

The Potenza Valley Survey: Preliminary Report on Field Campaign 2001

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THE PVS-PROJECT

In January 2000 the Department of Archaeology at Ghent University initiated a new survey project in Italy, titled '*The Potenza Valley Survey. From Acculturation to Social Complexity in Antiquity: A Regional Geo-Archaeological and Historical Approach*'.¹ Thanks to the acquisition of additional financial support² we will be able to prolong this research program at least until 2006. The aims and methods of this long term-project, as well as the results of the first field campaigns in May and September 2000, have been published in *BABesch*.³ In this report we will present some preliminary results of a major part of the aerial photography and the fieldwork of 2001, as well as a first evaluation of the study of the finds. The project's survey-area remains constricted to the circa 80 km long valley of the river Potenza in Adriatic Central-Italy (Marche).

As the new financial support has been obtained within the framework of an international research program, which focuses on Late Antiquity (3rd-7th century), very special attention will in the future be paid to this particular period. Nevertheless the original aim to measure long-term evolutions and changes between 1000 BC and 1000 AD will generally be sustained. As has been emphasized elsewhere, it is precisely such a long-term view, which allows to place the developments of ancient society in a sufficiently broad perspective. Still, other periods are not ignored, and it is intended that the analysis of the survey results will range across the whole period of human settlement.

ACTIVE AERIAL PHOTOGRAPHY

The photographic detection of sites and off-site phenomena within the PVS-project concerns the whole Potenza valley, which is photographed from a low-flying aircraft during regular flights in different seasons. In 2001 this activity was concentrated in summer (July) and early fall (September).⁴ Since harvest takes place rather early in this region of Italy, the July-flights did not produce the

same excellent results as were obtained during flights in May 2000, but they nevertheless extended our collection of slides and photographs to a total of some 1500 oblique aerial images. The number of processed sites in the inventory, where possible ancient field structures (such as lines, patches and dots) appear, reaches now about 200 units. Again some of these features have already been checked in the field, or coincide with areas within our second transect of intensive field-walking (see further). It still remains impossible to attach a chronological value to many of the structures without further field checks or even excavations. Still, in almost $\frac{1}{3}$ of all cases checked on the ground a first chronological indication is available.⁵

Again most sites were visible as soil marks, foremost observed during September-flights in the ploughed fields of the area of intensive field-walking near Treia (see further). As most of them coincide well with concentrations of settlement debris on the surface, a first chronological evaluation is possible. A majority of these seem to belong to the more visible Roman period, but also pre- and protohistoric sites and even medieval ones were detected or confirmed in this way. The easy observation of these darker greyish brown patches in the ploughed soil, is probably the result of a combination of ploughed up occupation layers, zones with locally more organic substance in the upper layers and humidity traces caused by differential drying of the soil in some archaeological zones. Sometimes, they are revealed by the very extensive surface erosion in this undulating landscape. Generally these settlement traces are seen as large irregular patches, but especially in the case of some Roman villas and farms, linear features, probably indicating local entrance roads and maybe some buildings, were observed. A typical isolated soil mark of irregular shape, observed on a small but pronounced hilltop near S. Maria in Selva (*fig. 1*), could after ground inspection be interpreted as a medieval site (circa 10th-13th century). Here we discovered a very dense concentration of potsherds, fragments of tiles, many animal bones in good condition and a fair num-



Fig. 1. Soilmarks on a medieval site near S. Maria in Selva.



Fig. 2. Cropmarks of a Roman road (to Urbs Salvia ?) and possible funerary monuments southwest of Potentia.

ber of fragments of medieval bricks, sandstone boulders and some *spolia* (e.g. marble *crustae*) from a Roman site nearby. This discovery proves the validity of aerially detected irregular soil marks of (early) medieval sites, which generally are hard to trace in this *incastellamento*-landscape.

The potential for observing *crop marks* in this still very agrarian landscape was again confirmed. Especially in the area of the river mouth, which will be the focus of more intense flying in the spring of 2002, the results were good. New details were added to sites already discovered during earlier work in the area. Such is the case with a major protohistoric site at Montarice, on a promontory north of the river mouth. In a field of sunflowers were revealed different linear traces, some of which probably belong to the ancient enclosure of this imposing site. A short field check of the general topography and of some of the internal traces and spots indicates that this site with known Bronze age occupation,⁶ was no



Fig. 3. Shadowmarks produced by differential tree-growth on the early medieval hilltop-site of Monte Gista.

doubt also very important in Iron Age and Roman times. Possibly this circa 4 ha large *oppidum*-like structure had a role to play in the control of the river mouth and the Adriatic shore by a local Piceni-elite. It was further possibly the emplacement of a well-situated Roman villa.⁷

Good results with detecting crop marks were also obtained on the site of the Roman town of *Potentia*, some distance south of the actual river mouth of the Potenza. Again new traces of the colony's street grid were revealed and mapped. Surprising was also the discovery of some suburban infrastructure. Along a road leading out of the ancient town in a south-westerly direction, which we discovered last year, we now noticed several small rectangular cropmarks disposed neatly along this ancient track (fig. 2). An identification as possible funerary monuments, constructed parallel with the road, seems most likely.

A third type of marks, *shadow marks*, were encountered only in a limited number of areas. Such traces, particularly associated with earthworks and human adaptations of the relief, seem to occur especially in the mountainous landscapes, where the thick forest cover or the permanent grasslands have conserved ancient features well.

Aerial detection can be very complementary to historical research here, as was clearly demonstrated by the images produced from the air of some Longobardian or other early medieval castles and hilltop-sites.

Upland sites visible in woodland, like on the Monte Gista (Fiuminata), whose concentric defense system was clearly revealed, can now be studied with more detail (fig. 3). This is also the case with the spectacular shadow marks of the protohistoric ritual (?) and settlement site, known from earlier discoveries⁸ on the Monte Primo, near Camerino. New aerial views imposed a second visit of our team (backed by geomorphologists) to this top-site overlooking the Upper Potenza valley,⁹ primarily to investigate two aspects. Firstly we studied in detail the circular discolorations, which we had spotted in 2000. We can now state that they do not indicate ancient funerary monuments, but that the strange differential growth of grasses is the result of particular conditions of humidity and that they are a natural phenomenon.¹⁰ Secondly, we traced the exact location of the major late Bronze Age circumvallations by means of a handheld GPS (Global Positioning System) instrument. We remarked that part of the outer



Fig. 4. Ground checking of the remains of a possible limestone quarry on the protohistoric hillside of Monte Primo.



Fig. 5. Fieldwalking in the area of Treia.

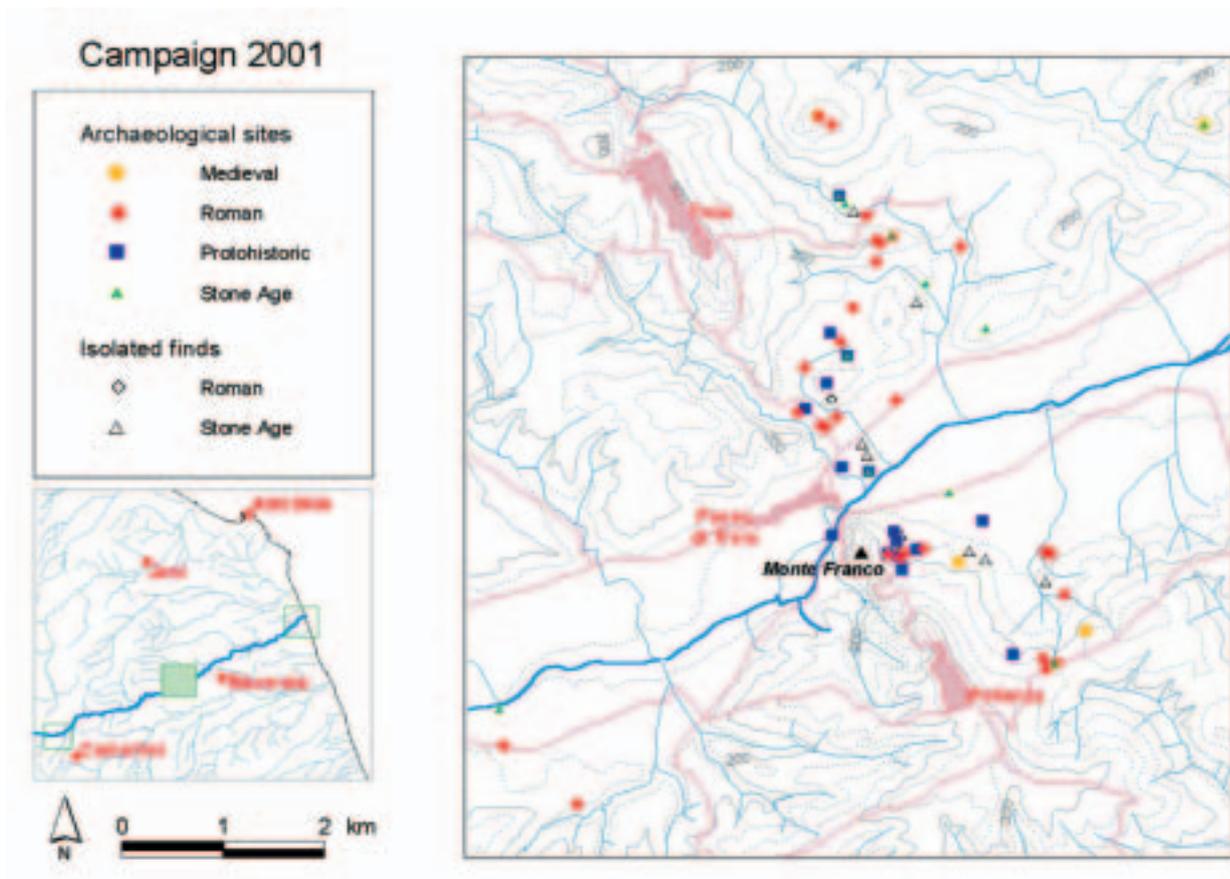


Fig. 6. General map with results of fieldwalking during the 2001 campaign.

enclosure was connected with a possible ancient limestone-quarry (fig. 4). Furthermore it is interesting, but sad, to notice that we had to ascertain the enlargement of the tombaroli-pit about which we already reported last year.¹¹ Once again protohistoric potsherds and bone fragments, left by the looters, were present in abundance.

