

# RUINS, RUBBISH DUMPS AND ENCROACHMENT: RESURVEYING LATE ANTIQUE OSTIA

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## *Abstract*

Ostia is one of the most extensively excavated cities in the Roman world and we are still analysing the ruins today. The ruins were excavated on a large-scale up to 1941, but were not documented in a scientific way. This has meant, in particular, that the processes involved in the transition of Ostia to a late antique city (from the 3rd to the 5th c.) are still largely unknown. The idea put forward by Ostia's most famous excavator, Guido Calza, that Ostia's 'end' and irreversible decay began in the late 3rd c., had still influenced scholars until recently. The author's research projects from 2001–2006 show that this is only true for certain areas of Ostia. Thanks to city-wide surveys and key-hole cleaning-excavations, the abandonment of predominantly commercial quarters can be verified from the 3rd c. onwards by the existence of blocked streets, ruins and rubbish dumps in these parts of the city. Yet, at the same time, we see the concentrated rebuilding of Ostia's secular infrastructure in the 4th and early 5th c., including all major public buildings along the Decumanus and the creation of new 'pedestrian-zones', with the maintenance of both continuing into the later 5th c. at least.

## OSTIA: THE PROBLEMS AND POTENTIAL OF A CLEARANCE EXCAVATION<sup>1</sup>

### *The Excavation History of Ostia Antica*

Ostia is, next to Pompeii, one of the largest excavation sites of Classical Antiquity. Almost two-thirds of the area inside the city walls has been

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<sup>1</sup> This paper is a revised and updated summary of a lecture held at the colloquium at Kings' College in London March 2008. I want to thank the organisers, especially Luke Lavan, and Charlotte Roueché for useful advice regarding Aphrodisias' south agora. This lecture was a short resumé of results from my habilitation-thesis which was completed in 2006, "Die Bewältigung des Verfalls. Urbane Lebensräume im Wandel zwischen Prinzipat und Spätantike" (Habilitationsschrift 3 Bd., Philosophische Fakultät III/Humboldt-Universität zu Berlin 2006), cited here as Gering (2006) with some parts published in a summary, cited here as Gering (2010) 92–108. A completely revised version will be published in the Palilia series by the German Archeological Institute at Rome with the title:

uncovered since the first scientific excavations in the middle of the 19th c. (fig. 1). Ostia's multi-storey buildings, the so called *insulae*, were one of the focal points of research for its most famous excavator Guido Calza (director from 1917–46). However, the further the excavations went on, the less they were recorded. For example, while the excavations of a single *insula* block, the Casa di Diana, were still being published in several articles between 1917 and 1921 by Calza himself, we have almost no written documentation for the rest of the city excavated from 1924 to 1927. This was the period when Calza's research 'with the pickaxe' culminated in the completely unrecorded excavation of the biggest public building in Ostia, the Tempio rotondo. This structure was roughly twice as big as the area of the Casa di Diana and, due to its location, layout, function and finds, more important for the history of architecture.<sup>2</sup>

Ostia's excavation history during the years 1938–41 is even more problematic. Because of the preparation for the planned world exhibition of 1942, the archaeology became political; the site was intensively reconstructed and rebuilt for the cultural legitimisation of fascist Italy.<sup>3</sup> As impressive as the re-erected ruins look today, their scientific value at this time was of secondary interest: in the superintendencies' diaries from 1938 until 1941 only statues and inscriptions were recorded, mostly with insufficient observations regarding find circumstance or stratigraphical context.<sup>4</sup> Considering the continuous scientific progress made in excavation methods since Visconti's reasonably well-documented mid 19th c. excavations, it is hard to understand why the philologist Calza was chosen as practical excavation director without any excavation experience. It is only in small part thanks to Calza that we have comparatively good documentation, with architectural and stratigraphical observations and useful photos, at least until 1924. These were produced by his assistant Raffaele Finelli, who was educated in the tradition of Dante Vaglieri, Ostia's first statal excavation director (1907–13). Excellent plans and reconstructions were drawn by Italo Gismondi, the famous architect.<sup>5</sup>

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*Die Merkmale der spätantiken Stadt. Urbanistische Deutung von Flächengrabungen: Ostia, Ephesos, Aphrodisias.* All plans, pictures and observations in the text are from the author unless otherwise specified.

<sup>2</sup> Calza (1920–21) 322–430. Calza (1926) 1–15. Cf. Olivanti (2001) 61.

<sup>3</sup> For the history of research see: Olivanti (2001) 56–65.

<sup>4</sup> For the scientific value of the *Giornale degli Scavi* from 1938–1941, see: Gering (2004) 299–382.

<sup>5</sup> Kockel (2001) 66–73.

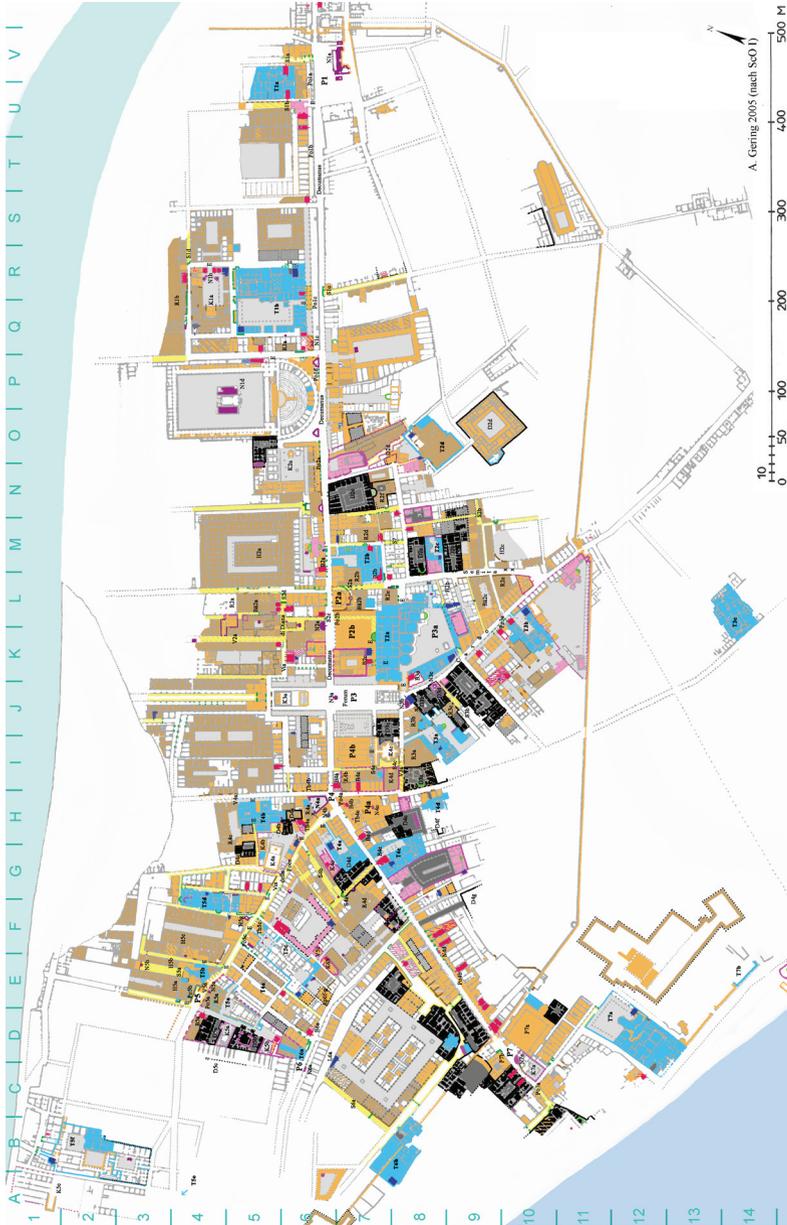


Fig. 1. Colour plan showing the functions of buildings in the late 4th–early 5th c.

In 1953 the basic documentation of the rushed wartime-excavations was published in the first *Scavi di Ostia* volume.<sup>6</sup> As (in)famous as Ostia was under the fascist regime, a lack of official engagement and advertisement after 1945 quickly made Ostia a 'forgotten' site. Even up to the present day for tourists it is not as well-known as the 'archetypical' large-scale-excavations at Pompeii or Herculaneum. Yet, compared with both these small country towns, Ostia offers a unique insight into a real metropolis like Rome, it containing buildings up to five floors high, and with a population estimated to be at least 40,000. It also continued to exist as an urban centre up to the Early Middle Ages.

### *The Benefits of a Clearance Excavated Site*

Despite all the problems with its modern excavation history, one tends to ignore the unique advantages of such large-scale excavations. Of course there has been an incredible loss of stratigraphical information regarding all kinds of finds and evidence, but it is only in Ostia that we can see an almost completely excavated antique city. That is, not only is the city centre visible, with the most important (predominantly public) buildings exposed, but we can also see the whole length of the *Cardo* and *Decumanus*, along which we can view the higher-status buildings, areas of private investment and rented spaces, like living quarters or production areas, as well as storage areas, predominantly at the margins of the city. Also exposed are all secondary streets and the full variety of smaller public or 'semi-private' buildings in between.

