C.3. THE GARDEN

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C.3.1. INTRODUCTION

The excavation of the gardens at “Horace’s Villa” has produced some of the most successful results of the AAR/SAL excavations.1 Preserved, systematically excavated ancient gardens outside of the region of Mt. Vesuvius are rare, but include the excavations of E. Salsa Prina Ricotti and W. Jashemski of the gardens at Hadrian’s Villa in nearby Tivoli and the joint Italian-Danish project on the gardens of Livia at Prima Porta.2 Given the importance of Horace’s poetry about the Sabine landscape and his villa, Frischer consulted Jashemski on the feasibility of undertaking a garden archaeology project, and she recommended a small team of specialists to do the work. He assembled the group for a feasibility study in August 1998. All participants were encouraged by the results of their investigations that year.3

Gardens and designed landscapes are excavated for a number of reasons, and, contrary to expectation, the goal is not the discovery of the species of plants that grew there. This is not possible in most instances.4 Rather, the objective of archaeological exploration is to recover the basic physical layout of the garden (the

1. My warmest thanks to Maria Grazia Fiore and Bernard Frischer for inviting Cornell University to join the project; to the entire staff of the AAR/SAL excavations, and in particular to Gianni Ponti, Stefano Camaiani, Luca Passalacqua, Laura Cerri and to the teams of students who worked on the garden project. In 2001, we dedicated the first presentation of the garden excavations to Wilhelmina Jashemski in appreciation for her role in bringing together the garden team and in honor of her 90th birthday. James Schryver, who took responsibility for the excavation and interpretation of the medieval levels, prepared the preliminary reports and shaped the discussion of the medieval levels of this report. Special thanks go to Elizabeth Clemence, Daniel Costura, and Misako Murata, who prepared the visual analyses, and to Elizabeth Macaulay and Kelly Cook, for their assistance in the preparation of the report. The work was supported with funding from the Center for the Humanities, The Hirsch Fund, and the Department of Landscape Architecture at Cornell University.


3. Frischer et al. 2000. The 1998 team is discussed in the preliminary report. In 1999, the staff included: Kathryn Gleason, John Foss, and James Schryver, with student volunteers Peter Hedlund, Elizabeth Macaulay, Mary Pearsall, Deni Ruggeri, and Giovanni Malfatti, with timely assistance from the University of California Research Expeditions Program volunteers throughout the season. The March 2000 team added Ann Kuttner, Betsey Robinson, and Aicha Malek, as well as students of archaeology and landscape architecture at the University of Pennsylvania, Penn State and Cornell: Pamela Brown, Daniel Costura, Sarah Cupperberg, Michael Delli, Laura Gawlinski, William Gruen, Andrew Hahns, Brian Jencek, Margaretha Kramer-Hajos, Alexandra Minkovich, Millicent Moran, Paula Rosenberg, Beth Ryan, Outi Salminen, Joseph Teel, Maki Uchida, Alisia Vilonen, and Kim Wilczak. Their excavation records and drawings form the foundation for this report. During the summer of 2000 Jennifer Ramsay analyzed the garden soils collected by our team.

boundaries, the paths, the edges, and the features that structure the space and the experience of the visitor), as well as to understand the garden within the context of the overall property and landscape, both built and natural. Evidence is derived both from the built architectural features of the garden, located through geophysical survey and excavation, and from the location of the plants, detected through excavation. The small holes, pits, and sometimes even flower pots indicate the presence of plants of different sizes, even though we usually cannot provide botanical identification without other records. For this project, Horace’s poems constitute such a record. Although he does not specify the plants in his garden, he mentions many of the plants of his estate, which illuminate the broader context of our study. The “external” landscape setting of a Roman garden is as essential to the garden design as the internal features. Whether or not we are speaking of Horace’s Sabine Villa, we gain much from the record his writings provide on the landscape of a farm in the Sabine hills. For instance, during the recent excavations, our archaeological botanist reported sorrell among the carbonized seeds from SU 7044, where it was deposited in antiquity in the fertilizer of the Flavian garden (see Ramsay, D.14). A common weed in wet areas, Horace suggests it was gathered from his land for medicinal purposes (Ep. 2.51-58).

Taken together, the archaeological evidence gives us the basic infrastructure of the garden: its water system, its planting beds and patterns, its paths; from these we can extrapolate the overall framework for the visual experience of the garden. Onto this structure we may drape such evidence for art and daily life as the remaining archaeological and textual records provide. It is also possible to judge other, often ephemeral, qualities of the garden from the evidence of the habitats it produced for other forms of life: for example, snails, insects, amphibians, and rodents that prefer sun to shade, moist to dry, high vegetation to low. Even without the details, this basic infrastructure of visual space allows us to glimpse the ways in which visitors saw the garden as they moved around it, sought cool as opposed to sunny places, or looked at the garden while they dined. The painstaking observation and recording of fine soil changes, as well as the recovery bits of bone and plant remains, are but the raw data leading to the larger understanding of the experience of seeing and being in the garden, or in the larger landscape of the villa.

This report presents a garden of the first century A.D., whose features we may interpret. We located a cultivated soil layer of the late first century B.C., but not its features. We begin with a brief review of the elements of the designed landscape already known at the beginning of the project: the elements that make this villa such an important contribution to garden history. We then present the methodology employed before turning to the full report on the excavation of the quadriporticus garden, which was the focus of three brief seasons of work between 1998-2000. Although this excavation is only a series of small test sites within the larger area of the garden, some of the preliminary results of the work allow us to present theories about the visual structure of the garden. Some conclusions are already quite evident, while other, more speculative, observations may guide future work at the site. The report concludes with questions and suggestions for such an effort, which is certainly warranted.

C.3.2. LANDSCAPE SETTING AND DESCRIPTION OF THE VILLA’S GARDENS

From a landscape architectural perspective, the overall siting and design of the villa take advantage of a variety of topographic features to create the architectural settings popular in gardens of the first centuries B.C. and A.D.: terraces, cryptoporticoes, and viewing pavilions (diaetae). Although Horace does not describe the contents and layout of the gardens of his villa, his poetry is set in the steep natural topography and such cultivated landscape as the rugged hills afforded (fig. 1). This is the landscape celebrated in the remarkable siting of the villa. The response of the architecture to the spectacular vistas
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marks the villa as a type of “view villa,” popular in the first century B.C. and highly developed a century later. The original building must have been sited, at least in part, for the views, though we have few certain architectural remains from which to judge how the scenes were experienced. For the Flavian period, the peak of “view mania,” the siting and the archaeological discoveries at Licenza suggest that the architecture was designed to take full advantage of the site.

The siting of the villa’s residential and bath complex is unusual. The land was terraced to form a saddle between a small knoll to the east, known today as the Castagneto, and the lower slopes of Monte Rotondo to the west. As observers have noted, the setting was quite strategic both for views and for pleasant climatic conditions. Horace describes it as an arx enclosed by montes (Sat. 2.6.16), which well describe the site of current excavations. By terracing the saddle, the designer created broad level surfaces for gardens and working areas connected to the architecture, while providing extraordinary views from these terraced gardens to the north and south (fig. 2). The gardens will be described in detail below.

The Castagneto is a knoll rising about 50 m above the villa. At the summit, the 1998 survey team noted a remarkably level surface with a clearing in the woods. Today, the overgrown spools of coppiced chestnuts obscure the view, but in winter it is possible to appreciate a 360° view of the countryside surrounding the villa from this clearing (fig. 3). The knoll’s lower slope has now eroded over the east wall of the villa, and the overburden has prevented excavations of buried walls off the east portico. There can be little doubt that the architecture of the east side of the villa was carefully planned in relationship to this topographic feature, as the slope would have required retention. A retaining wall and a means of egress to the knoll could have been combined with either interior architectural features or exterior ones.


7. The vistas from the villa are best portrayed in a series of panoramic photographs taken in 1926 by Lugli (Plate I). New forestry projects from the mid-twentieth century have matured, obscuring views, especially to the east and south.

Villas of the first centuries B.C. and A.D. around the Mediterranean often featured such viewing knolls. For example, Herod the Great’s palace at Jericho had an artificial knoll with a pavilion at its summit (fig. 4). The pavilion provided views of the estate with its famous palm and balsam plantations. Closer to home, the Villa dei Papyri at Herculaneum and the Villa Iovis on Capri had viewing pavilions. It is difficult to believe that this knoll at Licenza was not incorporated into the villa’s architectural scheme; remains of a pavilion, however, have yet to be detected. Cores in the area demonstrated that the soil layers there have been very stable for tens of thousands of years (see Foss et al., E.1). This preliminary evidence suggests that the knoll may have had a gently rounded crest naturally, rather than a constructed terrace. It is likely that any disturbance for an architectural structure may thus be represented archaeologically as a minimal intrusion into the natural soil horizons, as with posthole construction. In March 2000, a ground penetrating radar survey was conducted on the knoll’s summit, but lack of time prevented a sufficient number of transects to be run. Further survey is warranted in this area to determine if there are archaeological remains of a diaeta or other structures associated with the villa.

On the north and south, the saddle, with its terraced platform for the villa, drops away about 50 m, quite steeply to the north, more gradually to the south. The view to the north, of the prominent hill at Civitella, is almost directly on axis with the villa. This view will be explored in more detail below, but it is worth suggesting here that when the as yet unexcavated northern side of the villa is investigated, archaeologists may consider the possibility of a garden, an ambulatio, and/or diaetae that address not only this hill, but the extraordinary panorama of the valley. The view to the south is no less impressive, though less visible now. Today the panorama begins with the view of S. Maria Delle Case on the slope below Roccagiovine, where the Temple of Vacuna may have been visible in Horace’s day (Epist. 1.10.49).