FIELD CAMPAIGN IN THE TREIA AREA

As has been announced in last year's report¹² the intensive field surveys are only being carried out in 3 large sample zones. They are transects of some 9 to 25 km each, systematically spaced at regular intervals across the c. 80 km long region of the Potenza Valley. They cover all the main landscape types of the region and represent in particular the upper (2000), middle (2001) and lower valley (2002/2003). They are chosen on geographical grounds, but also on the basis of cultural-historical features, such as the vicinity of Roman towns (for which they acted as hinterland) or/and of known protohistoric centres, such as hillsites with important élite cemeteries. One of the strengths

of this kind of intensive field survey is its ability to shed light on long-term changes in settlement pattern and land use.

The area investigated during the September 2001 campaign (3 weeks) is situated in the middle valley of the Potenza, immediately west of Passo di Treia. The topography of this landscape, situated at some 30 km from the Adriatic shore, is essentially of Miocene and Pliocene origin. The hilly area, situated generally between 250 and 350 m, consists of dorsal ridges alternating with small and sometimes deeply incised secondary valleys, which are connected with the east-west oriented Potenza valley. The still very agrarian open landscape with dispersed rural units, groups its population mainly in several towns situated since medieval times on the hilltops overlooking the valley.

Our survey area covers some territory of the municipalities of Pollenza and Treia, with a total of about 14 km (fig. 6). This area was not arbitrarily chosen. Along the course of the middle valley a couple of strategic protohistoric hilltop sites occur, e.g. the Monte Pitino and the Monte Franco. In the Passo di Treia area the Potenza runs through a nar-

rowing of the valley formed by two axial hillspurs of Miocene date, occupied by the medieval and actual centres of Treia (N) and Pollenza (S). On the south side the river is dominated by a very conspicuous promontory, the Monte Franco (or Francolo).

The presence of protohistoric features in this zone, known from literature,¹³ does not surprise at all when we take into account the strategic value of this particular area. On a dominant plateau immediately west of actual Treia lies the site of the Roman *municipium Treia*. Intensive survey in the region west of the pass by Moscatelli, whose conclusions have been published in the *Forma Italiae* series, has already highlighted the importance of the area in Roman times.¹⁴ We, therefore, decided to focus our fieldwork on the area east of the pass, so that both studies might become complementary. The whole core of the hinterland of Roman Treia in the Potenza valley could then be systematically approached.

As the archaeological field methods of intensive line-walking in team (*fig. 5*) and systematic registration in a GIS remained essentially the same as during last year's campaign, we refer to the 2000-report for this information.¹⁵ In the Treia area a total of some 70 sites were defined on the basis of comparatively higher surface artefact density or by the presence of certain anomalies. All potential chronologically diagnostic artefacts, all feature sherds (rims, bases, handles), all prehistoric pottery, and all lithic artefacts were collected during the routine field survey and bagged as a group according to field number. The still preliminary processing of all archaeological material (see further) and a first apprehension of the main topographical aspects of the sites and of some of the off-site finds, leads to a series of observations per period.

Stone Age

Before a precise definition, identification and chronometry of Stone Age sites in the survey area is available specialist reports on our finds are awaited.¹⁶ Still, several zones of intense occupation by Late Stone Age settlers were located. Three of them were found on the lowest gravel terraces immediately south of the Potenza. Here we discovered some not very dense, concentrations of a handful of fragments of prehistoric pottery and many pieces of worked flint, e.g. some cores and blades, with a higher density towards the river. These finds probably indicate the presence of a very wide settlement and activity zone, connected

with the river and with readily available raw flint material for the production of tools and weapons (*fig. 7*). It is possible that factors such as colluviation shield the appearance of more neat concentration zones with a higher density and sharper delimitations. A GIS-analysis that takes into account several geomorphological parameters can be helpful here in the future.

Most of the more inland-located prehistoric sites are also located near streams and ancient terraces. One of them, probably of Neolithic date, was found north of the Potenza river, located immediately west of a small torrent. Here we discovered a large concentration of worked flint (some cores, flakes, tools and weapons) together with several prehistoric potsherds. The artefacts coincide with an area of very dark greyish soil (sandy clay) mixed with some loose pebbles. An old occupation layer is possibly ploughed up and partly deposited here by colluviation originating from a river terrace immediately north of the site.

Furthermore we have inventoried several isolated flint artefacts such as scrapers, arrowheads, a burin and a bifacially worked point. These isolated finds are dispersed over the whole survey area.

Bronze and Iron Age

Although the protohistoric material collected during the Treia campaign was often much more diagnostic than the Bronze and Iron Age pottery found in the Camerino area,¹⁷ it still remains difficult to identify distinct Bronze age sites in the region. A small concentration of thick, probable Bronze Age potsherds and some burned loam, lying on the southern river bank of the Potenza near the Molino-bridge and at the foot of the Monte Franco, agrees well with the expected. The top of the Monte Franco (*fig. 8*) has already revealed its archaeological value in this period. Apennine, Sub-Apennine and Protovillanovan remnants have been discovered here during small-scale excavations and it seems that the Recent and Final Bronze Age settlement was situated on top of the Monte Franco, while some Iron Age continuity was located in the eastern plain at the foot of the hill.¹⁸ Our finds seem to indicate that the Bronze Age occupation might well have extended to the river edge. Another site with probable connection to the Monte Franco, was discovered at only 500 m distance of this hill. This elongated concentration of protohistoric (probably Bronze Age) pottery and some flint artefacts is not dense, but within the context of the field quite clear.

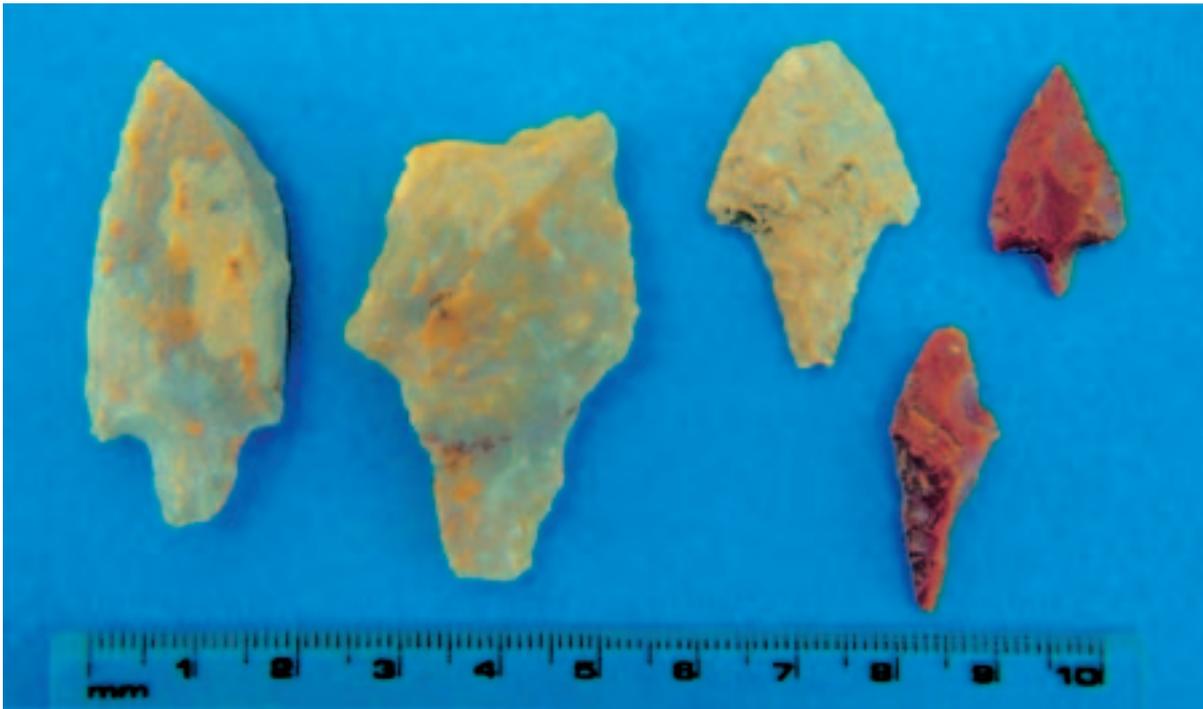


Fig. 7. Some arrowheads collected at different locations in the survey area.



Fig. 8. View of the Monte Franco.



Fig. 9. Some 'Piceni-bucchero' from the settlement-zone at the foot of the Monte Franco.

At least eight of the protohistoric sites much resemble the possible but difficult to date Iron Age sites, which we identified in the upper Potenza valley,¹⁹ both as far as the potsherds themselves, as the location of these findspots go. We now tend to identify these sites as rather small Iron Age settlements. They reveal limited numbers of datable finer wares. As in the upper valley some of their locations are clearly determined by the availability of easy and sure sources for the provision of water, an observation not unique in the Marche and elsewhere.²⁰ They occur on both sides of the Potenza valley. A very distinct Iron Age site of this simple 'casale' type, found high on a hillslope immediately east of the centre of Pollenza, is a good example. It lies approximately some 50 m to the south of a natural spring located at the top of a torrente. The very obvious and dense concentration of protohistoric pottery and some sparse river pebbles was found in an area of dark greyish brown earth, which is clearly distinguished from the surrounding lighter brown soil. From this slight slope, oriented towards the southeast, there is a very nice view over the whole Potenza valley until the coastal Monte Conero.

