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Toilets with a View

The Luxurious Toilets of the Emperor Hadrian at his Villa near Tivoli

Gemma Jansen

Abstract

An investigation of the many toilets at the villa of the Roman emperor Hadrian, near Tivoli (Italy), both multi-seat and single-seat varieties, shows that the emperor preferred to have some privacy in his toilet. The multi-seat latrines found there were for servants. For Hadrian himself, his family and especially his guests, the emperor built toilets with space for a single person. These were vast rooms with high ceilings and large windows providing light. They were equipped with sophisticated water systems and very luxurious decorations. A special feature of some of these toilets with large windows was a spectacular view. All toilets are different in shape and decoration, and many have no equal elsewhere in the Roman Empire. It is well-known that the emperor Hadrian loved to entertain and surprise his guests. It looks like his toilets were part of the surprise too.¹

From 1999 onwards, the author has studied - together with a small team of colleagues and students - the many toilets at Hadrian's villa (fig. 1). This site presents an extremely valuable assembly of thirty-five toilets. They are not only well preserved, but they show a cross-section of toilets throughout the entire Roman society. Here is the opportunity to study the toilets of the lowest ser-

vant up to the toilet of the most powerful man of the Empire: Hadrian himself. All these things make this site unique and allow us to study some issues impossible to investigate elsewhere: For which social group was a particular toilet built? and: How much privacy was available for each social group?²

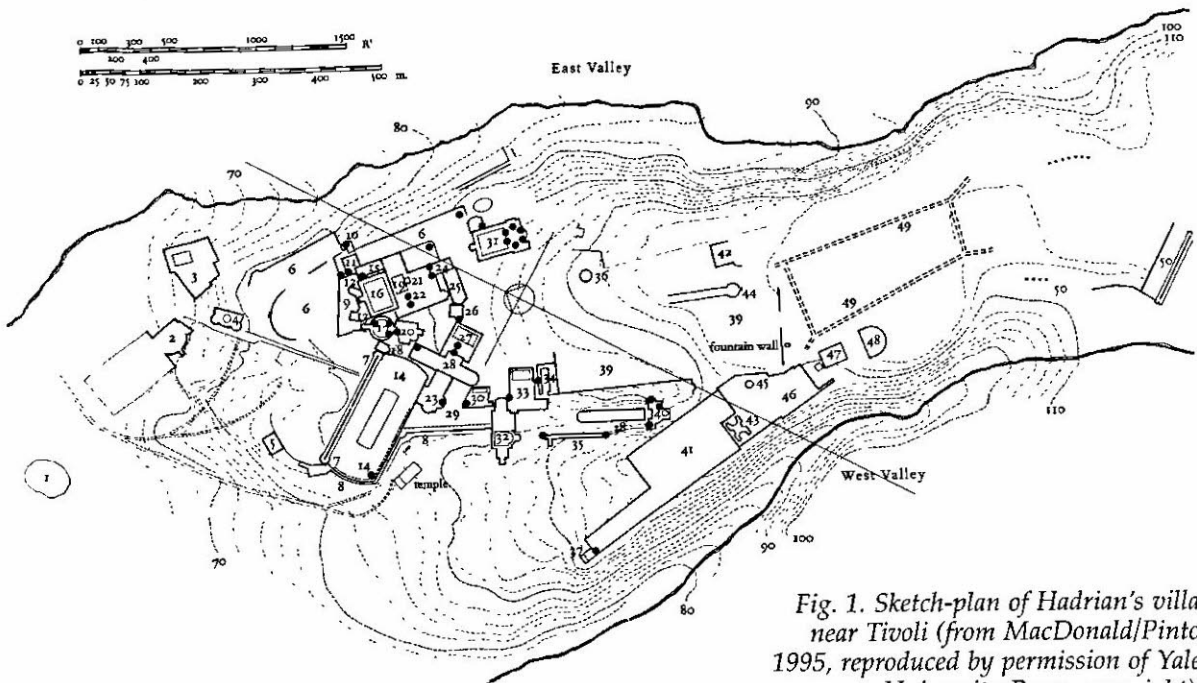


Fig. 1. Sketch-plan of Hadrian's villa near Tivoli (from MacDonald/Pinto 1995, reproduced by permission of Yale University Press, copyright).



Fig. 2. Public toilet with marble seats, front plates and sponge gutter near the Forum Baths at Ostia.



Fig. 3. Flush toilet with raised tiled floor in the kitchen of the House of Apollo at Pompeii.



Fig. 4. Niche toilet on upper floor of House V 1, 30 at Pompeii.

Furthermore, as the toilets are so well preserved, they also provide answers to more basic questions about water systems and decoration schemes. Especially since most of the toilets have been cleared of the debris on their floors, there is a lot of new information available on their water supply and drainage systems. Besides, the drains appeared to be full of parts of the original toilet decoration: pieces of coloured marble, mosaics and fragments of wall plaster. There was only one drain, belonging to the toilet of the Smaller Baths (30), which still contained the original Roman deposit. For the many finds in this drain, representing unusual luxurious decoration, see the article by Alessandro Blanco (in this volume pp. 183-190). Because of the organic nature of this deposit, samples were taken and analyzed. The results revealed that no seeds, fruits or pollen were preserved in the samples. Even the chrysalis of flies are absent, a very common feature in fecal surroundings.³

This article, then, presents new information on the water systems and the decoration of the toilets of the villa. To put the toilets of Hadrian's villa in perspective, however, a short presentation of toilets elsewhere in Roman Italy is needed.

ROMAN TOILETS IN POMPEII, HERCULANEUM AND OSTIA

Since Scobie's inspiring publication on Roman sanitation, published in 1986, modern scholars have re-investigated Roman toilets and toilet behavior. Several researchers have published on the issue, though mainly focusing on Italy. From their work some general conclusions can be drawn on toilets in this central part of the Empire.⁴

Roman toilets resemble modern western toilets in many ways. The Romans, for example, preferred to sit down; therefore, their toilets are equipped with seats. The Roman seats, however, have a different design, as the Romans did not use toilet

paper; instead, they used a sponge on a stick. There was a hole in the front plate of the toilet seat in order to use these sponges (*fig. 2*). The other difference is that Romans were not always alone on a toilet. Besides the many one-person toilets in private houses, two-seaters and three-seaters also occur. And public toilets were nearly always group toilets, so-called multi-seaters. As the small private and the larger public toilets differ both in water technique and in decoration, they will be dealt with separately.

All Roman toilets needed water: both to rinse the sponge and to flush the toilet after use. Therefore group toilets had gutters in front of the seats, filled with running water to wash the sponges. To create an efficient and continuously flowing stream, this water could only be pipe water. The overflow of the sponge gutter was directed in the deep feces gutter underneath the seats and together with sewage was led into the city sewer system. It is not clear whether these feces gutters underneath the seats were flushed additionally with an extra water pipe. Recent investigations of Van Vaerenbergh into the toilets belonging to baths show that the flushing system was not always working smoothly. This is remarkable, as toilets near baths profit from the best circumstances: good nearby sewers and enough flushing water at hand, either from the swimming pool, the bathtubs or the overflow from the many fountains. Private toilets are much smaller and seldom have a sponge gutter. Sponges were rinsed in small basins or jars. Toilets were flushed manually with a bucket of water. This led to a different design: the front plate is missing so that the toilet could be flushed.

The toilets of Hadrian's villa can be compared best with the toilets of the Roman harbor town Ostia. Most of these are built in the 2nd century and thus provide the right timeframe with which to contrast Hadrian's own toilets. In order to get a good chronological overview of all the possible examples of toilets, however, it is good to have a quick look first at the toilets found at Pompeii and Herculaneum, which were in use more than a century earlier.