The total number and extent of all major public infrastructural and cultic buildings are known. Their distribution, density, size and location can be analysed in relation to their urban accessibility, their intended or real functionality, with respect to their social 'interaction' or separation; in other words their vicinity or deliberate disconnection from living and working areas etc. The topographical and functional relationships between private buildings and their spatial interaction with different social groups ('vertical' or 'horizontal social zoning') can be analysed on an equally broad scale with the help of urban theory and basic statistical methods. Ostia is, like Pompeii, one of the best sources for studies on ancient urban living conditions and urbanism; it is also able to help us answer specific questions arising from contemporary urban scholarship.

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<sup>6</sup> Calza *et al.* (1953).

## METHODOLOGY

Such a site is highly amenable to surface survey archaeology therefore, and with careful examination of the exposed city we can make a number of observations. Thanks to research fellowships from the Gerda-Henkel-Foundation and the German Archaeological Institute at Rome and Berlin, I could focus my research on three subjects from 2000–2007:

- a) A survey of the late antique modifications of *insulae* and private dwellings (386 partly preserved apartments, 102 fully preserved ones) to quantify the amount of rentable space which was abandoned, or renovated/extended/converted into *domus* or commercial spaces.<sup>7</sup>
- b) With respect to abandoned *insula*-spaces I wanted to know when, where and why abandonment and collapse had happened: all datable coin-hoards from the old excavations had to be located by examining Finelli's diaries, old plans and photos, alongside the recent research of single buildings ('Bauaufnahmen'). A detailed survey of walls and the characteristic building-debris of collapsed upper-floors allowed me to trace several periods of intensive collapse and the patterns of distribution of collapse and its immediate 'crisis management', characterised by the reuse of building-debris in the repairs.
- c) Since 2004 my focus has remained the same, but my case-studies changed from private to public buildings, street space and the changes/modifications of the traffic system.

The method was in all three research strands (a–c) the same: 1) a combination of intensive archive study (of all unpublished excavation diaries, plans and photographs); 2) a systematic walk-over survey of all ruins for possible signs of abandonment, reuse or late modification; 3) a detailed documentation and analysis of the selected standing walls in their present state of preservation via devegetation and cleaning of their foundations with a small team of technicians and workmen. This was supplemented by several key-hole excavations of areas where late antique stratigraphy connected to walls and was still *in situ*, or where foundation layers were already exposed by older excavations.

A side effect of the general survey was a complete catalogue of the remaining stratigraphy in buildings which, fortunately, were not excavated completely in Calza's rushed campaign of 1938–41. Based on this

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<sup>7</sup> Gering (2002) 109–40.

catalogue I focused on two areas in particular, using two archaeological cleaning methods as well as carrying out additional minimally invasive excavation. The methods utilised were: 1) the cleaning of profiles of old trenches and 2) the cleaning of former surface excavations. Both types of vertical and horizontal cleaning and 'supplementary' excavation-work aimed to understand the connection between the surviving stratigraphy and the free-standing walls, something lost due to Calza's undocumented excavations.

Both methods were used in several small-scale trenches, focusing on street-space and its blocking, and in two larger areas of cleaning and 'micro-archaeology' at the 'Terme piccole' (Regio I. xix. 5) and at the Sigma-plaza or *exedra* (Regio I. xii. 3). As well as these case-studies, a complete catalogue of city-wide abandonment and late-antique modifications was published initially in a colour-plan in 2004, with further detailed studies appearing as part of my habilitation-thesis in 2006–11.<sup>8</sup>

#### ARCHIVE RESEARCH AND WALK-OVER SURVEY

Many important revelations as to the urban history and morphology of the late antique city can be garnered from archive research alongside surface survey. The late antique levels are often already exposed in many sites, being often the last 'ancient' occupation levels surviving, so a surface survey can reveal many overlooked features for this period. Equally, many structures from this era have been removed by early excavators, so the study of archive photographs and plans is invaluable. Ostia's Late Roman development can be assessed by examining several features of the existing excavated city and those exposed during initial excavations, but now lost. Analysing the exposed city also allows us to create detailed plans of its layout and evolution over time. From these, alongside surface observations, we can analyse the following features, which can inform us as to how Ostia functioned as a city.<sup>9</sup>

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<sup>8</sup> Gering (2004) fig. 1.49. For the other publications see footnote 1.11.

<sup>9</sup> For urban analyses and their results in Ostia see: Gering (2010) 92–107.

*The Street System and the Organisation of Traffic (fig. 2)*

- Restricted public access contrasted with the concept of the completely 'open city' without hierarchies of access or control: unlimited traffic flow for goods or people.
- The organisation of traffic and supply for public infrastructure and commerce. The size and renovation status of different kinds of streets (primary or main streets, secondary and one-way streets).
- The functional zoning, or hierarchies, in the city's structure caused by the street system: one centre versus several sub-centres,
- The different grades of 'order': areas of rigid city-planning and communal control versus uncontrolled spaces of random development. Controlled or random deurbanisation processes.

*Domestic Space: General Characteristics of 'Private' Residential Quarters*

This can be defined as 'vertical zoning' (socially restricted areas inside an *insula*), as opposed to the social 'horizontal zoning' in the city between ghettos for the predominantly rich or poor. Also, we can see the new role of the *domus* as a centre of control and a nucleus for local building activities

*The Organisation of Commercial Space*

The random distribution pattern seen in the size and function of shops (*tabernae*) versus guild-controlled horizontal zoning: for example a baker's street, or an exclusive high-class shopping area. It is particularly interesting to see changes in the overall pattern of the organisation of commercial spaces diachronically: from single shops to rows of specialised shops; from little markets to more centralised large market areas; from multi-storey warehouses to open plazas (a 'boom' in late antique *macella*), or to new 'souk'-like structures in secondary streets. All this may indicate a change from export-oriented production to a luxury local consumer market.

*Public and 'Semi-Public' Space*

When were the 'traditional' elements of the Roman city like curia, basilicae, or Ostia's guild-houses left in ruins, renovated or even extended? What new forms of public buildings were introduced in Late Antiquity? Does the variety of building-types and architectural forms decrease or

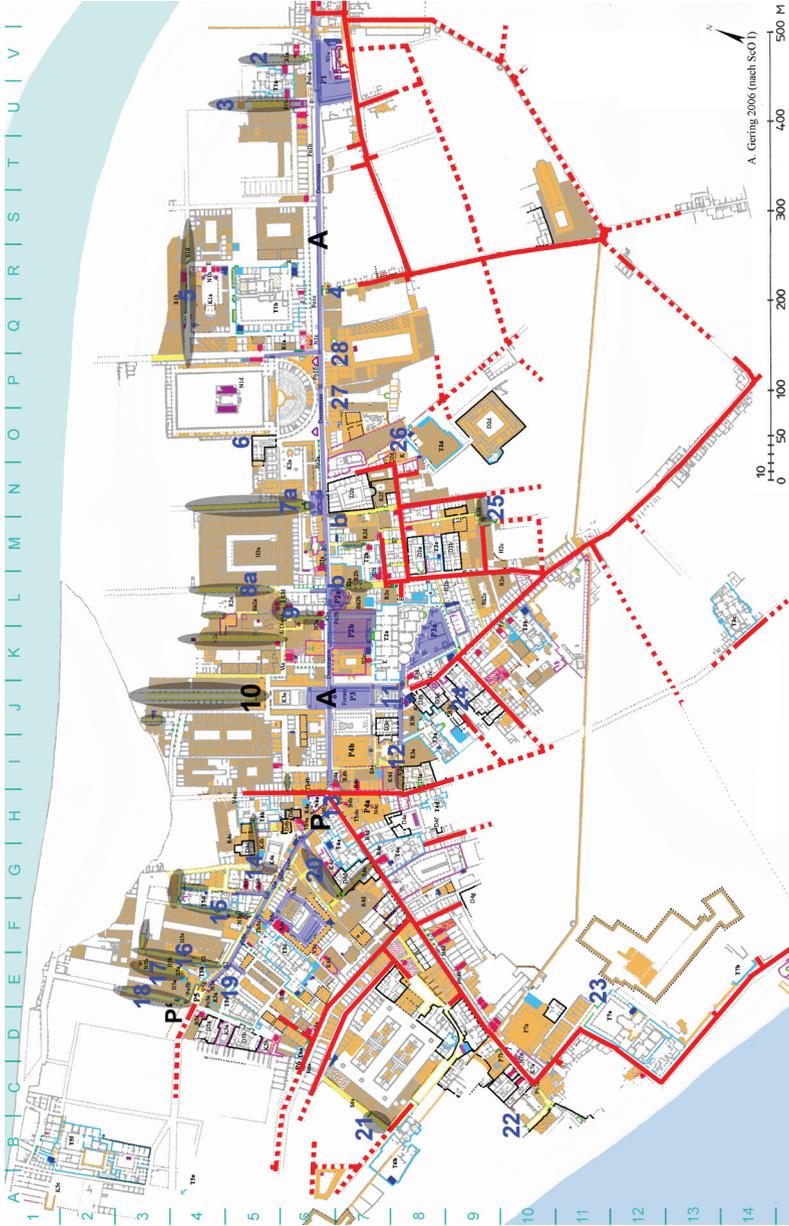


Fig. 2. Traffic system and blocked streets (brown) in late 4th–early 5th c. (blue: 'pedestrianized zones' and plazas).

increase over time? What role did amenities play, such as: entertainment, spectacles, the theatre, decorative buildings or *ornamentum urbis*? Was there still a need for spaces for civic government and other administrative buildings?