Of a very different kind is the extensive Iron Age settlement zone discovered at the foot of the Monte Franco. Here a cluster of six protohistoric concentrations must be interpreted as one phenomenon. The location in the immediate surroundings of the Monte Franco is important to notice, since it is in about this same area that the Soprintendenza delle Marche excavated in 1961 some elements of an important Piceni-necropolis at Moie di Pollenza.²¹ The excavated remains of the cemetery were datable between 900-700 BC. In the summer of 1963 research continued and revealed that the necropolis was situated on top of a Piceni-settlement of the Early Iron Age, which in turn covered an Apennine occupation.²²

During our surveys we determined and mapped several dense cores of Iron Age artefacts in this general area, essentially in arable fields on the eastern and northeastern slopes of the Monte Franco. Most of them consist of protohistoric pottery associated with some wattle and daub and some fragments of oven or hearth floors. Among the pottery we distinguish Iron Age *dolia* fragments, many typical ornamented 'Piceni-bucchero' sherds (fig. 9) and some imported pottery, e.g. geometric and Greek potsherds. In the clear-



Fig. 10. Possible Piceni-burials detected as crop marks at Passo di Treia.

est area, a very gently sloping or almost flat zone partly bordered to the north by a talud, probably of Roman age (see further), different indications point to a function as settlement. Although the field does not belong to a clear river terrace many pebbles occur here in the concentration. Furthermore, many small fragments of sandstone, some bone fragments, some bronze and wattle and daub are present. Together with other zones downslope this whole area can be considered as a wide settlement zone located on the gentle slopes at the foot of the Monte Franco. It certainly represents a form of concentrated habitation connected with the presence of the Piceni elite in the Middle Valley.

Not far from the Monte Franco, on the northern bank of the Potenza, we planned to investigate a specific field where our aerial photographs had shown circular crop marks (*fig. 10*) which might be connected to another Piceni-necropolis.²³ Unfortunately this field was still under crops. Control of an adjoining field resulted in a partial confirmation of this indication as some protohistoric potsherds (e.g. a 'Piceni-bucchero'-handle) were found here. This research will be continued.

Roman period

As could be expected from earlier work in the area around Roman *Trea*,²⁴ east of our survey zone, the Roman finds in the 2001-transect were particularly numerous. Almost 30 distinct Roman settlement sites were mapped, as well as much off-site material of that period. In clear contrast with the results in the Upper Potenza valley, where most of the sites that we recorded should be interpreted as more or less isolated and fairly simple farmsteads widely scattered over the landscape, in this region the dispersed Roman settlement structure shows greater hierarchy. Apart from a majority of small and simple sites, the presence of larger complexes, some of which can be considered as villas, was noted. The latter not only display a more extensive surface scatter, but the presence of more imperishable building materials (floortiles, rooftiles, bricks, *hypocaustum*-tiles, limestone and sandstone boulders,...), much more imported pottery and whole categories of specific finds (coins, glass, lead artefacts,...) indicates greater comfort, wealth and organisation.

The site distribution in this period displays a more total use of the landscape, compared to the

Iron Age situation. Although at first sight an even spread seems likely, at least four distinct patterns should be distinguished:

1. The lower terraces near the Potenza are certainly chosen for their easy to work arable land, possibly the presence of meadows and water. Part of the sites here seem also connected with the main road arteries, such as the branch of the Roman road in the valley bottom connecting *Septempeda* with *Ricina*. Near this road and close to the modern road which leads from Passo di Treia to Treia we noted several dense concentrations (*fig. 12*) with Roman pottery and building materials, such as *tegulae*, limestone blocks and even parts of an *opus spicatum* floor.
2. Some settlements show the same location pattern as the simple Iron Age sites: a farm built on the slopes with a clear vicinity to natural water supply in the shape of springs or torrents. Several small sites in the southern part of the survey area, near Pollenza, display these characteristics.
3. A series of settlements, some clearly of the more elaborate (villa-)type is located on the hilltops and ridges at some distance from the river, often evolving parallel with the Potenza and especially located in the northern part of our study area where an orientation towards the south was favoured. These villa-sites seem surrounded by large estates wherein only some secondary, isolated Roman structures, associated with agricultural activity, have been recorded. This pattern of well-situated hill-top sites, on high gravel terraces, is already recognisable in some older finds from the area, such as the probable villa remains on a ridge parallel to the Potenza at Votalarca and some finds on the even higher Colle Carbonari.²⁵ Several important sites can be added to this list now. A good example is a site in the northern part of our survey zone, where a very neat concentration of Roman artefacts was found on the ridge just south of the Strada Vicinale Chiaravalle (*fig. 11*). The concentration consists of many fragments of pottery, a very large number of rooftiles and some small to large worked and unworked blocks of sandstone. A fresh coin of Vespasian and a stamped tile (see below) belong to the more important finds. The artefact concentration is very well delineated and can be seen from a distance as a typical zone of greyish earth. Its main core, full of building materials, measures some 20x17 m with a southwest northeast axis. The greyish zone flows out in

the southern direction of the lower slope, where colluviation has resulted in a very large concentration of Roman building materials and pottery.

4. Finally a couple of Roman sites could well be connected with the Monte Franco hill and the natural pass, already a point of attraction in protohistoric times. The ideal view and possibly a control function could have played here. The best example was found just northeast of the main Piceni-settlement area. It is a very large Roman settlement zone, with dense remains of building materials and pottery, which can be divided into two (*in situ?*) areas, probably representing two large buildings. The site lies on a relatively flat part of the slope, bordered by an old (Roman?) talud, and has a great view on the pass, the river Potenza and the Monte Franco. The finer wares and larger numbers of pottery seem to be situated in the eastern part of this concentration, an area with a length of some 80 m. The individual concentrations seem to be part of a large villa with its main building(s) on a northwest-southeast longitudinal axe and several outhouses south and maybe north of it. The presence of the talud and the terracing might indicate clear Roman interference with the topography.

Although in some cases a more distinct date within the Roman period can already be proposed, and some sites with long lives were encountered, further pottery research is awaited before chronological groupings and counts per period are possible. Only then will it be possible to study phenomena such as: continuity or discontinuity of occupation with other periods, shifts in settlement location within the Roman period, detailed comparison of site sizes, etc.

Early Middle Ages

Again very little material of distinct medieval date was encountered during our prospections.²⁶ Sites of that period can hardly be distinguished. A typical medieval hilltop site, comparable to the one already discussed just outside our survey transect (see above), was found on the very top of the Colle Carbonari. The small concentration has not been fully evaluated, but it consists essentially of medieval pottery and some isolated pieces of Roman (?) rooftiles. The full extent and date of this site still has to be determined, but both sites seem to confirm the emerging picture of rather restricted isolated sites outside the major towns,



Fig. 11 Remains of a Roman villa detected by soilmarks on one of the hilltops near modern Treia. Remark the large outflow of brown soil downslope as a result of colluviation.



Fig. 12. Roman settlement site and remains of an old road (?) in the valley bottom just north of the Potenza.

essentially confined to some small hilltop settlements.

Other medieval (and post-medieval) finds were generally part of so-called off-site scatters. This was certainly the case on the fields immediately east of the towns of Pollenza and Treia, where aspects of garbage disposal, manuring and colluviation certainly result in a very intricate pattern of surface distribution.

PRELIMINARY DISCUSSION OF THE FINDS

Introduction

In 2000 and 2001, two seasons of surveys in the Potenza Valley area were carried out in the surroundings of *Prolaqueum*/Pioraco and of *Trea*/Treia. Both fieldwalking campaigns produced a high number of finds, most of them ceramics. Especially the second season was very fruitful, probably due to the vicinity of the *municipium* of *Trea*. Indeed, if the chronology ranges from the Paleolithic to the 20th century, the Roman finds of the imperial era outweigh the rest. Pottery and ceramic building material dominate. Remarkable was the find of fragments of a brick floor in *opus spicatum* on a villa site near Treia. There were also some Roman glass finds, while metal objects occurred rarely. The latter are difficult to date, with the exception of 10 coins, amongst them 5 of the Roman period. Stone objects as well as well-finished stone building material was also rarely noticed, apart from flint artefacts, most of them dating from the Late Stone Age. Bronze Age material seems rare, but this has most likely to do with problems of identification of the sherds. Fieldwalking on the important Iron Age site at the foot of nearby Monte Franco yielded lots of fragments of Picenean building-material, fine and coarse wares, and some rare semi-glazed South-Italian and most probably black glaze Greek imports. In both the areas of Pioraco and of Treia black gloss or so-called Campanian ware and its imitations turned up at an appreciable rate, informing us of human occupation in the last three centuries BC. Late antique occupation is difficult to detect, despite the presence of some Asia Minor and African imports or imitations. The early middle ages are also difficult to trace, though some decorated wall sherds could point to occupation in the Longobardian age, near Pioraco as well as around Treia. A small hill-site near the southern boundary of the territory of Treia yielded a reasonable amount of diagnostic pottery presumably dating from the 10th to the

13th century. Post-medieval finds concern mostly majolica, plane and cooking ware, 'testo da pane' fragments and some particular objects, such as canon balls and arquebus bullets. Finally a pottery dump of mainly dishes to be dated in the 19th or early 20th century was plotted near Pollenza.

