



## CHAPTER FIVE

### Dissertation III on the Waters and Aqueducts of Ancient Rome

**T**o a most noble gentleman and oldest of friends, *Giulio dei Conti di Montecvecchio*, *Raffaello Fabretti*, son of *Gaspare*, of *Urbino*, sends greetings.

#### I. INTRODUCTION

No one certainly will be more surprised than you, most outstanding Giulio, that I have decided to dedicate to you this third dissertation on the aqueducts. Everyone has come to know our old close association, extended “through a series of so many years as each of us has” [Ov. *Pont.* 4.12.21]—who then acquainted with one of us is ignorant of that? Ours is a friendship “known almost more than you and I are known” [Ov. *Tr.* 3.6.6]. Everyone, then, will judge me to have acted rightly if, through the duty of writing, I am eager to nurture that harmony that, “begun in the green of youth, comes unweakened to hair turning white” [Ov. *Pont.* 4.12.29–30], which has been joined, as it were, by a destined meeting of minds—“each of our stars agrees in an incredible way” [Hor. *Carm.* 2.17.21–22]—and by “common bonds of sacred study” [Ov. *Pont.* 4.13.43]. I shall leave behind whatever glory I have produced for myself as a result, as a testament to those present and those to come.

But, indeed, I seem to see that you, because of this unusual literary subject (as you will call it), in comparison with others, are affected by no small



amazement at me and break forth into these words or others quite like them: “Why does that man (curse him) babble at me about aqueducts? I do not abide even the sight of them and would rather hear with ready ears the praises of wine with Homer, the prince and master of our poets. And why, I say, does he recount those restless suburban excursions of his, like a story to a deaf man? I am so devoted to the city and leisure that not at any time have I even sought out country stays at Tusculum, pleasant as they are. And whatever territory lies beyond the city, would it seem to be ‘beyond the paths of the year and the sun’ [Virg. *Aen.* 6.796]?”

Nevertheless, having spoken first this pardon, in this exchange and perhaps for the first time, I am forced to disagree with you. There is more than one reason at hand why to you most of all, before all my friends, this treatise should be dedicated. Although you often display yourself to us—through poetic boasting, I think—both as most fond of Homer and no less than him devoted to wine, it has nevertheless seemed good to you to pursue lyric poetry and to imitate Pindar rather than Homer. Not wrongly, even to a Pindaric bard, will the ancient abundance of waters entering Rome be described, since Pindar himself proclaimed on the very threshold of his odes that “water is best” [*Ol.* 1.1].

Moreover, when we seek out the fourteen aqueducts existing at the time of Procopius [*Goth.* 1.19.3], ten of them have been lost altogether, and four remain. The Crabra, or Damnata, the dirtiest of all and foul in its very appearance, serves not only for irrigation of gardens, as once before, but for washing off skins from the butcher. The Virgo is almost reduced to nothing and unworthy of its own name, poured out for the most part into the Rivus Herculaneus—fleeing from it once, the Virgo is said to have acquired its name [Plin. *HN* 31.42]—and leaking from damaged conduits. The Traiana is polluted from water recently tapped for it from Lake Sabatini (not to speak of worse sources) and rightly destined, as once before, for driving mills on the Janiculum, according to the same Procopius as our authority [*Goth.* 1.19.8]. Finally, there is the Alexandrina, scorned by the ancient Romans for a long time and very greatly to be scorned in like manner today, since it is polluted by rains and all too often arrives muddy.

In reading about so many losses of aqueducts, who else, therefore, would bear them more steadfastly than you? You have been accustomed either, by Pyrrhic indifference and lack of feeling, to forgo the most important of things or, by continual abstinence from water, to do without a most excellent substance. Your quite sedentary pursuits now (indeed, your in-

terest in sitting as the one and only thing) and your very great ignorance of this *ager suburbanus*, which you have never inspected, either at close hand or at a distance, force me, because I know that you are excellently versed in foreign geography, in like manner to take care to aid your leisure through my constant excursions and to instruct you in this domestic knowledge of Roman lore. Indeed, especially “that holy and venerable name of friendship” [Ov. *Tr.* 1.8.15] also demands, as a bond of human society, that one friend help the other and that one contribute things he has sought for himself to the benefit of others. “But nevertheless let us seek serious things, with play put away” [Hor. *Sat.* 1.1.27].

## 2. TOPOGRAPHIC MAP

It is our custom to prepare a topographic map with the course of the roads worked out as much as possible and the location of the more well known ancient monuments, for an easier grasp of what is to be discussed. If ever it has been useful elsewhere, here it is certainly most necessary, as you will see [fig. 31]. In this, I demand that you grant me some assumptions now, which I will prove in fuller detail elsewhere. First, the measurements of distances began not from the Golden Milestone at the head of the Forum, as many have thought, but from the ancient location of the gates before Aurelian’s extension of the walls. Likewise, the circumference of the republican walls was quite restricted; indeed, it proceeded along the high ground of the hills, the course of the Tiber from the west, and the *agger* of Servius or Tarquinius Superbus from the east. As a result, both the distances of some places that we have learned and the courses of the roads—especially the branching of the Via Latina from the Appia outside the city, according to Strabo [5.3.9], concerning which there was a long discussion in my first dissertation [1.4d]—are successfully defended from different absurdities of modern writers.

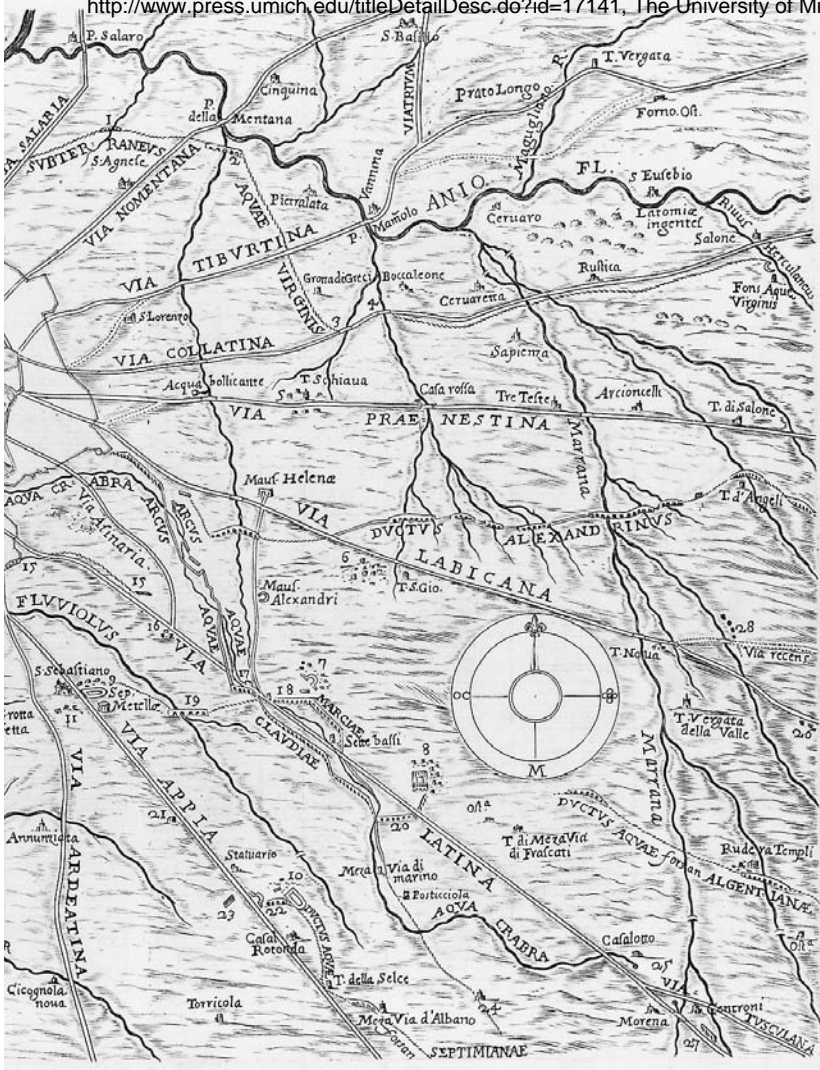
## 3. THE EASTERN GATES OF THE “SERVIAN” WALL AND THEIR ROADS

Just as, in the first dissertation [1.4d], we briefly discussed restoring the Porta Capena to its proper location, we shall shortly attempt the same



Fig. 31. Topographical map of Latium depicting settlements adjacent to Rome

1. Substructure of the Aqua Virgo, between the Via Salaria and Via Nomentana, below the Church of S. Agnese
2. Another substructure at the bank of the Anio, to the right of the Via Nomentana
3. Another, under the very pavement of the Via Collatina
4. Another on the Via Collatina, on the property Bocca di Leone
5. Ruins of a town or a village on the Via Praenestina
6. Other ruins, on the Via Labicana
7. Other ruins, on the Via Latina, perhaps of the Pagus Lemoniun
8. Other ruins of a further village on the same road, on the property Settebassi
9. Others, on the Via Appia, perhaps of the neighborhood of the Camenae
10. Others, of a further village on the same road, on the property di Statuario
11. Others, of a village or a neighborhood on the Via Ardeatina
12. The Vicus Alexandri on the Via Ostiensis
13. The shipyard and Emporium on the Tiber, below the Aventine
14. The shrine of SS. Cyro and John on the Via Portuense
15. Remains of the conduit of the Anio Vetus, or the Specus Octavianus
16. The intersection of the Via Asinaria with the Via Latina, between the second and third milestones



17. The remains of the Temple of Fortuna Muliebris, as we believe, on the Via Latina at the fourth milestone
18. The settling tanks of the Marcia, Julia, and Tepula
19. The conduit led off from the arcade of the Claudia for the use of the village of the Came-nae, crossing under the spring of Acqua Santa
20. Another branch from the same arcade for the use of a further village on the Via Latina, in the area of Settebassi
21. A temple on the Via Appia, today the Torrione de' Borgiani
22. Structure in the shape of a theater, on the same road, where the arches of a conduit end (we believe it to be the Septimianus)
23. A very large site for burning dead bodies in the same spot
24. Remains of the settling tanks of the Anio Novus and Claudia
25. Underground construction and emissary of the Aqua Crabra
26. A pair of cisterns on the Via Labicana
27. Traces of a particular conduit on the Via Latina, for the use of a huge building nearby, named *li Centroni*
28. Other remains, conduit for the use of a villa at the seventh milestone of the Via Labicana



thing concerning the Porta Ostiensis or another gate, perhaps with a different name, that was on the same road. Here, with the same conciseness, we shall make an investigation concerning the location of the Porta Collina, Porta Viminalis, and Porta Esquilina that closed the eastern side of Rome, to explain our map no less than to understand ancient writers.

Strabo [5.3.7] is our authority that all three of these gates were located along the *agger*: “Servius completed a wall after the Esquiline and Viminal Hills had been added to the city. Since all these areas could be easily seized from without, they dug a deep trench, and when its dirt was received within, they built an earthwork of about six stades on the inner edge of the trench and set up walls and towers on it, from the Porta Collina up to the Porta Esquilina. The third gate, the Porta Viminalis, is in the middle of the earthwork.”