The slim evidence of only ten public group toilets from Pompeii and Herculaneum shows only a glimpse of the appearance of the toilets in use in the 1st century BC and AD.⁵ Based on the evidence available, we can state that the public toilets were simple in design. Small high-positioned windows gave the toilets a dark appearance. Koloski-Ostrow calls them 'grim'. To compensate darkness the walls were painted white, mostly with a dark dado to hide stains. The toilets were provided with

running water for the sponge gutters (nearly all executed in masonry - no marble) and for flushing the gutter underneath the seats. When connected to the baths, they were additionally flushed with water from the baths or swimming pools. All of these public group toilets were connected to a sewer that brought the toilet waste out of the city.

Private toilets can be found in great abundance in Pompeii and Herculaneum. From the 200 toilets investigated by the author in Pompeii and the more than sixty toilets in Herculaneum, it can be concluded that every household must have had at least one toilet. This is confirmed by the recent investigation of all the toilets of region V at Pompeii by Hobson. He also discovered that private toilets are part of the houses from the very beginning of Pompeian urbanization. Most of the private toilets are single-seaters, though two-seaters or three-seaters occur. They tend to be dark rooms with tiny windows (if any windows at all). The only decorations visible are red lines on white plastered walls and, in a few cases, painted floating ornaments in between (dolphins, garlands etc.). The toilets occur frequently in kitchens, under stairs and upstairs in rented apartments. In most cases, two brick walls or a slot can be seen to support the wooden seat (now gone). There was no sponge gutter, but a basin to clean the sponges. To fill these basins, the Pompeians seldom had running water; they had to fill the basin with water from the cistern in the courtyard or a street fountain. Besides, to flush the toilet, they had to use a bucket of water, filled at the same water source. Households with good water supplies installed flush toilets, which mostly occur in kitchen areas. To facilitate flushing, a tiled chute was built in front of the toilet seat. The chute slanted slightly towards the drain underneath. The fact that these toilets were also provided with footrests shows that it was apparently not unusual to throw water into the drain while somebody was using the toilet (*fig. 3*). Households where water was more scarce, for example the rented apartments upstairs, had toilets built in niches in the wall. Thus one could sit right above the drainpipe, which was led into the wall. In these cases not much water was required for good flushing (*fig. 4*). Only few private toilets were connected to a sewer, most emptied into cesspits.

To get an idea of what the toilets in Hadrianic times looked like, we have to turn to Ostia. As this busy port town with a high population density, is completely different from the relatively quiet residential town Pompeii, it is not a surprise that here more public toilets can be found: twenty-seven, of which at least twenty date from the 2nd

century. The most famous toilet, the one near the Forum Baths (fig. 2), dates from the 4th century. Only 2nd-century toilets will be taken into account here.⁶ The water supply and drainage systems of these toilets very much resemble those of the Pompeian examples. The only difference is that here, in addition to the sponge gutter, an extra water basin or *labrum* is added in many of the toilets.⁷ The multi-seaters in the tenement houses have the same somber aspect as the toilets of Pompeii. They remain dark due to the lack of large windows. They have only a modest wall decoration in the form of a simple flower motif, floors are laid out in black and white mosaics without a pattern, and sponge gutters are made of masonry, or sometimes of travertine or marble. The multi-seaters found in more public areas are somewhat different, mostly with regard to decoration. Especially, the toilets that are connected to baths are decorated with more detail. The windows in the upper parts of the walls are large and bring in a lot of light. The wall decoration is still very plain: the same white plaster with flower motifs or yellow and red squares. But the floors are much fancier: varying from simple black and white mosaics, decorative mosaics, small coloured marble stones to a floor of white marble slabs. Many toilets have white marble sponge gutters and three 2nd-century toilets still contain marble seats.

Neudecker calls some of these toilets 'Prachtlatrinen'. From the end of the 1st century onwards this new phenomenon is adopted in the Roman Empire: vast latrines in which a lot of light comes in through large windows or peristyles. They are indeed large: average seat capacity is for about thirty-five persons with an absolute maximum of eighty.⁸ These toilets are executed completely in marble (floor, gutter, wall, and seats) and are adorned further with mosaics, statues and spouting fountains. The large amount of flowing water from the fountains provided good flushing capacity and the vast windows guaranteed fresh air. Although this would have diminished the bad smell, clients were not meant to loiter in the toilets. According to Neudecker, the decorations were intended to alienate one from the very fact that one was supposed to do on a toilet: a dirty act is camouflaged by shining marble and sparkling fountains. The three toilets of Ostia that fit into his category of 'Prachtlatrinen' are the most modest of Neudecker's list.⁹ 'Prachtlatrinen' do not occur so often in Italy, anyway. The most elegant and dazzling examples are to be found in the Near East (twenty examples) and North Africa (twenty-eight examples).

The more than seventy private toilets of Ostia date mostly from the 2nd century. They have been preserved on ground floors only and mostly are in bad shape.¹⁰ As far as can be detected they are most charming in their simplicity: a board with a hole fixed in a slot in the walls of a small room.¹¹ Some had footrests. Underneath was a hole or gutter connected to a drain. These toilets hardly differ from the small and dark private toilets of Pompeii: many are found at the back of shops in a small space underneath staircases. No decoration (no wall paintings, no marble) has been found in them except for one: the toilet of the Casa del Fortuna Annonaria has a beautiful floor in *opus sectile*.¹²

All toilets must have been connected eventually to the city sewer system, which in Ostia is laid out very systematically. How these private toilets were flushed is still unclear as the long tile chutes that are in front of the Pompeian toilets are missing. Some toilets have an imprint of a lead pipe, but it is not clear whether this pipe was meant to flush the toilet or to fill a missing sponge basin. Four toilets have preserved their sponge basins, all with an imprint of a supplying lead pipe. In this respect, the toilet of the Casa del Fortuna Annonaria forms an exception too: the basin there was filled automatically with the effluence from the *nymphaeum* fountain in the adjacent room.

In short, in the 2nd century AD at Ostia toilets were standard commodities. Public group toilets were spacious, well lit, simply decorated and equipped with a rather good water supply and drainage system, whereas the private toilets were small and dark. They had no decoration, seats were made of wood and their water supply and drainage systems were executed with less sophistication.

TOILETS AT HADRIAN'S VILLA

Just after becoming emperor in 117 AD, Hadrian started to build a new and vast palace, 120 hectare large, in the countryside about 30 km from Rome.¹³ The architecture Hadrian choose for this palace was very rich, new for his times and sometimes even unique in the Roman world. Whenever he was not on his travels outside Italy, he stayed either in Rome or here. He was never alone at Tivoli, but always surrounded by 1000 people or more, among whom were his family, friends, the imperial administration, his other personnel, slaves ... and many visitors. The many dining rooms present at the villa suggest that Hadrian seemed to love banqueting and entertaining his



Fig. 5. Front plate of the round toilet at the East Terrace (6) (photo R. Kragting).

guests. These dining rooms range from large areas where a lot of guests can be received (as for example the large Water Court, 31) to smaller areas (for example the Scenic Triclinium, 40) and very intimate rooms for a few private guests (as at the Island Enclosure, 17). These guests could marvel at the beautiful architecture, pieces of art and the large surrounding gardens filled with marvelous water displays.

