

BETWEEN *SATRICUM* AND *ANTIUM*

B A B E S C H

Annual Papers on Mediterranean Archaeology

Supplement 18 — 2010



BABESCH FOUNDATION
Stichting Bulletin Antieke Beschaving

BETWEEN *SATRICUM* AND *ANTIUM*

Settlement Dynamics in a Coastal Landscape
in *Latium Vetus*

by

Peter Attema, Tymon de Haas and Gijs Tol

With contributions by

Luca Alessandri, Tycho Derks, Hendrik Feiken, Simone Malagodi, Claudio Moffa, Bert Nijboer,
Harry Pape, Michelangelo La Rosa, Olaf Satijn, Lisa Volterrani and Sarah Willemsen.



PEETERS

Leuven - Paris - Walpole, MA

2010

BABESCH Supplement Series

edited by

H. Geertman

M. Waelkens

Photo on the cover:

*The mouth of the Astura river with the Medieval tower of Torre Astura **in the background** (foto GIA).*

© 2010 Peeters, Bondgenotenlaan 153, B-3000 Leuven

*All rights reserved, including the right to translate or reproduce
this book or parts in any form*

ISBN 90-429-**aanvullen**

ISSN 0165-9367

CONTENTS

Introduction PETER ATTEMA	IX
------------------------------	----

Acknowledgements PETER ATTEMA	XI
----------------------------------	----

Part I Landscape, Topography And Methodology

1 Geology and Geomorphology of the Nettuno Area HENDRIK FEIKEN	1
2 Historical Cartography and Ancient Topography GIJS TOL	9
3 Archaeological Research in the Nettuno Area: Sources, Biases and Data Integration TYMON DE HAAS	17
4 The Ground-Penetrating Radar Survey CLAUDIO MOFFA, SIMONE MALAGODI & LISA VOLTERRANI	33

Part II Settlement Dynamics from Prehistory to the Medieval Period

5 Prehistory MICHELANGELO LA ROSA	39
6 Bronze Age LUCA ALESSANDRI	43
7 Iron Age (10 th -7 th century BC) PETER ATTEMA, TYMON DE HAAS & GIJS TOL	47
8 Archaic Period (6 th century BC) PETER ATTEMA, TYMON DE HAAS & GIJS TOL	53
9 Post-Archaic Period (500-350 BC) PETER ATTEMA, TYMON DE HAAS & GIJS TOL	57
10 Republican Period (350-250 BC) PETER ATTEMA, TYMON DE HAAS & GIJS TOL	61
11 Republican Period (250-100 BC) PETER ATTEMA, TYMON DE HAAS & GIJS TOL	63
12 Republican Period (100-30 BC) PETER ATTEMA, TYMON DE HAAS & GIJS TOL	65
13 Imperial Period (30 BC-AD 100) PETER ATTEMA, TYMON DE HAAS & GIJS TOL	67

14 Imperial Period (AD 100-250) PETER ATTEMA, TYMON DE HAAS & GIJS TOL	71
15 Imperial Period (AD 250-400) PETER ATTEMA, TYMON DE HAAS & GIJS TOL	73
16 Late Antiquity and Early Medieval Period (AD 400-700) PETER ATTEMA, TYMON DE HAAS, OLAF SATIJN & GIJS TOL	75
17 Medieval Period (AD 700-900) PETER ATTEMA, TYMON DE HAAS, OLAF SATIJN & GIJS TOL	77
18 Medieval Period (AD 900-1200) PETER ATTEMA, TYMON DE HAAS, OLAF SATIJN & GIJS TOL	79
19 Concluding Remarks PETER ATTEMA, TYMON DE HAAS & GIJS TOL	81

Part III The Museum Collection

20 Amphoras from the <i>Antiquarium</i> of Nettuno HARRY PAPE	85
21 Coins from GIA Surveys and the <i>Antiquarium</i> of Nettuno TYCHO DERKS	91
22 Oil Lamps from the <i>Antiquarium</i> of Nettuno SARAH WILLEMSSEN	99
23 Miscellaneous Artefacts from the <i>Antiquarium</i> of Nettuno GIJS TOL	111

Part IV Ceramic Typologies

24 Introduction to the Ceramic Typologies LUCA ALESSANDRI, TYMON DE HAAS, BERT NIJBOER, GIJS TOL	125
A Bronze Age, Late Iron Age and Orientalizing <i>Impasto</i>	126
B <i>Dolia</i> (Storage Jars)	141
C Coarse Wares	142
D Amphoras	157
E Black Glazed	160
F Terra Sigillata	166
G African Red Slip Ware	172

Part V
Site Catalogue

Introduction to the Site Catalogue	185
Site Descriptions	186
Site Chronology	240

Part VI
The *Carta Archeologica*

Overview Map	247
Bibliography	255

Introduction

Peter Attema

In the summer of 2000, a small team from the Groningen Institute of Archaeology (GIA) working at the Latin settlement of *Satricum*, went to look for the protohistoric sites recorded by Fabio Piccarreta on the beach between Torre Astura and Nettuno in the 1970s.¹ The aim was to check if these sites still existed and if so, whether they were in a condition that allowed further investigation. The reasons for the GIA to take up research on the coast were twofold: from the perspective of the *Satricum* excavations, it could furnish important information on the economic relation between ancient *Satricum* as the principal protohistoric settlement located on the river Astura and coastal occupation near the river's mouth; from the perspective of the Pontine Region Project, it would supply valuable archaeological information about a till then little surveyed landscape.

Let me recall that first visit that, in retrospect, would be the first step in a seven-year programme of excavations, survey and artefact studies.

Starting from Torre Astura, we first came across the remains of various *villae maritimae*, the luxurious residences of the Roman elite, as well as the remains of a kiln, just as described by Piccarreta. Then we passed the area where Blanc in the 1930s had established the geological genesis of the coastal landscape:² here, grey marine clays are covered by layers of volcanic tuffs and Pleistocene sands. Continuing in the direction of Nettuno, just before the large *villa maritima* of Le Grottaacce, we came upon what seemed to be one of the best preserved protohistoric contexts along the coast: Piccarreta's site no. 13, which is also known as Pelliccione. Thick deposits of handmade pottery (*impasto*) were exposed in strata of dark coloured sand in a dune protruding onto the beach and therefore prone to marine erosion. An intervention therefore seemed warranted.

In 2001, with the kind permission of Annalisa Zarattini of the *Soprintendenza per I Beni Archeologici di Lazio* and in close cooperation with the staff and personnel of the *Poligono Militare* on whose terrain the site is located, the first field season took place. The excavations at P13, as we labelled Piccarreta's site no. 13, were quite successful as they uncovered the first Late Bronze-Age saltern known along the Latial coast south of the Tiber. In 2002, a second campaign was spent mapping and sampling still extant protohistoric and Roman remains along the coast between Torre Astura and Nettuno. The results of the excavations were exhibited in Nettuno and Groningen and published in full in *BABesch* and *Palaeohistoria*.³

GIA's work soon attracted the attention of the municipality of Nettuno, who were keen to extend the archaeological observations to other parts of the municipality. This seemed a welcome opportunity to learn more about protohistoric rural settlement related to protohistoric *Satricum* and *Antium* and to establish the influence of the latter on the landscape when it became a Roman colony in 338 BC. With additional finances furnished by the Regione Lazio, it was in the summer of 2003 that we began work on the *Carta Archeologica di Nettuno*. Besides revisits to known sites and new fieldwork, the project was also to include an inventory of a huge collection of artefacts that since the 1960s had been collected by the director of the local *Antiquarium* at various sites in the Nettuno area. In five campaigns between 2003 and 2007, the surface archaeology of the accessible parts of the territory of Nettuno was recorded and the entire museum collection drawn, described and studied. The fieldwork produced detailed geographical information on previously known sites and resulted in the discovery of new sites. The study of the collection in the local *Antiquarium* proved to be a goldmine for our knowledge of the chronology and function of sites recorded in the past.

The archaeological investigations carried out by staff members, researchers and students of the GIA, as described above, have resulted in the present volume that offers an inventory of archaeological sites in the municipality of Nettuno from the first Middle Palaeolithic hunter-gatherer camps of about 200,000 BP to the origin of Nettuno at the start of the 2nd millennium AD (part V). In the tradition of the *Forma Italiae*, the site inventory is accompanied by a map showing all archaeological sites that were documented in the course of the campaigns. The chronology of the sites is supported by the publication of finds and/or by reference to typological tables (part IV). Particular categories of finds from the *Antiquarium*, such as coins, oil lamps and special finds, are presented separately in part III.

The first part of this volume offers an introduction to the landscape, ancient topography, research history and finally the methodology of the *Carta Archeologica*. In part II, we present a period-by-period interpretation of the archaeological data, with period maps and histograms showing the major chronological trends in the density of various types of settlements in the study area and their distribution over the landscape. These trends inform us on the reciprocal relation between humans and their environment in the past and reveal major processes in the landscape, such as the appearance of the first agricultural settlements in the Bronze Age, the growth of a site hierarchy and town and country relations in the Iron Age and Archaic period, the rise of the villa landscape in Roman times, and *incastellamento* in the medieval period.

The *Carta* is, however, not only an invaluable instrument from a historical point of view, but it can also be instrumental in cultural heritage policy to safeguard archaeologically sensitive areas from (further) destruction or to have these properly excavated prior to major interventions. To this end a concise Italian version of the *Carta* was published locally.⁴ Archaeologically sensitive areas are found in the Campania zone, where remote sensing has shown that wall remains of Roman *villae* have been preserved; in the coastal area between Torre Astura and Nettuno, where the remains of protohistoric sites can still be studied; in the Astura valley with its many farm sites located on hill tops, but on the east bank of which land reforms unfortunately have already wiped out large parts of the archaeological record; and finally in the *Poligono Militare* that preserves the natural coastal landscape in combination with the archaeological record.

Nettuno has a rich archaeological heritage, among which are many well-known and protected sites, such as the so-called *via Selciatella*, the Roman funerary site of Torre del Monumento, the Roman *villae maritimae* of Torre Astura and Le Grottacce and the many Roman fishponds; but there are also hundreds of sites unknown to the public. These are in the form of small scatters of lithics or potshards in a ploughed field, a few wall remains in the garden of a farmer or a couple of artefacts or coins in a private collection. It is these data in particular that provided insight into the time depth and socio-economic implications of the archaeological past of Nettuno and which we present in this book.

At the same time the work for the *Carta*, as it included comparisons between the archaeological record of the 1960s and today, has taught us how fast the archaeological record is vanishing as a result of today's urban sprawl and the wholesale land reforms to allow modern farming technology. Rather than to view the archaeological heritage as a burden to the economy, it should be conceived of as a resource for education and cultural tourism, as well as a possibility to restore the bond between the modern landscape and the archaeological past.

NOTES

¹ Piccarreta 1997.

² Blanc 1935, 1936.

³ Attema et al. 2003a; Nijboer et al. 2006; De Haas et al. 2008.

⁴ Attema et al. 2009.

Acknowledgements

Peter Attema

This book would not have been possible without the physical, logistical, financial and intellectual efforts of many.

First of all I would like to thank Luca Alessandri, Hendrik Feiken, Tymon de Haas, Michelangelo La Rosa, Gijs Tol and Olaf Satijn who not only directed fieldwork and/or studied parts of the Liboni collection, but were also involved in the compilation and editing of texts and illustrations. Special thanks go to Bert Nijboer and Gert van Oortmerssen who have been of invaluable help in the processing of the many artefacts. Thanks are also due to Erwin Bolhuis, Martijn van Leusen and Nick Ryan for their technical support in the field and Siebe Boersma, Chris Luinge and Brigitte Saan for professional drawing. The English text was corrected by Gerre van der Kleij of GrondTaal. Over the years many students and researchers have participated in the campaigns. I thank them all for their dedicated fieldwork; a list of all participants is included below.

I am very grateful to the following persons of the *Soprintendenza per i Beni Archeologici di Lazio* for their administrative support: the inspectors Annalisa Zarattini, Micaela Angle, Francesco di Mario and Alessandro Cassatella as well as Demetrio Matrango. Furthermore I would like to thank Arnaldo Liboni, who over the years not only has allowed the Groningen team at the Forte Sangallo to study the museum collection, but also furnished precious information on the provenance of many of the artefacts we studied. Of the Regione Lazio that together with the Groningen Institute of Archaeology co-financed the project *Carta Archeologica di Nettuno*, I express my thanks to Clarissa Belardelli. Without the annual accommodation offered by the Scuola Santa Maria Goretti, the field campaigns would not have been possible. My deep thanks go to Ivana Lazzaro, director of the school, to her secretary Giulio Ciorra and to all the other staff. Of the Comune di Nettuno I wish to thank Vittorio Marzoli, at the time mayor of Nettuno, who has given his support to the project right from the start, showing a continuous interest in the results. Finally I want to thank Ettore Cuccillato, at the time alderman of culture, who took the initiative for the project and has accompanied us on many occasions in the field. Unfortunately, Ettore did not live to see the results of the project, which we deeply regret.

The following people participated in the excavations, mapping and surveys in the Nettuno area:

2001

Luca Alessandri, Peter Attema, Mariëlle Bannink, Marcella Blom, Stefan Elevelt, Tymon de Haas, Marieke Kramer, Jolanda Maassen, Bert Nijboer, Gert van Oortmerssen, Michiel Rooke, Olaf Satijn, Nienke van Schie, Katrine Seistrup, Edmée Sleijpen, Anke Stoker, Gijs Tol

2002

Peter Attema, Mariëlle Bannink, Marcella Blom, Tycho Derks, Stefan Elevelt, Tymon de Haas, Michelangelo La Rosa, Chris Luinge, Bert Nijboer, Gert van Oortmerssen, Nienke Pieters, Jorn Seubers, Janien Sonneveld, Gijs Tol, Berber van der Veen, Hans Veenstra

2003

Luca Alessandri, Peter Attema, Erwin Bolhuis, Tjark Blokzijl, Tycho Derks, Rik Feiken, Tymon de Haas, Alexandra Hut, Bettine van Klinken, Tijm Lanjouw, Michelangelo La Rosa, Tanja van Loon, Jolanda Maassen, Bert Nijboer, Neeltje Oome, Gert van Oortmerssen, Joke Oosterhuis, Itamar de Rooze, Nick Ryan, Jorn Seubers, Gijs Tol, Hans Veenstra, Corien Wiersma

2004

Peter Attema, Erwin Bolhuis, Tycho Derks, Sander Droogsma, Tymon de Haas, Colinda Kaal, Tijm Lanjouw, Michelangelo La Rosa, Tanja van Loon, Martijn van Leusen, Jolanda Maassen, Neeltje Oome, William Pouille, Itamar de Rooze, Jorn Seubers, Gijs Tol, Chris Luinge, Naomi Wildeman, Gretha van der Veen, Sarah Willemsen

2005 (February)

Rik Feiken, Tymon de Haas, Marlies van Kruining, Edmée Sleijpen, Gijs Tol

2005 (summer)

Peter Attema, Annelies Berends, Erwin Bolhuis, Hilde Boon, Tycho Derks, Rosa Doreleijers, Sander Droogsma, Tymon de Haas, Pieter den Hengst, Evert Hensbroek, Naomi Huisman, Michèl de Jong, Tim Kauling, Michelangelo La Rosa, Martijn van Leusen, Tanja van Loon, Chris Luinge, Bert Nijboer, Gert van Oortmerssen, Harry Pape, Maaïke Peters, Matt Ratto, Nick Ryan, Jorn Seubers, Ilona von Stein, Gijs Tol, Jet Tolsma, Bert Tuin, Kees van der Veer, Mark van der Weg

2006

Peter Attema, Annelies Berends, Siebe Boersma, Erwin Bolhuis, Tycho Derks, Tymon de Haas, Tim Kauling, Michelangelo La Rosa, Martijn van Leusen, Tanja van Loon, Chris Luinge, Claudio Moffa, Harry Pape, Nick Ryan, Olaf Satijn, Jorn Seubers, Gijs Tol, Lisa Volterrani, Sarah Willemsen

PART I
LANDSCAPE, TOPOGRAPHY
AND METHODOLOGY

1

Geology and Geomorphology of the Nettuno Area

Hendrik Feiken

INTRODUCTION

In this chapter the various deposits found in the municipal territory of Nettuno will be presented within their broader geological framework. The municipal territory of Nettuno is located about 60 km south of Rome on the Tyrrhenian coast of southern Lazio. The area is part of a system of marine terraces that in the north borders on the Pontine *graben*, a plain formed during the Pleistocene through tectonic movement. To the north-west of the *graben* lie the *Colli Albani*, formed in the Middle Pleistocene as the volcanic activities of the *Volcano Laziale* reached a climax. To the north-east are the *Monti Lepini*, a mountain chain that is part of the Volsci range.⁵ Characteristic points along the modern coastline are the high *Macco* rock on which Nettuno itself is located, and the cape of Torre Astura near the mouth of the Astura river.

The landscape has been shaped by marine, tectonic and volcanic influences. Inland, its soils consist mainly of aeolian sands, while in the valleys and along the coast marine and volcanic sediments are found. On the basis of these data, the suitability of the area for settlement from prehistory to the Roman period will be commented on. Also, attention is given to the degradation of archaeological sites in the area.

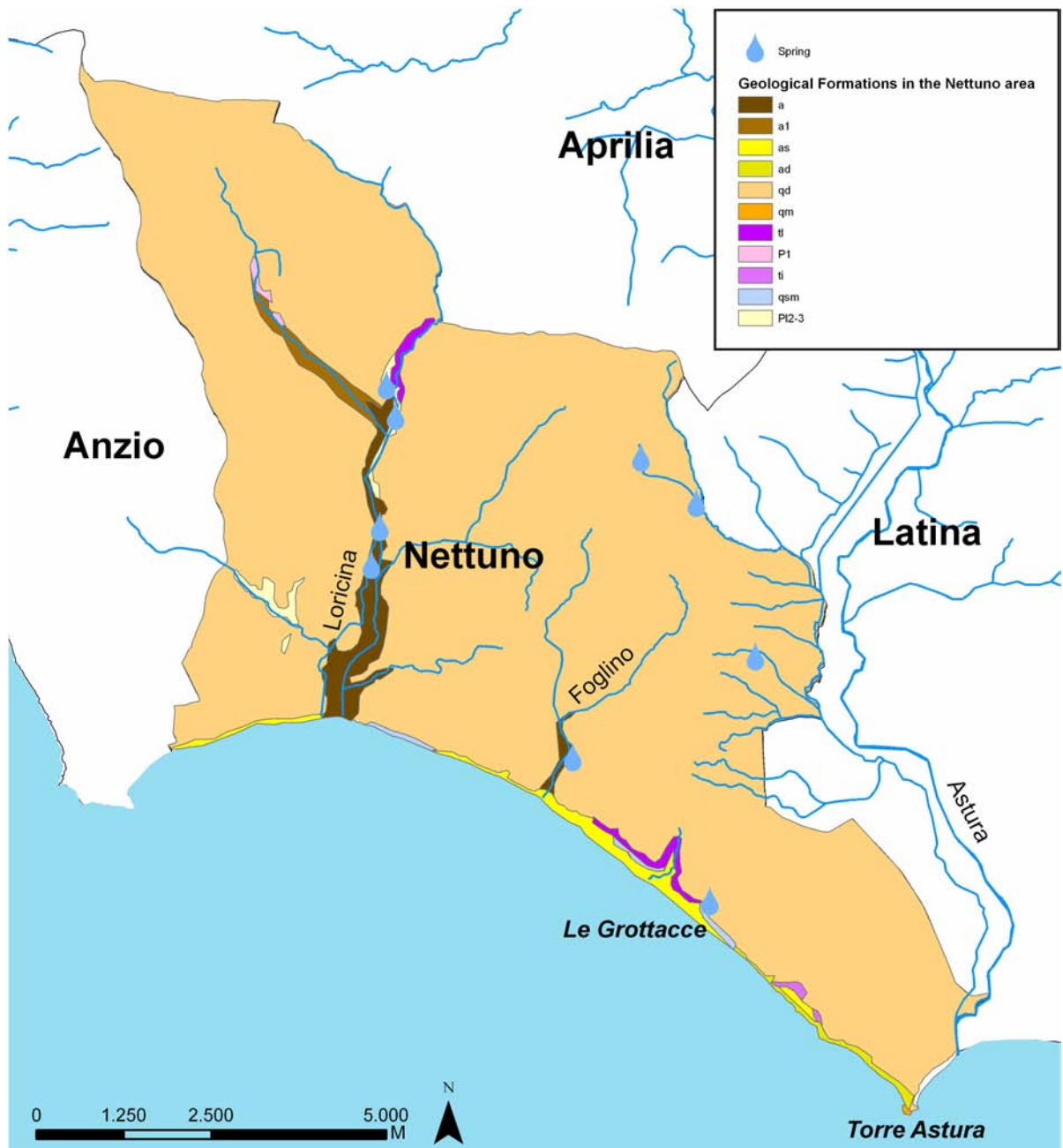
GEOLOGY AND GEOMORPHOLOGY

In the municipal territory of Nettuno eleven geological formations occur (see *table 1.1* and *fig. 1.1*).⁶ The classification is based on the lithostratigraphy which implies that rock strata and unconsolidated sediments are distinguished by their lithological and stratigraphical characteristics. A lithostratigraphic unit conforms to the law of superposition, which states that in any succession of strata not disturbed or overturned since deposition, younger rocks lie above older rocks. The geological map distinguishes marine, continental and pyroclastic Formations. In *fig. 1.2* the chronostratigraphy of the last 4 million years is schematically rendered.⁷

The map shows that the larger part of the municipal territory of Nettuno consists of Formation qd. Along the coast predominantly Holocene beach and dune formations are found (Formations as and ad). The valleys of the Astura, Loricina (or Fosso del Quinto) and Foglino are filled with Holocene peat or peaty clayey sediments. In the valley of the Loricina four springs occur. Their origin can be explained as follows: at points where the groundwater in the sandy subsoil comes across impermeable clayey layers it will run on top of these. Where these impermeable layers are exposed, like in a valley side, a line of springs may result.

Table 1.1 The lithostratigraphical Formations in the municipality of Nettuno according to the geological map (adapted after Beneo 1963).

Geologic timescale	Marine Formations	Continental Formations	Pyroclastic Formations	Description
Holocene		a, a1		Peat and colluvio-alluvial deposits
Holocene		as		Dunesand or beachsand
Holocene		ad		Dunesand (with yellow/grey colour)
Late Pleistocene		qd		<i>Duna antica</i> ; aeolian sands
Middle Pleistocene	qm			Marine sand
Middle Pleistocene			tl	<i>Tufo litoide</i> or <i>Tufo lionato</i> ; tuff
Middle Pleistocene			P1	<i>Pozzolane inferiori</i> ; tuff
Middle Pleistocene			ti	<i>Tufi inferiori</i> ; lower tuff
Early & middle Pleistocene	qsm			Polygenetic gravels, fluvatile and lagoonal sands deposited on the coast
Middle & late Pliocene	Pl 2-3			<i>Macco</i> ; lime sandstone with fossils



Along the coast and river courses, older formations are exposed through erosion. A good example of such an exposure is found at Le Grottacce. Here a section is found directly on the coast with at the top recent dune sand (Formation ad), followed by so-called *sabbie rosse*. These are dune sands from the Late Pleistocene that are characterized by soil formation which reddens the sands (Formation qd). Below are lithoid tuffs (compact tuffs; Formation tl) followed by bluish, loamy

Fig. 1.1. Geological Formations in the municipality of Nettuno (see also table 1.1; after Carta Geologica d'Italia, Foglio 158 Latina).

marine sediments (*marne azzurre*).⁸ The description of the (lowest) marine deposits derives from Blanc, who describes this layer as '*Marne e sabbie marine*'.⁹ This is Formation qsm on the geological map.

fossils, often cemented with flint pebbles and fragments of lime from elsewhere. *Macco* forms the substratum of the historical centre of Nettuno and crops out at the Scuola di Pubblica Sicurezza, at Villa Borghese, at the back of the Cimitero Americano, along the right bank of the Fosso Cacamele, along the Fosso dell'Armellino near Cadolino and in La Campana. At Torre del Monumento, the *Macco* is found close to the surface. At about 100 m west of the Parco Loricina the *Macco* lies at a depth of about 8 m in the valley of the Loricina. Through displacements along faults the *Macco* is also relatively close to the surface in other areas, for example at Tre Cancelli, Scopone and Borgo Montello.¹⁰

The Pleistocene (1.81 million years-10,000 BP)

There is great controversy on the definition of the Quaternary.¹¹ Geologists from north-western Europe and North America use indicators that refer to climate change. According to them the start of the Quaternary (and Pleistocene) is 2.6 million years ago. Geologists in southern Europe, on the contrary, use fossils to date the start of the Pleistocene. According to them, the start of the Quaternary (and Pleistocene) must be placed at the moment when the cold-water ostracods *Cytheropteron testudo* occurred for the first time in the Mediterranean Sea (about 1.81 million years ago).¹² Due to this controversy, the Pleistocene in southern Europe is shorter than in north-western Europe. The transition from Pliocene to Pleistocene has been found at Tor Caldara, slightly to the west of Nettuno.¹³

In this chapter, the southern European chronology is used. The Pleistocene is characterized by rapid alternations of climate. The relatively cold periods are indicated as glaciations and the intermediate, relatively warmer periods as interglacials. Geological investigations show that in the past 2.6 million years at least 30 glaciations occurred. Glaciations are characterized by drops in sea level as the water is locked up in ice masses, interglacials by sea level rises.¹⁴

Early and middle Pleistocene marine and fluvial deposits (qsm)

Towards the end of the Pliocene and the start of the Pleistocene fluvial and marine sediments were deposited, traditionally known as the *Calabrian* and *Siciliano* deposits. Nowadays these are included in the Calabrian marine stage (see fig. 1.2). The deposits in general consist of sandy greyish

clays and grey-greenish sands, the top of which is yellow and enriched with *breccia* with many volcanic minerals such as magnetite, hematite, augite, hornblende, garnet and biotite (mica).

The *Siciliano* deposits in the municipal territory of Nettuno are found along the coast and inland. In Nettuno the grey clays of the *Siciliano* lie on top of the *Macco*. The clays fill up the tectonic depressions that originated during the Pliocene. These clays are not found where the *Macco* surfaces, or almost surfaces. Towards the end of the Early Pleistocene a relative drop in sea level occurred (700-800,000 years ago) and sandy deposits and gravels were deposited in the area. This is Formation qsm, consisting of polygenetic gravels, fluvial and lagoonal sands deposited at the coast. This Formation is found along the coast between Nettuno and Torre Astura, for instance at Le Grottace.

Middle Pleistocene volcanic deposits (ti, P1& tl)

Eruptions of the *Volcano Laziale* are responsible for the subsurface of the municipal territory of Nettuno. Three major eruption phases are known for this volcano, which took place between 600,000 and 20,000 years ago:¹⁵ the Tuscolano-Artemisio phase (600,000-300,000 years ago); the Faete phase (or Campi di Annibale phase; 300,000-20,000 years ago); and the hydromagmatic phase (200,000-20,000 years ago). Especially the first phase has greatly influenced the landscape development of the Agro Pontino and Agro Romano. This is the phase in which a large stratovolcano was formed, an event accompanied by eruptions and pyroclastic deposits. The volcano ejected 283 km³ of material.¹⁶ In the municipal territory of Nettuno the '*Tufo lionato*' (tl) (also named '*Tufo litoide*') is found at the surface in the valley of the Fosso del Quinto and the Vallone Carnevale. This tuff was formed about 360,000 years ago. Along the coast it is found together with the older '*Tufi inferiori*' and the '*Pozzolane inferiori*' (P1). The latter two pyroclastic deposits were formed in the initial phase of the Colli Albani volcano. Pozzolana is a fine, sandy volcanic ash. The '*Pozzolane inferiori*' south-east of Nettuno contain marine shells of the *Pectunculus* family.

Middle Pleistocene marine deposits (qm)

Formation qm consists of marine sands of the *Tirreniano*. This period is also called Eemien (Isotopic stage 5) and is dated to 130,000-80,000 BP. During construction activities south-east of Net-

Table 1.2. The characteristics of the four marine terraces south-east of Nettuno (Snoek/van der Giessen 1985; De Wit et al. 1987; Kamermans 1991; Sevink et al. 1991).

the marine terraces	Dates (K is 1000 years)		Geo-morphological complexes	Soil types (FAO – UNESCO types)	Textural classes	Drainage classes	Slope classes	Alltitude (m)
	Absolute	Geologic Timescale						
Terracina		Holocene	Dunes	Calcaric Regosol	Coarse	Somewhat excessively - excessively	Level to gently rolling - rolling to hilly	0-5 m
Borgo Ermada Level	90 ± 15 Kyr BP	Weichsel/Würm	Beach ridge deposits	Chromic Luvisols	Medium	Well	Level to gently rolling	3-7 m (east) 5-10 m (west)
			Lagoonal deposits	Complex of Gleyic Cambisols, Gleyic and Alblic Luvisols, solodic Planosols	Coarse	Poorly - imperfectly	Level to gently rolling	7-10 m
Minturno Level	125 Kyr BP	Eemien	Beach ridge deposits	Chromic Luvisols	Medium	Well	Level to gently rolling	15-20 m
			Lagoonal deposits	Gleyic Luvisols	Fine	Imperfectly	Level to gently rolling	15-20 m
Latina Level	560 ± 10 Kyr BP	Middle Pleistocene	Beach ridge deposits	Chromic Luvisol	Medium	Well - somewhat excessively	Rolling to hilly	21-27 m
			Lagoonal deposits	Gleyic Luvisols	Coarse - medium	Imperfectly	Level to gently sloping	> 25 m
				Solodic Planosols	Coarse	Imperfectly	Level to gently sloping	
				Complex of Chromic Vertisols and Gleyic Luvisols	Medium - fine	Poorly - moderately well	Level to gently sloping	

tuno marine fossils were found in these sands, particularly bivalve shells and sea snails, but also microfauna (benthic foraminifera's) and fossilized body parts of sea lilies and ostracods were encountered.¹⁷ All these organisms point to a warm sea and therefore a warm, tropical climate.

The marine sands of the *Tirreniano* were deposited during a transgression of the sea. In the municipality of Nettuno they are only found near the surface at Torre Astura and at Quadrata near Acciarella. In the latter area the sands occur at an altitude of 13 m above sea level, while in the valley of the Loricina and at Borgo Sabotino these sands occur only at 13 m below sea level. According to Tamburino this is evidence for tectonic movements in the Pontine region since the Middle Pleistocene.¹⁸

Late Pleistocene aeolian deposits (qd)

The area of Nettuno is dominated by the *Duna Quaternaria Antica* (qd). Lithic tools of the Middle Palaeolithic are found within the red sands (*sabbie rossastré*) of this Formation.¹⁹ In the yellow sands on top (also belonging to this Formation), Epigravettian tools are found. The red sands, consisting mainly of quartz, do not contain calcium carbonate. In these sands an iron-manganese concretion layer is found at 50-60 cm depth with clayey soil horizons.

According to Sevink et al. the dunes are part of

an old marine beach ridge system with associated aeolian deposits.²⁰ The beach ridges to the south-east of Nettuno have been studied particularly well.²¹ Four different levels were distinguished here, from young to old the Terracina, Borgo Ermada, Minturno en Latina complexes. The oldest level, the Latina complex, was formed 560,000 BP.²² The youngest level was formed during the Holocene (see table 1.2).²³ The orientation of the beach ridges in the municipal territory of Nettuno is north-west to south-east. In the north the *Duna Quaternaria Antica* (Formation qd) borders on the *graben* formed by tectonic movement. There are no reliable dates for the sinking of the *graben*. The formation of the various terraces was probably determined by trans- and regression phases. During a transgression phase abrasion surfaces are created and beach ridges and lagoons are moved inland. Lagoons are always situated behind beach ridges, such as still can be found today in the Agro Pontino. The extent of a beach ridge depends on the available sediment and the scale of sea level rise. During a subsequent regression phase the beach ridge may move seaward and rivers will start to cut into the now dry coastal area. This is due to the lowering of the erosional basis. During a following transgression phase new beach ridges and abrasion levels may be formed. Because of the uplift of the land the old beach ridges will now be on a higher altitude.²⁴ That is why the several terraces from



Fig. 1.3. Erosion in the Campana area, northern part of the municipality of Nettuno (photo GIA).



Fig. 1.4. Erosion along the coast at the Roman villa of Le Grottacce (photo GIA).

high to low and from land to sea form a chronosequence. A characteristic of such a chronosequence is that the older beach ridges lie at a higher level and more inland than the younger beach ridges.²⁵

During the latest glacial, the Weichselien or Würm, a number of shorter warmer periods occurred. These periods are known as interstadials and a number of these can be traced in the Agro Pontino and Agro Romano. During the Weichselien Neanderthals frequented this area for the first time. During an interstadial animals like the aurochs (*Bos primigenius*), Merck's rhinoceros (*Dicerorhinus merckii*), straight-tusked elephant (*Elaphas antiquus*) and hippopotamus (*Hippopotamus amphibius*) occurred. When it became colder and dryer animals

such as the European ass (*Equus hydruntinus*), woolly rhinoceros (*Coelodonta antiquitatis*), chamois (*Rupicapra rupicapra*) and lynx (*Felix lynx*) occurred.²⁶ During a colder phase the Agro Romano and Agro Pontino were probably a steppe rich in *Artemisia*, which is characteristic steppe vegetation.²⁷

During the colder phases of the Weichselien the sea retreated and rivers cut into the beach ridge. Due to the scarcity of vegetation and the peak in discharge flows, broad valleys could form. East of Nettuno the Astura valley is a clear example of this, as its present course is much narrower than the valley in which it runs. Similarly, the valley of the Loricina widened during the Weichselien.

The Holocene (10,000 BP-present)

Towards the end of the Weichselien the temperature as well as the sea level rose through the melting of ice sheets and glacier ice. In Italian literature this transgression is indicated by the term Versiliana or Fiandriana transgression. Due to the higher temperatures the steppe vegetation disappeared and modern vegetation could develop. In the *graben*, north of Nettuno, a lagoon was formed at the beginning of the Holocene, which gradually filled in with peaty and clayey sediments.²⁸ Along the coast a sandy beach was formed with behind it a row of young dunes (Formations ad and as). In the Holocene the wide river valleys were covered by colluvio-alluvial deposits.²⁹ In the valleys peat started to form (Formation a). In pollen cores, the first indicators for agricultural activities are found in sediments dating to around 3000 BC. In the coastal zone such activities continued into the Roman period.³⁰

THE SUITABILITY OF THE AREA FOR HUMANS IN THE PAST ESTIMATED BY LAND EVALUATION

The degree of suitability of a landscape for human occupation in the past can be estimated through archaeological land evaluation. Land evaluation is a method devised by soil scientists and is regularly used by the FAO (Food and Agriculture Organization of the United Nations) in developing countries. According to this method the most suitable type of land use is evaluated given a certain type of landscape and the existing social-economic and (agro-) technical situation. Land evaluation has been adapted for use in archaeological research. Researchers try to model types of land use in antiquity with the help of archaeological and historical data, as for instance ancient agricultural imple-

ments, irrigation and drainage systems, terracing and information from classical sources. For the area of the beach ridges south-east of the municipality of Nettuno, an archaeological land evaluation programme has been carried out by Kamermans and Van Joolen.³¹ Kamermans focused in his research on the older periods (from the Middle Palaeolithic to the Bronze Age), whereas Van Joolen focused on the periods from the Bronze Age to the Roman era.

In the municipality of Nettuno sandy aeolian sediments (the so-called *Duna Antica*) dominate the surface. Kamermans includes aeolian sediments in the landscape unit 'beach ridge and aeolian deposits', while Van Joolen includes them in the 'Borgo Grappa beach ridge land system'. In general, the suitability of the *Duna Antica* compares favourably with other landscape units of the Pontine Region, such as the coastal lagoons and areas with tuff or alluvium/colluvium, over a long period from the Middle Palaeolithic to the Early Middle Ages (the period discussed in this book).³² In short, the results of land evaluation indicate that finds from all periods can potentially be found in the territory of Nettuno. Not only the sandy subsoil with all its favourable biotic influences, but also the nearness of the sea will have attracted occupation.

GEOMORPHOLOGY AND HUMAN OCCUPATION

From south to north the territory of Nettuno consists of a sandy beach separated from the recent dunes by a cliff of several meters. In the south-western part lies the already mentioned *Macco* elevation on which the historical centre of Nettuno is located. Due to the continuing rise in sea level the coastline, and with it the cliffs and dunes, are moving gradually inland. As the present dunes are recently formed and very dynamic, the prehistoric and Roman landscape in this area was probably quite different from that of today. When considering the geomorphological characteristics of the landscape we can single out those areas that would have been attractive in prehistory and during the Roman period. Areas alongside the river courses would have been particularly attractive for habitation because of the presence of river water and because springs occur in the valleys, guaranteeing good quality drinking water. Strategic locations, for example areas between two forking streams or flanks of river valleys, would also have been attractive for occupation. This is also true for strategic locations on the coast, such as the cliffs and the *Macco* elevation overlooking the sea.

DEGRADATION OF ARCHAEOLOGICAL SITES IN THE TERRITORY OF NETTUNO

The sandy subsoil with loamy sublayers in the territory of Nettuno is prone to erosion, while the undulating landscape promotes rill and gully formation (*fig. 1.3*). Ploughing often takes place perpendicular to the contour lines and this increases erosion. Erosion especially takes place when the fields are bare, for instance after harvesting. Renewed ploughing of eroded fields will make the erosion gullies temporarily disappear, after which the erosion process will start anew. In this way, many hectares of arable land in the territory of Nettuno are almost imperceptibly disappearing. This form of erosion affects the preservation of archaeological sites, for instance in the area of Campana.

Coastal sites are being affected by marine erosion (see *fig. 1.4*). Since Roman times, the relative sea level has risen by more than 1.2 m and this process continues to this day.³³ However, the relative rise in sea level is not the only cause of erosion: a second negative influence is the construction of ports, promenades and other structures on the coast. To avoid erosion of the coast groins are built in the sea, and to protect the beach and the promenades breakwaters are constructed. These structures, which project into the sea, not only notably change the coastal hydraulics and thus the natural modification of the shores, but also produce sedimentary traps which deprive even large areas of sediment supply. Groins and jetties break the natural longitudinal flow of sediments, while breakwaters generally stop the natural exchange of sediments between the offshore and the backshore.³⁴

In the case of Nettuno, sediment supply takes place on the western part of its coast line. This means that other parts of the coast are being eroded to keep up the sediment supply. This process takes place to the east of Nettuno, where the row of dunes on the *Poligono* is being affected by erosion. As a result, a number of protohistoric and Roman sites are being eroded there.

CONCLUDING REMARKS

The landscape in the municipal territory of Nettuno was shaped by marine, tectonic and volcanic influences. However, most of the soils consist of aeolian sediments which are considered to be suitable for cultivation, both now and in the past. From a geomorphological point of view the landscape offers strategical settlement locations on the

Macco cliffs along the coast and along the river courses, especially where streams meet. Coastal erosion, ploughing and land improvement form a constant threat to the archaeological heritage and lead to the destruction of many archaeological sites in the countryside.³⁵

NOTES

- ⁵ Kamermans 1991, 21.
- ⁶ *Carta Geologica d'Italia*, Foglio 158 Latina (scale 1:100,000).
- ⁷ Chronostratigraphy studies the age of rock strata through time.
- ⁸ Attema et al. 2003.
- ⁹ Blanc 1935, 114; 1936, 379.
- ¹⁰ Tamburino 1988.
- ¹¹ Pillans/Naish 2004.
- ¹² Lowe/Walker 1997, 2-3.
- ¹³ Bellotti et al. 1997.
- ¹⁴ Lowe/Walker 1997.
- ¹⁵ De Rita et al. 1995.
- ¹⁶ De Rita et al. 1995, 41.
- ¹⁷ Tamburino 1988.
- ¹⁸ Tamburino 1988.
- ¹⁹ Blanc 1935, 1936; Ansuini/La Rosa 1989; Attema et al. 2003; see also chapter 5.
- ²⁰ Sevink et al. 1982, 1984.
- ²¹ Sevink et al. 1982.
- ²² De Wit et al. 1987.
- ²³ Sevink et al. 1982.
- ²⁴ Kamermans et al. 1979, 10-11.
- ²⁵ Kamermans 1991, 23.
- ²⁶ Kamermans 1993.
- ²⁷ Sevink et al. 1984, 12.
- ²⁸ Kamermans 1991, 23.
- ²⁹ Sevink et al. 1982, 363.
- ³⁰ Van Joolen 2003, 153-177.
- ³¹ Kamermans 1993; Van Joolen 2003.
- ³² Kamermans 1993; Van Joolen 2003.
- ³³ Lambeck et al. 2004.
- ³⁴ Caputo et al. 1991, 36.
- ³⁵ The threat caused by modern urban expansion is discussed in chapter 3.

2

Historical Cartography and Ancient Topography

Gijs Tol

INTRODUCTION

The 1692 map by Giovanni Battista Cingolani (fig. 2.1) is the first to provide us with considerable topographic precision and detail for our study area.³⁶ Until then (notwithstanding a vivid tradition with the first surviving map possibly going back to the early 4th century AD)³⁷ maps were mainly large-scale and based on an insufficient knowledge of the landscape and topography on a regional and local level.

From this ample cartographic tradition we can obtain several types of important information: they form proof of the state of contemporary topographic and monumental awareness, ascertain the legacy of ancient toponomastics and provide us with important evidence on prior land-use, thus providing insight in the formation of modern landscapes. Especially the latter is pivotal when studying the coastal area around Nettuno, because of the rapid urban development and the introduction of destructive mechanized agricultural methods in the last 50 years.

Although the Cingolani map, as most maps of its period, presents foremost a contemporaneous image, clues about the ancient topography can be deduced from it as well. Several *ruderi* of mainly Roman origin are depicted. On other examples these archaeological features are accompanied by a written identification that must derive from ancient literature.³⁸ These historical references form proof of a rapidly growing archaeological interest from the 17th century onwards. This resulted not only in the listing and identification of the monumental archaeological landscape of the Nettuno area,³⁹ but also triggered private excavation activities, mainly conducted by members of the rich aristocratic families in the area around Anzio, whose main goal was to retrieve valuable pieces of ancient art for private collections.⁴⁰

TOWNS

On a map from 1711 by Guglielmo Delisle (fig. 2.2)⁴¹ with a mainly historical scope and probably based predominantly on ancient literature, four ancient centres of habitation can be distinguished that are of interest for our study area. These are

respectively *Antium* (Anzio), *Caenon* (Ceno), *Satricum* and *Astura*. However, archaeological evidence for each of these towns varies considerably.

The most western town, its distinct promontory clearly visible, is *Antium*. The site has been the subject of antiquarian interest from the 17th century onwards. In the course of the second half of the 19th century, the Italian state increasingly took the initiative for research on *Antium*. Despite the modern situation in which many of the archaeological remains are either destroyed or obscured by large-scale (industrial) building activity and marine erosion, we can sketch a general outline of the development and appearance of the ancient city, thanks mainly to the excellent topographical study by Lugli (1940). The archaeological record attests to uninterrupted activity from the 10th century BC until at least the 6th century AD.⁴² The protohistoric occupation of *Antium* was concentrated on the natural tuff hill of *Le Vignacce* 2 km north of the promontory, a location that remained in use until at least the 5th century BC, when along the outer perimeter of the hill a fortification of the bank and ditch type (*agger e fossa*) was constructed (fig. 2.3a). According to the ancient sources this was a period of continuous warfare between the Romans and several mountain tribes such as the *Volscii*. Within this period also occurred the first attempt by the Romans to found a colony at *Antium* (467 BC). It is probable that these early Roman colonies were primarily established as military strongholds in the ongoing wars of that period and that this colonization therefore did not yet have the legal connotation that characterized the second wave of colonization in the Pontine region during the 4th century BC.⁴³ The archaeological evidence for a second colony, according to historical sources founded in 338 BC, is ample. Activity dating to this period can no longer be detected in the *Vignacce* area, but it is present in lower parts, towards the sea, and it is mainly of a religious nature.⁴⁴

In the late Republican period several large *villae maritimae* were built along the coast, luxurious complexes owned by the elite and possibly connected with industrial activities.⁴⁵ This type of coastal occupation is typical for the area, with a particularly dense pattern of coastal villas in the

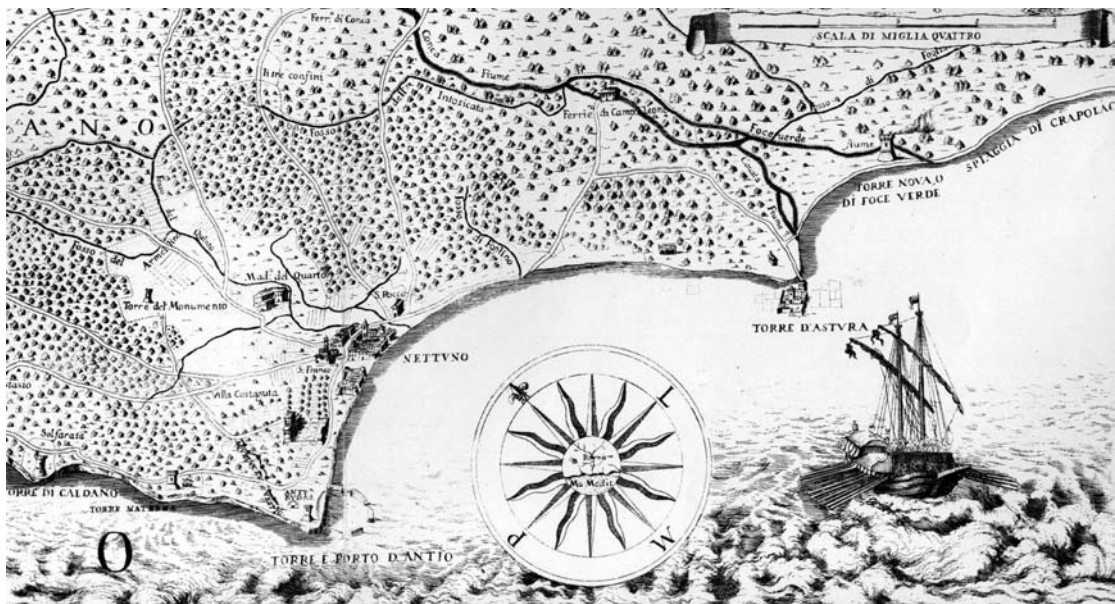
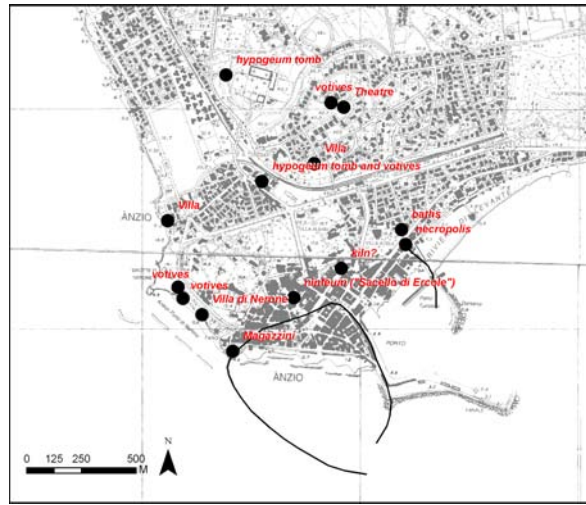
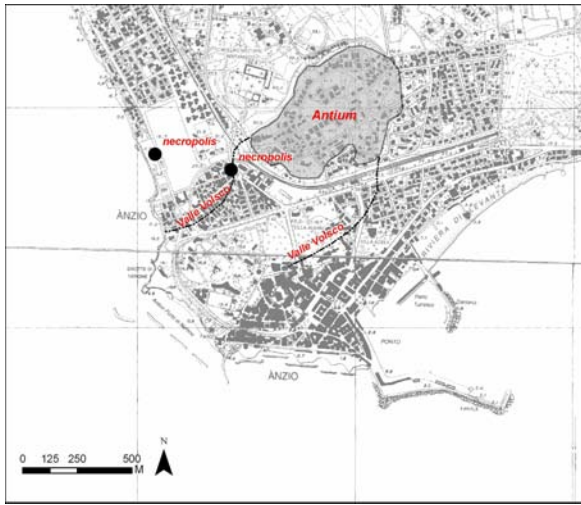


Fig. 2.1. Topografia Geometrica dell'Agro Romano by Giovanni Battista Cingolani (1692; Frutaz 1972, II, TAV.XXXII).



Fig. 2.2. Regionum Italiae Mediarum Tabula Geographica by Guglielmo Delisle (1711; Frutaz 1972, II, TAV.XXXVI).



zone of Anzio and Nettuno. The early and middle Imperial periods are the most important in the history of *Antium*. Large-scale building activity - often historically connected to the emperors Nero and Caligula - took place with the construction of a harbour, the embellishment of the area close to the sea with public buildings, and the enlargement of several of the residential villa complexes mentioned before, among them the so-called Villa of Nero (fig. 2.3b).⁴⁶ A period of general decline seems to have set in from the late 3rd century AD onwards, and despite occasional restorations or literary references⁴⁷ the city seems to have lost its importance and progressively to have become depopulated.

The location of the second ancient town - *Caenon* - has been a continuing subject of debate. This *oppidum*, mentioned in the ancient sources,⁴⁸ is described as the Volscian port settlement, connected to the town of *Antium* on the Colle delle Vignacce and destroyed during the epic battle of 338 BC that saw the surrender of the city of *Antium* to the Romans. Despite these written testimonies the exact positions of the *oppidum* and its harbour have not yet been identified.⁴⁹ This may partly be due to the fact that these early harbours were not the large stone structures common in later periods, but simply places with naturally favourable conditions for access and the provision of shelter - for example river mouths - which consequently left little or no material evidence. Therefore its location in the natural bay south of the promontory of *Antium*, in accordance with the depiction of the site in Delisle's map, seems most probable.

The ancient town of *Satricum* - modern Borgo Le Ferriere - is situated more inland, on a tuff

Fig. 2.3a/b. Plan of *Antium* in the protohistoric (a) and Roman (b) period with main archaeological monuments indicated.



Fig. 2.4. Plan of *Satricum* with indication of the main archaeological monuments (courtesy of M. Gnade, University of Amsterdam).

plateau west of the Astura river. During its prime *Satricum* occupied a settlement area of 58 ha, but traditionally the attention of archaeological research has focused on the acropolis, located on a natural tuff elevation in the north-eastern extremity of the settlement area (fig. 2.4). Excavations were conducted as early as the late 19th century and from the 1970s onwards rescue excavations were carried out by several Dutch Institutes,⁵⁰ after large parts of the town had already been severely damaged by large-scale levelling for the plantation of vineyards. As at *Antium*, the earliest occupation of the site can be dated to the late 9th century BC, when several huts were built around a small (artificial) lake. During the 8th and 7th centuries BC the

town grew in importance, probably in close association with religious activity. An increase in the number of dwellings and the amount of pottery - including many imported ceramics - attests to the town's growing population and prosperity. The site reached its peak during the Archaic period, when it was probably one of the main Latin towns. The construction of the temple with its stone foundations (dedicated to the female goddess *Mater Matuta*), some large courtyard buildings flanking the sanctuary, the equipment of the city with a defensive rampart (*aggere*), and several production areas within the town's limits are some of the features that can be attributed to this period. In the subsequent post-Archaic period the city underwent some drastic changes. Funerary and religious activity continued, but habitation on the *acropolis* ended and was concentrated instead in the lower parts. The placement of graves within the *acropolis* area has sparked debate about the cultural identity of its inhabitants during this period.⁵¹ The town kept its function as an important religious centre until at least the 2nd century BC.⁵²

Historical and archaeological evidence for the settlement *Astura* is scarce. The site is mentioned by Strabo and Pliny⁵³ and also appears on several historical maps, for example as a *statio* in the *Tabula Peutingeriana*.⁵⁴ Delisle locates the settlement near the mouth of the river with the same name. It has been suggested that the settlement may have functioned as a harbour already in the Late Iron Age.⁵⁵ In this harbour cargo was transferred from larger ships onto smaller boats that could navigate the river and provide *Satricum* with goods. Evidence for a harbour has not yet been found. The Italian topographer Fabio Piccarreta did find archaeological evidence for a large settlement not far from the mouth of the river.⁵⁶ His observations were confirmed in 2003 when a team of the GIA studied a long section with a large amount of material, including stretches of post-Roman walls, in a section close to the beach about 100 m west of the river.

On the Cingolani map that was mentioned earlier several features from the High Middle Ages are depicted that are of special importance for our research area. Two habitation centres, respectively *Conca* (modern Borgo Montello, approximately 10 km inland along the river *Astura*) and *Nettuno* (along the coast between *Antium* and *Astura*) are examples of *incastellamento*, which is typical for the High Middle Ages in this region.⁵⁷ Based on literary references both were founded early in the 12th century and both possibly functioned under the ownership of the monastery of Grottaferrata.⁵⁸

In short, the practise of *incastellamento* involved the foundation of fortified settlements, which subsequently became local centres of power, economy and religion. A third feature from the High Middle Ages is the tower situated at *Torre Astura*, located on a small promontory near the mouth of the river with the same name. It used the remains of a Roman villa as its foundations and seems to have a 10th-century origin.⁵⁹

VIABILITY AND WATERWAYS

Potential for communication must have played an essential role in the development of each of these (urban) centres. The location of early settlements like *Antium* and *Astura* near the coast probably facilitated access to goods, although **no traces have been found of the supposed pre-Roman harbours of *Caenon* and *Astura*.** The river *Astura* is supposed to have been navigable and as such may have constituted one of the main commercial gateways to the city of *Satricum*.⁶⁰ The same may be true for **the Loricina river, as our fieldwork revealed a dense pattern of Archaic and Republican sites along it.** In early Imperial times the Roman colony *Antium* as well as the villa complex *Torre Astura* became equipped with a harbour. The latter site is, possibly erroneously, thought to have functioned mainly as a refuge harbour,⁶¹ being one of the few places that could provide shelter on the important sea route between Ostia, Circeo and Terracina. **The occurrence of imported materials on many sites in the Nettuno area, however, is evidence for its participation in the Mediterranean trade network, in which these harbours played an important role.** **The continuing function of the *Astura* river as a communication route during Imperial times can be hypothesized on the basis of the presence of *villae* along its course.**⁶²

Communication routes over land between several parts of the Pontine region must have existed already in protohistory, as is evident from for example the reconstructed early transhumance routes. In line with the rapid urban development and population growth visible in the archaeological record from the Late Iron Age onwards, there are strong indications as well for the construction and organization of a more complex road system, connecting the various early habitation centres. The *via sacra* at *Satricum*, passing in front of the sanctuary and running across the *acropolis*, was paved with pebbles of volcanic origin during the Orientalizing period.⁶³ Another road fragment outside the *acropolis* in the north-western part of the settlement area probably connected this part

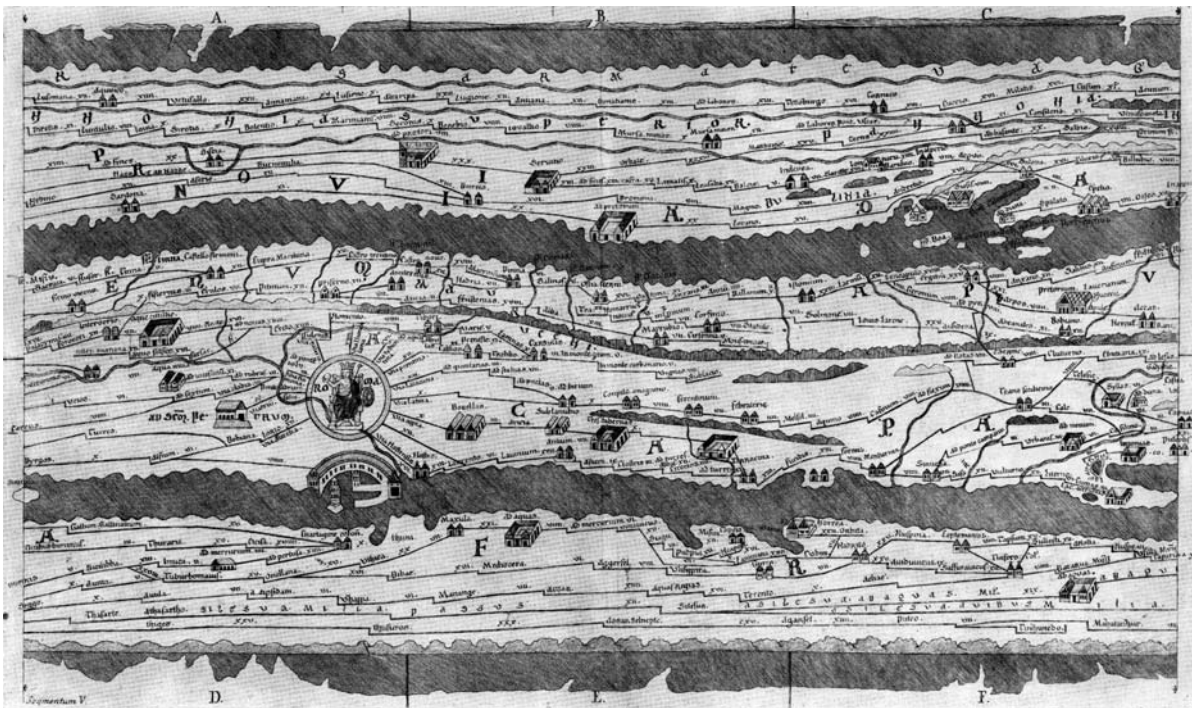


Fig. 2.5. The Tabula Peutingeriana (Frutaz 1972, II, TAV.If).

of the town with the *via sacra*.⁶⁴ It shows the same construction technique and can possibly also be dated to the Orientalizing period or the early Archaic period. Although the identification of these early roads, built as they were from compacted earth strengthened with volcanic pebbles or pottery fragments, is very difficult with archaeological techniques other than excavation, it is fair to assume that organised routes existed to other contemporary settlements of considerable importance such as *Antium*, *Ardea*, *Velitrae* and *Campoverde*.⁶⁵

The roads at *Satricum* attest to several phases of restoration and reconstruction, with the latest phase dating to the post-Archaic period or slightly later. During this period the road surfaces consisted mainly of tuff flakes, fragments of architectural terracotta's and pottery.⁶⁶ No evidence has been found for other contemporary roads in our study area. The survival of the existing Archaic road system into the post-Archaic and early Republican period can be hypothesized on the basis of the uninterrupted archaeological record for both *Antium* and *Satricum*.

Communication must have received a major boost from the construction of the *via Appia*, in 312 BC.⁶⁷ Several perpendicular roads connected the coastal towns with this main route, such as

the *via Ardeatina* and the *via Antiatina*. A road branching off at *Lanuvium* passes the municipality of *Nettuno* before reaching the promontory of *Antium*.⁶⁸ Its ancient name is unknown and it is therefore often simply referred to as the *via Selciatella*. Although these 'secondary' roads date to the late Republican or even the early Imperial period it is probable that this period saw only the pavement with *basoli* of tracks already used earlier.⁶⁹ In the *Nettuno* area, for example, a clear alignment of settlements along the later course of the road can already be distinguished in the middle Republican period. At least two other roads branched off from this road from *Lanuvium* towards *Antium*. One branch probably ran towards the Roman villa and port of *Torre Astura*, while the other headed towards the modern centre of *Nettuno*, where it possibly met a coastal road.⁷⁰

Two bridges of Roman origin, connected to this road, were found during a topographical survey by a GIA team in February 2005. The first one is in line with the course of the *via Selciatella*, crossing the *Fosso dell'Armellino*,⁷¹ while the second one seems to coincide with one of the perpendicular roads suggested by De Rossi.⁷²

Around the area of *Satricum* several sites, often located near the *Astura* river, were transformed into or newly founded as *villae rusticae* in the late

Republican or early Imperial period. One of those was even located within the abandoned settlement area of the ancient town itself.⁷³ The remains of a road coming from Campoverde are evidence of the ongoing infrastructural improvements in this area.⁷⁴

The identification of a coastal road in Roman times is surrounded by uncertainty. Although most scholars have little doubt about the actual existence of a coastal route, its name, appearance, date and course have all been subject of serious debate.⁷⁵ The road tentatively goes by the name *via Severiana*, based on the find of an inscription near Ardea.⁷⁶ This name has subsequently been assigned to the coastal road depicted in the *Tabula Peutingeriana*, presenting an itinerary from Ostia to Terracina while passing through eight intermediate stations (fig. 2.5).⁷⁷ Besides providing a connection between the settlements of Ostia and Terracina, the *via Severiana* may have been the main communication route for the *villae maritimae*.

The main problem is that material evidence for the road is almost completely lacking. Besides a small fragment of a road near Ostia⁷⁸ no other road fragments can be securely assigned to the *via Severiana*. Material evidence for several of the road stations mentioned on the *Peutingeriana* is lacking as well.⁷⁹ For the location of these (lost) road stations the *Peutingeriana* has been used as a piece of evidence. However, comparison of the depicted distances on the map between known habitation centres with the real situation reveals

a relatively large degree of spatial inaccuracy.⁸⁰ This may be due to the fact that the distances mentioned are not measured from town centre to town centre but represent extra-urban junctions. It seems also unlikely that all roads were constructed in a straight line. Routes must have been calculated taking into account detours caused by natural obstacles. In any case we must keep in mind that the map presents foremost an itinerary and not a map created for a topographical purpose. Over the last century several reconstructions of the course of the *via Severiana* have been put forward (see fig 2.6), with roughly two different approaches concerning our study area.⁸¹ One reconstruction connects the coastal *villae* known archaeologically and thus follows a course directly behind these. The other reconstruction follows a course further inland, avoiding the water-logged areas around the coastal lakes of Fogliano, Paola, Monaci and Caprolace.

The reign of Septimius Severus comprised the late 2nd and early 3rd century AD. Since the heyday of Ostia, Terracina and the coastal villas falls much earlier, predominantly in the 1st centuries BC and AD, the Severian interventions must concern a road of much earlier date. The lack of paved remains of the road does not exclude the possibility that this coastal route never constituted a single, uniform project, but was much more the result of the piecing together of several local road systems.⁸²

The evidence for the survival of earlier roads or for the construction of new ones after the Roman period is scarce. The continuing activity on several villa complexes, recently attested along the Roman road from *Lanuvium* to *Antium* until at least the 6th century AD, indicates that the road was still in use at the time.⁸³ De Rossi mentions the reuse of several parts of the road even during medieval times, after the *borgo medievale* of Nettuno was constructed.⁸⁴ The survival of some sort of coastal road leading to Torre Astura can be hypothesized as well.

CONCLUDING REMARKS

In this chapter we have presented a short overview of the cartographical and topographic data available for the study area of the *Carta Archeologica*. From the 17th century onwards cartographic evidence and well-documented antiquarian activities attest to an increasing historical and archaeological interest in our study area. On the basis of historical sources several urban centres dating to various periods have traditionally been located in

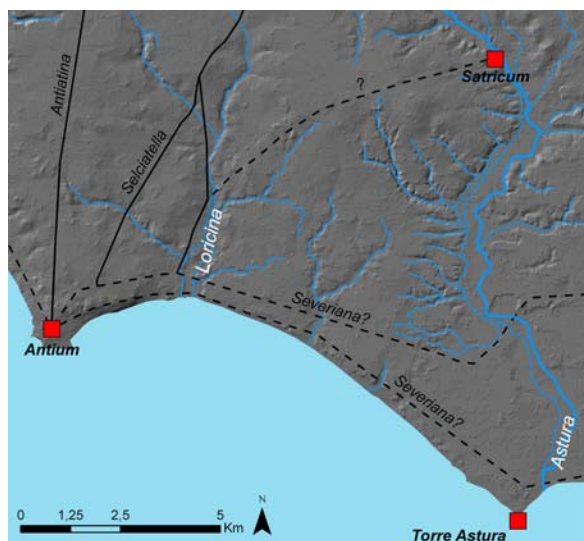


Fig. 2.6. Reconstruction of the road network in and around the municipality of Nettuno for the Roman period.

our study area. However, the amount of archaeological evidence for each of these centres varies considerably. Ample archaeological evidence has been found for the identification of the Latin centres *Satricum* and *Antium*, contrasting with a complete absence of data for the towns of *Caenon* and *Astura*. For the Roman period there is firm evidence for a colony at *Antium* as well as for activity around the Roman site of Torre Astura.⁸⁵

The archaeological evidence in support of foundation of a Roman colony at *Satricum* is, however, very poor. Finally, Nettuno and *Conca* (nowadays securely identified as the modern towns of Nettuno and Borgo Montello) are examples of *incastellamento*.

Communication, both by land and by water, must have played an important role in the development of each of these urban centres as well as in the formation and organization of rural occupation. Dense clusters of predominantly Archaic and Republican sites can be found along the course of the Loricina and Astura rivers (see part II), which indicates that these were probably navigable during these periods. The Astura river supplied a communication route between *Satricum* and the coastal area.

Early roads are attested within the town area of *Satricum*, and presumably connected the various Latin centres already during the Late Iron Age. In the Roman period a basalt-paved road branching off the *via Appia* in the direction of *Antium* was functional within the study area. The presence of a perpendicular branch of this road is suggested by the remains of a Roman bridge. Material evidence for a supposed coastal road, the *via Severiana*, is lacking completely.

NOTES

- ³⁶ Frutaz 1972, Volume II, TAV. 165.
³⁷ Frutaz 1972, Volume II, TAV. 1-IV. The so-called *Tabula Peutingeriana* is thought to be an 11th/12th-century copy of a 4th-century map; see for example Talbert 2007, 221.
³⁸ For example the map of Innocenzo Mattei (1666); see Frutaz 1972, Volume II, TAV. 47. Here several ancient structures are identified by the author as remains of the sanctuary of Fortuna mentioned by for example Horace, (*Od.* i. 35).
³⁹ f.e. Volpi 1726; Nibby 1819; Winckelmann 1830. For Ashby see Scott/Turchetti 1991.
⁴⁰ Brandizzi Vittucci 2000, 13-16.
⁴¹ Frutaz 1972, Volume II, TAV. 185.
⁴² The earliest settlement of the area is attested by several graves in the eastern part of the municipality and some fragments in a stratum underneath the *Valle Volso*. See f.e. Brandizzi Vittucci 2000, 81; Guidi 1980, 42; Lugli 1940, 180; Guaitoli 1984. The latest restorations were undertaken in the 4th century AD, see f.e. Brandizzi Vittucci 2000, 26; Chiarucci 1989, 94; Lugli 1940, 154-155.

- In AD 465 a see is founded at *Antium* (Duchesne 1892), while the harbour is still in use in 537 (Prokopius, *bell.Goth.* I 26).
⁴³ Attema 1993, 231-232.
⁴⁴ Iaia 2004.
⁴⁵ Several of these complexes attest to activities related to fish farming (Giacopini 1994; Higginbotham 1997), tile/amphora production (Attema et al. 2003a) or sulphur extraction (Quilici/Quilici-Gigli 1984a).
⁴⁶ See f.e. Lugli 1940; Chiarucci 1989; Brandizzi Vittucci 2000, chapters 3-5.
⁴⁷ Cf. note 7.
⁴⁸ Livius II 63,6; Dion.Hal. IX,56.
⁴⁹ Scholars like Lugli (1940) and Chiarucci (1989) place the harbour of *Caenon* on the promontory of modern Anzio, the same location where the subsequent Roman harbour was constructed. Other sources appear more in favour of a location more to the south on the location of modern Nettuno (f.e. Brandizzi Vittucci 2000).
⁵⁰ The early excavation activities have been supervised by the Dutch Institute at Rome. Participants in this project have been the University of Nijmegen, the Groninger Institute of Archaeology and the University of Amsterdam. The latter still continues yearly excavations within the settlement area.
⁵¹ Compare f.e. Bouma 1996 and Gnade 2002.
⁵² Gnade 2007.
⁵³ Strabo *Geography* V, 3, 5-6; Pliny *Historia Naturalis Liber III*, V, 57.
⁵⁴ Frutaz 1972, volume II, TAV.1-4.
⁵⁵ Bietti Sestieri/De Santis 2000.
⁵⁶ Piccarreta 1977, 21.
⁵⁷ Brandizzi Vittucci 2000, 146-147.
⁵⁸ Rasi 1832, 11.
⁵⁹ Lombardi 1847, 126; Galeazzi 2008
⁶⁰ Maaskant Kleibrink 1987, 13.
⁶¹ Piccarreta 1977, 65.
⁶² Maaskant Kleibrink 1987, 13; See also the site catalogue in part V.
⁶³ Maaskant Kleibrink 1992a, 15.
⁶⁴ Gnade 2002, 8.
⁶⁵ A reconstruction of this early road system can be found in Maaskant Kleibrink 1987, 12.
⁶⁶ Maaskant Kleibrink 1992a, 16; Gnade 2002, 90-93.
⁶⁷ Severini 2001, 9.
⁶⁸ De Rossi 1981; Negrini 2004.
⁶⁹ The paving of preexisting tracks seems to have been common practise in the Roman period. See for example Gnade 2002, 28. De Rossi dates the road from *Lanuvium* to *Antium* in the 5th or 4th century BC (De Rossi 1981, 90).
⁷⁰ De Rossi 1981, 92.
⁷¹ See site cat. no. 15015.
⁷² See site cat. no. 15129; De Rossi 1981, 92.
⁷³ Gnade 2002, 8; Raaymakers 2007.
⁷⁴ Maaskant Kleibrink 1992a, 17; see also De Rossi 1981 for roads in the *Satricum* area.
⁷⁵ For example Brandizzi Vittucci 1998; Cassatella 2003, 2004; Fogagnolo/Valenti 2005.
⁷⁶ Brandizzi Vittucci 1998, 929.
⁷⁷ Frutaz 1972, Vol. II, TAV. I-IV.
⁷⁸ Brandizzi Vittucci 1998, 934.
⁷⁹ The location of the stations *Clostris*, *ad Turres Albas* and *ad Turres* are unknown. This may also be true for the stations *Laurentum* and *Astura*. See Cassatella 2003 for the archaeological evidence for each of the stations mentioned in the map.

- ⁸⁰ For a detailed analysis of this problem, see Brandizzi Vittucci 1998, 938 ff.
- ⁸¹ Brandizzi Vittucci 1998 hypothesizes a course behind the coastal lagunes. For a course along the sea: Westphal 1829. See also Cassatella 2003.
- ⁸² Brandizzi Vittucci 1998, 992-993.
- ⁸³ These observations are in contrast with Brandizzi Vittucci's assumptions. She states that the excellent state of preservation of the road is a strong indication that it fell in disuse at an early date, possibly already in the 4th century AD (Brandizzi Vittucci 2000, 126).
- ⁸⁴ De Rossi 1981, 102.
- ⁸⁵ See site cat. no. 11202.

3

Archaeological Research in the Nettuno Area: Sources, Biases and Data Integration

Tymon de Haas

INTRODUCTION

In this chapter we will introduce and evaluate the various datasets on which the *Carta Archeologica* and the reconstruction of the area's settlement history (presented in part II) are based. In the first section we will present the topographical studies and excavations that have taken place in the area since the end of the 18th century. The methods, summary results and the biases in these results will be evaluated for each type of investigation. Special attention will be given to two important topographical studies by Fabio Piccarreta and Arnaldo Liboni.

In the second and third section we will discuss the research that has been undertaken by the GIA in the light of the *Carta Archeologica*. The second section will focus on the methods and biases in GIA's surveys that include both intensive off-site and site surveys, geophysical research and finds studies. In the third section we will zoom in on the material studies undertaken on the extensive collection of artefacts in the *Antiquarium* of Nettuno.

The fourth section discusses the problems met with when combining these various data sources. The method by which we have dealt with these problems is then explained, as well as the steps we took to come to a diachronic analysis of the data.

PREVIOUS RESEARCH

The municipality of Nettuno and its immediate surroundings have been subject to a range of archaeological studies, including topographical research and excavations. Most of these deal with the site of *Antium*, but non-urban areas with their sites and road systems have also received attention from excavators and topographers over the past centuries. In the following pages we will give a brief overview of these various studies, starting with the topographical research and excavations. After this, we will elaborate further on two particularly important topographical studies.

Topographical research

Topographic interest in the area goes back to the 18th century; various famous scholars visited the area, among them Volpi, Nibby and, in the late 19th and early 20th century, Lanciani and Ashby.⁸⁶ Their publications predominantly deal with the monumental remains of *Antium* and are of great value, since they describe architectural remains that have since been lost due to urban expansion and marine erosion.

Lugli's fundamental study from the early 1940s is the first that systematically describes the remains of *Antium*. Lugli extensively maps and describes evidence for the protohistoric settlement, the Roman harbour and town and the Imperial villa.⁸⁷ Later topographical studies build primarily on this work.⁸⁸

Since the 1970s a number of studies have appeared that focus on rural areas and Roman infrastructure rather than on *Antium*: Piccarreta's *Astura* deals with rural occupation in the Astura valley (see also 1.3), while De Rossi describes a number of rural sites in relation to the Roman road system.⁸⁹ Special attention was paid to the site of Torre Astura on the mouth of the Astura river.⁹⁰ Recent topographical work is mainly concerned with the via Severiana.⁹¹

Excavations

A second source for the present study is formed by excavations. Again, most of the evidence that is available refers to the town of *Antium*, where antiquarian excavations were undertaken from the 17th century onwards.⁹² During Anzio's urban expansion in the late 19th and early 20th centuries various rescue excavations took place, for example during the construction of the railroad.⁹³ In the course of the past century more systematic excavations have been conducted of many more features related to the town of *Antium*. These excavations have unearthed a section of the protohistoric rampart (*aggere*), tombs dating from the 10th century BC to the 4th century AD, various votive deposits, remains of various Roman struc-

tures and the Imperial villa.⁹⁴ Since the 1990s underwater archaeology has added information on the Roman harbour of *Antium* and the *piscinae* of Torre Astura.⁹⁵

Another very important excavated site is *Satricum*, located to the north of the municipality of Nettuno. This site was discovered and partly excavated in the 19th century by Italian and French scholars. After large-scale levelling activities in the 1970s rescue excavations were started under supervision of the Dutch Institute in Rome. Over the years teams from the Dutch Institute in Rome and the universities of Amsterdam, Groningen and Nijmegen excavated parts of an Iron Age settlement and an Archaic to Republican sanctuary on the acropolis, a large post-Archaic necropolis, a Roman villa and, more recently, parts of the Archaic and post-Archaic settlement.⁹⁶

Excavations have also taken place recently within the municipality of Nettuno. From 2001 to 2003 the GIA recorded and excavated several protohistoric and Roman sites on the coast between Nettuno and Torre Astura, of which the most important were a Late Bronze Age saltern and the Roman *villa maritima* of Le Grottacce.⁹⁷ The *Soprintendenza* has been involved in restorations of the Roman road known as the *via Selciatella* and restorations and subsequent excavations at Torre del Monumento.⁹⁸

The Piccarreta dataset

Fabio Piccarreta's study is of special importance to our work because together with the Liboni dataset and our own surveys (see below) it is the primary source of information on rural settlement in the area. Piccarreta undertook this study as part of the *Forma Italiae* project, which intended to produce an archaeological map for the whole of Italy on a scale of 1:25.000. The Astura volume covers the map sheet Borgo Sabotino with the lower Astura and Moscarello valleys; the western part of this area falls within the municipality of Nettuno. In this area of approximately 10 x 10 km, Piccarreta recorded a total of 196 sites.

The data on these sites were collected at a time when agricultural mechanization and urbanization were much less developed than they are now. This means that Piccarreta was able to map many sites that have now been built over or disappeared due to ploughing and levelling activities; moreover, he was able to enter the *Poligono Militare*, a military base that is nowadays largely inaccessible.⁹⁹

Piccarreta's study, however, also has its limita-

tions. Firstly, this type of topographical survey focuses primarily on sites with architectural remains (i.e. Roman sites). This implies that sites where less durable building materials were used - i.e. mostly pre-Roman sites - remain unrecorded (although some protohistoric and Roman pottery scatters were recorded). This means that the archaeological map Piccarreta created is biased towards the Roman period.¹⁰⁰

A second problem lies in the limited attention that was paid to ceramics. Sites were not systematically sampled and the assemblages were only very superficially described. This means only very generic dates were ascribed to these sites. Basically, sites were dated to the Roman or the protohistoric period; in some cases this date is somewhat refined by finds of black glazed ware, terra sigillata or African Red Slip Ware. The date ranges provided by these ware groups are, however, still rather broad. This means that in spite of the high quality of the topographical inventory, it lacks the chronological precision necessary for a diachronic reconstruction of the Roman rural landscape.

To counter these biases the GIA undertook complementary fieldwork in 2003, both to see if Piccarreta indeed missed non-architectural sites and to get more pottery dates from his sites (see below).

The Liboni dataset

Another very important dataset, that has so far remained unpublished, is provided by the topographical research undertaken by Arnaldo Liboni, the director of the *Antiquarium* of Nettuno. Over the past 30 years he has recorded around 85 previously unknown sites as well as several sites also known from Piccarreta's research. The area investigated by Liboni focuses on the municipality of Nettuno, although some sites lie outside its territory. The study area overlaps slightly with the area studied by Piccarreta and is quite similar in size (ca 10 x 8 km).

Not only has Liboni recorded sites that have in the course of time disappeared as a result of intensive agriculture and urbanization, but he also monitors remaining sites and regularly discovers new ones.¹⁰¹ Liboni also collected pottery samples from sites, which have been studied by the GIA. As a result, more refined dates are available for these than there are for Piccarreta's sites.

The Liboni dataset, however, is also biased in certain respects. First of all, the spatial precision of the site locations is limited, because they were

plotted on maps of a rather large scale. Moreover, Liboni did not sample systematically; his collection contains few fragments of coarse ware and amphora but many fine wares. This means that periods with relatively few fine wares are underrepresented in his collection.

As with the Piccarreta dataset, the GIA has tried to compensate for these biases through new fieldwork on sites from the Liboni dataset. This was done to obtain more precise locations as well as more representative ceramic samples (see below).

GIA SURVEYS

Since 2000 the Groningen Institute of Archaeology (GIA) has conducted fieldwork in and near the municipality of Nettuno. Between 2000 and 2002, excavations and mapping projects took place along the coast between Nettuno and Torre Astura.¹⁰² In 2003 surveys were started in the Astura valley (partly outside the municipality).¹⁰³ In 2004 and 2005 new surveys took place both in the municipality of Nettuno and in the Astura valley with some additional fieldwork and ceramic studies in 2006;¹⁰⁴ at the same time, the collection gathered by Arnaldo Liboni was studied in detail (see also part III). These new surveys included both intensive field surveys and site revisits as well as geophysical prospection.

Intensive surveys

The intensive surveys that were performed from 2003 to 2005 followed the methodology developed in previous GIA surveys in the Fogliano area immediately to the south of Nettuno and in the Sibaritide in Calabria, southern Italy.¹⁰⁵ This method aims for a detailed mapping of artefact distributions over the landscape. Arable and fallow fields were divided into units of usually 50 x 50 m, but sometimes their size and shape were determined by local topography. These units were sampled through systematic line walking at intervals of 10 m; the samples thus collected are termed 'standard samples'. Assuming a complete recovery of artefacts from a 2 m-wide swath, this resulted in a 20% coverage of the surface. For each unit a paper unit form was filled out containing a sketch of the unit and notes on field properties and visibility conditions; extra notes were entered in each team's field book. Units were sketched in field books and on field maps.¹⁰⁶ Since 2004 the units were also recorded digitally in the field using a PDA with a connected GPS receiver.¹⁰⁷

If find densities were relatively high - usually

on Roman sites - additional diagnostic samples¹⁰⁸ were taken to allow more precise dating. Protohistoric sites generally yielded much smaller amounts of pottery. In order to obtain datable material these sites would be surveyed again at 100% coverage, thus collecting all protohistoric material in so-called 'total samples'. Grab samples are the fourth type of sample collected during these surveys; these are comprised of material that was not collected systematically from survey units.¹⁰⁹ All samples were recorded on the unit forms and/or in field books.

Site revisits

The revisits were specifically targeted to resurvey sites known to us from the studies by Piccarreta and Liboni, but several sites found during the intensive surveys were also revisited. The main purpose of these revisits was to expand our knowledge of these sites, both spatially and chronologically. The method that was used varied: if visibility conditions were reasonably well, sites were surveyed in regular units of 30 x 30 m. From these units diagnostic samples were taken at 50 to 100% coverage. However, survey conditions were often very poor; in such circumstances sites could hardly be located and only unsystematic grab samples were collected. Additional information on non-diagnostics was recorded in field books. Data (location sketches, notes) were generally recorded in field books, although for some sites unit forms were used. In most cases the location of the finds was also recorded digitally using the PDA.

Geophysical surveys

During the campaign of 2006 a number of previously surveyed sites were selected for geophysical explorations. The methods and results of these geophysical surveys will be presented in chapter 4.

Find processing

Find processing for the intensive surveys and the site revisits generally followed the same methods. When the samples - normally registered on unit forms, but for the revisits sometimes in field books - were brought in from the field, a bag form was created with general information on the sample (provenance, ID, collection date). This form was also used during later stages of the find processing.

After washing and drying, finds were classified, counted and weighed.¹¹⁰ The classification

scheme was designed to allow simple diachronic analysis of the finds. The classification consists of seven basic material categories:

- 1 lithics
- 2 impasto pottery
- 3 building materials
- 4 other pottery
- 5 metal, bone, glass, stone
- 6 unidentifiable ceramics
- 7 production debris

Each of these seven find categories is in turn subdivided into find subcategories (see *table 3.1*). Finds were counted and weighed per subcategory and their condition was assessed; all these data were recorded on the bag forms. Finally, diagnostic fragments were selected for further study. For ceramics this selection mostly included rims, handles, bases and decorated fragments; all lithic fragments were selected for specialist study.¹¹¹

During the next stage the selected fragments were numbered individually and then described according to the standard developed for the *Satricum* excavation, which was modified to describe effectively protohistoric as well as Roman pottery. Finally, most fragments were drawn to allow the tracing of parallels in published contexts.

Data processing

The data gathered during the surveys and find processing were digitised so that analysis could be carried out. Spatial and descriptive data were stored in two databases: an ArcGIS database and an MS Access relational database.

To produce digital spatial data, sketches on unit forms and in field books as well as the digital PDA data were used. The PDA data were imported into ArcGIS and subsequently traced digitally to create a shapefile with survey units; missing units were then added using the paper maps and sketches. Finally all units were labelled with their unique Unit ID. Similarly, point data (mainly from site revisits) were imported into shapefiles.¹¹² All spatial data collected in this manner were added to a geodatabase that also contains archaeological data gathered from other sources as well as topographic, geological, historical and soil map layers.

The descriptive data recorded on unit forms, bag forms, in field books and shard descriptions were all entered into an Access database consisting of four connected tables. The UNIT table contains data on the individual units (i.e., information from the unit forms); the BAGS table contains

data on the samples (information from unit and bag forms; the FINDS table contains records for each find subcategory per sample (the data filled out by the classifier on the bag form); the DIAGNOSTICS table records data on individual selected finds (information from the shard descriptions). These four tables are related to each other by unique IDs for units and samples.¹¹³

Results

Some preliminary results of the GIA surveys are shown in *table 3.2*.¹¹⁴ Here we will expand on the results of both the site revisits and the intensive block surveys.

Intensive surveys

In total, over 8 km² divided into more than 2700 units have been surveyed intensively. As shown in *figure 3.1*, the surveys were concentrated in two areas: Campana to the west and Quarto delle Cintonare to the north-east. Other areas were studied less intensively or not at all, for varying reasons.

During the intensive survey some 44.000 finds (more than 1100 kg) were picked up. *Figures 3.2a* and *b* show that building material was both in weight and in numbers by far the largest find category, forming more than 40% of all finds. Pottery (both impasto and wheel-thrown pottery) and building material together account for 85% of all finds.

Many sites previously recorded by Liboni and Piccarreta were encountered; in almost all cases this led to a more accurate mapping of their location and a considerable expansion of the ceramic repertoire and its chronology. However, several sites known to be located within the block survey area could not be found. In some cases this may be due to poor visibility conditions, in other cases the sites were probably not recorded accurately.

The intensive surveys have also yielded 41 new sites.¹¹⁵ Most of these are located in the area of Campana but they occur throughout the study area (*fig. 3.3*). For the Campana area, our surveys have yielded a few small Roman sites that are probably related (as e.g. outbuildings) to larger ones already recorded by Liboni. Most of the new sites, however, are protohistoric scatters that had escaped attention during both Piccarreta's and Liboni's studies. In general, this indicates that these two studies were indeed biased towards larger (Roman) sites with architectural remains.

Site revisits

So far about 75 previously known sites have been resurveyed during a revisit (see *table 3.2*).¹¹⁶ As stated above, visibility conditions were extremely variable during these revisits; this is one of the reasons why many of the sites have been revisited more than once.¹¹⁷ The revisits have greatly increased our knowledge, not only of the chronology of sites but also of the ongoing destruction of the archaeology in the area. We will further illustrate the importance of these revisits, using the preliminary data from our 2003 revisits in the Astura valley.

During the 2003 campaign a separate team spent the whole season revisiting sites recorded previously by Piccarreta. In total, we tried to relocate 132 sites (*fig. 3.4*). Only 44 of these could actually be relocated: almost 30% (38 sites) have by now disappeared due to building activities (23) or the levelling and cleaning of fields (15) for intensive agriculture. Limited visibility conditions prevented us from locating sites in 25 cases (19%), but often off-site material in the area indicated the site's presence; future revisits may confirm this. In another 25 cases (19%) land owners did not grant us permission to enter; it is unclear whether these sites still exist today.

We thus have diagnostic samples from 44 sites in total. The quality and size of these samples vary greatly, but in general the number of diagnostic shards is very low (*fig. 3.5*): from half of the samples (mainly grab samples), no shards were catalogued. Samples with more than five diagnostic shards were collected from only six sites.¹¹⁸

Notwithstanding the limited number of sites sampled and the, in most cases, limited sample size the revisits have significantly improved Piccarreta's dataset, especially for the protohistoric period. In combination with the non-diagnostic material (which was not collected), many sites could be dated more precisely (*figs 3.6a/b*). Figure 3.6a clearly shows that where Piccarreta only observed a few protohistoric sites, the revisits have recorded protohistoric material (mostly of Archaic date) on many more sites where previously only Roman phases were known. Date ranges are still rather

wide for sites of the Roman period (*fig. 3.6b*), but we were able to refine these for several sites, especially those where samples were relatively large. We are convinced that new revisits will improve these dates further.

Table 3.1. Find classification used by the GIA.

Code	Description
1a	Unworked lithics
1b	Lithic tools
1c	Lithic nuclei
1d	Lithic flakes
1e	Obsidian
2a	Plain impasto
2b	Burnished impasto
2c	Impasto rosso
3a	Red archaic tile, volcanic inclusions
3b	White/pink/yellow tile, volcanic inclusions (impasto chiaro sabbioso)
3c	Depurated tile
3d	Other coarse fabric tiles
3e	Burnt hut loam/grumo
3f	Architectonic terracotta
3g	Roman bricks
3h	Marble
3i	Tesserae
3j	Plaster/stucco
3k	Cement
4a	White/pink/light red pottery, volcanic inclusions (impasto chiaro sabbioso)
4b	Coarse ware
4c	Amphora
4d	Depurated ware
4e	Black glazed ware
4f	Terra sigillata (Italian/Gaulish)
4g	African Red Slip Ware
4h	Other fine wares
4i	Votive material
4j	Bucchero
4k	Glazed ware
5a	Metal
5b	Bone
5c	Glass
5d	Stone
6	Indet ceramics
7a	Slag
7b	Kiln debris
7c	Wasters
7d	Indet

*Table 3.2. Summary results of the surveys in the Nettuno municipality and adjacent area. *several sites were revisited more than once.*

Campaign	Area	units surveyed	hectares surveyed	new sites	sites revisited
Summer 2003	Astura valley	559	155.3	5	48
Summer 2004	Nettuno municipality	1008	227.1	10	25
February 2005	Nettuno municipality	282	68.4	11	10
Summer 2005	Nettuno munic. and Astura valley	890	365	15	5
Total		2739	815.8	41	ca 75*

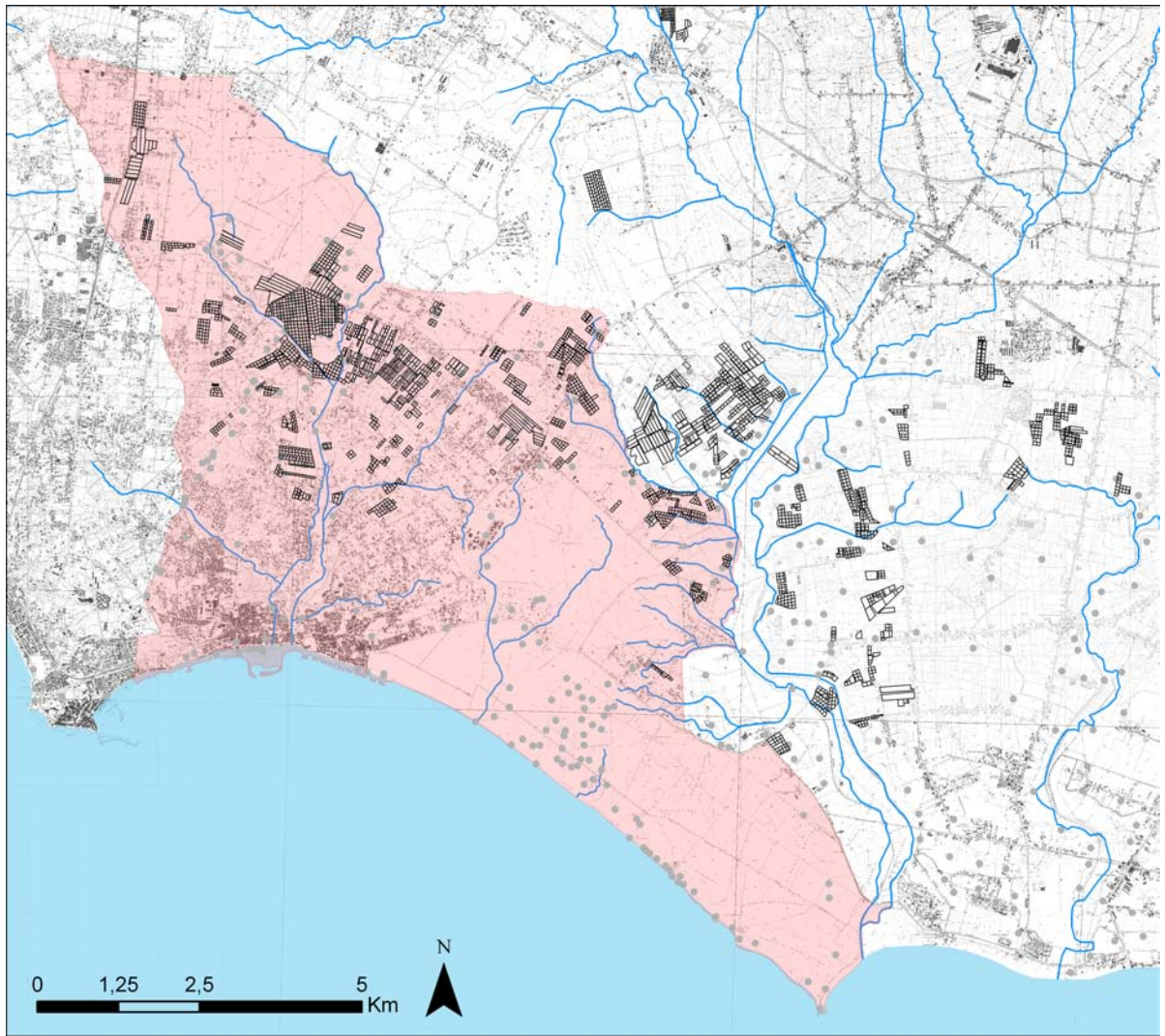


Fig. 3.1. Areas surveyed systematically.

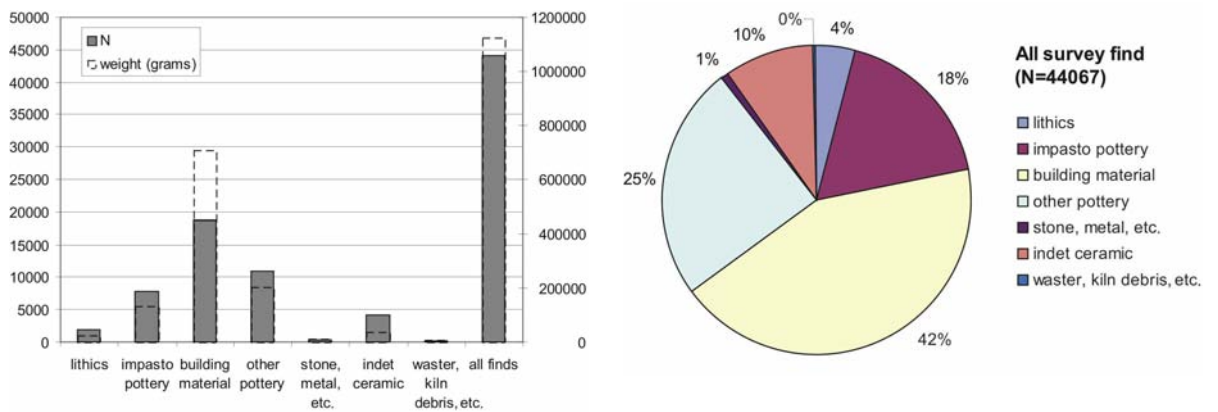


Fig. 3.2a/b. Finds per find category (number and weight in grams) (a) and percentages of total number of finds (b).

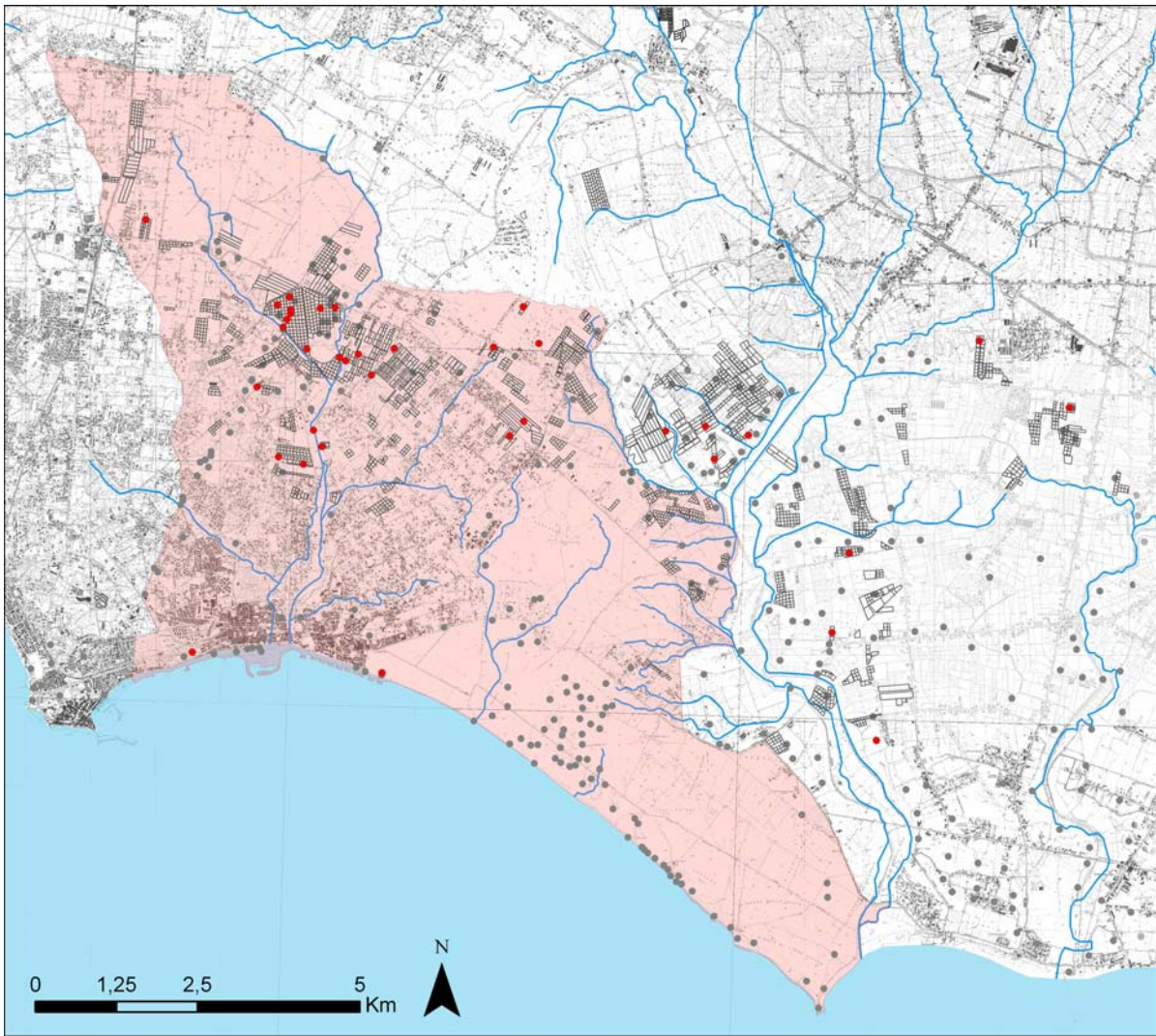


Fig. 3.3. Sites newly discovered during the GIA investigations.

Biases

Like the other datasets discussed in section 1, the dataset of the GIA surveys is not free of post-depositional or research biases, which will have to be accounted for in the analysis of the settlement history of the Nettuno area.¹¹⁹

At a very general level we can say that the area studied by us is far from being either a random sample or a representative sample of the various geological or geomorphological units. The area available for systematic survey is limited by modern land use (fig 3.7): the towns of Anzio and Nettuno have over the last 50 years expanded considerably and now take up most of the western part of the area (indicated in grey) and to the north several smaller built-up areas are located. North of Anzio and Nettuno there is a 'suburban

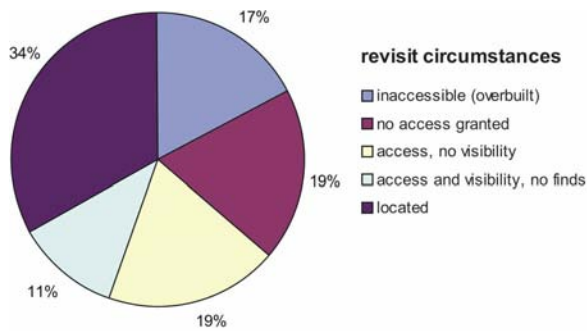


Fig. 3.4. Field conditions during revisits in the Astura valley.

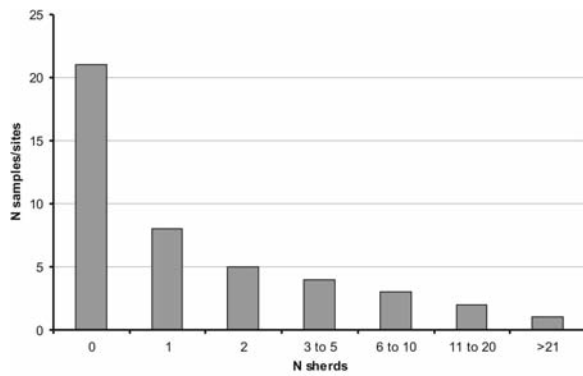


Fig. 3.5. Number of catalogued sherds from the 44 Piccarreta revisit samples.

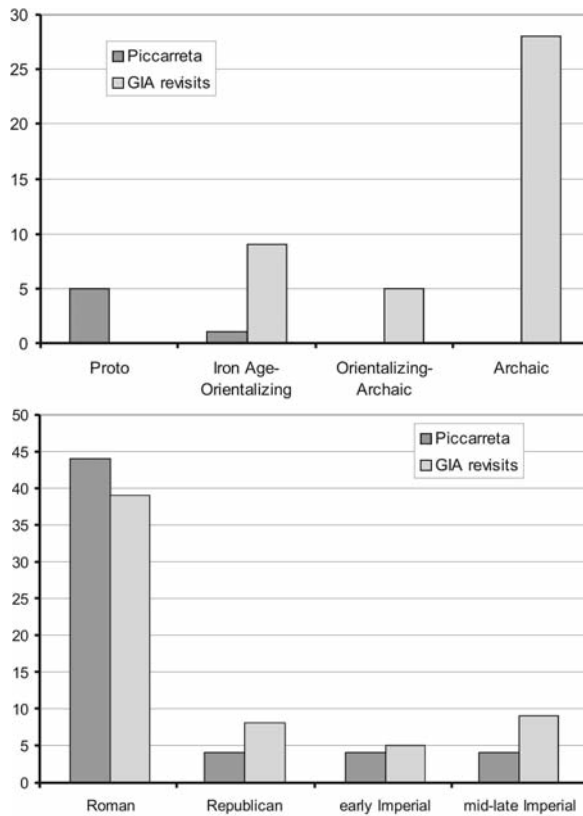


Fig. 3.6a/b. Number of sites for the (a) protohistoric and (b) Roman periods according to Piccarreta and after revisits.

zone' which is characterized by less dense urbanization (yellow). The plots in this suburban zone are generally very small and often not accessible for survey. We do, however, have some information on this zone from previous studies.

A third zone which is not accessible for study is the military base that covers the coastal strip

between Nettuno and Torre Astura (brown). In this area Piccarreta recorded a large number of sites, so we do have some knowledge of its archaeology. His data were complemented by the excavation and mapping projects that were undertaken by the GIA directly on the coast. A fourth zone that is unsuitable for systematic survey is the forested area (dark green). Major forests are located north of the military base and in the area of Campana.¹²⁰ Thus at least 43% of the total area of the municipality is inaccessible for research and another 18% (the 'suburban area') has a limited potential (fig. 3.8).

In the zones that were accessible and suitable for systematic survey, still only a limited part could actually be surveyed. Often land owners denied us access. Moreover, in areas where plots are relatively small asking permission takes a lot of time. For this reason our surveys concentrated on areas with very large fields; in areas with smaller fields our surveys were more limited and dispersed (see fig. 3.7). In total, 6% of the municipality was covered during the intensive survey, which is 10.5% of the area potentially available for surveys.¹²¹

In the areas we did actually survey we must also account for various biases. First of all, intensive agriculture has over the past 50 years seriously degraded archaeological remains: walls and road surfaces have often been removed from fields (fig. 3.9).¹²² After repeated ploughing ceramics have often become very fragmented; some fragile wares - especially the handmade impasto - may have become so fragmented that they can no longer be observed.

In more recent years the soil in many areas has been cleared of large stones and artefacts to improve its agricultural potential. In some areas leveling activities have destroyed even entire hills and any archaeological remains there may once have been. In other areas depressions have been filled with soil from elsewhere; this means archaeological remains may have become covered by or brought in with the fill. In general, we have largely avoided such areas on the basis of information from farmers and field observations.

Another group of bias factors are concerned with visibility. In the surveyed areas surface visibility was far from uniform. Variables such as vegetation cover, tillage, light conditions, stoniness and presence of recent materials heavily influenced recovery rates. To compensate for these biases, their influence was individually assessed and an overall estimate of visibility conditions was used to counter visibility biases in our distribution maps.

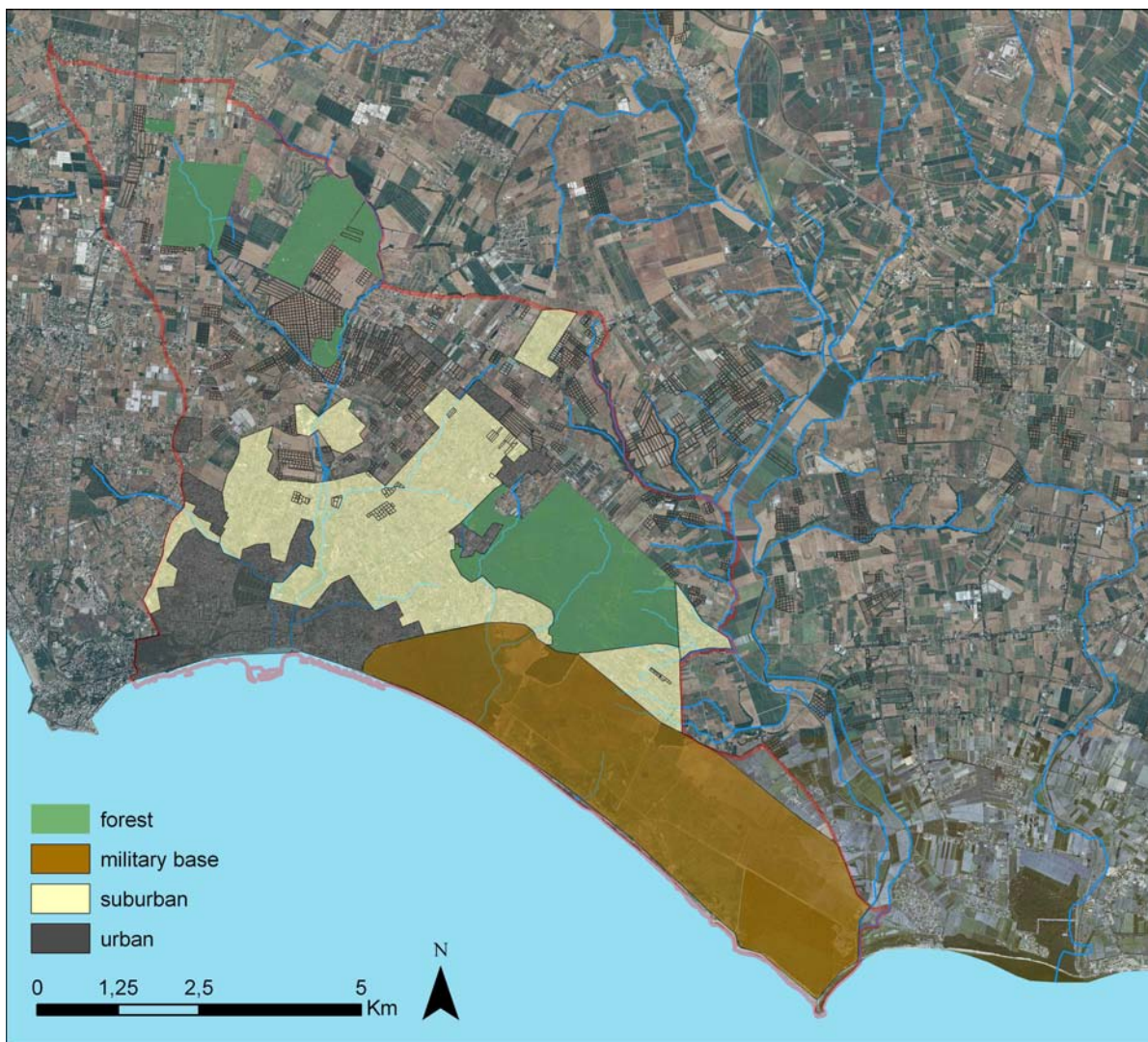


Fig. 3.7. Land use and survey potential in the municipality of Nettuno.

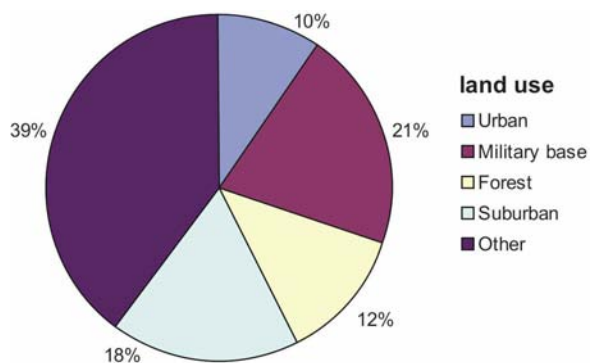


Fig. 3.8. Land use in the municipality of Nettuno.

Figure 3.10 shows that most units had a medium visibility, while relatively few units had high or very high visibility conditions. In general, we can say that visibility conditions were poorer and more varied in the Quarto delle Cintonare than in the Campana area (fig. 3.11). Poor visibility conditions may influence artefact (and site) retrieval in various ways: for protohistoric periods, low visibility may have prevented us from finding artefacts and, as a consequence, (low-density) sites. Although Roman artefact densities may be less high under poor visibility conditions, we do not believe that this caused us to miss Roman sites during the survey.

A final set of biases occurred during the material studies. As said before, the pottery shards collected during the survey, especially protohistoric



Fig. 3.9. Removed road surface (basoli) in the area of Campana (foto GIA).

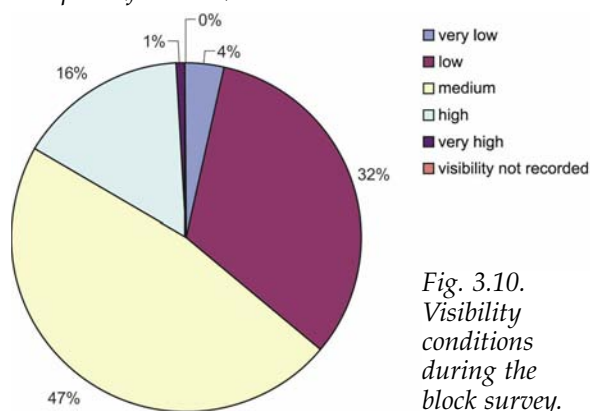


Fig. 3.10. Visibility conditions during the block survey.

impasto fragments, were often very fragmented or even reduced to hardly recognisable lumps. Another problem is the variable diagnostic value of various pottery types; for certain periods, relatively many diagnostic types are available, while for others these are lacking.¹²³ For periods that do not have diagnostic types we have to rely mainly on fabrics, which are generally less precisely dateable.¹²⁴ For the late antique period our knowledge of both pottery types and fabrics is rather limited.

THE MUSEUM COLLECTION OF THE ANTIQUARIUM OF NETTUNO ('LIBONI COLLECTION')

In section 1.4 we have discussed the topographical surveys performed by Arnaldo Liboni, director of the *Antiquarium* of Nettuno. During his surveys Liboni collected diagnostic samples from many sites in and around the municipality of Nettuno. This collection has over the years been sup-

plemented with finds brought in by local people, materials found during construction work, and important pieces that were confiscated by the authorities from private collectors. The collection includes ceramics, coins, amphoras, oil lamps, architectural elements, sculptures and many other objects. A systematic study or inventory of this collection, however, had not yet been done.¹²⁵

Within the framework of the *Carta Archeologica di Nettuno* the GIA has started such an inventory.¹²⁶ The collection consists of ca 250 crates of material distributed over two storage locations; of these 250 crates, 150 contained ceramics.¹²⁷ Of these 150 we first studied the material from the territory of Nettuno, in total 35 crates.¹²⁸ All these finds have been entered into a database; a large selection (25 crates, over 2100 pieces) of the material has been drawn, described and photographed. For this we used the same system as we did during the processing of the finds from the survey.¹²⁹ Specific find categories - coins, amphoras and oil lamps - were studied by students as part of their BA and MA theses.¹³⁰ Some sites were visited with Liboni to relate as many finds as possible to known sites.

The data gathered from the Liboni collection must also be reviewed critically, since several problems remain. Despite our efforts we have not yet been able to relate all material to specific sites. This is especially problematic for finds from the military base (ca 300 pieces) that cannot be related with certainty to sites documented earlier by Piccarreta.

A second problem lies in Liboni's sampling strategy, which was evidently biased: it is clear that he was especially interested in Roman finds, and specifically Roman fine wares. As a result coarse wares are very rare in his collection, and periods with few or no fine wares are therefore generally lacking.¹³¹

ROMAN TO MEDIEVAL NETTUNO: HISTORICAL, EPIGRAPHICAL AND CARTOGRAPHICAL SOURCES

Historical, epigraphical and cartographical sources form another dataset used in our research. For the Archaic to Roman periods, these sources (which include Livy's *Ab urbe condita*, Suetonius' *De vitae Caesarum* and Cicero's letters) often dominate the interpretation of archaeological finds, although their interpretation is very problematic.¹³² In our research we will therefore use historical sources only with caution.

For the Nettuno area - and especially Anzio - a considerable amount of epigraphic information is available as well.¹³³ These epigraphic data in-

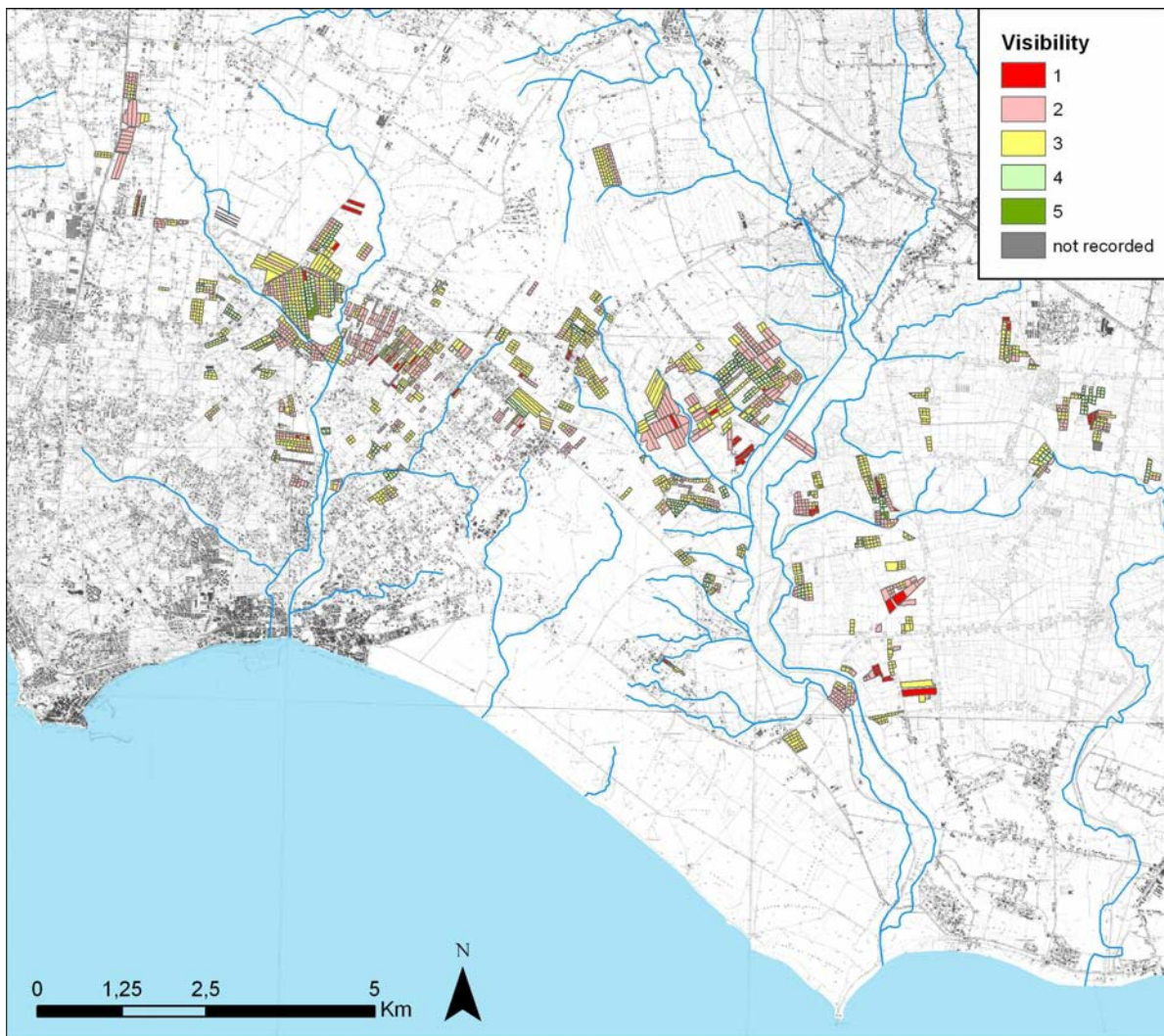


Fig. 3.11. Visibility conditions in the various block survey areas.

clude important finds such as the two *fasti* found at Anzio, inscriptions related to Roman building activities and various funerary inscriptions. These data can complement our other sources in certain respects and where possible we will incorporate them in our analysis.

For the late Roman and medieval periods the situation is different: these periods are traditionally not very well understood archaeologically. This has to do with on the one hand our limited knowledge of local ceramic types and a lack of imports from this period, and on the other with a traditional 'gap' between historians and archaeologists.¹³⁴ Recent research projects have tried to bridge this gap with more integrated studies that combine

archaeological information with ethnographical, epigraphical, toponymic, historical and cartographical sources.¹³⁵ Within the *Carta Archeologica* project we have tried to combine these sources, to the extent that they are available for this region, with the limited information we have gained from ceramics from excavations, from our surveys and from the Liboni collection.¹³⁶ In the following section we will give a short overview of the most important of these sources.

A first source is the so-called Peutinger map, a 12th- or 13th-century copy of a map of the topography of the Roman Empire, with an emphasis on infrastructure. The original map dates to the 3rd to late 4th century AD; the last additions to it seem to have been made in the mid to late 4th century AD. The Peutinger map is intrinsically a historical source and not a proper map: essentially it is a

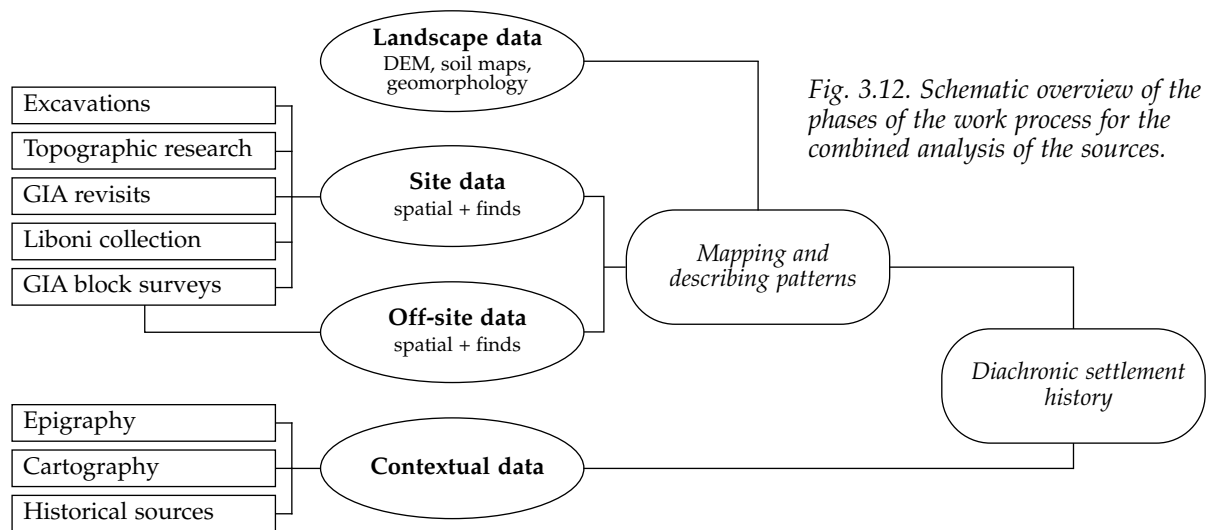


Fig. 3.12. Schematic overview of the phases of the work process for the combined analysis of the sources.

graphical version of an *Itinerarium*. Information on the Nettuno area on this map is very limited, but it does show an important route along the coast that must have run through the area.¹³⁷

Other additional sources are contemporary written sources containing specific information about settlement and infrastructure. For the 4th to 10th century AD, the main historical documentation on the Nettuno area is provided by the *Liber Pontificalis* (LP), the official papal account of the lives of the Popes.¹³⁸ The LP is the generic title of a collection of biographies of popes compiled from the year 311 onwards.¹³⁹ Although its interpretation can be difficult, it provides us with information on a growing number of ecclesiastical possessions in southern Lazio from Constantine onwards.¹⁴⁰

No other historical sources are available for the 7th to 9th-century AD Nettuno area, and there is consequently no evidence for the creation of *curtes* in the area in the 8th and 9th century. However, the LP contains information on a local variant of such *curtes*, the *domuscultae*, 8th-century papal agricultural estates with a strong link to Rome.

The bulk of the available historical sources on southern Lazio in general and the Nettuno area in particular date from the late 10th century or later. Important sources are registers of monasteries in and around Rome and of the larger central-Italian monasteries. The *epistolae* of the papal curia offer excellent insights into property conflicts and local political circumstances. Finally, the *Rerum Italicarum Scriptores*, which is a collection of miscellaneous Italian documents, and the Vatican archives provide documentary information for the Nettuno area from respectively the 10th century and 12th century onwards. From the 12th century onwards,

cartography, too, provides clues to the pre-industrial landscape. Maps become sufficiently detailed to provide information on a local level from the 15th century onwards, but this period falls outside the scope of this study.

COMBINING AND ANALYZING SOURCES

In the previous sections we have discussed the main sources that were used for this study. They include excavations, topographical studies, intensive surveys and site revisits, artefact studies (especially pottery) and epigraphical, historical and cartographical sources. Obviously, combining all these sources with their widely varying approaches and biases poses serious problems. The different research methods yield information of varying quality and precision, both spatially and chronologically. Thus, excavations from the late 19th century may yield relatively detailed information on a specific site, but its location may very well be uncertain. The sites from our survey, on the other hand, have been recorded and described very accurately, but the quality of the finds is often quite poor.