Something similar concerning enclosure of the *agger* by the Porta Collina and Porta Viminalis is found in Dionysius, who indeed omits the Porta Viminalis but does not for that reason exclude it from the place designated by Strabo: “Where, however, the city is most vulnerable to enemy attacks, from the Porta Esquilina up to the Porta Collina, it was fortified by artificial construction, for a trench was dug in front, the minimum width of which is one hundred feet and more, the depth thirty feet, and above the trench rises a wall, supported by a high and broad earthwork, not easily to be shaken by battering rams nor pierced by tunnels. Along this fortification, almost seven stades long and fifty feet wide, the citizens were then assigned by squadrons” and so on [Dion. Hal. *Ant. Rom.* 9.68.2–4].

We would begin to explain the maximum length of seven stades, according to Dionysius, if we start from the Porta Collina, not far from the highest ground of the Quirinal, and proceed along the *agger* already mentioned; sure traces of it remain in the vineyard of the Carthusian fathers and subsequently in the Villa Peretti. It will come to an end in front of the Church of S. Eusebio, more or less, and will lead in a certain way to the Porta Esquilina itself. Antiquarians are still fighting among themselves about this gate and are so disgracefully in a fog about an obvious matter. Between these two end points, if the *agger* is divided again, the Porta Viminalis will obviously be between the two gates the Collina and the Esquilina; for this reason, it will quite correctly be that gate that has sometimes been called “between the earthworks.” In like manner, it is also the one “under the middle of the *agger*,” as Strabo says [5.3.7], the place where

we see even today the *agger* proceeding from the Porta Collina straight up to this point, taking a turn, and being divided in two.

Since we stand on the testimony of ancient and most respected authors and the nature of the place itself, we do not have the leisure to refute here all the whims of modern writers. Instead, we have set forth this argument only in passing, to free our path from brambles and obstacles, such as those authors cited have scattered everywhere. It will therefore be enough for us to put before our eyes and consideration, through this sketch [fig. 32], completed not with finished art but rather simply, how well all the roads, which begin from this direction, correspond to the location we have assigned to the gates and the common course of the other roads that we have measured elsewhere. In this way, each reader, through his or her own reasoning, will understand, from consideration of the topography alone, what most modern writers have been ignorant of. Not paying attention to the roads and the gates from where they go out, they have decided different things, one against another.

With our topographical arrangement then set in place, there appear next to each other, issuing from the Porta Esquilina excellently and with unbending course, each of two roads, namely, the Via Praenestina and the Via Labicana, which went forth from there according to Strabo [5.3.9]. Indeed, although now the Via Praenestina, in its course up to the Porta Maggiore, is confused with the Via Labicana, it is nevertheless possible to see the ancient course of the Praenestina through the gate, now closed, which was left in the extension of the walls by Aurelian for the sake of this road, as well as through traces of the same road from there; none of these is visible from the Porta Maggiore, unless, afterward, we follow the ancient Praenestina by turning to the left. Nardini also describes the rut of this road leading to the closed gate already mentioned, inside the modern walls of the city,<sup>1</sup> and there remains a trace of its beginning, distorted and less than a right angle in each direction, along the north side of the *castellum* of the Aqua Claudia, described in our first dissertation [I.4c]. As a result, the trace will show the most direct course of the Via Labicana from this point to the right and that of the Praenestina from there to the left. On this course, from the *castellum* to the closed gate already mentioned, the Via Praenestina runs into that decagonal structure in the Vigna Coltelli

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1. Nardini, 39.

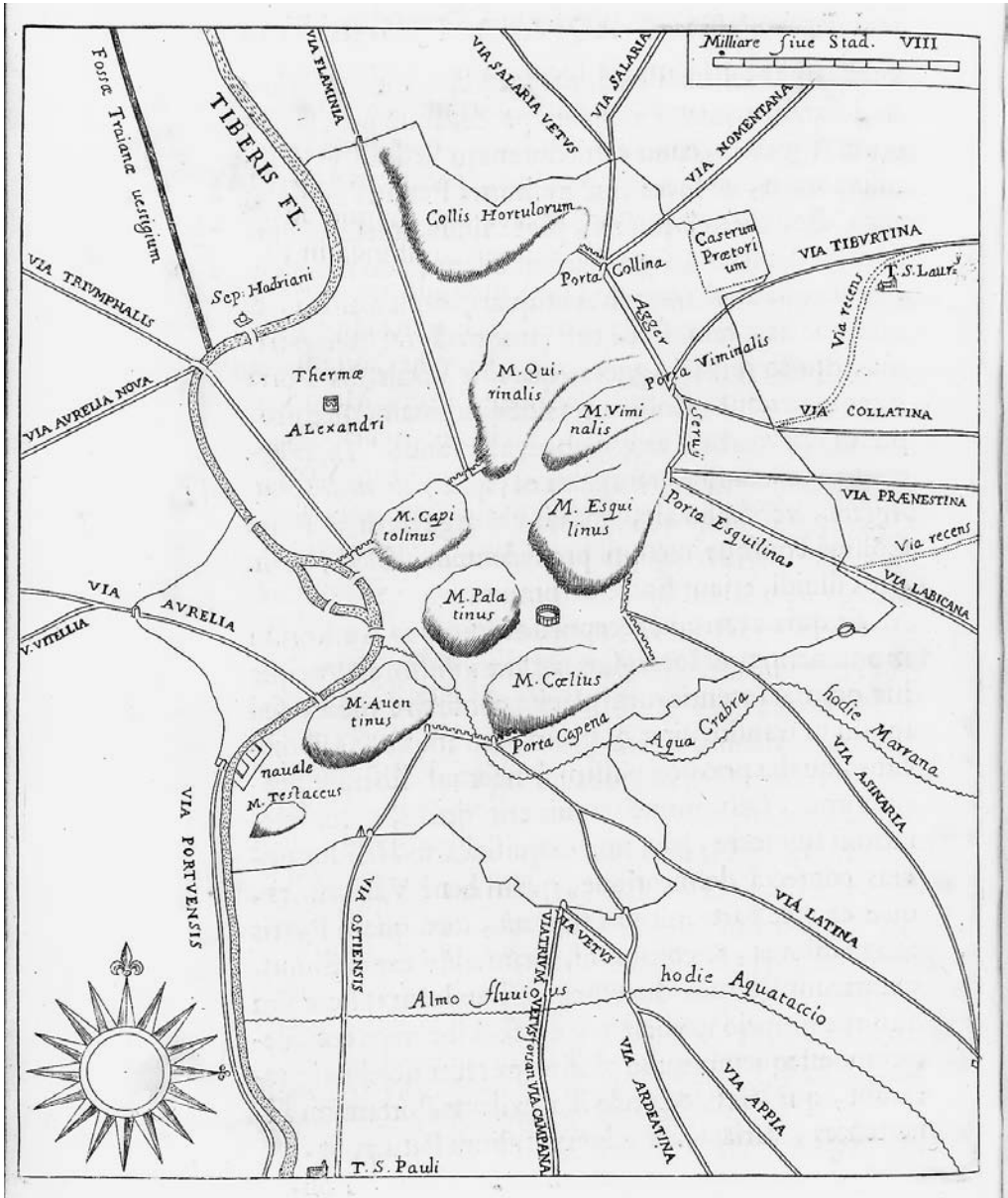


Fig. 32. Plan of ancient Rome, with gates and major roads from the city



that some reasonably have named the Pantheon of Minerva Medica (so called from its round shape) and situated in this fifth region of the Esquiline, according to Sextus Rufus.<sup>2</sup>

Something similar indeed happens along the two roads, the Via Colatina and Via Tiburtina, that depart straight from the Porta Viminalis, or “the gate between the earthworks.” By an equal shortcut, because the gate along the Via Tiburtina is closed (indeed, I say that this road appears at the south side of the *Castra Praetoria*, with very sure traces of its ancient course), through the Arch of S. Lorenzo on the Via Collatina, by a route twisted to the left, they have forced the road to seek the Via Tiburtina below the Basilica of S. Lorenzo. As a result, the Porta Collina will finally send forth its own roads, the Via Nomentana and the Via Salaria, in a straight line, in accordance with the intention of our ancient sources and the pattern of the other roads. Fabricius, however, writes: “The Via Salaria was allotted its name from the gate from which it began.”<sup>3</sup> Among ancient authors, you will indeed read of a Via Salaria but not a Porta Salaria and of a Porta Collina but not a Via Collina; for example, Festus [p. 9L] mentions a Porta Agonensis, or Aegonensis (which, for him, is the Porta Collina), and a Via Salaria.

However, the roads had been paved at one time, before the aqueducts were introduced; for this reason, those who either introduced or restored the aqueducts enlarged the conduits by special and noted work when they had come to the roads, both for their adornment and so that the roads would not be narrowed, as we see Claudius did along the Via Labicana in the arch of the modern Porta Maggiore and Augustus along the Via Colatina, with the arch built at oblique angles to align it with the road, as has been said elsewhere [I.4f]. Indeed, modern writers, troubled in vain and disagreeing among themselves about their identification in a matter not at all supported by the truth, have mistakenly accepted these arches as the gates of the ancient city.

Nevertheless, it is necessary to correct the error of Nardini who stands in our way; he posited a second earthwork next to the one already mentioned, as if that one was the work of Servius and as if it is necessary to attribute another to Tarquinius, from a misunderstanding of ancient sources that he cites in support of this opinion, which is new and, I might

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2. Sextus Rufus, *De regionibus urbis* (= Graevius, 3:93F).

3. Fabricius, 51 (= Graevius, 3:471A).

say, by leave of so great a man, absurd.<sup>4</sup> I indeed would not believe even Mercury were he to tell me that more than one earthwork ever stood toward the east, or against Gabii (two things that are the same, although Nardini tries to separate them). If inquiry is made of Livy [1.14.3] and Strabo [5.3.7], whom Nardini cites as sources, they will say nothing further than that Servius brought to completion a wall from this direction, up to the Quirinal, which Ancus Marcius had omitted, as Strabo says, and that Servius surrounded the city completely with an earthwork, trenches, and a wall, as Livy says. Moreover, the evidence of Strabo will deny that the Porta Esquilina in particular, from which two famous roads went out, at his time “was closed as unnecessary,” as Nardini, twice falsely deduces from him, as if standing on a very sure matter.<sup>5</sup>

Aside from the fact that Dionysius says nothing about Servius as the builder of any earthwork, he might also complain that they have barbarously translated him when he states correctly in Greek, “Tarquinius was active and employed a large number of workmen in strengthening those parts of the city walls that looked toward Gabii, by widening the ditch, raising the walls, and placing the towers at shorter intervals” [Dion. Hal. *Ant. Rom.* 4.54.2]. These words are as follows in Gelenius’s Latin translation, with emendations by Sylburg: “Tarquinius, with a large number of workmen employed, fortified the part of the city that turned toward Gabii, with the trench widened”—understand the trench that Servius had dug—“and the walls built higher”—as at one time Servius had decided—“and with towers erected at more frequent intervals along that part.”<sup>6</sup>

Nardini did not act with good faith: he distorted the true meaning of the words “widening the ditch” and “raising the walls” (which imply the completion of someone else’s work, already standing) to invent, rashly and with no authority, a construction from scratch.<sup>7</sup> I understated the case when I said “with no authority,” since, on the contrary, both Dionysius and Strabo openly oppose Nardini’s statement. Dionysius, as is understood from his other words quoted earlier [Dion. Hal. *Ant. Rom.* 9.68.2–3], describes a complete fortification of a triple nature around the city of Rome (such as was found in the consulship of Lucius Aebutius and Publius

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4. Nardini, 157.