For all those people toilets were provided. This article deals only with the sanitary provisions that are built within the palace architecture. Some sanitary practices, such as relieving oneself against a wall or defecating in the wild, cannot be retrieved from the archaeological record; other practices are hard to track down, such as the use of chamber pots and wooden toilets. The later are mentioned in ancient Latin texts, but their use in the villa has not been established yet.¹⁴

Dispersed over the villa terrain the author and her team have investigated ten multi-seaters and twenty-five single-seaters.¹⁵ Most of these toilets are mentioned by several researchers of the villa or have been excavated recently by the Soprintendenza di Lazio.¹⁶ The toilets of this large estate, however, have not been studied systematically until now. The multi-seaters are recognizable by remnants of seats above a deep gutter in front of which a small sponge gutter was laid out. This sponge gutter is not sunken in the toilet floor, but usually placed on top of it and serves at the same time as a convenient footrest. None of the seats are still preserved as the wooden ones have decayed and the stone ones have been robbed. What is left are traces of the fastenings: slots in side or back walls, small holes for little wooden or marble beams, rests of the marble beams themselves, larger holes for stone supports, rests of travertine

supports or supporting walls. In several toilets a combination of the different methods of fastening were applied. The seats were once closed with a front plate as ledges or marble rests in the wall indicate.¹⁷ We were lucky to uncover a marble front near the round toilet on the East Terrace (6) (fig. 5). Seating capacity varied from three to twenty people. The rooms were vast and the few toilet walls that are standing show large windows above shoulder height.

The single toilets are somewhat different and consisted of a single marble seat above a drain. In seven toilet rooms footrests also remain. The rooms were spacious, both with respect to surface area and height. This might be due to the round architectural design, so popular at the villa, which provides a lot of space for these toilets and most of them can be found on either side in the rest area at the back of the apses. A lot of light came in through large windows, sometimes as large as door openings.

As it is possible to establish the specific function of the different buildings of the villa, it is also possible to determine which of the social groups of the villa (the emperor and his family, his guests, his staff and slaves) used or visited a specific building and the adjoining toilet.¹⁸ In those parts of the villa identified as the private domain of the emperor, only single toilets occur. Examples include the single toilets of the Island Enclosure (17) and the toilets in the Peristyle Pool Building (27). In the large areas where guests were entertained, clusters of single toilets were constructed. Near the dining halls of the Water Court (31) six single seat toilets were built; the dining hall of the Scenic Triclinium (40) offers three separate toilets. It does not come as a surprise that multi-seaters were located in the baths and in the service areas. Relying on these data we can conclude that different toilets were built for people of different social rank. The emperor and his guests used mainly single-seaters. Staff and slaves only had multi-seaters at their disposal. The lavish decoration of the single-seaters and their excellent water systems (both discussed below) underline this conclusion.

WATER SUPPLY AND DRAINAGE

Like other Roman toilets elsewhere, the villa toilets needed water for rinsing sponges and flushing, and a drain connected to a sewer to carry away urine and feces. There was plenty of water at the villa site, as we know that Hadrian tapped one or two aqueducts passing his villa terrain on



Fig. 6. Multi-seater of the North Service Building (26) (photo R. Kragting).



Fig. 8. End of the sponge gutter of the multi-seater of the North Service Building (26).



Fig. 7. Start of the sponge gutter in the multi-seater of the North Service Building (26) with hole for the supplying lead pipe.

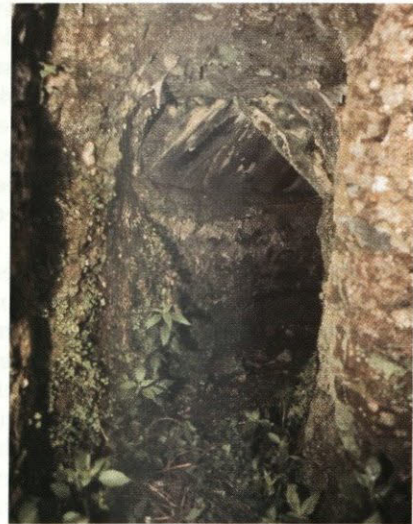


Fig. 9. Drain with an a cappuccina roof connected to the feces gutter of the multi-seater of the Central Service Building (34) (photo R. Kragting).

their way to Rome.¹⁹ Water played an eminent role in the villa and its gardens. Salza Prina Ricotti describes it thus: 'Così la villa si riempì non soltanto di verde, ma si illuminò di fontane monumentali, di graziose fontanelle, di cascate, di ninfei, di canali grandi e piccoli, di ampi bacini, geometrici laghetti piacevoli da ammirare nella calura estiva e, mentre il minimo soffio del vento faceva fremere la loro superficie ed il continuo moto dell'acqua scorreva negli euripi suddividendo ed illuminando l'area, i giardini, da belli che erano, divenivano magici.'²⁰ Besides, water was used inside dining rooms to enliven architecture.

Right now, several international research groups are working on the water systems and drainage in and around the villa.²¹ Their research, however, is severely handicapped by the fact that nearly all lead pipes have been robbed during the last few centuries.²² There is only indirect evidence for lead pipes: holes in the walls for leading the lead

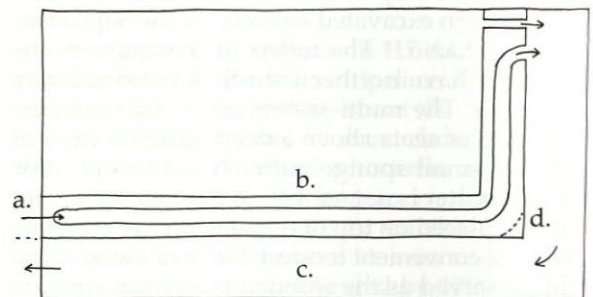


Fig. 10. Schematic presentation of the water supply and drainage system of a multi-seater: a = hole for supply pipe, b = sponge gutter, c = feces gutter underneath the seats, d = round corner.

pipes through, the imprint of the pipes in sub floors, and cut away ridges left by the looters. A team of speleologists is mapping the villa sewer system, which is not easy as well as that the sewers are hardly accessible:²³ they are relatively small (50 cm or lower) and most of them have not yet been excavated. In addition, the channels for water supply and the ones for drainage do not seem well systemized. There are, for example, no distribution points built at regularly intervals nor is there a main sewer with branches. To get a clear and coherent picture of how the overall water system and drainage was planned and how it worked, we have to wait until the results of the investigations of the several teams have been published. On a smaller scale, at the level of the toilets themselves, however, it is possible to reconstruct the water and sewer systems.²⁴

Water systems at multi-seaters

The multi-seater next to the North Service Building (26) illustrates the basic principles of the water system in these toilets best (fig. 6). There is a staggered entrance with a small *nymphaeum* in the porch. The toilet room itself has seats along two sides. Water was brought in once with a lead pipe of which the hole (\varnothing 5 cm) is still visible (fig. 7). It filled the shallow sponge gutter made of travertine in front of the seats. The overflow was led into the deep feces gutter (150 cm) underneath the seat (fig. 8). The gutter, partly hewn out of the underlying tuff bedrock and partly built in masonry, was made waterproof with layers of *opus signinum*. The gutter is connected with a drain *a cappuccina* (conical in form, made by two tiles) to the villa's sewer network further downwards (fig. 9). In addition to wastewater from other (unknown) places, which was led into this gutter, the spill-overs and the cleaning water from the ground was also led into it, aided by the slightly sloping floors. Figure 10 presents all the different elements working together to establish a good water supply and drainage system.