Albeit with variable accuracy, most information can nonetheless be related to specific sites that can be located and dated. By combining these different sources on site level, and while allowing for their variable quality, we do believe that it is possible to present a balanced analysis of the area's settlement history. A schematic overview of the work process followed by us is shown in figure 3.12.

The first step in the process was gathering all data from the various sources into a standardized format. For this, all site locations have been en-

Table 3.3. Diagnostic wares and types and other sources used to date sites to various periods.

Period	Wares	Principal types/typologies	Other dating evidence
Middle Palaeol.	Lithic		
Upper Palaeol.	Lithic		
Neolithic	Obsidian		
	Impasto		
Bronze Age	Impasto	Nijboer et al. 2006	
	(Italo-)Mycenean ware		
1000-700 BC (Iron Age)	Impasto	Maaskant Kleibrink 1987, 1992a, Attema et al. 2003b	
700-600 BC (Orientalizing)	Impasto rosso	Maaskant Kleibrink 1987, 1992a, Attema et al. 2003b	
	Bucchero		
	Etrusco-Corinthian		
600-500 BC (Archaic)	Archaic impasto (mostly red augite fabric)	Maaskant Kleibrink 1987, 1992a, Attema et al. 2003b	
	Bucchero pesante		
	Archaic tile (red augite fabric)		
500-350 BC (post-Archaic)	Impasto chiaro sabbioso	Bouma 1996, Olcese 2003	
	Yellow to white augite tile		
350-250 BC	Black glazed ware	Morel 1981, Bernardini 1986	some coins; Graeco-Italic am- phora?; pink to orange augite tile
	Coarse ware	Bouma 1996, Olcese 2003	
250-100 BC	Black glazed ware	Morel 1981, Bernardini 1986	some coins; <i>opus incertum?</i> ; <i>opus signinum</i> ; pink to orange augite tile
	Coarse ware	Olcese 2003	
	Amphora	USAP 2005; De Haas et al. 2008	
100-30 BC	Black glazed ware	Morel 1981, Bernardini 1986	<i>Opus incertum</i> ; <i>opus reticulatum</i> ; white to pink/orange depurated tile with some lava or augite; depurated soft tile
	Coarse ware	Olcese 2003	
	Amphora	USAP 2005; De Haas et al. 2008	
30 BC-AD 100	Terra sigillata	Ettlinger et al. 1990	<i>Opus reticulatum</i> ; white to pink/ orange depurated tile with some lava or augite; depurated soft tile
	Coarse ware	Olcese 2003	
	Amphora	USAP 2005	
AD 100-250	African red slip ware	Hayes 1972	<i>Opus mixtum</i> ; depurated hard tile; white sandy tile
	Coarse ware	Olcese 2003	
	Amphora	USAP 2005	
AD 250-400	African red slip ware	Hayes 1972	<i>Opus vittatum</i> ; depurated hard tile; white sandy tile
	Coarse ware	Olcese 2003; Paroli/Vendittelli 2004	
	Amphora	USAP 2005	
AD 400-700	African red slip ware	Hayes 1972	<i>Liber Pontificalis</i>
	Coarse ware	Paroli/Vendittelli 2004	
AD 700-900	Coarse ware	Paroli/Vendittelli 2004	<i>Liber Pontificalis</i>
AD 900-1200	Coarse ware, <i>ceramica a dipinta rossa</i>	Paroli/Vendittelli 2004	various historical sources

tered into an ArcGIS shapefile with unique five digit site IDs. These site IDs allow us to connect the spatial data to an MS Access site database in which data on finds and research circumstances are stored for each site.¹⁴¹

The second step in our analysis was to establish a chronological framework for our diachronic analysis. The periodization we used in this study is based on the archaeological date that can be ascribed to the various sites, particularly the ceramic date - pottery wares, fabrics and types (table 3.3).¹⁴² The period boundaries have been chosen so as to include as many well-dated pottery types within a period as possible.

Using this periodization, we have created 'period maps'. If a site contained material ascribed exclusively to a single period it is indicated on our maps with a (red) square. However, several pottery wares and types occur in more than one period.¹⁴³ Thus, if a phase may be present based on overlapping types or wares, the site is indicated with a smaller, pink dot. For sites from the Liboni and Piccarreta datasets that we have not revisited, our dating evidence is generally even less precise. These sites are not displayed on the period maps. For later periods some sites are only known from historical sources. Although the spatial accuracy of these sources is rather limited, we have chosen to include these sites on the maps.

Once these period maps were created, we first described the settlement trends and patterns based on the overall number of sites and site-distribution maps.¹⁴⁴ At this stage, we included data from our off-site surveys and landscape data to provide a context for the site data. We were thus able to describe the distribution of sites over different landscape units, how these patterns changed over time and how they relate to off-site distributions.

This has resulted in a diachronic analysis of the settlement history of the Nettuno area, in which the broader regional context is discussed using both the distribution maps and the 'contextual data' provided by historical, epigraphical and cartographical sources.¹⁴⁵ We specifically looked at the role of the central settlements *Satricum* and *Antium* and other well-investigated sites.

CONCLUDING REMARKS

In this chapter we have introduced the various datasets available for our study. These studies include antiquarian and topographical work undertaken since the 18th century, as well as excavations. Most of these studies focus on the urban centres in

the area, *Antium* and *Satricum*. For rural areas, two important topographical studies were available: a study of the lower Astura valley by Piccarreta and the dataset created for the whole coastal area by Arnaldo Liboni, director of the *Antiquarium* of Nettuno. These studies provide excellent site inventories but only contain limited chronological information on these sites.

The research carried out by the GIA has expanded these two datasets. Systematic off-site surveys and visits to previously recorded sites in combination with geophysical research and pottery studies have yielded new sites and more detailed knowledge on the chronology of previously known sites.

Another important part of GIA's research was the study of the collection gathered by Liboni over the years. A large part of this collection could be catalogued and attributed to sites in the area, adding further information on site chronology and status.

A final set of sources are the historical, epigraphical and cartographical data. Most of these stem from late antiquity and are therefore mainly used for this period. Where most of the other sources can be used on a site level, these sources provide more general, contextual data.

Our analysis of these sources proceeded in three steps. First, the topographic, excavation and survey data were combined into a uniform set of site data. These site data were used to create period maps using a periodization specifically based on the (dated) archaeological materials from the sites. Second, these distribution maps were described. Finally, the observed patterns were analyzed in their regional context. The results of this analysis will be presented in Part II.

NOTES

⁸⁶ For more extensive comments, see Brandizzi Vittucci 2000.

⁸⁷ Lugli 1940.

⁸⁸ Chiarucci 1989; Brandizzi Vittucci 2000; Caneva/Travaglini 2003.

⁸⁹ Piccarreta 1977; De Rossi 1981.

⁹⁰ Castagnoli 1963; Piccarreta 1977; Piccarreta 1980.

⁹¹ Brandizzi Vittucci 1998; Cassatella 2003, 2004 (see also chapter on ancient topography). The archaeological museum of Anzio has recently started an archaeological mapping project; see Jaia 2004.

⁹² Chiarucci 1989; Brandizzi Vittucci 2000; Sapelli/Jaia 2002; Caneva/Travaglini 2003.

⁹³ *NSc* 1884; for an overview of such notes, see also Lugli 1940.

⁹⁴ On the *aggere*: Guidi 1980; Guaitoli 1981; Velocchia Rinaldi 1983; On the tombs: Gierow 1961; De Meis 1984; Morpurgo 1946; material from Roman tombs is newly on

- display at the archaeological museum of Anzio; on the votive deposits: Jaia 2004; Franco 2006; on other Roman remains: De Meis 1986; Santa Maria Scrinari/Morricono Mattini 1975; on the Imperial villa: Gizzi 1988; Crescenzi et al. 1992; Jaia 2004. For an overview, see also Chiarucci 1989; Brandizzi Vittucci 2000; Franco 2006.
- ⁹⁵ Felici 1993; Felici/Baldieri 1997; Petriaggi 2004; on the submerged *piscinae* of Nettuno, see Jacono 1924; Gianfrotta 1997.
- ⁹⁶ For the 19th-century excavations, see Waarsenburg 1998; for excavations on the acropolis: Maaskant Kleibrink 1987, 1992a; for the necropoleis, see Gnade 1992 and Waarsenburg 1994; for recent excavations, see Gnade 2003, 2006; for an overview of Dutch field work, see also Gnade 2007.
- ⁹⁷ Attema et al. 2003a; Nijboer et al. 2006; De Haas et al. 2008.
- ⁹⁸ Negrini 2004.
- ⁹⁹ The GIA excavations on the coast form an exception. We would again like to thank the Italian ministry of defence and the personnel of the *poligono militare* for permission for and help during these investigations.
- ¹⁰⁰ See also below. However, in comparison with *Forma Italiae* volumes on for example Circeii, Terracina and Cora, Piccarreta has actually recorded relatively many protohistoric sites (cf. Lugli 1926, 1928; Brandizzi Vittucci 1968). For a more detailed study of the biases of the Piccarreta and Liboni datasets, see also Attema/De Haas forthcoming.
- ¹⁰¹ For example on the occasion of new building activities.
- ¹⁰² Attema et al. 2003a, Nijboer et al. 2006.
- ¹⁰³ Attema et al. 2008.
- ¹⁰⁴ De Haas 2008; a more extensive report on the 2004/2005 surveys will appear in *Palaeohistoria* 51/52.
- ¹⁰⁵ Attema et al. 2002; van Leusen/Attema 2003; see also Van Leusen 2002.
- ¹⁰⁶ The *Carta Tecnica Regionale* (CTR), scale 1:10,000 was used for this.
- ¹⁰⁷ For the technology and procedures, see Ryan/Van Leusen 2002.
- ¹⁰⁸ Diagnostic samples typically include rims, bases, handles, decorated fragments and specific fabrics.
- ¹⁰⁹ For example, material removed from fields and piled on heaps, material given to us by land owners, or material from dirt tracks.
- ¹¹⁰ Classifying was mostly done by P. Attema and T. de Haas, but some samples were classified by P. van Leusen, A. Nijboer and G. Tol.
- ¹¹¹ The lithics were studied by M. La Rosa
- ¹¹² Esri ArcGis 9.1 was used; all data were digitized on screen using CTR maps for topographical reference; data were stored in coordinate system *Roma 1940 Gauss Boaga Est*.
- ¹¹³ In the near future, all shard drawings will also be digitized for publication and archiving.
- ¹¹⁴ These data include an area that was surveyed at *Bonifica di Padiglione*, north of the municipality of Nettuno. The results obtained in these surveys will not be discussed here.
- ¹¹⁵ These 41 sites include three sites near *Padiglione* and five sites that were pointed out to us by local people or found by coincidence in areas that were not surveyed in blocks.
- ¹¹⁶ Several more were resurveyed during the block survey; see above.
- ¹¹⁷ In fact, we will continue to revisit sites within the context of PhD studies by G. Tol and T. de Haas.
- ¹¹⁸ Many of these samples contained lithic materials, which will not be discussed here.
- ¹¹⁹ See Van Leusen 2002: chapter 4
- ¹²⁰ We have performed a trial survey in a stretch of forest in the area of Campana, for the moment without results. New techniques will have to be developed to cover these areas.
- ¹²¹ Ca 430 hectares were surveyed within the municipality; the potentially surveyable area includes the 'suburban' and 'other' areas from diagram 6, ca 4.110 ha. A considerable part of this potentially surveyable area is taken up by farm buildings, roads, rivers and a golf course. This means that the potentially surveyable area is in fact even smaller and thus the percentage covered is higher.
- ¹²² See also De Rossi 1981; similar problems were noted during the revisits in the Astura valley; see above.
- ¹²³ For example, early Imperial ceramics such as *terra sigillata* and Dressel 2-4 amphoras are very easily recognized, while the lack of characteristic fine wares makes the period 500-350 BC hard to detect.
- ¹²⁴ This problem is especially significant for protohistory: impasto fabrics are generally very durable and since we have very few diagnostic fragments from our surveys this poses significant problems in interpreting these finds.
- ¹²⁵ Some objects have been published in Petrassi et al. 2002 and Conte 2007.
- ¹²⁶ Work on the Liboni collection was coordinated by G. Tol.
- ¹²⁷ The other 100 crates primarily contain lithic material.
- ¹²⁸ This is approximately a third of all ceramics in the collection; many of the other crates contained small amounts of material.
- ¹²⁹ See section 2.4 above.
- ¹³⁰ See part III.
- ¹³¹ This problem has been discussed above in sections 1 and 2. Problems related to the specific find groups (amphoras, coins) will be discussed in part III.
- ¹³² For the Pontine region, the struggles between Rome and the Latins and Volscians are an especially important and problematic example. On a more local level, scholars have tried to relate the villa of Torre Astura and the burial monument of Torre del Monumento to specific persons known from historical sources; these interpretations are clearly in conflict with archaeological chronological evidence.
- ¹³³ See Santa Maria Scrinari/Morricono Mattini 1975; Brandizzi Vittucci 2000; Franco 2006.
- ¹³⁴ Moreland 2005.
- ¹³⁵ The most important of these studies deal with the Tiber valley (Patterson/Roberts 1998) and Tuscany (Fentress/Cambi 1989; Valenti 1996). Improved knowledge of late Roman coarse wares and amphoras, among other things, has yielded many new insights into late antique rural settlement.
- ¹³⁶ These sources have been studied by O. Satijn and G. Tol.
- ¹³⁷ See chapter 2.
- ¹³⁸ Duchesne 1892; Davis 1992, 1995, 2000.
- ¹³⁹ The title *Liber Pontificalis* is a later invention; the original compilation does not seem to have had a title.
- ¹⁴⁰ Toubert 1973, 303; Davis 2000, xxvii. The extent, accuracy and importance of the biographies varies through time. It is clear, however, that the accuracy of the biographies before the first compilation in the early 6th century is less than that of the later ones. In the seventh to ninth century, the lives seem to have been described by someone with close knowledge of the events. The provided information should be considered genuine

and accurate, with some allowance for copying errors (Davis 2000, xiii).

¹⁴¹ Summary data on all sites within the municipality are presented in the site catalogue (Part V); the diachronic analysis is based not only on these sites, but also on sites that are located close to the municipal territory.

¹⁴² A complete typology of all the (dated) pottery types is given in Part IV.

¹⁴³ On the level of pottery types, for example: Tripolitana and Africana amphoras may date to either AD 100-250 or AD 250-400. On the level of ceramics, for example: tiles tempered with augite and wall fragments of black glazed ware may date anywhere between 350 and 30 BC (and in theory even to the Archaic or post-Archaic period).

¹⁴⁴ We must admit that in some cases it has proven to be very difficult to separate the description of distribution patterns from the analysis of these patterns.

¹⁴⁵ In our analysis we will comment extensively on the effect of the various biases influencing the data and the analysis.

4

The Ground-Penetrating Radar Survey

Claudio Moffa, Simone Malagodi & Lisa Volterrani¹⁴⁶

INTRODUCTION

In July 2006, a geophysical survey was carried out within the municipality of Nettuno. The goal of the survey was to verify the presence of buried walls on five archaeological sites that had previously been localized during the intensive surveys and site revisits, marked on the surface by Roman potshards and fragments of building material.¹⁴⁷ Due to the soil composition, which is mainly sandy, and in order to investigate the presence of buried archaeological structures at a supposed maximum depth of 1.5 m, we chose to use the Ground-Penetrating Radar technique.

Ground-penetrating radar (GPR) is one of the near-surface geophysical methods that is gaining acceptance as a viable means of field study in archaeology.¹⁴⁸ It involves the transmission of high-frequency radar pulses from a surface antenna into the ground. It measures the elapsed time between the moment when this energy is transmitted, reflected from buried materials or sediment and soil changes in the ground, and then received back at the surface. When many thousands of these radar reflections are measured and recorded as antennas are moved along transects within a grid, an image of soil-, sediment-, and feature changes can be created.

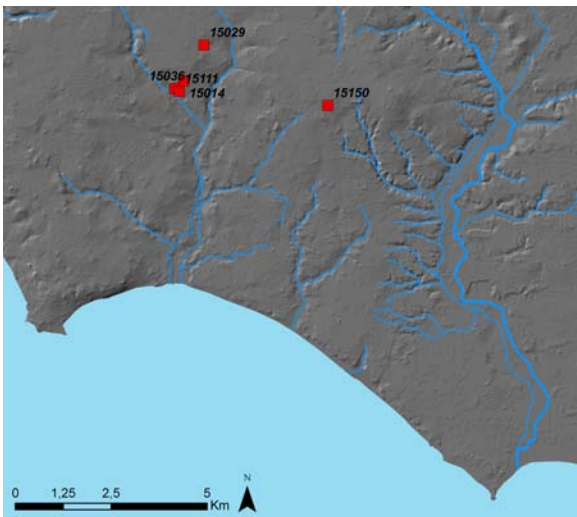


Fig. 4.1. Sites explored with GPR.

DATA ACQUISITION

An IDS RIS 2KA console with a 200 MHz antenna was used to acquire profiles on five sites (fig. 4.1). In the geophysical survey, 295 GPR profiles were acquired with a distance of 1m between them for a total length of 6.854 m, covering a surface of 5.654 m².¹⁴⁹

Site 15150 was investigated almost completely, with longitudinal and transversal profiles. The area surveyed measures 22 x 20 m (fig. 4.2, A).

Site 15029 was investigated with a survey that covered the whole area where the surface remains had been found. This area has an irregular perimeter (with a length of 35 m and a width of 8 to 12 m; fig. 4.2, B).

Site 15014, being very large, was sampled covering two parallel transects (100 m long and 20 m wide) with an interdistance of 40 m. Both transects were divided in square areas 20 m wide. In areas that yielded better results, the grids of acquisition profiles were increased and transversal profiles were performed as well (fig. 4.2, C).

Site 15036 was sampled by a 50m long and 10 m wide transect, while site 15111 was sampled by a transect of 39 x 10 m wide (fig. 4.2, D).

RESULTS

Some issues must be considered before presenting the most significant results. The geophysical surveys were carried out on soils that possess highly heterogeneous electrical properties and consequently produce different electromagnetic responses. In some of the areas investigated the soil conductivity was high (due to the presence of moisture or clayey sediment in the soil), so that that the results obtained cannot be considered reliable. Therefore, the absence of anomalies on the GPR sections does not assure the absence of buried structures. This is the case for the data from sites 15029, 15036 and 15111.

Site 15150

On site 15150, however, the georadar survey revealed significant anomalies. Figure 4.3 illustrates the same horizontal section at a depth of about

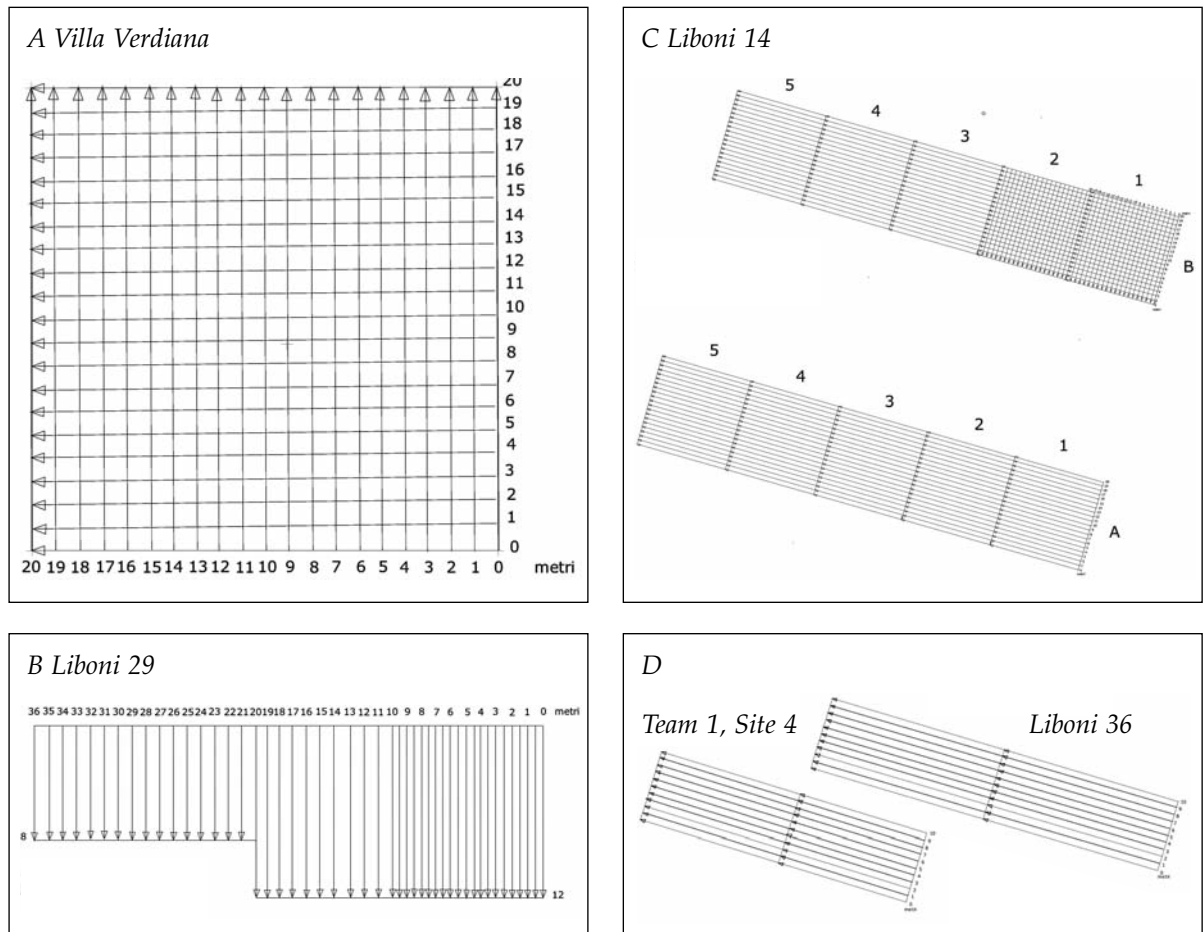


Fig. 4.2. Acquisition of GPR profiles on sites 15150 (A), 15029 (B), 15014 (C) and 15036/15111 (D).

0.80-1 m; in each section, different colour scales and gradations reflect differences in signal intensity. The anomalies suggest the presence of a buried rectangular architectural structure, 10 m long and 7 m wide, marked by a red line.

The sections in figure 4.4a and b correspond to data acquisition lines. The T13 GPR profile shows a sub-horizontal reflector probably due to wall remains. The L4 GPR profile shows three different superficial anomalies probably related to buried walls.

Site 15014

On site 15014, GPR data provided relevant information in four squares, the first two of each transect investigated (A1, A2 and B1, B2). The very poor quality of the data obtained from other squares does not allow verification of the presence of buried structures.

Transect A

In figure 4.5 the horizontal sections of the squares A1 (below) and A2 (above) are shown in sequence at a depth of 0.8 m. In both squares the presence of a linear and continuous anomaly oriented N-S is evident. This anomaly can be related to a rectangular structure, probably a wall.

Figure 4.6a and b show vertical GPR profiles in which a strong horizontal reflector can be observed. The first one refers to square A2 (line LLA0026) and is located at 6 m; the second one refers to square A1 (line LLA005) and is located at 4 m.

Transect B

Horizontal sections of the squares B1 and B2 (fig. 4.7), at a depth of 1m approximately, show the probable presence of buried archaeological structures, marked by a red line. Visible are two linear

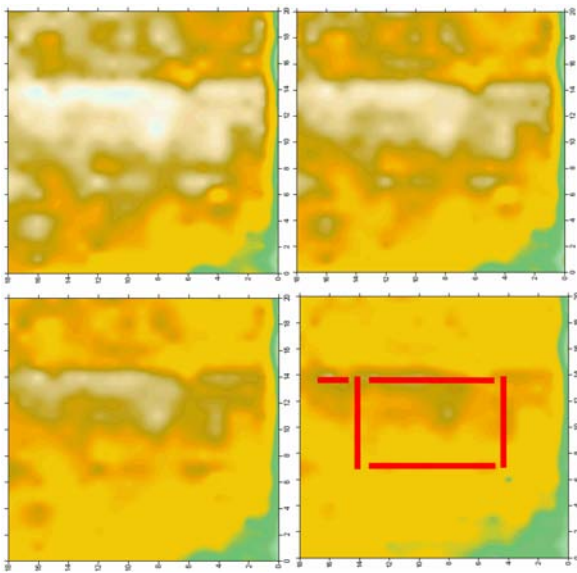


Fig. 4.3. Horizontal section at a depth of about 0.80-1m on site 15150.

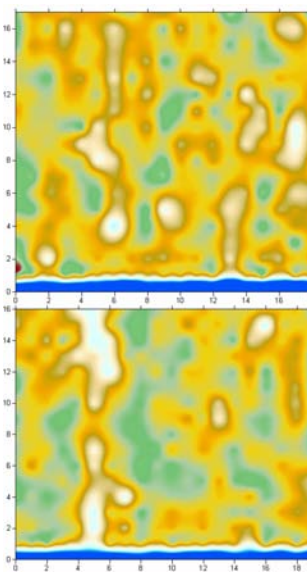


Fig. 4.5. Horizontal section at a depth of about 0.8m on site 15014, transect A.

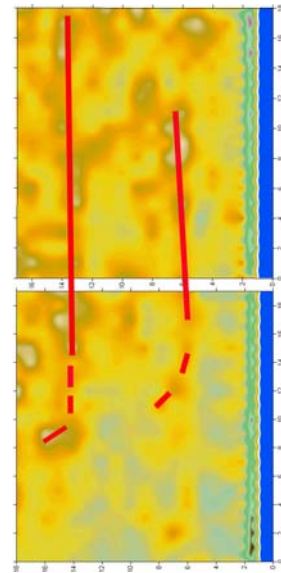


Fig. 4.7. Horizontal section at a depth of about 1m on site 15014, transect B.

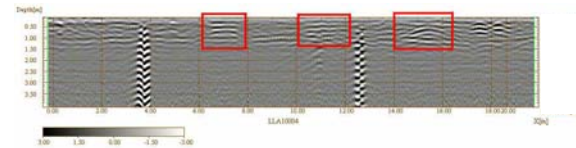
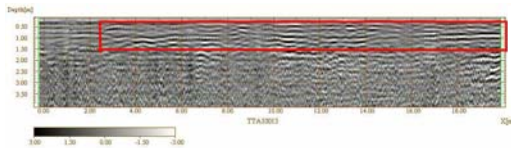


Fig. 4.4 a/b. GPR profiles of site 15150.

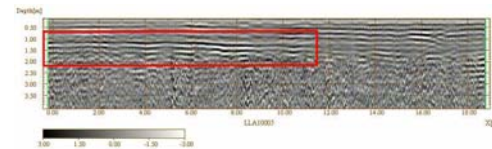
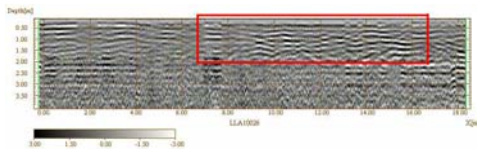


Fig. 4.6 a/b. GPR profiles of site 15014, transect A.

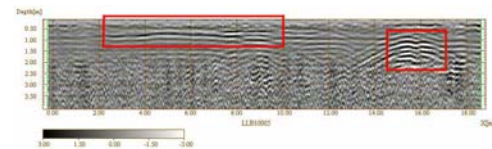
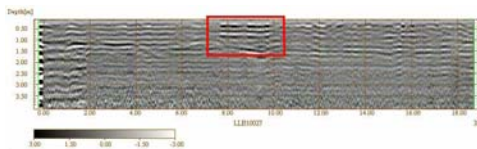


Fig. 4.8 a/b. GPR profiles of site 15014, transect B.

parallel anomalies, with a distance between them of approximately 7 m.

Figure 4.8a illustrates the GPR profile LLB0027 in square B2: a strong anomaly is evident between 7 and 10 m. The last figure (fig. 4.8b) depicts a long horizontal reflector in square B1, while a hyperbolic anomaly is also visible, probably to be identified as a buried wall.

CONCLUDING REMARKS

The georadar survey has ascertained the presence of buried structures on several of the archaeological sites previously identified by ground surveys. On site 15150 the GPR anomalies have highlighted the presence of a rectangular structure. Reliable results were obtained also on site 15014, although restricted to the first two squares of both transects.

The interpretation of the anomalies as walls, approximately E-W orientated, appears to be confirmed by the orientation of the anomalies running parallel in transects A and B.

With regard to site 15029, it is possible to confirm the presence of a linear reflector corresponding to the surface scatter of tuff fragments and tiles. Sites 15036 and 15111 did not produce usable data.

In conclusion, although the georadar survey has been carried out on sandy soils, generally considered ideal for georadar prospection, the results have only been partially satisfactory. This is probably due to the presence below the ground surface of areas which retain the soil moisture. The prospections, however, do indicate that at several Roman sites subsurface remains still exist that merit further study.

NOTES

¹⁴⁶ The first and third author are both archaeologist and geophysicist; the second author is engineer and geophysicist.

¹⁴⁷ See site cat. nrs. 15150, 15029, 15014, 15036 and 15111.

¹⁴⁸ Conyers 2004.

¹⁴⁹ The GPR survey areas were measured in by Erwin Bolhuis (GIA) using a Total Station.

PART II
SETTLEMENT DYNAMICS FROM PREHISTORY
TO THE MEDIEVAL PERIOD

5

Prehistory

Michelangelo La Rosa

RESEARCH HISTORY

The earliest investigations into the prehistoric period in the territory of Nettuno go back to the second half of the 1930s, when Alberto Carlo Blanc found evidence for a Mousterian lithic industry along the coast south of the city.¹⁵⁰ He observed lithic artefacts in strata of flint pebbles in the red sands of the Pleistocene fossil dune formations (*Duna Quaternaria Antica*) in the area of Cretarossa between S. Rocco and the Foglino river (*fig. 5.1, site 15235*). There, these formations are exposed by marine erosion.¹⁵¹ Unfortunately, the splendid formation of S. Rocco has been destroyed completely nowadays by urban expansion. In the zone of the Roman ruins of Le Grottacce, further to the south-east, Blanc found a lithic industry with the typical characteristics of that particular local facies of the Middle Palaeolithic known as Pontinian.¹⁵² This term refers to the worked small flint pebbles that are present in the sediments of the Pontine region.¹⁵³

Forty years later, in 1971, Edoardo Borzatti von Lowenstern of the Laboratory of Quaternary Ecology of the University of Florence and his team paid a short visit to the quaternary littoral formations on the *Poligono Militare* at a point where a small valley, the Vallone Carnevale, reaches the

coast. On this occasion he found a rich Middle Palaeolithic site with lithics typical of the Pontinian techno-complex. These had come to the surface as a result of the, still ongoing, erosion of the reddish sands. The numerous implements that were collected (ca 1500 pieces) were found concentrated in a restricted area of about 100 m², as such showing that they belonged to a well-defined site.¹⁵⁴ Unfortunately a permit had been issued for an investigation of a few hours only, and consequently the resulting data could not be checked later on.

In 1989 the prehistoric site of Le Grottacce, attributed to the Epigravettian, was published by Paola Ansuini and Michelangelo La Rosa (*fig. 5.2, site 15238*).¹⁵⁵ The, abundantly represented, lithic industry at this site - about 1400 implements - came from a limited area of a few tens of square meters that was exposed by weather erosion. The site is situated circa 500 m south of the imposing ruins of the Roman *villa maritima* of Le Grottacce. The soil of the site is composed of yellowish sands that cover the red sands, which in turn contain artefacts dating to the Mousterian Pontinian.¹⁵⁶ Further to the south-east along the coast lithic artefacts have been recorded on two more locations (at Saracca: *fig. 5.2, site 15237*; and near Torre Astura: *fig. 5.1, site 15239*)

The research activities carried out in the north-

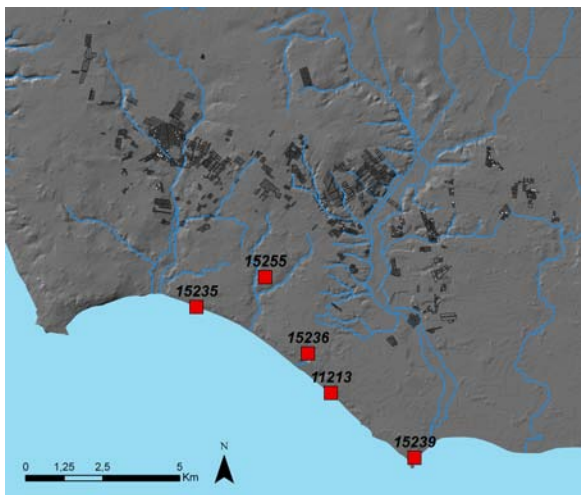


Fig. 5.1. Distribution of Middle Palaeolithic artefacts (white areas) and sites (red squares).

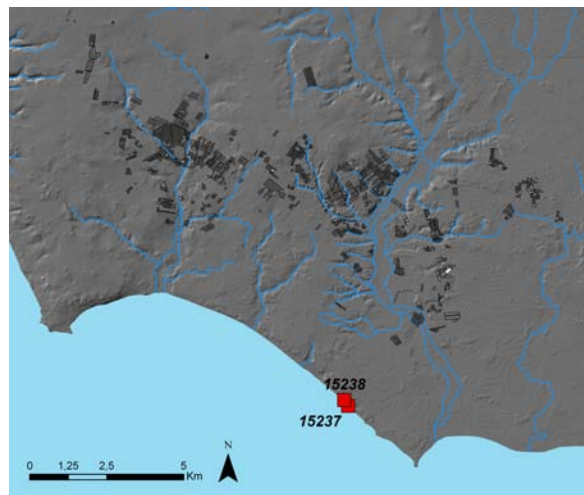


Fig. 5.2. Distribution of Upper Palaeolithic artefacts (white areas) and sites (red squares).

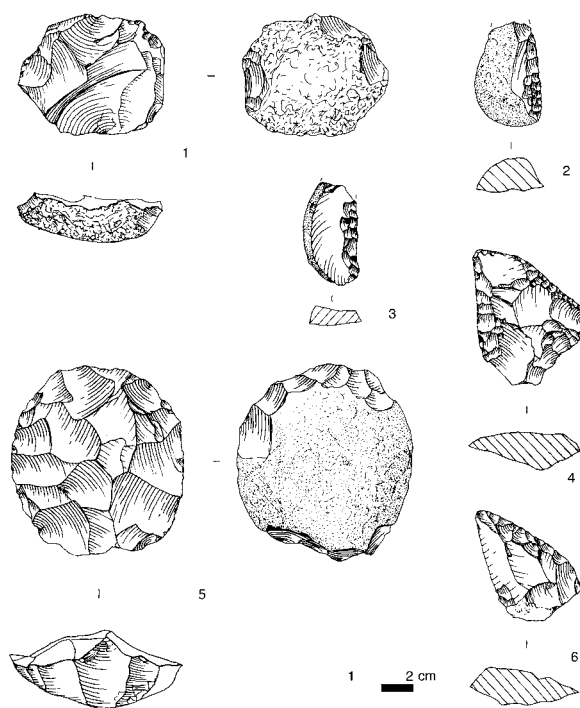


Fig. 5.3. Middle Palaeolithic industry from the GIA surveys. 1 and 5: disoidal or centripetal cores; 2: simple convex sidescraper; 3: simple straight sidescraper; 4: 'dejeté' sidescraper; 6: transversal sidescraper (drawings by D. Aureli).

ern part of the Pontine region during the last decennia of the past century by Arnaldo Liboni have led to the localization of a series of Palaeolithic sites and the collection of a large quantity of lithic artefacts from these, now kept in the *Antiquarium* of Nettuno. In the territory of Nettuno large concentrations of the Pontinian industry have been recorded at La Seccia and Foglino-Colle Antinoro (fig. 5.1, site 15255).¹⁵⁷ These Mousterian assemblages have, however, not yet been published.

During the excavation of the Bronze Age site Piccarreta 13¹⁵⁸ by the GIA in 2003, a small trench was dug in the red sands at the base of the small cliff on which this site is located. These investigations verified the presence and stratigraphical position of a Pontinian lithic industry in the Pleistocene fossil dune formations (fig. 5.1, site 11213).¹⁵⁹

THE LITHIC INDUSTRY FOUND DURING GIA SURVEYS IN 2004 AND 2005

In general it is difficult to draw conclusions from distributions of lithics found at the surface, since

these usually belong to various periods that may widely range in time. Although it is relatively easy to classify diagnostic artefacts typologically and to ascribe them accordingly to a specific chronological-cultural period, it is very difficult, and often even impossible, to classify atypical tools, waste and certain types of cores. It is therefore with much caution that we present some paleo-ethnological observations on the results of the lithic studies of the material from the GIA surveys.

The surveys carried out in the territory of Nettuno during the campaigns of 2004 and 2005 have resulted in the collection of a total of 581 lithic artefacts (see tables 5.1, 5.2 and 5.3) exclusively made out of flint pebbles. Almost 60% of the industry consists of flakes and small flakes (debris), 18.1% is represented by cores, while 113 items are tools (19.4%); only 20 unretouched blades and bladelets were counted (see table 5.1). From a chronological and cultural point of view the lithics cover a fairly long period from the Middle Palaeolithic (Pontinian Mousterian) to the Upper Palaeolithic (Aurignacian and Epigravettian).

The Middle Palaeolithic is well represented by the particular Mousterian industry characteristic of the coastal strip of southern Lazio, the Pontinian (see above).¹⁶⁰ Key elements are sidescrapers (fig. 5.3: 2, 3, 4 and 6) and Levallois flakes, naturally backed knives, disoidal or centripetal cores (fig. 5.3: 1 and 5) and a number of unretouched flakes, often with a heavy patina, that clearly belong to the Mousterian typology.

Human presence during the Upper Palaeolithic is evidenced by bladelet cores, blades (fig. 5.4: 1), bladelets with and without retouch, endscrapers, burins (fig. 5.4: 9-10), truncated tools (fig. 5.4: 3), a truncated backed tool (fig. 5.4: 6), and a fine example of a point (fig. 5.4: 8). Within the latter group we can discern circular (fig. 5.4: 7) and nose-ended (fig. 5.4: 5) carinated endscrapers and a rabot that recalls the Aurignacian culture found in the Fossellone cave at Monte Circeo,¹⁶¹ while the bladelet cores (fig. 5.4, nr 11) and the microliths (fig. 5.4: 2 and 4) may well belong to the final phase of the Upper Palaeolithic (Epigravettian).

With a percentage of 28.3 the 'Mousterian group' (sidescrapers, Levallois flakes, naturally backed knives) numerically slightly prevails over the 'Upper Palaeolithic group' (burins, endscrapers, truncated tools, retouched blades, microliths, point, rabot). Among the cores (see table 5.2) the number of disoidal cores is much higher than the number of bladelet cores.

During the surveys of 2004 and 2005 artefacts representing a lithic industry were also collected

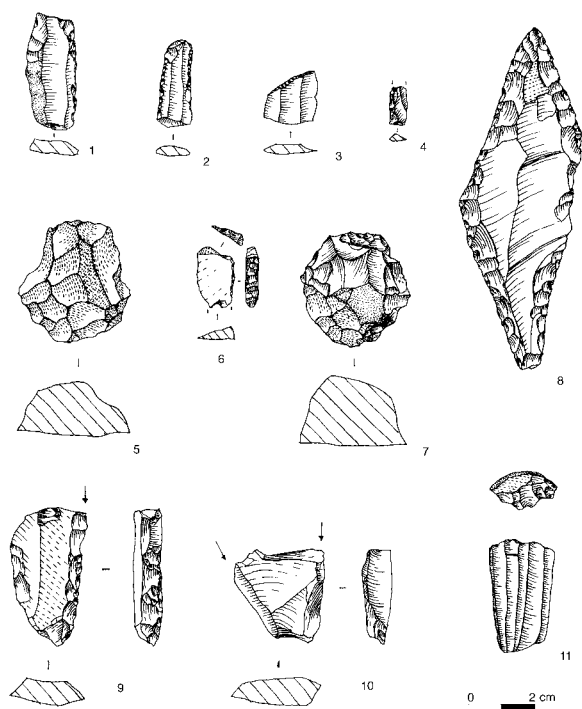


Fig. 5.4. Upper Palaeolithic industry from the GIA surveys. 1: retouched blade; 2 and 4: retouched bladelets; 3: truncated tool; 5: nose-ended carinated endscraper; 6: truncated backed tool; 7: circular carinated endscraper; 8: point; 9: burin; 10: multiple burin; 11: bladelets core (drawings by D. Aureli).

in a stratigraphical position along the coast at those points where marine erosion has exposed parts of the Pleistocene fossil dunes. At Cretarossa, a site already known from palaeo-ethnological literature,¹⁶² Mousterian lithic artefacts were found near the parking lot behind the main office of the *Poligono Militare*, near the beach pavilion.¹⁶³ These artefacts (8 implements, including two side-scrappers; fig. 5.3: 2 and 6) were retrieved from a stratum of flint pebbles incorporated in a deposit of reddish sands known as *lehm*.¹⁶⁴ At Saracca¹⁶⁵ we clearly identified the transition between the red and the yellow sands of the *Duna Quaternaria Antica* (see chapter 1), which contained lithic complexes from various periods: in the red sands of the *lehm* Mousterian artefacts were found, while Upper Palaeolithic artefacts were collected from the superimposed yellow sands (one unretouched blade and one unretouched bladelet). More to the south, near Torre Astura,¹⁶⁶ where the deposit of *lehm* submerges below sea level, Mousterian artefacts were found in the red sands (five implements, among which a discoidal core; fig. 5.3: 1).

Table 5.1.
Composition of the lithic industry.

	N	%
Cores	105	18.1
Flakes and Debris	343	59.0
Blade and Bladelets	20	3.4
Tools	113	19.4
Total	581	99.9

Table 5.2.
Debitage characteristics.

	N	%
Flake cores and fragments	70	14.9
Bladelets cores	5	1.1
Discoidal or Centripetal cores	14	3.0
Flaked pebbles	12	2.6
Chopping tool type cores	4	0.8
Blades (unretouched)	11	2.3
Bladelets (unretouched)	9	1.9
Flakes (unretouched)	269	57.5
Flakes of Mousterian type	6	1.3
Debris	68	14.5
Total	468	99.9

Table 5.3.
Typological classification of the tools.

	N	%
Burins	7	6.2
Endscrapers	4	3.5
Retouched blades	8	7.1
Truncated tools	2	1.8
Truncated backed tool	1	0.9
Point	1	0.9
Rabot	1	0.9
Microliths		
Retouched bladelets	2	1.8
Borers	7	6.2
Notched tools	12	10.6
Denticulated tools	8	7.1
Sidescrapers	27	23.9
Levallois flakes	3	2.6
Naturally backed knives	2	1.8
Retouched flakes	24	21.2
Chopping tools	2	1.8
'Esquillé' tools	2	1.8
Total	113	100

As far as the distribution of lithics over the territory is concerned (*figs 5.1 and 5.2*), its wide dispersion and the relative scarcity of artefacts force us to interpret these materials as residual. They indicate generic human visits to the territory during prehistory, above all near water courses (modern Fosso del Quinto, Fosso dell'Armellino, Fosso dello Sbirro and Fosso della Seccia).

CONCLUDING REMARKS

At the present state of our knowledge, and awaiting studies of the lithic materials kept in the *Antiquarium* of Nettuno, we may state that significant concentrations of both Middle and Upper Palaeolithic material have been documented on various locations in the municipal territory, although perhaps not all these locations can be interpreted as proper sites. In combination with the overall distribution of lithics found in the surveys this indicates that the territory of Nettuno in the prehistoric period was much frequented, not only by Neanderthal man (Pontinian Mousterian) and, sporadically, by human groups of the early Upper Palaeolithic (Aurignacian), but also by Epigravettian populations.

NOTES

- ¹⁵⁰ Blanc 1937.
- ¹⁵¹ Cf. chapter 1.
- ¹⁵² Blanc 1937.
- ¹⁵³ Blanc 1939.
- ¹⁵⁴ Borzatti von Lowenstern/Barsottini 1983.
- ¹⁵⁵ Ansuini/La Rosa 1989.
- ¹⁵⁶ La Rosa 2004.
- ¹⁵⁷ La Rosa et al. 1989-1990; Vianello et al. 1995; Mantero 2003.
- ¹⁵⁸ See site cat. no 11213.
- ¹⁵⁹ La Rosa et al. 1989-1990; Vianello et al. 1995; Mantero 2003.
- ¹⁶⁰ Blanc 1939.
- ¹⁶¹ Blanc/Segre 1953.
- ¹⁶² Blanc 1937; La Rosa 2004.
- ¹⁶³ See site cat. no 15235.
- ¹⁶⁴ Blanc 1935.
- ¹⁶⁵ See site cat. no 15237.
- ¹⁶⁶ See site cat. no 15239.

6

Bronze Age

Luca Alessandri

MIDDLE BRONZE AGE

Omitting a still unpublished Early Bronze Age site in an area called 'Stop 4',¹⁶⁷ the oldest protohistoric artefacts in the municipal territory of Nettuno date to the Middle Bronze Age. Notably in the area of Campana, ceramic artefacts that can be attributed to the Middle Bronze Age 1 and 2 have been collected at various locations.¹⁶⁸ The shards were noted for the first time by A. Liboni and are now kept in the *Antiquarium* of Nettuno.¹⁶⁹ Since then, survey campaigns of the GIA have allowed a better demarcation of the area of distribution of the ceramic fragments, and an assessment of the state they are in.¹⁷⁰ A catalogue of the most important fragments is included at the end of this chapter.

The shards appear at the surface on the right bank of the Fosso del Quinto, a tributary of the Fosso di Loricina, and are found in various concentrations parallel to the course of this stream, over a distance of circa 1000 m. Another isolated concentration of impasto shards, which unfortunately lack any diagnostic features, has been recorded on the opposite side of the *fosso*, in the locality Piscina Cardillo.¹⁷¹ A few ceramic fragments have also been identified along the beach south of the mouth of the Fosso Foglino,¹⁷² while a heavily abraded handle that can be attributed

to the full phase of the Middle Bronze Age was recorded near Torre Astura; unfortunately it lacks a precise provenance.¹⁷³ Just outside the municipal territory, to the west in the locality Cacamele, ceramic fragments that can be attributed to the Middle Bronze Age 1 were found along both sides of the Fosso Tinozzi, formerly called the Fosso Cacamele.

It seems therefore likely that the settlements of the first phases of the Middle Bronze Age tended to be located along water courses. However, a study by the present author on the coastal sites of central-southern Italy between the rivers Tiber and Garigliano has not revealed any statistically significant correlation between river courses and protohistoric settlements (*fig. 6.1*). There is, though, a strong correlation between the latter and natural springs; in fact, the settlements of Cacamele, La Campana and Fosso Foglino are located in the immediate vicinity of springs of fresh water (*fig. 6.2*).¹⁷⁴

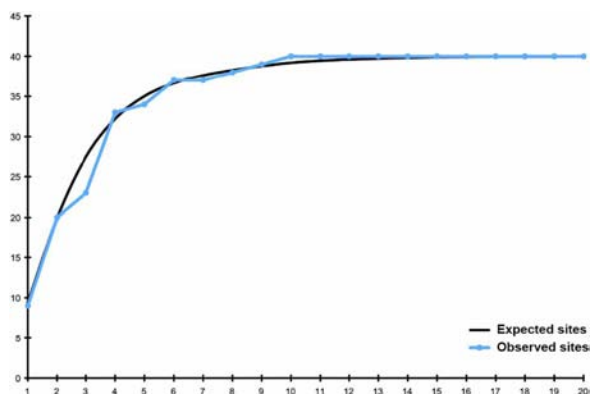


Fig. 6.1. Distances between settlements and their nearest stream; comparison between the number of sites observed and the number of sites expected indicates a random distribution (after Alessandri 2007).

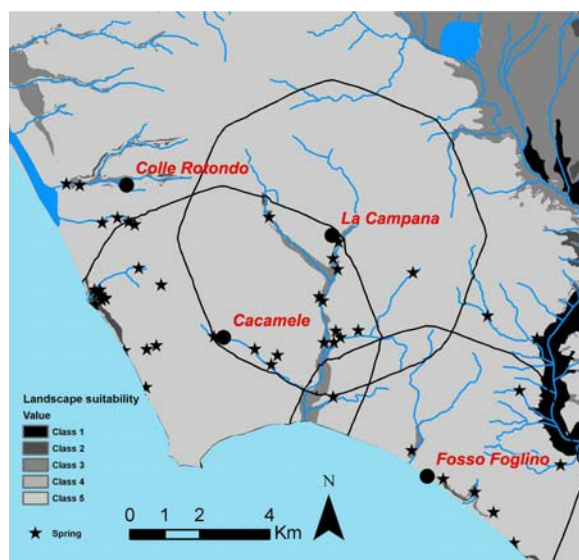


Fig. 6.2. The area within an hour's walk from the settlements of Cacamele, La Campana (site 15010) and Fosso Foglino (site 15243); the landscape is classified by its suitability for agriculture, with the first class representing the most suitable land (for a more detailed definition, see Alessandri 2007; springs are discussed by Ventriglia 1990).

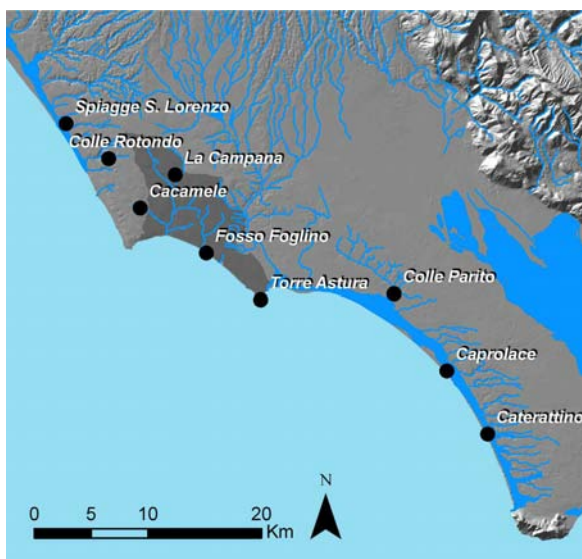


Fig. 6.3. Coastal sites dated to the earliest phase of the Middle Bronze Age (the municipality of Nettuno is highlighted in darker grey).

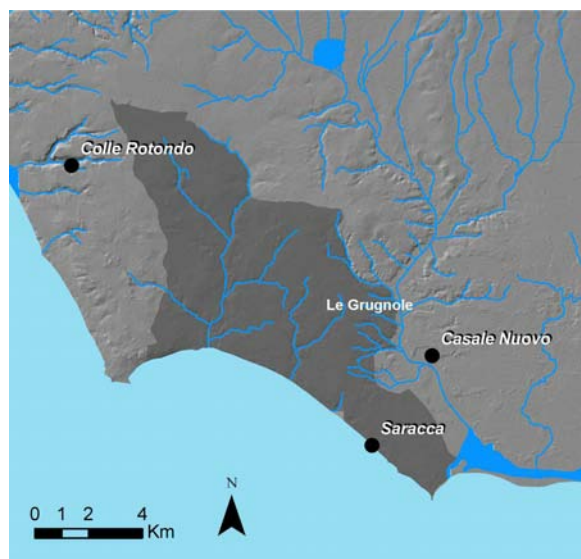


Fig. 6.5. Coastal sites dated to the Recent Bronze Age (the municipality of Nettuno is highlighted in darker grey); the exact provenance of the axe from Le Grugnone (site 15244) is unclear and therefore not indicated on the map.

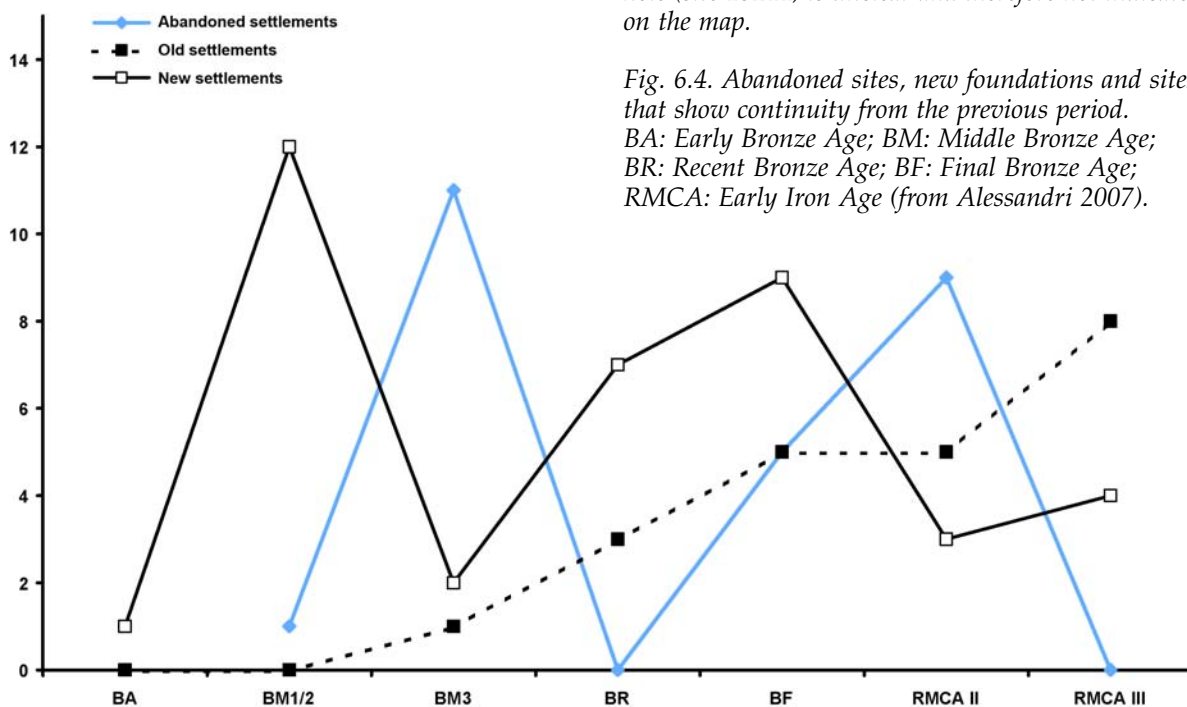


Fig. 6.4. Abandoned sites, new foundations and sites that show continuity from the previous period. BA: Early Bronze Age; BM: Middle Bronze Age; BR: Recent Bronze Age; BF: Final Bronze Age; RMCA: Early Iron Age (from Alessandri 2007).

The territory at one hour's walking distance from each settlement consists mainly of sandy terrain, not very suitable for an intensive type of agriculture. It is therefore likely that an important part of the subsistence strategy would have included hunting, fishing and gathering in the large forests

that probably still characterized this part of the coast. The territory of Nettuno contains no potentially strategic sites of any significance; Cacamele, La Campana and Fosso Foglino are situated in open positions. However, this is in accordance with the general tendency of all contemporary coastal sites;

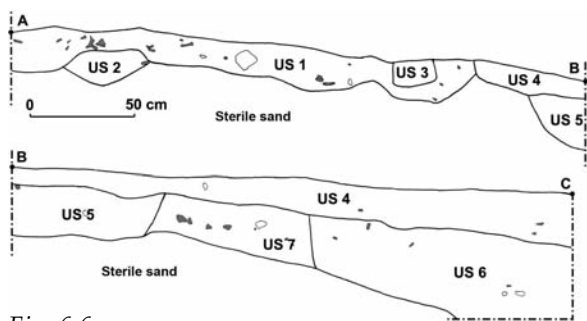


Fig. 6.6. The section of site La Saracca (site 11209); stones are indicated in white, ceramic fragments in grey.

it is the case, for example, at Spiaggio San Lorenzo to the north, and Colle Parito, Caratterino and Borgo Ermada to the south (fig. 6.3).¹⁷⁵

No sites dating to the advanced phase of the Middle Bronze Age are known in the territory of Nettuno. This is in accordance with a general thinning out of the archaeological evidence during this phase in all of central-southern Lazio (fig. 6.4).

RECENT BRONZE AGE

There are, however, several sites from the succeeding phase of the Recent Bronze Age. These have been recorded in the stretch of beach along the *Poligono Militare* (fig. 6.5). In the locality Saracca a number of basins filled with purified clay have been exposed by marine and weather erosion.¹⁷⁶ These were found below a structure dating to the Roman period and near an imposing natural deposit of clay (fig. 6.6).¹⁷⁷ Further to the north, an axe datable to the same phase was found in the locality Le Grugnole. Immediately outside the municipal territory there are the sites of Colle Rotondo, situated more inland and in this phase represented only by the necropolis of Cavallo Morto, and Casale Nuovo, to the east.¹⁷⁸

FINAL BRONZE AGE

In the opinion of the author, the archaeological evidence at the site of La Saracca can only be interpreted when taking into account the archaeological evidence of the immediately following period. In the Final Bronze Age we see, on the same stretch of beach where Saracca is located, two very special sites coming into being, Le Grottaacce and Pelliccione, where settlement debris *stricto sensu* is almost completely absent (fig. 6.7).¹⁷⁹ The vast majority of the ceramic fragments collected during the excavation of Pelliccione in fact belong to jars (*olle*) or large containers, and

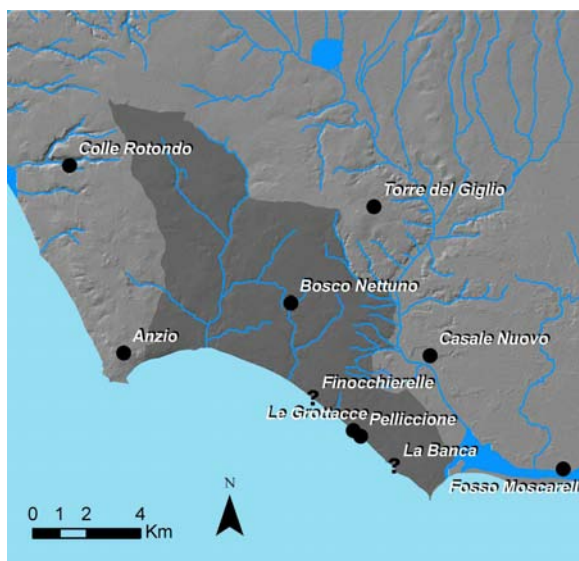


Fig. 6.7. Coastal sites dated in the Final Bronze Age (municipality of Nettuno is highlighted in darker grey); Finocchierelle (site 11216) and La Banca (site 11206) are not dated with certainty.

the small quantity of pottery that could be recovered from the exposure at Le Grottaacce points at a similar situation there. These sites are interpreted as salt extraction sites of the *atelier de briquetage* type.¹⁸⁰ The jars would have been used to boil sea water - whether or not treated first - to extract salt from it.¹⁸¹ In this way a solid substance is formed in the jar, for the extraction of which it is necessary to break the vessel. This explains the enormous accumulation of ceramic fragments that is characteristic of these sites.

It is difficult, at this point, not to consider the settlement of Saracca, the clay basins of which are presumably related to the production of pottery, as in one way or another connected with this process. It is very probable that the jars were produced on the spot, in series, to be used right away. Both the abundant presence of clay along the coast and the presence of numerous fresh water springs nearby have probably been key factors in the choice to locate this type of site in this area. It must be kept in mind, however, that just north of Pelliccione and in the localities of Finocchierelle, La Banca and Bottego other surface concentrations have been found with impasto pottery, very similar to that found at Pelliccione.¹⁸² Unfortunately, repeated surveys have not yielded diagnostic fragments, but also in these cases the ceramics, judging from their clay, thickness and dimensions, appear to belong exclusively to large containers.

The enormous quantity of fragments found in the excavation of Pelliccione but also noted at other sites, tells us much about the considerable quantity of goods that must have been produced here. Moreover, it is clear that the production must have far exceeded the needs of the local community, and that the surplus generated in this way must have entered a well-structured exchange network. Evidence of this are the Mycenaean and Italo-Mycenaean fragments found at Casale Nuovo and Pelliccione that, far from indicating direct contacts between Mycenaean and local peoples, point to the participation of these sites in a regular circuit of exchange between communities. A final site to be mentioned is Bosco di Nettuno, located further inland. The ceramic assemblage of this site consists exclusively of jars (*ollae*) and large ceramic containers.

CONCLUDING REMARKS

Both inland, notably in the Campana area, and along the coast between Nettuno and Torre Astura sites with Middle Bronze Age sherds were recorded. The location of these sites is statistically related to the occurrence of springs. This pattern thins out in the advanced phase of the Middle Bronze Age. In the Recent Bronze Age and especially the Final Bronze Age sites specializing in the production of pottery and salt appear. The archaeological evidence points at surplus production and external contacts and therefore to the existence of an exchange network.

NOTES

- ¹⁶⁷ This site was discussed by A. Guidi on the *XL Riunione Scientifica Preistoria e Protostoria*; while this contribution was still in preparation, the site was also published in *RSPL* 2007, 225/226. This volume also describes a still unpublished site dating to the Middle Bronze Age phase 1 and 2 in the locality San Giacomo (*RSPL* 2007: 221-224).
- ¹⁶⁸ See site cat. nrs. 15078, 15245, 15007, 15010, 15068 and 15248.
- ¹⁶⁹ First published in Alessandri 2007.
- ¹⁷⁰ De Haas/Tol 2005.
- ¹⁷¹ See site cat. no. 15005.
- ¹⁷² See site cat. no. 15243; *RSPL* 2007, 218/219.
- ¹⁷³ See site cat. no. 11202; Alessandri 2007.
- ¹⁷⁴ Alessandri 2007, 165-176.
- ¹⁷⁵ For Spiagge S. Lorenzo: Guidi 1980; Morandini 1999; for a general framework of the Grotta Nuova pottery, Cocchi Genick 2002: 47; for Colle Parito: Alessandri 2007; for Caterattino: Guidi 1981; for a general framework, Cocchi Genick 1995; for Borgo Ermada: Pascucci 1996a; Holstrom et al. 2004.
- ¹⁷⁶ See site cat. no. 11209; *RSPL* 2007, 224/225.
- ¹⁷⁷ See chapter 1.
- ¹⁷⁸ For Cavallo Morto and Colle Rotondo, see Quilici/Quilici Gigli 1984b; Angle et al. 2004; for Casale Nuovo, see Gianni et al. 1984; Angle et al. 1992, 1993; Angle 1996.
- ¹⁷⁹ For Le Grottaacce (site cat. no. 11215), see Piccarreta 1977, site 15; Attema et al. 2003a; for Pelliccione (site cat. no. 11213), see Piccarreta 1977, site 13; Attema et al. 2003a; Nijboer et al. 2006; *RSPL* 2007, 219-221.
- ¹⁸⁰ Pacciarelli 1999, 2000; Nijboer et al. 2006.
- ¹⁸¹ Daire 1994.
- ¹⁸² For the exposure north of Pelliccione, see site cat. no. 15124; for Finocchierelle, see site cat. no. 11216; for La Banca, see site cat. no. 11206; for Bottego, see site cat. no. 15122.

7

Iron Age (10th-7th Century BC)¹⁸³

Peter Attema, Tymon de Haas & Gijs Tol

The Iron Age settlement pattern in southern Lazio is characterized by nucleated settlements on carefully selected locations in the landscape. Over time these villages developed specific functions in the domain of religion, craft specialization, specialized production and exchange. For this reason they are termed proto-urban settlements. Sites of this type would eventually, in the 6th century BC, grow into settlements with urban characteristics. Already in the Iron Age, however, these sites are considered to have been at the top of the settlement hierarchy. Distribution maps show that they were evenly spaced over the southern Latial landscape, from the Alban Hills to the Tyrrhenian coast.

Within the territories of these proto-urban Iron Age sites minor rural sites can be identified that either constitute hamlets or isolated farmsteads. This is a type of settlement dynamics which land-

scape archaeologists call 'rural infill'. Minor sites in the territory of larger sites are usually considered to have been dependent on the latter. The formation of proto-urban settlements and the process of 'rural infill' are in Italian archaeology referred to as proto-urbanization, a process already foreshadowed by the settlement dynamics of the final stages of the Bronze Age. In southern Lazio the pattern of proto-urban settlements is exceptionally fine-grained: territories of individual centres were small, generally not exceeding 50 km².¹⁸⁴ This implies that a close socio-economic relation probably existed between proto-urban sites and minor rural sites.¹⁸⁵

Figure 7.1 shows the total numbers of certainly and possibly occupied sites in the Nettuno area in each period. This histogram seems to indicate a steady increase in the number of sites from the Early Iron Age to the 7th century BC. This sup-

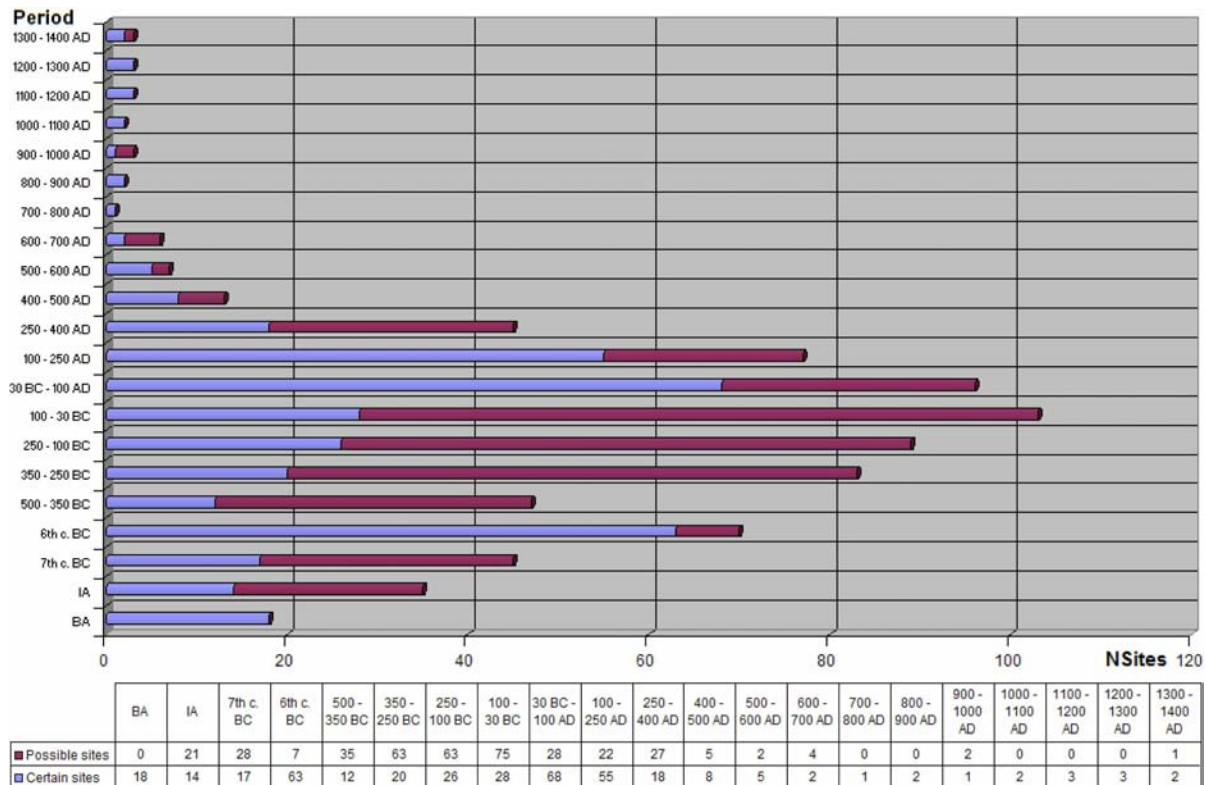
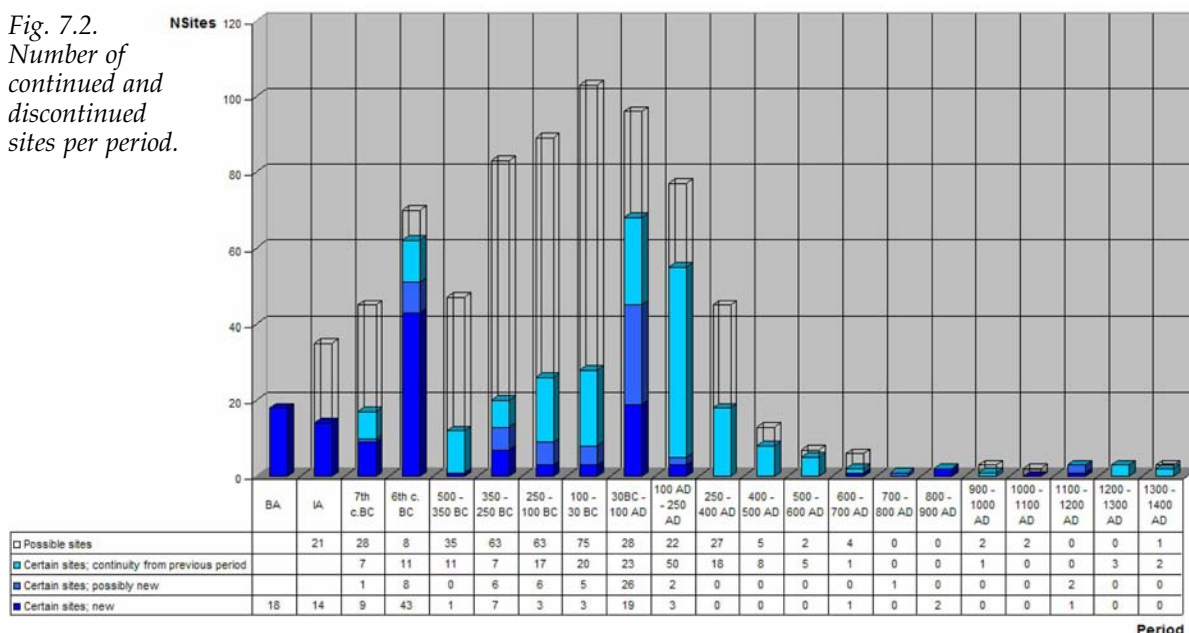


Fig. 7.1. Number of certainly and possibly occupied sites per period.

Fig. 7.2.
Number of
continued and
discontinued
sites per period.



posed increase is, however, mainly based on the *possible* sites per period. The number of *confirmed* sites increases only slightly from 14 to 17. As stated in chapter 3, the large number of possible sites in our dataset can be explained by the poor diagnostic potential of the impasto shards from the survey. The specific fabrics of the impasto shards do indicate, however, that this increase occurred predominantly in the 7th century BC. This is in line with developments elsewhere in *Latium Vetus*.¹⁸⁶

Figure 7.2 shows that sites founded in the Early Iron Age often continued into the 7th century BC, while a fair number of new sites were founded in the 7th century BC. Sites are evenly distributed along all river valleys and in the areas between them, but it is noteworthy that a certain degree of clustering takes place in the area of Campania (fig. 7.3).

For a meaningful analysis of the distribution of the minor Iron Age sites recorded in the *Carta Archeologica*, the two larger settlements *Satricum* and *Antium* are crucial as points of reference. For both sites, a combination of funerary and settlement evidence indicates their proto-urban status.¹⁸⁷ Ancient *Satricum* is located on a tuff hill ca 12 km inland along the river Astura at modern Borgo le Ferriere. The protohistoric settlement of *Antium* is located near the coast on a *macco* elevation called Le Vignacce. At *Satricum* the earliest archaeological remains are securely dated to the late 9th century BC, while those at *Antium* go back to the Final Bronze Age.¹⁸⁸

The distribution of rural sites indicates that river valleys played an important role during protohistory as overall structuring elements in the organization of the landscape (fig. 7.3). Locations chosen for habitation were, however, mainly those where natural springs were present.¹⁸⁹

In the territory of *Antium*, the main structuring elements in the landscape would have been the Loricina river and its tributaries, while in the case of *Satricum* the Astura river connected the town to the sea. The minor Iron Age sites that arose in the Loricina and Astura valleys and along their tributaries had, in our view, a socio-economic relation with the proto-urban centres of *Antium* and *Satricum*. By the Archaic period, the rural site patterns can be more clearly related to these two towns, as there is a relatively empty zone between these two clusters. Following the territorial model presented in figure 8.1, each of these settlements would indeed have controlled a part of their surrounding landscape. We may surmise that this territorial division was already developing in the course of the Iron Age.

Figure 7.3 shows that the highest concentration of minor sites is found along the Loricina valley and especially in the area of Campania that already showed a considerable concentration of settlement in the Bronze Age. This early occupation of the Loricina valley is consistent with the Final Bronze Age developments at *Antium* noted above. In the course of the Iron Age more sites were established along the Loricina south of Campania. Some of these sites can be securely dated to the

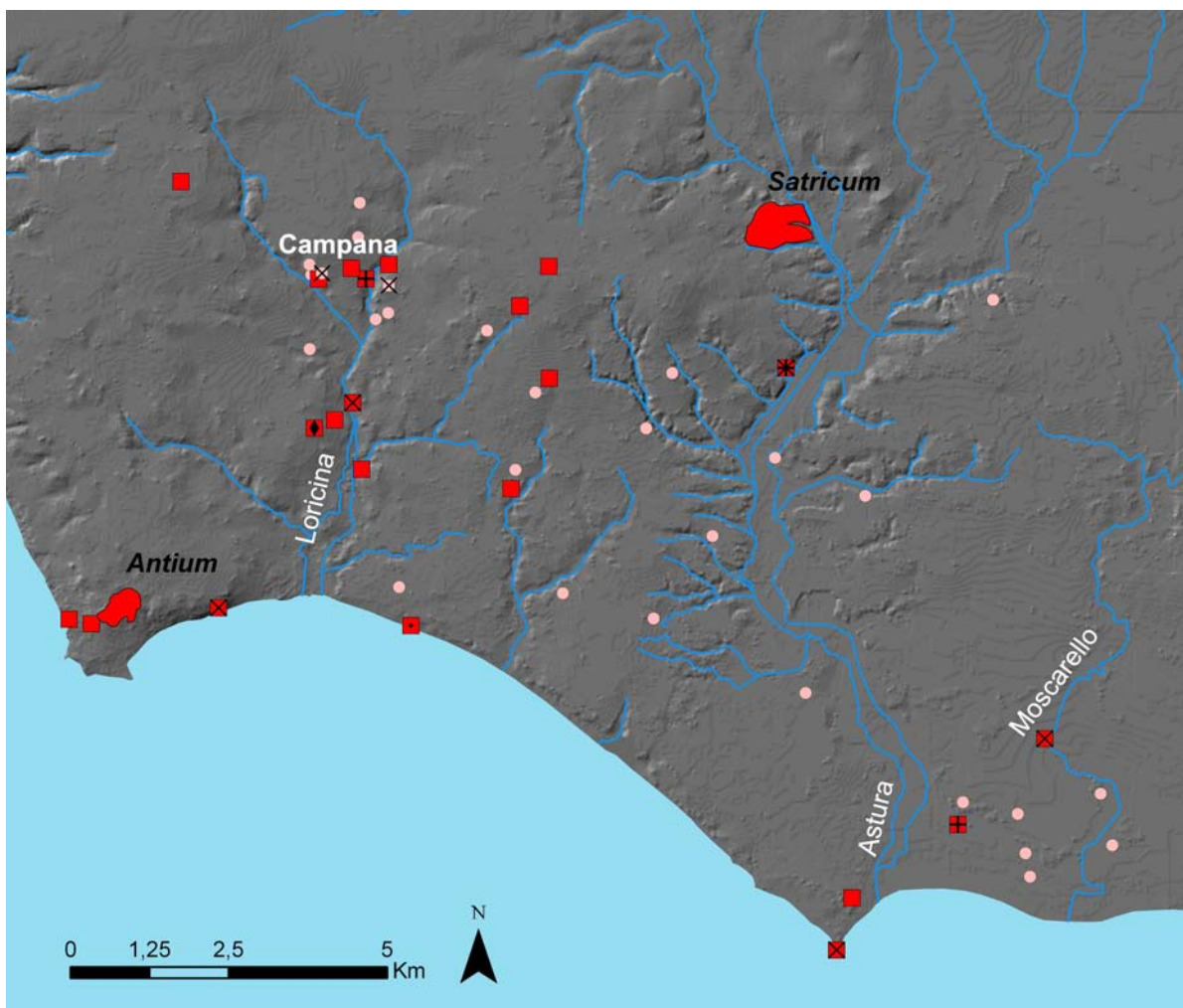


Fig. 7.3. Distribution of Iron Age sites (red squares: certainly occupied; pink dots: possibly occupied; diamonds: Etrusco-Corinthian pottery; X: bucchero; +: impasto rosso; black dot: industrial site of Depuratore).

7th century BC on the basis of the presence of bucchero,¹⁹⁰ Etrusco-Corinthian pottery fragments¹⁹¹ and/or *impasto rosso*¹⁹² (fig. 7.3).¹⁹³ The occurrence of these fine wares in rural contexts is important, as it indicates a relation with the nearest proto-urban centre (*Antium*) where this pottery type was available. The distribution map also shows how sites evolved along the tributaries of the Loricina.

Although most of these scatters in the Loricina valley and its tributaries can only be dated roughly to the protohistoric period, density maps give a good indication for the extent and intensity of occupation. By way of example, we show a density map of protohistoric shards found in the part of the Campana area that is located in the area between

the fork of the Fosso del Quinto and the Fosso dello Sbirro. Figure 7.4 shows how, against a general thin spread of shards (indicated in yellow), clear concentrations stand out (the darker colours) with sites indicated as red squares. The widespread occurrence of low-density scatters may indicate that more sites that are not so clearly visible on the surface were present in the area. This would suggest that small agglomerations of (farm-) huts existed in this period, a settlement form that may go back to the Middle Bronze Age (see chapter 6). However, due to the poor diagnostic value of the shards, it is hard to say whether this type of settlement was continuous or discontinuous. Compared to the lower densities recorded for other areas of the *Carta Archeologica*, Campana stands out as a favourite area for settlement in protohistory.

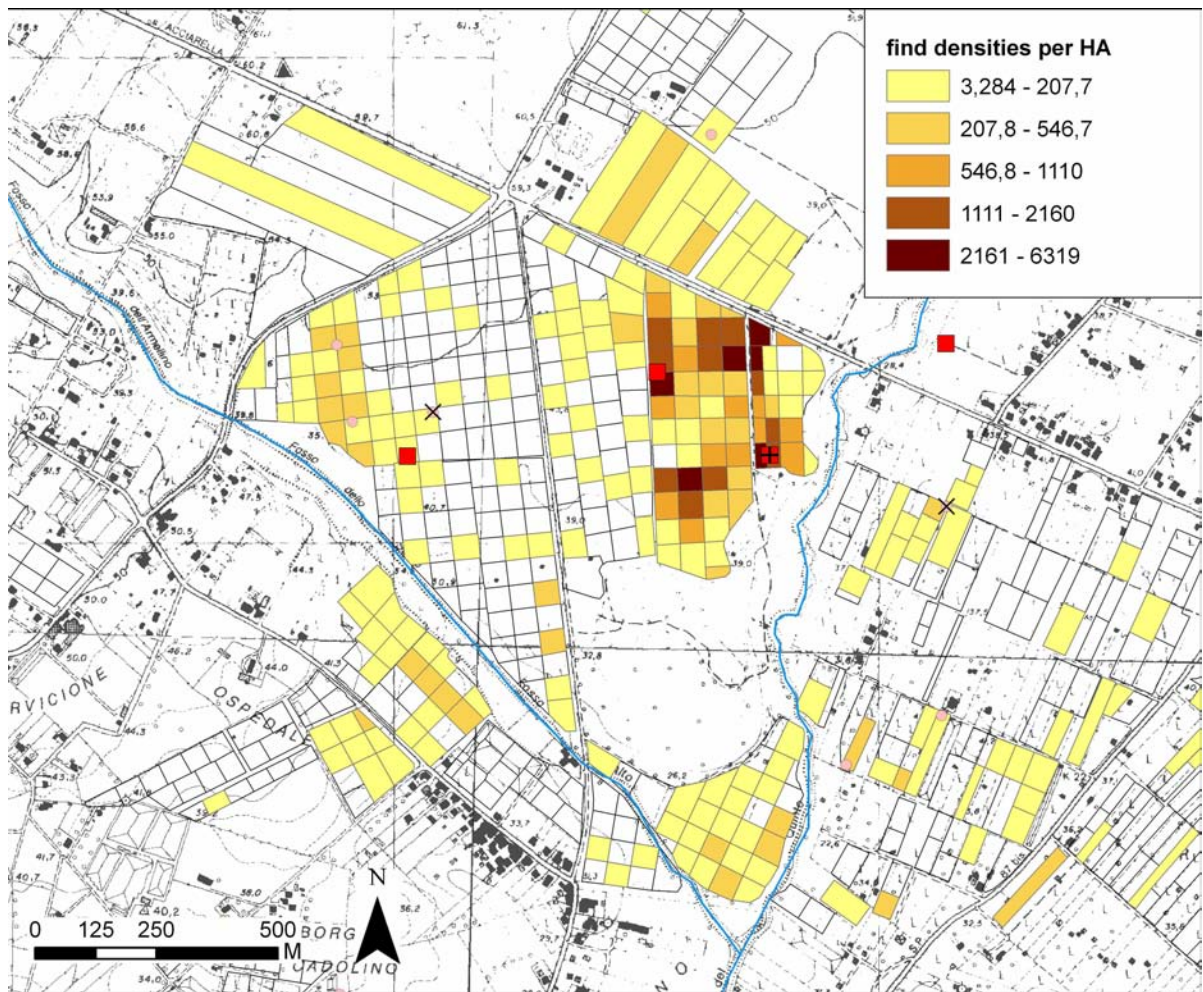


Fig. 7.4. Density of Bronze Age and Iron Age shards and location of Iron Age sites in the area of Campana (red squares: certainly occupied; pink dots: possibly occupied; X: bucchero; +: impasto rosso).

Elsewhere in the survey area small scatters of pottery indicate instead the existence of isolated huts or special activity areas that were less long-lived.

Of particular interest is the evidence for an 'industrial' site at the location of Depuratore¹⁹⁴ in modern Nettuno, attesting to a further functional differentiation in the Iron Age settlement pattern. The pottery collected here in a soil profile caused by marine erosion consisted almost exclusively of shards of handmade coarse impasto pottery, mainly belonging to rather large jars (*olle*) dating to the 8th and 7th centuries BC. Like the Bronze Age site 11213, this site can perhaps be interpreted as a salt working site of the 'briquetage' type (cf. chapter 6). This site would probably have belonged to the sphere of influence of *Antium*.

Whereas only one Bronze Age site is known in the Astura valley, a considerable filling up of the area with small sites must have occurred in the course of the Iron Age (fig. 7.3). The only evidence is, however, formed by a very few pottery shards from each site that are moreover hardly diagnostic. Some shards of *impasto rosso*, however, can be securely dated to the 7th century BC, and on two sites bucchero shards were found.¹⁹⁵ Figure 7.3 also shows that a number of small sites were established in this period in the Moscarello valley, east of the Astura valley. Just as we have 'rural infill' in the Loricina valley related to *Antium* as the nearest proto-urban settlement, we may connect the sites in the Astura and Moscarello valleys to *Satricum* as the nearest proto-urban settlement there.

Finally we would like to emphasize the role of the river Astura as the main communication route between *Satricum* and the coast. On three locations near the mouth of the Astura, low quantities of Iron Age material have been found.¹⁹⁶ Although this may not be sufficient to allow us to postulate a coastal settlement, it does indicate that human activity took place there.¹⁹⁷ The settlement known today as Astura may thus have started much earlier than the Roman wall remains recorded by Piccarreta would suggest.¹⁹⁸ Given the fact that the dune landscape is a highly dynamic environment, more evidence for Late Iron Age and Archaic presence may lie hidden below the sand. On a more general level we see a reoccupation of the coast in the course of the Iron Age, following a period of abandonment in the Early Iron Age.

CONCLUDING REMARKS

The *Carta Archeologica* shows that the number of rural sites increases during the Iron Age. This is a development that occurs simultaneously with the growth of the proto-urban centres of *Antium* and *Satricum*. By the 7th century BC, these settlements are considered to have become the socio-economic focal points in the landscape under study. The rural site pattern can be characterized as dispersed in the river valleys and areas between them. Only in the Campania area can a certain degree of clustering of rural sites be observed. This was already a characteristic feature of this area in the Bronze Age.

NOTES

- ¹⁸³ In this outline of Iron Age settlement development, we have not broken down the data set according to the Latial chronological periods I-IVB as the resolution of the ceramic chronology of the sites from the survey does not allow this. When sites were allocated to the 7th century BC (Orientalizing period) this was done on the basis of the presence of *impasto rosso* and/or bucchero and/or Etrusco-Corinthian pottery. Such an allocation roughly corresponds to *Satricum* phases IIA and IIB (725-600 BC) (Maaskant Kleibrink 1992a, 15).
- ¹⁸⁴ It appears that, whilst the areas of high-ranking Etruscan proto-urban centres fall within the estimated size categories of 100 to 200 ha and 50 to 100 ha, those in Lazio - with three exceptions in the Tiber and Liri valley - can generally be classified as falling within size categories of 20 to 50 ha and 1 to 15 ha (Pacciarelli 2000, fig.7).
- ¹⁸⁵ Examples of the development of proto-urban settlements in southern Lazio and related 'rural infill' have been commented on by various authors, both in general terms (Pacciarelli 2000) and in case studies concerning individual settlements and their territories (Attema 1993; Attema/Van Leusen 2004; Attema 2005).
- ¹⁸⁶ See e.g. Attema/Van Oortmerssen 2000 on the territory of *Lanuviium*.
- ¹⁸⁷ For *Satricum* see Maaskant Kleibrink 1987, 1992a/b; Waarsenburg 1994. For *Antium* see Gierow 1961; De Meis 1984; Lugli 1940; Chiarucci 1989; Brandizzi Vittucci 2000.
- ¹⁸⁸ Alessandri 2007, 74-82.
- ¹⁸⁹ Cf. chapter 6 of this volume in which Alessandri observes a statistical relation between the location of proto-historical sites and the presence of natural springs.
- ¹⁹⁰ See site cat. nrs. 15005, 15108 and possibly 15127.
- ¹⁹¹ See site cat. no. 15153.
- ¹⁹² See site cat. no. 15068.
- ¹⁹³ The bucchero and Etrusco-Corinthian shards may point to the existence of rural tombs. It is not usual to find these fine wares in rural domestic contexts in the Pontine region and their distribution seems to have been exclusively restricted to proto-urban and - outside settlements - ritual/mortuary contexts.
- ¹⁹⁴ See site cat. no. 15125.
- ¹⁹⁵ See site cat. nrs. 11297 and 11355.
- ¹⁹⁶ See site cat. no. 11202.
- ¹⁹⁷ On analogy with the Etruscan proto-urban centres, imported objects found in the graves and votive deposits at *Satricum* may have arrived there via an transshipment harbour located at the mouth of the Astura, from where such goods found their way upriver to the main settlement.
- ¹⁹⁸ Piccarreta 1977, 21.

8

Archaic Period (6th Century BC)

Peter Attema, Tymon de Haas & Gijs Tol

In *Latium*, as in *Etruria*, the proto-urban Iron Age villages transformed during the 6th century BC into settlements with urban features such as fortifications, early forms of urban planning and stone architecture.¹⁹⁹ Roads probably became an important part of the regional infrastructure, connecting these urban settlements. Using the spatial model developed by Thiessen, we may attribute to each urban settlement a hypothetical territory (*fig. 8.1*).²⁰⁰

In the coastal zone, fortifications mostly consist of earthworks of the bank and ditch (*agger e fossa*) type. In combination with natural landscape features such as deeply incised river valleys or steep sides of hills, these constructions protected large settlement areas.²⁰¹ A particularly imposing example of this can still be found at *Ardea*, but *Satricum* and *Antium* also had impressive earthworks during this period.²⁰² The introduction of forms of urban planning is evident at *Satricum*, where the building blocks of houses and the temple were aligned according to a fixed orientation.²⁰³ No evidence for urban planning or stone architecture has yet been unearthed at *Antium*, however.

At *Satricum* there is also evidence for paved streets that were probably connected to a developing regional infrastructure.²⁰⁴

The introduction of houses and temples on stone foundations and with tiled roofs formed a revolution in building practices. These more durable buildings replaced the traditional wattle and daub hut structures with thatched roofs. It has been assumed that the proto-urban villages during the 6th century BC developed into autonomous, small but self-confident Latin 'city states'.²⁰⁵ Their central position in the surrounding territory seems evident from the presence of elaborately decorated temples, such as have been reconstructed for *Satricum*. In these temples town dwellers as well as the rural population could worship the gods and dedicate their gifts. A remarkable phenomenon is formed by the rich contents of the votive deposits known from this period, indicating that wealth was accumulated in the central settlements. It is likely that these settlements depended to a certain degree on food production in the countryside in order to function properly, although most town dwellers would have been involved in agricultural production as well. The increase in the number of rural sites found in the survey, as discussed in the next paragraph, seems to fit in with the development of the urban settlements.

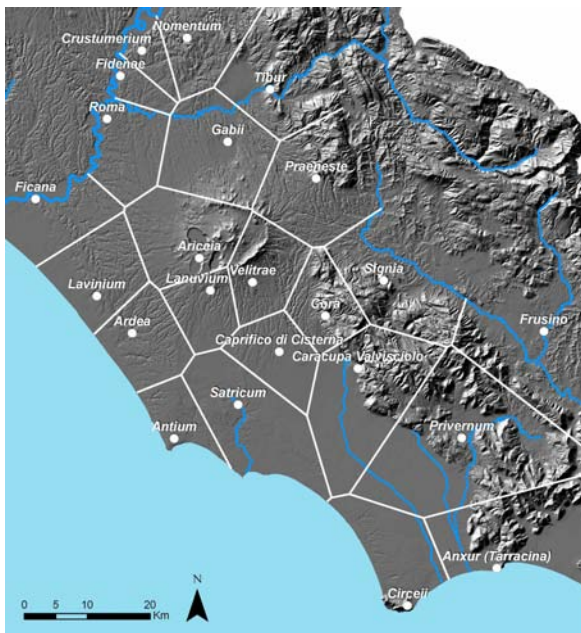


Fig. 8.1. Main Archaic sites in southern Lazio (territories constructed by Thiessen polygons).

Figure 7.1 shows a sharp increase in the number of confirmed sites in the 6th century BC, a development that is paralleled only in the early Imperial period. Figure 7.2 shows that most of these sites were newly founded. The increase in rural sites is especially evident in the upper Astura valley, just south of *Satricum*, emphasizing the growing importance of this settlement. Most of the sites in the Astura valley are within a distance of ca 6.5 km from *Satricum*, but the areas along the tributaries of the Astura became more densely occupied as well (*fig. 8.2*). This suggests that this river played an important role in settlement location as a source of water and a means of transportation of goods to and from the coast. The presence of Archaic rural sites in the Moscarello valley indicates that *Satricum's* catchment area extended well beyond the Astura valley. Most of the sites are

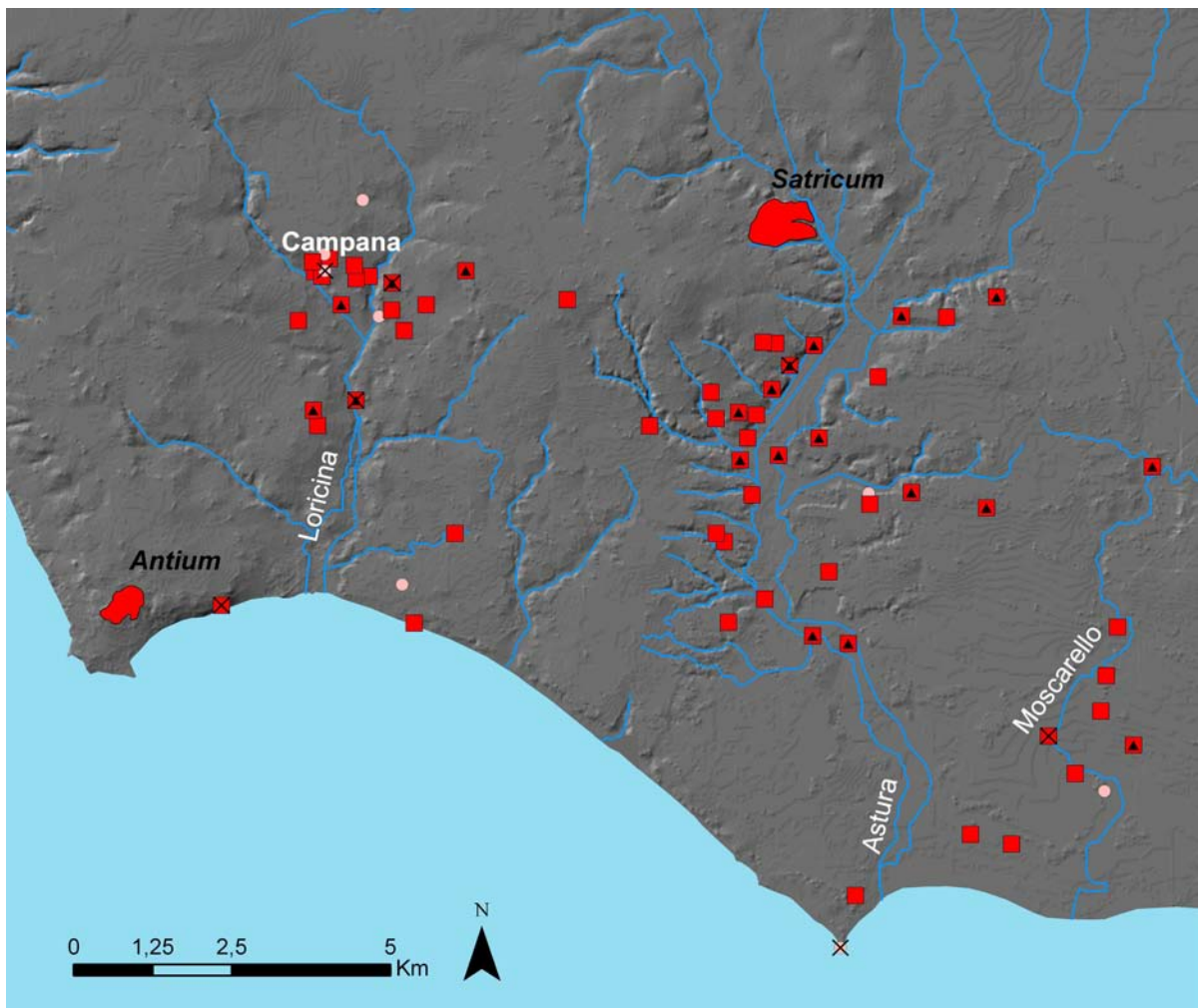


Fig. 8.2. Distribution of Archaic sites (red squares: certainly occupied; pink dots: possibly occupied; X: buccero; triangles: Archaic tile).

located upstream; the coastal area is largely abandoned, except for the Depuratore site at Nettuno that was occupied until the end of the 6th century BC and may have kept its 'industrial' function.²⁰⁶ Similarly, a few Archaic shards indicate that human activity continued at the mouth of the Astura.

In the catchment area of *Antium*, there is a strong continuation of occupation in the area of Campana where sites, as they did in the foregoing period, cluster between the fork of the Fosso dello Sbirro and the Fosso del Quinto. These rural sites are located at a distance of ca 6 km from *Antium* and we assume a close socio-economic relation between this area and *Antium*. Unfortunately we know only very little about sites nearer to *Antium* due to the impossibility to survey its immediate surroundings (cf. chapter 3).

At several rural sites red-fired roof tiles have been recorded. The homogeneity in form and fabric of these tiles suggests a limited number of production places. We assume that organised production of tiles (and pottery) took place in the towns of *Antium* and *Satricum* and that these centres functioned as the providers of ceramic products.²⁰⁷ All rural sites, except for Depuratore, are interpreted by us as isolated farmsteads or small hamlets.

A good example of what we interpret as an Archaic hamlet is site 15115. This site is located on one of the inland beach ridges just north-west of the modern village of Castelverde. Here, in an area of about 150 x 100 m red-fired Archaic shards were collected in ploughed fields and vineyards

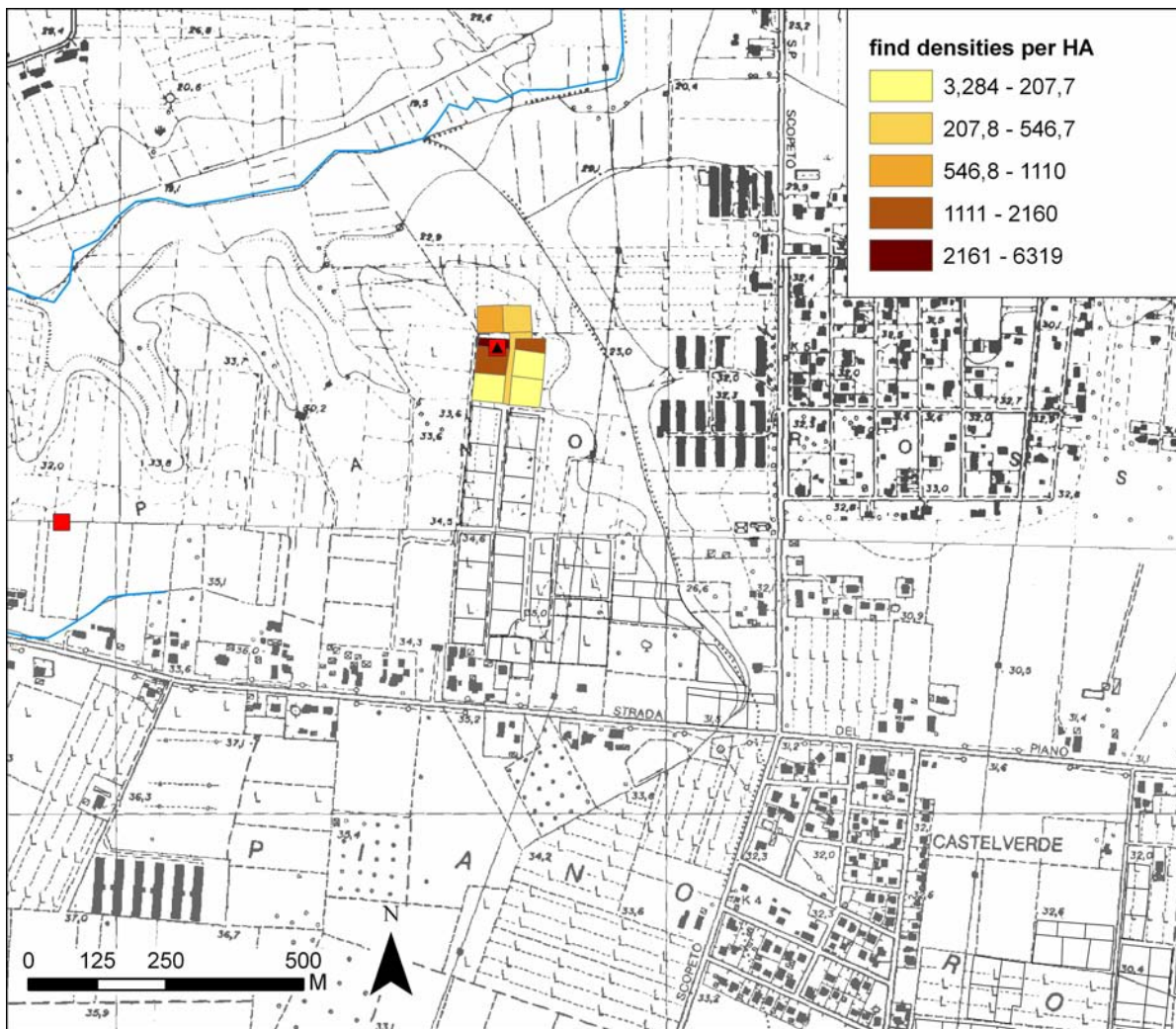


Fig. 8.3. Density of Archaic ceramics at site 15115, interpreted as a hamlet/cluster of farmsteads (red squares: certainly occupied; triangle: Archaic tile).

with densities varying between 19,5 and 38,1 shards per 100 m² (fig. 8.3). The artefact distribution could be demarcated accurately because the site had not been built over in the following post-Archaic and Roman periods. The extent and the density of the artefact distribution suggest that we are here dealing with more than one farmstead. Augering at the site indicated that unfortunately no stratigraphy remained, implying that over time all shards had been ploughed to the surface.

CONCLUDING REMARKS

The Archaic period saw a clear increase in the number of (newly founded) rural sites. Their dis-

tribution in the Astura valley and along its tributaries underlines the growing importance of *Satricum* as a central settlement, while the distribution of sites in the Loricina valley indicates the same for *Antium*. Variations in the size of the sites suggest that both isolated farmsteads and hamlets occurred in rural areas. Pottery production is assumed to have occurred in the central settlements, as attested at *Satricum*. This implies a close economic relation between central settlement and surrounding countryside, and it would have been only one of the many socio-economic and religious functions of the central settlements. In the case of *Satricum*, the river Astura was probably an important transport route connecting the town to the coast, but the evidence for a settlement at the

mouth of the Astura remains poor. More in general, rivers are likely to have been important as means of transport and for the provision of fresh water.

NOTES

- ¹⁹⁹ The Archaic period as it used here roughly corresponds to settlement phase IIIA, IIIB and IV at *Satricum* (590-490 BC) (Maaskant Kleibrink 1992a, 15-16).
- ²⁰⁰ See Bouma/Van 't Lindenhout 1996 for diachronic maps.
- ²⁰¹ The extent of the settlement area of *Satricum* in the Archaic period is estimated at 58 ha, that of *Antium* around 26; cf. Guaitoli 1984.
- ²⁰² For *Ardea*, see Guaitoli 1977; Di Mario 2007; for *Satricum*, see Maaskant Kleibrink 1987; for *Antium*, see Lugli 1940; Guaitoli 1981.
- ²⁰³ Kleibrink 1997.
- ²⁰⁴ Maaskant Kleibrink 1992a, 16 & chapter 3.
- ²⁰⁵ Bouma/Van 't Lindenhout 1996.
- ²⁰⁶ See site cat. no. 15125; Tol 2003.
- ²⁰⁷ Nijboer 1998; Mater 2005, 97/98. However, a probable 7th/6th centuries BC pottery production site has been detected in our most recent surveys; this indicates that pottery production occurred in the countryside as well.

9

Post-Archaic Period (500-350 BC)

Peter Attema, Tymon de Haas & Gijs Tol

The 5th and 4th centuries BC were a period of socio-economic and political change in southern Lazio. As the transitional period between the Archaic period with its flourishing towns and the establishment of Roman colonies in the 4th century, it has been labelled the post-Archaic period.²⁰⁸ Whereas the Archaic towns are generally viewed as largely autonomous settlements, the colonies fell under Roman rule and were either new foundations (*Norba* in the Monti Lepini) or existing settlements (*Antium*, *Satricum*). The transition from the Archaic

to the Roman landscape was, however, a gradual process and Roman rule, as the ancient sources assert, was not established overnight.²⁰⁹ In fact, the 5th and the first half of the 4th century BC are depicted as a period of frequent fights between Latins, Romans and Volscians. In the historical sources, *Antium* is described as a Volscian fortified settlement, and the archaeologically observed enlargement of the rampart (*agger*) is often attributed to Volscian presence.²¹⁰ At *Satricum*, a sizeable cemetery in the south-western part of the former

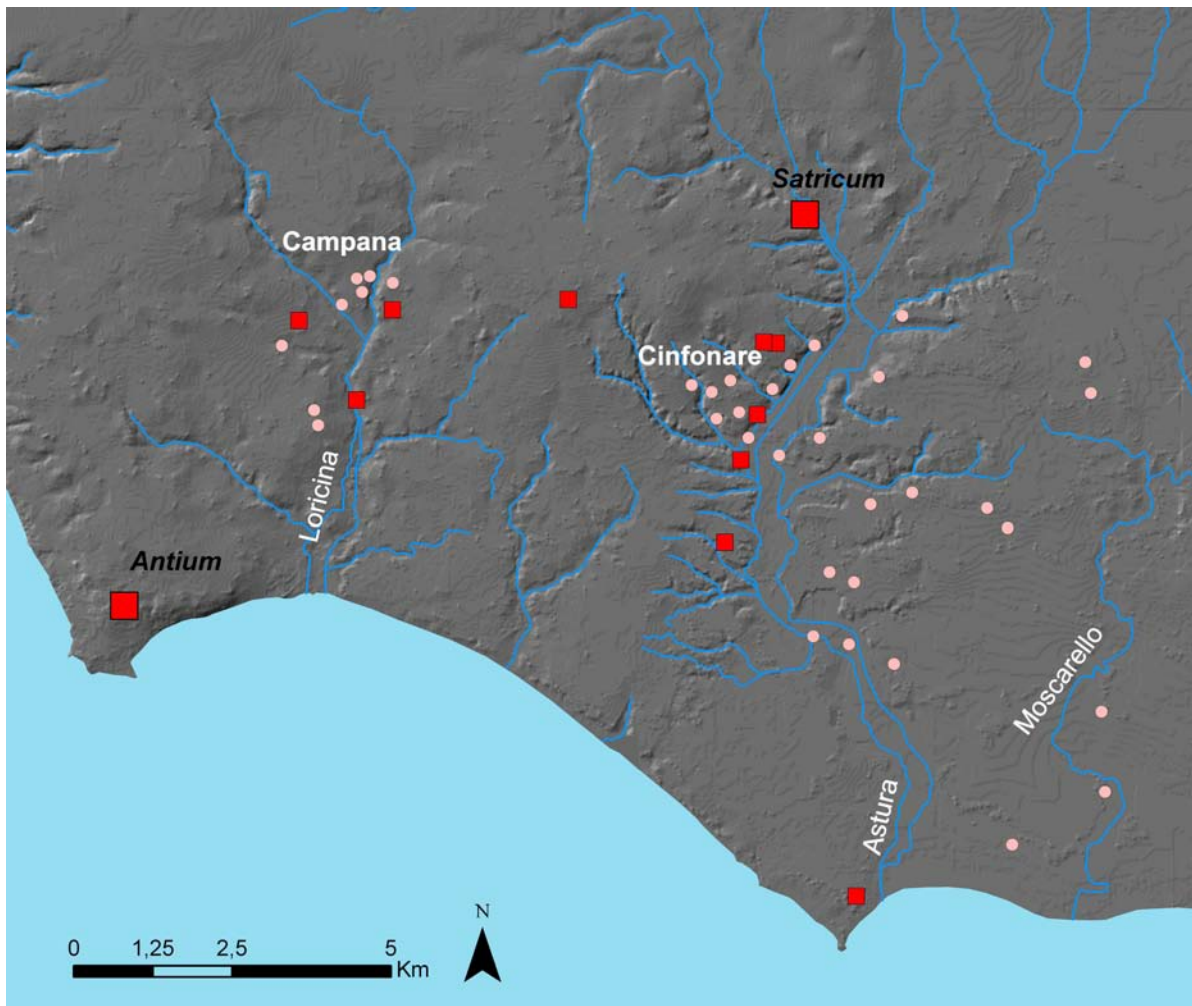


Fig. 9.1. Distribution of post-Archaic sites (red squares: certainly occupied; pink dots: possibly occupied).

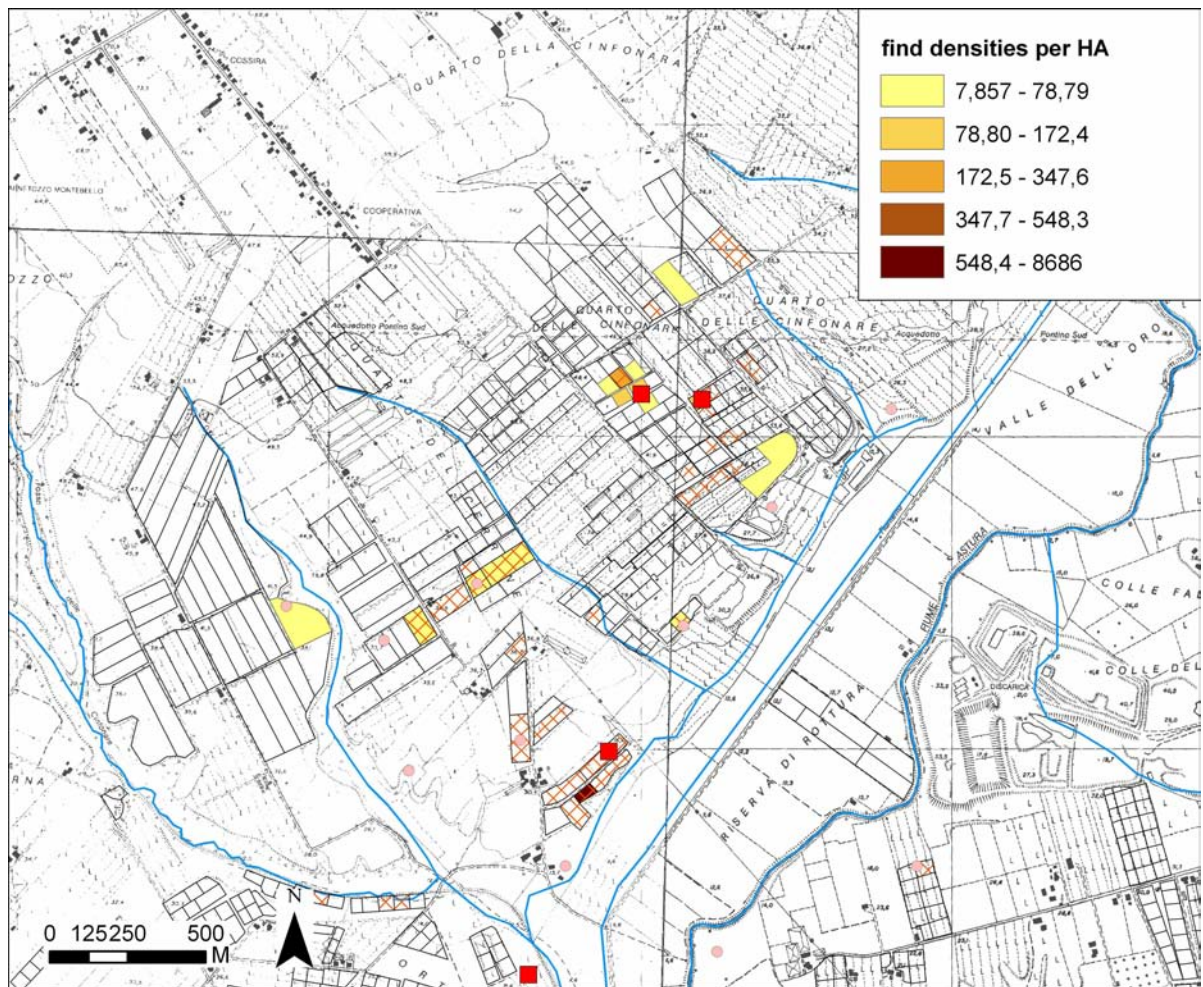


Fig. 9.2. Density of *impasto chiaro sabbioso*, presence of post-Achaic tile (crosshatches) and post-Achaic sites (red squares: certainly occupied; pink dots: possibly occupied) in the area of Quarto delle Cintonare.

Archaic settlement area, a small cemetery on the acropolis and tombs along the northbound monumental road as well as several structures in the lower settlement testify to the town's continued existence.²¹¹ The settlement, however, contracted and possibly split up into various smaller nuclei.²¹² Whether the ethnic composition of the settlement in this period was Latin, Volscian or a mix of both has been debated.²¹³ It has even been suggested that *Satricum* ended up in the sphere of influence of *Antium*.²¹⁴

Although knowledge of the common pottery of this period is increasing due to the excavation of various post-Achaic contexts at *Satricum*, the period remains notorious for the lack of specifically diagnostic forms and fabrics. Post-Achaic *impasto chiaro sabbioso*, with its whitish fabric, con-

tinues well into the Republican period. This means that the post-Achaic period is hard to detect in survey assemblages, especially on multi-period sites. Figure 7.1 shows a substantial decrease in the number of rural sites, while figure 7.2 indicates that almost no new sites were founded. Due to the dating problems mentioned above, however, the size of the decrease is unknown.²¹⁵ If we rule out all unconfirmed sites the decrease in rural occupation is dramatic, as we would end up with only 12 sites. In that case we could indeed speak of a socio-economic crisis in the post-Achaic countryside. If, however, we include all unconfirmed sites (35), we must conclude that there was a large degree of continuity.²¹⁶ A valid statement on the degree of continuity or discontinuity in the post-Achaic rural landscape is therefore difficult to give.

If we look at the distribution of sites (fig. 9.1), it is clear that, although no new areas were settled in this period, some sites at least were definitely still occupied both in the Astura valley and the Campana area, and especially in the Astura valley there remain many possibly occupied sites. Although there are only a few sites that are certainly post-Archaic, a more detailed look at the distribution of possibly post-Archaic finds may hint at a more densely settled countryside. Figure 9.2, as an example, shows the distribution of so-called *impasto chiaro sabbioso* and post-Archaic tile fragments in the Quarto delle Cintonare area. Four sites in this area can certainly be dated to the post-Archaic period on the basis of diagnostic shapes, while at least five 'possible' sites are embedded in an overall distribution of *impasto chiaro sabbioso* and post-Archaic tile fragments. It seems therefore likely that these 'possible' post-Archaic sites were occupied as well, although they themselves lack diagnostic post-Archaic artefacts. Rather than to a situation of crisis, these observations would point to stagnation and material impoverishment in the post-Archaic period. Remarkable is the presence of wasters of tile and of *impasto chiaro sabbioso* pottery in the Quarto delle Cintonare area, indicating that ceramic production took place in the countryside. This possibly indicates a loosening of the economic relation of rural sites in the Astura valley with *Satricum*, which contracted during this period. We envisage the post-Archaic sites as very modest subsistence farmsteads, some of them perhaps with roofs covered with white roof tiles. This must have made them look quite different from their Archaic predecessors with their dark-red roof tiles. As the distribution of rural sites in the Quarto delle Cintonare area shows, farmsteads are still found at relatively short distances from each other, scattered in the small valleys of the tributaries of the Astura and along the Astura itself.

CONCLUDING REMARKS

During the post-Archaic period the town of *Satricum* contracted and the number of rural sites in its catchment area seems to have decreased. The situation at *Antium* is less clear, but also in the countryside around *Antium* the number of rural sites decreased. How dramatic this decline was is uncertain, given the large number of unconfirmed sites. The period can probably be characterized as one of stagnation and material impoverishment. The distribution of rural sites suggests that the ties between town and countryside were

loosened. These developments may be linked to the unstable political situation described in the ancient sources.

NOTES

- ²⁰⁸ Attema 1993, 91; Gnade 2000, 2.
²⁰⁹ Attema/Van Leusen 2004.
²¹⁰ A number of small fortified settlements in the surroundings of *Antium* are placed in the same historical context; see Quilici/Quilici-Gigli 1984b; Jaia 2003.
²¹¹ Gnade 2000, 2003, 2007.
²¹² Kleibrink 1997; see also Gnade 2007.
²¹³ See the various contributions in Quilici-Gigli 1992; see also Gnade 2002.
²¹⁴ Stibbe in Gnade 1992, 452. Gnade is, however, not convinced of this hierarchical relation (Gnade 2000, 128).
²¹⁵ Only 6 out of 12 confirmed post-Archaic sites could be dated on the basis of parallels in form, the remaining sites were dated on the basis of studies of their fabric.
²¹⁶ Revisits of sites recorded by Piccarreta have led to the tentative hypothesis that many Roman Republican sites may contain a post-Archaic phase.

10

Republican Period (350-250 BC)

Peter Attema, Tymon de Haas & Gijs Tol

During the second half of the 4th century and the first half of the 3rd century BC, Roman rule was established more firmly in the Pontine region. With the construction of the *via Appia* in 312 BC an important new route through the Pontine plain was created. A land division scheme was possibly already implemented over a large part of the Pontine plain before 312 BC, reclaiming this area for agricultural purposes.²¹⁷ At the same time Roman colonies were firmly established in the Monti Lepini, while in the coastal area Roman rule was represented by the colonies of *Terracina*, *Circeii* and *Antium*.²¹⁸

Satricum is also reported to have become a Roman colony during this period, but it is likely

to have been of modest size compared to the Lepine colonies.²¹⁹ Although its sanctuary still existed, few indications for substantial Roman occupation have been found on the site itself in spite of extensive excavation.²²⁰ An additional indication for the decreasing importance of *Satricum* during the Republican period is the thinning out of the rural settlement pattern to the south of the site. We have to be cautious here, however, since large parts of the territory around *Satricum* were levelled in the 1960s and little information is available on the type of small rural farmsteads that were characteristic for this period.²²¹ A survey in 1991 to the east of *Satricum* towards modern Borgo Montello, where a number of hills along

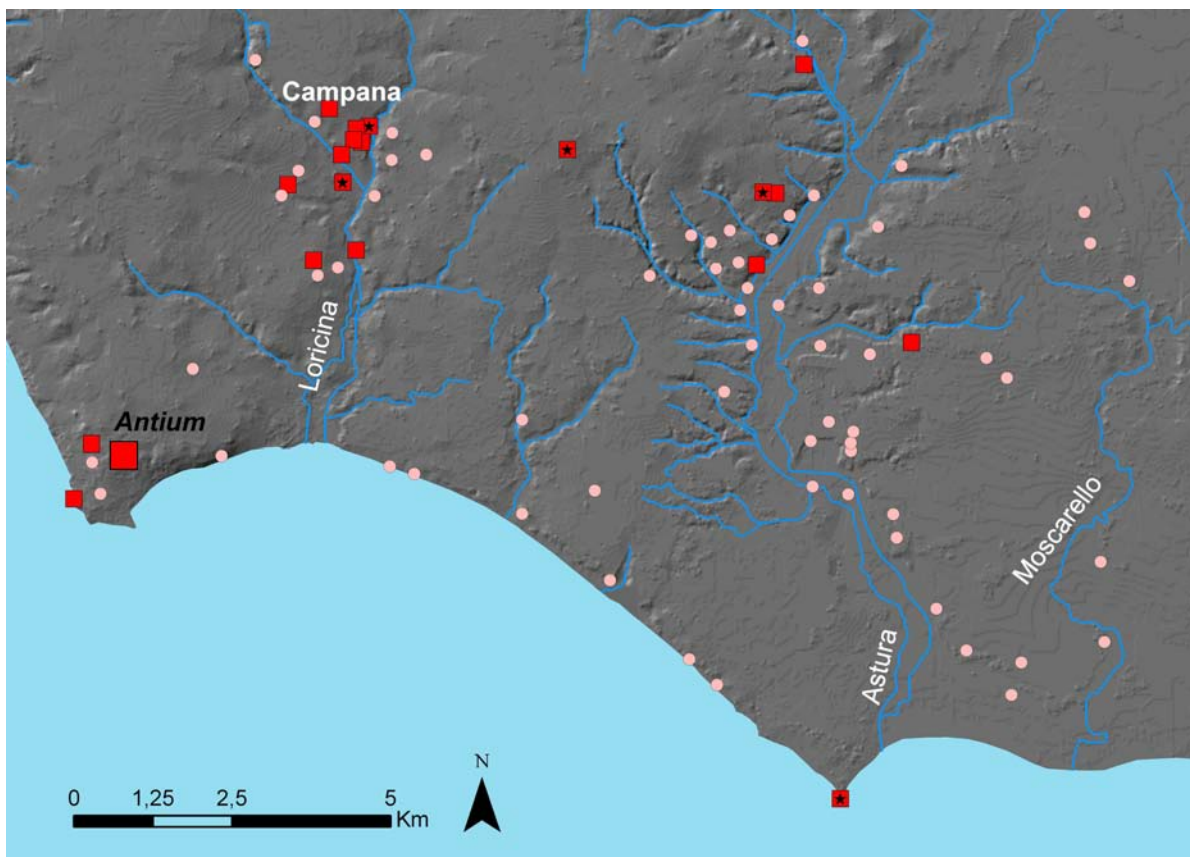


Fig. 10.1. Distribution of Republican sites (350-250 BC; red squares: certainly occupied; pink dots: possibly occupied; black stars: petites estampilles).

the Astura valley were at that time still preserved, produced evidence for small rural sites of the Republican period.²²² It is nonetheless safe to conclude from the available information that by the period 350-250 BC *Satricum* had dwindled to a rural hamlet consisting of a few, probably scattered, farmsteads. Except for its role as a local sanctuary - archaeological evidence shows ongoing ritual activity in the Archaic temple area - the settlement is unlikely to have played a particularly significant economic role in the wider rural landscape during this period.²²³

Historical sources imply that *Antium* may have remained a sizeable settlement during this period. Archaeological evidence includes various votive deposits from this period as well as at least one subterranean tomb (*hypogeum*).²²⁴

How do these developments relate to the rural territory between the colonies of *Satricum* and *Antium*? Figure 7.1 shows an increase in the numbers of both the confirmed and the possible rural sites, indicating an increase in rural occupation. This is a trend that would continue into the late Republican and early Imperial period. Figure 7.2 shows that new foundations occurred, but the high number of uncertain sites complicates an assessment of the impact of the developments in this period in terms of continuity or discontinuity.²²⁵ There are, however, spatial trends that may indicate a reoccupation of parts of the landscape that had earlier been largely abandoned (*fig. 10.1*). An increase in the number of possibly occupied sites in the lower Astura and Moscarello valleys, and especially along the coast, may reflect the growing importance of these areas.