8. GPR equipment was kindly provided by Professor Larry Brown of Cornell University. It was operated by student Joshua Goldman. No report was produced, as unfortunately it was not possible to complete the survey assessing the presence of walls to the north of the villa.
On the west, the long slope rising 530 m to the summit of the Colle Rotondo has also eroded, burying this side of the villa. How this slope was integrated into the villa is a more complex issue. It is possible that a peristyle at the northwest opened onto a courtyard that is now substantially buried under the eroded slope. Coring of the accessible portion of this courtyard has not produced garden soils; however, too little of the overall area is available for study to be sure that it was not planted, if only with shade trees. Also on this side of the villa, the recent excavations identified an atrium of the late Republican period (See Camaiani et al., C.5).

C.3.2.1. Gardens within the building: small courtyard garden (Area 8, Lugli’s cortile A)

Lugli describes the garden at the northern end of the villa as one of two courts that furnished light and air to the rooms around it; the second is the so-called atrium roughly on axis to the south. Lugli regards Area 8 (his cortile A) as opening onto the countryside to the north; a room 12 (Lugli’s cortile B) was an interior court with a water feature, but recent excavations revealed an earlier phase beneath it (fig. 5; and see De Simone, C.2.1)

Lugli reports that the original appearance of Area 8 is not known, but that changes were made to the courtyard itself in the imperial period. Within the courtyard space is a low, rectangular construction, with small semicircular niches in the middle of each side. The construction consisted of a channel surrounding the central space, which was evidently occupied by a garden. This highly architectonic form of garden bed or planter was popular by the mid-first century A.D., as seen in the Domus Augustana in Rome, the Templum Pacis in Rome, and further afield, at Conimbriga in Portugal.

Recent investigations have shown that the north enclosure wall of the building was reconstructed incorrectly by Pasqui’s team: the boundary wall visible today should not be regarded as the north wall of the villa and the complex clearly continues northward (see Frischer, F.1). The implication of this discovery is that Area 8 was an introverted space, not facing the north view as indicated by Lugli, although the doors onto it along the north-south central axis may have formed part of a series of frames through it to the vista of the valley beyond.

Lugli also suggests that the entire area around this feature was a garden (un cortile fiorito) that surrounded one of the rooms (room 7) projecting onto it, which he interprets as the summer triclinium. The present ground surface of the area disguises any hint of a garden, and cores of the central feature revealed that the early excavators had removed all of the original soil before refilling and replanting it. While the area clearly bears further examination, we did not make it a priority for the feasibility study.

C.3.2.2. The quadriporticus garden (Sectors V, VI, VII)

The garden excavations focused entirely on the area within the large quadriporticus, discovered during the 1911-1914 excavations by Pasqui and further investigated by Lugli and Price during the American Academy in Rome excavations of 1930-1931 (fig. 6). The architecture of the quadriporticus itself was the focus of further work during the 1997-1999 seasons and is reported separately (see De Simone et al., C.4). Lugli reports the dimensions of the quadriporticus garden as 34 x 76 m. It is comparable in size to the peristyle of the Villa dei Papyri (8 x 94 m), the House of Octavius Quartius at Pompeii (30 x 86 m) or the central peristyle of the Villa at Sirmione (50 x 80 m). Lugli thought that the garden was at the front of the building, with the entrance to the villa at the south end of the quadriporticus. Excavations in 1997 showed the south wall to be buttressed in such a way as to make an entrance here unlikely (see Passalacqua, C.4.2).

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12. If this was done by Pasqui, the plantings had disappeared by the time of the Lugli/Price excavation (unpublished photograph in the collection of Thomas Price). It is likely that any plantings were done in the years after the latter excavation.
13. Lugli 1930, 39 and 58.
Within the quadriporticus was a spacious garden focusing on a large *piscina* in the center. Lugli describes it as follows:

“[The garden was] surrounded on all four sides by a crytoporticus or corridor with large windows opening on the garden. In the center is a large tank with two pilasters on the southern side, which perhaps supported statues, and with a drain for the outflow. Edible fish were probably kept in this tank, while the *xystus* or garden was laid out with avenues of box and borders of flowers, and rustic benches were conveniently placed in the shade of the fruit trees.”

This is the image that guided Thomas Drees Price’s 1932 reconstruction and has influenced the plantings installed at the site since the 1950s, as well as the reconstructions shown at the Museum in Licenza today. No actual archaeological evidence, however, was reported for fish-raising features in the pool, for walks, planting patterns, or benches. A flower pot was found during the Pasqui excavations and exhibited in the Museum, but its findspot is not known, nor is it clear if its function was recognized. Lugli and Price undertook excavations primarily in the northeastern area of the quadriporticus, where they discovered a niched basin within the portico. It was placed, apparently in a later phase, to terminate the east-west axis through the *piscina*. It is possible that the basin was visible from the garden, and its construction compromised the passage through the porticus at that point. This suggests that the facade was opened up to the garden. The Lugli-Price team also excavated the northeastern corner of the *piscina* wall and along the north edge, revealing that it had four piers rather than two as described above. No other results from their excavation in the area are known.

In summary, the features of the quadriporticus garden securely known archaeologically at the start of our project were:

- the central *piscina* with its four piers, a tank and conduit leading to the drain in the southwest area of the quadriporticus;
- a set of steps leading into the garden on the central N/S axis;
- a flower pot from the Pasqui excavations;
- the surrounding porticus with the articulation of its facade, seen to be a series of alternating doors and panels separated by pilasters. Within the porticus was a fountain feature on the east side of the E/W cross-axis through the pool;
- an understanding of the slope of the garden (Price calculated a slope of 0.9% east-west, 1.2% north-south).

The challenge for the new excavations was to locate features within the garden soil itself, under the unexcavated central area of the quadriporticus.

### C.3. Methodology

To detect the fine features of a relict garden, as well as to reconstruct as much as possible the plantings, decoration, activities and habitats of ancient garden areas, we planned an integrated and coordinated series of specialist activities.

#### C.3.3. Preliminary survey and assessment techniques within the residence and quadriporticus

A geophysical surveying (remote sensing) team, a pedologist, and an archaeologist began the study of the quadriporticus garden and other gardens within the building complex. First, the remote sensing team located possible subsurface features. In 1997, a geophysical survey was conducted using a magnetometer. Further studies with resistivity and magnetometer equipment were conducted in 1998, and the area was checked with soil cores to test the readings (see Foss et al., E.1). By and large, debris blocked the cores taken for this purpose. Studies were also done of the larger area of the villa to describe

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15. His reconstructions are more valuable for their reconstruction of the architecture than for their portrayal of the garden.


the geological, geomorphological and pedological conditions at the site (see Foss et al., E.1).

Ideally, field work on the larger landscape of the villa estate goes hand in hand with garden excavations, especially with this type of villa. A team from Sheffield University worked at the site in 1998, conducted some promising preliminary field work, and proposed a feasibility study that would have integrated the environmental retrieval studies with an assessment of habitat and resources in the area. The project would also have identified, through systematic field walking, any archaeological remains of outlying features of the villa, such as other gardens, roads, and outbuildings, providing important information for the interpretation of the garden, villa views, and environmental evidence from the excavations. Unfortunately, the funding for this study was not available. Nevertheless, this is an important dimension for future work at the site.

C.3.3.2. Assessing preservation of cultivation soils

Cores, useful for the detection of garden soils, revealed which levels were formed through erosion, redeposition of fill, cultivation or natural processes of soil formation. Many of J. Foss’ initial cores were blocked by debris, but, after stratigraphic excavation through rubble, new cores “periscoped” down, permitting more accurate removal and readings of the fine soil layers and features of the garden by the archaeologists. This coordinated effort is worth planning into any garden or landscape project from the onset. In 1998, it permitted us to determine the presence of two levels of ancient cultivated soils, although only one could be reached by the archaeologists in the time available that season. Without the cores, the feasibility of a garden excavation project at the site would have appeared less promising.

Garden soils are identified on the basis on several characteristics. Roman soils were typically cultivated with fertilizer, which consisted of debris gathered from kitchens, barns, and even privies (if Virgil is to be believed). This material was gathered into large piles, in order to be used later and worked into garden soils and fields. As a result of this deposition process and continued cultivation, the artifacts from cultivated layers are highly abraded, often preventing identification. Finds within the soil include potsherds, bones, carbonized plant and wood remains, and other artifacts, all randomly scattered.

C.3.4. Excavation of the quadriporticus garden (Area 24, Sectors VI.1, VI.2, VII; Area 25, Sector V)

A team dedicated to the excavation of the garden soils is typically needed on Mediterranean sites. K. Gleason planned and carried out the strategy, coordinating the work with B. Frischer and G. Ponti. J. Schryver supervised the excavation and interpretation of the medieval levels. After various stratigraphic units in the garden had been identified, flotation and wet-sieving of soil samples were undertaken in 1999 and 2000. Recovery of plant remains was successful, despite rather poor conditions for preservation and retrieval (see Ramsay, D.14). Animal bones, eggshells and land snails were also preserved. No feasibility studies were carried out for insects, pollen or phytoliths.