At five other multi-seaters a hole or imprint of a pipe has been found.²⁵ Only at the west toilet of the Canal Block (35) another washbasin has been found, other toilets only had sponge gutters.²⁶ The sponge gutters of other toilets are also shallow with an average depth 9 cm and an average width of 12 cm. This does not suggest a large stream of water flushing the gutter underneath the seats. The question can be asked whether these toilets were flushed adequately. One would expect the toilets to be built above the large villa

sewers, through which all the surplus water from the large ponds and water displays was drained away. This only appears to be the case at a few toilets.²⁷ Therefore additional flushing was needed and for this reason the toilet of the North Service Building (26) was probably connected to a small reservoir.²⁸ Most toilets, however, form the beginning of a new sewer line, and it seems that they had to be flushed with one jet of water only. Especially the toilets that are connected to baths have additional flushing. Although there is no proof for it, it seems highly plausible that the toilet of the Service Quarters (8) was flushed by the surplus water of the above lying pool of the East West Terrace (14).

To get rid of waste materials round drains would serve best. From this point of view the round toilet at the East Terraces (6) and the semi-circular one of the Larger Baths (33) are very functional. The other rectangular toilets show rounded edges to streamline the drain. Besides, all drains had a smooth coating of *opus signinum* and a slope of approximately 30 cm. Studying the feces gutters revealed how the multi-seaters were built. To create a drain deep enough, a large rectangle was dug out of the underlying bedrock. On top of this, the upper part of the gutter walls were built. Most gutters were therefore partly hewn in the rock and partly built. Tiles were placed at the bottom. The gutter was then completed with a waterproof layer of *opus signinum*. The gutters are about 45 cm wide and about 1 m deep.

The only exception in every sense is the toilet in the Service Quarters (8). As this is situated on the first floor, it was impossible to build a deep feces gutter underneath the seats: it is, indeed, not much deeper than the floor level, starting at both ends at 5 cm underneath the floor. The gutter was made deeper by raising the sponge gutter and the footrests in front of the toilet seats. In the corner there is a large drain in the form of a round hole leading to the floor underneath. Around the hole there still is a square impression, which might indicate a lead sheet connected to a lead drainpipe. The lead pipe (now gone) was probably connected to a sewer in the underlying room.

Water systems at single-seaters

In broad terms, the water system of single toilets worked according to the same principle as that of the multi-seaters. However, their appearance was completely different. Instead of a sponge gutter there was a sponge basin; instead of a feces gutter underneath the seats, there was a collection



Fig. 11. Single-seater in the west wing of the Scenic Triclinium (40) with remains of marble seat and imprint of opus sectile floor. The groove indicates the position of the water pipe (photo R. Kragting).



Fig. 12. Toilet room of the External Nymphaeum at the Water Court (31) with collection box (left), down spout for rainwater (right) and gray slates as floor decoration (photo R. Kragting).

box with a connection to the sewer. The system can be illustrated best with the three toilets at the Scenic Triclinium (40). In the dining area around the Canopus where Hadrian must have entertained his guests, two toilets were in the side buildings and one behind the cupola. The toilets in the side buildings are rather similar (fig. 11): a vast room in which - at the back - there is a marble toilet seat, more a throne than a toilet. On the walls are the remains of marble decoration and the imprint of an elegant pattern of marble pieces can be seen on the floor. Here is also a deep impression of a lead pipe preserved going in the direction of the toilet seat, stopping at about 30 cm in front. This implies that once a lead pipe fed something in front of the toilet seat: this must have been a small charming, bubbling fountain in which sponges could be cleaned. The toilet at the east side has, though placed in a symmetrical position, something extra: footrests under which the overflow of the little sponge basin is led. Both toilets are connected to a collection box, which in turn was connected to a drain. The toilets appeared to be the start of a small sewer lines with a roof *a cappuccina*, connecting with the large villa sewer a little further away. The third toilet of this area can be found near the cupola, it differs from the other two: here the toilet seat is built into a niche, the collection box is very shallow and connected to a very small drain channel. A drain from a roof above also ends into this channel. The water supply system with a pipe leading to the basin in front of the seats is the same, however.

The toilet in the External Nymphaeum at the Water Court (31) gives more specific information



Fig. 13. Detail of the toilet floor in the External Nymphaeum at the Water Court (31) with lead water pipe ending in collection box (top left) and small pipe next to metre-stick (photo R. Kragting).

about the water system (fig. 12). The toilet is built in a niche of this rather large room. The collection box is connected to a drain with an *a cappuccina* roof. In one of the corners a drain from above comes down. The floor decoration in gray schist and the skirting in yellow marble are partly preserved. The lead pipe that flushed the toilet is still *in situ*, together with a small rolled lead pipe, a diversion, which had to fill a sponge basin (fig. 13). The center of the basin was 60 cm in front of the seat. The pipe had a diameter of 4.5 cm and the diversion 2 cm.

We discovered parts of a marble sponge basin at only two toilets.²⁹ At eleven others an imprint of a pipe or a real pipe was heading in the direction of a sponge basin.³⁰ The basins are not far from the seats, mostly within a range of 30 to 40 cm. The water pipes entered the room mostly through the door openings. In three toilets a diversion of pipes can be seen. This means that with this stream of water several things at one time were supplied. How the water pipes of the toilets fit in the larger scheme can be seen very well on the drawing of the floor of the Water Court (31) by Rakob, showing how from two central points each toilet gets water with a separate water line.³¹ This suggests that the taps that operated all the waterlines were operated from these two central places.

Most single-seaters seemed to be flushed with only one water jet. Maybe this was sufficient, as the collection boxes are still very smooth today and have a chute downwards (with a decline between 3 and 15 cm) to the sewer (figs. 14, 15). The depths of the boxes depended on the location of the sewer to which they had to be connected. Most are 76 cm deep, though some are rather shallow (10-25 cm). The later ones are mostly found on upper floors, where one has to drain the toilet between the ceiling of the ground floor and the floor of the first floor. Some special maneuvering was needed also at the Island Enclosure (17), where the drains had to dive underneath the canal. Not all toilets were connected to drains. It is remarkable that some toilets seem to dispose their material into gardens or down the cliffs of the valleys.³² Maybe the pipes that once carried the waste of these toilets have since disappeared.

The drain from above in the toilet at the External Nymphaeum at the Water Court (31) and in other toilets, and the find of a 'toilet' in the theatre, seduced Hidalgo and Leon to speculate about a flushing system with higher placed reservoirs.³³ This is a rather interesting theory which would be very sophisticated if true. A systematic check of



Fig. 14. Single-seater at the West Belvedere (37) with modern fence in the middle (photo A. Vela).



Fig. 15. Detail of the collection box at the toilet at the West Belvedere (37) (photo A. Vela).

all these pipes and their provenance revealed that rainwater from adjoining roofs was led into these down pipes and in the already existing drain. This water was not meant for flushing, as in this case the toilets could be flushed only during a rain shower.

The principles of the water supply and drainage systems are summarized in figure 16. These toilets were equipped with sophisticated water systems feeding charming marble basins, in which fresh water bubbled. The water system definitely added to the comfort of these luxurious toilets.

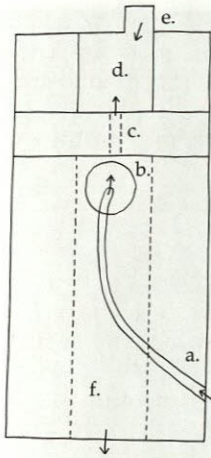


Fig. 16. Schematic presentation of the water supply and drainage systems of a single-seater:

a = imprint of lead supply pipe, *b* = imprint of the sponge basin, *c* = drain for the overflow of the sponge basin underneath the foot rests, *d* = collection box underneath the seat, *e* = rain water pipe discharging in collection box, *f* = connected sewer line.



Fig. 17. Small finds from the drain of the west toilet of the Island Enclosure (17).