During this period there is for the first time a clear relation between planned regional roads and settlement development. The distribution of sites to the north-east of *Antium* may reflect the course of the road leading from *Antium* to *Lanuvium*. We have certain evidence for the existence of this road in the following periods in the form of basalt paving, but it is probable that an unpaved track already existed in this period, attracting rural settlement.

As to the size and function of the sites, we are probably still dealing with small family farmsteads that mainly produced for their own use. The occurrence of black glazed ware with *petites estampilles* suggests, however, that these farmsteads participated in an economic network and had relations with a market town to which a small surplus of their agricultural produce was brought. Considering the fact that *Satricum* would not have been a centre of any importance anymore, we may sup-

pose that *Antium* was this market town. The wide distribution of rural sites over the landscape suggests that the tie between central settlement and rural sites was still rather loose. There are no indications for the existence of early surplus producing villa sites or luxury residences.

CONCLUDING REMARKS

Although both towns are recorded in the written sources as Roman colonies, it is only *Antium* that manifests itself as a true central place in the study area. *Satricum* seems to have been reduced to a small rural settlement. Rural settlement patterns in the northern catchment area of *Antium* show that a straight track leading from *Antium* in the direction of the Alban Hills probably already existed. Rural occupation in the countryside in general intensified and economic ties between rural sites and the central place can be reconstructed on the basis of the presence of black glazed ware on the rural sites. There are no signs yet of a clear social stratification in the countryside: rural sites are small and there are no indications for the presence of villas yet.

NOTES

²¹⁷ Cancellieri 1990.

²¹⁸ *Terracina* was founded in 329 BC, *Antium* in 338 BC. *Circeii* (393 BC); the colonies in the Monti Lepini had according to literary sources already been founded in an earlier phase (*Cora* 6th century BC, *Signia* 495 BC, *Norba* 492 BC, *Setia* 383 BC). In most cases archaeological evidence for fortified urban settlements dates to the mid-4th century or later.

²¹⁹ For an evaluation of *Satricum* during this period, see Gnade 2007.

²²⁰ However, a recently excavated levelling layer may be attributed to a 4th-century phase of restructuring of the site; see Gnade 2007.

²²¹ The decision to turn a large part of the former settlement area of *Satricum* into vineyards was taken in 1959 (Maakant Kleibrink 1992, 8 referring to Pagliaro 1990, 256 who describes this as a '(...) trasformazione radiCALE in vigneti specializzati').

²²² Three small rural sites were recorded during this small-scale survey; see Drost 1996.

²²³ For the sanctuary, see Bouma 1996.

²²⁴ For the votive contexts, see Jaia 2004; for the hypogeum tomb, see Morpurgo 1946; Di Renzoni/Schiapelli 2007.

²²⁵ Unfortunately, most of the 'uncertain' sites are located in the *Poligono Militare* and could not be revisited by us to obtain more precise dates. If all uncertain sites would be included, rural development for this period would have to be characterized as a sudden boom. The problem at present is that the shards of black glazed pottery found in the survey, although markers for the Republican period, often have no diagnostic features which would make them suitable for more precise dating on the basis of typological schemes.

11

Republican Period (250-100 BC)

Peter Attema, Tymon de Haas & Gijs Tol

The period between 250 and 100 BC can be characterized as a period of stabilization of Roman presence in the Pontine Region and of expansion abroad. In traditional economic models, this period also saw the introduction of an agriculture based on slave labour and the demise of free peasants after the second Punic War. The growing importance of the major Roman colonies is expressed by investments in their urban plans and architecture. At the same time the material

record of some sites in the countryside suggests that investments began to be made, too, in the rural domain. The evolvement of specific types of rural sites - such as the platform villa in the Monti Lepini - in combination with evidence for olive culture from pollen diagrams,²²⁶ suggests that specialization in farming had begun. It can be suggested, therefore, that independent farmers or local elites began to aim for market-oriented production. Concentration of wealth in the hands of

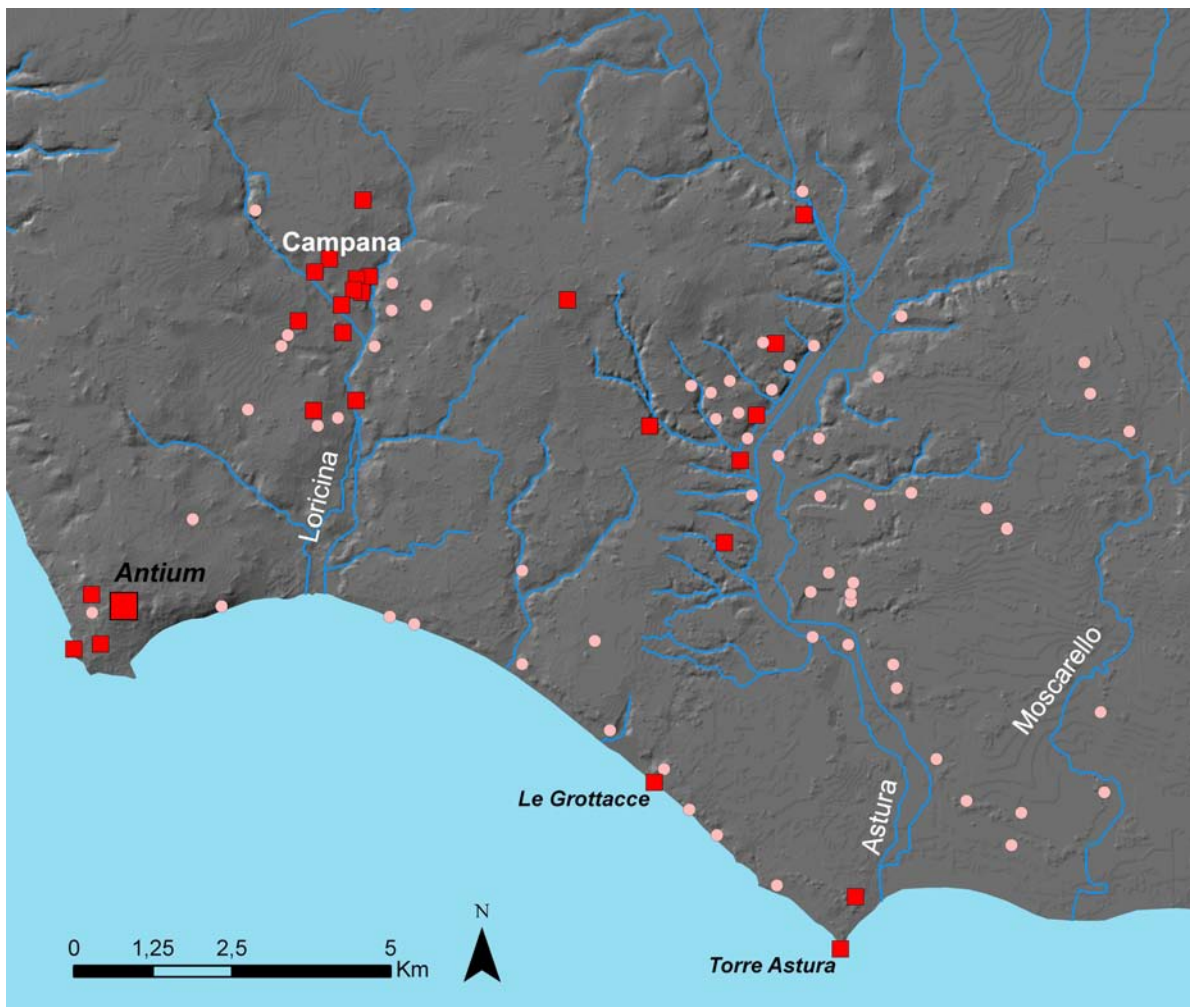


Fig. 11.1. Distribution of Republican sites (250-100 BC; red squares: certainly occupied; pink dots: possibly occupied).

a few will have led to the establishment of local elites in the Roman colonies, that invested in rural property and urban embellishment.

These investments are indeed attested archaeologically and historically in our study area in both urban and rural contexts. In *Antium*, for example, a *praetor* Lucretius is recorded as having decorated the sanctuary of Aesculapius and having built an aqueduct leading water from the 'Loracina' to *Antium*.²²⁷ The presence of *fasti* in *Antium* is in itself an indicator for the administrative function of the town.²²⁸ The start of investments in coastal *villae* during this period is represented by the first phase of the later coastal villa of Nero, dated to the end of the 2nd century BC. This phase already shows signs of luxury. At the same time, at least two more coastal *villae* have a first phase that dates to this period.²²⁹ Although easily reached by sea, the development of these residences implies that roads are likely to have been established along the coast.

Figure 7.1 shows an increase of confirmed sites for this period while the number of possible sites remains the same. In figure 7.2 it seems that the period was characterized by a substantial degree of continuity. Figure 11.1 shows a slight increase in the number of confirmed sites in the countryside near *Antium*. The linear distribution of some of these sites hints at the course of a road leading to the Alban Hills. This road, with its associated rural settlements (Campana clearly remains a favourite rural area), underscores the growing importance of *Antium*.

The situation in the Astura valley remained stable, but along the coast in the area of the *Polygono Militare* the number of sites increased. This is an indication that the reoccupation of the coastal zone, which is very clear in the late Republican period, definitely was already underway during this earlier period.²³⁰ Interpretation of the settlement patterns in these areas, however, is hampered by imprecise dates and by the often unknown dimensions of the sites.²³¹

At various sites we have recorded shards of Graeco-Italic amphoras, a typical indicator for wine transport. Production of some of these amphoras may have occurred at the villa of Le Grottacce towards the end of this period.²³² Nonetheless we think that most of the inland rural sites are likely to have been small, and that they could only have produced a small surplus for the local market and/or the coastal villa sites. An example of a modest Republican farm dating to the 3rd and early 2nd centuries BC was excavated on the southern edge of the acropolis of *Satricum*.²³³ This building con-

sisted of a relatively simple, rectangular building of ca 130 m² with a central courtyard. The existence, side-by-side, of beginning specialization and farms that only produced a small surplus for the local market, is conform the situation described above for the Monti Lepini.

CONCLUDING REMARKS

The *Carta Archeologica* shows an increase in the number of rural sites that would eventually lead to a peak in the early Imperial period. If indeed Graeco-Italic amphoras were produced at Le Grottacce, this would indicate specialization in wine production in the study area towards the end of the period. Social stratification in the countryside is evident from the first investments made by the elite in coastal *villae*. In *Antium* itself elite investments are made in urban architecture.

NOTES

²²⁶ Haagsma in Attema 1993, 249-255.

²²⁷ Liv. XLIII, 4; this episode is dated to ca 170 BC; see also Brandizzi Vittucci 2000, 48.

²²⁸ These *fasti*, found in a building at Arco Muto which according to Brandizzi Vittucci probably had a public function, are dated to the period 163-84 BC (Brandizzi Vittucci 2000, 60 with refs).

²²⁹ See site cat. nrs. 11215 and 11202.

²³⁰ This process, however, had possibly already begun in the preceding period; see chapter 10.

²³¹ Piccarreta recorded many sites in this area, but these are often scatters with tiles and coarse wares; only a few yielded black glazed ware, but if this material was present these sites can only be described as 'possibly occupied' in any of the three Republican phases we distinguish.

²³² See site cat. no. 11215; Attema et al. 2003a, 127-136; De Haas et al. 2008. Amphoras from this site probably date to the late 2nd and 1st centuries BC. The finds include kiln debris, tile wasters and large amounts of amphora sherds, but so far no amphora wasters. The fabrics of the amphorae from Le Grottacce are currently being studied as part of the research project 'Ricostruire i commerci nel Mediterraneo in epoca ellenistica e romana attraverso nuovi approcci scientifici e tecnologici' (www.immensaequora.org) coordinated by prof. Gloria Olcese of the University of Rome 'La Sapienza'.

²³³ Gnade 2003; Louwaard 2007.

12

Republican Period (100-30 BC)

Peter Attema, Tymon de Haas & Gijs Tol

In the final phase of the Republican period the trends noted in the foregoing period, notably the increasing investments in urban and rural architecture, continued. This is evident from research along the foothills of the Monti Lepini, in the respective *agri* of the Roman colonies of *Cora* and *Setia*, in the surroundings of Terracina and on the slopes of the Monte Circeo. In all these areas many *villae* have been recorded, some of which display elements of luxury.²³⁴ These developments

are a sign of increased interest by the local elites of the Roman colonies of *Cora*, *Setia*, *Circeii* and *Terracina* in the surrounding countryside. The *via Appia* as the main artery in the region surely attracted settlement and commercial activity. The regional archaeological record indicates that this period saw a boom in agricultural exploitation, characterized by a diversification in rural site types, ranging from the traditional small farmstead to the larger, surplus producing *villae rusticae* and

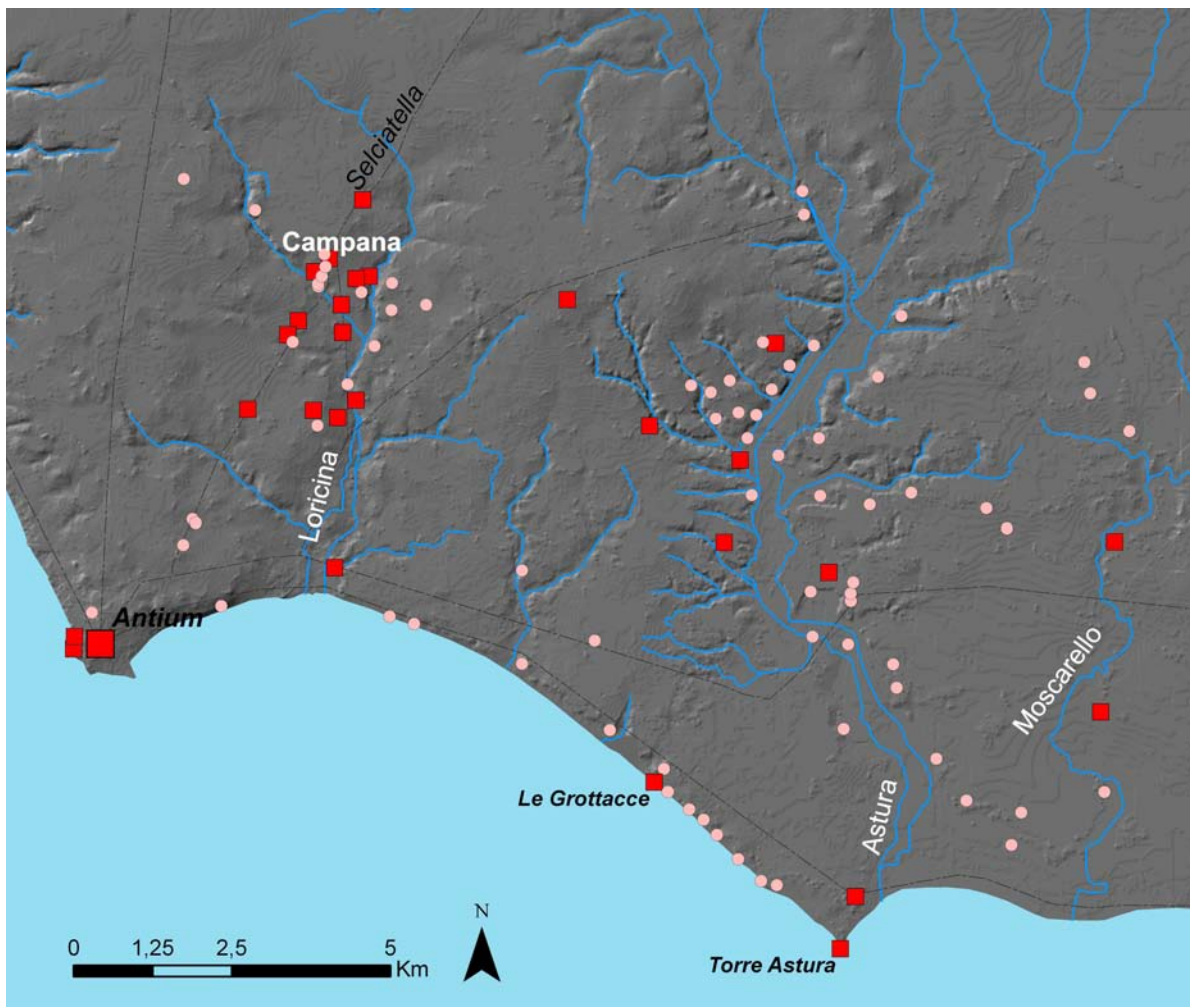


Fig. 12.1. Distribution of Republican sites (100-30 BC; red squares: certainly occupied; pink dots: possibly occupied; black dotted lines: main roads).

the very large luxury *villae*. These general trends, noted for the wider Pontine region, seem to hold for the territory of the *Carta Archaeologica* as well.

Figure 7.1 shows a clear peak in the number of sites, most of which are unfortunately classified as possibly occupied. Figure 7.2 indicates that in the category of certainly occupied sites there is to some degree continuity with the foregoing period. The Loricina valley and the Campania area are still settled quite densely, as is the Astura valley, but the Moscarello valley now also has confirmed sites (fig. 12.1). For the *villae* of Torre Astura and Le Grottacce, we have firm evidence of their status as coastal *villae*. Considering the large number of possible sites on the coast, it may very well be that other coastal villas were also built during this period.

In the archaeological strata underneath the villa of Le Grottacce, there is evidence for tile production and possibly also for amphora production, an activity that, as we saw in the previous section, may already have started at the end of the preceding period.²³⁵ A socio-economic relation between elite *villae* and smaller sites in the hinterland is suggested by the presence of amphoras of similar type and fabric on several rural sites in countryside further inland. We may assume that there was a socio-economic relation between the inland and the coastal sites: farmsteads perhaps supplied the *villae* with certain agricultural products and with labour. Some of these farmsteads may even have become wholly dependent on the coastal *villae*. On the other hand, a part of their production was probably intended for the town for *Antium* or Rome. Regarding the products from these farms, we may notice that both wine amphoras (of late Graeco-Italic and Dressel 1A type) and olive oil amphoras (local type) were produced at Le Grottacce.²³⁶ That wine was produced in the area is clear from a local stamped wine amphora dated to 93 BC.²³⁷

For this period we can hypothesize a network of roads leading from and to *Antium* as the central place of the area.²³⁸ The map shows that the area of Campania was an important node from which one road led to *Antium* and another in the direction of Nettuno. The former, the *via Selciatella*, probably already existed previously but was paved at the end of the 2nd or in the early 1st century BC.²³⁹ The second road may indicate that by this time the area of Nettuno had begun to attract Roman interest as well.²⁴⁰ The relatively large number of rural sites along these two roads is remarkable.

CONCLUDING REMARKS

In this period the number of rural sites reaches a peak, indicating that the rural economy was booming. This situation would continue in the early Imperial period. The archaeological evidence points to an involvement of the elite in commercial enterprises such as (amphora and) wine production. We may assume that an intricate economic relation had developed between coastal villa sites, inland rural sites and the Roman colony of *Antium*. The area along the *via Selciatella*, and especially the area of Campania, became densely settled.

NOTES

²³⁴ In these areas, various large villas have been recorded in particularly scenic locations; for *Cora*, see Brandizzi Vittucci 1968; for *Setia*, see Zaccheo/Pasquali 1972; for *Terracina*, see Lugli 1926; for *Circeii*, see Lugli 1928. The colony of *Norba* was according to historical sources destroyed in 81 BC; this would explain why similar *villae* are lacking in the area around *Norba*.

²³⁵ See note 232 above.

²³⁶ Attema et al. 2003a, 133-136.

²³⁷ Brandizzi Vittucci 2000, 132, with refs.

²³⁸ This reconstruction of the infrastructure is based partly on solid archaeological data (cf site 15201), partly on reconstructions proposed by previous topographers (Brandizzi Vittucci 1998, 2000; cf Cassatella 2003).

²³⁹ One of the bridges in this road to the north of our study area has two construction phases; the second of these dates to the 1st century BC, the first possibly to the 2nd century BC (De Rossi 1981, 76/77).

²⁴⁰ Three fishponds (see site cat. nrs. 15203, 15204 and 15205) and various other remains may point to the existence of a number of *villae maritimae* in the Nettuno area; although we have no dateable material evidence for this, the road may indicate that they were already occupied at this time.

13

Imperial Period (30 BC-AD 100)

Peter Attema, Tymon de Haas & Gijs Tol

During this period veritable elite residences appeared in the countryside that in luxury far surpassed those of the preceding late Republican period. This phenomenon is widespread in southern Lazio in certain landscapes with exceptional scenery, such as the Alban Hills and the coast between *Antium* and Monte Circeo. Other areas retain their mainly rural function, although large and rich *villae* are also known from the area of *Setia* in the Monti Lepini. The *via Appia* continues to

attract settlement and commerce as a vital artery between Rome, the Alban Hills and the growing Roman town of *Terracina*. Elite investments in urban embellishment increased, but were mainly concentrated in coastal towns such as *Antium* and *Terracina*. With regard to urban development, elite building, commerce and elite culture, the coastal area certainly was the most dynamic part of the Pontine Region. Imperial interest in the zone would undoubtedly have added to this.²⁴¹

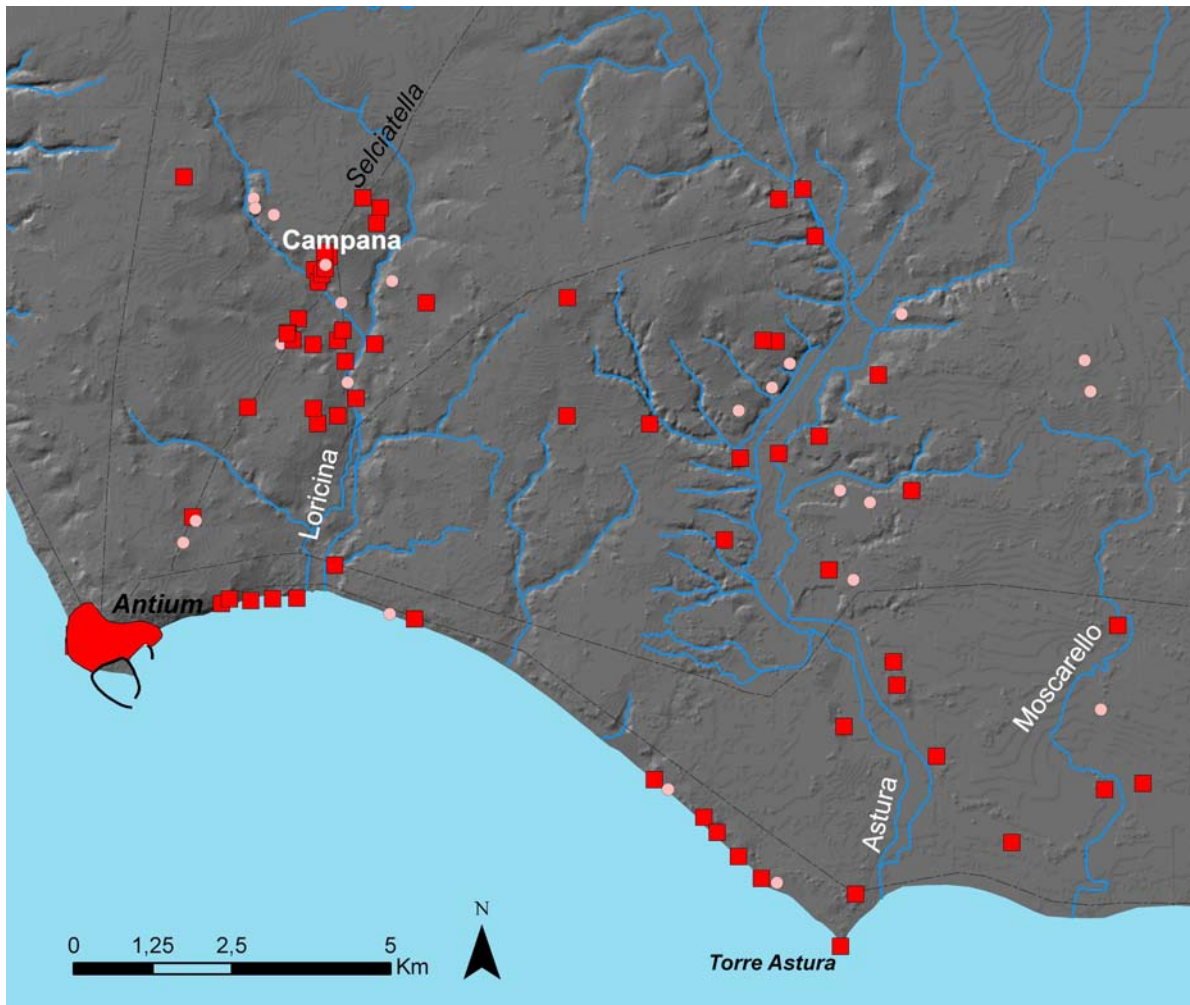


Fig. 13.1. Distribution of Imperial sites (30 BC-AD 100; red squares: certainly occupied; pink dots: possibly occupied; black dotted lines: main roads).

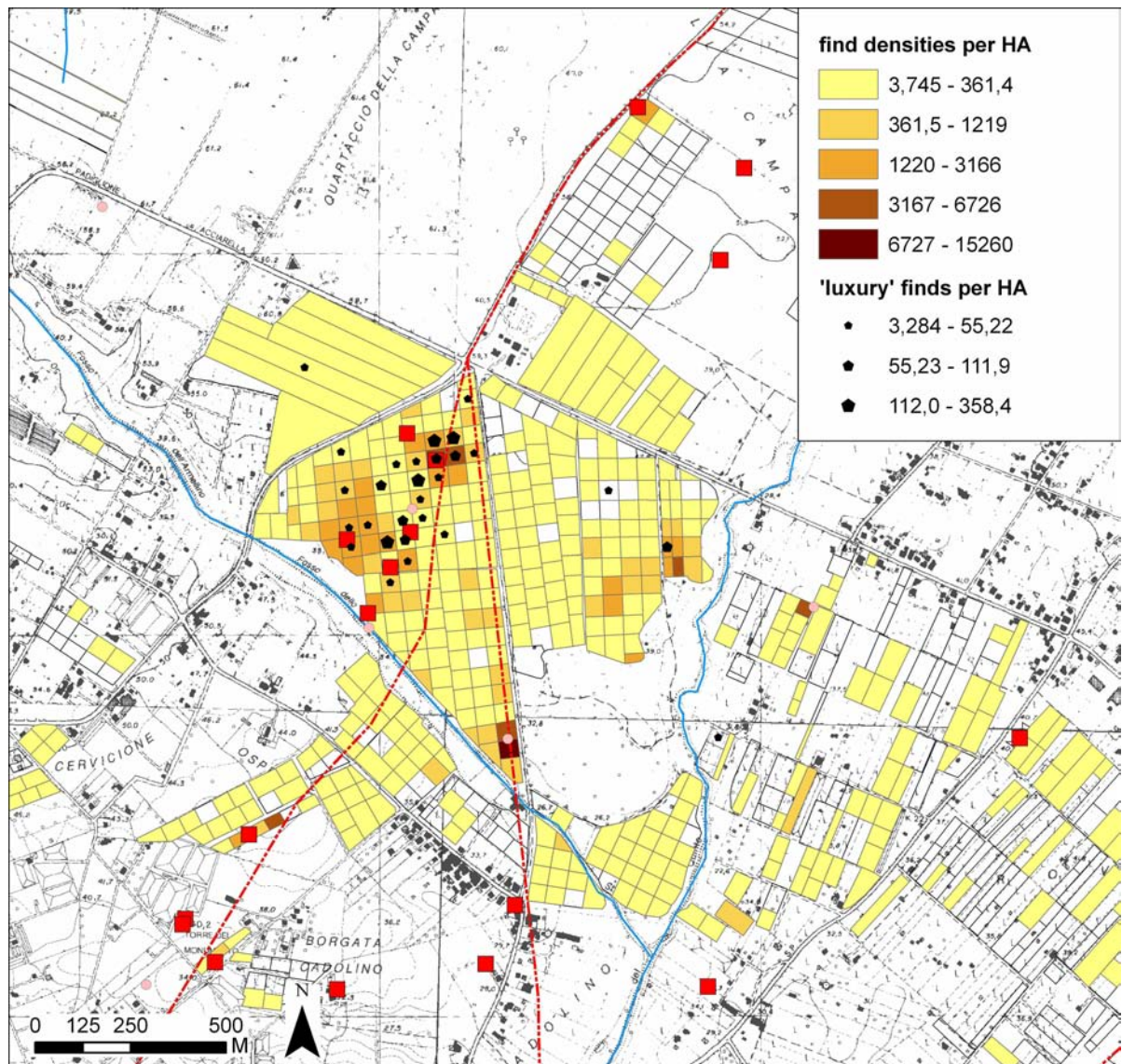


Fig. 13.2. Density of tile/ceramics and luxury materials and location of Imperial sites (30 BC-AD 100; red squares: certainly occupied; pink dots: possibly occupied) in the area of Campania. Red lines indicate Roman roads.

The building of a large harbour at Antium testifies to the vitality of this coastal settlement, and it must have stimulated economic activities. The interest in the territory around Antium is reflected in the continued increase in the number of confirmed sites (more than twice as many sites as in the previous period) and in the founding of new rural sites (figs 7.1 and 7.2). We must, however, be cautious here, as the ceramics of this period (Terra Sigillata and specific amphora types) can be dated more precisely, resulting in a higher number of certainly occupied sites.

The increase in site density in the Loricina valley and along the *via Selciatella* is remarkable. The latter had by this time probably developed into a busy artery and was attracting settlement (fig. 13.1). In the survey of the Campania area we noted a remarkable differentiation between sites. Figure 13.2 shows how sites are located amidst a widespread distribution of tile and pottery. Some of these contain luxury indicators (marble, painted plaster, *tesserae*), while others lack these. We interpret the sites without luxury indicators as out-buildings belonging to substantial villae. Further

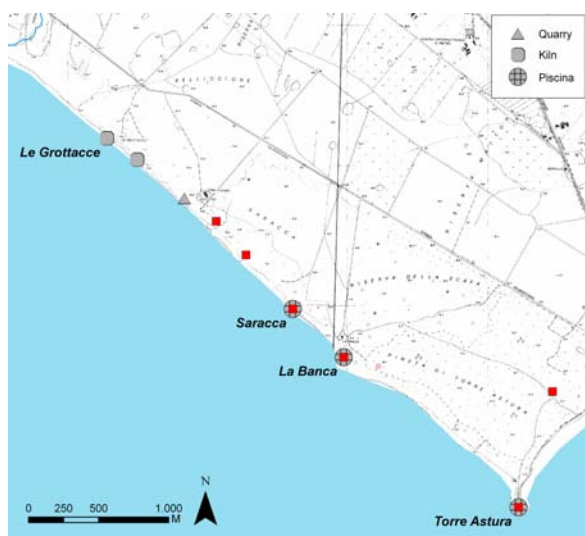


Fig. 13.3. *Villae maritimae*, piscinae, kilns and quarries along the coast north-west of Torre Astura (30 BC-AD 100).

away from the roads we recorded smaller farmsteads.

We also recorded a substantial number of confirmed sites in the Astura and Moscarello valleys, testifying to a general trend of expansion that mainly took place in the lower Astura valley. As already suggested in the discussion of the period 100-30 BC, these sites may have had a strong socio-economic tie with the *villae maritimae*.

The most remarkable development, however, took place along the coast where many elite *villae* with fishponds were now established, with distances of 275 to 500 m between them. This is especially true for the coastal stretch north-west of Torre Astura, at Saracca and La Banca (fig. 13.3); the fishponds at Torre Astura stand out because of their exceptionally large dimensions.²⁴² *Villae* with fishponds were also built to the east of *Antium*, for example along the coast at present-day Nettuno.²⁴³ In ancient sources on the subject, fish farming is often not considered a commercial activity but is related to elite banqueting by the owners of the *villae maritimae*.²⁴⁴ This need not be altogether true, however, as we do have other evidence for commercial activity along the coast in the form of remains of a kiln and a quarry (see fig. 13.3).

Amphoras of the Dressel 2-4 and Haltern 70 types found inland on rural sites point to an economic network in the area with *Antium* as the main harbour. The larger number of *villae* both on the coast and further inland (especially in the

Campana area) would indeed point to an increase in the scale of the agricultural economy compared to the foregoing period.

CONCLUDING REMARKS

Economic and possibly also demographic growth was strong in the coastal zone during this period. Along the shores between Torre Astura and *Antium* the *villae maritimae* flourished. Many of these had large fishponds. Strong ties may have existed between the inland rural sites in the Astura and Moscarello valleys and the coastal *villae*. On inland rural sites imported amphoras occurred. The construction of *Antium*'s harbour probably gave a strong economic boost to the local economy. In the inland area this growth is expressed in the Campana area by the emergence of luxury villas and their outbuildings, and in the eastern part of the area by the further filling up of the rural hinterland with farms.

NOTES

- ²⁴¹ The lavish villa complex at *Antium*, commonly referred to as the Villa di Nerone, attests to this Imperial interest. According to historical sources it was also Nero who ordered the construction of a new harbour at *Antium*.
²⁴² Dating these fishponds is, however, still problematic; cf Piccarreta 1977; Higginbotham 1997.
²⁴³ See site cat. nos. 15203, 15204 and 15205.
²⁴⁴ See for a recent discussion of the architecture Grüner 2006.

14

Imperial Period (AD 100-250)

Peter Attema, Tymon de Haas & Gijs Tol

Pottery from various parts of the Mediterranean found its way to the Pontine Region in considerable quantities during this period. The presence of African Red Slip Wares and amphoras at many rural sites in the Pontine Region indicates that the regional infrastructure and economic network that developed in the foregoing period functioned effectively. It can be assumed that the harbour towns of *Antium* and *Terracina* played an important role in the local and regional distribution networks.

The flourishing economy is reflected in building activities at *Antium*, implying investments in urban embellishment. Building activities have been attested at the imperial villa of Nero, while on the Vignacce hill a modest theatre complex was modified.²⁴⁵

Figure 7.1 shows a slight decrease in the numbers of both the confirmed sites and the possible sites. This downward trend would continue from this period onwards. Figure 7.2 shows that almost

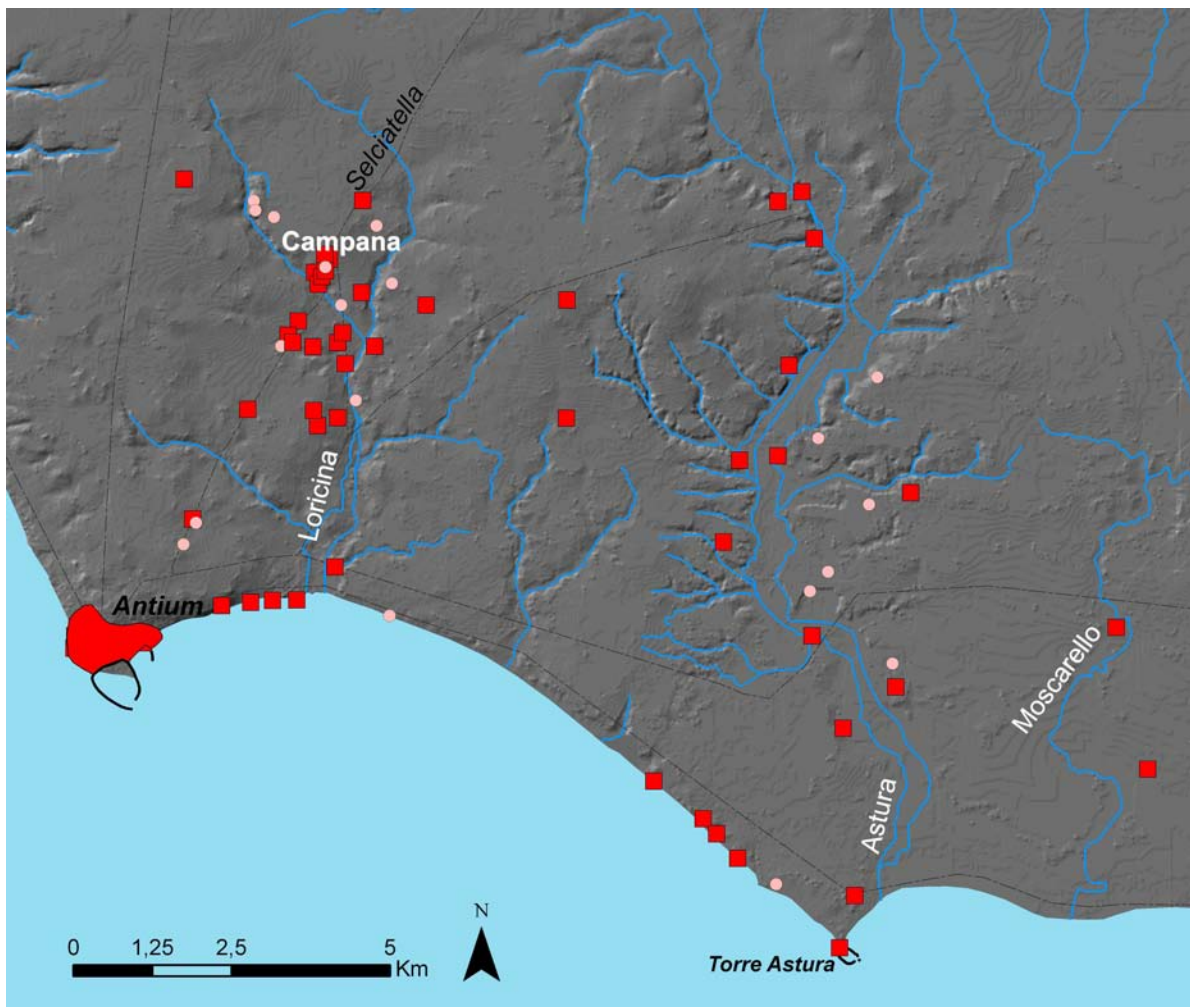


Fig. 14.1. Distribution map of Imperial sites (AD 100-250; red squares: certainly occupied; pink dots: possibly occupied; black dotted lines: main roads).

no new sites were founded and that sites from the early Imperial period continued to exist. This would indicate a period of stability.

Figure 14.1 shows that the elite coastal *villae* continued to exist, too. Some of these *villae* were partly rebuilt or refurbished in the course of the 3rd century AD.²⁴⁶

Archaeological surface finds now unequivocally shows that a settlement existed west of the mouth of the Astura.²⁴⁷ Its fortunes in the Imperial period, however, will have been strongly related to those of the villa at Torre Astura that at this time was enlarged with a harbour. Whether this harbour had a commercial function or served leisure purposes only is difficult to establish. However, the large size of the harbour seems to point to a commercial function, and this would be in line with our hypothesis of strong economic ties between the inland rural sites as surplus producing farms and the coastal *villae* as partly economic enterprises.²⁴⁸ Some observations may strengthen the hypothesis of close ties between the coastal and inland sites. With regard to the nature of rural settlement in the two major river valleys of the Astura and the Loricina, we notice important social differences with those in the Campana area. Whereas the sites in the Campana area continue to show status indicators and presumably were *villae* with a certain degree of luxury, such indicators are still lacking at most sites in the Astura valley. In the Astura valley the sites are fairly regularly spaced with intervals of 1.2 to 2 km, a less dense pattern than in the Loricina valley (*fig. 14.1*). This suggests a rural landscape of modest farmsteads, each of which would have occupied one of the hilltops overlooking the Astura valley. Remarkably, the sites in this area produced little evidence for the presence of imported amphoras. Apparently the farmsteads in the Astura valley were foremost production farms that were controlled by the owners of the coastal *villae*.²⁴⁹ This idea is supported by the fact that, when the coastal *villae* were abandoned in the late Imperial period, the farmsteads in the Astura valley also

disappeared. On the large sites in the Loricina valley we also found imported (Gallic, Spanish and North African) amphoras; these *villae* perhaps not only functioned as production sites (supplying *Antium*), but possibly also consumed imported products such as wine and olive oil.

CONCLUDING REMARKS

In spite of the continuing investments in *Antium* itself and in the *villae maritimae* (for example the construction of a large harbour at Torre Astura), the number of rural sites decreased, a trend that would continue in the following periods. The archaeological record shows a clear differentiation between, on the one hand, the sites in the Astura and Moscarello valleys, which are rather poor in material culture, and, on the other, the Loricina valley where many sites show signs of luxury. The former farmsteads may be interpreted as economically depending on the *villae maritimae*, whereas the latter would be independent *villae rusticae*.

NOTES

²⁴⁵ The theatre itself probably dates to the mid-1st century AD, the surrounding rooms were added towards the end of the 1st or the start of the 2nd century AD. It is unclear whether this theatre was intended for public or private use; see Lugli 1940, 175/176; Brandizzi Vittucci 2000, 71/72; Laurenzi 2007.

²⁴⁶ Site cat. nrs. 15210, 11202, and possibly 11265.

²⁴⁷ Site cat. no. 11201.

²⁴⁸ Given its size, awkward connection with the mainland, absence of warehouses and scarcity of settlements in the immediate surroundings, however, Piccarreta suggests that the facilities functioned primarily as a refuge harbour (Piccarreta 1977, 64).

²⁴⁹ An exception is formed by the villa excavated at the former settlement of *Satricum*; this site, ca 1100 m² large with 30 rooms, shows a classic villa layout with a *pars urbana*, baths, a *pars rustica* and evidence for outbuildings. The villas we recorded in the Campana area may be similar in size and layout to this villa; see Raaymakers 2007.

15

Imperial Period (AD 250-400)

Peter Attema, Tymon de Haas & Gijs Tol

The decrease in the number of rural sites in the landscape is a tendency visible throughout the Pontine Region in the course of the Imperial period. The inevitable conclusion must be that agricultural exploitation diminished and that parts of the landscape even may have been abandoned.²⁵⁰ This is in line with the historical sources that depict this period as one of economic and demographic decline and even possibly crisis.²⁵¹

Although figure 7.1 shows a decrease in the num-

ber of sites in the area of the *Carta Archeologica*, this decrease is not as dramatic as these historical sources would suggest. The identification of late Imperial sites is mainly due to the intensive pottery studies carried out for this project, studies that have greatly improved our knowledge of late Roman pottery. However, figure 7.2 indicates that, for the first time in the long settlement history of the area, no new sites were founded in this period. This is an important indicator of the declining rural economy.

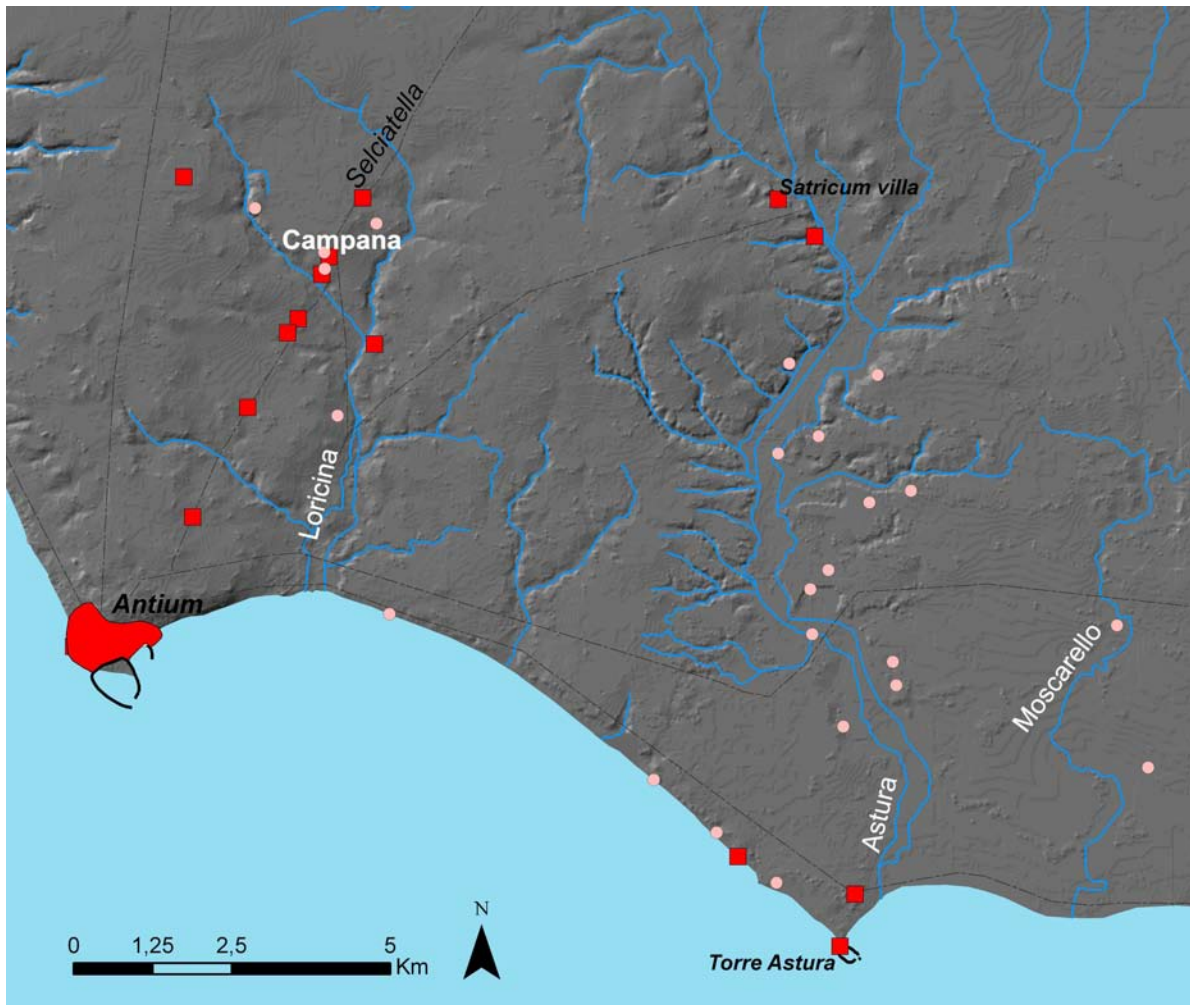


Fig. 15.1. Distribution of Imperial sites (AD 250-400; red squares: certainly occupied; pink dots: possibly occupied; black dotted lines: main roads).

With regard to urban development, the archaeological record of *Antium* indicates that it was still very strong at this time. The last investments we know, in the form of repairs of the thermal complex,²⁵² date to the late 4th century AD. According to Brandizzi Vittucci, a settlement probably sprang up during this period at the location of modern Nettuno, judging from finds of inscriptions and tombs near S. Biagio.²⁵³ Whether we are dealing with a villa or a larger settlement is, however, unclear.

The majority of rural sites are located along the *via Selciatella*: figure 15.1 shows a linear distribution of sites dating to this period. The map, however, also shows how the pattern in the Campana area thinned out, and this happened for the first time since the Iron Age. The number of diagnostic shards found on sites that continued from the previous period is lower, and this may reflect a contraction of these sites. Again the excavated villa at *Satricum* may serve as a parallel: this villa, which was possibly abandoned in the 3rd century, shows evidence for contracted (re)occupation in the 4th and first half of the 5th century AD.²⁵⁴

Besides this villa, the Astura and Moscarello valleys yielded only many 'possible' sites, and it seems that these areas were gradually being abandoned during the later Imperial period, or at most that they contained mainly sites that functioned on a subsistence level only. The observation that imported amphoras are more abundant in the Campana area than in the Astura valley is also valid for this period and seems to indicate that the Astura valley gradually became disconnected from the economic network that focussed on *Antium*. The archaeological record shows that the area around the estuary of the Astura, however,

remained in use: at Torre Astura and Saracca there is evidence for repairs dating to this period.²⁵⁵

CONCLUDING REMARKS

A decline in rural settlement set in during this period. Although *Antium* itself and the *villae* along the *via Selciatella* remained important, the number of *villae maritimae* declined. Both in the area of Campana and in the Astura and Moscarello valleys the number of sites diminished; the Moscarello valley may even have been abandoned. Sites that were still inhabited generally yield fewer finds, suggesting a general impoverishment of the countryside.

NOTES

²⁵⁰ In the Fogliano area we observed a strong decline in the number of sites already in the middle Imperial period (Attema et al. 2002; Attema et al. 2005), whereas in the foothills of the Lepine mountains we have no evidence either for occupation after the 3rd century AD (Van Leusen et al. 2005). However, the ceramics of both areas were studied on the basis of a more limited knowledge of (late) Imperial wares than was the case during the present study.

²⁵¹ The widely accepted idea of a 3rd-century crisis goes back to authors such as Cassius Dio, Herodianus and Cyprianus; for studies on the crisis and landscape archaeology, see for example Patterson 1987; Duncan Jones 2004. *CIL* X, 6656; see Brandizzi Vittucci 2000, 46.

²⁵² Brandizzi Vittucci 2000, 134/135; these finds can, however, not be attributed accurately to a specific location, and they are therefore not included in our map.

²⁵³ Raaymakers 2007, 90.

²⁵⁴ See site cat. nrs. 11202 and 12209; Piccarreta 1977, 21-66, 75/76. Still unstudied archaeological material in the Liboni collection may add to our knowledge of the measure of continuity of rural occupation that we observed in this area.

16

Late Antiquity and Early Medieval Period (AD 400-700)

Peter Attema, Tymon de Haas, Olaf Satijn & Gijs Tol

In general, the historical view of late antiquity and the early medieval period is one of progressive political division, decline of Roman administration and incursions of foreign peoples. This negative state of affairs is supposedly reflected in an almost complete abandonment of the Italian countryside and a severe contraction of urban centres. The apparent sharp break between late

antiquity and the early medieval period may, however, be due to a combination of negative factors, such as our insufficient knowledge of early medieval ceramics, the breakdown in imports, and the less durable building techniques that impede our recognition of any traces there might be in the rural landscape. Especially the late 6th to early 8th-century landscapes were until recently

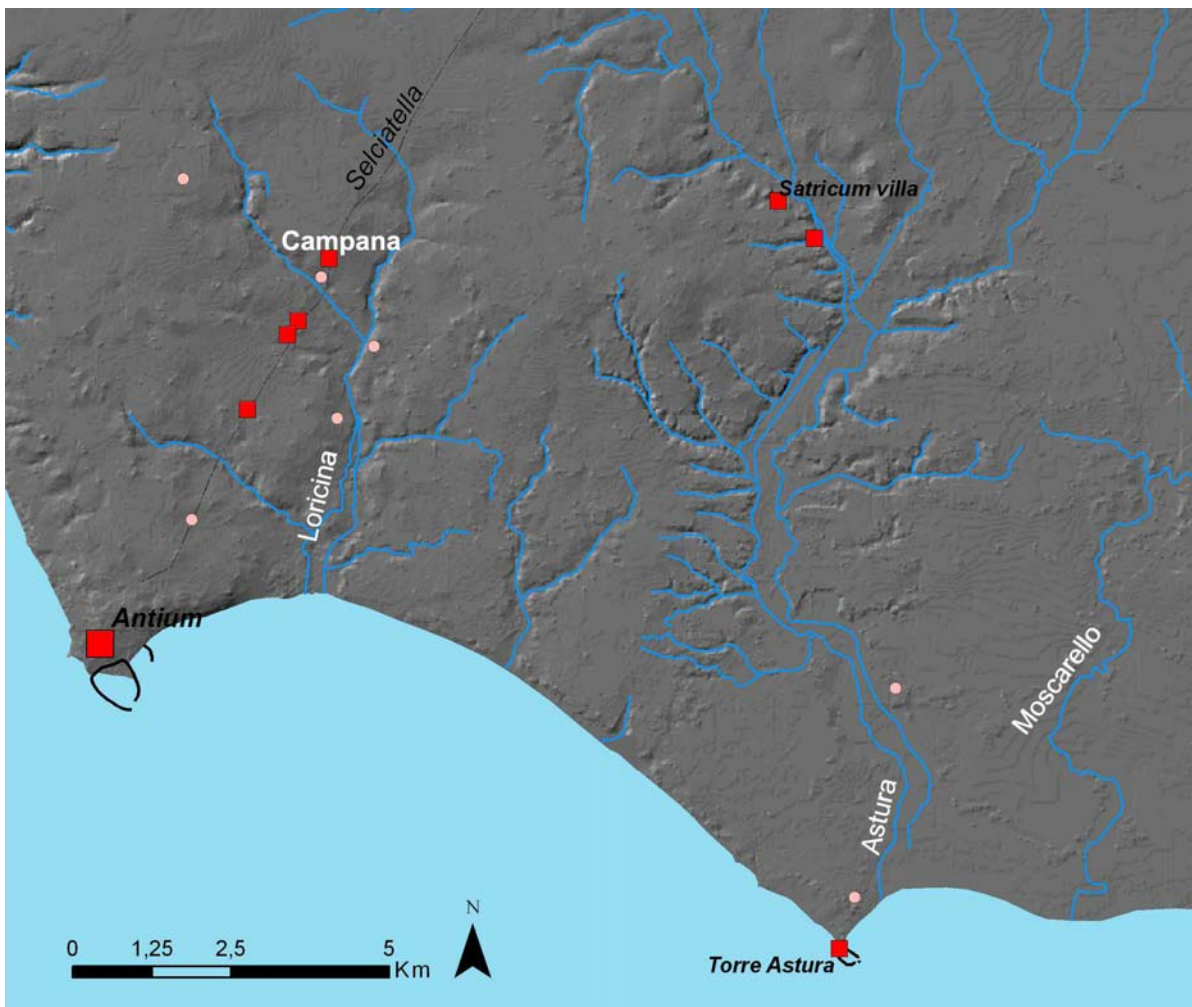


Fig. 16.1. Distribution of late antique and early medieval sites (AD 400-700; red squares: certainly occupied; pink dots: possibly occupied).

void of archaeological evidence. As described in chapter 3, it is especially the work on post-Roman coarse wares and amphoras that is now changing our views on the late antique and post-Roman landscape. This is, to some degree, also the case in the area studied for the *Carta Archeologica*.

Figure 7.1, although showing a persistent decline in the number of sites for the period AD 400 to 700 (a trend that had already set in after AD 100), does indicate that there was some continuity in parts of the landscape. We must realize, however, that the quantity of material on which these observations are based is extremely low. Save for the period 600 to 700, no new foundations occurred (fig. 7.2).

From figure 16.1 it is evident that, except for the villa at *Satricum*, the upstream Astura valley had lost its role in the socio-economic structure of the area. The settlement of Astura may have continued to exist until the end of this period, as we have material dating to the 8th century AD. The villa at Torre Astura remained functioning until well into the 7th century AD.²⁵⁶ The Astura settlement and the villa of Torre Astura are thus likely to have remained a socio-economic unit at the mouth of the Astura, and the harbour at Torre Astura may have played a central role in this.²⁵⁷

Continuity is also clear along the *via Selciatella* in the Campana area that consolidated its position as a focal point for rural habitation and production. *Antium* itself continued to exist, although the number of historical references to the town decreases after the end of the 4th century AD. A decrease can also be observed in the quantity of archaeological data that are available.²⁵⁸ The foundation of an episcopal see at *Antium* in AD 465²⁵⁹ proves that the city was viable enough to become an ecclesiastical centre in the 5th century AD. Procopius still records the use of the harbour in

the year AD 537,²⁶⁰ but the see of *Antium* was cancelled somewhere in the 6th century AD.²⁶¹ In the 6th and 7th century AD we see a continuing decline in the number of rural sites, which may be related to the diminishing ecclesiastical interest in *Antium*.

CONCLUDING REMARKS

In spite of settlement continuity in the Campana area, at the mouth of the Astura river and at *Satricum*, we see a general decline in rural occupation of the region, a process that had already set in around AD 100. It seems likely that *Antium* also contracted after AD 400, although it is certain that its harbour remained in function. It seems to have been a vital element in what remained of the flourishing economy of the previous periods.

NOTES

²⁵⁶ Repairs were possibly still carried out on other coastal villae as well, possibly until the 5th or 6th century AD. An analysis of the masonry techniques used in repairs on the coastal villae is fundamental for an accurate date of the various phases.

²⁵⁷ There are parallels for this coastal continuity in Tuscany where villae also show continuity into the 5th century AD. Here, fish production is presumed to have been an important source of income. Later in the 5th century AD these villa sites underwent internal reorganization and contraction (Francovich/Hodges 2003, 40; Valenti 1996). In the 6th century AD several of these would be converted into small maritime settlements (cf. *Cosa*: see Francovich/Hodges 2003, 57, referring to Fentress/Perkins 1989 and Cambi in Carandini/Cambi 2002, 239-241).

²⁵⁸ Tol 2005, 18.

²⁵⁹ Duchesne 1892.

²⁶⁰ Prokopius *bell. Goth*, I 26

²⁶¹ Duchesne 1892; Brandizzi Vittucci 2000, 137.

Medieval Period (AD 700-900)

Peter Attema, Tymon de Haas, Olaf Satijn & Gijs Tol

The 8th and 9th centuries are generally considered to have been a period of socio-economic and political reorientation in which *curtes* and, in the Roman hinterland, the so-called *domuscultae* played a significant role.

Curtes have been defined as estate centres ‘in many different forms, invariably being a manorial initiative within pre-existing villages’.²⁶² The *curtes* often seem to have been founded as centres for storage and distribution, administration and religion. They mainly functioned within a local economy, although the larger centres seem to have become centres for exchange on more than a merely local level. The archaeological record shows that these *curtes* became the focal points for seigniorial power. There was also an active

involvement of monasteries in many of the newly organised and (re)built *curtis* centres of the 8th and 9th centuries AD.

Another new form of agrarian settlement was the *domusculta*. According to the *Liber Pontificalis*, *domuscultae* were papal foundations, founded by the popes Zacharias (AD 741-752) and Hadrian I (AD 772-795).²⁶³ With regard to the physical form of these *domuscultae*, the *Liber Pontificalis* offers no details about size or internal organization. Archaeological investigations north of Rome have shown that *domuscultae* probably consisted of several habitation and production centres.²⁶⁴ These estates must be considered to have been annexes for agricultural production for the papal court and the city of Rome in general.²⁶⁵ They are part of the

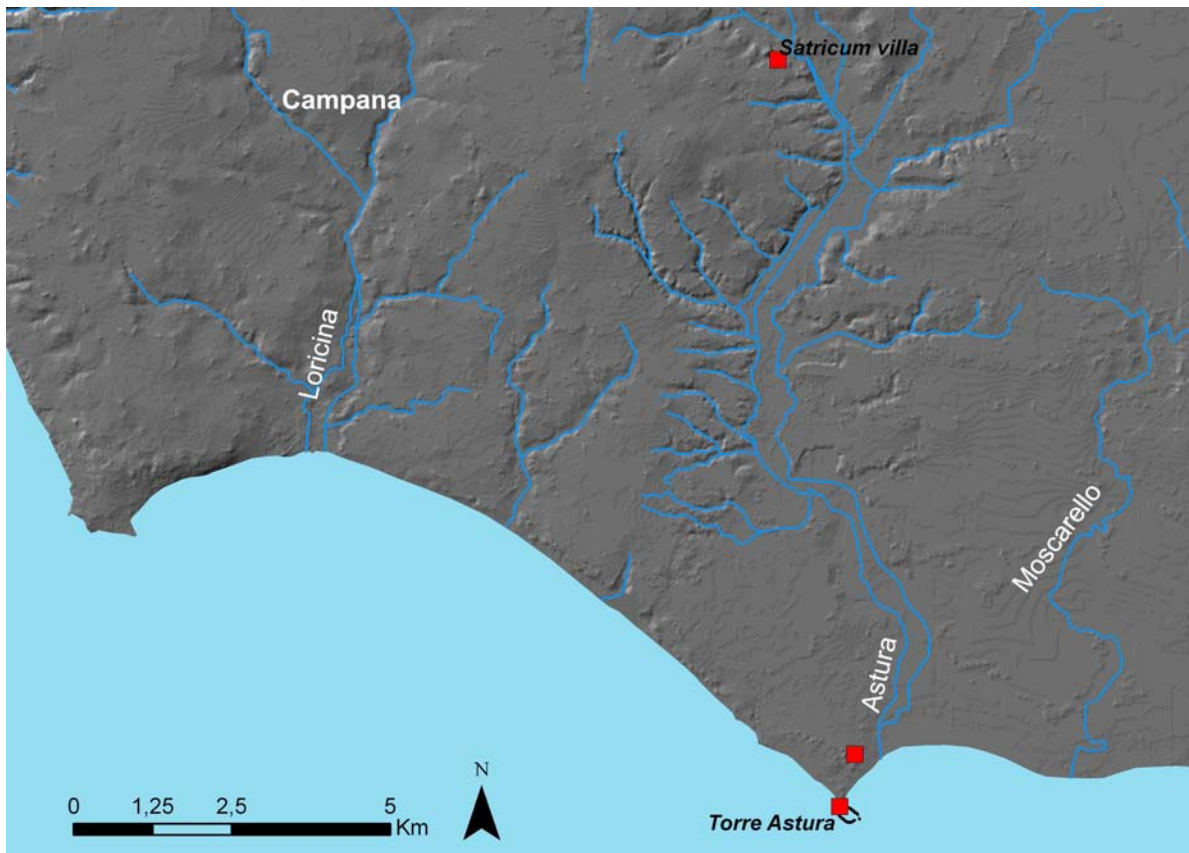


Fig. 17.1. Distribution of medieval sites (AD 700-900; red squares: certainly occupied).

same distribution network: the ceramic wares on the sites north of Rome (specifically Forum Ware) are the same as those found in Rome.²⁶⁶

There is no historical evidence for the existence of *curtes* in our study area, possibly because there were no monasteries nearby that had a direct interest in the area. Figures 7.1 and 7.2 show that we have almost no data on rural sites for this period. Similarly, there is no historical or archaeological evidence for occupation at *Antium* during this period.

The *Liber pontificalis* does, however, report the foundation of two *domuscultae*, called *Antius* and *Formias*.²⁶⁷ The *domusculta Antius* is generally assumed to have been situated near Anzio, although so far there is no convincing archaeological evidence for its exact location.²⁶⁸ The only activity near *Antium* in the lifetime of the *domuscultae*, the later 8th and 9th centuries AD, that can perhaps be observed took place at one site, and the evidence there consists of *one* shard only.²⁶⁹ At the current state of our knowledge, the Loricina valley appears to have been totally abandoned, while continuity at *Antium* itself cannot be proved. At the mouth of the Astura ceramic finds indicate human activity at the settlement of Astura between AD 700 and 800 and at Torre Astura in the 9th century AD (*fig. 17.1*).²⁷⁰

More archaeological evidence comes from the area of ancient *Satricum*, where three Forum Ware shards and a Sparse Glaze Ware shard in a Roman villa excavation point to reoccupation of the area in the period between the 8th and the 10th century AD.²⁷¹ Of course these finds cannot substantiate the claim that ancient *Satricum* in the medieval period would have been the site of the *domusculta Formia*, but it is an interesting hypothesis nonetheless. Further archaeological research in this area seems warranted. At the present state of our knowledge we must conclude that the study area was virtually abandoned.²⁷²

The *Liber Pontificalis* mentions that in the course of the 9th century AD fortifications were erected on various locations along the coast. It has been suggested that the later towers at S. Anastasia, *Antium*, Nettuno and Torre Astura started out as part of Charlemagne's plan to defend strategic locations along the coast by means of a system of *stationes et excubias* (stations and sentinels). These posts at ports and river mouths would have been intended as a measure against the growing Saracen threat. However, there is no evidence for such (early) constructions at the locations mentioned above.

As we have seen, there is no historical or archaeological evidence for occupation at *Antium*

during this period, and some authors have related the disappearance of *Antium* and the origin of Nettuno to the Saracens. Tradition holds that the population of *Antium*, shortly after the Saracen-induced abandonment, resettled near the Roman temple of Nettuno, on the spot of the *borgo medievale* of Nettuno. Other sources mention that Nettuno was supposedly founded by the Saracens themselves. For neither of these scenarios, however, there is convincing evidence.

CONCLUDING REMARKS

Except for some ceramic evidence for continuity at the mouth of the river Astura and at *Satricum*, we have no archaeological data for this period. Whether *Antium* continued to exist is uncertain, since both archaeological and historical sources are lacking. Historical sources do not mention the establishment of *curtes* in the area, but they do refer to two *domuscultae*, *Antius* and *Formias*. Identification of these *domuscultae* on the basis of archaeological sources is, at the present state of knowledge, not possible.

NOTES

²⁶² Francovich/Hodges 2003, 111.

²⁶³ The *Liber Pontificalis* is the only secure historical source we have for the existence of *domuscultae* (Duchesne 1886; Davis 1992).

²⁶⁴ The *Capracorum domusculta* is the first one of these papal estates to be securely identified (cf. Christie 1991). From the description in the *Liber Pontificalis* it is clear that *domuscultae* consisted of lands (*massae*), farms (*fundi*) and/or farm buildings (*casali*) (cf. Duchesne 1886, 501; Francovich/Hodges 2003, 88).

²⁶⁵ Davis 1992; Arthur/Patterson 1994; Marazzi 1990.

²⁶⁶ Arthur/Patterson 1994, 414; Patterson 2003.

²⁶⁷ *Hic massa quae vocantur Antius et Formias suo studio iure beati Petri adquisivit, quas et domos cultas statuit* (LP, life 93, nr 26; Duchesne 1886, 435; Davis 1992, 49) ('by his efforts he acquired for St. Peter's ownership of the estates called Anzio and Formiae; these he also established as *domuscultae*' translation by Davis).

²⁶⁸ Marazzi 1998; Brandizzi Vittucci 1998, 2000; Cecere 1989; Davis 1992, 46.

²⁶⁹ The fragment was found in the area of site 15036, but must be considered an off-site find.

²⁷⁰ Recent investigations by the GIA have provided this evidence for occupation up to the 8th century AD at the settlement of Astura; for a preliminary report, see Attema et al. forthcoming.

²⁷¹ Raaymakers 2007.

²⁷² We are convinced that dedicated field research on this period is likely to reveal more information on the settlement patterns of this period. As discussed in chapter 3, research biases are particularly strong for this period.

Medieval Period (AD 900-1200)

Peter Attema, Tymon de Haas, Olaf Satijn & Gijs Tol

Settlement development in central Italy in the period between AD 900 and 1200 is characterized by *incastellamento*. The historian Toubert has described *incastellamento* as a social process in which the rural population resettled, or was resettled, in newly founded fortified (mostly hilltop) settlements, called *castra* or *castelli*. Seigneurial power mostly took the initiative in this process; monasteries, local nobility and even the pope were involved in the initiation of the (re)settlement.²⁷³ The *castra* became the new economic and religious centres and were an important factor in the Italian rural economy from the later 10th century AD onwards. Somewhere in the 11th or 12th century AD, a *castrum* was founded at Nettuno. The monastery of Grottaferrata was probably

involved in the foundation of this *castrum*.²⁷⁴ Unfortunately the ecclesiastical records of the high Middle Ages for the wider Nettuno area are limited, at least in comparison to the well-documented Sabina and north-eastern Lazio, north of the Sacco valley. To what extent Nettuno and its hinterland were part of any religious topography is therefore difficult to assess.²⁷⁵

A second *castrum* may be identified at modern Borgo Montello, the former settlement of Conca. A *castrum Concae* is mentioned for the first time in a letter by pope Pasquale II in AD 1115 or 1116, possibly describing the areas owned by the same monastery of Grottaferrata.²⁷⁶ A possible first reference to Conca is found in an 'instrumento' dated to AD 988.²⁷⁷

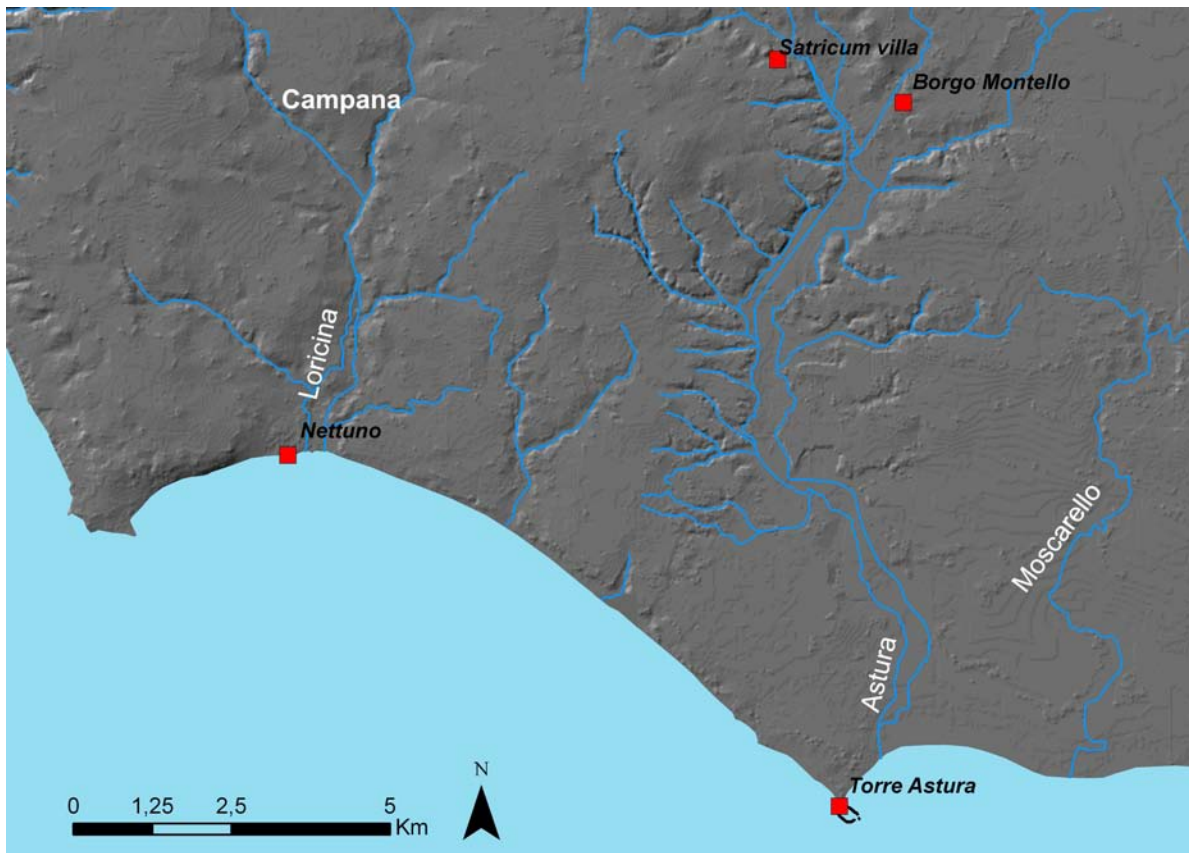


Fig. 18.1. Distribution of medieval sites (AD 900-1200; red squares: certainly occupied).

The foundation of the *castra* of Nettuno and Conca may have been part of the effort of the monastery of Grottaferrata to tighten control over this coastal area. In the case of Nettuno, the counts of the Tusculum family may have been involved as actual founders of the settlement; a combined effort therefore, the usual case for an *incastellamento* foundation. There are indeed contemporary records that indicate that the Tusculi were involved in (sea) trade.²⁷⁸ Although figures 7.1 and 7.2 show a slight increase in the number of sites for this period as well as one or more new foundations, figure 18.1 makes clear that, except for the villa at *Satricum*, we have no archaeological evidence for renewed settlement in the countryside, neither in the Loricina valley nor in the Astura valley. The coastal stretch between the *castrum* of Nettuno and Torre Astura has not yielded any archaeological evidence for occupation during this period.

At Torre Astura itself there is pottery evidence for continuity from the 10th century AD onwards until the first building phase of the tower in the 12th century, and possibly even from Roman Imperial times. The location may have remained in use as a harbour and fish-production site.²⁷⁹ In the mid-12th century the Tusculi owned or managed the island of Astura.²⁸⁰ After the fall of the counts of Tusculum in 1191, Nettuno became part of the Orsini possession.²⁸¹ Torre Astura in that year became a possession of the Frangipane family. In 1193 they sold their property on the coast to the papal court.²⁸² Their descendants, however, remained as a kind of stewards at Torre Astura.

According to several sources in the 12th and 13th centuries AD, the hinterland of Nettuno seems therefore to be in the hands of Grottaferrata, either in lease, as can be inferred from the letters of Innocenzo III,²⁸³ or in ownership.²⁸⁴

CONCLUDING REMARKS

Although we know of the existence of two *castra* in the area (*castrum Concae* at modern Borgo Montello and *castrum Neptuni* at modern Nettuno), we have very little archaeological evidence for occupation. Both historical and archaeological sources indicate that Torre Astura continued to exist. The foundation of a *castrum* at Nettuno may reflect a renewed interest in, and importance of, coastal settlement.

NOTES

²⁷³ Toubert 1973, 321.

²⁷⁴ Grottaferrata must have owned parts of the Nettuno area between AD 1004 (when the abbey was founded) and AD 1140, the date of a reference in which it claims the *castrum Neptuni*. This *castrum Neptuni* was then owned by Tolomeus of Tusculum (Rasi 1832, 11; Lombardi 1847, 136; Brandizzi Vittucci 2000, 146, note 699).

²⁷⁵ In AD 1140 monks of Grottaferrata are reported to have claimed the *castrum Neptuni* owned by Tolomeus II of Tusculum. A juridical verdict mentions Nettuno in 1204 as part of the suburbicary see of Albano (Toubert 1973, 1341, no 4). In AD 1210 the first church, *S. Nicolao de Neptuni*, is referred to. It seems no coincidence that it is described as belonging to the monastery of Grottaferrata (Brandizzi Vittucci 2000, 146, referring to *Arch. Vat., reg. Vat.*, 8.129, a letter of Pope Innocenzo III dated to AD 1210).

²⁷⁶ Brandizzi Vittucci 2000, 147, note 712; Pagliaro 1990, 14. This '*Castrum Ascianum in Castro Concae*' can safely be identified with *castrum Conca*, nowadays Borgo Montello. The *castrum* included the churches of S. Giovanni, S. Giorgio, S. Pietro in Turri and a 'Graecorum'. In AD 1250 the possession of Grottaferrata was confirmed.

²⁷⁷ In this source the 'heredes' ('heirs') of Domenico di Conca were mentioned. These heirs of Domenico di Conca were neighbours of a vineyard donated by the archpriest of Aricia to the monastery of S. Ciriaco at Rome. Cf. Pagliaro 1990, 14, note 4 referring to Lucidi 1797, 328.

²⁷⁸ They would have used the port of Nettuno to export spolia from the large imperial complexes of *Antium* (Brandizzi Vittucci 2000, 9). For this there is, however, no explicit evidence.

²⁷⁹ It is also likely that a lighthouse (originally Roman?) continued to function.

²⁸⁰ In AD 1163 Torre Astura was leased to Gionata of Tusculum by abbot Pietro of S. Alessio all'Aventino (Piccaretta 1977, 10, note 14).

²⁸¹ Benedetti in Caneva/Travaglini 2003, 473.

²⁸² Tol 2005, 22; the same year in which reference was made for the first time to the castello at Torre Astura (cf. Tomassetti 1976, 385).

²⁸³ Letter of Innocenzo III dated to AD 1201 (in Galieti 1948) and 1210 (cf. J.P. Migne, *Patrologia*, CCVI, 316).

²⁸⁴ *Libellus querellus monachorum monasterii S. Mariae in gryptaferrata* (28.2.1140) in: *Arch. Vat.*, AA, LXVIII, 3698; see also Brandizzi Vittucci 2000, 146, note 699.

Concluding Remarks

Peter Attema, Tymon de Haas & Gijs Tol

The earliest human presence in the territory of Nettuno dates back to the Palaeolithic. Excavated prehistoric sites and lithics found in surface surveys cover a time span ranging from the Middle Palaeolithic characterized by the Pontinian Mousterian culture, to the Upper Palaeolithic characterized by the Aurignacian and Epigravettian cultures. Overall, the archaeological evidence fits the general framework of settlement of the Pontine coast well.

In contrast to the ubiquitous Palaeolithic presence, the archaeological evidence for the Mesolithic, Neolithic and the Early Bronze Age is very limited. Clear evidence for a sedentary existence starts in the Middle Bronze Age, with a decrease in sites occurring at the end of this period. The location of Middle Bronze Age sites was related to the presence of natural springs. Settlement, whether inland or along the coast, intensified during the Recent and Final Bronze Age. It is during these periods that we see the development of sites that specialized in metallurgy, pottery and salt production. Sporadic Mycenaean and Italo-Mycenaean shards make clear that the Pontine coast was now part of a long distance exchange network.

From our discussion of the settlement patterns from the Iron Age to the medieval period it has become clear that there were two periods of intensive rural occupation: the Archaic period, roughly the 6th century BC, and the early and middle Imperial period between 30 BC and AD 250. Although the relative size of these peaks in rural settlement may be exaggerated due to biases in the attribution of ceramic data to the various chronological periods (see chapter 3), it is clear that the rural economy was flourishing during these periods. For the Archaic period we pointed to the towns of *Satricum* and *Antium* as central places within the rural landscape, while in the Imperial period the Roman colony of *Antium* was the central place in the area around which the rural economy evolved. For both the Archaic and Roman periods, there is a close correlation between flourishing towns and flourishing countryside.

The peak in urban growth and rural settlement in the 6th century BC mirrors a more general development in Archaic Latium, which is bound up with the success of the first urban centres and a

related agricultural economy that was based on intensive arable farming. A settlement pattern composed of fairly evenly spaced urban centres boasting temple architecture, elite buildings and fortifications is typical for *Latium Vetus*. In political terms this development can be referred to as polity formation, and in *Latium Vetus* these polities were probably rather small independent 'city-states', each wielding power over a portion of the landscape. This process of carving the landscape into territorial entities had already begun during the Orientalizing period, as is shown by both the developments at Iron Age central settlements and the increase in rural sites for this period. Since the growth of urban settlements and an increase in rural settlement took place at the same time, a considerable demographic growth, starting in the 7th century BC, is very plausible. The ensuing stable settlement pattern and agricultural economy may have triggered further demographic growth. The roots of this process are nowadays sought in the transitional period from the Bronze Age to the Iron Age, for which there is ample evidence (as we have seen in chapter 5).

The general sharp decrease in the number of rural sites following the Archaic period and the contraction of the urban centre of *Satricum* are clear signs of the destabilization of the polity organization of *Latium Vetus* at this time. Other polities in the Pontine region also contracted, and it seems that this region, being the south-eastern margin of *Latium Vetus*, suffered most from the instable political situation during the 5th and 4th centuries BC. Many of the skirmishes between Romans, Latins and mountain peoples (especially the Volscians) that Livy describes are set in the Pontine region. The Volscians took *Antium* as a stronghold, and in the light of this political and military turmoil we may assume that *Antium* also contracted. The decrease in the number of rural sites in its catchment area indeed indicates that the local agricultural economy suffered a setback. The destabilization of the Archaic settlement pattern that we see in the study area thus seems typical for the 5th and 4th centuries BC in the Pontine region as a whole and can be related to the political situation of this period.

We have observed that in the course of the 4th

century BC a new cycle of growth set in. This is in line with our observations elsewhere in the Pontine region where we also see an increase in the number of rural sites. This growth can be related to the Roman colonies and the new infrastructure of centuriation and roads. In the study area *Antium*, now a Roman colony, played a fundamental role in the successful exploitation of the countryside. The continuation of old and the founding of new farms would eventually result in a densely occupied and flourishing countryside in the late Republican and early and middle Imperial periods. The peak in the number of (confirmed) rural sites for the period 30 BC-AD 100 not only surpasses that of the Archaic period but also contains a considerable variety of rural site types, from modest farmsteads to luxurious *villae maritimae*. This means that the socio-economic organization of the countryside changed from one based on subsistence farming by individual families to a more complex economy in which several production modes and social strata can be discerned, ranging from peasant farming to slave-run estates. Trade in commodities such as olive oil, wine and fish sauce is attested by the many amphora shards present in the ceramic assemblages from rural sites, as well as by historical and epigraphical sources. Elite presence and imperial interference in and around *Antium* certainly were factors in these developments.

In the course of the Imperial period, however, a new process of contraction set in which reached a point of no return after AD 400. Between AD 400 and 600, we see a serious reduction in the number of rural sites. Still, this decline seems a rather gradual process if we take the various biases into account, such as the problems surrounding the dating of coarse wares, the impoverishment of material culture and the use of less durable materials for construction. As mentioned before, *Antium* became an ecclesiastical focal point in AD 465 and its harbour was still in use at the end of the 6th century AD. In the 6th and 7th centuries AD the decline in the number of rural sites continued and we related this to the diminishing ecclesiastical interest in *Antium*. After AD 600 the countryside seems to have been largely abandoned, and for the early medieval period we have evidence for only a few sites. According to historical sources, however, two *domuscultae* were probably situated in the area.

Although we know of the existence of two *castra* between AD 900 and AD 1200 in the area (*Concae* at modern Borgo Montello and *castrum Neptuni* at modern Nettuno), we do not have archaeological

evidence for rural reoccupation. The establishment of a fortified settlement at Nettuno (part of the wider process of *incastellamento*) reflected, however, the renewed interest in and importance of coastal settlement. Both historical and archaeological sources indicate that Torre Astura continued to exist.

PART III
THE MUSEUM COLLECTION

20

Amphoras from the *Antiquarium* of Nettuno

Harry Pape

INTRODUCTION

The museum collection at the *Antiquarium* of Nettuno contains over 60 virtually intact amphoras and many diagnostic fragments (rims, shoulders with neck, handles and rim, spikes).²⁸⁵ Some of the vessels were reportedly recovered by fishermen from the coastal waters between the Roman villa complex of Torre Astura and the former Roman port town of *Antium*. These vessels have a thick marine incrustation of shells and other remnants. Other pieces were collected from the 1970s onwards by Arnaldo Liboni, director of the *Antiquarium*, at *villae maritimae* along the coast and at Roman villas located inland.

CHRONOLOGY

In table 20.1 we have listed parallels and dates for the 60 intact amphoras in the museum collection, as well as their provenance and presumed principal contents (see also fig. 20.1).²⁸⁶ The table shows that the amphoras span a chronological range of approximately 1100 years, from the Etruscan *Tipo Py 4A*, beginning in 450 BC, to the *anfore cilindriche di grandi dimensioni* ending in AD 650 (see also fig. 20.2). The earliest amphoras in the collection, dating to between 450 and 100 BC, represent different production areas: they include *Tipo Py 4A* (from southern *Etruria*), the consecutive Graeco-Italic (MGS IV-VI) amphoras (from *Magna Grecia*, Sicily) and the *van der Werff* 1-3 (from North Africa; fig. 20.3a-c). 1st-Century BC amphoras include the Dressel 1 type and its variants (from central Italy), with the 'Greco-Roman' Dressel 2-4 from Italy and the Baetican Haltern 70 as its successors (fig. 20.4a-c). From the start of the 1st century AD new types emerge (e.g. the smaller *Forlimpopoli*, Dressel 21-22, Beltrán IIB, *Rhodian type*; fig. 20.5a-d). Most of these were only used for a relatively short period (about 50 years), with the exception of *Forlimpopoli* (250 years).

In the second half of the 1st century AD, various more efficient types arose: the medium-sized lightweight amphoras from Gaul (Gallica 4), and the increasingly large but also (relatively) lightweight African amphoras (Tripolitanian I-III, *Africana* I-II, cylindrical amphoras; fig. 20.5e-g). The

Gauloise 4 was the most common amphora in Gaul and north-western Europe until AD 250, and the *Africana* II was used for bulk transport between North Africa and Rome from AD 200 to 400.²⁸⁷ These amphoras all had a fairly long lifespan; Tripolitanian II, for example, had a lifespan of around 350 years, while the small Keay LII and Spatheion amphoras lasted for 300 years (fig. 20.5h/i).

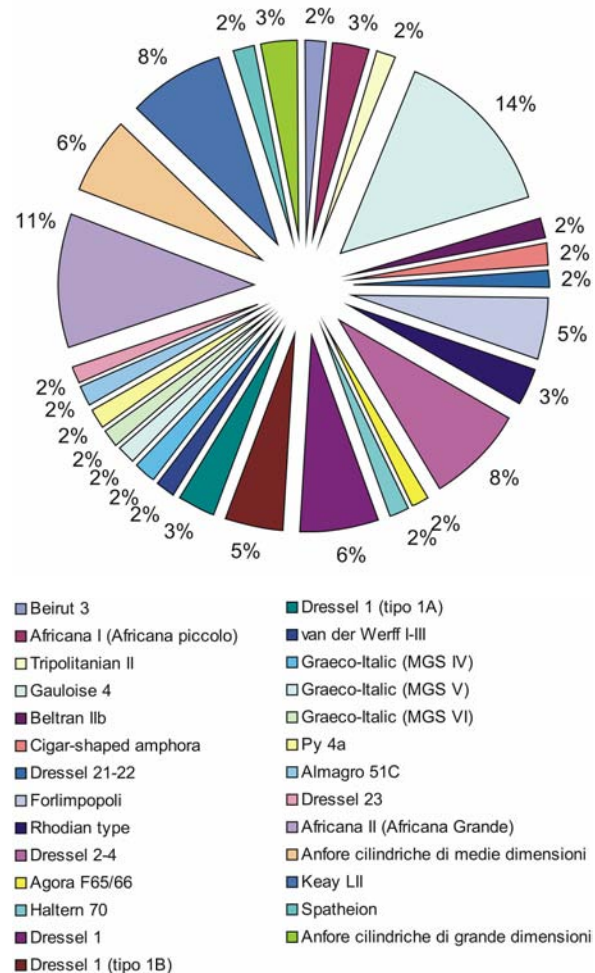


Fig. 20.1. Amphora types present in the museum collection (percentage of total collection).

Table 20.1. Amphora types in the museum collection.

Amphora type	Dating	No found	Provenance	Principal Contents
Tipo Py 4A	450-250 BC	1	Southern Etruria	Wine
Graeco-Italic (MGS IV)	4 th - start 3 rd century BC	1	Magna Grecia, Sicily	Wine
Graeco-Italic (MGS V)	mid 4 th - mid 3 rd century BC	1	Magna Grecia, Sicily	Wine, olives, grapes
Graeco-Italic (MGS VI)	end 4 th - 2 nd century BC	1	Magna Grecia, Sicily	Wine
van der Werff 1-3	4 th -2 nd century BC	1	North Africa	Wine
Dressel 1 (Tipo 1A)	mid 2 nd - end 1 st century BC	2	Italian central Tyrrhenian area	Wine
Dressel 1 (Tipo 1B)	mid 2 nd - end 1 st century AD	3	Italian central Tyrrhenian area	Wine
Dressel 1	mid 2 nd - end 1 st century BC	4	Italian central Tyrrhenian area	Wine
Haltern 70	mid 1 st century BC- mid 2 nd century AD	1	Baetica	<i>Defrutum</i>
Agora F65/66	mid 1 st century BC- 4 th century AD	1	Asia Minor	-
Dressel 2-4	mid 1 st century BC- end 1 st century AD	5	Italian central Tyrrhenian area	Wine
Rhodian type (Camulodunum 184)	end 1 st century BC- start 2 nd century AD	2	Rhodes	Wine
Forlimpopoli	end 1 st century BC- mid 3 rd century AD	3	North-eastern Italy	Wine
Dressel 21-22	1 st century AD	1	Campania	Fruit (apples, cherries, plums)
No 66 (Cigar-shaped amphora)	1 st century AD	1	Unknown, probably desert environment (Palestina?)	-
Beltrán IIB	start 1 st - mid 2 nd century AD	1	Baetica	Fish sauce
Gauloise 4 (Pélichet 47)	mid 1 st - mid 3 rd century AD	9	Southern France	Wine
Tripolitania II	mid 1 st - end 4 th century AD	1	Libya	Olive oil, fish sauce
Africana I (Africana piccola)	mid 2 nd - start 5 th century AD	2	Tunisia	Olive oil
Beirut 3	end 1 st - mid 2 nd century AD	1	Beirut	wine
Africana II (Africana grande)	end 2 nd - start 5 th century AD	7	Tunisia	Olive oil, fish conserves
Dressel 23	3 rd - end 4 th century AD	1	Baetica	Olive oil, olives
Almagro 51 C (Keay XXIII/LusitanaIV)	3 rd - mid 5 th century AD	1	Lusitania	Fish sauce
Anfore cilindriche di medie dimensioni (Keay XXV, 1-3)	start 4 th - mid 5 th century AD	4	Tunisia	Olive oil, fish conserves
Keay LII	4 th -7 th century AD	5	Calabria, Sicily	Wine
Spatheion (Keay XXV, 2/XXVI)	4 th -7 th century AD	1	Tunisia	Olive oil, olives, fish conserves, wine
Anfore cilindriche di grandi dimensioni	mid 5 th - mid 7 th century AD	2	Tunisia	Olive oil

-600 -500 -400 -300 -200 -100 0 100 200 300 400 500 600 700 800

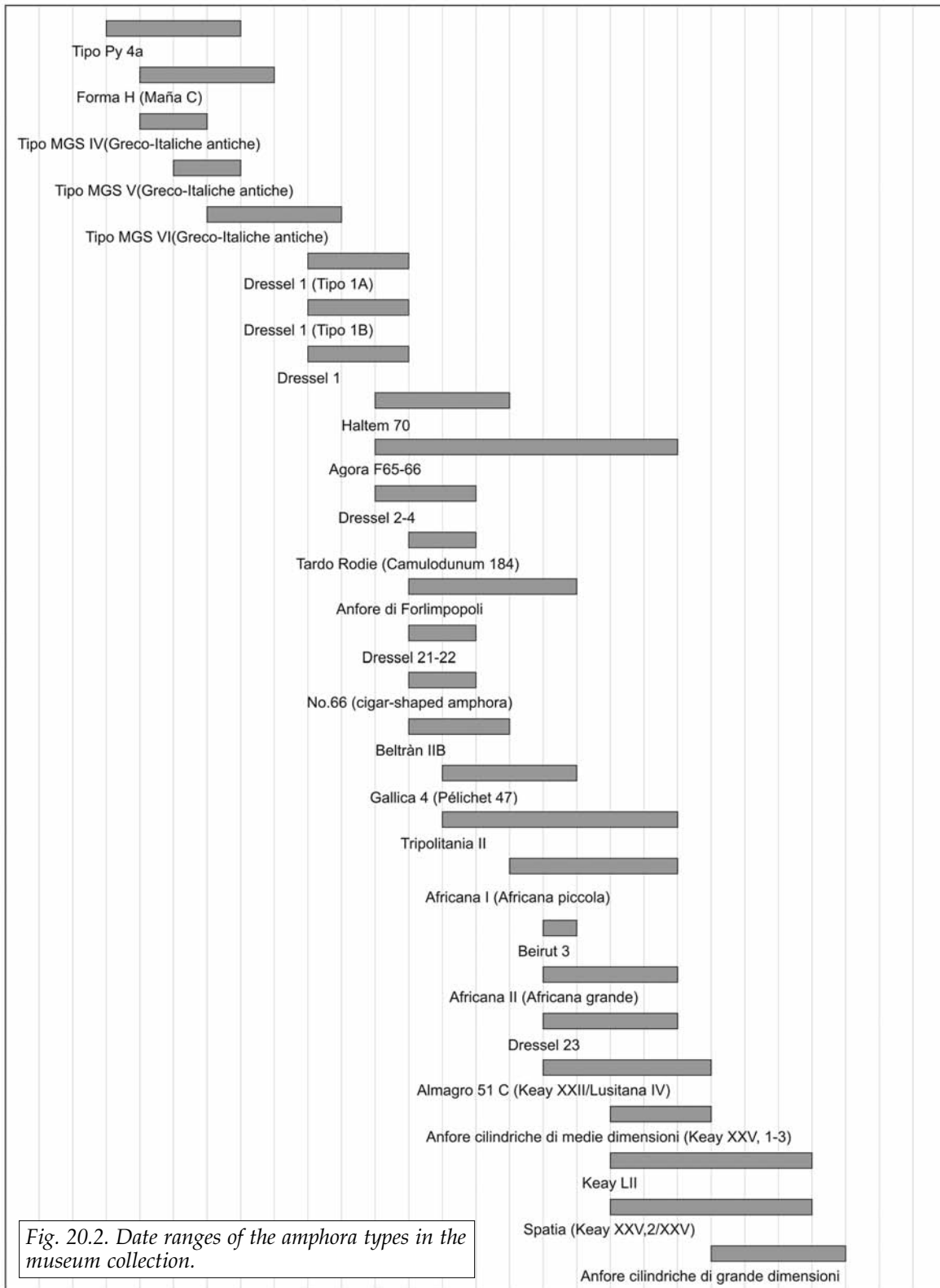


Fig. 20.2. Date ranges of the amphora types in the museum collection.



Fig. 20.3a-c. Post-Achaic and Republican amphora types: a) Tipo Py 4A; b) Tipi MGS IV-VI or Graeco-Italic; c) Van der Werff type 1-3.



Fig. 20.4a-c. Late Republican to early Imperial amphorae: a) Dressel 1; b) Dressel 2-4; c) Haltern 70.



Fig. 20.5a-i. Various Imperial amphorae: a) Forlimpopoli type; b) Dressel 21-22; c) Beltrán IIB; d) Tardo Rodie; e) Gauloise 4; f) Africana II; g) cylindrical amphora; h) Keay LII; i) Spatheion.

CONTENTS

Table 20.1 gives an overview of the probable contents of the various amphora types.²⁸⁸ The Dressel 1, Dressel 2-4, Gallica 4, Keay LII and Africana II types make up the bulk of the collection and, with the exception of the Africana II amphorae, all these types primarily carried wine. The Africana II amphorae were most probably used for olive oil and fish preserves.

Considering the rest of the vessels in the collection, 36 of them (60%) carried wine, whilst 4 amphorae carried olive oil (7%) and 2 vessels (3%) fish sauce. Another 2 amphorae (3%) were probably used to transport fruit and fruit products (Haltern 70 carrying *defrutum* and Dressel 21-22 carrying various fruits).

The remaining 16 amphorae (27%) are known to have carried various products, such as olives, grapes, olive oil, fish preserves and wine.²⁸⁹ Most of these amphorae, however, probably carried olive oil, a very popular and much demanded product in Roman times.

PROVENANCE AND DISTRIBUTION

The provenance of the amphorae has been listed in table 20.1. The most common amphora types were distributed widely across the Mediterranean and the changes in typology and provenance reflect broader shifts in production and trade networks within the Roman Empire. The earlier vessels were predominantly produced in central Tyrrhenian Italy (e.g. Dressel 1, Dressel 2-4), which was supposedly the dominant wine producing area in the late Republican period.²⁹⁰ The rise of other wine producing areas from the early Imperial period onwards is reflected in the collection by the occurrence of several amphorae from France (Gauloise 4).

A second important shift in these trade networks occurred in the 2nd century AD; from then on olive oil was exported from North Africa to Italy in large quantities, and the large numbers of African amphorae (Tripolitanian, Africana II, cylindrical amphorae) are thus likely to have carried primarily oil.

Fish sauce as an amphora-transported commodity is ranked by Peacock & Williams behind wine and olive oil. Both fish preserves and fish sauce seem to have been produced by specialized *villae* in Spain, Portugal and Morocco. The am-

phoras for this purpose were produced especially in Baetica (Beltrán IIB), Lusitania (Almagro 51 C) and Tunisia (Africana II, Spatheion), so in or near the area of fish processing.²⁹¹

The Keay LII vessels seem to suggest a small-scale renaissance of Italian wine production in the 4th to 7th century AD in Calabria and/or Sicily.

NOTES

²⁸⁵ The amphoras were studied by the author in 2006 and 2007; this paper only discusses the amphoras studied in 2006. For a complete catalogue, see De Haas et al. 2008, where the amphoras from GIA's surveys and the excavation at *Le Grottacce* (site 11215) are also published.

²⁸⁶ Classification and dating after *Roman amphorae: a digital resource*, University of Southampton (<http://ads.ahds.ac.uk/catalogue.html?amphora2005>), Some additional types derive from Peacock/Williams 1991 and Caravale/Toffoletti 1997.

²⁸⁷ Peacock/Williams 1991, 51-53.

²⁸⁸ After Peacock/Williams 1991; Caravale/Toffoletti 1997.

²⁸⁹ The Africana II, for example, is known to have carried both olive oil and fish preserves, but no wine or fish sauce.

²⁹⁰ Tchernia 1986.

²⁹¹ Peacock & Williams argue that amphoras produced in a specific region do not have to be filled in the same area, but could be brought elsewhere for that purpose: for example, the Moroccan fish industry is not linked to local amphora production (Peacock/Williams 1991, 17-18). Empty amphoras may have been brought in from Spain, but other containers may also have been used to transport products; see also Bekker-Nielsen 2005.

21

Coins from the GIA Surveys and the *Antiquarium* of Nettuno

Tycho Derks

INTRODUCTION

GIA's field surveys and the museum collection have yielded a number of Roman coins, which will be discussed in this section. During the surveys conducted from 2004 to 2006, coins were retrieved from the localities of Torre Astura and Campana (stray finds). The coins from the museum collection come from many different sites, although predominantly from the aforementioned site Torre Astura,²⁹² but also from sites 15014, 15019, 15085 and 11281 (see *fig. 21.1*).

In the catalogue, the coins from these various sites are described first, followed by stray finds and finds from unknown localities. In the final part of the catalogue, a set of excellently preserved coins of large denominations is discussed. This set was confiscated by the *carabinieri* and its provenance is unknown. The real possibility that these coins were found in Nettuno, however, merits their inclusion in this work. Two hoards, containing a combined total of some 1700 coins, were found at Torre Astura and will be discussed separately below.

THE COIN HOARD FROM TORRE ASTURA

The bulk of the museum's numismatic collection is made up of a two-part bronze hoard retrieved from Torre Astura (*fig. 21.2*). For reasons explained below they will be treated here as a single hoard, consisting of approximately 1700 coins. The exact find location of the hoard is unknown, but judging by the fairly good state the coins are in, it is unlikely that they were exposed to the sea as many other finds from Torre Astura were. They have probably been sheltered by sand or stored in a container of some kind.

The hoard consists entirely of $\text{Æ}3$ (149 coins) and $\text{Æ}4$ (1553 coins), denominations dating to the mid-4th century AD, the exact date range (as will be discussed below) being in fact quite short.

As can be seen in table 21.1, the vast majority of coins were struck by the emperor Constantius II (AD337-361). The other identifiable coins were issued by Julian II (the Apostate), as Caesar (AD 355-361) and as Augustus (AD 361-363). With 75%

of the coins being issued by only two individuals, it seems rather unlikely that the unidentified coins would have presented many surprises.

The various coin types in the hoard are listed in table 21.2. There are two dominant types, the FEL.TEMP.REPARATIO ('Fallen Horseman') type,

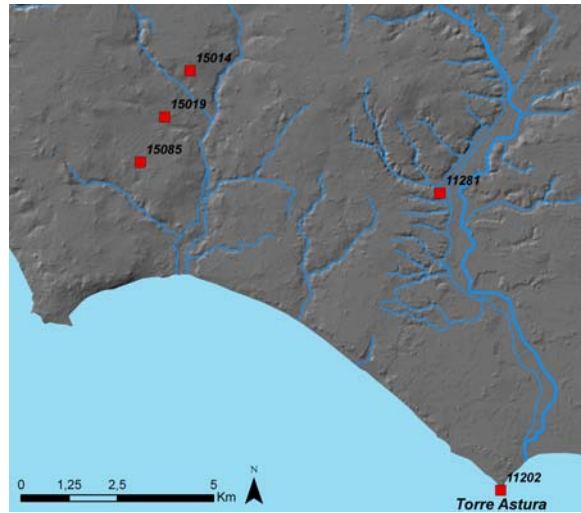


Fig. 21.1. Locations of numismatic finds within the municipality of Nettuno.



Fig. 21.2. Part of the coin hoard from Torre Astura.

Table 21.1. Number of coins in the Torre Astura hoard.

	Number	Date
Constantius II Augustus	1264	337-361
Julian II Caesar	1	355-361
Julian II Augustus	5	361-363
Indeterminable	432	-
Total	1702	-

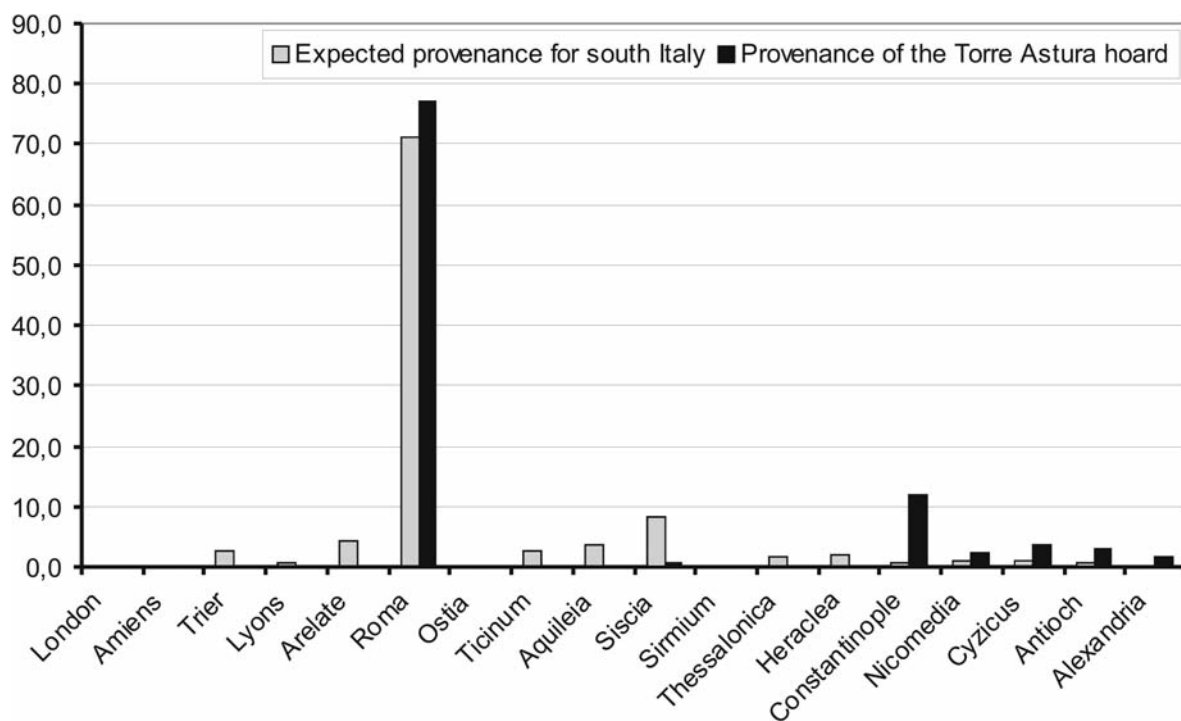


Fig. 21.3. Expected incidence for southern Italy set against the provenance of the Torre Astura hoard (in percentages, mints ordered from west to east). (Based on RIC VIII: 104).



Fig. 21.4. Location of Torre Astura, possibly on the trade routes to the east. Large black dots indicate the provenance of the hoard; small black dots indicate the other mints in the empire.

Table 21.2. Coin types in the Torre Astura hoard.

Type	Number	Date
SPES REI PVBLICE	768	355-361
FEL. TEMP. REPARATIO	557	348-361
VIRTUS EXERCITVS ROMANORVM	165	360-363
VICTORIAE DD AVGGQ NN	50	340-348
VOT XX MVLT XXX	3	342-353
GLORIA REI PVBLICAE	2	350-361
VICTORIA DD AVGG N	1	340-348
Indeterminable	156	-
Total	1702	-

issued between AD 348 and 361, and the SPES REI PVBLICE type, issued between AD 355 and 361.

The two main types explain the predominance of the issues by Constantius II. The SPES REI PVBLICE type falls entirely within the sole reign of Constantius (AD 350-361); the only other issuer in this period was Julian, as Caesar. His issues are relatively rare, although perhaps not as rare as the single coin in this hoard. Although the FEL TEMP. REPARATIO type was already issued after the

Table 21.3. Provenance of coins in the Torre Astura hoard.

Mint	Percentage
Rome	76.6 %
Constantinople	12.4 %
Cyzicus	3.6 %
Antioch	2.9 %
Nicomedia	2.2 %
Alexandria	1.5 %
Siscia	0.7 %

monetary reform of AD 348, during the dual reign of Constantius II and Constans (deceased AD 350), the reduced versions in the Torre Astura hoard all belong to a later period, being the result of rapid inflation during the war against the usurper Magnentius (AD 350-353). The handful of VIRTUS EXERCITVS ROMANORVM issues by Julian suggest the hoard was deposited shortly after his elevation to Augustus in November AD 361.

Of the 1702 coins, only 137 could be traced to a specific mint (*table 21.3*). The dominance of the Roman mints is hardly surprising given that city's proximity to Torre Astura, but the other mints are not the most obvious locations. When compared to an expected incidence for southern Italy for this period (*RIC VIII*), the results appear to be somewhat different (*fig. 21.3*). The expected western mints are completely absent in the Torre Astura hoard, which contains a much larger share of those from the east.

It should also be noted that, except for nearby Rome and the single coin from Siscia, all the mints are located in the eastern trading ports, as opposed to the mainly inland mints of the west. Given Torre Astura's location on the Italian coastline and the existence of a harbour, it could be speculated that the villa had trading connections with the East, and perhaps was one of the ports of call on the trading routes (*fig. 21.4*).

CATALOGUE

In the catalogue the coins from the various sites in the municipality of Nettuno are described first, followed by stray finds and finds from unknown localities. In the final part of the catalogue the confiscated coins are discussed. The coin descriptions follow the standard used by Sear (1988) with some minor adjustments.

Site 15014 (*Campana*)

1.

Severus Alexander Æ Sestertius. IMP CAES M AVR SEV ALEXANDER AVG, laureate draped bust right / P M TR P VI COS II P P S-C, Emperor standing left sacrificing over altar from patera. Diam. 3.14 cm, weight 13.8 g. Rome mint. *RIC Sev.Alexander 468*; Cohen 1955, 326.

2.

Domitian Æ As. IMP CAES DOMIT AVG GERM COS XI CENS POT P P, Laureate head right, aegis at tip of bust. / MONETA AVGVSTI SC, Moneta standing, holding scales and cornucopia. Diam. 2.90 cm, weight 11.7 g. *RIC Domitian 395*; *BMC 449*.

3.

Faustina Sr. Æ As. DIVA FAV-STINA, bust facing right / AETERNITAS S.C. Providentia standing left, holding sceptre and globe with bird on top. Diam. 2.98 cm, weight 17.5 g. *RIC Anton.Pius 1693*.

4.

Constantius II Æ 3. D N CONSTAN-TIVS P F AVG diademed bust right/ FEL TEMP -REPARATIO Soldier spearing fallen horseman (FH type). Diam. 1.71 cm, weight 2.7 g. Rome mint (mint mark ROM).

5.

Severus Alexander Æ Sestertius. IMP SEV ALEXANDER AVG, laureate bust right, drapery on left shoulder / P M TR P VIII COS III P P, SC below, emperor in quadriga right holding eagle tipped sceptre. Diam. 2.56 cm, weight 7.8 g. *RIC Sev.Alexander 495*; Cohen 1955, 377.

6.

Constantius II Æ 4. D N CONSTAN-TIVS P F AVG, diademed bust right/ FEL TEMP -REPARATIO (FH type). Diam. 1.60 cm, weight 1.0 g.

7.

Republican AR didrachm. Head of Mars facing right / Bust of horse facing right. Diam. 1.65 cm, weight 3.9 g. Romano-Campanian (312-286 BC). Similar to Head 1977, 33 no 2.

8.

Constantine I Æ Follis. IMP CONSTANTINVS P F AVG, laureate and cuirassed bust right / SOLI INVICTO COMITI, Sol standing left, chlamys hanging behind, right hand raised, holding globe close to body. Diam. 2.37 cm, weight 3.6 g. Ostia mint (mint mark MOSTS). *RIC VI Ostia 83*.

9.

Trajan Æ Sestertius. IMP CAES NERVAE TRAIANO AVG GER DAC TR P COS V P P, laureate head right / SPQR OPTIMO PRINCIPI S-C, Fortuna standing facing, head left, holding rudder & cornucopiae. Diam. 3.28 cm, weight 11.3 g. *RIC 500*; Cohen 1955, 477.

10.

Trajan? Æ. Illegible, laureate head right, illegible / illegible. Diam. 3.17 cm, weight 9.2 g. Obv.: legend illegible, emperor (Trajan?) facing r.

11.

Gordian III Æ Sestertius. IMP GORDIANVS PIVS FEL AVG, laureate, draped and cuirassed bust right / LAETITIA AVG N SC, Laetitia standing left, with wreath and anchor. Diam. 2.85 cm, weight 15.1 g. *RIC 300a*; Cohen 1955, 122.

12.

Republican AR Denarius. Apollo facing r. I? behind head / horseman facing r. (L) PISO ... (illegible) below. Diam. 2.25 cm, weight 2.3 g. Rome mint, moneyer L. Piso L.f. L.N. Frugi (90 BC) or C. Piso L.f. Frugi (67 BC). Crawford 1975, no 340/1 & 408/1b.

13. Constantius II Æ 3. D N CONSTAN-TIVS P F AVG, diademed bust right/ FEL TEMP –REPARATIO (FH type). Diam. 1.98 cm, weight 2.7 g. Constantinople mint (mint mark CONS).
14. Constantinopolis commemorative Æ 4. CONSTANTI-NOPOLIS, laureate helmeted bust of Constantinople left, wearing imperial cloak & holding scepter / Victory standing left on prow, holding spear and resting hand on shield. Diam. 1.53 cm, weight 0.9 g. Similar to RIC VII Rome 332 & 333.
15. Diocletian Æ post-reform radiate. IMP C C VAL DIO-CLETIANVS P F AVG, radiate draped bust right / CONCORDIA MILITVM, Diocletian standing right in military dress, receiving Victory on globe from Jupiter. Diam. 2.14 cm, weight 2.6 g. Rome mint (mint mark RS). RIC VI Rome 284; Sear 1988, 3540.
16. Republican Æ. Heads of bearded Janus / Prow of galley. Diam. 3.30 cm, weight 22.6 g.
17. Constans Æ 4. D N CONSTANS P F AVG, rosette diademed & draped bust right / GLORIA EXERCITVS, 2 soldiers standing to either side of one standard. Diam. 1.58 cm, weight 1.2 g. Rome mint (mint mark RP). RIC VIII Rome 52.
18. Commodus? Æ. Partial legend MCOM?...., bearded emperor facing right / S C, illegible. Diam. 2.79 cm, weight 9.3 g.
19. Nero Æ As. IMP NERO CAESAR AVG GERM, Laureate head right / PACE P R TERRA MARIQ PARTA IANVM CLVSIT SC, Temple of Janus with doors closed. Diam. 2.96 cm, weight 10.3 g. RIC Nero 526; Cohen 1955, 175.
20. Unidentified Æ. Completely illegible. Diam. 1.59 cm, weight 2.0 g.
Site 15019 (Torre del Monumento)
21. Unidentified Æ. Completely illegible. Coin is pierced, possibly used as medallion. Diam. 1.81 cm, weight 6.6 g.
22. Unidentified Æ. Illegible, two standing figures facing each other / illegible. Coin is clipped (square shape). Diam. 1.65 cm (2.03 diag.), weight 3.5 g.
23. Unknown coin, Æ or possibly Pb. Both sides are illegible. Diam.: 1.80 cm, weight 3.0 g.
24. Unknown coin, Æ or possibly Pb. 'LOS' / 'AES'. Diam. 2.22 cm, weight 6.9 g.
Diam.: 2.22 cm, weight 6.9 g.
25. Unidentified Æ. Both sides illegible. Diam. 1.89 cm, weight 2.4 g.
26. Unidentified Æ. Both sides illegible. Diam. 1.74 cm, weight 2.6 g.
27. Unknown coin, Æ or possibly Pb. 'LOS' / illegible. Diam. 2.17 cm, weight 6.8 g.
28. Domitian Æ As. IMP CAES DOMIT AVG GERM COS XV CENS PER P P, laureate head right / FORTVNAE AVGVSTI S-C, Fortuna standing left holding rudder & cornucopiae. Diam. 2.60 cm, weight 10.2 g. RIC Domitian 394.
Site 15085 (I Cioccati)
29. Constantius II Æ 4. D N CONSTAN-TIVS P F AVG, diademed bust right/ FEL TEMP –REPARATIO (FH type). Diam. 1.56 cm, weight 1.6 g. Alexandria mint (mint mark: ALE?).
30. Unidentified Æ. Both sides illegible. Diam. 1.60 cm, weight 2.5 g.
31. Marcus Aurelius Dupondius. AD 161. IMP CAES M AVREL ANTONINVS AVG P M, radiate bust right, slight drapery on left shoulder / CONCORD AVGVSTOR TR P XV S-C, COS III in ex, Aurelius & Verus standing facing each other, clasping hands. Diam. 2.58 cm, weight 13.7 g. RIC M.Aurelius 799; BMCRE 853; Cohen 1955, 50.
32. Jovian Æ 3. D N IOVIANVS P F AVG, diademed, draped & cuirassed bust left / VOT V MVLT X in wreath, VRB.ROM.P. in ex. Diam. 1.87 cm, weight 2.4 g. Rome mint (mint mark: VRB.ROM.P.). RIC VIII Rome 332.
Site 11202 (Torre Astura)
33. Constantius II Æ 3. D N CONSTANTIVS P F AVG, diademed, draped & cuirassed bust / VIRT EXERC ROM, soldier standing right, head left, holding trophy over left shoulder & placing hand on head of kneeling captive. Diam. 1.71 cm, weight 2.1 g.
34. Constantius II Æ 3. D N CONSTANTIVS P F AVG, diademed, draped & cuirassed bust / VIRT EXERC

- ROM, soldier standing right, head left, holding trophy over left shoulder & placing hand on head of kneeling captive. Diam. 1.69 cm, weight 2.2 g.
35. Unidentified Æ. Both sides illegible. Diam. 1.52 cm, weight 1.6 g.
36. Unidentified Æ. Both sides illegible. Diam. 1.98 cm, weight 1.7 g.
37. Unidentified Æ. Both sides illegible. Diam. 1.71 cm, weight 3.3 g.
38. Unidentified Æ. Both sides illegible. Diam. 2.13 cm, weight 3.0 g.
39. Unidentified Æ. Various fragments of unidentifiable coins.
40. Unidentified Æ. Both sides illegible. Diam. 2.65 cm, weight 7.3 g.
41. Siena, 16th century Æ. VETVS SENA / CIVITAS VIRGIN. Diam. 1.81 cm, wt 0.6 g.
42. Republican AR Didrachm, ca 230-226 BC. Helmeted head of Mars facing r., club behind. Horse galloping r., club above, ROMA below. Diam. 1.58 cm, weight 3.0 g. Crawford 1975, 75; Sydenham 1952, 23.
43. Augustus Æ Quadrans, moneyer C. Rubellius Blandus (4 BC). C RVBELLIVS BLANDVS S C / III VIR A A A F F, around garlanded altar with bowl-shaped top. Diam. 1.50 cm, weight 3.3 g. RIC Augustus 0467; Cohen 1955, 511.
44. Constantine I Æ Follis. IMP CONSTANTINVS P F AVG, laureate and cuirassed bust right / SOLI INVICTO COMITI, Sol standing left, chlamys hanging behind, right hand raised, holding globe close to body. Diam. 1.90 cm, weight 1.5 g. Similar to RIC VII, Rome 40.
45. Constantius II? Æ 3. partial legend ...CONS(..)NTIVS ... / illegible. Diam. 2.32 cm, weight 2.2 g.
46. Constantius II Æ 4. CONSTANTIVS P F AVG, draped & cuirassed bust right / GLORIA EXERCITVS, two soldiers standing to either side of one standard. Diam. 1.40 cm, weight 2.1 g. Similar to RIC VIII 56.
47. Constantius II Æ 4. Partial legend D N CONSTANT... AVG, bust right / FEL TEMP REPARATIO (FH type). Diam. 1.64 cm, weight 1.7 g.
48. Constantius II Æ 3. D N CONSTANTIVS P F AVG, bust right / FEL TEMP REPARATIO (FH type). Diam. 2.02 cm, weight 2.0 g.
49. Unidentified Æ 3. illegible, bust right / partial legend SECVRI-TAS REI P... Diam. 1.76 cm, weight 1.4 g. Rome mint (mint mark: R-wreath-S). Possibly RIC VIII Rome 12.
50. Constantius II Æ 3. D N CONSTANTIVS P F AVG, bust right / FEL TEMP REPARATIO (FH type). Diam. 1.92 cm, weight 2.7 g. Constantinople mint (mint mark: CONS).
51. Julian II Caesar? Æ 4. partial legend ...S NOBIS, bust right / FEL TEMP REPARATIO (FH type). Diam. 1.55 cm, weight 2.4 g.
52. Constantius II Æ 3. D N CONSTANTIVS P F AVG, bust right / FEL TEMP REPARATIO (FH type). Diam. 1.92 cm, weight 2.3 g.
53. Julian II Caesar Æ 3. Partial legend D N IVLIA... ..ES NOB, bust right / FEL TEMP REPARATIO (FH type). Diam. 1.80 cm, weight 2.7 g. Siscia mint (mint mark: DSIS).
54. Constantius II Æ 4. Partial legend ... CONSTAN-TIVS, bust right / FEL TEMP REPARATIO (FH type). Diam. 1.57 cm, weight 2.0 g. Sirmium mint (mint mark: DSIRM).
55. Constantius II Æ 4. D N CONSTANTIVS P F AVG, bust right / FEL TEMP REPARATIO (FH type). Diam. 1.60 cm, weight 2.3 g.
56. Constantius II Æ 4. D N CONSTANTIVS P F AVG, bust right / FEL TEMP REPARATIO (FH type). Diam. 1.46 cm, weight 1.8 g.
57. Unidentified Æ 4. illegible / partial legend (..GLOR..). Diam. 1.49 cm, weight 1.4 g.
58. Constantius II Æ 4. Partial legend ..ANTIVS.., bust right / SPES REI-PVBLCICE, SMKE in exergue, emperor standing left holding globe and spear. Diam. 1.52 cm, weight 1.3 g. Cyzicus mint (mint mark: SMKE). RIC VIII Cyzicus 117.

59.
Constantius II? Æ 4. Partial legend ..P.F. AVG / partial legend ..GLORIAE.. . Diam. 1.51 cm, weight 1.9 g.

60.
Constantius II Æ 4. Partial legend ..CONST., bust right / SPES REI-PVBLICE, SMND in exergue, emperor standing left holding globe and spear. Diam. 1.65 cm, weight 3.0 g. Nicomedia mint (mint mark: SMND).

61.
Constantius II? Æ 4. Illegible / FEL TEMP REPARATIO (FH type). Diam. 1.63 cm, weight 2.0 g.

62.
Constantius II? Æ 4. Illegible / FEL TEMP REPARATIO (FH type). Diam. 1.39 cm, weight 1.7 g.

63.
Unidentified Æ 4. Illegible / VOT XX MVLT XXX, in wreath. Diam. 1.40 cm, weight 1.1 g.

64.
Unidentified Æ 4. Illegible / partial legend GLORIA EXER., Diam. 1.08 cm, weight 0.8 g.

65.
Unidentified Æ 4. Illegible / VOT XX MVLT XXX, in wreath, ROMA in ex. Diam. 1.33 cm, weight 0.8 g. Rome mint (mint mark ROMA).

66.
Constantius II Æ 4. D N CONSTANTIVS P F AVG, diademed bust right / FEL TEMP REPARATIO (FH type). Diam. 1.60 cm, weight 1.7 g.

67.
Constantius II Æ 4. D N CONSTANTIVS P F AVG, diademed bust right / FEL TEMP REPARATIO (FH type). Diam. 1.58 cm, weight 2.3 g.

Site 11281 (Intossicata)

68.
Faustina sr. Æ Sestertius. DIVA FAVSTINA, draped bust right / AETERNITAS S-C, Aeternitas standing left holding phoenix on globe and holding up skirt. Diam. 2.76 cm, weight 9.4 g. Similar to RIC 1105; Cohen 1955, 12.

Locality: Campana

69.
Republican AR quinarius, c.209 BC. Head of Roma facing right, wearing winged helmet / Dioscuri on horseback, holding spears, charging right. Ear of corn or club below, ROMA in ex. Similar to BMCR I 15.9; Sydenham 1852, 141.

Locality: Piscina Cardillo

70.
Philip II of Spain (1554-1598) Æ. VT COMMODVS / Eagle facing left. Diam. 1.99 cm, weight 3.4 g.

Locality: Chiesa di S. Francesco

71.
Papal States Æ. BONONIA DOCET - 1750 / illegible. Diam. 1.86 cm, weight 2.0 g.

72 a-d (four coins).

- Papal States Æ. BONONIA DOCET - 1736 / illegible. Diam. 2.04 cm, weight 2.8 g.

- Papal States Æ. BONONIA DOCET - 1738 / illegible. Diam. 1.87 cm, weight 1.4 g.

- Unidentified Æ. Both sides illegible. Diam. 1.83 cm, weight 0.6 g.

- Papal States? Æ. ROMA / illegible. Diam. 2.01 cm, weight 0.8 g.

Unknown provenance

73.
Unidentified Æ. Both sides illegible. Diam. 1.93 cm, weight 4.0 g.

74.
Unidentified Æ. Both sides illegible. Diam. 2.32 cm, weight 7.1 g.

75.
Republican Aes Grave (2nd cent.). Head of bearded Janus / Prow of galley, I in front. Diam. 2.76 cm, weight 18.3 g.

76.
Unidentified Æ. Both sides illegible. Diam. 2.30 cm, weight 9.4 g.

77.
Unidentified Æ. Partial legend (...)ANTONIN(...) / illegible. Diam. 2.41 cm, weight 9.1 g.

78.
Unidentified Æ. Several small, unidentifiable fragments.

79.
Constantius Gallus? Æ 3. Partial legend D N (..) CL CONS(...) / FEL TEMP REPARATIO (FH type). Diam. 1.83 cm, weight 3.7 g.