### *Cultic and Religious Space*

Both non-Christian and Christian spaces and their urban impact. Alongside them, the author looked at two specific features of the exposed city using surface survey in order to be able to answer some of the above questions. These features are: the relationship between ruins and the (more or less immediate) rebuilding activity around them; and the evidence for blocked streets and encroachment.

### *Ruins: Indicators of Temporary Abandonment or of Final Decay in the 3rd c.?*

How were areas of local or temporary dysfunction, ruins or abandoned city-quarters, treated by contemporary inhabitants, and how can we verify or refute interpretations of urban crisis or even cultural decay by analysing and quantifying the surface or near-surface remains of collapse in Ostia? Building debris and collapsed or abandoned buildings are the result or side-effect of any building activity at any time. By comparing the building micro-histories of Ostian *insulae* it becomes clear that, surprisingly, an ancient visitor of Ostia would have seen most ruins not in the 4th or 5th c. A.D., but rather between the Trajanic and Severan period, when Ostia was at the pinnacle of its economic growth.

City-planning at this time was largely independent of the authorities and just 'happened', according to the rules of a rapidly changing market; the time between the demolition of an old building and new building activity was minimal though. Thus, a factor like the number of visible ruins at a particular time is not sufficient to be able to categorise certain periods of a city's history in simple terms such as 'boom' or 'decay'. That being said, it is of course difficult sometimes to differentiate between temporary ruination and *irreversible* decay of a building, based on archaeological remains. Yet, with close analysis some new conclusions can be reached.

#### 1. *The Caseggiato del Sole*

The 'Caseggiato del Sole' (fig. 3, fig. 11: R2d) is, in its present form, a ruin. It was originally a multiple-storey-building, but only the ground



Fig. 3. Caseggiato del Sole with a closing wall and drain.

floor is actually preserved. Fifty years after its largely unpublished excavation, intensive detective work was needed to find out if the original excavators' theories were right: was the building abandoned completely before A.D. 300? Was the building continuously in use until the Early Middle Ages, or was it 'reoccupied' and rebuilt after a certain period of neglect? The *insula* could have become a temporary ruin due to one of the 3rd or 4th c. fire-collapses, after which the ground floor could have been filled up with the building rubble and burned debris, something that was indeed discovered within it when it was first excavated. This evidence led the excavators to their interpretation of *final* abandonment at that time, yet the upper floors were built up again on top of this fill, which shows evidence for continuing occupation at a higher ground level. A closer study by the author brought to light this evidence for continuing use, the presence of which was too subtle to be recorded by the original excavators.

The pieces of evidence for this later use are: late drains coming from the upper floors; the very thick blocking wall along the street (fig. 3), which can be explained by it supporting more upper floors; and a gap for a threshold for a new door about +1.00m above street level, which was

filled with modern masonry in antique *opus-vittatum* style by the first excavators.<sup>10</sup> Urban surface research must be based both on such previously unrecorded details, as well as numerous examples of such details. Only with a sufficient number of case-studies can this approach become more than just a subjective basis for a theory.

Until recently, such city-wide theories were often developed on the basis of single building-histories or a few known statements from ancient authors. Looking at a whole variety of micro-histories *first* is a much better, more scientific, approach in order to quantify the development of a city through time. For the urban researcher Ostia offers the unique evidence base of several hundred building-histories, with their main building phases datable by finds, the height of their foundations, relative wall-sequences and by brickstamps, masonry techniques or mortar comparisons. By comparing the similar characteristics of many building-histories some specific patterns within the city's history become clear. Compiling a synthesis of all detailed architectural studies ('Bauaufnahmen') from the last 30 years would allow us to make fundamental scientific progress, especially regarding Ostia's late antique urban development, and also make it possible to discern some overall patterns in the late antique city planning.<sup>11</sup>

### *Street Blocking/Encroachment*

Good indicators for urban change are blocked or narrowed streets. Streets could have been partly or temporarily closed by walls, doors or mobile fences, and traces of thresholds or metal fencing are quite commonly found when street pavements are well-recorded (figs. 4 and 5). The streets, or certain areas of the city, were closed off completely by massive walls, and/or raised levels behind these walls, or new structures. These structures were sometimes built using humble techniques with local building debris and stones (fig. 6: reused bricks, irregular tufa-stones, low-quality mortar from building rubble), or sometimes using solid brickwork, originally faced with marble veneers (fig. 7: *opus vittatum A* with high-quality mortar). The phenomenon of street blocking can be seen all over Ostia (fig. 2: twenty-six areas closed by significant building work, with forty-seven street blockings using walls or doors), and, to a lesser extent, in

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<sup>10</sup> Gering (2011) 301–16.

<sup>11</sup> The first real synthesis after Meiggs' standard volume of 1960 is: Pavolini (1986) 239–283. More recently: Pensabene (2007). For a continually updated bibliography see: [www.ostia-antica.org/biblio.htm](http://www.ostia-antica.org/biblio.htm).



Fig. 4. Blocked street with a door in the context of the late houses V ii and iii.



Fig. 5. Blocked cardo north of Capitulum.



Fig. 6. Blocked sidewalk of Via della Foce.



Fig. 7. Blocked *semita Horreorum* by back wall of *exedra*.

many other cities of the Roman empire too. But an interpretation of their widely differing urban function, as part of a local or city-wide 'system', can only be studied at a large-scale excavation site like Ostia.

A surprisingly large number of Ostia's street blockings remained *in situ* up until their excavation. They seemed to have successfully served their purpose by closing abandoned commercial quarters, which show no evidence of being reoccupied in Late Antiquity. Many street blockings can be found around well-used streets like the Decumanus and Via della Foce (fig. 2: Decumanus: blue (A); Via della Foce: P/P'). This gives us clear evidence that their function was to canalise or restrict public access, or to reduce the amount of traffic flow. These blockings were not removed in Antiquity, which suggests that their intended effect continued to be felt until the level of occupation rose above them, when the city centre was gradually abandoned between the 6th and 8th c.

### 1. *New Research*

Many of the blockings of tabernae, or doors, were, however, removed during the modern excavations up to 1941 because they blocked the modern visitors' access to the newly uncovered buildings. At that time, blocked or narrowed streets were generally interpreted as signs of the final decay of Ostia, and so, until recently, signs of these changes were removed. The author relocated these structures with the help of old photographs and plans from the Soprintendenza's archives and by careful cleaning on site (figs. 6 and 8). In many cases it was possible to date them by finds in the building foundation pits, by building technique, by the relative/absolute height of their foundations in relation to the existing street level (fig. 6: +35 cm above Severan street level), or by analysing their urban function in relation to adjoining firmly-dated buildings. Dating the blockings only by construction technique or the amount of spolia reused for its construction, without supplementary stratigraphical information, is, however, problematic. Most blockings can only be adequately dated by their overall context, that is their connection to certain firmly dated building phases of nearby structures, or their function in a system with a firm chronology.

A good example of this dating technique can be seen with the apse of a nymphaeum inside the House of the Tigriniani (fig. 9: S4a. fig. 10 from its rear),<sup>12</sup> which served to block two former market streets. Here

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<sup>12</sup> Brenk and Pensabene (1998–99) 271–99.

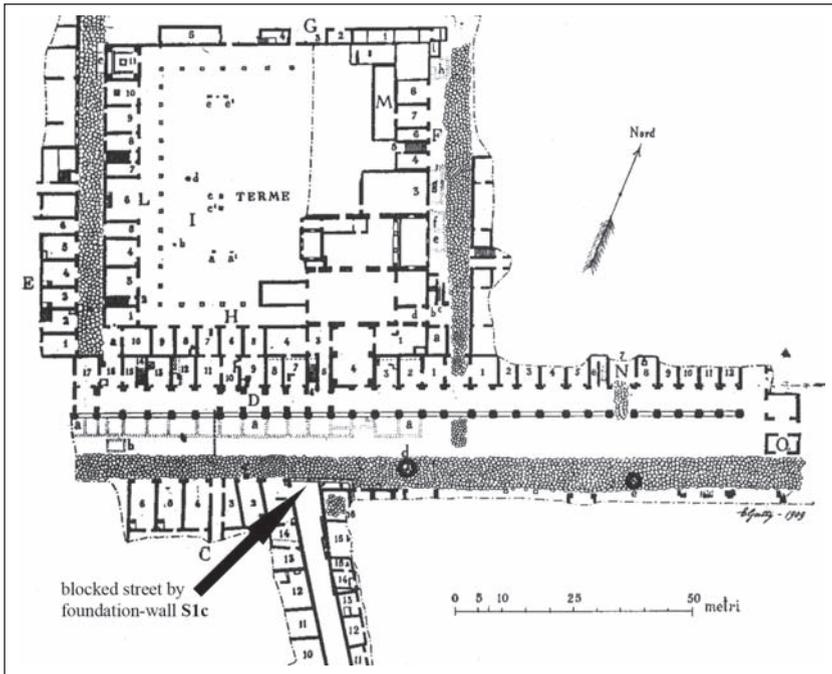


Fig. 8. Blocked Via del Sabazeo S1c, from plan of Gatti from 1909.

we have lots of dating evidence for the house (capitals, inscriptions), and supplementary dating evidence from the reused ceramics (instead of bricks) used in the facing of the walls of the apse (fig. 10). Also, the blocking on the other side of the market area was to close off the same streets (fig. 9: S4b). Though most of the individual building activities are not very well-preserved or datable in isolation, they can be understood together as a single localised functional change in the urban landscape.