Excavation focused first on the identification of the nature of the strata. It is evident from the levels of the 1911-1914 excavations that the quadriporticus lay under two meters of later deposits. The first meter consists of almost continuously cultivated soils. These preserve a rubble layer, dated to medieval times (fig. 7). As has been observed at other sites, a layer of rubble debris is often ideal for preserving garden features, and this proved to be the case in the quadriporticus, where such a layer was present. The best preservation occurred under the thickest portions of this layer, and, during excavation, particular attention was paid to the identification of cultivated surfaces. Once these were established, and the surfaces exposed, excavators turned to the identification and documentation of every small feature and change in soil color. Due to the short work seasons, the areas exposed were plotted carefully, but only at the end of the three seasons was it possible to put the plans together and observe a distinct pattern to the finds. That said, the discovery of three planting pots and several pits in 1999, all parallel to the central N/S

18. James Schryver supervised the excavation and interpretation of these areas.
axis, gave us some immediate clues as to the design of the garden.\textsuperscript{19}

The archaeological stratigraphy is sufficiently clear and data-rich to reconstruct the general chronology, with the main periods of use dated by coins and pottery. The following discussion presents the garden excavation in two groups: Sectors V and VI, the central area of the garden with its pool; and Sector VII, a single large trench at the north end of the garden, at the base of the central steps. The excavation of Sectors V and VI is first discussed trench by trench; thereafter the activities they represent are related to each other. The various activities of each period are initially described with stratigraphic unit numbers, artifact descriptions, and soil context; then they are interpreted, within the limits possible for a feasibility study.

\textbf{C.3.4.1. Sectors V and VI: the central part of the garden (Sector VI) and the piscina (Area 25, Sector V)}

The Pasqui team first excavated the central piscina and its water pipe and small tank on the western side. They also identified two large piers along the south side of the pool. Lugli and Price pursued the pool’s outlines further on the north and east sides and located the northern two piers.\textsuperscript{20} In the published study of the excavations, Lugli describes the pool as having a spurting central jet (\textit{fontana zampillante}) that provided an attractive focus within the well-tended gardens for those strolling in the porticoes.\textsuperscript{21}

\textsuperscript{19} The results of the garden excavation were then examined from the point of view of design and human experience. This included analysis of artifacts, some particular to the garden. E. Macaulay developed expertise in ancient flower pots and sundials specifically for this task. A. Kuttner and K. Gleason studied artifacts found in early excavations and will work together on the relationship between the building and gardens for a future interpretative article.

\textsuperscript{20} Lugli 1926, cols. 542-543. Lugli first poses the idea that the piers to the south of the pool are buttresses. Price (1932) evaluates the theory from an engineering standpoint, 140.

\textsuperscript{21} Lugli 1926, col. 541.

This jet is purely speculative: neither campaign fully excavated the bottom of the pool.

To clarify aspects of the construction of the pool and the contents of its fill, teams conducted remote sensing surveys over the pool and excavations were undertaken inside it (northwest corner, Sector V) and outside it (east side and near the southeast pier, Sectors VI.1 and VI.2, respectively). The pool walls seen today are heavily consolidated with a cement cap. No mortar or clamps survive inside the pool to hint as to the nature of the original coating, nor is there any indication of hydraulic mortar or \textit{cocciopesto} to suggest that the pool was lined with waterproof material. Lugli and Ponti assumed that the walls visible today are foundations, the former on the basis of the materials of construction, the latter on the basis of garden levels to the north of the pool, and both on the assumption that the original garden surface was a short step down from the thresholds between the portico and the garden. The garden levels in cores and trench VI.2, however, place this hypothesis in some question. It may simply be the case that the limestone chip and cement walls seen today are but the core of walls once finished in finer materials. This issue is linked to phasing: the core suggests garden levels well below the top of the walls. The results of the 1999 excavation in Sector VI.2 address this relationship inconclusively (see below). The excavations to date do not establish the original date of the pool’s construction; nor do they clarify the interpretative issues discussed above. If anything, our studies have suggested new possibilities and raised more questions to guide future excavation strategy.

\textbf{Sounding in the piscina (Area 25, Sector V)}\textsuperscript{22}

Area 25 is the rectangular structure located in the center of the garden and interpreted as a pool (\textit{fig. 8}). The excavation was undertaken to understand the chronology of its destruction, to verify the quota of the floor, and to re-examine its function. The original plan was to undertake several stratigraphic explorations and then to expose the entire pool with the help of a backhoe. Because of structural problems with the perimeter walls of the pool, however, the

\textsuperscript{22} The work was done by Luca Passalacqua, the author of this section (Sector V).
project had to be reduced in scope and was limited to opening up a single trench in the northwest corner.

Study of the fill (SU 5001) in this trench revealed a surprisingly large amount of marble rubble, which probably resulted from the stripping of the pool’s revetment panels. Ceramic finds, however, were sparse, and no statuary or decorative elements were encountered. Thus it is difficult to date the destruction of the pool, beyond noting that in late antiquity we often find cisterns or large basins used as dumps for rubbish and debris. That the structure was a pool seems beyond doubt, even if in the area investigated no traces of decorative surface treatment of the walls or floor were preserved.

In this sounding, all that remained was the preparatory bedding for the floor of the pool, at a quota 2 m below the top of the perimeter walls. The bedding consisted of a thick stratum of opus caementicium (SU 500). No hydraulic mortar or cramps were found on the walls.

Sounding in Sector VI.1

In 1998, a small trench was set out that extended from just inside the pool across the pool wall and into a baulk remaining from the earlier excavations. The aim of the trench was to reveal the nature of the soil layers above the Roman levels and to ascertain the preservation of the stratigraphy along the pool wall. Although the earlier excavators had “chased” the pool walls, they did not dig deeply enough in this area to sever the connection between the original garden levels and the pool wall. The stratigraphy of this trench is correlated with that of Sector VI.2 (see the following discussion). Although no garden soils were encountered during the brief excavation, a core taken a few meters southeast of the pool indicated that they were at a lower level than anticipated (figs. 9 and 10).

Sounding in Sector VI.2

In 1999, a 4 x 6 m trench was laid out just east of the southeast pier of the pool with the following objectives:

• to locate and examine the garden soils identified by cores taken in 1998;
• to ascertain the relationship of the cultivated levels to the pool walls;
• to examine the stratigraphy associated with the pool and perhaps date the construction of the pool;
• to determine if the piers of the pool were original to the construction or added as support in a later phase.

The phases for Sector VI generally correlate with the phases given for Sector VII below.

Period I (Activities 1-5)

This Period cannot yet be correlated with other Periods at the site, as no datable pottery has been found, there are no trenches that link the pool area to stratigraphy from the enclosing porticoes, and we were not able to reach the natural soil in either trench. While we have information on phasing and construction techniques, we cannot yet offer a date for the original construction of the pool. For the present, the assignation of the pool to the “original building” is neither proven nor disproven, pending further excavation.

While this first Period has no confirmed date, later Periods and activities around the pool do correlate with other areas of the garden and villa.

Activity 1: The first activity at the site is identified by soil cores, which attest to a redeposition of subsoil (see Foss et al., E.1). The redeposition suggests a probable leveling or raising of the ground. Such grooming of the surface may represent the leveling of the entire terrace for the construction of the villa as a whole, or a more specific preparation for the construction of the pool. There is no ceramic material to date this activity.

Activity 2: A cut (SU 6024 in VI.2) just outside the outer pool wall is seen in both VI.1 and VI.2. This cut may be evidence

23. By the “original building” we mean the first traces of a building that at present cannot be evaluated as a single unit (see De Simone, D.1.3.7).
24. Price (1932) also suspected an original leveling of the platform, 141.
of a construction trench, in which the walls are built up against standing soil. If, however, the site was graded as a terrace before construction of the portico and courtyard, an interpretation of a construction set against earth (controterra) suggests that the pool was built once the garden soils had already been deposited. This would imply that the pool was part of the imperial phase of the villa. If the pool was original to the platform, however, it would have typically been constructed first into the subsoils, and then the fills and garden soils would have been brought in and spread around the pool. There simply is not enough stratigraphic information to further inform us on this issue.25

Activity 3: The wall of the pool (SU 6026) is constructed of concrete and limestone chips. The excavation showed definitively that the piers are integrated into the walls of the pool (fig. 11). It is notable that a mortar coating (SU 6025) was found in a highly decayed state on the outside of the pool wall, as it has been difficult to detect such material elsewhere.

Activity 3 is the construction of the pool wall. It is likely that the walls seen today are but the cores of walls with a finer original finish. It is difficult to conclude from the mortar found in the excavations that the walls were simply plastered, and no clamps or other evidence guide us further in interpreting the treatment of the walls. It is also possible, though speculative, that the walls are foundations for a structure at a higher level, or for a reused feature, such as a cistern, associated with an earlier period at the villa.

Activity 4: Immediately outside the pool walls, set within the cut, are fills SU 6006 and 6023. SU 6006, in Sector VI.1, is within the cut of the earlier excavations of Pasqui and Lugli. SU 6009 is the cut of an ancient trench, with SU 6008 at the base of it. SU 6023, in Sector VI.2, is of a lighter color than the surrounding fill of SU 6022. No diagnostic material was recovered to date the fills of these cuts, nor were plant remains or other evidence of fertilizer recovered from the soil samples.

Activity 4 is problematic to interpret from test trenches. The clearest explanation is that the cuts are for the construction of the pool. This may suggest a construction set against earth. If so, the stratigraphy of VI.2 indicates that the earth cut into to create the pool was already layered with cultivated soil levels of earlier periods. This would indicate that the pool was installed later in the history of the villa.

The difference in soil color suggesting a cut might indicate the presence of decayed plaster.

