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Archaeological Research at Gabii, Italy: The Gabii Project Excavations, 2009–2011

MARCELLO MOGETTA AND JEFFREY A. BECKER

Abstract

Since the summer of 2009, the ancient site of Gabii has been the focus of excavations conducted by the University of Michigan. Stratigraphic investigations near the urban core are revealing the complex sequence of occupation in this Latin city, which emerged in the Early Iron Age. The spatial distribution of intramural burials of the Orientalizing and Archaic periods shows that the settlement was initially organized in separate habitation clusters. The city was provided with monumental fortifications by the late seventh or early sixth century B.C.E., but its layout was radically modified in the fifth century B.C.E., and a uniform orthogonal plan was imposed across the entire site. Three domestic structures dating to the Middle Republican period have been identified in two of the city blocks. Significant modifications of this sector of Gabii are attested from the first century B.C.E. Excavation data confirm that the city began to decline dramatically at this time. Areas in the upper part of the site were taken up for industrial activities or transformed into burial grounds and were finally abandoned in the Late Imperial period. These preliminary results document how ancient cities in the region developed and decayed; the findings have also provided the basis for further research on-site in 2012–2014.*

INTRODUCTION

The Gabii Project was launched in 2007 with the aim of exploring a major central Italian urban center on a large scale (fig. 1). The site was chosen because it was representative of a group of primary cities in the region, such as Caere, Tarquinia, and Rome itself, and was archaeologically and logistically favorable. Gabii is

abandoned, virtually unexcavated, well preserved, and largely on public land. One of its necropoleis, Osteria dell'Osa, was extensively excavated and published, leading the excavators to formulate a hypothesis about the emergence of ranked society in central Italy, one that has proved important for Roman archaeology.¹

Gabii is famous in the sources—and famous for the ancient Romans themselves—but its archaeology and history are little known. Most prior archaeological knowledge of the site came from a field survey that revealed multiphase pottery evidence and suggested that the city once covered more than 65 ha.² The Gabii Project began with a comprehensive magnetometer and core-sampling survey across almost 40 ha of the former urban expanse, bringing to light evidence not only of good stratification but also of the geophysical signature of an orthogonal city plan (fig. 2).³ Armed with that plan, excavations commenced in 2009 and have continued since that time.⁴ At this point they have exposed almost 1 ha of surface area in the ancient city center (fig. 3), a sector that has proven to contain multiphase architecture and settlement evidence from the Orientalizing period through the second and third centuries C.E.

THE GENERAL TOPOGRAPHY AND SEQUENCE OF THE SITE OF GABII

Unlike other first-tier sites that emerged during the first wave of urbanization in central Italy (ninth

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¹ Bietti Sestieri 1992a, 1992b.

² Guaitoli 1981.

³ Becker et al. 2009; Kay 2013.

⁴ Excavations were supervised by A. Thorne, F. Andreac-

chio, J. Sewell, C. Melisch, and S. Zottis. Staff included E. Adkins, J.M. Evans, J. Farr, A. Johnston, L. Banducci, T. Samuels, A. Summers, I. Cangemi, R. Apostol, W. Balco, and M. Andrieu. The topography team was led in 2009 by J.M. Harrington and in subsequent years by R. Opitz, with the collaboration of J. Nowlin, E. Robinson, A. Chapnick, E. Casagrande Cicci, and P. Maranzana. The finds lab was supervised by C. Pilo and A. Crawford, with the help of L. Banducci, L. Wilke, B. Benson, K. Huntley, S. Rous, L. Herring-Harrington, and L. McAlpine. The environmental lab was supervised by L. Motta, with S. Oas, C. Murphy, A. Commito, and D. Tincu. K. Killgrove and A. Nava served as bioarchaeologists. V. Scarpellino and F. Renati were in charge of the logistics.

Fig. 1. Map of central Italy, showing the location of Gabii and surrounding sites (courtesy University of North Carolina at Chapel Hill, Ancient World Mapping Center; www.awmc.unc.edu).

to eighth centuries B.C.E. in the conventional chronology), the site of Gabii appears formally laid out (fig. 4). The urban area occupies a narrow ledge of land delimited to the north by the volcanic crater of Castiglione and to the south by the depression of Pantano Borghese. A major regional road, which connected Gabii with Rome, functioned as the main axis of the orthogonal city plan.⁵ This thoroughfare follows the contour of the crater of Castiglione, curving in a northerly course and exiting the fortifications near the site of the so-called Santuario Orientale, in the direction of Tibur.⁶ From each side of this trunk

road, parallel northwest-southeast streets branch off at right angles, delimiting elongated city blocks that face the thoroughfare on their short side, adapting to the sloping morphology of the crater.⁷ The axial position of the thoroughfare suggests that the road was created *ex novo* at the time of the original town planning to ensure that the streets on either side of it were of similar length. The new course, however, may have resulted from the repositioning of a preexisting road running closer to the crater's rim.

A notable exception in the grid pattern is represented by an east-west road that departs from the thoroughfare at an odd angle, leaving Gabii and continuing in the direction of Praeneste. It is evident that its orientation did not influence the overall alignment of the blocks located in the eastern sector of the town.⁸ The high degree of coordination among buildings and plots throughout the site suggests that, even if we assume the road to Praeneste does not reflect a much later insertion in the layout, the plan of Gabii is the result of a generalized and quite uniform subdivision of the urban land.

A 1 ha portion of the central sector of the town was selected in 2009 for excavation using the open-area method, with the goal of contextualizing the emergence of orthogonal town planning at the site and reconstructing its growth and decay through time (fig. 5).⁹ Several factors influenced the positioning of the excavation area. For logistical reasons, the area had to be located on land owned by the Italian state. The Gabii archaeological park includes only the portion of the site north of the modern Via Prenestina

⁵ Before the creation of the rectilinear course of the Via Praenestina, Rome and Gabii were connected by a road network referred to in literary sources as the Via Gabina (*LTURS* 3:9–10, s.v. “Gabina, Via”). This artery reached Osteria dell’Osa on a different alignment (Kahane and Ward-Perkins 1972). The common view is that the winding course of the Via Gabina was regularized already in the third or second century B.C.E. and that a new stretch from Gabii to Praeneste was added at this time (Quilici 1977; Carboni 1997, 8–10). Major infrastructure west of Gabii (e.g., the Ponte di Nona), however, dates only to the first century B.C.E. No earlier road surfaces have been identified beneath the Late Republican pavement between the third and 13th miles (*LTURS* 4:249, s.v. “Praenestina, Via”).

