# PORTUS AND ITS HINTERLAND

This book is dedicated to the memory of Geoffrey Rickman

# PORTUS AND ITS HINTERLAND: RECENT ARCHAEOLOGICAL RESEARCH

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**18**
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*Front cover illustration*
Aerial view of the Trajanic harbour and its surroundings seen from the west. *(Photo: Geert Verhoeven/Portus Project.)*

*Back cover illustration*
Detail of the *Terrazza di Traiano*, the western façade of the *Palazzo Imperiale*. *(Photo: Simon Keay/Portus Project.)*

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# Excavation and survey at the *Palazzo Imperiale* 2007–9

*Simon Keay, Graeme Earl & Fabrizio Felici*

## INTRODUCTION

Excavations at the site of the *Palazzo Imperiale* of Portus in 2007, 2008 and 2009 build upon a long tradition of archaeological work at Portus that began in the later nineteenth century[1] and has continued down to the present day with work by the Soprintendenza per i Beni Archeologici di Ostia. Their objective has been to understand better the layout, development and functions of this key complex, as well as its relationship to the large adjacent *magazzino* (warehouse).[2]

The *Palazzo Imperiale*[3] covers just under 3 ha and lies at the centre of Portus, on a spur of land that separates the Claudian and Trajanic basins and adjacent to the *Grandi Magazzini di Settimio Severo* (Fig. 5.1) This unique position suggests that it was key to the functioning of both basins and, therefore, to the port as a whole. The *Palazzo Imperiale* was clearly the headquarters of an official of some importance, possibly even the emperor, as its modern name suggests,[4] although there is no direct evidence as to who this might have been. The complex has been of interest to antiquarians and archaeologists since the later sixteenth century on account of the discovery of many columns, sculptures, inscriptions and other material that is known to have come from the site (Lanciani 1868: 170–1), and that have given rise to its name of *Palazzo Imperiale*.[5] The sumptuousness of the *Palazzo Imperiale* is evident from many of the early sources that discuss Portus. The best account, however, is by Lanciani (1868: 170–5) in the context of his description of the large-scale excavations undertaken at Portus by Alessandro di Torlonia in 1864–7: he reported the discovery of baths, a temple and a theatre, as well as the rich finds. Surprisingly, his short account remains the most detailed analysis of the complex to date,[6] even though it provides little more than a second-hand report. Furthermore, his only published plan of the complex, which features within his overall plan of Portus, is a mixture of sound observation and imagination (Fig. 5.2A).[7] However, he referred to several brick stamps and inscription fragments that seem to suggest that the *Palazzo Imperiale* was largely a Trajanic creation, with subsequent modifications under the Antonines (Lanciani 1868: 174–5).[8]

The plan of the *Palazzo Imperiale* drawn by Italo Gismondi in the context of his general plan of Portus (Lugli and Filibeck 1935) can be reconciled more easily to the remains that survive today, and benefited from the results of sondages undertaken by Lugli (Fig. 5.2B). One of these, for example, attempted to define a circular structure at the northern edge of the complex, which was interpreted as a possible temple (Lugli and Filibeck 1935: 91–2, figs 56–7). In the 1980s and again in the 1990s the Soprintendenza produced much-needed basic topographic plans of the ground and first floors of the complex and adjacent structures (Fig. 5.3). These have been complemented by the topographical and geophysical surveys undertaken in the context of the 1998–2005 geophysical survey of Portus (Keay, Millett and Strutt 2005: 98–102, figs 5.22–3) (Fig. 5.4), and the work associated with the Portus Project. Both of these have enhanced our understanding of the known layout of surviving first-floor structures, although their interpretation has been hindered by the substantial amounts of early twentieth-century demolition debris spread across the surface of the *Palazzo Imperiale*.

In contrast to the *Palazzo Imperiale*, the large building lying immediately to the northwest,[9] and usually identified as a warehouse, has never been the subject of any known excavation, and is mentioned only briefly by Lugli (Lugli and Filibeck 1935: 100–1). Its salient feature consists of a very substantial wall running eastwards from the *Palazzo Imperiale* for a distance of up to 250 m,

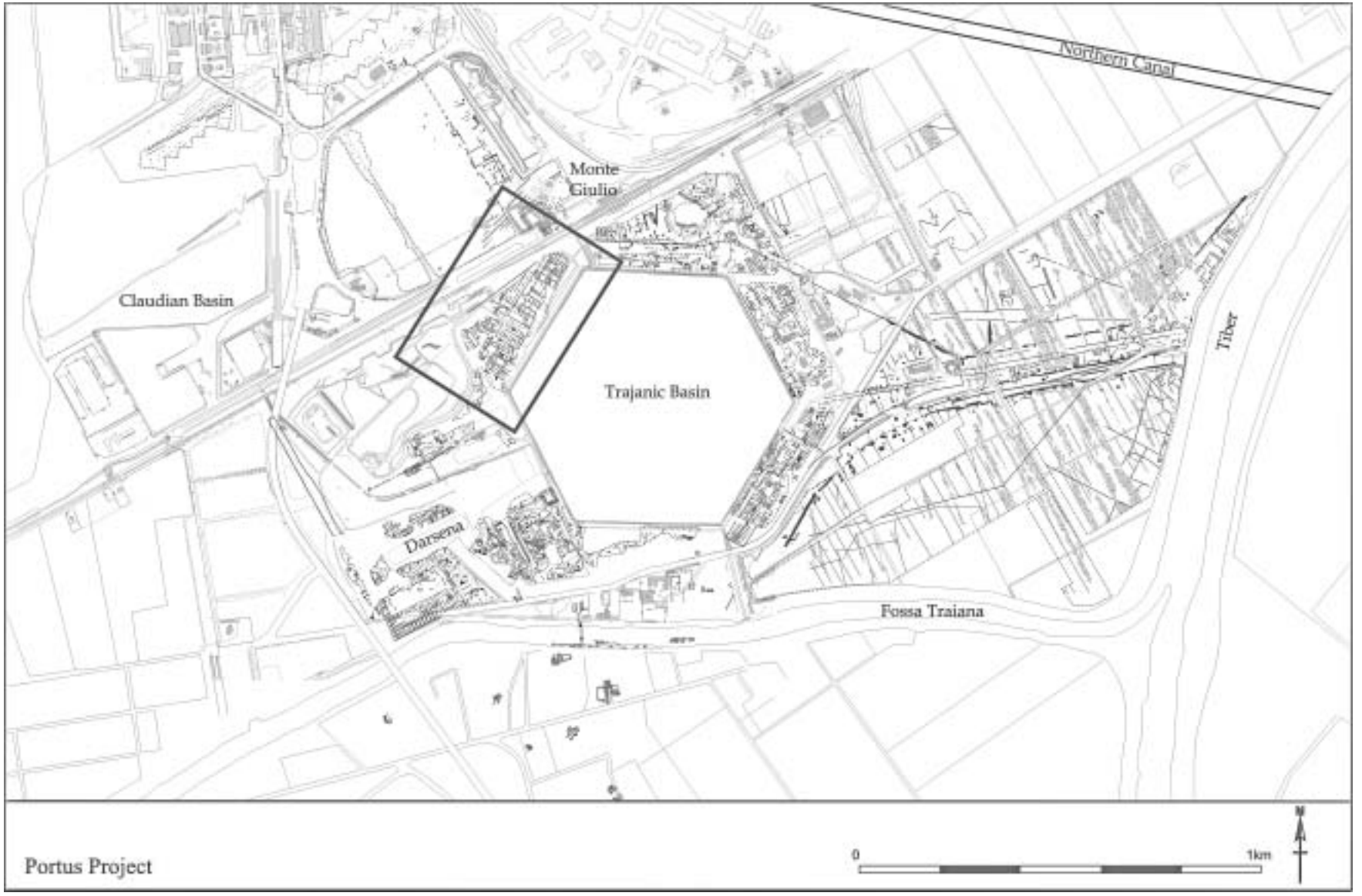


FIG. 5.1. **Plan of Portus showing the location of the *Palazzo Imperiale*.** *(Adapted from Keay et al. 2005: fold out (reverse).)*