This functional change can be understood as part of the building history of the house from its initial phase in the late 4th or early 5th c., which reflects the extended property limits desired by the late antique owners of this house. These changes should also be seen in the context of the reuse of an abandoned guild-temple area nearby into a store for late antique building material (fig. 9: Tempio dei fabri navales), and the modification of several apartments in abandoned *insulae* in the immediate area, in order to create additional fountains in the ground floor of the house.

More than twenty minor streets and some of the most important traffic axes of 2nd c. Ostia were entirely blocked up when the excavators found

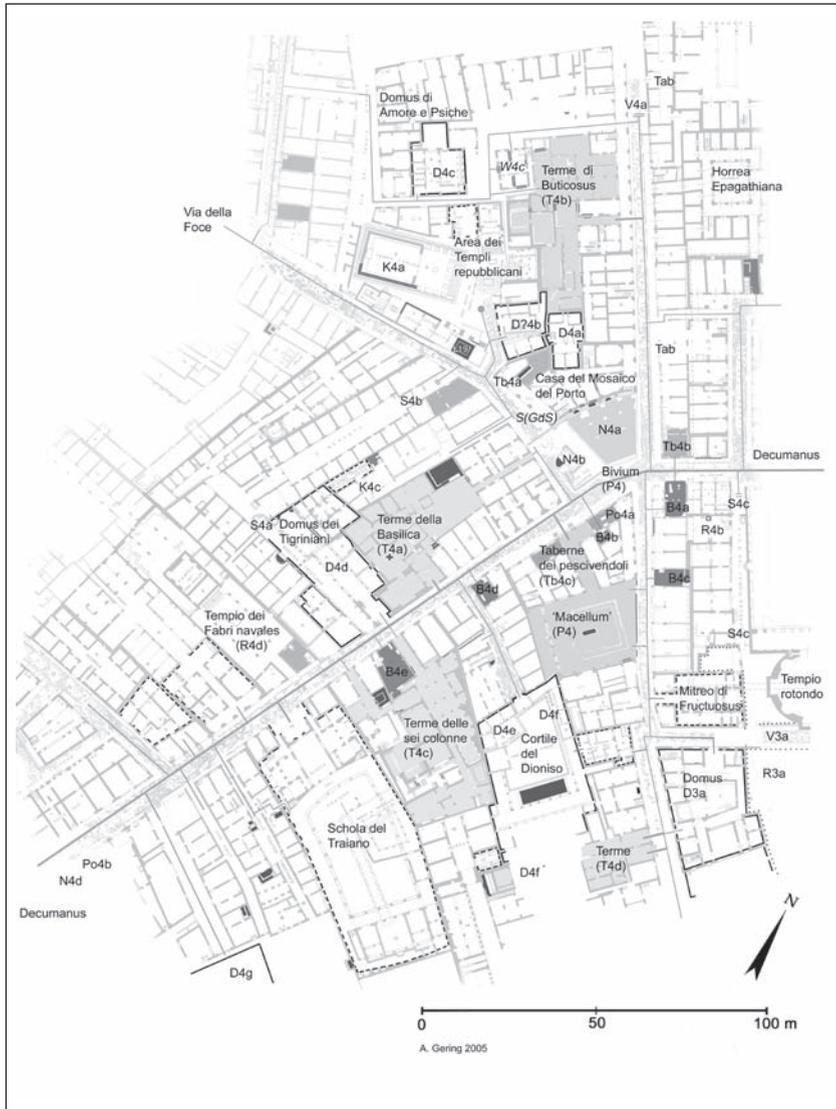


Fig. 9. Via della Foce part I: plan of Bivium area with late-antique building activities.



Fig. 10. Blocked market street by apse S4a of Domus dei Tigriniani.

them (fig. 2: 1–28). Ancient urban studies have shown that ‘encroachment’ was not a sign of final decay and decline, but rather a method or ‘master plan’ in order to reorganise shrinking cities with new hierarchies of access, with a new tendency to separate quarters by function and social status.

The functional or social quarters of late antique Ostia could have been dominated by: (a) ruins, rubbish dumps and abandoned or squatter-occupied buildings; (b) large and luxurious houses with new local infrastructure or ‘semi-public’ amenities; (c) by public amenities, *ornamentum urbis* and ‘memorials’ of the city’s splendid history, concentrated in a ‘pedestrian zone’;<sup>13</sup> (d) by canalised heavy-traffic routes, with souk-like markets built on the street-space of secondary-streets, or (e) newly concentrated production/commerce zones in formerly abandoned areas. One single encroachment would not be enough to define and physically separate these specific quarters from each other or from frequented streets. This could only be achieved with a series or system of closing-walls, doors, stairs

<sup>13</sup> A phenomenon so far only really studied at Ephesus: Thür (1999) 104 ff; Fildhuth (2010) 137–53.

and different rises in ground level (for example fig. 2: 10=fig. 5.: blocking of all side-doors linked to these streets to close off the northern cardo).

One of the best examples of a large-scale reorganisation of urban traffic, access and functional distribution is the 'officially authorised' street blocking of the *semita horreorum* in Ostia (fig. 11: S2a. fig. 7).<sup>14</sup> The closing of the street seems to have been 'officially approved' as the Sigma plaza or *exedra* (fig. 12: EXE) is one of the most significant new public buildings of late antique Ostia. At its rear it had a large niche (fig. 12: *Ni*), which was obviously designed for prominent statue-display, perhaps of a local benefactor or member of the imperial house. Sigma-plazas or *exedrae* show the 'status' of a late antique city, and seem to have been the common venue for late antique trials or tribunals, functions which in earlier periods would have taken place inside the forum-basilica.

The *exedra* was fully open to the Decumanus, but had only two doors facing south. One door (fig. 12: T<sub>3</sub>) allowed restricted access from a bakery to the plaza, the other (fig. 12: T<sub>1</sub>) opened onto a shop with the door T<sub>2</sub>. Both doors could be locked and could be controlled by a *tabernarius*, or possible a gatekeeper (fig. 12: tab 5). Obviously it was not as easy as it has been to come from the Decumanus to one of the most exclusive living quarters in Ostia, along the *semita horreorum*. This area was characterised by a large concentration of private houses (more than 1000m<sup>3</sup>) and three extensive bath complexes. A former side-entrance to the 'palaestra' of the Forum Baths was embellished with a newly-built fountain.

The connection between the Cardo to the south and the Decumanus to the north was blocked immediately before reaching the Decumanus, but this area was still provided with lots of public amenities around the baths, like marble-lined toilet areas and bars, both good indicators of concentrated public frequentation of this axis (fig. 11: baths). The consequence of this official blocking by the *exedra* was a concentrated 'private' encroachment of the Via dei Molini, the street that continued from the *Semita* northwards, by shops varying in size and date.

The first building phase of the *exedra* can be dated to after the demolition of its structural predecessors on the site: a monumental entrance to a bath building of the 2nd c., characterised by four apses inside a quadratic room and a large entrance-hemicycle in the direction of the Decumanus (fig. 12: Ap<sub>1</sub>-4, with Ap<sub>4</sub> reused as a baking-oven). These baths were originally much bigger (fig. 12: black walls of an open structure to the south

<sup>14</sup> Gering (2004) 326-49, esp. 330-31, 342-49.