⁶ Ashby (1902, 193–95, map 4) and Tomassetti (1907, 7–8) mapped the extra-urban stretch of the trunk road. This road crossed the Fosso di San Giuliano and joined the Via Collatina at Corcolle, reaching the Aniene River at Ponte Lucano (Guaitoli 1981, 37, fig. 10; 44; pl. 2, no. 23). Excavations document at least two levels, with a *via glareata* under the latest basalt pavement (Guaitoli 1981, 55). Another road branched off from this near the Santuario Orientale in the direction of Passerano to the east (Kahane 1973).

⁷ The western stretch of this artery was brought to light during the construction of a water main in the 1960s (Quilici 1988). The continuation of the road toward the so-called Area Urbana was excavated by the Soprintendenza Speciale per i Beni Archeologici di Roma in the 1990s (a preliminary report appears in Majerini and Musco 2001); see also Becker et al. 2009, 636 n. 39.

⁸ Excavations conducted by the Soprintendenza Speciale per i Beni Archeologici di Roma on both sides of this road have documented substantial transformations in the Imperial period. The suggested dating for the paving of the road to Praeneste is the first century C.E. (Majerini and Musco 2001, 490–93). Epigraphic evidence attests roadwork conducted east of Gabii in the first century B.C.E. (Ashby 1902, 198). It is possible that the systematization of the stretch of road from Gabii to Praeneste followed the establishment of a colony at Praeneste. Traces of centuriation on both sides of the Via Praenestina between Gabii and Praeneste have been attributed to the Sullan colonization (Muzzioli 1970).

⁹ In this open-area strategy (Barker 1993), the principles of the Harris Matrix guide the documentation and interpretation of the archaeological deposits (Harris 1989).

Fig. 2. Composite plan of Gabii, showing the results of the magnetometer survey and the locations of several key features: 1, the Gabii Project excavation site (the solid line indicates the excavation limits); 2, the Area Urbana; 3, Hamilton's Forum; 4, the Temple of Iuno (modified from Becker et al. 2009, fig. 5).

Fig. 3. Orthorectified photomosaic of the Gabii Project 2009–2011 excavation site.

Fig. 4. Restored city plan of Gabii, based on the interpretation of the magnetometer survey.

(south of this road, the archaeological remains sit on private property). The results of a preliminary core-sampling survey conducted in 2008, however, demonstrated that stratigraphic deposits were better preserved in the north sector than in the south sector of the site, where the stratigraphy had been razed by modern plowing.¹⁰ Moreover, previous fieldwork in the area of the archaeological park documented the presence of ancient quarries along the crater's rim; this area, therefore, was excluded from the sample.¹¹ Limited excavations by the Soprintendenza Speciale per i Beni Archeologici di Roma exposed a tract of the trunk road, showing that it was flanked by standing architecture (the so-called Area Urbana) mostly dating to the Imperial period.¹² On the basis of this evidence, the sector adjacent to the Area Urbana was chosen as the ideal candidate to document the long-term urban development.

The Gabii Project excavation site encompasses four city blocks located north of the thoroughfare. Five excavation areas have been opened thus far (identified as Areas A–E). These correspond to separate stratigraphic basins delimited by specific features of the urban plan.

Area A occupies the north sector of the excavation site, near the edge of the crater.¹³ Natural erosion and plowing caused the decapitation of many of the archaeological deposits. The bedrock crops out in most parts of the area under a thin layer of topsoil, revealing a series of rock-cut features. Most notable among these are two burials of the Orientalizing period and a large quarry of the Imperial period.¹⁴ Because of the lack of well-preserved stratigraphy and the redeposited nature of most of the fills, the function of smaller features can be confidently interpreted in only a few cases. A series of postholes aligned with the main face

¹⁰ Becker et al. 2009, 636–38; Gallone and Mogetta 2011.

¹¹ Evidence for the quarrying of Lapis Gabinus is attested along the rim of the crater throughout the urban area (Piccarreta 1981).

¹² Majerini and Musco 2001.

¹³ Area A measures 35 x 20 m. It is delimited by a linear cut in the bedrock to the north, by one of the side streets of the

urban grid to the east, and by a northwest–southeast rubble wall to the west. The last continues in the Area Urbana to the south and clearly represents a subdivision of the city block.

¹⁴ Intensive extraction of this building material for use in Rome is thought to have begun in the first century B.C.E. (Jackson and Marra 2006).

Fig. 5. State plan of the structural remains of a 1 ha portion of Gabii selected for excavation by the Gabii Project from 2009 to 2011 (drawing by R. Opitz).

of the large quarry, for instance, may have been dug for the insertion of lifting devices used in the quarry phase, while some of the rectangular cuts represent quarry test pits. Structural remains, although badly preserved, have been found in the south part of the area. Judging from the main alignments of walls and drainages, they most likely relate to the grid-plan occupation phase. Other alignments of circular cuts may belong to earlier hut habitations.

Area B extends south of Area A, on a lower rock-cut terrace conforming to the orthogonal plan, west of the side street (Road 3) that leads to the Area Urbana.¹⁵ Although this sector of the town suffered great destructions when the large quarry found in Area A was in use, both architecture and stratigraphy are overall

better preserved than in Area A, because in the Imperial period the area was completely obliterated by a thick deposit of building and quarry debris and used as a burial ground.

Area C is situated in the east sector of the site and corresponds to a city block that is delimited by two of the side streets of the urban grid (Roads 1 and 2).¹⁶ The buildings documented in this city block show a multistratified sequence of occupation spanning from the Middle Republican to the Early Imperial periods. Walls are preserved to a maximum height of 0.6 m, having been decapitated by modern agricultural activities. A modern drainage ditch (measuring 3 m wide and more than 2 m deep) crosses the area in a north–south direction, destroying substantial portions

¹⁵ Area B measures 35 x 35 m. The south limit corresponds to the boundary of the Gabii Project's excavation permit. The structures uncovered in Area B continue in the neighbor-

ing sector of the city block excavated by the Soprintendenza Speciale per i Beni Archeologici di Roma.

¹⁶ Area C measures 45 x 20 m.

of the ancient structures.¹⁷ Traces of an earlier occupation have only begun to emerge in the south half of the area.

Area D is located west of Area C and corresponds to the eastern part of a city block that, though formally divided and included in the orthogonal layout, was never developed.¹⁸ The structures found in this sector of the excavation predate the establishment of the grid plan.