5. Nardini, 39–40.

6. S. Gelen, trans., *Dionysii Halicarnassei antiquitatum sive originum Romanarum* (Basel, 1549); F. Sylburg, ed., *Dionysii Halicarnassei opera omnia* (Leipzig, 1774–77).

7. Nardini, 157.

Servilius—indeed, in the eightieth year after the expulsion of the kings), where, “situated on elevations and steep cliffs, it [Rome] was so protected by nature itself that it needed little fortification”; where “it was defended by the Tiber, not otherwise than by a wall”; and finally, pertinent to our discussion, where “the city is most vulnerable,” that is, “from the east,” according to Pliny [HN 1.9]. Nevertheless, the *agger* had not occupied this part and region, except from the Porta Esquilina to the Porta Collina. Moreover, Strabo, after he reviews the wall completed from all sides and the single earthwork at the least secure part, finally concludes, “Of this sort is the fortification of Rome” [5.3.7], so that he excludes every other addition of fortification.

Nonetheless, this common desire in many writers of this age—that of enlarging the walls of ancient Rome—has forced them to make up these things and others like them. Yet, as I have said many times and as you have learned from Dionysius, cited earlier, the Tiber, the raised elevations, the high ground of the hills, and an earthwork used to enclose the city. Dionysius wanted this to be understood concerning the time when he was writing, as is evident from these words: “The walls of Rome are difficult to find, because of the structures joined to them everywhere, yet they keep traces of their ancient structure in many places. However, if someone wished to measure their circuit and compare it with that by which the Athenian city is contained, the circuit of Rome will not appear much larger” [Dion. Hal. *Ant. Rom.* 4.13.4–5]. Lipsius and Clüver (still not agreeing with this comparison) and all those who follow them—seeming to diminish the size of Rome, or, rather, that of the ancient city, and to not accept the things that Dionysius had also said elsewhere about the restricted course of its walls, by thinning them out as reason demanded—have enlarged Athens itself beyond limit and have taken into the comparison the Long Walls, Munychia, Astu, the port of Piraeus, and the Phalaric Wall, even though they are parts separated from Athens eighty years before.<sup>8</sup> On this matter, look at Fr. Donati, who fully, no less than ingeniously, refutes Lipsius and Clüver.<sup>9</sup> We mention this author more willingly because he has not only enriched our studies by his very great learning but also added weight and glory to them by his example, when he shows that they are matters not unworthy of a most pious and serious elder. This is something I also wish

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8. Lipsius, 108–10 (= Lipsius, *Opera omnia*, 3:423–24); Clüver, 509.

9. Donati, 58 (= Graevius, 3:598A–602D).

earnestly to say about Fr. Athanasius Kircher (although there is sometimes disagreement between us).

We will discuss fully elsewhere [III.5c] how, when the walls had been reduced into a narrow space, Pliny's first measurement of the circumference of the city (which we will present in its appropriate place) could climb to thirteen miles and beyond. If others have dared to reduce Pliny's seventy miles to seven, perhaps we also will not be ashamed to reduce these thirteen miles to eight ("XIII" to "VIII," with a single letter slightly changed), since today we intend in this introduction and short examination to report nothing further than the correct location of the ancient gates and the courses of the roads from them. Having accomplished this, now we turn our pen to the subject set before us.

#### 4. THE NUMBER OF THE AQUEDUCTS

##### a. Frontinus's Evidence and Pliny

Not only has Dionysius most deservedly put the aqueducts among the three things to be admired in the city, when he says, "To me clearly, among these things from which the greatness of the Roman Empire is most evident, there seem most magnificent the aqueducts, the paved roads, and the sewers" [Dion. Hal. *Ant. Rom.* 3.67.5], mentioning the same things that Strabo most admires in his *Geography* [5.3.8]. The aqueducts have also provided the first and special indication and evidence of Roman greatness, such as Pliny has seriously and truthfully said: "If anyone will have considered more carefully the vast supply of water arriving for public use, for baths, pools, homes, canals, suburban properties, villas and space, the arches constructed, the mountains tunneled through, and the valleys leveled, he will confess that there has never been anything more wonderful in the whole world" [HN 36.123].

In agreement with this is the following passage of Frontinus: "We turn to the maintenance of the lines, just as we have promised, a matter worthy of earnest concern, since they are a most eminent testimony to the greatness of the Roman Empire" [*Aq.* 119.1]. Likewise, Cassiodorus says about Rome, "So many rivers have been brought there, on structures built something like mountains, that you would believe that their channels were natural masses of rock, because so great a force of the river could be strongly

sustained during so many centuries” [Var. 7.6.2]. Rutilius has surpassed all of this, with poetic exaggeration.

Why should I speak of the channels hanging from their airy arches, where scarcely Iris would support the rain-bearing waters? Rather, you would say that these mountains have grown into the stars; let Greece praise so great a work of giants. [Rut. *Namat.* 1.97–100]

Concerning the number of the aqueducts from the time of Augustus up to Frontinus, there is very little doubt, since Frontinus himself reviews nine and describes their source, capacity, and length of conduit, separately and in order. Pliny does not contradict him, handing down in the chapter cited earlier that “seven rivers were channeled into the sewers by Agrippa in his aedileship.” Nardini has wrongly charged this so that he may provide an even worse answer, that the Julia and Tepula, because they arrived joined together, were counted as one and that the Alsietina was excluded because it was on the other side of the Tiber.<sup>10</sup> The simple and natural solution of this imaginary discrepancy between Pliny and Frontinus consists in only the difference of chronology: when Pliny reviews the work of Agrippa, he correctly reports that only seven aqueducts were introduced into the sewers by him, since the Claudia and Anio Novus did not yet exist but were added to the others a long time afterward. If, indeed, Nardini’s frivolous reason, “because before Frontinus they were mixed together,” has to be applied some place, why should not the Claudia with the Anio Novus have been considered only as one in the same way? According to Frontinus, the aqueducts “were distributed outside the city, each one from its own conduit, and inside the city were mixed together” [*Aq.* 72.6] (he repeats the same thing in almost similar words at *Aq.* 91.3).

## b. The Evidence of the Regionary Catalogs and Procopius

In the centuries after Frontinus, however, as new sources of water were channeled into old conduits, so also an addition of new aqueducts was made to the city and those buildings contiguous with it. But we find up to

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10. Nardini, 508.

this point that no one has written how many lines were added beyond the old ones, and we look in vain in Publius Victor and the *Notitia Imperii*, since, indeed, these authorities differ considerably among themselves. However, they have spoken in the same way about the principal conduits as they have about water sources, more than one of which some conduits received. As a result, a remarkable confusion has arisen among modern writers.

Indeed, in his epilogue, Victor numbers the water sources in this way:<sup>11</sup>

*Twenty Waters*

1. Appia
2. Marcia
3. Virgo
4. Claudia
5. Herculanea
6. Tepula
7. Damnata
8. Traiana
9. Annia
10. Alsia, Alsietina, or Augusta
11. Caerulea
12. Julia
13. Argentiana
14. Ciminia
15. Sabatina
16. Aurelia
17. Septimiana
18. Severiana
19. Antoniniana
20. Alexandrina

The *Notitia Imperii*, however, arranges its water sources in a different way, as follows [Jordan, 2:569–70; VZ, 1:185–86]

*Nineteen Water Sources*

1. Traiana
2. Annia

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11. Publius Victor, *De regionibus Romae liber aureus* (= VZ, 1:256; Graevius, 3:112E).

3. Alsia
4. Claudia
5. Marcia
6. Herculea
7. Julia
8. Augustea
9. Appia
10. Alsietina
11. Setina
12. Ciminia
13. Aurelia
14. Damnata
15. Virgo
16. Tepula
17. Severiana
18. Antoniniana
19. Alexandrina

Nevertheless, Procopius, a most careful author in other respects and a diligent investigator of Roman lore, seems to stretch forth a thread in this labyrinth, with these words: “Indeed, there are fourteen aqueducts in number at Rome, constructed by men of old in baked brick, having that width and depth that they allow a man to ride in them mounted on a horse” [*Goth.* 1.19.13]. As other authors generally do, we will grant credibility to him when he speaks directly about the conduits, but not concerning the water sources. Resting on this stable foundation, as it were, let us strive as best we can to identify the aqueducts themselves.

It would be superfluous to repeat here the nine well-known aqueducts cited by Frontinus and examined elsewhere by us (namely, in the first dissertation, on the Aqua Alexandrina) and to “recook cabbage.” Instead, we shall only connect to each one of them the water sources reported by Publius Victor and the *Notitia*, after a discussion of the fourteen conduits supplied by Procopius.

Beyond the nine conduits that I say are described in Frontinus—indeed, those of the Appia, the Anio (which afterward was called the *Vetus*, for distinguishing it from the other), the Marcia, the Julia, the Tepula, the Alsietina, the Virgo, the Claudia, and the second Anio (which earned the name *Novus*)—there is another, that is, [the Aqua Crabra].

### c. The Aqua Crabra

We can seek the tenth aqueduct from Frontinus, and it will be that of the Aqua Crabra, which “used to flow beyond the intake of the Julia,” as Frontinus himself says [Aq. 9.4], that is, to the right of the Via Latina, where the Julia also began, according to Aq. 9.1. Although he adds in the same place, “this water was not tapped by Agrippa,” that is, excluded from the conduit of the Julia, “since he had condemned its use or because he believed it should be left for the property owners of Tusculum” [Aq. 9.5], it is nonetheless clear that the Crabra indeed would have been not further received afterward into the channel of the Julia but brought to Rome in its own channel, which it occupies even today. Indeed, there remain traces of the antiquity of this conduit in the ancient construction of its cataract, or emissary, at the ninth milestone of the Via Latina, below certain large ruins called Centroni. Here, after that volume of water carried to Rome by the artificial channel already mentioned has been received in an underground conduit, the remainder is carried through the Roman Campagna into the Anio River. In addition, this same opening of the channel gives off the smell of ancient magnificence; here, it goes underground for almost four stades, so that after overcoming the ridgeline in between, it can be easily carried into the city from that point on a downward course. It is self-evident that the channel of the Aqua Crabra is today supplemented by the Aqua Julia and Aqua Tepula, which flow into the same Alban valley from their broken conduits, a matter that, however, Martinelli has disclosed as if by a certain secret warning of a friend.<sup>12</sup>

Just as at one time, in the territory of Tusculum, “all the villas of that region,” according to Frontinus [Aq. 9.5], “used to receive” the Aqua Crabra “distributed in turns, according to fixed days and amounts, but not with the same restraint,” so perhaps by the same rule was it distributed in the city. This fragment of an inscription [fig. 33], seen in the garden of S. Maria on the Aventine, can be understood as concerning this distribution and a similar means of allotment through division by measures and unequal lengths of time (CIL VI, 1261):

for Thyrsis, freedman of Augustus, two pipes from the second to the . . .  
hour, on the fourth day before . . .

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12. F. Martinelli, *Roma ex ethnica sacra exposita* (Rome, 1653), 31.