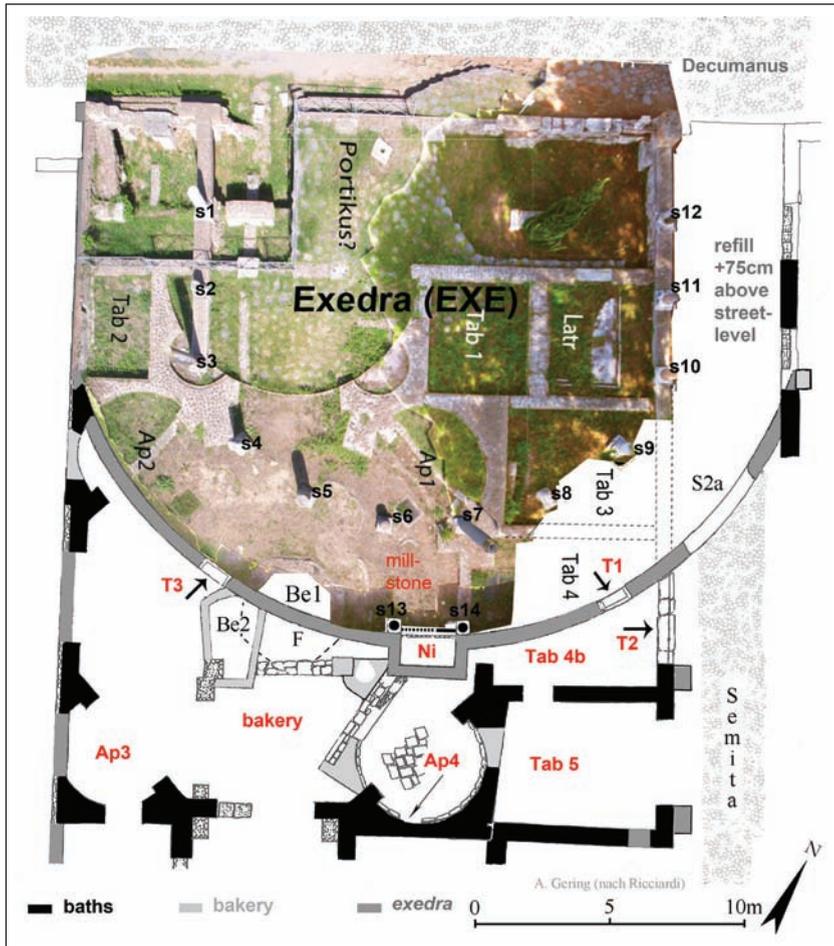


Fig. 12. Plan of *exedra* and earlier structures.

and west) and were surrounded on three sides with shops. Their facade was still standing while the whole area inside was reused as a mill-bakery before the *exedra*-back-wall was built, but a reduced bakery could have been still in use even after this, with an older water-basin incorporated into the later *exedra*-back-wall (fig. 12: Be2). During the 4th c. a toilet with a pavement of reused marble slabs was installed in the corner-shop of the facade at a higher level (fig. 12: *Latr.* fig. 13).<sup>15</sup> The toilet's spolia pavement

<sup>15</sup> For detail: Gering (2004) 321–42.



Fig. 13. *Exedra* seen from the Decumanus.

consisted of roof-tiles and the rooftop of a marble temple, reused as a water channel (fig. 14.15). The reused sets of spolia and the layout of the slabs is very similar to another toilet ('forica', fig. 11: *L1*), dated by TPQ of a Constantinian inscription reused in its pavement (fig. 16).

A new trench by the author, inside the central octagonal water-basin of the baths (fig. 12: *Be1*), was opened in 2005 to look for dating evidence underneath the later back wall of the *exedra*. The excavated material showed a unique filling process for the *exedra*'s foundation pit, with building debris from burned and collapsed marble architecture present. Similar fill levels were excavated by Calza, and consisted of finds from this area which cannot be dated before the 4th c., using stylistic comparisons of their decoration. Final proof for this dating was provided by an inscription of Vincentius Ragonius Celsus (*praefectus annonae* in A.D. 385–89), which was found here by Calza and had obviously been reused to raise the *exedra*'s floor-level (fig. 17), but had originally come from the Forum Baths where Calza had returned it, along with other fragments, shortly after its discovery.<sup>16</sup> The *exedra*, therefore, is unlikely to have been constructed

<sup>16</sup> *CIL* 19 Suppl. 4718. See: Ricciardi and Scrinari (1996) 194 no. 1.



Fig. 14. *Exedra*: marble floor with spolia.

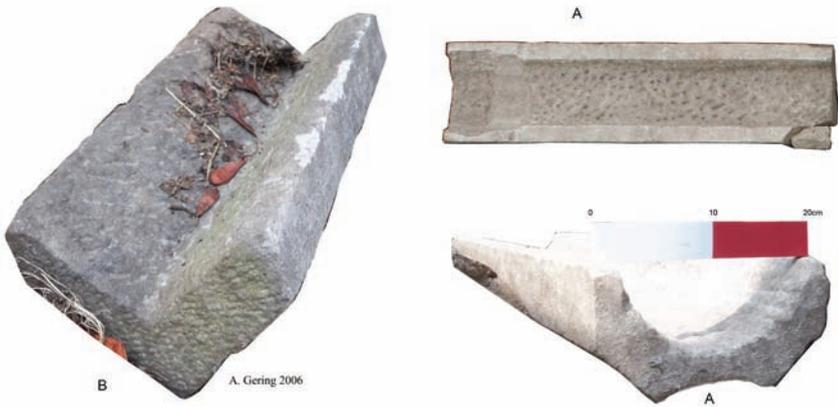


Fig. 15. *Exedra*: temple rooftops reused for drains.



Fig. 16. Toilet L1 in the Via della Forica.



Fig. 17. *Exedra*-columns: foundation-wall with building-rubble.

before the end of the 4th c., and was most probably built in the 5th c. after a catastrophe which had destroyed the original architectural context of Ragonius' inscription in the Forum Baths.

This evidence fits well with a series of significant collapses probably caused by an earthquake of the late 4th c. or early 5th c., which can be traced virtually city-wide thanks to the author's wall-survey regarding cracks, static repairs and the widespread reuse of building-rubble (fig. 17: fragments of collapsed and burned floors, walls and pillars). This 'crisis-management' can also be seen in coin-dated destruction and fill layers at a similar level throughout the city, this being between +65–75 cm above the existing street level, a phenomenon which was partly documented in the old excavation diaries up to 1924, and revealed in recent research projects (see below).

### *Waste Disposal and the Raising of Ground Levels*

The practice of waste disposal is an interesting field of research in order to understand the development of a city. The reduction of the utilised city area in Late Antiquity, and the loss of a large number of citizens, had many consequences for communal control and everyday city life. In 1st and 2nd c. A.D. Ostia all streets inside and outside the city walls were regularly raised to prevent Tiber floods. Primarily anorganic building debris or commercial and household waste was used to achieve this outside the city walls.

#### 1. *New Research*

From the author's various sondages inside the 'abandoned' areas north of the Decumanus and on the Via della Foce, it appears that from the mid 3rd c. onwards, broken transport amphorae, household ceramics, glass and bones—but also material from collapsed or intentionally dismantled buildings, especially the upper floors of *insulae*—were reused in large quantities for ground level raising inside the city as well, not largely dumped outside it, as one would expect to see in a modern western city. That means for roughly one-third of the area inside the city walls, the entire northern half of Ostia, the system of private or commercial waste disposal seems to have been modified. Amphora stamps and other dating evidence from this rubbish allow us to date the first peak of this practice to the 4th c., in other words long before Ostia lost its status as a regional centre; it was still able to sustain luxurious lifestyles, entertainments, and

administrative and political activity at that time. The starting point for this activity in Ostia is the Late Severan period, so before the late antique era. It is, thus, not a unique feature of Late Antiquity, nor is it evidence for supposed cultural decline.

#### DEVEGETATION AND KEY-HOLE EXCAVATION

##### *The Micro-History of the Via della Foce*

One specific example of large-scale abandonment and concentrated late antique urban reorganisation can be analysed in detail here. The Via della Foce, one of the main streets of 2nd c. Ostia, connected the city centre with the river harbour and Regio III, an area dominated by store- and warehouses. From the 3rd c. onwards in Ostia we can find several archaeological signs of a shrinking city: ruins and collapse on the one hand, but with intensive and quite innovative crisis-management on the other. While shops in side-streets were mostly abandoned or closed off by walls or even by new buildings like fountains, baths and houses (see above: Domus dei Tigriniani), the Via della Foce showed an unusual concentration of late antique shops that were continuously renovated or even built *ex novo* along the sidewalks of this main street (fig. 18: P05c and the shop front of Insula III i). We see the same pattern with the baths and fountains here: while existing baths inside older *insulae* were no longer repaired, new baths were created within abandoned buildings (fig. 18: T5b, T5d, T6a).

While the 2nd c. water supply was widely distributed throughout Regio III and its *insulae*, late antique (mostly marble) fountains were concentrated almost exclusively on the street front, probably due to the proximity of repaired water pipes (fig. 18: N5a, N5g, N5h?, N5i). It seems a likely scenario that most of the multi-storey buildings of Regio III had collapsed in this area *before* any late antique reorganisation took place. We could even argue, based on the discovery of several coin hoards below and in the collapse layer of +65 cm above street level, that a single event was responsible for this radical transformation from a five-storey skyline to a new two-storey street facade in front of ruins: after a period of neglect there was a fire and/or earthquake-induced collapse sometime between the late 3rd and middle of the 5th c. The ruins of the abandoned high-rise buildings were dangerous, especially in their interiors, so were not reused

