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HADRIAN'S VILLA : A MODERN SURVEY

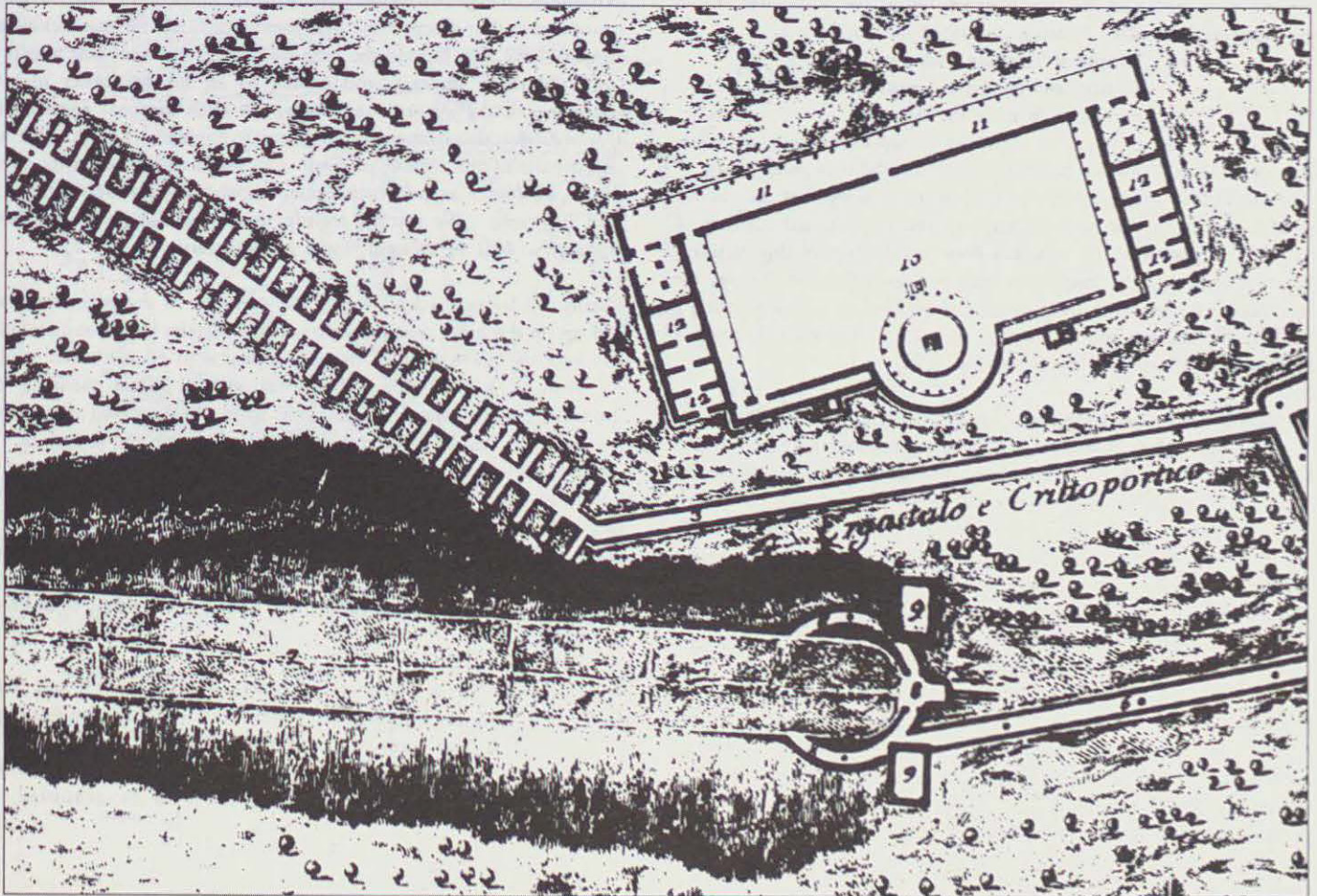
We began measuring Hadrian's Villa in the summer of 1985. Mary-Ann Ray and I, along with 12 graduate students of architecture were engaged in a summer program of study, studio, and travel known as Atelier Italia. For a visit to Hadrian's Villa, we were unable to secure thorough documentation of the Villa (especially plan information). We naively decided to begin measuring and producing measured drawings. Four or five visits that summer resulted in several of the simple buildings being measured and drawn, and our discovery of the use of the golden section and root two proportioning of the spaces. In addition, we acquired an intimate knowledge of these buildings through the measuring and drawing process. That fall, through discussions with the architectural historian Bill MacDonald, we became 'hooked', and resolved to continue our work. Bill pointed out that the last thorough overall plan of the complete Villa was measured and drawn by Piranesi and published by his son Francesco in 1781. During the ensuing year we acquired the existing documentation of the Villa (texts and drawings), and began the serious 'assault' on the Villa in the summer of 1986. That summer's group of graduate students included George Newburn, who has become the third collaborator in the survey. We have returned each summer since with a group of 15 graduate students of architecture to conduct the continuing work on the survey. This work proved more