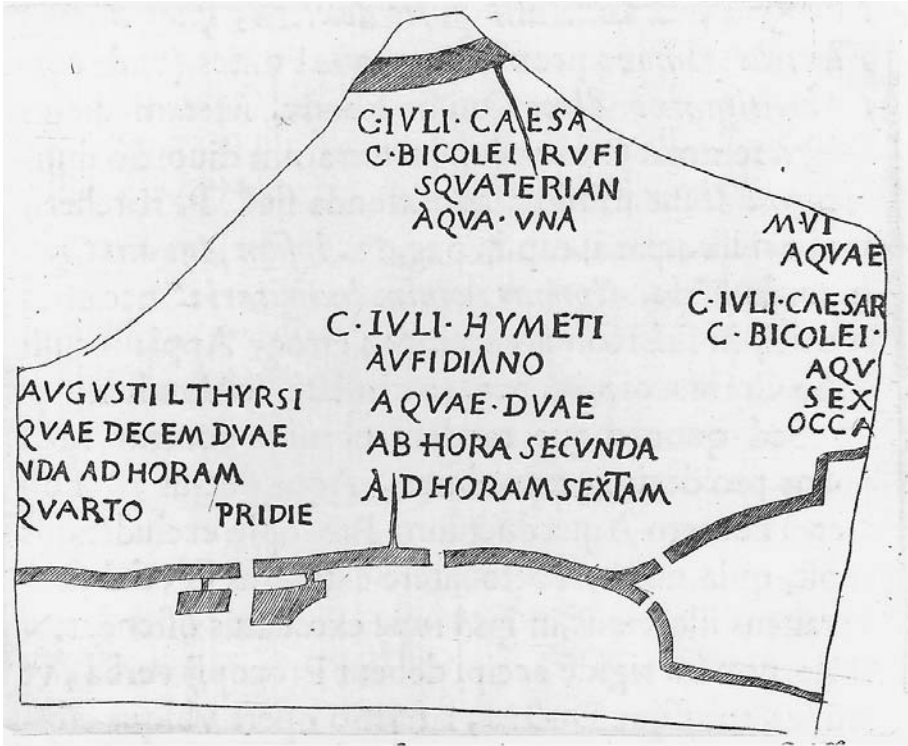


Fig. 33. Inscription depicting staggered distribution from water source [CIL VI, 1261]

for the freeman of C. Julius Caesar, C. Bicoleus Rufus Squaterianus, one pipe . . .

to the Aufidianum of C. Julius Hymetus, two pipes from the second to the sixth hour . . .

to Vibius . . . pipes, to C. Bicoleus, freedman of C. Julius Caesar, . . . pipes from the sixth hour until sunset . . .

The same passage of Frontinus just cited [Aq. 9.5] is proof that this aqueduct was afterward called *Damnata*. When Frontinus mentions water that was “untapped,” “not approved of,” and “excluded,” he seems to have given the opportunity of coining the name *Damnata*. Both Victor and the

*Notitia* for that reason omit the name *Crabra*, because they have kept the name *Damnata*, similar in actuality. From the origin described earlier and the downward course of the Aqua Crabra, or *Damnata*, it becomes obvious that it is different from the Almo, which is mixed in with the Tiber between the Porta Ostiensis and the Basilica of S. Paolo. Aside from other testimony of pagan writers, the following statement of Gregory I in his *Registrum epistolarum* is proof: “In addition, the two properties lying next to the same grant, between the Tiber and the porticus of that church, for those coming from the gate of the city on the right side, which the River Almo divides. . . .”<sup>13</sup> Indeed, the springs of the Almo, quite nearby—Ovid describes it as “very brief in its course” [*Met.* 14.329]—are separated from the distant sources of the Crabra by a long, intervening strip of land. As a result, Fr. Kircher’s identification of the two can scarcely be admitted: “the Aqua Crabra itself in the city is indicated by the name *Almo*.”<sup>14</sup> Nor can another similar error of Fabricius, who ignorantly confuses the Appia with the channel of the Crabra.<sup>15</sup>

But by whatever name that aqueduct that we posit for the tenth is finally called, it is not to be excluded from the number of Procopius’s aqueducts because its channel was not constructed of fired brickwork but is shown to be underground, dug out in the very rock. Indeed, Procopius’s words ought not to be taken so literally that we understand that all the aqueducts and their entire conduits were constructed everywhere of brickwork: the channels of both the Aqua Alsietina and the Aqua Virgo were opened for the most part in the living tufa, and all the construction of both the Marcia and the Claudia above ground was built exclusively of *opus quadratum* [squared stone]. Indeed, it is enough, for the credibility of Procopius’s words, to verify these things in most cases, although not in all.

Similar is that [other] characteristic that Procopius attributes to all these aqueducts, namely, a width and depth that “allow a man to ride in them mounted on a horse” [*Goth.* 1.19.13]. The channels of some, at a depth of six or seven feet, perhaps barely admitted a man and a horse (provided he led the horse restrained by a bridle); the channels of the Julia and Tepula, two feet wide and three and a half feet deep as Pliny describes

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13. P. Ewald and L. M. Hartmann, eds., *Gregorii I papae Registrum epistolarum* (Munich, 1978), 2:434 (“Epist. 14.14”).

14. Kircher, 62.

15. Fabricius, 186 (= Graevius, 3:521B).

them [HN 7.26], were not even large enough for a pygmy mounted on the back of a ram or goat.

Clearly, however, I am amazed that someone would have been found who, in his commentary on Frontinus,<sup>16</sup> has unhappily confused this volume of the aqueducts with respect to height, or (as Procopius calls it) “depth,” with that elevation that Frontinus promises to report in the introduction of his work. No other “height” of aqueducts is to be spoken of there, except what Frontinus [Aq. 18] calls by his own word the “leveling” [*libra*] of each line. Indeed, except for the measurement of the conduit of the Aqua Appia, which Frontinus [Aq. 65.3] says he found to be five feet in height and one and a half feet in width, there is not even a trace in his treatise about the height and width of the others.

Listen to a monstrosity of an interpretation: “Afterward, with respect to the height of each one and the system of measurements, ancient writers hardly agree with themselves on the height of the underground courses and the arches. Procopius, however, defines the height as sufficiently great that a horseman could pass through those arches easily. Frontinus, below, says that they were raised to a height of 109 feet. Strabo of Amaseia, book V, [writes] ‘The sewers, vaulted with close fitting stone, have left room for wagons loaded with hay.’”<sup>17</sup> Keuchen, people will say that your thinking is not consistent when you make Frontinus, who refers to the height of arches, to be in total agreement with Procopius, who refers to the depth of channels, and—what provokes the greatest laughter—with Strabo, who talks about the width of sewers.

I am not unaware that I should say this interpretation should be first attributed to Dempster,<sup>18</sup> from whom Keuchen has taken it in almost as many words. Nevertheless, I think that Keuchen has behaved worse and is obviously guilty of ignorance in a matter that gives special proof of his handling of it and of theft at the same time.

But since we have now strayed too long, let us return to the remaining aqueducts that are missing from Procopius’s number. The Aqua Traiana will therefore provide the eleventh aqueduct for us, just as the Aqua

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16. R. Keuchen, ed., *Sexti Julii Frontini viri consularis quae extant* (Amsterdam, 1661).

17. Keuchen, *Sexti Julii Frontini*, 371.

18. T. Dempster, *Antiquitatum romanarum corpus absolutissimum in quo praeter ea, quae Johannes Rosinus delineaverat, infinita suppleuntur, mutantur, adduntur* (Cologne, 1620), 137 (“ad caput xiv Paralipomena. De aquaeductuum forma mirabili et iure concesso,” 136–39).

Alexandrina, about which we have spoken in its own dissertation, will provide the twelfth.

#### d. The Aqua Septimiana

For the thirteenth aqueduct, there comes before us that one included on our map [fig. 31] under the name *Aqua Septimiana*; to the left of the Via Appia, before the seventh milestone from the city, after a construction on arcade of more or less 630 paces, it seems to have carried its water from the Alban hills to the Via Appia itself, beyond the location known as Casal Rotondo, near the tower now called the Torre della Selce. Its conduit is raised above that of the Claudia by the entire height of its arches where they are higher, that is, by an elevation of about twenty-five feet (there was no need for more exact measurement because of the clear evidence of its appearance).

However, I would not deny that this aqueduct could have received the Anio Novus; although the Anio Novus is carried near the city on the arches of the Claudia, it surpasses it by a moderate height, as we have shown in the cross section in our first dissertation [fig. 7]. Nevertheless, before the Anio Novus was received into its settling tank, I think that it always maintained the same parallel course, as I have found, by constant observation, that in many places far from the city, it is carried forty feet and more above the Claudia. I will pursue this more fully sometime in a separate dissertation, *On the Course of the Aqueducts*.

As a result, I do not indeed believe—but, as I have said, I do not consider impossible—that this aqueduct was tapped from the conduit of the Anio Novus. This same aqueduct, after it goes under that long ridge of the Via Appia that runs all the way from here to the tomb of Cecilia Metella, used to be distributed at first for the use of a certain huge settlement, or neighborhood, which is, as it were, the image of a large town, to the right for those approaching the city, in a place called Statuario and marked by no. 10 on our map [fig. 31]. Then again, from here, turning back to the left onto the Appia—its conduit divided into two channels, which are evident up to this day in a structure in the shape of a theater at no. 22—it continued toward the city and the boundaries of Region I. Indeed, far below remain traces of this same conduit (for it could not have been a new source of water), between the third and fourth milestone for those approaching

on the left, near the walls of an ancient temple at no. 21, commonly known as Torrione de'Borgiani.

Fr. Kircher, in his *Latium*, says unacceptable things about this very aqueduct after Casal Rotondo, stating that its water was “drawn” all the way “from the Lucrine Lake” or from “the Caerulean spring tapped by Appius Claudius Crassus and augmented by Claudius Caesar.”<sup>19</sup> My deep respect for a man so distinguished and well known for so many labors causes me to not refute these things but only touch on them in passing. What, indeed, could the Aqua Appia have had in common with the Claudia? Although Eutropius [2.9.3] called (incorrectly) the Appia itself the Claudia, as if introduced by Appius Claudius Caecus, nevertheless, far more absurdly, by reversing the names like this, will we say that Appius Claudius “brought the water of the Caerulean spring by various wanderings of circles,” with an anachronism not, indeed, of a few months but of more than 350 years. Who will have said that water came down to Rome from the Lucrine Bay, as though from a higher elevation? No one will have except perhaps Ligorio, who brings the Alsietina to Rome from Alsium (a maritime city of Etruria),<sup>20</sup> or someone who would not be afraid to speak of a watery spring below Tivoli “much deeper than the Roman city,”<sup>21</sup> although the long and moreover winding descent of the Anio toward the city, into which the spring flows down, is roaring back against it. Love of truth and authority of the speaker compel these clearly troublesome criticisms, although from one unwilling, first so that they not seem to be believed by us, next that they not lead away off the path others who will defer more than is right to the efforts of a great man and his personal inspection emphasized so many times. “Indeed, the more that those who publish their concerns are crammed full with reputation of name,” to use the words of Salmasius against Scaliger, in a similar matter, “the more wrong they do, with greater destruction to the republic of letters, whenever it has been their practice to do wrong.”

#### e. The Aqua Argentina

Finally, another aqueduct will complete the number we want, one called by us perhaps with the name *Aqua Argentina*, which first emerges under

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19. Kircher, 31.

20. Ligorio, *Paradosse*, 38.

21. Kircher, 199.



the Tusculan hills at approximately the ninth milestone from the city; again runs on many arches through another valley, under the tower *di meza Via di Frascati* [at the halfway point to Frascati]; and without a doubt heads in the direction of Rome. However, I could not find even the smallest trace of it beyond here.