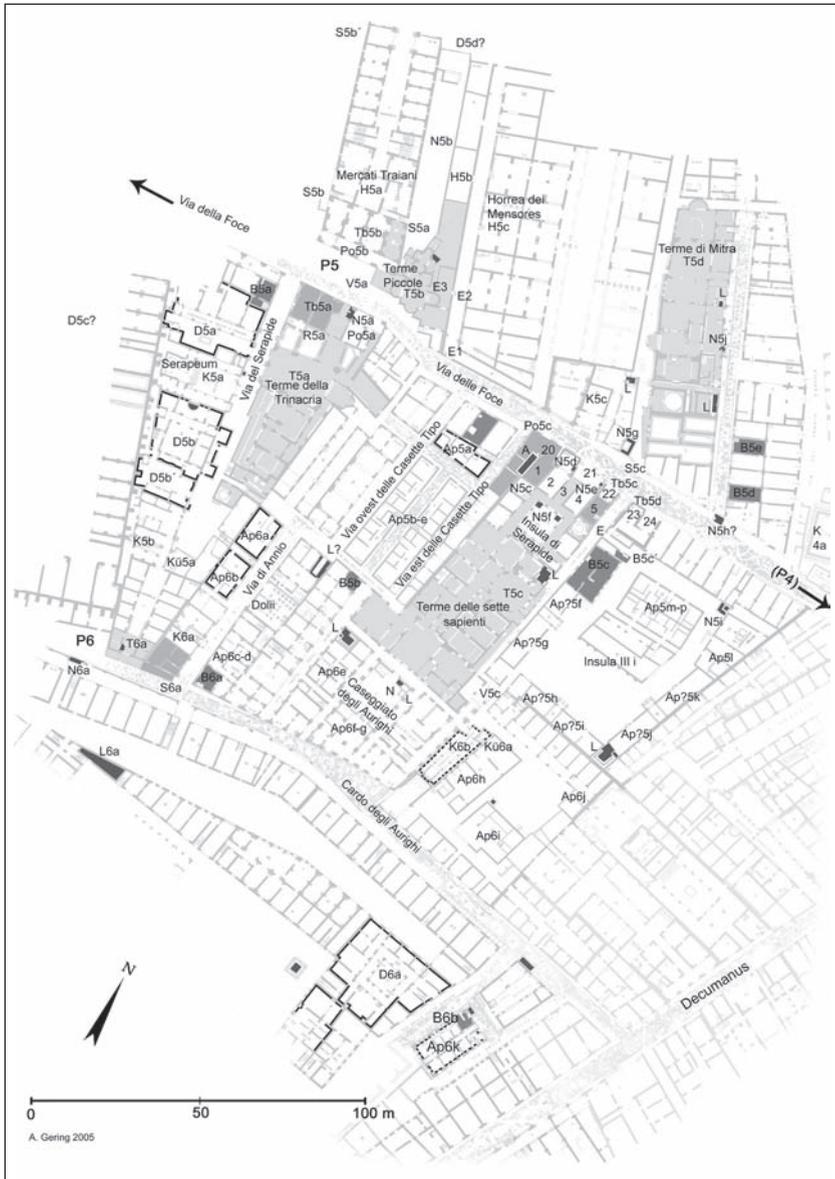


Fig. 18. Via della Foce part 2: the context of the Terme piccole.

and stabilised in any way, only still-standing facades and completely collapsed *insulae* provided secure building sites for the late urban revival.

### 1. *The Fieldwork*

In 2004, key-hole excavations by the author brought to light surprising evidence that showed that the collapsed facades of *insulae* in this part of Ostia were not signs of the final abandonment of the area, but were reused as foundations for new buildings in Late Antiquity. Excavations were extended in 2005, thanks to the Soprintendenza di Ostia, Anna Gallina Zevi, Angelo Pellegrino and Alfredo Marinucci and an experienced team.<sup>17</sup> What these excavations demonstrated was that intensive building activities took place on a raised occupation level above the destruction layers of the *insulae*. Strangely, between the abandonment, the collapse and the reuse and rebuilding there was a gap of several decades at least. Even though the partial abandonment of commercial buildings and *insulae* had already started before the mid 3rd c., with a peak in this process in the later 3rd c. verified by stratigraphy, most of the amenities built in this area cannot be dated before the late 4th or early 5th c. A concentrated collapse of *insulae* and *horrea* here seems to have produced a 'Pompeii of early Late Antiquity', and so deserves closer attention given to it. The building developments in the area could be dated quite accurately due to the interrelationship between the localised raising of ground levels and excavated stratigraphy.

The Via della Foce was, more than any other continuously used city quarter, filled with 3rd c. commercial ruins, which were later closed-off after their collapse and left as abandoned areas. Once the most important traffic axis to the river-harbour and the *horrea*, the whole street was, according to the archive excavation reports (*Giornale degli Scavi* or *Giornale di Scavo*), closed for wheeled traffic by late spolia walls of 'private construction', that is, shops built on the street space. The Via della Foce was now only accessible through two passages with door thresholds (fig. 9: *S/Gds next to N4b*); wheeled traffic from the Decumanus was excluded. The entrance to the street from a crossroads, the so-called Bivium (fig. 9: *P4*),

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<sup>17</sup> I want to thank Susanna Wittmann (finds supervisor) and the many experienced workers of the Soprintendenza who helped to excavate the extremely difficult stratigraphy disturbed by the unrecorded excavations of Guido Calza. See Gering (2004) 354–60; Gering (2010) 12–20. A complete excavation report is in preparation as a monograph: *Die Terme piccole (Ostia Regio I xix 5): Funktion, Rekonstruktion, Präsentation. Ein historischer Bau in urbanistischer Perspektive*.

was embellished with a large fountain, a show-piece at least two storeys high (*N4a*). Even before the construction of this nymphaeum though, the street had lost its importance as a main axis for two lanes of traffic, with the street space gradually narrowed by private *tabernae* and public amenities. Most of the evidence for this change was removed during its initial excavation, but even though these excavations were carried out very quickly, lots of unspectacular, but for us very important, traces remain *in situ*.

The plans figs. 9 and 18 illustrate the dynamics of late antique building activity in this 'pedestrianised' area of the Via della Foce, formerly a uniformly commercial quarter with only a basic public infrastructure. By the end of the 4th c. or in the early 5th c. there was around the Bivium, the attractive entrance to the pedestrian zone, four large new or extended bath buildings (three public: fig. 9.15: *T4a-c*, one private: *T4d*), five new sizeable bars (fig. 9.15: *B4a-e*) as well as at least six large houses of late antique origin (*D4a-f*). Further along the Via della Foce the evidence for a late 'infrastructural boom' is equally striking. In the 2nd and 3rd c. there were only two bath buildings, one in a (semi) private context in a sanctuary (fig. 18: *T5a*) and one in a luxurious *insula*-complex (Regio III. x. 1-3: *T5c*), yet by the end of the 4th c. there were, with the new Terme di Mitra (*T5d*), already three large bath complexes here, and in the 5th c. two tiny new *balnea* (*T5b*, *T6a*) served the area alongside the above-mentioned baths, and replaced one abandoned bath-building due to its collapse (*T5a*).

Most of the more complex rebuilding works in Regio III have one characteristic in common: their foundations are visible today, that means they date to the same time as, or after, the late antique rise in ground level above the excavated visible pavement, which is mostly at a height of between +40–70 cm. Excavations by the author in several parts of the Via della Foce have discovered dating evidence (coins of Constantine and Valens, late TSA) suggesting this local rise in ground level due to collapse took place in the second half of the 4th or in the early 5th c., not the middle of the 3rd, as was believed by the excavators before the Second World War. Several street blockings actually antedate these late 4th or early 5th c. works: they were built directly onto the pavement in the Severan period.

## 2. *The Terme Piccole*

The collapse of *insulae* here seem to be connected to the raising of the ground level by +60cm, which can be dated, through individual building

analyses, to sometime between the late 4th or early 5th c., while further building activities took place at least up to the end of the 5th c.<sup>18</sup> T. Heres proposed an absolute dating of the building phases of the Terme piccole, which were certainly built after the collapse, to A.D. 450–500 (phase 1), with some of the *praeefurnia* extensions being added in a second phase from 490–550.<sup>19</sup> The results of the author's excavations around and inside the baths in 2004–2005 demonstrate that Heres' dating proposals point in the right direction, but we have a much more complex building history here. This is judging from the many interesting functional interdependencies and relative sequences in relation to adjoining buildings, like the 'Magazzini Traianei' (Regio I. xx. 1), which were closed and reused as a water-tank for the baths. This is something only apparent when the whole area is taken into consideration, not just isolated wall typologies.

While the collapsed facade, probably from the structure opposite, fell directly onto the street paving, the lowest part of the foundations of the baths were in fact constructed at a substantially higher level, some +35 to +40 cm above the street (figs. 19, 20). Part of the fill between the fallen *insula* facade and the new foundation of the Terme piccole contained oil lamps of Hayes I type and ceramics which date from the middle of the 4th c. onwards. The wall decoration of the baths has no specific dating relevance as it seems to have consisted mainly of marble spolia; many inscribed or worked slabs were found inside the baths, as well as imprints in the mortar. The baths and their adjoining 'Palaestra' garden with a small fountain, and the beginning of the rear wall (fig. 20: N5b), were perhaps connected to a still unexcavated house to the north.

The complex entrance area to the baths was re-excavated in 2005. The stairs to the entrance (fig. 20: E2), as well as the street entrance of a former shop, which was reused as the *apodyterium* (fig. 20: \*17, \*19), seem to have been the focal points for late antique statue concentration: the archive diaries report statues of Venus and Hermes Propylaios as finds

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<sup>18</sup> Other areas with this level of +60–80 cm covering ruins of collapsed facades (around the Forum and the 'Terme bizantine' and Regio IV) are discussed in Gering (2004) 368–72 with fig. 48. The first collapse could be explained by an earthquake or fire-induced collapse at the end of the 3rd c., but the evidence here points towards a concentrated city-wide collapse of the late 4th or early 5th c. which is also verified by building micro-histories, such as for the Magazzini Traianei: see Bartolini and Turchetti (1999) 28.