Current research and methodology

The difficulties in identifying survey material are well known. Responsible are the fragmentary and eroded state of the pottery. A temporary lack of familiarity with the pottery of some periods forms another barrier to identification.²⁷ Nevertheless, the help of regional experts²⁸ or comparison within a well-defined survey context gave already a clue to some of the most problematic materials. The stone artefacts of Stone and Bronze Ages are in a first instance classified by students specializing in prehistory at the Universities of Ghent and Macerata. In the near future they will be studied more thoroughly.²⁹ The examination of the Iron Age material is connected with a close study of the Piceni settlements.³⁰ The black gloss material is studied in the light of a *status quaestionis* of this class of pottery in Italy.³¹ A research program is being built up for the Late Antique and Early Medieval pottery.³² Finally some experience of the authors of this report with the identification of Greek and Roman pottery proves to be very useful. Even so, the publications of archaeological reports of the Soprintendenza Archeologica delle Marche remain fundamental. Especially the well-preserved finds of the necropolis of *Potentia* at Porto Recanati and the finds of a nearby excavated villa suburbana, published by L. Mercado, can be considered as a first class reference for the study of pottery in the Potenza Valley and more generally in *Picenum*.³³ Visits in the near future to different public and private³⁴ archaeological collections in the Marche will be very useful. Important production and consumption centres in *Picenum*, or those in the northern Adriatic such as Fano, Ravenna, Aquileia or Pola, have to be taken into account, as well as imports of other Italian settlements and of Eastern and North-African regions.

A program for a reference fabric collection is being built up in collaboration with the Department of Geology of Ghent University.³⁵ Forthcoming petrographic and chemical analysis applied to imported ceramics could be connected with existing reference collections emanating from Roman sites in Belgium and sites excavated by Belgian Missions in Greece, Turkey and the Middle East.

Fundamental fabric study has already been carried out or is in progress on Classical and Hellenistic cooking ware and storage vessels, and Greek and Roman amphorae, especially Coan types and Italian Dressel 1 and Dressel 2-4 types.³⁶ The experience obtained and a presumable relationship with Late Antique cooking ware imported from the Aegean seem to be relevant in this research. The abundance of amphora fragments picked up in the survey, stresses again the importance of fabric study in order to get more information on origins and even chronology. It is hardly needed to emphasize that this sort of research should be expanded to other categories of pottery. Eventually, this could lead to a better knowledge of local productions, not only for well-defined periods, but also concerning centuries-old use of clays and techniques in pottery-making. In another way fabric study could prove to be conclusive in specific case-studies such as on the regional or even local imitations of republican black gloss or African Red Slip.

One should keep in mind that the classic study of typology remains of basic importance. Thanks to the good preservation of some pottery fragments this is possible for Roman and Late Medieval pottery, and even for some Iron Age finds. Typological study of North-Italian terra sigillata is clear, but is also very rewarding for other types of Roman pottery. For instance a typological overview of the widespread one-handled globular thin walled beakers with their very specific rims and handles, but displaying different sizes and details, would be very profitable. Moreover they show an important variety in fabrics. Amphorae are another specific category of pottery where a thorough examination can be most rewarding. This is shown by the study (forthcoming) of the Aegean amphora type Knossos 19, as denominated by J. Hayes.³⁷ The Knossos 19 amphora, probably originating from Kos, functions as a guide-line for chronology but is also a tell-tale on ancient economy and trade (apparently Greek wine) in *Picenum* and along the Adriatic coast. The necropolis of *Potentia* yielded 6 amphorae of this type, which is considerable in comparison with the other amphora types that were reused in the graves.³⁸ Since the presence of these amphorae in Pompeii and 1st-century Corinth, a date in the first half of the 2nd century AD should be revised.³⁹ During our second season of field-walking, substantial fragments of the shoulder and one handle of a Knossos 19 (*fig. 16, 19*) were discovered on a probable villa-site near Treia: an important chronological reference, but also an

indication for the spread of Eastern imports on rural sites.

Epigraphic finds of Roman date were very poor. Two sherds of Roman coarse ware seem to bear graffiti, while a fragment of a stamped tile was discovered on the same site where the Knossos 19 turned up (*fig. 18, 28*). The reading of the stamp is not certain, but the tile is likely to come from a northern Adriatic production centre.

The processing of the huge number of artefacts that were recovered during fieldwalking is based on a Microsoft Access program. Most of the information has already been brought into this Access-database, but needs refinements. In the near future a first try to quantification will be carried out. The material itself was firstly stored according to the nature of the material: stone, metal, glass, ceramic. The ceramics are divided in building-materials and pottery. The pottery is classified in diagnostic sherds and, the bulk of the material, wall sherds. The finds of the first season are deposited in the town-hall of Fiuminata, the second season finds in an ancient schoolbuilding at Villa Potenza, now in use as a finds depot of the Soprintendenza Archeologica delle Marche. Intensive study of all this material is programmed in the seasons to come.

The finds

At this stage of the research, the preliminary presentation of the finds can merely be a selection with some short notes. Programs for the study of the material of all periods are in preparation. In a final stage, the results of the material-study will be confronted with the field observations, procuring more detailed data for the identification and dating of the different sites and off-site phenomena.⁴⁰

- Stone, Bronze and Iron Age

The oldest artefacts, among them a hand-axe and a Mousterien triangular point, date back to the Paleolithic.⁴¹ But the bulk of the lithic material, consisting of arrowheads and blades, belongs to the Neolithic period.⁴² A survey during the first season on the Potenza terrace near Monte Primo led to the discovery of a large Neolithic site under threat of modern exploitation.⁴³ The limited number of Neolithic and Bronze Age impasto sherds reflects more identification problems than scarcity. This is mainly due to the fragmentary state of the pottery and the traditions of pottery-making deep into the Iron Age,⁴⁴ as shown by the coarse ware finds on Monte Primo. If there are

diagnostic features they are limited to lugs and cordon walled fragments (fig. 13, 1).

In contrast, Iron Age bucchero-like (ceramica bucceroide) fine ware and South-Italian imports reflecting the thriving and wealthy culture of the *Piceni*, are easily distinguishable, but one should keep in mind that they must represent only a minor part of the mass of sherds of this period that were picked up. Substantial diagnostic fragments of black-burnished buccero-like pottery represent a very differentiated series of shapes and incised decorations. Fragments of furcated horn handles ('anse a corna ramificate'), strap looping handles (probably of *kyathoi* or *kantharoi*), pastille-like lugs, profiled stems, rims and carinated walls, mostly belong to different kinds of cups (fig. 13, 3-5). Some of the finds have close parallels with intact examples from necropolis sites in the neighbourhood, such as S. Ginesio, Pitino di San Severino, Moie di Pollenza and Passo di Treia, or from other sites in the Marche such as Numana and Grottazolina.⁴⁵ The decoration consists of incised lines, triangles and circles. A chalice cup with relief cuts in the sharp edge of the carinated wall reminds us of the beautiful triple cups on stand of Grottazolina.⁴⁶ Most of the material is likely to date from the end of 7th to the first half of the 6th century (Picenum III and IVA), and was picked up on an important Picenean settlement at the foot of Monte Franco near Treia. Nevertheless the bulk of the sherds produced by this settlement is coarse ware. Since a good part amongst them are diagnostic fragments, we can hope that they will give better insight in this ill-known category of Picenean pottery. Building fragments have also been found here: some daub fragments, but essentially tiles (fig. 13, 4). A handful of sherds of imported semi-glazed ware with geometric motives (black, brownish and red

bands) in Greek tradition was found on the same site. Their South-Italian origin seems clear, but the regions of production remain uncertain (Apulian? Messapian? Daunian?). One semi-glazed handle with bands was undoubtedly part of an *oinochoe* (fig. 13, 7).⁴⁷ At least two small black glaze wall sherds can be ascertained as being of Greek origin.

- Roman Republican

More than 30 find-spots yielded some 70 fragments of black gloss or so-called Campanian ware, imports or imitations, going from the 3rd to 1st century BC (maybe until the early 1st century AD).⁴⁸ A handle with wall fragment of a cup Espèce 3220 in the classification of J.-P. Morel could date from the 3rd century BC (fig. 14, 8).⁴⁹ A ring-base of a *skyphos* dates from the 4th or 3rd century BC.⁵⁰ A rather well-preserved *pyxis* fragment type 7544 remains difficult to date, but needs close comparison with the famous inscribed *Op(p)ius-pyxis* discovered in the earliest layers of *Potentia* (fig. 14, 9).⁵¹ A first examination of the clay leads to the supposition that some of the black gloss material are productions from the regional workshop in *Aesis*.⁵² Simple rouletting is nearly the only decoration that was noticed on the black gloss fragments, but doesn't give clues as to the identification of types or to chronology. Because of the fragmentary state of most of the black gloss material it remains very difficult to present an appreciable range of different types.