Activity 5: SU 6019 and SU 6022, in Sector VI.2, are redeposited fills around the pool. The placement of this activity in the chronology is speculative, as there has not been enough excavation to determine if the pool was cut into these soils or if the soils were laid down after the construction of the pool, as indicated above. SU 6022 should be examined further as a possible cultivated soil.

We cannot rule out the possibility that a garden surface began at the pool edge, as no pavement or substrate for a pavement was seen. The test trenches are too small to confirm the sequence of activity. Organic soil, amended with debris, was seen in a core sample just over one meter beneath this surface (the level at which the Pasqui and Lugli/Price excavations stopped, south east of the corner of the pool). This activity is placed in Period I. Either a garden was laid out at the same time as the pool construction, or there was already a garden in place, and the construction trench was cut into it.

25. Price (1932) devotes a considerable part of his discussion to the engineering functions of the piers, 140-141.
Period II (Activities 6-10)

This correlates with a period of remodeling or alteration throughout the villa. The stratigraphy of the soils to the southeast of the pool is intact. It is clear from this trench and related cores that cultivated soils surrounded the pool, though no particular design could be ascertained in the small area of the trench, nor were any soil discolorations or fine features observed. No pots or garden artifacts were discovered, but limited ceramic evidence indicates a date in the second century A.D. SU 6013 overlies another fill level (SU 6017), with pottery dated to the first century A.D.

Activity 6: This is the deposition of SU 6017. This fill is a clayey loam with visible amendments in the form of pottery fragments and occasional carbonized plant material. No identifiable plant remains were recovered from this level, but the soil has all the attributes of a cultivated soil. Depending upon the following interpretation of the structures, the deposition of this soil may have preceded the construction of the piers as a second cultivated soil layer. It is dated by its scant ceramic remains to a time from the end of the first century B.C. to the end of the first century A.D.; the later date is more likely (see Angelelli, D.2,3). If the supports (activity 7) are associated with this level, they would have projected above the garden surface.

Activity 7: This is the construction of two crude brick rubble-core supports (fig. 12). The two features, made of loosely compacted, degraded brick fragments, may be foundation supports for columns or trellis posts. They are spaced ca. 0.9 m apart, and a core taken to the east at the same interval produced more such brick fragments. The line of these features is parallel to a wall extending westward off the east portico into the garden. Further excavation is needed to reveal their extent to the west, as cores were inconclusive. If the supports are associated with SU 6017, they date to the first century A.D., while if they are associated with SU 6013, they may be dated to the end of the first century or in the second century A.D.

It is conceivable that these supports are associated with the surface of garden level SU 6019, as their bases are at the surface. It seems more likely, however, that they are either substructures for SU 6017 or for a feature associated with SU 6013 (activities 6 and 8). Further archaeological exploration, either by geophysical survey or excavation, should investigate the possibility that they are supports for a trellis or other light architectural feature associated with the extension of the aforementioned wall, as hypothetically reconstructed in fig. 13.

This is the level into which it seems most likely that the brick piers were set; however, the composition of this layer would not have presented a useful or pleasing surface to a garden or courtyard.

Activity 8: This is the deposition of SU 6013, a layer ca. 26 cm thick. It is a redeposited yellowish clay fill, lacking organic inclusions but with occasional pottery, bits of brick, tufa, and pockets of sand. We interpret this layer as fill brought onto the site, but not apparently for cultivation, as it does not have the necessary organic content. Ceramic remains date this level to the end of the first century or beginning of the second century A.D.

Activity 9: This is the deposition of SU 6012, a clay-rich layer below the root zone, barely distinguishable from SU 6010 in color. Its presence was marked by the absence of tree roots and other recent organic material. The fill contained roof-tile fragments, a slab of pavement, and large tesserae. Environmental retrieval produced carbonized wheat grains, culm nodes, chenopodium, buttercup,
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primrose, and allium. Ceramics in the fill are dated to the end of the first century/beginning of the second century A.D. This appears to be a fill taken from the immediately surrounding area to level the ground around the pool, and it is strikingly similar to the eroded soils that buried the nymphaeum in the east portico. It seems unlikely that the plant remains represent cultivation in the garden, although it is premature to rule out this possibility. It is more probable that this is soil originating from the nearby slopes.

Activity 10: This is the deposition of SU 6010, dated by a single potsherd to the first or second century A.D. It is the ancient level at which the early excavators stopped, and it has been infiltrated by roots of the modern sod grass and other organic surface materials. A soil sample from the lower levels of SU 6010 produced a carbonized seed of Galium (bedstraw), a local weed associated with cultivated areas.

This may be the ancient garden level of the area around the pool; the early excavators evidently thought so. If so, it may be related to SU 6008 from Sector VI.1. It is not possible to offer a definitive interpretation from the evidence—it will be necessary to correlate this test trench with excavation of areas protected by unexcavated overburden.

Period III (Activity 11)

This is a general designation for the period that represents the decline of the garden, and probably of the adjacent quadriporticus. Much of the area of Sector VI was excavated during the Pasqui excavations. This period is clearly preserved in the upper levels of Sector VI.1 (excavation conducted by G. Ponti).

Period IV

This Period has no activities preserved in Sector VI.2, as the levels were removed during the Pasqui excavations. It is represented in Sector VI.1 as the layer of rubble excavated as SU 6005. The rubble is made up of construction materials that seem to represent either neglect or active dumping. It appears that the materials were sifted through to remove pieces suitable for reuse.

This Period correlates with the corresponding Period in Sector VII.1, as well as with the test pits excavated for soil cores along the western edge of the quadriporticus. It is defined for the garden as a whole by the intentional dumping of debris in the northern and western areas of the garden, probably indicating the medieval reoccupation of the adjacent buildings. The excavated trenches of Sector VI show that the early excavations severed any relationship of this layer with the eastern wall of the pool (SU 6002).

Period V (Activity 12)

This Period, too, is represented mainly in Sector VI.1. It correlates well with the northern area of the garden, as a long, continuous period of cultivation on the site, with pottery from the seventeenth to the twentieth centuries. SU 6001 in Sector VI.1 is comparable in depth to the cultivated soils described in Sector VII.1. It is notable that these soils have considerably fewer potsherds and other inclusions than Sector VII. This may be due to a more sporadic cultivation history, and/or to the difference in the agricultural practices of the parcel owner, as Sector VI.1 lies on different property from both Sector VI.2 and the northern area of the garden. In Sector VI.2, the archaeological excavations removed most of the cultivated soils of Period V.

Period VI (Activities 13-16).

This includes the twentieth-century excavations and activities associated with the archaeological park. In the garden areas, generally, this is seen in photographs and records as excavation activity, as restoration activity and as cultivation taking place on the

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26. The northern part of the garden lies on property 1215A/B, owned by the Foschi at the time of the Pasqui excavations. Sector VI.1 lies on property 1214, owned by the Angeletti at that time, and Sector VI.2 lies on property 1213, owned by the Caponetti. Thanks to B. Frischer for providing this information.
unrented portions of the site during the excavations. The pool itself was excavated in this period (see the previous discussion). Extensive restoration is seen around the quadriporticus. Regarding the pool itself, restoration efforts focused on the southwestern portions of the pool, while less restoration is seen on the northern and eastern portions. Photographs from the Lugli/Price excavations show that the earth removed in 1931 and 1932 was used to groom the slopes between the excavated and unexcavated areas to give the effect seen in Price’s model of 1932. The following discussion addresses only those activities encountered in Sectors VI.1 and VI.2

Activity 13: In Sector VI.1 this activity is represented by cut SU 6009 and the redeposition of possible garden soils SU 6006 and 6007 as one layer, which was later cut again (SU 6004) by the Lugli/Price’s excavation, as seen in the photographic record. The cut SU 6015 and subsequent fills SU 6014 and 6016 in Sector VI.2 are commonly referred to as a “wall chasing” trench with subsequent fill.

Activity 14: Removal of soil down to the upper surface of SU 6010, the surface level of the 1999 excavation of Sector VI.2, after leaf removal. This fill is loam with occasional pottery fragments.

Activity 15: In Sector VI.1, SU 6004 is the cut made through any eroded debris from the Pasqui excavation into presumably unexcavated fills in the narrow area between the pool and the quadriporticus. In Sector VI.2, SU 6011 is a linear compacted surface on top of SU 6010.

Activity 15 is the Lugli/Price excavation. There are no notes on the material removed in 1931, but the excavation of this cut is seen clearly in progress in a photograph.37 Sector VI.1 showed that the Lugli/Price excavation cleared the line of the pool wall (SU 6002) along its east and north sides, but did not excavate deeply into the stratigraphy. Careful study of various photographs taken during restoration of the pool over the years suggests that the Pasqui and then the Lugli/Price baulks were trimmed back on other occasions as well.

SU 5011 in Sector VI.2 appears to represent the compaction and deposition of mud on the wheelbarrow paths seen in the photographs of the Lugli/Price excavation.

Activity 16: Activity 16 is represented in Sector VI.1, where SU 6003 is the erosion of the soil (SU 6001) cut by SU 6004 into the “wall chasing” trench of the Lugli/Price excavation.

C.3.4.2. The northern part of the garden (Area 24, Sector VII)

Sector VII was excavated as a 4 x 5 m trench in 1998, first by K. Gleason, who was able to excavate only the western half and a small area along the steps. Later in the season, the dig was brought down to bedrock on the eastern side under the supervision of L. Cerri. In 1999, the western side was completed and a backhoe was used to open a 5 x 4 m area, expanding the dig to the south and west. This was excavated as a series of steps, for safety reasons, and was not taken down to bedrock. It remains excavated only to the ancient garden level (Period II), with the southern steps remaining unexcavated entirely. In March 2000, a short excavation season of two weeks completed work on the trench prior to backfilling in June 2000.28 The trench was expanded by a meter to the east, by a meter to the west, and into the lowest of the terraced baulks to the south (fig. 14).