<sup>19</sup> For the chronology of the walls see: Heres (1982) 484 (A.D. 450/490–550).







Fig. 21. Via della Foce blocked by collapsed facade.

The new discoveries of 2004–2005 supplement these finds, and allow us to date more precisely the links between this structure and the surrounding buildings, thanks to the micro-archaeology still present with the various different systems of water channels in the baths. The late antique lead water pipes were simply laid on top of the ground floor of the baths, not inside the bedding of the old street sewers as they always had been; a similar technique was found in the Insula di Serapide (fig. 18: room *Tb5c* of the baths *T5c*). It is interesting to compare this to the equally improvised drainage of the new fountains here, which were supplied by the water tanks of the Magazzini Traianei next door.

The western part of Ostia had obviously suffered more than other parts of the city from this first extensive collapse of buildings onto the street. A courtyard wall was built partly on top of the fallen facade of the Magazzini Traianei (figs. 21, 22: tufa-wall IA) whose foundation level was +35 cm. This rubble wall is on the same alignment as the street blocking (fig. 6). The courtyard wall is preserved up to +90 cm (fig. 6: \*5, fig. 21) today, but its mortar left a few remains on the baths' wall beyond the height of +1.70 m

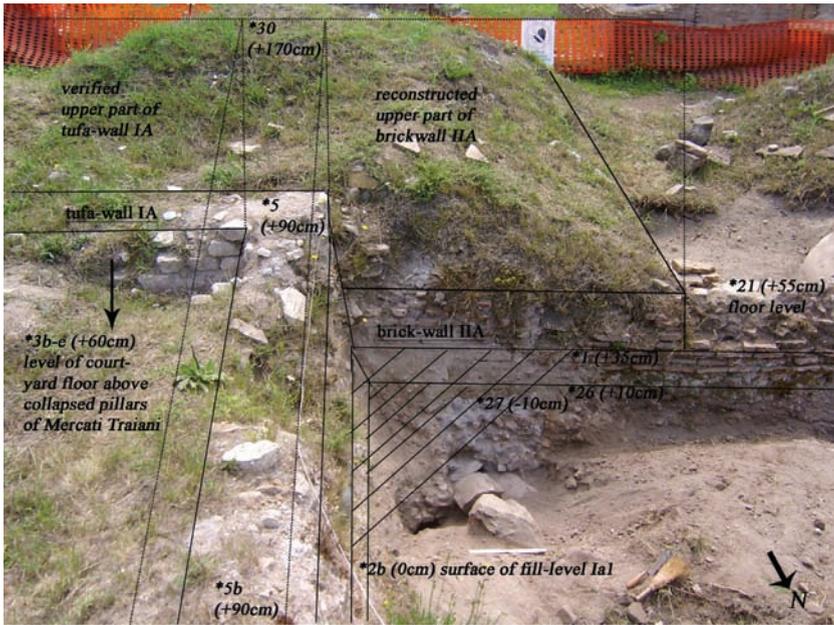


Fig. 22. Collapsed facade seen from courtyard of baths.

(fig. 21: traces in plaster). This wall then had obviously fully covered the ruin of the fallen facade.

From these results we can hypothesise as to how the fallen facade may have been reused in the years after its collapse. Verified by finds and stratigraphy, the excavation showed lots of imaginative building work around the ruin. Instead of removing it, the collapsed wall served as a foundation for a new construction. The cleaned profile of the facade collapse on the street illustrated the complexity of this reworking process (figs. 22, 23). The fallen facade was cut off parallel to the pre-existing wall (fig. 22: *wall II A*) to the left of ‘collapsed vault in situ’, this wall was then partly rebuilt (fig. 22: ‘reconstructed upper part of brick wall II A’). The whole north side of the fallen facade was cut very regularly (fig. 25: collapsed vault *in situ*). The cleaning of the stratigraphy below the collapsed vault showed clearly that this was not modern activity.

It is quite clear, therefore, that the facade collapse was cut into a rectangular shape, which was, at least on two sides, hidden behind other walls. Combined with the supplementary information provided by the discovery of a lead-pipe at a new level of +60cm, we may reconstruct, of course very hypothetically, some kind of fountain which was built on top of the large

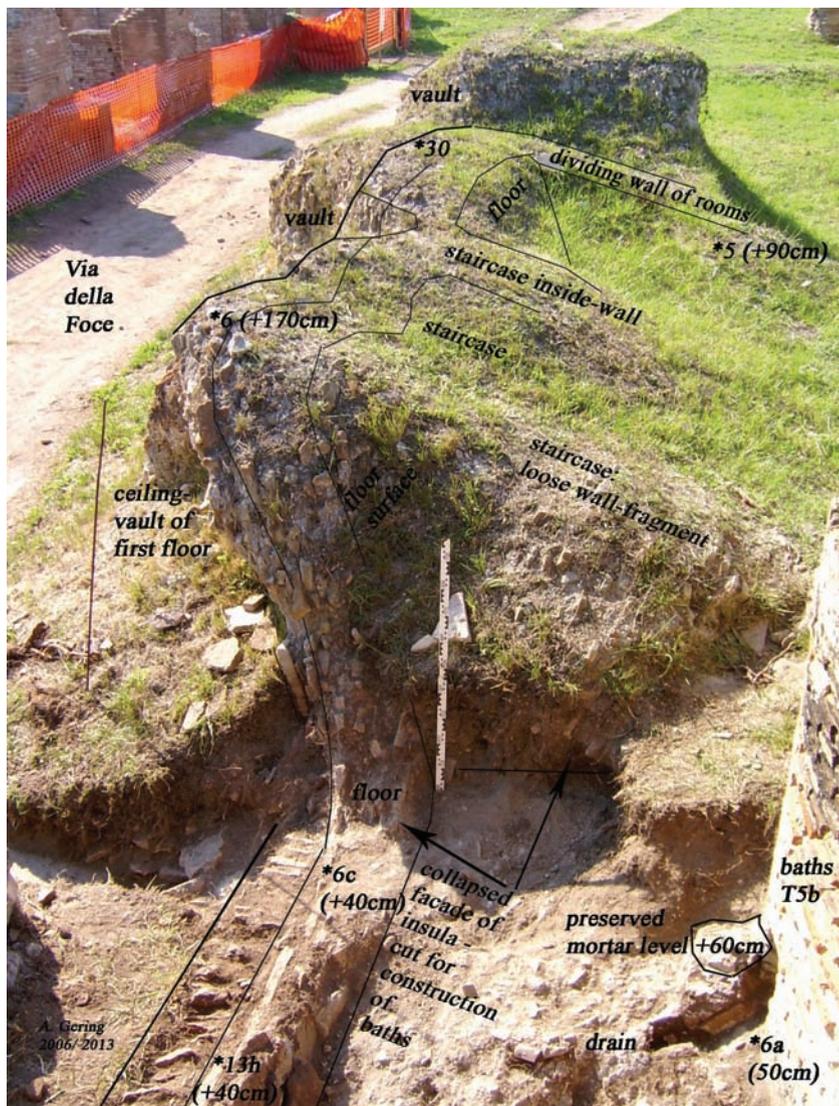


Fig. 23. Collapsed facade seen from east.

foundation, maybe like the 'facade-fountain' at the Piazzale della Vittoria. The only difference would have been that in the latter case a large foundation had to be built mainly *ex novo* (or possibly reused from an earlier phase), while the fallen facade V5a was reused here for that purpose.

It is not known how the structure of ruin V5a could have been modified for a decorative water display in its lost upper parts (fig. 19). But a water-tank in its foundation base seems quite typical for a facade-fountain, especially due to the problems in the water-supply after the later 5th c. Whatever its possible shape or decoration, it seems another example illustrating a widespread urban phenomenon of the construction of large nymphaea in front of abandoned buildings, exactly like the facade-fountain at the Bivium, in front of the burnt out Caseggiato del mosaico del porto. Examples of this practice in other cities include the facade-fountain in the city centre of Hierapolis in front of the closed Temenos of Apollon, or the even more striking parallel of the late fountain in front of the closed Celsus-library in Ephesus.<sup>21</sup> The fountain on the Via della Foce would have had a prominent location, but no long-view axis, an untypical urban setting for a late facade-fountain. We can say in general though, there was in Late Antiquity a new desire for visible structural *varietas*,<sup>22</sup> and 'surprising' buildings inserted into the urban landscape, so as to decorate uniform city prospects or streets.

The space between the fountain, or water tank, and the fallen *insula* facade was filled with random fragments of collapsed floors (fig. 25: fill II B). The filling material II B, which was used to create a solid foundation next to the water tank II A, contained rubbish and a broken column, but also coins of Valens (fig. 19). This dating evidence from inside the foundations suggests the final 'cleaning up' and building work in and around the facade ruin did not start before the second half of the 4th c. Several of the walls here show clear sequences and can give us a relative chronology of the events that took place in the area:

- The collapsed facade and loose material from upper floor ceilings dropped directly onto the level 0 cm, the street level in Severan times (here in front of the Terme piccole 3.25 masl.)