At the eastern end of the site is Area E, which includes only a section of the city block adjacent to that uncovered in Area C.¹⁹ The two city blocks are separated by a well-preserved side street belonging to the orthogonal grid (Road 1). Excavation in Area E started in 2011 with the removal of the postabandonment levels, which revealed only the latest phase of occupation.

THE EARLY IRON AGE AND ORIENTALIZING PERIOD: THE INFANT BURIALS IN AREA A

In Area A, where the bedrock proved to be quite shallow and thus many strata had been disturbed or destroyed by later intrusions, two intact infant tombs were discovered in 2009 (online fig. 1). These contexts proved remarkable in terms of both their state of preservation and the grave goods that accompanied the deceased. Both were *a fossa* inhumation burials in which the deceased were placed in rectangular pits cut directly into the bedrock. The earlier of the two tombs, Tomb 10, dates to the Latial IIIb–IVa1 phase (second half of the eighth to beginning of the seventh century B.C.E.).²⁰ The grave goods featured 10 ceramic vessels, including a high-quality impasto drinking set, an overpainted Geometric skyphos, and eight pieces of bronze ornamentation. Among the bronzes are two lunate pectoral amulets that are most likely apotropaic bullae. Tomb 11 is slightly later in date, belonging to the Latial IVa2–IVb phase (middle seventh to early sixth century B.C.E.). This tomb contained no bronze ornamentation but included seven ceramic vessels, all high-quality forms, such as Etrusco-Corinthian Ware and an askos decorated with stamp designs. These infant graves stand as silent markers of the increasingly rigid social ranking of early Latium, and they represent a desire on the part of leading families to express

their status by means of material wealth deposited in tombs. Clear parallels can be found in other Latin infant burials, including examples at Ficana and in the Sepulcretum along the Via Sacra in Rome.²¹

Fragmentary traces of early residential architecture remain elsewhere on the site, notably in the southeast corner of Area B. A curvilinear trench cut in the bedrock was discovered beneath Room 1 of the Area B building. This trench and its associated layers were heavily disturbed by the leveling and construction courses associated with the later structure, but given that a sequence of abandonment levels (with traces of burning) covering the trench included orientaling ceramics, it is likely that the trench represents the remains of an Iron Age hut.²² Thus far, no further remains of this building have been discovered, as they were likely obliterated by the republican structure; these traces indicate in any case a more widespread distribution of orientaling structures on the site. In fact, a series of postholes belonging to an oval hut have been identified also, in the northeast corner of Area C (though not in association with stratigraphy).

Because the stratigraphic sequence in Area A has suffered major disturbance, the contextualization of the infant tombs with respect to the adjacent areas proves elusive. The clear remains of a severely truncated rock-cut foundation trench, which predates the Middle Republican occupation in the northern part of Area A, suggest the possibility that the burials originally were deposited within a nucleus of habitation, perhaps conforming to the tomb type referred to in the ancient sources as a *suggrundarium*.²³ That type has been archaeologically confirmed elsewhere in central Italy—namely, in the Sepulcretum. Additionally, the excavators of the Osteria dell’Osa necropolis speculated that, given the relative absence of infant individuals in that funeral population, in all likelihood infant depositions would eventually be found within the settlement itself, conforming to Latin practice.²⁴ These infant tombs helped both project and define the identity of Latin settlements, and while definitive proof of eighth- and seventh-century B.C.E. habitations at Gabii is still forthcoming, the deposition of these two elite tombs at Gabii is more than provocative

¹⁷ The ditch was filled and covered by the same colluvial deposits that form the actual plow zone. Minor water streams flowing south from the rim of the crater are shown in historical maps of the area. A 17th-century cadastral map commissioned by Pope Alexander VII (Rome, Catasto Alessandrino, Archivio di Stato di Roma, no. 430/2) describes the land use and types of cultivations on an estate then known as the Tenute di Pantano, which included the area of Gabii.

¹⁸ Area D measures 45 x 20 m.

¹⁹ Area E measures 35 x 12 m.

²⁰ Becker and Nowlin 2011.

²¹ Gjerstad 1956, 88 (Tomba H), 102–3 (Tomba EE), 110–11 (Tomba MM), 144–45 (Tomba FF), 117–20 (Tomba D), 120–24 (Tomba G); see also Fischer-Hansen 1990.

²² The ceramics include sherds of impasto rosso and local impasto wares.

²³ Plin., *HN* 7.15.

²⁴ Smith 2006, 149.

in terms of the discussion of the emergence of fixed social hierarchy in Latium.

THE ARCHAIC PERIOD: THE AREA D BUILDING

More substantial architectural remains dating to the late seventh and the sixth centuries B.C.E. have been uncovered and documented in the stratigraphic sequence excavated in Area D (fig. 6). The preservation of Archaic-period contexts in this sector of the city can be explained by the fact that the area was never reoccupied in the subsequent phases of the development of Gabii, remaining buried beneath a thick (up to 0.8 m) layer of silt. Excavation of this level of coluvium revealed a group of structures built with cut-stone masonry using building material quarried from the higher deposits of the local tuff bedrock. These remains appear to have been razed at a uniform level corresponding roughly to that of the Middle Republican occupation in the adjacent block (Area C). As to size, architectural refinement, and characteristics of associated finds, this compound can be interpreted as an elite context, of which at least two occupation phases are known. The ceramic materials collected from the abandonment layers covering the collapsed walls (mainly impasto pottery, large storage vessels, and bucchero) date the destruction of the buildings to the late sixth century B.C.E.

The archaic compound occupies a shallow depression in the underlying geology. The edges of the depression were regularized by means of a retaining wall, which was built using a technique similar to that used for the other parts of the complex. The structure, dating to the second half of the sixth century B.C.E., encloses two oblong rectangular rooms (Rooms 1 and 2) arranged on the same alignment and delimited by walls constructed in the same technique, which entailed placing small blocks and slabs of tuff in irregular courses with little clay mortar. To the north is Room 1, which measures approximately 5 x 6 m. This room is open on the south side and presents at its center a dressed tuff block with slightly tapering sides, perhaps the foundation of a post supporting the roof. The post would have been placed before the construction of a beaten-earth floor (the floor was repaired at some point before the final abandonment). To the south is a larger structure, Room 2, of which only the northern part is preserved; the south side of the room is truncated by the modern drainage ditch. A 6 x 8 m room can be reconstructed, given the presence of a circular pit lined with tuff rubble and clay farther south along the same

Fig. 6. Area D, plan of the archaic building (T = tomb) (drawing by R. Opitz).

alignment as the west wall of the room (this feature can be interpreted as a fireplace or hearth because the bottom presents traces of burning). In the open area west of Rooms 1 and 2 was a small rubble structure in the shape of a horseshoe, which surrounded a shallow pit. A series of midden deposits (thin layers of silt mixed with ashes and organic material) dumped from the northern limit of Room 2 (most likely during its occupation phase) abutted the eastern side of the feature, whose original function remains unclear.