During the excavations we identified six distinct periods in this area of the garden. These are presented

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27. Price 1932, plate 40.2
28. The excavation took place as part of a course offered simultaneously at Cornell and the University of Pennsylvania by K. Gleason and A. Kuttner. The archaeology students in the course served as supervisors, under the general direction of Gleason. James Schryver supervised the medieval levels.
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on the Harris Matrix (fig. 15), and described as follows.

Period I. The Early Garden (second century B.C. - first century A.D.)

This Period (Activities 1-2) can be dated to the late first century B.C. It is characterized by a cultivated soil layer, organically rich, but with few finds or features. Very little of this level has been exposed, but it may be interpreted as the garden associated with Period I of the villa (see Camaiani et al., C.5, and De Simone, D.1.3.7).

Activity 1: SU 7023, 7024, 7028. The earliest activity identified was a north-south cut in the yellow shale, just to the east of the current north-south axis of the central steps to the garden. No diagnostic artifacts or plant remains were recovered.

This activity is the shaping of the shale bedrock for the garden or terrace (see Foss et al., E.1.3.1).

Activity 2: SU 7042. The fill of this cut in the bedrock is a layer of redeposited brown shale-derived soil with characteristics of cultivation, erratic distribution of potsherds, carbonized plant material, and bone fragments. No discolorations or other features were observed in this soil, but the area exposed was limited. No plant remains were found in the soil sample processed (fig. 16). Diagnostic ceramics recovered date to the late Republican period.

The layer was exposed at the base of the trench excavated in 1998 and 1999, but only in the western part of it; to the east is the bedrock, reached in 1998 and in 2000. It continues to the south in the area excavated in 2000. In 1998, we observed that the garden soil appeared to run north under the steps. When we attempted to check the relationship in 1999, however, electrical wiring for new lighting in the archaeological park had been placed under the steps, destroying the stratigraphy and thus preventing confirmation of the continuation of SU 7042.

SU 7043 is a cultivated soil of the late Republican age. It is likely to be a garden of the first phase of the villa, but this cannot be confirmed without the discovery of further features or architectural associations. The cut of the bedrock is man-made, but not enough area is exposed to understand the intention. The line of this cut should be related to the Republican atrium identified beneath the bath complex and to other first century B.C. remains, as the interface between the soil level and the bedrock is along a clean north-south line. No specific relationships of this feature to the adjacent architecture are obvious at present; however, if this garden soil in fact continues for any distance under the steps or under the portico itself, it may suggest the phasing of those architectural features, possibly dating them to the Flavian period. This could be clarified with trenches anywhere along the wall, as the Pasqui excavations did not reach this level.

Period II. The Garden of the Flavian Age

Period II (Activities 3-8) represents a time of remodeling or alteration and is characterized by yellow, clayey, shale-derived fill, with inclusions of small quadrangular pieces of brick pavers, stones, and occasional pottery of the first century A.D. This fill was deposited to raise the level of the courtyard to form the feature that dominates this period, i.e. the Flavian garden. The cultivated soil contains pottery, coins, and other artifacts, as well as carbonized plants, bone and mollusc remains. The most exciting discovery was of a flower pot (VH 148, SAL inv. no. 114428, from SU 7040) and an amphora (VH 160, SAL inv. no. 114550, from SU 7040), reused as a flower pot. These, together with remarkably well-preserved pits, stake holes and post holes, indicate the design of the garden. The finer soil features are preserved only under the medieval rubble layer (see Period IV). It is clear from the remains in this small area that the potted plants date to at least the mid-
late first century A.D., but there are hints of alterations to the design during and after this time.

Activity 3: SU 7021, 7022, 7027. This activity represents the burial of the original garden surface SU 7042 with 30 cm of redeposited shale-derived clay soils, perhaps from building activity elsewhere in the garden or villa, mixed with stones and fragments of small quadrangular pieces of brick for paving, found erratically distributed in the matrix of the fill. SU 7027 was sampled for plant remains, and a cereal grain fragment of indeterminate identity was retrieved.

Ceramics from this level contain identifiable types, but their chronology is uncertain (see Angelelli, D.2.3). A single rim fragment from the late second century/early first century B.C. is present, but this may be residual.

The original cultivated surface was buried to raise the level of the garden, presumably as part of the Flavian renovation represented in the next activity. The contents of the fill may include elements of an earlier garden (the pavers, for example), but we cannot conclude this from the test trench.

Various small postholes and soil discolorations are evident as inclusions of grey clay or organic soil in the matrix of SU 7021, 7022 and 7027 (see below, and fig. 24). These are postholes and planting pits from the cultivated level above. Preservation conditions in the soil above made it difficult or impossible to see these features in the surface, so they are best recorded at this level. As yet, we cannot assign a chronology to the phasing of each act of setting a posthole or pit.

Activity 4: No SU was assigned—feature not removed. A line of chipped limestone was laid out just west of the north-south central axis. As the feature was uncovered in the southern area of the trench, it began to curve out slightly to the east.

No significant pottery is associated with this stratum (figs. 17 and 19).

As this feature was first observed only under the bases of the flower pots, we initially interpreted it as gravel laid to aid in draining the plantings in this clay-rich soil. We were not able to excavate along the sides of this feature to find its bottom. The size and density of the stone chips look similar to the images of the pool walls prior to restoration; this may not be a level of loose gravel, but the disintegrated top of a masonry feature that separated the beds of the lower garden, or a phase of the upper garden, that we have too little evidence to identify. We simply do not know how substantial a feature it is.

Activity 5: SU 7019, 7026, 7029, 7040, 7041, 7043, 7047, 7063, 7070, 7081. This activity involved the deposition of cultivatable soil. Another layer of brown clay loam, richer in artifact content than the lower garden soil, was laid out and cultivated over the yellow clay fill. The horizon between the yellow clay fill and the cultivated soil is typically sharp in the sections. However, along the baulk in the southeast area of the trench dug in 2000, the upper cultivated soil formed a sharp, but furrowed, interface. Not enough evidence of such furrowing was seen in other baulks to allow a full interpretation.

Ceramics from this level include residual Republican wares (second-first century B.C.) and fragments dating throughout the first century A.D., with the major finds centering on the Flavian era.

Remains of cultivated crop plants and related weeds were retrieved: an unidentifiable fragment of nut, *Pisum sativum* (common pea), milk vetch, *Lolium sp.*, crane bill, *Allium sp.*, and bulrush, a plant found in wet conditions. A flotation sample produced a range of cereal, cereal processing debris, and
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cultivated herbs and weeds (see Ramsay, D.14).

This is a cultivated soil layer from a Flavian era garden. Residual pottery fragments are typical of amended soils, and the soil of this level has clearly been amended, or fertilized with food processing remains, hearth sweepings, and other burnt debris from kitchens thrown in a compost pile. The features of this cultivated area that lead us to conclude it is a garden soil rather than a field are discussed below.

Activity 6: SU 7067. A line of pots is set into the amended soil. These may be separate activities over time (i.e., different seasons, different years), but the dating of the pottery puts all of the vessels into the same time frame, that of the mid- to late first century A.D. (fig. 18).

The northernmost feature is the bottom portion of a small, purpose-made olla perforata (flower pot, VH 203, SAL inv. no. 114529) found bottomside up at the margin of the garden level and the layer of debris above. It is not in situ, but was located along the line of the other features and may be very near its original location. Also found at this margin was a large fragment of a well-preserved glass plate (VH 194, SAL inv. no. 114534, from SU 7061). Approximately one meter to the south, a complete perforated olla (VH 148, SAL inv. no. 114428, from SU 7040) was found set into the garden soil, its rim approximately 3 cm below the surface level (fig. 20; see Macaulay, D.3.1).

Soil retrieved from inside the pot (SU 7044) produced remains of horse bean, elderberry, an indeterminate fruit or nut and several plants that grow in wet places: cranebill, sorrell, and sedge. Clearly, the process by which the soil came to be in the pot was a separate and earlier activity that took place away from the garden itself, but it is most appropriate to mention it here.

Emanating from the complete pot is a series of seven small circular holes, 4-7 cm in diameter, appearing as dark soil discolorations on and just below the surface of SU 7040 (fig. 17). These were not excavated and thus have no SU number.

Parallel to the central axis, 0.94 m to the south, a small pit was identified by the looser consistency of the soil. A narrow amphora had been removed from the layer immediately above this location, and it may have caused the pit to form, or it may have been embedded in this location originally.

Finally, 1.1 m further south along the same line, the upper third of a cylindrical-ovoid amphora was found, placed upside down in reuse (VH 160, SAL inv. no. 114550, from SU 7040). It had been shattered, possibly before deposition (fig. 22; see Angelelli, D.2.3). The soil from inside the amphora (SU 7048)—again to be regarded as an earlier, off-site activity—contained a single grain of cultivated barley.

This line of features represents a series of planting pots, embedded in the garden soil of SU 7040 (figs. 17 and 21). The olla perforata is a type of purpose-made planting pot (see Macaulay, D.3.1). The cylindrical-ovoid amphora is almost certainly a planting pot in reuse, a practice commonly seen at Pompeii, Hadrian’s Villa, and other Roman garden sites in Italy.9 The breaking of pots prior to planting is suggested in the ancient literature. The plant remains found in the fill of these pots are characteristic of the fertilizer rather than plants that may have grown in the pots themselves. The other feature in the line is a planting pit without a pot.