I am indeed of the opinion that each of these two conduits [the Aqua Septimiana and Aqua Argentiana] brought water to Rome, but I do not claim that they would have been brought inside the walls of the city, especially since that earlier one, which descends over the ridge of the Via Appia, could not have overcome the quite deep valley of the Almo except on a very long arcaded structure. At least some ruins, from a lengthy and strong construction, would have remained of it.

## 5. THE LIMITS OF THE ANCIENT CITY

Why, you will ask, were these two later aqueducts counted among the fourteen aqueducts of Procopius, if, as we confess, they did not enter the city? To this objection, therefore, we will here, where the occasion especially demands it, pursue at greater length the solution that we prefaced in a few words in our first dissertation [I.5].

The words *Roma* and *urbs* seem to mean one and the same thing, but two very different things are nevertheless indicated by them. The term *urbs* includes whatever is contained within the walls and has been marked off by the plow, or *urbum*, as Pomponius writes [Dig. 50.16.239.6]. We follow him rather than Isidore [Etym. 15.2.3], who derives the word from *orbs*. The term *Roma*, however, also embraces the built-up area of *aedificia continentia* (continuous buildings), as is established in many laws of the same title, namely, the *lex urbis* [Dig. 50.16.2], the *lex Alphenus* [Dig. 50.16.87], the *lex aedificia* [Dig. 50.16.139], the *lex qui in continentibus* [Dig. 50.16.147], the *lex mille passus* [Dig. 50.16.154], and the *lex collegarum* [Dig. 50.16.173.1].

Now it is worth our effort to define how far this built-up area extended and to interpret its expanse, for an appropriate understanding of both the laws cited and of other ancient authors. Lipsius so loosens the boundaries of Rome that he has included in it cities and towns situated around it—

Ostia, Aricia, Ocriculum, and others.<sup>22</sup> In this, he speaks for the expansion of Roman greatness elegantly, to be sure, but against the mind of our juriconsults and contrary to law. It will be far from every correct and probable interpretation that the jurisdiction of the urban prefect, granted within one hundred miles from the law on his duties [*Dig.* 1.12.4]—reckoned from the continuous buildings, not from the Golden Milestone of the City, as is held in the *lex mille passus* [*Dig.* 50.16.154]—would be extended almost by half, if the distance would begin to be reckoned from Ocriculum (which is thirty-nine miles away from the city). Moreover, if Lipsius is correct, a man whom the earth of Aricia or Tibur first took up in its embrace would be said to have been born at Rome, according to the *lex qui in continentibus* [*Dig.* 50.16.147]. Finally, that which is “up to the continuous buildings of the city,” although it is distant from the city by three days’ journey, such as the independent city Ocriculum, would be considered not to be away from the city, according to the *lex collegarum* [*Dig.* 50.16.173].

In addition, in the same chapter, Lipsius expands Rome, “extending without a perimeter into the suburbs,” into a measureless space. I do not know why, shortly before, he contracts the city no further than the seventh milestone, by distorting the words of Pliny [*HN* 3.66–67].<sup>23</sup>

However, to our proposed “limit of expanding buildings” already set forth, we believe no ancient authorities are in opposition. On the contrary, there is outstanding support for it, since the very appearance of the topography supports our theory, to the extent that we may reconstruct it because of the losses over a very long time and the hostile madness that has devastated everything by fire and sword.

#### a. Settlement on the Via Ostiensis

Along the Via Ostiensis (to take our beginning from this point), before it comes to the intersection of the Via Laurentina, on the very bank of the Tiber, there stand huge ruins of a settlement or neighborhood at no. 12 [fig. 31]. We have both its name and its distance from the city in Ammi-  
anus [17.4.14]: “It was brought”—he is speaking about the obelisk brought from Egypt by order of Constantius—“into the Vicus Alexandri, distant

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22. Lipsius, 113 (= Lipsius, *Opera omnia*, 3:426).

23. Lipsius, 109–11 (= Lipsius, *Opera omnia*, 3:424–25).



from the city at the third milestone. From there, put on windlasses and drawn more slowly through the *Porta Ostiensis* and the *Piscina Publica*, it was brought in the *Circus Maximus*.” Indeed, anyone who will have looked at the place will certainly come to the conclusion that tombs or other buildings did not stand forth at the edge of the road here, as everywhere else, but, rather, that homes were arranged far and wide on either side in the manner of a town, houses that the Tiber, deviating from its ancient course, presently cuts through, showing part of the settlement separated from *Latium* on the Etruscan bank on the right.

Moreover, we should note here the position of the *Porta Ostiensis* in the circuit of the walls of ancient Rome. It could not be elsewhere than beneath the high ground of the *Aventine*, on its south side, between the Churches of *S. Prisca* and *S. Saba*. Only from this direction is there a way open through *Region XII* of the *Piscina Publica* very close by, toward the *Circus*, which bordered on the same region to the left. For if *Porta Ostiensis* were beneath the *Aventine* on its north side, at the place of the modern *Salinae*—although what antiquarians call the *Via Ostiensis* is commonly said first to have gone forth from the *Porta Trigemina*, which they locate there—the transport of the obelisk would have been made through *Region XIII* (the *Aventine*) or *Region XI* (the *Circus Maximus*), in which the *Porta Trigemina* was located, according to *Victor* and *Rufus*, and not through *Region XII* (the *Piscina Publica*). It would also not have run into these things on its journey but would have remained far and outside the area of the entire *Circus*, in the direction of the *Porta Capena*. Even if we exclude this account of *Ammianus*, the ancient *Porta Ostiensis* or the beginning of the *Via Ostiensis* cannot be imagined elsewhere; in this way, the gate may look directly out on its road and not present a monstrous angle where it begins, contrary to that which we observe in all other roads, especially in an open and unencumbered area.

In addition, the location of the *Septizodium*, the remains of which used to be visible in the memory of our fathers between the *Caelian* and the *Palatine*, seems to contribute a substantial amount to this argument. Indeed, *Septimius Severus* (as *Spartianus* says about him), “when he built it, thought of nothing else than that his construction would meet those coming from *Africa*” [*SHA Sev.* 24.3]. Yet for those coming from *Africa* a bit behind the entrance of the gate, from which the *Via Ostiensis* began (if it should be situated here), the *Septizodium* of necessity met also those not thinking about it. If the gate, however, had been between the *Aventine*



and the Tiber, it would have to have been sought by a long way around and including a guide for the journey, and the reason Spartianus gives for it would have been altogether meaningless.

There is, moreover, a ready explanation why I have named the Via Ostiensis as the appropriate and particular route for those arriving from Africa: indeed, this road, being straight, was the shortest of all for those journeying after they had put to shore at the mouth of the Tiber, namely, at the sixteenth milestone, according to the Antonine Itinerary [*It. Ant.* 301.6] and the Peutinger Table.<sup>24</sup> Reality itself, with measurement made by me more than once and in a consistent way, has also confirmed this. The Via Portuensis, opened on the right bank of the Tiber across the river, three miles longer than the Ostiensis in its curvings—for excellently does the Antonine Itinerary [300.8] count nineteen miles from Rome to Portus—served only for the conveyance of goods and for drawing cargo ships by cattle up the river, as is understood from Procopius [*Goth.* 1.26.10–13]. Procopius's particular remark concerning this road and the very sure traces of the road itself, observed by me and faithfully rendered on the topographic map [fig. 31], show that it clearly diverged from the modern course of the Tiber, where the river withdraws from the fixed and permanent road (indeed, where its course once was) and where, besides, it had to be channeled to avoid dangers to modern transport (which are extremely great at this Vicus Alexandri, notorious for frequent shipwrecks).

### (1) *The Emporium*

Nardini shows excellently, in my opinion, that the Porta Trigemina is not at all synonymous with the Porta Ostiensis, as they commonly hold.<sup>25</sup> Uselessly, however, he adds from Victor and Rufus (who say no such thing) that it remained useless, for that was common to all the other ancient gates included within Aurelian's walls. Instead, a persuasive argument that the Porta Trigemina was the same as the Porta Navalis is presented by the narrowness of its location between the Aventine and the Tiber, enough for only one gate. Fr. Alessandro Donati proves forcefully that the Navalia were “at the Aventine” and “the first walls of the city,”<sup>26</sup> against the opinion of Ligorio, Panvinio, and others.<sup>27</sup> It is also appropriate for the Empo-

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24. *Tab. Peut.* IV.5 (cf. Bosio, *La Tabula Peutingeriana*, 84).

25. Nardini, 50.

26. Donati, 252–53 (= Graevius, 3:788E–789C).

27. O. Panvinio, *Descriptio urbis Romae* (= Graevius, 3:377A).

rium to have been connected to the *Navalia*. Indeed, after you have gone past the high ground of the *Aventine*, you will notice that very many ruins along the *Tiber*, which up to this time have remained confused and scattered (and for this reason unobserved by others), constitute a single structure, which can represent nothing else than this *Emporium* that we are searching for. There are several reasons: first, the great number of warehouses and porticoes; next, their gradual descent toward the *Tiber*, which seems to have served for unloading goods from ships to the warehouses; then, the very broad open area everywhere around it for exposing these same goods, whether for manufacture, reworking, or the loading of ships; and finally, the fold and curve of the riverbank, seen and noted by *Flaminio Vacca*, in that space that lies between the last and lowest arches and the *Tiber*, for establishment of a port.

*Vacca* describes it like this in his letter to *Simonetti* cited elsewhere by us [I.6]: “I remember that, last year, near the place called *La Cesarina*, because it belongs to the *Casa Cesarina*”—likewise today—“there were found certain yellow columns, which, transported on the *Tiber*, had been unloaded in that area above the bank; there are also seen there many unfinished pieces of different material that were found in that spot in times past, but they are full of ugly spots and surrounded by very hard quartzes, and that is the reason why they remained in that place. Above ground are seen walls in the manner of warehouses, and in the bank of the *Tiber* is seen the curve of the port.”<sup>28</sup>

Within the area of these ruins, I think there existed that inscription with the navigational law “Whatever is carried for owner’s use does not owe duty” [*CIL* VI, 8594] that *Fulvio* reports as found on the bank of the *Tiber* below the *Aventine*.<sup>29</sup> Certainly, a base two feet in height still exists there, uncovered in earlier years within the boundaries of our *Emporium*, with the following inscription.

Anteros Caes(ar), warehouseman of the third cohort, gave and dedicated freely as sacred to *Silvanus*. [*CIL* VI, 588]

On its right side is sculpted a patera and on the left a wolf, sacred to this divinity, as to *Mars* among the Romans. There, also, stood that altar found in the vineyard once belonging to *Marcello di Capozucchi*:

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<sup>28</sup>. Cf. *Montfaucon*, *Diarium italicum*, 167–68.

<sup>29</sup>. *Fulvio*, 322–23.

Sacred to the conserving fortune of the Horrea Galbiana, M. Lorinus Fortunatus the master gave and dedicated from his own money. [CIL VI, 236]

Finally, another small base is kept in the same place in a vineyard bordering on this Emporium to the south. Whether it was brought back here from the home of Pomponio Leto, where Mazochi observed it, or whether it is another from the same vineyard, it should be referred perhaps to the public warehouses of this Emporium, from the following double inscription with emblems (the first inscription occurring on the front of the base, the second on the back) and the *magistri* cited in the inscriptions.