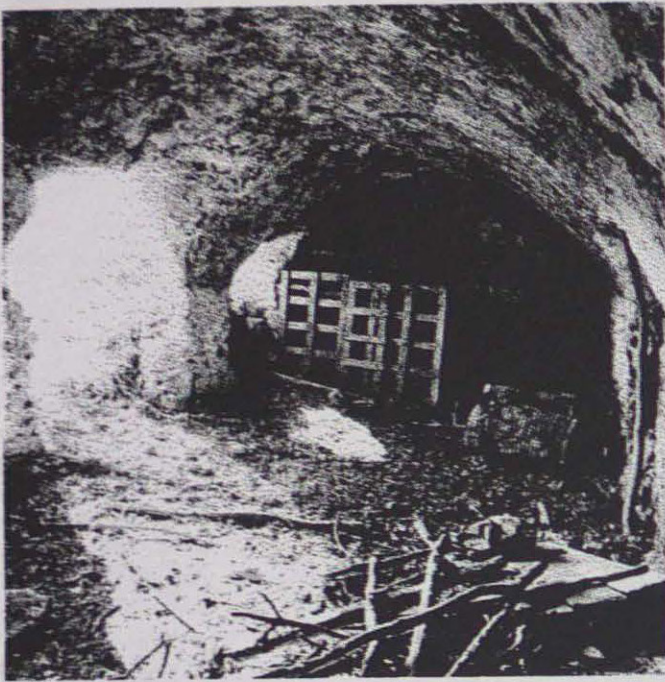
exacting and time consuming than first anticipated, but we are finally 'closing in' and plan to complete the field work with the work of the summer of 1993. What follows is an account of the work on one of about 50 projects at Hadrian's Villa.

TEMPIO DETTO DI PLUTONE E PROSPERPINA

Temple of Pluto

The Temple of Pluto, as we have come to call it, is located to the east of the Academia, and just east of the grotto earthwork that we call Hadrian's Comet. We first saw the Temple of Pluto, or rather the enormous growth of trees, blackberry bushes, and assorted other nasty growth, in mid-summer of 1987. We were measuring in the Academia and needed a diversion. We had seen the 'Comet' on Piranesi's drawings and were intrigued. We wandered off in the general direction, climbing several of Bulgarini's fences, traipsing through tall grain, and finally arrived at the Comet site. We moved down into the growth, and found that the grotto was there, but filled with thousands of flies. After exploring this site we moved further east to what looked to be a building, but very overgrown. We climbed up a small embankment, through bushes and trees to discover the remains of walls. We realized that we were on the roof of part of the building after having almost fallen through. We left realizing that the building was quite extensive, and would be worth measuring.





Later that week we examined Piranesi's drawings, and found that he had also examined the building, and had speculated as to its shape. Contini, who produced the first plan known of the Villa, had shown only nondescript walls. Piranesi described the building as:

10. Temple of Sarapide with a surrounding Portico, and an Atrium with lateral Wings.
11. Portico in front of the Atrium.
12. Lodging for those who went to the Oracles.