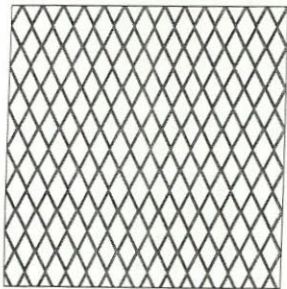


Fig. 18. Reconstruction of the opus sectile floor in the two toilets of the wings of the Scenic Triclinium (40) by Guidobaldi (1994).

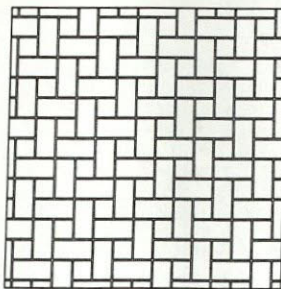


Fig. 19. Reconstruction of the opus sectile floor in the toilet of the East Belvedere (10) by Guidobaldi (1994).

FORM AND DECORATION

The robbing of art and decorations of the villa must have started shortly after the abandonment of the site in the 5th century. That is the reason why almost all decorations are gone. Only tiny pieces show us a glimpse of how beautiful and magnificent the villa must have been once. The walls

must have been decorated with frescos, marble slabs or *intarsia*, the latter made of delicately shaped small pieces of coloured marbles set in natural slate fields to form floral or architectural designs. Ceilings once were plastered with stucco decorations. Floors were covered with coloured marbles from all over the world, alternating with black and white mosaic floors with floral or geometric patrons.

Although toilet rooms did not escape the robberies, there are enough clues left to reconstruct the decoration of these rooms. For example the sub floors, and especially those that have been protected by a roof, show the negative impressions of *opus sectile* floor patterns. Plaster on the walls shows the negative of the revetment with marble slabs, while clamp holes in the walls indicate the presence of wall decoration. Besides, during our cleaning operation of toilet floors and drains we found parts of decoration in many toilets: small parts of wall plaster with colourful painting (red, blue, green, yellow), small mosaics cubes in all colours, parts of many types of coloured marble and other stones, and *intarsia* (fig. 17). Unfortunately, most of these finds do not reveal anything of the decoration of the specific toilet room. The finds were dumped in the toilet drains - together with modern material - probably during the several restorations.³⁴ Alternatively, the finds seem to be transported - after the collapse of the villa - from elsewhere (far or near) along the drains.³⁵ Some fills tell something about the history of the villa after abandonment, for example the fill in the toilet of the West Belvedere (37) with glazed shards from post-antiquity inhabitants (1500-1800). Only in two toilets we can state that the finds are definitely from the toilet rooms themselves.

On the basis of all the gathered information it can be concluded that the single-seaters were extremely rich in decoration. Toilets seats and front plates that have survived are made of marble; remaining footrests are covered with marble slabs. Of two toilets a part of the floor survives: the Stadium Garden (28) toilet had a floor with small marble squares in red and white, the toilet of the External Nymphaeum at the Water Court (31) had rectangular gray slates on the floor with a skirting of yellow marble (fig. 12).³⁶ Of eight other toilets we have imprint of various patterns in *opus sectile* in the sub floor: the imprints are either rectangles or diamonds (figs. 11, 18, 19). Thresholds and skirting boards are preserved better. Seven toilets still have one or more marble (white, pink or yellow) or slate slabs left. Toilet walls were plastered but had no paintings, they show signs of marble

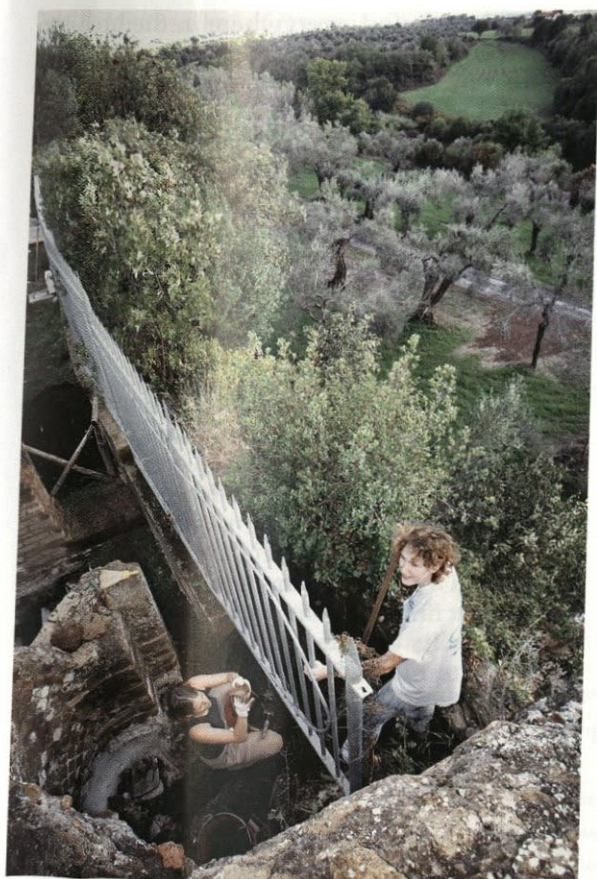


Fig. 20. View over the east valley from the single-seater at the West Belvedere (37) (photo H. Heuts).

revetment, though at no toilet wall are the actual marble slabs still attached.

It is remarkable that most toilet seats are built in niches in the room.³⁷ These niches offer a special place for decoration: the apse. One of the toilets in the Peristyle Pool Building (27) is known to have a mosaic in this apse in the form of a *velum*.³⁸ Ceilings are mostly made in the form of cross vaults or semi-domes covered with plain white stucco. Windows in these vaults light two toilets. Besides all these luxurious decorations the single-seaters had yet another special item: a view. Eight toilets have large windows, sometimes as large as a doorway opening to a wide variety of views: to the artificial canal around the island, the villa gardens, and the dramatic valleys on each side of the villa terrain. The views can always be enjoyed best from the toilet seat (fig. 20).³⁹

In general, the multi-seaters are more soberly decorated than the single-seaters, although there is some variety within this framework. Their floors

can range from *opus signinum* or *opus spicatum*, to crude white mosaics or more elegant black and white mosaics to marble floors. The sponge gutter goes from masonry built and coated with *opus signinum* or plaster to travertine and marble examples. In most cases the seats seem made of wood, sometimes of heavier material like travertine or marble. Walls were covered with *opus signinum* or plastered white without any paintings, except for the toilets of the Smaller Baths (30), where wall decoration with *entarsia* can be reconstructed.⁴⁰ Most walls are preserved only at such a low height that it is not possible to conclude anything about windows and the amount of light in these rooms. Only three toilets have (remains of) windows that were placed high in the wall. They were placed too high to enjoy the surroundings.⁴¹ From this, however, it can be concluded that these toilets were well-lit.

The simplest toilets occur in the slave areas: the toilet of the Service Quarters (8) and of the service area of the Heliocaminus Baths (20).⁴² The three most beautiful toilets, all with marble decorations are the ones in the Smaller (30) and Larger Baths (34) and the round one at the East Terraces (6). Due to their position they do not seem to have been destined for slaves or servants, but for the guests of the Emperor. Their lavish decorations also point into this direction.

From this survey of the decorations in the toilets, we can conclude that especially the single-seaters were decorated extremely colourfully with shiny materials. This indicates that the toilet rooms were not isolated entities in the villa, but that they were part of the overall villa conception, where lavish and variegated decorations are the standard. Some toilets had exactly the same decorations as the surrounding rooms, as for example the six toilets at the Water Court (31).