80.
Constantius II Æ 3. D N CONSTANTIVS P F AVG, diademed bust right / FEL TEMP REPARATIO (FH type). Diam. 1.89 cm, weight 2.8 g.

81.
Constantius II Æ 2. D N CONSTANTIVS P F AVG, diademed bust right / FEL TEMP REPARATIO (FH type). Diam. 2.17 cm, weight 1.7 g.

82.
Constantius II Æ 3. D N CONSTANTIVS P F AVG, diademed bust right / FEL TEMP REPARATIO (FH type). Diam. 2.02 cm, weight 2.0 g.

83. Constantius II Æ 3. D N CONSTANTIVS P F AVG, diademed bust right / SPES REI PVBLICE, emperor standing left holding globe and spear. Diam. 1.96 cm, weight 1.3 g.

84. Constantius II Æ 3. D N CONSTANTIVS P F AVG, diademed bust right / FEL TEMP REPARATIO (FH type). Diam. 1.94 cm, weight 2.5 g

The confiscated collection

85. Vespasian Æ Dupondius. IMP CAES VESPASIAN AVG COS III, radiate head right / S-C, ROMA below, Roma seated left on a pile of arms, holding wreath & parazonium. Diam. 2.55 cm, weight 13.4 g. *RIC* Vespasian 476; Cohen 1955, 411; *BMC* 591.

86. Philip I Æ Sestertius. IMP M IVL PHILIPPVS AVG, laureate, draped & cuirassed bust right / P M TR P III COS II P P S C, Felicitas standing left with caduceus & cornucopiae. Diam. 2.94 cm, weight 16.5 g. *RIC* Philip I 150a; Sear 1988, 2598 var.; Cohen 1955, 138.

87. Nero Æ Dupondius. IMP NERO CAESAR AVG P MAX TR PPP, Laureate bust of Nero right / SECVRITAS AVGVSTI S C, Securitas seated holding sceptre, garlanded and lighted altar before against which leans lighted torch resting on bucranium. Diam. 2.89 cm, weight 13.5 g. *RIC* Nero 518; *BMC* 341.

88. Marcus Aurelius (as Caesar, AD 139-161) Æ Sestertius. AVRELIVS CAESAR AVG PII F COS II, bare head right, slight drapery on far shoulder / S-C, Minerva advancing right, holding javelin & shield. Diam 3.30 cm, weight 28.0 g. *RIC* Anton.Pius 1243a; Cohen 1955, 576.

89. Antoninus Pius Æ Sestertius. ANTONINVS AVG PIVS PP TR P XI, laureate head right / COS IIII S-C, Pius standing left, sacrificing with patera over tripod. Diam. 3.37 cm, weight 29.5 g. *RIC* Anton.Pius 843.

90. Hadrian Æ Sestertius. HADRIANVS AVG COS IIII P P laureate bust right / SPES AVG S-C, Spes advancing left. Diam. 3.02 cm, weight 26.0 g. *RIC* Hadrian 790; *BMC* 1560.

91. Faustina sr. Æ Sestertius. DIVA AVGVSTA FAVSTINA, veiled & draped bust right / PIETAS AVG S-C, Pietas standing, head left, sacrificing over altar to left, holding box of incense. Diam. 3.48 cm, weight 30.2. *RIC* Anton.Pius 1146a; Sear 1988, 1366; Cohen 1955, 240.

92. Nero Æ Sestertius. NERO CLAVD CAESAR AVG GER P M TR P IMP P P, laureate head right with aegis / S-

C, triumphal arch surmounted by quadriga, statue of Mars between columns. Diam. 3.39 cm, weight 23.4 g. *RIC* Nero 143, Cohen 1955, 308; *BMC* 183.

93. Unidentified Æ. Both sides heavily damaged, possibly by very high temperature. Diam. 2.80 cm, weight 12.8 g.

94. Constantine II? Æ 4. Partial legend ...TINVS AVG, bust left / GLORIA EXERCITVS. Diam. 1.49 cm, weight 1.3 g.

95. Constantius II Æ 3. Illegible, diademed bust right / SPES REI PVBLICE, emperor standing left holding globe and spear. Diam. 1.73 cm, weight 2.2 g. Thessalonica mint (mint mark: TS*ME).

96. Unidentified Æ 3. Illegible, bust right / FEL TEMP REPARATIO (FH type). Diam. 1.86 cm, weight 1.7 g.

97. Constantine I Æ Follis. IMP CONSTANTINVS P F AVG, laureate bust right / SOLI INIVICTO COMITI, P F, Sol standing left raising right hand and holding a globe. Diam. 2.11 cm, weight 3.3 g. Similar to *RIC* VI Rome 234a.

98. Constantius II Æ 3. D N CONSTANTIVS P F AVG, diademed bust right / FEL TEMP REPARATIO (FH type). Diam. 1.71 cm, weight 1.7 g.

99. Valentinian I? Æ 4. Partial legend (...)VALENTINI-ANV(...), diademed, draped & cuirassed bust right / SECVRITAS REIPVBLICAE, Victory advancing left holding wreath & palm. Diam. 1.56 cm, weight 1.6 g. Similar to Sear 1988, 4103.

100. Julian II Æ 3. D N FL CL IVLIANVS P F AVG, diademed, helmeted and cuirassed bust left, holding spear and shield / VOT/X/MVLT/XX in four lines within wreath, VRB•ROM•P in ex. Diam. 1.83 cm, weight 2.2 g. Rome mint (mint mark: VRB.ROM). *RIC* VIII Rome 329; *LRBC* 695.

101. Constantius II Æ 3. D N CONSTANTIVS P F AVG, diademed bust right / FEL TEMP REPARATIO (FH type). Diam. 1.90 cm, weight 3.0 g.

102. Constantius II Æ 3. D N CONSTANTIVS P F AVG, diademed bust right / FEL TEMP REPARATIO (FH type). Diam. 1.99 cm, weight 2.1 g. Cyzicus mint (mint mark: SMK[.]).

NOTE

²⁹² See site cat. no 11202.

Oil Lamps from the *Antiquarium* of Nettuno

Sarah Willemsen

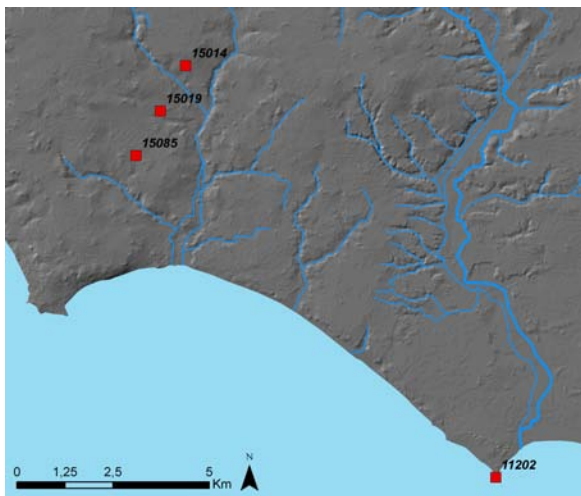
INTRODUCTION

A special find category in the Nettuno collection is formed by oil lamps. They were found during Arnaldo Liboni's visits to sites in the Nettuno district: the catalogue contains fragments from sites 15019, 15014, 15085 and 11202 (*fig. 22.1*). The latter site (Torre Astura) yielded the largest quantity of lamps.

The oil lamp collection shows a huge variety in date and provenance. Most lamps, however, date to the 1st and 2nd centuries AD. A few examples have a BC date, while there is only one lamp with a date later than the 3rd century AD.

As far as provenance is concerned, although most lamps seem to derive from central Italy, some lamps have other origins. Stamps are a useful help in determining the location of a workshop. The stamp on one lamp fragment, for example, indicates that it stems from Pompeii (nr 1). Apart from this Pompeii lamp, two other fragments showed part of a stamp. One was unfortunately illegible, but the other could be deciphered. It is clear that a few examples were made in the Near East, Greece and Egypt, based on the shape, decoration and stamps of the lamps.

Another instrument that was used to establish the provenance of the lamp is the decoration. It provides us with important clues about the decorative tradition and style of different periods.



CATALOGUE

For the description of the oil lamps, the same method is used as in Bailey (1975). The description starts with the measurements of the (fragment of the) lamp. These measurements contain the length (L), the width (W), the height (H) and the diameter (D). If the provenance is known it is mentioned secondly. The third segment gives the description of the lamp itself. The body, the shoulder, the discus, the decoration, the handle, the nozzle and the base are described. The fourth segment contains a colour description of the lamp. The fifth part of the description is the date. Sometimes a parallel for a certain type of lamp can be found in the literature. In that case it is possible to give a date for the lamp. The sixth (and last) segment contains the literature that was used for the description of the lamp.

1.

Measurements: L: 9.3, W: 7.1, H: 4.0, D: ca 5

Provenance: Pompeii

Find location: Unknown

Description: Complete oil lamp with an almost circular body, a ring-handle and a rounded, heart-shaped nozzle. The shoulder is wide and the transition to the wall is quite sharp. The shoulder is decorated with three rows of raised circular points (also called globules). Near the nozzle only two rows of the original three rows are present.

The shoulder is separated from the plain discus by two circular grooves. The exterior groove ends at the base of the handle. The raised line between the grooves has a width of 4 mm. The discus is plain and sloping slightly inward. The air hole is not precisely in the centre of the discus. The handle has two small grooves, which approach each other at the middle of the handle. Between the heart-shaped nozzle and the most exterior circular groove, a small hole was pierced.

The lamp stands on a circular raised ring. The base is decorated with two ring-and-dot patterns. Between those patterns the word 'αελζει' is impressed. This inscription belonged to a potter from Pompeii (Walters 1914, 73).

Colour: Exterior: 10 YR 7/1 (light grey), 10 YR 6/1 (light grey), 5 YR 5/3 (reddish brown) and 5 YR 3/1 (very dark grey); Slip: 5 YR 6/4 (light reddish brown), 5 YR 5/4 (reddish brown) and 2.5 YR 5/8 (red); Interior: Not

Fig. 22.1. Provenance of oil lamps in the museum collection.

visible; Core: 10 YR 7/1 (light grey) and 10 YR 6/1 (light grey)

Date: Second half 1st century AD

Literature: Bailey 1980, 375, plate 86, Q1421; Szentlélek 1969, 96, no. 146; Walters 1914, 73, no. 491, 502 and 1086; Heres 1972, Tafel 71: 249, 250, 338 and 424

2.

Measurements: L: 9.0, W: 5.9, H: 3.3, D: ca 3.5 (discus)

Provenance: Near East

Find location: Unknown

Description: Almost complete oil lamp with an irregular body. On the shoulder a few traces of decoration are discernable (maybe swags or tendrils). The vertical band handle is lost. The large splayed nozzle with a rounded tip is not entirely symmetrical. A raised line surrounds the plain sunken discus and extends into a raised edge on each side of the top of the nozzle, producing a channel between the air hole and the wick-hole. The base has a circular raised line.

Colour: Exterior: 5 YR 4/1 (dark grey) and 7.5 YR 6/4 (light brown)

Date: 2nd-1st century BC

Literature: Bailey 1975, 79-83 and 194, Plate 26, 27 and 84

3.

Measurements: L: 11.0, W: 7.8, H: 5.5, D: unknown

Provenance: Italy

Find location: Unknown

Description: Triangular handle of an oil lamp with part of the shoulder and wall attached. The handle is decorated with an *acanthus palmette* pattern. It consists of a flower with five leaves, and two branches underneath. In the back of the handle, next to the wall of the lamp, an air hole is pierced. The shoulder is wide and round and has a soft transition to the wall. The discus is missing.

Colour: Exterior: 5 YR 6/3 (light reddish brown) and 5 YR 5/1 (grey); Interior: 10 YR 8/2 (very pale brown) and 10 YR 7/1 (light grey)

Date: AD 40-90

Literature: Bailey 1980, 206-211, Q 1020, Plate 95

4.

Measurements: L: 4.6, W: 3.9, H: 4.6, D: unknown

Provenance: Unknown

Find location: Site 15014

Description: Band handle with part of the wall, the shoulder and the base attached. The handle is vertical and has raised edges and two shallow grooves above. It is attached to a straight wall, which has a sharp transition to the flat base. On the exterior the fragment is completely painted in red and black, on the interior one red painted line is visible.

Colour: Paint: 2.5 YR 6/4 (light reddish brown) - 10 YR 4/1 (dark grey); Core: 10 YR 7/3 (very pale brown)

Date: Augustean-Tiberian

Literature: Goethert-Polaschek 1985, 181-183

5.

Measurements: L: 8.9, W: 4.9, H: 1.6, D: unknown

Provenance: Central Italy

Find location: Site 15085

Description: Fragment of the discus, shoulder and part of the nozzle of an oil lamp. The wide and round

shoulder is separated from the plain discus by four small circular lines. Two lines on the shoulder indicate the place of the (now missing) nozzle.

Colour: unknown

Date: Flavian

Literature: Rizzo 2003, 128-131 and 137, tav. XXIX, no 126

6.

Measurements: L: 5.9, W: 4.5, H: 3.4, D: unknown

Provenance: Central Italy

Find location: Site 15085

Description: Part of the handle, shoulder, wall and discus of an oil lamp. The shoulder is decorated with part of a stylized palm branch in relief. The discus is decorated with a Chi-Rho sign, of which only the upper part is left. The handle is not pierced and has a groove above. At the base of the handle three parallel impressions are visible.

Lamps of this type are imitations of imported African Red Slip Ware.

Colour: unknown

Date: 4th-5th century AD

Literature: Bailey 1980, 33, 383-385, Q1431 MLA; Bonifay 2004, 360-361 and 365-366, no 2

7.

Measurements: L: 10.2, W: 6.5, H: 5.3, D: ca 7

Provenance: Vicinity of Rome

Find location: Site 11202

Description: Incomplete mould-made wall-lamp, with a wide and rounded shoulder that is separated from the discus by two circular grooves. The grooves do not form a complete circle, but end at the base of the transverse handle. A row of impressed ovules decorates the shoulder. The discus is decorated with a scallop-shell; an air hole is pierced in the middle of it. The nozzle is incomplete, but part of a shoulder volute is visible. The base is decorated with three impressed ring-and-dot patterns.

A parallel of this lamp was found in Bailey (1975 II: 268-270). This particular lamp has an impression on its base that says CIUNBIT. The base is also decorated with a ring-and-dot-pattern, which resembles the one of the Nettuno lamp. Therefore it seems probable that both lamps were made in the same workshop.

Colour: Exterior: 10 YR 7/3 (very pale brown), 10 YR 6/2 (light brownish grey) and 10 YR 5/1 (grey); Interior: 10 YR 5/1 (grey) and 10 YR 4/1 (dark grey); Core: 10 YR 4/1 (dark grey) and 10 YR 6/2 (light brownish grey)

Date: Last quarter 2nd century AD, or a little later (late Antonine or Severan)

Literature: Bailey 1980, 268-70, plate 50, Q 1158; Bonnet 1988, 84, fig. 22

8.

Measurements: L: 5.7, W: 5.7, H: 4.0, D: ca 4

Provenance: Central Italy

Find location: Site 11202

Description: Mould-made lamp with a small circular body. The rounded shoulder is decorated with three rows of closely spaced, raised points (globules). The small plain discus is separated from the shoulder by three grooves with two circular lines in between. A ring handle, decorated with three grooves, is placed at the rear end.

Colour: Exterior: 10 YR 7/3 (very pale brown) and 10 YR 7/4 (very pale brown); Slip: 7.5 YR 5/6 (strong brown) and 7.5 YR 4/6 (strong brown); Interior: 10 YR 7/4 (very pale brown) and 7.5 YR 5/6 (strong brown); Core: 10 YR 7/4 (very pale brown)
Date: First half 3rd century AD
Literature: Bailey 1980, 375, plate 86, Q 1421

9.

Measurements: L: 4.9, W: 5.6, H: 1.0, D: (discus) ca 4
Provenance: Unknown
Find location: Site 11202

Description: Fragment of a discus and part of the shoulder of a lamp. The shoulder is separated from the discus by a circular raised line. The flat shoulder has two circular impressions with an impressed straight line in between. This is the location where the nozzle was attached. The air hole is not exactly in the centre of the discus. On the discus part of a decoration is visible. A torch or a cornucopia is depicted.

The form of the fragment resembles the lamps of Loeschke type VIII (Goethert-Polaschek 1985, Typentafel) and is dated to the second or third quarter of the 1st century AD.

Colour: Exterior: 10 YR 7/3 (very pale brown); Exterior slip: 2.5 YR 5/8 (red) and 5 YR 5/8 (yellowish red); Interior: 7.5 YR 7/4 (pink); Interior slip: 2.5 YR 5/6 (red); Core: 10 YR 7/4 (very pale brown)

Date: Second or third quarter 1st century AD

Literature: Bonnet 1988, 53 and 73, fig. 20 and 22; Szentlélek 1969, 101, no 141 and 158; Walters 1914, no 1162, 1170 and 1321

10.

Measurements: L: 6.6, W: 6.5, H: 3.4, D: ca 7

Provenance: Unknown

Find location: Site 11202

Description: Fragment of the circular body of an oil lamp, with the nozzle attached. The transition from the flat shoulder to the round wall is quite sharp. The short nozzle is rounded and slightly elevated. It is demarcated by two lines, which bend towards the (missing) discus.

Colour: Exterior: 7.5 YR 7/4 (pink), 7.5 YR 6/4 (light brown), 5 Y 5/1 (dark grey) and 10 YR 6/1 (grey); Interior: 7.5 YR 7/4 (pink) and 7.5 YR 6/4 (light brown); Core: 7.5 YR 7/4 (pink) and 7.5 YR 6/4 (light brown)

Date: Late 1st century - first half 2nd century AD

Literature: Bailey 1980, 310-12, plate 63, Q 1243, 1246

11.

Measurements: L: 5.3, W: 5.0, H: 3.6, D: ca 5.5

Provenance: Central Italy

Find location: 11202

Description: Fragment of an oil lamp, with part of the discus, the shoulder and a ring handle preserved. The quite wide and round shoulder is separated from the plain discus by two circular raised lines. The small discus has an air hole in the centre. The ring handle has two parallel grooves on top. At the base of the handle, two circular impressions are visible; one at each side.

Colour: Exterior: 10 YR 8/2 (white) and 10 YR 8/3 (very pale brown); Exterior slip: 2.5 YR 5/8 (red); Interior: 10 YR 8/2 (white) and 10 YR 8/3 (very pale brown);

Interior slip: 2.5 YR 6/6 (light red) and 2.5 YR 5/6 (red); Core: 10 YR 8/2 (white) and 10 YR 8/3 (very pale brown)

Date: AD 90-140

Literature: Bailey 1980, 316-18, 324, plate 67, Q 1278

12.

Measurements: L: 7.9, W: 5.4, H: 2.9, D: ca 7

Provenance: Central Italy

Find location: Site 11202

Description: Fragment of the base and wall of an oil lamp, with part of a ring handle attached. The flat base is separated from the wall by a circular groove. Only a small part of the shoulder is left, which shows the wide and round form of it. On the base, part of an inscription is visible; BICAG.

Comparison with similar inscriptions suggests that the complete text was BICAGAT. This is the name of an oil lamp maker, who worked somewhere in central Italy.
Colour: Exterior: 10 YR 8/1 (white) and 10 YR 8/2 (white); Interior: 10 YR 8/1 (white) and 10 YR 8/2 (white); Core: 10 YR 8/1 (white) and 10 YR 8/2 (white)

Date: AD 90-140

Literature: Bailey 1980, 119 and 325, Q1287

13.

Measurements: L: 6.1, W: 8.0, H: 1.9, D: ca 7

Provenance: Central Italy

Find location: Site 11202

Description: Fragment of the body of a mould-made oil lamp, with part of the discus, shoulder, wall and nozzle attached. The discus is separated from the round and wide shoulder by two circular grooves. Three impressed lines on the shoulder define the nozzle. On both sides of the nozzle an impressed ring-and-dot pattern is visible. The eagle of Jupiter decorates the discus. The head is not preserved.

Colour: Exterior: 7.5 YR 7/4 (pink), 10 YR 6/1 (grey), 10 YR 8/4 (very pale brown) and 10 YR 5/1 (grey); Slip: 7.5 YR 5/4 (brown) and 7.5 YR 4/0 (dark grey); Interior: 10 YR 8/1 (white) and 5Y 6/1 (greenish grey); Core: 2.5 Y 8/2 (white) and 2.5 Y 5/0 (grey)

Date: First half 2nd century AD

Literature: Bailey 1980, 80-81, 329, Plate 70, Q1308; Bonnet 1988, 47 en 71, fig. 2, 3 and 4

14.

Measurements: L: 5.4, W: 5.3, H: 2.8, D: (discus) ca 5

Provenance: Vicinity of Rome

Find location: Site 11202

Description: Part of the shoulder and discus of a mould made oil lamp. A ring handle with two parallel grooves on it, is attached. The plain discus is separated from the shoulder by a raised line. The shoulder is wide and round and decorated with ivy tendrils, leaves and bands.

Colour: Exterior: 10 YR 8/2 (white) and 10 YR 7/2 (light grey); Interior: 10 YR 8/2 (white) and 10 YR 7/2 (light grey); Core: 10 YR 8/2 (white) and 10 YR 7/2 (light grey)

Date: Last quarter 2nd century-first quarter 3rd century AD

Literature: Bailey 1980, 337-9. Plate 72, Q 1327; Heres 1972, Tafel 46, no 431 and 432, 71

15.

Measurements: L: 7.0, W: 5.4, H: 2.9, D: ca 7

Provenance: Central Italy

Find location: Site 11202

Description: Fragment of the discus, shoulder and wall of an oil lamp. The plain discus is separated from the round and wide shoulder by a raised line, and has an air hole just next to the centre. A small circular impression is visible on the shoulder. The almost complete ring handle has two grooves on top.

Colour: Exterior: 5 YR 5/3 (reddish brown), 5 YR (light grey), 5 YR 4/1 (dark grey), 5YR 4/2 (dark reddish grey) and 10 YR 5/3 (brown); Interior: 10 YR 6/1 (grey) and 10 YR 6/2 (light brownish grey); Core: 10 YR 6/1 (grey) and 5 YR 6/4 (light reddish brown)

Date: AD 90-140

Literature: Bailey 1980, 316-18, 324, Plate 67, Q 1278

16.

Measurements: L: 5.0, W: 3.5, H: 4.7, D: unknown

Provenance: Unknown

Find location: Site 11202

Description: Complete ring handle, with fragment of the wall and shoulder of an oil lamp. The handle has two grooves above. At the base of the handle a small third groove is visible.

Colour: Exterior: 10 YR 8/2 (white) and 10 YR 8/3 (very pale brown); Slip: 2.5 YR 5/6 (red), 2.5 YR 4/6 (red) and 10 YR 4/1 (dark grey); Interior: 10 YR 8/1 (white), 10 YR 5/3 (brown) and 10 YR 4/1 (dark grey); Core: 10 YR 8/2 (white) and 10 YR 7/2 (light grey)

Date: Unknown

Literature: -

17.

Measurements: L: 7.7, W: 3.8, H: 1.8, D: ca 7

Provenance: Unknown

Find location: Site 11202

Description: Fragment of the discus, shoulder and part of the nozzle of an oil lamp. The shoulder is wide and round and the transition to the discus is soft. The nozzle is short and rounded. There is a relief discernable on the discus, but it is unclear what it represents.

Colour: Exterior: 7.5 YR 8/2 (pinkish white) and 7.5 YR 7/2 (pinkish grey); Slip: 7.5 YR 4/2 (dark brown) and 7.5 YR 3/2 (dark brown); Interior: 7.5 YR 8/2 (pinkish white) and 10 YR 4/3 (dark brown); Core: 10 YR 8/2 (pinkish white)

Date: Unknown

Literature: -

18.

Measurements: L: 4.8, W: 2.8, H: 1.1, D: (discus) 7

Provenance: Vicinity of Rome

Find location: 11202

Description: Fragment of the discus and shoulder of an oil lamp. The wide and round shoulder is decorated with ivy tendrils, leaves and bands. A raised line separates the plain discus from the shoulder. The discus is black and looks burnt.

Colour: Exterior: 2.5 Y 8/2 (white) and 2.5 Y 2/0 (black); Interior: 2.5 Y 8/2 (white), 10 YR 4/2 (dark greyish brown) and 10 YR 4/3 (dark brown); Core: 10 YR 8/2 (white)

Date: Last quarter 2nd century-first quarter 3rd century AD

Literature: Bailey 1980, 337-9, plate 72, Q 1327; Heres 1972, Tafel 46, no 431 and 432, 71

19.

Measurements: L: 3.8, W: 2.4, H: 2.1, D: unknown

Provenance: Central Italy

Find location: Site 11202

Description: Fragment of a nozzle of an oil lamp, with part of the wall, shoulder and discus attached. The small nozzle is rounded and defined by two lines. A circular impression is visible between the nozzle and the discus. A small raised line separates the discus from the shoulder.

Colour: Exterior and interior: 7.5 YR 4/0 (dark grey), 5 YR 6/2 (pinkish grey), 5 YR 4/6 (yellowish red) and 7.5 YR 7/4 (pink); Core: 7.5 YR 4/0 (dark grey) and 7.5 YR 7/2 (pinkish grey)

Date: AD 80-150

Literature: Bailey 1980, 314, plate 64, Q 1253

20.

Measurements: L: 3.7, W: 2.2, H: 3.2, D: unknown

Provenance: Unknown

Find location: Site 11202

Description: Fragment of a ring handle of an oil lamp, with a small piece of the shoulder attached.

Colour: Exterior: 2.5 Y (light grey) and 2.5 Y 7/4 (pale yellow); Slip: 2.5 YR 3/2 (dusky red); Interior: 10 YR 7/2 (light grey); Slip: 5 YR 5/6 (yellowish red); Core: 10 YR 7/2 (light grey)

Date: Unknown

Literature: -

21.

Measurements: L: 4.0, W: 2.3, H: 4.1, D: unknown

Provenance: Unknown

Find location: Site 11202

Description: A ring handle of an oil lamp with a part of the wall and shoulder attached. The shape of the handle is irregular and it has a small thickening above, with a shallow groove next to it. At the base of the handle two small impressions are visible.

Colour: Exterior: 2.5 Y 8/2 (white), 2.5 Y 2/0 (black); Interior: 2.5 Y 8/2 (white); Core: 2.5 Y 8/2 (white)

Date: Unknown

Literature: -

22.

Measurements: L: 7.1, W: 7.2, H: 3.8, D: ca 7

Provenance: Unknown

Find location: Site 11202

Description: Fragment of the wall and shoulder of an oil lamp, with a piece of the discus and a ring handle attached. The shoulder is wide and round, with an angle in the middle. It is separated from the (almost completely missing) discus by two shallow grooves. The grooves are almost circular, and end at the base of the handle. On the shoulder, next to the handle, a small impressed line is visible.

Colour: Exterior: 5 YR 8/1 (white), 5 YR 8/2 (pinkish white) and 5 YR 7/4 (pink); Interior: 7.5 YR 8/0 (white) and 7.5 YR 8/2 (pinkish white); Core: 7.5 YR 8/2 (pinkish white), 7.5 YR 8/4 (pink) and 7.5 YR 6/0 (light) grey

Date: Unknown

Literature: -

23.

Measurements: L: 6.6*, W: 4.6*, H: 2.3, D: ca 7 (* = L/W not clear)

Provenance: Unknown

Find location: Site 11202

Description: Fragment of the base, wall and shoulder of an oil lamp. The shoulder is wide and round and the transition to the wall is soft. The wall is separated from the base by one small circular groove. There is an impression visible at the middle of the base, which says 'NINA'.
Colour: Exterior: 2.5 Y 8/2 (white) and 2.5 Y 8/0 (white); Interior: 10 YR 8/3 (very pale brown), 10 YR 7/3 (very pale brown) and 5 YR 3/1 (very dark grey (slip/burnt)); Core: 10 YR (white) and 10 YR 8/3 (very pale brown)

Date: Unknown

Literature: -

24.

Measurements: L: 4.3, W: 3.5, H: 2.4, D: ca 6.5

Provenance: Unknown

Find location: Site 11202

Description: Fragment of the wall and shoulder of an oil lamp with a small piece of the discus and the nozzle attached. There is a line visible on the exterior of the wall, which could be an imprint. The discus is separated from the shoulder by at least one raised line. An impressed line defines the nozzle. A circular impression is visible at one side of this line.

Colour: Exterior: 10 YR 8/2 (white), 10 YR 8/3 (very pale brown), 10 YR 7/6 (yellow), 7.5 YR 5/6 (strong brown), 7.5 YR 4/2 (dark brown) and 10 R 8/2 (weak red); Interior: 10 YR 8/2 (white) and 5 YR 4/6 (yellowish red); Core: 10 YR 8/2 (white)

Date: Unknown

Literature: -

25.

Measurements: L: 12.1, W: 8.8, H: 4.5, D: ca 9

Provenance: Vicinity of Rome

Find location: Site 11202

Description: Almost complete oil lamp with a circular body, a ring handle and a round, heart-shaped nozzle. The shoulder is wide and has a quite sharp transition to the wall. It is decorated with ivy tendrils, leaves and branches. Between the discus and the nozzle two panners are discernable. The branches end in a small spiral next to the animals.

The shoulder is separated from the discus by a wide raised line. A hole is pierced in the most inner circular groove, right above the nozzle. The almost complete discus is sloping inward and has a rosette with 18 petals. A circular groove forms the transition between the flat base and the wall. The handle has a groove underneath.

Colour: Exterior: 10 YR 8/2 (white), 10 YR 7/2 (light grey), 10 YR 7/3 (very pale brown), 10 YR 6/3 (pale brown), 10 YR 5/2 (greyish brown) and 10 YR 5/6 (yellowish brown); Interior: not visible; Core: not visible

Date: Last quarter 2nd century-first quarter 3rd century AD
Literature: Bailey 1980, 337-9, plate 72, Q 1327; Bonnet 1988, 84, no 15; Heres 1972, Tafel 46, no 431 and 432, 71

26.

Measurements: L: 3.8*, W: 2.6*, H: 0.9, D: (discus) ca 6 (* = L/W not clear)

Provenance: Central Italy

Find location: Site 11202

Description: Fragment of the discus and shoulder of an oil lamp. The discus is separated from the shoulder by two raised lines, of which the one on the exterior is significantly wider. On the discus part of a palm branch is visible.

A very similar fragment was found in a villa at Settefinestre (Ricci 1985: 215).

Colour: Exterior: 10 YR 8/3 (very pale brown) and 10 YR 7/3 (very pale brown); Slip: 5 YR 5/8 (yellowish red), 5 YR 5/3 (reddish brown) and 2.5 YR 5/6 (red); Interior: 7.5 YR 8/2 (pinkish white) and 7.5 YR 5/6 (pink); Core: 7.5 YR 8/2 (pinkish white) and 7.5 YR 5/6 (pink)

Date: AD 90-140

Literature: Bailey 1980, 320-21, plate 65, Q 1261; Bonnet 1988, 54 and 76, fig. 6-9; Ricci 1985, 215, fig. 122; Szentléleky 1969, no 158

27.

Measurements: Not recorded

Provenance: Possibly Greek

Find location: Site 11202

Description: Fragment of the nozzle of an oil lamp. The broad nozzle has a large wick hole. This type of nozzle is called 'blunt'. It is projecting and has a curved termination widening out around the wick hole.

Colour: Exterior: Black glazed; Interior: unknown; Core: unknown

Date: Republican

Literature: Goethert-Polaschek 1985, type 1; Mercado 1962, 9, TAV. 1; Szentléleky 1969, 45-47; Walters 1914, 50-54, Plate XL

28.

Measurements: L: 7.5, W: 5.1, H: 2.4, D: ca 5

Provenance: Unknown

Find location: Site 11202

Description: Complete miniature oil lamp, with a convex base. The lip is slightly in curving. The lamp has a lug on one side and some sort of a nozzle on the opposite side. It has some chalky incrustations on the interior.

Colour: Exterior: 5YR 6/6 (reddish yellow); Interior: 5YR 6/6 (reddish yellow)

Date: Unknown

Literature: -

29.

Measurements: L: 5.9, W: 6.2, H: 3.9, D: unknown

Provenance: Unknown

Find location: Site 11202

Description: Fragment of the handle, shoulder, wall and base of an oil lamp. The shoulder is decorated with a geometric pattern, which consists of rectangular shaped lines and a band that encircles them. Both the transition to the wall and to the plain discus is marked by a circular raised line. The handle is not pierced. The base is flat.

Colour: Unknown

Date: Unknown

Literature: -

30.

Measurements: L: 9.1, W: 5.1, H: 3.2, D: unknown

Provenance: Unknown

Find location: Site 11202

Description: Part of the ring handle, shoulder, wall, discus and base of an oil lamp. The shoulder is wide and round and decorated with several ring-and-dot-patterns. It is separated from the plain discus by three circular raised lines. The discus has an air hole in the middle. The base is wide and flat.

Colour: Unknown

Date: Unknown

Literature: -

31.

Measurements: L: 5.3, W: 4.2, H: 2.7, D: unknown

Provenance: Unknown

Find location: Site 11202

Description: Almost complete oil lamp. The lamp has a small circular body with a small protruding nozzle attached. The upper part of the nozzle is missing. The shoulder has a soft and round transition to the wall. The lamp stands on a slightly elevated base.

This type might be a miniature oil lamp.

Colour: 5YR 7/4 (pink)

Date: Unknown

Literature: -

32.

Measurements: L: 5.3, W: 3.4, H: 0.8, D: unknown

Provenance: Unknown

Find location: Site 11202

Description: Fragment of the discus and part of the shoulder of an oil lamp. The discus is decorated with a relief which represents a human figure, holding something in his hands. The discus is separated from the shoulder by two circular raised lines.

Colour: Slip: 2.5 YR 5/8 (red); Core: 7.5 YR 7/4 (pink)

Date: Unknown

Literature: -

33.

Measurements: L: 8.5, W: 7.4, H: 3.2, D: ca 6

Provenance: Egypt

Find location: Site 11202

Description: Fragment of the body of an oil lamp, with part of the nozzle attached. The handle is missing. On the right side a small lug is attached to the shoulder. Normally the lug was pierced and intended for suspension when not in use (Bailey I 1975: 30). The wide and round shoulder is separated from the discus by one circular groove. The discus is plain and has an air hole in the middle. Vague remains of decoration are visible on the shoulder (consisting of globules). The nozzle is wide and rounded, but the opening is missing. The lamp has a small, concave base with a circular groove.

Colour: Exterior: 5 YR 8/4 (pink) and 5 YR 7/6 (reddish yellow); Interior: 5 YR 8/4 (pink) and 5 YR 7/6 (reddish yellow); Core: 5 YR 8/4 (pink) and 5 YR 7/6 (reddish yellow)

Date: Unknown

Literature: Bailey 1975, 30; Szentl leky 1969, 43-45, no 32; Walters 1914, Plate XL, no 45

34.

Measurements: L: 12.6, W: 10.6, H: 3.9, D: ca 7

Provenance: Italy

Find location: Site 11202

Description: Almost complete three-nozzle oil lamp with a ring-handle. Unfortunately one nozzle is entirely missing and one is half missing. The body is round and the transition from the shoulder to the discus is sharp. A raised line separates the shoulder from the discus. The discus is decorated with a floral pattern. The 'flower' contains 22 leaves that are all turned slightly to the right. In the centre around the air hole, we can see four circular grooves, with three raised lines in between. The width of the middle line is the largest. The nozzle in the middle is positioned directly opposite to the handle at the rear. Next to this nozzle there is another nozzle on both sides. Originally the lamp consisted of three nozzles. Now only the one on the right is completely preserved and here we can see the entire volute-decoration. The lamp stands on a circular raised line.

Colour: Unknown

Date: 1st century AD

Literature: Bailey 1980, 206-208; Goethert-Polaschek 1985, Typentafel, Loeschke Typus III

35.

Measurements: L: 3.4, W: 3.8, H: 2.7, D: unknown

Provenance: Unknown

Find location: Site 15019

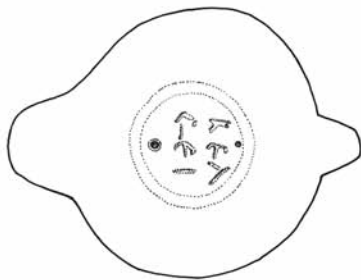
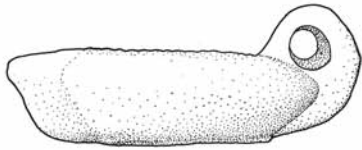
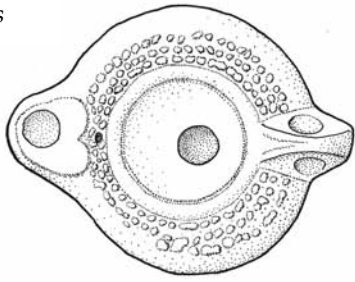
Description: Incomplete fragment of the ring handle of an oil lamp, with part of the wall and shoulder attached. The handle is decorated with two shallow grooves.

Colour: Exterior: 2.5 YR 5/6; Interior: 2.5 YR 5/8; Core: 7.5 YR 7/4

Date: Unknown

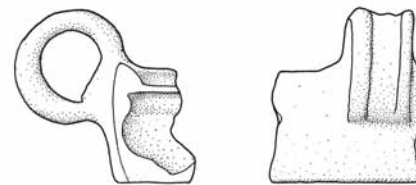
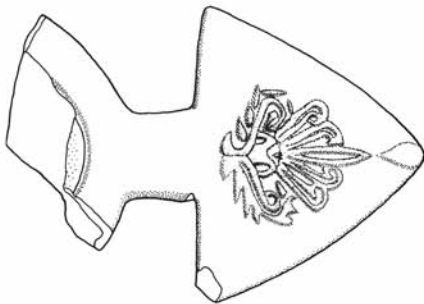
Literature: -

Oil Lamps

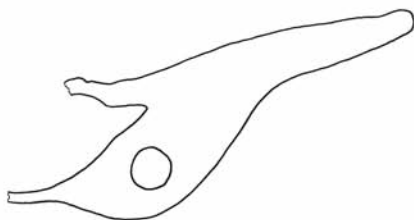


1

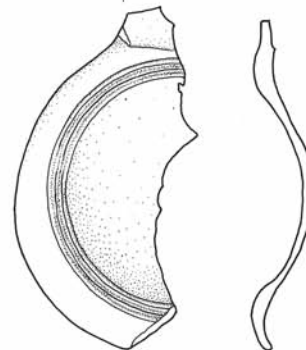
2



4

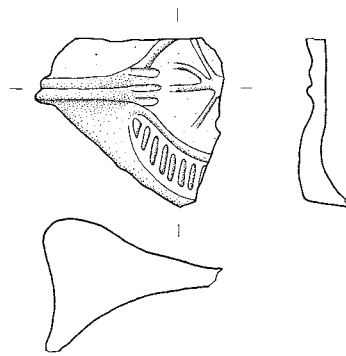


3

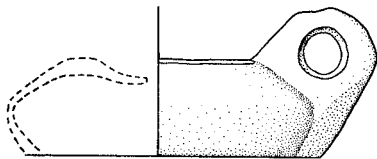
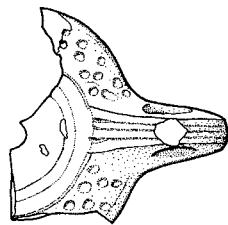


5

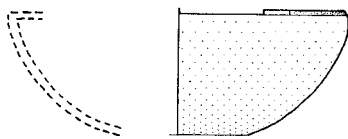
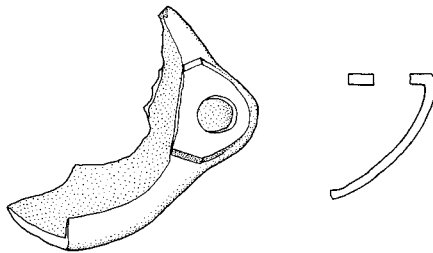
Oil Lamps



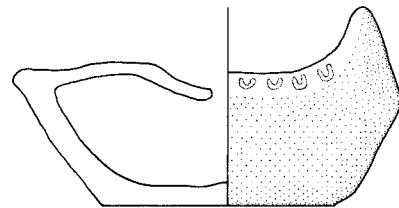
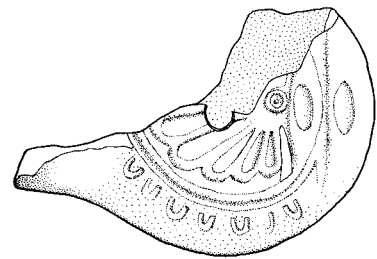
6



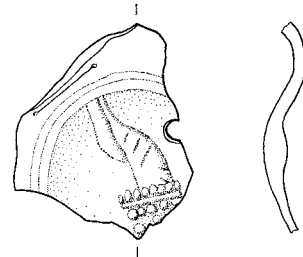
8



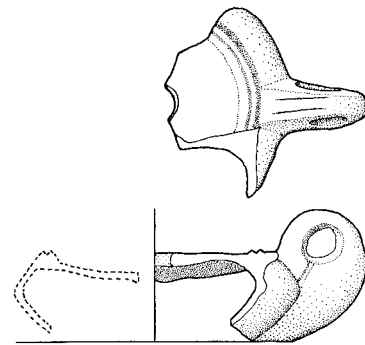
10



7

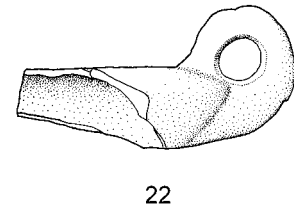
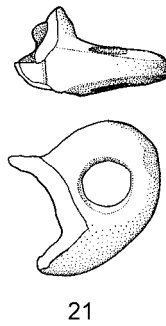
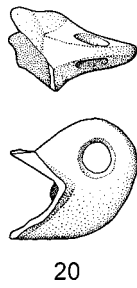
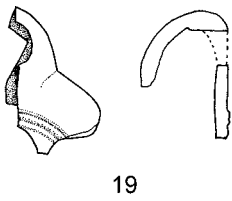
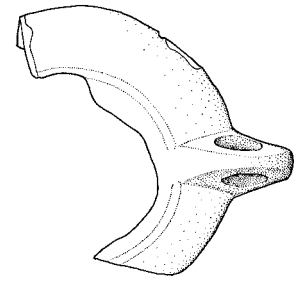
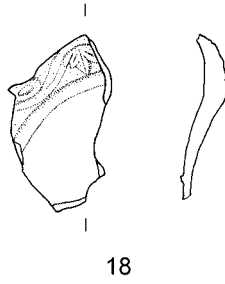
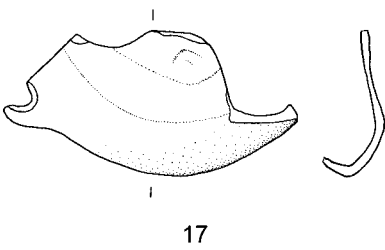
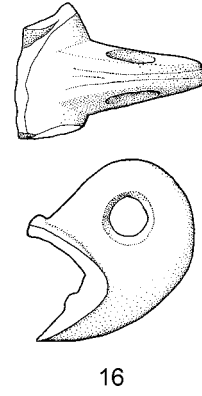
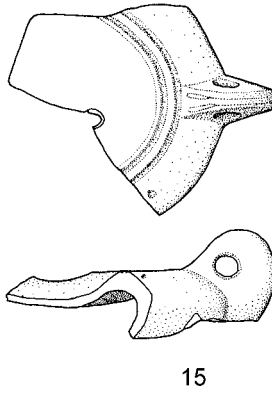
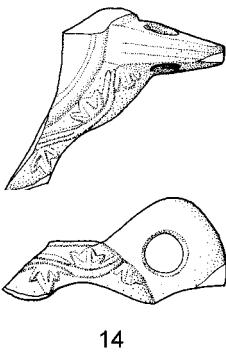
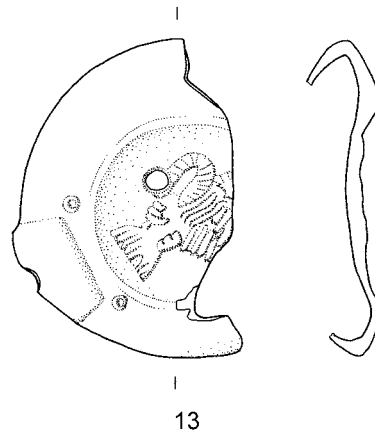
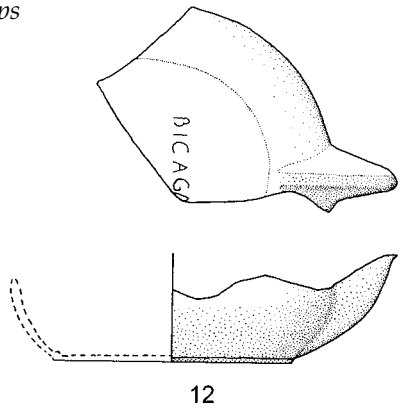


9

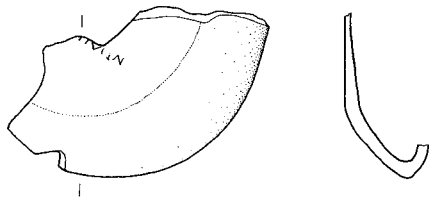


11

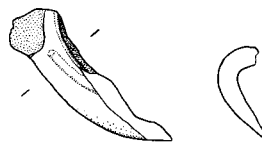
Oil Lamps



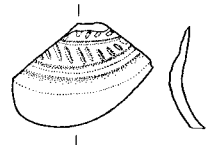
Oil Lamps



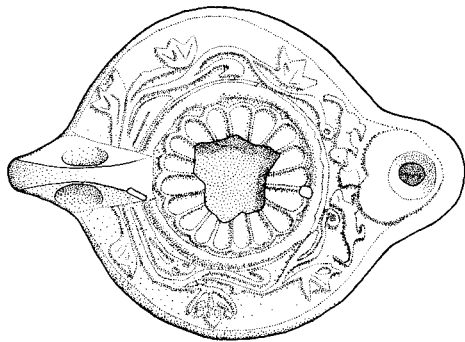
23



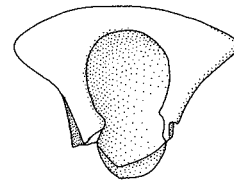
24



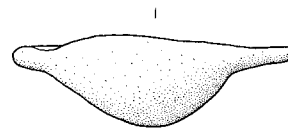
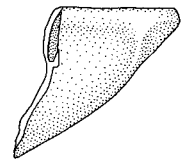
26



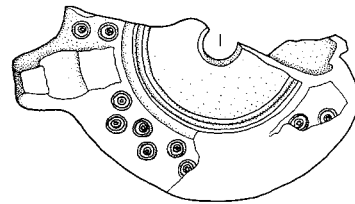
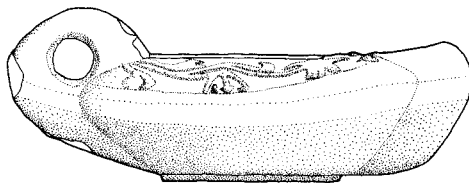
25



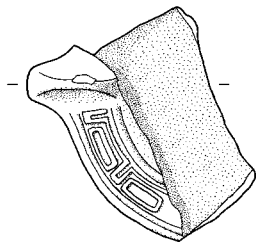
27



28

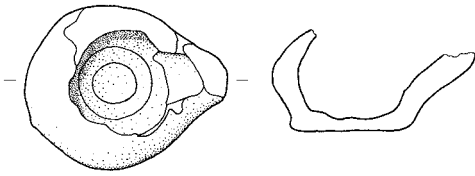


30

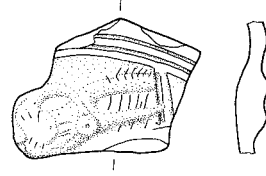


29

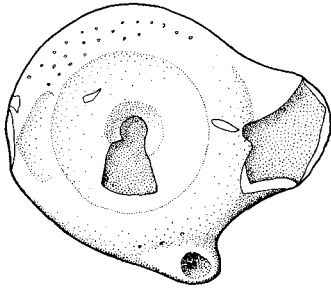
Oil Lamps



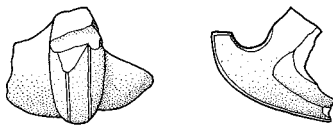
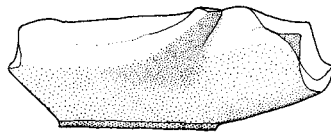
31



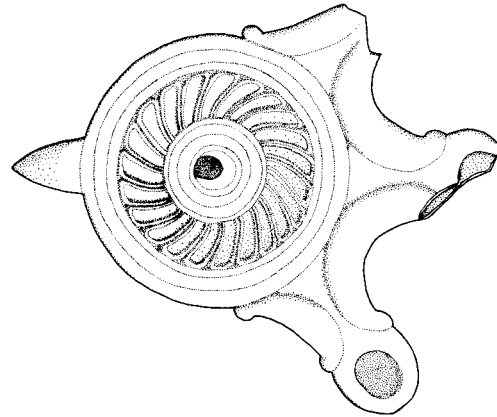
32



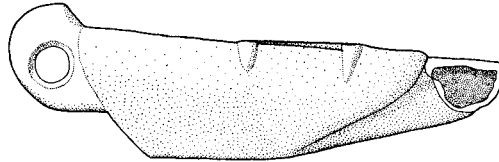
33



35



34



Miscellaneous Artefacts from the *Antiquarium* of Nettuno

Gijs Tol

INTRODUCTION

This material category includes a series of objects that do not fit into conventional typo-chronological sequences such as exist for most objects of daily use, such as pottery. They include uncommon and rare objects that are often related to trade, specific crafts and status, and that do not constitute convenient tools for dating a site or phase.

Although they form only a small percentage of the available examples in the archaeological collection of the *Antiquarium* of Nettuno, only fragments found within the municipality of Nettuno are included in this publication. Even so, it is extremely difficult to relate each of the separate objects to specific sites. Most of the miscellaneous finds were either donated by local citizens, found particularly during walks along the coast - where the presence of the *Poligono Militare* has preserved large parts of the archaeological landscape -, or confiscated by the *Carabinieri* from *clandestini*. Several finds could be assigned to the monumental villa of Torre Astura,²⁹³ while some loom weights and stamped tile fragments were found during GIA's intensive surveys.

CATALOGUE

The material is grouped into the following categories: stamped tiles, loom weights, marble objects, (terracotta) statues, bronze objects, antefixes and finally several individual objects.

Each description consists of the following elements:

- 1) Fragment type;
- 2) A detailed description of all physical characteristics of the fragment;
- 3) The find location of the fragment;
- 4) The colours of the fragment using Munsell-values. In general colours are recorded for three different parts of the fragment; the inner- and outer surface and the core;
- 5) The measurements of the fragment, whereby a capital M stands for 'maximum';
- 6) A bibliographical reference for the fragment (when available);
- 7) The date range of the fragment (when available).

1. Stamped tile

Tile, in section rectangular, broken off at all sides, therefore unknown edges. Part of a circular stamp visible, with a raised circle in the middle. The letters are worn and only four of them are recognisable. On the basis of this no good assumption regarding the text can be made.

Find location: Site 11202

Colours: Ext: 10YR 8/2 (white), Int: 10YR 8/2 (white), Core: 10YR 8/2 (white)

Measurements: Mlength: 16.0 cm, Mwidth: 12.9 cm, Mthickness: 2.8 cm

2. Stamped mattone

Flat, rectangular mattone, one edge intact, which is convex. On the topside two letters of a stamp are visible, reading C-S

Find location: Site 11202

Colours: Ext: 10YR 8/2 (white), Int: 10YR 8/2 (white), Core: 10YR 8/2 (white)

Measurements: Mlength: 9.4 cm, Mwidth: 6.3 cm, Mthickness: 2.7 cm

3. Stamped tile

Part of a flat, rectangular tile, broken off on all sides. On the topside the remains of a stamp are visible, which text seems to consist of woven letters. Their content is unknown.

Find location: Site 11202

Colours: Ext: 10YR 7/3 (very pale brown), Int: 10YR 7/6 (yellow), Core: 7.5YR 7/6 (reddish yellow)

Measurements: Mlength: 18.0 cm, Mwidth: 9.5 cm, Mthickness: 3.3 cm

4. Stamped tile

Fragment of a flat, rectangular tile. No original edges remain, all sides broken off. On the topside part of a stamp is visible, reading ..MAL..

Find location: Site 11202

Colours: Ext: 10YR 7/3 (very pale brown), Int: 10YR 7/3 (very pale brown), Core: 10YR 7/3 (very pale brown)

Measurements: Mlength: 13.7 cm, Mwidth: 13.4, Mthickness: 3.3 cm

5. Loom weight

Rectangular loom weight with flattened sides and rounded edges. Perforation in the top part, almost running horizontally, connecting the two short sides of the fragment.

Find location: Site 11281

Colours: Overall: 10YR 8/6 (yellow)-10YR 7/6 (yellow)

Measurements: Mheight: 9.8 cm, Mwidth: 5.6 cm, Mthickness: 4.4 cm. Diameter hole: 0.9 cm

6. Loom weight

Rectangular loom weight with flattened sides and rounded edges. Perforation in the top part, running perfectly horizontal, connecting the two short sides of the fragment.

Find location: Site 11281

Colours: Overall: 7.5YR 7/6 (reddish yellow)-5YR 7/4 (pink)

Measurements: Mheight: 8.2 cm, Mwidth: 5.3 cm, Mthickness: 2.5 cm. Diameter hole: 1.1 cm.

7. Loom weight

Rectangular shaped loom weight with flattened sides and rounded edges. Perforation in the top part, running horizontally, connects the two short sides of the fragment. Small part of the top part is broken off. On top of the fragment is a small stamp with the depiction of a cross.

Find location: Site 15038

Colours: Overall: 2.5Y 8/2 (pale yellow)

Measurements: Mheight: 9.3 cm, Mwidth: 6.1, Mthickness: 3.0 cm. Diameter hole: 0.7 cm

8. Loom weight

Trapezoidal shaped loom weight with flattened sides and rounded edges. Perforation in the top part, running slightly downwards, connects the two short sides of the fragment. The front side of the fragment bears a stamp, depicting a node.

Find location: Found within the municipality of Nettuno, exact location unknown

Colours: Overall: 7.5YR 8/4 (pink)

Measurements: Mheight: 9.7 cm, Mwidth: 5.8 cm (bottom)-3.2 cm (top), Mthickness: 4.3 cm (bottom)-2.7 cm (top)

9 (A-C). Loom weights

(Irregular) circular or oval loom weights with rounded edges, in section more or less oval. They occur in stone (A) as well as clay (B). Normally single perforation, running horizontally or slightly downwards, connects the two sides of the fragment. On one example a double perforation (C). These objects can possibly be connected with fishing activities.

Find location: Exact location unknown, found on *Poligono Militare*

Colours: Clay examples: 2.5YR 8/2 (white)-7.5YR 8/2 (pinkish white)-10YR 8/2 (white), Stone example: 5Y 5/1 (grey)

Measurements: Height: 5.6 cm-6.9 cm, Width: 5.0 cm-6.8 cm, Thickness: 2.8 cm-3.6 cm. Diameter hole: 0.4 cm-1.0 cm

10. Loom weight in the shape of a miniature amphora (Lead)

Miniature amphora with circular perforation next to the neck. The front side is slightly bowed forward and the fragment is slightly thickened on the under part of the body. The fragment has a gently out curving body and a convex top and bottom.

Find location: Site 15038

Colours: Overall: 10YR 5/2 (greyish brown)

Measurements: Mheight: 7.2 cm, Mwidth: 3.2 cm, Mthickness: 3.1 cm

11. Loom weight in the shape of a miniature amphora (Lead)

Miniature amphora with circular perforation in the top part. There is a bend in the left handle, the space between the neck and the handle is open. The upper part is convex. The underside is heavily thickened and convex.

Find location: Site 15038

Colours: Overall: 10YR 6/2 (light greyish brown)

Measurements: Mheight: 7.9 cm, Mwidth: 3.2 cm, Mthickness: 3.5 cm

12. Loom weight in the shape of a miniature amphora (Lead)

Miniature amphora with circular perforation in the top part. Space between neck and handles is closed. This amphora has a pointed spike on the bottom. Tapering, convex top.

Find location: Site 15038

Colours: Overall: 10YR 7/2 (light grey)-2.5Y 6/0 (grey)

Measurements: Mheight: 7.6 cm, Mwidth: 3.0 cm, Mthickness: 3.2 cm

13. Loom weight in the shape of a miniature amphora (Lead)

Miniature amphora with circular perforation between neck and handle. A clear pointed spike on the bottom. Open space between the neck and the handles. A tapering, convex top.

Find location: Site 15038

Colours: 2.5Y 7/2 (light grey)

Measurements: Mheight: 7.4 cm, Mwidth: 3.2 cm, Mthickness: 3.1 cm

14. Loom weight in the shape of a miniature amphora (Lead)

Miniature amphora with heavily bended top part. There seems to have been a circular perforation in the handle. The space between neck and handle is open. The top is somewhat rectangular with convex edges; the body is gently flaring towards a flattened bottom.

Find location: Site 15038

Colours: Overall: 5Y 4/2 (olive grey)

Measurements: Mheight: 7.0 cm, Mwidth: 3.4 cm, Mthickness: 3.0 cm

15. Decorated marble plaque

Marble plaque with flattened underside. The top side is decorated with what seems to be the image of a temple. Several columns and other architectural elements can be recognized.

Find location: Site 15014

Colours: N8-N9 (grey)

Measurements: Mheight: 27.0, Mwidth: 24.6, Thickness: 3.0-4.2 cm

16. Marble sundial

Marble plaque, on the underside flattened with two strong grooves (perhaps to attach the fragment). Over the top side runs a crack. Decorated with one straight, one in curving and one out curving groove, intersected by five rays (also represented by grooves). Several sides of the fragment are still intact.

Find location: Site 15014

Colours: Ext: HUE N6-N7-N8 (grey), Core: 5B 7/1 (light bluish grey)

Measurements: Mheight: 30.2 cm, Mwidth: 21.6 cm, Thickness: 2.4-2.9 cm

17. Marble statuette

Marble statuette on a rectangular pedestal flattened on both sides with concave edges. Much of the original statue is broken off; still visible are two feet and part of a leg, belonging to a human being, part of a seated dog and the isolated base of a column.

Find location: Site 11202

Colours: N8-N9 (grey)

Measurements: Mheight: 7.9 cm, Mlength: 8.3 cm, Mwidth: 15.3 cm

18. Part of a statuette

Small statuette, standing on a pedestal with the head missing, the body is almost completely covered by drapes, only the feet are visible. Circular perforation on the right side. Fragment is irregular flat on the backside.

Find location: Site 11202

Colours: Overall: 5YR 7/3 (pink)

Measurements: Mheight: 12.1 cm, Mwidth: 4.0 cm, Mthickness: 2.1 cm

19. Part of a clay statue (?)

Incomplete face of a statue, backside concave. Present are eyes, part of the nose, the mouth and the dimple on the chin.

Find location: Site 11202

Colours: Overall: 7.5YR 7/6 (reddish yellow)

Measurements: Mheight: 9.2 cm, Mwidth: 9.2 cm, Mthickness: 3.8 cm

20. Head of a terracotta statue

Head of a female, apart from a couple of worn spots complete, broken off at the neck. The head is clearly made in a mould; therefore the backside of the fragment is strongly concave in section.

Find location: Site 11202

Colours: Ext: 7.5YR 7/4 (pink), Int: 10YR 6/1 (grey/light grey), Core: 7.5YR 6/4 (light brown)

Measurements: Mheight: 17.7 cm, Mwidth: 9.9 cm, Thickness: 1.7-3.8 cm

21. Part of a statue

Part of a coarse ware statue; only some drapes can be recognised.

Find location: Exact location unknown, found on *Poligono Militare*

Colours: Overall: 5YR 6/4 (light reddish brown)

Measurements: Mheight: 18.6 cm, Mwidth: 14.6 cm, Thickness: 1.3-4.8 cm

22. Bronze item

Cylindrical centre part decorated with several bugne and a ridge in the middle and two more ridges on each side. On both the right and the left side the cylindrical part is bordered by a flat area, with grooves along the edges, both of concave shape. The right member ends in a point, the left in a twig-shaped part.

Find location: Found in the La Campana region, exact location unknown

Colours: 5G 3/2 (dusky green)- 5 BG 6/6 (light blue green)

Measurements: Mlength: 23.7 cm, Width: 0.7-1.4 cm, Thickness: 0.2-0.7 cm

23. Bronze lance point

Lance point with side-hook, attachment to the shaft is circular; the top part is rounded in section with a sharp triangle on each side.

Find location: Found within the municipality of Nettuno, exact location unknown

Colours: 5G 3/2 (dusky green)

Measurements: Height: 4.0 cm, Width: 0.9 cm, Thickness: 0.5 cm

24. Fragment of an antefix

Part of a coarse ware antefix with palmette motive, the leaves marked by shallow grooves. Both sides of the fragment are more or less flattened with convex edges.

Find location: Exact location unknown, found on *Poligono Militare*

Colours: Ext: 5YR 8/4 (pink)-5YR 7/4 (pink), Int: 5YR 8/3 (pink)-5YR 7/4 (pink), Core: 5YR 8/3 (pink)-5YR 7/4 (pink)

Measurements: Mheight: 12.1 cm, Mwidth: 13.0 cm, Thickness: 1.8-2.2 cm

25. Fragment of an antefix

Part of a coarse ware antefix, more or less rectangular in section with flattened underside and unknown depiction.

Find location: Exact location unknown, found on *Poligono Militare*

Colours: Overall: 2.5YR 6/6 (light red)

Measurements: Mheight: 9.6 cm, Mwidth: 8.2 cm, Mthickness: 3.0 cm

26. Fragment of an antefix

Complete coarse ware antefix with flattened underside and convex edges. The fragment is decorated with a palmette motive; the spaces between the leaves are slightly lowered to pronounce the depiction.

Find location: Exact location unknown, found on *Poligono Militare*

Colours: Overall: 10YR 4/4 (dark yellowish brown)-7.5YR 8/4 (pink)

Measurements: Mheight: 15.4 cm, Mwidth: 14.7 cm, Thickness: 2.4-3.8

27. Part of an antefix

Coarse ware antefix, in section more or less rectangular, the interior of the fragment is concave and thickened on the underside, convex edge. Front side decorated with a palmette motive with five leaves to be recognized. The spaces between the ridges are lowered.

Find location: Exact location unknown, found on *Poligono Militare*

Colours: Overall: 10YR 8/3 (very pale brown)

Measurements: Mheight: 9.6 cm, Mwidth: 15.0 cm, Thickness: 2.0-3.6 cm

28. Part of an antefix

Coarse ware antefix, rectangular in section with flattened underside and convex edges. The front side seems to be decorated with a floral motive, consisting of a central theme, on both sides flanked by separate leaves.
Find location: Exact location unknown, found on *Poligono Militare*

Colours: Overall: 10YR 7/1 (light grey)-10YR 8/2 (white)
Measurements: Mheight: 13.6 cm, Mwidth: 16.4 cm, Thickness: 2.1 cm

29. Part of an antefix

Almost complete coarse ware antefix, with more or less flattened back side, thickened on top and flattened edges. The front side is decorated with several floral motives, intersected by a horizontally running band, which is thickened in section.

Find location: Exact location unknown, found on *Poligono Militare*

Colours: Overall: 10YR 8/2 (white)
Measurements: Mheight: 18.4 cm, Mwidth: 14.5 cm, Thickness: 1.8-3.8 cm

30. Coarse ware object of unknown function

Egg-shaped object with convex top and bottom, in section more or less circular.

Find location: Site 11202

Colours: Overall: 10YR 8/2 (white)
Measurements: Mheight: 6.3 cm, Mwidth: 3.3 cm

31. Agho crinalo (bone)

Straight pin, underside circular in section, upper part oval in section. In the top half three holes, two of circular shape and the middle one of rectangular shape.
Find location: Exact location unknown, found on *Poligono Militare*

Colours: Overall: 10YR 8/3 (very pale brown)-10YR 8/4 (very pale brown)

Measurements: Mheight: 11.25 cm, Tbottom: 0.6 cm, Ttop: 0.9 cm

32. Decorated wall fragment

Flaring wall fragment with on the exterior decoration of what seem to be two human legs. Traces of a blackish slip are still visible on the exterior of the shard.

Find location: Site 11202

Colours: Ext: 5YR 3/1 (very dark grey), Int: 7.5YR 6/4 (light brown), Core: 7.5YR 5/0 (grey)

Measurements: Mheight: 5.4 cm, Mwidth: 4.4 cm, Twall: 0.4 cm, Tdecoration: 0.9 cm

33. Lead shell

Shell-shaped object with small circular perforation. Topside convex, bottom side flat.

Find location: Site 11202

Colours: Overall: 2.5Y 4/0 (dark grey)
Measurements: Mheight: 3.6 cm, Mwidth: 3.6 cm, Thickness: 0.8-1.3 cm

34. Basalt wedge

Rectangular shaped wedge, square in section with rounded edges. Cylindrical perforation in the top part. The bottom part is incomplete.

Find location: Site 15102

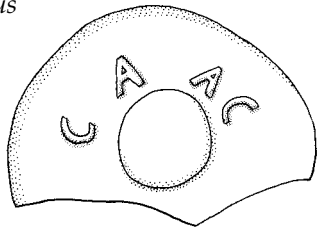
Colours: Ext: 5Y 5/1 (grey)-5Y 4/2 (olive grey), Core: 5Y 5/1 (grey)-5Y 6/2 (light olive grey)

Measurements: Mheight: 8.6 cm, Mwidth: 1.4 cm

NOTE

²⁹³ See site cat. no 11202.

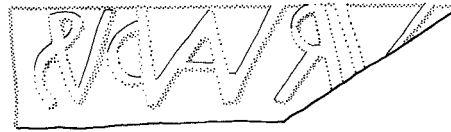
Miscellaneous



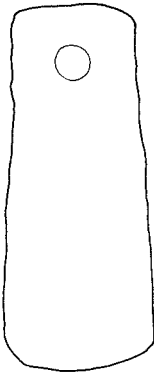
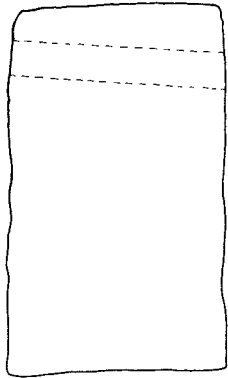
1



2



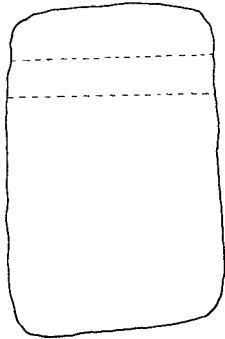
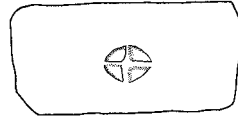
3



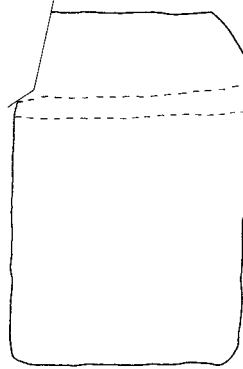
5



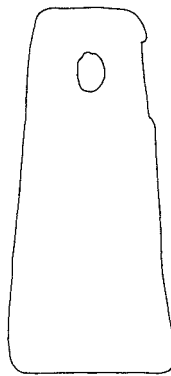
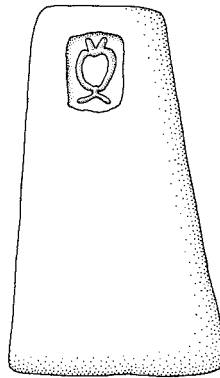
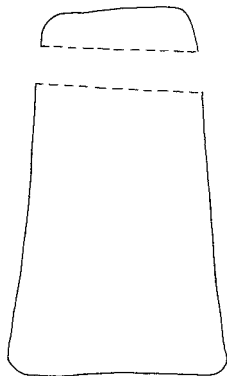
4



6

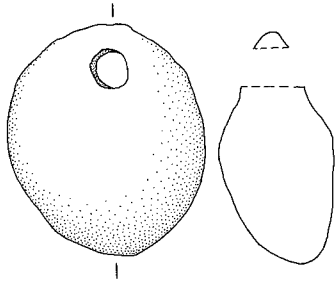


7

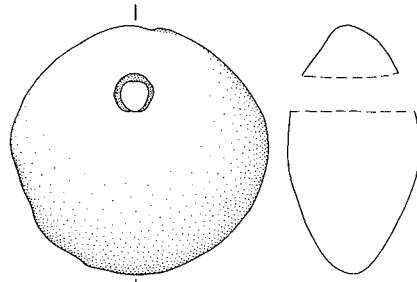


8

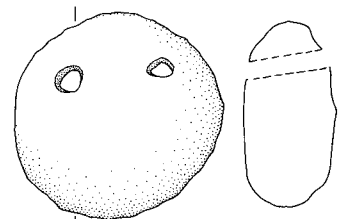
Miscellaneous



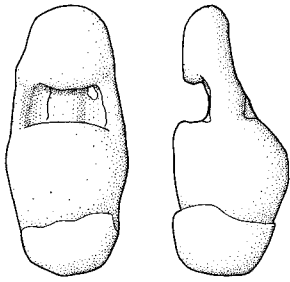
9a



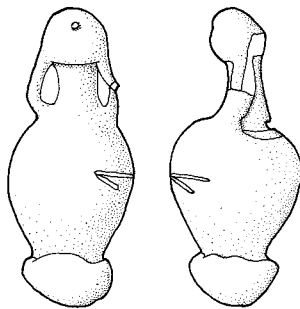
9b



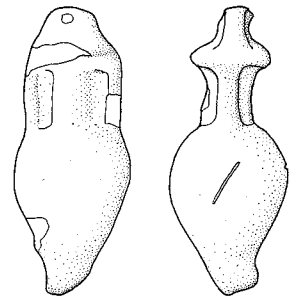
9c



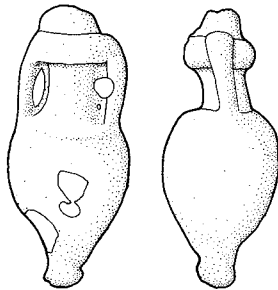
10



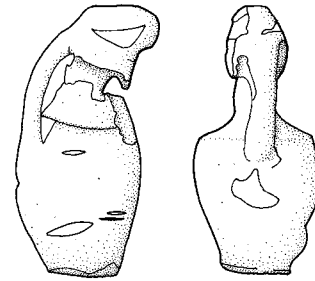
11



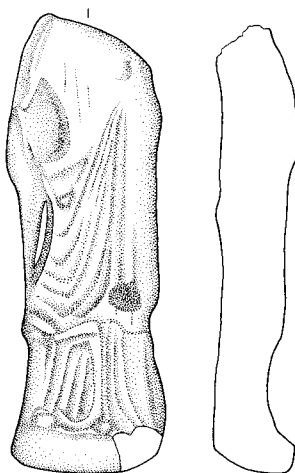
12



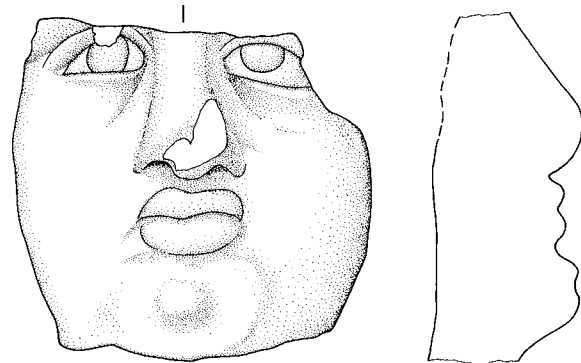
13



14

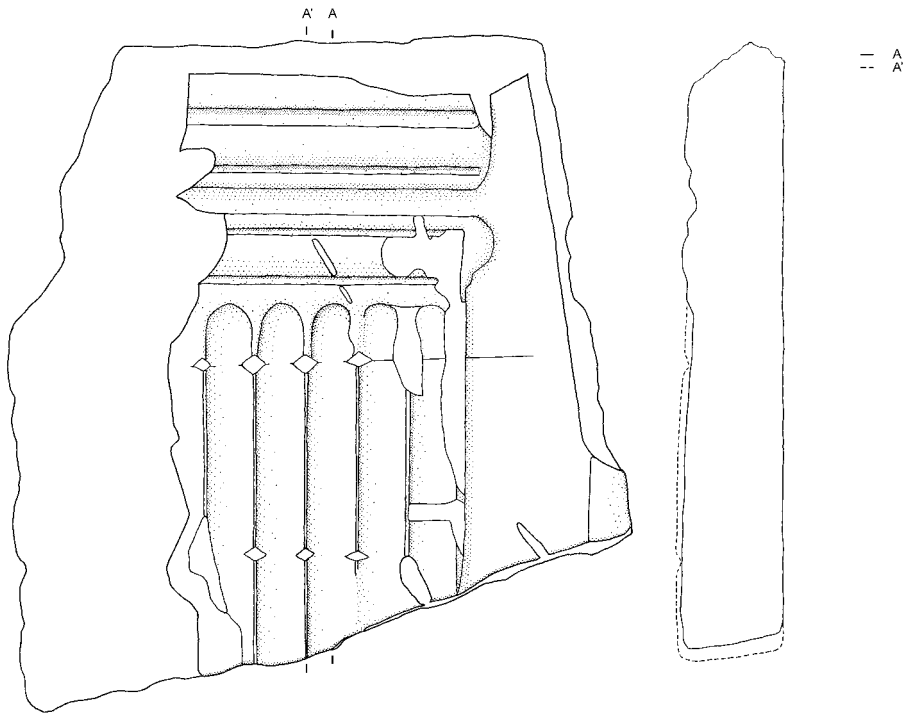


18

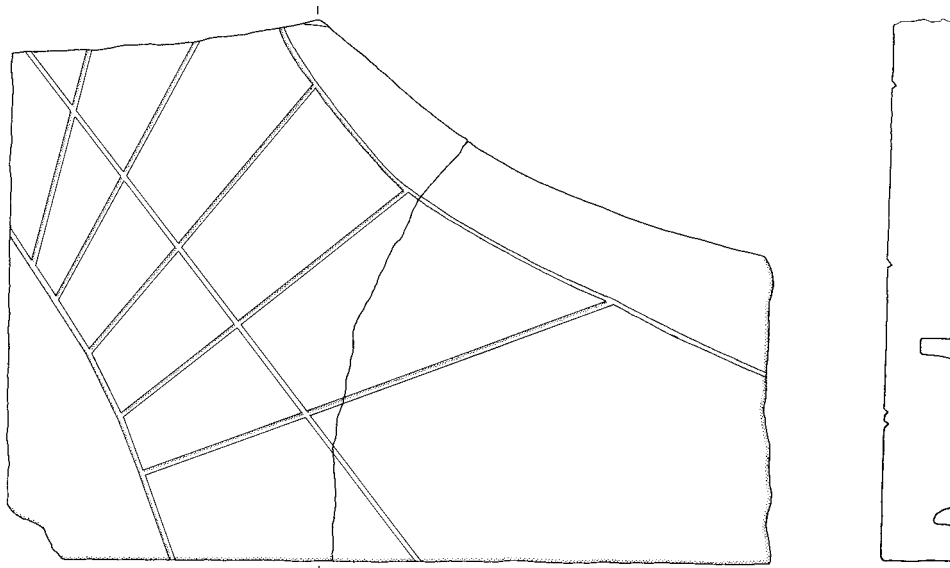


19

Miscellaneous

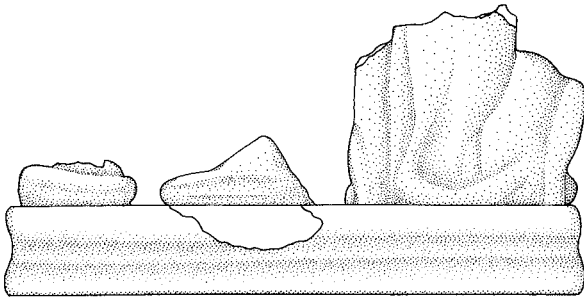
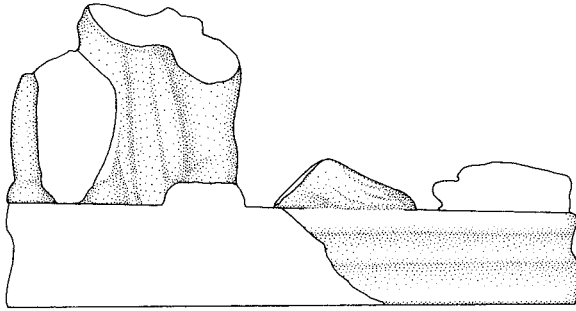
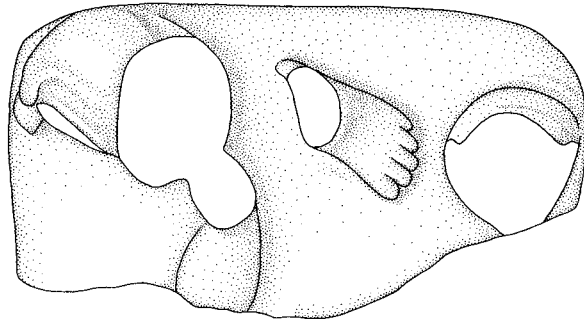


15 (1:3)

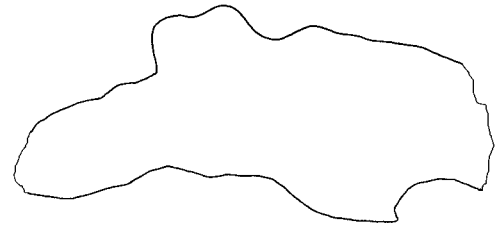
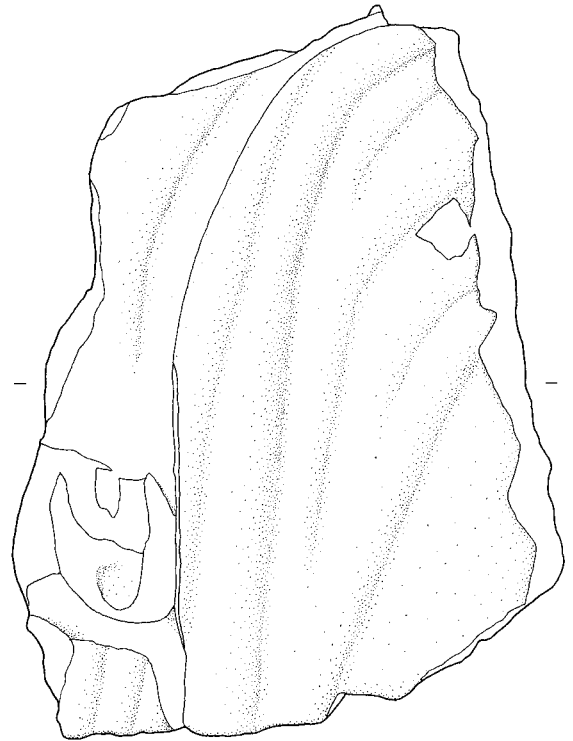


16 (1:3)

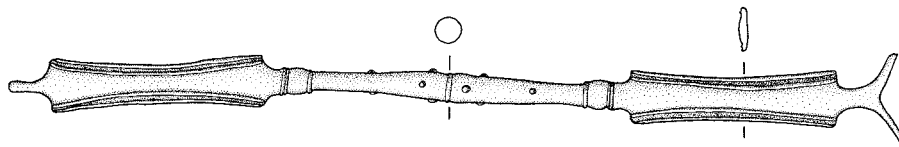
Miscellaneous



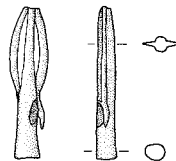
17



21

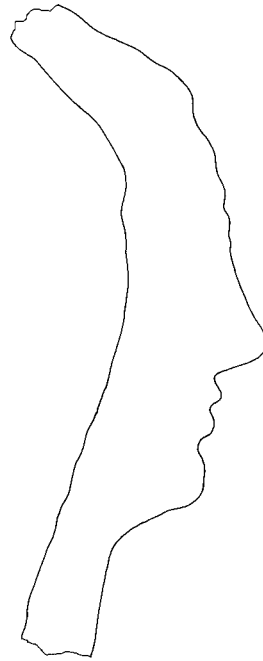
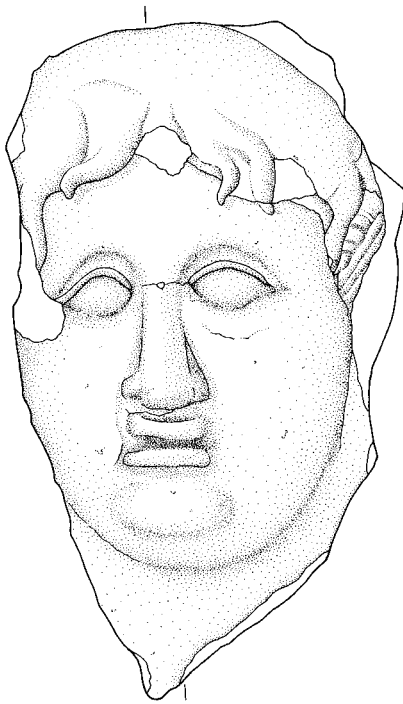


22

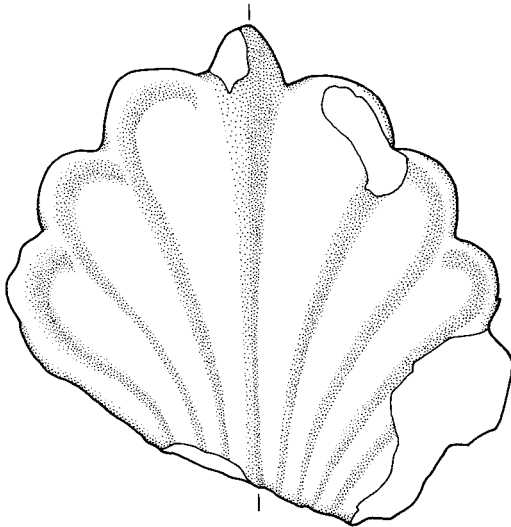


23

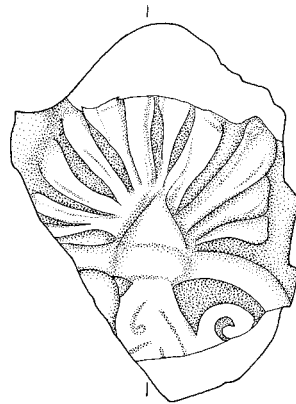
Miscellaneous



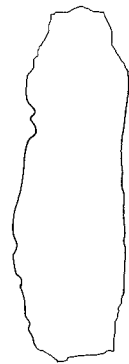
20



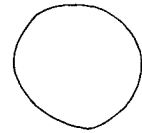
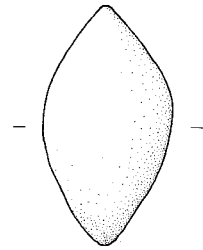
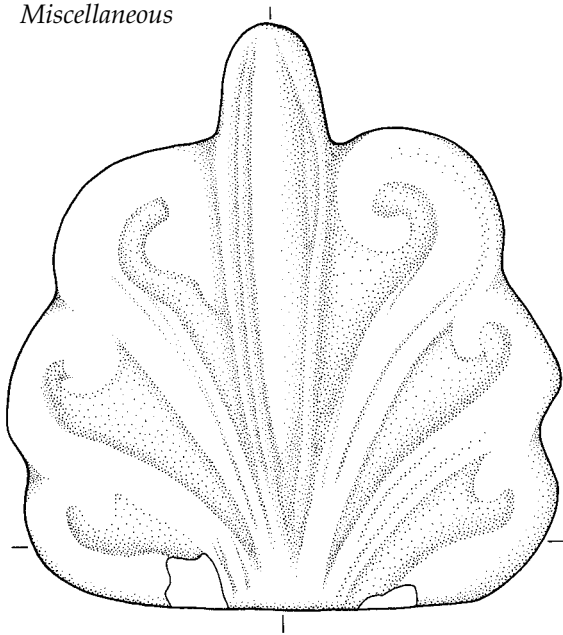
24



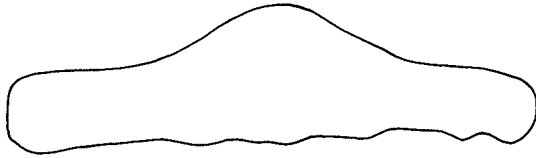
25



Miscellaneous



30

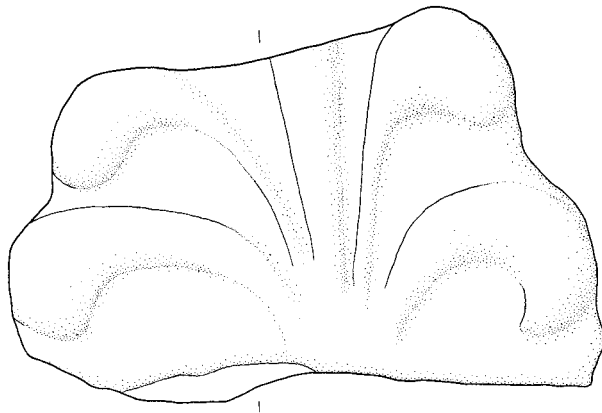


26



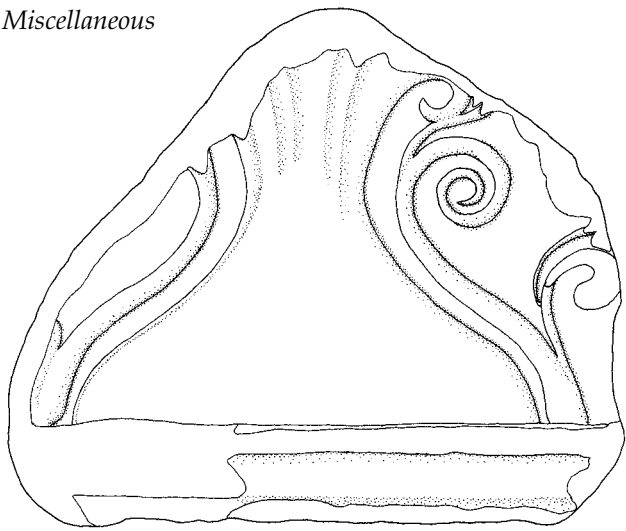
CD

31

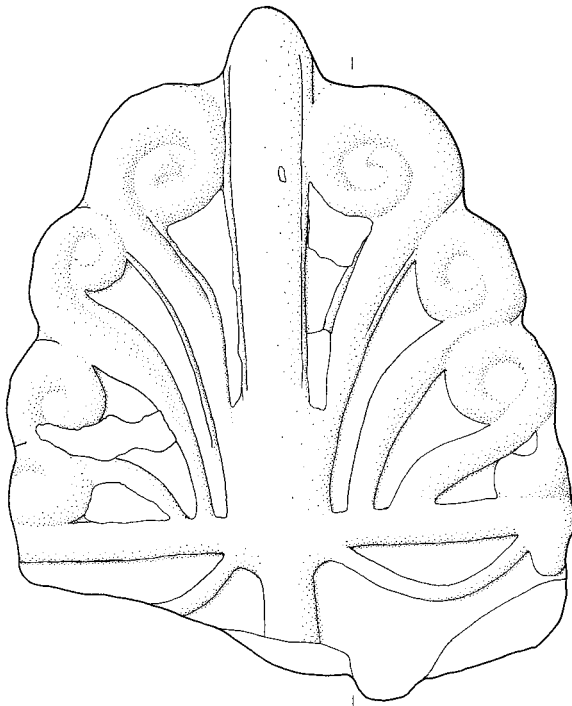


27

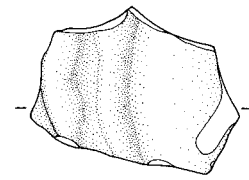
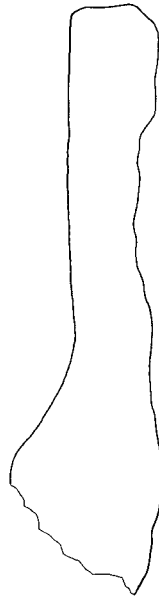
Miscellaneous



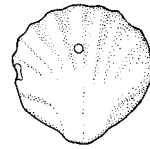
28



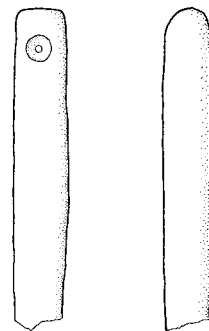
29



32



33



34

PART IV
CERAMIC TYPOLOGIES

Introduction to the Ceramic Typologies

Luca Alessandri, Tymon de Haas, Bert Nijboer, Gijs Tol

In this part of the catalogue we present typologies for the different pottery categories studied for the *Carta Archeologica*. These typologies are based on those materials in the dataset that could be securely dated on the basis of comparisons in fabric and/or shape with material from securely dated contexts elsewhere. A complete overview of all materials that were encountered will be published elsewhere.

Seven typologies were drawn up for the most common handmade pottery, coarse wares and fine wares. These typologies apply to: A) impasto pottery; B) storage vessels (*dolia*); C) transport amphoras; D) other coarse wares (cooking- and table wares); E) black glazed ware; F) terra sigillata; G) African Red Slip Ware.

These seven typologies together cover the greater part of the materials in the dataset. The typologies A and F are ordered by shape, while typologies B-E and G are ordered chronologically. These different approaches are related to the amount of material available for each category, and to the structure of the existing typologies of the wares.

DESCRIPTION

When more than one fragment was identified as belonging to the same, single type, this type's description was standardized, covering all the variation in shape, size and colours observed on the fragments.

The descriptions consist of the following elements:

- 1) Fragment type and vessel shape (for example 'rim fragment of a bowl');
- 2) A detailed description of all physical characteristics of the fragment;
- 3) The colours or the range of colours of the type using Munsell-values.²⁹⁴ Usually colours are recorded for three different parts of the fragment; the inner- and outer surface and the core.
- 4) The measurements or the range of measurements for each type. The diameter is measured at the lip. A capital M stands for maximum, a capital T for thickness.
- 5) A bibliographical reference for the type
- 6) The chronological range of the type

NOTE

²⁹⁴ Munsell 1994.

A

Bronze Age, Iron Age and Orientalizing *Impasto*

CERAMICS FROM LA CAMPANA (MIDDLE BRONZE AGE 1-2, MIDDLE BRONZE AGE 3?)

Below, the diagnostic fragments from several locations in the Campana area and elsewhere in the Nettuno area that were collected during various visits by A. Liboni and the GIA are catalogued. Diagnostic pieces without chronological value have not been included in this catalogue.

Site 15078 ('La Campana, Pineta bassa')
Besides several impasto wall fragments:

1.
Rim fragment of a bowl, surface 5YR 4/2 dark reddish grey, diameter unknown.

Site 15068 ('Fosso del Quinto, Campana, vicino Sughereto')
Besides several impasto wall fragments and an Archaic dolium fragment:

2.
Rim fragment of a deep bowl or carinated cup with maximum diameter at rim, surface 5YR 4/2 dark reddish grey, rounded breaks, diameter unknown, exact inclination unclear.

3.
Rim fragment, probably of a bowl a bordo rientrante with bugno on maximum diameter and possibly handle attachment or second bugno, surface 5YR 4/4 reddish brown, rounded breaks, diameter unknown.

4.
Facetted spindle whorl, surface 5YR 4/4 reddish brown.

Site 15078 ('La Campana, vicino Pinetella bassa')
Besides several impasto wall fragments and later ceramics:

5.
Rim fragment of a troncoconical bowl with flattened lip, surface 5YR 4/2 dark reddish grey, sharp breaks, diameter unknown.

Not from a specific site, generically from 'La Campana'

6.
Wall fragment of a deep bowl a carena ispessita with maximum diameter at rim, surface 2.5YR 3/1 dark reddish grey, rounded breaks.

7.
Rim fragment of a bowl a bordo rientrante, surface 2.5YR 3/1 dark reddish grey, rounded breaks.

Site 15245 ('La Campana')

8.
Rim fragment of a carinated deep bowl with equal diameter at mouth and shoulder, out curving rim, surface 5YR 4/2 dark reddish grey, rounded breaks.

9.
Rim fragment of a carinated deep bowl with maximum diameter at rim, above carena slightly in curving, out turning rim with internal angle, surface 5YR 4/4 reddish brown, rounded breaks.

10.
Rim fragment of a jar with out curving rim and notched decoration on lip, surface 5YR 4/4 reddish brown, rounded breaks.

Site 15007 ('La Campana parte frumento vicino alla strada')

11.
Rim fragment of a carinated deep bowl with equal diameter at mouth and shoulder, carena almost directly below rim, surface 5YR 4/2 dark reddish grey, rounded breaks.

Site 15248 ('La Campana, sughereto, dalla parte opposta al frumento')

12.
Rim fragment of a carinated deep bowl, wall almost vertical above carena, slightly out curving rim, surface 5YR 4/2 dark reddish grey, rounded breaks.

13.
Fragment of a band handle with pointed margins and outer ends lightly folded outwards, surface 5YR 4/2 dark reddish grey, rounded breaks.

14.
Rim fragment of a bowl a bordo rientrante with straight wall and pointed lip, surface 2.5YR 3/0 very dark grey, rounded breaks, exact inclination unclear.

15.
Rim fragment of an ovoidal jar with out turning rim and notched decoration on lip, surface 5YR 4/4 reddish brown, rounded breaks.

16.
Rim fragment of a troncoconical jar with strongly out turning rim, surface 2.5YR 3/0 very dark grey, rounded breaks.

17.
Discoidal spindle whorl, surface 5YR 4/4 reddish brown, upper side abraded.

Site 15010 ('Casale la Campana')

18. Fragment of an elevated band handle with parallel sides and upper part expanding into a T, surface 5YR 4/4 reddish brown, very rounded breaks.
19. Fragment of an elevated band handle with pointed outer ends, surface 2.5YR 3/0 very dark grey, worn fractures.
20. Fragment of an elevated band handle with pointed outer ends, surface 2.5YR 3/0 very dark grey, rounded breaks
21. Fragment of a vertical elevated band handle, surface 2.5YR 3/0 very dark grey, rounded breaks.
22. Band handle fragment of a cup, possibly with a 'tongue shaped' elevation, surface 2.5YR 3/0 very dark grey, rounded breaks.
23. Rim fragment of a carinated deep bowl with maximum diameter at the carena, short neck above carena, out-curving and then incurving rim, troncoconical deep body, surface 5YR 4/4 reddish brown, reasonably clear breaks
24. Rim fragment of a carinated deep bowl with maximum diameter at the carena, short neck above carena, troncoconical deep body, ext 5YR 4/4 reddish brown, int 2.5YR 3/0 very dark grey, rounded breaks.
25. Rim fragment of a small carinated cup, maximum diameter at the carena, surface 2.5YR 3/0 very dark grey, rounded breaks.
26. Rim fragment of a carinated deep bowl with equal diameter at rim and carena, out curving rim, ext 5YR 4/4 reddish brown, int 2.5YR 3/0 very dark grey, partly eroded, rounded breaks.
27. Rim fragment of a carinated cup with equal diameter at carena, carena almost directly below rim, surface 2.5YR 3/0 very dark grey, rounded breaks.
28. Rim fragment of a troncocoidal bowl with strongly out curving rim, surface 5YR 4/4 reddish brown, int eroded, rounded breaks.
29. Rim fragment of a globular deep bowl with strongly out curving rim, surface 2.5YR 3/0 very dark grey, eroded, rounded breaks.

Discussion

The carinated ciotola no 2 (although its inclination is uncertain) may be similar to several examples from Valle Felici,²⁹⁵ a context dated to the initial phase of the Middle Bronze Age.²⁹⁶ This site also yielded a parallel for ciotola no 6.²⁹⁷ Ciotola no 9 is similar to type 179 in Aspetti, dated to the Middle Bronze Age 2A.²⁹⁸

Rim fragment no 10 can also be ascribed to a type from Aspetti,²⁹⁹ belonging to the Grotta Nuova facies and the southern proto-Appennine facies, and dated to the second phase of the Middle Bronze Age. Ciotole Nos 8 and 11 appear to be older; they can be attributed to type 359,³⁰⁰ common in the Abruzzo and in north-Campanian contexts of the first phase of the Middle Bronze Age.

Handle fragment no 13 is similar to an example from Vivara, Punta d'Alaca,³⁰¹ dated to the full phase of the Middle Bronze Age. The carinated ciotole nos 12, 26 and 24 can be attributed to the same phase, to type 205B of the Grotta Nuova facies.³⁰² Scodella no 14 is similar to type 37B in the same work³⁰³ and is common in pre-Appennine and Appennine contexts; the ovoidal olla no 15 can be ascribed to type 411A.³⁰⁴ Fragment no 18 belongs to type 477³⁰⁵ and is considered common in the Grotta Nuova and the proto-Appennine facies, dating to the first phase of the Middle Bronze Age Fragments. Nos 19 and 20, both of type 500B,³⁰⁶ should be ascribed to that same phase. The ansa con sopraelevazione, probabilmente terminante a punta dates to the Middle Bronze Age. This type has a parallel in an example from Ponte S. Pietro Valle, trench B³⁰⁷ - a context yielding fragments of the initial phase of the Middle Bronze Age and the Recent Bronze Age³⁰⁸ - but also in a fragment from Lariano.³⁰⁹

Fragment no 26 has a clear parallel in the Villaggio delle Macine,³¹⁰ dated to Middle Bronze Age 1B.³¹¹ Other 1st-phase fragments include no 27, similar to an example from Candalla, Riparo della Roberta, layer c,³¹² and fragment no 28, similar to a fragment from the Grotta dell'Orso at Sarteano.³¹³ Fragment 29 may indicate a later habitation phase; this fragment has a parallel from Tor San Giovanni, dated to the Middle Bronze Age phase 3.³¹⁴

BRONZE AGE CERAMICS FROM OTHER LOCATIONS IN THE NETTUNO AREA

Site 15243 (Fosso Foglino)

1. Rim fragment, possibly of a rounded bowl with vertical band handle or perforated lug with probably a tongue shaped extension attached to the lip, surface 2.5YR 3/0 very dark grey, abraded, rather rounded breaks.
2. Wall fragment of a closed form with a broad vertical band handle, surface 5YR 3/4 dark reddish brown, rounded breaks.
3. Rim fragment of a jar, very likely of ovoid shape, with a short small neck, slightly outturning, and with rounded lip, surface 5YR 3/4 dark reddish brown, rounded breaks.
4. Rim fragment of a jar, very likely of globular shape, with a vertical neck and rounded lip, surface 2.5YR 4/6 red, rounded breaks
5. Rim fragment of a jar, very likely of ovoid shape, with a vertical neck and rounded lip, surface 2.5YR 4/6 red, rounded breaks, with a slightly outturning rim and rounded lip, surface 5YR 5/6 yellowish red, rounded breaks.

Discussion

The fragment of the bowl (scodella) no 1 is not unlike type 18, variant A in the typology of D. Cocchi Genick.³¹⁵ This type appears in the context of the proto-Apennine facies in ceramic groups from the Abruzzi and northern Campania and is assigned to phase 1 of the Middle Bronze Age. Apart from the fragment of a jar (olla), no 3, two other impasto fragments were collected on the beach at ca 100 m north-east of the site. The much worn fractures, and the fact that no other archaeological sites exist in the vicinity of the find spot except for Fosso Foglino, suggest that these fragments indeed come from the latter site. The shapes, although hardly diagnostic, are compatible with the date of the bowl (scodella).

Site 11209 (Saracca)

1. Rim fragment of a cup or carinated deep bowl with rounded lip, wall lightly ingoing, elevated vertical band handle (upper part missing) attached to the part of the wall immediately above the carena and to the interior of the rim, surface 2.5YR 4/4 reddish brown, fairly sharp breaks. Surface 2.5YR 4/4 reddish brown, rather sharp breaks.
2. Rim fragment of a small barrel formed jar with continuous rim with internal angle and obliquely cut lip, hor-

izontal notched cord applied below the rim. Surface 7.5YR 3/4 dark brown, rather rolled breaks

3. Rim fragment of probably a collared vase with troncoconical wall and slightly outturning rim with an internal angle, surface 2.5YR 4/6 red, fairly sharp breaks.
4. Rim fragment of a troncoconical bowl with straight wall with a distinct rim and rounded lip with internal angle, surface 2.5YR 3/6 dark red, fairly sharp breaks
5. Rim fragment with flattened lip of a troncoconical vase, surface 5YR 4/3 reddish brown, fairly sharp breaks.
6. Rim fragment of with distinct rounded lip, surface 5YR 4/3 reddish brown, fairly sharp breaks.
7. Rim fragment with tapering lip of a troncoconical vase, surface 2.5YR 4/4 reddish brown
8. Fragment of an outturning rim with rounded lip, surface 5YR 4/3 reddish brown, fairly sharp breaks.
9. Fragment of an outturning rim with tapering lip, surface 5YR 4/3 reddish brown, fairly rounded breaks
10. Fragment of outturning rim with lip obliquely cut towards exterior, surface 7.5YR 3/2, dark brown, fairly rounded breaks.

Discussion

Among the fragments collected at the site, the bowl (ciotola) no 1, is characterized by a (probably) straight cylindrical upper part, which is not unlike the ones seen in examples from S. Giovenale, Area A, settore Sud, strati 11 and 15, a context that can be dated to the oldest phase of the Recent Bronze Age.³¹⁶

Similarly, the barrel-shaped jar (olla a botte) no 2 matches examples from Recent Bronze Age contexts; a similar specimen is known from a Recent Bronze Age context at S. Giovenale (area B, trench AP 58:1, test pit B, strata 8-7).³¹⁷

Finally, the truncated conical bowl (scodella) no 4 resembles a specimen from Broglio di Trebisacce (sett. D east, livello S, riq H) that can be classified as Giardino's type 10. It can be dated to the Recent Bronze Age.³¹⁸

Site 11206 (La Banca)

1. Fragment of a barrel shaped jar with almost distinct rim, rounded lip and indication of internal angle. Surface 5YR 3/2 dark reddish brown, rather rolled breaks

Discussion

The jar fragment (olla) no 1 was found ca 250 m north of

the site of La Banca, near the crescent moon-shaped fishpond of site 11207. Considering the distance, it is doubtful that the shard originally belonged to this site. The fragment, being without context, cannot easily be interpreted. However, the type of impasto is quite similar to that of the Final Bronze Age sites Le Grottacce (site 11215) and Pellicione (site 11213).

Site 15005 (Piscina Cardillo)

1. Fragment of a bowl with a slightly incurving rim, a bugna immediately below the rim, surface 7.5YR 3/2, dark brown, rounded breaks

Discussion

This bowl (no 1) is fairly common and its date is therefore imprecise, but it can be attributed with certainty to the Middle Bronze Age.

Site 15244 (Le Grugnole)

1. Winged axe

Discussion

This axe can be dated to the Recent Bronze Age on the basis of its wings that are converging towards the lower end, its distinct end and its slightly pronounced shoulder.

Site 11202 (Torre Astura)

Reported as coming from 'Torre Astura'

1. Fragment of a handle with an oval perforation, very rounded breaks. Completely abraded surface, surface 7.5YR 3/2 dark brown, probably from the seafloor, fairly sharp breaks
Reported as coming from 'Torre Astura', left side of entrance
2. Fragment of an ovoid jar with out turning and in curving rim, a horizontal notched cord applied immediately below the rim, surface 2.5YR 4/8 red, rounded breaks, probably from the sea floor
3. Fragment of probably a jar with out turning rim with internal angle and tapering lip, surface 2.5YR 4/4 reddish brown, fairly sharp breaks

Discussion

The oldest Bronze Age fragment, although in a bad state of preservation, is represented by the lug (no 1), which resembles a specimen from Gola del Sentino, Grotta dei Baffoni³¹⁹ dated to the Middle Bronze Age 2A.³²⁰ Since the shard has very rounded fractures and completely worn surfaces, it may have originated elsewhere along the coast.

The fragment of the ovoid jar (olla) no 2 resembles three specimens from Satricum found in late Orientalizing contexts, at the earliest.³²¹ Fragment no 3 likewise has a parallel at Satricum, but in an early Orientalizing stratum.³²²

Site 15246 (Bosco di Nettuno)

1. Fragment of an ovoidal jar with out curving rim, below rim a horizontal impressed cord decoration, surface 2.5YR 4/6 red, quite sharp breaks
2. Fragment of an ovoidal jar with out curving rim, surface very worn, 5 YR 4/3 reddish brown, worn breaks and concretions
3. Fragment of an out turning rim with internal angle, surface 2.5YR 4/6 red, breaks quite worn.
4. Fragment of a globular jar with short vertical neck, rim with internal angle, flattened lip, surface 2 3/10B dark bluish gray, worn breaks, diameter unknown and inclination uncertain

Discussion

The fragment of ovoid jar (olla) no 1 has parallels in Fossa della Cavatella in a mixed context with a predominance of shards dating to the Final Bronze Age/Early Iron Age.³²³ Also jar (olla) no 3 can be assigned to that period, while the globular jar (olla) no 4 has a close parallel in a stratigraphical unit at S. Giovenale, dated to the Final Bronze Age.³²⁴

The ovoid jar (olla) with the continuous rim, no 2, is probably older and apparently a later intrusion: its state of preservation suggests clearly a prolonged immersion in water, a condition which excludes the immediate vicinity of the site.

Introduction

The GIA surveys in the territory of the Comune di Nettuno have revealed various sites that can be assigned to the Iron Age and the Orientalizing period (see fig. 7.3). These are located inland along the main river valleys and along the coast. Some of the sites can be dated securely on the basis of the presence of specific categories of fine wares that are characteristic for the Orientalizing period, such as bucchero, *impasto rosso* or certain depurated fabrics.³²⁵ Others are securely dated on the basis of the presence of common impasto shards that have diagnostic features preserved. For several sites, however, occupation during the Iron Age and the Orientalizing period is uncertain, as both characteristic fine wares and impasto shards with diagnostic features are lacking there. As a rule, these sites have been dated on the basis of the fabrics of the impasto shards found on them. These were compared to fabrics that were dated by the GIA in stratigraphical contexts from *Satricum*.³²⁶

Of the confirmed sites, especially the coastal site at Depuratore (site 15125) and a few other sites along the coast towards Torre Astura contain significant quantities of Iron Age and Orientalizing impasto shards.³²⁷ Only a few of these have been catalogued here because the majority consist of wall fragments, plain bases and small rim fragments of common vessel forms. The non-diagnostic shards could be assigned by us to the period 950-580 BC based on the GIA research on fabrics. The Depuratore fabrics have more in common with those from *Satricum* than with those from site 11213 which was dated to the Recent Bronze Age.³²⁸ The Iron Age fabrics are generally harder, resulting in a more jagged fracture. The presence of notable quantities of ferromanganese nodules in the shards from *Depuratore* and other locations along the coast also points to the Iron Age and Orientalizing periods.

The ceramics from the Iron Age and the Orientalizing period are well-known from the sites of *Satricum* and Campoverde, just outside the territory of Nettuno. Both sites produced an abundance of common impasto ceramics of these periods, as well as bucchero, *impasto rosso* and depurated wares.³²⁹

Site 15125 (*Depuratore*)

1. Base fragment of a stand

Slightly flaring wall, straight rim, flattened lip with a slight moulding on the outside
Colours: Ext: 10R 4/8 red, Int: 5YR 5/6 yellowish red; burnish: 7.5YR 6/2 pinkish grey, Core: 10R 4/8 red
Measurements: 7.8 x 5.1 x 1.3 (wall) - 1.0 (lip). Diam.: 28 cm

Reference: Nijboer 1998, 118

Date: 8th/7th century BC

2. Rim fragment of a bowl

Spreading wall, straight rim, convex lip
Colours: Ext: 2.5YR 5/8 red, Int: 2.5YR 5/8 red, Core: 10R 4/4 weak red

Measurements: 5.9 x 11.6 x 1.3 (wall) - 1.0 (lip). Diam.: 40 cm

Reference: Attema et al. 2003b, 338, bowl type V-1; Nijboer 1998, 118.

Date: Iron Age/Orientalizing

3. Base fragment with a lug

Flat base, inside concave. Complete lug just above the base, in section rectangular with rounded edge. Two clear fingerprints on the underside of the lug

Colours: Ext: 5YR 5/6 yellowish red, Int: 5YR 3/4 dark reddish brown, Core: 5YR 6/2 pinkish grey

Measurements: 4.1 x 8.4 x 3.2 x 1.0 (base) - 0.9 (wall). Lug: 5.8 x 3.2 x 1.3. Diam.: 18 cm

Reference: Maaskant Kleibrink 1987, 182 cat. no 704, 187, cat. no 783; both bases with lugs were found in D10 Hut 2 at *Satricum*

Date: 8th century BC

4. Rim fragment of a jar

Out turning rim, slightly bevelled on the inside

Colours: Ext: 5 YR 4/6 (yellowish red), Int: 5 YR 4/4 (reddish brown), Core: 5 YR 4/6 (yellowish red)

Measurements: 5.7 x 10.1 x 1.1 (wall) - 0.7 (lip). Diam.: 24 cm.

Reference: Attema et al. 2003b, 333, Jar types III-1 and III-2.

Date: Iron Age/Orientalizing

5. Rim fragment of a dolium

Out curving rim and convex lip (with traces of secondary burning)

Colours: Ext: 10 YR 5/1 (gray) - 10 YR 7/6 (yellow), Int: 2.5 YR 5/8 (red) - 7.5 YR 5/6 (strong brown), Core: 2.5 YR 3/1 (very dark gray)

Measurements: 14.1 x 13.0 x 2.4 (wall) - 1.9 (lip). Diam.: 34 cm.

Reference: Rasmus Brandt 1996, 179-180, Dolium 28b.

Date: Orientalizing

6. Rim fragment of a bowl

Upright rim, convex lip, irregular surface.

Colours: Ext: 2.5 YR 4/3 (reddish brown), Int: 5YR 5/8 (yellowish red), Core: 2.5 YR 4/6 (red)

Measurements: 4.4 x 4.3 x 1.3 (wall) - 0.7 (lip). Diam.: 16 cm

Reference: Attema et al. 2003b, 338, Bowl type V-2/1621

Date: Iron Age/Orientalizing

7. Rim fragment of a jar

Flaring wall, out curving rim, convex lip
Colours: Ext: 2.5 YR 4/4 (reddish brown), Int: 2.5 YR 4/4 (reddish brown), Core: 5 YR 4/4 (reddish brown)
Measurements: 6.9 x 8.5 x 1.1 - 1.6 (wall) - 0.6 (lip). Diam.: 22 cm.

Reference: Attema et al. 2003b, 333, Jar type III-3 4859-31.
Date: Iron Age/Orientalizing

8. Bow of fibula, copper-alloy

Bow of small fibula thickening towards the centre and decorated with two incised double circles

Measurements: 1.2 x 2.5 x 0.6

Reference: An exact parallel of this fibula is not found. A comparable undecorated fibula is published in Rasmus Brandt 1996, 289, no. 286. The decoration of incised double circles is common for *fibulae a navicella* of the Orientalizing period (cf. Bietti Sestieri 1992). Von Eles published a few comparable fibulae from northern Italy as 'piccolo fibule con cerchielli impressi sull'arco' and dated them to the 6th century BC (Von Eles Masi 1985, 205, Tav. 159).

Date: 7th/6th century BC

Site 15123 (Bottego 1)

1. Almost complete profile of a bowl

Shallow bowl with strong out curving rim and convex lip thickening on the outside

Colours: Ext: 7.5 YR 4/6 (strong brown), Int: 7.5 YR 4/4 (brown), Core: 7.5 YR 4/4 (brown)

Measurements: 3.9 x 9.7 x 0.5 (wall) - 0.9 (lip). Diam.: 28 cm

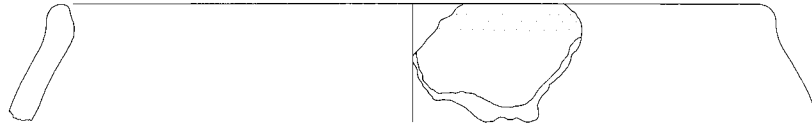
Reference: Somewhat comparable rims are recovered at *Satricum*, Anagni and Caere; Maaskant Kleibrink 1992, cat. no 2751, 2794 and 2788; Gatti, 1993, 100; Cristofani 1993, 302, 302, 398, bowl type Kc11, esp. Kc 11.3, Kc 12 and Bacino Type N5c.1. The diameter of fragment Bot-1 3/27 is too large for a regular bowl and too small for a bacino. Another option is that the fragment is the upper part of a stand/holmos

Date: Late Orientalizing/Early Archaic

NOTES

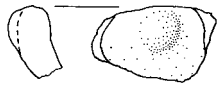
- ²⁹⁵ Bermond Montanari 1992, fig. 1, nos 25 and 27.
²⁹⁶ Cocchi Genick 2002, 36, site 12; this complex dates to the Middle Bronze Age 1A.
²⁹⁷ Bermond Montanari 1992, fig. 1, no 28; for the date see note 14 above.
²⁹⁸ AA.VV. 1995, 122.
²⁹⁹ AA.VV. 1995, 253, type 43.
³⁰⁰ AA.VV. 1995, 220/221.
³⁰¹ Sector E, south-eastern settlement area; see Damiani et al. 1984, fig. 4C, no 3. Cocchi Genick considers this type to be a variant of type 496, dated to the second phase of the Middle Bronze Age and common in the Grotta Nuova facies and in Tyrrhenean, Adriatico and Alto Jonio-contexts of the proto-Apennine facies.
³⁰² AA.VV. 1995, 138.
³⁰³ AA.VV. 1995, 46.
³⁰⁴ AA.VV. 1995, 243.
³⁰⁵ AA.VV. 1995, 281.
³⁰⁶ AA.VV. 1995, 294.
³⁰⁷ Negroni Catacchio 1981, fig. 105, no 18.
³⁰⁸ Cocchi Genick 2002, 41 (MBA2A).
³⁰⁹ Guidi 1981, fig. 5, no 5.
³¹⁰ Chiarucci 1985, fig. 1, no 2.
³¹¹ Cocchi Genick 2001, 207, type 279.
³¹² Cocchi Genick 1984, fig. 1, no 1. In AA.VV 1995, 132, the type is considered to be a variant of type 195, common in the Grotta Nuova facies and the proto-Apennine, dated to the first phase of the Middle Bronze Age.
³¹³ Cremonesi 1968, fig. 12, n. 10. In AA.VV 1995, 178, the type is considered to be a variant of type 277, common in the Grotta Nuova facies and the Adriatic and Tyrrhenian proto-Apennine groups, dated to the first phase of the Middle Bronze Age.
³¹⁴ Dottarelli et al. 1984, fig. 4, no 3.
³¹⁵ AA.VV. 1995, 34.
³¹⁶ Damiani 1991, 24.
³¹⁷ Berggren/Berggren 1981, 13.
³¹⁸ Giardino 1994, 220.
³¹⁹ Radmilli 1956, fig. 3, no 4.
³²⁰ Cocchi Genick 2001, 355, tipo 498B.
³²¹ Maaskant Kleibrink 1992a, nos 2692, 2710 and 2720, stratum IIC mixed with IIB: outside building G.
³²² Maaskant Kleibrink 1992a, no 2469, stratum IIA: the pottery found in part of the area of female activity of hut feature VII.
³²³ Pascucci 1996b, fig. 2, no 13.
³²⁴ Berggren/Berggren 1981, 'test pit M-N, stratum 2', tav. 26, no 64
³²⁵ See site cat. nos 11202, 15005, 15068, 15072, 15108, 15127, 15153; see also chapter 7.
³²⁶ Attema et al. 2003b; see also www.lcm.rug.nl/research.
³²⁷ Attema et al. 2003a; Nijboer et al 2006.
³²⁸ See chapter 6 and site cat. no. 11213.
³²⁹ Cf. Crescenzi 1978; Maaskant-Kleibrink 1987, 1992a, 2004; Kleibrink 2001; Gnade 2007.