Activity 7: This represents a series of activities indicated by small dark pits and dark circular holes surrounded by cemented stone (fig. 23). It is not possible to determine a sequence or chronology of these features in relationship with those described in activity 6. The features were not excavated, so there are no associated SU numbers. No datable material was recovered.

On the north side of the garden, two small holes (ca. 7 cm in diameter) of brown, organic soil surrounded with mortar and small stones (20 cm in diameter) were found, one on either side of the north-south axis, though not paired (“stake holes,” in fig. 17).

Round postholes, 5-7 cm in diameter, filled with brown soil, were noted during the excavation of the yellow fill of activity 6 in a number of locations. These are noted on the plan and tentatively appear to conform to a pattern symmetrical to that of the west side of the garden’s central axis.

On the east side of the central axis, where the overlying cultivated soil becomes very thin (7-9 cm) in the areas where it overlies higher bedrock, excavation of the fill below revealed various pits, up to 30 cm in diameter (fig. 24). Further exploration is required to determine if the shallowness of the soil is due to erosion or to some feature of the garden requiring little depth to the soil.

The small holes surrounded by mortared stone may be stake holes for a light reed or wooden garden feature, as the diameter of the hole is appropriate. The support provided by the stones and mortar is slight (we did not excavate the features), and the purpose may have been to protect the base of the feature from rot.

The 5- to 7-cm postholes without supports are more difficult to analyze at this point. They are almost perfectly round, which suggests the interpretation of a posthole rather than a plant hole. These posts have been pressed or hammered directly into the ground; there is no evidence of pits dug first then backfilled around the posts. As the posts are found in the layer below the cultivated soil, they appear to be sturdy supports, perhaps for a lightweight fence, such as the type of reed fence seen in garden paintings. They would not provide sufficient support for an architectural feature, such as a trellis.

The larger irregular pits seen in the yellow fill below the garden level are most easily interpreted as pits for small shrubs or plants. They are not carefully made, and it is not possible to ascertain from the pits themselves if the plants grew intentionally or wild; however, preliminary studies of their location suggest a place in a coherent design pattern.

Activity 8: SU 7005. Traces of a plaster surface were identified along the northernmost edge of the trench. It consisted of a layer of lime mortar only partially revealed and not removed. No datable ceramics or artifacts were recovered. This activity represents the poorly preserved remains of a walk, landing or other feature, probably associated with the lowest unrestored step on the central axis (activity 9).

Activity 9: SU 7006. This activity represents a constructed ledge of mortar, corresponding with the dimensions of the reconstructed stairs above, although this step has a higher riser than the restored ones above in the series (fig. 25). Disturbed soil (SU 7002) above this step makes it unclear whether or not the step had been discovered by Pasqui and deliberately left unrestored.

30. Without a careful study of the relationship of this surface to the wall, it is not clear if this is an ancient surface or a surface created after the 1911-14 excavations. The Pasqui excavations did not continue below this level anywhere else in the trench, and this seems to have been the surface that signaled the ancient level to them.
or if it was first discovered in 1998. In the center of this feature is an opening framed with brick tile (SU 7007). No significant pottery was identified from the stratigraphic units in this activity.

The most obvious interpretation is that this one step represents the construction of central steps into the garden, more or less as seen restored. It is unclear, however, why the steps were furnished with a channel (SU 7007) set above the lowest step. This feature may be contemporary with or earlier than the activities above, as it is not possible to discern the phasing from the evidence exposed within the sounding. Considering the presence of this drain and the absence of any paving or definitively compacted surface at the base of the stairs, we should keep open the possibility that the reconstructed stairs were incorrectly interpreted. It is worth considering whether the steps were intended to provide access, or were part of a stepped water fountain, popular in the first and second centuries A.D. Further excavation is needed to explore this feature; as noted above, however, after our 1998 season, electricians dug a narrow trench and laid in wiring for lighting at each side of the central stair.

**Period III: Decline of the Garden**

Period III (Activity 10) represents the decline of the garden, and probably of the adjacent quadriporticus. We have poor stratigraphy for this Period, which is broadly dated by coins and artifacts from the third to the fifth century A.D. Any phasing information that might have come from the association with the surrounding architecture was destroyed when Pasqui’s team severed the relationship with the architecture in pursuit of the line of the walls.

*Activity 10: SU 7020, 7037, 7038, 7039.* The mixed fills of material from this period seal portions of the cultivated layer discussed above. Lenses of wall painting fragments (primarily red, yellow, and white, most without decoration), eroded plaster, patches of debris, irregular surfaces, and finely eroded materials cover the cultivated surfaces between 10-23 cm in the northern part of the trench, closest to the building. In the southern part of the trench, as one moves out into the courtyard, there is hardly any distinction between the Flavian cultivated surface and those above. Plant remains from SU 7038 consisted of wild grasses.

Ceramics from this stratum range in date from residual material of the mid-first century A.D. to more significant material dating from the third century, with types in use until the fifth. Coin evidence also offers a *terminus post quem* of the fifth century A.D., although the types found were in use from the late third through the fifth (see Buttrey, D.11).

The lowest fills over the cultivated surface of the garden can be interpreted as the decay, collapse and erosion of the plasters of the surrounding porticos onto the garden surface immediately nearby (fig. 18). This process did not apparently extend far out into the courtyard, and if it did, later agricultural processes obliterated the traces. The layer is best preserved where protected by later fills.

Within the limited area of the trench, we did not identify any deliberate destruction in this phase. We need to see more of this layer to interpret the role of the artifacts. If they are residual, this suggests activity in the third to the fifth centuries prior to the deposition of this layer, or activity occurring at the villa during a period of neglect of the stucco decoration of the building exterior around the courtyard.

The preservation of *carbonized seeds* of wild grasses may be consistent with some burning off of wild grasses growing over the site, or they could have been blown in from burning in the greater vicinity.
Period IV: Medieval Occupation

Period IV (Activities 11-12) is characterized by the intentional dumping of debris, probably indicating the medieval occupation of the adjacent building. Some three meters from the building wall into the garden, the debris piles taper off and the ground is marked by cultivated soils that merge with cultivated levels above and below (fig. 18).

This Period is distinguished by deliberate human activities taking place after the main occupation phases of the first century B.C. to the second century A.D. Judging from the garden trenches alone, the activities appear to be a clearing of debris from the villa, and probably cultivation of the courtyard beyond the zone of dumping. The Pasqui excavations severed the stratigraphy of these later activities from the stratigraphy of the architecture by trenching along the outer wall of the building, so it is difficult to make specific associations between activities in the building and those seen in the garden. One has the impression from the nature of the materials that the building was cleared out for reoccupation and usable pieces of construction material were removed.

Activity 11: SU 7004, 7010, 7011, 7016, 7025, 7035, 7036, 7052, 7055, 7058, 7059, 7062, 7064, 7074, 7079, 708. A clear margin distinguished the soils of activity 10, which had little evidence of human effort in the deposition of the fill, from a complex area of apparently intentional deposition above it. This level consists of adjacent deposits of debris, too numerous to define and number individually during the feasibility study (fig. 26). These deposits contained construction material and artifacts from the building: fragments of slate, tegulae, imbrices, bricks, triangular column bricks, marble, painted plaster from the columns and walls; rough volcanic rocks (of the type often employed for grotto effects); blue glass tesserae, black, white, and red tesserae of varying sizes; a range of artifacts, shells, molluscs, and carbonized plant remains. Among the artifacts were pottery, coins, various metal fragments, and extraordinarily well-preserved fragments of window glass and other glass artifacts. Plant remains retrieved from two separate dumps indicate varied uses: sample 13, for example, contained cultivated wheat, barley, and olive, while sample 16 simply contained wild grasses.

Ceramic remains are largely residual fragments from the late Republican period through the imperial age, with types dating from the fourth to the sixth century A.D. Two coins are datable to the fourth century. The terminus post quem is thus the sixth century A.D., although an earlier date may be more likely.

The size of each rubble unit suggests individual dumping episodes. Two impressions stand out when assessing the artifacts recovered from the deposits. First, among the roof-tiles and bricks, nothing was whole. The composition of the piles strongly indicates that the debris was first sorted, then dumped in the courtyard. Similarly, with the artifact assemblage, we have an impression of sweepings that contained things either not noticeable or not worth collecting, as opposed to a habitation dump or artifacts lost accidentally in an inhabited area. Most of the pottery, glass plates and glasses, metal objects, even coins, are of Roman date, but the occasional fourth to sixth century potsherds provide a terminus post quem.

Overall, we interpret activity 11 as an effort to clear out the building for reuse, dumping the material into the garden. We cannot rule out the possibility that the dumps only represent a kind of sorting through or pillaging of the ruins for building materials, although if so, the pillagers were doing some fine sweeping as they went along. The lay of the dumps, sloping down towards the courtyard, suggests that the debris may have been dumped “out” of a relatively intact
building into the courtyard. The debris apron appears primarily on the north and west sides of the courtyard where substantial building remained behind the porticoes. It does not appear that anyone made the effort to dump more than 2-3 meters into the courtyard. Beyond the edge of the dump area is cultivated soil, and it is possible that the process of later cultivation disturbed earlier dumps, at least at the edges. Pasqui’s excavators cut a trench along the building wall, which prevents us from determining if the material was simply dumped off the retaining wall at the north. The piles taper off on the south side, and there is some directionality to the lay of the fragments in some piles, but not others (fig. 18).