L. Dunius Apella, C. Annius Tyrannus, first masters, gave and dedicated it to the fortune of the warehouse.

(patera and pitcher)

(on the right side, a club; on the left, a globe)

C. Annius Tyrannus the master and L. Dunius Apella gave and dedicated it to the fortune of the warehouse.

(two cornucopias with fruits; a plowshare placed crosswise) [CIL VI, 188]

Therefore, I have decided not to present the construction—notable and unusual in its great antiquity—in a single and simple sketch but to give a detailed explanation of it in sections, shown in ground plan [fig. 34] and cross section [figs. 35–36]. After this, I shall return to investigating the settlements along the military and principal routes that enclosed the continuous buildings of Rome.

The entire area of the porticoes and the warehouses is of stone construction, without any mixture of brickwork. Indeed, the dividing walls are of *opus incertum* [concrete faced irregularly with stone], from which their antiquity is detected, but the arches and supports of the arches are of cut stone, of most careful craftsmanship.

## b. Other Settlements on Main Roads

The Via Ardeatina shows ruins of its own settlement (indeed, not certain and extensive, yet not to be scorned) in that place where it begins to diverge from the Appia (joined to the Appia, it proceeded almost up to that spot) on a modern road that connects the Appia with the Ardeatina below the tomb of Cecilia Metella. The mass of buildings virtually touches

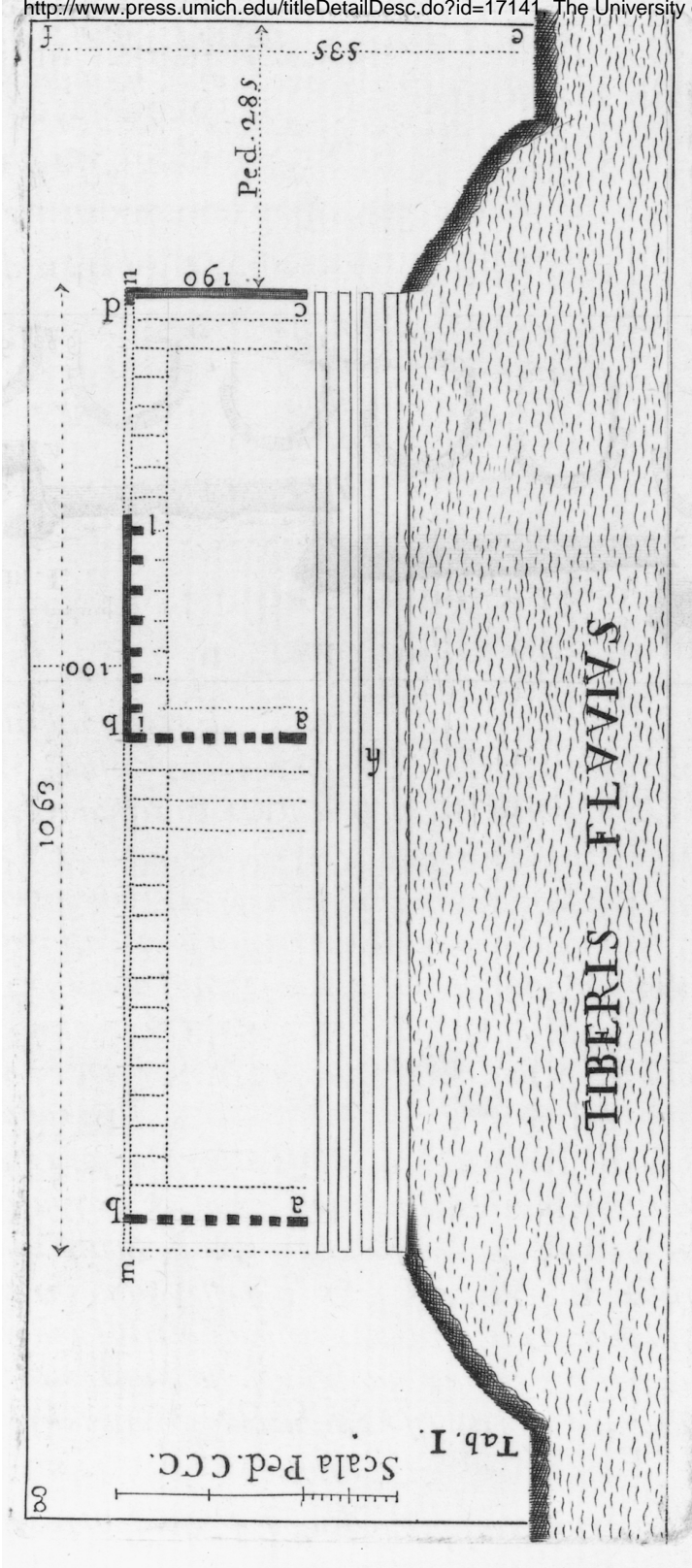


Fig. 34. Emporium structure: plan

- ab. Two walls, equal in length, structure, and number and downward movement of their arches, showing a double curvature at each face of the arch, from which we believe there were porticoes with a descent to the Tiber
- cd. Another wall, corresponding to the preceding in structure and length, but lacking arches, since it is external
- efg. Substructure of the space or exterior area bounded by a brick wall
- h. Steps by which we conjecture from Livy [41.27.8] that there was an ascent from the Tiber into the warehouse
- il. Remains of chambers or storage spaces into which the longer side *mm* seems to have been divided

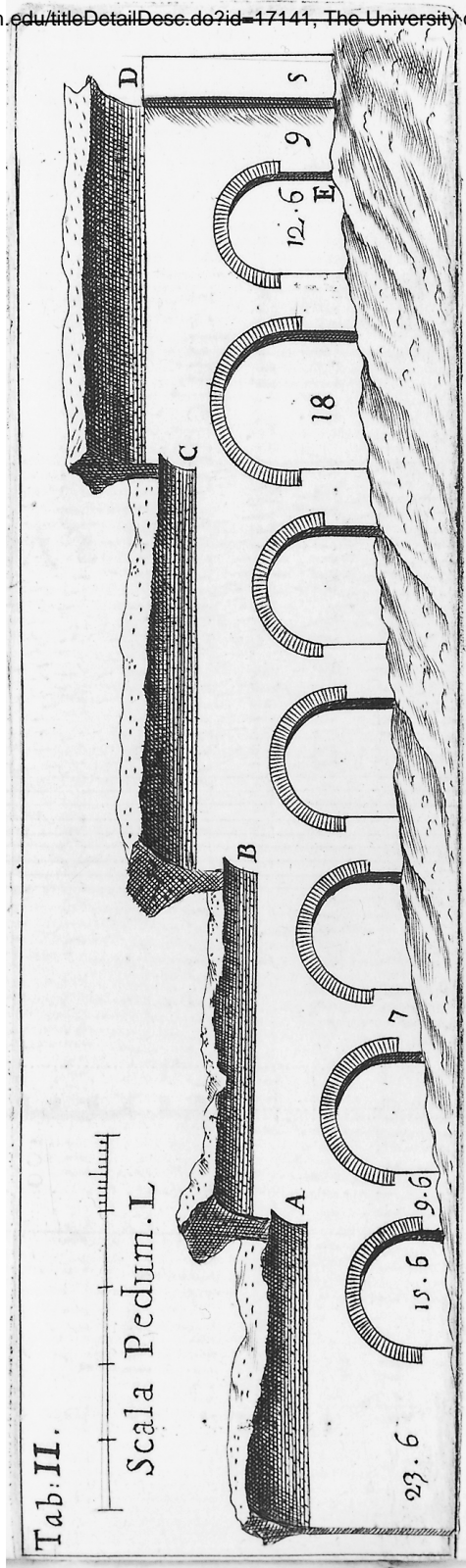


Fig. 35. Porticus: cross section. The ascent of the porticoes—from which, according to the instruction of Vitruvius [5.12.1], there ought to be an entrance to emporia—from bottom to top is twenty feet: from A to B, six feet; from B to C, eight feet; and from C to D, six feet. The place is filled with earth and debris.

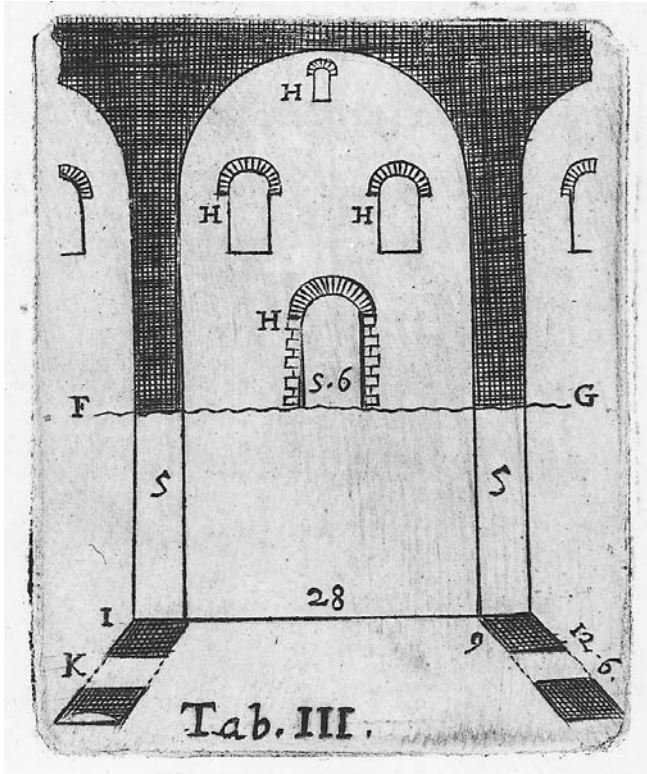


Fig. 36. Cross section of vaulted chamber. The part under the line FG is buried under earth and its own debris. There remain traces of doors between one and the other warehouse, from side IK, of the same length as the other between E and D of the earlier table [fig. 35], that is, nine feet.

H. Four windows on the exterior side toward Monte Testaccio, on which excavation shows there were lattices, two inches wide and deep, distant by a space of one foot from the exterior facade

on others that lie scattered to the left, away from the Via Appia, near the Church of S. Urbano. Between them was a circus, which, from coins and its more recent structure, those more informed judge was that of not Caracalla but Gallienus.

The Appia, as the most famous of the other roads, at first included that district—its name was perhaps that of the Camoenae, if we believe Nardini<sup>30</sup>—and afterward gained another one most splendid, beyond the fifth

30. Nardini, 81–82.

milestone to the left, at a place to which the name *Statuarii* is still attached, perhaps from the large number of statues and adornments. This district is distinguished before the others for its own praetorium, temple, amphitheater, and circus, as well as other most notable elements.

Another district closer to the city along the same road (we shall call it *Ad Camoenas*) competed with that one in the rest of its adornment and, in rivalry with it, had its own conduit, which took water from the arcade of the *Claudia*. Indeed, there still remain traces of the structure from the wellhead at the start of the conduit (no. 19 of our map [fig. 31]), filled with incrustation everywhere, through which the water descended to this new conduit. It is conspicuous even now from the arches that cross the valley near the source of the *Aqua Salutaris* in a course of four hundred feet and from the channel of the same aqueduct, again within the boundaries of the district itself, even now in the *Vigna Cortesia*.