La Banca



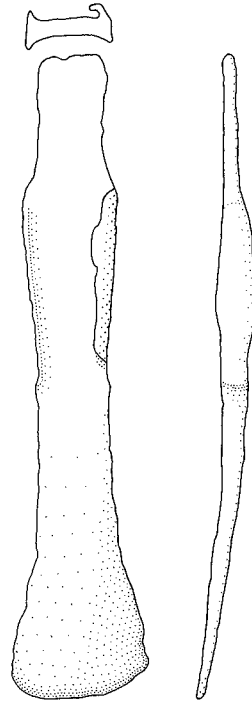
1 (1:3)

Piscina Cardillo



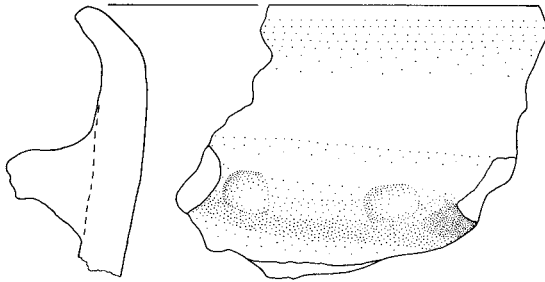
1 (1:2)

Le Grugnole

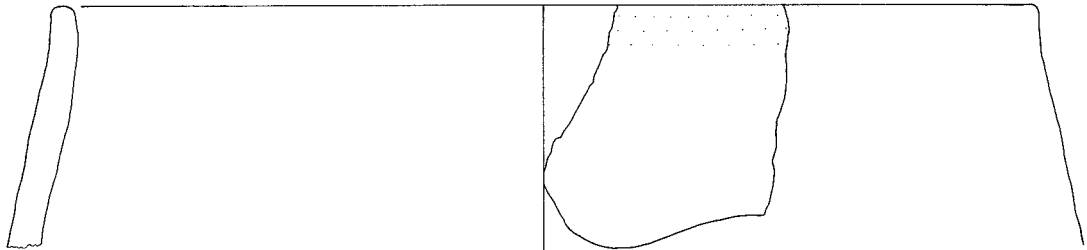


1

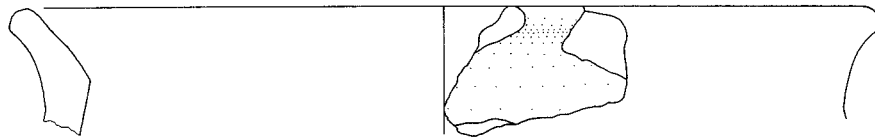
Bosco di Nettuno



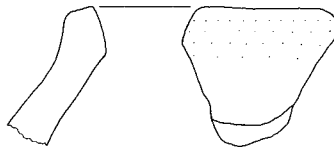
1



2

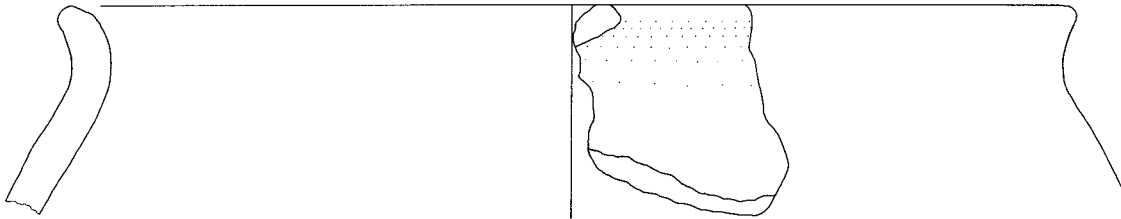
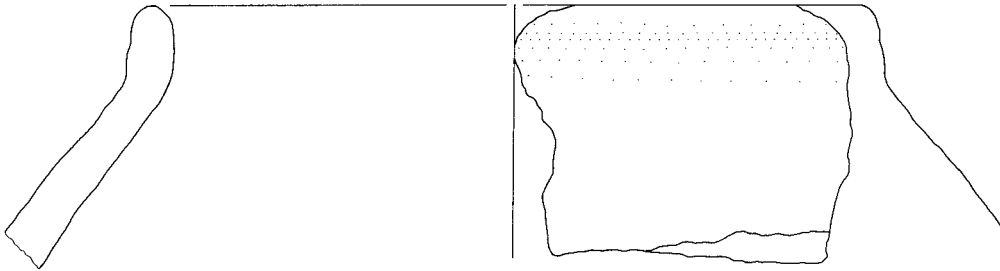
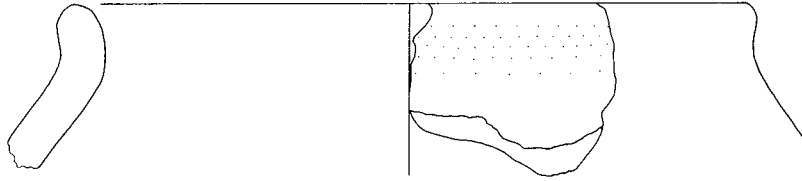
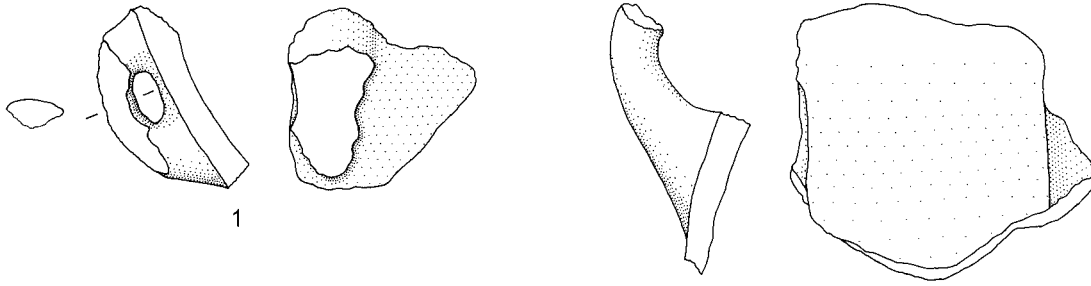


3

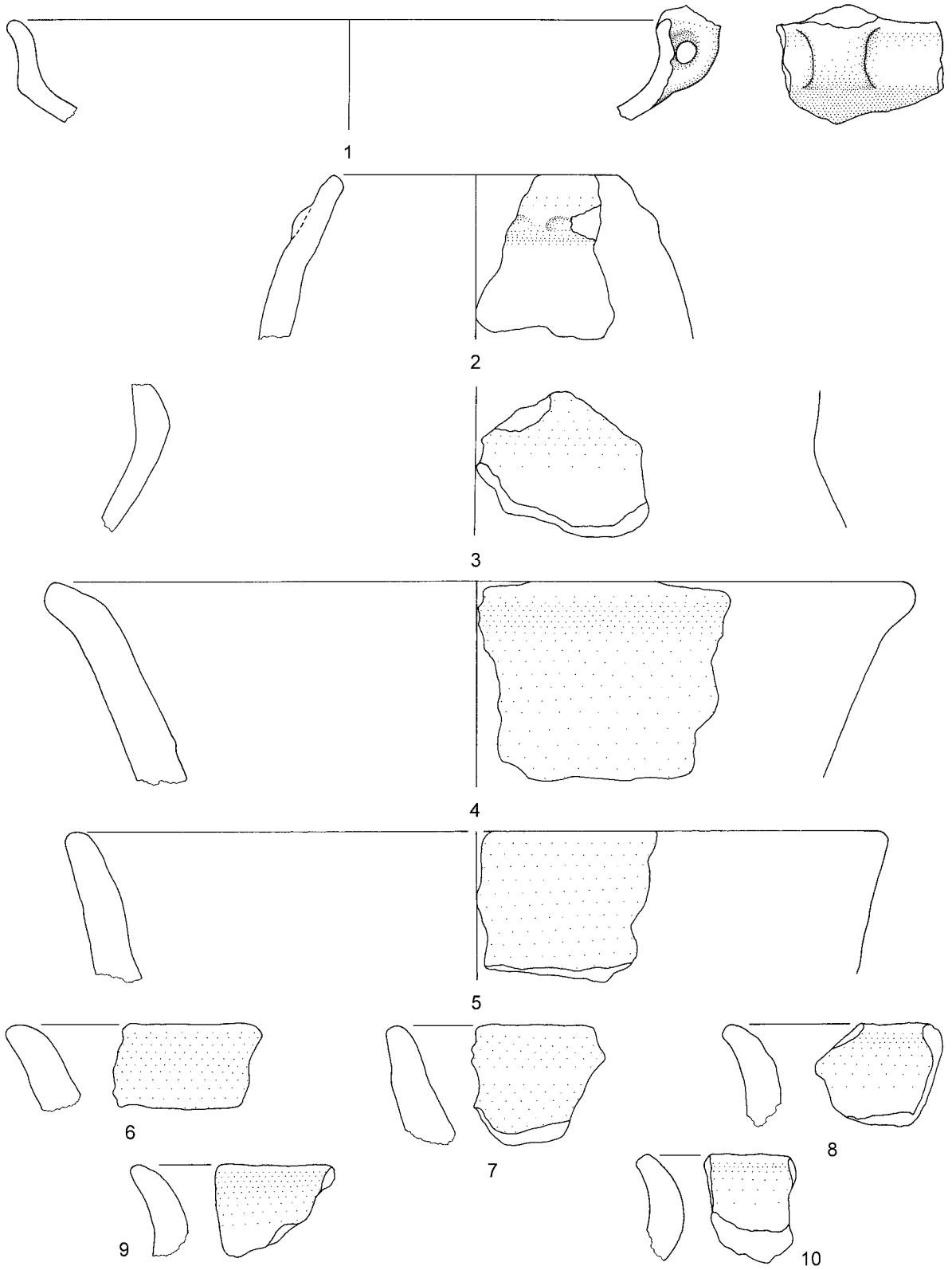


4

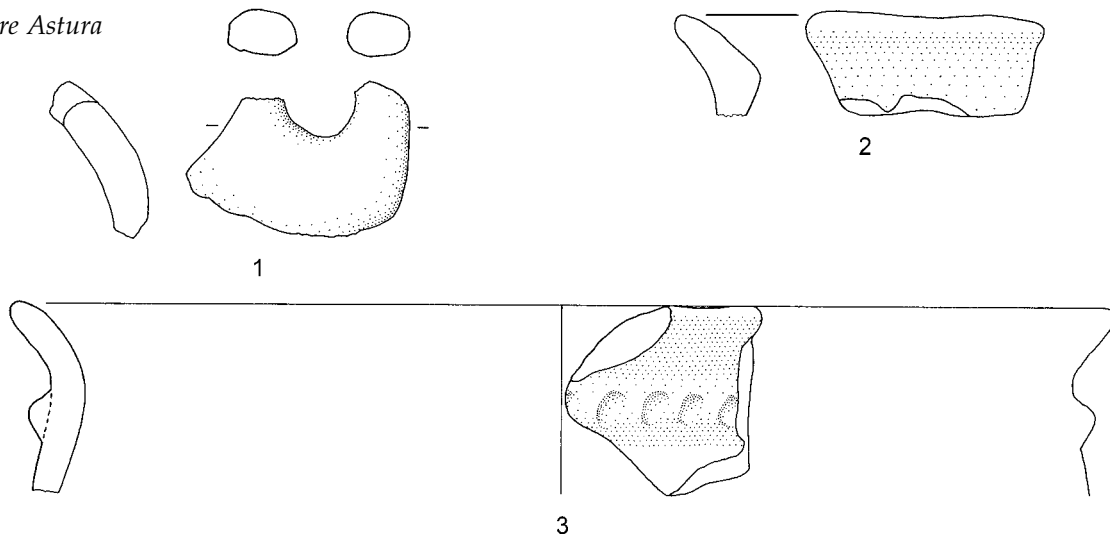
Fosso Foglino



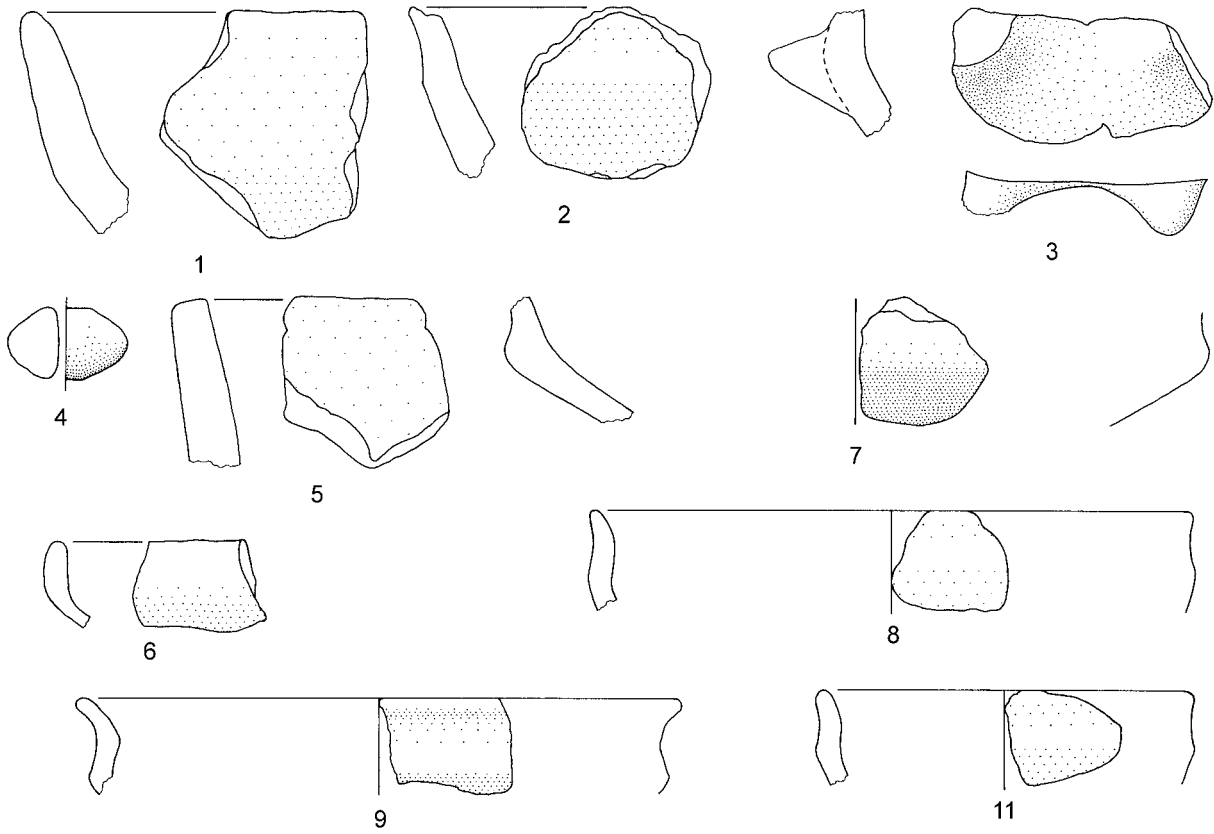
Saracca

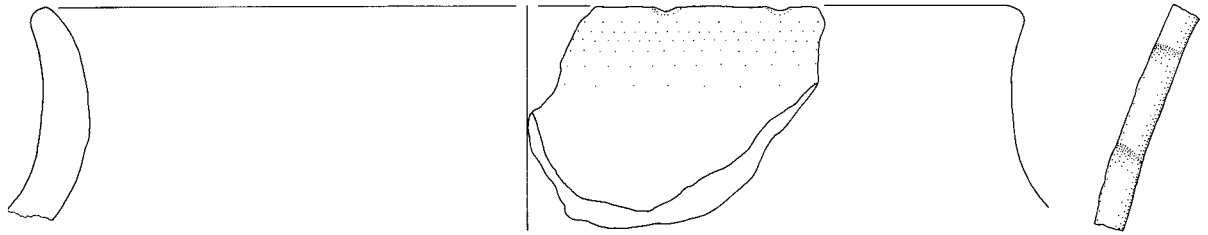


Torre Astura

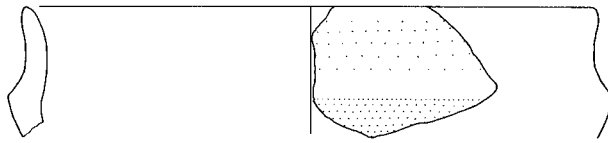


La Campana

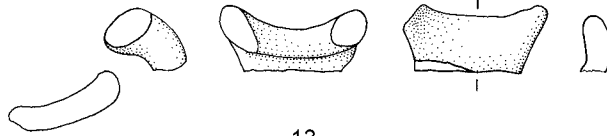




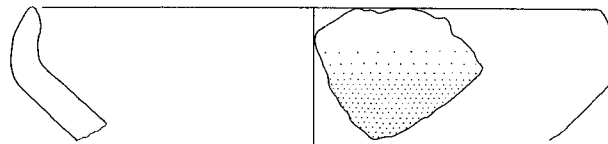
10



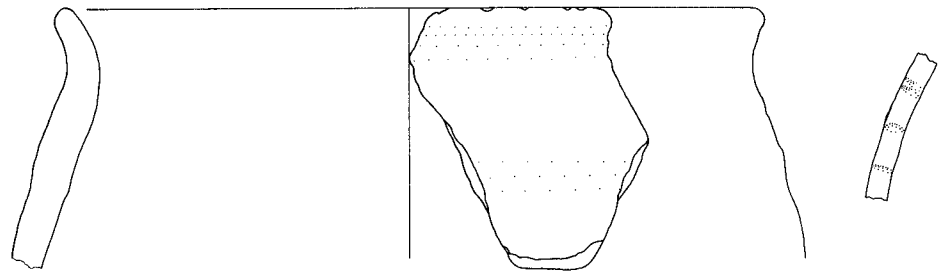
12



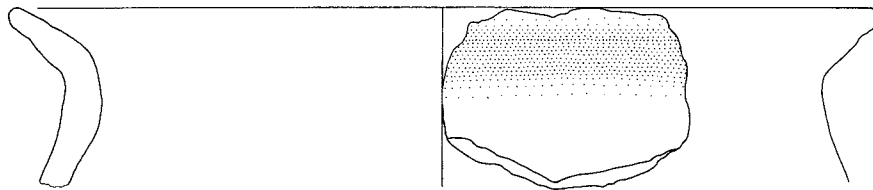
13



14

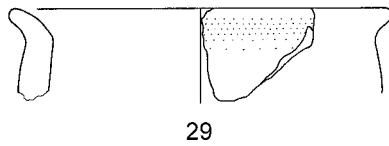
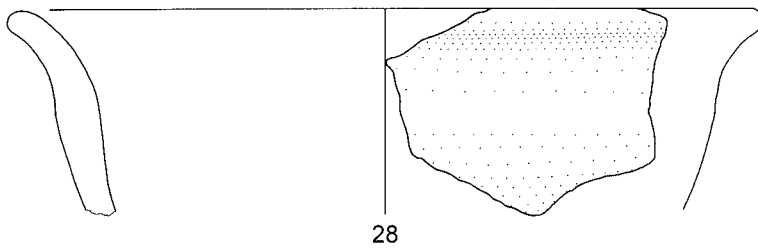
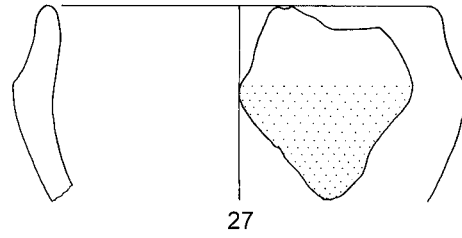
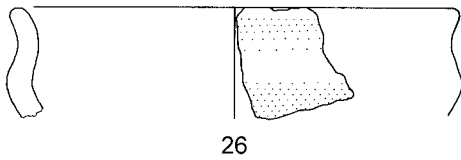
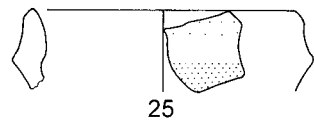
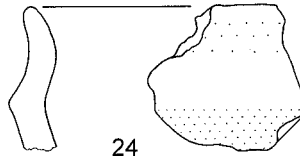
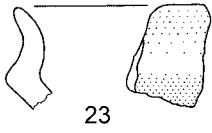
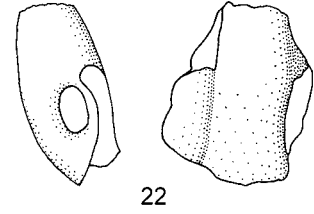
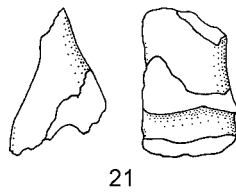
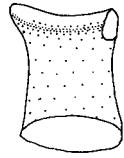
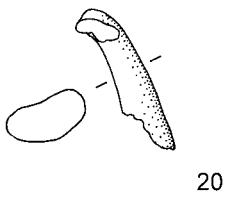
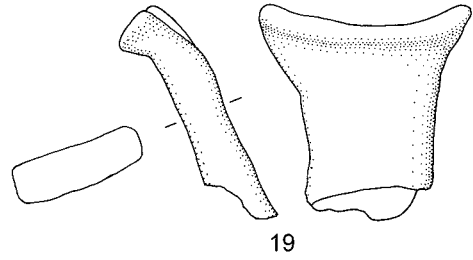
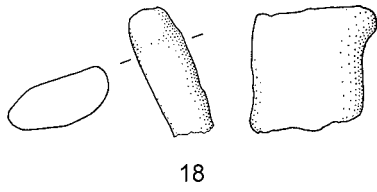
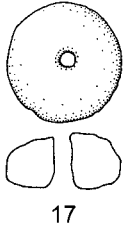


15

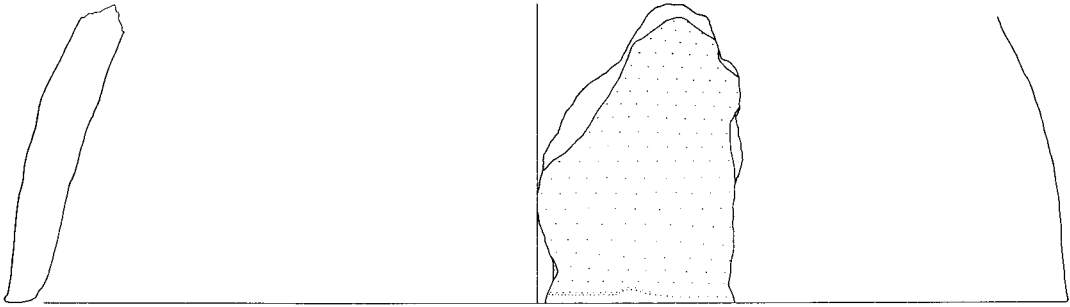


16

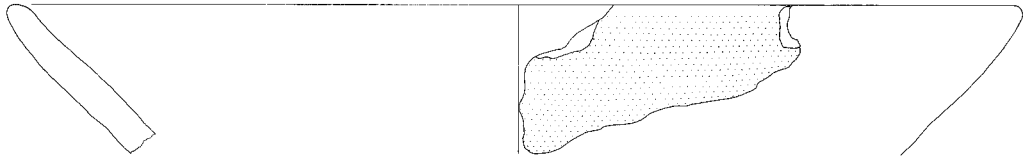
La Campana



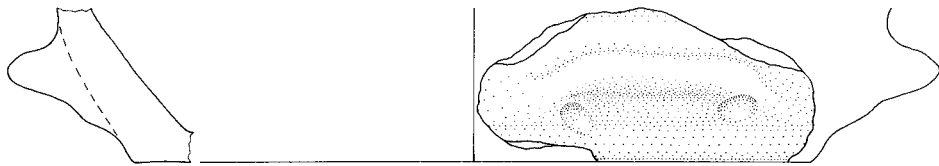
Depuratore



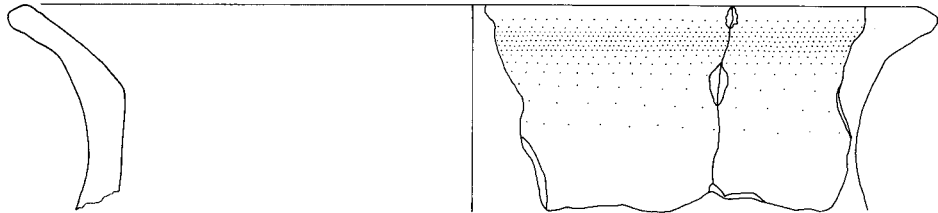
1



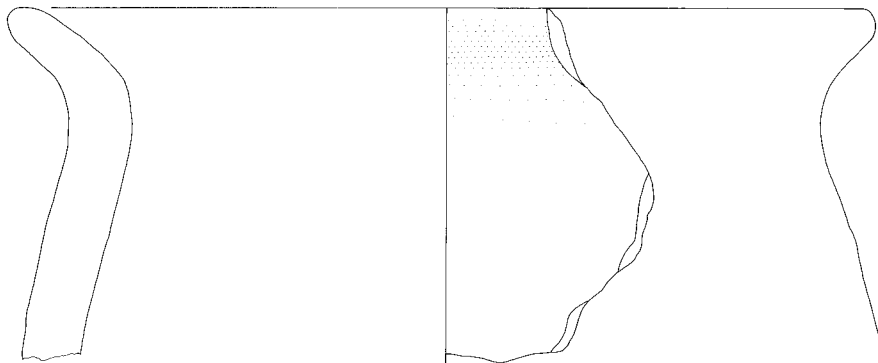
2 (1:3)



3

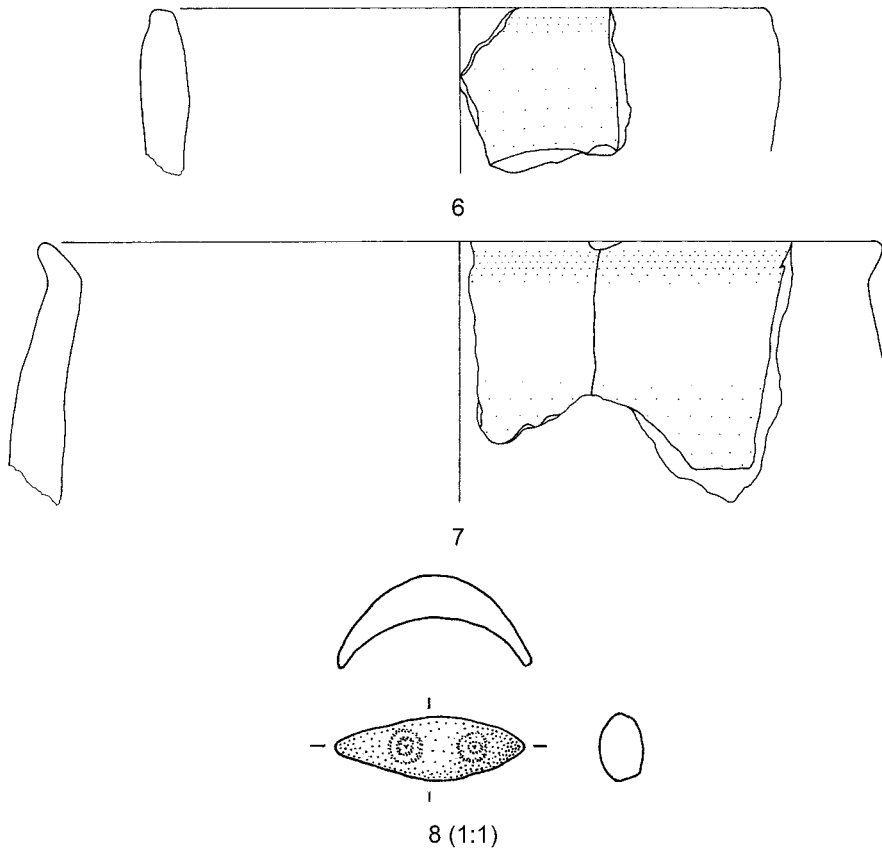


4

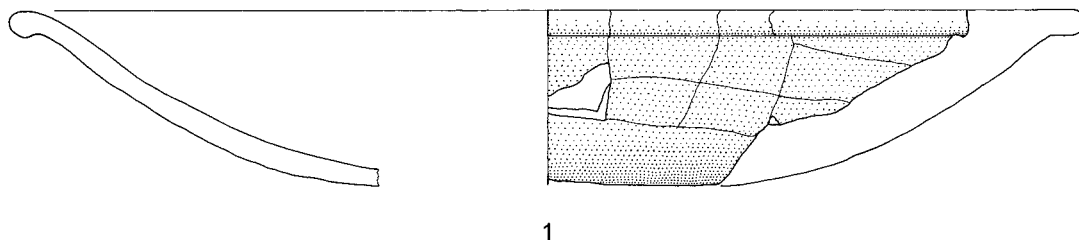


5 (1:3)

Depuratore



Bollego 1



B

Dolia (Storage Jars)

B 1. Rim fragment of a *dolium*

Out curving/out turning rim, convex lip thickened on the interior as well as the exterior. The top of the lip is profiled with 4 grooves

Colours: Ext: 2.5YR 5/6 (red)-5YR 5/3 (reddish brown), Int: 2.5YR 5/6 (red)-5YR 5/3 (reddish brown), Core: 10YR 6/4 (light reddish brown)-7.5YR 6/4 (light brown)
Measurements: Mheight: 6.5 cm, Trim: 3.4 cm, Tlip: 5.7 cm, Diam.: > 30 cm

Reference: Maaskant-Kleibrink 1987, 240, no 178; Attema et al. 2003b, Class II-8

Date: Archaic

B 2. Rim fragment of a *dolium*

Out curving/out turning rim, convex lip thickened on the interior as well as the exterior

Colours: Ext: 5YR 5/4 (reddish brown)-5YR 3/1 (very dark grey), Int: 5YR 5/4 (reddish brown)-5YR 3/1 (very dark grey), Core: 7.5YR 4/2 (dark brown)-5YR 6/4 (light reddish brown)

Measurements: Mheight: 4.4 cm, Trim: 1.8 cm, Tlip: 2.9 cm, Diam.: Unknown

Date: Archaic (on basis of the fabric)

B 3 Rim fragment of a *dolium*

Straight rim, flattened lip.

Colours: Ext: 10YR 7/2 (light grey)-10YR 6/2 (light brownish grey), Int: 10YR 5/2 (greyish brown), Core: 10YR 4/1 (dark grey)-10YR 5/3 (brown)

Measurements: Mheight: 5.3 cm, Trim: 3.5 cm, Tlip: 3.5 cm, Diam.: Unknown

Date: Post-Archaic or Republican (on basis of the fabric)

B 4. Rim fragment of a *dolium*

Short flat rim out turning into wall, convex lip thickened on the exterior.

Colours: Ext: 10YR 8/3 (very pale brown), Int: 10YR 8/3 (very pale brown), Core: 10YR 8/3 (very pale brown)
Measurements: Mheight: 11.0 cm, Trim: 6.0 cm, Tlip: 4.5 cm, Diam.: 71-76 cm

Date: Post-Archaic or Republican (on basis of the fabric)

B 5. Rim fragment of a *dolium*

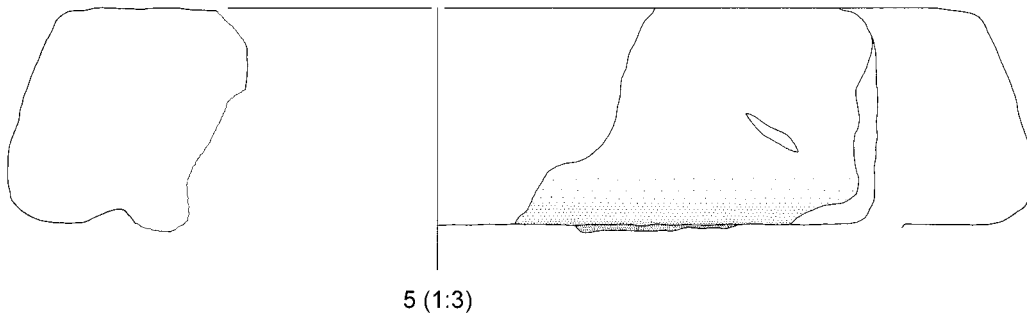
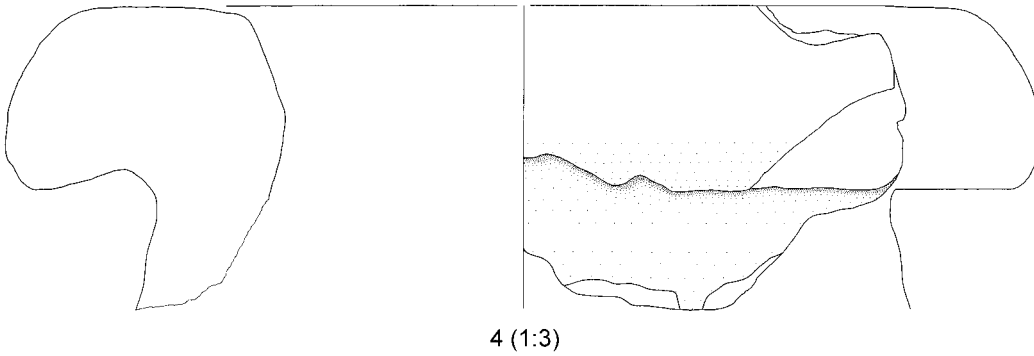
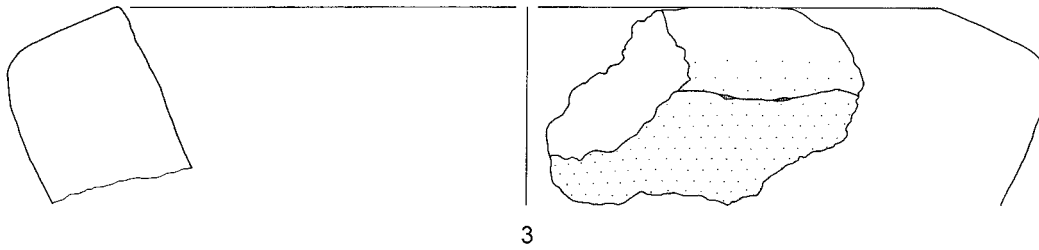
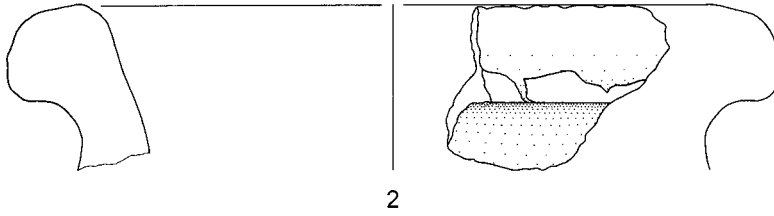
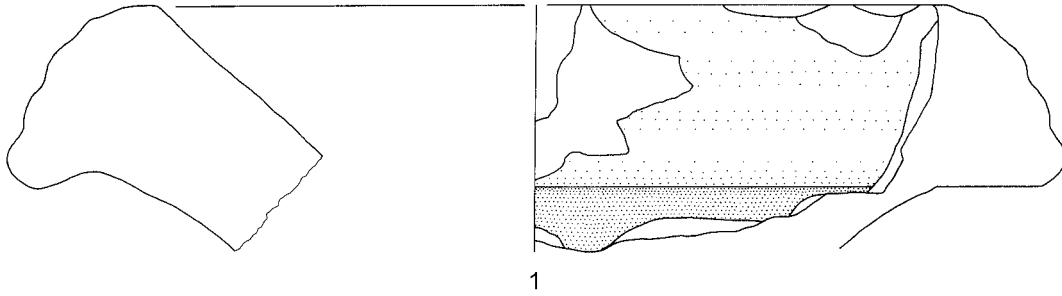
Probably short flat rim, convex lip.

Colours: Ext: 7.5YR 7/4 (pink), Int: 7.5YR 6/4 (light brown), Core: 7.5YR 7/4 (pink)

Measurements: Mheight: 8.8 cm, Tlip: 8.5 cm, Diam.: Unknown

Date: Post-Archaic or Republican (on basis of the fabric)

Dolia



C

Coarse Wares

C 1-4: ARCHAIC PERIOD

C 1. Rim fragment of a large bowl

Flaring wall, slightly in curving rim with two grooves on the exterior. Flattened lip, slightly thickened on the exterior.

Colours: Ext: 5YR 5/4 (reddish brown), Int: 2.5YR 6/8 (light red)-5YR 5/8 (yellowish red)

Measurements: Mheight: 4.2 cm, Twall: 1.2 cm, Tlip: 1.5 cm, Diam.: 40-45 cm

Reference: Maaskant-Kleibrink 1992a, 274/326, no 1485/2161

Date: 540/530 BC

C 2. Rim fragment of a jar

Upright rim with single horizontal groove on the exterior. Convex lip, slightly thickened on the interior.

Colours: Ext: 2.5Y 7/2 (light grey), Int: 2.5Y 7/2 (light grey), Core: 5YR 7/6 (reddish yellow)

Measurements: Mheight: 3.7 cm, Twall: 0.5 cm, Tlip: 0.5 cm, Diam.: 11 cm

Reference: Maaskant-Kleibrink 1992a, 272, no 1449

Date: 540/530 BC

C 3. Rim fragment of a bowl

Flaring wall, straight rim with long, shallow triangular thickening and undercut on the exterior. Pointed lip.

Colours: Ext: 5YR 6/8 (reddish yellow), Int: 5YR 6/8 (reddish yellow), Core: 5YR 6/8 (reddish yellow)

Measurements: Mheight: 4.2 cm, Twall: 0.6 cm, Trim: 1.1 cm, Diam.: 30 cm

Reference: Maaskant-Kleibrink 1992a, 275, no 1488

Date: Archaic

C 4. Rim fragment of a jar

Out curving rim, convex lip, slightly thickened on the exterior.

Colours: Ext: 5YR 6/8 (reddish yellow), Int: 7.5YR 6/6 (reddish yellow), Core: 10YR 6/3 (grey)

Measurements: Mheight: 3.9 cm, Twall: 0.8 cm, Tlip: 1.0 cm, Diam.: 24 cm

Reference: Maaskant-Kleibrink 1987, 237, no 146

Date: Archaic

C 5-8: POST-ARCHAIC/EARLY REPUBLICAN PERIOD

C 5. Part of a teglia

Inwards spreading wall, ribbed on interior. On underside where fragment turns into base a short horizontal attachment on the exterior, with a convex, upturned edge. The transition to the wall is triangular concave on the upside, convex on the underside.

Colours: Ext: 7.5YR 5/4 (brown), Int: 5YR 6/6 (reddish yellow), Core: 7.5YR 7/4 (pink)

Measurements: Mheight: 5.4 cm, Twall: 1.2 cm. Attachment: Mextension: 3.6 cm, Mthickness: 1.4 cm, Tedge: 0.8 cm, Diam.: Unknown

Reference: Bouma 1996, Plate CXII, no T13

Date: 375-300 BC

C 6. Rim fragment of a jar

Ovoidal body, out turning rim with internal angle. The rim is almond shaped; a convex moulding on the exterior, convex lip. This form differs from the mid and late Republican examples on the basis of the moulding, which is less pronounced (more flattened) and in general shorter. Upright rims do not occur within this type. On the exterior the transition of the rim into the wall is smoother.

Colours: Ext. and Int: 7.5YR 4/4 (dark brown/brown), Core: 7.5YR 4/6 (strong brown)

Measurements: Mheight: 2.3 cm, Twall: 0.4-0.5 cm, Trim: 0.8-1.1 cm, Diam.: 14-30 cm

Reference: Bouma 1996, Plate LXXXVI, no J496

Date: 375-300 BC

C 7 (A and B). Rim fragment of a jar

Out curving rim with internal angle. Rim varies considerably in size. Convex lip, thickened on the exterior and undercut.

Colours: Ext: 2.5YR 4/6 (red)-2.5YR 6/8 (light red)-5YR 4/4 (reddish brown)-7.5YR 5/4 (brown)-10YR 4/1 (dark grey), Ext: 2.5YR 6/8 (red)-5YR 4/4 (reddish brown)-7.5YR 4/6 (strong brown)-7.5YR 5/4 (brown)-10YR 6/4 (light yellowish brown), Core: 2.5YR 4/6 (red)-5YR 2.5/1 (black)-7.5YR 4/2 (dark brown/brown)-2.5Y 5/2 (greyish brown)

Measurements: Mheight: 4.8 cm, Trim: 0.4-0.6 cm, Tlip: 0.8-1.1 cm, Diam.: 14-20 cm

Reference: Olcese 2003, TAV. VII, Olla type 2; Bouma 1996, Plate LV-Plate XCIII

Date: 5th-3rd century BC

C 8. Knob of a lid

Cylindrical knob with rounded edge and flattened top. Interior hollow.

Colours: Ext: 5YR 5/6 (yellowish red), Int: 5YR 6/8 (reddish yellow), Core: 5YR 5/6 (yellowish red)

Measurements: Mheight: 2.8 cm, Twall: 0.7 cm, Tknob: 1.7 cm, Diam.: 4 cm

Reference: Bouma 1996, Plate CXVIII, no L115

Date: 375-300 BC

C 9-19: REPUBLICAN PERIOD

C 9. Rim fragment of a jar

Out turning rim, which is slightly thickened on the exterior, convex lip.

Colours: Ext: 5YR 4/4 (reddish brown), Int: 5YR 4/4 (reddish brown), Core: 5YR 4/4 (reddish brown)

Measurements: Mheight: 3.3 cm, Twall: 0.5 cm, Trim: 1.0 cm, Diam.: 22 cm

Reference: Bouma 1996, Plate XCII, no J579

Date: End 3rd century BC

C 10 (A and B). Rim fragment of a jar

Ovoidal body, upright to out turning rim with internal angle. The rim itself is almond shaped; a pronounced, large convex moulding on the exterior, on the exterior

transition to the wall is hollowed out. Convex lip.
Colours: Ext: 2.5YR 6/6 (red)-5YR 5/6 (yellowish red)-7.5YR 6/4 (light brown), Int: 2.5YR 5/8 (red)-5YR 6/6 (reddish yellow)-7.5YR 6/4 (light brown), Core: 2.5YR 5/6 (red)-5YR 4/6 (yellowish red)-10 YR 3/1 (very dark grey).
Measurements: Mheight: 6.6 cm, Twall: 0.4-0.7 cm, Trim: 1.1-1.6 cm, Diam.: 14-28 cm
Reference: Olcese 2003, TAV. VIII, Olla type 3a
Date: 2nd century BC-Augustean

C 11. Rim fragment of a jar

Out turning, concave rim, thickened on the exterior. Lip slightly pointed.
Colours: Ext: 2.5YR 6/8 (light red), Int: 2.5YR 6/8 (light red), Core: 2.5YR 6/8 (light red)
Measurements: Mheight: 1.5 cm, Twall: 0.3 cm, Tlip: 0.3 cm, Diam.: 14 cm
Reference: Olcese 2003, TAV. VIII, Olla type 3c
Date: 2nd-1st century BC

C 12. Rim fragment of a jar

Out curving rim, flattened lip thickened on the exterior.
Colours: Ext: 7.5YR 4/0 (dark grey), Int: 10YR 8/3 (very pale brown), Core: 10YR 8/3 (very pale brown)
Measurements: Mheight: 2.8 cm, Twall: 0.3 cm, Tlip: 0.8 cm, Diam.: 9 cm
Reference: Cotton 1979, 165, no 12
Date: 100-30 BC

C 13. Rim fragment of a jar

Out curving rim, convex lip thickened and pointed on the exterior.
Colours: Ext: 7.5YR 5/3 (brown), Int: 7.5YR 4/2 (brown), Core: 7.5YR 4/1 (dark grey)
Measurements: Mheight: 1.8 cm, Twall: 0.6 cm, Tlip: 1.4 cm, Diam.: 20 cm
Reference: Olcese 2003, TAV. IX, Olla type 5
Date: Late Republican

C 14. Rim fragment of a jar

Out curving, concave rim with convex lip.
Colours: Ext: 5YR 5/1 (grey), Int: 5YR 6/2 (pinkish grey)-5YR 7/6 (reddish yellow), Core: 5YR 6/4 (light reddish brown)
Measurements: Mheight: 1.8 cm, Twall: 0.4 cm, Tlip: 0.4 cm, Diam.: 12 cm
Reference: Olcese 2003, TAV. VIII, Olla type 3b
Date: Late Republican

C 15. Rim fragment of a Mortarium

Flaring wall, straight rim, convex lip thickened on the interior with a large convex thickening on the exterior.
Colours: Ext: 7.5YR 8/4 (pink), Int: 7.5YR 8/4 (pink), Core: 7.5YR 8/4 (pink)
Measurements: Mheight: 5.2 cm, Twall: 2.1 cm, Tlip: 3.4 cm, Diam.: 40 cm
Reference: Olcese 2003, TAV. XXXVIII, Bacini/Mortaria type 8
Date: Mid-late Republican

C 16. Rim fragment of a lid

Flaring wall, out turning rim with internal angle, convex lip.

Colours: Ext: 2.5YR 4/8 (dark red), Int: 2.5YR 3/1 (reddish brown), Core: 2.5YR 3/1 (reddish brown)
Measurements: Mheight: 1.1 cm, Twall: 0.7 cm, Tlip: 0.6 cm, Diam.: 20 cm
Reference: Olcese 2003, TAV. XIX, Lid type 2
Date: 3rd-1st century BC

C 17. Rim fragment of a lid

Spreading wall, overhanging rim, on exterior hollowed out on transition to wall, convex lip.
Colours: Ext: 2.5YR 6/6 (light red), Int: 2.5YR 5/6 (red), Core: 2.5YR 5/6 (red)
Measurements: Mheight: 2.3 cm, Twall: 0.5 cm, Tlip: 0.7 cm, Diam.: 12 cm
Reference: Dyson 1972, fig.35, no PD89, lids class I
Date: 110/100-40/30 BC

C 18. Rim fragment of a beaker

Flaring wall, out turning rim, pointed lip. Some traces of blackish and reddish slip on fragment.
Colours: Slip: 5YR 3/1 (very dark grey)-10R 4/6 (red), Clay: 5YR 8/3 (pink)
Measurements: Mheight: 2.7 cm, Twall: 0.4 cm, Tlip: 0.3 cm, Diam.: 11 cm
Reference: Cotton 1979, 136, no 23
Date: 100 -30 BC

C 19. Rim fragment of a pitcher

Out curving rim, transition to wall on the interior marked by a small thickening. The interior of the rim is slightly concave; the exterior is ribbed, with one horizontal ridge. Lip is convex and thickened on the exterior.
Colours: Ext: 10YR 5/1 (grey), Int: 10YR 5/1 (grey), Core: 10YR 5/1 (grey)
Measurements: Mheight: 2.2 cm, Twall: 0.4 cm, Tlip: 0.6 cm, Diam.: 12 cm
Reference: Dyson 1972, fig. 41, no PD167, pitcher class V
Date: 110/100-40/30 BC

C 20-23: LATE REPUBLICAN-EARLY IMPERIAL PERIOD

C 20. Rim fragment of a tegame

Spreading wall. Short flat horizontal rim, convex lip.
Colours: Ext: 5YR 4/1 (dark grey)-10YR 7/3 (very pale brown), Int: 5YR 4/1 (dark grey)-10YR 7/3 (very pale brown), Core: 5YR 4/1 (dark grey)
Measurements: Mheight: 2.8 cm, Twall: 0.6 cm, Tlip: 0.5 cm, Diam.: 25 cm
Reference: Olcese 2003, TAV. XVI, Tegami type 7
Date: 2nd century BC-third quarter 1st century AD

C 21 (A and B). Rim fragment of a tegame

Flaring wall, straight rim thickening on the interior. Lip is convex or bevelled on the interior and grooved.
Colours: Ext: 5YR 5/1 (grey)-5YR 4/1 (dark grey), Int: 5YR 6/6 (reddish yellow), Core: 5YR 6/6 (reddish yellow)-5YR 4/1 (dark grey)
Measurements: Mheight: 3.1 cm, Twall: 0.3-0.4 cm, Tlip: 0.6-0.8 cm. Diameter: 20-30 cm
Reference: Dyson 1972, f. 45, no 22II-22/24/25
Date: 100 BC-AD50

C 22. Rim fragment of a casserole

Spreading wall, out curving rim with sharp transition into wall, convex lip. Exterior of rim and lip are blackened.
Colours: Ext: 2.5YR 3/0 (very dark grey)-2.5YR 6/4 (light reddish brown), Int: 2.5YR 6/4 (light reddish brown), Core: 2.5YR 6/4 (light reddish brown)
Measurements: Mheight: 4.5 cm, Twall: 0.5 cm, Tlip: 0.8 cm, Diam.: 28 cm
Reference: Olcese 2003, TAV. VI, Casserole type 1
Date: 1st century BC-1st century AD

C 23. Rim fragment of a jar

Out curving concave rim, on some examples the rim is almost vertical. Exterior of the rim often thickened. Convex lip.
Colours: Ext: 2.5YR 6/6 (red)-5YR 4/3 (reddish brown)-5YR 4/6 (yellowish red)-5YR 7/8 (reddish yellow), Int: 2.5YR 6/8 (red)-5YR 4/3 (reddish brown)-5YR 5/6 (yellowish red)-5YR 7/8 (reddish yellow), Core: 2.5YR 5/6 (red)-5YR 4/3 (reddish brown)-7.5YR 7/2 (pinkish grey)
Measurements: Mheight: 2.6 cm, Twall: 0.3-0.5 cm, Tlip: 0.3-0.5 cm, Diam.: 10-17 cm
Reference: Olcese 2003, TAV. X, Olla type 7
Date: Late Republican-Flavian

C 24-53: IMPERIAL PERIOD

C 24. Rim fragment of a pentola

Upright wall, groove on interior near the rim. Short slightly down turning flat to slightly convex rim, flattened lip.
Colours: Ext: 7.5YR 6/4 (light brown), Int: 7.5YR 6/4 (light brown), Core: 10YR 6/3 (pale brown)
Measurements: Mheight: 3.7 cm, Twall: 0.3 cm, Tlip: 0.6 cm, Diam.: 22 cm
Reference: Olcese 2003, TAV. II, Pentola type 2a
Date: Mainly Augustean

C 25. Rim fragment of a pentola

Wall slightly out curving or spreading outwards. Short horizontal or slightly down turning flat rim, convex lip.
Colours: Ext: 2.5YR 7/8 (red)-5YR 5/4 (reddish brown)-7.5YR 4/4 (dark brown/brown)-10YR 8/3 (very pale brown), Int: 2.5YR 7/8 (red)-5YR 5/4 (reddish brown)-7.5YR 4/4 (dark brown/brown)-10YR 8/3 (very pale brown), Core: 2.5YR 7/8 (red)-5YR 5/4 (reddish brown)-5YR 3/1 (very dark grey)-10YR 8/3 (very pale brown)
Measurements: Mheight: 2.8 cm, Twall: 0.3-0.6 cm, Tlip: 0.4-0.6 cm, Diam.: 15-24 cm
Reference: Olcese 2003, TAV. I, Pentola type 1a
Date: Augustean-Trajanic

C 26. Rim fragment of a pentola

Slightly outwards spreading wall. Almost horizontal, slightly upturning short rim, with a strong groove on top close to the lip, which is bevelled on the exterior.
Colours: Ext: 5YR 7/6 (reddish yellow), Int: 5YR 6/6 (reddish yellow), Core: 5YR 6/8 (reddish yellow)
Measurements: Mheight: 1.5 cm, Twall: 0.5 cm, Tlip: 0.7 cm, Diam.: 26 cm
Reference: Olcese 2003, TAV. VI, Pentola type 6
Date: 0-AD 50

C 27. Rim fragment of a pentola

Thick broad horizontal convex rim, lip is bevelled on the exterior and triangular concave.
Colours: Ext: 5YR 6/6 (reddish yellow), Int: 5YR 6/6 (reddish yellow), Core: 7.5YR 5/4 (brown)
Measurements: Mheight: 2.2 cm, Twall: 1.1 cm, Tlip: 0.7 cm, Diam.: >30 cm
Reference: Olcese 2003, TAV. V, Pentola type 5b
Date: 1st century AD

C 28. Rim fragment of a pentola

The top of the wall is often slightly in curving into an upright part. Medium-sized horizontal or slightly down turning flat rim, lip is bevelled on the interior.
Colours: Ext: 2.5YR 5/8 (red)-5YR 6/6 (reddish yellow), Int: 2.5YR 5/8 (red)-2.5YR 6/8 (red), Core: 2.5YR 6/6 (light red)-2.5YR 4/1 (dark reddish grey)
Measurements: Mheight: 4.1 cm, Twall: 0.4-0.7 cm, Tlip: 0.6-0.9 cm, Diam.: 24-26 cm
Reference: Olcese 2003, TAV. III, Pentola type 3a
Date: 0-AD 125

C 29. Rim fragment of a pentola

Wall slightly spreading outwards or upright. Almost horizontal, slightly upwards turning flat or convex rim, sometimes thickened and grooved on interior where it meets the wall, convex lip sometimes slightly thickened on the exterior.
Colours: Ext: 2.5YR 5/4 (weak red)-10YR 8/4 (very pale brown), Int: 2.5YR 5/4 (weak red)-10YR 8/4 (very pale brown), Core: 2.5YR 5/4 (weak red)-10YR 8/4 (very pale brown)
Measurements: Mheight: 7.0 cm, Twall: 0.5 cm-0.6 cm, Tlip: 0.4-0.7 cm, Diam.: 22-23 cm
Reference: Dyson 1972, fig. 43, Pentola class 8
Date: Caligulan-early Claudian

C 30. Rim fragment of a pentola

Two-part flaring wall, divided by a thickening on the interior and an internal angle. Short horizontal rim, slightly concave on top with a convex lip thickened on the in- and the exterior.
Colours: Ext: 2.5YR 6/8 (light red)-7.5YR 5/2 (brown), Int: 2.5YR 6/8 (light red), Core: 2.5YR 6/8 (light red)
Measurements: Mheight: 2.6 cm, Twall: 0.4-0.7 cm, Tlip: 0.8 cm, Diam.: 20-22 cm
Reference: Olcese 2003, TAV. II, Pentola type 2b
Date: Claudian

C 31. Rim fragment of a pentola

Upright wall. Broad horizontal convex rim, often thickened on the interior where the rim meets the wall. Flattened lip.
Colours: Ext: 2.5YR 5/6 (red)-5YR 6/6 (reddish yellow)-7.5YR 4/6 (yellowish red), Int: 2.5YR 5/6 (red)-5YR 6/4 (light reddish brown)-7.5YR 4/6 (yellowish red), Core: 2.5YR 5/6 (red)-5YR 6/2 (pinkish grey)-7.5YR 6/4 (light brown)
Measurements: Mheight: 2.5 cm, Twall: 0.5-1.0 cm, Tlip: 0.7-0.8 cm, Diam.: 24-37 cm
Reference: Olcese 2003, TAV. IV, Pentola type 4
Date: 1st-mid 2nd century AD

C 32. Rim fragment of a pentola

Wall slightly spreading or curving outwards, thickened on interior where it meets the rim, with corresponding groove on exterior. Broad horizontal convex rim turning downwards towards the lip, which is flattened. Colours: Ext: 2.5YR 5/8 (red), Int: 7.5YR 6/6 (reddish yellow), Core: 5YR 6/8 (reddish yellow)
Measurements: Mheight: 2.0 cm, Twall: 0.3-0.7 cm, Tlip: 0.8 cm, Diam.: 24 cm
Reference: Olcese 2003, TAV. V, Pentola type 5a
Date: 1st-2nd century AD

C 33. Rim fragment of a jar

Broad horizontal rim, convex on interior, ribbed on exterior. Convex lip, slightly thickened on the exterior. Colours: Ext: 5YR 6/8 (reddish yellow), Int: 5YR 6/8 (reddish yellow), Core: 5YR 6/8 (reddish yellow)
Measurements: Mheight: 1.4 cm, Trim: 0.7-1.0 cm, Tlip: 1.0 cm, Diam.: 17 cm
Reference: Cotton/Métraux 1985, 236, no. 32
Date: 30 BC-AD 200

C 34. Rim fragment of a jar

Out curving to out turning rim. Convex lip which is heavily thickened on both the in- and exterior. Colours: Ext: 5YR 6/8 (reddish yellow)-10YR 5/3 (brown), Int: 5YR 6/8 (reddish yellow)-10YR 5/3 (brown), Core: 5YR 7/4 (pink)-7.5YR 7/6 (reddish yellow)
Measurements: Mheight: 2.3 cm, Twall: 0.6-0.7 cm, Tlip: 1.1-1.2 cm, Diam.: 15-20 cm
Reference: Cotton 1979, 136, no. 18
Date: AD 50 -100

C 35. Rim fragment of a jar

Outwards spreading wall, out curving, occasionally flat rim, convex lip. Colours: Ext: 2.5YR 6/8 (light red)-5YR 7/4 (pink), Int: 2.5YR 6/8 (light red)-5YR 7/4 (pink), Core: 2.5YR 7/8 (light red)-5Y 5/2 (olive grey)
Measurements: Mheight: 3.3 cm, Twall: 0.4-0.5 cm, Tlip: 0.7 cm, Diam.: 15-18 cm
Reference: Olcese 2003, TAV. XII, Olla type 10
Date: 1st century AD

C 36. Rim fragment of a jar

Out turning rim with internal angle, internal thickening on transition to wall, interior of the rim is concave. Exterior of the rim sometimes thickened to form a triangular profile. Convex lip. Colours: Ext: 5YR 6/6 (reddish yellow), Int: 5YR 6/6 (reddish yellow), Core: 5YR 6/6 (reddish yellow)
Measurements: Mheight: 2.1 cm, Twall: 0.5 cm, Tlip: 0.6-1.0 cm, Diam. 22-25 cm
Reference: Olcese 2003, TAV. XII, Olla type 9
Date: 1st-2nd century AD

C 37. Rim fragment of a jar

Out curving/out turning rim, halfway up the interior of the rim a small groove followed by a thickening. Convex lip. Colours: Ext: 7.5YR 7/6 (reddish yellow)-10YR 7/3 (very pale brown), Int: 7.5YR 7/6 (reddish yellow)-10YR 7/3 (very pale brown), Core: 5YR 7/6 (reddish yellow)-10YR 6/1 (grey)

Measurements: Mheight: 1.6 cm, Twall: 0.5 cm, Tlip: 0.5-0.6 cm, Diam.: 12-15 cm
Reference: Dyson 1972, fig. 53, no. 22II-130
Date: Caligulan-early Claudian

C 38. Rim fragment of a jar

Flaring wall, out turning rim with internal angle, lip flattened and thickened on in- and exterior. Traces of red paint on the exterior. Colours: Slip: 2.5YR 4/8 (red), Ext: 10YR 6/3 (pale brown), Int: 10YR 6/3 (pale brown), Core: 10YR 6/3 (pale brown)
Measurements: Mheight: 5.0 cm, Twall: 0.4 cm, Tlip: 0.5 cm, Diam.: 20 cm
Reference: Dyson 1972, fig. 55, LS 11
Date: Late 1st-early 3rd century AD

C 39. Rim fragment of a jar

Spreading wall, short horizontal, slightly down sloping rim, tapering convex lip. Colours: Ext: 5YR 5/1 (grey), Int: 5YR 5/2 (reddish grey)-5YR 7/6 (reddish yellow), Core: 5YR 7/3 (pink)-5YR 6/6 (reddish yellow)
Measurements: Mheight: 2.3 cm, Twall: 0.3 cm, Tlip: 0.3 cm, Diam. 21 cm
Reference: Olcese 2003, TAV. XI, Olla type 8
Date: Mainly Flavian

C 40. Rim fragment of a jar

Out curving rim thickened on the exterior. Thickened lip is bevelled on the interior and concave. Colours: Ext: 5YR 7/6 (reddish yellow), Int: 5YR 6/6 (reddish yellow), Core: 5YR 7/2 (pinkish grey)
Measurements: Mheight: 2.4 cm, Twall: 0.6 cm, Tlip: 0.7 cm, Diam.: 20 cm
Reference: Dyson 1972, fig. 62, no. LS99, Jars class 28
Date: 2nd century AD

C 41. Rim fragment of a bowl

Wall decorated on exterior with at least two bands of rouletting. Straight rim, strongly out turning into wall, marked on the interior by a lowering and subsequent thickening, creating an internal angle. On exterior of the rim two horizontal grooves. Convex lip. Colours: Ext: 7.5YR 8/4 (pink), Int: 7.5YR 8/4 (pink), Core: 7.5YR 8/4 (pink)
Measurements: Mheight: 3.4 cm, Twall: 0.3 cm, Tlip: 0.6 cm, Diam.: 14 cm
Reference: Cotton 1979, 177, no. 5
Date: Mainly 2nd century AD

C 42. Rim fragment of a tegame

Slightly flaring wall, straight rim, convex lip thickened on both the in- and the exterior. Colours: Ext: 2.5YR 5/6 (red), Int: 2.5YR 5/6 (red), Core: 2.5YR 5/6 (red)
Measurements: Mheight: 2.6 cm, Twall: 0.4 cm, Tlip: 1.1 cm, Diam.: 17 cm
Reference: Olcese 2003, TAV. XV, Tegami type 6
Date: 1st-2nd century AD

C 43 (A and B). Rim fragment of a jug

Flaring to spreading wall, out curving rim, on one example groove on interior near the lip. Convex lip. On

several fragments remains the attachment of a vertical band handle on the exterior of the rim and lip.

Colours: Ext: 2.5YR 5/6 (red)-5YR 4/1 (dark grey), Int: 2.5YR 5/6 (red)-5YR 4/2 (dark reddish grey)-5YR 6/8 (reddish yellow), Core: 2.5YR 5/6 (red)-5YR 7/2 (pinkish grey)-5YR 6/6 (reddish yellow)

Measurements: Mheight: 4.1 cm, Twall: 0.4-0.6 cm, Tlip: 0.5-0.8 cm, Diam.: 9-14 cm

Reference: Olcese 2003, TAV. XXV, Brocche type 2

Date: 1st-2nd century AD

C 44. Rim fragment of a jug/flagon

Spreading wall, slightly in curving rim, out curving into wall. Exterior of the rim bears three horizontal grooves. Convex lip.

Colours: Ext: 5YR 7/4 (pink), Int: 7.5YR 7/4 (pink), Core: 5YR 7/4 (pink)

Measurements: Mheight: 4.1 cm, Twall: 0.5 cm, Tlip: 0.4 cm, Diam.: 8 cm

Reference: Cotton/Métraux 1985, 230, no. 12

Date: 30 BC-AD 200

C 45. Complete profile of a ciotola/coppa

Raised flat base, interior lowered and ribbed. Spreading wall, straight rim, tapering convex lip.

Colours: Ext: 2.5YR 6/6 (red), Int: 2.5YR 6/6 (red), Core: 2.5YR 6/6 (red)

Measurements: Mheight: 2.3 cm, Tbase: 0.4 cm, Twall: 0.8 cm, Tlip: 0.4 cm, Diam.: 6.7 cm

Reference: Olcese 2003, TAV. XXXII, Ciotole/Coppe type 5

Date: 1st century AD

C 46. Rim fragment of a mortarium

Unknown wall, out turning rim, concave on the interior. The lip is heavily thickened and concave to create a triangular profile with convex edges. Three horizontal grooves on the lip.

Colours: Ext: 7.5YR 3/2 (dark brown)-5YR 5/6 (yellowish red), Int: 5YR 5/6 (yellowish red), Core: 5YR 5/6 (yellowish red)

Measurements: Mheight: 1.9 cm, Twall: 0.9 cm, Tlip: 1.4 cm, Diam.: 25 cm

Reference: Olcese 2003, TAV. XXXVI, Bacini/Mortaria type 3a

Date: Augustean-Flavian

C 47. Rim fragment of a casserole

Spreading wall with broad convex thickening on the interior marking the transition from rim to wall, with corresponding groove on the exterior. Concave rim, convex lip thickened on the interior. In shape perfect resemblance with Hayes form 19 of the African Red Slip Ware typology (see catalogue inventory number G 15).

Colours: Ext: 5YR 7/6 (reddish yellow)-5YR 6/2 (pinkish grey), Int: 5YR 7/6 (reddish yellow)-5YR 6/6 (reddish yellow), Core: 5YR 7/6 (reddish yellow)-5YR 6/6 (reddish yellow)

Measurements: Mheight: 6.6 cm, Twall: 0.4-0.5 cm, Tlip: 0.8 cm, Diam.: 29 cm

Reference: Dyson 1972, fig. 47: 22II-49 & 50

Date: 2nd century AD

C 48. Rim fragment of a beaker

Flaring wall, out curving rim, ridge on exterior where

rim meets the wall, convex lip.

Colours: Ext: 10YR 6/4 (light yellowish brown), Int: 7.5YR 6/6 (reddish yellow), Core: 7.5YR 6/6 (reddish yellow)

Measurements: Mheight: 2.8 cm, Twall: 0.2 cm, Tlip: 0.3 cm, Diam.: 6.5 cm

Reference: Cotton/Métraux 1985, 200, fig.11

Date: Claudian-Neronian

C 49. Rim- and neck fragment of an olpe

Unknown wall, straight neck out turning into wall with internal angle. Out turning rim, on interior slightly ribbed. Groove on exterior right below the lip. The lip is convex and thickened on both sides. On the exterior of the neck remains the beginning of a vertical band handle.

Colours: Ext: 5YR 7/6 (reddish yellow), Int: 5YR 7/6 (reddish yellow), Core: 5YR 7/6 (reddish yellow)

Measurements: Mheight: 6.5 cm, Twall: 0.5 cm, Tneck: 0.9 cm, Tlip: 1.3 cm, Diam.: 5.4 cm

Reference: Olcese 2003, TAV. XXIX, Olpai type 1

Date: 1st-2nd century AD

C 50. Rim fragment of a lid

Flaring wall. Horizontal, out curving or out turning rim, convex lip. The exterior of rim and lip are blackened.

Colours: Ext: 5YR 2.5/1 (black)-5YR 6/6 (reddish yellow), Int: 5YR 6/6 (reddish yellow), Core: 5YR 6/6 (reddish yellow)

Measurements: Mheight: 2.9 cm, Twall: 0.5-0.8 cm, Tlip: 0.5-0.8 cm, Diam.: 9-28 cm

Reference: Olcese 2003, TAV. XIX, Lid type 3

Date: 1st-2nd century AD

C 51. Rim fragment of a lid

Flaring wall, short horizontal rim out turning into wall. Interior of the rim is slightly concave. The rim is bevelled and thickened on the exterior.

Colours: Ext: 10YR 5/4 (yellowish brown)-10YR 4/2 (dark greyish brown), Int: 7.5YR 5/4 (brown)-5YR 5/4 (reddish brown), Core: 10YR 5/4 (yellowish brown)

Measurements: Mheight: 1.5 cm, Twall: 0.5 cm, Tlip: 0.7 cm, Diam.: 8 cm

Reference: Olcese 2003, TAV. XX, Lid type 4

Date: Claudian-late Severian

C 52. Decorated wall fragment

Wall fragment decorated with pine scales.

Colours: Ext: 2.5YR 6/6 (light red), Int: 2.5YR 6/6 (light red), Core: 2.5YR 6/6 (light red)

Measurements: Mheight: 2.7 cm, Twall: 0.3 cm, Tdecoration: 0.8 cm

Reference: Cotton/Métraux 1985, 207, no. 22

Date: Claudian-Neronian

C 53. Decorated wall fragment

Wall fragment decorated with two horizontal lines of incisions with below them a single horizontal line of double-incisions. Some traces of a brownish slip remain on the exterior of the shard.

Colours: Ext: 7.5YR 5/6 (strong brown), Int: 7.5YR 8/4 (pink), Core: 7.5YR 8/4 (pink)

Measurements: Mheight: 4.1 cm, Twall: 0.7 cm

Reference: Cotton/Métraux 1985, 204, no 8

Date: AD 50-200

C 54-69: LATE ANTIQUE AND EARLY MEDIEVAL PERIOD

C 54. Rim fragment of a jar

Incurving, flaring wall, out curving rim thickening on the exterior and somewhat faceted, convex lip.

Colours: Ext: 10R 5/6 (red)-2.5YR 6/6 (red), Int: 10R 4/4 (weak red)-2.5YR 5/6 (red), Core: 10R 4/6 (red)-2.5YR 6/6 (red)

Measurements: Mheight: 3.7 cm, Twall: 0.3-0.5 cm, Tlip: 0.4-0.7 cm, Diam.: 15-17 cm

Reference: Cotton 1979, 169, no.39 (late Roman hard red coarse ware)

Date: AD 350/370-450

C 55. Rim fragment of a jar

Out turning rim, thickening on the exterior. The lip is flattened, concave and thickened on the interior.

Colours: Ext: 5YR 6/6 (reddish yellow), Int: 5YR 6/6 (reddish yellow), Core: 5YR 6/6 (reddish yellow)

Measurements: Mheight: 2.0 cm, Twall: 0.4 cm, Tlip: 0.8 cm, Diam.: 20-25 cm

Reference: Paroli/Venditelli 2004, 554, no 38

Date: Mid 7th century AD

C 56. Rim fragment of a jar

Flaring wall with several grooves on the exterior. Out curving rim, the external transition from rim to wall is hollowed out and bears a groove, convex lip. The fragment is blackened on the exterior.

Colours: Ext: 10YR 3/1 (very dark grey), Int: 10YR 5/2 (greyish brown), Core: 10YR 3/1 (very dark grey)

Measurements: Mheight: 5.9 cm, Twall: 0.8 cm, Tlip: 1.2 cm, Diam. 20 cm

Reference: Paroli/Venditelli 2004, 594, no. 75

Date: End 5th-second half 6th century AD

C 57. Rim fragment of a bowl

Flaring wall, sharp transition from rim to wall, marked by an internal angle. The rim is folded, creating one part that is out curving into the wall and another that is strongly overhanging with an unknown lip. The exterior of the overhanging part is decorated with a wavy incised line.

Colours: Ext: 5YR 7/8 (reddish yellow), Int: 5YR 6/8 (reddish yellow), Core: 2.5YR 6/8 (light red)

Measurements: Mheight: 2.2 cm, Twall: 0.6 cm, Trim: 0.6-1.1 cm, Diam.: 30 cm

Reference: Cotton 1979, 183: 4,10 & 12

Date: AD 350/370-450

C 58. Almost complete profile of a bowl

Raised flat base, interior concave. In curving wall, short flat rim out turning into the wall with internal angle, tapering convex lip.

Colours: Ext: 2.5YR 6/6 (light red), Int: 5YR 6/6 (reddish yellow), Core: 5YR 6/1 (light grey/grey)

Measurements: Mheight: 4.8 cm, Twall: 0.7 cm, Tlip: 0.4 cm, Diam.: 14 cm

Reference: Paroli/Venditelli 2004, 444, no. 16/17 and 587, no 19

Date: AD 475-550

C 59. Rim fragment of a bowl

Flaring wall, short horizontal rim, thickened and undercut on the interior, concave top and flat bottom. Small convex lip.

Colours: Ext: 10YR 5/3 (brown), Int: 10YR 5/3 (brown), Core: 2.5YR 6/8 (light red)

Measurements: Mheight: 2.0 cm, Twall: 0.6 cm, Tlip: 0.4 cm, Diam.: 24 cm

Reference: Paroli/Venditelli 2004, 588

Date: AD 500-600

C 60. Rim fragment of a flanged bowl

Flaring wall with a small ridge on the exterior, straight rim with broad straight flange on exterior with convex edge. Convex lip.

Colours: Ext: 7.5YR 8/4 (pink), Int: 7.5YR 8/4 (pink), Core: 7.5YR 8/4 (pink)

Measurements: Mheight: 5.0 cm, Twall: 0.6 cm, Tlip: 0.5 cm, Flange: Mextension: 2.0 cm, Mthickness: 0.6 cm, Diam.: 19 cm.

Reference: Local imitation of Hayes 1972, 140-144, Form 91C

Date: AD 530-600

C 61. Rim fragment of a bowl

Flaring wall with ridge on exterior. Out curving rim, with a convex interior and short concave exterior, pointed lip.

Colours: Ext: 5YR 4/2 (dark grey), Int: 5YR 4/2 (dark grey), Core: 5YR 4/2 (dark grey)

Measurements: Mheight: 2.3 cm, Twall: 0.7 cm, Tlip: 0.4 cm, Diam.: 21 cm

Reference: Paroli/Venditelli 2004, 86, no 28; 251, no 30; 466, no 48

Date: 6th century AD

C 62. Rim fragment of a bowl/plate

Flaring wall, slightly in curving rim, on exterior a small thickening creates a triangular profile, convex lip thickened on both sides. The exterior of the rim is decorated with three lines bearing small incisions. Traces of reddish/brownish paint remain on the in- and exterior of the fragment.

Colours: Ext: 2.5YR 5/8 (red)-10YR 8/4 (very pale brown), Int: 2.5YR 5/8 (red)-10YR 8/4 (very pale brown), Core: 10YR 8/4 (very pale brown)

Measurements: Mheight: 1.9 cm, Twall: 0.5 cm, Tlip: 1.2 cm, Diam.: 21 cm

Reference: Paroli/Venditelli 2004, 105, no 29

Date: AD 600-625

C 63. Rim fragment of a casserole

Out curving rim, lip is thickened on both sides and convex with a groove at the centre of the lip, creating a somewhat triangular profile.

Colours: Ext: 5YR 6/6 (reddish yellow), Int: 5YR 6/6 (reddish yellow), Core: 5YR 7/1 (light grey)

Measurements: Mheight: 1.7 cm, Trim: 0.6 cm, Tlip: 1.0 cm, Diam.: 22 cm

Reference: Paroli/Venditelli 2004, 593, no 64

Date: End 5th-second half 6th century AD

C 64. Rim fragment of a casserole

Out curving rim, on exterior two grooves. Convex lip, thickened on the exterior. Traces of a reddish/brownish slip on the fragment.

Colours: Slip: 2.5YR 5/8 (red), Ext: 10YR 8/2 (white), Int: 10YR 8/2 (white), Core: 5YR 6/3 (light reddish brown)

Measurements: Mheight: 1.9 cm, Twall: 0.5 cm, Tlip: 0.8 cm, Diam.: 13 cm

Reference: Paroli/Venditelli 2004, 442/443

Date: AD 500-550

C 65. Rim fragment of a casserole

Wall slightly spreading outwards, two grooves on interior as well as on exterior. Rim strongly out turning with internal angle, convex lip, thickened on the exterior. *Colours:* Ext: 2.5Y 4/2 (dark greyish brown), Int: 10YR 5/4 (yellowish brown), Core: 10YR 5/4 (yellowish brown)

Measurements: Mheight: 4.0 cm, Twall: 0.3 cm, Tlip: 0.4 cm

Reference: Paroli/Venditelli 2004, 448, no 42

Date: AD 500-550

C 66. Rim fragment of a casserole

Probably in curving rim, convex lip heavily thickened on in- and exterior.

Colours: Ext: 2.5YR 6/8 (light red), Int: 2.5YR 6/8 (light red), Core: 2.5YR 6/8 (light red)

Measurements: Mheight: 1.7 cm, Trim: 0.3 cm, Tlip: 1.5 cm, Diam.: 25 cm

Reference: Paroli/Venditelli 2004, 554, no 32

Date: Mid 7th century AD

C 67. Rim fragment of an amphora?

Out curving rim, convex lip. On exterior of the rim remains the attachment of a vertical handle of unknown shape.

Colours: Int: 7.5YR 6/4 (light brown), Int: 7.5YR 6/4 (light brown), Core: 7.5YR 6/4 (light brown)

Measurements: Mheight: 4.1 cm, Twall: 0.7 cm, Tlip: 0.7 cm, Handle: Mextension: 1.6 cm, Diam.: 8 cm

Reference: Paroli/Venditelli 2004, 192, no 76

Date: Late 6th-early 7th century AD

C 68. Decorated wall fragment (ceramica a vernice rossa)

Flaring wall fragment, decorated with several intersecting circles of reddish/brownish paint.

Colours: Paint: 7.5YR 6/4 (light brown), Ext: 7.5YR 7/4 (pink), Int: 7.5YR 6/2 (pinkish grey), Core: 7.5YR 6/4 (light brown)

Measurements: Mheight: 8.8 cm, Twall: 0.8 cm

Reference: Paroli/Venditelli 2004, 288/289

Date: 8th century AD

C 69. Decorated wall fragment

Flaring wall fragment, on the exterior decoration 'a petali'.

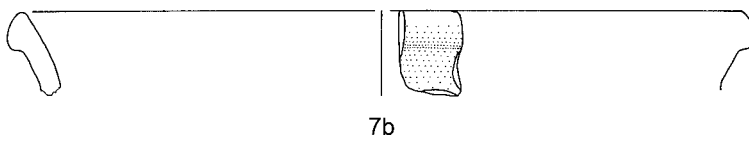
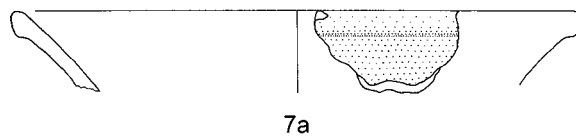
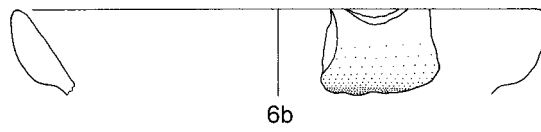
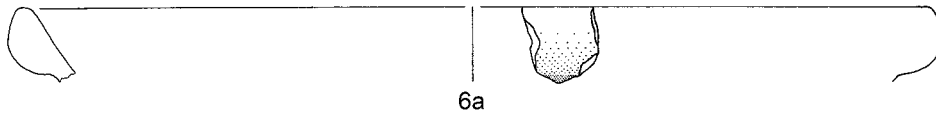
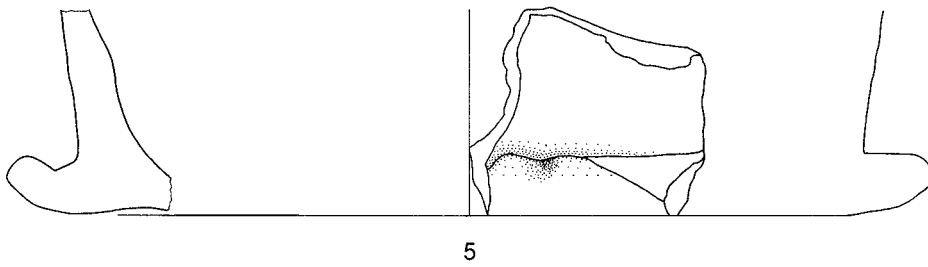
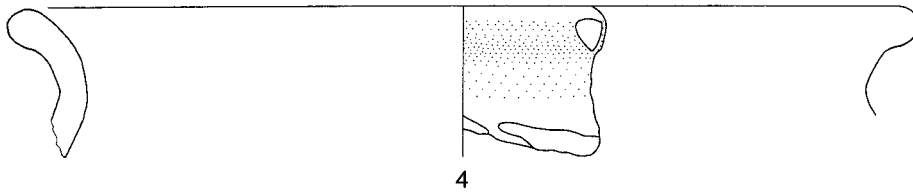
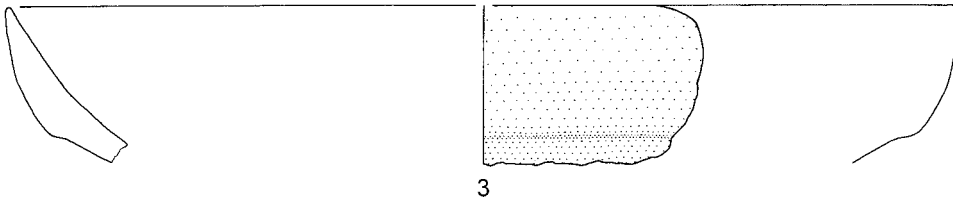
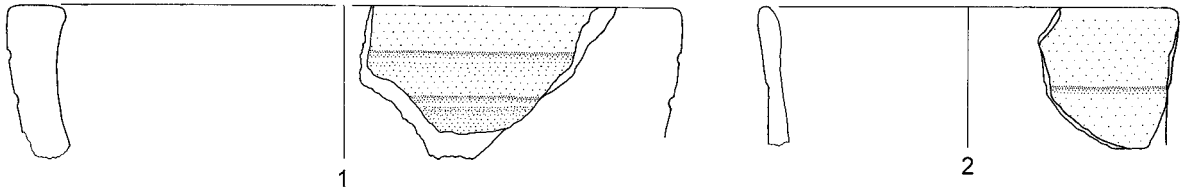
Colours: Ext: 5YR 7/6 (reddish yellow), Int: 5YR 7/6 (reddish yellow), Core: 5YR 7/8 (reddish yellow)

Measurements: Mheight: 4.2 cm, Twall: 0.3 cm, Tdecoration: 0.5 cm

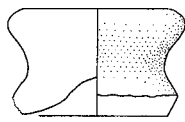
Reference: Paroli/Venditelli 2004, 299/300

Date: 9th century AD

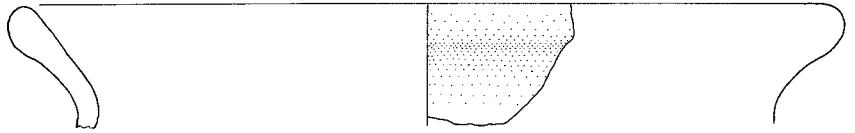
Coarse Ware



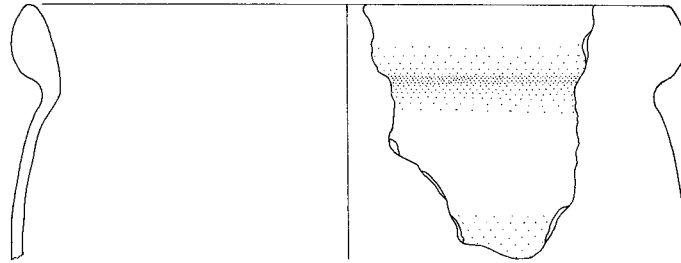
Coarse Ware



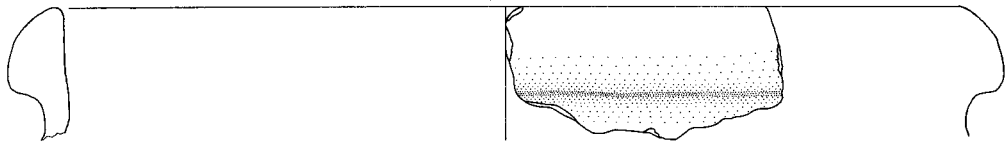
8



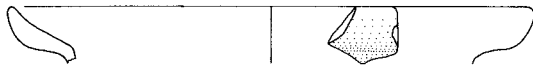
9



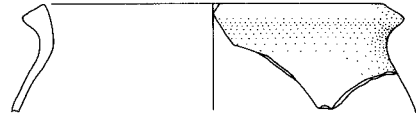
10a



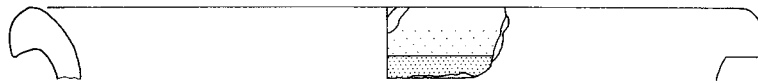
10b



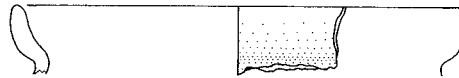
11



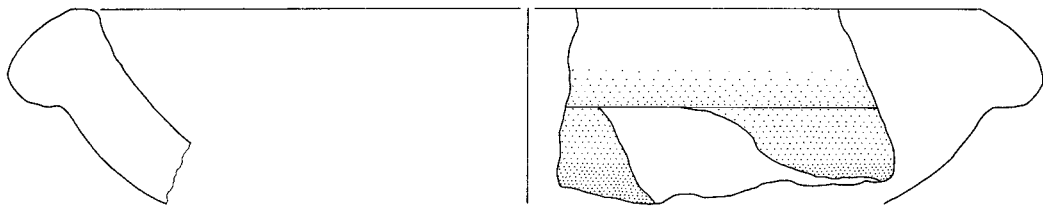
12



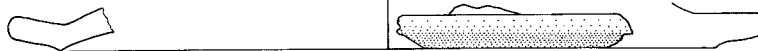
13



14

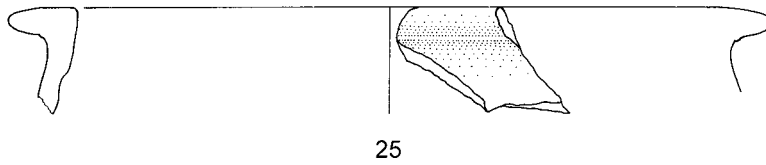
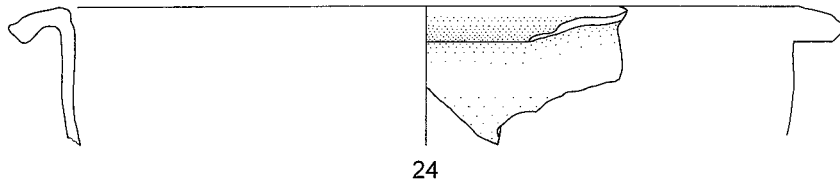
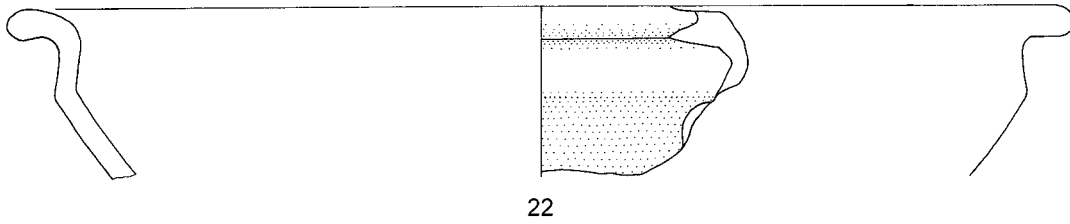
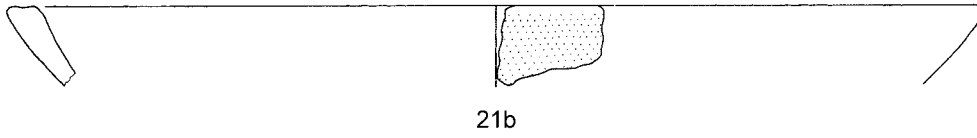
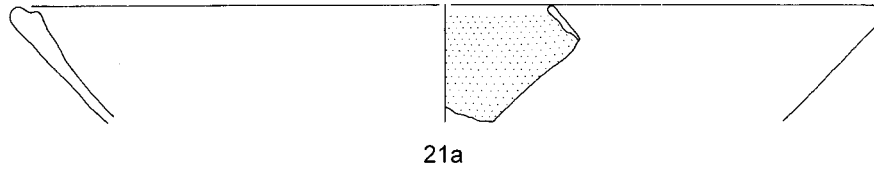
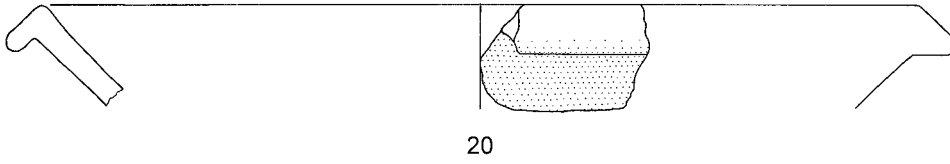
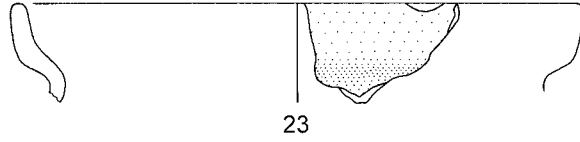
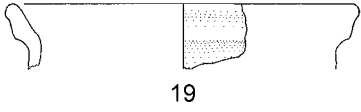
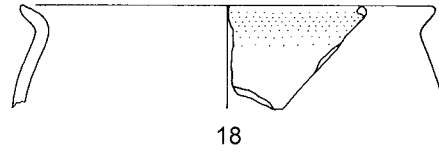
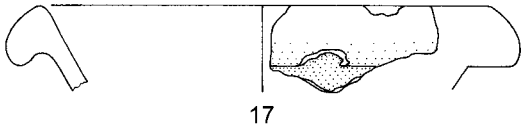


15

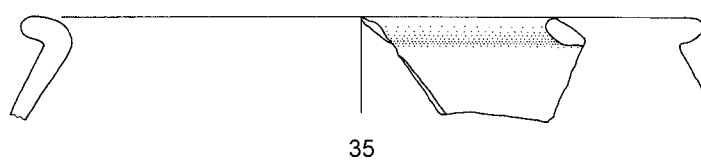
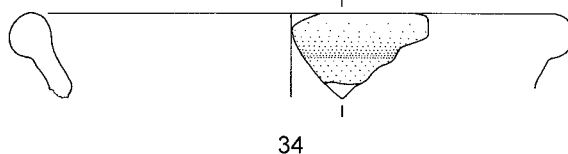
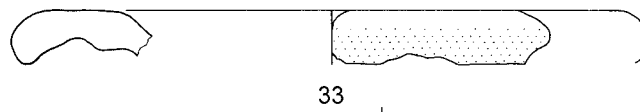
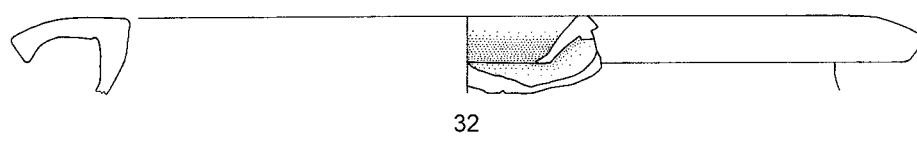
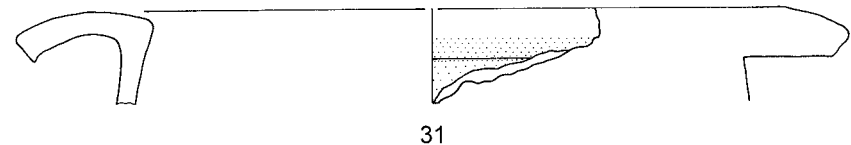
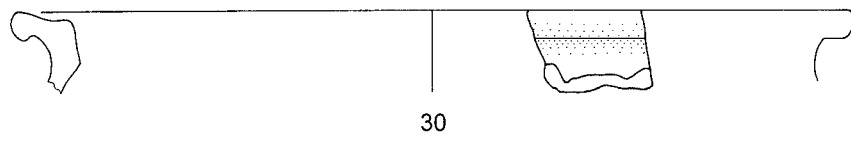
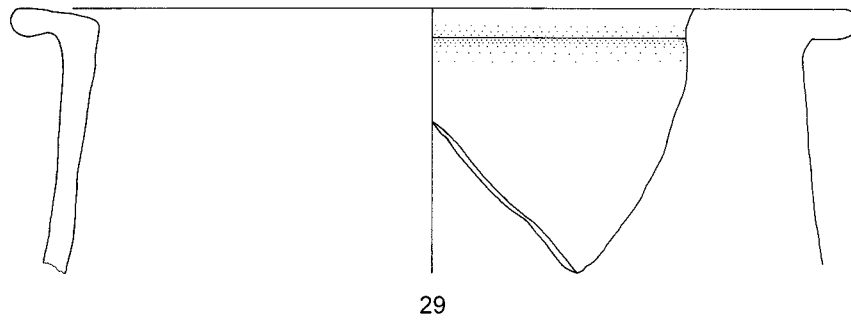
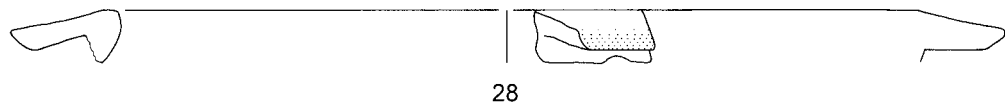
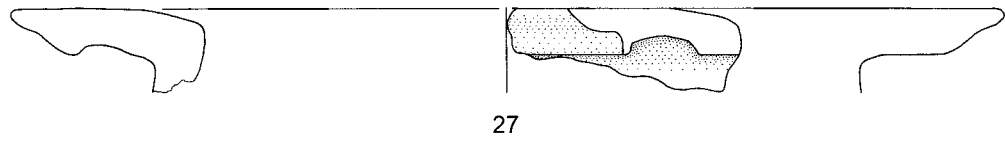


16

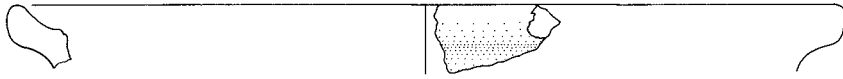
Coarse Ware



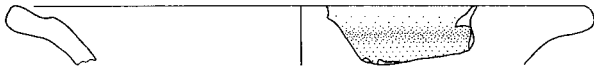
Coarse Ware



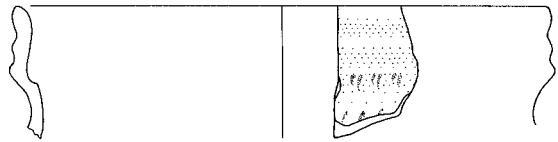
Coarse Ware



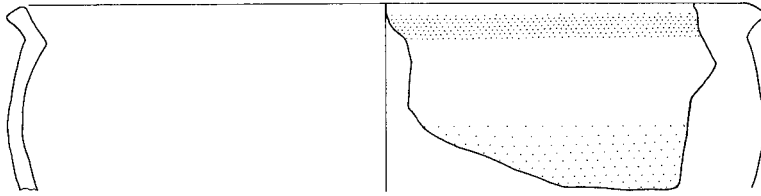
36



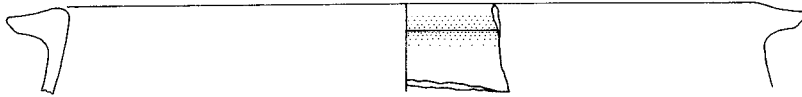
37



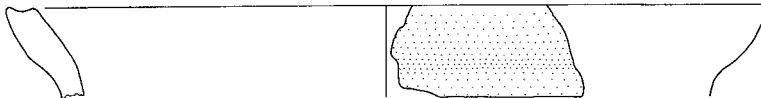
41



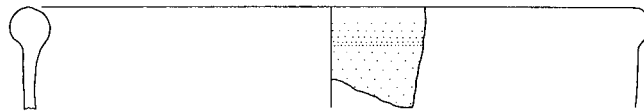
38



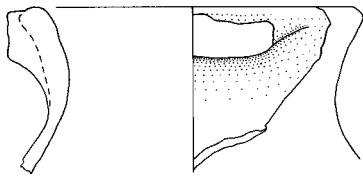
39



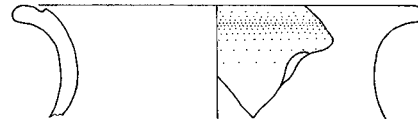
40



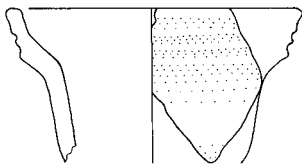
42



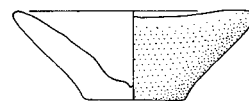
43a



43b

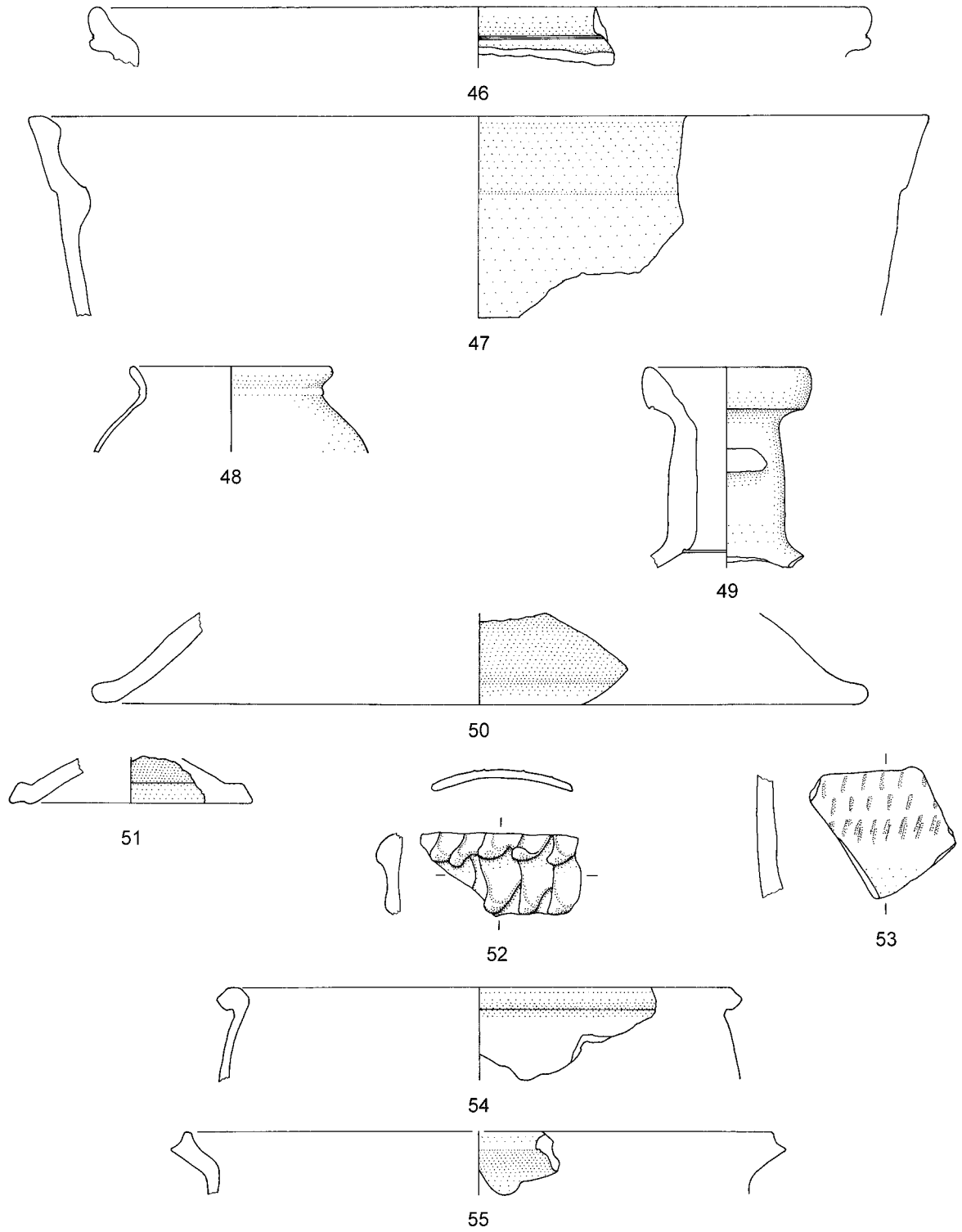


44

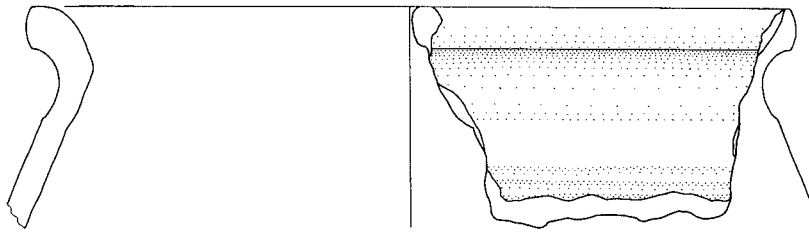


45

Coarse Ware



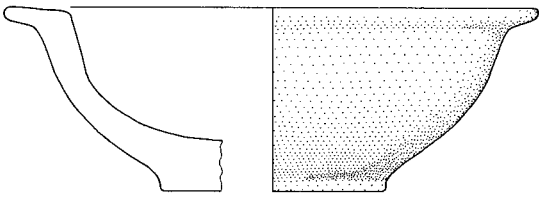
Coarse Ware



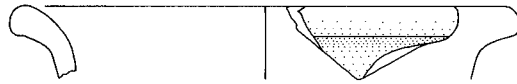
56



57



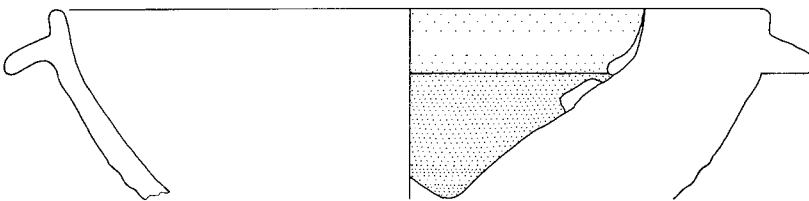
58



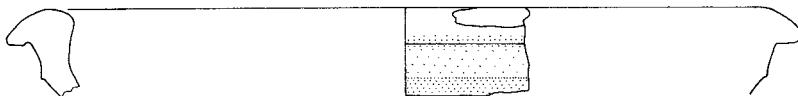
64



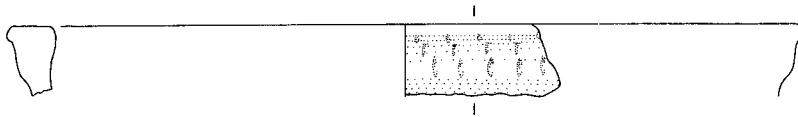
59



60



61

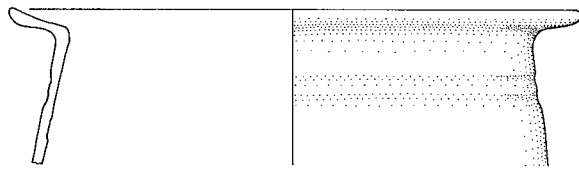


62

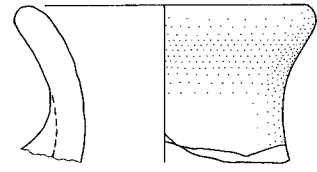


63

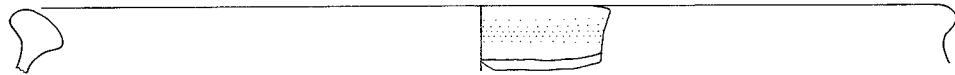
Coarse Ware



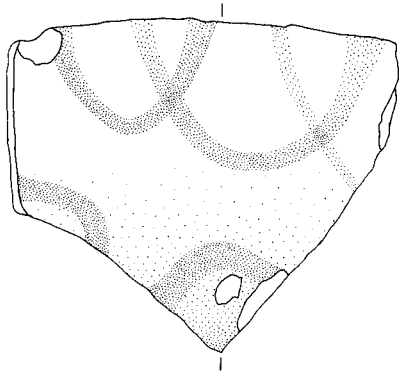
65



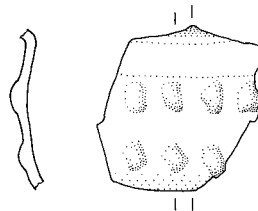
67



66



68



69

D

Amphoras

D 1. Handle fragment

Heavy, elongated vertical handle, oval in section.

Fabric: Includes brown to pale depurated and coarse fragments, one with black sand inclusions (Peacock/Williams 1986, 87; Tchernia 1986, 45/47).

Reference: Dressel 1A, B & C; Peacock/Williams 1986, 86-90

Date: 130-end 1st century BC

D 2. Handle fragment

Heavy vertical handle, oval in section with deep groove on exterior.

Fabric: Mostly pale (but one pink) coarse fabric with various inclusions.

Reference: Haltern 70; Peacock/Williams 1986, 115/116

Date: Mid 1st century BC-mid 1st century AD

D 3. Handle fragment

Elongated vertical double-bar handle.

Fabric: Several fabrics occur: pink to pale depurated; pink to pale to orange coarse with black sand (Peacock/Williams 1986, 106/87); red to orange coarse with large white inclusions (Peacock/Williams 1986, 106/94; Tchernia/Zevi 1972, 38).

Reference: Dressel 2-4; Peacock/Williams 1986, 105/106

Date: Late 1st century BC-mid 2nd century AD

D 4. Rim fragment

Low, triangular rim.

Fabric: Several fabrics occur, most importantly pale coarse and pale-brown depurated with some inclusions (Peacock/Williams 1986, 85).

Reference: Graeco-Italic?; Peacock/Williams 1986, 84/85 [may also belong to Dressel 1A amphoras]

Date: Late 4th century-130 BC (130-mid 1st century BC)

D 5. Rim fragment

High, quasi triangular rim.

Fabric: The fragments have varying fabrics, including orange coarse with black sand (Peacock/Williams 1986, 87).

Reference: Dressel 1A?; Peacock/Williams 1986, 86-88 [may also belong to Graeco-Italic type amphora]

Date: 130-mid 1st century BC (late 4th century-130 BC)

D 6. Rim fragment

High rim thickened on the exterior ('collar rim').

Fabric: Mostly pink to orange coarse with black sand (Peacock/Williams 1986, 87).

Reference: Dressel 1B; Peacock/Williams 1986, 87 (lower examples may also belong to Dressel 1A type amphora)

Date: Second quarter 1st century BC-late 1st century BC (130-mid 1st century BC)

D 7. Rim fragment

Low rim thickened on the exterior ('rolled rim').

Fabric: Mostly red to orange coarse with large white inclusions (Peacock/Williams 1986, 106/94; Tchernia/Zevi 1972, 38), but also a few pink to pale depurated, partly with a white coating.

Reference: Dressel 2-4; Peacock/Williams 1986, 105/106

Date: Late 1st century BC-mid 2nd century AD

D 8. Rim fragment

Thickened rim, convex on the exterior and often concave on the interior.

Fabric: Both pink to orange and pale coarse with a grey core; some fragments show remains of a coating.

Reference: Dressel 20; Peacock/Williams 1986, 136-140

Date: 1st-late 3rd century AD

D 9. Rim fragment

Thickened, sometimes out curving rim with a deep groove on the exterior.

Fabric: Very few fragments, one red coarse with a white coating (Peacock/Williams 1986, 167)

Reference: Tripolitanian type; Peacock/Williams 1986, 166-170

Date: 1st-4th century AD

D 10. Rim fragment

Thickened rim; the exact shape varies and therefore identification remains unsure.

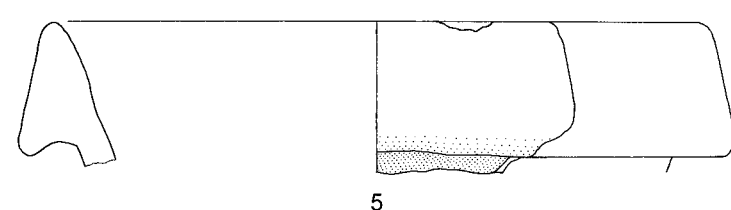
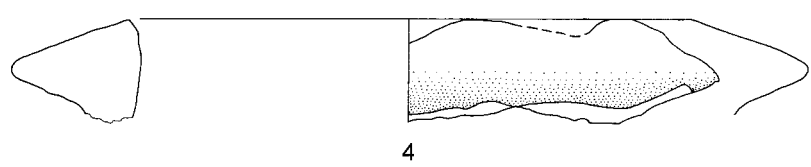
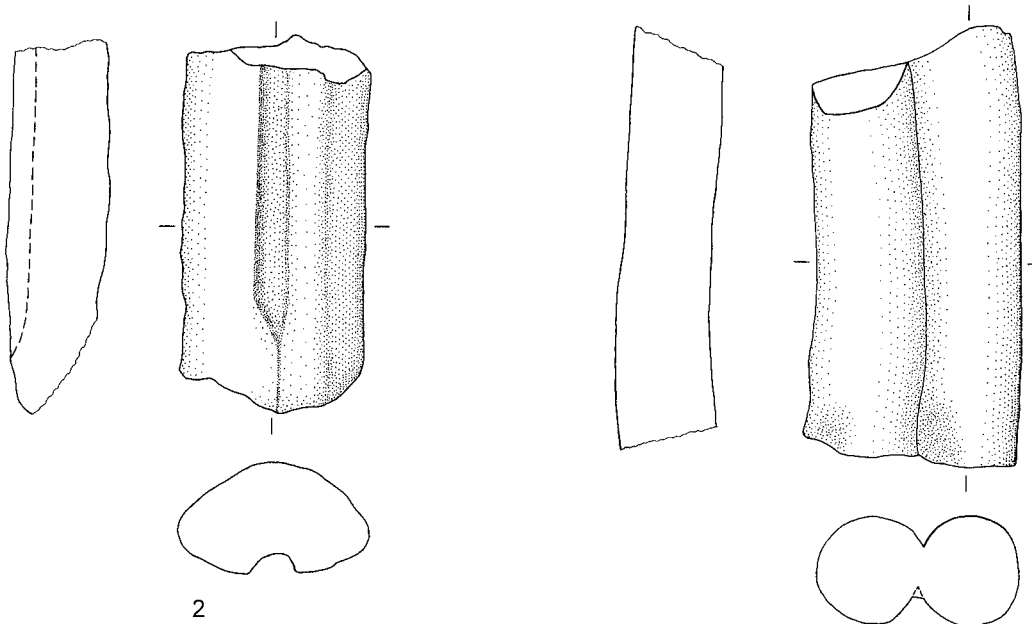
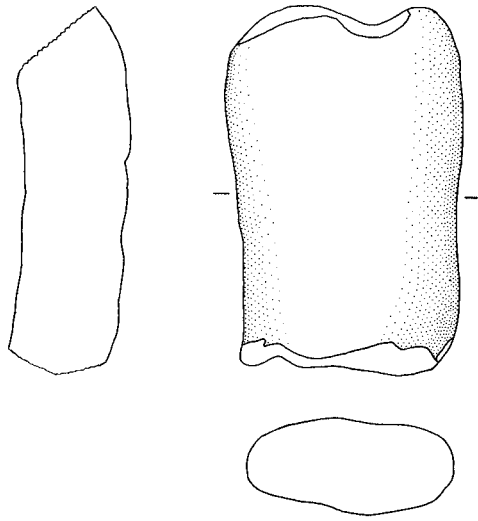
Fabric: Red to orange to pink coarse with a white or grey coating (Peacock/Williams 1986, 156/154)

Reference: Africana type?; Peacock/Williams 1986, 153-157

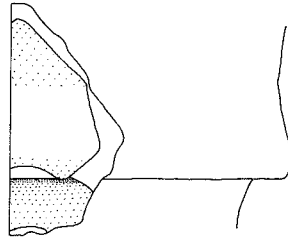
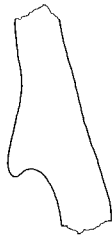
Date: Late 2nd-late 4th century AD

Several other fragments have been ascribed to types, but these have not been included in this typology. In the case of the small local amphoras (presumably produced at the coastal villa Le Grottacce south of Nettuno, site 11215) the ascription was based on fabric resemblances (Attema et al. 2003a, 136). Of other, occasional typological ascriptions we are unsure.

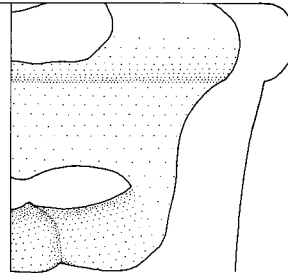
Amphoras



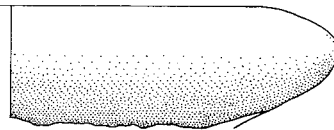
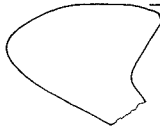
Amphoras



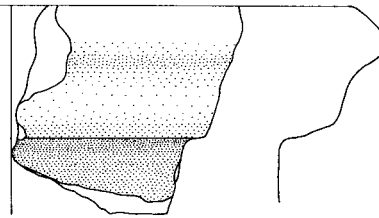
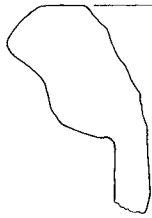
6



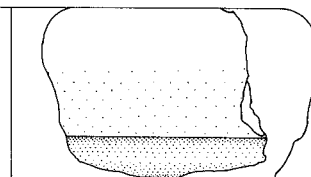
7



8



9



10

E

Black Glazed

E 1. Base fragment of a skyphos

Flaring base ring, edge thickened on both sides as well as undercut on the exterior. Ex- and interior of the base are flat. Two grooves on exterior wall, just above base ring. Flaring wall.

Colours: Glaze: 10YR 3/1 (very grey black), Clay: 10YR 5/4 (yellowish brown)

Measurements: Mheight: 3.3 cm, Tbase: 0.8 cm, Twall: 0.5 cm, Diam. (base): 6 cm

Reference: Bouma 1996, Plate CXLIX; Cotton 1979, 96: 1-3
Date: Cotton dates the type in general to the 4th and 3rd centuries BC. The *Satricum* fragments were found in a stratum dating between 375 and 300 BC.

E 2. Base fragment of a skyphos

Cylindrical base ring with convex edge, flattened on the exterior. Exterior of the base is flat, the interior concave. Slightly flaring wall.

Colours: Glaze: 10YR 3/1 (very dark grey), Clay: 5YR 7/4 (pink)

Measurements: Mheight: 3.9 cm, Tbase: 0.4 cm, Twall: 0.5 cm

Reference: Morel 1981, Plate 127, type 4333a1
Date: 1st half 3rd century BC

E 3. Rim- and handle fragment of a skyphos

Upright wall, slightly out curving rim, convex lip. Attached to the exterior of the rim is a vertical ring handle.

Colours: Glaze: 2.5YR 3/0 (very dark grey), Clay: 2.5YR 6/6 (light red)

Measurements: Mheight: 3.2 cm, Twall: 0.6 cm, Tlip: 0.5 cm, Handle: Mlength: 3.5 cm, Mwidth: 4.7 cm, Thandle: 1.2 cm, Diam.: 15 cm

Reference: Morel 1981, Plate 131, type 4373a1
Date: 330-300 BC

E 4. Rimfragment of a patera

Spreading wall, straight rim with a groove on the interior, convex lip.

Colours: Glaze: 7.5YR 3/0 (very dark grey), Clay: 7.5YR 8/4 (pink)

Measurements: Mheight: 3.5 cm, Twall: 0.7 cm, Tlip: 0.4 cm, Diam.: 14 cm

Reference: Morel 1981, Plate 36, type 2233a1
Date: 150/140 BC

E 5. Rimfragment of a patera

Straight rim with a groove on the exterior, making a turn inwards towards the base with an angle of almost 90 degrees, Tapering convex lip.

Colours: Glaze: 7.5YR 2/0 (black), Clay: 7.5YR 6/4 (light brown)

Measurements: Mheight: 2.5 cm, Trim: 0.9 cm, Tlip: 0.6 cm, Diam.: >30 cm

Reference: Morel 1981, Plate 42, type 2266a1
Date: 100-ca 50 BC

E 6. Rim fragment of a plate

Broad horizontal more or less convex rim, convex lip thickened on both sides.

Colours: Glaze: 7.5YR 3/0 (very dark grey), Clay: 10YR 7/4 (very pale brown)

Measurements: Mheight: 0.9 cm, Trim: 0.5 cm, Tlip: 0.8 cm, Diam.: 14 cm

Reference: Schippa 1980, TAV. XXXVII, no 352
Date: 280-ca 20 BC

E 7. Rim fragment of a plate

Spreading wall, straight rim, convex lip thickened on both sides.

Colours: Glaze: 7.5YR 2/0 (black), Clay: 5YR 7/6 (reddish yellow)

Measurements: Mheight: 1.5 cm, Twall: 0.5 cm, Tlip: 0.4 cm, Diam.: 17 cm

Reference: Morel 1981, Plate 26, series 1642
Date: 220-ca 30 BC

E 8. Rim fragment of a plate

Flaring wall, straight rim, convex lip.

Colours: Glaze: 7.5YR 3/0 (black), Clay: 7.5YR 6/4 (light brown)

Measurements: Mheight: 3.7 cm, Twall: 0.4 cm, Tlip: 0.4 cm, Diam.: 16 cm

Reference: Morel 1981, Plate 116, type 4113a1
Date: Second quarter 2nd century BC

E 9. Rim fragment of a plate

Spreading wall, short horizontal convex rim, convex lip with a groove on the in- and the exterior.

Colours: Glaze: 2.5YR 3/0 (very dark grey), Clay: 5YR 7/6 (reddish yellow)

Measurements: Mheight: 1.6 cm, Twall: 0.4 cm, Trim: 0.6 cm, Diam.: 20 cm

Reference: Morel 1981, Plate 11, type 1311a1
Date: 150-ca 30 BC

E 10. Rim fragment of a plate

Flaring wall, short horizontal convex rim, convex lip.

Colours: Glaze: 2.5YR 3/0 (very dark grey), Clay: 5YR 8/4 (pink)

Measurements: Mheight: 1.7 cm, Twall: 0.5 cm, Trim: 0.4 cm, Diam.: 12 cm

Reference: Morel 1981, Plate 13, type 1312e1
Date: 140/130 BC

E 11. Rim fragment of a plate

Spreading wall, almost vertical rim, in curving into wall, convex lip.

Colours: Glaze: 2.5YR 3/0 (very dark grey), Clay: 2.5YR 6/6 (light red)

Measurements: Mheight: 3.4 cm, Twall: 0.6 cm, Tlip: 0.6 cm, Diam.: 18 cm

Reference: Morel 1981, Plate 75, type 2822b1
Date: 100-ca 50 BC

E 12. Rim fragment of a plate

Spreading wall, short in turning rim with internal angle, convex lip.

Colours: Glaze: 7.5YR 3/0 (very dark grey), Clay: 7.5YR 8/4 (pink)

Measurements: Mheight: 4.2 cm, Twall: 0.5 cm, Tlip: 0.5 cm, Diam.: 24 cm
Reference: Morel 1981, Plate 75, type 2821a1
Date: 1st century BC

E 13. Rim fragment of a jug

Spreading wall, straight rim, the convex lip is heavily thickened on the exterior as well as thickened on the interior with a groove right beneath the thickening.
Colours: Glaze: 7.5YR 2/0 (black), Clay: 5YR 8/3 (pink)
Measurements: Mheight: 2.7 cm, Twall: 0.5 cm, Tlip: 0.9 cm, Diam.: 10 cm
Reference: Morel 1981, Plate 55, type 2539b1
Date: 300-270 BC

E 14. Rim fragment of a crutch

Out curving rim, convex lip thickened on the exterior.
Colours: Glaze: 2.5YR 3/0 (very dark grey), Clay: 5YR 7/4 (pink)
Measurements: Mheight: 2.1 cm, Trim: 0.3 cm, Tlip: 0.6 cm, Diam.: 10 cm
Reference: Morel 1981, Plate 157, type 5222d1
Date: Around 300 BC

E 15. Rim fragment of a bowl

Flaring wall, straight rim concave on the exterior. Convex lip with slight thickening on the exterior.
Colours: Glaze: 5YR 2.5/1 (black), Clay: 5YR 8/4 (pink)
Measurements: Mheight: 3.3 cm, Twall: 0.4 cm, Tlip: 0.5 cm, Diam.: 15 cm
Reference: Bouma 1996, Plate CXLV, no B3
Date: 375-300 BC

E 16. Rim fragment of a bowl

Flaring wall, slightly in curving rim with a groove on the exterior, convex lip.
Colours: Glaze: 5YR 3/1 (very dark grey), Clay: 5YR 7/6 (reddish yellow)
Measurements: Mheight: 2.5 cm, Twall: 0.4 cm, Tlip: 0.4 cm, Diam.: 14 cm
Reference: Bernardini 1986, TAV. IX, no 111
Date: 305-265 BC

E 17. Rim fragment of a bowl

Slightly in curving rim with a groove on the interior. Convex, somewhat tapering lip.
Colours: Glaze: 7.5YR 5/0 (grey), Clay: 7.5YR 8/4 (pink)
Measurements: Mheight: 1.8 cm, Twall: 0.6 cm, Tlip: 0.4 cm, Diam.: 14 cm
Reference: Bernardini 1986, TAV. XIII, no 139
Date: 305-265 BC

E 18. Rim fragment of a bowl

Flaring wall, slightly in curving rim, slightly pointed lip.
Colours: Glaze: 10YR 2/1 (black), Clay: 10YR 7/2 (light grey)
Measurements: Mheight: 2.7 cm, Twall: 0.4 cm, Tlip: 0.3 cm, Diam.: 18 cm
Reference: Bernardini 1986, TAV. X, no 119
Date: 305-265 BC

E 19. Rim fragment of a bowl

Flaring wall, in curving rim, convex lip.
Colours: Glaze: 5Y 3/1 (very dark grey), Clay: 7.5YR

6/4 (light brown)
Measurements: Mheight: 2.6 cm, Twall: 0.4 cm, Tlip: 0.5 cm, Diam.: 15 cm
Reference: Morel 1981, Plate 72, type 2783i1
Date: 300-250 BC

E 20. Rim fragment of a bowl

Flaring wall, slightly in curving rim, convex lip.
Colours: Glaze: 7.5YR 3/0 (very dark grey), Clay: 7.5YR 8/4 (pink)
Measurements: Mheight: 2.5 cm, Twall: 0.3 cm, Tlip: 0.3 cm, Diam.: 13 cm
Reference: Morel 1981, Plate 77, type 2831b1
Date: Mid 3rd century BC

E 21. Rim fragment of a bowl

Flaring wall, slightly in curving rim, tapering convex lip. Clear turning marks on the exterior of the shard.
Colours: Glaze: 7.5YR 2/0 (black), Clay: 7.5YR 7/6 (reddish yellow)
Measurements: Mheight: 3.5 cm, Twall: 0.5 cm, Tlip: 0.3 cm, Diam.: 22 cm
Reference: Morel 1981, Plate 75, type 2812c1
Date: Second half 3rd-early 2nd century BC

E 22. Rim fragment of a bowl

Flaring wall, slightly in curving rim with groove on exterior right below the lip, which is flattened.
Colours: Glaze: 10YR 3/2 (very dark greyish brown), Clay: 10YR 7/4 (very pale brown)
Measurements: Mheight: 3.7 cm, Twall: 0.3 cm, Tlip: 0.3 cm, Diam.: Unknown
Reference: Morel 1981, Plate 56, type 2562a1
Date: Mid 2nd century BC

E 23. Rim fragment of a bowl

Slightly flaring wall, straight rim with a groove on the exterior right below the lip, which is convex and thickened on the exterior.
Colours: Glaze: 2.5YR 2.5/0 (black), Clay: 10YR 7/2 (light grey)
Measurements: Mheight: 4.1 cm, Twall: 0.5 cm, Tlip: 0.6 cm, Diam.: 17 cm
Reference: Morel 1981, Plate 56, type 2553a1
Date: 150-125 BC

E 24. Rim fragment of a bowl

Flaring wall, straight rim, convex lip.
Colours: Glaze: 2.5YR 3/0 (very dark grey), Clay: 2.5YR 6/6 (light red)
Measurements: Mheight: 1.8 cm, Twall: 0.5 cm, Tlip: 0.5 cm, Diam.: 20 cm
Reference: Morel 1981, Plate 76, type 2825e1
Date: 140/130 BC

E 25. Rim fragment of a bowl

Flaring wall, straight rim, slightly pointed lip.
Colours: Glaze: 2.5YR 3/0 (very dark grey), Clay: 2.5YR 6/6 (light red)
Measurements: Mheight: 2.1 cm, Twall: 0.6 cm, Tlip: 0.4 cm, Diam.: 22 cm
Reference: Morel 1981, Plate 78, type 2851a1
Date: First half or mid 1st century BC

E 26. Almost complete profile of a miniature bowl

Flaring base ring with convex edge, exterior unknown, interior concave. Flaring wall, straight rim, convex lip.
Colours: Glaze: 2.5YR 2.5/0 (black), Clay: 7.5YR 6/4 (light brown)

Measurements: Mheight: 2.7 cm, Tbase: Unknown, Twall: 0.6 cm, Diam.: 7 cm

Reference: Pedroni 1986, TAV. 19, no 908

Date: 3rd-2nd century BC

E 27. Rim fragment of a miniature bowl

Flaring wall, slightly in curving rim, convex lip.

Colours: Glaze: 7.5YR 2/0 (black), Clay: 7.5YR 8/6 (reddish yellow)

Measurements: Mheight: 3.1 cm, Twall: 0.6 cm, Tlip: 0.5 cm, Diam.: 8 cm

Reference: Morel 1981, Plate 73, type 2787g1

Date: 130-ca 20 BC

E 28. Stamped base fragment

Flaring base ring with flattened edge. The interior of the base is concave, the exterior convex. Flaring wall. The interior of the base is decorated with one stamp depicting a rosette, made up of probably 11 leaves. Although the decoration pattern normally consists of 8 leaves, examples with 10 or 11 leaves occur (see Bernardini 1986, TAV.XII, no. 128).

Colours: Glaze: 7.5YR 3/0 (very dark grey), Clay: 5YR 8/3 (pink)-7.5Y 7/4 (pink)

Measurements: Mheight: 3.5 cm, Tbase: 0.7-0.8 cm, Twall: 0.6 cm, Diam.: 5-5.5 cm

Reference: Bernardini 1986, TAV. LV, stamp type 12

Date: 305-265 BC

E 29. Stamped base fragment

Flaring base ring with convex, thickened edge. Exterior base flat, interior concave. Flaring wall. The interior of the base bears one stamp with the depiction of a rosette, consisting of eight leaves divided by intersecting lines.

Colours: Glaze: 2.5YR 4/0 (dark grey), Clay: 7.5YR 7/4 (pink)

Measurements: Mheight: 2.8 cm, Tbase: 1.5 cm, Twall: 0.6 cm, Diam.: 4.5 cm

Reference: Bernardini 1986, TAV. LVI, stamp type 25

Date: 305-265 BC

E 30. Stamped base fragment

No base ring preserved, interior of the base is concave, flaring wall. The interior of the base is decorated with three stamps depicting rosettes, made up of eight leaves divided from each other by points.

Colours: Glaze: 2.5YR 2.5/0 (black), Clay: 2.5YR 6/6 (light red)

Measurements: Mheight: 1.6 cm, Tbase: 1.0 cm, Twall: 0.6 cm, Diam.: unknown

Reference: Bernardini 1986, TAV. LVII, stamp type 43

Date: 305-265 BC

E 31. Stamped base fragment

Cylindrical base ring with a convex edge. Interior base concave, exterior slightly convex. Flaring wall. The interior of the base is decorated with three stamps depicting a palmette.

Colours: Glaze: 7.5YR 2/0 (black), Clay: 5YR 7/4 (pink)

Measurements: Mheight: 3.4 cm, Tbase: 0.8 cm, Twall: 0.5 cm, Diam.: 5.7 cm

Reference: Bernardini 1986, TAV. LVIII, decoration type 103

Date: 305-265 BC

E 32. Stamped base fragment

Flaring base ring with convex edge. Interior of the base is concave, exterior slightly convex. Flaring wall. The interior of the base is decorated with two stamps depicting a palmette.