An earlier level of occupation has been identified since the removal of the upper beaten-earth floor of Room 2 (fig. 7). This revealed that both the north and west walls of Room 2 pertain to the reconstruction of a preexisting building (the east wall shows a reinforcement in a sort of *emplekton*, but it is possible that this was part of the original structure). This activity was symbolically marked by the careful deposition, at the northwest corner of the room, of a whole vessel containing faunal remains and a spindlewhorl.²⁵ A lower

²⁵ The deposition of offerings in connection with the foundation or with renovation works in habitation contexts is known from contemporary sites, such as Pyrgi (Baglione et al. 2010). The presence in these assemblages of objects whose function relates to the female sphere (e.g., spindlewhorls, loomweights) has been interpreted as an indication of female control over household activities.

Fig. 7. Area D, archaic building, view from the east. Lower floor surface of Room 2.

floor level showing clear traces of burning was found in association with the east wall, suggesting that the renovation followed a substantial destruction by fire. Concentrations of burnt adobe suggest that the building had a mud superstructure and most likely a thatched roof (no evidence of tile roofing has been detected).

Burnt surfaces have also been observed below the floor level of Room 1, although not in connection with preexisting structures. Based on the numerous pottery sherds (including Italo-Geometric, bucchero, and Etrusco-Corinthian) found in the construction fill covering these earlier surfaces, this previous phase can be tentatively dated to the late seventh century and early part of the sixth century B.C.E. A dolium infant burial (Tomb 30) found in association with a rock-cut trench immediately north of the complex may perhaps pertain to this period as well.

By the late sixth or early fifth century B.C.E., the area occupied by the compound was suddenly abandoned and came to be used as a burial ground. Three rock-cut tombs, each containing multiple depositions, were dug around the perimeter of the preexisting structures. The walls of the preexisting structures must have been still visible at the time because they were systematically respected. The tombs belong to the same basic type, consisting of a deep shaft with one or more side niches for individual inhumations.²⁶

To the west of the complex is Tomb 25, whose main shaft measures 2.5 x 1.2 m. On the eastern side of the

shaft is a niche of 2.0 x 0.5 m, which was dug after a first attempt on the opposite side failed because of the partial collapse of the wall. In this niche, a young adult male was buried, while an adult female was deposited inside a sarcophagus carved out of a single block of local tuff found in the main shaft (online fig. 2). A fragment of Attic red-figure pottery securely dates the final closing of this tomb to the early fifth century B.C.E. East of Tomb 25 and adjacent to the northwest corner of Room 1 is a larger square shaft measuring approximately 2.5 x 2.5 m, with three niches of 2.0 x 0.5 m dug on the north, east, and west sides (Tombs 38–40), each featuring a carved funerary bed occupied by a male inhumation (fig. 8). These niches were probably closed off by means of wooden planks, as suggested by the presence of narrow, vertical tracks carved on the side walls. Another shaft measuring 2.5 x 1.8 m, with two side niches (Tombs 40 and 41), is located immediately east of the compound's enclosure wall. In this tomb, the opening of the western niche was walled with slabs of tuff. These features suggest that burials could be added to these shafts through time without disturbing the previous depositions.

Grave-good assemblages are absent (with the exception of personal ornamentation in one case, Tomb 38), as is normally expected for burials of sixth- and fifth-century B.C.E. Latium.²⁷ On a broader level, the exception to the general rule of burying the dead outside the city walls is a strong indication that privilege was accorded to the main occupants of the tombs, whose high rank is in any case suggested by the labor-intensive grave type.²⁸ Defining the exact relationship among the elite individuals buried here, as well as the possible ties between these individuals and the previous occupants of the compound, remains an open problem that will be addressed in future research on-site.

THE REPUBLICAN PERIOD (FIFTH TO SECOND CENTURIES B.C.E.): TOWN PLANNING AND DOMESTIC ARCHITECTURE

A general reorganization of the site was achieved in the course of the fifth century B.C.E., following the abandonment of the Area D necropolis. A new system of land division following an orientation different from that of preexisting structures was imposed ubiquitously on-site at this time, most likely as the result of a centralized project (see fig. 4).²⁹ The regular spacing of the

²⁶ A small cluster of tombs of this type has been found in unpublished excavations conducted by the Soprintendenza Speciale per i Beni Archeologici di Roma south of the Temple of Iuno, in the area of the so-called Hamilton's Forum.

²⁷ See esp. Colonna 1977.

²⁸ For a general contextualization of the problem, see contributions in Bartoloni and Benedettini 2009.

²⁹ Mogetta (forthcoming). Monumental writing in this phase is documented by a fragmentary sporadic inscription datable to the fifth century B.C.E. (Fortson and Potter 2011).

roads suggests that the plan was laid out on the basis of a recurring module that defined the width of the city blocks. The pattern is particularly evident in the core area south of the main thoroughfare, where seven road features have been found at regular interaxial intervals of approximately 44–45 m.³⁰ Within the Gabii Project excavation area, city blocks of smaller proportions, about half the size in width, are also attested. In Area C, excavations have brought to light a 20 m wide city block delimited by two side streets (Roads 1 and 2). The results of the magnetometer survey suggest that the buildings of Area E continue farther east beyond the excavation limit. These findings have led to the identification of another block that is approximately 20 m wide, with each road occupying approximately 2.5 m.