Penna (1836) also saw the building and described it in more detail. "... these ruins in the last century were in better condition, as attested by S. Cabral who also saw columns in the ground, and capitals of marble." Apparently, no one has done measuring of this building since Piranesi, and he may have only redrawn Contini. Thus, we were quite excited about the prospect of looking at and measuring a building that has not been seriously excavated. We did not return to the Temple of Pluto until the following year.

On Thursday, July 14, 1988 we set out to 'rediscover' the Temple of Pluto. George, Mary-Ann, and I along with two teams - Minerva and Juno¹ - first arrived at the Comet site. We cleared a path down to the grotto (the flies were still there), and unable to contain ourselves, cleared a large part of the grotto moving north in a wild frenzy. David, Maria, Mario, Tina, Martin, and John were in slight shock (we were 'quite active' as it was our first clearing of the summer, and what with fresh sickles. . .). After examining the site, we decided that it was too difficult to measure since we were still training the groups, and we would put this site off for a later time.²

We moved over to the Temple of Pluto, and spent the rest of the day clearing the site. The building, or rather the growth of trees, bushes, and vines was a free standing mound of earth within a field of waist high grain. The clearing was quite difficult - mostly small trees, and not so many of the thorny blackberry bushes except along the east

wall. We soon made our way around to what appeared to be a large raised square-like area. What we were seeing was only half of what Piranesi drew. It soon became evident that either Piranesi had misrepresented the building, or that farmers over time had plowed away half of the building. The second hypothesis seemed unlikely as there is no evidence of the building extending to the south as Piranesi shows, and we found a corner (although an odd one) along the east wall at the south corner. The south wall did not seem to extend too far heading west, but we never really dug along it far enough to trace its course.³

After inspecting the perimeter of the building, and some of the upper part (3 to 4 meters above the farmer's land), we set out to do the serious clearing. Along the west end of the north side we found three underground rooms. Piranesi shows four, but we later determined that there were definitely only three. Along the east end of the north side we found the vaulted room with two interior piers. Penna describes this room as "... two doors at No. 1 enter into a room with 2 pilasters which hold up a vault. . ." The vaulted room had some restoration work on the two piers in recent years (perhaps at the same time as the not too careful work done at the Academia). Thus we were not the first to see the building since Piranesi.

We located the long wall along the east side which turned out to be in good shape and about 3 1/2 meters high. This wall extended from the room with the two piers to the 'famous' south/east corner. It was extremely overgrown with very mature blackberry bushes and a strange very thin thorny vine that proved difficult for our sickles and clippers. We also located the long wall along the west side which ran from the three underground rooms to an inside corner and the beginning of the curved wall shown by both Piranesi and Contini. The wall was also overgrown, and mostly covered by earth. We only found parts of the wall at its north and south ends, and in the center where we found an odd rectangular appendage protruding from the wall fragment. We started calling this appendage the 'fountain', although at first we thought it was a small stair.

Finally we located a wall within the confines of the perimeter walls and up on the earth mound a terrace-like interior that was parallel to and near the north wall. This wall appeared to be the inside wall of the row of rooms along the north side. When clearing and excavating along this wall we came upon the mortared (not paved) flat roof still remaining over part of the room with the two piers. We cleared the section of the roof and stepped from the earth, where we had been working all day, to the constructed 'floor'. For the first time we were able to understand the profound significance of the floor - a surface invented to accommodate the placement and movement of the human body. We drew everything we found, toured the Academia, Odeon, and Inferi, and licked our wounds over Peroni at Bar Belli.