We can observe that no two toilets at the villa grounds are the same. Though some are placed in a symmetrical position and their ground plans may be the same, furnishings and decorations show many small variations. One of the two toilets in the wings of the Scenic Triclinium (40), for instance, has a footrest, whereas the other one does not. Besides, the toilets at the villa are not only variations of the common types: two are so exceptional in form that they have no parallels in the Roman Empire. They can be regarded as novelties of Hadrian or his architect. Their form is so different that at first we had serious doubts whether these rooms were toilets at all.⁴³ Only after cleaning their floors and drains did they prove to be toilets.



Fig. 21. Gilded mosaic tesserae from the apse of the toilet in the Fountain Court East (12) (photo R. Kragting).



Fig. 22. Round group toilet with seven separate seats at the East Terraces (6) (photo R. Kragting).

One of them is the vast two-person toilet in the Fountain Court East (12). The room has an area of 12 square m and is 4 m high. A large window is overlooking the adjoining garden with fountain. The toilet seats themselves were placed in two niches, one in front of the another. Beneath the seats were the normal collection boxes, smoothened with several layers of fine *opus signinum*. In front of the seat some parts of marble sponge basins remain. Though floors, walls and ceiling were decorated just like the other villa toilets, the niches of the seats, however, had a special adornment. In the apse of the east toilet (the apse of the west one is a modern reconstruction) many imprints of mosaics can still be detected. The mosaics themselves have been discovered in the drain and on the toilet floor: eighty-eight turquoise tesserae and eight gilded ones (fig. 21). This toilet, which is matchless in the Roman world due to its two opposing seats, is also unique because of its shining decoration in the apses.

The other exceptional toilet is the round group toilet at the East Terraces (6) (fig. 22). This very elegant toilet, decorated completely with marble slabs, had a small fountain in the middle of the room. Although there are a few other round group toilets in the Roman Empire,⁴⁴ this is the only one with separate seats for each user: seven users sat on seven individual seats. The round shape of this toilet echoes the continuous repetition of

round forms found everywhere in the architecture of the villa. More than in the other toilets, the visitors must have felt surprised. In this sense it is a pity that we can not establish the user group of these two toilets: we do not know exactly what function the Fountain Court East (12) had, nor what other buildings surrounded the round toilet. From their exclusiveness, however, we can conclude they must have been for the most privileged visitors.

TOILETS IN USE

It would be naive to assume that all toilets discussed here were built in one stroke and were in use at the same time. At least seven toilets show alterations that provide clues for dating or that tell us something about their period of use. Most toilets seem part of the general building process of Hadrian.⁴⁵ One room seems to have been planned as a toilet at first, but somewhere during the building process its design was changed.⁴⁶ Two more toilets were built later than their surrounding buildings and thus form no part of the original plan.⁴⁷ It is remarkable that both are multi-seaters for personnel.

After Hadrian's death the villa was in imperial hands for at least some eighty more years. This can be deduced from the imperial portraits of all Hadrian's successors that have been found on the terrain, as late as the reign of Septimius Severus and his son Caracalla. We can conclude that the villa had not yet been abandoned then from a few brick stamps dating from the beginning of the 4th century. This implies that the villa was in use for more than 300 years.⁴⁸ It seems only natural that some toilets have been altered as, for example, one of the doors of the eastern toilet of the Residence (22) has been closed.⁴⁹ Two other toilets were put out of use while the villa was still inhabited.⁵⁰

The finds in the drain of the Smaller Baths (30), parts of terra cotta cooking pots, so-called casseroles, from the early 3rd century AD and a strong corroded coin that can be dated to the years 296-305 AD, probably do not tell us anything about the late use of this toilet, but instead give us something about the date of dismantling this toilet and this part of the villa.⁵¹

CONCLUSIONS

The people that built and designed the toilets of Pompeii and Ostia were severely restricted: space and money determined the appearance of their toilets. Hadrian, who was not limited in any way,

Tab. 1. Multi-seaters of Pompeii, Ostia and Hadrian's villa.

	Pompeii/Herc.	Ostia (2 nd century)	Hadrian's villa		
	tenement houses	baths	simple	luxurious	
10 examples	12 examples	8 examples	7 examples	3 examples	seat
wood	wood	marble	travertine,	wood, marble marble	wall
white plaster	white plaster	with flower motif white plaster	with flower motif <i>opus signinum</i> ,	white plaster <i>intarsia</i>	marble floor
simple	simple	marble, mosaics,	colored stones <i>opus signinum</i> ,	<i>spicatum</i> , crude white mosaics white or colored	marbles, fine mosaics windows
small; high	position	small; high position	small; high position	large; high position	large with a view
dark/light	dark	dark	light	light	light
water	pipe water	pipe water	pipe water	pipe water	pipe water
sponge gutter	not preserved	not preserved	marble	masonry or travertine	marble
extra wash basin	–	–	<i>labrum</i>	–	–
discharge	sewer	sewer	sewer	sewer	sewer

Tab. 2. Single-seaters of Pompeii, Herculaneum, Ostia and Hadrian's villa.

	Pompeii/Herculaneum	Ostia (2 nd century)	Hadrian's villa
	200 and 60 examples	70 examples	25 examples
seat	wood	wood	white marble
wall	white plaster	not preserved	white plaster or marble revetment
floor	tiles	not preserved	<i>opus sectile</i> in many colors
windows	small; high position	not preserved	large with views
dark/light	dark	–	light
water	bucket of water	bucket, sometimes pipe water	pipe water
sponge basin or gutter	basin or bucket	basin or bucket	marble basin
discharge	cesspit	sewer	sewer

could order the toilets to be built just the way he liked. The interesting question is: 'Do these toilets differ from the toilets of Pompeii and Ostia, discussed in the first part of this article?' When we compare the toilets of Hadrian's villa with other toilets in the Roman world (tab. 1), it appears that the multi-seaters for slaves are just as somberly decorated as in other places of the Empire, whereas the water systems very much resemble the systems of toilets elsewhere. Compared to the multi-seaters of Pompeii they receive a lot of light - just as do the ones in Ostia. None of these servant toilets, however, fits into Neudecker's category of 'Prachtlatrinen'. In contrast, Hadrian's multi-seaters for guests and his single-seaters are the most luxurious toilets to be found in the entire Roman Empire (tab. 2). They are the absolute pinnacle, not only with regard to space and decoration, but also in terms of their hydro-technology. Large,

lowly placed windows not only provided an abundance of light, but also spectacular views.

The toilets cannot be regarded as separate entities. They form an integrated part of the villa complex. They are not only imbedded in the infrastructure of water and sewer systems, but they are also part of the architectural program and decoration schemes. Indeed they fit in very well with the many other playful surprises in the villa. Just as MacDonald and Pinto (1995, 170) discovered that no two rooms in the villa look the same, no two toilets are equal. Even within one building toilets differ in form and decoration. Apart from that, the two toilets with remarkable ground plans, the round one of the Terrace (6) and that of the Fountain Court East (12), have no parallels in the Roman world. Hadrian's guests must have marveled and felt surprised at the sight of these toilets, just as they did at the view of the uncon-

ventional architecture of the buildings, the dazzling gardens and unexpected water displays.