- Roman Imperial

Pottery

Terra sigillata and thin walled ware are quite well represented in the mass of Roman pottery that

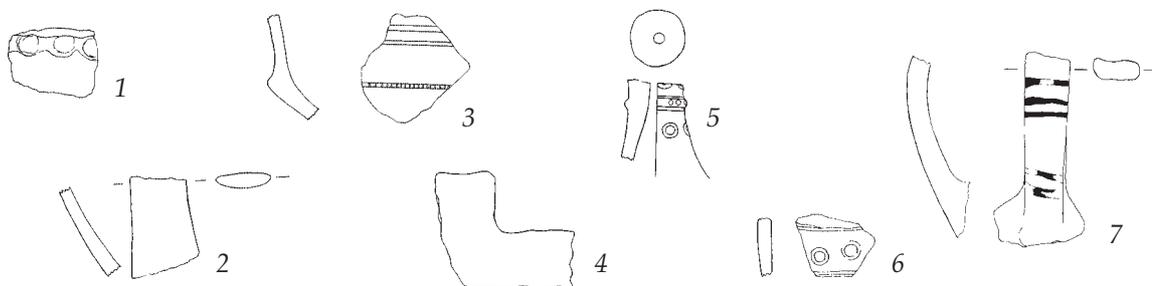


Fig. 13. Late Bronze Age (?) impressed cordon wall fragment (1), Iron Age: Picenean buccero-like ware, with incised decoration, cup with carinated wall (2-3, 5-6); Picenean tile (4); South-Italian import, semi-glazed handle of an *oinochoe* (7), late 7th or first half 6th century BC. (Scale 1/3)

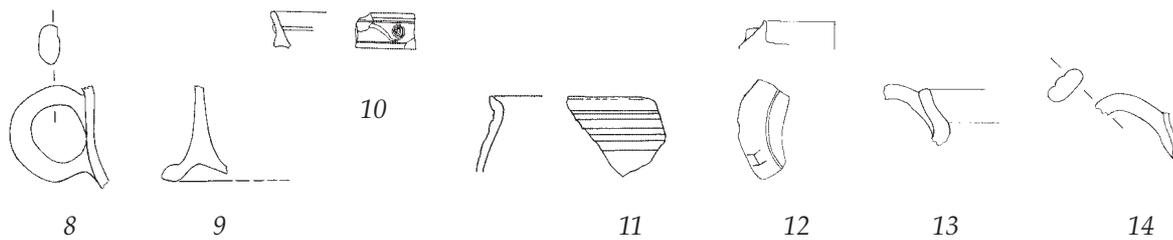


Fig. 14. Roman Republican and Imperial: handle of a cup in black gloss (8), probably 3rd century BC, fragment of pyxis in black gloss (9), 2nd or 1st century BC; rim of a terra sigillata dish type Goudineau 28/Dragendorff 3 (10), 1st century AD; rim of a thin walled ovoid beaker (11), middle to third quarter 1st century AD; upper part of a Fimalamp (12), 1st or 2nd century AD; handle and rim fragments of globular beakers, so-called 'olletta monoansata' (13-14), 1st to 3rd century AD. (Scale 1/3)

was collected during both seasons. Unfortunately, the material is fragmented to such an extent that it is hard to recognize different types. Looking at the technique and the clay of the terra sigillata, most of them belong to North-Italian production centres, although some could be of Adriatic or another Italian origin.⁵³ A North-Italian rim of a dish with an applied volute decoration can be identified as a type Goudineau 28/Dragendorff 3 (fig. 14, 10). An Augustean-Tiberian date is possible, but there exists also a late production in the Flavian period.⁵⁴ Two upper wall fragments close to the rim with a profiled notch band are of the type Haltern 9/Goudineau 37 mainly from the Augustean period, but surviving until Claudius.⁵⁵ Different rims, wall fragments and some rare handles of thin walled ('pareti sottili') beakers reflect the variety of types within this category of fine ware. The rim and profiled upper wall of a thin walled ovoid beaker can be compared with an upper part found in the production centre of *Aesis*, and a complete example in Corinth, but they are not close parallels (fig. 14, 11).⁵⁶ The much occurring thin walled, one-handled globular beakers ('olletta monoansata' or 'boccalino monoansato dal corpo globulare'; fig. 14, 13-14), recognizable at their flaring rims and rounded or looping handles, display important differences in fabric. Remarkable is the use of a rather coarse orange-brown fabric, probably regional, for some of these beakers. This fabric occurs also in a wide range of table ware and small storage vessels that were found during the survey. Some beakers of this type could have an Aegean or Eastern origin.⁵⁷

Only 4 lamps turned up, 3 of them are of the Fimalamp type (fig. 14, 12). The success of this North-Italian production, and their imitations, in the Western part of the Roman empire is well known. No bottoms with stamps (e.g. *Fortis*, *Fronto* etc.) were found.⁵⁸ The *unguentaria* belong

to 5 different types, but no satisfying parallels have been found yet.⁵⁹ Apparently the regional production (and import?) of this pottery group was prosperous just until the first half of the 1st century AD. It would be most interesting to find out if *unguentaria* are valuable indicators of vanished rural cemeteries of the republican and imperial eras, although they also occur in settlement contexts. Among the categories of common pottery, some plain table vessels and cooking ware deserve attention. Quite a lot of casseroles (*caccabus*) of different types, sizes and fabrics, with or without handles, have the common feature of a flattened overhanging rim (fig. 15, 15-16). Recent research on material of sites and shipwrecks along the Adriatic coasts of Italy, Croatia and Slovenia prove a considerable import from the Aegean.⁶⁰ But it is clear that African imports and regional productions should not be underestimated, as good quality of cooking pots was requested. Since popular types of cooking- and tableware can last for ages, a chronological appreciation remains difficult. A fragment of a casserole rim with upstanding handle seems a rather rare type (fig. 15, 16).⁶¹

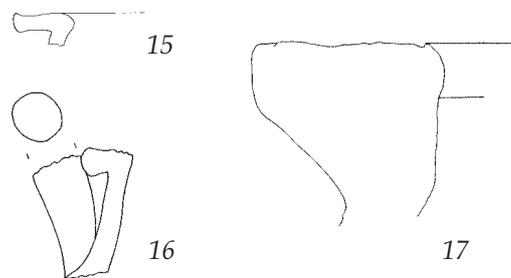
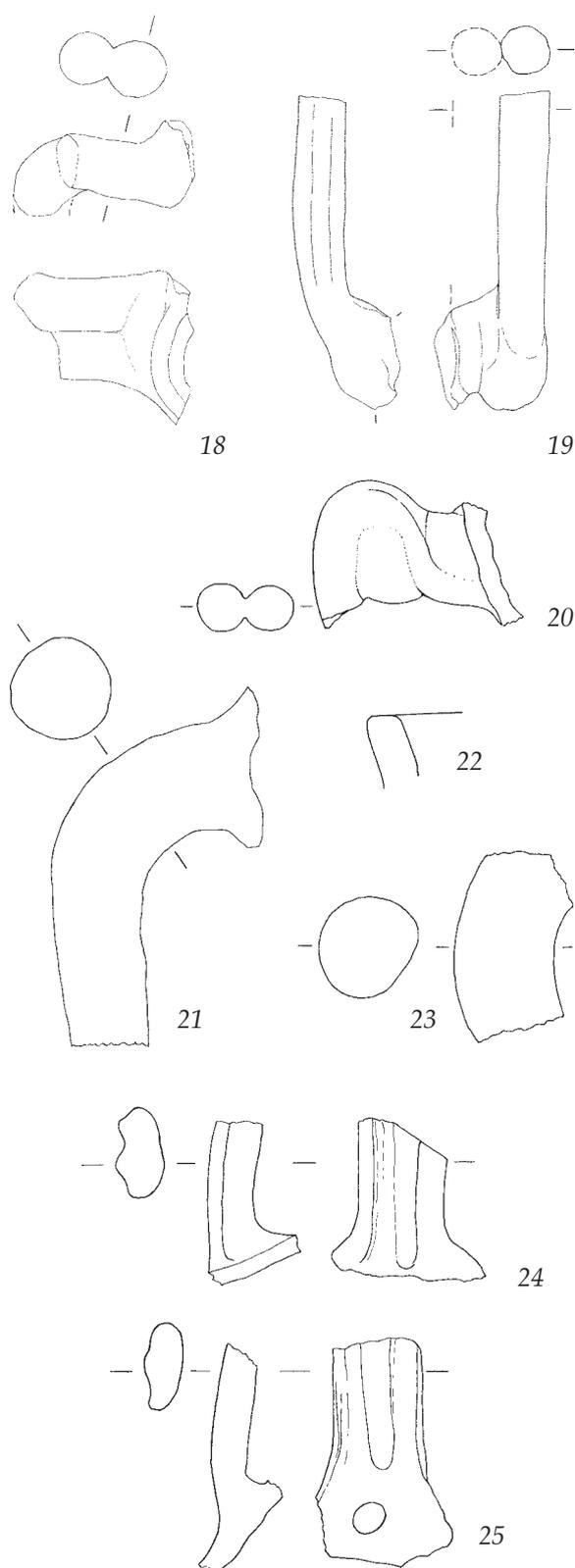


Fig. 15. Roman Imperial: common ware, casserole rims (15-16) and dolium (17), 1st to 3rd century AD. (Scale 1/3)

Fig. 16. Roman Republican and Imperial: amphorae 1st century BC to 2nd century AD, Campanian Dressel 2-4 'black sand' (18); Dressel 2-4 Knossos 19 (19), probably Coan; Dressel 2-4 with clay application, probably local (20); Lamboglia 2 or Dressel 6A, Adriatic (21); Porto Recanati or amphora with funnel rim, probably local (22-23); Forlimpopoli, North-Italian (24-25). (Scale 1/3)