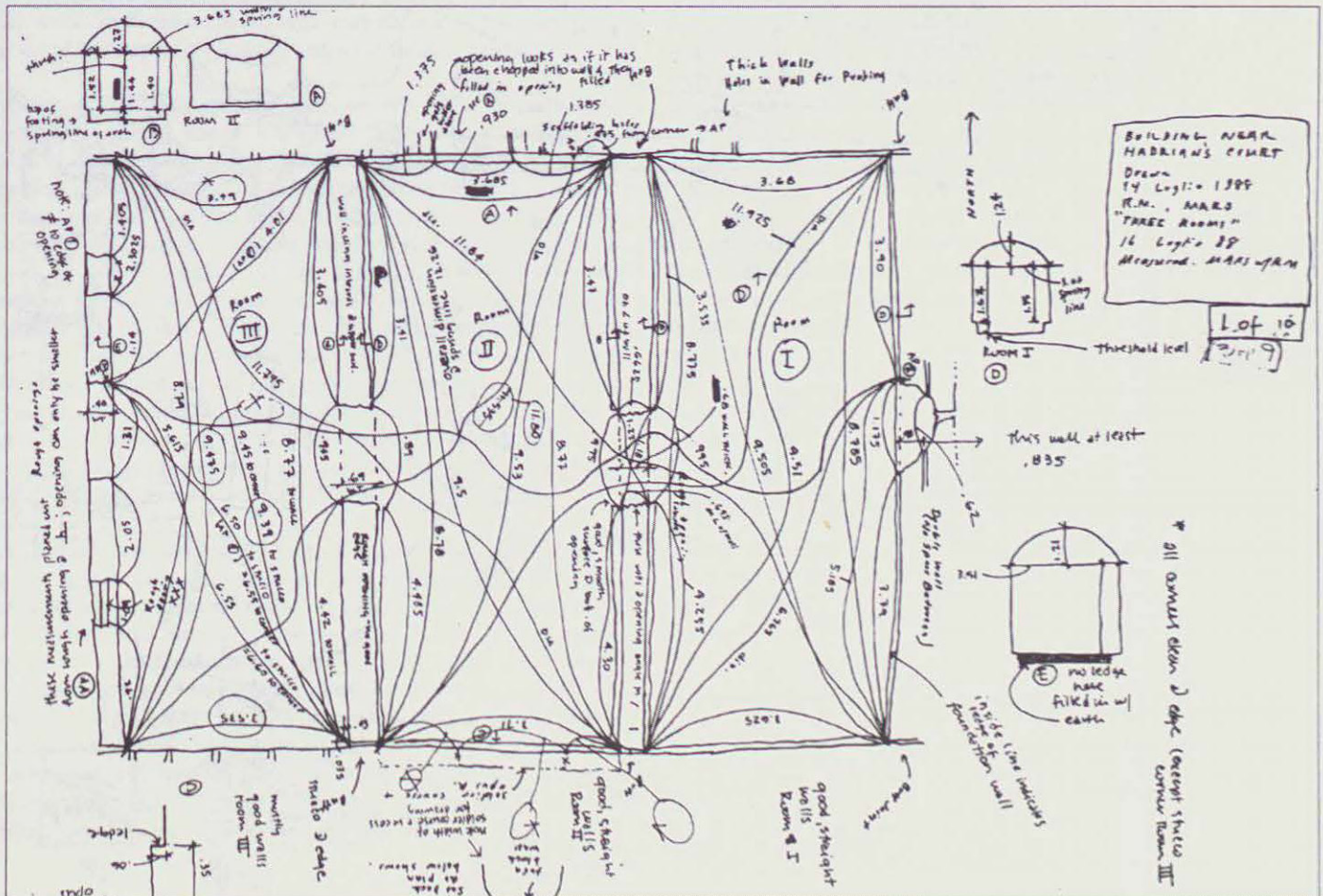
Saturday, July 16, we returned with Mars and Jupiter⁴, and began measuring. Mars with Robert started on the three underground rooms, and Jupiter with Mary-Ann and George started with the 'fountain' along the west wall. Additional clearing and modest digging was required to properly prepare the areas for measuring.

Mars measured the three underground rooms by flashlight, a first for us. These rooms had been used by shepherds, and a portion of the 1st room was gated off with chicken wire. Each room was approximately 3.5 meters by 8.8 meters and had a vaulted ceiling. There were doorways at the center of each room's long east wall, but these appeared to be broken through and not original. There was also the typical beginning of breaking through the east wall of the innermost room - they were always looking for treasure. This wall had another wall against it without a cavity (thus ending the treasure hunt, and an indication of not another room as Piranesi had shown). Because these rooms had no original doors or windows, we determined that these rooms were not rooms to be occupied, but rather the typical Roman construction designed to produce a terrace raised from the land and a plinth to construct a structure on. The cross walls forming the individual vaulted spaces were determined to be abutting the long north and south walls. The vaults were poured in place board form concrete typical for vaulted construction at the Villa.