A direct stratigraphic relationship between the archaic and republican levels has been verified thus far only in this sector. Most notably, the fill of Tombs 40 and 41 is covered by the preparation layer of one of the roads defining the orthogonal layout of the city. This context provides a terminus post quem for the dating of the city plan. Useful data to define the chronology of the layout have also been collected from a number of test trenches excavated across three roads. In the earliest construction phase, the roads were cut directly into the bedrock to decrease and regularize the steep slope of the volcanic crater. As documented in both Areas B and C, the construction cuts truncated earlier deposits, which on the basis of pottery can be dated to no later than the sixth century B.C.E. The roads were most likely left unpaved at this stage, as suggested by the clear traces of wheel ruts visible on the surface of the bedrock in one of the excavated roadways.³¹ At a later time, when the periodic regularization of their surface made the roads reach too deeply into the bedrock, the roadway surface was artificially raised by means of successive layers of packed gravel and clay (online fig. 3). These layers have been found to contain material dating as early as the fifth and fourth centuries B.C.E. In the late third century or early second century B.C.E., side walls respecting the preexisting alignments were built to retain a further fill of the roadway (this chronology is suggested by the black-gloss pottery recovered from these layers, which belongs exclusively to the group of the *petites estampilles*). Some of the side streets were eventually paved with basalt slabs, as documented by the stretch preserved between Areas C and E.

Fig. 8. Area D, Tomb 38, view of the tomb shaft and the east niche, from the northwest. Note the funerary bed carved into the bedrock, with the in situ deposition.

Most of the architecture identified within the city blocks can be dated to ca. 200 B.C.E. at the earliest, on the basis of the materials recovered in construction fills and in the road layers associated with this occupation. It seems that the renewal of the street grid was followed by widespread building activities and house construction, which masked much of the evidence of occupation pertaining to the first phase of the orthogonal plan. Among the earliest features are the drainage infrastructure delimiting property plots in Area A, where an elongated rectangular rubble building (0.6 x 4.3 m), which opens onto a small courtyard to the west, may date as early as the fourth century B.C.E. The exact extent and articulation of individual properties in the early stage are therefore still problematic.

Much better preserved structures belonging to the later phase are located in Areas B and C, respectively. These take the form of courtyard buildings with paved floor surfaces.³² The most legible occupation phases correspond to the third and second centuries B.C.E. These structures are built within city blocks defined by the street system discussed above. In the case of the Area C structure, the building's footprint occupies the entire width of a single city block (east–west), while its limits on the north–south axis are still the focus of ongoing excavation (fig. 9). The structure measures at least 33 x 20 m, which is an interesting figure to consider in light of the proportions of atrium houses described by Vitruvius (*De arch.* 6.3.3–6).³³ The Area C

³⁰ Test trenches carried out in this part of the site confirmed the results of the magnetometer survey (Gallone and Mogetta 2011).

³¹ On this construction technique, see in general Quilici 1992, 2008. Jarva (2010) presents a contemporary example in Latium, the recently excavated urban road at Crustumium.

³² Gallone and Mogetta 2013.

³³ In the second of the three atrium types described by Vitruvius in this passage, proportions of 2:3 are prescribed, whereby the length is divided into three parts and the width is assigned two parts.

Fig. 9. Area C, plan of the Middle Republican house (drawing by R. Opitz).

house has as its architectural focus a large, seemingly open courtyard with provision for drainage (a circular well, presumably connected to an underground cistern). Access seems to be from the east and is not on axis with the structure. Many of the preserved rooms have paved floors; the paving technique consists of a packed substrate of crushed, local tuff over which a low-grade plaster variant of *opus signinum* has been applied. The northern part of the structure may have been used as a sort of *hortus*, but later intrusion and reassignment makes interpretation difficult. However, in the northern part of the surviving structure there is a well feature whose opening is surrounded by massive slabs of tuff serving as a sort of pavement. In the middle of the structure's plan is a room that once had plastered walls and a paved floor and that may have been the triclinium (Room 3) of the building. This room's paved floor is now much abraded and displays an unusual wear pattern with more pronounced abrasion in the central part of the room (fig. 10).

Other rooms—which are now in varying states of preservation—surrounded the open courtyard. If the structure had an unconventional atrium plan, then it is possible that Room 2 represents a tablinum, while

Fig. 10. Area C, view of Room 3 from the southeast.

Rooms 1 and 4 represent *alae*, which therefore would not be symmetrical. An entryway communicating with a paved street immediately east of the house is evident north of Room 1, as is provision for drainage of the structure. A range of rooms to the south (Rooms 6–8) are less well preserved and remain to be fully excavated.

The house located in the southwest corner of the excavation area (Area B) has as the focus of its plan a courtyard with a paved floor (fig. 11). As in other rooms, the floor is composed of a substrate of crushed red tuff that was treated with a plaster of fairly low quality, a version of *opus signinum*. Its dimensions are similar to those of the Area C building, roughly 31 x 18 m. A primary feature of the courtyard is a well cut into the bedrock and capped with two monumental slabs of tuff (fig. 12). The slabs are expertly worked, creating the effect of a very shallow basin surrounding the well. The wellhead and covering link the two structures (Areas B and C) together; both demonstrate a propensity for expert workmanship in the treatment of monumental pieces of local tuff.

An L-shaped suite of rooms (Rooms 1–5) frame the courtyard of the Area B house on its east and north sides; to the south are additional rooms, but their relationship to the structure and to the southern closing wall is still uncertain. While the orientation of the structure is not clear at this stage, the 2011 excavations did reveal a key piece of evidence: the courtyard communicates with a paved street running northeast–southwest (Road 4); it originally carried foot traffic (and perhaps very narrow wheeled traffic) to some point lower in the city. It is clear that the street connects with the Area Urbana excavated by the Soprintendenza Speciale per i Beni Archeologici di Roma, but the exact relationship between the Area B building and the buildings of the Area Urbana cannot be determined based on the evidence available at this time.

Fig. 11. Area B, plan of the Middle Republican house (drawing by R. Opitz).

One could enter the Area B structure from the street by means of a door, of which the threshold block and the implantation points are extant. A covered drain, or *cuniculus*, lies under the southwest corner of the courtyard and communicates with a series of drains under the street and the southern part of the occupation terrace on which the structure is built. In both cases (Areas B and C), the original construction of these buildings was realized by means of well-dressed ashlar blocks of local tuff, which were partially maintained in the subsequent phases. These ashlar suggest a high prestige factor for the structures in their earliest occupation, an interesting clue to their role in the newly reorganized city of Gabii with its orthogonal streets.