It is much discussed whether Hadrian was the architect of his own villa. It is a fact, however, that whoever made the drawings and sketches had to please him. The buildings of the villa must have been approved by Hadrian and must have been executed according to his taste. In this way the buildings and toilets still visible do reveal something of Hadrian's preferences and gives us a glimpse of his character. He seems to have been someone who wanted to impress others, and someone who did this in a creative, artistic and even frivolous way. To find out whether these many luxurious toilets are typical for Roman emperors or for Hadrian alone, more comparative research must be done in other imperial palaces and villas. The fact that his direct successors longed for more soberness can be read in the Meditations of Marcus Aurelius, who recommends his readers to live a simple Stoic life. One piece of advice he offers is: '[...] Do all things as a disciple of Antoninus (Pius) [...] how he would remain the whole day at the same occupation, owing to his spare diet not even requiring to relieve nature except at the customary time.'⁵² This quote gives us at least a hint that not all emperors wanted (and needed) a luxury toilet around every corner.

NOTES

- 1 I want to thank Soprintendente A.M. Reggiani of the Soprintendenza Archeologica per il Lazio for her kind permission to research the site. My thanks go also to Benedetta Adembri and the excellent staff at the excavation site, Mr Di Croce and Mr Galli, who were always willing to help. Pina Cinque owes my gratitude for sharing her information on recently discovered toilets. Furthermore, I would like to express my kind gratitude to Hubertus Manderscheid for all his much appreciated help and advice regarding this research. Special thanks are for Ann Koloski-Ostrow, who not only discussed the subject of latrines with me many times, but who also kindly corrected and revised the English of this paper. Above all, I would like to thank my fellow toilet researchers at the site for their creative ideas and enthusiasm: Carmen Flagiello, Béatrice de Fraiture, Nathalie de Haan, Lynn Hagendoorn, Robert Kragting, Frederike Schipper, Jeroen Van Vaerenbergh, Anneleen Van de Water, Mandy van der Velden and Eveline Vermeulen. Many of their ideas and thoughts have found a place in this article. I owe them for that. This investigation is financially supported by the Netherlands Organization for Scientific Research (NWO). Photographs and drawings in this article are by the author, unless stated otherwise. The photographs are printed with the permission of the Ministero per i Beni e le Attività Culturali, Soprintendenza Archeologica per il Lazio.
- 2 For a discussion of these problems, see Jansen 2000 and 2005.
- 3 The samples were analyzed voluntarily by Lieselotte

Meersschaert and Bart Klinck of the archaeobotanical laboratory of the Archaeology Department Waasland at Sint-Niklaas (Belgium). For more detailed information about these investigations see Van Vaerenbergh, forthcoming.

- 4 This paragraph is based on Neudecker 1995, Koloski-Ostrow 1996 and 2000, Hobson 2004 and forthcoming, and Van Vaerenbergh 2006. Interesting are remarks on latrines by Garbrecht and Manderscheid (1994, 23-24 and 66-67). The results of the author's own investigations at Pompeii, Herculaneum and Ostia (Jansen 1993, 1997 and 2002) are included too.
- 5 These toilets are not only few in number, but do not all provide crucial data: one is overbuilt by the modern restaurant (toilet in the Forum Baths), and three others were not yet finished when Vesuvius destroyed the city (toilet at the Forum, the Great Palaestra and the Central Baths).
- 6 In comparison to Pompeii, it is much more difficult to distinguish between public toilets and private ones at Ostia. In this article public toilets are the independent ones, the ones found in/near baths, in guild houses, in other public buildings as the fire department, and on the ground floor of the tenement houses. Most of these toilets are directly accessible from the streets. The public ones accommodating one or two persons only (six examples) are not taken into account here.
- 7 The function of this extra basin is not clear, it could be for washing hands and faces, or for storing the sponges.
- 8 Neudecker 1995, Abb. 72.
- 9 These are the two large toilets of the Baths of Neptune and the toilet in the south part of the *palaestra* of the Baths of the Forum.
- 10 Boersma (1996) has raised a lot of confusion, arguing that down pipes on the outer site of a house are for discharging rainwater of the roofs and that down pipes inside are for toilet waste of upper floors. As no toilet has been found yet on an upper floor in Ostia, his statement is regarded as an assumption. In the Casa delle Volte Dipinte is a 'possible' toilet on the upper floor connected with a down pipe and this is a down pipe on the inside. Boersma does not refer to this toilet in his argument.
- 11 In several toilets dispersed over the city these boards have been reconstructed in concrete.
- 12 The fact that this toilet is the only single-seater of which the marble seat has been preserved is at least suspicious. Especially since the marble is not weathered and is completely intact, it could be one of the many reconstructions by the excavator Calza. Besides, he (*Giornali degli Scavi* 25, 1938-1939, 58) does not mention a seat in his excavation report, he only mentions the beautiful floor: '[...] nel sottoscala è ben conservato un gabinetto personale con una pavimentazione in mattonelle esagonali di marmo giallo antico [...]'. I thank Jane Shephard and Luigi Mastromarino, both of the Soprintendenza di Ostia, for providing this useful information.
- 13 For this paragraph see MacDonald/Pinto 1995 and Salza Prina Ricotti 2001. The reference system to the buildings (names and numbers) used in this article is that of MacDonald/Pinto 1995, see also figure 1.
- 14 See for a list of these texts, Salza Prina Ricotti 1995a, 108-110. Besides, she (1995a, 77-110; 2004, 39-40) argues that the women in the palace did not use the normal toilets, but (now disappeared) chamber pots and wooden toilets.
- 15 This is the number known in November 2005. In addition to the catalogue published in Jansen 2003 seven new toilets have been detected. The toilet at Fountain Court East (12), though offering seats for two persons, is regarded here as a single-seater as it has all other