The *Via Latina* also shows a double settlement, the first a bit beyond the fourth milestone, at the settling tanks of the *Aquae Marcia*, *Julia*, and *Tepula*, as we believe (which perhaps was the *Pagus Lemonius*); the second, the largest of all, extended ten stades beyond, in the area of *Settebassi*. To the west of this is shown the villa of some emperor (for the ruins are not unworthy of such an identification), with a station for a garrison and quarters of the praetorians, as well as porticoes, baths, and other adornments. For the use of this, its own conduit, consisting of an arcade of six hundred paces, was brought from the arches of the *Anio Novus*.

Along the *Via Praenestina*, around the circular temple that contemporaries call the *Tor de'Schiavi*, there remain very many traces of a most elaborate settlement.

To the left of the *Via Praenestina* was the *Via Collatina*, according to Frontinus [*Aq.* 5.7]—not, indeed, as Holste notes on Clüver,<sup>31</sup> starting from the *Praenestina* at the fifth milestone or after the *Tor de'Schiavi* already mentioned, where there is a modern side road. The *Via Collatina* maintained its own paved course from the city all the way to *Collatia*, as I wish you to believe now on behalf of my good faith. Holste indeed observed neither its course nor its terminus; if he had observed it, he, like us, would have located *Collatia* at the ruins *del Castellaccio*, a mile away from the *Via Praenestina* (which was reported as the ancient *Castrum Osaë* or *Losae* more than once in the *Bullarium casinense* for the census of

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31. Holste, 102–3.



the venerable monastery of S. Paolo),<sup>32</sup> instead of identifying them as Gabii, as he did, rashly and inconsistently.<sup>33</sup> Both Strabo [5.3.10] and Dionysius [Dion. Hal. *Ant. Rom.* 4.53.1], as cited by Clüver,<sup>34</sup> expressly prove that Gabii stood on the Via Praenestina itself, and Holste admits the same thing, that Gabii was on the Via Praenestina, in his annotations on Ortelius.<sup>35</sup>

Holste must be corrected, moreover, when he believes that the *castello* of S. Giuliano was on the Osa stream and accepts it as our *Castrum Osae*;<sup>36</sup> more accurately, the ruined walls and the name *S. Giuliano* remain around one and a half miles beyond, on the other side of the *Castrum di Castiglione*, in the direction of Tivoli, and at a still greater distance from the Via Praenestina, as I shall show in a more appropriate place.

For this reason, nevertheless, no settlement appears along the *Collatina*, either because it is to be associated with the settlement already mentioned on the Praenestina, to which it was very close at that point, or because the Via Collatina was to be considered not one of the main roads but a secondary route. The road was only eight feet four inches in width, not equaling the customary measurement of consular roads, generally fourteen feet four inches. As a result, Pliny [*HN* 31.25], in showing the source of the Aqua Virgo, which arises along that road, cited the Via Praenestina, as the more famous and truly military route, and a side road of two miles from its eighth milestone. You will see from our map [fig. 31] that this is nevertheless the same as the eighth milestone of the Via Collatina (about which [see] Frontin. *Aq.* 10.5). How little, however, has Georg Fabricius, in his *Roma*, understood our topography (that I may again raise a cry against that notorious writer) when he says that this Via Collatina “leads to Collatia, outside the gate of the same name, and after a brief distance runs into the Salaria”!<sup>37</sup> There are two whole roads, the Tiburtina and the Nomentana, in between.

The Via Tiburtina and the Nomentana went forth along the sides of the *Castra Praetoria*; although the gates themselves from which they

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32. Margarini, *Bullarium casinense*, vol. 1 (Venice, 1650), 26 (constitutio 22), 32 (constitutio 25), 35 (constitutio 30); vol. 2 (Todi, 1670), 139 (constitutio 150), 218 (constitutio 211), 282 (constitutio 262).

33. Holste, 199.

34. Clüver, 954.

35. Holste, 35.

36. Holste, 131, 199.

37. Fabricius, 54 (= Graevius, 3:476F).



issued are today closed, ancient ruins of each road do indeed survive. Each road had this very sort of a district or settlement as its terminus, according to Pliny, in words to be cited shortly.

Along the *Via Salaria*, I do not doubt that its own settlement existed, but I confess that I have looked for it in vain, since perhaps, as Lucan laments about Troy, “All of Pergamum is covered with brush, and even the ruins have perished” [9.968–69].

The *Campus Martius*, with the *Campus Minor*, expanded in its entirety and intact to the *Via Flaminia* and the *Via Triumphalis*, closed the circuit of our Rome there outside the walls.

### c. Measurements from the Golden Milestone

Pliny states the following, first about the size of the city strictly speaking; then about the measurement of distance, still not understood, from the Forum to individual gates; and finally about that even more obscure measurement to the edge of the continuous buildings: “The walls in their course surrounded an area at the time of the principate and censorship of the *Vespasians*, in the 826th year after the foundation of Rome, of thirteen miles and two hundred paces, having embraced seven hills. The city itself is divided into fourteen regions, with 265 crossroads of the *Lares*. If a straight line is drawn from the milestone set up at the head of the Forum to the individual gates, . . . the result is a total of thirty miles and 765 paces in a straight line. But the total length of all the streets from the same milestone through the districts to the farthest edge of the buildings with the *Castra Praetoria* . . . results in a little more than seventy miles” [HN 3.66–67].

Putting aside for now the first two measurements of distance, the third, from the Golden Milestone to the farthest edge of the buildings and the *Castra Praetoria*, through the settlements of all the roads, corresponds excellently to our reconstruction, as you can recognize from the following summary set forth roughly and established for a simple grasp of the matter.

From the Golden Milestone via the *Via Ostiensis*, including the *Vicus Alexandri*, and return by the same route to the Forum, seventy-five hundred paces.

From the [Golden] Milestone via the *Via Ardeatina*, including its settlement, and return by the same route to the Forum, seventy-five hundred paces.



From the [Golden] Milestone via the Via Appia, including the settlement of the Camoenae, and return by the same route, seventy-five hundred paces.

From the [Golden] Milestone via the Via Latina, including its settlement (the Pagus Lemonius?), and return by the same route, eleven thousand paces.

From the [Golden] Milestone via the Via Labicana, including its settlement, and return by the same route, eight thousand paces.

From the [Golden] Milestone via the Via Praenestina, including its settlement, and return by the same route, seven thousand paces.

From the [Golden] Milestone via the Via Tiburtina, including the Castra Praetoria, and return by the same route, three thousand paces.

From the [Golden] Milestone via the Via Nomentana, including the Castra Praetoria, and return by the same route, three thousand paces.

From the [Golden] Milestone via the Via Salaria, including a settlement of uncertain location, and return by the same route, seven thousand paces.

From the [Golden] Milestone via the Via Flaminia, including the Campus Martius, and return by the same route, six thousand paces.

From the [Golden] Milestone via the Via Triumphalis, including the Campus Minor, and again by the same route, three thousand paces.

Total 70,500 paces.

In interpreting Pliny's words, we have deliberately omitted those most distant settlements along the Via Latina and the Appia (nos. 8 and 10 [fig. 31]), since, indeed, we believe that they were built after Pliny's time and interrupted the series of other settlements arranged generally in a circle. Indeed, two factors here suggest the work of an earlier time: the aqueducts, which we see were constructed for the supply of each settlement, and the special praetorium of the settlement on the Via Latina. Here, I observed first the reworking of walls among the ancient monuments, with the inner surface straight but the outer tilted back slightly, which they call *a scarpā* today (although I am not unaware that this technique, which Vitruvius [6.11] calls "structural leaning," was of older invention). Nevertheless, it is certain that these settlements existed at the time of Procopius—what indeed would have stimulated so splendid a mass of structures after the abandonment of the Roman state and the transfer of the seat of empire to the East?—and that they received the water delivered by two later aque-

ducts. We may therefore conclude that the aqueducts from this point entered what was called “Rome” (to the extent that they did not also proceed farther).

These observations on Pliny will certainly seem presumptuous or bold to some, but they come closer perhaps to his idea and offer with themselves proof noted by no one, although very certain, from the topography itself.

Moreover, the words of Dionysius describe the circuit of these continuous buildings as follows: “The places inhabited around the city, many they are and great, are unfortified and especially subject to incursions of enemies. If anyone wishes to ascertain the size of Rome, with his eyes turned to these things, he must be greatly deceived. And he will surely not be able to learn how far the city extends and where it stops; in such a way does the area of the entire city cohere in an unbroken bond, furnishing to those looking at it the idea of a city stretched into infinite distance” [Dion. *Hal. Ant. Rom.* 4.13.4].

Whoever is forced to recognize the boundary of the Ambarvalian ceremonies and the *ager Romanus* itself within the fifth or sixth milestone—according to Strabo [5.3.2], “at the place known as Festi”—will charge that these words of Dionysius are no doubt presented with exaggeration, just as other words of Pliny, “the expanding buildings adding many cities” [HN 3.67], can scarcely be extended beyond the limits we have designated. But beyond our own extension, which we have given to the name *Rome*, Nardini seems to stretch what is called the *urbs* itself in a certain manner.<sup>38</sup> He has wished to include in the territory of the first region, described by Rufus and Victor and with its circuit of thirteen thousand paces unchanged, the Temple of Fortuna Muliebris, which was distant from the city by twenty thousand feet in a straight line (indeed, at the fourth milestone on the Via Latina), and the Fossae Cluiliae, at the fifth milestone on the Via Appia, “whose name, with physical evidence,” at the time of Livy (for so the historian says [1.23.3]) “disappeared through antiquity”—Nardini thus imitates carelessly the license of Panvinio (to be sure, in not so unrestrained a fashion).<sup>39</sup>

Well, then (so that my discourse, having digressed, may return to its point of departure), from the correctness of the Latin and the support itself

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38. Nardini, 73–74.

39. Panvinio, *Descriptio urbis Romae* (= Graevius, 3:284).

of the jurisconsults, it is not inappropriate to call by the name *Rome* that area outside the city and within which some of the aqueducts listed by Procopius delivered their water. Let us add as a crowning touch that Frontinus also, like us, recognized Rome outside the city: although he states as preface in his introduction that he will describe “the aqueducts that flow into the city” [Aq. 3.1], he nevertheless includes among them the Alsietina, which he later announces “was consumed entirely outside the city” [Aq. 85], not in the Campus Martius, as Ligorio, that most daring stick, understood in his *Paradosse*: “The Alsietina spring, taking itself from the Lacus Alsietinus over the Via Claudia, supplied a fountain in the Campus Martius, as Frontinus shows.”<sup>40</sup> I correct him with the comments of Celso Cittadini, saying the same things in Italian, “He makes authors that he has never read say in his own way what the Latin does not mean. Frontinus did not mention the Campus Martius but states that the Alsietina terminated at the *naumachia* [naval amphitheater], meaning the *naumachia* that was at San Cosimato, not the one below the Pincian.”<sup>41</sup>

## 6. THE WATER SOURCES LISTED IN THE REGIONARY CATALOGS

There remains now the task (that we promised we would undertake) of directing the flow of all the sources of water listed by Victor and the *Notitia* to be absorbed into those fourteen aqueducts of Procopius. Indeed, for the first four, the Appia, the Marcia, the Virgo, and the Claudia, its own conduit has been assigned to each.