The north wall of these rooms confused us for the longest time. The north wall turned out to be two walls built against each other. The outer wall was built later to buttress the structure when it probably began to show signs of failure. But because of the butt condition of the cross walls (including the 'entrance' wall), this north/west corner looked like three parallel walls. This kind of mistaken thinking on our part has characterized our work at the Villa. We learn by direct observation and by making many mistakes.

The three rooms had dirt floors. We did not dig down to find the base of the wall and a possible finished floor. The rooms also had rough tufa⁵ block walls, but at some point near the top of the south wall opus reticulatum⁶ appears. This led us to think that this wall existed before the three vaulted rooms were built and thus was the original north wall of the structure. The rooms also have evidence of being plastered (south/east corner of the first room). While measuring and excavating along the outside of the north double wall we noticed there was evidence of a floor at the terrace level at the north/west corner. Thus, we lost Jim for the rest of the day as he carefully uncovered and measured what turned out to be an interesting 12 sided overlapping scalloped design for a marble floor. Only bits of marble were found, but the pattern within the mortar base was perfectly intact.

Locating these underground rooms to the outside proved to be difficult. This was our first building that did not have an easy overall structure to attach all our measurements to, and that was so overgrown. We made the fatal mistake of picking one of our arbitrary points outside on a fallen tree branch. When people moved around this corner later that day, and on subsequent days, the arbitrary point became more 'arbitrary'. We moved east along this double north wall and found a corner turning the wall south. This was the corner of the second wall of the innermost underground room. Further along to the east we found another outside corner, this being the corner of the room with the two piers. Thus, there appeared to be



a space between the three underground rooms and the room with the two piers. Was this a space for a broad stair up to the terrace, or merely part of the configuration of the structure?

The so called 'fountain' appendage to the west wall turned out to be an 'E' shaped figure attached to the west wall, and built as part of the west wall. It was about 3 meters by 3 meters but lower than the decayed top of the wall. The small south space in this shape had evidence of paving (rectangular paving blocks measuring 0.185 x 0.39 meters). We found drainage evidence within the wall (fired tiles in the shape of an upside down V), which lead to the fountain theory. Further inspection and photography has dispelled the 'fountain' theory, and left us without an explanation for this construction.