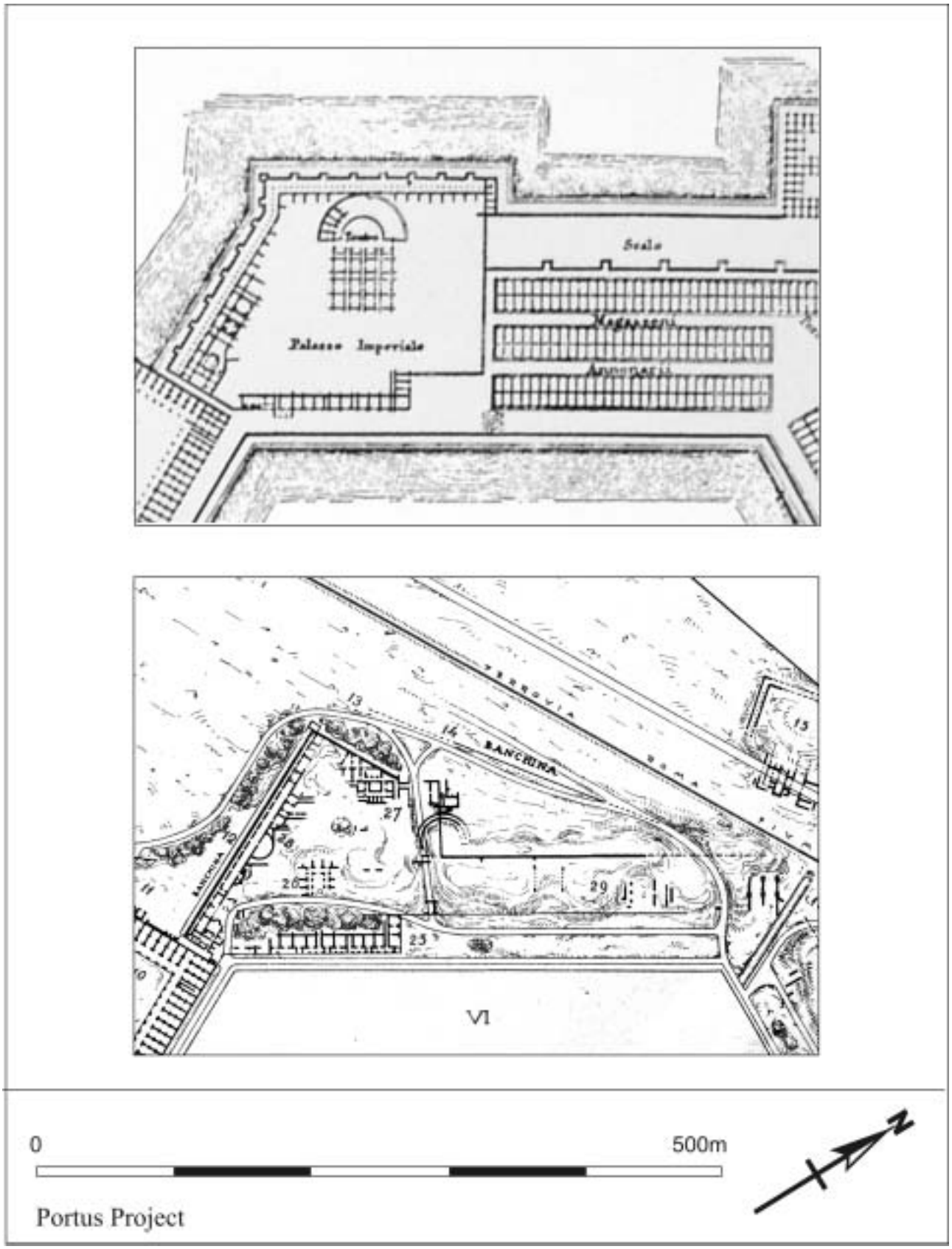


FIG. 5.2. **Early plans of the *Palazzo Imperiale*. A. Detail of Rodolfo Lanciani's plan of Portus showing the *Palazzo Imperiale*.** *(From Lanciani 1868.)* **B. Detail of Italo Gismondi's plan of Portus showing the *Palazzo Imperiale*.** *(From Lugli and Filibeck 1935: carta N III.)*

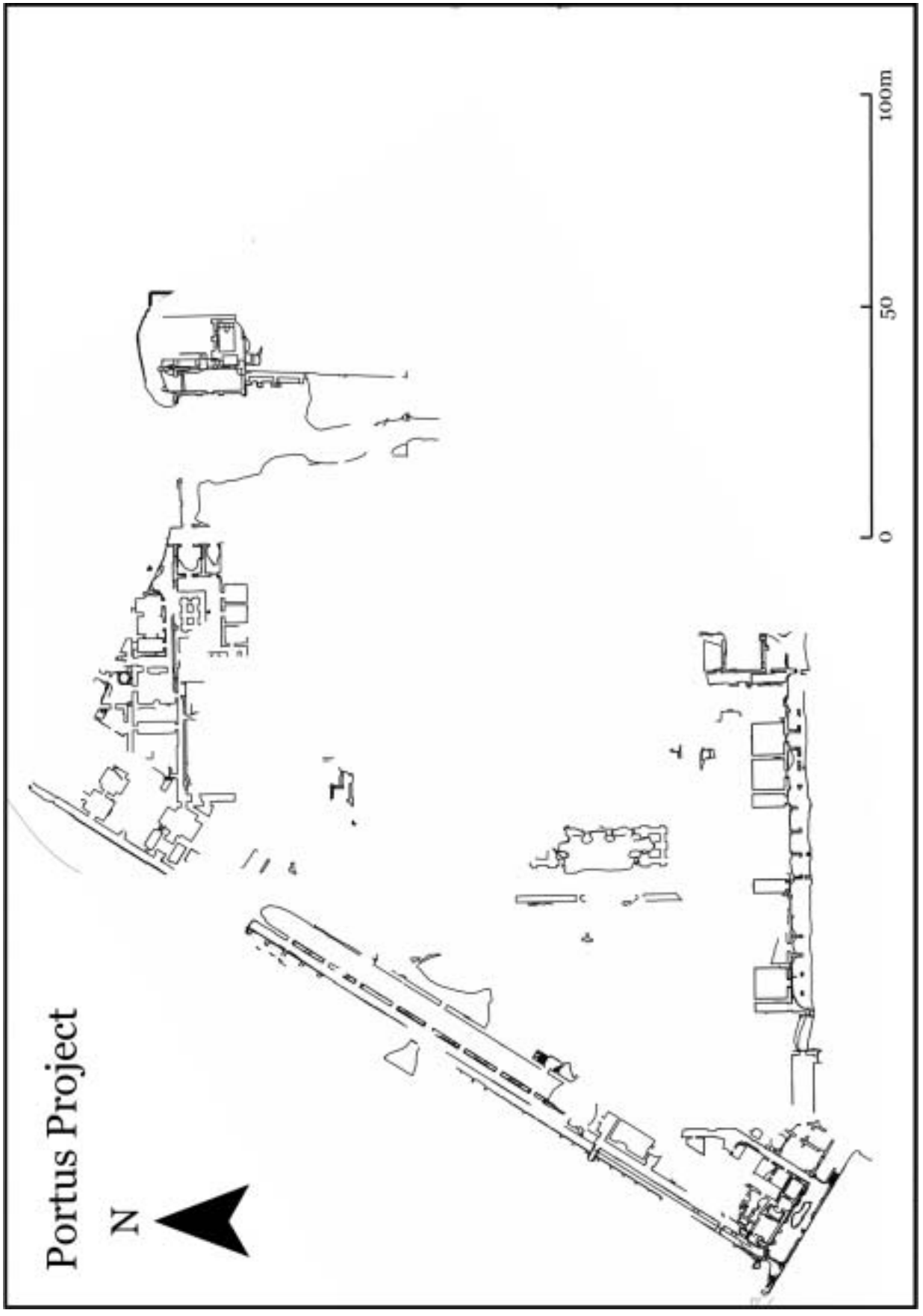


FIG. 5.3. Plan of the ground floor of the *Palazzo Imperiale* from a survey undertaken on behalf of the Soprintendenza per i Beni Archeologici di Ostia during the 1980s.

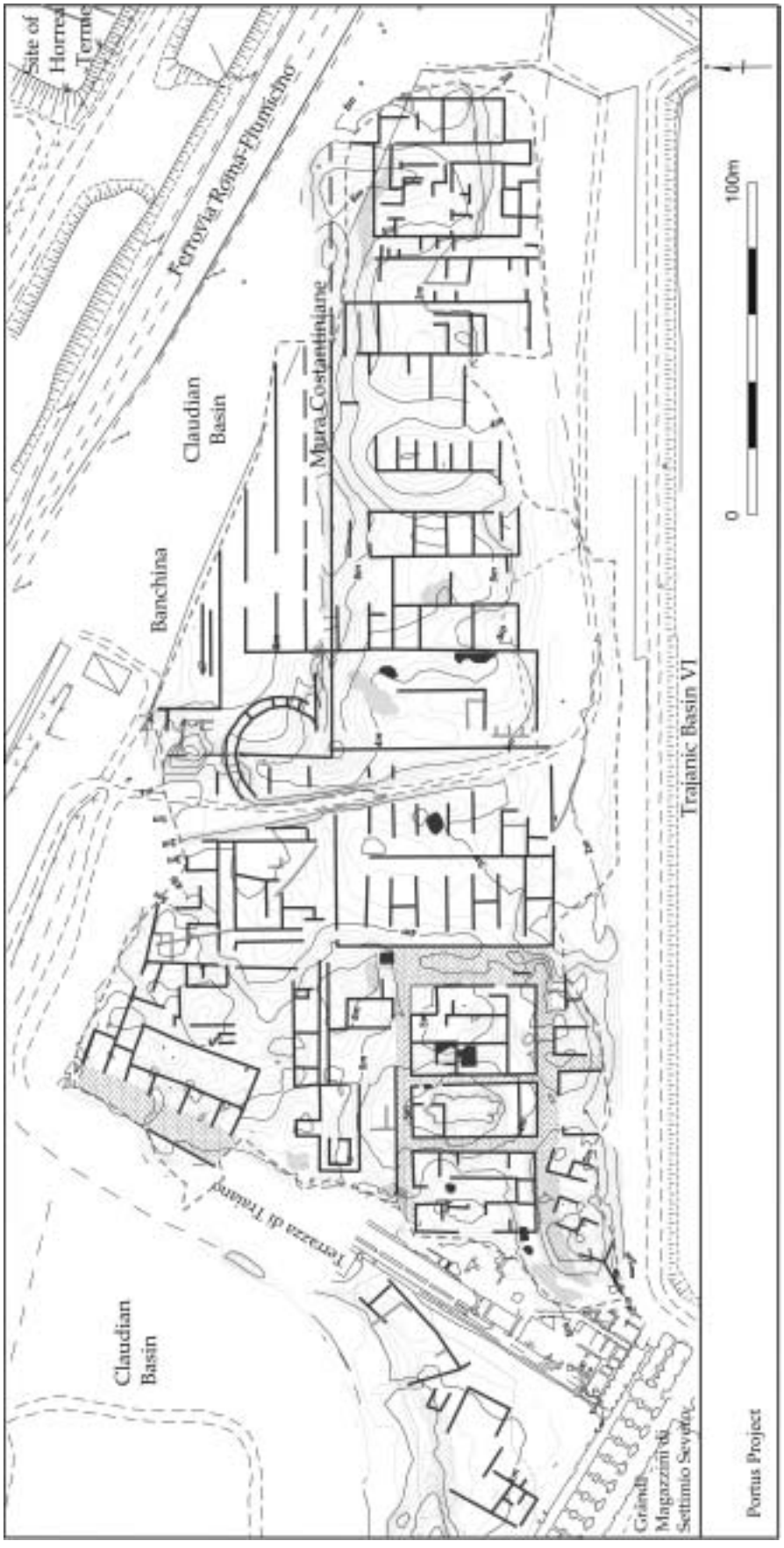


FIG. 5.4. Interpretation of the results of the magnetometer survey of the *Palazzo Imperiale* and adjacent warehouse. *(After Keay et al. 2005: fig. 5.23.)* This and all subsequent plans referring to the excavation adopt the site north orientation for convenience; this is at variance to true north.

as well as periodic perpendicular walls that are very clear in the topography and that run for some 80 m southwards in the direction of the Trajanic basin. The 1998–2005 geophysical survey of Portus suggested that this single building was composed of a row of smaller *horrea*, arranged perpendicular to it and separated from each other by corridors (Keay and Millett 2005a: 289).

## THE 2007–9 FIELDWORK

The fieldwork in 2007–9 focused upon the little known northern sector of the *Palazzo Imperiale*, with the aim of furthering our understanding of the origins, development and function of the entire complex. It built upon the recently-published geophysical and topographic survey of the whole of Portus (Keay *et al.* 2005). The excavations were part of an integrated strategy of topographic survey, intensive geophysics and excavation that was developed in order to answer research questions appropriate to the large scale of the site as a whole.