- characteristics of a single-seater. Multi-seaters: eighteen-person toilet at Service Quarters (8), eleven-person toilet at Hall of the Cubicles (15), seven-person toilet at the East Terrace (19), three- or four-person toilet at the Helioaminus Baths (20), twelve-person toilet at North Service Building (26), two- or three- person toilet at the Smaller Baths (30), twenty-person toilet at the Larger Baths (33), six- or seven-person toilet at Central Service Building (34), a ten- person and a sixteen-person toilet at the Canal Block (35). Single-seaters: one toilet at the East Terraces (6) (new), one toilet at East Belvedere (10), two-person toilet at Fountain Court East (12), three toilets at the Island Enclosure (17) (one new), two toilets at the Residence (22), one toilet at the Arcaded Triclinium (23) (new), two toilets at Residence Fountains (24) (both new), two toilets at the Peristyle Pool Building (27), one toilet at the Stadium Garden (28) (new), six toilets at the Water Court (31), one toilet at the External Nymphaeum at the Water Court (31), one toilet at the West Belvedere (37) (new), and three toilets at Scenic Triclinium (40). The author does not regard the 'toilet' discovered recently at the North Theater (2) by Hidalgo and León (2004) as a toilet, but rather as a *nymphaeum* room: there is no sign of a seat, the collection box underneath the seat does not resemble the others in the villa, nor is it in the middle of the back wall as with the others. There are still some potential toilet rooms which have not been cleaned by our team: in the Northern Ruins (3), one at East Belvedere (10), one at Hall of the Cubicles (15), two toilets on the terrace of the Central Service Building (34), two toilets next to the *nymphaeum* behind the Scenic Triclinium (40), and in the Circular Hall (45).
- ¹⁶ See, Adembri 2000, 77; MacDonald/Pinto 1995, 172; Neudecker 1995, 68-69; Salza Prina Ricotti 1995a, 106 n. 44; 2001, *passim*. In several monographs of buildings of the villa toilets are mentioned. More recently the following toilets have been excavated and are studied at the moment: the toilet in the Arcaded Triclinium (23) by Letizia Rustico, the toilet of the Stadium Garden (28) by Benedetta Adembri and the toilet of the West Belvedere (37) by Alessandro Vella and Marella Maccarone.
- ¹⁷ Ledges indicating front plates have been found at the toilets of the Smaller Baths (30), at three of the toilets of the Water Court (31) and at one of the toilets of the Scenic Triclinium (38) a small part of the front plate is still *in situ*.
- ¹⁸ See for an extended discussion of this theme, Jansen 2003. MacDonald/Pinto 1995, 170-182.
- ¹⁹ Salza Prina Ricotti 1995b, 367. See also Ehrlich (1989) for an evocative description of the 'structural role of water architecture in Hadrian's villa' in which she portrays Hadrian as 'a virtuoso amateur architect, who thrived upon the creation of magnificent water shows'.
- ²⁰ For many years Hubertus Manderscheid (2000, 2002 and 2004) has been studying the waterworks of the villa, including those of the baths and the Scenic Triclinium (40). Since 2001 a Scandinavian group has carried out a multi-disciplined survey of the water supply of Villa Adriana and its possible relations to the urban Roman aqueducts with participants from the Universities of Copenhagen, Lund and Oslo under the direction of Jørgen Hansen, Copenhagen, and sponsored by the Carlsberg Foundation. The results are expected to appear as a supplementary volume 'Water for the Emperor - Survey of the External Water-Supply of Villa Adriana' in the series of the *Accademia di Danimarca* in Rome in 2007. More recently, a team of German engineers led by Henning Fahlbusch (2003) started studying the overall waterworks in the project 'Wasserkultur in der Villa Adriana in Tivoli'.
- ²² Among the few that have survived is the pipe in the mouth of the crocodile fountain statue found at the bottom of the Canopus basin (the original is now in the site museum) and one found by our team in one of the toilets in the External Nymphaeum of the Water Court (31). See pp. 168-169 and figs. 12, 13.
- ²³ The speleologists of the Associazione Roma Sotterranea are presently mapping the underlying sewer system.
- ²⁴ During our research Hubertus Manderscheid helped us with lead tests to establish whether the holes and imprints really indicate the presence of lead pipes. The name of the test is Rmerckoquant R 10 077 Pb 2+ and its use is described by Eggert 1988. In most cases the results of this test were positive. Furthermore, we tried to trace lead pipes still hidden underneath floors with a metal detector. This method proved to be successful at Pompeii earlier (see Jansen 2001). However, in the villa it was used in vain. We want to thank dottoressa Benedetta Adembri for lending us a metal detector.
- ²⁵ These can be found in a toilet at the East Terraces (6), Helioaminus Baths (20), Smaller Baths (30), Central Service Building (34) and the east toilet of the Canal Block (35).
- ²⁶ In two multi-seaters, the one at the Helioaminus Baths (20) and the one of the Smaller Baths (30), no sign of a gutter can be detected. As these are the smallest of the multi-seaters, serving only few people (respectively for three to four and two to three persons), there might have been a sponge basin. Research of the author at Ostia has revealed that sponge basins were used at toilets servicing up to three or four people, while sponge gutters were available at toilets for more than three to four people.
- ²⁷ The round toilet at the East Terraces (6), the multi-seater of the Central Service Building (34) and both single-seaters of the Residence (22).
- ²⁸ Although wastewater from elsewhere was discharged in some gutters, this was not done to flush the toilet but rather to find an easy way to dispose of that water in an already existing drain.
- ²⁹ In the toilet of the Fountain Court East (12) and the Stadium Garden (28).
- ³⁰ Rakob (1967, 12-15) describes this feature for the six toilets of the Water Court (31). He calls the way the water was provided on these toilets 'extravagante sonst nicht übliche Weise'.
- ³¹ Published in Rakob 1967 Abb.1 and Guidobaldi 1994, Tav. F. The team of Fahlbusch has investigated the water system of the Scenic Triclinium (40) and made a reconstruction of the water system including the toilets. For a first impression see Manderscheid 2004, 118 and Fig. 3.
- ³² Gardens: toilets at the Residence (19) and the Smaller Baths (30). Cliffs: toilet at East Terraces (6) and West Belvedere (37).
- ³³ See Hidalgo/León 2004. The other toilets with drains from upstairs are three of the toilets at the Water Court (31) and the one described above, the toilet behind the cupola in the Scenic Triclinium (40).
- ³⁴ Modern bottles and plastic bags in the toilet drain of the round toilet on the East Terraces (6), a cement sack and parts of a grenade in the toilet drain of the Residence Fountains (24), some lead sheets, a small drawn lead water pipe from the first half of the nineteenth century, glass and drinking vessels in the toilet drain of External Nymphaeum at the Water Court (31). The drain of the east toilet of the Canal Block East (36) appeared a dump for every kind of material: dead animals, parts of mosaic floors from elsewhere and all kinds of plastic objects.
- ³⁵ For example, the finds in the drains of the toilets at the Island Enclosure (17), the Residence (22), the Arcaded Triclinium (23) and the Peristyle Pool Building (27).

- 36 In the drain we have found many more slabs of the yellow marble skirting.
- 37 Only three single-seaters have no niche: the east toilet of the Island Enclosure (17), and the two larger toilets of the Scenic Triclinium (40).
- 38 Sear (1997, 109) describes his find of yellow and red glass *tesserae*; these are not visible anymore. Another toilet with mosaics in the apse is the east toilet of the Fountain Court East (12). In the drain of the west toilet of the Residence Fountains (24) we found a part of stucco of the apse with two white mosaics still in place and many imprints.
- 39 In the toilets at the rim of the East Terraces (6) and at the West Belvedere (37) the walls are preserved at too low a height to conclude whether here was a window or not. Due to their location next to the valley panoramas, it seems most probable that they had windows offering a spectacular view.
- 40 See Blanco forthcoming and pp. 183-190 in this volume.
- 41 Except for the window in the toilet of the Smaller Baths (30), which must have been lower in the wall and opened into the garden.
- 42 The toilet for the visitors of these baths has not been found yet.
- 43 Others, too, had doubts, for example, Guidobaldi (1994, 91 and 76) who names the room of the Fountain Court East (12) 'latrina?' and the round room at the East Terraces (6) 'fontana prolubata'.
- 44 Other round toilets can be found in the Maxentius' Baths on the Palatine in Rome and at Piazza Armerina (Sicily).
- 45 See for building periods of the villa MacDonald /Pinto 1995, 33, Adembri 2000, 35 and Salza Prina Ricotti 2001.
- 46 This is the eastern room of the External Nymphaeum at the Water Court (31).
- 47 The multi-seater at the Hall of Cubicles (15) has been built in a previously existing room and the one at the North Service Building (26) is built against the already standing building. It is hard to tell how much later. Salza Prina Ricotti (2001, 153-156, 157-158) supposes that they were ready at Hadrian's return to Italy in AD 125.
- 48 MacDonald /Pinto 1995, 198-199.
- 49 In the toilet of the East Belvedere (10) footrests were added later.
- 50 The drain of the western toilet of the Peristyle Pool Building (27) was deliberately blocked by building a terrace room over viewing the Stadium Garden (28). After blocking the drain this room was altered at least three times, as is indicated by the remains of three different floors. The other toilet that has been put out of order is the round toilet at the East Terraces (6) of which one of the front plates was used outside the toilet. That this plate was used as a sewer drain tells us that one was afraid of falling in a still functioning sewer and thus that the toilet was put out of use while the villa was still inhabited.
- 51 See for more details Van Vaerenbergh, forthcoming.
- 52 Marcus Aurelius, *Meditations* VI.30 quoted from Loeb translation.

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Fig. on cover and title page:
Greek Geometric horse
Amsterdam, Allard Pierson Museum inv. 1344, formerly Scheurleer Collection