THE LATE REPUBLICAN PERIOD: THE INDUSTRIAL COMPLEX OF AREA C

Signs of profound changes in the organization of the settlement in the later Republican period have

Fig. 12. Area B, view of the central open courtyard from the southwest, showing the slabs capping the well. The cut in the bedrock may be interpreted as a spoliation trench (of a basin or impluvium?). Note, at the bottom of the trench, the cover slabs of the drain running under Road 4.

been detected throughout the excavation site. According to ceramic finds, in the late second century B.C.E. the atrium house occupying the south part of Area C was finally abandoned.³⁴ The area was leveled and radically transformed, and the preexisting domestic structures were repurposed (fig. 13). The boundary walls of the house were reused to retain a thick construction fill that buried both the earlier floors and the paved well. Three parallel structures made of tuff rubble were built on top of this stratum, abutting the west wall of the house at an odd angle. In the northern part of the complex, which is better preserved, the structures are connected with a floor preparation made of large tuff fragments, whose surface shows the imprint of circular features, perhaps dolia or vats, that were clearly robbed at a later stage.

The north wall of the house was kept to serve as the substructure of a pavement built with reworked basalt slabs, which opens onto the east side street (fig. 14). This pavement provides evidence for a previously unknown courtyard that features a complex system of drainages flowing from west to east and from north to south. These channels are connected to a well that is partly built and partly dug in the bedrock; another rock-cut well provided with a monolithic wellhead is located at the center of the paved court, suggesting that activities requiring substantial amounts of water were conducted there. North of this paved court was an open, unpaved area, to which is annexed a semi-

³⁴Late third-century B.C.E. black-gloss pottery and fragments of common wares of the first half of the second century B.C.E. have been collected from the layer of building debris that sealed the destruction of Room 3 (this layer also contains numerous fragments of painted plaster from the original decoration). This material provides a terminus post quem.

Fig. 13. Area C, plan of the Late Republican industrial complex (drawing by R. Opitz).

circular recess facing the western side street, where a dolium was found still in situ. The location of this feature suggests that the dolium may have been used to collect urine from passersby, an arrangement well-documented at Pompeii in association with laundry shops.³⁵ In addition, frequent pigments and fragments of mortars and pestles have been collected in the abandonment layers of the industrial complex, indicating that dyeing activities were also carried out in this area.³⁶

A series of basalt-paved rooms have been uncovered in the south part of the neighboring city block in Area E. These structures belong to the latest occupation of a building that was clearly remodeled at the same time as the industrial complex of Area C. These rooms open to the south onto a court featuring a pavement made with large slabs of tuff—which, however, was partially obliterated in this phase (perhaps this pavement surrounded a well, given the technical similarities of the structures found in Areas B and C). Connected with these structures is a circular feature (diam. ca. 3 m)

built with tuff rubble, which is abutted by a series of ashy layers containing frequent botanical remains. Although the excavation of this context is still in its early stages, one can tentatively say that preexisting habitations were repurposed for industrial activities in this city block as well.

In Area A, early quarrying activities seem to be attested along the western edge of the excavation. By the first century B.C.E. the more northerly part of the city block was in any case completely deserted, possibly in connection with more intensive quarrying activities conducted farther up the slope. A long stretch of wall made of recycled elements built on top of the back-fill of the possible quarry effectively separated Area A from the sector immediately to the west; the wall may represent an attempt to segregate the abandoned area from the rest of the buildings that still occupied the neighborhood. This boundary wall continues south into Area B, where it was used as a new limit for the house, though it encroached on the street that served

³⁵ For examples of domestic *fullonicae* at Pompeii, mostly dating to after 62 C.E., see Richardson 1988, 20–1.

³⁶ A striking parallel is attested at Fregellae, where around the middle of the second century B.C.E. several houses located on the decumanus were modified to accommodate

industrial installations typical of tanneries (vats, plastered channels, praefurnia). For a preliminary description of the sequence, see Battaglini and Diosono 2010. More generally on this phenomenon, see Coarelli 1996.

this sector of the block in the previous period. In the Area B house, new rubble walls and foundations sitting directly atop or cutting through earlier crushed-tuff floors document several changes in the internal organization of the building (most notable is the closing off of the courtyard) before the final abandonment at the end of the first century B.C.E. or early first century C.E.

THE IMPERIAL PERIOD (FIRST TO THIRD CENTURIES C.E.)

This period is characterized by the rapid expansion of quarry works aimed at exploiting the local tuff, a type of *peperino* that the ancients called *Lapis Gabinus*.³⁷ This tuff became popular for construction in Rome, among other places, in the second century B.C.E.³⁸ The quarry strategy is still being explored, but it seems that the first deposits to be exploited were those that made up the exposed edge of the rim of the volcanic crater of Castiglione. Then, by stages, the quarries moved southward from the rim into formerly occupied zones.³⁹ The chronology of the quarry activities remains to be refined, but their onset belongs to the Late Republic, and their rapid advancement in the first century C.E. suggests that the occupants of this part of the city had either dispersed altogether or relocated elsewhere.⁴⁰ In all likelihood, it was some combination of these circumstances. The structures in Area B, for example, became untenable as the quarry works grew ever nearer, although the side street traversing this part of the city remained in use.

The quarry works themselves are highly variable. Some cuttings are massive, regular quarry trenches, while others are pits for single blocks or perhaps even simply assay pits. Unsuccessful assay pits, evident in Area A, were simply left abandoned when the vein of tuff proved unattractive (online fig. 4). Quarry debris abounds, filling the quarry cuts and, in some cases, forming part of the layer of destruction and debris that covers the abandoned Area B. The activities of the quarry, and perhaps the quarrymen themselves, occupied a liminal zone in this semiabandoned area of the

Fig. 14. Area C, view of the paved court of the industrial complex from the east.

city, wherein the buildings were abandoned but a single side street running north–south remained in use, presumably to facilitate the removal of the quarried stone. Several quarry cuts deliberately avoid truncating the road itself, allowing a reasonably secure sense of the continuity of Gabii's infrastructure.

Perhaps signaling the transformation of this zone (and the city itself), a small necropolis (fig. 15) began to grow in the area of the former structure in Area B

³⁷Reference to the local stone occurs in Strabo 5.3.10. Tacitus (*Ann.* 15.43) praises the fire-resistant properties of the tuff of Alba and Gabii in his discussion of reforms following the Neronian fire of 64 C.E. Vitruvius (*De arch.* 2.7.2) discusses the fire-retardant qualities of tuff in general. It should also be noted that in some scholarly contexts the seemingly interchangeable name “sperone” is also employed.