### TOPOGRAPHIC AND GEOPHYSICAL SURVEY

The *Palazzo Imperiale* is trapezoidal in plan and originally would have stood to three storeys. Its most salient features are the engaged arcade of the *Terrazza di Traiano*[10] that overlooks the Claudian basin on its western side, a small set of baths at its southwestern corner and a row of vaulted chambers that today open onto the Trajanic basin to the south. Most of the remainder of what survives consists of a network of partially understood concrete-vaulted basement structures (Plate 5.1) and a few first-floor walls. Prior to this fieldwork very little was known about the eastern edge of the *Palazzo Imperiale*, which is sundered from the rest of the complex by the sunken path that was dug in the early twentieth century, presumably to provide easy access to the Trajanic basin, a process that involved the demolition of substantial Roman structures.[11] The only visible structures prior to the excavation were the badly truncated cisterns that are discussed in this paper (p. 000). Details of these were mapped by means of a microtopographic survey and careful documentation of standing walls, in conjunction with reference to the detailed and unpublished survey undertaken by the Soprintendenza during the 1980s. This was further enhanced with intensive blanket programmes of high-resolution magnetometry (2007), large-scale ground-penetrating radar (GPR) (2008 and 2009), resistance tomography (2008) (Keay *et al.* 2009), and by intensive topographic survey and laser scanning (see below, Chapter 6 (Earl, Beale and Keay)). This has enabled us to produce enhanced plans of the ground and first floors of the *Palazzo Imperiale*.

### EXCAVATIONS

Excavation was focused upon an area of *c.* 2,000 $m^2$ that encompassed the northern edge of the *Palazzo Imperiale* on either side of the twentieth-century path, and the flatter lower-lying land beyond (Plate 5.2). It was carried out on the basis of a 'question and answer' strategy that combined open-area excavation and sondages that revealed a palimpsest of moles, walls and other structures that developed over at least seven main periods of occupation, stretching between the early second and fourteenth centuries AD, with the cut of the path providing two control sections through the site. The excavated sequence was further calibrated by a series of deep bore-holes for environmental cores drilled to a depth of up to 10 m in different parts of the excavated area.[12]

#### THE PRE-TRAJANIC *PALAZZO* (PERIOD 1)

Results from the rest of the excavation area indicate that remains of pre-Trajanic structures are buried deeply. The exception is a short stretch of a very substantial concrete mole (2014) built from concrete with brown *caementa* that was discovered running from east to west at the northern edge of the excavation and that subsequently was incorporated into the *Palazzo Imperiale* under Trajan (Period 2) (Plate 5.3). It was perforated by a series of large holes for wooden beams, and wave action had undercut the lower part of the mole in antiquity, creating a characteristic 'notch' (Plate 5.4). GPR and topographic survey revealed that the mole continued eastwards (6000), beneath the modern path, while excavation demonstrated, by uncovering its foundations sandwiched between Trajanic (Period 2) realignments, that it continued westwards (2218). Furthermore, GPR survey suggests that it extended beyond this in a southwesterly direction, deep beneath the *Palazzo Imperiale* (Plate 5.5). This mole at present is impossible to date, apart from stating that it pre-dates the Trajanic period (Period 2). It also bears a very strong resemblance to the moles of supposedly Claudian date uncovered during building work associated with the Aeroporto

Trajanic moles, laying bare some of the underlying *caementa*, while the path itself was flanked by a number of post-holes. The fact that the path seems to head directly towards the gateway in the 'Mura Costantinine' suggests that both it and the first phase of fortification were contemporary and, thus, that the former may have dated to some time after the later fifth century AD. Furthermore, the land on either side of the path was used for a number of amphora, tegula and cist burials (Period 6/Phase 2). Some were sited immediately in front of the late antique walls, while others had been dug into the earlier fills between the footings of the concentric walls of the amphitheatre (Building 4).

## DISCUSSION

### THE PRE-TRAJANIC *PALAZZO IMPERIALE*

The discovery of the pre-Trajanic mole (2218 = 2014 = 6000) at the northern edge of the excavation is of major importance. It makes clear that the original line of the Claudian basin in this part of Portus did not project northwestwards, as it did with the completed *Palazzo Imperiale* from the Trajanic period onwards. It appears, instead, that it extended in an arc southwestwards, coinciding with the alignment of the westernmost side of the Trajanic hexagonal basin. This suggests that Trajan's architects may have chosen the alignment of the Claudian basin in this part of the harbour as the reference-point for the laying out of the hexagonal basin (**Fig. 5.18**). A core drilled through the Trajanic mole (2007)[34] revealed the existence of marine deposits beneath it, suggesting that the area south of the pre-Trajanic mole may have been open water, and provides a hint that the pre-Trajanic harbour in this part of the port may have been lagoonal in nature.

There is no evidence as yet for the whereabouts of a precursor to the *Palazzo Imperiale* or any other possible buildings in this part of the port.[35] The discovery of lead *fistulae* stamped with the name of the Empress Messalina (Lanciani 1868: 170), however, suggests that there may have been some kind of official building by the middle of the first century AD, and that on present evidence it can have lain only beneath the southwestern quadrant of the later *Palazzo Imperiale*.

Other evidence for the pre-Trajanic harbour across the port is minimal and, to date, has been limited to the identification of deeply-bedded stretches of mole, stretches of wall made from apparently early *opus reticulatum* or certain kinds of architectural decoration.[36] On this basis possible 'Claudian' structures have been identified in excavations at the *Antemurale* (see Chapter 8), the *Terme della Laterna* (Lidia Paroli and Giovanni Ricci, pers. comm.), and the *Basilica Portuense* (Paroli 2005: 259–61), and were the basis for assigning the first phase of the *Darsena* and adjacent structures to the pre-Trajanic period (Keay and Millett 2005a: 275–8).

### THE *PALAZZO IMPERIALE* DURING THE SECOND CENTURY AD

The evidence from these excavations suggests that the *Palazzo Imperiale* was a *de novo* construction of late Trajanic date. As yet there are few good ceramic deposits to give us a clear date. However, the epigraphic fragments reported by Lanciani (1868: 174)[37] as having been found at the site indicate that an important stage in its construction had been reached by AD 112–17, even though their precise point of discovery within the complex remains unknown. Furthermore, brick stamps from both these excavations and those discussed by Bloch imply that construction continued until at least AD 115–16, with subsequent work continuing under Hadrian and the Antonines.[38] This date would seem to be borne out in general terms by the *opus reticulatum* technique used in the brick-faced construction, while the *Terrazza di Traiano* traditionally has been dated also to Trajan's reign, even though there are no obvious dated stylistic parallels for it.

The relationship of the Trajanic *Palazzo Imperiale* to the southwesterly alignment of the pre-Trajanic mole makes it clear that the former was built upon land reclaimed from the southeastern corner of the Claudian basin, presumably upcast displaced during the excavation of the hexagonal basin itself.[39] Indeed, logic would suggest that the large quantities of sand needed for the levelling-up of the Open Area to the east of the *Palazzo Imperiale*, and quite possibly the area beneath Building 5,[40] was also derived from the same source. If so, this would have represented a massive engineering feat, and one that helps make sense of the claim made by Pliny in his Panegyric to the Emperor Trajan, that 'he let the sea into the shore and moved the shore out to sea' (*Panegyricus* 29.2). All of this suggests, therefore, that the *Palazzo Imperiale* complex was completed at a late stage in the overall construction process of the harbour, a conclusion supported by the late date of the brick stamps from the site.

The layout of the completed 3 ha complex was distinctive. It was trapezoidal in shape, overlooked both the Claudian and Trajanic basins and was served

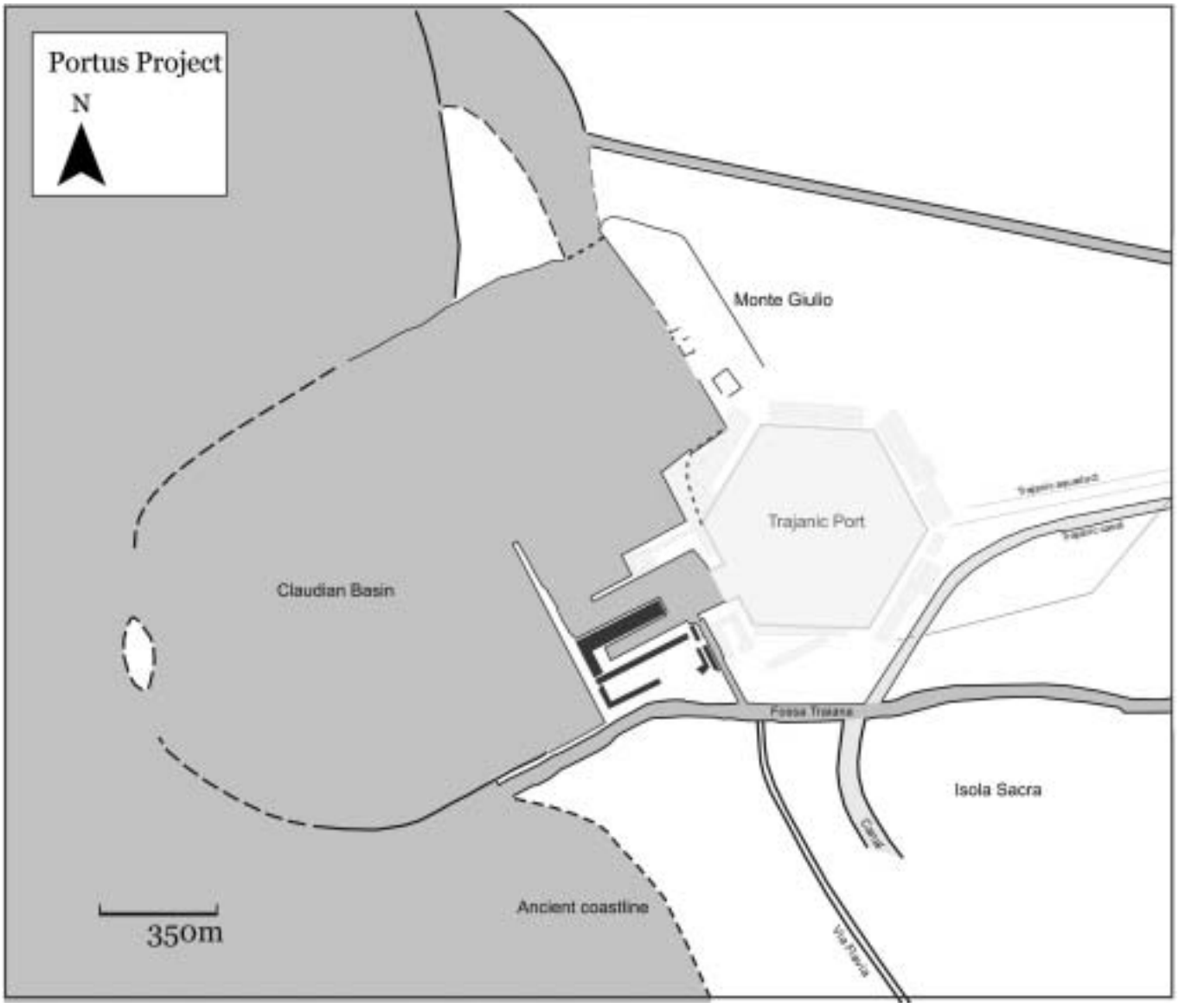


FIG. 5.18. Interpretative plan showing the course of the Period I mole that defined the southern side of the Claudian basin and its relationship to the Trajanic *Palazzo Imperiale* and hexagonal basin. *(Portus Project.)*