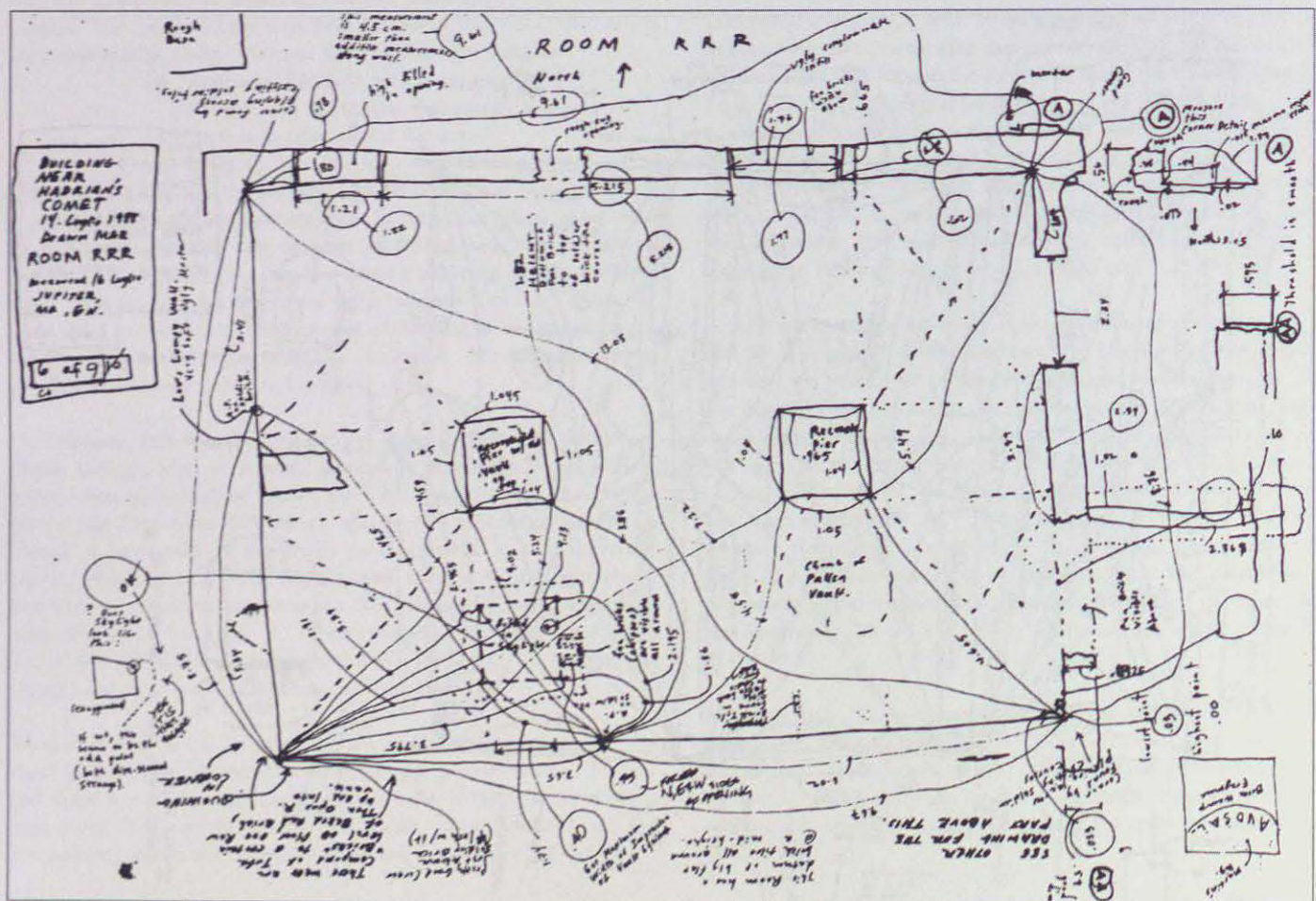
Jupiter moved to the odd corner where the three underground rooms meet the internal south running west wall. Later that summer when photographing this construction and doing additional excavation we found vague evidence of some kind of stair-like structure.

After lunch, Jupiter moved to the room with the two square piers. Some additional clearing was required, and the room was measured. The room had the remains of a vault on the south/west corner, and a filled in skylight. We never found the floor to this vaulted room, although our digging was not substantial. The two openings in the east wall were probably doors (they had vaults), and the two high openings in the north wall were probably windows. Both of the

windows had been filled in at some point, leading to the speculation that this building with its filled in skylights and windows had existed as a usable room originally (perhaps a kind of cryptoportico), later to be abandoned when the upper structures were added. The construction is completely different from the three substructure rooms. This construction was quality opus reticulatum with the ceiling divided into six cross vaulted spaces. The inside of the room had been plastered as we found evidence of remaining plaster in the south/east corner. Adjacent to this corner along the east wall running to the south we found quite a good brick stamp.⁷ Farther south along this wall we found another brick stamp.

Mars spent the rest of the day clearing along the east wall with its extremely thick blackberry growth and a new kind of bush with thin but very strong stems and devastating prickles.

We again returned to the Temple of Pluto on Monday, July 18, with members of all five teams (5 of us were leaving for a trip to Mantova late in the day). We worked in the morning making corrections and clearing and measuring some new areas. The famous arbitrary point proved difficult when drawing up and locating the three rooms. These rooms were partially remeasured, relocated with more stable arbitrary points, and other corrections and additional long dimensions were made. The long east wall was carefully drawn and measured, again noting the brick stamps. An extensive excavation was made outside the room with the two piers to try to find the arcade



that Piranesi draws, and perhaps column bases. A bit of subfloor and wall were located just outside the southern opening to the room - no evidence of columns. In addition, what had appeared as a door, was now a window with a niche below.