Colours: Glaze: 7.5YR 2/0 (black), Clay: 5YR 7/4 (pink)

Measurements: Mheight: 1.5 cm, Tbase: 0.4 cm, Twall: 0.6 cm, Diam.: 5 cm

Reference: Bernardini 1986, TAV. LIX, decoration type 120

Date: 305-265 BC

E 33. Stamped base fragment

Flaring base ring with convex edge. Interior of the base unknown, exterior convex. Unknown wall. The interior of the base bears one stamp, depicting a rosette, made up of eight thin leaves divided by intersecting lines.

Colours: Glaze: 2.5Y 2.5/1 (black), Clay: 7.5YR 8/4 (pink)

Measurements: Mheight: 2.2 cm, Tbase: 1.1 cm, Twall: 0.7 cm, Diam.: 4.8 cm

Reference: Pedroni 1986, TAV. 52, no 258

Date: 3rd-2nd century BC, based on the stamp

E 34. Stamped base fragment

Flaring base ring with convex edge, interior of the base concave, exterior flat. Flaring wall. The interior of the base is decorated with at least three stamps, probably depicting cuoricini. The stamped part of the base is separated by a circular groove. At some points, especially on the interior of the base the glaze appears more red than black.

Colours: Glaze: 2.5YR 3/0 (very dark grey)-10R 4/3 (weak red), Clay: 7.5YR 6/8 (reddish yellow)

Measurements: Mheight: 4.2 cm, Tbase: 1.0 cm, Twall: 1.0 cm, Diam.: 7 cm

Reference: Pedroni 1986, TAV. 38, no 1001

Date: 2nd century BC, based on the decoration

E 35. Decorated wall fragment

Wall fragment, on exterior painted decoration consisting of a horizontal band with three semi-circular objects below, two of them cut in half by a vertical line.

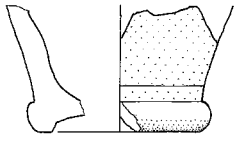
Colours: Glaze: 2.5YR 3/0 (black), Paint 2.5YR 3/6 (dark red), Clay: 2.5YR 6/6 (light red)

Measurements: Mheight: 3.4 cm, Twall: 1.1 cm, Diam.: unknown

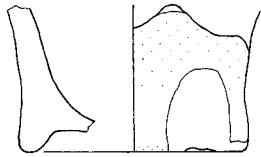
Reference: Pedroni 1986, TAV. 91/92, types 481-485

Date: 3rd-2nd century BC, based on the decoration

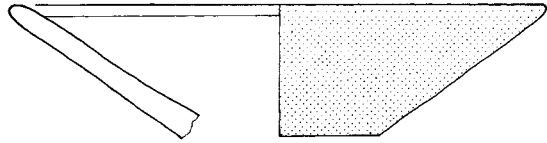
Black Glazed Ware



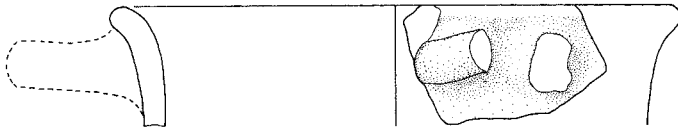
1



2



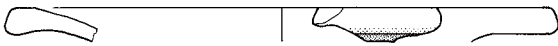
4



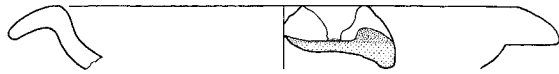
3



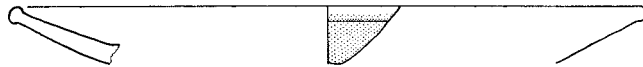
5



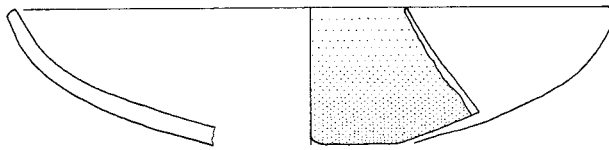
6



10



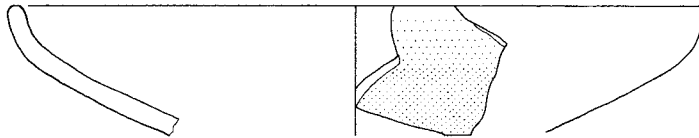
7



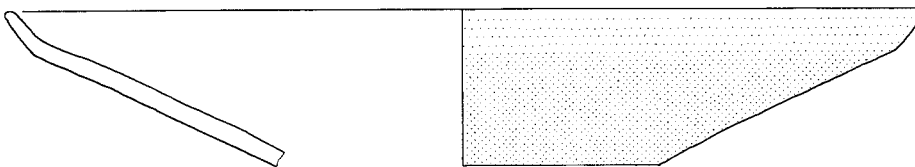
8



9

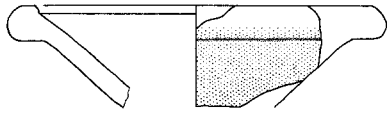


11



12

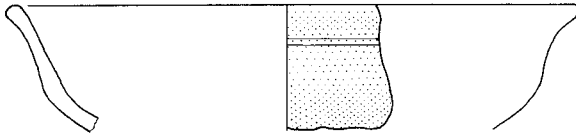
Black Glazed Ware



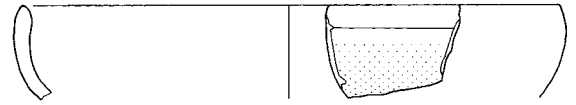
13



14



15



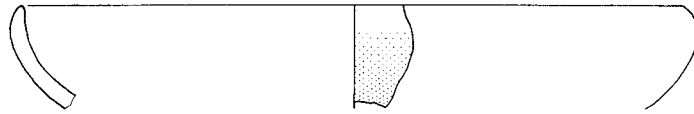
16



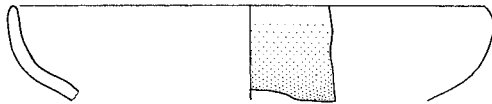
17



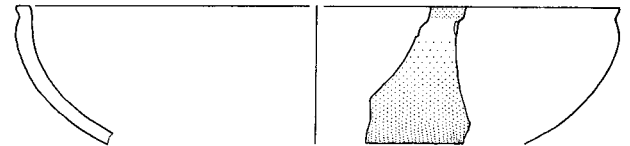
19



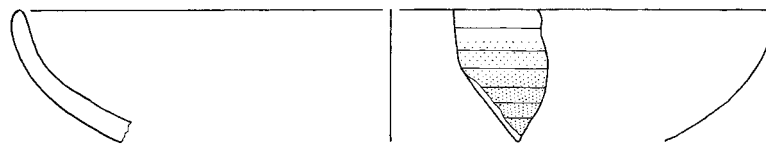
18



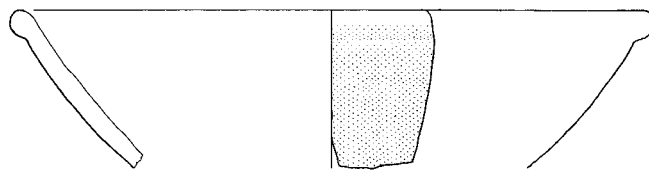
20



22



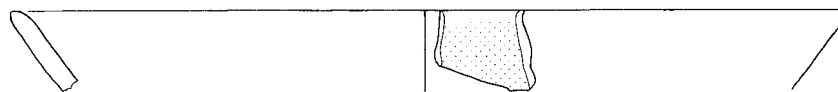
21



23

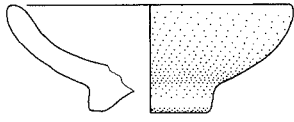


24

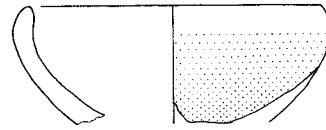


25

Black Glazed Ware



26



27



29



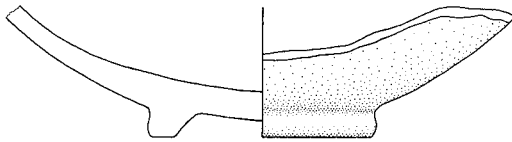
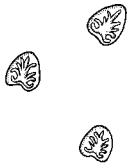
28



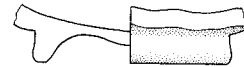
33



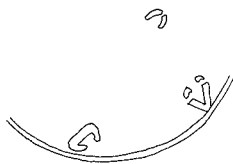
30



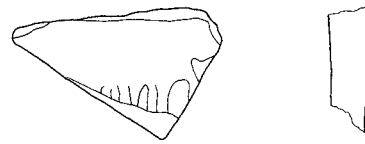
31



32



34



35

F

Terra Sigillata

F 1. Rim fragment of a plate

Straight rim making a strong turn inwards towards the floor, convex lip.

Colours: Slip: 2.5YR 4/8 (red), Clay: 2.5YR 6/6 (light red)
Measurements: Mheight: 2.6 cm, Trim: 0.4-0.5 cm, Tlip: 0.5 cm, Diam.: 28 cm

Reference: Ettliger 1990, 53, form 1

Date: 40-15 BC

F 2. Rim fragment of a plate

Flaring base ring with convex edge, base flat on the exterior, flat on the interior with double circular incision on the interior of the floor. Spreading or gently flaring wall, making a strong curve into the floor. In general two variants of rim and lip: the first has a straight rim, sometimes with several grooves on the exterior near the lip, a convex lip which is (heavily) thickened on the exterior and undercut with sometimes a groove on the interior. On some examples the lip is heavily profiled, incidentally bearing a band of rouletting on the exterior. The second has a short flat rim, out turning into the wall, normally a groove on the interior on transition to wall. Convex lip.

Colours: Slip: 10R 4/6 (red)-10R 4/8 (red)-2.5YR 5/6 (red)-2.5YR 5/8 (red), Clay: 2.5YR 6/6 (light red)-5YR 8/4 (pink)-5YR 7/6 (reddish yellow)-7.5YR 7/6 (reddish yellow)

Measurements: Mheight: 4.9 cm, Tbase: 0.6 cm, Twall: 0.4-0.7 cm, Tlip: 0.3-1.0 cm, Diam.: 14-25 cm

Reference: Ettliger 1990, 57, form 3

Date: AD 50-100

F 3. Rim fragment of a plate

Flaring wall, grooved on both interior and exterior on transition to base. Straight rim, convex lip.

Colours: Slip: 10R 4/8 (red), Clay: 5YR 7/6 (reddish yellow)

Measurements: Mheight: 2.6 cm, Twall: 0.6 cm, Tlip: 0.3 cm, Diam.: 25 cm

Reference: Ettliger 1990, 59, form 4.3

Date: Late Augustean

F 4. Rim fragment of a plate

Wall in curving into flat floor. Upright rim, tapering convex lip with a groove on the interior.

Colours: Slip: 2.5YR 6/6 (light red), Clay: 2.5YR 4/8 (red)
Measurements: Mheight: 2.6 cm, Tfloor: 0.6 cm, Twall: 0.4 cm, Tlip: 0.2 cm, Diam.: 20 cm

Reference: Ettliger 1990, 59, form 4.6

Date: Tiberian-Claudian

F 5. Rim fragment of a plate

Flaring wall, short out curving rim, convex lip.

Colours: Slip: 2.5YR 4/8 (red), Clay: 5YR 7/6 (reddish yellow)

Measurements: Mheight: 1.4 cm, Twall: 0.3 cm, Tlip: 0.3 cm, Diam.: 20 cm

Reference: Ettliger 1990, 61, form 5

Date: Early Augustean

F 6. Rim fragment of a plate

Out turning convex horizontal rim, groove on exterior rim on transition to wall. The lip is bevelled on the interior and thickened on both sides. A groove on the interior on transition to rim.

Colours: Slip: 2.5YR 4/8 (red), Clay: 5YR 7/6 (reddish yellow)

Measurements: Mheight: 1.4 cm, Trim: 0.7 cm, Tlip: 1.3 cm, Diam.: Unknown

Reference: Ettliger 1990, 69, form 10

Date: Early-mid Augustean

F 7. Rim fragment of a plate

Flaring wall, straight rim with large convex undercut moulding on exterior. Convex lip.

Colours: Slip: 2.5YR 5/6 (red), Clay: 5YR 7/6 (reddish yellow)

Measurements: Mheight: 2.4 cm, Twall: 0.6 cm, Trim: 1.0 cm, Diam.: Unknown

Reference: Ettliger 1990, 73, form 12

Date: Mid-late Augustean

F 8. Rim fragment of a plate

Flat floor, more or less upright rim turning inwards towards floor at an angle of 90 degrees. Exterior of the rim usually concave with two horizontal grooves, one towards the transition to the floor and another close to the lip. The interior of the rim is broadening towards the floor, often with a strong ridge halfway. Usually two horizontal grooves on interior of the rim as well. Convex lip.

Colours: Slip: 2.5YR 4/6 (red)-2.5YR 4/8 (red), Clay: 2.5YR 6/6 (light red)

Measurements: Mheight: 1.9 cm, Trim: 0.6-0.7 cm, Tlip: 0.2-0.3 cm, Diam.: 14-22 cm

Reference: Ettliger 1990, 83, form 18

Date: Last decade BC-Tiberian

F 9. Rim fragment of a plate

Flat floor. More or less vertical rim, broadening towards the floor, sometimes concave on the exterior. The rim is in turning towards the floor at an angle of 90 degrees. This transition is sometimes marked on the exterior by a small ridge. Often several grooves on the exterior of the rim; normally one or two just below the lip and another near the transition to the floor. Sometimes also a groove on the interior just below the lip. Convex lip. The exterior of the rim is incidentally decorated, either by an incised band of rouletting or with plastic decoration depicting a double spiral.

Colours: Slip: 10R 4/6 (red)-2.5YR 4/8 (red), Clay: 2.5YR 6/6 (light red)-5YR 7/4 (pink)

Measurements: Mheight: 2.8 cm, Tfloor: 0.3-0.4 cm, Trim: 0.3-0.6 cm, Tlip: 0.2-0.4 cm, Diam.: 12-20 cm

Reference: Ettliger 1990, 87, form 20

Date: Augustean-Tiberian

F 10. Rim fragment of a plate

Out curving wall turning into floor. Upright or slightly

spreading rim making an angle of 90 degrees towards the wall. Convex lip, sometimes slightly thickened on the exterior. Incidentally several grooves on exterior and/or interior of the rim.

Colours: Slip: 10R 4/6 (red)-2.5YR 4/8 (red)-2.5YR 5/6 (red), Clay: 10R 6/6 (light red)-5YR 7/6 (reddish yellow)-5YR 8/3 (pink)

Measurements: Mheight: 2.2 cm, Twall: 0.3-0.5 cm, Tlip: 0.2-0.4 cm, Diam.: 14-18 cm

Reference: Ettliger 1990, 89, form 21

Date: Augustean-Tiberian

F 11. Rim fragment of a cup/bowl

Spreading or gently flaring wall, grooved on the exterior on transition to floor, straight rim with one or two grooves on exterior near the lip, normally a single groove on the interior as well. Convex lip.

Colours: Slip: 10R 4/6 (red)-10R 4/8 (red)-2.5YR 4/8 (red)-2.5YR 5/6 (red), Clay: 10R 6/6 (light red)-2.5YR 6/8 (light red)-5YR 7/4 (pink)-7.5YR 6/6 (reddish yellow)

Measurements: Mheight: 2.8 cm, Twall: 0.3-0.4 cm, Tlip: 0.3 cm, Diam.: 12-25 cm

Reference: Ettliger 1990, 65, form 7

Date: Mid-late Augustean

F 12. Rim fragment of a cup/bowl

Spreading to slightly flaring wall, short out curving rim, on exterior sometimes two small grooves with a ridge in between, incidentally a groove on the interior. Convex lip.

Colours: Slip: 10R 4/6 (red)-10R 5/8 (red)-2.5YR 4/8 (red), Clay: 10R 6/6 (light red)-2.5YR 6/6 (light red)-5YR 7/4 (pink)

Measurements: Mheight: 3.6 cm, Twall: 0.4-0.5 cm, Tlip: 0.3-0.5 cm, Diam.: 12-22 cm

Reference: Ettliger 1990, 67, form 8.1/2

Date: Early Augustean-0

F 13. Rim fragment of a cup/bowl

Spreading or gently out curving wall, straight or slightly out curving rim, sometimes groove on exterior of the rim near the lip. Incidentally grooves on the interior of the rim as well. Convex to pointed lip.

Colours: Slip: 10R 4/8 (red)-2.5YR 4/8 (red), Clay: 2.5YR 6/6 (light red)-5YR 6/6 (reddish yellow)

Measurements: Mheight: 4.9 cm, Twall: 0.4-0.6 cm, Tlip: 0.3-0.4 cm, Diam.: 12-17 cm

Reference: Ettliger 1990, 67, form 8.3

Date: Early Augustean-0

F 14. Rim fragment of a cup

Slightly out curving wall with on the exterior on transition to rim two grooves with a convex thickened part in between, decorated with a band of rouletting. Sometimes corresponding groove on the interior. The rim is convex thickened on the exterior with a groove just below the lip. Also a groove on the interior of the rim. The exterior of the rim is decorated with a band of rouletting as well. Convex lip. On the exterior of the wall usually plastic decoration, with mainly flower and animal motives.

Colours: Slip: 10R 4/8 (red)-10R 4/8 (red), Clay: 10R 5/6 (red)-2.5YR 6/6 (light red)

Measurements: Mheight: 5.4 cm, Twall: 0.4-0.6 cm, Tlip:

0.4-0.5 cm, Diam.: 18-20 cm

Reference: Ettliger 1990, 79, form 15

Date: Mid-late Augustean

F 15. Rim fragment of a cup

Almost vertical spreading or slightly flaring wall, on one example two grooves on exterior of wall with band of rouletting in between. Short flat rim, either out turning or out curving into wall. One to three grooves on the interior on or just below the transition to the wall, incidentally a corresponding groove on the exterior on transition rim to wall. Tapering convex to pointed lip.

Colours: Slip: 10R 5/6 (red)-2.5YR 4/8 (red), Clay: 2.5YR 6/6 (light red)-5YR 7/4 (pink)

Measurements: Mheight: 3.8 cm, Twall: 0.3 cm, Tlip: 0.2-0.3 cm, Diam.: 12-22 cm

Reference: Ettliger 1990, 101, form 27

Date: Tiberian-Neronian

F 16. Rim fragment of a cup

Flaring wall, out curving into wall. The lip is convex, thickened on the exterior and undercut. Several bands of rouletting on the exterior of the rim. Interior of the rim bears a single groove.

Colours: Slip: 10R 4/8 (red), Clay: 5YR 7/4 (pink)

Measurements: Mheight: 3.7 cm, Twall: 0.7 cm, Trim: 0.7 cm, Tlip: 0.4 cm, Diam.: Unknown

Reference: Ettliger 1990, 107, form 31

Date: Late Augustean-early Tiberian

F 17. Rim fragment of a cup

Flaring wall, straight or slightly in curving rim with short horizontal to slightly down turning flange on exterior. Often a groove on exterior of the rim just below the lip. Incidentally also the interior of the rim is grooved. Convex lip. The exterior of the rim above the flange is often decorated with several themes of plastic decoration among which dogs, human (female) heads, double spirals and different types of rosettes.

Colours: Slip: 10R 4/6 (red)-2.5YR 5/6 (red)-2.5YR 5/8 (red), Clay: 10R 6/6 (light red)-2.5YR 6/6 (light red)-2.5YR 8/4 (pink)-5YR 8/4 (pink)-5YR 7/6 (reddish yellow)

Measurements: Mheight: 4.7 cm, Twall: 0.3-0.5 cm, ExtFlange: 0.9-1.2 cm, Tlip: 0.2-0.3 cm, Diam.: 10-14 cm

Reference: Ettliger 1990, 113, form 34

Date: Late Tiberian-Flavian

F 18. Rim fragment of a cup

Flaring wall, straight to in curving rim, convex lip.

Sometimes several bands of rouletting on exterior of rim and wall, intersected by several horizontal shallow grooves.

Colours: Slip: 2.5YR 4/8 (red), Clay: 2.5YR 6/6 (light red)-5YR 7/4 (pink)

Measurements: Mheight: 4.1 cm, Twall: 0.3-0.4 cm, Tlip: 0.3-0.4 cm, Diam.: 12 cm or slightly larger.

Reference: Ettliger 1990, 115, form 36

Date: Early Augustean

F 19. Rim fragment of a cup

Flaring wall, sometimes several shallow grooves on the interior near the rim. In general short flat, horizontal but mostly down turning rim with tapering, flattened lip to create a more or less triangular rim-profile.

Sometimes interior of the rim is slightly concave. The exterior of the rim is incidentally hollowed out on transition to wall.

Colours: Slip: 10R 4/8 (red)-2.5YR 4/6 (red)-2.5YR 4/8 (red), Clay: 10R 6/6 (light red)-2.5YR 6/6 (light red)-5YR 6/4 (light reddish brown)-5YR 7/6 (reddish yellow)-5YR 8/4 (pink)

Measurements: Mheight: 3.3 cm, Twall: 0.3-0.5 cm, Tlip: 0.3-0.6 cm, Diam.: 14-24 cm

Reference: Ettlinger 1990, 117, form 37

Date: Mainly mid 1st century AD

F 20. Rim fragment of a cup

Flaring wall, out curving rim, convex lip. Often a groove on exterior of the rim, just below the lip. Several bands of rouletting on exterior of the wall.

Colours: Slip: 2.5YR 4/8 (red)-2.5YR 5/6 (red), Clay: 5YR 6/4 (light reddish brown)-10YR 5/3 (brown)

Measurements: Mheight: 2.6 cm, Twall: 0.4-0.5 cm, Tlip: 0.4-0.5 cm, Diam.: 12-26 cm

Reference: Ettlinger 1990, 119, form 38

Date: Augustean-early Tiberian

F 21. Stamped base fragment

Stamp *a planta pedis* reading CORNEL(i)

Potter: P. Cornelius

Location: Arezzo

Reference: Oxe et al. 2000, 189, stamp type 612

Date: AD 10-50+

F 22. Stamped base fragment

Stamp *a planta pedis* reading CANV...

Potter: Most likely Camurius. On many examples the M is shortened to an N.

Location: Arezzo

Reference: Oxe et al. 2000, 173, stamp type 514

Date: AD 30-70

F 23. Stamped base fragment

Stamp *a planta pedis* reading SEX·M·P

Potter: Sextus Murrius Pisanus/Pictus

Location: Pisa

Reference: Oxe et al. 2000, 292, stamp type 1213

Date: AD 50-120

F 24. Stamped base fragment

Stamp *a planta pedis* reading either L·R·PI or ..PIS

Potter: L. Rasinius Pisanus

Location: Pisa

Reference: Oxe et al. 2000, 363, stamp type 1690

Date: AD 50-120

F 25. Stamped base fragment

Stamp *a planta pedis* reading either SEX·M·F, S·M·F or S·M·FE. On one example the S and M are stamped upside down.

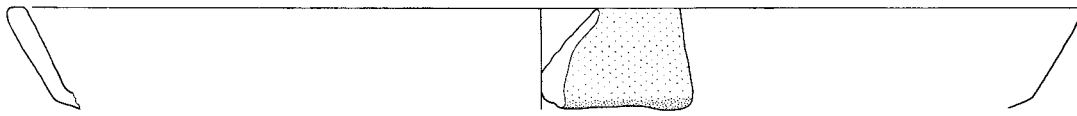
Potter: Sextus Murrius Festus

Location: Pisa

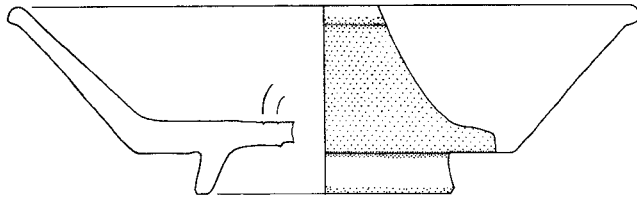
Reference: Oxe et al. 2000, 290, stamp type 1212

Date: AD 60-150

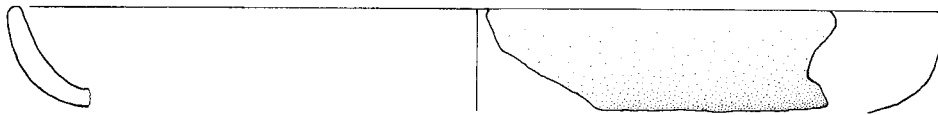
Terra Sigillata



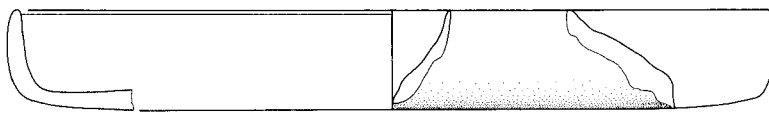
1



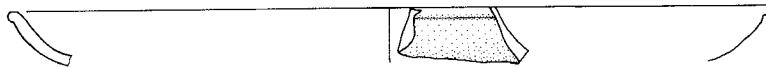
2



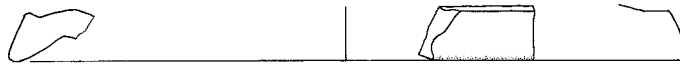
3



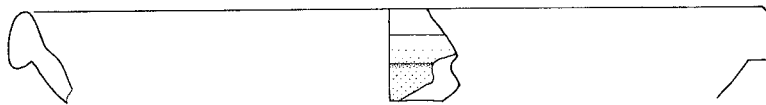
4



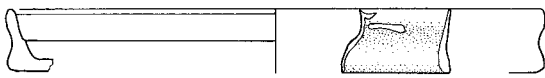
5



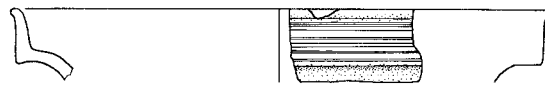
6



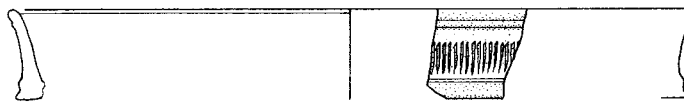
7



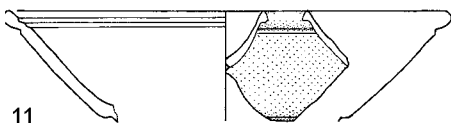
8



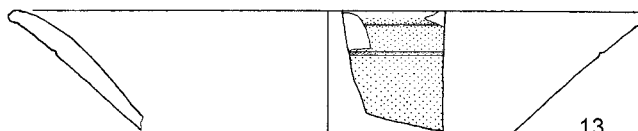
10



9

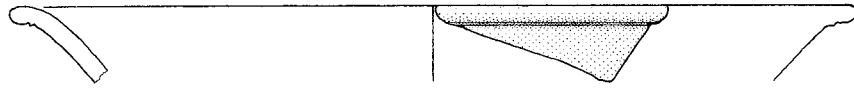


11

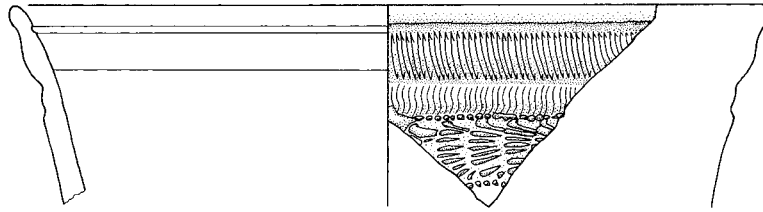


13

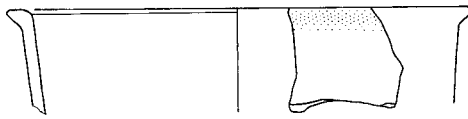
Terra Sigillata



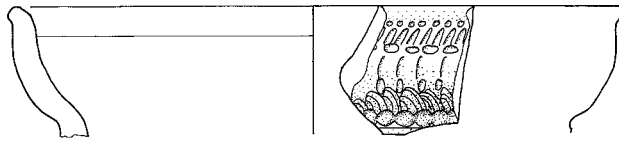
12



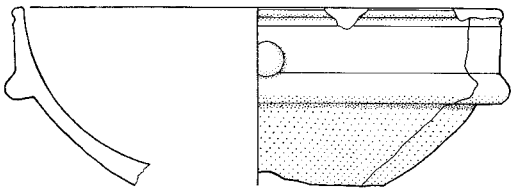
14



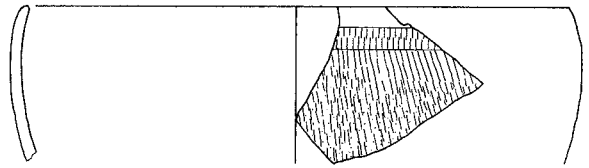
15



16



17



18

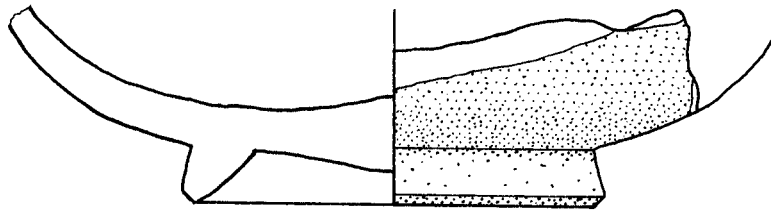


19



20

Terra Sigillata (scale 1:1)



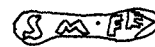
21



22



23



24



25

G

African Red Slip Ware

G 1. Deep Casserole

Flaring wall, slightly in curving rim, convex lip.

Colours: Slip: 2.5YR 5/8 (red), Core: 2.5YR 6/6 (light red)

Measurements: Mheight: 2.3 cm, Twall: 0.35 cm, Trim: 0.35 cm, Diam.: 18 cm

Reference: Hayes 1972, 207, form 193

Date: 1st century BC

G 2 (A and B) Dish

Flaring base ring with convex edge. Flaring wall, broad horizontal convex rim, convex lip. The interior of the rim is either decorated with so-called barbotine leaves (2A) or plain (2B).

Colours: Slip: 2.5YR 5/8 (red)-2.5YR 6/8 (light red), Core: 10R 5/6 (red)-10R 5/8 (red)-10R 6/8 (light red)-2.5YR 5/6 (red)

Measurements: 2A: Mheight: 4.0 cm, Twall: 0.4-0.6 cm, Trim: 0.4-0.8 cm, Diam.: 9-24 cm; 2B: Mheight 4.6 cm, Twall: 0.4-0.6 cm, Trim: 0.5-0.9 cm, Diam.: 19-34 cm

Reference: Hayes 1972, 21-25, forms 3B and 3C

Date: A: AD 75-150, B: Early-mid 2nd century AD

G 3. Dish

Spreading wall with a groove on the exterior. Straight rim, convex lip thickened on the exterior.

Colours: Slip: 2.5YR 5/6 (red), Core: 2.5YR 5/6 (red)

Measurements: Mheight: 1.3 cm, Twall: 0.5 cm, Tlip: 0.7 cm, Diam.: 22 cm

Reference: Hayes 1972, 26-29, form 5C

Date: Mid 2nd century AD

G 4. Dish

In curving wall, groove on interior halfway up the wall. Broad horizontal rim, sometimes sloping slightly up or downwards. Groove on interior rim near the lip. Convex lip.

Colours: Slip: 2.5YR 5/8 (red)-2.5YR 6/8 (light red), Core: 10R 6/8 (light red)-2.5YR 5/6 (red)

Measurements: Mheight: 3.7 cm, Twall: 0.4-0.5 cm, Trim: 0.6-0.8 cm, Diam.: 16-28 cm

Reference: Hayes 1972, 29-31, form 6

Date: End 1st-end 2nd century AD

G 5. Bowl

Steep, spreading wall, curving into floor. Groove on exterior of wall, marking the end of a band of rouletting that starts right beneath the lip. Also bands of rouletting just above and below where the wall curves into the floor. The rim is convex, heavily thickened on the exterior and undercut.

Colours: Slip: 2.5YR 5/8 (red)-7.5YR 5/6 (strong brown), Core: 2.5YR 5/8 (red)

Measurements: Mheight: 4.6 cm, Twall: 0.4-0.6 cm, Tlip: 0.6-0.8 cm, Diam.: 14 cm

Reference: Hayes 1972, 31-33, form 7B

Date: Early-mid 2nd century AD

G 6 (A and B). Carenated bowl

Spreading, carinated wall, straight rim with convex moulding on the exterior and smaller ridge below. Two grooves on interior at the same height as the exterior moulding. Convex lip often slightly thickened on the exterior and undercut. Form 6A bears several bands of rouletting on exterior moulding, another one just above and below the carination. Form 6B is plain.

Colours: Slip: 10R 5/8-2.5 YR 5/8 (red) to 10R 6/8-2.5YR 6/8 (light red). Core: 2.5YR 6/6 (light red)

Measurements: A: Mheight: 6.0 cm, Twall: 0.3-0.5 cm, Tmoulding 0.7-1.2 cm, Tlip 0.3-0.6 cm, Diam.: 15-26 cm;

B: Mheight: 5.4 cm, Twall: 0.5-0.7 cm, Tmoulding 0.8-1.1 cm, Tlip 0.4-0.6 cm, Diam.: 18-28 cm

Reference: Hayes 1972, 33-35, forms 8A and 8B

Date: A: AD 80/90-160+, B: second half 2nd century AD

G 7 (A and B). Bowl

Flaring base ring with convex edge. Underside floor is flattened, interior concave. Flaring wall, straight rim with two grooves on exterior. Convex lip which is occasionally thickened on in- as well as on exterior. Form 7 A bears a band of rouletting between the two grooves on the rim, form 7 B is plain.

Colours: Slip: 2.5YR 5/8 (red)-2.5YR 6/8 (light red). Core: 10R 6/8 (light red)

Measurements: A: Mheight: 5.7 cm, Twall: 0.4-0.6 cm, Tlip 0.5-0.8 cm, Diam.: 14-22 cm; B: Mheight: 7.6 cm, Twall: 0.4-0.6 cm, Tlip 0.5-0.7 cm, Diam.: 16-22 cm

Reference: Hayes 1972, 35-37, forms 9A and 9B

Date: A: AD 100-160+, B: second half 2nd century AD

G 8. Large carenated bowl

Spreading wall, heavy knobbed and undercut rim. Concave lip. The exterior of the upper part of the rim bears rouletted decoration.

Colours: Slip: 2.5YR 5/8 (red), Core: 10R 5/8 (red)

Measurements: Mheight: 1.8 cm, Twall: 0.5 cm, Trim: 1.0 cm, Diam.: 28 cm

Reference: Hayes 1972, 37-38, form 10A

Date: 2nd century AD

G 9. Large carenated bowl

Spreading wall, a two-step heavy rolled rim. Convex lip, faceted on the interior.

Colours: Slip: 2.5YR 5/8 (red), Core: 2.5YR 6/8 (light red)

Measurements: Mheight: 2.1 cm, Twall: 0.6 cm, Trim: 1.4 cm. Diameter: 22 cm

Reference: Hayes 1972, 37-38, form 10B

Date: 2nd century AD

G 10. Large carenated bowl

Spreading wall, straight rim with notched cord on the exterior just below the lip, which is thickened on the exterior with a groove on top. Fragment is somewhat blackened on the exterior.

Colours: Blackening: 2.5 YR 4/0 (dark grey), Slip: 2.5 YR 5/8 (red), Core: 2.5YR 5/8 (red)

Measurements: Mheight: 3.1 cm, Twall: 0.7 cm, Tdecora-

tion: 1.2 cm, Tlip: 1.2 cm, Diam.: 38 cm
Reference: Hayes 1972, 38, form 11
Date: Presumably 2nd century AD

G 11. Inkwell

Flaring base ring with the edge bevelled on the interior. Exterior base flat, interior flat. Flaring wall, straight rim and convex lip. Top convex with a central hole, marked off by a thickened lip which is bevelled on the interior. There is another small hole on one side near the edge of the top. Complete shape.

Colours: Slip: 10R 5/8 (red), Core: 10R 6/8 (light red)
Measurements: Mheight: 6.4 cm, Twall: 0.4 cm, Tlip: 0.5 cm, Diam. (top): 8.5 cm, Diam. (base): 4.8 cm
Reference: Hayes 1972, 177, form 124
Date: 2nd century AD

G 12 (A and B). Bowl

Flaring base ring with convex edge, exterior flat, interior flat. Carinated wall, which is more or less vertical (12B) or slightly sloping outwards (12A). Straight rim, convex lip, sometimes thickened or bevelled on the interior. In general rather deep form. A couple of fragments bear a shallow groove on top of the lip.

Colours: Slip: 2.5 YR 5/8 (red)-2.5YR 6/8 (light red), Core: 2.5YR 5/6 (red)-2.5YR 6/6 (light red).
Measurements: A: Mheight: 7.4 cm, Twall: 0.4-0.5 cm, Tlip: 0.6-0.7 cm, Diam.: 18-20 cm; B: Mheight: 7.8 cm, Twall: 0.3-0.6 cm, Tlip: 0.5-0.7 cm, Diam.: 16-24 cm
Reference: Hayes 1972, 39-41, forms 14A and 14B
Date: A: Mid 2nd century AD, B: second half 2nd century AD

G 13. Bowl

Flaring base ring with convex edge, exterior flat, interior flat. Flaring wall, slightly in curving rim, convex lip.
Colours: Slip: 2.5YR 5/8 (red), Core: 2.5YR 6/8 (light red)

Measurements: Mheight: 5.2 cm, Twall: 0.5 cm, Tlip: 0.5 cm, Diam.: 14 cm
Reference: Hayes 1972, 42, form 14/17
Date: Second half 2nd century AD

G 14. Small dish

Shallow shape. Circular base ring with flattened edge, exterior flat, interior flat. Flaring, carinated wall, straight rim, convex lip which is occasionally slightly thickened on the interior.

Colours: Slip: 2.5YR 5/6 (red), Core: 2.5YR 5/6 (red)
Measurements: Mheight: 3.4 cm, Twall: 0.6 cm, Trim: 0.5 cm, Diam.: 14-15 cm
Reference: Hayes 1972, 41-42, form 16
Date: AD 150-200+

G 15. Casserole

Vertical wall, strong external groove and corresponding internal moulding on transition to long rim, which is slightly in curving. The lip is slightly flattened and thickened on the interior. The exterior of the shard is blackened.

Colours: Exterior: 10YR 7/4 (very pale brown), Interior: 5YR 7/6 reddish yellow, Core: 5YR 7/8 (reddish yellow)
Measurements: Mheight: 3.3 cm, Twall: 0.5 cm, Tlip: 0.6 cm, Diam.: 24 cm

Reference: Hayes 1972, 44, form 19
Date: Late 1st-early 2nd century AD

G 16 (A and B). Casserole

This form is characterized by a carinated wall, marked by an outer flange and corresponding inner groove. The exterior of the bottom is covered with several grooves. Flaring wall. 16A is more shallow and has a plain convex rim. 16B is deeper and the rim is thickened on the interior and undercut. The exterior of the rim is often blackened.

Colours: Blackening: 5YR 4/2 (dark reddish grey)-7.5YR 5/0 (grey). Slip: 10R 5/8 (red)-2.5YR 4/8 (red)-2.5YR 5/6 (red), Core: 10R 6/8 (light red)-2.5YR 4/8 (red)-2.5YR 6/6 (light red)
Measurements: 16A: Mheight: 3.2 cm, Twall: 0.4-0.6 cm, Tlip: 0.5-0.6 cm, Diam.: 15-18 cm; 16B: Mheight: 6.0 cm, Twall: 0.4-0.7 cm, Tlip: 0.6-0.9 cm, Diam.: 18-32 cm
Reference: Hayes 1972, 45-48, forms 23A and 23B
Date: A: Early-mid 2nd century AD, B: Mid 2nd-early 3rd century AD

G 17. Dish

Circular base ring with pointed edge. Exterior base is flattened, interior flat but occasionally slightly raised with at least one circular groove. On exterior small angle on transition wall to base. Flaring wall, in curving rim, convex lip. Generally a groove on the interior of the rim, this groove is sometimes absent. Sometimes exterior of the rim is blackened.

Colours: Slip: 2.5YR 5/8 (red)-2.5YR 6/8 (light red), Core: 10R 6/6 (light red)-2.5YR 6/6 (light red)-5YR 6/6 (reddish yellow)
Measurements: Mheight: 4.5 cm, Twall: 0.4-0.7 cm, Trim: 0.45-0.7 cm, Diam.: 14-36 cm, most examples between 20 and 30 cm
Reference: Hayes 1972, 49-51, form 27
Date: AD160-220

G 18. Large lid

Flaring top ring with flattened edge, exterior flat, interior concave. Flaring wall, straight rim, convex lip. Lip is sometimes thickened on the exterior, generally of convex to triangular shape. Sometimes a sharp transition on interior lip to the rim. Occasionally a groove on exterior of wall. Exterior of lip and rim is often blackened. This form is unslipped.

Colours: Blackening: 5YR 4/1 (dark grey)-5YR 5/1 (grey). Exterior and interior: 10R 6/6 (light red)-2.5YR 6/6 (light red)-5YR 6/6 (reddish yellow). Core: 10YR 6/6 (light red)-2.5YR 6/8 (light red)
Measurements: Mheight: 4.8 cm, Twall: 0.4-0.7 cm, Tlip: 0.6-1.2 cm, Diam.: 18-36 cm
Reference: Hayes 1972, 208-209, form 196
Date: Mid 2nd-mid 3rd century AD

G 19. Casserole

Rounded bottom, on exterior covered with many grooves. Generally vertical straight wall, grooved on interior and carena on transition to bottom. Sometimes wall slightly flaring or slightly spreading in- or outwards. Straight rim. Convex lip with heavy convex thickening on the exterior and undercut. Generally groove on top to receive a lid. Sometimes this groove

is absent. Incidentally the lip is more protruding outwards with the thickening of more angular shape and a stronger undercut. There is substantial variation in the dimensions of the different fragments of this form. Often the rim and lip are blackened on the exterior. *Colours:* Blackening: 2.5YR 5/2 (weak red)-5YR 6/2 (pinkish grey), Slip: 2.5YR 6/6 (light red)-2.5YR 6/8 (light red), Core: 2.5YR 6/6 (light red)-5YR 7/6 (reddish yellow)

Measurements: Mheight: 14.6 cm, Twall: 0.3-1.0 cm, Tlip: 0.7-1.4 cm, Diam.: 12-35 cm

Reference: Hayes 1972, 209, form 197

Date: Late 2nd-mid 3rd century AD

G 20. Large dish

Spreading wall, making a strong turn inwards towards the floor. Straight rim, convex tapering lip.

Colours: Slip: 2.5YR 5/6-2.5YR 5/8 (red). Core: 10YR 5/6 (red)

Measurements: Mheight: 3.7 cm, Twall: 0.6 cm, Tlip: 0.3 cm, Diam.: 20-30 cm

Reference: Hayes 1972, 52-53, form 31

Date: Early-mid 3rd century AD

G 21. Dish

Flaring wall, short flat rim, either horizontal or slightly down turning, convex lip.

Colours: Slip: 10R 4/8 (red)-2.5YR 6/8 (light red)-5YR 6/8 (reddish yellow), Core: 10R 6/8 (light red)-2.5YR 6/6 (light red)

Measurements: Mheight: 3.1 cm, Twall: 0.5-0.7 cm, Trim: 0.4-0.8 cm, Diam.: 24-34 cm

Reference: Hayes 1972, 55, form 32

Date: Early-mid 3rd century AD

G 22. Large bowl

Thin walled. Unknown wall turning sharply into a broad flat rim, which is slightly sloping upwards. Convex lip.

Colours: Slip: 5YR 6/6 reddish yellow, Core: 5YR 6/6 reddish yellow

Measurements: Mheight: 1.4, Twall: 0.4 cm, Trim: 0.4 cm, Diam.: 28 cm

Reference: Hayes 1972, 62-65, form 45B

Date: AD 230/240-320

G 23. Plate

Thin walled. Broad, almost flat out curving rim. Convex tapering lip; groove on lip.

Colours: Slip: 2.5YR 6/8 (light red), Core: 2.5YR 5/8 (red)

Measurements: Mheight: 1.8 cm, Trim: 0.5 cm, Tlip: 0.3 cm, Diam.: 20 cm

Reference: Hayes 1972, 65-67, form 48B

Date: AD 260-320

G 24. Plate

Flat floor, on interior as well as and the exterior. Transition wall to floor marked by either a tiny foot or a shallow groove. Flaring wall, in curving rim, convex lip. Clear turning marks on exterior of the wall.

Colours: Slip: 2.5YR 5/2 (greyish brown)-7.5YR 6/8 (reddish yellow), Core: 10YR 6/3 (pale brown)

Measurements: Mheight: 3.3 cm, Twall: 0.4-0.5 cm, Trim:

0.3 cm, Diam.: 14-30 cm

Reference: Hayes 1972, 67-69, form 49

Date: AD 230/240-300

G 25 (A and B). Large dish

Two variants. One (A) with tiny convex foot, interior and exterior base are flat. Spreading wall, straight rim, convex lip. Generally thin-walled. The angle with which the wall meets the floor is quite variable. The second variant (B) is characterized by a slightly more flaring and generally thicker wall.

Colours: A and B: Slip: 2.5YR 5/6 (red), Core: 2.5YR 6/6 (light red)-2.5YR 6/8 (light red)

Measurements: A: Mheight: 3.6 cm, Twall: 0.3-0.5 cm, Trim: 0.3 cm, Diam.: 24-40 cm; B: Mheight: 4.5 cm, Twall:

0.4-0.6 cm, Trim: 0.4 cm, Diam.: 20-40 cm

Reference: Hayes 1972, 69-73, forms 50 A and B

Date: A: AD 230/240-360, B: AD 350-400+

G 26. Flat-based dish

Flaring wall, short flat rim, either horizontal or slightly down turning. One groove on interior right near the lip which is convex.

Colours: Slip: 2.5YR 4/8 (red)-2.5YR 5/8 (red)-2.5YR 6/8 (light red), Core: 2.5YR 5/6 (red)-2.5YR 6/4 (light reddish brown)-5YR 7/6 (reddish yellow).

Measurements: Mheight: 3.7 cm, Twall: 0.3-0.7 cm, Trim: 0.4-0.7 cm, Diam.: 20-40 cm

Reference: Hayes 1972, 93-96, form 58

Date: AD 290/300-375

G 27. Flat-based dish

Flaring wall, broad flat rim, either horizontal or slightly up turning. Two clear grooves on interior of rim, convex lip.

Colours: Slip: 10R 5/8 (red)-2.5YR 5/8 (red), Core: 2.5YR 6/6 (light red)-2.5YR 6/8 (light red)

Measurements: Mheight: 1.6 cm, Twall: 0.5 cm, Trim: 0.5-0.8 cm, Diam.: 28-40 cm

Reference: Hayes 1972, 96-100, form 59

Date: AD 320-420

G 28 (A and B). Flat-based dish

Flat base, with groove on interior and corresponding ridge on exterior on transition to wall. Flaring wall, slightly in curving rim, flattened on the exterior to create a triangular profile. Convex lip. A differs from B by a less sharp angle of the rim, being almost horizontal and therefore creating a less pronounced triangle on the exterior.

Colours: Slip: 2.5YR 5/6 (red)-2.5YR 5/8 (red). Core 10R 5/6 (red)-2.5YR 6/6 (light red)

Measurements: A: Mheight: 2.2 cm, Twall: 0.6 cm, Trim 0.9 cm, Diam.: 28 cm; B: Mheight: 4.0 cm, Twall: 0.5-0.6 cm, Trim: 1.0-1.1 cm, Diam.: 26-32 cm

Reference: Hayes 1972, 100-107, forms 61A and 61B

Date: A: AD 325-400/420, B: AD 400-450

G 29. Flat-based dish

Extremely shallow shape. Flaring wall, straight rim, convex lip.

Colours: Slip: 2.5YR 5/8 (red)-2.5YR 6/8 (light red), Core: 10R 5/8 (red)

Measurements: Mheight: 2.5 cm, Twall: 0.8-1.0 cm, Tlip:

0.7-0.8 cm, Diam.: 23-36 cm

Reference: Hayes 1972, 109-111, form 64

Date: Early-mid 5th century AD

G 30. Large bowl

Flaring wall, two-part flaring rim, made up of a horizontal part curving upwards into an out curving part. The transition between the two parts is marked on the interior of the rim by a groove. Another clear groove on the interior of the rim near the lip, which is convex and sometimes thickened on both the in- and the exterior. *Colours:* Slip: 10R 5/8 (red)-10R 6/8 (red)-2.5YR 6/8 (light red), Core: 10R 5/6 (red)-2.5YR 5/6 (red) *Measurements:* Mheight: 4.3, Twall: 0.6 cm, Trim: 0.6-1.0 cm, Tlip: 0.7-1.3 cm, Diam.: 17-40 cm

Reference: Hayes 1972, 112-116, form 67

Date: AD 360-470

G 31. Large bowl

More or less flat rim, slightly up turning. Two strong grooves on the interior of the rim. Large thickened lip, which is bevelled on the exterior.

Colours: Slip: 5YR 6/6 (reddish yellow), Core: 5YR 5/6 (yellowish red)

Measurements: Mheight: 1.8 cm, Trim: 0.6 cm, Tlip: 1.6 cm, Diam.: 34 cm

Reference: Hayes 1972, 116-119, form 68

Date: AD 370-425

G 32. Small bowl

Broad flat rim, slightly up turning, a groove marks the transition to the lip, which is convex and heavily thickened on both sides. Notches on lip.

Colours: Slip: 2.5YR 6/8 (light red), Core: 10R 6/8 (light red)

Measurements: Mheight: 1.2 cm, Trim: 0.6 cm, Tlip: 1.2 cm, Diam.: 18 cm

Reference: Hayes 1972, 121-124, form 73A

Date: AD 420-475

G 33. Flanged bowl

Spreading wall, straight rim with broad convex to straight flange on exterior with bevelled to hanging edge, convex lip.

Colours: Slip: 2.5YR 5/6 (red)-2.5YR 5/8 (red)-2.5YR 6/8 (light red), Core: 10R 5/6 (red)-10R 6/8 (light red)-2.5YR 6/6 (light red)

Measurements: Mheight: 4.0 cm, Twall: 0.4-0.7 cm, Tlip: 0.5 cm, Flange: Mdepth: 2.7 cm, Twall: 0.7-0.8 cm, Diam.: 22-30 cm

Reference: Hayes 1972, 140-144, form 91B

Date: AD 450-530

G 34. Large bowl

Flaring wall, groove on exterior halfway up the wall. Short flat rim, convex lip.

Colours: Slip: 2.5YR 5/8 (red), Core: 2.5YR 6/8 (light red)

Measurements: Mheight: 4.4 cm, Twall: 0.6 cm, Trim: 0.6 cm, Diam.: 34 cm

Reference: Hayes 1972, 145-148, form 93B

Date: AD 500-540

G 35. Bowl

Flaring wall, rim heavily rolled on the exterior and

undercut, convex lip.

Colours: Slip: 2.5YR 5/6 (red), Core: 2.5YR 6/6 (light red)

Measurements: Mheight: 2.5 cm, Twall: 0.5 cm, Trim: 1.0 cm, Diam.: 20 cm

Reference: Hayes 1972, 152-155, form 99

Date: AD 510-620

G 36. Large dish/bowl

Slightly out curving wall, heavy knobbed rim with groove on transition rim to wall. Convex lip.

Colours: Slip: 2.5YR 5/8 (red), Core: 2.5YR 5/8 (red)

Measurements: Mheight: 1.8 cm, Twall: 0.5 cm, Trim: 1.1 cm, Diam.: 30-36 cm

Reference: Hayes 1972, 160-166, form 104A

Date: AD 530-580

G 37. Large dish/bowl

Spreading wall, heavy knobbed rim thickened on both sides. Three grooves on transition rim to wall. Convex lip.

Colours: Slip: 2.5YR 5/8 (red), Core: 2.5YR 5/6 (red)

Measurements: Mheight: 1.3 cm, Twall: 0.6 cm, Trim: 1.0 cm, Diam.: 30 cm

Reference: Hayes 1972, 160-166, form 104B

Date: AD 570-600

G 38. Decorated fragment

Palm leaf decoration, consisting of several lozenge-shaped leaves

Reference: Hayes 1972, 229-231, stamped decoration type 4h

Date: AD 350-Early 5th century AD

G 39. Decorated fragment

The decoration consists of an ovoidal shaped palm branch.

Reference: Hayes 1972, 229-231, stamped decoration type 4k

Date: AD 350-early 5th century AD

G 40. Decorated fragment

Decoration of a broad palm leaf with at the top a double central spine, converging near the middle of the depiction.

Reference: Hayes 1972, 231, stamped decoration type 5l

Date: AD 410-470

G 41. Decorated fragment

Decoration consists of a pattern of four concentric circles.

Reference: Hayes 1972, 235, stamped decoration type 27h

Date: AD 350-470

G 42. Decorated fragment

Square stamp with diagonal running lines isolating small diamond shaped objects.

Reference: Hayes 1972, 241, stamped decoration type 69c

Date: AD 350-470

G 43. Decorated fragment

Decoration depicting a circle internally subdivided into many small squares by intersecting lines. Some of the squares have a point in the middle.

Reference: Hayes 1972, 241, stamped decoration type 70e

Date: AD 350-425

G 44. Decorated fragment

Chevron stamp depicting several converging leaf-sprays.

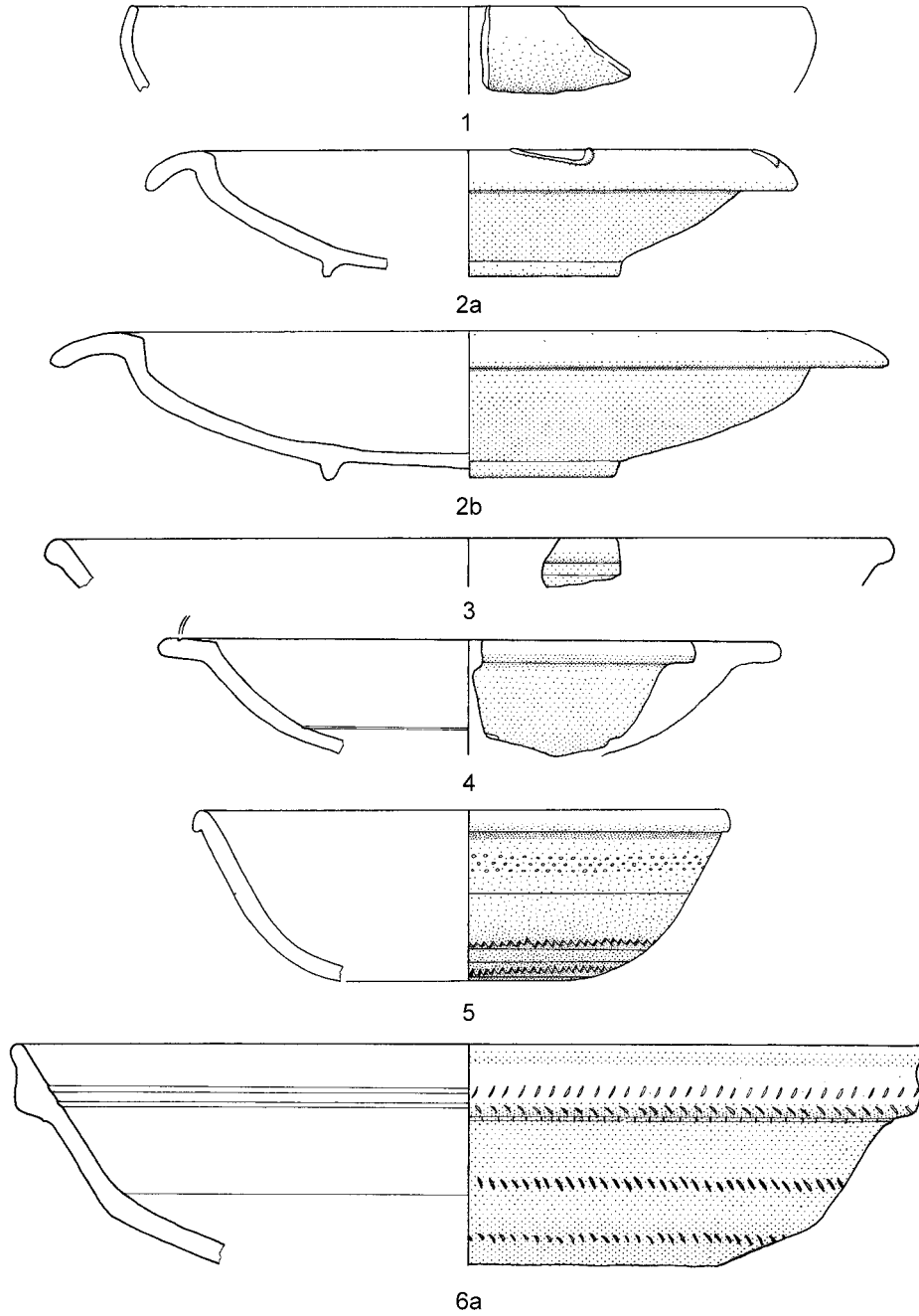
Reference: Hayes 1972, 243, stamped decoration type 77s
Date: AD 410-470

G 45. Decorated fragment

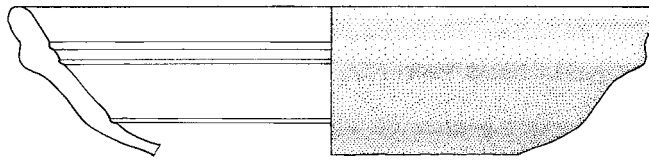
Decoration consists of a simple leaf-clover (only fragment visible in drawing).

Reference: Hayes 1972, 245, stamped decoration type 78b
Date: Late 4th century AD

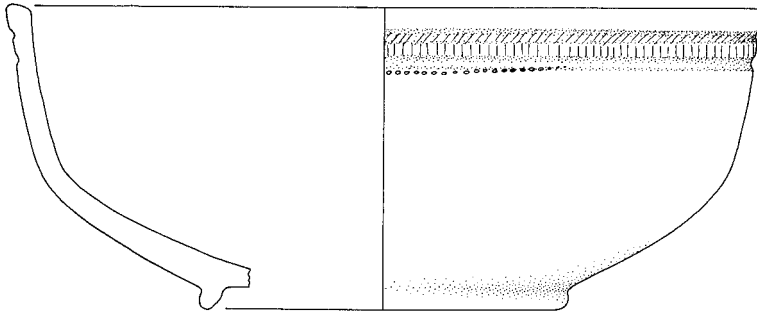
African Red Slip Ware



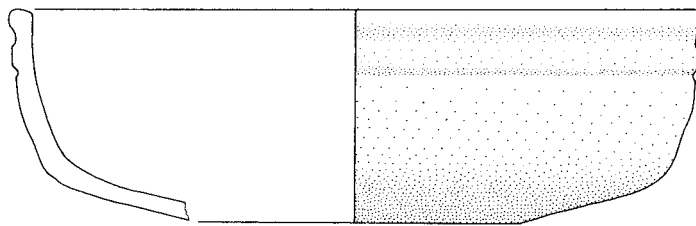
African Red Slip Ware



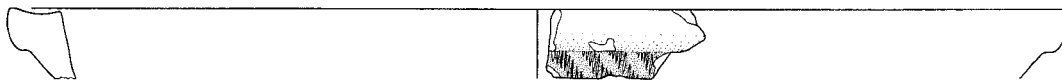
6b



7a



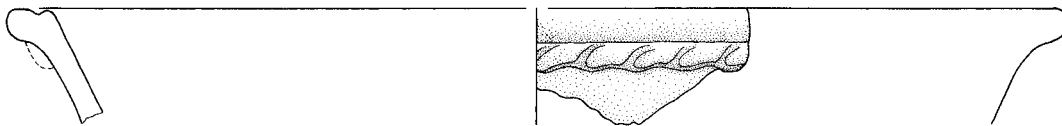
7b



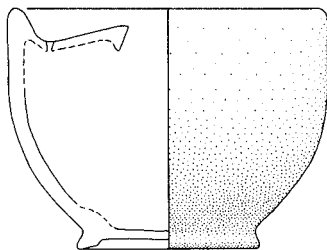
8



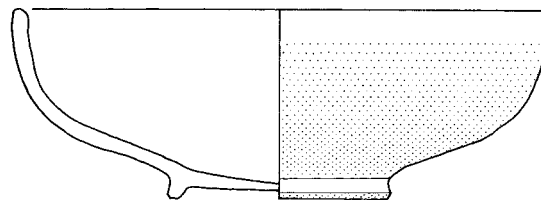
9



10

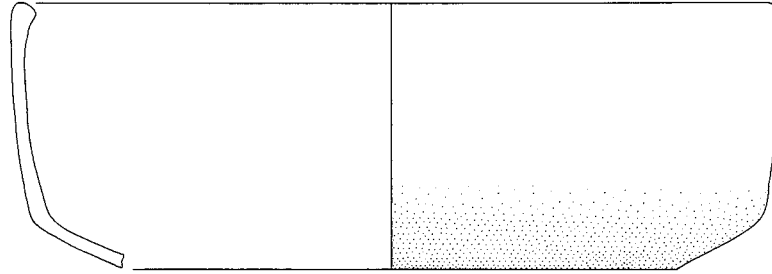


11

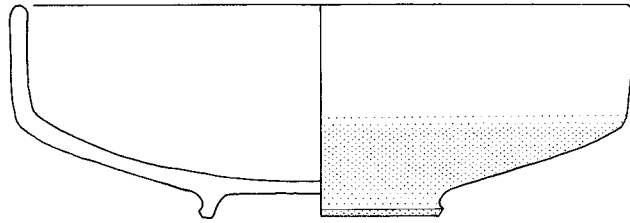


13

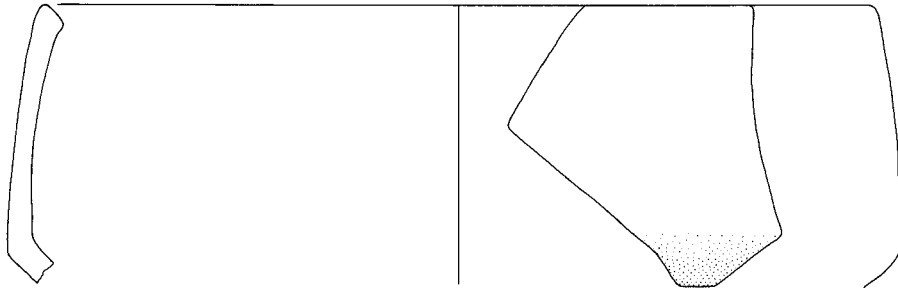
African Red Slip Ware



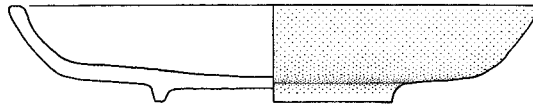
12a 1



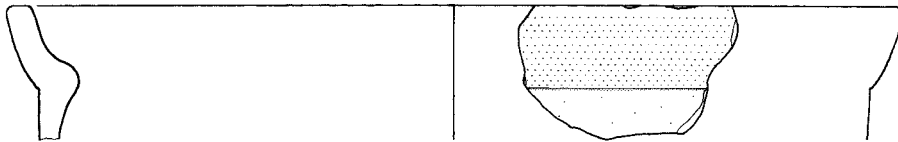
12a 2



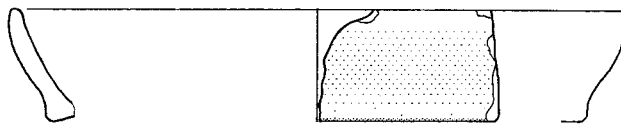
12b



14

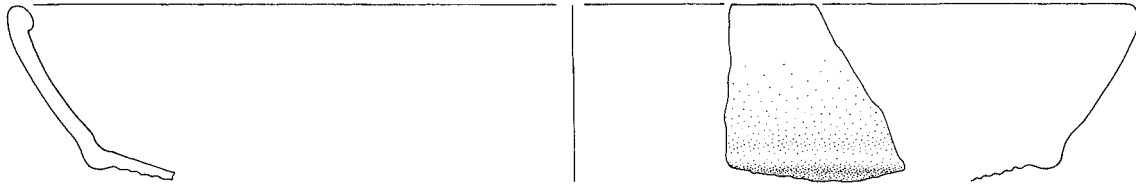


15

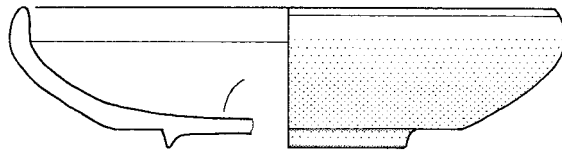


16a

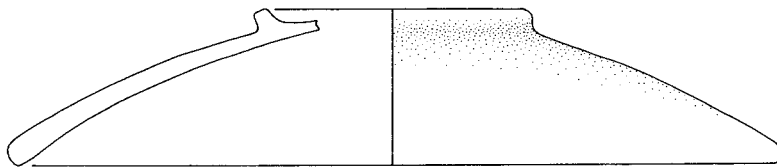
African Red Slip Ware



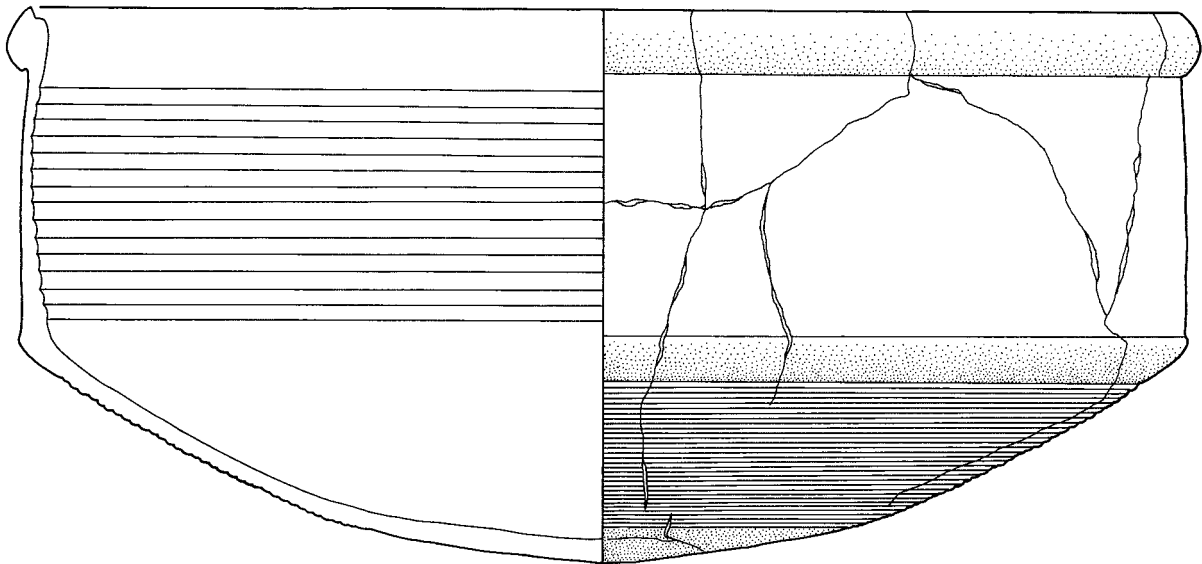
16b



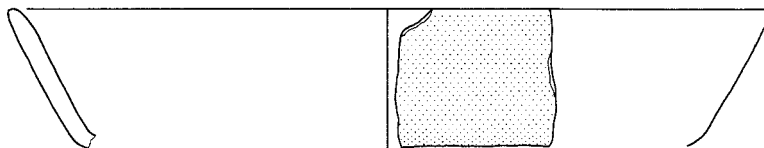
17



18

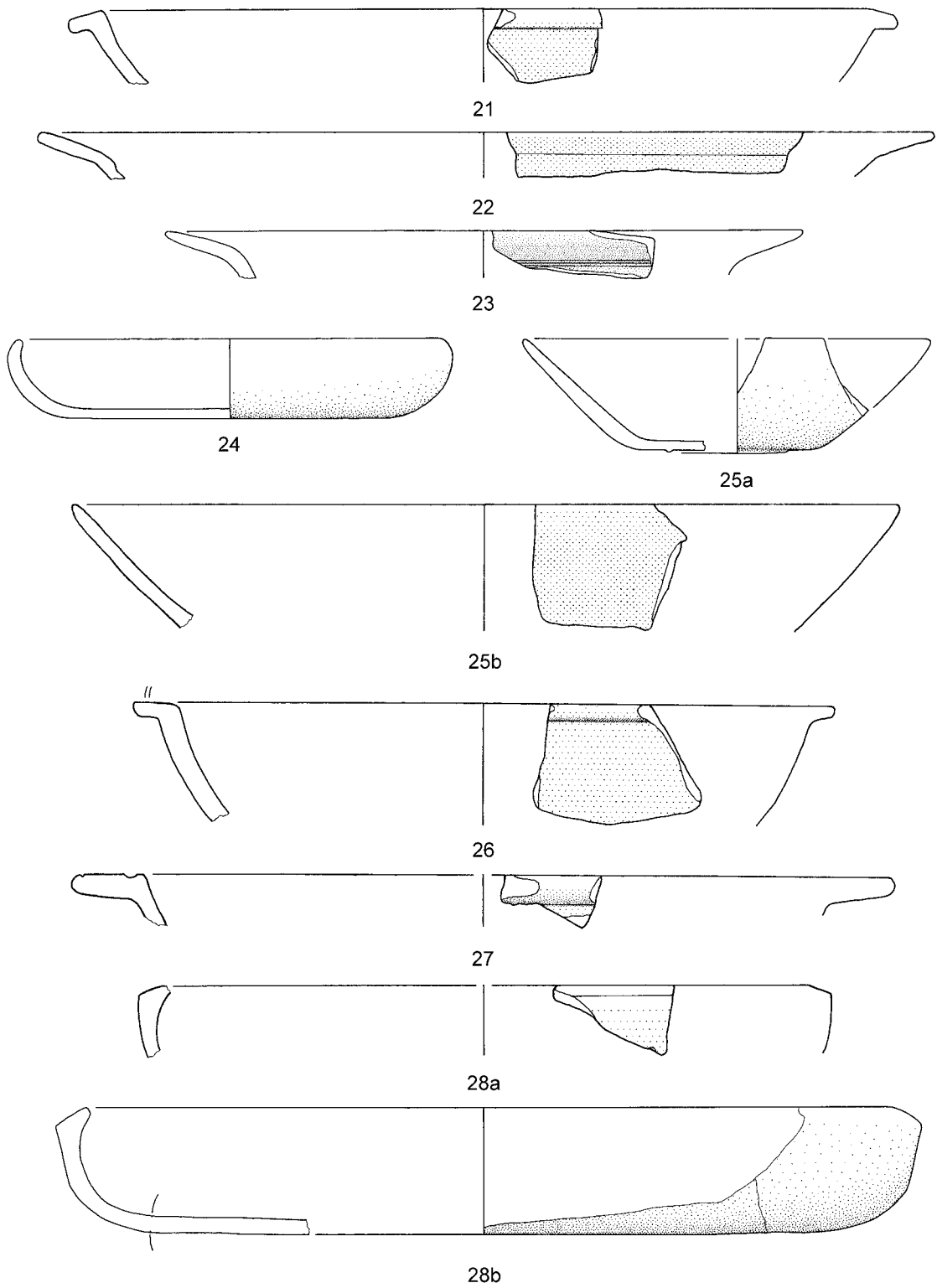


19

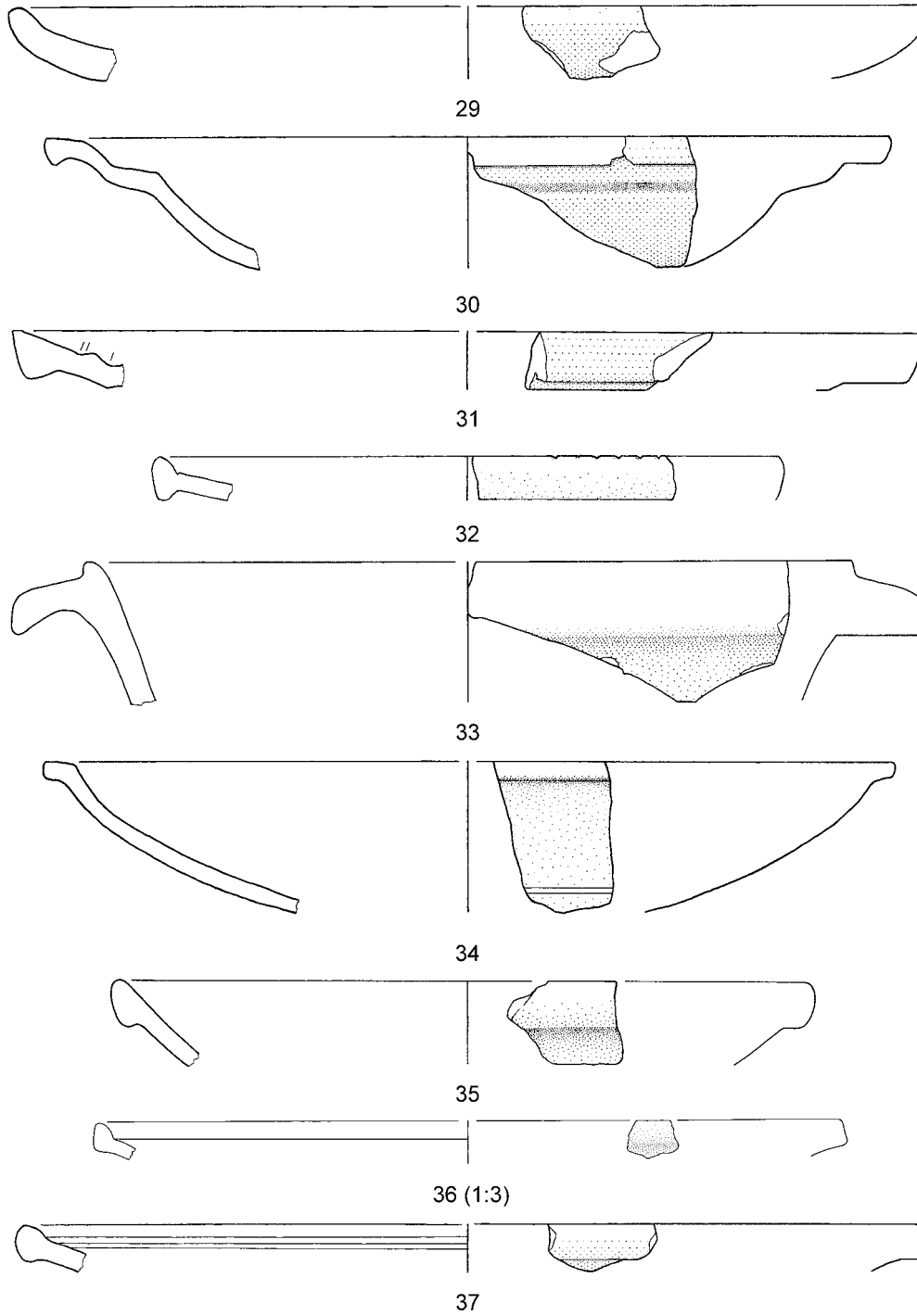


20

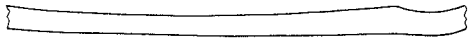
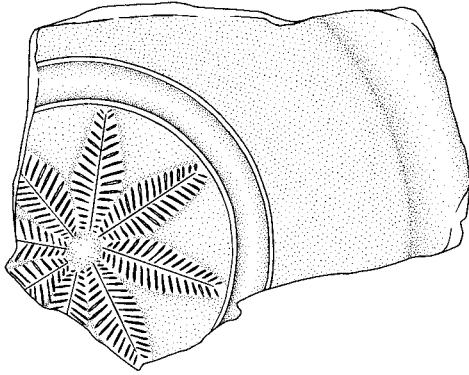
African Red Slip Ware



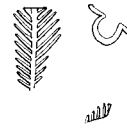
African Red Slip Ware



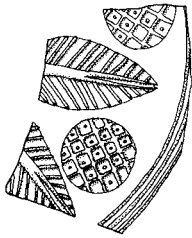
African Red Slip Ware



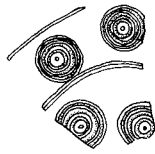
38



39



40/43



41



42/44



45

PART V
SITE CATALOGUE

Introduction to the Site Catalogue

This catalogue presents a compilation of all archaeological sites known from the Nettuno municipality. It includes sites mapped during the topographical studies by Piccarreta and Liboni, as well as sites recorded during the intensive surveys and site revisits carried out by the GIA, and other previously known sites.

SITE DESCRIPTIONS

The description of each site consists of the following elements:

Site identification:

- A 5-digit site ID. Supplementary ID's by which a site is also known, have been added.
- A toponym (when available).
- The site's centroid coordinates (Roma 1940 Gauss Boaga Est).

Survey information:

- The survey method(s) used to investigate the site.
- The number and type of samples taken. If materials from the collection of the *Antiquarium* of Nettuno have been assigned to a site, their inventory numbers are mentioned as well.

Standard samples are collected during the block surveys from walker transects for each survey unit at a specified coverage (usually 20%).

Diagnostic samples are targeted at obtaining qualitative information, and usually include rims, handles, bases as well as decorated fragments.

Total samples are usually collected at small and/or diffuse (protohistoric) sites for which the standard samples only include few artefacts. Total samples include all surface artefacts from a survey unity, as they are taken at 100% coverage.

Grab samples are all non-systematic artefact collections, and include all samples to which none of the above definitions apply. Museum inventory numbers are presumably comparable to grab samples.

Site information:

- The geographical position of the site and the survey conditions.
- An estimation of the dimensions of the site (when possible).
- The material evidence for each site with, in the case of dated diagnostics materials, a reference (between brackets) to the relevant ceramic typologies. lithic material from the GIA surveys is not included, as it has been published elsewhere.³³⁰
- The site's chronology.
- A description of the site.

Reference:

- Bibliographical references to previous publications.

NOTE

³³⁰ Attema et al. 2008.

Site Descriptions

Site 11201

Piccarreta 1

Toponym:

Astura

Coordinates:

X: 2333526; Y: 4587564

Survey method:

Unsystematic

Samples:

1 grab sample (P1/G.S.)

Geographical position and find circumstances:

The site is situated 100 m south-west of the mouth of the Astura river and was previously mapped by Piccarreta in the 1970s. The remains of the site can be seen in a naturally eroded section, running over a length of approximately 100 m.

Site dimensions:

Approximately 34 ha (according to Piccarreta's mapping)

Material:

Impasto; Archaic and post-Archaic coarse ware; Building material (tile, wall remains); Coarse ware (C 68); Amphora; Depurated ware; African Red Slip Ware (G 6A, G 12A, G 18, G 35); Pompeian Red Ware; Glass

Site chronology:

Iron Age (7th century BC?); Archaic period; post-Archaic period; Republican period (250-30 BC); Imperial period (30 BC-AD 400); possibly late Antique and early Medieval period (6th and 7th centuries AD); Medieval period (8th century AD)

Description:

The section probably represents the edge of a large settlement. The many tiles and the wall remains in the section point to the presence of



buildings. On the basis of the artefact assemblage we may assume a possible continuity in human presence from the 7th/6th century BC to the 8th century AD, although pottery from the early Republican period is so far lacking. The artefact assemblage suggests a settlement, at a short distance from the mouth of the Astura, that was inhabited from the Orientalizing period onwards. We must, however, be very cautious with our interpretations since the material found in the section was not in situ, as shards with very different dates were found mixed together.

Reference:

Piccarreta 1977, 21

Site 11202

Piccarreta 2

Toponym:

Torre Astura

Coordinates:

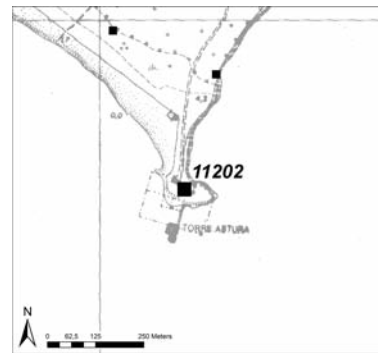
X: 2333283; Y: 4586739

Survey method:

Unsystematic

Samples:

Several grab samples were collected during revisits in 2005/2006; Museum inventory numbers: TA.101.01-TA.101.27; TA.102.01-TA.102.77; TA.103.01-TA.103.05; TA.104.01; TA.105.01-TA.105.03; TA.106.01-TA.106.07; TA.107.01-TA.107.02; TA.108.01-TA.108.04; TA.109.01-TA.109.04; TA.110.01-TA.110.08; TA.111.01-TA.111.23; TA.112.01-TA.112.04; TA.113.01-TA.113.04; TA.114.01-TA.114.02; TA.115.01; TA.116.01-TA.116.05; TA.117.01-TA.117.02



Geographical position and find circumstances:

The Roman villa maritima of Torre Astura is situated on the shore to the south-west of the mouth of the river Astura, at a point where the shore juts out into the sea at a sharp bend in the coastline. Five components may be discerned in the complex (see for a more detailed description Piccarreta 1977, 21-66; figure 3):

- Remains of a terrace
- Remains of a bridge aqueduct
- A large fish basin, with the medieval tower of Astura built on it
- The remains of a *basis villae*
- Remains of a port

It was not possible to conduct a systematic investigation of this site due to its location within military property and its monumental status. Over the years several grab samples were collected from the site.

Site dimensions:

Approximately 4 ha (dimensions of the port not included)

Material:

Impasto; Bucchero; Building material (marble, tile (some stamped examples; Misc. nrs.1-4), brick); Coarse ware (C 7, C 10, C 12, C 13, C 14, C 20, C 21, C 24, C 29, C 37, C 38, C 39, C 42, C 45, C 47, C 48, C 52, C 54, C 56, C 58, C 60, C 65, C 69, Misc. nr.32); Amphora; Depurated ware; Black Glazed Ware (E 5, E 15, E 19, E 27, E 31, E 32); Terra Sigillata (F 2, F 3, F 4, F 5, F 8, F 9, F 10, F 11, F 12-13, F 14, F 17, F 19, F 21, F 25); African Red Slip Ware (G 2A, G 2B, G 4, G 5, G 6A, G 6B, G 7A, G 7B, G 8, G 10, G 11, G 12A, G 12B, G 13, G 14, G 16A, G 16B, G 17, G 18, G 19, G 22, G 24, G 25, G 27, G 28B, G 30, G 32, G 33, G 38, G 41, G 43, G 45); Loom weights; Oil lamps; Lead (Misc. nr.33); Bronze; Roman Glass; Worked bone; Terracotta (ao statues; Misc. nos 17-20, 30); Coins

Site chronology:

(Middle) Bronze Age; Iron Age (7th century BC); Possibly Archaic period; Republican period (350 BC-30 BC); Imperial period (30 BC-AD 400); late antique and early medieval period (5th-6th century, possibly

7th century AD); Medieval period (9th and 12th centuries AD, possibly 10th-11th century AD)

Description:

Several impasto shards place the earliest occupation of the site in the Middle Bronze Age. A fairly large amount of impasto as well as several bucchero fragments indicate activity in the Orientalizing period. Evidence for the post-Archaic period is absent. Fragments of Black glazed Ware and some diagnostic coarse ware pieces indicate reuse of the site somewhere during the Republican era. Large quantities of Terra Sigillata and African Red Slip Ware, along with other find categories, indicate an increase in activity from the late Republican period or the start of the Imperial period onwards. This seems to be the period when the first phase of the villa was erected, judging by the wall remains in *opus reticulatum*. The site seems to have flourished between the mid-1st and the mid-3rd centuries AD. It remained inhabited at least until the 6th century, possibly the 7th AD, as is suggested by the presence of several late African Red Slip Ware fragments. During the Byzantine period a tower was built, using parts of the fishpond as its foundations. Materials dating from the 9th to the 14th century AD show reuse of the site during this period.

Reference:

Castagnoli 1963, 637-644; Quilici 1970; Tomassetti 1976, 385; Piccarreta 1977, 21-66; Piccarreta 1980, 113-115; Cenciarini-Giaccaglia 1982, 214; De Rossi 1984, 136-139; Higginbotham 1997, 143-151; Petrassi et al. 2002, 14-20; Ceccarelli 2004; Petriaggi 2004; Alessandri 2007, 106-108

Site 11203

Piccarreta 3

Toponym:

Pineta di Torre Astura

Coordinates:

X: 2333098; Y: 4587152

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the southwestern part of the *Poligono Militare*, at a short distance from the coast, just inside the perimeter of the Pineta di Torre Astura. The monumental villa complex of Torre Astura itself lies 500 m to the south. Due to its location within military property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks, tuff, remains of walls); Coarse ware; Amphora; Wall plaster

Site chronology:

Roman

Description:

The material evidence may point to the presence of a villa. It is difficult to ascertain a date for the site; at the moment we can only say that it must be of Roman (Republican or Imperial) origin.

Reference:

Piccarreta 1977, 66

Site 11204

Piccarreta 4

Toponym:

Pineta di Torre Astura

Coordinates:

X: 2332283; Y: 4587745

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the southwestern part of the *Poligono Militare*, at a short distance from the beach, just south of site 11205. Due to its location within military property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks, remains of walls in *opus caementicium*); Coarse ware; Amphora; Tesserae; Wall plaster; Remains of a pier.

Site chronology:

Possibly Republican period (250 BC-30 BC); Possibly Imperial period (30 BC-AD 400)

Description:

The material evidence points to the presence of a villa complex, erected probably at the end of the Republican or the start of the Imperial period.

Reference:

Piccarreta 1977, 66-67

Site 11205

Piccarreta 5

Toponym:

La Banca

Coordinates:

X: 2332036; Y: 4587810

Survey method:

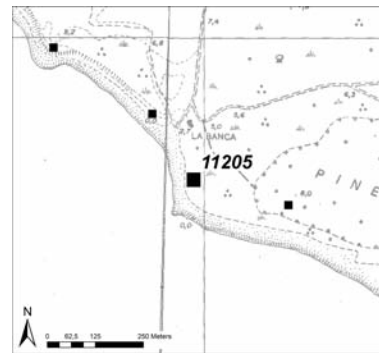
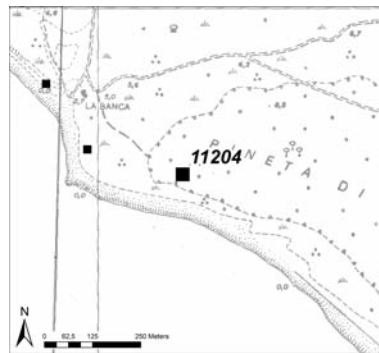
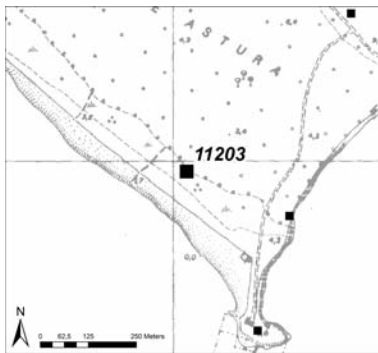
No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is situated 1.6 km northwest of Torre Astura, along the coast



in the southern-central part of the *Poligono Militare*. It consists of a villa with an associated fishpond. The villa is nowadays completely obscured by sand dunes, but its presence is indicated by a substantial amount of artefacts around the location, including many building materials. The fishpond is damaged but still visible.

Site dimensions:

Unknown

Material:

Building material (tile)

Site chronology:

Possibly Republican period (100-30 BC); Imperial period (30 BC-AD 100)

Description:

On the basis of the building technique - opus reticulatum - that was used in the fishpond, it can be dated to the end of the Republican period or the start of the Imperial period.

Reference:

Piccarreta 1977, 67-68; Higginbotham 1997, 140-143

Site 11206

Piccarreta 6

Toponym:

La Banca

Coordinates:

X: 2331929; Y: 4587981

Survey method:

Unsystematic survey

Samples:

1 grab sample

Geographical position and find circumstances:

The site lies within the first row of dunes, just north-west of Torre Astura in the south-western part of the *Poligono Militare*. During a visit to the site by L. Alessandri in February 2000, several small impasto

fragments were collected from the slope of the dune facing the sea.

Site dimensions:

Unknown

Material:

Impasto

Site chronology:

Early or Middle Bronze Age

Description:

Piccarreta dated the material from this site to the Iron Age, but a jar fragment collected at a short distance from the site dates to the Early or Middle Bronze Age.

Reference:

Piccarreta 1977, 68; Alessandri 2007, 106-107

Site 11207

Piccarreta 7

Toponym:

Saracca

Coordinates:

X: 2331672; Y: 4588154

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is situated 2.1 km north-west of Torre Astura, along the coast in the southern-central part of the *Poligono Militare*. It consists of a semi-circular fishpond and the remains of a villa. Both structures are heavily damaged and for the largest part obscured from the eye by the dunes.

Site dimensions:

Unknown

Material:

No materials collected

Site chronology:

Possibly Republican period (100 BC-30 BC); Imperial period (30 BC-AD 400)

Description:

The walls of the villa were erected in *opus reticulatum*, indicating an origin somewhere at the end of the Republican or the start of the Imperial period. Later restorations and adjustments of its plan, executed in *opus vittatum*, can be assigned to the late Imperial period. It is probable that the fishpond was built at the same time as the villa itself.

Reference:

Piccarreta 1977, 68-74; Higginbotham 1997, 137-140

Site 11208

Piccarreta 8

Toponym:

Saracca

Coordinates:

X: 2331338; Y: 4588539

Survey method:

Unsystematic

Samples:

1 grab sample (P8/G.S.)

Geographical position and find circumstances:

The site is located on the coast in the south-western part of the *Poligono Militare*. The site was visited in the summer of 2005, when a substantial ceramic sample was collected.

Site dimensions:

Unknown

Material:

Building material (tile, marble, wall plaster); Coarse ware; Black Glazed Ware; Terra Sigillata; African Red Slip Ware (G 7A, G 16A, G 16B, G 18, G 19); Tesseræ

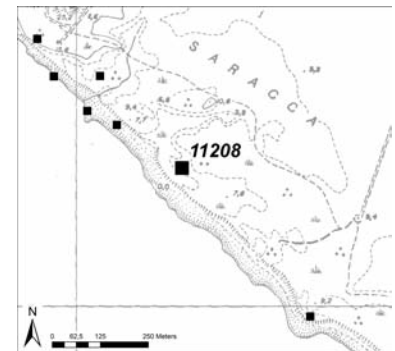
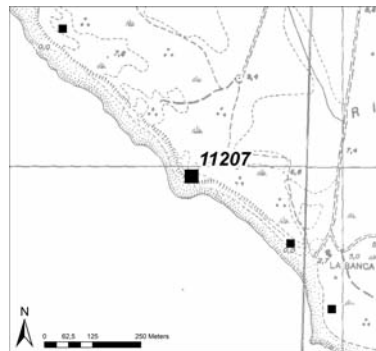
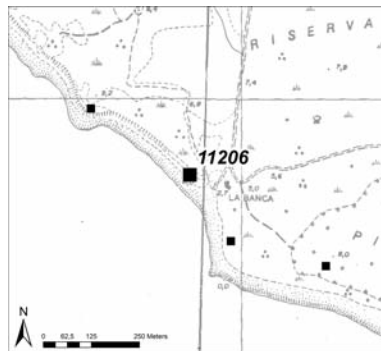
Site chronology:

Possibly Republican period (350-30 BC); Imperial period (30 BC-AD 250, possibly AD 250-AD 400)

Description:

A definite villa site. Apart from sev-

FYI:
using a technique 'on the fishpond' is more correct than using it 'in the fishpond'



eral walls, nowadays still preserved up to a height of several meters, luxury indicators (marble and painted wall plaster) were found. The finds indicate that the villa was erected in the early Imperial period. Earlier activity on this location is attested by a single Black Glazed Ware fragment. The site was apparently abandoned in the course of the 3rd century AD.

Reference:
Piccarreta 1977, 74-75

Site 11209

Piccarreta 9

Toponym:
Saracca
Coordinates:
X: 2331125; Y: 4588779
Survey method:
No survey
Samples:
No samples taken

Geographical position and find circumstances:

The site is located in the central-western part of the *Poligono Militare*, on the coast, just north of site 11208. It consists of a protohistoric layer underneath a wall in *opus reticulatum*.

Site dimensions:

Unknown

Material:

Impasto; Building material (tiles, bricks, remains of walls in *opus lateritium* and *opus reticulatum*); Coarse ware.

Site chronology:

(Recent) Bronze Age; Possibly Republican period (100-30 BC); Imperial period (30 BC-AD 250)

Description:

The protohistoric site consists of two basins, dug into the sand and filled with fine clay. The proximity

of a large clay bank together with the quantity of clay within the containers and the presence - at a short distance - of sites with a considerable concentration of similar containers in reddish impasto, may indicate that this was a pottery production site, of the type already established for example at *Casale Nuovo*. The ceramic materials collected on this site can be dated to the Recent Bronze Age.

Around the end of the Republican or the start of the Imperial period a building was erected at this location. The lack of status finds suggests that we are not dealing with the type of *villa maritima* typical for this stretch of the coast.

Reference:
Piccarreta 1977, 75-76; Alessandri 2007, 100 & 104-106

Site 11210

Piccarreta 10

Toponym:
Pelliccione
Coordinates:
X: 2331005; Y: 4588778
Survey method:
No survey
Samples:
No samples taken

Geographical position and find circumstances:

The site is situated along the coast in the central-western part of the *Poligono Militare*, just south of site 11212. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Remains of a *cuniculus*

Site chronology:

Roman

Description:

The *cuniculus* is of Roman (Republican or Imperial) origin. We cannot be more specific about the date of the site, because no structures to which it was connected have been identified.

Reference:
Piccarreta 1977, 76

Site 11211

Piccarreta 11

Toponym:
Pelliccione
Coordinates:
X: 2330898; Y: 4588942

Geographical position and find circumstances:

The site is situated in the central-western part of the *Poligono Militare*, close to the sea. It consists of a kiln with a diameter of 4.5 m, dug into the tuff bedrock. The site, previously mapped by Piccarreta, was excavated by a GIA team in 2001.

Survey method:

No survey

Samples:

No samples taken

Site dimensions:

20m²

Site chronology:

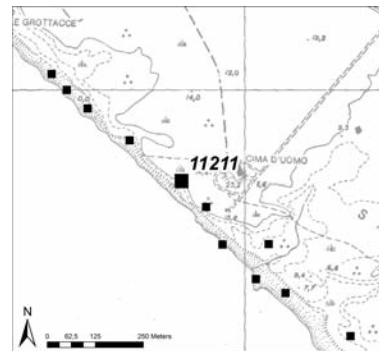
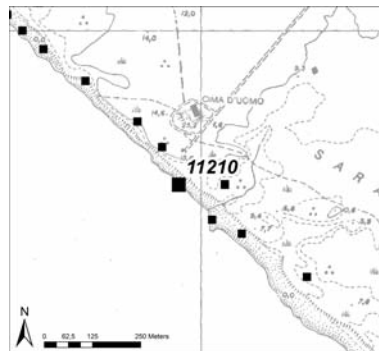
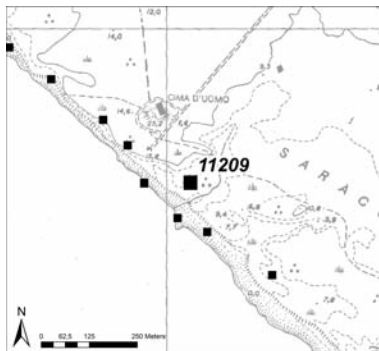
Possibly Republican period (350-30 BC)

Description:

From the excavation two charcoal samples were collected which gave a radio-carbon dating between AD 1480 and AD 1960. These samples, together with a stratum of sea shells and chalk, indicate a lime kiln that must have been in use in the 18th and 19th century. The kiln, however, is identical to Roman lime kilns as described by Cato in the 2nd century BC.

Reference:

Piccarreta 1977, 76; Attema et al. 2003a, 137-138



Site 11212

Piccarreta 12

Toponym:

Pelliccione

Coordinates:

X: 2330763; Y: 4589048

Survey method:

No visit

Samples:

No samples taken

Geographical position and find circumstances:

The site is located along the coast in the central-western part of the *Poligono Militare*, just south of site 11213.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks, remains of walls)

Site chronology:

Roman

Description:

On the basis of the material evidence, we can only conclude we are dealing with a site of Roman origin. On the site there is clear evidence for structures.

Reference:

Piccarreta 1977, 76

Site 11213

Piccarreta 13

Toponym:

Pelliccione

Coordinates:

X: 2330654; Y: 4589131

Survey method:

No survey

Samples:

All materials collected are provenient from excavated pits.

Geographical position and find circumstances:

Site 11213 is located in the central-western part of the *Poligono Mili-*

tare, on a small promontory which has been eroded by the sea on three sides. The site, mapped in the 1970s by Piccarreta, was excavated by the GIA in two successive campaigns in 2001 and 2002.

Site dimensions:

Unknown

Material:

Lithics; Impasto; Italo-Mycenean pottery; Building material (Roman tile); Coarse ware; Amphora

Site chronology:

Middle Palaeolithic period; Middle and Recent Bronze Age; Roman

Description:

Site 11213 contains traces of prehistoric, protohistoric and Roman activity. During the excavation a small trench was dug in the red sands at the base of the cliff. The materials that were collected confirm the presence of a middle Palaeolithic site. The Roman period is represented by off-site material that has intruded in all of the *in situ* protohistoric layers, as well as by one concentration of Roman shards in a humid blackish soil matrix. During the excavation a layer was found containing impasto shards of large containers, often decorated with plastic cords below the rim. Shards with old fractures often matched, clearly confirming that the layer was *in situ*. However, no features could be recorded. Since domestic fine ware and animal bones were almost completely absent we can exclude an interpretation as a domestic context. Instead, we interpret the site as a waste dump where broken pottery and chunks of tuff, which are the residue of salt extraction of the briquetage type, were dumped. The place where the extraction was carried out was probably higher up in the dunes, or in a location that has now been eroded by the sea. Two

animal bones from the lowest level produced radiocarbon dates falling between the 14th and 11th centuries BC. The interpretation of the calibrated C14 dates, in combination with the pottery types which included a shard that probably comes from an Italo-Mycenean cup, suggests a probable date of this site of around the 12th century BC.

Reference:

Piccarreta 1977, 76; Attema et al. 2003a, 107-140; La Rosa 2004; Nijboer et al. 2006; Alessandri 2007, 103-105

Site 11214

Piccarreta 14

Toponym:

Pelliccione

Coordinates:

X: 2330561; Y: 4589220

Survey method:

No survey

Samples:

Several total samples

Geographical position and find circumstances:

The site is located along the coast in the central-western part of the *Poligono Militare*, halfway between sites 11215 and 11213. In the summer of 2002 two pits filled with amphora shards were excavated by the GIA.

Site dimensions:

Unknown

Material:

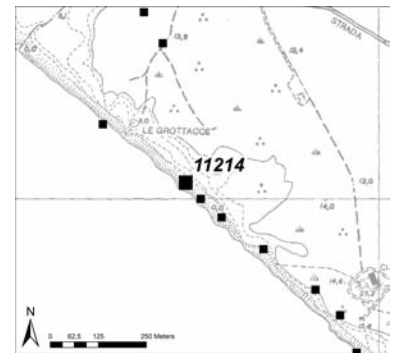
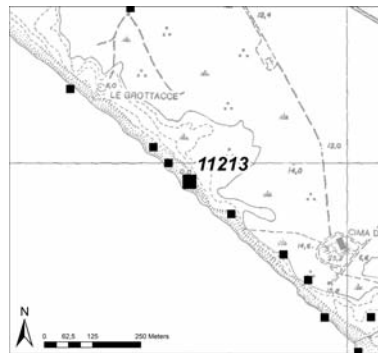
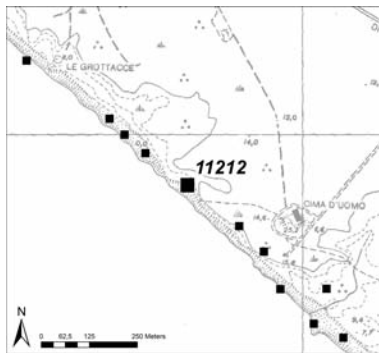
Remains of several walls; Remains of a kiln; Building material (tiles, bricks); Amphora

Site chronology:

Possibly Republican period (100-30 BC); Possibly Imperial period (30 BC-AD 100)

Description:

Piccarreta noticed the remains of a



kiln in association with many large fragments of tiles and amphoras. The remains indicate that a structure was indeed present here. Around the area several large pits filled with amphora shards were studied by the GIA. The material collected is similar to that of the Le Grottaacce villa and probably dates to the 1st century BC. It seems that 11214 was part of the activities conducted within this large villa complex.

Reference:

Piccarreta 1977, 76; Attema et al. 2003a, 133

Site: 11215

Piccarreta 15

Toponym:

Le Grottaacce

Coordinates:

X: 2330358; Y: 4589380

Survey method:

No survey

Samples:

All studied fragments were collected during excavation

Geographical position and find circumstances:

The site is located in the central-western part of the *Poligono Militare*, along the coast, several hundred meters north of site 11213. Below entry 15 of his inventory, Piccarreta described three parts of a villa complex:

- 15a: two large wall fragments in *opus incertum* belonging to a terrace associated with the Roman villa, a drainage system and a large piece of mosaic floor.
- 15b: a large building with walls in *opus reticulatum*, interpreted as a thermal complex with two building phases.
- 15c: the remains of the foundations of, according to Piccarreta,

an *essicatoio* (drying building). On this location there would have been earlier kiln activities.

During the GIA fieldwork campaign of 2001, a large section filled with amphora fragments and various strata and structures related to the villa were mapped. A piece of a mosaic floor of the main building was recovered for restauration and a the evidence for kilns on this site was studied.

Site dimensions:

Unknown

Material:

Impasto; Building material (Roman tile; Wall remains in *opus incertum* and *opus reticulatum*; Remains of a kiln); Coarse ware; Amphora; Fine ware; Mosaic

Site chronology:

(Final) Bronze Age; Republican period (250-30 BC); Imperial period (30 BC-AD 250, possibly AD 250-400)

Description:

On the location of the large section there is evidence for a Final Bronze Age site. The area was subsequently intensively used during the Roman period. The presence of suitable clay beds, tile wasters and kiln debris as well as the local minerals in the clay of the amphoras and tiles, possibly point to amphora and tile production at the spot predating the villa complex. The presence of Dressel 1 amphoras and the *terminus post quem* given by the foundations of walls in *opus reticulatum* in the layer with amphoras, date this phase in the end of the 2nd or the 1st century BC. The villa complex itself was probably built at the end of the 1st century BC or at start of the 1st century AD. In a third phase repair works were carried out at the villa.

Reference:

Blanc 1937; Piccarreta 1977, 76; An-

suini/La Rosa 1989; Attema et al. 2003a, 137/138; Alessandri 2007, 100/103; De Haas et al. 2008

Site 11216

Carnevale

Toponym:

Carnevale/Finocchierelle

Coordinates:

X: 2328936; Y: 4590510

Survey method:

No survey

Samples:

Several total samples

Geographical position and find circumstances:

The site is located along the coast in the central-western part of the *Poligono Militare*, just north of the Vallo-*ne Carnevale*. It consists of a stratum with protohistoric pottery in a section eroded by the sea. The profile was cleaned, drawn and sampled in 2002 by the GIA.

Site dimensions:

Unknown; the finds layer extends over a length of almost 50 m.

Material:

Impasto

Site chronology:

Bronze Age

Description:

Although a substantial amount of material was collected from the location only few fragments were diagnostic. They date to the Bronze Age.

Reference:

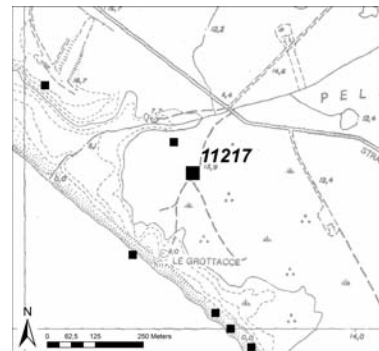
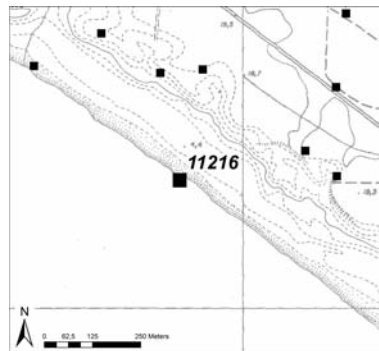
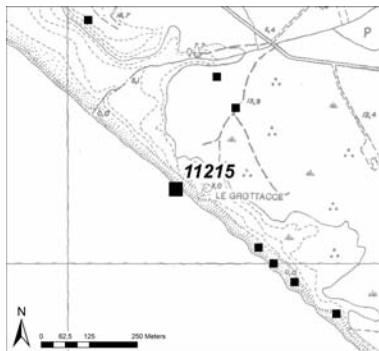
Piccarreta 1977, 76; Attema et al. 2003a, 125; Tol 2003; Alessandri 2007, 98/100

Site 11217

Piccarreta 17

Toponym:

Pelliccione



Coordinates:

X: 2330501; Y: 4589583

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the central-western part of the *Poligono Militare*, at a short distance from the sea, close to site 11218. Due to its location within military property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks, remains of walls in *opus incertum*); Amphora

Site chronology:

Possibly Republican period (250-30 BC)

Description:

There is evidence for structures, possibly of late Republican date. The site may be connected to the large villa 11215, located nearby.

Reference:

Piccarreta 1977, 84

Site 11218

Piccarreta 18

Toponym:

Pelliccione

Coordinates:

X: 2330452; Y: 4589664

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the central-western part of the *Poligono Militare*, at a distance of 250 m from the

sea, close to site 11215. Due to its location within military property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Part of a drainage canal

Site chronology:

Roman

Description:

There probably is a connection between this site and site 11217; the structure dates somewhere in the Roman period. Nowadays the pipe supplies a fountain with water.

Reference:

Piccarreta 1977, 84

Site 11219

Piccarreta 19

Toponym:

Pelliccione

Coordinates:

X: 2330117; Y: 4589812

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the central-western part of the *Poligono Militare*, at ca 200 m from the sea. The extent of the site could not be ascertained by Piccarreta, because of the dense *macchia* vegetation. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles)

Site chronology:

Roman

Description:

The material assemblage reveals

almost nothing about the date or function of the site, except that it probably is of Roman origin.

Reference:

Piccarreta, 1977, 84

Site 11220

Piccarreta 20

Toponym:

Finocchierelle

Coordinates:

X: 2329995; Y: 4590186

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the central-western part of the *Poligono Militare*, right along the present-day coastal road, on the eastern bank of the *Valone Carnevale*. On the location a section revealed several strata containing archaeological material. Due to its location within military property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks, several large *cappellaccio* blocks respectively 60x50x40; 80x60x42 in 170x60x?; within these blocks several holes and crams could be observed); Coarse ware; Amphora

Site chronology:

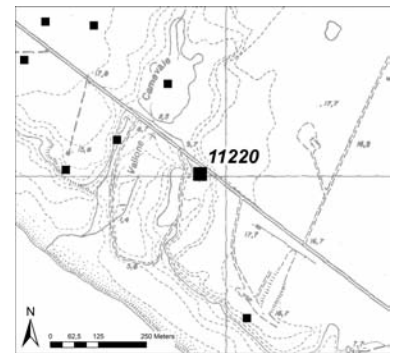
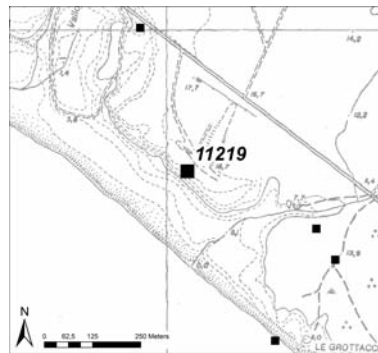
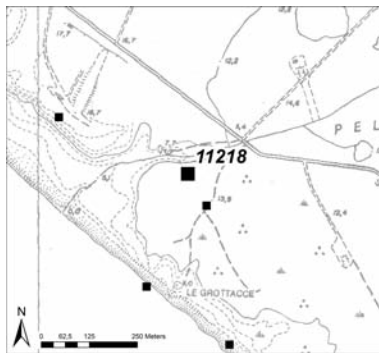
Roman

Description:

The finds are Roman, but at the moment they cannot be dated with any more precision. The building materials and *cappellaccio* blocks indicate that there was a structure on the site.

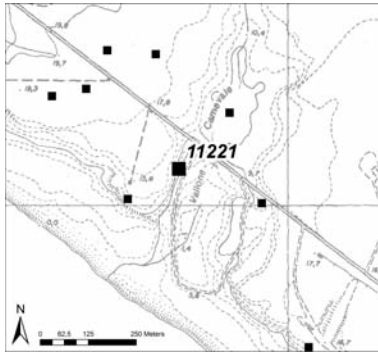
Reference:

Piccarreta 1977, 84



Site 11221

Piccarreta 21



Toponym:
Vallone Carnevale
Coordinates:
X: 2329779; Y: 4590275
Survey method:
No survey
Samples:
No samples taken

Geographical position and find circumstances:

The site is located in the central-western part of the *Poligono Militare*, close to the sea, on the western bank of the Vallone Carnevale. Due to its location on military terrain it was not possible to revisit the site.

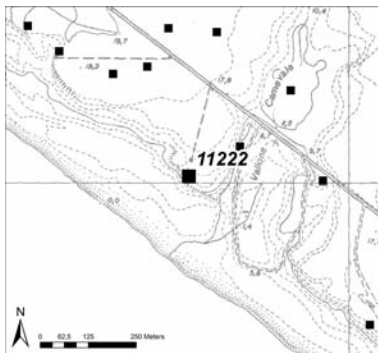
Site dimensions:

Unknown
Material:
Building material (tiles)
Site chronology:
Roman

Description:

The material assemblage reveals almost nothing about the date or function of the site, except that it probably is of Roman origin.

Reference:
Piccarreta 1977, 85



Site 11222

Piccarreta 22

Toponym:
Finocchierelle
Coordinates:
X: 2329646; Y: 4590197

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the central-western part of the *Poligono Militare*, close to the sea, just west of the Vallone Carnevale. Due to its location within military property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks); Pavement in cocciopesto; Coarse ware; Depurated ware; Black Glazed Ware; Amphora

Site chronology:

Republican

Description:

The material assemblage points to the presence of a Republican site, possibly a farm. At the moment it is impossible to propose a more detailed chronology for the site.

Reference:

Piccarreta 1977, 85

Site 11223

Piccarreta 23

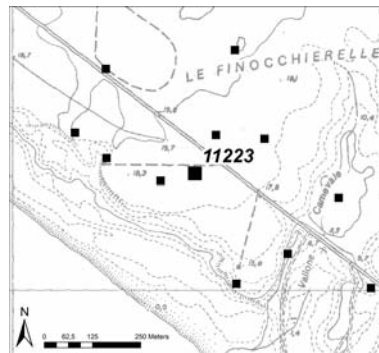
Toponym:
Finocchierelle
Coordinates:
X: 2329538; Y: 4590483

Survey method:

No survey

Samples:

No samples taken



Geographical position and find circumstances:

The site is located in the north-western part of the *Poligono Militare*, close to the sea, in the vicinity of several other archaeological sites. Due to its location within military property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11224

Piccarreta 24

Toponym:
Finocchierelle

Coordinates:
X: 2329449; Y: 4590464

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

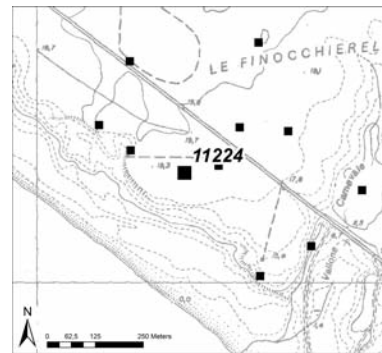
The site is situated in the north-western part of the *Poligono Militare*, approximately 200 m from the sea. Due to its location within military property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles, several large pieces of tuff); Coarse ware; Amphora.



Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period. Although Piccarreta remarks that the tuff fragments are not *in situ*, they are evidence for structures on the site.

Reference:

Piccarreta 1977, 85

Site 11225

Piccarreta 25

Toponym:

Finocchierelle

Coordinates:

X: 2329309; Y: 4590523

Survey method:

No survey

Samples:

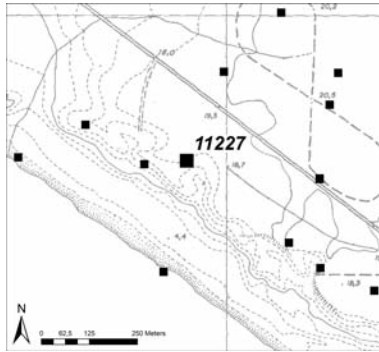
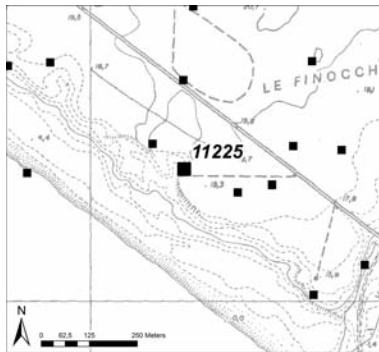
No samples taken

Geographical position and find circumstances:

The site is located in the north-western part of the *Poligono Militare*, just east of site 11226, 250 m from the sea. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown



Material:

Building material (tiles); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11226

Piccarreta 26

Toponym:

Finocchierelle

Coordinates:

X: 2329227; Y: 4590589

Survey method:

No survey

Samples:

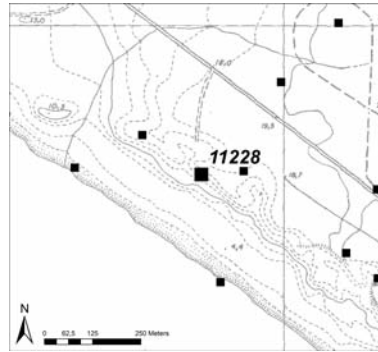
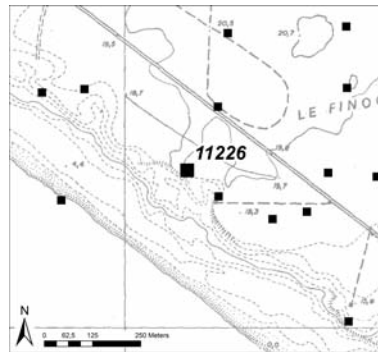
No samples taken

Geographical position and find circumstances:

The site is located in the north-western part of the *Poligono Militare*, at a distance of 250 m from the sea, near several other archaeological sites. Due to its location on military property, it was not possible to revisit the site.

Site dimensions:

Unknown



Material:

Building material (tiles); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11227

Piccarreta 27

Toponym:

Finocchierelle

Coordinates:

X: 2328961; Y: 4590801

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the north-western part of the *Poligono Militare* near 11228. Due to its location on military property, it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11228

Piccarreta 28

Toponym:

Finocchierelle

Coordinates:

X: 2328851; Y: 4590792

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the north-western part of the *Poligono Militare*, approximately 200 m from the sea, just south-east of site 11229. Due to its location within military property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11229

Piccarreta 29

Toponym:

Finocchierelle

Coordinates:

X: 2328698; Y: 4590895

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the north-western part of the *Poligono Militare*, approximately 200 m from the sea. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11230

Piccarreta 30

Toponym:

Finocchierelle

Coordinates:

X: 2329719; Y: 4590573

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this

location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11231

Piccarreta 31

Toponym:

Finocchierelle

Coordinates:

X: 2329593; Y: 4590583

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in a large open area in the central-western part of

the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11232

Piccarreta 32

Toponym:

Finocchierelle

Coordinates:

X: 2329307; Y: 4590755

Survey method:

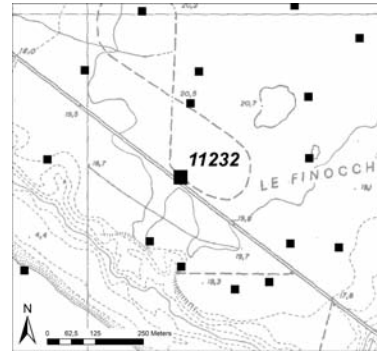
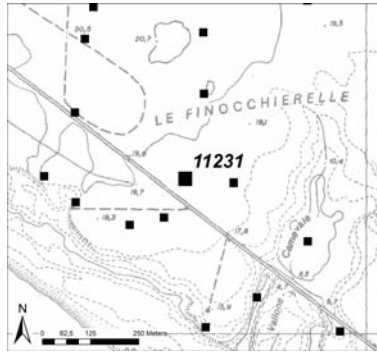
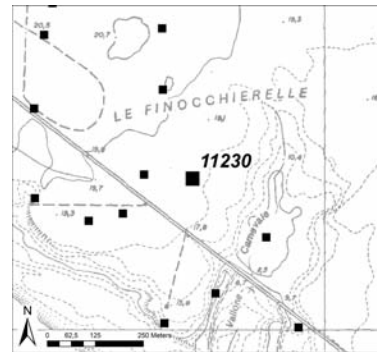
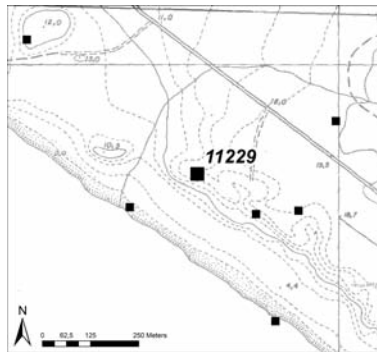
No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in a large open



area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11233

Piccarreta 33

Toponym:

Finocchierelle

Coordinates:

X: 2329058; Y: 4591033

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11234

Piccarreta 34

Toponym:

Finocchierelle

Coordinates:

X: 2329333; Y: 4590947

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11235

Piccarreta 35

Toponym:

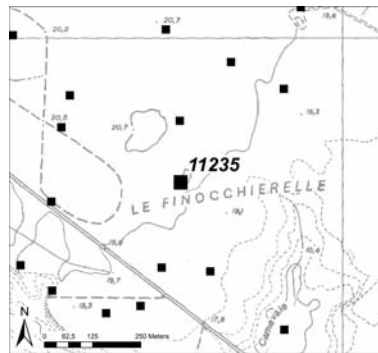
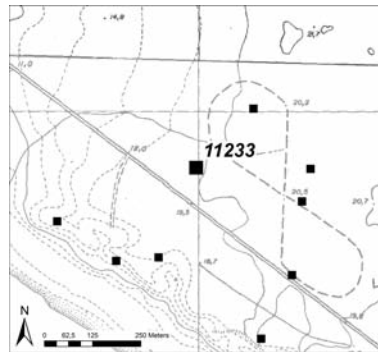
Finocchierelle

Coordinates:

X: 2329642; Y: 4590804

Survey method:

No survey



Samples:

No samples taken

Geographical position and find circumstances:

The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11236

Piccarreta 36

Toponym:

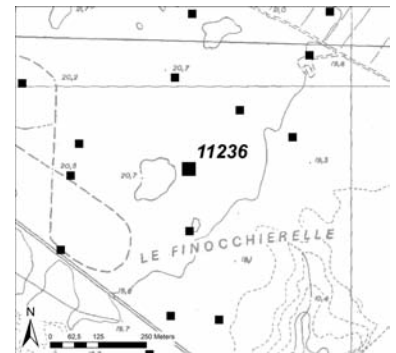
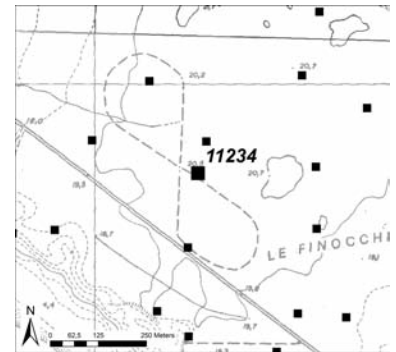
Finocchierelle

Coordinates:

X: 2329640; Y: 4590964

Survey method:

No survey



Samples:

No samples taken

Geographical position and find circumstances:

The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11237

Piccarreta 37

Toponym:

Finocchierelle

Coordinates:

X: 2329355; Y: 4591030

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

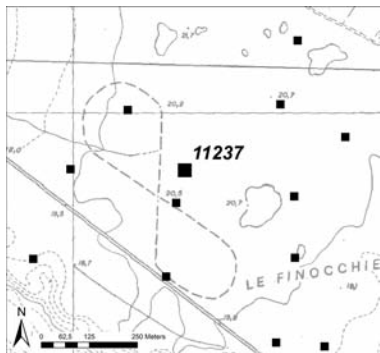
The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta.