by the large Open Area discovered during these excavations to the east. In order to understand better the significance of these developments within the context of the *Palazzo Imperiale* as a whole, the first results of the topographical and geophysical surveys of the remainder of the complex have been used to produce a summary plan of the whole of the first floor (Fig. 5.19).[41] This allowed broad functional areas to be identified on the basis of known standing structures and geophysical anomalies, and will be amended in the light of ongoing and future work. The complex offered monumental façades to the west and south, but also had a more 'functional' area to the east, which was integral to Building 5. Fresh water consumption played an important role in its functions. It was probably supplied by the aqueduct that appears to have formed the east–west spine of Building 5. This fed a major two-level cistern at the centre of the complex, which in turn may have supplied a bath-suite in the southwest corner of the complex, a two-level cistern on its northern edge, and the Cistern Block discovered in the course of these excavations. Some of the rooms, at least, would have been decorated with a range of sculptures, including personifications of emperors, philosophers and mythological figures (Lanciani 1868: 172).[42] It is unclear what kind of

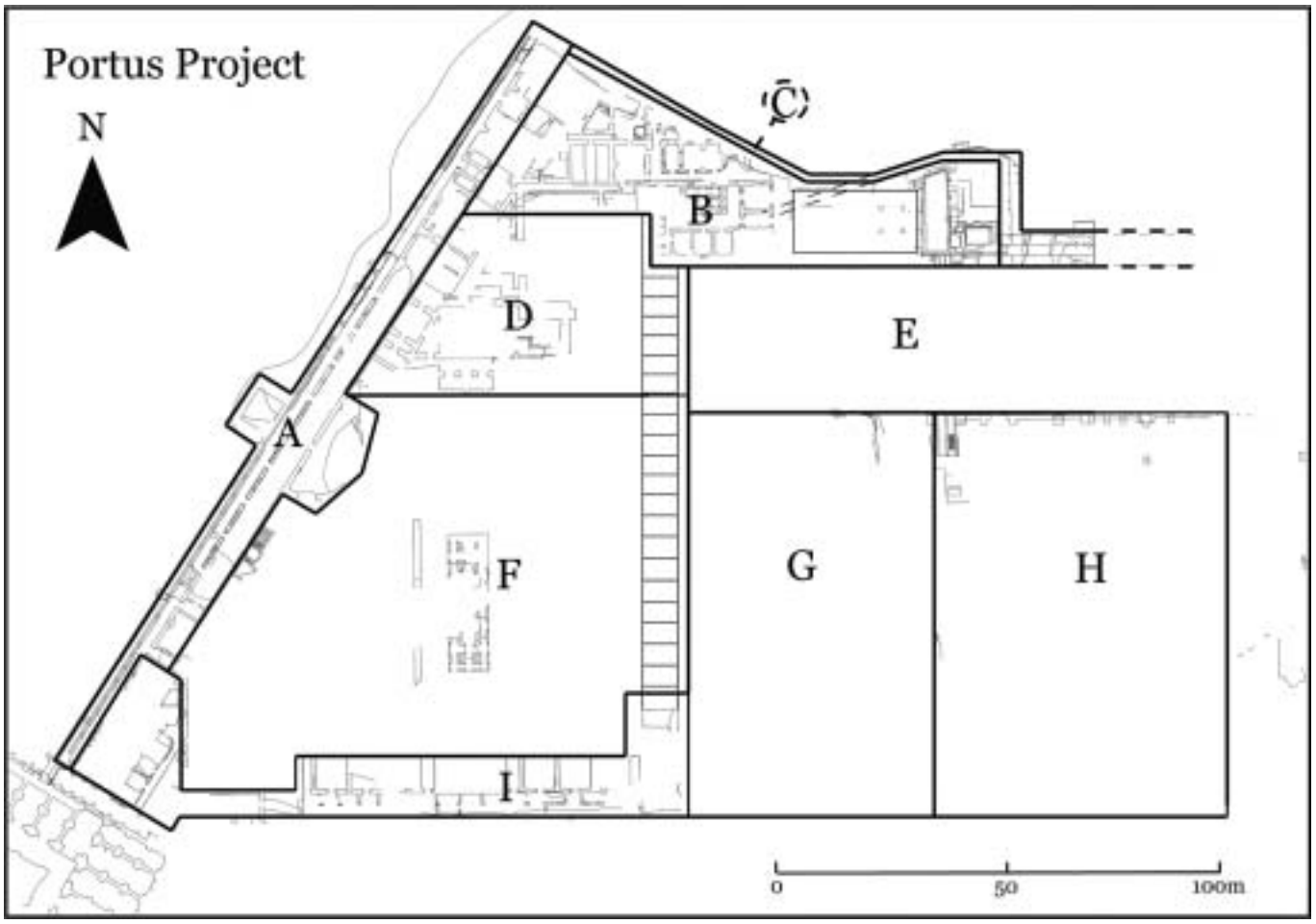


FIG. 5.19. Interpretative plan of the *Palazzo Imperiale* complex during the Trajanic and Hadrianic periods (Periods 2 and 3), incorporating the results of the excavation, and of the topographic and geophysical surveys. The building can be broken down into the following zones: A: western frontage onto the Claudian basin, comprising a monumental colonnade and hemicycle; B: area of functional rooms; C: north frontage onto the Claudian basin and mole; D: rectangular space; E: open area; F: possibly residential area focused upon the cistern; G: space transitional to Building 5; H: Building 5; I: south frontage onto the hexagonal basin and southwestern baths. *(Portus Project.)*

building, if any, lay on the tongue of land later occupied by the *Grande Magazzini di Settimio Severo*.

The Trajanic *Palazzo Imperiale* is clearly distinguishable from the complex bearing the same name at Ostia, whose similarity to other large insulae at the river port has been stressed recently (Spurza 2002: 127–30). It is possible that this complex was inspired by the large residential *villae maritimae*[43] that are to be found along the Tyrrhenian coast of Italy, particularly in the bay of Naples, and that the intention of Trajan's architects was to create the effect of a villa within the 'maritime' context of the two basins.

Alternatively, its position within the Claudian basin can be equated roughly with the position of the Ptolemaic and early Roman palace quarter (*Akra Lochias*) at the southeastern corner of the eastern harbour at Alexandria (Mackenzie 2007: 68–71, 173–8).[44] In sum, therefore, the *Palazzo Imperiale* at Portus lends further support to the idea that there was an important ideological and symbolic element underlying the conception of the Trajanic enlargement of Portus.[45] The wealth and sophistication of the décor suggests that it must have been used by an important official, possibly the *procurator annonae Ostiae*, who was a *libertus* responsible to the *praefectus annonae* and first attested during the reign of Trajan (Bruun 2002: 163–5). It is possible also that it could have been used periodically by emperors travelling to and from Rome — even though doubt has been expressed that the emperor ever travelled through Portus.[46] By this time, Portus was established fully as the maritime port of Imperial Rome and would have been the most conveniently located landfall for rapid access to the City.

## THE SUBSEQUENT DEVELOPMENT OF THE *PALAZZO IMPERIALE*

During the early third century AD, access to, and unloading within, the *Palazzo Imperiale* by means of the Open Area was suppressed, with the construction of the amphitheatre-shaped building[47] and its associated courtyard and garden (Fig. 5.20). Overall, this suggests that the eastern side of the complex may have acquired a function more related to display or entertainment than hitherto. At the same time, however, the amphitheatre-shaped building itself was effectively enclosed in the space between the Cistern Block and Building 5. This meant that it could be seen only from that part of the Open Area lying to the east and was in some measure a non-public building.

The nearest parallel for the amphitheatre-shaped building would be the *Ludus Magnus* in Rome, which was built in the Domitianic period and rebuilt under Trajan (Colini and Cozza 1962). This, too, was effectively 'enclosed' and not readily visible as a free-standing ampthitheatre. However, it was also significantly larger and lacked the hemicycle and richly-decorated rooms adjacent to the amphitheatre-shaped building. If there is any value in this parallel, its presence at Portus conceivably could be related to the *vigiles*, a detachment of which was stationed at Portus in the Severan period.[48] It would make sense that a practice arena for this semi-military body was located close to the prime source of authority in the port. Another possibility is that the building was built to stage *naumachiae* on a modest scale and in the