The east/west running interior wall was cleared, partially excavated, and measured. This wall turned out to be quite intact and interesting. The wall was a series of square piers, or brick bases for columns, equally spaced. This wall coupled with Jim's marble floor led to the prospect of a large rectangular room at the north/west corner of the complex (good for summer sunsets).

We also set up a large triangulated measuring structure along the west wall and undertook the excavation of the mysterious curved wall. Piranesi showed this wall as completing itself as a half circle. Our excavation indicated that this wall had a much shallower arc and seemed to wander off to the south/west. The wall, found beneath the earth, was in bad shape having been beaten over the years by farmers' plows. The wall was also an odd construction with evidence in one spot of a large flat file similar to those found on Roman stairs. We never found the end to this wall.

Just to the south of this wall we found two very large travertine sub-bases for columns. Martin got quite excited about these (perhaps to avoid having to do the hard digging in the sun). These turned out not to be in their original position, and appear to have been moved from somewhere on the site. They could have been associated with the curved walls (as Piranesi shows), and were moved by a farmer to get them out of the way of plowing the adjacent fields.

Robert along with Mars returned again on July 23 to do corrections and additional poking around. The final work in 1988 occurred on the 13th of August. We had spent the morning inspecting the ceiling restoration at the Sistine Chapel (within inches of the two fingers touching), and met a group at the Temple in the afternoon. The group, under the guidance of Laura, who had taken the building on as her own by this time (doing all the drawing), performed a serious excavation at the center of the east/west running interior wall with the equally spaced piers. They dug down looking for a floor. When we arrived, they hit the mortar base for what would have been a marble floor. This floor was measured in relationship to Jim's floor and found to be within 2" (thus, probably at the same level). That afternoon we photographed all of the Temple of Pluto that we had cleared and measured, and all of our excavation holes. At the end of the day, we covered up all the mini-excavations.

We did not return to work at the Temple of Pluto until the summer of 1991. In the two previous years we would visit the site to see if our clearing efforts had been overtaken by nature, but a combination of Italy's drought and the horses being given access to some tasty leaves by our clearing efforts had left the site in a state of still being semi-cleared. We were interested in returning to the Temple to work on the south wall, which was still a mystery, and to see if we could find additional rooms to the south of the east/west running interior wall where we had found a floor late in the summer of 1988. Our technique had improved from 1988, and we were interested in 'finishing' the Temple of Pluto.