Activity 12: SU 7033, 7034, 7051, 7053, 7054, 7056, 7073. South of the debris piles, the soil is disturbed by cultivation from the surface to levels lower than we were able to reach. Units merged and were assigned new numbers based on the most subtle of features. Essentially, where there were no rubble piles from late antiquity, no clear traces of activities 6 to 8 could be found. From the surface downwards excavators encountered a series of merging layers, all characteristic of cultivated soils, whose distinctions in content were more evident in the sections than in the horizontal surfaces of the trench. In general, we can observe different ceramic content in different broad stratigraphic zones, and the soil is more calcareous in the more recently cultivated soils than in the clayey shale-derived ancient ones. There are no structures or even particularly evident soil features, such as tree pits, although in the upper levels we searched for some indication of the trees evident in the 1911 and 1930 photographs of the site (fig. 27).

Ceramic evidence and soil structure suggest that cultivation took place regularly, if not continuously, from the early through the late medieval period. The level of the cultivated surfaces has built up nearly two meters since the earliest detected cultivated soil of the late Republican period. This can be attributed to the combination of material brought in for soil amendment and alluvial deposition of soils from cultivated slopes east and west of the site.

It is notable, however, that the ceramic content in the cultivated areas of Sector VII is much greater than that seen in Sector VI. This may be due to the proximity of Sector VII to the building complex. Moreover, Sector VII lies in historically different property (parcel 1215, owned by Foschi) than Sector VI.1 (parcel 1214, owned by Angeletti) or VI.2 (parcel 1213, owned by Caponetti). Depending upon the longevity of these holdings, agricultural practices may have varied between properties. It would make an interesting contribution to the cultural landscape history of the area to examine this possibility in the baulks as excavations continue.

It is not possible to judge from these excavations, therefore, at what point any medieval inhabitation of the site ended. A July entry in the Regesto Farfense from 1011 points to local initiatives towards incastellamento. This may be a plausible terminus post quem, as the cultivated levels directly above this rubble layer contained pottery later than the thirteenth century reoccupation of the site.\(^\text{31}\) The presence of potsherds in the soil is not in itself an indication of inhabitation on the property, as it remained a customary practice to fertilize soils with kitchen debris, including broken pottery from various periods.

Period V: Surface Levels of the Courtyard

Period V (Activity 13) is a continuation of the agricultural phases of Period IV. We identify this level as the agricultural activities that can be seen in the photographs of the Pasqui excavations—orchards and gardens still under cultivation as excavations progressed. The absence of well-formed surfaces in the upper two meters suggests that continuous cultivation begins earlier than the fifteenth century.

Activity 13: SU 7001. Agriculture appears to have been fairly continuous, with pottery gently gradating from the twentieth century to medieval times as one progresses down through the mixed levels. Horizons are merged, as one might expect in plowed soils. No distinct soil features were seen when these surface levels were manually excavated in 1998 and 2000. In the expansion of the trench, these levels were removed mechanically.

Period VI: The Twentieth Century

Period VI (Activities 14-16) is the pre-excavation surface level. It represents the surface seen in the 1911 and 1931 photographs of the Pasqui and Lugli/Price excavations. Cultivation is active in photographs of the Pasqui excavations. During the Lugli/Price excavation, the orchards remain, but without evidence of activity. Rather, the site begins to be groomed for presentation as an archaeological park. The excavators’ trenches within the garden date to this Period as well. This Period represents the excavation, restoration, and planting that created the site as it was encountered at the beginning of the current project.

Activity 14: SU 7002, 7012, 7013, 7017. A trench, ca. 3 m wide, cut along the building wall on the north side of the garden through the ancient levels.

Photographs from the Lugli/Price excavation of the 1930s show the garden side of the trench to be quite irregular (fig. 28), although without comparative photographs from the earlier excavations, it is difficult to tell if this was the weathering of two decades or if vertical baulks were simply never created by the excavators. During the course of Pasqui’s work, cultivation continued above the trench to the south. The cut of the excavation trench was readily identified, as were the later fills of it.

In 1998, we were initially unable to date the garden level and the rubble piles, as both contained small bits of a grey rock that at first sight looked like the bits of Portland Cement used in the restoration of the steps at the time of the Pasqui excavation, but it was soon identified by Foss (see Foss et al., E.1) as a type of local tufa. For the most part, Pasqui’s team had excavated down to the level of activity 3 and not lower. A half-meter of erosion and fill from the later landscaping has added 25 cm to the bottom of the original excavator’s trench, but it was never completely backfilled (fig. 18).

Activity 15: SU 7009, 7032, 7050, 7069. Sloping fills extending from the unexcavated upper surface at the south to the area of the lowest step of the restored stairs.

During the Lugli/Price excavation, the site was altered, and a small archaeological park was created using the excavated earth to groom the slopes. The baulks left standing in the area of the quadriporticus were graded to produce sloping banks leading from the unexcavated surfaces down to the ancient level. Stratigraphically, this appears to have been primarily a process of cut and fill; some material was taken off the top of the baulk and deposited at the base, creating a slope. This would have happened through erosion to a certain degree, but the photographs and Price’s model indicate that the slopes were intentionally regraded (fig. 29). Price shows the sloping banks in his model, which he created either in the winter or late spring of 1932.
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Activity 16: Surface activity—no SU were assigned.
The surface level of the site reflects the last phase of cultivation, seen today as grass, spirea, rose, and rosemary, removed for the excavation, and cypress and other trees left in place.32

The area surrounded by the quadriporticus was also planted with ornamental trees and shrubs, perhaps as the old orchard trees died. The cypress trees were planted around the perimeter, and other trees appear to have been selected in accordance with Lugli and Price’s interpretation of the area as a combination of ornamental and fruit-producing trees and shrubs.33

C.3.5. Evaluation of the Garden Design

Analysis of the features found in the garden area during the feasibility study provide a tantalizing glimpse of a cultivated surface of the first century B.C. We cannot say more about it at this time. The later cultivated surface, however, contains some of the best preserved garden features outside of the area of Vesuvius. The finds from this feasibility study are already sufficient to offer the interpretation of an axially-organized garden of the Flavian period, one that perhaps continued somewhat later into the Hadrianic period.

The axiability of the garden design is striking, even from the fragmentary evidence discovered to date (cf. fig. 17). The purpose-made planting pot, the small pit, and the reused amphora lie parallel to the central axis of the garden on the west side. This linearity appears to be supported under the surface in the line of a gravel feature, also running parallel to the central axis, underlying the pots. The possibility of bilateral symmetry guided the excavations in 000, and the pattern of soil markings offers some evidence for a balanced arrangement between the two sides of the axis, but such bilateral effect—if it is confirmed by further work—appears to be in the layout rather than the materials of the garden. On the east side of the axis, the evidence rests on the arrangement of soil discolorations, some of which are well-defined circular stake holes, while others are more amorphous pits or possibly inclusions in the underlying fill layer.

Only further excavation will verify the preliminary outlines of the plan proposed in fig. 17.

During the excavations, it was striking how present the hill at Civitella was to those of us working in Sector VII. Any time one looked up the steps on the central axis, the hill formed a backdrop. This view adds additional weight to the visual strength of the axis in the garden. How this view was handled in the design of doorways and windows of the residence, which stood between that view and the garden, is a critical part of the overall architectural scheme.

Today, the visual relationships within the garden are blocked by the large raised areas of unexcavated overburden. To facilitate an understanding of the relationship of the architecture to the excavated remains along the axis and the features of the central pool, we created both manually drawn single-point perspectives and computer images in Form Z (figs. 30 and 31).34 The manual drawings were made in single-point perspective to approximate the kind of perspective employed by Roman designers. Form Z was used to enable one to roam through the architecture and garden and “see” what visual relationships might have escaped the notice of the archaeologists, given the site conditions. These computer renderings are only in sketch form; more elaborate images will be generated as further assessment of the evidence proceeds. What both types of drawing indicate, however, is that doorways and openings in the building would have permitted a framed view of the hill at Civitella from the garden through the residence.

The reconstruction drawings also demonstrate how little we know of the garden. The perspective views circular stake holes, while others are more amorphous pits or possibly inclusions in the underlying fill layer. Only further excavation will verify the preliminary outlines of the plan proposed in fig. 17.


34. Form Z, marketed by Integrated CADD Services, is a simple-to-learn 3D-modeling program used by architects and landscape architects to create visually sophisticated models. The ones made for this study were created from the excavation’s AutoCAD plans, using software licensed to the Geddes Laboratory at the College of Art, Architecture and Planning, Cornell University. In addition to animated 3D models, the program offers sun-shade calculations and other features required for manipulating interior and exterior built spaces.
looking north along the axis between the pool and the central steps appear inadequate, vacant. Looking south along the axis provides even less information. The focal points are evident, but the layers of framing that are so pronounced and delightful in the gardens around Vesuvius await discovery at “Horace’s Villa.”

C.3.6. Notes on artifacts

Ollae perforatae

The small ornamental pots found in situ, on the surface of the ancient garden level, and in Pasqui’s excavations, are the most obviously diagnostic elements of the garden; they provide both dating material and a certain identification of the site as a garden. The pots are discussed by Macaulay (D.3.1).

Sundial fragment

An intriguing twist on the importance of the central axis was provided by a simple study to determine the possible sites within the gardens for a small fragment of sundial discovered during the Pasqui excavations, now in the SAL storehouse at Santuario di Ercole Vincitore, in Tivoli (on the fragment see Macaulay, D.3.2). The find-spot is unknown and the piece is not mentioned in existing records.