³⁸Lugli (1957, 1:308–9) provides a listing of structures at Rome that employed *Lapis Gabinus*. These include repaired sections of the Servian Wall, the piers of the Pons Mulvius (109 B.C.E.), the *substructio* of the Tabularium (80–78 B.C.E.), the Pons Fabricius (62 B.C.E.), the Ponte di Nona (first cen-

tury B.C.E.), the emissarium of the Cloaca Maxima (ca. 80 B.C.E.), the foundation course of the Mausoleum of Caecilia Metella (ca. 50 B.C.E.), parts of the Forum Iulium (46 B.C.E.), the Temple of Venus Genetrix, and the retaining wall of the Forum of Augustus (2 B.C.E.). In most of these cases, Lugli (1957) comments on the accurate dressing of the *opus quadratum* blocks and a frequent occurrence of rustication.

³⁹J.M. Farr is developing a phasing of quarrying activities as part of a dissertation on quarries at Gabii.

⁴⁰A cluster of Late Antique structures is attested around the church of San Primo (Fiocchi Nicolai 2006).

Fig. 15. Area B, plan of the house with the imperial necropolis superimposed on it (T = tomb) (drawing by R. Opitz).

by the late first century C.E., if not a bit earlier. The stratigraphic sequence shows at least two superimposed levels of burials. The earlier phase seems to belong to the first and second centuries C.E., while the second phase may be related to the third to fifth centuries C.E.⁴¹ The tombs number 27 at this stage and include both adult and subadult inhumations; the burial strategy is variable, with some tombs showing evidence for more elaborate preparation than others. For instance, the tomb of an adult male is prepared with a floor of tiles, surrounded by stones, and capped by more bricks and tiles (Tomb 21), while another is simply deposited in the soil, seemingly without preparation (Tomb 6). It should be noted that given the relatively shallow stratigraphy of this sector, postdepo-

sitional interruptions—most notably plowing—have distributed and in some cases (e.g., Tombs 3 and 19) truncated and/or abraded the human remains. There is no discernible pattern to the organization of the tombs in either period.

The sequence of burials began in the mid first century C.E. The earliest grave (Tomb 8) is of a high-status individual. This tomb contained an adult male inhumation within a sarcophagus manufactured from repurposed lead sheeting.⁴² This tomb was discovered in 2009 and has been joined in 2011 by two other tombs using varying thicknesses of lead sheeting (Tombs 34 and 35). The remaining tombs in this ad hoc necropolis are much more typical of the archaeological record for central Italy in the Imperial period. Adults are

⁴¹ The later burials of this area are cut into a unitary destruction layer that covers a vast area of the site; given the presence there of material dated to the third century C.E., this destruc-

tion layer provides a terminus post quem for the later phase of burials in Area B.

⁴² Gallone 2012.

typically buried in *a cappuccina* tombs, most of which are cut into the collapsed remains of the abandoned Area B building. Males and females are interspersed, as are several infant and child burials. While one child is deposited in a terracotta sarcophagus (Tomb 35), others are buried in imbrices deposited in a former drainage canal (Tombs 43 and 45) at the eastern margin of the Area B domestic building. The remains of an infant were placed in a pair of ollae, which were then deposited in an *a fossa* tomb (Tomb 32) in the northern part of Area B. Taken together as a group, the tombs from the Area B necropolis offer promising evidence of the changing dynamics of settlement and land use in the neighborhood of imperial Gabii. While tests are only in their early stages, the preliminary skeletal pathology shows evidence for physical stresses and injuries that come from repetitive motion, as well as many healed, traumatic wounds. It would seem that most of the deceased in this necropolis worked as manual laborers either in an agricultural setting or in the adjacent tuff quarries.

The necropolis is a clear indication of the contraction of the urban center and the abandonment, by stages, of portions of the city closest to the quarry operations. The retasking of formerly inhabited space represents not only a feature of Gabii's urban decay but also an interesting facet of the realities of contracting cities in imperial Latium.⁴³ These tombs from Gabii represent further entries into an important and growing data set for burials in the *suburbium* of imperial Rome and as such represent a promising research opportunity wherein the health, nutrition, and lifestyle of ancient Italians can be sampled via a battery of scientific tests from ¹⁴C analysis to isotopic and genetic analyses.⁴⁴

PRELIMINARY CONCLUSIONS

The fieldwork carried out so far is already sufficient to support several important preliminary observations about the development of the city of Gabii. The ancient sources report that Gabii had declined by the Augustan period, after which it enjoyed a brief renewal before eventually sliding into obscurity.⁴⁵ With that information in mind, it is significant to see not only the

evidence of multiple periods of occupation during the first millennium B.C.E. but also the transformation of the city as it pushed into the Roman Imperial period. At this stage, there are three significant categories to which the work of the Gabii Project is contributing important new data with respect to the archaeology of urban centers in central Italy. These categories are city planning, domestic architecture of the Republican period, and the transformation of urban landscapes in the *longue durée*.

The discovery by magnetometry of the latent city plan of ancient Gabii prompted this investigation.⁴⁶ The street system of Gabii is orthogonal with elongated blocks and can be dated to the fifth century B.C.E., making it the earliest-known grid of its type in a non-Greek town in the Italian peninsula (the evidence for regular layouts in Etruria comes mostly from colonial foundations—e.g., Marzabotto—not from primary cities).⁴⁷ This means that when Rome started founding its colonies in the late fourth century B.C.E., it had a model that was far closer spatially and culturally than anything offered by contemporary Greek town planning. Perhaps precisely because it could count on a local Latin tradition, Rome was able to successfully readapt other elements derived from Greek urbanism.⁴⁸ It is also now clear that remains dating prior to the fifth century B.C.E. are not aligned on the same layout, which suggests that the city was completely overhauled at a specific point in its history. Because this transformation happened in a period that was characterized by the spread of the republican system,⁴⁹ it is tantalizing to connect this transformation with changes in the social structure at Gabii. However, much remains to be done to clarify this crucial event in the evolution of Italian urbanism; thus, further excavation and ground penetrating radar (GPR) surveys will be aimed at gathering additional relevant data, particularly for the first phase of occupation of the orthogonal layout.⁵⁰

The scholarly pursuit of sound chronologies for republican domestic architecture continues in earnest today, with the reassignment of chronologies in Vesuvian sites leading the way in a reappraisal of domestic architectural forms, especially the diffusion of houses of the atrium type.⁵¹ At Rome, the evidence for Middle

⁴³ Patterson 2006.

⁴⁴ Killgrove 2010.