Lots of fragments of *dolia* and amphorae were discovered during the two seasons (fig. 15, 17). The *dolia* fragments have different sizes and fabrics. Some fabrics show a filler of silex chips, a feature that is also noticed for the coarse ware of the Iron Age. The complete shape of a type of *dolium* is known by two intact examples kept actually in the abbey of Fiastra, and presumably originating from *Urbs Salvia* or its surroundings. The fragments that were picked up recently and one of an earlier survey near Treia are of the same type.⁶² The quantity and variety of amphorae that were recovered, is startling.⁶³ A number of wall, shoulder and handle fragments of the same amphora represents the oldest type that turned up, probably a late Greco-Italic type, although an early Lamboglia 2 or a Dressel 1C are also possible. The date ranges from the middle into the second half of the 2nd century BC.⁶⁴ Most of these amphorae were wine-containers from southern Italy (Apulia, Sicily, Campania). Dressel 1A and 1B from the Tyrrhenian coast regions are present, but because of their fragmentary state it is difficult to distinguish these subtypes and to date them more precisely. All these older types continued to be introduced in the 1st century BC, but from the last quarter of the century onwards Dressel 2-4 amphorae from different origins were coming up. Probably a little earlier the North-Italian Dressel 6A appeared, but again its fragmentary state makes it difficult to distinguish this type from the Lamboglia 2 amphorae (fig. 16, 21). Moreover local production on the Adriatic coast, among them certainly Picenean workshops, started to imitate Lamboglia 2 and Dressel 6A amphorae.⁶⁵ Brindisian olive-amphorae were not yet identified, but they must be present.⁶⁶ Another olive-amphora is the Istrian Dressel 6B, but again, nearly impossible to distinguish from Dressel 6A and late Lamboglia 2 amphorae, not to speak of the regional imitations. The 1st and 2nd centuries AD saw the explosion of amphorae import and regional copies. Hispanic imports of olive oil and fish-sauces from Baetica are attested by one Dressel 20 wall sherd and three Dressel 7-11 wall sherds.⁶⁷ Notwithstanding the important olive-oil



production in Istria and *Picenum*, Baetican mass produced olive-oil appeared in Adriatic regions to supply military installations in Ravenna, Aquileia and, above all, Pannonia. At the contrary Dressel 7-11 amphorae are rare. Their presence can be explained by the fact that Baetican fish-sauce was considered as a delicacy, but these amphorae also regularly accompanied in smaller numbers the cargos of Dressel 20, as is shown by many shipwrecks in the Mediterranean. Most puzzling is the variety of Dressel 2-4 wine-amphorae, with their typical bifid handles. The Knossos 19 subtype is of Aegean origin, most probably from Kos (fig. 16, 19).⁶⁸ A substantial upper part fragment and a knob in fine buff fabric belong to the Pompei 8-9 subtypes ('argilla B'), but the origin remains unknown.⁶⁹ A third subtype is represented by a 'black sand' handle fragment, visibly originating from the Vesuvian region (fig. 16, 18).⁷⁰ A very strange sub-type is formed by a group of 5 handles picked up only in the vicinity of Pioraco: for unknown reasons the upper part of the handle has a supplementary flattened clay slice, whereas a clay-ball is plugged in the interior part of the handle. Possibly they are local productions (fig. 16, 20). Only one parallel is known from the *villa suburbana* near *Potentia*.⁷¹ At least 3 other types of bifid handles are part of a Dressel 2-4 type, but in this case only fabric analysis can bring new clues for the identification. It would be interesting to see if there are Adriatic, and more precisely Picenean copies.⁷² It is well known by the ancient texts that Picenean wine had an excellent reputation.⁷³ Very common are Forlimpopoli amphorae and their imitations (fig. 16, 24-25). They are also the best represented amphora type in the eastern necropolis of *Potentia*.⁷⁴ Forlimpopoli amphorae are characterized by a light buff and fine clay, thin walls, strap and profiled handles and a flat base with a narrow footring. They are most probably the successors of the Dressel 6A and their new typology seems inspired by the Gauloise 4 type produced in *Gallia Narbonensis*. Gauloise 4 are attested in the Adriatic region but occur rarely.⁷⁵ Resembling types of the Forlimpopoli are produced in Umbria (Spello) and the Tiber Valley, so here again it is to hope that fabric analyses will help to make distinctions. Finally the fragments of amphorae with everted collar or funnel rim ('con collo' or 'orlo ad imbuto') need attention (fig. 16, 22-23). Lots of them are probably of *Picenean* origin. They are inspired by a combination of the North-Italian Dressel 6A and 6B, and the Baetican Haltern 70 types. They seem omnipresent in at least a part of the Marche, especially

in the eastern necropolis of *Potentia*, near actual Porto Recanati, the reason why T. Bezeczky called them amphorae of the Porto Recanati type.⁷⁶ The strange funnel-like rim points to a content of olives, possibly preserved in *defrutum* (a sort of liqueur), as *tituli picti* on Haltern 70 and its Gaulish imitations Augst 21 tell us.⁷⁷ Anyway, some years ago a small olive-pot with a *titulus pictus* mentioning *oliva picena* was discovered in the *vicus* Bliesbrück on the Rhine:⁷⁸ now we know that Picenean olives were exported even to *Germania Superior!*

Building material

A variety of bricks and tiles occurs between the finds. Noteworthy was the discovery of lumps of an *opus spicatum* floor that were ploughed up on the site of a rural settlement near Treia. The floor was possibly part of the room of an olive- or wine-press (*torcularium*).⁷⁹ There must have been much imported tiles and bricks as well as local productions, as was already observed elsewhere in the Marche.⁸⁰ Although the meaning and the frequency of stamped tiles is unknown, there exists a wide variety of names of producers or owners of workshops in the Adriatic. When collating the 3 preserved letters found on a tile near Treia (see above) with some complete examples found in Ravenna, the name might be reconstructed as [C IVLI THIA]SI G[ALLICANI]. The second possibility, which we prefer, [P ABVDI RVFI] SIC[VLEIANI], a stamp on a tile found



Fig. 18. Roman Imperial: fragment of a tile with stamp [SI G] or [SI C], 1st century AD (28). (Scale 1/3)

during a prospection in Rivignano (Udine), that is in the territory of Aquileia. A third possibility is that]SIC[could point to the *gens Sicinia*, well known in the epigraphy of Treia. Of course it could also be a hitherto unknown stamp (fig. 18, 28). At any rate, a rarity when comparing with the much more occurring PANSIANA- and SOLONAS-stamps in the Potenza valley, and in *Picenum* in general. In Treia, a tile-stamp of CHRYSIPPUS was found during an earlier survey. At all events, the tile-stamps prove an intense trade of building-material produced in the Padana and Aquilean regions.⁸¹ Stone building materials were also found during our fieldwalking: rarely marble, mostly sandstone (e.g. possibly one base of a small column) and limestone. On a late-medieval site near Treia, Roman *spolia* of marble and porphyry (e.g. *crustae*) were discovered.⁸²

Other finds

With the exception of 3 coins,⁸³ not one metal object can be identified with certainty as Roman (e.g. 2 small bronze bells and a bronze finger-ring). One well-preserved bronze coin of Titus was minted during his eighth consulship, in 80 AD. It was discovered on an important Roman rural settlement near Treia. Some glass-finds are worthwhile mentioning. A greenish ring-base comes from a rather large but unidentified vessel (fig. 17, 26). A rim with groove of a white glass cup without foot resembles two examples found in a grave in S.Vittore di Cingoli, which is dated in the beginning of the 1st century AD (fig. 17, 27).⁸⁴

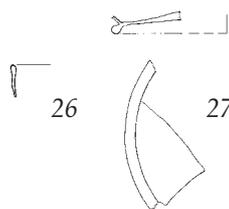


Fig. 17. Roman Imperial: rim of a white glass cup, early 1st century AD (26); ring-base in greenish glass of an unidentified vessel (27). (Scale 1/3)

Several spheroid stone disks with a flat base might be interpreted as ancient weights.

- Late Antique and Medieval

There are some conspicuous finds of the Late Antique period. A small fragment of an African Red Slip dish with concentric circle and a palm-branch belong to the forms Hayes 59, 60 or 61 (fig. 19, 29).⁸⁵ Several other fragments of dishes can belong to the same African types, or to the

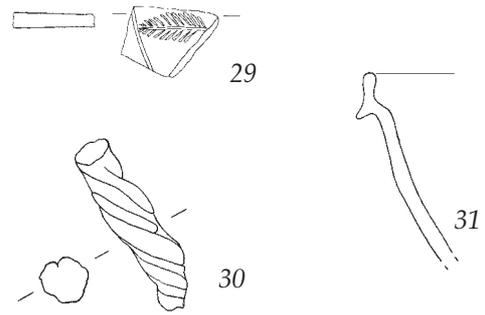


Fig. 19. Late Antique: fragment of an African Red Slip dish with palm-branche decoration, 4th to first half 5th century AD (29); handle of an African jug, 5th century AD (30); rim of an Eastern Red Slip mortarium, 4th - 6th century AD (31). (Scale 1/3)

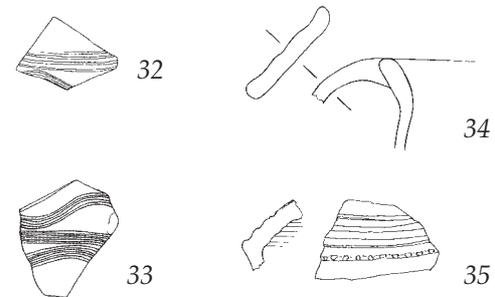


Fig. 20. Early and Late Medieval: wall sherds with incised wavy lines, 6th-7th century AD (32-33); rim and strap handle of plain ware (34), coarse ribbed wall fragment (35), 10th-13th century AD. (Scale 1/3)

types Hayes 86 and 181. A group of bowl rims belong to Hayes 99 (African) and Hayes 9 and 10 (Cypriotic or Eastern). One has to take into account that there must occur many imitations, such as attested by the bottom of a dish with stamped rosettes. Sometimes the rim is profiled, while the wall can have incised decorations. A banded overhanging rim of a bowl or mortarium can be classified into an Eastern Sigillata group (fig. 19, 31).⁸⁶ Some piecrust ware needs a closer examination, just as the cooking ware and amphorae.⁸⁷ A twisted handle belongs to a jug of African origin (fig. 19, 30).⁸⁸ A small fragment of a lamp of the African type occurs, but no close parallel was found yet.⁸⁹ Most of the late antique material was picked up around Treia. It would be interesting to confront this material with the finds of the excavations that were carried out in the eighties of the 20th century under and near the abbey of SS. Crocifisso, situated in the centre

of ancient *Trea*.⁹⁰ Some wall sherds with incised wavy lines can be assigned to the 6th and 7th centuries AD (*fig. 20, 32-33*). They represent a current decoration on common ware in Italy at the time.⁹¹ Finally, a group of plain and coarse pottery of the 10th-13th centuries AD is not studied yet and needs further attention (*fig. 20, 34-35*).⁹²

ACKNOWLEDGEMENTS

The 2001 field survey was carried out within the Regione delle Marche and the PVS-team is very grateful to the Soprintendenza Archeologica delle Marche and especially to Soprintendente Dott. Giuliano de Marinis and Dottoressa Edwige Percossi, Ispettrice for the area, for their support and expertise.