To explore possible locations for the sundial, a three dimensional study model was prepared, using Form Z software (fig. 32). This software has a program for determining sun/shade patterns at any specified time of the day, year, and latitude. Plans were prepared that showed the areas of the courtyard that received light all day on each solstice and equinox of the year. Assuming a one-story porticus around the garden, Gleason anticipated that there would be a limited number of sunny locations within the four quadrants of the garden, but did not express her assumptions until the model was completed. The results were surprising. Continuous sun is not available in any of the quadrants, but only along the central axis of the garden, between June and September, the months when one might be most inclined to reside at the villa.

Clearly the entire villa was not laid out to provide continuous sun for a small ornamental sundial. In antiquity, prior to the development of magnetic north, gnomons were used by Roman surveyors to establish the initial layout of a building or property line in relation to north. We may be picking up on the evidence for the original establishment of the central axis that guided the design and construction of the architecture as well as the garden. This is an hypothesis that can be tested further on the computer.

Components of a grotto feature

Throughout the rubble level, a number of elements came to light that may indicate the presence of a grotto or rustic fountain feature. These include rough, deeply pitted calcareous stone, tufa, blue and green glass tesserae, and scallop shells with mortar (fig. 33), as well as fine bands and fragments of marble. While no one of these elements, apart from the shell, is particularly indicative of a nymphaeum or a similar feature, taken together, they raise the possibility that the restored central steps into the garden, with the drain at the base, may have been an ornamental water feature, rather than a means of access and regress. Similar features are seen at Hadrian’s Villa and at Pompeii.

C.3.7. Conclusions of the feasibility study and notes for future work at the site

The feasibility study has offered an exciting first look at an imperial garden of the mid- to late-first century A.D., as well as a glimpse of a first century B.C. cultivated surface probably associated with the early phases of the villa encountered elsewhere in the excavations. The site clearly warrants further investigation, as the preservation of the imperial

35. The model was created by Misako Murata, a landscape architecture student at Cornell University. My thanks for her careful work, and to Roger Trancik for his assistance with the necessary computer facilities.


37. Similar shells with mortar were noted by A. Kuttner at the SAL storehouse in the Santuario di Ercole Vincitore, in Tivoli.
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garden is among the best in the Roman world outside of the vicinity of Vesuvius. The preservation of planting features appears to be only in specific areas of the garden; it might be, however, that other more substantial architectural features and divisions of the garden are preserved. The current interpretation is of an open garden with a pool in the middle and plantings in the open area. The evidence here—and comparative examples of Flavian gardens—suggests that we should be looking for masonry and other architectural subdivisions of the space. This conclusion offers specific recommendations for future work in the garden that will reveal these features.

The feasibility study has already offered enough physical evidence of axes and three-dimensional organization to suggest the importance of vision and views in the architecture of the garden and villa, as indicated at the beginning of this report.\(^{38}\) We are proceeding with an interpretative article that will set out visual and architectural relationships to help shape future work at the site. The images presented in this section raised more visual issues than they could clarify, and thus they should be taken as study images, not as final interpretations of the garden.\(^{39}\)

**Location of well preserved areas**

The preservation of fine soil discolorations in the imperial cultivated surface level is only found under the medieval debris (activity 11) and probably only under the earlier deposition of material from the deterioration of the building (activity 10). In our study area, the finest soil discolorations in the garden surface itself were found only under the layer of plaster-rich debris from activity 10. From surface examination and observations made during the coring efforts around the garden as a whole, we believe that the finest preservation will only be on the perimeter, and quite possibly only on the north and west sides.

That said, two other types of garden features were successfully located, and these survived in more difficult preservation conditions. The planting pots were found both within and beyond the area of fine preservation, although all were found within the area covered by the medieval debris piles. To the south of the medieval debris piles, we encountered merging layers of cultivated soils. It is difficult to judge the extent of disturbance of the early garden levels caused by agricultural activity in later periods. We were not able to locate any pots, pits or other features. Only the chipped limestone feature (activity 4) continued south beyond the line of protective overlying medieval rubble piles.

Below the garden soils of the imperial garden lies the distinctive yellow clay fill of activity 3. This layer records stakeholes and pits dug into it from the garden layer above. Although we did not excavate this lower level out beyond the protected area of the medieval rubble piles, we had preservation of features where none had been seen above. It is quite possible that if this levelling surface continues to the south into the courtyard, it will offer a record of features of the overlying garden area.

Given these conditions, future work should proceed as follows. The whole garden and the Castagneto should be studied with ground penetrating radar under the direction of a operator experienced in processing the data to detect garden features. It is unlikely, however, that the site will produce a record of garden surfaces through the use of GPR. Rather, investigation should focus on the location of more substantial remains: 1) any structures or irregularities on the slopes above the villa; 2) within the quadriporticus garden, the limestone chip feature found in Sector VII; 3) the location of internal garden walls seen entering the garden area on the east side of the portico; 4) the location of more of the brick footings detected in Sector VI.1, as well as water channels and pipes associated with the pools, fountains, and features of the little explored southern part of the garden.

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39. K. Gleason is currently working on the presentation of this material, tentatively titled “The Visual Structure of the Flavian Garden at ‘Horace’s Villa’, Licenza.”
The results of the geophysical survey can assist in prioritizing further excavation. With promising results, a full open area excavation may prove to be the most exciting way to reveal this garden. A more conservation-oriented approach, however, is also possible: use nondestructive methods to detect remains around the portico, then focus on small trenches to confirm the finds and to answer additional questions about the pool and the portico in already excavated areas. The parts of the garden under the medieval rubble piles will yield the most detail on the nature of the plantings and may most fruitfully be fully excavated once the geophysical survey is complete.

Specifically, future strategy for excavation should give high priority to those particular areas protected by the early deterioration of the surrounding architecture, followed by protection of that surface by later piles of medieval rubble. These conditions are clearly observable on the north and west sides of the quadriporticus, and the ancient surfaces appear to lie at or below the base of the trenches of the early excavators. These protected areas should be excavated, rather than studied with geophysical equipment, due to the rubble component, although GPR may be used to excellent effect for detecting subsurface infrastructures, such as pipes and walls above the layer of yellow clay (which may disturb the GPR readings).

The results of excavation also suggest using GPR to locate planting pots along the axes established in Sector VII, and wherever a pattern of small disturbances might be detected elsewhere in the garden. We would only note that the planting pots in Sector VII were located directly above the chipped limestone features, and if this is a construction technique used elsewhere, pots may be difficult to locate geophysically.

In sum, future excavation strategy should begin with full GPR survey of the garden area, laying out a closely spaced series of transects to detect patterns of small features, such as planting pots, as well as walls. For unexcavated surfaces, the length of the waves should be calibrated to detect features more than two meters below, while in excavated surfaces the calibration should be within a meter. Other types of geophysical survey may need to be considered for small features within centimeters of the excavated surfaces. Excavations should then be strategized to reveal elements seen in the nondestructive survey, to explore already excavated features (the pool, steps, edges of the porticoes), and to excavate below the rubble apron to check preservation conditions. Excellent results from this phase of work may well lead to the decision to conduct a full open-area excavation of half or all of the garden. We would suggest the northern half, as there are fewer trees, and the relationships between the architecture and the garden would be much clarified by removing the unexcavated area of the garden. All preliminary indications are that, while the upper garden is Flavian, and clearly not Horace’s, it is a rare example of a Roman garden and a worthy complement to the display of the villa architecture.

Destruction of this garden to reach the cultivated surface of the first-century-B.C. garden needs to be considered carefully and only after thorough documentation of the imperial garden. From our feasibility study, it is clear that the lower level is in a limited area, not under the entire portico courtyard. Study of this lower level, therefore, should begin with test trenches to locate preserved areas. Coring through the revealed imperial levels may be the most effective and least destructive method of locating this early surface. If the lower surface is promising as a garden, it should be revealed according to a strategy interwoven with the excavation of the upper levels. That is, if the upper garden surface contains no features, the subsoil of that garden—the yellow clay fill of Sector VII, for example—should be checked for features. If coring reveals a cultivated level beneath the fill, excavation may be appropriate.

This garden is structurally more complicated than we have been able to reveal in this project to date. Excavators need to be wary of expecting simple lines of plants in neat beds of fertilized soil, but here we have all the hints of garden features popular at the time—nymphaea, masonry features, trellises, pools, statue bases, planting vessels of all sorts, and sundials. In their fragmentary state, these features will present an interpretative challenge to future archaeologists.
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Contextual studies

Environmental retrieval at the site was labor-intensive due to the clay content of the soils, but the results are well worth the effort. The preservation of molluscs is notable, and study of the molluscs, such as that conducted by M. Pinto-Guillaume Ezequiel at the Villa of Livia at Prima Porta, is clearly possible.40 We were not able to assess the preservation of insects. Carbonized plant remains and faunal remains speak to the surrounding landscape, rather than to the plants or animals of the garden, but given Horace’s writings about that landscape, it is fascinating to see the relationship between the archaeological finds and Horace’s commentary. We have already found plants and uses he mentions (see Ramsay, D.14).

This brings us to the importance of field survey of the surrounding landscape, as initially planned for the project. The villa’s architecture clearly engages the views of this landscape in intentional and meaningful ways. The economy of the villa has a complex relationship with the landscape, illuminating matters of local production versus luxury for the residents of this villa over time. State-of-the-art garden archaeology places field survey ahead of excavation as the means of addressing these questions, and no other site warrants this attention more than Horace’s Sabine slopes and valleys.

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