⁴⁵ The topos of Gabii's decline is reflected in the comments offered in Cic., *Planc.* 23; Prop. 1.33–6.

⁴⁶ Becker et al. 2009.

⁴⁷ Becker et al. 2009, 640; Mogetta 2013.

⁴⁸ On the Greek influence in Roman town planning, see Sewell 2010, 21–86.

⁴⁹ Political developments in Latium in the late sixth and the

fifth centuries B.C.E. are outlined in Cornell 2000.

⁵⁰ The Gabii Project, in concert with Elena Pettinelli and Pier Matteo Barone of the Università degli Studi Roma Tre, has already begun a focused campaign of GPR survey.

⁵¹ For a recent reassessment of the debate, see Sewell (2010, 109–36), who dates the emergence of standardized atrium houses to ca. 200 B.C.E. Jolivet (2011) offers a different reconstruction emphasizing the influence of archaic precedents.

Republican domus architecture remains scanty and is highly fragmentary when present.⁵² At Gabii, the discovery of at least two major Middle Republican domestic compounds constitutes a fundamental addition to the very short list of securely dated contexts from central Italy. This is also the first time that elite houses of this period are being brought to light in a top-tier city. Gabii, unlike secondary towns, such as Pompeii, Musarna, or Marzabotto, was the seat of aristocrats of the same caliber as those who lived in contemporary Rome, Naples, or Tarquinia. Both houses are quite large (more than 600 m², a size comparable to that of house plots of the top property class at Cosa),⁵³ are centered on courtyards, and demonstrate high-quality building techniques. One of them possibly features a U-shaped arrangement around the open courtyard, which does not have precise comparanda from urban contexts (though a parallel for this type of plan would be Via Gabina site 11, which is located in the countryside of Gabii).⁵⁴ The other clearly displays an atrium with a classic tablinum. These features, however, seem to have been inserted only at a later stage, modifying the original house plan (this would also explain the presence of asymmetric *alae*). As excavation continues, key issues are the typology and development of the Roman domus and the origins of the canonical atrium house, the current understanding of which is likely to be substantially revised by our findings.

Of equal importance is a yet-earlier phase of seemingly domestic architecture—namely, the remains of the compound in Area D. Here, we see important evidence for elite habitation in the Archaic period, a structure composed of a stone footing and a superstructure in wattle and daub or mudbrick; one stretch of wall may also have been reinforced by means of *emplekton* (Vitr., *De arch.* 2.7).⁵⁵ This compound, whose abandonment and final destruction are associated with chamber tombs, is the seeming precursor to the period of the city's history that saw the insertion of the regular street plan. Again, elite sixth-century B.C.E. housing is known from only a handful of sites in central Italy, and the new evidence from Gabii will undoubtedly contribute to a better understanding of the emergence of houses featuring stone masonry

and roof tiles in the major cities in the region.⁵⁶ The goal for future excavation in this sector of the site is to obtain the entire plan of the archaic complex and to assess whether this was part of a continuous urban fabric or—as the available evidence suggests—whether this area formed a discrete cluster of habitation of the kind one can imagine existed in the area of the orientating infant burials.

Finally, the adoption of large-scale and long-term levels of analysis at Gabii allows us to reconstruct how urban landscapes transformed over time. Vast areas of Gabii were abandoned by the end of the Republican period, as attested by the deposition of Early Imperial adult burials inside the walls and by the creation of vast quarries aimed at exploiting tuff (Lapis Gabinus) in the same period. This means that the literary references lamenting the decline of the city were not pure flights of fancy or stale topoi, as has sometimes been surmised. The evidence for the quarrying of local tuff at Gabii in the Republican period appears to dramatically alter the settled center of the city. While the quarrymen first attacked the exposed tuff embankment that formed the edge of the volcanic crater of Castiglione, they eventually continued their work at ever-greater distances from the crater's rim. As a consequence, the settled areas contract away from the quarry and its activities, although the continued use and maintenance of side streets, and presumably the main trunk road, signal an odd symbiosis between a symptom of the city's decline—namely, quarrying—and the streets that gave spatial definition to the once-healthy settlement. The emergence of the ad hoc necropolis in Area B signals a significant change in the appropriation and use of space within the former center of the city. The remains exposed by the Soprintendenza Speciale per i Beni Archeologici di Roma in the so-called Hamilton's Forum (a pillared structure in the area of the Sanctuary of Iuno)⁵⁷ and the Area Urbana most likely represent the Imperial and Late Roman phases of the settlement. Thus, although the city shrank considerably in size and importance, it continued to receive monumental public architecture in the Imperial period, which was funded by both private patrons and emperors.⁵⁸

⁵² In the region of Rome, the best-preserved example of a standardized atrium of the late third century B.C.E. has been found at the auditorium site. The excavators argue that the design of this building was based on urban models (De Davide and Di Giuseppe 2007). The purported early date of the concrete houses on the north slopes of the Palatine (Carandini and Papi 2005), however, is problematic. A possible example of contemporary domestic architecture has been exposed under the Basilica Iulia (Carettoni and Fabbrini 1961).

⁵³ Fentress 2003, 23–5.

⁵⁴ Widrig 1980.

⁵⁵ For examples of tuff rubble construction in Early Roman contexts, see Cifani 2008, 237.

⁵⁶ Cf. recent research on the early layers of Piazza d'Armi at Veii (Bartoloni 2009).

⁵⁷ Angelelli et al. 2012.

⁵⁸ Becker et al. 2009, 630–32.

In conclusion, the archaeology of Gabii is shedding new light on many aspects of ancient urbanism that are difficult to reach and study in such detail at comparable sites in central Italy. Many questions still remain open, most notably the actual extent and character of the Early Iron Age settlement, the internal organization of the city blocks in the first phase of the orthogonal layout, and the location of industrial activities in the later phase, when local industrial features previously relegated to the outskirts of town may have moved into other areas. It is hoped that the continuation of the project in the next three years will help clarify some or all of these issues, providing further information on how cities such as Gabii were ultimately shaped by their inhabitants and how these transformations relate to the vagaries of history.

MARCELLO MOGETTA
KELSEY MUSEUM OF ARCHAEOLOGY
UNIVERSITY OF MICHIGAN
434 SOUTH STATE STREET
ANN ARBOR, MICHIGAN 48109-1390
MOGETTA@UMICH.EDU

JEFFREY A. BECKER
JEFFREY.BECKER@GMAIL.COM

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