supplement the previously produced datasets.

The first chapter focuses on the historiography and archaeology of the study area, highlighting key sites and historical events while examining the infrastructure, geology and geography of the zone in antiquity. Ch. 2 discusses the methodological background of the study and problems that plague survey archaeology, including inherent issues concerning the value of pottery assemblages for determining site chronology, function and development. T. also specifies his methodological approach — with emphasis on quantity, diagnostics and overlapping periodization (41) — and his additional goals for the project, including the publication of all diagnostic pottery collected — a task seldom undertaken in regional survey work.

Ch. 3 presents the first case study, reflecting on the value of systematic revisits to previously recorded sites: 118 sites are considered, many identified previously by surveys in the 1970s (Piccaretta 1977; Liboni unpublished) and by the GIA in 2003–2005. However, no description of the sampling methods employed by these earlier surveys is given which could create issues when discussing the value of such revisits, as sites surveyed less recently and with less intensity seem to have produced more diagnostic pieces (52). Regardless, the overall results are impressive, as these revisits were able to confirm or extend chronologies at many sites, in the process recording several new sites and observing the rate of site loss and destruction in this region.

Ch. 4 examines the archaeological collection at the Antiquarium di Nettuno and evaluates whether such a dataset can be usefully integrated with recent fieldwork data. This study produced some interesting results as the collection provided chronological scope for several sites that are now destroyed. Due to the bias in the collection (predominantly fine wares, metals, rare finds) consumption trends could not be evaluated, although some of these finds did elucidate the status of certain sites, even furnishing pieces previously undocumented by survey work (e.g. first-century B.C. *vernice nera*). While the detailed examination of this collection allowed for many objects to be 'put back in the landscape', facilitating the reassessment or discovery of several sites, it is worth