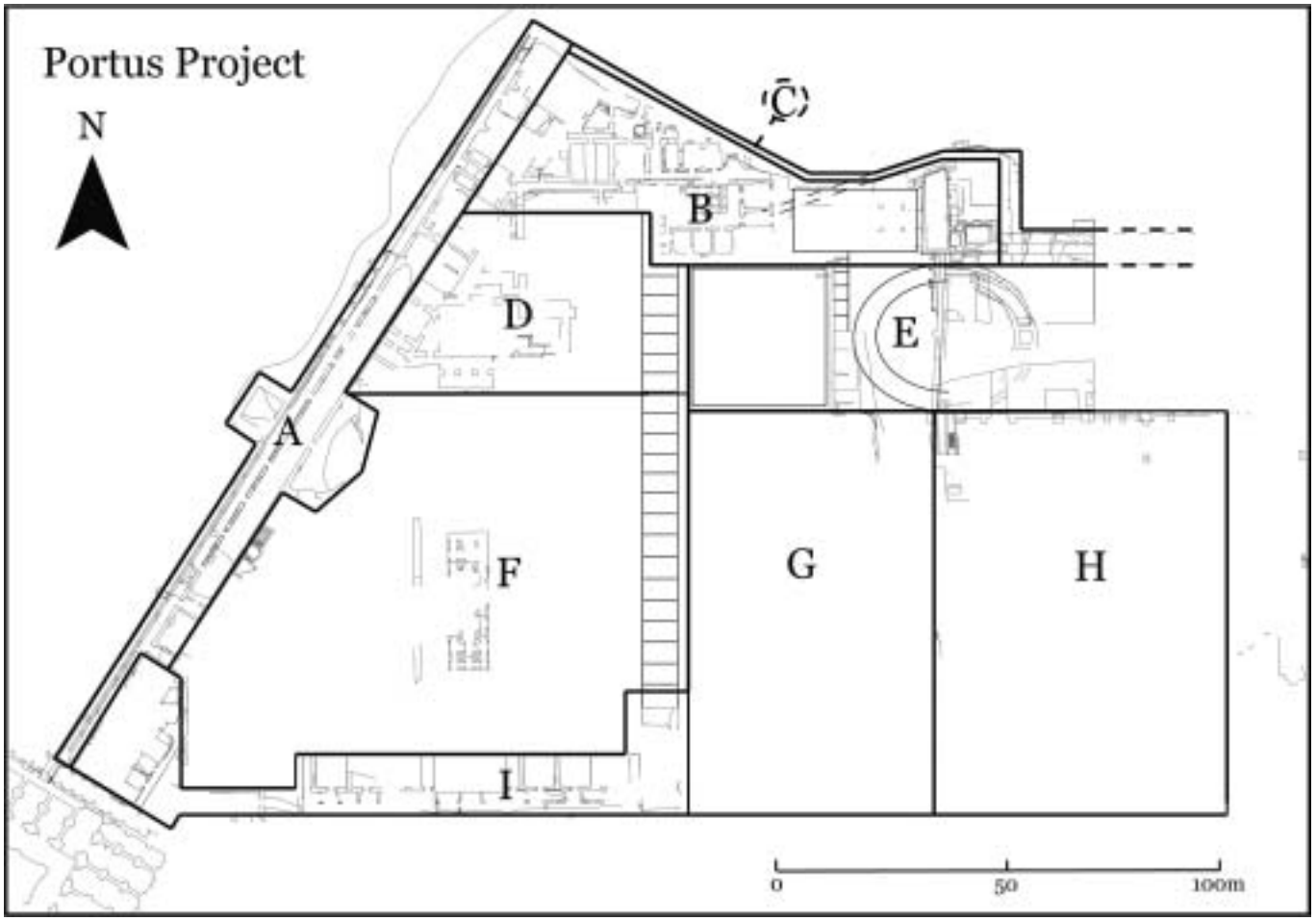


FIG. 5.20. Interpretative plan of the whole of the *Palazzo Imperiale* during the early third century (Period 3), incorporating the results of the excavation, and of the topographic and geophysical surveys. The building can be broken down into the following zones: A: western frontage onto the Claudian basin, comprising a monumental colonnade and hemicycle; B: area of functional rooms; C: north frontage onto the Claudian basin and mole; D: rectangular space; E: amphitheatre and adjacent rooms and courtyard/garden; F: possibly residential area focused upon the cistern; G: space transitional to Building 5; H: Building 5; I: south frontage onto the hexagonal basin and southwestern baths. *(Portus Project.)*

relative privacy of the *Palazzo Imperiale*. The proximity of the Cistern Block on its northern side lends some support to this view, and perhaps to the possibility that it acted as some kind of fish-tank or decorative pool.[49]

Whichever interpretation one chooses, the initiative conceivably could have been tied up with the establishment of a new official who was probably based at Portus, the *procurator portus utriusque.* He is first attested epigraphically in AD 247,[50] and even though the whereabouts of his headquarters within the port are not known, it would seem logical to suppose that it might have been the *Palazzo Imperiale*. An alternative interpretation is that the function of the amphitheatre was related closely to the continued use of the *Palazzo Imperiale* as some kind of imperial residence, albeit a temporary one: the amphitheatre adjacent to the Piazza d'Oro at Hadrian's Villa is a case in point (Prina Ricotti 2001: 411–17), while the Castrensian amphitheatre adjacent to the *Palatium Sessorianum*, a complex that was begun during the reign of Septimius Severus and completed in that of Elagabalus (Colli 1996) in the earlier third century AD, is another.[51]

### The late antique *Palazzo Imperiale*

The principal topographic change during the late antique period saw the incorporation of the *Palazzo Imperiale* and Building 5 within the walled circuit that enclosed the whole port. In the case of the latter, the walls responded to the pre-existing topography and ran along the frontage of the building, while the corridors down to the Trajanic hexagon were systematically demolished to create a steep bank that sloped downwards from north to south. With the *Palazzo Imperiale*, however, the defences needed to run northwards and keep the Cistern Block within the walled area. Consequently, the amphitheatre-shaped building and luxurious rooms lying to the west had to be demolished, thereby creating a flat open area behind the walls. It also defined an open area that lay between these stretches of wall, the Cistern Block (Buildings 1 and 2) to the north and the Period 1 and 2 moles.

At one level the inclusion of both buildings within the walled circuit is testimony to their continued importance during the later fifth and sixth centuries, which is hardly surprising in itself. However, while corroborative data is needed from other parts of both complexes, this evidence does suggest that the construction of the late antique fortifications in the late fifth century AD represented a major change in the character and uses of both buildings. In the first instance it seems that the water within the Claudian basin had contracted quite significantly, to the point where the old Period 1 mole was no longer at the water's edge, and what had been a dock between the Period 1 and Period 2 moles had degenerated into a zone of passage frequented by people using the gateway in the fortifications. In short, the *Palazzo Imperiale* had become landlocked, a development that may go some way to helping us to understand the need for substantial fortifications in this part of the port, which may have been erected in response to both land- and sea-based threats. Furthermore, the blocking of the gate in the sixth century is paralleled by a similar development at the *Antemurale*, raising the question as to whether gate-blocking was a co-ordinated response to external threat, possibly related to the Gothic Wars. Secondly, Building 5 clearly cannot have continued to function as before, since much of its northern part had been demolished, while the *Palazzo Imperiale* had lost a major monumental focus. The final and most significant development was the increasingly widespread excavation of burials within the *Palazzo Imperiale*, in Building 5 and in the Open Area to the north of the latter. This is testament to a use of space that was very different to that which had prevailed earlier.

# The Isola Sacra: reconstructing the Roman landscape

*Paola Germoni, Martin Millett, Simon Keay, Joyce Reynolds & Kristian Strutt*

## INTRODUCTION (Martin Millett)

One element within the Portus Project involves increasing our knowledge of the hinterland of the port, especially through an extension of the geophysical survey that previously examined the eastern margins of the site (Keay, Millett and Strutt 2005b: 120–72). The focus of the current work is the area of the Isola Sacra, which lies to the south, between the Roman harbour of Portus and the ancient city of Ostia. The Isola Sacra is an artificial island created at the mouth of the Tiber, the name of which is attested by Procopius (5.26) (Testini 1975: 46–7). It is bounded to the west by the Tyrrhenian sea, to the east and south by the river Tiber, and to the north by the artificial cut of the Fiumicino canal (also called the *Fossa Traiana* in the archaeological literature, although it is now known to have originated in the Claudian period — Keay and Millett 2005a: 277). The island is formed of fluvial and alluvial deposits laid down in the delta of the river Tiber, and was originally a coastal spit where the river turned south on approaching the sea (Arnoldus-Huyzendveld 2005: fig. 2.2).

The modern topography (Fig. 12.1) differs considerably from that of antiquity in two respects. First, the present course of the Tiber was established only after a major flood in 1557, during which the river created a new channel by cutting through the neck of a tight meander that lay at the southeast corner of the island. The area within this meander that had been settled in the Roman period was thus separated from the Isola Sacra and became part of the eastern bank of the river surrounded by an oxbow lake (Arnoldus-Huyzendveld 2005: 19, fig. 2.3). Second, the island, which is now broadly rectangular in plan, is about three times bigger than it was in the classical period on account of the progressive extension of its shoreline to the west as a result of deposition in the delta (Arnoldus-Huyzendveld 2005: 21, fig. 2.3). The Roman coastline is estimated to lie approximately along the line of the modern via della Scafa, approximately 3 km inland from the modern coast. In the Roman period the island would have encompassed an area of about 330 ha, measuring 1.6 km from east to west and 2.6 km from north to south.

After initial small-scale fieldwork in the northern part of the island in 2005 (Strutt 2005), the first main seasons of work within the current project were undertaken in 2008 (Strutt, Richardson and Millett 2008) and early 2009 (Strutt 2009). It is intended to complete the survey in 2010, so rather than present an interim report on this current work, the intention of the present paper is twofold. First, it provides an account of the extensive archaeological work that has been undertaken in the area already, providing an interpretative account of the evidence and defining the questions to be addressed in the survey. Second, the strategy of the current survey is presented, together with illustrations of the preliminary results. The opportunity also is taken to provide a definitive gazetteer of past archaeological work in the area as a reference-point for future synthesis (below, p. 000). Within the text, reference is made to specific excavations within this gazetteer by site number.