In addition to the signatories of this article, the fieldwork team of 2001 included: Morgan De Dapper, Jacques Semey, Joris Angenon, Sophie Dralans, An Van den Bremt, Griet Van Heddeghem, H el ene Verreyke, Maarten Weyler, Lieven Verdonck, Liselotte Raes, Jacinte Blindeman, Paul De Paepe, Herlinde De Buck, Geert Verhoeven, Julie Van Kerckhove, Nele Eggermont, Beata De Vlieghe and Tanja Goethals.

NOTES

- 1 The project is directed by Prof. Frank Vermeulen and the principal archaeological investigators on the Belgian side include Miss Catharina Boullart and Mr. Patrick Monsieur (Department of Archaeology, Ghent University, Belgium). For the geomorphological aspects close collaboration is obtained with Prof. Morgan De Dapper and Dr. Beata De Vlieghe (Department of Geography, Ghent University). Italian institutions, such as the Soprintendenza Archeologica delle Marche and the Universities of Macerata and Camerino, actively support the programme.
- 2 A substantial grant was obtained from the Belgian Federal Government (IUAP phase V). Other financial support comes from the Fund of Scientific Research - Flanders and from Ghent University (BOF-funds).
- 3 Vermeulen & Boullart 2001.
- 4 We thank Jacques Semey who participated again in part of this aerial detection.
- 5 For preliminary reports on our aerial photography in the area see: Vermeulen & Boullart 2001 and Vermeulen 2002.
- 6 Unpublished small-scale excavation by Lollini (Soprintendenza delle Marche) in 1976. See also Percossi Serenelli 1985.
- 7 Intensive surveys are planned here in September 2002.
- 8 Bonomi Ponzi 1992.
- 9 For a first report see: Vermeulen & Boullart 2001.
- 10 We thank Morgan De Dapper for this view.
- 11 Vermeulen & Boullart 2001.
- 12 *Ibidem*.
- 13 Lollini 1958, 204-205; Lollini 1976.

- 14 Moscatelli 1988.
- 15 Vermeulen & Boullart 2001.
- 16 The systematic study of the Stone Age material of the 2000-, the 2001- and the coming 2002-campaigns will take place in September 2002 by specialists in this field.
- 17 Vermeulen & Boullart 2001.
- 18 See: Lollini 1958, 204-205; Lollini 1976; Piangatelli 1970, p. 27.
- 19 Vermeulen & Boullart 2001.
- 20 Baldelli 1982, 143-145.
- 21 Lollini 1966, 210.
- 22 Lollini 1963, 322-323.
- 23 Vermeulen & Boullart 2001; Vermeulen 2002.
- 24 Moscatelli 1988; Bejor 1977.
- 25 Bejor 1977. See also: Mercado 1979 and Mercado, Brecciaroli & Paci 1981.
- 26 See also Vermeulen & Boullart 2001.
- 27 MacDonald 1995.
- 28 We thank especially our Italian colleagues M. Silvestrini, E. Percossi, F. di Gennaro, U. Moscatelli, M. Cerquetella and C. Corsi for the help they have already procured us in this identification process.
- 29 Prof. Ph. Cromb e of the prehistoric section at Ghent University will set to work in the third season (2002).
- 30 The study of these settlements is the object of doctoral research by C. Boullart.
- 31 J. Vankerckhove works on this black gloss material for an MA thesis.
- 32 H. Verreyke is engaged to study the pottery of Late Antiquity and Early Middle Ages, to prepare a PhD thesis on northern Adriatic ceramic production, distribution and use. She will focus on local production and imported cooking wares and will help to establish a program for a reference fabric study.
- 33 Mercado 1974 ; ead. 1974b; ead. 1979.
- 34 Falconi Amorelli 1975.
- 35 Work by prof. P. De Paepe.
- 36 Monsieur & De Paepe 2002.
- 37 Hayes 1983, 149, fig. 23, nrs. 58, 62, 63.
- 38 Mercado 1974a: graves 9, 54, 128bis, 216, 293, 305.
- 39 Panella 1986, 617-619, fig. 14-15; Slane 2000, 301, fig. 14, b.
- 40 We are indebted to J. Angenon and C. Braet for the drawings of the material presented here.
- 41 The identification of the lithic and ceramic material is due to the experience and knowledge of dott.ssa M. Silvestri for which we are most grateful.
- 42 Cf. Pignocchi 1998, fig. 1-8; Lollini 1965.
- 43 Vermeulen & Boullart 2002.
- 44 Lollini 1979; Silvestrini & Pignocchi 1999; cf. Malone & Stoddart 1994, 77-78, 120-122 and Barker 1995, 115-122 and 132-137.
- 45 S. Ginesio: *kyathos* with strap handle, Landolfi 1990, 92, pl. II, 3-4; Pitino di San Severino: stemmed cup with carinated wall and horned handles, handle-less stemmed cup with carinated wall, Lollini 1976 (grave 7) Annibaldi 1968, pl. VI (grave 5); Moie di Pollenza, grave 26 and Sirolo, graves 8 and 18: stemmed cups with carinated wall, Lollini 1985, fig. 5, 6, fig. 8, 4 and esp. fig. 16, 1; Numana, graves 14 and 18, and Sirolo, graves 435 and 18: *kantharoi* with strap handles, Lollini 1976, fig. 13 and pl. 118 and ead. 1985, fig. 7, 18, fig. 16, 4.
- 46 Grottazolina: grave 21, Lollini 1976, pl. 114 ; also *kyathos*: Falconi Amorelli 1975, pl. LXIX, 11 & LXXX, 30 (collezione Pallotta) .
- 47 Ancona: semi-glazed sherds, Lollini 1956, fig. 12; the finds in the lower levels beneath the amphitheatre of

