WE DISCOVERED THAT...

Times are A-changin and much stays the same

Contributions on the occasion of the retirement of
Hans Kamermans

Publication on the occasion of the retirement of Hans Kamermans

Editors: C.C. Bakels, K. Fennema, J.F. Porck and M. Wansleeben

Graphic design and lay-out: J.F. Porck, JANNA Geographics, Crete
Published by: Graven 13, Deventer
Cover photo: H. Fokkens, Faculty of Archaeology, Universiteit Leiden.

Faculty of Archaeology
P.O. Box 9514
NL-2300 RA Leiden
the Netherlands

What to do with a physical geographer in an ancient Roman city?

Hanna Stöger

Universiteit Leiden, the Netherlands

How can one lure a physical geographer with an interest in prehistoric lithics into a Roman city of marble and brick? Clearly, the promise of Italian food and sunny weather alone would not have done the trick. One needs to know *exactly* what would tempt a confessed pre-historian/ computer expert into the realms of classical archaeology. Above all, it requires an archaeological project with a pronounced focus on computer applications and, equally important, brand-new surveying equipment which needs to be tested (i.e. the Faculty's new TopCom Differential GPS). Once the scientific parameters are right, even the built environment of Rome's imperial cities can be interesting for pre-historians, since true scholarship transcends all chronological, geographic and conceptual boundaries of archaeology. This short article tells the story of Hans Kamermans, who, despite of his devotion to paleo-environments, fled the marshy plain of the *Agro Pontino* to help investigate the built environment of Rome's harbour city of Ostia. The research at Ostia, which was carried out with the help of Hans Kamermans, concerned the city's site plan and the history of its development. The purpose of this short article is twofold: it is dedicated to Hans Kamermans to thank him for his continuous support for my research, and it aims to emphasise the importance of map-based interpretive approaches to the ancient city.

Many archaeological sites, Ostia being no exception, invest a great amount of research into enlarging and refining the quality of their site plan. Over the last century numerous Italian and foreign archaeological projects contributed to intensive mapping and remapping activities at Ostia. However, despite these serious efforts, the analytical potential of Ostia's site plan had never been realised and exploited, leaving the city's spatial organisation a neglected field of study. Ostia's built space became the focus of my doctoral research. Hans Kamermans lent unbounded support to my study and his expertise in spatial analysis and mapping proved to be invaluable for my enquiry into the port-town's past built space (Stöger 2011).

Ostia's site plan - a reflection of changing research foci over time

Ostia's general plan was published in 1953 (Calza 1953) and has been continuously updated by incorporating new excavation data until 1996. Its development not only reflects technological progress in mapping and remote sensing, but also changing research agendas responding to conceptual advances in urban studies. Based on an earlier plan of 1914 (Shepherd 2006), the mapping of Ostia developed in a piecemeal fashion over a long period of time, progressing along the course of the excavations. Within the core of the city, in relative proximity to Ostia's established local point of reference, the 1953 plan remains accurate, with only minimal divergences between the mapping and the actual location of the architectural structures.

Although accurate in the centre, the 1953 plan revealed substantial margins of error in the peripheral areas of Ostia's excavated terrain. These discrepancies were only discovered once advanced methods of topographic recording had been applied. Unsurprisingly, the inaccuracy of the site-plan did not pose noticeable problems for traditional research which was concentrated on individual buildings or smaller areas. The site-plan however became an issue of concern when recent projects began to examine larger areas, or when studies extended into the periphery of the excavated areas and beyond. Not only the plan's inaccuracies, but

also the growing demand for geo-referenced digital maps brought Ostia's 1953 general plan more and more under pressure.

With a growing interest in intra-site comparative studies and large-scale surveys (Heinzelmann 1998b), the need for computer-based methods of systematic, geo-referenced recording and data-processing has also increased (e.g. University of Texas' survey of Ostia's synagogue, see White 2001). Hence, in response to research demands, as well as current site management requirements, Ostia's *Soprintendenza* launched the production of a new geo-referenced digital site-plan. At the same time the *Soprintendenza* faced a dilemma, since replacing the 1953 general site plan would have meant that an enormous amount of embedded information would be lost. The 1953 general plan incorporates a wealth of archaeological and architectural information, reproduced as attribute data, detailing earlier and later building phases and architectural conventions such as wall apertures, discontinued structures, as well as detailed archaeological features. In their efforts to find a workable compromise, the *Soprintendenza* has been exploring various solutions.

With the production of Mannucci's *Atlante di Ostia antica* (1995) a beginning was made to confront these growing challenges. The *Atlante* offers a new site plan, covering Ostia's extended excavated areas. The new plan is based on aerial photogrammetry, and it is tied to Italy's national co-ordinate system Gauss-Boaga. The *Atlante* aimed at bringing Ostia up to date with modern methods of topographic recording and data management, offering an updated and updatable site-plan in printed and digital form, representing the site's first vector-based map.