## PREVIOUS WORK (Paola Germoni)[1]

The Isola Sacra was traversed from north to south by the Via Flavia, the principal axis of communication between Ostia and Portus, the two main coastal centres of *Latium Vetus*. The extensive cemetery of Portus, with its monumental mausolea and numerous more ordinary graves, developed along both sides of this road between the last decades of the first and the beginning of the fourth

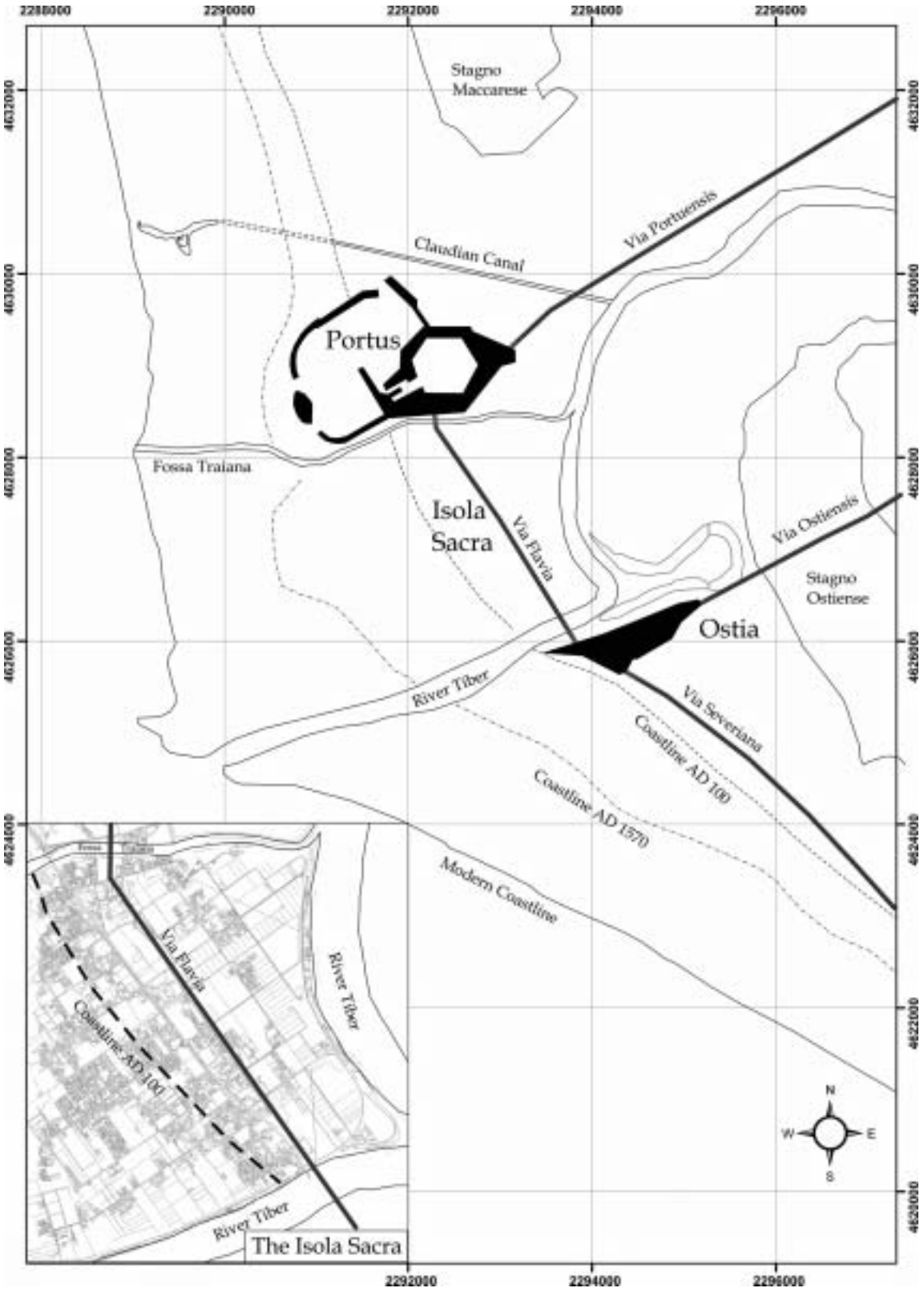


FIG. 12.1. **The Isola Sacra, with the principal sites discussed in the text.** *(Portus Project.)*

centuries AD. It is one of the most significant known examples of Roman funerary architecture and is a key point of reference for understanding associated funerary rituals.

Archaeological knowledge of the Isola Sacra, associated since the Renaissance with the presence of the *statio marmorum* at its northern edge (Paroli 2005a: 44) (Fig. 12.2: Site 28a) and from the seventeenth century with its cemeteries (Fig. 12.2: Sites 11, 16, 18–24, 27, 30, 32, 34–5), was increased significantly by exploration in the 1970s. A series of buildings including religious structures was discovered on the south bank of the Fiumicino Canal (Fig. 12.2: Sites 3, 7, 9, 12–15), providing evidence for the character of the river-port settlement on the Isola Sacra, the function of which was to process and facilitate the transport of goods along the *Fossa Traiana*. The Isola Sacra was organized essentially around two main alignments: a land-based one oriented northwest to southeast, and a fluvial one, following the *Fossa Traiana* itself, which ran from east to west.

## THE ROAD

The course of the Via Flavia (Keay and Millett 2005a: 279), which ran in a straight line from Torre Boacciana to Sant'Ippolito, has been known on the southern side of the Isola Sacra since 1879 (Fiorelli 1880; Borsari 1889). The road itself was 7.8 m wide and was composed of two layers: the uppermost consisted of rammed gravel *c.* 90 cm thick, overlying a level of tufa on top of the natural sand. The road, sections of which have been discovered at locations not precisely known today, has suffered from the continued removal of gravel for use in the construction of the present-day via della Scafa, which was completed in 1880.[2] The absence of any remains of the north–south road in the northern part of the island was noted by Calza (1928: 137), who related one group of tombs (*Opera Nazionale Combattenti* — Fig. 12.2: Site 20) to a secondary road distinct from the main route of communication between Ostia and Portus, which he considered to be the final stretch of the Via Severiana.

It was only with the large-scale excavation of the principal cemetery area in 1938 (Fig. 12.2: Site 35) that a long stretch of the road identified as having two carriageways *c.* 10.5 m wide.[3] Given the sandy nature of the soil, the edges of the road were retained by parallel *opus reticulatum* walls reinforced with large rectangular tufa capstones and supported by external buttresses at *c.* 3 m intervals. A continuous central spine separated the polygonal basalt blocks of the western carriageway from the compacted gravel surface to the east (Calza 1940: 21–5, fig. 2).

On the south bank of the Fiumicino Canal, the discovery of another segment of road with basalt paving slabs during the excavations by Veloccia in 1972 allowed the northern extent of the road to be documented. As it approached the Ponte di Matidia it widened to form a paved piazza, with evidence of various phases of use dating to between the second and the seventh centuries AD. The alignment of the road and its relationship to the buildings facing onto the canal suggest that the scheme can be ascribed to a single phase of planning, and is best understood in the context of the development of Portus under Trajan.

Stratigraphic excavation of the road within the cemetery in the mid-1980s allowed its chronology and that of the underlying preparation of both carriage-ways to be established. The discovery of an *as* of Galba pointed to a Flavian date for its initial construction: furthermore the foundation levels beneath the basalt paving and river gravel surfaces were the same, underlining the fact that they were constructed as one (Baldassare 1987: 127–8, note 1 e 2, fig. 26). There is no obvious explanation for the existence of the pair of carriageways, and the extent of their continuation beyond the excavated area is as yet unknown.

The line of the road between the principal excavated cemetery (Fig. 12.2: Site 35) and via Redipuglia has not been confirmed by excavation, although further north, northwest of Sant'Ippolito, stretches of a narrower paved route have been located. However, an excavation on the line of the road a little further south in 1999 uncovered a building (Fig. 12.2: Site 24) that seems to block the line of the road at this point. The intermediate course of the road between via Redipuglia and the cemetery is clearly visible on satellite photos, although recent excavation here revealed that the surface of the road has been removed almost completely, leaving only the underlying preparation layers (Fig. 12.2: to the west of Site 32).

Further stretches of the basalt-paved road on the northern side of the Isola Sacra have been discovered during construction work further south (Fig. 12.2: Sites 36–8). All were sealed by humic soil and are of a similar constructional technique. *Opus reticulatum* retaining walls with external buttresses are consistently present, while the lowest layers of the road preparation are homogeneous. A consistent difference is the absence of any basalt slab surface, with excavations

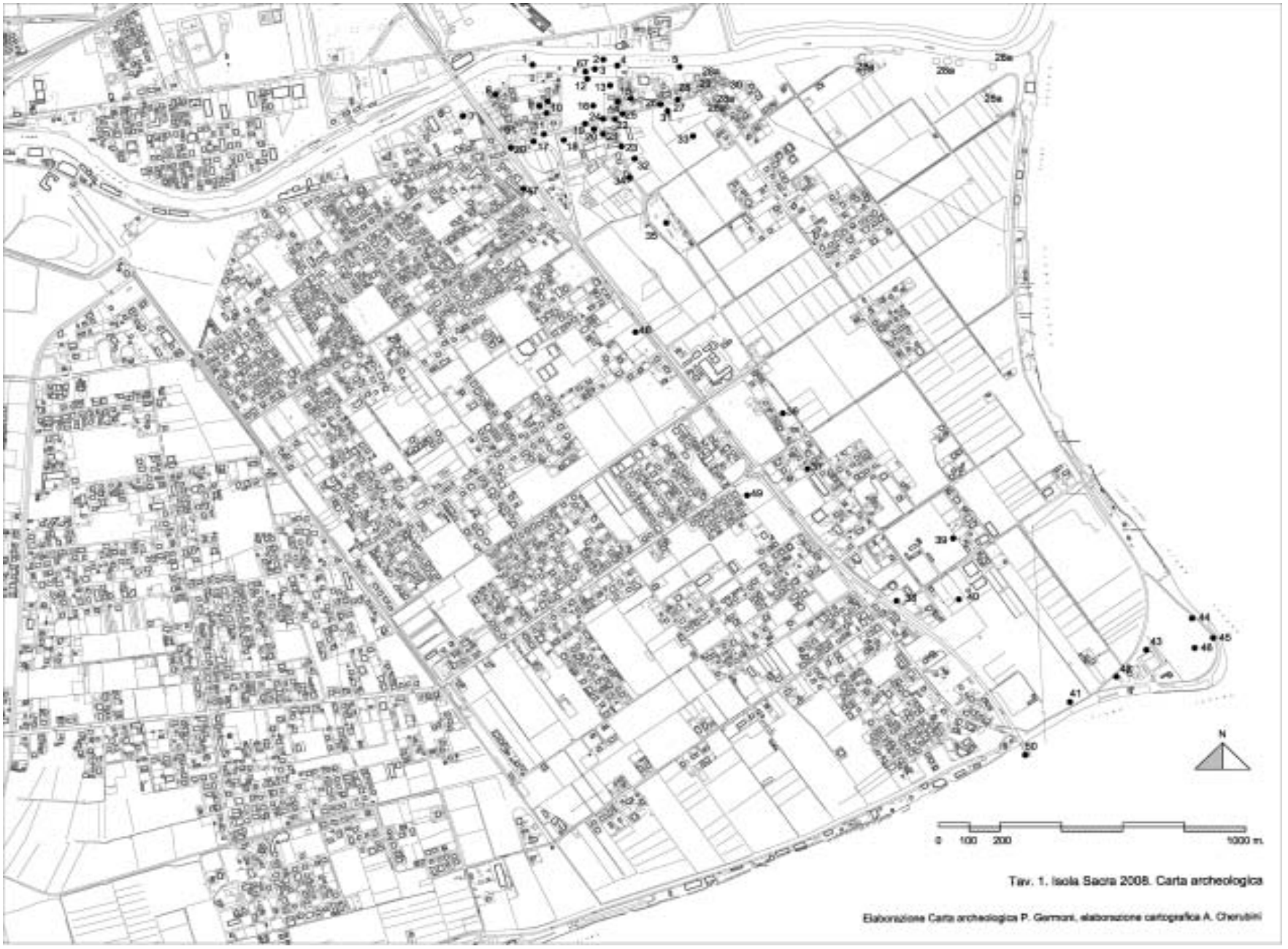


FIG. 12.2. Map of the Isola Sacra showing the location of the sites discussed in the text and listed in the gazetteer. Filled circles represent sites known from the archives of the Soprintendenza per i Beni Archeologici di Ostia; hollow circles represent sites located from bibliographical sources.