<sup>21</sup> Dorl-Klingenschmid (2001) kat. 29.

<sup>22</sup> Pensabene (2004) 281–97.

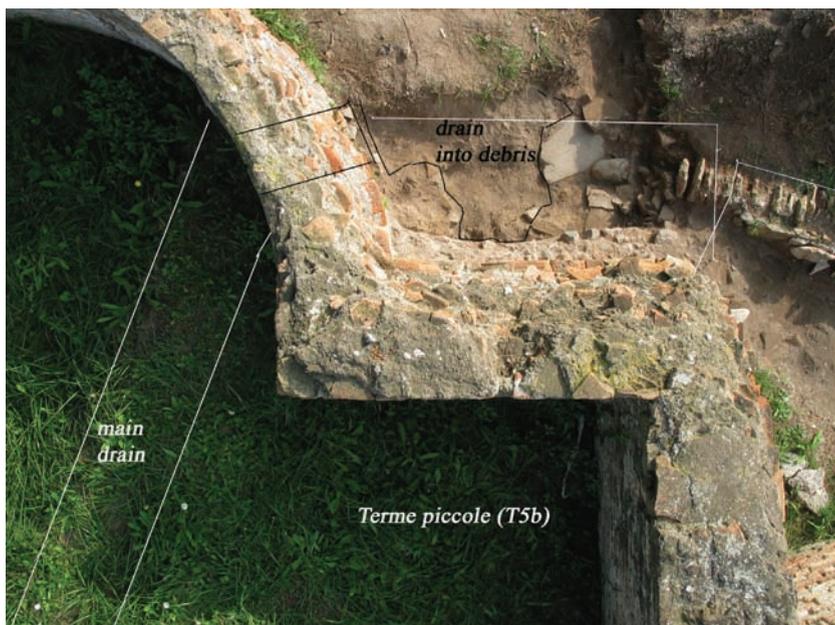


Fig. 24. Terme piccole: drains into building-rubble.

- The water basin has a foundation level of only +10cm above street level. This corresponds with the latest repairs of the still in use Magazzini Traianei.
- The possible wall II A1, towards the Magazzini Traianei, was cut down after the collapse to the street level \*23 (fig. 25). This wall had probably been cut when parts of the facade in the area north of the 'fountain' had to be removed for new construction activities.

The Terme piccole's wastewater led straight into this artificial fill-layer (fig. 24) immediately adjoining the fallen facade; the builders did not try to reach or repair the communal water system underneath the street pavement again. However, the activity here was not a city-wide phenomenon yet; the Forum Baths in the city centre showed much later sewer repairs, using late antique amphorae.<sup>23</sup> In western Ostia though, the sewer system seems to have been abandoned earlier, probably in connection with the massive *insula* collapse onto the street.

<sup>23</sup> Unfortunately this cleaning-excavation, carried out in 1969, is still unpublished. For this information I am grateful to Fausto Zevi and Patrizio Pensabene.

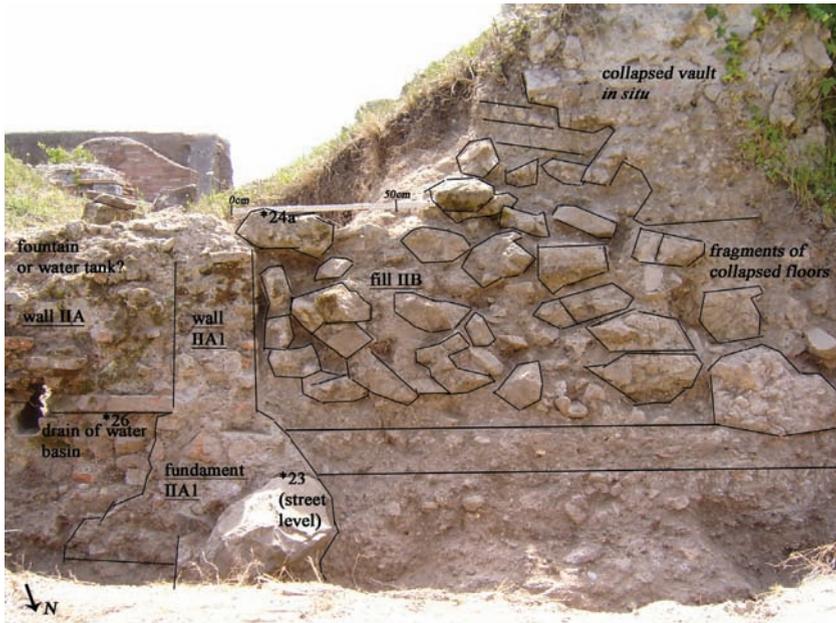


Fig. 25. Collapsed facade seen from the north.

Nevertheless, the street-space between the facades of the Via della Foce, with their new shops, arcades, bars, baths and fountains, was still in the 5th c. one of the most attractive areas to spend time in the city. It was not easy to get access to the area behind the facades on the north side of the street where large abandoned areas continued up towards the Tiber. However, behind the facades to the south, inside the former sanctuary of the Serapeum, two late-antique houses were erected south of the extended *Domus di Bacco e Arianna* (fig. 18: *D5a, D5b/D5b'*). These houses, of modest size but lavishly decorated with marble, could not have been created there before the sanctuary was abandoned. The collapse of the *insula* facade onto the street, due to an earthquake or catastrophic fire, would have probably been the catalyst for the abandonment and reorganisation we see. That suggests these houses were probably built after this facade collapse. Another house seems to have been built in the former *horrea* nearby, probably also after their destruction (*D5c?*).

The phenomena of visible, but reworked ruins alongside a luxurious infrastructure was certainly a feature of western Ostia in the 4th and 5th and perhaps part of the 6th c. Maybe it was the charm of successfully and intelligently covered ruins, combined with the newest urban trends, that attracted owners of country estates or rich merchants to have a small

city pied-à-terre inserted into one of the abandoned buildings of Ostia's commercial or cultic areas, like here with those built in the sanctuary of Serapis.<sup>24</sup> It is also a feature of the early 7th c. to find new occupation levels completely covering ruins,<sup>25</sup> although in this period most amenities were certainly out of use.

### CONCLUSION

Modern research for three decades has been mostly focused on single building 'micro-histories' (Bauaufnahmen). The author, instead, started his own research in 2001 with city-wide surveys to get a broader view of the patterns of distribution, quantity and visibility of abandonment and rebuilding in the city in Late Antiquity. These surveys concentrated on the evidence for: fire or earthquake damage; late wall repairs; the use of building rubble from collapsed upper floors; and ceramic or coin-dated raisings of ground levels throughout the city. A specific survey methodology was developed to fill in the gaps seen in the results of traditional research. It turned out to be the most effective way, in an rather unsystematically excavated city like Ostia, firstly to concentrate on all 'forgotten' places where late antique stratigraphy, foundations or walls were still preserved in their original context, and secondly to connect this new evidence to the existing 'micro-histories', with the aim of creating a systematic synthetic history.

After locating the most promising areas for detailed research, two specific methods of minimally invasive 'surface' archaeology were used: a) cleaning and excavating the 'micro-stratigraphy' of not fully excavated ground levels; and b) cleaning and measuring the vertical profiles of old trenches or foundation walls which were already excavated, but not documented stratigraphically before.

Two specific kinds of previously neglected evidence were particularly important in achieving an overall interpretation and understanding of Ostia's late antique city-structure: the evidence for blocked streets and

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<sup>24</sup> The idea that ruins or debris were viewed positively in Antiquity cannot be verified yet, but the question remains open as to why luxurious houses like D5a or D5b/b' were inserted into collapsed *insulae* deliberately. See Mar (2002).

<sup>25</sup> 4.95 masl. would have been necessary, a level which is paralleled at the theatre-chapel, which blocked the Decumanus, and is dated to the 7th c. at least, or in the Via del Sabazeo, dated by a coin of the early 7th c.: Finelli, *Giornale degli Scavi* 5 (1912) 295 ff, 316 ff; Streibl (2010) 89–90.

encroachment, indicating a completely new reorganisation of traffic-flow and a social or functional ‘horizontal zoning’ of the city; and the treatment of ruins of collapsed buildings which were left *in situ*. It can be demonstrated that some of these ruins were not in fact signs of ‘irreversible’ decay because they were still incorporated into later building activities.

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- Fig. 15. *Exedra*: temple rooftops reused for drains.
- Fig. 16. Toilet L1 in the Via della Forica.
- Fig. 17. *Exedra*-columns: foundation-wall with building-rubble.
- Fig. 18. Via della Foce part 2: the context of the Terme piccole.
- Fig. 19. The collapsed facade and building-levels.
- Fig. 20. Plan of the Terme piccole and the collapsed facade.
- Fig. 21. Via della Foce blocked by collapsed facade.
- Fig. 22. Collapsed facade seen from courtyard of baths.
- Fig. 23. Collapsed facade seen from east.
- Fig. 24. Terme piccole: drains into building-rubble.
- Fig. 25. Collapsed facade seen from the north.