Site dimensions:

Unknown

Material:

Building material; Coarse ware



Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11238

Piccarreta 38

Toponym:

Finocchierelle

Coordinates:

X: 2329207; Y: 4591187

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

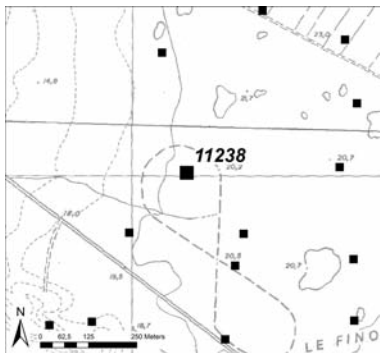
Piccarreta 1977, 85

Site 11239

Piccarreta 39

Toponym:

Finocchierelle



Coordinates:

X: 2329143; Y: 4591500

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

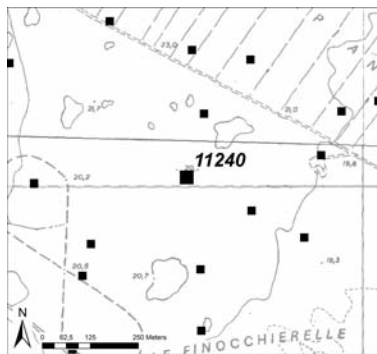
Piccarreta 1977, 85

Site 11240

Piccarreta 40

Toponym:

Finocchierelle



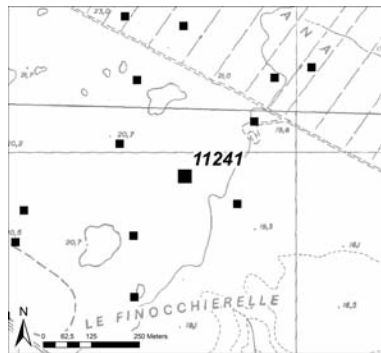
Coordinates:
X: 2329604; Y: 4591202
Survey method:
No survey
Samples:
No samples taken
Geographical position and find circumstances:
The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:
Unknown
Material:
Building material (tiles); Coarse ware
Site chronology:
Roman
Description:
The material assemblage indicates occupation somewhere during the Roman period.
Reference:
Piccarreta 1977, 85

Site 11241

Piccarreta 41

Toponym:
Finocchierelle
Coordinates:
X: 2329773; Y: 4591117
Survey method:
No survey
Samples:
No samples taken
Geographical position and find circumstances:
The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

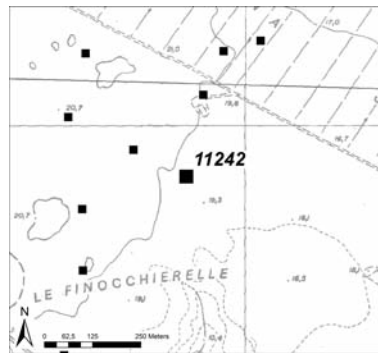


Site dimensions:
Unknown
Material:
Building material (tiles, bricks, block of tuff); Coarse ware; Amphora;
Site chronology:
Roman
Description:
The material assemblage indicates occupation somewhere during the Roman period.
Reference:
Piccarreta 1977, 85

Site 11242

Piccarreta 42

Toponym:
Finocchierelle
Coordinates:
X: 2329910; Y: 4591047
Survey method:
No survey
Samples:
No samples taken
Geographical position and find circumstances:
The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.
Site dimensions:
Unknown
Material:
Building material (tiles, bricks); Coarse ware; Amphora
Site chronology:
Roman
Description:
The material assemblage indicates occupation somewhere during the Roman period.
Reference:
Piccarreta 1977, 85



Site 11243

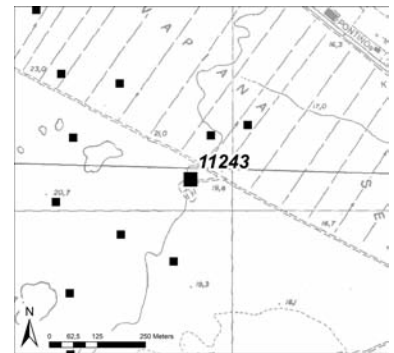
Piccarreta 43

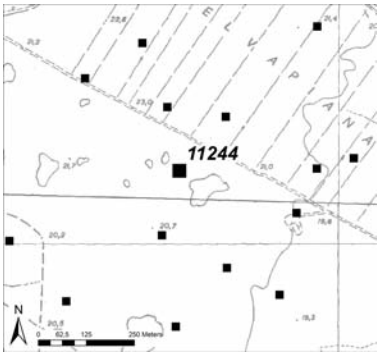
Toponym:
Selvapiana
Coordinates:
X: 2329954; Y: 4591260
Survey method:
No survey
Samples:
No samples taken
Geographical position and find circumstances:
The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.
Site dimensions:
Unknown
Material:
Building material (tiles, bricks); Coarse ware; Amphora
Site chronology:
Roman
Description:
The material assemblage indicates occupation somewhere during the Roman period.
Reference:
Piccarreta 1977, 85

Site 11244

Piccarreta 44

Toponym:
Selvapiana
Coordinates:
X: 2329649; Y: 4591368
Survey method:
No survey
Samples:
No samples taken
Geographical position and find circumstances:
The site is located in a large open





area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11245

Piccarreta 45

Toponym:

Selvapiana

Coordinates:

X: 2329404; Y: 4591609

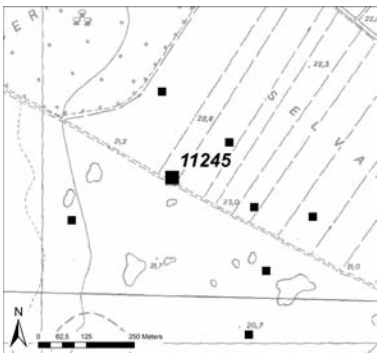
Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:



The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks, several blocks of cappellaccio (50x30x45 cm; 74x45x38 cm and 80x90x20 cm); Coarse ware; Amphora; Black Glazed Ware

Site chronology:

Republican

Description:

A Roman site, with for sure a Republican phase.

Reference:

Piccarreta 1977, 85

Site 11246

Piccarreta 46

Toponym:

Selvapiana

Coordinates:

X: 2329378; Y: 4591833

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

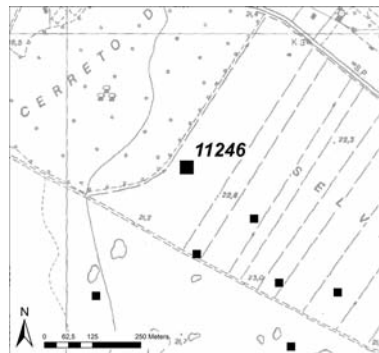
The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware; Amphora



Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11247

Piccarreta 47

Toponym:

Selvapiana

Coordinates:

X: 2329553; Y: 4591701

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

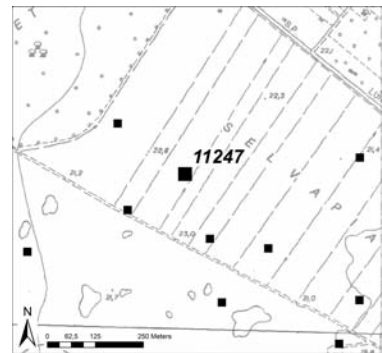
Piccarreta 1977, 85

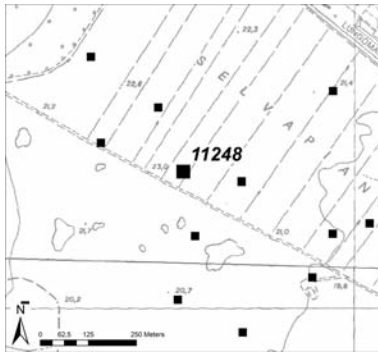
Site 11248

Piccarreta 48

Toponym:

Selvapiana





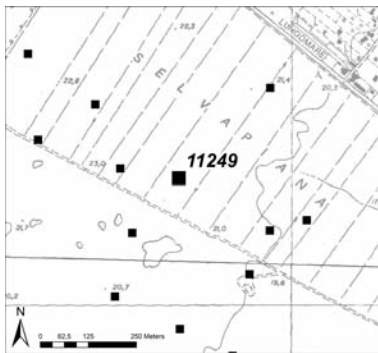
Coordinates:
X: 2329618; Y: 4591534
Survey method:
No survey
Samples:
No samples taken
Geographical position and find circumstances:
The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:
Unknown
Material:
Building material (tiles); Coarse ware; Amphora
Site chronology:
Roman
Description:
The material assemblage indicates occupation somewhere during the Roman period.
Reference:
Piccarreta 1977, 85

Site 11249

Piccarreta 49

Toponym:
Selvapiana



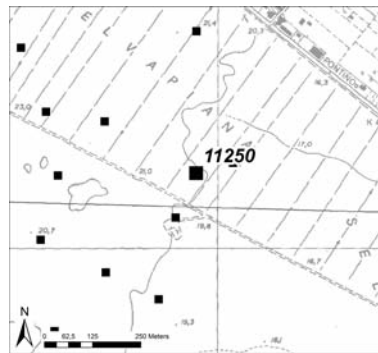
Coordinates:
X: 2329770; Y: 4591509
Survey method:
No survey
Samples:
No samples taken
Geographical position and find circumstances:
The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

Site dimensions:
Unknown
Material:
Building material (tiles); Coarse ware
Site chronology:
Roman
Description:
The material assemblage indicates occupation somewhere during the Roman period.
Reference:
Piccarreta 1977, 85

Site 11250

Piccarreta 50

Toponym:
Selvapiana
Coordinates:
X: 2330007; Y: 4591374
Survey method:
No survey
Samples:
No samples taken
Geographical position and find circumstances:
The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.

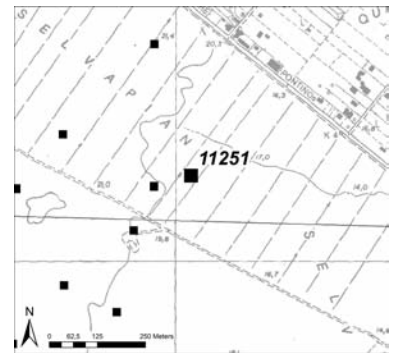


Site dimensions:
Unknown
Material:
Building material (tiles); Coarse ware
Site chronology:
Roman
Description:
The material assemblage indicates occupation somewhere during the Roman period.
Reference:
Piccarreta 1977, 85

Site 11251

Piccarreta 51

Toponym:
Selvapiana
Coordinates:
X: 2330103; Y: 4591401
Survey method:
No survey
Samples:
No samples taken
Geographical position and find circumstances:
The site is located in a large open area in the central-western part of the *Poligono Militare*. Around this location many archaeological sites have been mapped by Piccarreta. Due to its location on military property the site could not be revisited.
Site dimensions:
Unknown
Material:
Building material (tiles); Coarse ware
Site chronology:
Roman
Description:
The material assemblage indicates occupation somewhere during the Roman period.
Reference:
Piccarreta 1977, 85



Site 11252

Piccarreta 52

Toponym:

Selvapiana

Coordinates:

X: 2330008; Y: 4591744

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located just within the northern perimeter of the *Poligono Militare*, in an area where Piccarreta mapped many sites. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 85

Site 11253

Piccarreta 53

Toponym:

-

Coordinates:

X: 2327972; Y: 4591166

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located near the mouth of the Foglino river and consists of the remains of an ancient bridge. It consists of two walls, the topside

paved in modern times, attached to a partly preserved arched structure.

Site chronology:

Roman

Description:

The bridge is probably of Roman origin.

Reference:

Piccarreta 1977, 85

Site 11254

Piccarreta 54

Toponym:

Valle Foglino

Coordinates:

X: 2328256; Y: 4591245

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the south-western part of the *Poligono Militare*, at a short distance from the sea, just east of the Foglino river. Due to its location within military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles), remains of the terrace of a villa, consisting of four walls forming a substructure a *cassaforma*. On top of these foundations a pavement in *cocciopesto* with a mosaic floor can be distinguished; Coarse ware; Amphora; Black Glazed Ware

Site chronology:

Republican

Description:

Considering the material and architectural evidence, the site represents a site with Republican and possibly Imperial occupation.

Reference:

Piccarreta 1977, 85/86

Site 11256

Piccarreta 56

Toponym:

Valle Foglino

Coordinates:

X: 2328491; Y: 4591390

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the south-western part of the *Poligono Militare*, at a short distance from the sea, on the eastern bank of the Valle di Foglino. Due to its location within military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles)

Site chronology:

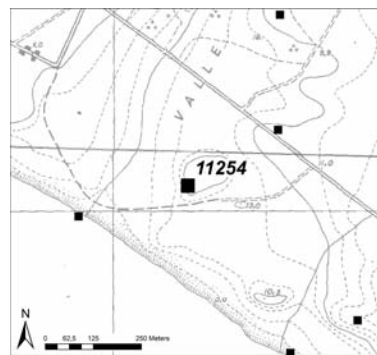
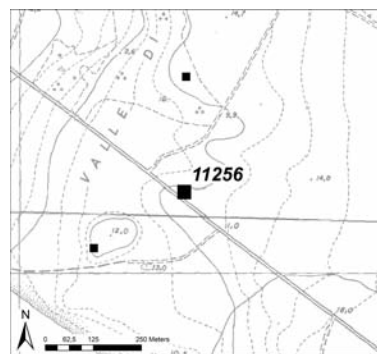
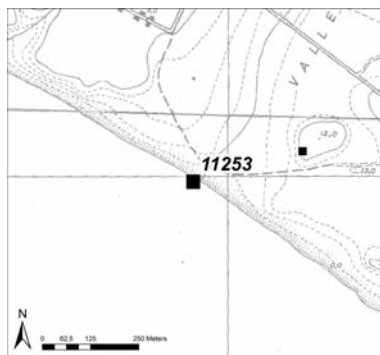
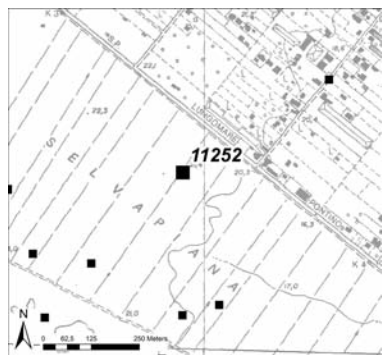
Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 86



Site 11257

Piccarreta 57

Toponym:

Valle Foglino

Coordinates:

X: 2328496; Y: 4591690

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the western part of the *Poligono Militare*, at a distance of 500 m from the sea, on the eastern bank of the Fosso Foglino. Due to its location within military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles, block of cappellaccio)

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 86

Site 11258

Piccarreta 58

Toponym:

Pantano Potassa

Coordinates:

X: 2328696; Y: 4592362

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the north-western part of the *Poligono Militare*, on

the eastern bank of the Fosso Foglino, just south of site 11259. Due to its location within military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles)

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 86

Site 11259

Piccarreta 59

Toponym:

Pantano Potassa

Coordinates:

X: 2328729; Y: 4592620

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located just within the north-western perimeter of the *Poligono Militare*, on the western bank of the Fosso Foglino. Due to its location within military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles)

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 86

Site 11260

Piccarreta 60

Toponym:

Colle Antinoro

Coordinates:

X: 2328902; Y: 4593309

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located just south of the Cerreto Regina Margherita and just outside the northern perimeter of the *Poligono Militare*, close to site Piccarreta 11261. No attempt at revisiting the site was made.

Site dimensions:

Unknown

Material:

Piece of a column in grey granite; 1 m long, maximum diameter of 53cm (51cm at the top)

Site chronology:

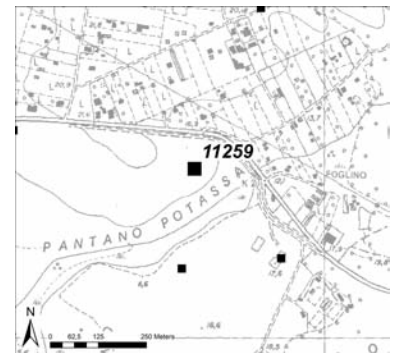
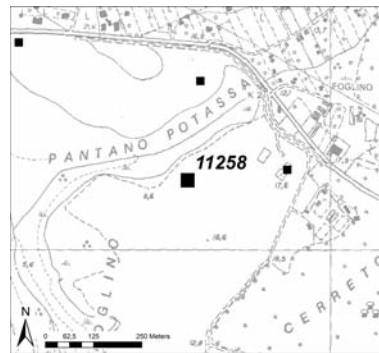
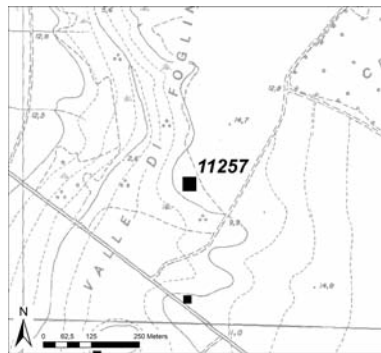
Roman

Description:

The column fragment is of Roman origin. The site is possibly related to site 11261.

Reference:

Piccarreta 1977, 87



Site 11261

Piccarreta 61

Toponym:

Colle Antinoro

Coordinates:

X: 2328997; Y: 4593058

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located just outside the northern perimeter of the *Poligono Militare*, on the southern border of the Cerreto Regina Margherita, 50 m east of the Fosso Foglino. No attempt at revisiting the site was made.

Site dimensions:

Unknown

Material:

A block of travertine (dimensions 97x77x30 ??)

Site chronology:

Unknown

Description:

Due to the lack of subsidiary evidence it is impossible to give a dating for the travertine block. Perhaps it can be associated with a former bridge crossing the Foglino.

Reference:

Piccarreta 1977, 87

Site 11262

Piccarreta 62

Toponym:

Riserva del Nespolo

Coordinates:

X: 2333423; Y: 4588445

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the eastern

extremity of the *Poligono Militare*, close to the Astura river and approximately 100 m south of site 11263.

Due to its location on military ground it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks);

Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 87

Site 11263

Piccarreta 63

Toponym:

Riserva del Nespolo

Coordinates:

X: 2333414; Y: 4588665

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the eastern extremity of the *Poligono Militare*, not far from the river Astura. Due to its location on military property the site could not be revisited.

Site dimensions:

Unknown

Material:

Building material (tiles); Coarse ware

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 87

Site 11264

Piccarreta 64

Toponym:

Riserva Mattone

Coordinates:

X: 2333026; Y: 4589721

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the eastern part of the *Poligono Militare*, close to the river Astura. Due to its location within military property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks);

Coarse ware; Amphora

Site chronology:

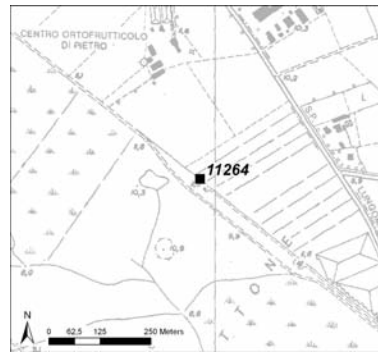
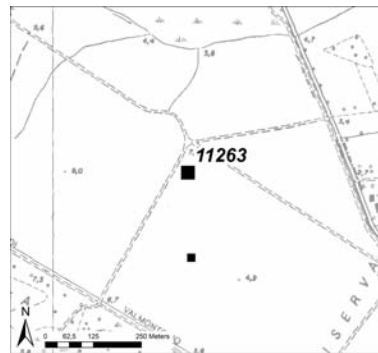
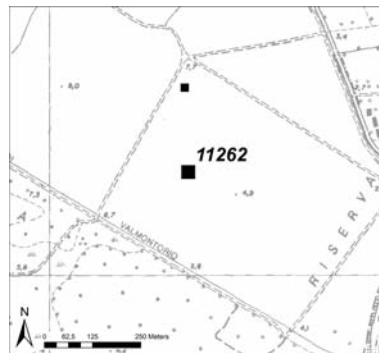
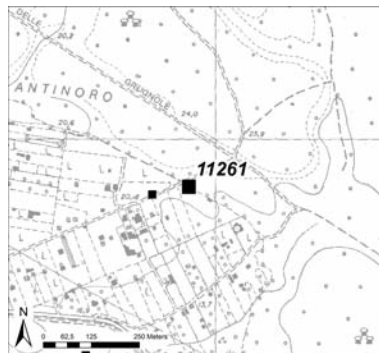
Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period. Piccarreta describes the site as one of modest proportions with few finds.

Reference:

Piccarreta 1977, 87



Site 11277

T1S8; Piccarreta 77

Toponym:

Spinacceto

Coordinates:

X: 2332088; Y: 4592251

Survey method:

Block survey and one long transect.

Samples:

17 standard samples (1266-01 to 1266-04; 1267-01; 1286-01 to 1286-03; 1289-01 to 1289-08); 1 diagnostic sample (3003-01)

Geographical position and find circumstances:

The site is located in the eastern part of the municipality, close to the border with Latina. The site is situated on a relatively low (20 m asl) plateau 300 m from the Fosso della Sorcia. Visibility conditions were relatively poor during the survey.

Site dimensions:

Ca 3500 m²

Material:

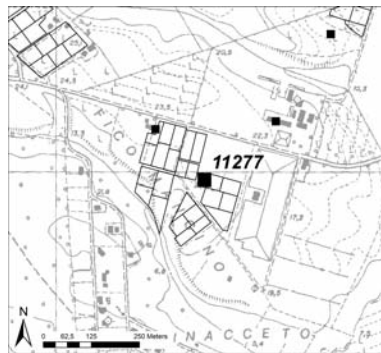
Archaic and post-Archaic coarse ware; Building material (Archaic and Republican tile); Coarse ware; Amphora (D 1); Depurated ware; Black Glazed Ware; Terra Sigillata (F 10); African Red Slip Ware (G 18); Glazed fragments

Site chronology:

Archaic period; post-Archaic period; Possibly Republican period (250-30 BC, possibly 350-250 BC); Imperial period (30 BC-AD 250)

Description:

The site clearly shows evidence for Archaic and post-Archaic occupation, but the majority of the finds date to the Republican period. The Terra Sigillata and African Red Slip Ware fragment indicate that occupation continued well into the mid Imperial period. These observations are in accordance with those of Piccarreta.



Reference:

Piccarreta 1977, 88

Site 11278

Piccarreta 78

Toponym:

Spinacceto

Coordinates:

X: 2331635; Y: 4593312

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the north-eastern part of the municipality between the Pantano dell'Intossicata and the eastern border of the Macchia delle Grugnole, just south of site 11279. We attempted to revisit the site in 2003, but the location was overbuilt.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks);

Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 88

Site 11279

Piccarreta 79

Toponym:

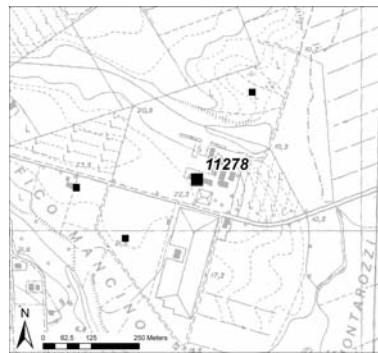
Pantano dell'Intossicata

Coordinates:

X: 2331778; Y: 4593539

Survey method:

No survey



Samples:

No samples taken

Geographical position and find circumstances:

The site is located along the north-eastern perimeter of the municipality, known as the Pantano dell'Intossicata, just south of site 11280. During the summer of 2003 the location was revisited, but the area has been levelled, and no traces of the site were left.

Site dimensions:

Unknown

Material:

Building material (tiles)

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 88

Site 11280

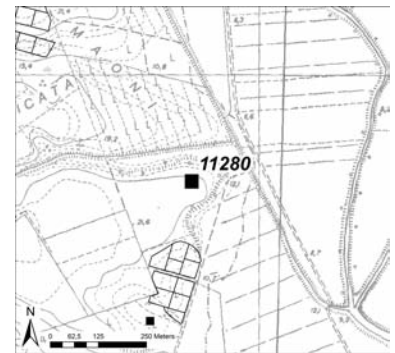
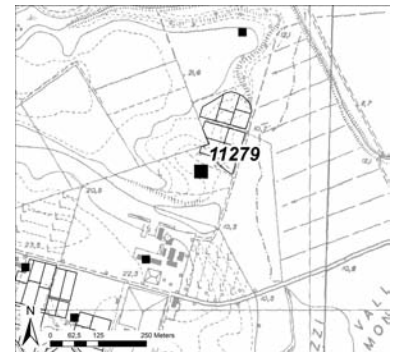
Piccarreta 80

Toponym:

Orti Maoni/Intossicata

Coordinates:

X: 2331886; Y: 4593902



Survey method:

Unsystematic survey in 2003, 2004 and 2006.

Samples:

2 grab samples (3002-01, P80 GS). Museum inventory numbers: INT.901.07

Geogr. position and find circumstances:

The site is located on the north-eastern border of the municipality directly west of the Pantano dell'Intossicata at an elevation of 20 m asl. During all revisits, the area was densely overgrown by corn plants. Our sample from this site contains few fragments.

Site dimensions:

Unknown

Material:

Archaic coarse ware; Building material (Republican tile, Grumo); Coarse ware; Black Glazed Ware

Site chronology:

Archaic period; Republican

Description:

The site clearly shows evidence for occupation during the Archaic and Republican period. In the earliest phase of the site the building(s) appear to be constructed with perishable materials. Considering the tile fragments these were replaced by more durable structures in the Republican period.

Reference:

Piccarreta 1977, 80

Site 11281

T1S6; Piccarreta 81

Toponym:

Orti Maoni/Pantano del'Intossicata

Coordinates:

X: 2331703; Y: 4594453

Survey method:

Unsystematic revisit in 2003; Block survey in 2004

Samples:

23 standard samples (1176-01 to 1176-08; 1177-01; 1178-01; 1179-01 to 1179-03; 1180-01 to 1180-04; 1181-01 to 1181-06); 2 grab samples (1179/04; P81 GS). Museum inventory numbers: INT.902.01-INT.902.15

Geogr. position and find circumstances:

The site is located on the north-eastern border of the municipality of Nettuno, on an elevated plateau in a bend of the Pantano dell'Intossicata. This large site, surveyed previously by Piccarreta, is partly located in a vineyard, partly in a melon field; in both parts visibility conditions were good.

Site dimensions:

Ca 7000 m²

Material:

Archaic coarse ware (ao dolium); Building material (post-Archaic, Republican and early Imperial tile; a terracotta fragment; tuff; remains of stone foundations; basalt); Depurated ware; Black Glazed Ware (E 4, E 12); Terra Sigillata; African Red Slip Ware (G 2B, G 4, G 5, G 7A, G 7B, G 12A, G 12B, G 15, G 16B, G 18, G 21); Loom weights (Misc. nrs.5&6), Pompeian Red Ware; Roman Glass; Iron

Site chronology:

Archaic period; post-Archaic period; Republican period (250-30 BC, possibly 350-250 BC); Imperial period (30 BC-AD 250)

Description:

Modest quantities of Archaic, post-Archaic and Republican material show continuous occupation from the 6th century BC onwards. Imperial material, however, is far more abundant and the site must have been of considerable size in this period. Several foundation blocks indicate the presence of a building.

Reference:

Piccarreta 1977, 88

Site 11282

Piccarreta 82

Toponym:

-

Coordinates:

X: 2330631; Y: 4594801

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located near the southern bank of the Pantano dell'Intossicata, 200 m to the east of site 11283. The area where the site is located has been levelled, and no traces of the site are left.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 88

Site 11283

Piccarreta 83

Toponym:

Piscina della Farna

Coordinates:

X: 2330387; Y: 4594864

Survey method:

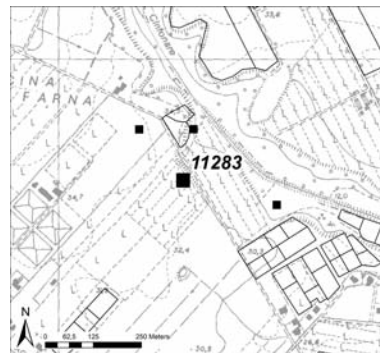
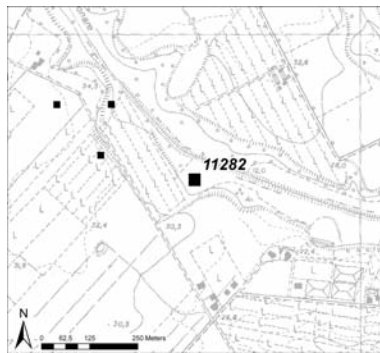
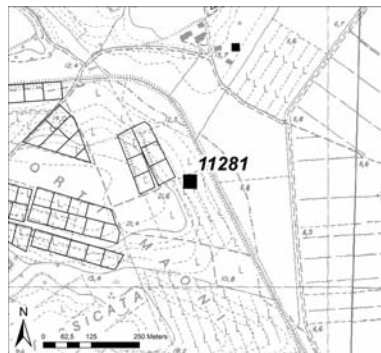
Unsystematic

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the north-eastern part of the municipality, just



east of site 11284, close to the Pantano dell'Intossicata. A revisit to the area in 2003 showed that it had undergone substantial ground removal, creating profiles up to 7 m high. The location of site 11283 was located just above these dug-away zones and yielded a small amount of material. The very fine sand present in the vineyard probably limited ground visibility, obscuring more finds from the eye.

Site dimensions:

Unknown

Material:

Building material (roman tiles, bricks); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 88

Site 11284

T1S7; Piccarreta 84, (Liboni 46?)

Toponym:

Piscina della Farna

Coordinates:

X: 2330273; Y: 4594996

Survey method:

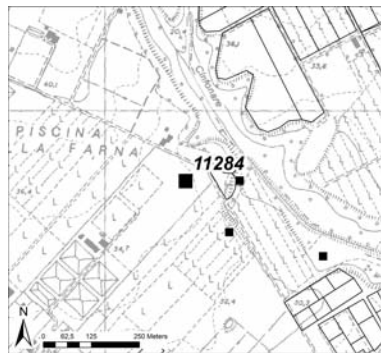
Unsystematic revisit in 2003; Block survey and long transects with 3m interdistance in 2004.

Samples:

6 standard samples (1239-01; 1239-02; 1240-01 to 1240-04), 1 grab sample (P85 GS)

Geogr. position and find circumstances:

The site is located in the north-eastern part of the municipality, on the border with Latina. It is situated on an elevation south of the valley of the Pantano dell'Intossicata. Visibility conditions during survey were relatively good.



Site dimensions:

Ca 400 m²

Material:

Orientalising impasto; Archaic coarse ware; Building material (Republican tile); Coarse ware; Black Glazed Ware; Terra Sigillata

Site chronology:

Possibly Iron Age (7th century BC); Archaic period; Republican period (250-30 BC, possibly 350-250 BC); Imperial period (30 BC-AD 100)

Description:

The fragments of Orientalising and Archaic impasto point to early occupation of the site; the rest of the material indicates occupation during the Republican era with continuity into the early Imperial period.

Reference:

Piccarreta 1977, 88

Site 11285

Piccarreta 85

Toponym:

Piscina della Farna

Coordinates:

X: 2329461; Y: 4595100

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site was mapped by Piccarreta in the 1970s 500 m eastwards of the hamlet Tre Cancelli, just outside the northern perimeter of the Macchia delle Grugnole. In 2003 the location was revisited, but it was overbuilt by a complex of greenhouses.

Site dimensions:

Unknown

Material:

Building material (tiles, bricks); Coarse ware; Amphora

Site chronology:

Roman

Description:

The material assemblage indicates occupation somewhere during the Roman period.

Reference:

Piccarreta 1977, 88

Site 11286

Piccarreta 86

Toponym:

Tre Cancelli

Coordinates:

X: 2328964; Y: 4595120

Survey method:

No survey

Samples:

Museum inventory numbers: TC.840.01-TC.840.06; TC.841.01-TC.840.04

Geographical position and find circumstances:

The site is situated in a field on the east side of a small road that runs parallel to the main road through the town of Tre Cancelli. The site could not be revisited, because the field was fenced off.

Site dimensions:

Unknown

Material:

Grinding stone fragments; Building material (Tile, Bricks, Cocciopesto pavement); Coarse ware; Amphora; Terra Sigillata; African Red Slip Wares (G 6A, G 7A, G 7B, G 12B, G 16A, G 19)

Site chronology:

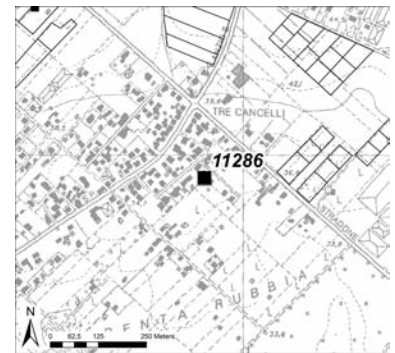
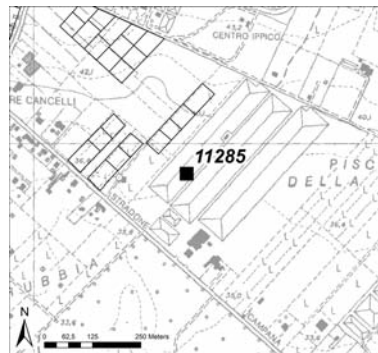
Imperial period (30 BC-AD 250)

Description:

The first activity on the site dates to the early Imperial period. Occupation continues at least until the end of the 2nd century AD, maybe even a bit later.

Reference:

Piccarreta 1977, 88



Site 15001

Liboni 1

Toponym:

Cadolino

Coordinates:

X: 2325463; Y: 4595983

Survey method:

Unsystematic

Samples:

Museum inventory numbers: CAD.960.01-CAD.960.05, P.Card.993.01-P.Card.993.02

Geogr. position and find circumstances:

The site is situated in the centre of the old hamlet Cadolino which nowadays is absorbed by the municipality of Nettuno. Until a decade ago it was possible to visit the site, but at present the location is overbuilt. Spread over the area a couple of finds that can possibly be related to the former site were observed.

Site dimensions:

Unknown

Material:

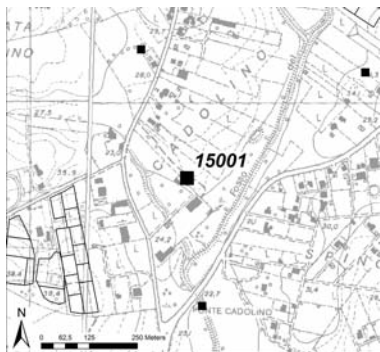
Building material (tile); Coarse ware; Amphora; Terra Sigillata (F 8, F 9); African Red Slip Wares (G 6A, G 7A); Wall plaster; Tesserae

Site chronology:

Imperial period (30 BC-AD 250)

Description:

Considering the Terra Sigillata and African Red Slip Ware fragments



the site can be dated in the early Imperial period. Material dating later than the mid 2nd century AD was not found. The material noticed during our revisits supports this date range. The materials in the collection of the museum, for instance the plaster and the tesserae, indicate that the site was a villa.

Site 15002

Liboni 2

Toponym:

Cadolino

Coordinates:

X: 2325344; Y: 4596317

Survey method:

Unsystematic

Samples:

1 grab sample; Museum inventory numbers: CAD.965.01-CAD.965.05

Geographical position and find circumstances:

The site is located in the area of Cadolino, on the edge of a field near the southern border of this small village. In February 2005 a short visit to the site was made under unfavourable conditions. Because the field was just sown in we decided not to enter it. A small grab sample was collected along the edge of the field.

Site dimensions:

Unknown

Material:

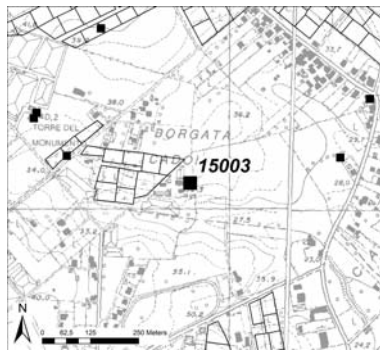
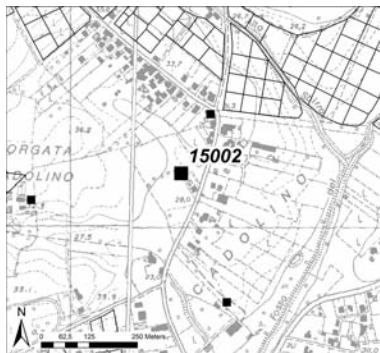
Coarse ware; Terra Sigillata; African Red Slip Ware (G 16B, G 18, G 19)

Site chronology:

Imperial period (30 BC-AD 250)

Description:

A site with occupation from the beginning of the Imperial period until at least the late 2nd century AD and maybe even slightly later. Evidence for earlier and later occupation is entirely absent. The function and dimensions of the site could not be established.



Site 15003

Liboni 3

Toponym:

Cadolino

Coordinates:

X: 2324954; Y: 4596250

Survey method:

No survey

Samples:

Museum inventory numbers: CAD.962.01-CAD.962.02.

Geographical position and find circumstances:

A large site located in the area of Cadolino, spread over different properties. Access was either not obtained from the various landowners or impossible because of large fences.

Site dimensions:

Unknown

Material:

Plain impasto; Depurated ware; Terra Sigillata (F 2); African Red Slip Ware (G 6A, G 7A)

Site chronology:

Iron Age (8th or 7th century BC); Imperial period (30 BC-AD 250)

Description:

Dating evidence for this site is scarce. A small amount of late Iron Age or Orientalising impasto indicates early activity on this location. Two ARSW fragments date in the first half of the 2nd century AD. The Terra Sigillata fragments point to earlier activity on the site, at the start of the Imperial period. The function and dimensions of the site remain unclear.

Site 15004

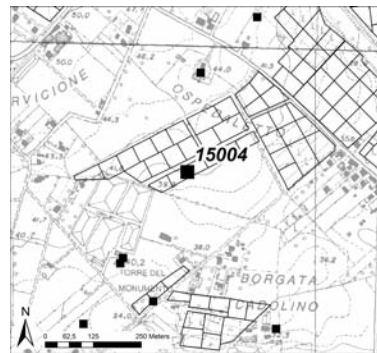
Liboni 4

Toponym:

Ospedaletto

Coordinates:

X: 2324723; Y: 4596657



Survey method:

Block survey in 2004; unsystematic revisit in february 2005

Samples:

7 standard samples (2187/01, 2187/02, 2187/03, 2187/04, 2187/05, 2188/01 and 2188/02), 3 diagnostic samples (2187/06, 2187/07 and 2188/03), 1 grab sample (2191/01)

Geographical position and find circumstances:

The site is situated in the area of Cadolino, directly next to the via Selciatella, 100 m to the north of the burial monument Torre del Monumento. The site lies at an elevation of 45 m asl, on terrain gradually descending from the Fosso dello Sbirro, which runs a few hundred m to the north. It was found on the edge of a ploughed field and therefore may extend further to the east. In the part of the site that was surveyed the visibility was good. In february 2005 the site was revisited, again under good circumstances. Although the earlier fallow part of the field was again not surveyable, a large complementary pottery sample was collected from the ploughed part of the site.

Site dimensions:

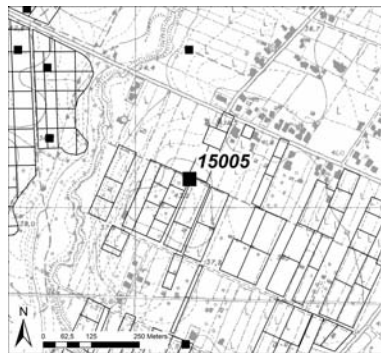
Unknown

Material:

Building material (Archaic and Roman tile, bricks, tuff and limestone debris); Archaic or post-Archaic coarse ware; Coarse ware (C 43, C 46, C 53, C 59, C 64, C 67); Amphora; Black Glazed Ware; Terra Sigillata (F 2, F 12); African Red Slip Ware (G 2B, G 6B, G 7A, G 12A, G 12B, G 16B, G 17, G 18, G 19, G 25A, G 25B, G 26, G 27, G 29, G 37, G 44); Oil lamps; Wall plaster; Tesserae

Site chronology:

Archaic period; post-Archaic period; Republican period (250-30 BC, possibly 350-250 BC); Imperial period (30 BC-AD 400); late antique and



early medieval period (5th-6th century AD, possibly 7th century AD)

Description:

Occupation on this site seems likely from the Archaic and post-Archaic period onwards, indicated by a piece of a roof tile, a coarse ware rim and some dolium fragments dating to these periods. Frequentation, probably on a small scale, continues in the Republican period. There is evidence for the construction of a villa around the start of the Imperial period. There is continuity on this site until at least the second half of the 6th century AD, indicated by some late ARSW fragments.

Site 15005

Liboni 5

Toponym:

Piscina Cardillo

Coordinates:

X: 2326205; Y: 4597255

Survey method:

Block survey in 2005; Unsystematic revisit in 2004.

Samples:

2 standard samples (2689/01 and 2689/02); 1 total sample (L5/01). Museum inventory numbers: P.Card. 990.01; CAM.305.01-CAM.305.03

Geogr. position and find circumstances:

The site is located in the area of Piscina Cardillo, approximately 100 m to the east of the Fosso del Quinto, which forms the border with the area of Campana. This part of the municipality of Nettuno is divided into small parcels. The site is located in a small vineyard and was visited under good circumstances. On the location few fragments were collected and it seems that the site has partly disappeared or that the centre of the site is situated in another parcel.

Site dimensions:

Unknown

Material:

Impasto; Archaic coarse ware; Buccchero; Building material (Archaic tile and imbrices); Depurated ware; Black Glazed Ware

Site chronology:

Bronze Age; Possibly Iron Age (7th century BC); Archaic period; Possibly post-Archaic period; Republican; Possibly Imperial period (30 BC-AD 250)

Description:

The protohistoric material can pro-

bably be dated in the Bronze Age. Considering the amount of building materials, there was probably habitation in the Archaic period. Although post-Archaic material is scarce, activity in the Republican period is well established. Fragments of a later date are absent, which makes it probable that the site was abandoned before Imperial times.

Site 15007

Liboni 7

Toponym:

Campana

Coordinates:

X: 2325782; Y: 4597699

Survey method:

Unsystematic

Samples:

Museum inventory numbers: CAM. 320.07

Geogr. position and find circumstances:

The site is located in the area of Campana, ca 400 m east of the via Selciatella and 100 m west of the Fosso del Quinto. The site is situated in a very large field where several sites have been found by Arnaldo Liboni.

Site dimensions:

Unknown

Material:

Impasto

Site chronology:

Bronze Age

Description:

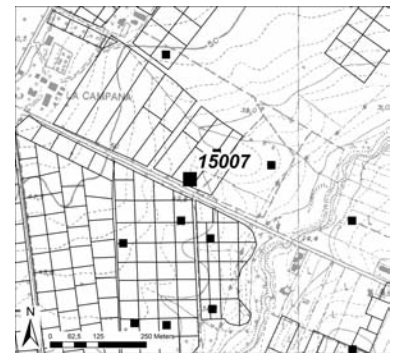
The material can probably be dated in the Bronze Age.

Site 15008

Liboni 8

Toponym:

Campana



Coordinates:

X: 2325967; Y: 4598163

Survey method:

No survey

Samples:

Museum inventory number: CAM.308.01; CAM.340.01

Geogr. position and find circumstances:

The site is located in the northern part of the municipality, not far from the border with Latina, on a height of 50 m asl. It is situated in a large greenery where several sites are indicated by Arnaldo Liboni. Due to unfavourable conditions this site was not revisited.

Site dimensions:

Unknown

Material:

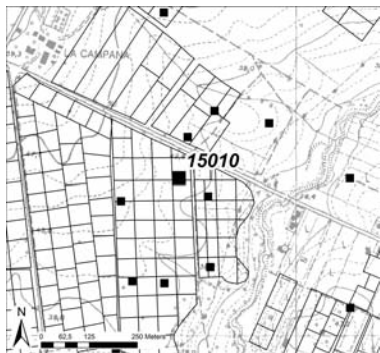
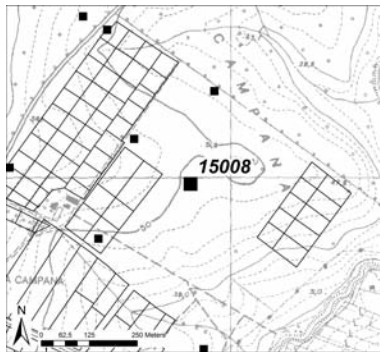
Impasto; Terra Sigillata; African Red Slip Ware

Site chronology:

Protohistoric; Imperial period (30 BC-AD 100, possibly AD 100-400)

Description:

The largest part of the ceramic assemblage consists of protohistoric impasto. The Roman fine ware fragments are not diagnostic and few in number. The material evidence points to a small protohistoric settlement of unknown type and function and small scale occupation of the site in the 1st and 2nd century AD.



Site 15010

Liboni 10

Toponym:

Campana

Coordinates:

X: 2325759; Y: 4597591

Survey method:

Unsystematic revisit in 2004; Block survey in february 2005

Samples:

5 standard samples (4226/01, 4227/01, 4249/01, 4250/01, 4251/01) 1 total sample (Net'04 L10/01). Museum inventory numbers: CAM.306.01; CAM.326.01-CAM.326.05; CAM.329.01; CAM.330.01-CAM.330.03; CAM.331.01

Geographical position and find circumstances:

The site is located in the region Campania, around 400 m east of the via Selciatella and 100 m west of the Fosso del Quinto. The site is situated in a very large field where several sites are indicated by Arnaldo Liboni. During the first visit the field was overgrown, during the block survey the visibility was better.

Site dimensions:

At least 1 ha

Material:

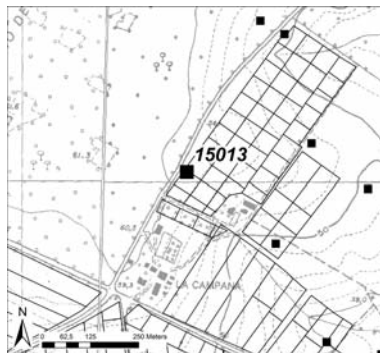
Impasto (ao a spindle whorl)

Site chronology:

(Middle) Bronze Age

Description:

Enormous amounts of impasto, dating predominantly to the Middle Bronze Age were found over a large area. An identification as a habitation site seems probable considering the size, shard density and finds like the spindle whorl. From all units of the site small amounts of Roman material (ao an ARSW rim) were collected. The fact that Roman material is present throughout this field suggests that this material should be considered as off-site.



Reference:

Alessandri 2007, 74

Site 15013

Liboni 13

Toponym:

Campana

Coordinates:

X: 2325489; Y: 4598207

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the northern part of the municipality in a large greenery along the via Selciatella. Within this field several other sites have been recorded by Liboni. No remains of the site were found when its location was surveyed systematically during the 2004 campaign.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Protohistoric

Description:

The site can generically be dated in the protohistoric period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork. The site was probably ploughed out completely over the years and cannot be traced anymore.

Site 15014

Liboni 14

Toponym:

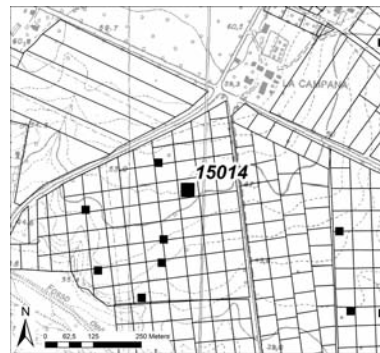
Campana

Coordinates:

X: 2325213; Y: 4597638

Survey method:

Block survey in february 2005; Un-



systematic revisit in 2004 & 2005.

Samples:

27 standard samples (4016/01, 4016/02, 4017/01, 4017/02, 4017/03, 4017/04, 4017/05, 4018/01, 4018/02, 4023/01, 4023/02, 4023/03, 4023/04, 4024/01, 4024/02, 4024/03, 4024/04, 4025/01, 4032/01, 4032/02, 4033/01, 4033/02, 4033/03, 4033/04, 4034/01, 4034/02, 4034/03). 11 diagnostic samples (Net'04 L14/01-Net'04 L14/11), 1 grab sample (Net'05 L14/G.S.). Museum inventory numbers: CAM.309.01-CAM.309.11; CAM.312.02; CAM.341.01-CAM.341.15; CAM.333.01-CAM.333.03

Geographical position and find circumstances:

The site is situated in the region Campania, in the north-western part of the municipality of Nettuno. It is located along the via Selciatella, in the middle of a very large field, in which several sites are indicated by Arnaldo Liboni. The site is situated at an elevation of approximately 60 m asl, strongly descending to the south in the direction of the Fosso dello Sbirro. During the first visit to the location the visibility was limited by vegetation. During the intensive block survey in february 2005 survey conditions were more favourable.

Site dimensions:

Approximately 1 ha

Material:

Archaic coarse ware; Building material (limestone, basalt, marble (Misc. nos 15,16), tile, brick); Coarse ware (C 21, C 25, C 26, C 27, C 34, C 36, C 40, C 43, C 44, C 55, C 63, C 66); Amphora (D 2, D 6, D 7, D 8, D 10); Terra Sigillata (F 2, F 17, F 19, F 23, F 24, F 25); African Red Slip Ware (G 2A, G 6A, G 6B, G7A, G 8-9, G 12A, G 12B, G 16B, G 17, G 18, G 19, G 25A, G 25B, G 26, G 30, G 33, G 34, G 36); Bronze; Lead; Iron; Glass;

Wall plaster; Tesserae; Coins

Site chronology:

Archaic period; Republican period (350-30 BC); Imperial period (30 BC-AD 400); late antique and early medieval period (4th-7th century AD)

Description:

The earliest finds on the site can be ascribed to the Archaic period. No finds indicate post-Archaic frequentation. Activity on the site seems to intensify during the Republican period; various finds, including coins, tile and coarse ware fragments date in this period. In early Imperial times the presence of a large villa complex seems certain from the abundance of villa-related finds. The villa existed until at least the end of the 4th century AD. Several ARSW fragments indicate that the site remained in use, probably on a somewhat smaller scale, during the 5th and 6th centuries AD.

Site 15015

Liboni 15 (Roman bridge); Site 0205-05

Toponym:

Campana

Coordinates:

X: 2325038; Y: 4597199

Survey method:

Unsystematic revisit in february 2005

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located on the edge of a large field in the southern part of the Campana area. Several large blocks remain of a former Roman bridge crossing the Fosso dello Sbirro. The site forms another indication of the course of the Roman road Lanuvium-Antium.

Material:

Four large stone blocks (varying in size between 50x40x50 cm and 190x

70x50 cm)

Site chronology:

Possibly Republican period (100-30 BC); Possibly Imperial period (30 BC-AD 100)

Description:

The large stone blocks-combined with the density of basalt fragments in their vicinity-make an identification as a bridge probable. We suggest a date in line with the paving of the road Lanuvium to Antium, around the end of the 2nd or the start of the 1st century BC.

Site 15016

Liboni 16

Toponym:

Bosco di Padiglione

Coordinates:

X: 2325646; Y: 4599844

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the northern extremity of the municipality, north of the via Campana. The site could not be revisited because its location is now in use as a golf course.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

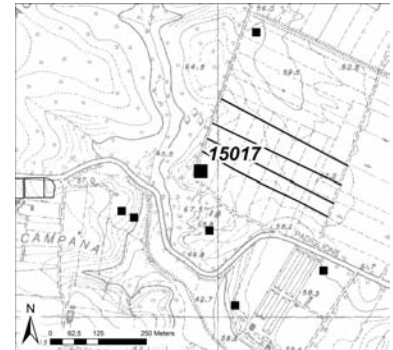
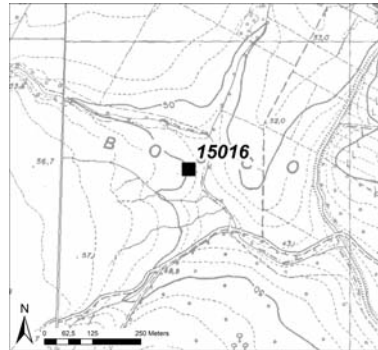
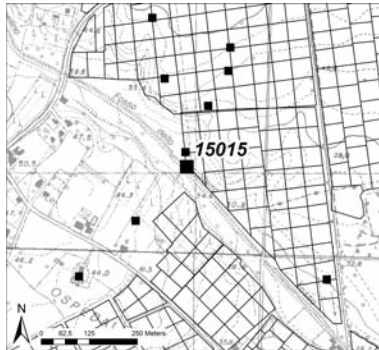
Roman

Description:

The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15017

Liboni 17



Toponym:

Campana

Coordinates:

X: 2324019; Y: 4598562

Survey method:

Unsystematic survey; Extensive survey in 2005

Samples:

Museum inventory numbers: CAM.336.01; CAM.337.01-CAM.337.04; CAM.339.01.

Geogr. position and find circumstances:

The site covers a vast area in the western part of the Campana region. The area, situated at a height of 65 m asl, was surveyed extensively in the summer of 2005 with surface visibility obstructed by vegetation. No finds were collected during this revisit.

Site dimensions:

Unknown

Material:

Impasto; Building material (tile); Coarse ware

Site chronology:

Protohistoric; Possibly Imperial period (30 BC-AD 250)

Description:

The material probably indicates the presence of a Protohistoric site of considerable size. The Roman fragments could also represent off-site material.

Site 15019

Liboni 19

Toponym:

Torre del Monumento

Coordinates:

X: 2324556; Y: 4596435

Survey method:

Unsystematic revisits in 2004 & 2005

Samples:

1 grab sample (3005/01); 1 diagnostic sample (4001/01). Museum inventory numbers: TdM.801.01-

TdM.801.05; TdM.802.01-TdM.802.07; TdM.803.01-TdM.803.04; TdM.804.01-TdM.804.13

Geogr. position and find circumstances:

The site is located directly behind the Roman burial monument Torre del Monumento, along the via Selciatella. The site covers three different fields that were fallow during our visits, offering a decent, but certainly not optimal visibility.

Site dimensions:

Unknown

Material:

Coarse ware (C 7, C 22, C 25, C 31, C 35, C 49, C 50, C 61); Amphora; Black Glazed Ware (E 18); Terra Sigillata (F 9, F 12, F 15, F 17, F 25); African Red Slip Ware (G 2A, G 2B, G 3, G 7A, G 7B, G 12B, G 16B, G 17, G 18, G 19, G 21, G 25A, G 26, G 28A, G 30, G 31, G 32, G 37, G 42, G 44); Glass; Bronze; Tesserae; Coin

Site chronology:

Republican period (350-250 BC and 100-30 BC, possibly 250-100 BC), Imperial period (30 BC-AD 400), late antique and early medieval period (5th-6th century AD)

Description:

Definitely a Roman villa site considering the large amount of tesserae. The first activity on the site dates somewhere in the Republican period. The prime of the site, however, seems to be from the beginning of the Roman empire until at least the 5th century AD. Conspicuous is the relatively high amount of late (4th and 5th century AD) ARSW fragments. Later activity, well into the 6th century, is indicated by another ARSW fragment.

Site 15020

Liboni 20

Toponym:

Torre del Monumento

Coordinates:

X: 2324453; Y: 4596263

Survey method:

Unsystematic survey

Samples:

1 grab sample (3006-01)

Geogr. position and find circumstances:

The site is located in the field directly south of Torre del Monumento along the suggested track of the via Selciatella. On our visit the field was densely overgrown and visibility conditions were very adverse.

Site dimensions:

Unknown

Material:

Building material (Roman tile, balsalt); Coarse ware; Amphora; African Red Slip Ware

Site chronology:

Possibly post-Archaic period; Possibly Republican period (350-100 BC); Imperial period (30 BC-AD 250)

Description:

The observed tile, amphora and ARSW fragments indicate that the site was occupied during the Imperial period. The material also suggests earlier occupation during the post-Archaic or Republican period.

Site 15021

Liboni 21

Toponym:

-

Coordinates:

X: 2324388; Y: 4595967

Survey method:

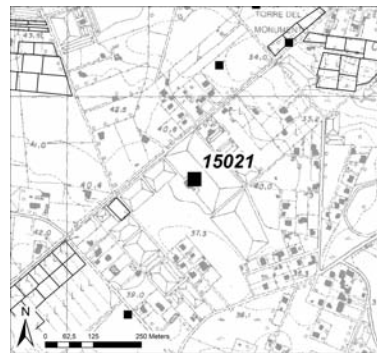
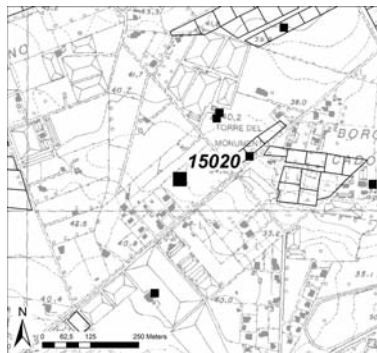
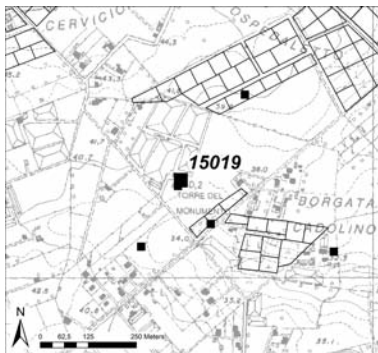
No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is situated along the track of the via Selciatella, between Torre del Monumento and I Cioccati. The area is divided into many small parcels. It was not possible to revisit the site.



Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15023

Liboni 23

Toponym:

Pocacqua

Coordinates:

X: 2323484; Y: 4594622

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the western extremity of the municipality, just south of the area of I Cioccati. The area is completely overbuilt, a revisit was therefore impossible.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

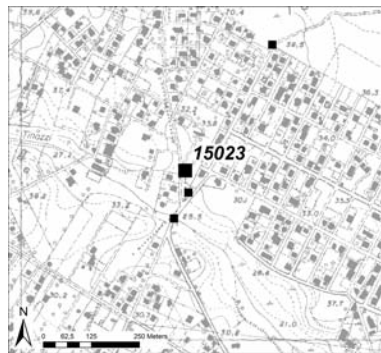
Roman

Description:

The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15024

Liboni 24



Toponym:

Pocacqua

Coordinates:

X: 2323492; Y: 4594566

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the westernmost part of the municipality. Permission to revisit the site was not obtained from the landowner.

Site dimensions:

Unknown

Material:

The site consists of the remains of an aqueduct, probably forming part of the supply system constructed to provide Antium with water.

Site chronology:

Possibly Republican (100-30 BC); possibly Imperial (30 BC-AD 100)

Description:

The site is definitely of Roman origin and should be dated in the late Republican or early Imperial period, in accordance with the date of the via Selciatella.

Reference:

Brandizzi Vitucci 2000, 134

Site 15025

Liboni 25

Toponym:

Pocacqua

Coordinates:

X: 2323455; Y: 4594499

Survey method:

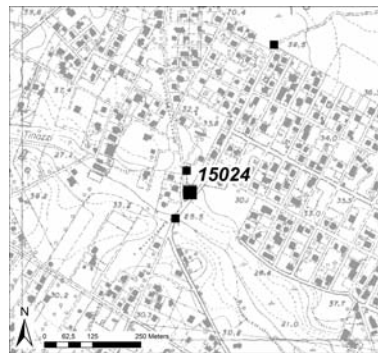
No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the western extremity of the municipality, along the suggested track of the via Selcia-



tella. It was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15026

Liboni 26

Toponym:

Sandalo

Coordinates:

X: 2322293; Y: 4599574

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is situated in the north-western part of the municipality, close to the border with Anzio. It was not possible to revisit the site.

Site dimensions:

Unknown



Material:

Unknown

Site chronology:

Protohistoric

Description:

The site can generically be dated in the protohistoric period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15027

Liboni 27

Toponym:

Campana

Coordinates:

X: 2324164; Y: 4598924

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the western part of the Campana region, just east of the Fosso dell'Armellino and the Bosco di Padiglione. It is located within a large field where several other archaeological sites have been mapped by Liboni. The area was surveyed during the 2005 campaign, but no remains of the site were found.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Protohistoric

Description:

The site can generically be dated in the protohistoric period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15029

Liboni 29; T1S1

Toponym:

Pineta della Campana

Coordinates:

X: 2325743; Y: 4598566

Survey method:

Block survey in 2004; Unsystematic revisit in 2005.

Samples:

2 standard samples (1001/01, 1002/01), 1 grab sample (1002/02), 1 diagnostic sample (1001/02). Museum inventory numbers: CAM.301.03; CAM.310.01; CAM.313.01; CAM.316.01; CAM.334.01-CAM.334.04

Geographical position and find circumstances:

The site is located in the northern part of the Campana region, in the corner of a greenery along the excavated part of the via Selciatella. To the north and west the site borders on the so-called Pineta della Campana. Within this very large field Liboni has indicated several archaeological sites. During our visit in 2004 a small strip of the greenery was ploughed, including the part where site 15029 was located.

Site dimensions:

800m²

Material:

Impasto (orientalising period); Building material (tile, tuff and limestone); Coarse ware (C 11); Amphora (D 3); Depurated ware (amphora, kitchen wares); Terra Sigillata (F 12-13, F 16, F 19, F 22, F 24); African Red Slip Ware (G 2A, G 6A, G 6B, G 7A, G 7B, G 12A, G 16B, G 18, G 19, G 21, G 26); Pompeian Red Ware

Site chronology:

Possibly Iron Age (7th century BC); Possibly Archaic period; Republican period (250-30 BC); Imperial period (30 BC-AD 400)

Description:

The impasto fragments are to be dated in the 7th/6th century BC and represent the earliest activity on this site. It is unclear whether we can speak of a permanent settlement in this period. No finds can be associated with the post-Archaic and early Republican period. Re-use of the location is attested from the mid Republican period onwards. From the start of the Imperial period the amount of material evidence increases. Several straight lines of ploughed up tuff and limestone were observed in association with high amounts of Imperial fine wares. A couple of Terra Sigillata fragments can be dated somewhere between 0 and AD 40. The sites shows continuous occupation until at least the end of the 3rd century AD, and maybe even until the second half of the 4th century AD, as indicated by a variety of ARSW shapes.

Site 15030

Liboni 30

Toponym:

Pineta della Campana

Coordinates:

X: 2325680; Y: 4598601

Survey method:

No survey

Samples:

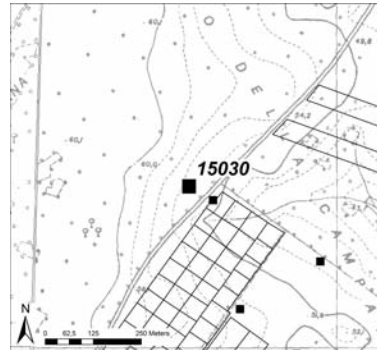
No samples taken

Geogr. position and find circumstances:

The site is located in the northern part of the Campana area, along the excavated stretch of the via Selciatella, just inside the eastern perimeter of the Nettuno camping area. Its location is nowadays covered by a pine tree forest, which made it impossible to revisit the site.

Site dimensions:

Unknown



Material:
Unknown
Site chronology:
Roman

Description:
The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork. There is a possible connection to site Liboni 29, located at short distance on the other side of the via Selciatella.

Site 15031

Liboni 31

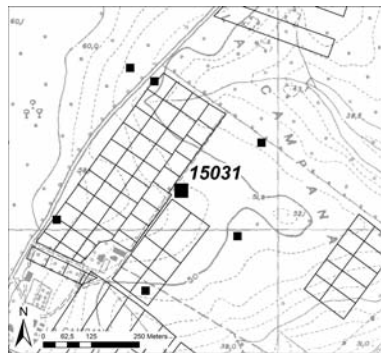
Toponym:
Campana
Coordinates:
X: 2325813; Y: 4598282
Survey method:
No survey

Samples:
No samples taken
Geogr. position and find circumstances:
The site is located in the northern part of the Campana area in a large greenery. Within this field several other archaeological sites have been mapped by Liboni. The site was revisited during the 2004 campaign when conditions were adverse and only a small part of its suggested area could be surveyed. A single find was collected.

Site dimensions:
Unknown

Material:
Impasto
Site chronology:
Protohistoric

Description:
The site can generically be dated in the protohistoric period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.



Site 15032

Liboni 32

Toponym:
Campana
Coordinates:
X: 2325720; Y: 4598022
Survey method:
Unsystematic survey; block survey in 2005

Samples:
1 total sample (L32/01)
Geogr. position and find circumstances:
The site is located in the area of Campana, 400 m east of the via Selciatella and 150 m west of the Fosso del Quinto. It is situated in a large, relatively high area nowadays in use as a greenery where Liboni has recorded many sites. Only a limited area could be surveyed because of vegetation cover. During the block survey no traces of the site were observed.

Site dimensions:
Unknown

Material:
Impasto
Site chronology:
Possibly Iron Age (8th or 7th century BC)

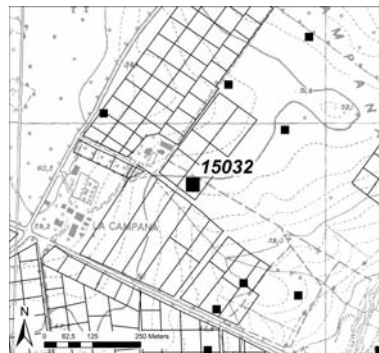
Description:
The single find cannot be dated with much precision; for now we can only say that it is of possible Iron Age date.

Site 15033

Liboni 33

Toponym:
Piscina Cardillo
Coordinates:
X: 2326204; Y: 4597591
Survey method:
Unsystematic survey

Samples:
1 total sample (L33/01)
Geogr. position and find circumstances:
The site is located just east of the



area of Campana next to the Fosso del Quinto. The area is divided into small plots and therefore hard to survey systematically. The location of the site itself was largely overgrown by stubbles and visibility was therefore very limited.

Site dimensions:
Unknown

Material:
Impasto (ao a rim of a jar)
Site chronology:
Iron Age (8th and 7th century BC)

Description:
The impasto probably dates to the late Iron Age or Orientalising period

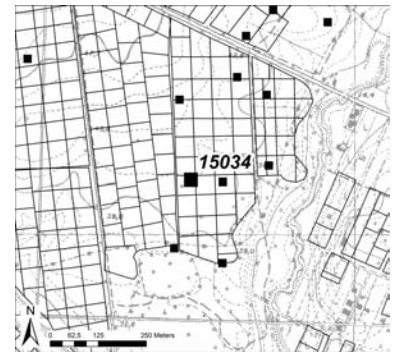
Site 15034

Liboni 34; Site 0205-13

Toponym:
Campana
Coordinates:
X: 2325638; Y: 4597324
Survey method:
Unsystematic revisit in 2004; Block survey in february 2005

Samples:
4 standard samples (4276/01, 4277/01, 4288/01, 4289/01), 1 diagnostic sample (Net'04 L34/01)

Geogr. position and find circumstances:
The site is located in the Campana area on a small elevation in a field



descending to the south and the east towards the Fosso del Quinto and the Fosso dello Sbirro. On the first visit to the site the visibility was very limited by vegetation. During the block survey visibility was quite good.

Site dimensions:
900m²

Material:

Archaic coarse ware; Building material (at least Republican tile, tuff, basalt); Coarse ware (C 6, C 7, C 9, C 10); Amphora (D 4, D 5); Black Glazed Ware (E 33); Loom weight (Misc. no 7)

Site chronology:

Archaic period; Possibly post-Archaic period; Republican period (350-30 BC)

Description:

A clear Archaic site with continuity into the Republican period. A lot of basalt flakes were found on the site and several blocks were piled together nearby. It seems likely that the site was located along a road, which was paved in Roman times.

Site 15035

Liboni 35

Toponym:

Campana

Coordinates:

X: 2324042; Y: 4598409

Survey method:

No survey

Samples:

Museum inventory numbers: CAM. 335.01

Geogr. position and find circumstances:

The site is located in the western part of the Campana area, on a high point in the landscape (67 m asl), close to site 15017. The site could not be revisited because of the dense vegetation.

Site dimensions:

Unknown

Material:

Impasto; Coarse ware; Amphora

Site chronology:

Protohistoric; Roman

Description:

The few non-diagnostic impasto fragments cannot be dated with precision. For now we can only say that they are of protohistoric date. One amphora fragment, of unknown date, was also found on this site.

Site 15036

Liboni 36

Toponym:

Campana

Coordinates:

X: 2324980; Y: 4597429

Survey method:

Unsystematic revisit in 2004; Block survey in 2005.

Samples:

21 standard samples (4056/01, 4057/01, 4057/02, 4065/01, 4065/02, 4066/01, 4066/02, 4066/03, 4066/04, 4067/01, 4067/02, 4067/03, 4067/04, 4067/05, 4068/01, 4072/01, 4073/01, 4073/02, 4074/01, 4074/02, 4074/03). 1 diagnostic sample (L36/01)

Geogr. position and find circumstances:

The site is situated in the Campana area, close to the track of the via Selciatella, in the same field as site 15014. It is located on a hilltop in the middle of an area that is sloping downwards on all sides. Several hundred m to the south runs the Fosso dello Sbirro. During the first visit to the site visibility was rather restricted; the block survey was executed under more favourable conditions, although the visibility was still somewhat limited by the vegetation.

Site dimensions:

Approximately 8200 m²

Material:

Archaic coarse ware (dolia, kitchen

ware); Building material (Archaic tile, Republican tile, tuff); coarse ware (C 10, C 15, C 17, C 19, C 25, C 28, C 30, C 31, C 32, C 34); Amphora (D 1, D 2, D 3, D 4, D 6, D 7); Depurated ware; Black Glazed Ware; Terra Sigillata (F 7, F 9, F 12-13); African Red Slip Ware (G 16B, G 18)

Site chronology:

Possibly Iron Age (8th or 7th century BC); Archaic period; Republican period (250-30 BC, possibly 350-250 BC); Imperial period (30 BC-AD 250)

Description:

There is evidence for occupation in the Archaic period; the amount and spread of the building and storage material suggests more than one building already in this period. The location appears to be reused from the mid Republican period onwards, well into imperial times. The most recent fragments are three ARSW pieces, which in conformation with the rest of the data from the site should be dated rather in the 2nd half of the 2nd century AD than in the earlier parts of the 3rd century AD. After the 2nd century AD the site appears to be abandoned.

Site 15037

Liboni 37

Toponym:

Ospedaletto

Coordinates:

X: 2324758; Y: 4596916

Survey method:

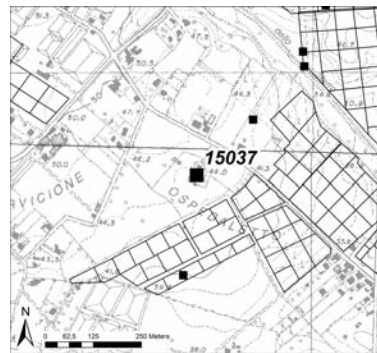
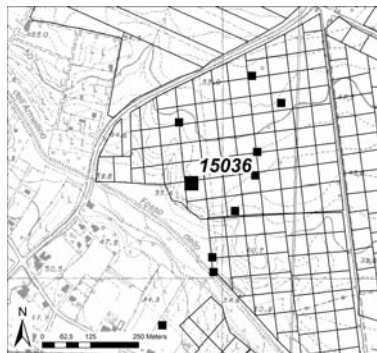
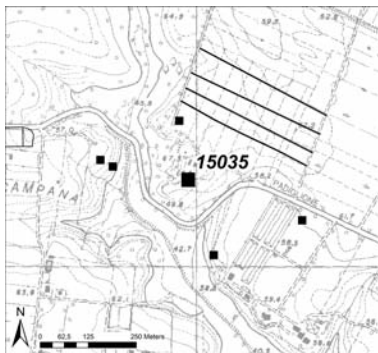
No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is situated south of the modern road leading from Cadolino to Campana along the suggested track of the via Selciatella. The site is located just north of site 15004, at



a height of 45 m asl, on terrain gradually descending from the Fosso dello Sbirro, that runs 100 m to the north. An attempt to revisit the site was unsuccessful; a house has been built on its location.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15038

Liboni 38

Toponym:

Campana

Coordinates:

X: 2325720; Y: 4597108

Survey method:

Block survey

Samples:

1 standard sample (4268/01). Museum inventory numbers: CAM.342.01-CAM.342.04, CAM.311.01

Geogr. position and find circumstances:

The site is situated in the Campana area, 500 m east from the via Selciatella, directly west of the Fosso del Quinto. It is located on the southern edge of a large field, it therefore is unclear whether the site continues further to the south. It was not possible to check this, since the area to the south is densely forested. Visibility conditions during the block survey were quite good.

Site dimensions:

Unknown

Material:

Building material (Roman tile);

Coarse ware; Black Glazed Ware (E 8, E 14, E 20, E 23, E 30, E 34); African Red Slip Ware (G 18, G 19); Lead miniature amphoras (Misc. nos 10-14)

Site chronology:

Possibly post-Archaic period; Republican period (350-100 BC, possibly 100-30 BC); Imperial period (AD 100-250)

Description:

The site shows possible activity as early as the post-Archaic period. Several fragments attest an early, mid and possibly late Republican phase of occupation. The remainder of the finds can be dated to the Imperial period. The most recent fragments date as late as the mid 3rd century AD. The five lead amphoras find parallels in several museums and publications, but are hard to date. The extent and function of the site, for the Republican as well as the Imperial phase, are unclear.

Site 15039

Liboni 39

Toponym:

Ospedaletto

Coordinates:

X: 2324905; Y: 4597061

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the area of Cadolino, just south of the Fosso dello Sbirro, along the suggested track of the via Selciatella. Nowadays the area is covered by a small soccer field.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

The site dates in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15040

Liboni 40

Toponym:

Piscina Cardillo

Coordinates:

X: 2327758; Y: 4596546

Survey method:

Block survey

Samples:

1 standard sample

Geographical position and find circumstances:

The site is situated near the area of Piscina Cardillo, north of the road running to Tre Cancelli. It was surveyed during the 2005 campaign under adverse visibility conditions.

Site dimensions:

Unknown

Material:

Late Iron Age and Orientalising plain impasto

Site chronology:

Possibly Iron Age (8th or 7th century BC)

Description:

A small spread of impasto dating to the late Iron Age and Orientalising period was found at this site.

Site 15041

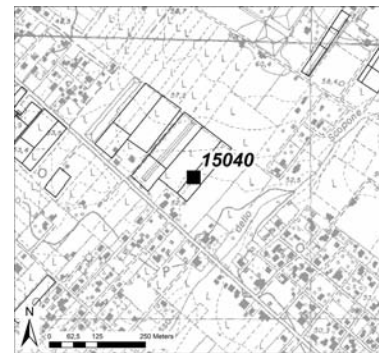
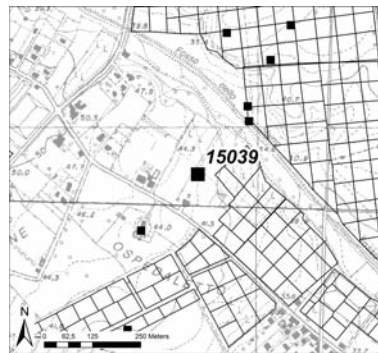
Liboni 41

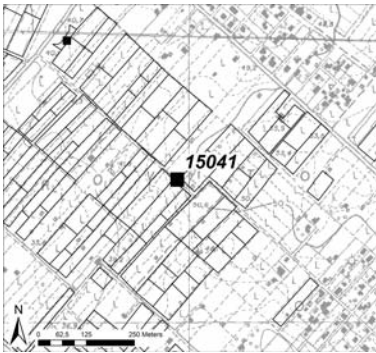
Toponym:

Piscina Cardillo

Coordinates:

X: 2327032; Y: 4596549





Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the central part of the municipality, 200 m south of the road running from Tre Cancelli to Piscina Cardillo. The area is divided into many small plots, which made survey in this area difficult. During a revisit the location was covered by a vineyard, in which no archaeological features were noticed.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

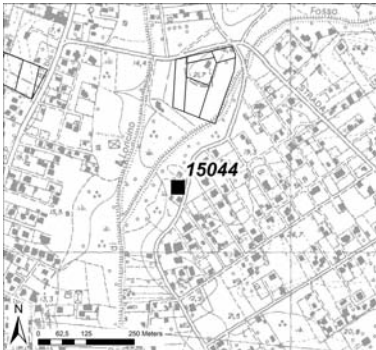
The site can be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15044

Liboni 44

Toponym:

Loricina



Coordinates:

X: 2325770; Y: 4594348

Survey method:

No survey

Samples:

Museum inventory numbers: LOR. 850.01

Geographical position and find circumstances:

The site is located in the central part of the municipality on a small plateau above the Fosso della Seccia, which derives from the Fosso Loricina 50 m to the south. The site was not revisited.

Site dimensions:

Unknown

Material:

Impasto

Site chronology:

Iron Age (8th century BC)

Description:

The ceramic assemblage shows occupation during the Iron Age.

Reference:

Alessandri 2007, 81/82

Site 15046

Liboni 46

Toponym:

Intossicata

Coordinates:

X: 2330415; Y: 4594997

Survey method:

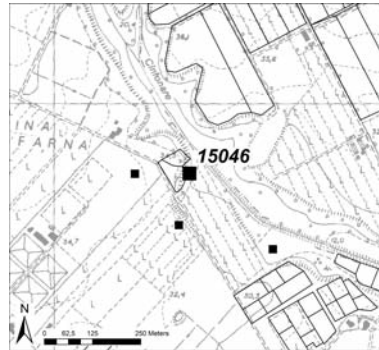
No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the north-eastern extremity of the municipality, at a short distance from the Fosso dell'Armellino, which forms the border with the Comune di Latina. During a revisit the site was not found; perhaps it is the same as site 11283 or 11284, both located a short



distance from the location recorded by Liboni.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

The site can be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15047

Liboni 47

Toponym:

Intossicata

Coordinates:

X: 2330666; Y: 4594301

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the north-eastern part of the municipality, between the Fosso dell'Intossicata and the road running from Tre Cancelli to the Intossicata region. During a revisit no remains were found, despite fairly good visibility conditions.

Site dimensions:

Unknown

Material:

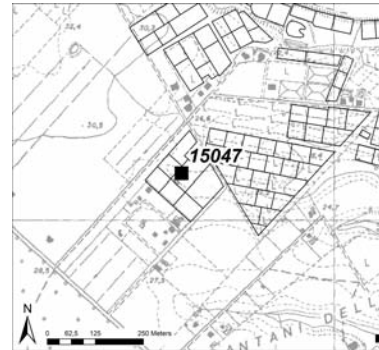
Unknown

Site chronology:

Roman

Description:

The site can be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.



Site 15048

Liboni 48

Toponym:

I Marmi

Coordinates:

X: 2323497; Y: 4594002

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the south-western part of the municipality, close to Anzio and the suggested track of the via Selciatella. The area is nowadays overbuilt, which made it impossible to revisit the site.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

The site can be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Toponym:

I Marmi

Coordinates:

X: 2323052; Y: 4593525

Survey method:

No survey

Samples:

Museum inventory numbers: CAM. 344.01

Geographical position and find circumstances:

The site is located in the western extremity of the municipality, right on the border with the Comune di Anzio. This is supposed to be the location where the via Selciatella leaves the municipality of Nettuno and continues towards the coast. The area is divided in several small plots surrounded by fences and therefore it has been impossible to revisit the site.

Site dimensions:

Unknown

Material:

Coarse ware; Black Glazed Ware; African Red Slip Ware (G 4, G 12B, G 18, G 19, G 20, G 25A, G 35)

Site chronology:

Republican; Imperial period (30 BC-AD 400); late antique and early medieval period (6th or 7th century AD)

Description:

Some Black Glazed Ware fragments indicate activity somewhere during the Republican period. The prime of the site seems to be between the end of the 1st and the mid 4th century AD. A 6th/7th century ARSW fragment indicates even later occupation of the site.

Coordinates:

X: 2324305; Y: 4593905

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is situated in the central-western part of the municipality, just north of the Fosso di Pocacqua. No remains of the site could be traced during a revisit to the area.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

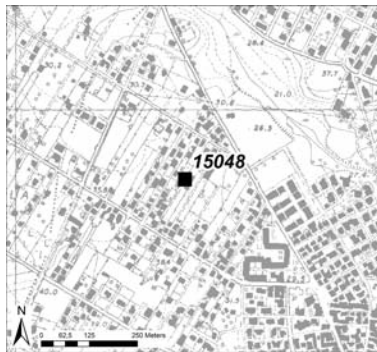
Roman

Description:

The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15049

Liboni 49

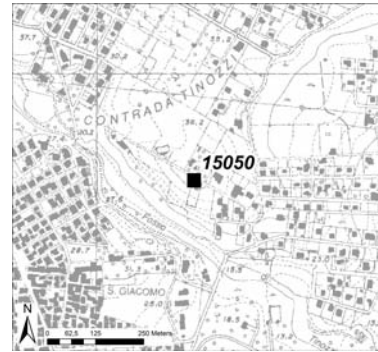


Site 15050

Liboni 50

Toponym:

Contrada Tinozzi



Site 15051

Liboni 51

Toponym:

Pantano Granieri

Coordinates:

X: 2328259; Y: 4592721

Survey method:

No survey

Samples:

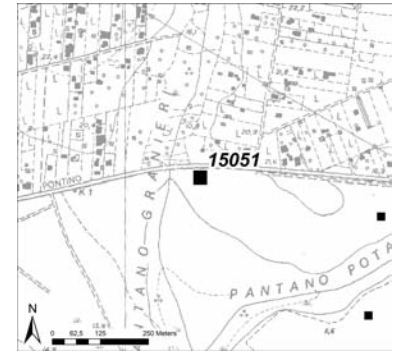
Museum inventory numbers: BdN. 836.01

Geographical position and find circumstances:

The site is situated just inside the northern perimeter of the *Poligono Militare* probably on the eastern bank of a nowadays small river, the Pantano Granieri. Due to its location within military property the site could not be revisited.

Site dimensions:

Unknown



Material:
Black Glazed Ware
Site chronology:

Republican

Description:
The presence of Black Glazed Ware fragments points to occupation of the site in the Republican period. The non-diagnostic fragments could not be dated more precisely. The size and function of the site are unclear.

Site 15052

Liboni 52

Toponym:
Nettuno

Coordinates:
X: 2324282; Y: 4592399

Survey method:
No survey

Samples:
No samples taken

Geogr. position and find circumstances:
The site consists of several Roman features located under the Chiesa di San Francesco, located near the beach in the centre of present-day Nettuno. Several remains of walls in *opus reticulatum* are still visible in the cellars under the church.

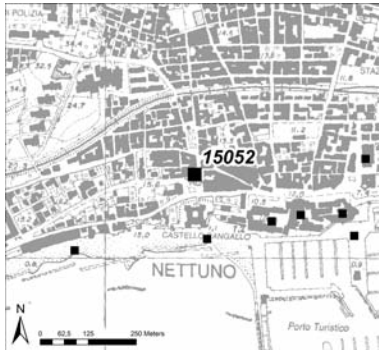
Site dimensions:
Unknown

Material:
Wall remains (*opus reticulatum*);
Roman vessel glass

Site chronology:
Roman

Description:
The wall remains point to the presence of a Roman site with its origin in the late Republican or early Imperial period. The glass fragments could not be dated with any precision. Ceramic evidence is completely lacking from this site.

Reference:
Brandizzi Vitucci 2000, 128



Site 15053

Liboni 53

Toponym:
Nettuno

Coordinates:
X: 2324483; Y: 4592279

Survey method:
No survey

Samples:
No samples taken

Geographical position and find circumstances:

The site is located at a short distance from the Nettuno harbour, within the perimeter of the Borgo Medievale. This makes it probable that the evidence for this site was found during building activities. It has been impossible to revisit the site.

Site dimensions:
Unknown

Material:
Unknown

Site chronology:
Roman

Description:
The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15054

Liboni 54

Toponym:
Nettuno

Coordinates:
X: 2324833; Y: 4592919

Survey method:
No survey

Samples:
No samples taken

Geographical position and find circumstances:

The site is located in the town centre of Nettuno, between the railway



station and the Cimitero Monumentale Americano. About 100 m to the east runs the Fosso Loricina. It was not possible to revisit the site; its location is overbuilt.

Site dimensions:
Unknown

Material:
Unknown

Site chronology:
Protohistoric

Description:
The site can generically be dated in the protohistoric period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15055

Liboni 55

Toponym:
Cretarossa

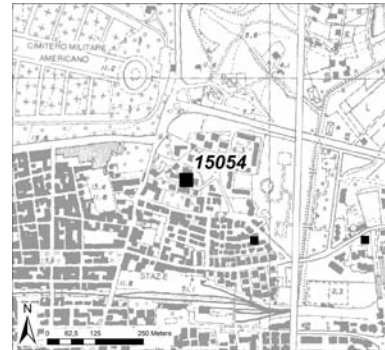
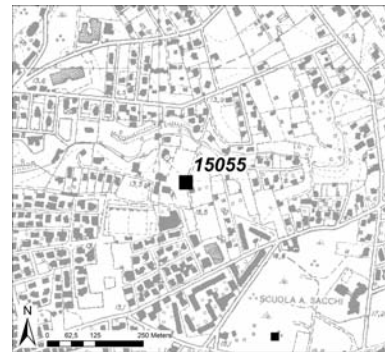
Coordinates:
X: 2326134; Y: 4592884

Survey method:
No survey

Samples:
No samples taken

Geographical position and find circumstances:

The site is situated in a highly urbanised area within the Cretarossa



area. It was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Protohistoric

Description:

The site can generically be dated in the protohistoric period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15056

Liboni 56

Toponym:

Loricina

Coordinates:

X: 2325010; Y: 4592762

Survey method:

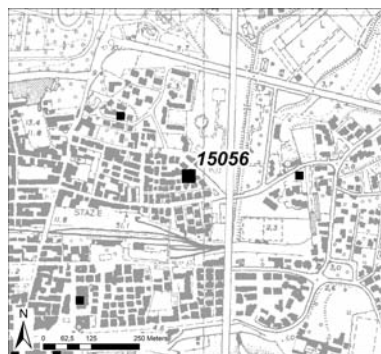
No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the present day centre of Nettuno, just north-east of the railway station. Its location is overbuilt, which makes it impossible to revisit the site.



Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15057

Liboni 57

Toponym:

Nettuno

Coordinates:

X: 2324727; Y: 4592440

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located in the centre of present-day Nettuno, just in front of the harbour. It was not possible to revisit the site; its location is overbuilt.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

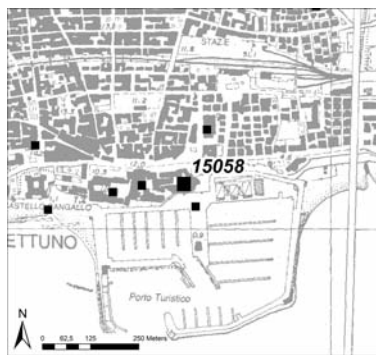
The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15058

Liboni 58

Toponym:

Nettuno



Coordinates:

X: 2324667; Y: 4592299

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located along the coast under one of the piers of the present-day harbour of Nettuno. It has therefore been impossible to revisit the site.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15059

Cretarossa; Liboni 59

Toponym:

Cretarossa

Coordinates:

X: 2326165; Y: 4591994

Survey method:

No survey

Samples:

Museum inventory numbers: CT. 970.01-CT.970.02

Geographical position and find circumstances:

The site is located on the public beach near the edge of the *Poligono Militare*. It consists of a small section below the Albergo Neptunus.

Site dimensions:

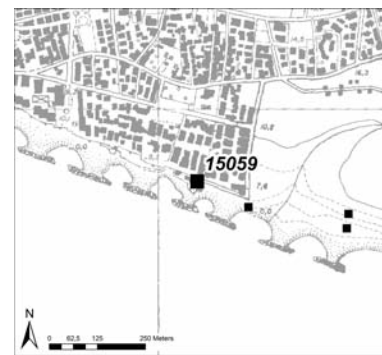
Unknown

Material:

Coarse ware

Site chronology:

Roman



Description:

A date is hard to ascertain for this site; the single diagnostic coarse ware is probably Roman.

Site 15060

Liboni 60

Toponym:

-

Coordinates:

X: 2327512; Y: 4592609

Survey method:

No survey

Samples:

No samples taken

Geogr. position and find circumstances:

The site is located just outside the northern perimeter of the *Poligono Militare* on the north side of the road running from Nettuno to Acciarella. The area has been divided into many small plots. It has not been possible to revisit the location.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Roman

Description:

The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15065

Liboni 65

Toponym:

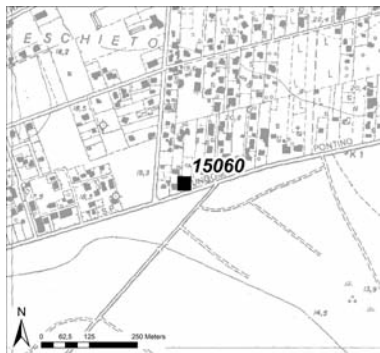
Campana

Coordinates:

X: 2323846; Y: 4598443

Survey method:

No survey



Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the western part of the Campania region, just south of the Bosco di Padiglione and the Fosso dell'Armellino. Its location is completely overgrown and no traces of the site could be identified.

Site dimensions:

Unknown

Material:

Unknown

Site chronology:

Protohistoric

Description:

The site can generically be dated in the protohistoric period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15066

Liboni 66

Toponym:

Campana

Coordinates:

X: 2323814; Y: 4598460

Survey method:

No visit

Samples:

Museum inventory number: CAM. 346.01

Geographical position and find circumstances:

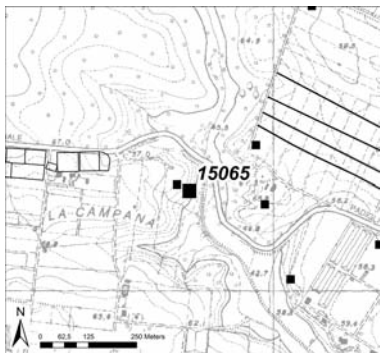
The site is situated in the north-western part of the municipality, not far from the border with the Comune di Anzio, at a height of approximately 66 m asl. The field where the site should be located was fenced off and therefore a revisit was not possible.

Site dimensions:

Unknown

Material:

Wall plaster



Site chronology:

Roman

Description:

The single find does not reveal much about the date and function of the site, but a pre-Roman date is excluded.

Site 15067

Liboni 67

Toponym:

Campana

Coordinates:

X: 2324109; Y: 4598214

Survey method:

No survey

Samples:

No samples taken

Geographical position and find circumstances:

The site is located in the western part of the Campana area, between the road Padiglione-Acciarella and the Fosso dell'Armellino. An attempt was made to revisit the site, but greenhouses have been built on top of it.

Site dimensions:

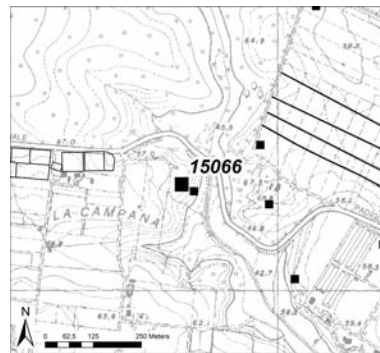
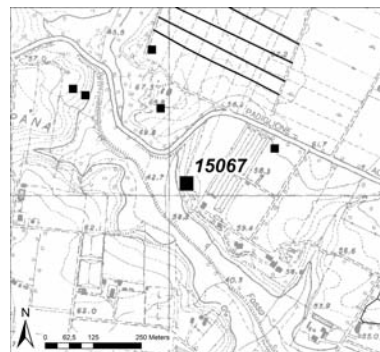
Unknown

Material:

Unknown

Site chronology:

Roman



Description:

The site can generically be dated in the Roman period. We cannot be more accurate due to the absence of material from the museum collection as well as our own fieldwork.

Site 15068

Liboni 68; Liboni 12; Site 0205-10

Toponym:

Campana

Coordinates:

X: 2325841; Y: 4597360

Survey method:

Unsystematic revisit in 2004; Block survey in february 2005

Samples:

3 standard samples (4230/02, 4231/02, 4232/02), 2 diagnostic samples (L68/01 and L68/02). Museum inventory numbers: CAM.307.01-CAM.307.05; CAM.326.07

Geogr. position and find circumstances:

The site is located in the Campana area, 500 m east of the via Selciatella and less than 50 m west of the Fosso del Quinto. It is situated in a large field where many sites are indicated by Arnaldo Liboni. During the first visit to the site the visibility was strongly limited; during the intensive block survey conditions were much more favourable.

Site dimensions:

1000 m²

Material:

Impasto (ao impasto rosso); Archaic coarse ware; Building material (Archaic tile, Roman tile, marble); Coarse ware (C 7, C 8, C 10); Amphora (D 1, D 4); Black Glazed Ware (E 2, E 6, E 16)

Site chronology:

Bronze Age; Iron Age (7th century BC); Archaic period; Possibly post-Archaic period; Republican period (350-30 BC)

Description:

The impasto includes fragments datable in the middle Bronze Age, the late Iron Age and the Orientalising period. The dimensions of the site and the density of the material points to permanent habitation in this period. The two units adjacent to the site also yielded large amounts of impasto. It is uncertain if these units belong to the site as well, because of the irregular spread of the material over the area. Contrary to the actual site here described no clear outline could be identified within these units. There is, although confined to a much smaller area, continuity in the Archaic and Republican period, although occupation in the post-Archaic period is uncertain. There is no evidence for activity later than the Republican period.

Site 15069

Liboni 69

Toponym:

Laghetto Granieri

Coordinates:

X: 2328151; Y: 4593566

Survey method:

No survey

Samples:

Museum inventory numbers: BdN. 831.01

Geogr. position and find circumstances:

The site is located inside the Cerreto Regina Margherita, close to the eastern shore of the Laghetto Granieri. The area of the site is covered by dense vegetation, what made it impossible to revisit.

Site dimensions:

Unknown

Material:

Coarse ware

Site chronology:

Roman

Description:

The few fragments collected from this site reveal nothing about its date, size and function.

Site 15070

Liboni 70

Toponym:

Loricina

Coordinates:

X: 2325298; Y: 4592763

Survey method:

No survey

Samples:

Museum inventory numbers: LOR. 852.01-LOR.852.06; LOR.853.01

Geogr. position and find circumstances:

The site is located just north-west of the Nettuno train station, in a nowadays highly urbanised area. The material in the museum collection was collected by Arnaldo Liboni during building activities. It is impossible to revisit the site; it is completely overbuilt.

Site dimensions:

Unknown

Material:

Coarse ware (C 18, C 50); Depurated ware; Terra Sigillata; African Red Slip Ware (G 6A, G 6B, G 18)

Site chronology:

Republican period (100-30 BC); Imperial period (30 BC-AD 250)

Description:

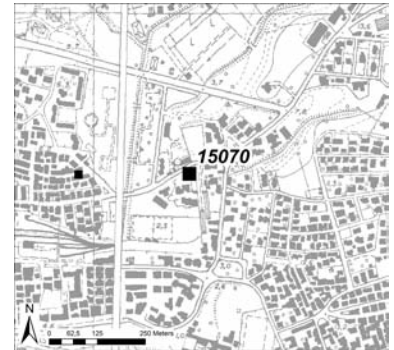
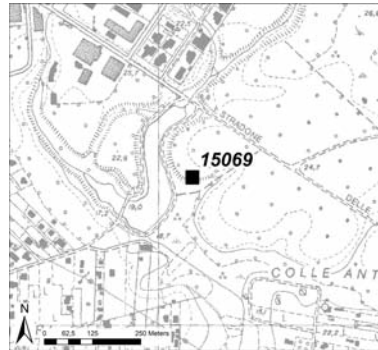
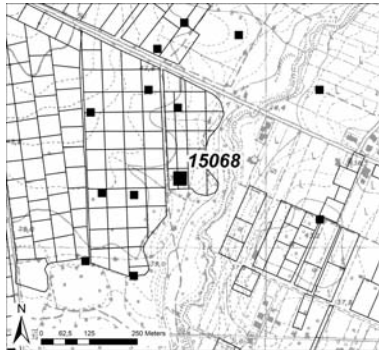
The ceramic assemblage shows occupation of the site from the late Republican period until at least the late 2nd century AD. There are no indications for earlier or later habitation of the location.

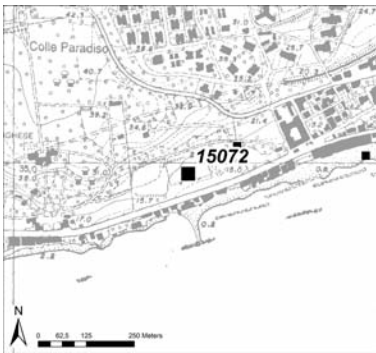
Site 15072

Villa Borghese; Liboni 72

Coordinates:

X: 2328151; Y: 4593566





Toponym:

Villa Borghese

Survey method:

No survey

Samples:

No samples. Museum inventory numbers: VB.950.01-VB.950.18; VB.951.01-VB.951.05

Geographical position and find circumstances:

The site is located within the property of the Borghese family, situated along the coastal road Anzio-Nettuno. Within this vast area, near the old Campo Sportivo, material was collected by Arnaldo Liboni from a small exposure. Due to its location within private property it was not possible to revisit the site.

Site dimensions:

Unknown

Material:

Possibly Impasto; Possibly Archaic coarse ware; Buccero; Coarse ware (C 41); Black glazed Ware; Terra Sigillata (F 19, F 20); African Red Slip Ware (G 2A, G 6A); Glazed ware; Bronze; Glass; Tesseræ

Site chronology:

Iron Age (7th century BC); Archaic period; Republican; Imperial period (30 BC-AD 250)

Description:

It is hard to say something about

the nature of this site. The finds assemblage is very inconsistent and unrevealing, presenting a couple of shards from almost all periods. The earliest occupation of the site can be dated to the protohistoric or Archaic period. Activity seems to intensify from the Republican period onwards, indicated by the number of Roman fine wares. The largest part of the material, 6 ARSW fragments, can be dated between AD 75 and 160, which appears to be the prime of the site. The glazed fragments indicate reuse of the location somewhere during the medieval period.

Site 15073

Liboni 73

Toponym:

Cerreto Regina Margherita

Coordinates:

X: 2328208; Y: 4594339

Survey method:

No survey

Samples:

Museum inventory number: BdN. 830.01

Geographical position and find circumstances:

The site is situated just north-east of the main junction in the village of Tre Cancelli. Its location is nowadays overgrown by the Cerreto Regina Margherita and therefore could not be revisited in the summer of 2006.

Site dimensions:

Unknown

Material:

Impasto

Site chronology:

Possibly Iron Age (8th or 7th century BC)

Description:

The few impasto fragments cannot be dated precisely. For now we can

only say that they are of possible Iron Age date. The extent and function of the site are unclear.

Site 15074

Liboni 74

Toponym:

-

Coordinates:

X: 2330389; Y: 4591986

Survey method:

No survey

Samples:

Museum inventory numbers: BdN. 834.01

Geogr. position and find circumstances:

The site is located in the south-eastern part of the municipality. The area where the site should be located is divided into many small plots. During a revisit the accessible parcels were checked, but no remains of the site could be identified.

Site dimensions:

Unknown

Material:

Impasto

Site chronology:

Possibly Iron Age (8th or 7th century BC)

Description:

Only a few fragments in the collection derive from this site. The exact date, extent and function of the site are unclear, we can only say that it is of possible Iron Age date.

Site 15075

Liboni 75

Toponym:

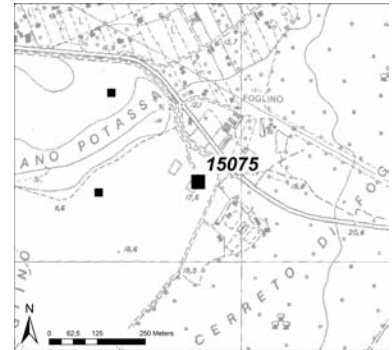
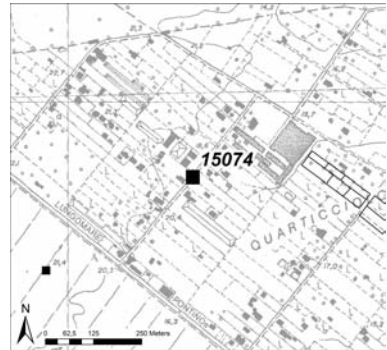
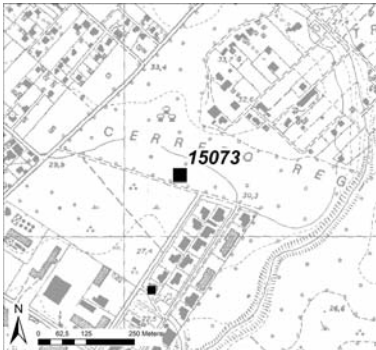
Pantano Potassa

Coordinates:

X: 2328955; Y: 4592389

Survey method:

No survey



Samples:
Museum inventory number: BdN. 835.01

Geographical position and find circumstances:

The site is located inside the perimeter of the *Poligono Militare*, just south of the *Macchia delle Grugnone*. Because of its location on military property a revisit was impossible.

Site dimensions:

Unknown

Material:

Impasto

Site chronology:

Possibly Iron Age (8th or 7th century BC)

Description:

The few non-diagnostic fragments cannot be dated with any precision. For now we can only say that they are of possible Iron Age date. The exact date, size and function of the site are unclear.

Site 15076

Liboni 76

Toponym:

Spinacceto

Coordinates:

X: 2331322; Y: 4593291

Survey method:

No survey

Samples:

Museum inventory numbers: BdN. 832.01; BdN.833.01.

Geographical position and find circumstances:

The site is located in the eastern part of the municipality, close to the *Macchia delle Grugnone*. In the summer of 2006 the site could not be found, perhaps it is overbuilt by one of the greenhouses in the area.

Site dimensions:

Unknown

Material:

Impasto; Archaic coarse ware (C 3, C 4)

Site chronology:

Possibly Iron Age (8th or 7th century BC); Archaic period

Description:

The ceramic assemblage is indicative for a habitation site in the Archaic period and possibly in the Iron Age.

Site 15078

Liboni 78

Toponym:

Campana

Coordinates:

X: 2326021; Y: 4598406

Survey method:

No survey

Samples:

Museum inventory numbers: CAM. 338.01-CAM.338.03

Geographical position and find circumstances:

The site is located in the north-central part of a large field in the region Campana. The site is bordered to the north by the *Pineta della Campana*. In this area several sites are indicated by Arnaldo Liboni. The location of the site was surveyed intensively during the 2004 campaign, but no finds were collected.

Site dimensions:

Unknown

Material:

Impasto; Terra Sigillata; Glass

Site chronology:

(Middle) Bronze Age; Imperial period (30 BC-AD 100)

Description:

The impasto dates to the middle Bronze Age. There are fragments that point to occupation in the early Imperial period as well.

Site 15079

Liboni 79

Toponym:

Campo Cerreto

Coordinates:

X: 2327368; Y: 4597446

Survey method:

No survey

Samples:

Museum inventory number: P.Card. 992.01

Geogr. position and find circumstances:

The site is located next to a small road in the region *Piscina Cardillo*, in the northern part of the municipality, close to the border with the *Comune di Latina*. Several greenhouses cover the area of the site, which therefore could not be revisited.

Site dimensions:

Unknown

Material:

Archaic coarse ware; Coarse ware

Site chronology:

Archaic period

Description:

The ceramic assemblage shows occupation in the 6th century BC. Evidence for earlier occupation is absent; that for later occupation is scarce and cannot be dated with any precision.

Site 15080

Liboni 80

Toponym:

Campana

Coordinates:

X: 2324338; Y: 4598304

Survey method:

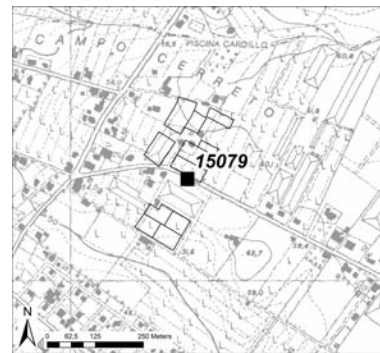
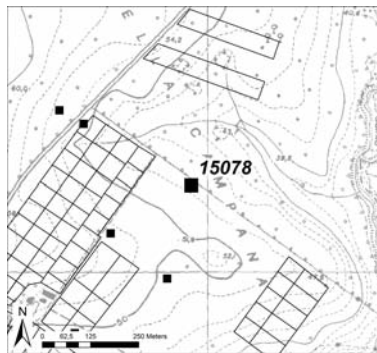
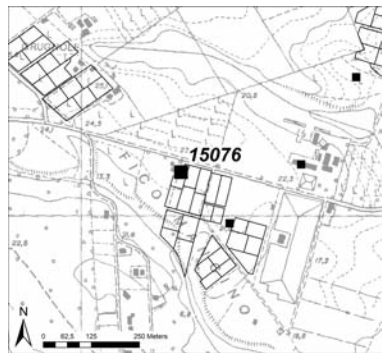
No survey

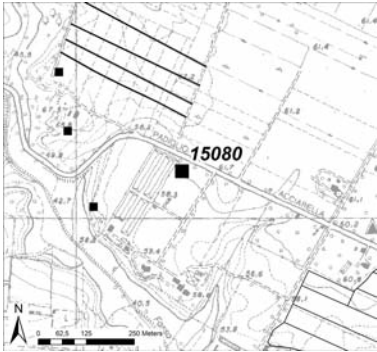
Samples:

Museum inventory number: CAM. 345.01

Geogr. position and find circumstances:

The site is situated in the western





part of the Campana region at a height of 60 m asl. The field in which it is located could not be visited since it was totally fenced off.

Site dimensions:

Unknown

Material:

Coarse ware; African Red Slip Ware; Bone

Site chronology:

Generically Imperial

Description:

No diagnostics were collected, therefore it is difficult to date the site. The ARSW indicates that the site was occupied somewhere during the Imperial period.

Site 15081

Liboni 81

Toponym:

Campana

Coordinates:

X: 2325595; Y: 4597146

Survey method:

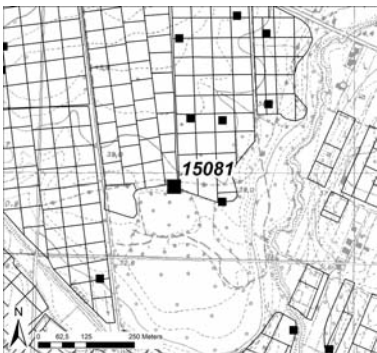
No survey

Samples:

Museum inventory numbers: CAM. 343.01-CAM.343.03.

Geographical position and find circumstances:

The site is located in a large field in



the area of Campana, 30 m to the west of site 15038. The site is nowadays overgrown by a small forest and could not be visited.

Site dimensions:

Unknown

Material:

Black Glazed Ware (E 7, E 13, E 21)

Site chronology:

Republican period (350-100 BC)

Description:

The ceramic assemblage, consisting of a large number of Black Glazed Ware fragments, confirms the presence of a Republican site of considerable size with a short lifespan. The Black Glazed Ware fragments can be dated between 300 and the beginning of the 2nd century BC.

Site 15082

Liboni 82

Toponym:

Cadolino

Coordinates:

X: 2325420; Y: 4596471

Survey method:

No survey

Samples:

Museum inventory numbers: CAD. 963.01-CAD.963.12

Geographical position and find circumstances:

The site is located in the central part of the Cadolino area. The location is nowadays overbuilt and a revisit was therefore impossible.

Site dimensions:

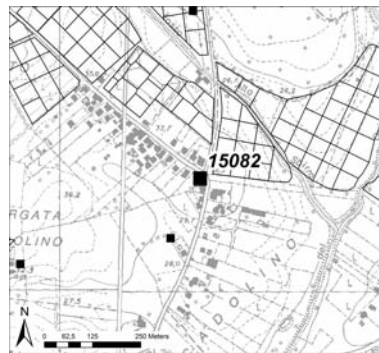
Unknown

Material:

Coarse ware (C 10, C 50); Black Glazed Ware (E 10, E 11, E 24, E 25, E 36); Terra Sigillata (F 1, F 2, F 3-4, F 9, F 10, F 17, F 18); African Red Slip Ware (G 6B, G 7A); Bronze; Lead; Iron; Wall plaster; Tesserae

Site chronology:

Republican period (350-30 BC); Imperial period (30 BC-AD 250)



Description:

The ceramic assemblage shows continuous occupation of the site from at least the late 4th or early 3rd century BC until the second half of the 2nd century AD. Its prime seems to be during the late Republic and the early Imperial period, when it can definitely be classed as a villa.

Site 15083

Liboni 83

Toponym:

Cadolino

Coordinates:

X: 2325927; Y: 4596257

Survey method:

No survey

Samples:

Museum inventory numbers: CAD. 964.01-CAD.964.06

Geogr. position and find circumstances:

The site is located in the region Cadolino, close to the eastern bank of the Fosso del Quinto. The area is divided in several small plots, enclosed by fences. The site was not revisited.

Site dimensions:

Unknown

Material:

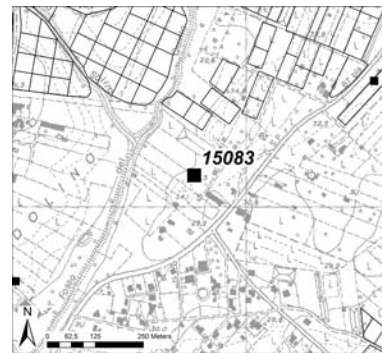
Coarse ware; Black Glazed Ware; Terra Sigillata; African Red Slip Ware (G 4, G 7A, G 7B, G 12A, G 16B, G 19, G 25B)

Site chronology:

Republican; Imperial period (30 BC-AD 400); Possibly late antique and early medieval period (5th century AD)

Description:

A few non-diagnostic Black Glazed Ware fragments indicate activity in the Republican period. The site was definitely occupied between the 1st and the 4th or possibly 5th century AD. The prime of the site seems to have been the 2nd and 3rd centuries AD.



Site 15084

Liboni 84

Toponym:

Cretarossa

Coordinates:

X: 2326365; Y: 4592483

Survey method:

Unsystematic

Samples:

1 grab sample (not numbered)

Geogr. position and find circumstances:

This site was discovered during building activities in the area of Cretarossa, 100 m north of the entrance of the *Poligono Militare*. It consisted of a pit at a depth of approximately 2 m below the present-day ground level, from which material was collected. No further archaeological works were carried out on the spot.

Site dimensions:

Unknown

Material:

Orientalising/ Archaic dolium

Site chronology:

Possibly Iron Age (7th century BC);

Possibly Archaic period

Description:

The pit was filled with the remains of a dolium of Orientalising or Archaic date. No other material was found associated with this find. The fragment itself can very well be an indication of a nearby settlement, but because of ongoing building activities further research in the vicinity of the find could not be carried out.

Site 15085

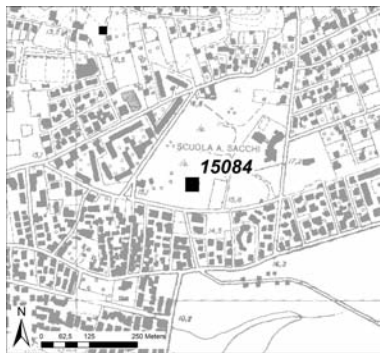
Liboni 22, Liboni 42, Liboni 43, Liboni 62, Liboni 63, Liboni 64

Toponym:

I Cioccati

Coordinates:

Liboni 22: X: 2324215; Y: 4595615



Liboni 42: X: 2323927; Y: 4595323

Liboni 43: X: 2323711; Y: 4594950

Liboni 62: X: 2323757; Y: 4595158

Liboni 63: X: 2323885; Y: 4595083

Liboni 64: X: 2323835; Y: 4595196

Survey method:

Revisit in 2004

Samples:

1 diagnostic sample (L63/01). Museum inventory numbers: MAC.920.01; MAC.921.01-MAC.921.15; MAC.922.01-MAC.922.03; MAC.923.01-MAC.923.04

Geogr. position and find circumstances:

These six sites are located on a large property in the western extremity of the municipality. The area is subdivided into two parts of more or less equal size, in use respectively for the cultivation of melons and as a vineyard. Only a small grab sample could be collected in 2004, when access was denied by the landowner during the block survey. Since then, despite several attempts, permission has not been granted for a visit. Several large blocks of basalt found during the revisit indicate that the via Selciatella crossed through the area.

Site dimensions:

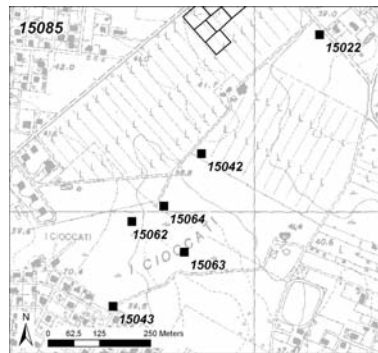
Unknown

Material:

Basalt; Coarse ware (C 16, C 23, C 28, C 29, C 31, C 35, C 36, C 43, C 53, C 54, C 62); Depurated ware; Black Glazed Ware; Terra Sigillata (F 2, F 11, F 15, F 17, F 18, F 19, F 22, F 25); African Red Slip Wares (G 1, G 2A, G 2B, G 4, G 6A, G 6B, G 7A, G 7B, G 12A, G 12B, G 16A, G 16B, G 17, G 18, G 19, G 20, G 21, G 23, G 25A, G 25B, G 26, G 27, G 28B, G 30, G 33, G 39, G 45); Oil lamps; Glass; Wall Plaster; Coins; Tesserae

Site chronology:

Republican period (100-30 BC, possibly 250-100 BC); Imperial period 30 BC-AD 400); late antique and early medieval period (5th and 7th century AD)



Description:

On this property at least six sites are indicated by Arnaldo Liboni. It was not possible to assign material to the individual sites, but judging by the amount and composition of the material they can all with great probability be labelled as villa sites. There is no evidence for activity prior to the Republican era. Large amounts of Terra Sigillata and ARSW have been collected, the largest part dating between the beginning of the Roman Imperial period and the end of the 3rd century AD. There is activity, on a slightly lesser scale, until the 7th century AD.

Site 15102

T3S1

Toponym:

Scopone

Coordinates:

X: 2328734; Y: 4597558

Survey method:

Unsystematic survey; block survey at 100% coverage

Samples:

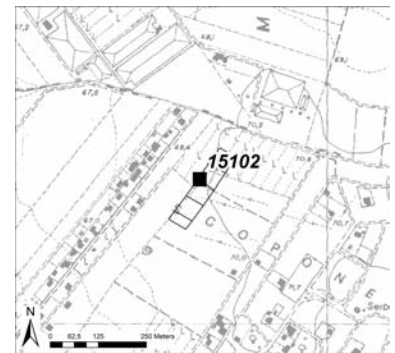
1 diagnostic sample (3004-01); 6 total samples (3004-01; 2913-01; 2914-01; 2915-01; 2916-01; 2917-01)

Geographical position and find circumstances:

The site is located near the northern border of the municipality, which is formed by the Fosso delle Cinfonare. The site is situated on the highest point (70 m asl) of the area, that slightly slopes down in all directions. The area was not ploughed, and therefore visibility conditions were rather adverse during survey. The direct surroundings of the site seem to have been levelled.

Site dimensions:

Unknown



Material:

Impasto (dolia, medium-thick wares, thin-walled table ware); Protohistoric grey ware?; Basalt whetstone (Misc. no 34)

Site chronology:

Iron Age (7th century AD)

Description:

The finds probably date to the Orientalising period; the varied repertoire of the impasto probably indicates that we deal with a settlement in this period.

Site 15103

T1S9

Toponym:

Scopone

Coordinates:

X: 2328274; Y: 4596932

Survey method:

Block survey and one transect

Samples:

1 standard sample (1376-01); 1 total sample (1376-02); 2 grab samples (1376-03 and 1376-04)

Geographical position and find circumstances:

This site is located in the central-northern part of the municipality, in the relatively high area of Scopone. The site was found in a ditch on the edge of a melon field. Visibility during the first visit was hindered by dustiness; revisits in better conditions revealed that the site probably extends into the adjacent field.

Site dimensions:

At least 100 m²

Material:

Late Iron Age and Orientalising impasto

Site chronology:

Iron Age (8th and 7th century BC)

Description:

The site was occupied during the

(late) Iron Age and Orientalising period.

Site 15106

T2S3

Toponym:

Zucchetti

Coordinates:

X: 2324960; Y: 4595240

Survey method:

Block survey

Samples:

6 standard samples (2227-01 to 2227-05; 2246-01); 1 diagnostic sample (2227-06)

Geographical position and find circumstances:

The site is located in the central-western part of the municipality, 400 m south of the crossroads at Cadolino and 500 m west of the Fosso Loricina. It is situated on a plateau at 40 m asl overlooking the valley of this stream, on the edge of a large ploughed field; the site may extend further to the west. Visibility conditions during survey were good.

Site dimensions:

At least 3500 m²

Material:

Archaic coarse ware; Building material (limestone, tile, marble); Coarse ware (C 23, C 28); Amphora (D 1, D 2, D 7); Black Glazed Ware (E 3, E 9); Terra Sigillata; African Red Slip Ware; Part of a grinding stone

Site chronology:

Archaic period; Possibly post-Archaic period; Republican period (350-30 BC); Imperial period (30 BC-AD 250)

Description:

The site shows continuity from the Archaic period possibly into the mid 3rd century AD, although the evidence for early Imperial occupation is relatively sparse.

Site 15107

T2S4

Toponym:

Zucchetti

Coordinates:

X: 2325345; Y: 4595126

Survey method:

Block survey

Samples:

3 standard samples (2249-01; 2258-01; 2259-01); 2 diagnostic samples (2249-02; 2259-02)

Geographical position and find circumstances:

The site is located in the central-western part of the municipality, 500 m south of the crossroads at Cadolino and 200 m west of the Fosso Loricina. It is situated on a plateau at 35 m asl overlooking the valley of this stream, on the edge of a large ploughed field; the site may extend further to the south. Visibility conditions during survey were good.

Site dimensions:

At least 4000 m²

Material:

Late Iron Age and Orientalising impasto; Building material (limestone, tile); Coarse ware (C 23); Black Glazed Ware; African Red Slip Ware (G 6B, G 7B, G 12B, G 16B, G 18, G 19, G 27); Terra Sigillata

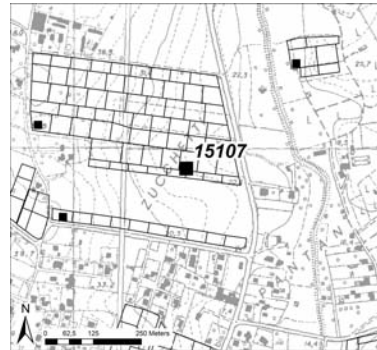
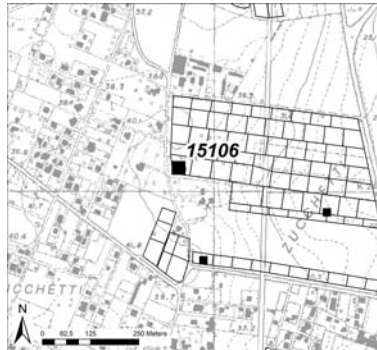
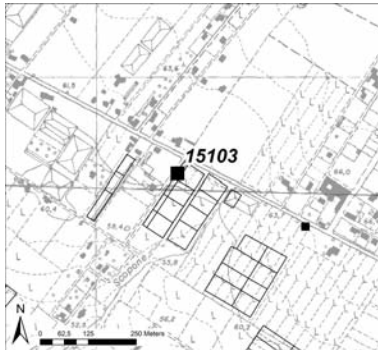
Site chronology:

Iron Age (8th and 7th century BC); Republican period (100-30 BC, possibly 350-100 BC); Imperial period (30 BC-AD 250, possibly AD 250-400); late antique and early medieval period (5th century AD)

Description:

Small scale occupation must have been present in protohistory as well as the post-Archaic and Republican period. Most finds, however, date in the Imperial period.

The wide variety of ARSW-shapes points to habitation from the mid



2nd century AD until at least the beginning of the 4th century AD.

Site 15108

T2S5

Toponym:

-

Coordinates:

X: 2325632; Y: 4595400

Survey method:

Block survey in 2004; unsystematic revisit in february 2005.

Samples:

7 standard samples (2301/01, 2301/02, 2301/03, 2301/04, 2301/05, 2301/06, 2301/07), 1 diagnostic sample (2301/08).

Geographical position and find circumstances:

The site is situated about 200 m south-east of the crossroad at Cadolino, on a high plateau overlooking the Fosso Loricina, which runs 50 m to the west of the site. The site was located in and around a vineyard. Visibility conditions during the survey were good.

Site dimensions:

Ca 2500 m²

Material:

Late Iron Age impasto ; Bucchero ; Archaic coarse ware (B 1; C 1, C 2); Building material (Archaic and Republican tile, tuff, limestone); Coarse ware (C 6, C 8, C 9, C 12); Amphora (D 3, D 5); Black Glazed Ware (E 17, E 22); Terra Sigillata (F 6)

Site chronology:

Iron Age (8th and 7th century BC); Archaic period; post-Archaic period; Republican period (350-30 BC); Imperial period (30 BC-AD 100, possibly AD 100-250)

Description:

The earliest material from the site dates to the 8th century BC. The largest part of the collected material can be attributed to the period between

the 6th and the 4th century BC. In this phase there is evidence for a hut or a hamlet, considering the building materials. There is continuity into the early and possibly mid Imperial period on a more modest scale.

Site 15109

T1S2

Toponym:

Torre del Monumento

Coordinates:

X: 2324634; Y: 4596321

Survey method:

Block survey

Samples:

2 standard samples (1047-01 and 1048-01); 1 grab sample (1048-02)

Geographical position and find circumstances:

Site 15109 is located ca 50 m east of Torre del Monumento, directly on the via Torre del Monumento. The site was situated in a ploughed field with good visibility conditions.

Site dimensions:

Ca 250 m²

Material:

Building material (limestone, tuff, tile); Coarse ware; Terra Sigillata; African Red Slip Ware (G 6B)

Site chronology:

Possibly Republican period (100-30 BC); Imperial period (30 BC-AD 250)

Description:

15109 is a small site with evidence for several small structures or buildings. The ceramic assemblage, although limited, possibly dates these structures to the late Republican and the Imperial period. Perhaps this site can be associated with site 15019, a Roman villa located directly next to Torre del Monumento. 15109 may consist of one or more small outbuildings.

Site 15110

T1S5

Toponym:

Campana

Coordinates:

X: 2325034; Y: 4597238

Survey method:

Block survey

Samples:

4 standard samples (1103-01 to 1103-03; 1104-01)

Geographical position and find circumstances:

The site is located in the same field as site 15111 and 15112, on its southwestern edge at 50 m from the Fosso dello Sbirro. The area steeply slopes down towards this stream; the width of the strips between the melon plants provided relatively good visibility during our visit.