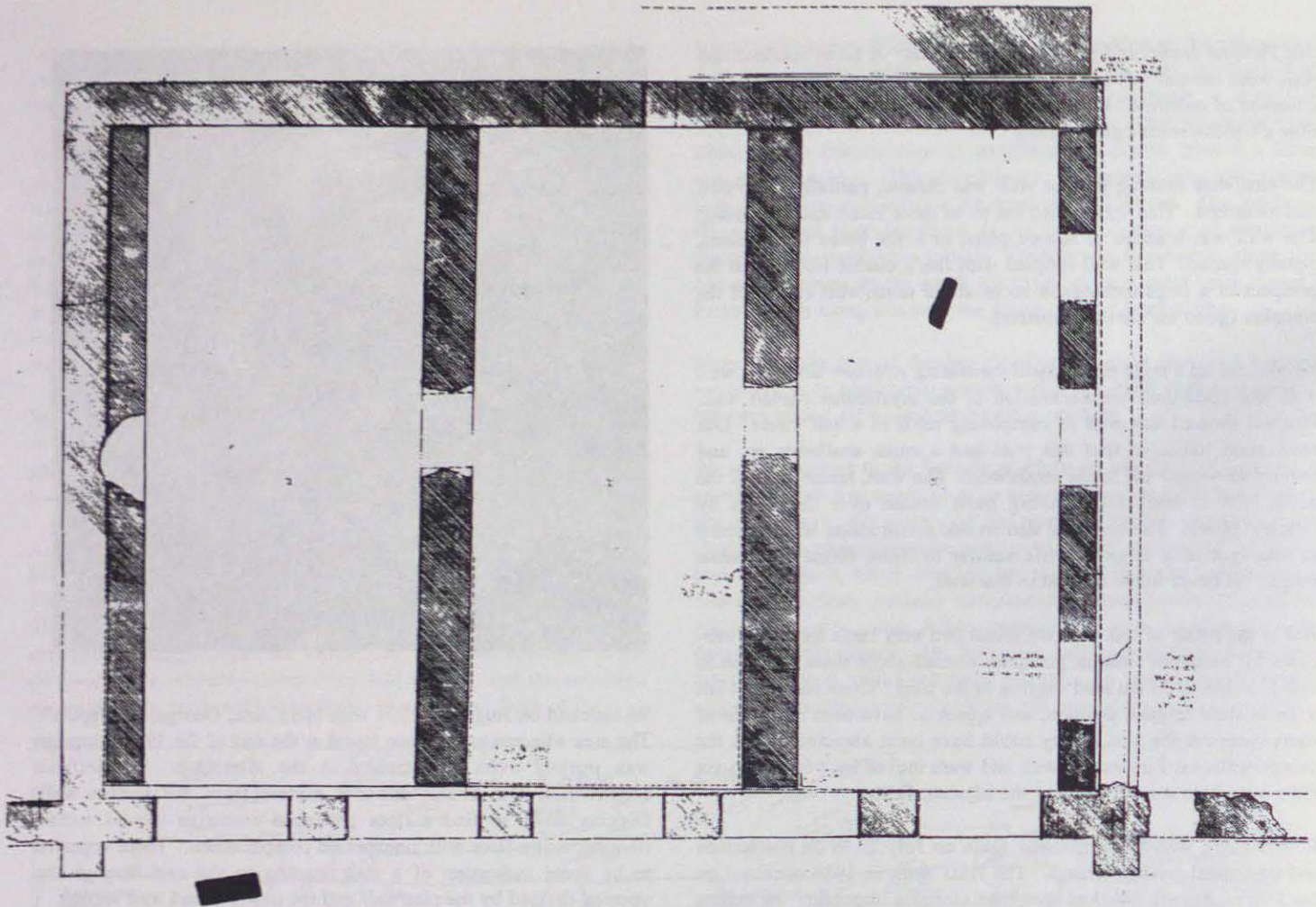


We returned on August 8, 1991 with Mary-Ann, George, and Jupiter⁸. The area adjacent to the floor found at the end of the 1988 campaign was worked over in a frenzy in the afternoon. A pier/wall construction was found about 3 meters from the known wall. Digging down to find a floor produced extensive bits of marble flooring, and a floor with unexpected complications. There appeared to be some indication of a stair leading to the east through the opening defined by the pier/wall and the newly found wall section.

The new wall clearly extended to both the east and the west. There was no evidence of extension to the south. George dug a large hole in this direction with no evidence of a floor or wall. We also located another intact wall section along the west wall towards the corner with the curved wall. We tried to find hard evidence of the mysterious south wall. Difficult digging produced an edge of this wall about 8 meters from the odd south/west corner. All work was measured and located to our previous references.

We returned to the site in the afternoon of August 15 (Robert and Jupiter, with Mary-Ann, George and others joining late in the day) to do some more work on the west wall and the south wall. No progress was made on the south wall. Another wall section was found near the corner where the curved wall extends. We were looking for the south/west corner, but ran out of time.

We photographed our work (holes in the ground) on August 27, and filled in the holes.



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Notes:

1. Minerva: David Gastau, Maria Segal, and Mario Violich. Juno: Tina Gruen, Martin Mervel, and John Ravitch.
2. We did not measure the 'Comet' until 1990, but we did clear it again in 1989.
3. We returned to this corner in 1991.
4. Mars: Tomaso Bradshaw, Jim Jackson, Laura Miller. Jupiter: Shelley Anixter, Ted Sharps, Caroline Otto.
5. Tufa is the natural soft volcanic rock that forms the bedrock at Hadrian's Villa and is the basis for most of the construction of the walls at the Villa.
6. Opus reticulatum is the brick and tufa wall construction involving the diagonal placement of the square tufa bricks.
7. Brick stamps are found rarely on fired Roman bricks, and the markings have been deciphered in the 20th century to allow the accurate dating of Roman construction.
8. Jupiter: Jody Alpert, Dara Schaefer, Larry Tighe.