almost exclusively revealing rammed pebble gravel surfaces that, in the stretch near via Falzarego (Fig. 12.2: Site 38), exhibit ancient wheel ruts parallel to the alignment of the road (Lauro 1993: 169, figs 3, 4). The largely homogeneous construction technique of the road, notwithstanding minor variations in surfacing material, and its close relationship to monumental areas in some stretches confirms that it was a single construction project. It also indicates that the use of basalt paving was confined to the most intensively used stretches, while the sporadic presence of agricultural settlements along its southern stretch (Meiggs 1973: 265) may have determined the use of gravel here. However, one important 1879 source argued against this, describing how, as it left Ostia, the road (Fig. 12.2: Site 50) had a basalt slab surface,[4] making it likely that the polygonal basalt blocks were systematically removed during the transformation of the area in the years 1879–80, a time when the damage to it was reported to the Prefettura.[5]

## THE CANAL FRONTAGE

A complex of structures was discovered along the south bank of the *Fossa Traiana* at the beginning of the last century. Works by the Ufficio Speciale del Genio Civile on the upgrading and widening of the Fiumicino canal in 1900 led to the discovery and subsequent destruction of an important series of structures that formed the monumental façade of this suburb of Portus at Correntini di Porto, to the northwest of the church of Sant'Ippolito. The excavation report describes three groups of buildings (Fig. 12.2: Sites 1, 4, 5) that were formed by rooms that were parallel to each other and perpendicular to the canal, and some of which had mosaic floors. They were interpreted as warehouses, largely on account of the fact that they were single-storey buildings (Gatti 1911).

A far broader picture of the use of the canal frontage during the Roman period emerged as a result of the 1969 and 1974 excavations, clarifying the suburban character of this sector of the Isola Sacra. The structures on the south bank of the *Fossa Traiana* developed in tandem with the port itself. They comprised a monumental façade stretching for over 500 m along the bank of the *Fossa Traiana*, behind which was a settlement that was clearly partly urban in character and articulated around a variety of spaces designed and used for a range of functions. These included warehouses (Fig. 12.2: Sites 1, 4, 5), working areas (Fig. 12.2: Sites 9, 15), commercial buildings (Fig. 12.2: Sites 3, 13), baths (Fig. 12.2: Sites 7, 12), cult buildings (Fig. 12.2: Sites 7, 14) and cemeteries (Fig. 12.2: Sites 16, 18–24). As with many of the structures along this bank of the *Fossa Traiana*, the baths (Fig. 12.2: Site 12) exhibited evidence for a first phase of construction dating to the second half of the second century AD, with successive enlargements during the course of the third and fourth centuries.

Of major importance to the settlement were the bridge (Fig. 12.2: Site 2), which spanned the *Fossa Traiana* and provided access to Portus, and the final stretch of the Via Flavia (Fig. 12.2: Site 13), which hitherto had been investigated only in the State-owned area of the cemetery and on the south side of the Isola Sacra opposite Ostia in the nineteenth century (above, p. 000). The text from a slab inscribed on both sides and found by the bridge (Veloccia Rinaldi 1975: 21–7) records that the bridge, which was dedicated to Matidia (AD 68–119), niece of Trajan and mother-in-law of Hadrian, was reconstructed in 412/13–23 following a fire, and again in the fifth or early sixth century; it probably remained in use until the Gothic Wars in the sixth century. Downstream from the bridge was a series of Trajanic structures on several storeys, which were restored in the Severan period (Fig. 12.2: Site 3). They ran parallel to the Via Flavia and perpendicular to the canal, and seem to have been used for commercial activities and in the control of river traffic to Rome along the Tiber.

The basilica *ad corpus* (Fig. 12.2: Site 14) dedicated to Hippolytus, the martyr associated with Portus (Testini 1975: 43–152; Paroli 2005a: 58; Paroli 2005b: 258), was installed on the land behind the south bank of the *Fossa Traiana* to the east of the Via Flavia. Its apse respected earlier functional buildings of Trajanic date (Testini 1978–80: 26–30, figs 3, 4) that had been partially obliterated by burials and funerary structures (Pani Ermini 1979: 246).

The so-called Isaeum (Fig. 12.2: Site 7) of Portus is the closest known building to the ancient coastline. It was discovered in 1969 and partially excavated between 1975 and 1989. It is a complex consisting of a series of rooms with a complicated stratigraphic sequence (Lauro 1993: 172) that was arranged on either side of a stretch of road; their axis runs perpendicular to the *Fossa Traiana* and followed the belt of coastal sand dunes. To the east there was a portico beside a large heated room, first built in the second century, and subsequently remodelled down to the late antique period (Lauro 1987). Lying to the west and arranged around a trapezoidal courtyard were

rooms and corridors that encompassed a cistern and fountains that were mostly of late antique date. Structures of the latest constructional phase continued beneath the modern buildings in the northwest part of the Isola Sacra. Epigraphic evidence for this peripheral area (Chastagnol 1969) attests to the restoration of an *aedem ac porticus deae Isidis* in AD 375–6. This evidence, together with sculptural fragments found *in situ* — most notably a female statue that Zevi has identified as Isis Pelagia (Zevi 1970–1) —, supports the interpretation of this complex as the meeting-place for *collegia* or religious associations (Zevi 1997).

## THE CEMETERIES

The earliest reported discoveries from the Isola Sacra include mention of a burial found between 1699 and 1744 (Thylander 1951–2: 1–2) and the sculptural group of Mars and the Capitoline Venus found in 1750 (Calza 1978: 18–19; Bignamini 2004: 47 n. 86). Other finds were uncovered during the course of excavations undertaken in 1839 with a licence granted by the Camera Apostolica to the Guglielmi family, which had assumed ownership of its estates on the Isola Sacra in 1839.[6] They derived from a cemetery located near the church of Sant'Ippolito, to the west of a farmhouse that may have been that shown on the *Catasto Alessandrino*. However, it was only in the 1920s that the Isola Sacra cemetery acquired the form that is recognizable today, with the uncovering of a group of tombs that still survive to a considerable height (Fig. 12.2: Site 20) on lands that became the property of the Opera Nazionale Combattenti in 1920, during preparatory work for agricultural drainage and the construction of houses and cowsheds; this discovery led to the systematic excavation of the southern sector of the cemetery (Fig. 12.2: Site 35). Another group of neighbouring tombs (Fig. 12.2: Site 34) was also excavated, but was subsequently covered up after important pieces of marble statuary had been recovered.

These three nuclei constitute direct evidence for the existence of a large cemetery, that of Portus, on the Isola Sacra. This extended across the northern sector of the Isola Sacra opposite the façade of Portus on the north side of the *Fossa Traiana*, and close to the ancient coastal road that connected the harbour basins of Claudius (AD 41–54) and Trajan (AD 98–117) with Ostia. The extensive excavations directed by Guido Calza did not always uncover the earliest phases of occupation at the site, although these have been reached subsequently, in research excavations undertaken by the Soprintendenza di Beni Archeologici di Ostia over the last 25 years in collaboration with university teams co-ordinated by Ida Baldassare. They have led to a fundamental re-evaluation of the cemetery and have enhanced our understanding of social aspects of death in the Roman world during the mid-Imperial period. They also have established that the cemetery's chronological range lay between the late first and fourth centuries AD, and that single burials were initially laid out along either side of a raised road. In time, funerary structures gradually filled the remaining spaces and formed groups of funerary structures. The desire to construct monuments that were easily visible from the road together with the gradual raising of the surrounding ground level led to the earlier burials being covered over by later ones (Fig. 12.2: Site 35).

## THE SOUTHERN AREA

Remains identified on the southern side of the Isola Sacra at the end of the 1960s attest to the expansion of Ostia onto the north bank of the river Tiber from the first century AD to the late antique period (Fig. 12.5: Sites 41–4). Excavations have revealed warehouses (*magazzini*) for storage near the ancient river mouth and provided information about the organization of settlement in the territory of Ostia (Zevi 1972: 406–7). Between 1999 and 2002 new evidence for aspects of the Roman settlement system provided a context to understand better the information that came to light after the flood of 1557[7] and during the construction of the modern road network serving the Aeroporto Leonardo da Vinci. It consists of two further burial areas (Fig. 12.2: Sites 39, 40) that were uncovered during development control work on former agricultural plots and farms laid out at the time of the drainage in the 1920s. At the Podere Monte Vodice (Fig. 12.2: Site 39), on the edges of the built-up area, funerary buildings and the rubble of brick walls were found over a large area and dated to between the first and third centuries AD. A range of burial rites was attested: inhumations cut into the natural, *a capuccina*, in amphorae and in terracotta sarcophagi, as well as cremations in urns. It is also probable that a *bustum sepulcrum* was present. The continuous inflow of ground water prevented the full excavation of the deepest burials, although these did not seem to differ in character from those of later periods. Preliminary excavations at the Lotto Priolo (Fig. 12.2: Site 40) brought to light numerous individual burials whose typology and funerary rite are similar to those at

Podere Monte Vodice. The excavated sites were located north and south of the via Falzarego (which bisects the ancient island), and seem to represent a dispersed cemetery along the eastern side of the Via Flavia (Fig. 12.2: Sites 36–8).