Site dimensions:

Ca. 1200 m²

Material:

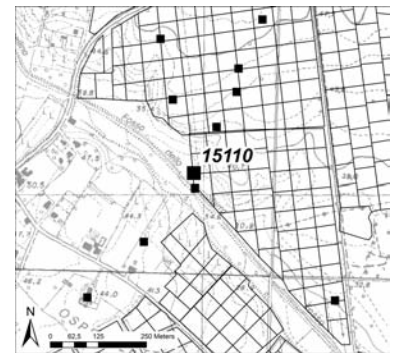
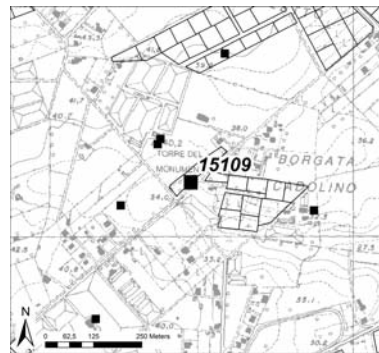
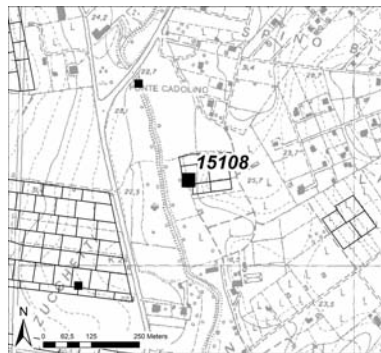
Building material (Remains of an in situ wall in *opus reticulatum*, limestone, tile (1 stamped fragment), brick); Coarse ware; Amphora; Terra Sigillata (F 2); African Red Slip Ware

Site chronology:

Possibly Republican period (100-30 BC); Imperial period (30 BC-AD 250)

Description:

The site clearly consists of a building, probably part of a villa complex. The finds assemblage indicates that it was probably not one of its main buildings (no luxury finds, hardly any cooking or fine wares), but an outbuilding. The first phase of the site can possibly be dated in the late Republican period. Occupation is certain during early and mid Imperial times.



Site 15111

T154; Site 0205-03

Toponym:

Campana

Coordinates:

X: 2325094; Y: 4597358

Survey method:

Block survey

Samples:

15 standard samples (1097-01 to 1097-07, 4039-01, 4039-02, 4040/03, 4040/04, 4053/01, 4053/02, 4054/01, 4054/02); 1 diagnostic sample (1097-08)

Geogr. position and find circumstances:

The site is situated in the area of Campana, spread over two different fields. One part was surveyed as T154 in 2004, the other in February 2005 under the name of site 0205-03. The northern part of the site is located at a high elevation, while most of the other finds were collected where the field slopes downwards rather strongly in the direction of the Fosso dello Sbirro, 300 m to the south. The overall visibility was rather poor, on part of the site it was slightly obstructed by vegetation.

Site dimensions:

Ca 4500 m²

Material:

Late Iron Age impasto (A 39); Archaic coarse ware (ao dolium); Building material (limestone, tuff, late Republican and Imperial tile, brick, marble); Coarse ware (C 30, C 33, C 36, C 57); Amphora (D 3, D 7, D 8); Terra Sigillata (F 11); African Red Slip Ware (G 2B, G 7A, G 7B, G 12A, G 16B, G 17, G 18, G 19, G 21, G 25B); Roman glass; Lead; Bronze; Tesserae

Site chronology:

Iron Age (8th century BC); Archaic period; Possibly Republican period (100-30 BC); Imperial period (30

BC-AD 400); Possibly late antique and early medieval period (5th century AD)

Description:

The single impasto shard may indicate an early phase of occupation; fragments dating in the Archaic period are also present, but scarce. The large size in combination with the different types of building material and the considerable amount of Imperial fine wares and tesserae indicates the presence of a Roman villa, erected somewhere around the start of the Imperial period and continuing until at least the end of the 4th century or the mid 5th century AD. Sites 15110 and 15127, whose finds assemblages are characterized by an abundance of building material and a lack of kitchen and table wares, can possibly be associated with this villa as outbuildings.

Site 15112

T153

Toponym:

Campana

Coordinates:

X: 2325402; Y: 4596907

Survey method:

Block survey

Samples:

3 standard samples (1062-01, 1063-01 and 1063-02); 1 diagnostic sample (1063-03)

Geogr. position and find circumstances:

The site is located in the area of Campana, in a large triangular field descending towards the Fosso dello Sbirro, on a small hill in the lower part of the field close to the fosso. The field was covered by long rows of melon plants, but strips between these rows were surveyable. Visibility in these strips was limited due to overgrowing melon plants.

Site dimensions:

At least 2000 m²

Material:

Archaic coarse ware (dolium, pottery); Possibly post-Archaic coarse ware; Building materials (limestone, Archaic and mid Republican tile); Amphora (D 5); Black Glazed Ware

Site chronology:

Archaic period; Possibly post-Archaic period; Republican period (350-30 BC); Possibly Imperial period (30 BC-AD 250)

Description:

The site shows evidence for occupation in the Archaic period. Activity in the post-Archaic period was not established with certainty. Thereafter the site appears to be inhabited uninterruptedly from the Republican up to the Imperial period. Building material, as Archaic tile fragments, shows that (one or more) substantial buildings were present in the 6th century BC and the Republican period.

Site 15114

T251

Toponym:

Padiglione

Coordinates:

X: 2322917; Y: 4598901

Survey method:

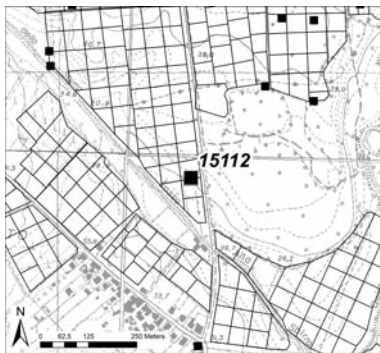
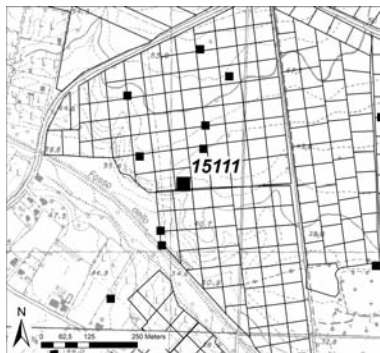
Block survey

Samples:

2 standard samples (2019-01 and 2019-02); 2 diagnostic samples (2019-03 and 2020-01)

Geogr. position and find circumstances:

The site is located in the north-western part of the municipality, 500 m east of the border with Anzio and 200 m west of the Bosco di Padiglione. It is situated at an elevation of 75 m asl; no streams are found in its vicinity. The area was



largely overgrown and visibility conditions were therefore unfavourable. The extent of the site remains unclear, because it is partly located on inaccessible terrain.

Site dimensions:

At least 2000 m²

Material:

Late Iron Age impasto; Building material (limestone, travertine, Roman tile); Coarse ware; Amphora (D 7, D 8); African Red Slip Ware (G 6B, G 7A, G 7B, G 16B, G 17, G 18, G 19, G 25B, G 27)

Site chronology:

Iron Age (8th century BC); Possibly Republican period (100-30 BC); Imperial period (30 BC-AD 400), Possibly late antique and early medieval period (5th century AD)

Description:

The site was already occupied in the late Iron Age, abandoned and again occupied, probably from the 1st century AD until at least the 4th, possibly the 5th century AD; the prime of the site, however, seems to have been in the 2nd and 3rd century. The presence of building materials as well as cooking, storage and table wares indicates that we probably deal with a domestic site; the size of this site, however, remains unclear.

Site 15122

Bottego 2 and 3

Toponym:

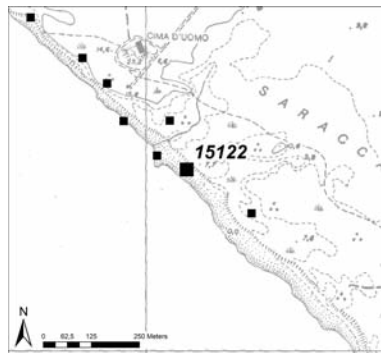
Bottego

Coordinates:

X: 2331112; Y: 4588734

Survey method:

After reconnaissance survey of the area of Bottego two sites were chosen for test trenches at places where shard concentrations surfaced. Two trenches were dug and material was collected.



Samples:

Several total samples

Geogr. position and find circumstances:

The sites are located in the central-western part of the *Poligono Militare*, on the slope of a dune, just north of site 11208.

Site dimensions:

Unknown

Material:

Impasto; Building material (tiles)

Site chronology:

Bronze Age; Roman

Description:

In both trenches no archaeological strata were present, and the finds are therefore probably provenient from buried contexts higher up the dune. The collected materials indicate human activity in the Bronze age and the Roman period in the vicinity.

Reference:

Attema et al. 2003a, 127; Tol 2003

Site 15123

Bottego 1

Toponym:

Bottego

Coordinates:

X: 2331111; Y: 4588728

Survey method:

Protohistoric shards were found during GIA research in a small exposure on the slope of the dune facing the sea. In 2002 this exposure was cleaned, deepened and enlarged to determine the context of the shards.

Samples:

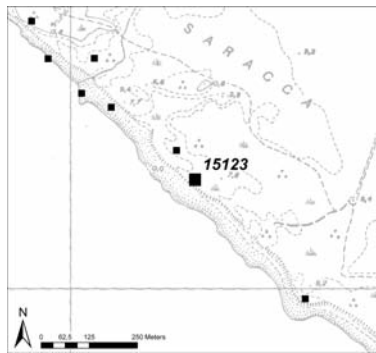
Several total samples

Geogr. position and find circumstances:

The site is situated near site 11209, along the coast in the central-western part of the *Poligono Militare*.

Site dimensions:

Unknown



Material:

Impasto; Clay slabs; Roman coarse ware

Site chronology:

Bronze Age; Roman

Description:

The materials, on the basis of parallels with the material from site 11213, can be assigned to the late Bronze Age. Judging from the large quantity of matching shards and the clear association with two specific layers, we probably deal with an *in situ* archaeological context. A single fragment, positioned in the top soil, is of clearly later date, but no further material of later periods was found.

Reference:

Attema et al. 2003a, 127; Tol 2003

Site 15124

Piccarreta 14pp

Toponym:

Pelliccione

Coordinates:

X: 2330600; Y: 4589179

Survey method:

Unsystematic

Samples:

1 grab sample

Geographical position and find circumstances:

The site is located in the central-western part of the *Poligono Militare*, on the coast, just 60 m north of site 11213. It consists of a concentration of ceramic material in an exposure created by marine erosion. A grab sample was taken and the exposure was drawn.

Site dimensions:

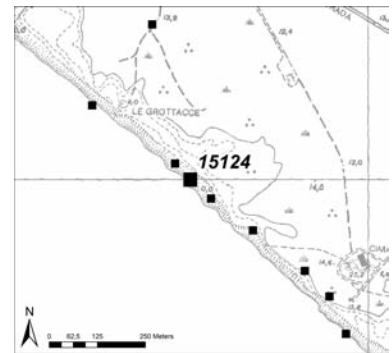
Unknown

Material:

Impasto

Site chronology:

(Recent) Bronze Age



Description:

Several diagnostics were collected, of which one, a broad band handle, may date to the Recent Bronze Age. No further work was carried out at the site and its nature remains unclear.

Reference:

Attema et al. 2003a, 126; Tol 2003

Site 15125

Depuratore

Toponym:

Depuratore

Coordinates:

X: 2326554; Y: 4591872

Survey method:

No survey

Samples:

Several total samples in 2002; grab samples in 2003, 2004 & 2005.

Geographical position and find circumstances:

Just east of the public beach on the *Poligono Militare*, marine erosion has exposed a large profile in the dunes facing the sea. In it a thick layer of mainly protohistoric shards is visible. The profile was drawn, described and sampled during the 2002 GIA fieldwork-campaign, whereafter the section was revisited various times.

Site dimensions:

Unknown; the finds layer can be followed in the section over a length of approximately 100 m.

Material:

Impasto; Archaic coarse ware; Building material (Roman tile); Bronze (fibula); Black Glazed Ware

Site chronology:

Iron Age (8th and 7th century BC); Archaic period; Republican

Description:

The largest part of the material, mainly consisting of large jars and large bowls, can be dated to the late

Iron Age and the Archaic period. They appear to be indicative of industrial activity, but it is unclear where the activities were conducted since only a small part of the section appears *in situ*. It is probable that a large part of the site has been disturbed during the construction of a water plant, located at short distance. A bronze fibula points to the presence of a (late Iron Age) grave in the vicinity of the site. Several dispersed Roman fragments were found during sampling in 2002.

Reference:

Velocchia Renaldi 1978, 25; Attema et al. 2003a, 124-125; Tol 2003; Alessandri 2007, 82-86

Site 15126

Depuratore 2; Site 0205-14

Toponym:

Depuratore

Coordinates:

X: 2326558; Y: 4591910

Survey method:

Unsystematic

Samples:

1 grab sample

Geogr. position and find circumstances:

The site is located within the water plant, near the western edge of the *Poligono Militare*, close to the public beach where several profiles were noticed.

Site dimensions:

Unknown

Material:

Building material (tile); Amphora; Depurated ware

Site chronology:

Imperial period (30 BC-AD 100)

Description:

Few diagnostic fragments were collected, which makes it impossible to give an accurate dating for the site. The tiles and amphora shards prob-

ably point to occupation in early Imperial period. Fine wares are absent in our sample.

Site 15127

Site 0205-01

Toponym:

Campana

Coordinates:

X: 2325146; Y: 4597449

Survey method:

Block survey

Samples:

1 standard sample (4040/01)

Geographical position and find circumstances:

The site is located in a large field in the Campana area, close to the via Selciatella. It is located on a natural height, descending southwards to the Fosso dello Sbirro. Survey conditions were mediocre during our visit; visibility was limited by a high degree of weathering, shadow and vegetation.

Site dimensions:

200 m²

Material:

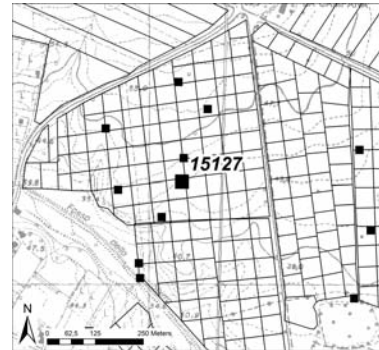
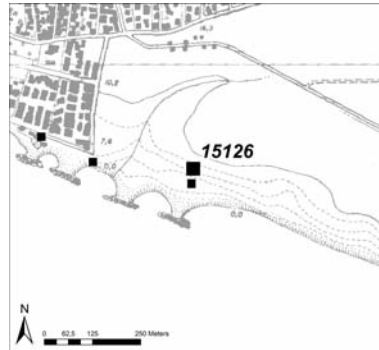
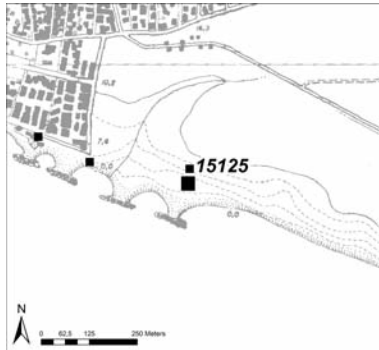
Building material (mainly tile; also basalt, tuff); Amphora (D 8, D 10); Depurated ware; African Red Slip Ware (G 16B)

Site chronology:

Possibly Iron Age (7th century BC); Possibly Archaic period; Imperial period (30 BC-AD 250, possibly AD 250-400)

Description:

The combination of finds points to a small building, erected at the beginning of the Imperial period. It could have functioned as an outbuilding of the villa 15111, located approximately 25 m to the west. It is conspicuous that the small amount of ARSW on the site exclusively belongs to casseroles.



Site 15128

Site 0205-02

Toponym:

Campana

Coordinates:

X: 2325137; Y: 4597708

Survey method:

Block survey

Samples:

3 standard samples (4031/01, 4032/01, 4032/02)

Geographical position and find circumstances:

The site is situated in the Campana area, close to the via Selciatella. It is located in the highest part of the field, overlooking the surroundings. To the south, the field descends strongly towards the Fosso dello Sbirro. During our visit to the site visibility was low, because of shadow and dust.

Site dimensions:

500 m²

Material:

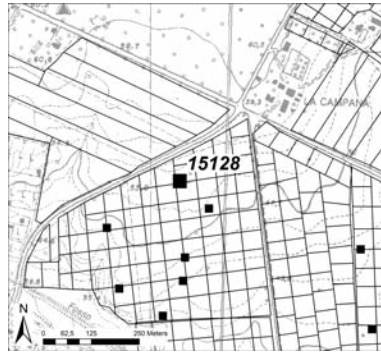
Building material (tile); Coarse ware (ao dolium); Amphora (D 3, D 9); Depurated ware; African Red Slip Ware

Site chronology:

Possibly Archaic period; Possibly Republican period (100-30 BC); Imperial period (30 BC-AD 250, possibly AD 250-400)

Description:

There is scarce evidence for activity in the Archaic and late Republican period. The remainder of the finds indicates the presence of an Imperial period site. Its small size and the relatively poor finds may indicate that we are dealing with an outbuilding belonging to a villa, probably site 15014, which is situated at short distance.



Site 15129

Site 0205-06

Toponym:

Ponte Cadolino

Coordinates:

X: 2325502; Y: 4595651

Geographical position and find circumstances:

The site consists of the remains of a bridge, pointed out to us by a local farmer. It is located close to the crossroads at the small hamlet Cadolino, crossing the Fosso del Quinto. Its toponym hints at the Roman origin of the bridge, deriving from the Latin word *cadus*, which indicates an (artificial) drop in the water level, still visible nowadays.

Site chronology:

Roman

Description:

The few remains that are still visible do not allow us to propose an accurate date. We cannot be more specific than to say it is Roman.

Site 15130

Site 0205-07

Toponym:

Campana

Coordinates:

X: 2324948; Y: 4597588

Survey method:

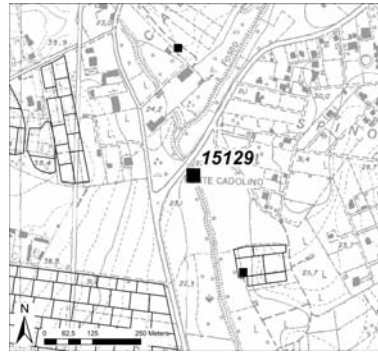
Block survey

Samples:

4 total samples (4063/01, 4064/02, 4070/02, 4062/02)

Geogr. position and find circumstances:

The site is situated in the Campana area, on the northern edge of a large field, bordered by the road towards Cadolino. It is located on a natural height, overlooking the surroundings. Towards the south the field descends strongly towards the Fosso



dello Sbirro. The site was found during the block survey under good visibility conditions. During a revisit, rain had washed the impasto shards clean, what made them easy to recognize.

Site dimensions:

Approximately 1200 m²

Material:

Impasto; Archaic coarse ware (only a few diagnostics were collected)

Site chronology:

Iron Age (8th or 7th century BC); Archaic period

Description:

The finds point to activity in the late Iron Age/Orientalizing and Archaic period.

Site 15132

Site 0205-09

Toponym:

Campana

Coordinates:

X: 2325151; Y: 4597510

Survey method:

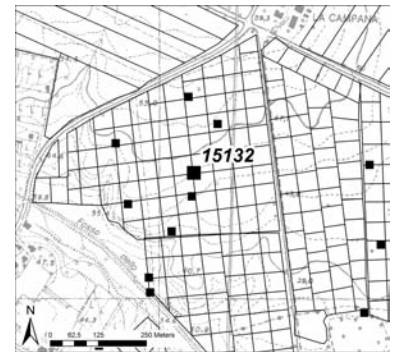
Block survey

Samples:

3 standard samples (4035/01, 4035/02, 4042/02)

Geogr. position and find circumstances:

The site is located in a large field in



the Campana area, where Arnaldo Liboni has indicated several sites. The site is situated on a small hilltop, sloping down to the south towards the Fosso dello Sbirro. Visibility was slightly limited by vegetation and weathering.

Site dimensions:
550 m²

Material:

Building material (tuff, brick, cement, tile, basalt); African Red Slip Ware; Terra Sigillata

Site chronology:

Possibly Republican period (100-30 BC); Imperial period (30 BC-AD 100 or AD 100-250)

Description:

The concentration of mainly building materials points to a function as an outbuilding belonging to a villa. Perhaps this site can be associated with site 15014, which is situated at short distance. The single ARSW fragment places the site within the lifespan of this large villa.

Site 15134

Site 0205-12

Toponym:

Campana

Coordinates:

X: 2325608; Y: 4597532

Survey method:

Block survey

Samples:

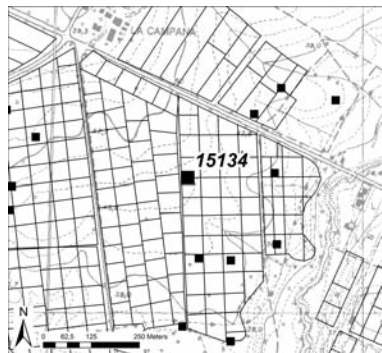
2 standard samples (4283/01, 4284/01)

Geogr. position and find circumstances:

The site is located in a large field in the Campana area, 200 m to the left of the Fosso del Quinto. During our visit survey conditions were quite favourable; the visibility was only slightly limited by vegetation.

Site dimensions:

5000 m²



Material:

Orientalising impasto; Archaic coarse ware

Site chronology:

Iron Age (7th century BC); Archaic period

Description:

A site with evidence for Orientalising and Archaic occupation, covering a large area. The concentration of material within the site is very dense. The size of the site and the quantity and density of the finds indicate the presence of a permanent settlement. Few diagnostics were collected.

Site 15135

Site 2726

Toponym:

Piscina Cardillo

Coordinates:

X: 2325998; Y: 4596723

Survey method:

Block survey

Samples:

1 standard sample (2726/01) & 1 total sample (2726/02)

Geographical position and find circumstances:

The site is located just north of the crossroad at Cadolino, between the Fosso del Quinto and the present-day road to Piscina Cardillo. Visibility conditions during the survey were low.

Site dimensions:

400 m²

Material:

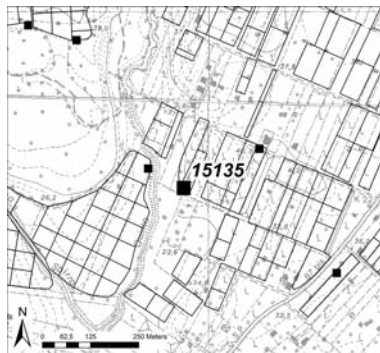
Iron Age and Orientalising impasto; Archaic coarse ware; Grumo

Site chronology:

Iron Age (8th or 7th century BC); Possibly Archaic period

Description:

The grumo indicates the presence of a habitation site of the late Iron Age and Archaic period.



Site 15136

Site 2733

Toponym:

Piscina Cardillo

Coordinates:

X: 2326195; Y: 4596825

Survey method:

Block survey

Samples:

1 standard sample (2733/01)

Geogr. position and find circumstances:

The site is located just north of the crossroad at Cadolino, between the Fosso del Quinto and the present-day road leading to Piscina Cardillo. The area is divided into several small plots. Visibility conditions during the survey were adverse.

Site dimensions:

Unknown

Material:

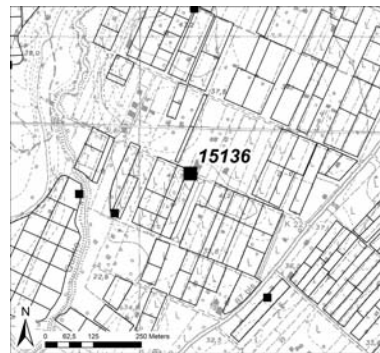
Possibly Iron Age and Orientalising impasto; Archaic coarse ware; Building material (Archaic, post-Archaic and Republican tile); Coarse ware; Amphora; Black Glazed Ware

Site chronology:

Possibly Iron Age (8th and 7th century BC); Archaic period; post-Archaic period; Republican

Description:

A clear habitation site from the Archaic period onwards. Activity on the site seems to continue into the Republican era. The lack of datable pieces makes it hard to ascertain a definite date for the abandonment of the site. Some fragments may be assigned to the Iron Age and Orientalising period and constitute evidence for even earlier frequentation of this location.



Site 15137

Site 2793

Toponym:

Campo Cerreto

Coordinates:

X: 2326395; Y: 4596503

Survey method:

Block- and transect survey

Samples:

1 standard sample (30% coverage; 2793/01) and 1 total sample (2793/02)

Geogr. position and find circumstances:

The site is situated just east of the Cadolino area, on the east side of the road leading to Piscina Cardillo. The area is divided into several small plots. Visibility conditions during survey were adverse.

Site dimensions:

Unknown

Material:

Archaic coarse ware; Possibly Archaic tile

Site chronology:

Archaic period

Description:

The material evidence shows we are dealing with an Archaic settlement site. There is no evidence for earlier or later activity on this location.

Geographical position and find circumstances:

The site is situated in the Piscina Cardillo area, in the central-northern part of the municipality, on the east side of the road running towards Cadolino. The area is divided into many small plots. Visibility conditions during the survey were medium to low.

Site dimensions:

1000 m²

Material:

Archaic coarse ware (ao dolium); Building material (tile); Coarse ware (C 23, C 37); Amphora; Black Glazed Ware; Terra sigillata (F 2); African Red Slip Ware (G 2A, G 2B, G 7B, G 16A, G 18, G 19)

Site chronology:

Archaic period; Republican; Imperial period (30 BC-AD 250)

Description:

Several fragments indicate Archaic occupation of the site. There is also evidence for activity in the Republican period. The prime of the site seems to have been from the start of the Imperial period to the end of the 2nd century AD, possibly even half a century later. Evidence for later occupation of the site is absent.

Geographical position and find circumstances:

The site is located several hundred m north-east of the small village of Tre Cancelli on the south side of the road to Piscina Cardillo. The area has been divided into many small plots. Visibility conditions during the survey were adverse.

Site dimensions:

2000 m² (but most fragments come from a very small area)

Material:

Impasto (plain and burnished)

Site chronology:

Possibly Iron Age (8th and 7th century BC)

Description:

For now we can only say the material is of possible Iron Age date. It has been impossible to date the few fragments with more precision.

Site 15138

Site 2821-23

Toponym:

Rovito

Coordinates:

X: 2326745; Y: 4596910

Survey method:

Block- and transect survey

Samples:

2 standard samples (2821/01 & 2822/01) & 5 diagnostic samples (2821/02, 2821/03, 2822/02, 2823/01 & 2823/02)

Site 15139

Site 2885

Toponym:

Tre Cancelli

Coordinates:

X: 2328524; Y: 4595564

Survey method:

Block- and transect survey

Samples:

1 standard sample (2885/01) and 1 total sample (2885/02)

Site 15140

Site 2906

Toponym:

Piscina Cardillo

Coordinates:

X: 2328741; Y: 4595787

Survey method:

Block- and transect survey

Samples:

1 standard sample (2906-01), 1 total sample (2906-02)

Geogr. position and find circumstances:

The site is located a few hundred m north of the village of Tre Cancelli, in a large field north of the road to Piscina Cardillo.

Site dimensions:

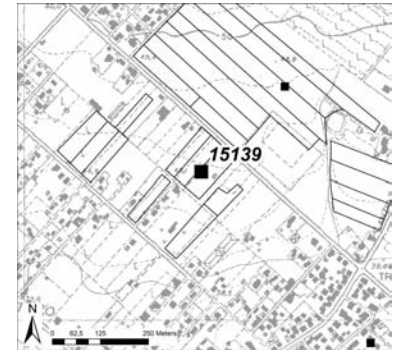
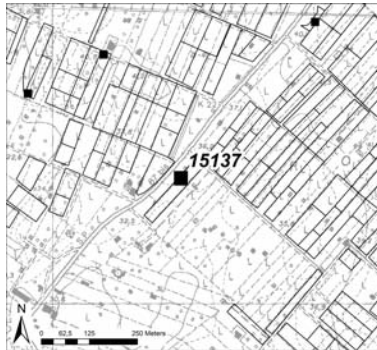
Unknown

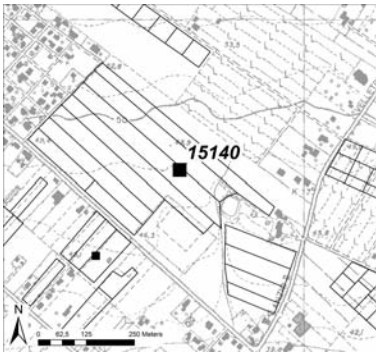
Material:

Impasto (plain and burnished)

Site chronology:

Iron Age (8th century BC)





Description:

A clear site, although only a few diagnostic fragments were collected. The material can be attributed to the Iron Age.

Site 15150

Villa Verdiana

Toponym:

Villa Verdiana/Scopone

Coordinates:

X: 2328974; Y: 4596990

Survey method:

Unsystematic survey

Samples:

1 grab sample (NET'05 V.V.)

Geographical position and find circumstances:

The site is located in the north-eastern part of the municipality, close to the road to Le Ferriere. It is situated in a garden. Over the years, ceramics have been collected by the landowner. The site may continue beyond his property.

Site dimensions:

Unknown

Material:

Archaic coarse ware (ao dolium, kitchen wares); Building material (tile); Coarse ware (C 10, C 23); Amphora; Depurated ware; Black

Glazed Ware (E 29); Terra Sigillata; African Red Slip Ware (G 5, G 6A, G 6B, G 7B, G 12B, G 18, G 19); Glass

Site chronology:

Archaic period; post-Archaic period; Republican period (350-30 BC); Imperial period (30 BC-AD 250)

Description:

A site with continuous activity from the Archaic period until at least the late 2nd century AD. Due to the limited amount of material at our disposal its size and function remain unclear. Georadar studies have shown the presence of several *in situ* walls on the site.

Site 15151

Villa Borghese 2

Toponym:

Villa Borghese

Coordinates:

X: 2323635; Y: 4592227

Survey method:

Unsystematic

Samples:

1 grab sample (VB G.S.)

Geographical position and find circumstances:

The site is situated along the coastal road Anzio-Nettuno. The area consists of a small hunting lodge located in the centre of a large lawn and a small wooded area. The site is located on the edge of this forest, where a small profile is visible. Here a sample was collected. Since the area is covered by vegetation no further works were undertaken.

Site dimensions:

Unknown

Material:

Coarse ware; Building material (ao a stamped tile fragment (AEMILI-PAULLI), marble); Terra Sigillata; Wall plaster; Depurated ware; Amphora; Tesserae

Site chronology:

Imperial period (30 BC-AD 100)

Description:

The Terra Sigillata shard indicates occupation in the early Imperial period. The marble and tesserae indicate that the site probably represents a villa.

Site 15153

GT 2007-1

Toponym:

Zucchetti

Coordinates:

X: 2325027; Y: 4595004

Survey method:

Unsystematic

Samples:

1 grab sample (GT 2007-01/01)

Geographical position and find circumstances:

The site is located in the south-western corner of a large field, just south of the Cadolino area. During the 2004 survey campaign the area was surveyed, but due to the poor visibility conditions only a small increase in find density was noticed, at the time not interpreted as a site. During a revisit in 2007 the area of the site was partly ploughed, revealing a clear concentration, visible also as a soil discolouration.

Site dimensions:

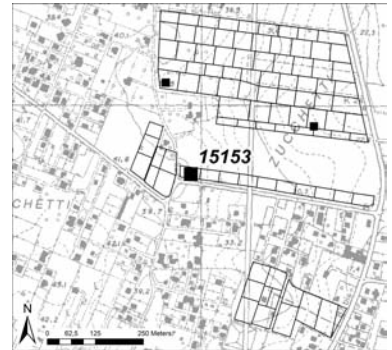
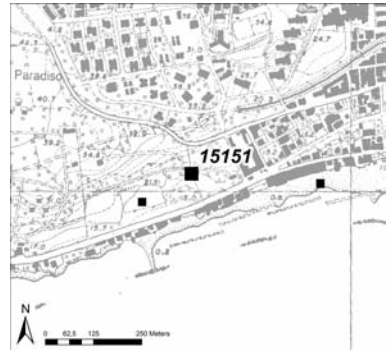
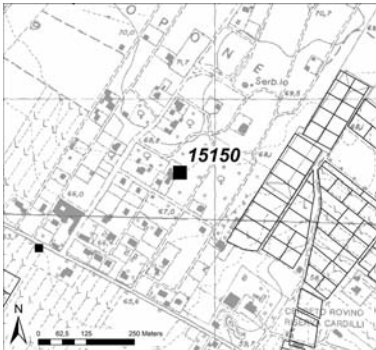
Unknown

Material:

Archaic coarse ware (ao almond rim); Etrusco-Corinthian fragment; Building material (grumo, tiles); Coarse ware (ao almond rim); Amphora; Terra Sigillata; African Red Slip Ware

Site chronology:

Iron Age (7th century BC); Archaic period; Possibly post-Archaic period; Possibly Republican period (350-30 BC); Imperial period (30 BC-AD 250)



Description:

There is evidence for habitation as early as the Archaic period. The Etrusco-Corinthian piece represents even earlier (7th century BC) activity. The tile and coarse ware fragments may indicate continuing use of the location. The early and mid Imperial periods seem to be the prime of the site. There is no evidence for activity in later periods.

Site 15201

via Selciatella (Strada Romana)

Coordinates:

X: 2326290-2322859

Y: 4599274-4593076

Geogr. position and find circumstances:

Part of the track of the Roman road from Lanuvium to Antium runs straight through the municipality of Nettuno. This road forked off the *via Appia* and continued in an almost straight line towards Antium. The road, its antique name unknown, enters the municipality of Nettuno in the northern part of the Campania region and leaves it in the west at the location of Pocacqua. In the Campania area, part of its track has been excavated and restored.

Description:

The paved road is dated at the end of the 2nd or the start of the 1st century BC. Perhaps it was built over an unpaved predecessor, as was not unusual in Roman times.

References:

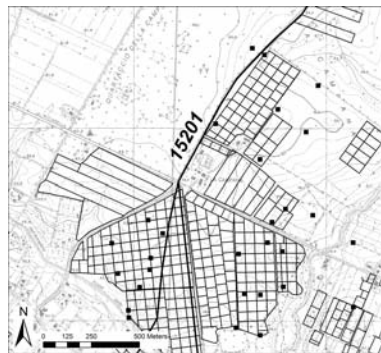
De Rossi 1981; Ceccarelli 2004; Negri 2004

Site 15202

Torre del Monumento

Toponym:

Torre del Monumento



Coordinates:

X: 2324548; Y: 4596420

Geogr. position and find circumstances:

The site is located approximately 1 km south of Campana, along the *via Selciatella*. The structure has partly collapsed in the 1950s, but its condition has not dramatically worsened since.

Site chronology:

Imperial period (30 BC-AD 100)

Description:

Based on the building technique (*opus reticulatum*) and its location along the Roman road the structure can be dated around the year 0. The structure forms a burial monument for an unknown individual. The study of an inscription from the site, today preserved at the *Antiquario di Nettuno*, can perhaps help with the identification. In the summer of 2006 an excavation was executed at the base of the monument by the *Soprintendenza*.

References:

Abbate 1894, 269; Giovannoni 1943; Ceccarelli 2004

Sites 15203/204/205

Three fishponds

Coordinates:

15203: X: 2324697; Y: 4592241

15204: X: 2324314; Y: 4592233

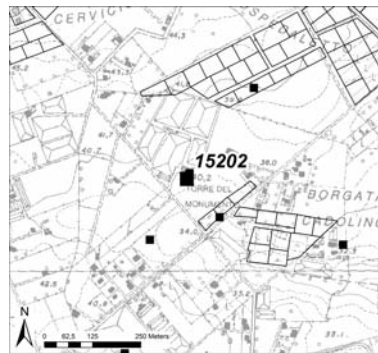
15205: X: 2323970; Y: 4592203

Geogr. position and find circumstances:

Three fishponds, situated south of the Borgo Medievale of Nettuno, were already described at the end of the 19th and the beginning of the 20th century by Lanciani and Jacono. Because of the building of several tourist wharves, two of them have been destroyed.

Site dimensions:

15203: 500 m²; 15204: 275 m²; 15205: 700 m²



Site chronology:

Imperial period (30 BC-AD 250)

Description:

Thanks to aerial photographs, taken by the Royal Air Force before the Second World War, it has been possible to identify the ponds and reconstruct their exact shape. These structures must be associated with at least one, and probably more villas. Various artefacts (ao marble and terracotta architectural elements and sculpture) that could very well be associated with villas are incorporated in the walls of the *Borgo*. It is not possible to give a precise dating of the fishponds, but they probably date to the Imperial period.

Reference:

Jacono 1924, 333-340; Gianfrotta 1997

Site 15206

De Rossi 1

Toponym:

I Marmi

Coordinates:

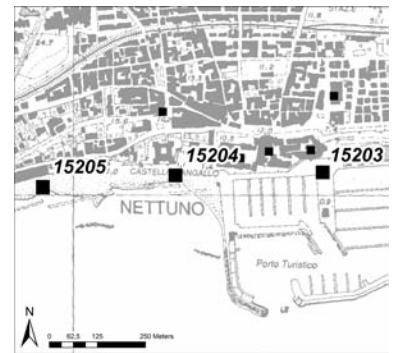
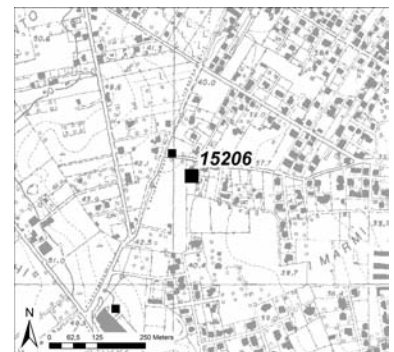
X: 2323102; Y: 4593465

Survey method:

No survey

Samples:

No samples taken



Geogr position and find circumstances:
The site is located in the south-western part of the municipality, close to Anzio. The site was not revisited.

Site dimensions:
Unknown

Material:
In his reconstruction of the via Selciatella, De Rossi signalled the presence of several wall remains.

Site chronology:
Possibly Republican period (100-30 BC); Possibly Imperial period (30 BC-AD 250)

Description:
The wall remains can be dated between the late Republican and the mid Imperial period, in accordance with the date of the road itself.

Reference:
De Rossi 1981, 103

Site 15207

De Rossi 2

Toponym:
I Marmi
Coordinates:
X: 2322905; Y: 4593121
Survey method:
No survey
Samples:
No samples taken

Geogr. position and find circumstances:
The site is located right on the border between the municipalities of Anzio and Nettuno along the track of the via Selciatella. The location was not revisited.

Site dimensions:
Unknown

Material:
It consists of the remains of a *villa rustica*, mapped by Lanciani. De Rossi mentions that already in the 1980s the remains had disappeared.
Site chronology:
Possibly Republican period (100-30

BC); Possibly Imperial period (30 BC-AD 250)

Description:
It is probable that the date of the villa coincides with the other sites along the via Selciatella. Therefore a date between the late Republican and the mid Imperial period seems appropriate for the site.

Reference:
De Rossi 1981, 103

Site 15235

Cretarossa lithic

Toponym:
Cretarossa
Coordinates:
X: 2326302; Y: 4591938
Survey method:
No visit
Samples:
No samples taken

Geographical position and find circumstances:
The site is located just inside the north-western perimeter of the *Poligono Militare*, close to site 15125 at a short distance from the sea.

Site dimensions:
Unknown
Material:
Lithics
Site chronology:
Middle Palaeolithic period
Reference:
Blanc 1937; La Rosa 2004

Site 15236

Carnevale lithic

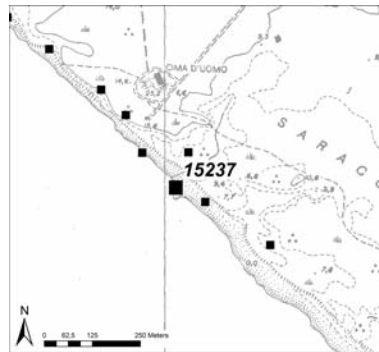
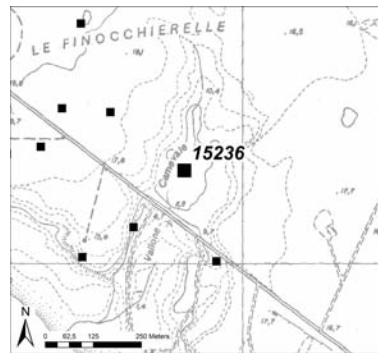
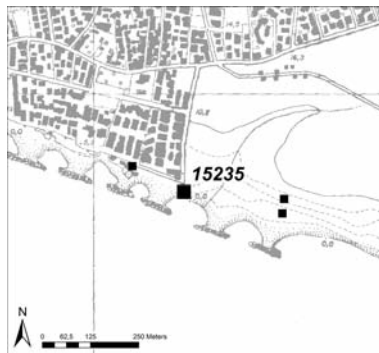
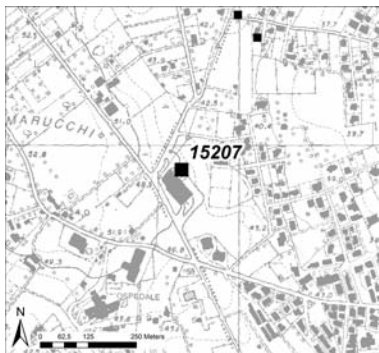
Toponym:
Carnevale
Coordinates:
X: 2329908; Y: 4590419
Survey method:
No survey

Samples:
No samples taken
Geogr. position and find circumstances:
The site is located in the central-western part of the municipality, within the perimeter of the *Poligono Militare*, several hundred m from the sea along the Vallone Carnevale.
Site dimensions:
Unknown
Material:
Lithics
Site chronology:
Middle Palaeolithic period
Reference:
Borzatti von Lowenstern/Barsottini 1983

Site 15237

Saracca lithic

Toponym:
Saracca
Coordinates:
X: 2331097; Y: 4588689
Survey method:
No survey
Samples:
No samples taken
Geogr. position and find circumstances:
The site is located in the south-western part of the *Poligono Militare*, at a short distance from the sea, a bit more inland compared to site 15238.



Site dimensions:
Unknown
Material:
Lithics
Site chronology:
Upper Palaeolithic period

Site 15238

Bottego lithic

Toponym:
Bottego
Coordinates:
X: 2330956; Y: 4588886
Survey method:
No survey
Samples:
No samples taken
Geogr. position and find circumstances:
The site is located in the south-western part of the *Poligono Militare*, at a short distance from the sea.
Site dimensions:
Unknown
Material:
Lithics
Site chronology:
Upper Palaeolithic period
Reference:
Ansuini/La Rosa 1989

Site 15239

Astura lithic

Toponym:
Astura
Coordinates:
X: 2333358; Y: 4587037
Survey method:
No survey
Samples:
No samples taken
Geogr. position and find circumstances:
The site is situated in the southernmost part of the municipality, between Torre Astura and the mouth

of the Astura river, at a short distance from the sea.
Site dimensions:
Unknown
Material:
Lithics
Site chronology:
Middle Palaeolithic period

Site 15243

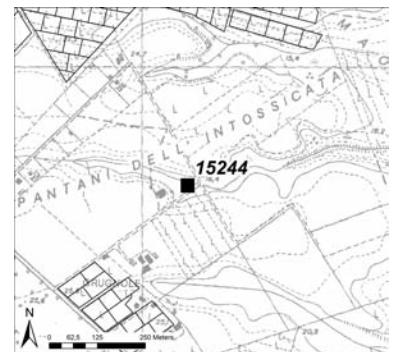
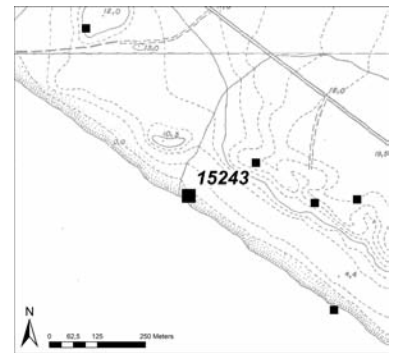
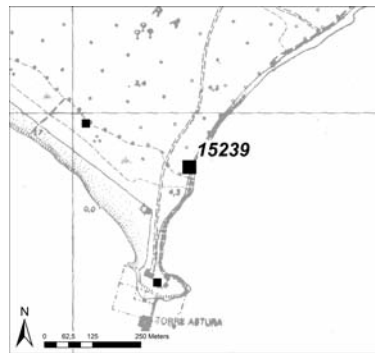
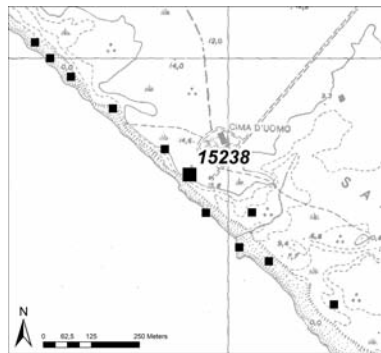
Toponym:
Fosso Foglino
Coordinates:
X: 2328485; Y: 4590833
Survey method:
Unsystematic
Samples:
No samples taken
Geogr. position and find circumstances:
The site is located in the south-western part of the *Poligono Militare*, at a short distance from the sea. Ceramic fragments, some of which extremely eroded, were found in an area of about 120 m long to the left of a small gully. To the south the concentration gradually became thinner. Inland, in a relatively flat zone, the vegetation impeded further survey. During a second visit in July 2001, no traces of the site were visible anymore. The remains may either have been destroyed by marine erosion or covered by sand that had accumulated at the spot after one or more storms.
Site dimensions:
Unknown
Material:
Impasto; Also some isolated finds of later material, of unknown date
Site chronology:
Middle Bronze Age 1
Reference:
Attema et al. 2003a, 125; Alessandri 2007, 98

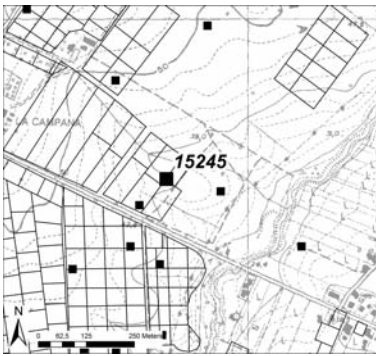
Site 15244

Toponym:
Le Grugnone
Coordinates:
X: 2331177; Y: 4593867
Survey method:
Unsystematic
Samples:
No samples taken
Geogr. position and find circumstances:
The site is located in the eastern part of the municipality near the Macchia delle Grugnone, close to the river Astura. It was found on private property by a local farmer. The site was not revisited.
Site dimensions:
Unknown
Material:
Bronze axe
Site chronology:
Recent Bronze Age
Reference:
Alessandri 2007, 16

Site 15245

Toponym:
Campana
Coordinates:
X: 2325850; Y: 4597766





Survey method:
Unsystematic
Samples:
1 grab sample
Geogr. position and find circumstances:
The site is located in the Campana area, ca 400 m east of the via Selciatella and 100 m west of the Fosso del Quinto, just north of site 15007.
Site dimensions:
Unknown
Material:
Impasto
Site chronology:
Bronze Age

Site dimensions:
Unknown
Material:
Impasto
Site chronology:
Bronze Age

Site 15247

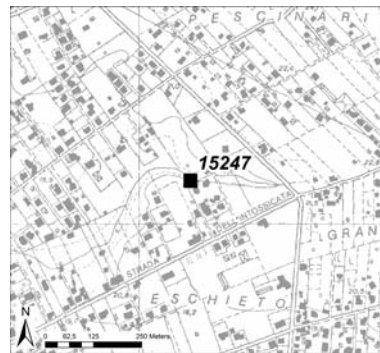
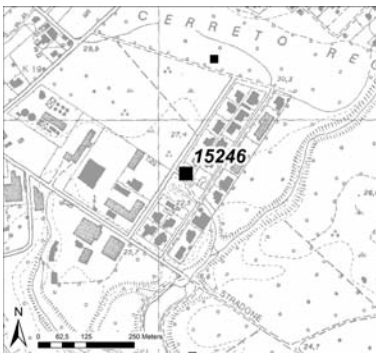
Toponym:
Granieri
Coordinates:
X: 2327193; Y: 4593292
Survey method:
Unsystematic
Samples:
1 grab sample
Geogr. position and find circumstances:
The site is located on the western bank of the Fosso della Seccia, 500 m north-west of the area of the Poligono Militare.
Site dimensions:
Unknown
Material:
Impasto
Site chronology:
Bronze Age

Site 15248

Toponym:
Sughereto
Coordinates:
X: 2325720; Y: 4597321
Survey method:
Unsystematic
Samples:
1 grab sample
Geogr. position and find circumstances:
The site is located in the Campana area, just west of the Fosso del Quinto, 200 m south of site 15010.
Site dimensions:
Unknown
Material:
Impasto

Site 15246

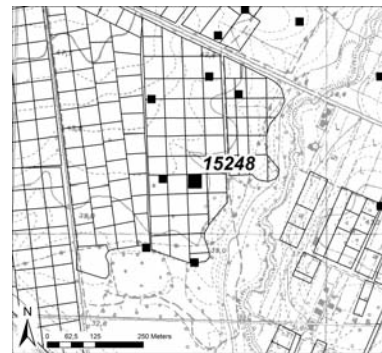
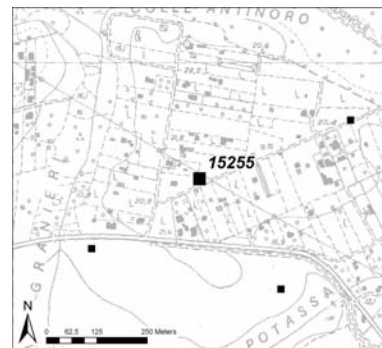
Toponym:
Bosco di Nettuno
Coordinates:
X: 2328138; Y: 4594036
Survey method:
No visit
Samples:
Museum inventory numbers: Unknown
Geogr. position and find circumstances:
The site is located in an overbuilt area near the western edge of the Cerreto Regina Margherita, just south of site 15073.



Site chronology:
Bronze Age

Site 15255

Toponym:
Colle Antinoro
Coordinates:
X: 2328550; Y: 4592867
Survey method:
No survey
Samples:
No samples
Geogr. position and find circumstances:
The site is situated between the Cerreto Regina Margherita and the Poligono Militare, just north of the location where two streams merge to form the Fosso Foglino.
Site dimensions:
Unknown
Material:
Lithics
Site chronology:
Middle Palaeolithic period
Reference:
La Rosa et al. 1989-1990; Vianello et al. 1995; Mantero 2003



Site Chronology

Site no	Toponym			Prehistoric	Bronze Age	Iron Age	Archaic	500-350 BC	350-250 BC	250-100 BC	100-30 BC	30 BC-AD 100	AD 100-250	AD 250-400	AD 400-700	AD 700-900	AD 900-1200	Protohistoric	Roman
11201	Astura			X	X	X		X	X	X	X	X	X	?	X	X			
11202	Torre Astura		X	X	?			X	X	X	X	X	X	X	X	X			
11203	Pineta di Torre Astura																		X
11204	Pineta di Torre Astura								?	?	?	?	?						
11205	La Banca									?	X								
11206	La Banca		X																
11207	Saracca									?	X	X	X						
11208	Saracca							?	?	?	X	X	?						
11209	Saracca		X							?	X	X							
11210	Pelliccione																		X
11211	Pelliccione							?	?	?									
11212	Pelliccione																		X
11213	Pelliccione		X	X															
11214	Pelliccione									?	?								
11215	Le Grottaacce		X						X	X	X	X	?						
11216	Carnevale/Finocchierelle		X																
11217	Pelliccione								?	?									
11218	Pelliccione																		X
11219	Pelliccione																		X
11220	Finocchierelle																		X
11221	Vallone Carnevale																		X
11222	Finocchierelle							?	?	?									
11223	Finocchierelle																		X
11224	Finocchierelle																		X
11225	Finocchierelle																		X
11226	Finocchierelle																		X
11227	Finocchierelle																		X
11228	Finocchierelle																		X
11229	Finocchierelle																		X
11230	Finocchierelle																		X
11231	Finocchierelle																		X
11232	Finocchierelle																		X
11233	Finocchierelle																		X
11234	Finocchierelle																		X
11235	Finocchierelle																		X
11236	Finocchierelle																		X
11237	Finocchierelle																		X
11238	Finocchierelle																		X
11239	Finocchierelle																		X
11240	Finocchierelle																		X
11241	Finocchierelle																		X
11242	Finocchierelle																		X
11243	Selvapiana																		X
11244	Selvapiana																		X
11245	Selvapiana							?	?	?									X
11246	Selvapiana																		X

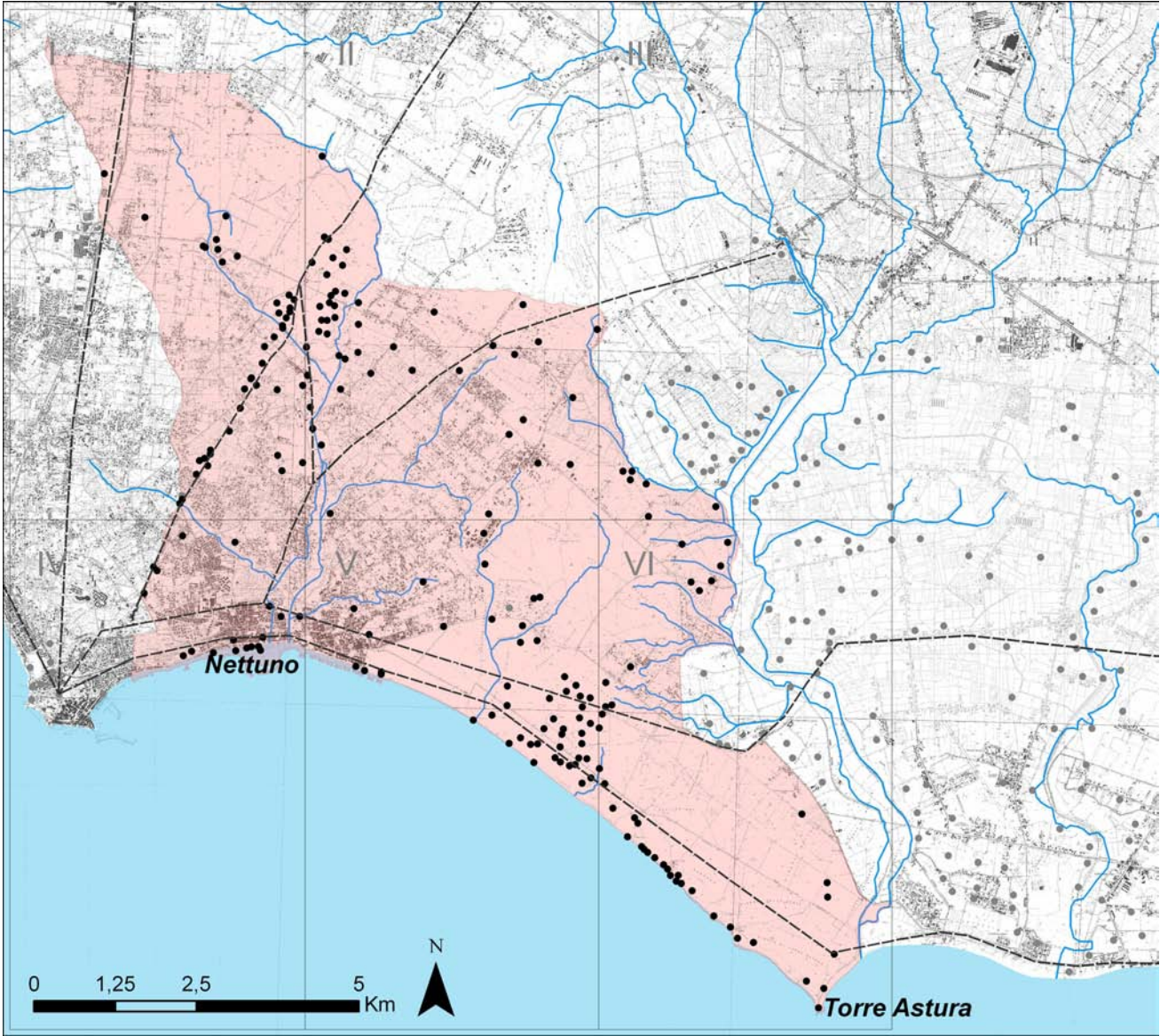
Site no	Toponym	Prehistoric	Bronze Age	Iron Age	Archaic	500-350 BC	350-250 BC	250-100 BC	100-30 BC	30 BC-AD 100	AD 100-250	AD 250-400	AD 400-700	AD 700-900	AD 900-1200	Protohistoric	Roman
11247	Selvapiana																
11248	Selvapiana																X
11249	Selvapiana																X
11250	Selvapiana																X
11251	Selvapiana																X
11252	Selvapiana																X
11253																	X
11254	Valle Foglino					?	?	?									
11256	Valle Foglino																X
11257	Valle Foglino																X
11258	Pantano Potassa																X
11259	Pantano Potassa																X
11260	Colle Antinoro																X
11261	Colle Antinoro														?	?	
11262	Riserva del Nespolo																X
11263	Riserva del Nespolo																X
11264	Riserva mattone																X
11277	Spinacceto			X	X	?	X	X	X	X							
11278	Spinacceto																X
11279	Pantano dell'Intossicata																X
11280	Orti Maoni/Intossicata			X		?	?	?									
11281	Orti Maoni/Pantano dell'Intossicata			X	X	?	X	X	X	X							
11282																	X
11283	Piscina della Farna																X
11284	Piscina della Farna			?	X		?	X	X	X							
11285	Piscina della Farna																X
11286	Tre Cancelli									X	X						
15001	Cadolino									X	X						
15002	Cadolino									X	X						
15003	Cadolino			?						X	X						
15004	Ospedaletto				X	X	?	X	X	X	X	X	X	X			
15005	Piscina Cardillo	X	?	X	?	?	?	?	?	?							
15007	La Campana	X															
15008	La Campana									X	?	?					
15010	La Campana	X															
15013	La Campana															X	
15014	La Campana			X		X	X	X	X	X	X	X	X				
15015	La Campana							?	?								
15016	Bosco di Padiglione																X
15017	La Campana	X								?	?						
15019	Torre del Monumento					X	?	X	X	X	X	X	X				
15020	Torre del Monumento					?	?	?		?	?						
15021																	X
15023	Pocacqua																X
15024	Pocacqua																X
15025	Pocacqua																X
15026	Sandalo															X	
15027	La Campana															X	

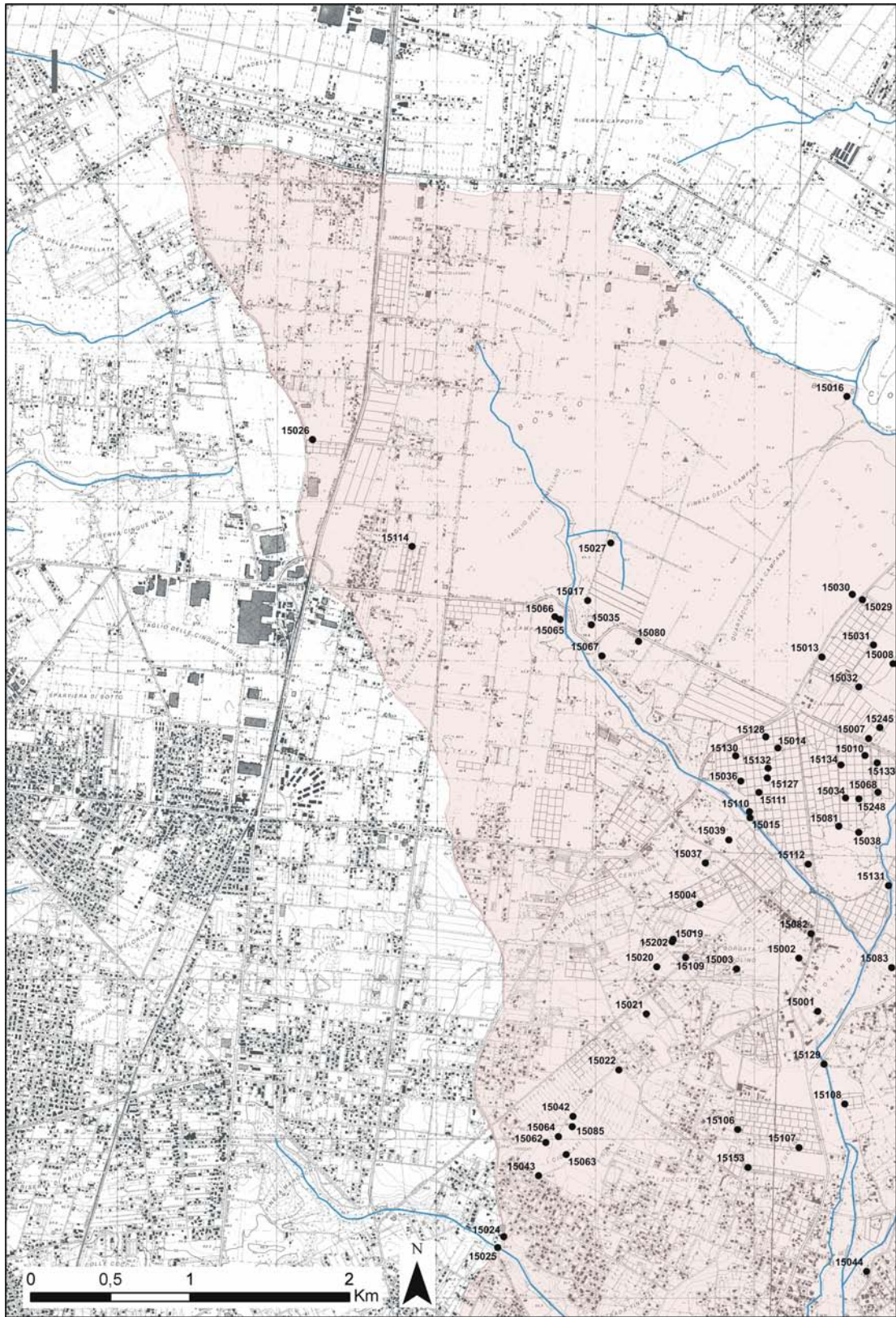
Site no	Toponym			Prehistoric	Bronze Age	Iron Age	Archaic	500-350 BC	350-250 BC	250-100 BC	100-30 BC	30 BC-AD 100	AD 100-250	AD 250-400	AD 400-700	AD 700-900	AD 900-1200	Protohistoric	Roman
15029	Pineta della Campana			?	?				X	X	X	X	X						
15030	Pineta della Campana																		X
15031	La Campana																X		
15032	La Campana			?															
15033	Piscina Cardillo			X															
15034	La Campana				X	?	X	X	X										
15035	La Campana							?	?	?	?	?	?						
15036	La Campana			?	X		?	X	X	X	X	X							
15037	Ospedaletto																		X
15038	La Campana					?	X	X	?			X							
15039	Ospedaletto																		X
15040	Piscina Cardillo			?															
15041	Piscina Cardillo																		X
15044	Loricina			X															
15046	Intossicata																		X
15047	Intossicata																		X
15048	I Marmi																		X
15049	I Marmi							?	?	?	X	X	X	?					
15050	Contrada Tinozzi																		X
15051	Pantano Granieri							?	?	?									
15052																			X
15053																			X
15054																	X		
15055	Cretarossa																X		
15056	Loricina																		X
15057																			X
15058																			X
15059	Cretarossa							?	?	?	?	?	?						
15060																			X
15065	La Campana																X		
15066	La Campana																		X
15067	La Campana																		X
15068	La Campana		X	X	X	?	X	X	X										
15069	Laghetto Granieri																		X
15070	Loricina									X	X	X							
15072	Villa Borghese		X	X		?	?	?	X	X									
15073	Cerreto Regina Margherita		?																
15074			?																
15075	Pantano Potassa		?																
15076	Spinacceto		?	X															
15078	La Campana		X									X							
15079	Campo Cerreto			X															
15080	La Campana										?	?							
15081	La Campana							X	X										
15082	Cadolino							X	X	X	X	X							
15083	Cadolino							?	?	?	X	X	X	?					
15084	Cretarossa		?	?															
15085	I Cioccati							?	X	X	X	X	X						

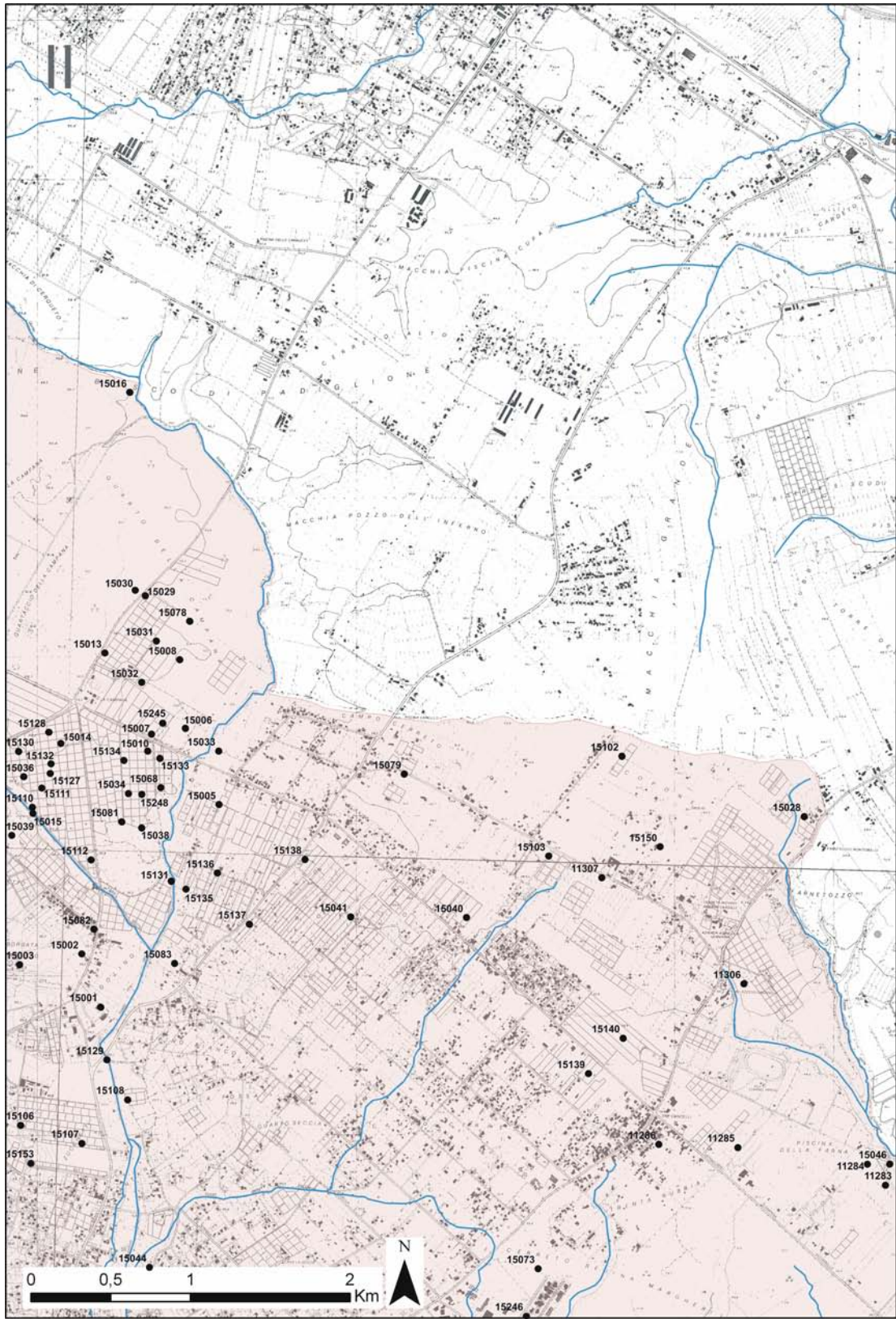
Site no	Toponym			Prehistoric	Bronze Age	Iron Age	Archaic	500-350 BC	350-250 BC	250-100 BC	100-30 BC	30 BC-AD 100	AD 100-250	AD 250-400	AD 400-700	AD 700-900	AD 900-1200	Protohistoric	Roman
15102	Scopone			X															
15103	Scopone			X															
15106	Zucchetti				X	?	X	X	X	X	X								
15107	Zucchetti			X			?	?	X	X	X	?	?						
15108				X	X	X	X	X	X	X	?								
15109	Torre del monumento								?	X	X								
15110	La Campana								?	X	X								
15111	La Campana			X	X				?	X	X	X	?						
15112	La Campana				X	?	X	X	X	?	?								
15114	Padiglione			X					?	X	X	X	?						
15122	Bottego		X																
15123	Bottego		X				?	?	?	?	?	?	?						
15124	Pelliccione		X																
15125	Depuratore			X	X		?	?	?										
15126	Depuratore											X							
15127	La Campana			?	?					X	X	?	?						
15128	La Campana				?				?	X	X	?	?						
15129	Ponte Cadolino								?	?									
15130	La Campana			?	X														
15132	La Campana								?	?	?								
15134	La Campana			X	X														
15135	Piscina Cardillo			?	?														
15136	Piscina Cardillo			?	X	X	?	?	?										
15137	Campo Cerreto				X														
15138	Rovito				X		?	?	?	X	X								
15139	Piscina Cardillo			?															
15140	Piscina Cardillo			X															
15150	Villa Verdiana/Scopone				X	X	X	X	X	X	X								
15151	Villa Borghese											X							
15153	Zucchetti			X	X	?	?	?	?	X	X								
15202	Torre del monumento											X							
15203												X	X						
15204												X	X						
15205												X	X						
15206	I Marmi									?	?	?							
15207	I Marmi									?	?	?							
15235	Cretarossa		X																
15236	Carnevale		X																
15237	Saracca		X																
15238	Bottego		X																
15239	Astura		X																
15243	Fosso Foglino		X																
15244	Le Grugnole		X																
15245	La Campana		X																
15246	Bosco di Nettuno			X															
15247	Granieri				X														
15248	Sughereto		X																
15255	Colle Antinoro		X																

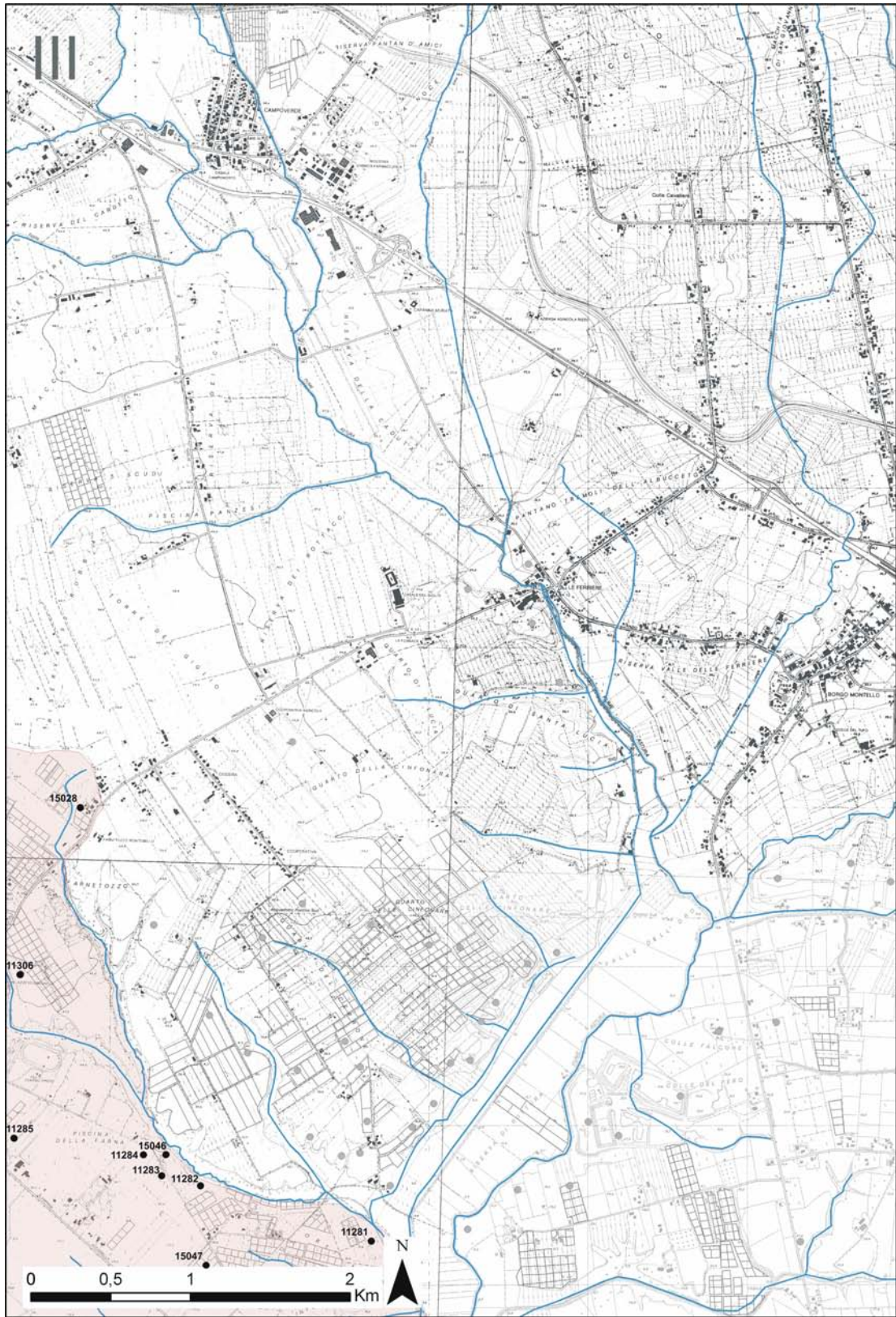
Part VI
The Carta Archeologica

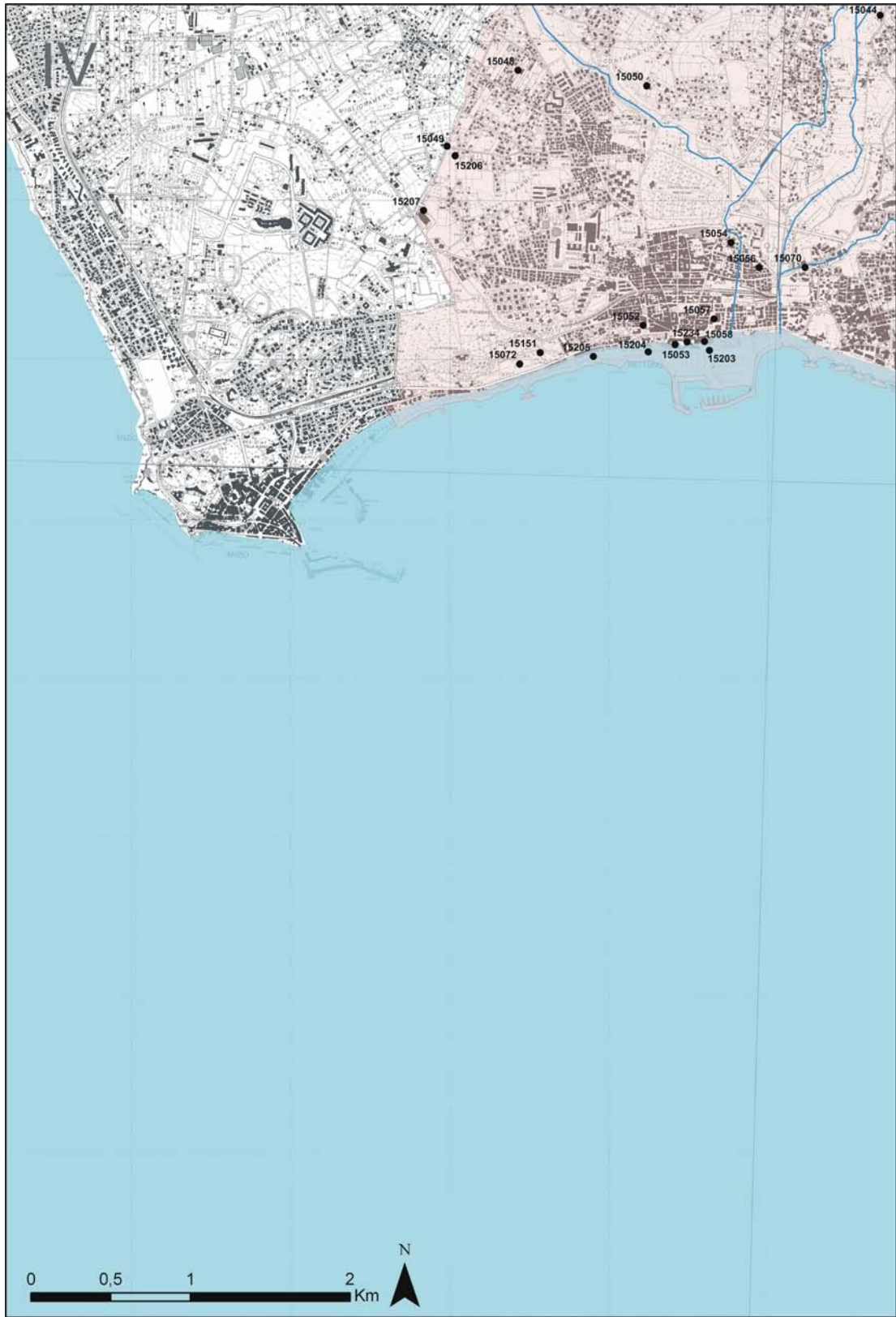
Overview Map



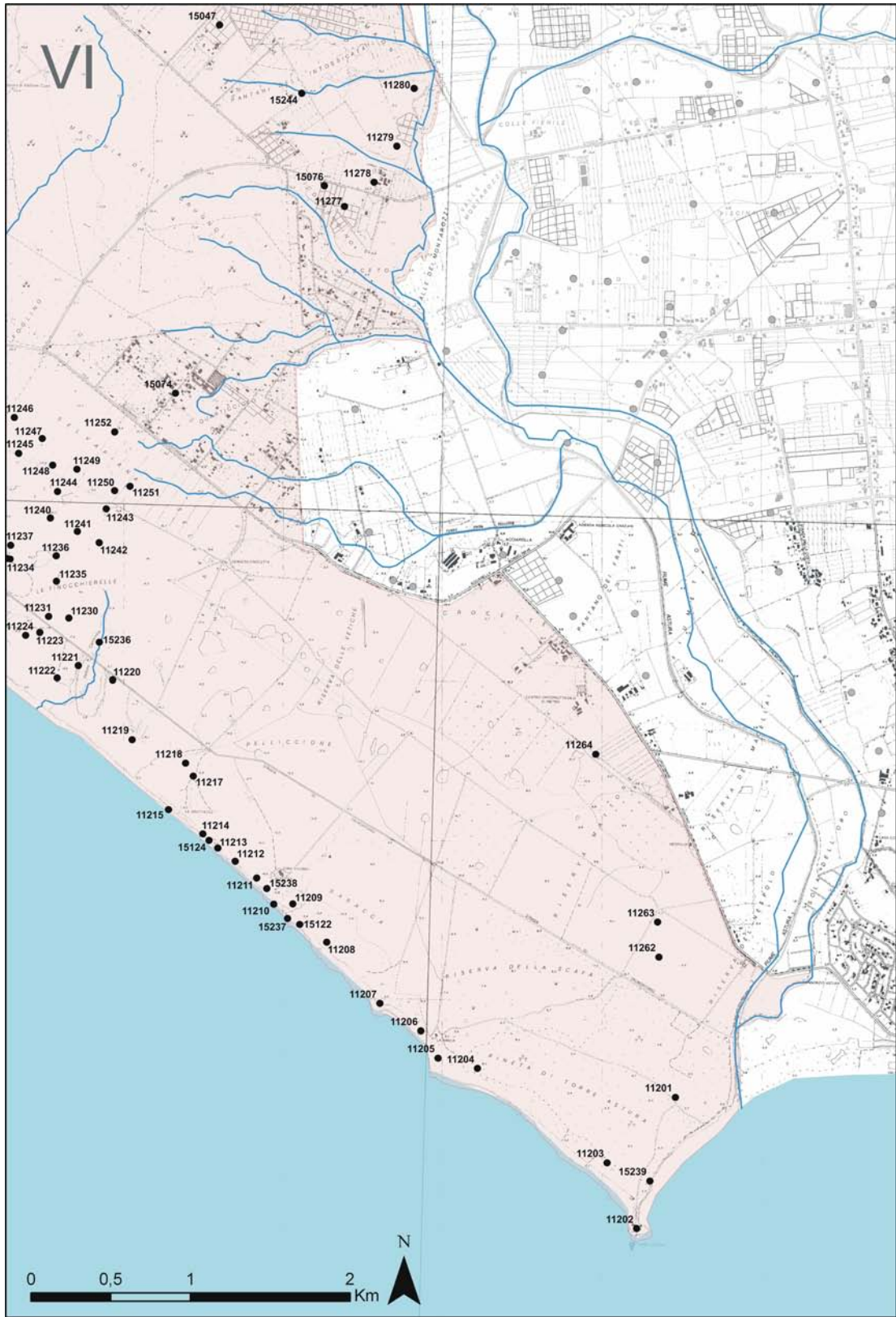












Bibliography

- AA.VV. 1995, *Aspetti culturali della media età del bronzo nell'Italia centromeridionale*, Firenze.
- Abbate, E. 1894, *Guida della Provincia di Roma I-II*, Rome.
- Alessandri, L. 2005, L'occupazione costiera nell'età del Bronzo media, recente e finale nel Lazio centromeridionale, in P. Attema/A. Nijboer/A. Zifferero (eds), *Papers in Italian Archaeology VI, Communities and Settlements from the Neolithic to the Early Medieval Period, Proceedings of the 6th Conference of Italian Archaeology, Groningen, 15-17.4.2003*, Oxford, 637-645.
- Alessandri, L. 2007, *L'occupazione costiera protostorica del Lazio centromeridionale*, Oxford.
- Angle, M. 1996, Casale Nuovo, in C. Belardelli/P. Pascucci (eds), *Repertorio dei siti protostorici del Lazio - provincie di Rieti e Latina*, Roma, 61-63.
- Angle, M./C. Caneva/A. Conti/R. Dottarelli/A. Gianni/C. Giardino/C. Persiani 1992, Casale Nuovo (LT) e la tarda età del Bronzo nel Lazio meridionale, in *Atti del III convegno di studi, un millennio di relazioni fra la Sardegna e i paesi del Mediterraneo*, Cagliari, 265-303.
- Angle, M./A. Conti/R. Dottarelli/A. Gianni/C. Persiani/L. Vagnetti/R. Jones/L. Costantini 1993, Prime testimonianze micenee nel Latium Vetus, *PP CCLXX*, 190-217.
- Angle, M./F. Di Gennaro/A. Guidi/S. Tusa 2004, La necropoli ad incinerazione di Cavallo Morto (Anzio, Roma), in *Atti del Convegno L'età del Bronzo recente in Italia, Lido di Camaiore, 26-29.10.2000*, 125-138.
- Ansuini, P./M. La Rosa 1989, Industria del Paleolitico superiore in località Le Grottacce (Nettuno-Roma), *Studi per l'ecologia del Quaternario* 11, 95-106.
- Arthur, P./H. Patterson 1994, Ceramics and early medieval central and south Italy: a 'potted' history, in R. Franco-vich/G. Noyé (eds), *La storia dell'alto medioevo italiano (VI-X secolo) alle luce dell'archeologia*, Florence, 409-441.
- Attema, P. 1993, *An archaeological survey in the Pontine Region. A contribution to the settlement history of south Lazio 900 - 100 BC*, Groningen.
- Attema, P. 2004, Zoutwinning aan de Tyrrheense kust in bronstijd Italië, *Tijdschrift voor Mediterrane Archeologie* 31, 3-11.
- Attema, P. 2005, Early urbanization between 800 and 600 BC in the Pontine Region (South Lazio), the Salento Isthmus (Apulia), and the Sibaritide (northern Calabria), in Osborne, R./S. Alcock (eds), *Mediterranean Urbanization 800-600 BC*, London, 113-142.
- Attema, P./G. van Oortmerssen 2000, Ceramics of the first millennium BC from a survey at Lanuvium in the Alban hills, central Italy: method, aims and first results of regional fabric classification, *Palaeohistoria* 39/40 [1997/1998], 413-439.
- Attema, P./E. van Joolen/M. van Leusen 2002, A marginal landscape: field work on the beach ridge complex near Fogliano (South Lazio), *Palaeohistoria* 41/42, [1999/2000], 149-162.
- Attema, P./A. Nijboer/M. Rooke 2002, "Piccarreta 13", een late bronstijdnederzetting op de kust van Zuid-Latium (Italië), *Paleoaktueel* 13, 65-69.
- Attema, P./T. de Haas/A. Nijboer 2003a, The Astura project, interim report of the 2001, and 2002, campaigns of the Groningen Institute of Archaeology along the coast between Nettuno and Torre Astura (Lazio, Italy), *BABesch* 78, 107-140.
- Attema, P./A. Beijer/M. Kleibrink/A. Nijboer/G. van Oortmerssen 2003b, Pottery classifications: ceramics from Satricum and Lazio, Italy, 900-300, BC, *Palaeohistoria* 43/44 [2001-2002], 321-396.
- Attema, P./M. van Leusen 2004, The early Roman colonization of South Lazio; a survey of three landscapes, in P. Attema (ed.), *Centralization, early urbanization and colonization in first millennium BC Italy and Greece. part 1: Italy*, Leuven, 157-195.
- Attema, P./T. de Haas/M. La Rosa 2005, Sites of the Fogliano survey (Pontine Region, central Italy), site classification and a comment on the diagnostic artefacts from Prehistory to the Roman period, *Palaeohistoria* 45/46, 121-196.
- Attema, P./H. Feiken/T. de Haas/G. Tol/M. La Rosa 2008, The Astura and Nettuno surveys of the Pontine Region Project (2003-2005), 1st preliminary report, *Palaeohistoria* 49/50, 415-516.
- Attema, P./T. de Haas/G. Tol 2009 (eds), *Nettuno, il territorio dalla preistoria al medioevo. La carta archeologica, Pomezia*.
- Attema, P./T. de Haas forthcoming, Rural settlement and population extrapolation, a case study from the ager of Antium, central Italy (350 BC – AD 400), in A. Bowman/A. Wilson (eds), *Settlement, Urbanisation and Population. Oxford studies on the Roman economy II*.
- Attema, P./T. Derks/G. Tol forthcoming, The 'Carta archeologica' of Nettuno, evidence for late antique and early medieval settlement on the coast of South Lazio near Antium and Torre Astura (Italy), to be published in *LRCW* 3.
- Bailey, D. 1975, *Greek and Roman Pottery Lamps*, Portsmouth.
- Bailey, D. 1980, *A Catalogue of the Lamps in the British Museum Vol 2, Roman Lamps made in Italy*, London.
- Bekker Nielsen, T. 2005 (ed.), *Ancient fishing and fish processing in the black sea region*, Aarhus.
- Bellotti, P./S. Evangelista/P. Tortora/P. Valeri 1997, Caratteri sedimentologici e stratigrafici dei sedimenti Plio-Pleistocenici affioranti lungo la costa tra Tor Caldara e Anzio (Lazio Centrale), *Bollettino della Società Geologica Italiana* 116, 94.
- Berggren, E./K. Berggren 1981, Excavations in Area B, 1957-1960, in *San Giovenale II*, 2.
- Bergonzi, G. 1976, Antium, in *Civiltà del Lazio Primitivo*, Roma, 318-322.
- Bermond Montanari, G. 1992, L'insediamento di Valle Felici presso Cervia e la media età del Bronzo in Romagna, *Rassegna di Archeologia* X, 375-384.
- Bernardini, P. 1986, *La ceramica a vernice nera dal Tevere*, Roma.
- Bietti Sestieri, A.M. 1992 (ed.), *La Necropoli Laziale di Osteria dell'Osa*, Roma.
- Bietti Sestieri, A./A. De Santis 2000, *The protohistory of the Latin peoples*, Roma.
- Blanc, A. 1935, Delle formazioni Quaternarie di Nettuno e Loro Correlazione con la stratigrafia dell'Agro Pontino, *Bollettino della Società Geologica Italiana* 54, 109-120.
- Blanc, A. 1936, Sulla stratigrafia Quaternaria dell'Agro Pontino e della Bassa Versilia, *Bollettino della Società Geologica Italiana* 55, 375-396.
- Blanc, A. 1937, Nuovi giacimenti paleolitici del Lazio e della Toscana, *StEtr* 11, 273-304.
- Blanc, A. 1939, Un giacimento aurignaziano medio nella

- Grotta del Fossellone al Monte Circeo, in *Atti XXVII Riunione della Società Italiana per il Progresso delle Scienze*, Bologna, 4, – 11, settembre 1938, Roma, 215-221.
- Blanc, A./A. Segre 1953, *Excursion au Mont Circé*, Roma-Pisa.
- Bonifay, M. 2004, *Etudes sur la céramique romaine tardive d'Afrique*, Oxford.
- Bonnet, J. 1988, *Lampes céramiques signées*, Paris.
- Borzatti von Lowenstern, E./P. Barsottini 1983, L'industria litica di Vallone Carnevale. Contributo alla conoscenza del Pontiniano, *Studi per l'ecologia del Quaternario* 5, 25-41.
- Bouma, J. 1996, *Religio Votiva: The archaeology of latial votive religion. The 5th - 3rd century BC votive deposit south west of the main temple at 'Satricum' Borgo le Ferriere*, Groningen.
- Bouma, J./E. van het Lindenhout 1996, Light in Dark Age Latium. Evidence from settlement and cult places, *Caeculus* III, 91-102.
- Brandizzi Vittucci, P. 1968, *Cora*, Roma.
- Brandizzi Vittucci, P. 1998, Considerazioni sulla via severiana e sulla tabula Peutingeriana, *MEFRA* 110, 929-993.
- Brandizzi Vittucci, P. 2000, *Antium. Anzio e Nettuno in epoca romana*, Roma.
- Cancellieri, M. 1990, Il territorio Pontino e la Via Appia, *Archeologia Laziale* X, 61-72.
- Caneva, G./C. Travaglini 2003, *Atlante Storico-ambientale Anzio e Nettuno*, Roma.
- Caputo, C./L. D'Alessandro/G. La Monica/B. Landini/E. Lupia Palmieri 1991, Present erosion and dynamics of Italian beaches. *Z.Geomorph.N.F.Suppl.-Bd.* 81, 31-39.
- Carandini, A./F. Cambi/M. Celuzza./E. Fentress 2002, *Paesaggi d'Etruria. Valle dell'Albegna, Valle d'Oro, Valle del Chiarone, Valle del Tafone*, Roma.
- Caravale, A./I. Toffoletti 1997, *Anfore antiche conoscerle e identificarle*, Formello.
- Cassatella, A. 2003, Nuove ricerche sulla via Severiana, in J. Rasmus Brandt/X. Dupré Raventos/G. Ghini (eds), *Lazio e Sabina* 1, Roma, 205-212.
- Cassatella, A. 2004, La questione della via severiana e le nuove ricerche, in C. Belardelli/L. De Maria/F. Fei./A. Toro (eds), *Vie Romane del Lazio. La Regione e il progetto 'Vie Romane': primi risultati*, Roma, 79-94.
- Castagnoli, F. 1963, Astura, *Studi Romani* 11, 637-644.
- Cecere, C. 1989, *La villa Caetani a Fogliano. Il luogo-l'architettura-la storia*, Roma.
- Ceccarelli, L. 2004, Torre Astura, in G. Caneva/C.M. Travaglini (eds), *Atlante storico-ambientale Anzio e Nettuno*, Roma, 343-345.
- Cenciari, A./M. Giaccaglia 1982, *Rocche e castelli del Lazio*, Roma.
- Chiarucci, P. 1985, Contributo sulla topografia dell'antica Antium, *Documenta Albana* VII, 17-32.
- Chiarucci, P. 1989, *Anzio archeologica*, Roma.
- Christie, N. 1991 (ed.), *Three South Etrurian Churches: Santa Cornelia, Santa Rufina, and San Liberato*, London.
- Coarelli, F. 1984, *Lazio*, Roma.
- Cocchi Gennick, D. 1984, L'insediamento dell'età del Bronzo di Candalla (Camaiole, Lucca), *Rassegna di Archeologia* IV, 105-148.
- Cocchi Gennick, D. 1995, *Aspetti culturali della media età del bronzo nell'Italia centro-meridionale*, Firenze.
- Cocchi Gennick, D. 2001, *Classificazione tipologica e processi storici. Le ceramiche della facies di Grotta Nuova, Viareggio*.
- Cocchi Gennick, D. 2002, *Grotta Nuova: la prima unità culturale attorno all'Etruria protostorica, Viareggio*.
- Cohen, H. 1955, *Description historique des monnaies frappées sous l'empire Romain, communément appelées médailles impériales*, Graz.
- Conte, C. 2007, *Il territorio di Nettuno in epoca romana, Anzio*.
- Conyers, L. 2004, *Ground-Penetrating radar for archaeology*, Walnut Creek.
- Cotton, M. 1979, *The Late Republican villa at Posto, Francolise*, Roma.
- Cotton, M./G. Métraux 1985, *The San Rocco Villa at Francolise*, Hertford.
- Crawford, M. 1975, *Roman Republican Coinage*, Cambridge.
- Cremonesi, L. 1968, La grotta dell'Orso di Sarteano. I livelli dell'età dei Metalli, *Origini* II, 247-329.
- Crescenzi, L. 1978, Campoverde, *Archeologia Laziale* 1, 51-55.
- Crescenzi, L./S. Gizzi/P. Vigilante 1992, *Anzio Villa di Nerone Restauri 1989-1992*, Roma.
- Cristofani, M. 1993 (ed.), *Caere* 3.2, Roma.
- Daire, M. 1994, *Le sel gaulois. Bouilleurs de sel et ateliers de briquetage armoricains à l'Age du Fer*, Saint Malo.
- Damiani, I. 1991, Aspetti ceramici dell'età del Bronzo recente in Italia peninsulare e nelle isole Eolie: la facies subappenninica a trent'anni dalla sua definizione, *DialA* III-IX, 5-33.
- Damiani, I./M. Pacciarelli./A. Saltini 1984, Le facies archeologiche dell'isola di Vivara e alcuni problemi relativi al Protoappenninico B, *Annali dell'Istituto universitario orientale di Napoli*, Arch.St.Ant. VI, 1-38.
- Davis, R. 1992, *The Book of Pontiffs. The lives of the eighth-century popes. The ancient Biographies of nine Popes from AD 715, to AD 817*, Liverpool.
- Davis, R. 1995, *The Book of Pontiffs. The Lives of the Ninth-Century Popes. The ancient biographies of the Popes from AD 817, to 891*, Liverpool.
- Davis, R. 2000, *The Book of Pontiffs. The ancient Biographies of the first Ninety Roman Bishops to AD 715*, Liverpool.
- De Meis, A. 1984, Nuovo materiale della necropoli protostorica di Anzio, *Bollettino della Commissione Archeologica Comunale di Roma* 87.2, 237.
- De Meis, A. 1986, Una villa di età imperiale nel suburbio dell'antica Antium, *BCom* XCI, 45-48.
- De Rita, D./C. Faccenna/R. Funicello/C. Rosa 1995, Stratigraphy and Volcano-Tectonics, in R. Triglia (ed.), *The Volcano of the Alban Hills*, Roma, 33-71.
- De Rossi, G. 1981, La via da Lanuvio al litorale di Anzio, in *Ricognizione archeologica: nuove ricerche nel Lazio*, Roma, 89-103.
- De Rossi, G. 1984, *Le torri costiere del Lazio*, Roma.
- Di Mario, M. 2007, *La terra dei Rutuli tra mito e archeologia: alle radici della romanità. Nuovi dati dai recenti scavi archeologici*, Roma.
- Di Renzoni, A./A. Schiapelli 2007, *La riscoperta dei Mulakia. Recupero dell'ipogeo romano*, Roma.
- Dottarelli, R./H. Shirazi/L. Re/S. Vitagliano 1984, Progetto di ricognizione sistematica nel territorio di Roma. Ricognizioni di superficie F. 10S, in Bietti Sestieri, A. (ed.), *Preistoria e protostoria nel territorio di Roma*, Roma, 14-24.
- Drost, E. 1996, *De rol van de rivier de Astura bij de archeologische invulling van het Pontijnse landschap in Zuid-Latium*. Ma thesis, Rijksuniversiteit Groningen.
- Duchesne, L. 1886, *Le Liber Pontificalis. Texte, introduction et commentaire par l'abbé L. Duchesne*, Paris.
- Duchesne, L. 1892, Le sede episcopali nell'antico ducato di Roma, *Archivio della R.Società Romana di Storia Patria* XV, 475-503.
- Duncan Jones, R. 2004, Economic change and the transition to late antiquity, in S. Swain/M. Edwards (eds), *Approaching Late Antiquity. The Transformation from Early to Late Empire*, Oxford, 20-52.
- Dyson, S. 1976, *Cosa: the utilitarian pottery*, Rome.
- Eisner, W./H. Kamermans./T. Wymstra 1986, The Agro Pontino survey: results from a first pollen core, *DialA*

- 2, 145-153.
- Eles Masi, P. von 1985, Le fibule dell'Italia settentrionale, in *Prähistorische Bronzefunde* Abt. 14, *Fibeln*, Bd. 5, München.
- Ettlinger, E. (ed.) 1990, *Conspectus Formarum terrae sigillatae Italico modo confectae*, Bonn.
- Felici, E. 1993, Osservazioni sul porto neroniano di Anzio e sulla tecnica romana delle costruzioni portuali in calcestrutto, *Archeologia Subacquea* 1, 71-104.
- Felici, E./G. Balderi 1997, Nuovi documenti per la "topografia portuale" di Antium, in *Atti del Convegno nazionale di Archeologia Subacquea - Anzio, 30-31, maggio e 1, giugno 1996*, Bari, 11-20.
- Fentress, E./F. Cambi 1989, Villages to castles: first millennium AD. Demography in the Albegna Valley, in Randsborg, K. (ed.), *The Birth of Europe. archaeology and social development in the first millennium A.D.*, Roma, 74-86.
- Fentress, E./P. Perkins 2007, Counting African Red Slip Ware, *L'Africa Romana* 5, 205-214.
- Fogagnolo, S./M. Valenti 2005, *Antiche strade Lazio - Via Severiana*, Roma.
- Franco, A. 2006, *Il museo racconta. Percorso ragionato dei luoghi e delle cose*, Anzio.
- Franzovich, R./R. Hodges 2003, *Villa to Village. The transformation of the Roman countryside in Italy, c. 400-1000*, London.
- Frutaz, A. 1972, *Le carte del Lazio*, Roma.
- Galeazzi, F. 2008, Il tratto costiero da Anzio a Torre Astura: le attività produttive nel tardo antico, in *Le carte archeologiche di Anzio e di Nettuno, convegno e mostra 15-16 dicembre 2007 Anzio*, Anzio, 67-78.
- Galieti, A. 1948, *Contributi alla storia della diocesi suburbicaria di Albano Laziale*, Roma.
- Gatti, S. 1993 (ed.), *Dives Anagnina: archeologia nella valle del Sacco*, Roma.
- Giacopini, L. 1994, *L'agricoltura nell'antichità*, Roma.
- Gianfrotta, P. 1997, Le peschiere scomparse di Nettuno (RM), in *Atti del Convegno nazionale di Archeologia Subacquea - Anzio, 30-31, maggio e 1, giugno 1996*, Bari, 21-24.
- Gianni, A./G. Ruffo/M. Ruffo 1984, *Lettera di segnalazione alla Soprintendenza Archeologica per il Lazio del 13.9.84*.
- Giardino, C. 1994, I materiali dell'età del Bronzo recente, in R. Peroni/F. Trucco (eds), *Enotri e Micenei nella Sibaritide I. Broglio di Trebisacce*, Taranto, 185-264.
- Gibbard, P./S. Boreham/K. Cohen/S. Moscarillo 2004, Global chronostratigraphical correlation table for the last 2.7 million years, *Boreas* 34-1.
- Gierow, P. 1961, la necropoli laziale di Anzio, *Bollettino di Paleontologia Italiana* 69-70, 243-257.
- Giovannoni, G. 1943, Tomba romana presso Nettuno, *Rivista di studi e di vita Romana* XXI, Rome, 378-379.
- Gizzi, S. 1988, Nuove conoscenze e problemi di recupero della villa di Nerone ad Anzio, *Archeologia Laziale* 9, 495-502.
- Gnade, M. 1992, *The south-west necropolis of Satricum. Excavations 1981 - 1986*, Amsterdam.
- Gnade, M. 2000, *Satricum in the Post-Archaic period. A case study of the interpretation of archaeological remains as indicators of ethno-cultural identity*, Amsterdam.
- Gnade, M. 2002, *Satricum in the post-archaic period; a study of the interpretation of archaeological remains as indicators of ethno-cultural identity*, Leuven.
- Gnade, M. 2003, *Satricum: la prosecuzione delle ricerche*, in J. Rasmus Brandt/X. Dupré Raventos/G. Ghini (eds), *Lazio & Sabina* 1, Roma, 213-220.
- Gnade, M. 2006, La Ventottesima campagna di ricerca a Satricum dell'Università di Amsterdam nel 2004, in G. Ghini (ed.), *Lazio & Sabina* 3, Roma, 255-260.
- Gnade, M. 2007 (ed.), *Satricum. Trenta anni di scavi olandesi*, Leuven.
- Goethert-Polaschek, K. 1985, *Katalog der römischen Lampen des Rheinischen Landesmuseums Trier*, Mainz am Rhein.
- Grüner, A. 2006, Architektur und Ästhetik römischer Fischzuchtanlagen. Zu Wahrnehmung und Function gattungsgreifender Dekorationssysteme in der spätrepublikanischen Villenarchitektur, *AA* 1, Halbband 2006, 21-60.
- Guaitoli, M. 1977, Considerazioni su alcune città ed insediamenti del Lazio in età protostorica ed arcaica, *RM* 84, 5-25.
- Guaitoli, M. 1981, Notizie preliminari su recenti ricognizioni svolte in seminari dell'istituto, in *Ricognizione archeologica nuove ricerche nel Lazio*, Roma, 79-87.
- Guaitoli, M. 1984, Urbanistica, *Archeologia Laziale* 6, 364-381.
- Guidi, A. 1980, Rinvenimenti preistorici nel territorio della soprintendenza del Lazio, *Archeologia Laziale* 3, 38-42.
- Guidi, A. 1981, Nuovi rinvenimenti in siti del passaggio alla media età del Bronzo, *Archeologia Laziale* 4, 47-55.
- Haas, T. de 2008, Comparing settlement histories in the Pontine Region (southern Lazio, central Italy): surveys in the coastal landscape near Nettuno, *Digressus* 8, 1-32, available from <http://www.digressus.org/index.html>.
- Haas, T. de/P. Attema/H. Pape 2008, Amphoras from the coastal zone between Anzio and Torre Astura (Pontine region, Central Italy): the GIA excavations at *Le Grottacce*, a local amphora collection and material from surveys in the Nettuno area, *Palaeohistoria* 49/50, 517-616.
- Haas, T. de/G. Tol 2005, Survey in Campania, gemeente Nettuno (Italië), *Paleoaktueel* 16, 77-83.
- Hayes, J. 1972, *Late Roman Pottery*, Rome.
- Head, B. 1977, *Historia Numorum, a manual of Greek numismatics*, London.
- Heres, G. 1972, *Die Römischen Bildlampen der Berliner Antikensammlung*, Berlin.
- Higginbotham, J. 1997, *Piscinae: artificial fishponds in Roman Italy*, Chapel Hill.
- Holstrom, S./A. Voorrips/H. Kamermans 2004, *The Agro Pontino Archaeological Survey* (cdRom), Leiden.
- Jacono, L. 1924, Nettuno - Piscinae in litore constructae, *NSc*, 333-340.
- Jaia, A. 2003, Il progetto della carta archeologica di Anzio, in J. Rasmus Brandt/X. Dupré Raventos/G. Ghini (eds), *Lazio & Sabina* 1, Roma, 201-204.
- Jaia, A. 2004, I Luoghi di culto del territorio di Anzio, in G. Ghini (ed.), *Lazio & Sabina* 2, Roma, 255-264.
- Joolen, E. van 2003, *Archaeological land evaluation. A reconstruction of the suitability of ancient landscapes for various land uses in Italy focused on the first millennium BC*, Groningen.
- Kamermans, H. 1991, Faulted land: the geology of the Agro Pontino, in A. Voorrips/S. Loving/H. Kamermans (eds), *The Agro Pontino Survey Project*, Amsterdam, 21-30.
- Kamermans, H. 1993, *Archeologie en landevaluatie in de Agro Pontino (Lazio, Italië)*, Amsterdam.
- Kamermans, H./A. Stierman/P. Vos./E. Westerhoff 1979, Bodemgesteldheid in de Agro Pontino ten Z.W. van Latina, Midden Italie, Unpublished report, Fysisch Geografisch/ Bodemkundig Laboratorium, Universiteit van Amsterdam.
- Kleibrink, M. 1997, L'organizzazione spaziale dei culti a Satricum, *MededRom* 56, 139-164.
- Kleibrink, M. 2001, The miniature votive pottery dedicated at the "Laghetto del Monsignore" Campoverde, *Palaeohistoria* 39/40 [1997/1998], 441-511.
- La Rosa, M. 2004, Osservazioni preliminari sulla distribuzione dei siti all'aperto musteriani nel territorio del

- Lazio costiero centro-meridionale e indagini sull'ubicazione della materia prima, in S. Bove (ed.), *I Quaderno, Studi e Ricerche*, Sabaudia, 91-104.
- La Rosa, M./P. Mazza/M. Rustioni/F. Vianello 1989, Agro Pontino (prov. di Latina e Roma), *Notiziario della Rivista di Scienze Preistoriche* 42, 356-359.
- Lambeck, K./M. Anzidei/F. Antonioli/A. Benini/A. Esposito 2004, Sea level in Roman time in the Central Mediterranean and implications for recent change, *Earth and Planetary Science Letters* 224, 563-575.
- Laurenzi, E. 2007, Il "teatro" nelle residenze private, in *Scienze dell'Antichità* 12, 669-676.
- Leusen, M. van 2002, *Pattern to process: methodological investigations into the formation and interpretation of spatial patterns in archaeological landscapes*, Groningen.
- Leusen, M. van/P. Attema 2003, Regional archaeological patterns in the Sibaritide: preliminary results of the RPC field survey campaign 2000, *Palaeohistoria* 43/44 [2001/2002], 397-416.
- Leusen, M. van/T. De Haas/S. Pomicino/P. Attema 2005, Protohistoric to Roman settlement on the Lepine margins near Ninfa (south Lazio, Italy), *Palaeohistoria* 45/46 [2003-2004], 301-346.
- Lombardi, F. 1847, *Cenni storici di Anzio Antico e Moderno colla descrizione delle sue ruine*, Roma.
- Louwaard, M. 2007, L'acropoli: l'edificio di età medio-repubblicano, in M. Gnade (ed.), *Satricum. Trenta anni di scavi olandesi*, Amsterdam, 75-77.
- Lowe, J./M. Walker 1997, *Reconstructing Quaternary Environments*, Harlow.
- Lucidi, E. 1797, *Memorie istoriche dell'antichissimo municipio ora terra dell'Ariccia e delle sue colonie Genzano, Nemi*.
- Lugli, G. 1926, *Ager Pomptinus pars prima Anxur-Tarracina*, Roma.
- Lugli, G. 1928, *Ager Pomptinus pars secunda Circeii*, Roma.
- Lugli, G. 1940, Saggio sulla topografia dell'antica Antium, *RIA* 7, 153-188.
- Maaskant Kleibrink, M. 1987, *Settlement excavations at Borgo le Ferriere <Satricum> I. The campaigns 1979, 1980, 1981*, Groningen.
- Maaskant Kleibrink, M. 1992a, *Settlement excavations at Borgo le Ferriere <Satricum> II. The campaigns 1983, 1985, and 1987*, Groningen.
- Maaskant Kleibrink, M. 1992b, Gli Scavi più recenti a Borgo le Ferriere (Satricum), *Archeologia Laziale* XI-1, 53-64.
- Maaskant Kleibrink, M. 2004, Miniature votive pottery, from the "Laghetto del Monsignore", Campoverde and votive deposit I at Satricum, Borgo Le Ferriere, in *Religio, Santuari ed ex voto nel Lazio meridionale*, Formia, 132-155.
- Malatesta, A. 1985, *Geologia e paleobiologia dell'era glaciale*, Roma.
- Mantero, D. 2003, Per un quadro del più antico popolamento umano del territorio di Anzio e Nettuno, in C. Caneva/C. Travaglini (eds), *Atlante Storico-Ambientale, Anzio e Nettuno*, Roma, 86-93.
- Marazzi, F. 1990, Il Patrimonium Appiae: beni fondiari della Chiesa Romana nel territorio suburbano della via Appia fra IV e IX secolo, *Archeologia Laziale* X-1, 117-126.
- Marazzi, F. 1998, I <<Patrimonia Sanctae Romanae Ecclesiae>> Nel Lazio (secoli IV-X). *Struttura amministrativa e prassi gestionali*, Roma.
- Mater, B. 2005, *Patterns in Pottery. A comparative study of pottery production in Salento, Sibaritide and Agro Pontino in the context of urbanization and colonization in the first millennium BC*, Amsterdam.
- Mercando, L. 1962, *Lucerne Greche e Romane dell'Antiquarium Comunale*, Roma.
- Morandini, A. 1999, Gli insediamenti costieri in età protostorica nel Lazio meridionale, *Latium XVI*, 5-47.
- Morel, J.-P. 1981, *Céramique Campanienne: les formes*, Rome.
- Moreland, J. 2005, Transformations in a Sabine landscape, 200-1000, AD, in P. Attema/A. Nijboer/A. Zifferero (eds), *Papers in Italian Archaeology VI. Communities and Settlements from the Neolithic to the Early Medieval Period* Vol. II, Oxford, 930-934.
- Morpurgo, L. 1946, Anzio. Sepolcreto sotterraneo pagano rinvenuto in contrada "Riserva di Camposanto" o "Perpenda", *NSc* 6/7, [1944/1945], 105-126.
- Munsell, 1994, *Munsell soil color charts* (revised edition), New Windsor.
- Negrini, C. 2004, La Via Selciatella tra via Padiglione Campana e via Spaccasassi, nei comuni di Nettuno, Aprilia e Lanuvio, in L. Petacco/S. Quilici-Gigli (eds), *Viabilità e insediamenti nell'Italia antica*, Roma, 229-233.
- Negrini Catacchio, N. 1981, *Sorgenti della Nova. Una comunità protostorica e il suo territorio nell'Etruria Meridionale*, Roma.
- Nibby, A. 1837, *Analisi storico-topografico-antiquaria della carta dei dintorni di Roma I*, Roma.
- Nijboer, A. 1998, *From household production to workshops. Archaeological evidence for economic transformations, pre-monetary exchange and urbanisation in central Italy from 800 to 400 BC*, Groningen.
- Nijboer, A./P. Attema/G. Van Oortmerssen 2006, Ceramics from a late Bronze Age saltern on the coast near Nettuno (Rome, Italy), *Palaeohistoria* 47/48 [2005-2006], 141-205.
- Olcese, G. 2003, *Ceramiche comuni a Roma e in area romana: produzione, circolazione e tecnologia (tarda età repubblicana - prima età imperiale)*, Mantova.
- Oxé, A./H. Comfort/P. Kenrick 2000, *Corpus Vasorum Arretinorum*, Bonn.
- Pacciarelli, M. 1999, Le origini di Vulci e il suo entroterra, in *Atti del Convegno Ferrante Rittatore Vonwiller e la Maremma, 1936-1976*, Ischia di Castro, 4-5.4.1998, 55-67.
- Pacciarelli, M. 2000, *Dal Villaggio alla Città, La svolta protourbana del 1000, a.C nell'Italia tirrenica*, Firenze.
- Pagliaro, M. 1990, *Le Ferriere di Conca nella valle dell'Astura. Storia di un Borgo antico*, Cisterna di Latina.
- Paroli, L./L. Vendittelli (eds) 2004, *Roma. Dall'antichità al medioevo*. Vol. 2 *Contesti tardoantichi e altomedievali*, Roma.
- Pascucci, P. 1996a, Borgo Ermada, in C. Belardelli/P. Pascucci (eds), *Repertorio dei siti protostorici del Lazio - provincie di Rieti e Latina*, Roma, 68-69.
- Pascucci, P. 1996b, Fosso della Cavatella, in C. Belardelli/P. Pascucci (eds), *Repertorio dei siti protostorici del Lazio - provincie di Rieti e Latina*, Roma, 65-67.
- Patterson, H. 2003, Tiber Valley workshop: Ceramic production and distribution during the late antique and early medieval periods, available from http://www.bsr.ac.uk/PBSR/sub_arch/Attach/Ceramic_production.pdf.
- Patterson, H./P. Roberts 1998, New light on dark age Sabina, in L. Sagui (ed.), *Ceramica in Italia: VI-VII secolo: atti del convegno in onore di John W. Hayes*, Roma, 11-13, maggio 1995, Firenze, 421-435.
- Patterson, J. 1987, Crisis: what crisis? Rural change and urban development in Imperial Apennine Italy, *BSR* LV, 115-146.
- Peacock, D./D. Williams 1991, *Amphorae and the Roman economy. An introductory guide*, London/New York.
- Pedroni, L. 1986, *Ceramica a vernice nera da Cales*, Napoli.
- Petrassi, L./M. De Simoni/I. Candeloro 2002, *Il patrimonio culturale di Nettuno archeologia, storia, natura, tradizioni*, Roma.
- Petriaggi, R. 2004, Restauro subacqueo delle strutture sommerse della peschiera romana di Torre Astura, in Ghini,

- G. (ed.), *Lazio & Sabina 2*, Roma, 273-276.
- Piccarreta, F. 1977, *Astura*, Firenze.
- Piccarreta, F. 1980, Satricum (Le Ferriere), in: G. Alvisi/M. Borghi/C. Piazzoni/E. Ferrero (eds), *L'aerofotografia da materiale di guerra a bene culturale. le fotografie aeree della RAF*, Roma, 86-87.
- Pillans, B./T. Naish 2004, Defining the Quaternary, *Quaternary Science Reviews* 23, 2271-2282.
- Quilici, L. 1970, Il problema di Torre Astura, *Italia Nostra* 75-76, 18-21.
- Quilici, L./S. Quilici-Gigli 1984a, Attività estrattiva dello zolfo nella zona tra Ardea ed Anzio, *Archeologia Laziale* VI, 229-249.
- Quilici, L./S. Quilici-Gigli 1984b, Longula e Polusca, *Archeologia Laziale* VI, 107-132.
- Quilici-Gigli, S. 1992, *I Volsci* (=Archeologia Laziale XI, 1), Roma.
- Raaymakers, R. 2007, La villa romana, in M. Gnade (ed.), *Satricum. Trenta anni di scavi olandesi*, Amsterdam, 86-90.
- Radmili, A. 1956, Ricerche intorno alla Gola del Sentino. III. Gli scavi nella Grotta dei Baffoni, *Bollettino di Paleontologia Italiana* LXV, 523-533.
- Rasi, G. 1832, *Sul porto e territorio di Anzio discorso storico con sommario e undici piante*, Pesaro.
- Rasmus Brandt, J. 1996, *Scavi di Ficana II,1*, Roma.
- Ricci, A. 1985, *Settefinestre, una villa schiavistica nell'Etruria Romana, La villa e i suoi reperti*, Modena.
- Rizzo, G. 2003, *Instrumenta Urbis I Ceramiche fini da mensa, lucerne ed anfore a Roma nei primi due secoli dell'impero*, Rome.
- RSPL 2007, *Repertorio dei siti protostorici del Lazio province di Roma, Viterbo e Frosinone*, Firenze.
- Ryan, N./M. van Leusen 2002, Educating the digital field-work assistant, in G. Burenhult/J. Arvidsson (eds), *Pushing the envelope. CAA 2001*, Oxford, 401-412. s.a. 1884, *NSc*, 240-241.
- Santa Maria Scrinari, V./M. Morricone Mattini 1975, *Mosaici antichi in Italia Regione prima Antium*, Roma.
- Sapelli, M./A. Jaia 2002, *La fanciulla di Anzio*, Anzio.
- Schippa, F. 1980, *Officine ceramiche Falische: ceramica a vernice nera nel museo di Civita Castellana*, Roma.
- Scott, V./R. Turchetti (eds), 1994, *Il Lazio di Thomas Ashby 1891-1930*, Roma.
- Sear, D.R. 1988, *Roman Coins and their Values*, London.
- Severini, F. 2001, *Antiche strade Lazio - Via Appia II*, Roma.
- Sevink, J./P. Vos/E. Westerhoff/A. Stierman/H. Kamermans 1982, A sequence of marine terraces near Latina (Agro Pontino, central Italy), *Catena* 9, 361-378.
- Sevink, J./A. Rimmelzwaal/O. Spaargaren 1984, *The soils of southern Lazio and adjacent Campania*, Amsterdam.
- Sevink, J./J. Duivenvoorden/H. Kamermans 1991, The soils of the Agro Pontino, in A. Voorrips/S Loving/H Kamermans (eds), *The Agro Pontino Survey Project*, Amsterdam, 31-47.
- Snoek, G./A. Van de Giessen 1985, *Genese, Bodems en Bodemgebruik van een Strandwallensysteem in Latium, Italië*, Unpublished report, Fysisch Geografisch/Bodemkundig Laboratorium, Universiteit van Amsterdam.
- Sydenham, E.A. 1952, *Coins of the Roman Republic*, London.
- Szentléleky, T. 1969, *Ancient Lamps*, Amsterdam.
- Tamburino, C. 1988, Lineamenti di morfologia e geologia del territorio di Nettuno, available from: <http://www.nettunocitta.it/OPERE/nettuno/nettunoindice.html>.
- Tchernia, A. 1986 *Le vin de l'Italie romaine*, Rome.
- Tchernia, A./ F. Zevi 1972 Amphores vinaires de Campanie et de Tarraconaise à Ostie, in P. Baldacci (ed.), *Recherches sur les amphores romaines*, Rome, 35-67.
- Tol, G. 2003, *The Astura 2002 campaign, report on the proto-historical pottery of the Depuratore, Carnevale and Bottego sections between Nettuno and Torre Astura*, Unpublished report, Rijksuniversiteit Groningen.
- Tol, G. 2005, *Carta archeologica del comune di Nettuno. Een tussentijds verslag van de archeologische kartering van de gemeente Nettuno (Lazio, Italië) aan de hand van de veldwerkcampagnes van de zomer van 2004*. Unpublished MA thesis (3 vols), Rijksuniversiteit Groningen.
- Tol, G. 2006, De Romeinse weg van Lanuvium naar Antium; verbeterde bereikbaarheid als trigger voor sociaal-economische veranderingen, *Tijdschrift voor Mediterrane Archeologie* 35, 25-31.
- Tomassetti, G. 1976, *La Campagna romana antica, medioevale e moderna II: Via Appia, Ardeatina e Aurelia*, Firenze.
- Toubert, P. 1973, *Les structures du Latium médiéval. Le Latium méridional et la Sabine du IX^e siècle à la fin du XII^e siècle*, Rome.
- USAP, 2005, *Roman amphorae: a digital resource*, available from <http://ads.ahds.ac.uk/catalogue/resouces.html?amphora2005>.
- Valenti, M. 1996, La Toscana tra VI-IX secolo. Città e campagna tra fine dell'età tardoantica ed altomedioevo, in G. Brogiolo (ed.), *La fine delle ville romane: trasformazioni nelle campagne tra tarda antichità e alto medioevo*, Mantua, 81-106.
- Velocchia Renaldi, M. 1978, Aspetti protostorici ed arcaici del lazio meridionale, *Archeologia Laziale* I, 21-25.
- Velocchia Renaldi, M. 1983, Attività della soprintendenza archeologica del Lazio, *Archeologia Laziale* V, 13-16.
- Ventriglia, U. 1990, *Idrogeologia della provincia di Roma*, Roma.
- Vianello, F./M. La Rosa/P. Mazza/J. Moggi-Cecchi/M. Rustioni 1995, Palaeolithic from the volcanoclastic deposits of the Agro Pontino, Latium, Central Italy, *Quaternaria Nova* 5, 7-22.
- Volpi, G. 1726, *Vetus Latium Profanum, tomus tertius in quo agitur de Antiatibus et Norbanis*, Padova.
- Waarsenburg, D. 1994, *The north-west necropolis of Satricum. An Iron Age cemetery in Latium Vetus*, Amsterdam.
- Waarsenburg, D. 1998, *Satricum, cronaca di uno scavo. Ricerche archeologiche alla fine dell'Ottocento*, Roma.
- Walters, H. 1914, *Catalogue of Lamps in The British Museum*, London.
- Westphal, J. 1829, *Die Römische Kampagne in topographischer und antiquarischer Hinsicht dargestellt*, Berlin.
- Winckelmann, J. 1830, *Opere, 1a ed.it./I-III*, Prato.
- Wit, H. de/J. Sevink/P. Andriessen/E. Hebeda 1982, Stratigraphy and radiometric datings of a mid-pleistocene transgressive complex in the Agro Pontino (Central Italy), *Geologica Romana* 26, 449-460.
- Zaccheo, L./F. Pasquali 1972, *Sezze dalla preistoria all'età romana*, Sezze.