The *Atlante* presents a fairly faithful mapping of Ostia's past built environment, reproduced at a scale of 1:500. It is however far from containing the detailed information found in the 1953 plan, and does not follow the established official numerical designations, in keeping with the traditional system organisation by Region, Insula, Building, and Room. Altogether these shortcomings compromise the usefulness of the *Atlante*. In fact, it did not succeed in replacing the 1953 site-plan, and on the whole has not found much application. Furthermore, the *Atlante* did not take into account the rural areas surrounding the city, although exploratory field surveys of the area to the southeast of Ostia had proceeded from the 1950s. These surveys, carried out by Bradford (1957), pioneered a combined study of aerial photographs and surface indications. An intensive survey followed almost five decades later, conducted by the *Deutsches Archäologisches Institut* (DAI) in the 1990s, when for the first time a detailed archaeological map of Ostia's suburban territories was produced, synthesizing information from aerial photographs, land surveys, as well as published and unpublished excavation reports (Heinzelmann 1998a). The DAI project's emphasis on Ostia's hinterland fits well into the broader trends which can be observed in studies of past cities. During the 1980s and 1990s research into ancient cities placed increasing emphasis on town and country relations and often privileged the wider setting of the city over the actual city centre. In recent years an inverse development was observed: current town-and-country studies, while contextualising sites within their wider social and economic worlds, are inevitably complemented by research with a clear focus on the internal organisation of the urban sites (e.g. Owen and Preston 2009).

Molehills in Roman cities – the ultimate challenge for pre-historians

With its distinct focus on the internal urban dynamics, my research into Ostia's spatial organisation clearly belongs to the studies focused on the city's centre. Ostia's digital plan, together with a thorough archaeological assessment, and the careful remapping of selected areas, formed the basis for my urban enquiry. The site plan serves as a rich data set which signifies the materialised infrastructure of past urban life.

Unsurprisingly, the site plan requires intensive work before it can serve as a digital data set for urban spatial analysis. The initial fieldwork at Ostia consisted of setting out geo-referenced points to link architectural remains to geographical positions (fig. 1). Geo-referenced positions were measured across the entire extend of the site. This was done with the help of Hans (fig. 2 and 3), who despite the urban context never shed the behaviour of a true pre-historian roaming the rural landscapes.

Figure 1.
Differential GPS on reference points linked to architecture in Insula IV ii.

Along Ostia's lesser crowded streets, where nature still takes its course, molehills abound. With Hans Kamermans present on site, not a single molehill survived. While walking, often even without realising, he attacked all molehills that came into his way by pushing the soil aside with his feet. He systematically destroyed the soil heaps in search of Palaeolithic remains. The density of molehills often required a zigzag course and Hans would move like a pendulum from one side of the street to the other so as not to miss out on any of those heaps. Unfortunately the geomorphology of the coastal landscape did not support such an early presence of human activity. However, we can be sure, if there had been any prehistoric lithics, Hans Kamermans would have found them!

Figure 2.
Setting up the base station of the Differential GPS on the roof of the Castello Giulio 2nd.

Figure 3.
Hans' relaxed mode of working: updating his analogue logbook from the PDA measurements.

References

Bradford, J. 1957. Ancient Landscapes: Studies in Field Archaeology, London: G. Bell and Sons.

Calza, G. (ed) 1953. Scavi di Ostia I, Topografia Generale, Rome: Istituto Poligrafico e Zecca dello Stato/Libreria dello Stato.

Heinzelmann, M. 1998a. Beobachtungen zur suburbanen Topographie Ostias. Ein orthogonales Strassensystem im Bereich der Pianabella, in Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung, 105, 175-225.

Heinzelmann, M. 1998b. Arbeitsbericht zu einer zweiten geophysikalischen Prospektionskampagne in Ostia antica, in Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung, 105, 425-429.

Mannucci, V. 1995. Atlante di Ostia antica, Venezia: Marsilio.

Owen, S. and L. Preston (eds) 2009. Inside the Greek City: Studies in Urbanism in the Greek World from the Bronze Age to the Hellenistic Period, Oxford: Oxbow.

White, L.M. 2001. The Ostia Synagogue – Area Masonry Analysis Project, unpublished preliminary report of the 2001 Field Season at Ostia Antica, Austin Texas.

Shepherd, E.J. 2006. Il 'Rilievo Topofotografico di Ostia dal Pallone'(1911), Aaera II, 15-38.

Stöger, H. 2011. Rethinking Ostia: A Spatial Enquiry into the Urban Society of Rome's Port-Town. Archaeological Studies Leiden University. Leiden: Leiden University Press.