Overall the evidence suggests that the Isola Sacra can be separated into two distinct zones that are best understood in terms of developments that took place at Portus in the north and at Ostia to the south. The initial phase of the settlement of the northern part of the Isola Sacra can be related to the planning and development of the Claudian basin at Portus,[8] while the southern area, overlooking Ostia, appears to have been consolidated in the first century AD (Zevi 1972: 406–7). Although one might have expected a bridge to have facilitated communication between Ostia and the Isola Sacra, this has not been confirmed yet, although the pylons found in the bed of the Tiber when the Ostia to Fiumicino road was built might be the remains of such a structure (Fig. 12.2: Site 50). If this were confirmed, it would raise interesting questions about the sequence of development of the Via Flavia and, thus, of the whole of the Isola Sacra, since it would mean that communication between Ostia and Portus, via the Ponte di Matidia, may not have been provided by ferries alone.

## THE CURRENT SURVEY (Martin Millett and Kristian Strutt)

### METHODS AND APPROACH

The new survey of the Isola Sacra began in 2007, with the application of methods similar to those used previously for the survey of Portus. The objective is to use magnetometry to provide information about the buried remains across the whole of the ancient landscape of the island. Variations in modern land use, especially the presence of modern buildings and plots that are heavily overgrown, limits the coverage in some zones. However, most of the area remains in agricultural use, meaning that geophysical survey is proving possible. The survey has begun with coverage of the northern and northeastern parts of the Isola Sacra, and it is planned to extend it to the west and south to cover the whole available area by the end of 2010. The survey is based on a 30 m grid that, for convenience, has been aligned with the modern property divisions that were defined in the *bonifica* of the 1920s. The axis of these land divisions (marked by drainage ditches) was oriented northwest to southeast, and at a tangent to the line of the *Fossa Traiana*. The survey grid was established using a total station theodolite and was geo-referenced by surveying in fixed points on the available topographic maps.

The magnetometer survey was undertaken using two Bartington Grad601-2 instruments. Each instrument has dual gradiometer sensors and therefore carries two gradiometers that work simultaneously to increase the speed of the survey. Data were collected at 0.1nT resolution, with readings taken at 0.25 m intervals along lines 0.5 m apart. In the level and open territory of the Isola Sacra this allowed for around 1 ha per day to be surveyed with each instrument. The use of the Bartington gradiometer in this survey (Fig. 12.3) provided higher resolution and greater speed than would be obtained with other single gradiometer systems such as the Geoscan Research instruments used in our earlier work at Portus (Keay, Millett and Strutt 2005a: 63–6).

### PRELIMINARY RESULTS

The results from the first two seasons of survey revealed considerable archaeological detail that complements previous work in the area. The results (Figs 12.4 and 12.5) are dominated by the geological evidence for successive shorelines created during the development of the Tiber delta. Similar linear features representing the dune formations derived from ancient shorelines were observed previously in the Portus survey to the north of the *Fossa Traiana* (Keay and Millett 2005a: 270). It is significant that these ancient shorelines appear to run continuously across the line of the Tiber between the area of the present survey and that previously examined to the north of the *Fossa Traiana*: there is no evidence at all for there having been an ancient river channel along the route of the present canal (cf. Giraudi *et al*. 2006; Giraudi, Tata and Paroli 2007).[9]

Previous archaeological work on the Isola Sacra had defined four different sets of landscape features: the cemeteries lining the Via Flavia, the bridgehead settlement at the north of the island, the settlement opposite Ostia at the south, and the quays and related structures lining the *Fossa Traiana* in the north. The first results of the geophysical survey provide evidence to enhance our understanding of some of these elements in the landscape. They also provide new evidence for four particular sets of features.

Our work beside the Via Flavia and the cemetery areas alongside is still at an early stage, but these will

FIG. 12.3. **Geophysical survey in progress in 2008 using a Bartington gradiometer.** *(Portus Project.)*

be examined before the project is completed. However, the work at the northeast corner of the island has located buildings and enclosures facing on to the Tiber (Fig. 12.4). These closely resemble the funerary enclosures identified further to the north (Keay, Millett and Strutt 2005b: 134), reinforcing the idea that mausolea lined the banks of the Tiber as it approached Ostia, although the presence of the flood embankment beside the river seems to have obscured some of the evidence for these on the Isola Sacra.

Also in the northeastern part of the island, along the southern side of the *Fossa Traiana*, the survey revealed the southern limits of a series of structures that may be related to quays. These are in an area situated where past work has suggested that the *statio marmorum* was located (Fig. 12.2: Site 28). The structures revealed in the geophysical survey are not distinctive in plan, but the evidence of marble on the surface beside the canal in this area supports the suggestion that we have identified the margins of these installations.

Third, evidence is beginning to emerge to suggest that there was a very large channel or inlet opening off the southern side of the *Fossa Trianana* about 300 m east of Sant'Ippolito, almost opposite the canal exit on its northern bank. This feature is up to 90 m wide and can be traced for more than 600 m to the south. This separates the cemetery zone facing onto the Via Flavia from the *statio marmorum* and the areas beside the Tiber to the west. Its western edge is not defined very sharply, but its eastern side has a revetment similar to the canals elsewhere at Portus (Keay, Millett and Strutt 2005b: 126). Preliminary analysis of results also has revealed that there was what would appear to be an island at the centre of the canal. The canal was also traversed by a bridge: this comprised a series of pylons, at least one of which coincided with a very large extant brick-faced concrete feature (Fig. 12.6: site 33). Our work is at too early a stage to offer any definitive interpretation of this significant topographic discovery.

Finally, although the geological evidence of the past coastlines tends to dominate images of the results across the whole landscape, careful examination of large areas is revealing evidence for a system of land divisions that post-date these and pre-date the *bonifica* (Fig. 12.4). The boundaries were laid out clearly with respect to the microtopography, which was itself determined by the dune systems and alignment of the former coastlines, but they also appear to have been the product of a large-scale system of land allotment, as some of the major boundaries run for long distances across the island. Further work is required to understand these features fully and to relate them to other archaeological material in order to confirm their dating. However, our preliminary conclusion is that they can be related to Roman agricultural practice. If we can trace these boundaries further across the island in the remaining survey and thereby relate

them to the excavated cemeteries and the Via Flavia, there is a very good chance that we will be able to present an entirely new framework for understanding the topographical development of the Isola Sacra, thereby placing past discoveries in a new context.

## GAZETTEER OF SITES (Paola Germoni)[10]

*For site locations see* Figure 12.2.

### SITE 1: BUILDINGS AND DOCK ON THE SOUTH SIDE OF THE *FOSSA TRAIANA* (NOW DESTROYED)

A building subdivided into a series of rooms facing onto the *Fossa* was interpreted as being warehousing. A continuous row of eight rectangular rooms lay adjacent to an open area, with a portico, which was renovated in the third century AD. The columns of the portico were made of brick and rested on a travertine plinth. Three small rooms faced onto the portico. A mosaic pavement in *opus tesselatum* was preserved in one of these rooms (a), with a representation of Bacchus at the centre and the heads of the four seasons in the corners. Coins dating to the reigns of Antoninus Pius (AD 140–3) and Gallienus (AD 254–68) were recovered from beneath the mosaic. The adjacent room (b) was floored with irregular fragments of coloured marble and yielded a brick stamp dated to AD 133. A large expanse of concrete at the eastern end of the building (Gatti 1911: 410–12, fig. 2) can be identified as the river mole.

### SITE 2: *PONTE DI MATIDIA*

Underwater surveys carried out in the canal silts during the excavations of Veloccia Rinaldi in 1972 revealed the foundations of the central pier and the southern bridge abutment. The distance between the two is shown on the published plan as *c.* 11 m. The opposite abutment, which is visible on the northern bank, comprises concrete covered with rectangular slabs of travertine. It comprised a rubble fill contained between parallel walls, indicating that it formed a small platform analogous to that documented by the southern bridgehead. The discovery was made in the excavation of a block with an inscription on both faces that had been reused as the floor of a later burial to the west of the northern edge of the Via Flavia. The two texts, of different dates, both record rebuilding work and so provide fundamental historical information about the bridge, including its name (*Pons Matidiae*). The earlier text records a restoration, probably necessitated by damage caused during the Gothic invasion of AD 408. It is ascribable to the period AD 412/413–423, the reign of Theodosius II and Honorius, and records work under the Prefect of the Annona Fundanius Martirius Felix. A second rebuilding inscription, the chronology of which is more uncertain, dates broadly to the fifth–sixth centuries AD and records work on behalf of the Prefect of the Annona Flavius Splendonius Aufidius and of the Urban Prefect Iunius Pomponius Ammonius (Floriani Squarciapino 1973–4: 260; Veloccia Rinaldi 1975: 19–27; Geremia Nucci 2000; Germoni 2001b: 384 fig. 1; Keay and Millett 2005b: 317, no. 11).

### SITE 3: BUILDINGS AND A BASALT ROAD ALONG THE SOUTH BANK OF THE *FOSSA TRAIANA* NEAR THE *PONTE DI MATIDIA*

Work on the south bank of the *Fossa* carried out on behalf of the Genio Civile in 1971 brought to light structures that were excavated systematically in 1972 and 1974. The excavations revealed a planned urban landscape on both sides of the Via Flavia in the vicinity of the bridge. Buildings on several storeys were arranged in parallel strips along the banks of the canal. The initial period of construction has been dated to the first half of the second century AD. A major transformation that included a general raising of the ground level and the consequent burial of the ground floor of the structures has been attributed to the Severan period. A similar sequence has been noted in the cryptoporticus under the church of Sant'Ippolito. The interpretation of these buildings is not easy. However, they were in use for a long period of time, and continued maintenance and the presence of a plentiful number of fourth-century AD coins in the trodden layers covering the floor suggests that their abandonment was a consequence of the destruction that occurred during the siege of Portus in AD 408. The proximity of the bridge, the large numbers of coins, and the evidence of continued use of the road until the seventh century, support the idea that this was the site of a *statio* with functions related to the payment of a toll for crossing the *Fossa Traiana* (Veloccia Rinaldi 1975: 14–19; Germoni 2001b: 384 fig. 1).

### SITE 4: BUILDING WITH AN EXEDRA ALONG THE SOUTH BANK OF THE *FOSSA TRAIANA* (DESTROYED)

The structures that were discovered during the widening of the channel in 1909 comprised a series of rooms lying perpendicular to the *Fossa Traiana*. They had narrow walls faced with brick. A wide exedra to the east was reinforced by external pilasters made from *opus latericium* (Gatti 1911: 412, fig. 3).