- Ancona prove that this sort of semi-glazed pottery was produced just until the end of the 4th and the beginning of 3rd century BC: Pignocchi & Virzì Häggglund 1998, 137-138, fig. 7; S. Genesisio: *oinochoe*, Landolfi 1990, 92, pl. II, 1; Numana: *oinochoe*, Lollini 1976, pl. 115; Sirolo: graves 435 and 8, *oinochoe*, Lollini 1985, fig. 7, 21 and fig. 11, A-B; cf. Barker 1995, 167, fig. 68; Falconi Amorelli 1975, pl. LXVI, 2 (collezione Pallotta).
- ⁴⁸ We thank J. Vankerckhove for the useful information she already procured us.
- ⁴⁹ Morel 1981, 256 and Pl. 91, the date proposed: until second quarter 2nd century AD, seems quite late; cf. a resembling cup found in Valesio, dated 330/300-225/200: Yntema 1993, fig. 10, 35. This type of cups seems related to some examples salvaged from the *Grand Congloué I* ship, that sank around 200 BC: Long 1987, 12, fig. 1, 4 (first row, fifth from the left); a one handle cup of the same family Espèce 5920, Morel 1981, 391, pl. 193, is dated end 4th-early 3rd century BC.
- ⁵⁰ Morel 1981, 303-314, Genre 4300, pl. 126-133: *skyphoi* seem to disappear around the middle of the 3rd century BC; our fragment is too worn to distinguish a specific type.
- ⁵¹ Morel 1981, 412 and pl. 205. The colony of *Potentia* was founded in 184 BC. The *Oppii* were amongst the most influential families at that time (Percossi Serenelli 2001, 45, fig. 11); see also the monumental inscription of Porto San Elpidio and the commercial activities of the *Oppii*: Paci 1998.
- ⁵² Brecciaroli Taborelli 1998; for the black gloss found in *Potentia* and its chronology, see Mercado 1974b, 411-413, and Frapicinni 2001.
- ⁵³ Mazzeo Saracino 1985 (Atlante II), 175-230; Pucci 1985 (Atlante II), 359-406; Maggi & Starac 2000; for the spreading of Italian sigillata in the North-Adriatic region: Makjanic 1988.
- ⁵⁴ Mazzeo Saracino 1985 (Atlante II), 202-203, forma 1 (pl. LXII, nrs. 13-14), compare also Pucci 1985 (Atlante II), 382-383, forma IX, esp. varietà 7, 13 & 15; cf. Malone & Stoddart 1994, 200, n° 17.
- ⁵⁵ Mazzeo Saracino 1985 (Atlante II), 197-198, forma 12 (pl. LVIII, esp. n° 3), from typological point of view this little cup corresponds with the Dragendorff 26-type; Mercado 1979, 274, fig. 184, h.
- ⁵⁶ Hayes 1973, n° 185, pl. 89; Ricci 1985 (Atlante II), 258-259, tipo 1/135: Claudian-Neronian. Brecciaroli Taborelli 1998, 206, n° 562. An example of the eastern cemetery of *Potentia* belongs probably to the same group: Mercado 1974a: grave 85. This cemetery yielded a lot of different types of thin walled pottery: Mercado 1974a, passim; for a production-centre in the Marche of grey thin walled cups: Montinori 1993.
- ⁵⁷ Marabini 1973, 146-147; Ricci 1985 (Atlante II), 266-267, tipo 1/109 & 1/111: from the middle of the 1st century AD on; Mercado 1974a, passim; Aegean or Eastern origin in Aquileia: Mandruzzato, Tiussi & Degrassi 2000, 360, fig. 4, n° 2; Istenic & Schneider 2000, 343 & fig. 3, 2: for the eastern necropolis of *Potentia*, see esp. n. 38.
- ⁵⁸ Eastern cemetery of *Potentia*: Mercado 1974a, passim and 416-417, and especially Ramadori 2001; Mercado 1974b: San Severino, grave 1; Mercado 1979, 242, fig. 153, a-b, 257, fig. 167, a, 264, fig. 175, d; Falconi Amorelli 1975, pl. LXXIV, 33-35 (collezione Pallotta).
- ⁵⁹ Falconi Amorelli 1975, pl. LXXIII, 25-30.
- ⁶⁰ Eastern cemetery of *Potentia*: Mercado 1974a, grave 128bis with a Firmalamp and a Knossos 19 amphora, second half of 1st century AD; Aegean import: Istenic & Schneider 2000, and fig. 1 for the map with sites and shipwrecks; Robinson 1959, passim.
- ⁶¹ Compare with Robinson 1959, F84 (pl. 3), in a 1st century AD context.
- ⁶² Fabrini & Paci 1991, 95-96, n° 22, with bibliography: a date in the second half of the 3rd to the 4th century AD is proposed. A survey carried out formerly by U. Moscatelli produced a rim fragment: Moscatelli 1988, 35-36, n° 2, fig. 17, 2.
- ⁶³ For an overview of the different types of amphorae in the Northern Adriatic: Bezeczky 1987; Carre 1985; Cipriano & Carre 1989; Toniolo 1991; Delplace 1993. See also Pasquinucci, Menchelli & Scotucci 2000, 355-356, for the region of *Asculum* and *Firmum Picenum*.
- ⁶⁴ Toniolo 1991, 15-16, fig. 2. Greco-Italic: Eastern cemetery of *Potentia*, grave 116, Mercado 1974a, fig. 116, b, but with a puzzling date in the Augustean age; Greco-Italic: Ancona, Pignocchi & Virzì Häggglund 1998, fig. 11, 1, together with Lamboglia 2 amphorae; San Severino Marche: Lamboglia 2, Perna 1996-1997; in 2001, when visiting the Archaeological Museum of Assisi, we noticed two Dressel 1C amphorae, having a very resembling fabric, shoulder inclination and strap handles, cf. Toniolo 1991, 15-16, fig. 4.
- ⁶⁵ Bezeczky 1987, 6-21; Toniolo 1991, 18-24; Carre 1985, 209-226; Cipriano & Carre 1989, 77-88 eastern necropolis of *Potentia*: graves 122 and 229 (Mercado 1974a, possible Picenean imitations); *villa suburbana* near *Potentia*: Mercado 1979, 184-187, fig. 99-102, fig. 138, a, fig. 141, j, fig. 157, y (possible Picenean imitations); Picenean production centre: Brecciaroli Taborelli 1984; cf. Delplace 1993.
- ⁶⁶ Cipriano & Carre 1989: 68-74.
- ⁶⁷ Dressel 20: Cambi 1976; Bezeczky 1987, 24-25; Toniolo 1991; Dressel 7-11; Bezeczky 1987, 22-23; Toniolo 1991, 31-33, fig. 26 (Dressel 20), fig. 27 (Dressel 7-11).
- ⁶⁸ See introduction and n. 13; no other Greek amphorae have been recognized yet among the survey material but they must exist as is shown in the Comacchio-wreck (Berti, 1985, amphorae from Kos and Chios), or in the eastern necropolis of *Potentia* (Mercado 1974a, graves 40 and 52, Dressel 43 Crete); Cordano 1992-1993: hellenistic stamps on Rhodian amphorae in Ancona.
- ⁶⁹ Panella & Fano 1986.
- ⁷⁰ Panella & Fano 1986.
- ⁷¹ Mercado 1979, fig. 149, r.
- ⁷² Aldini 1978, 242-243, fig. 3 and pl. 91: Forlimpopoli, workshop Terreno Dotti, together with flat-bottomed Forlimpopoli type amphorae; Tchernia 1986, 252-253; Panella 1989, fig. 5-6.
- ⁷³ Tchernia 1986, 336-337 and 348-349.
- ⁷⁴ Aldini 1978: basic study of the workshops in Forlimpopoli; Tchernia 1986, 249-256; Panella 1989, 156-161; eastern necropolis of *Potentia*: graves 8, 7, 10, 17, 18, 19, 24, 25, 40, 47, 49, 52, 93, 128, 293 and 306, Mercado 1974a; San Severino Marche: grave 2, Mercado 1974b.
- ⁷⁵ Bezeczky 1987, 26; Toniolo 1991, 36, fig. 34.
- ⁷⁶ Bezeczky 1987, 34-36; eastern necropolis of *Potentia*: graves 8, 24, 25, 46, 47, 49, 50, 58, 93 and 293, Mercado 1974a; San Severino Marche: grave 3, Mercado 1974b; *villa suburbana* near *Potentia*: Mercado 1979, fig. 138, b, fig. 139, a-b, fig. 157, x, fig. 176-177; Carre 1985, 232-234; cf. Cipriano & Carre 1989, 85-87; Brecciaroli Taborelli 1984, 73-88.
- ⁷⁷ Monsieur 2001, with bibliography.
- ⁷⁸ Albrecht 1998; Monsieur 2001, 182.

- ⁷⁹ This is true for the rural settlement that came to light in S. Giovanni in Strada di Offida (AP), Pignocchi 1998, fig. 1. Cf. the *villa suburbana* near *Potentia*, Mercado 1979, 189, fig. 107.
- ⁸⁰ E.g. *Asculum* and *Firmum Picenum*, Pasquinucci, Menchelli & Scotucci 2000, 356: among the finds of the Potenza Valley Survey the yellowish color of some bricks and tiles could also indicate local production.
- ⁸¹ Matijasic 1983; Mercado 1974a, fig. 335-341; Mercado 1979, fig. 117, n, fig. 159 and 160; Pasquinucci, Menchelli & Scotucci 2000, 364-365; Pelliconi 1983, for *Gallicanus* cf. 234-235, n° 22.53; another tile with also a [SIC] stamp was already found in the neighbourhood of Treia: Moscatelli & Paci 1978, 74; *Siculeius*: Buiatti 1994, 426-431; *gens Sicinia*: Marengo 2000, 162; *Chrysippus* in Treia: Moscatelli 1988, 55, fig. 47.
- ⁸² Monte del Crocifisso (site WF63): the porphyry-fragment was studied by prof. P. De Paepe, and he considers it as very close to Egyptian examples; in this light it is interesting to remind the existence of an important *Serapeum* in Treia: cf. Fabrini 1990, 160-175.
- ⁸³ Dr. J. Van Heesch, responsible for the Roman numismatic collection of the Royal Library in Brussels, will study the Roman coins, those of the later periods will be studied by L. Beekmans.
- ⁸⁴ Mercado 1974b, 111-123, fig. 34 and 38, d-e: grave 5.
- ⁸⁵ Hayes 1972, fig. 38: palm-branch style A, 4th to first half 5th century AD.
- ⁸⁶ Dishes and bowls: Hayes 1972; Dall'Aglio & De Maria 1994-1995, fig. 45; cf. Williams 1989, fig. 12-14; banded overhanging rim: the right inclination is not certain, compare Hayes 1972, form 3, Brecciaroli Taborelli 1998, fig. 106, 532, and Williams 1989, fig. 22, 269 and fig. 42, 448 (although a common ware mortar rim); Grazia Maioli 1983, imitations in Ravenna, esp. 111-112, nrs. 4.87 and 4.88 for the dishes with stamped rosettes close to form Hayes 53.
- ⁸⁷ Piecrust ware: cf. Williams 1989, 53-54, fig. 27-28; cooking ware: cf. introduction; amphorae: some spikes of the *Africana* grande type and 1 spatheion are already identified, cf. Mercado 1974a, grave 252 and ead. 1979, fig. 120, q and fig. 182.
- ⁸⁸ Santamaria 1995, fig. 21, 5th century AD; Mercado 1979, fig. 147, b and fig. 162, j.
- ⁸⁹ The remains of a XR or IX monogram on it is almost certain. For other Late Antique lamps, cf. Mercado 1979, fig. 119, a and fig. 181; Fabrini 1990, 127, fig. 3.
- ⁹⁰ Fabrini 1990, 125-131.
- ⁹¹ Ravenna: Gelichi 1983, id. 1998 (pots 'tipo Classe'); Toscana: Ciampoltrini 1998, fig. 5 (jugs); Rome, Crypta Balbi: Ricci 1998, fig. 6-8 (cooking pots and tubs); Southern Italy: Di Giuseppe & Capelli 1998, fig. 7 (various shapes 'dipinta'), fig. 8 (various shapes 'acroma').
- ⁹² From the hill-site Monte del Crocifisso (WF63), see also n. 55; material: cf. Barker 1995, 258-262, fig. 98.
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