The fifth, the Herculanea, was received into the conduit of the Anio Novus, according to Frontinus [Aq. 15.4]: “There is joined to it [the Anio Novus] the Rivus Herculaneus, which arises on the same road at the thirty-eighth milestone, from the region of the sources of the Claudia across the river and the road . . . , but when mixed, it loses the charm of its own limpidity.” Accordingly, it was perhaps listed by Victor after the Claudia in place of the Anio Novus, which does not appear in his summary.

Also called the Herculaneus was that branch in the city through which

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<sup>40</sup> Ligorio, *Paradosse*, 39.

<sup>41</sup> Cited in Martinelli, *Roma ex ethnica sacra*, 429.

part of the Aqua Marcia distributed itself below the Gardens of Pallas throughout the Caelian, as Frontinus says [*Aq.* 19.8–9]. Yet its name was not taken from that Herculanean branch joined to it in Tiburtine territory (for how could that happen?), as Fr. Donati mistakenly states.<sup>42</sup> As a result, this branch of the Marcia could have been called in the city by a name sought at closer distance and not from its source. But if, indeed, among these more thorny topics, it is pleasing to delight one's mind by Ligorio's persuasiveness, listen to him teaching like this in his *Collectanea de aquaeductibus*: "The Aqua Herculanea. It was tapped in the aqueduct of the Aqua Virgo by the emperor Claudius and was the reason that the Virgo lost its reputation, as a virgin does when corrupted by a man. As a result, as Pliny says, the masculine conduit was removed by oracle from the Aqua Virgo to return it to its purity."<sup>43</sup> Laugh now (if bad bile does not affect you more, as I feel sometimes happens to me in the case of this fool) at the rash confidence of the man and his lack of concern toward critics.

The sixth, the Tepula, and the seventh, the Damnata, had their own conduits and names.

The eighth, the Traiana, as we proved in the first dissertation [I.4g], was brought from Sabatine territory to the top of the Janiculum and the region of the Transtiber. Fulvio, who wishes the Aqua Virgo to have been called the Traiana on the occasion of its restoration and based on that coin with the fountain that we considered to be understood in connection with it, is therefore wrong.<sup>44</sup> Nor, indeed, does a reference to the Aqua Traiana inscribed as follows on a lead pipe found on the Aventine near the Porta S. Paolo contradict our opinion:

Aqua Traiana. Quintus Anicius Antoninianus, the son of Quintus, curator of the Thermae Varianae.<sup>45</sup>

It seems far more easy and more probable that the water crossed from the Janiculum very close by the Aventine over the Pons Aemilius and arrived through pipes from the more distant bank to the nearer one, with the advantage of linked conduits, just as, from the other direction, aqueducts were customarily brought from Rome across the Tiber, according to

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42. Donati, 298 (= Graevius, 3:837C).

43. Ligorio, *Collectanea*, Ottob. lat. 3365, fol. 5v.

44. Fulvio, 185.

45. Gruter, clxxxii.7 (= Lanciani, 511, no. 81).

the testimony of Frontinus [*Aq.* 11.2]. As a result, I may say with Statius, “to cross rivers with a bold pipe . . .” [*Silv.* 1.3.67], rather than fantasize, apart from the authority of any ancient writer, that the Marcia was restored to the Aventine by Trajan. Indeed, Frontinus’s words “to these hills, more than one aqueduct has been brought back, in particular, the Marcia, carried on a larger structure from the Caelian to the Aventine” [*Aq.* 87.4] are declared, with these immediately following, “The queen and mistress of the world feels this concern of its most devoted emperor Nerva day by day . . .” [*Aq.* 88.1].

By these words, Trajan’s father, Nerva, not Trajan himself, is indicated as builder of the extension. Besides, they cannot be a reference to Trajan, since at the time Frontinus wrote, that is, “at the beginnings of his administration,” as he says in his introduction [*Aq.* 1.1], or when “Nerva the emperor”—to whom he dedicates his work—“and Virginius Rufus were consuls for the third time” [*Aq.* 102.17], Trajan had not yet fully gained imperial power and was far from bringing in an aqueduct and striking a coin distinguished by his fifth consulship to commemorate the deed (as we have noted elsewhere, namely, in our first dissertation [I.4g]). Even if this were true, this accomplishment would not have deserved to be marked by a coin with depiction of a fountain, nor would the name *Marcia* have to be erased from a pipe so that *Traiana* might be substituted; especially to distinguish aqueducts, it was customary that their names be marked on the pipes, as we see the abbreviation “AQV. MAR.” and likewise “ANIO. VET.” indicated on other pipes.<sup>46</sup>

This Aqua Traiana (as I have briefly touched on already, citing Procopius) is said to have been intended for mills that were once on the slope of the Janiculum, a function for which we see that it has finally returned after a long interval. In such a way, there is “nothing new under the sun, nor can anyone say, behold, this is new,” as the Scriptures maintain [Ecclesiastes 1.9–10]. So, indeed, Procopius states about this: “From the region of the Transtiber, a great hill is conspicuous, and there all the mills have been constructed; indeed, the great force of the water is brought through its channel to the top of the hills, from where it falls on the slope with a mighty force” [*Goth.* 1.19.8]. Some people should therefore cease to wonder that this most ancient function of the Aqua Traiana has been resumed and to find fault with it (as we have heard they are doing). To me, it has

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46. See Gruter, clxxxii.8–9.

rather always been in my prayers to see the Tiber freed from blockage by river mills. Belisarius indeed devised these mills, when necessity dictated, after the aqueducts had been cut by the Goths in the siege of the city. As Procopius adds [*Goth.* 1.19.19–20], why, once the siege was ending, should we allow these structures to endure, to our loss and danger, with the greatest ugliness brought about by the obstruction of the river basin, no less inconvenience, since commerce between the upper and lower river has been interrupted? Not only are we taught by private losses that the expenses of river mills of this sort outweigh their advantages, since to replace those mills that are destroyed or carried off headlong by the river in flood (as not rarely happens), others are not sufficient. It is also clear from mathematical demonstrations that public losses from flooding of the city are increased as a result (I do not deny that other reasons are also factors here). When the course of the water has been slowed down by those huge mills by which the river banks are obstructed (Holste calls them “stationary piers” in a specific dissertation with this title),<sup>47</sup> the result is that the volume of water is increased, since water acquires greater speed when blockages against it are removed. As a result, its elevation drops, as Fr. Castelli concludes in his treatise *On the Measurement of Running Water*.<sup>48</sup>

In the case of these mills, the following worse thing has happened: their occupation of the banks of the Tiber has been a mistake by new discovery and not from imitation of Belisarius. Indeed, Belisarius blocked the river bank not with “stationary piers” but, rather, with a harmless structure (to describe it with Procopius’s words): “In front of the bridge”—beneath the Janiculum—“with ropes fitted and stretched most strongly from each bank of the river, he tied two boats, with a two-foot space left between each, where the water was rushing with greater force from the arch of the bridge. Then, with two millstones installed in each boat, he installed in the middle a machine by which mills are accustomed to be turned. He attached other small boats in a line, according to the plan of those that were behind, and installed machines in the same manner, all of which, in a row, driven by the force of the water flowing forward, turned the mill set next to them and milled as much as the city required.”

For the ninth, the *Annia*, or, as the revised Victor has it, the *Amnia*, we agree with Panciroli that the name could be said to have been derived

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47. L. Holste, *Dissertatio de pila stassilari* (= Graevius, 4:1803–6).

48. Castelli, *Della misura*, 37 (corollary 16, app. 9).

from *Ania* or *Anio*, which was taken from the river itself;<sup>49</sup> we should not say instead that Victor omitted an aqueduct in existence and put in its place another uncertain one by mistake. Now let us show praise for this ingenious solution of Panciroli through comparison with a much worse and monstrous interpretation: “The Aqua Annia was brought from the Aqua Traiana in different places of Rome by Lucius Annius Verus the censor, in the principate of Antoninus Pius and Marcus Aurelius.” Already, without me, you have recognized that this is Ligorio;<sup>50</sup> who else would know how to include so many foolish ideas in a very few words?

The tenth, the *Alsia*, or the *Alsietina*, which is also the *Augusta*, is the very *Alsietina* to which Frontinus also attributed the name *Augusta*, stating, “What reason moved Augustus, an emperor with the greatest foresight, to introduce the Aqua *Alsietina*, which is also named the *Augusta*, I do not know; its water enjoys no popularity and indeed is hardly wholesome” [*Aq.* 11.1].

The name *Augusta* is also connected with another source, by which Augustus (as stated in his *Res Gestae* [20.2]) “doubled the aqueduct that is called the *Marcia*, with a new source tapped for its conduit,” which was afterward tapped in part for the *Marcia*, in part for the *Claudia*, as we have observed from Frontinus [*Aq.* 14.3] in our second dissertation. Dio Cassius writes that this name was also given to the Aqua *Virgo* by Agrippa: “Agrippa brought the aqueduct that was called the *Virgo* into the city at his own expense and named it the *Augusta*” [54.11.6]. This, however, is not so certain; indeed, it may be stated more securely that Dio mistook one aqueduct for a second—namely, the *Virgo* for the *Appia*, which had its source in the same property of Lucullus—when the writer first and alone said that the *Virgo* acquired the name *Augusta*. Frontinus also would not have been silent about this; indeed, he indicates instead the reason for Dio’s mistake. Frontinus says that a branch of the aqueduct, which was called the *Augusta*, was tapped as a supplement for the *Appia*, as we see in *Aq.* 5.6–8, although with some lacuna, which is made clear from the things he adds later [*Aq.* 65.1–4].

As a result, so as not to disagree with Frontinus, closer in time and more diligent in the account of his official duty and a more faithful writer, let us give the name *Augusta* back to the branch of the *Appia*, which, “on

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49. G. Panciroli, *De quattuordecim regionibus urbis Romae earumdemque aedificiis tam publicis quam privatis libellus* (= Graevius, 3:446E).

50. Ligorio, *Collectanea*, Ottob. lat. 3365, fol. 5v.



the Via Praenestina at the sixth milestone, on a side road to the left” (as Frontinus declares in *Aq.* 5.6–8), “received a source.” [About this Frontinus says that] “its conduit up to the Gemelli (which is a place below Spes Vetus), in an underground line, completes 6,380 paces.”

Nardini correctly observes that the name of the Alsietina was discovered to have been incorrectly added to this branch of the Augusta from a gloss that crept into the text of Frontinus.<sup>51</sup> But he does not correct Frontinus with equal success when he states that the Aqua Appia could not have been brought “intra Spem Veterem,” that is, to the area of the Porta Maggiore. For if he is moved by the argument (indeed, he claims none) that the Appia, as it were, would not have been able to rise to that place, the point is meaningless, since Frontinus [*Aq.* 5.6] indicates the place where the conduit crossed, not its elevation, and states that it was underground everywhere (except for the section at the Porta Capena [*Aq.* 5.5]). It is not at all absurd to keep in mind that the same conduit was sunk underground, in part at a deeper level under the hills, in part at a more shallow level under level ground.

Angeloni wrongly applied this same name, *Augusta*, to the Marcia: “Agrippa, reintroducing into the city, at his own expense, the Aqua Marcia, already destroyed, the best and the purest that there is today, called it the Augusta.”<sup>52</sup> But he does so from authorities unknown to us and even to himself, unless we might say that he would have been mistaken in his reading of “Marcia” instead of “Virgo.” He could have called the Virgo the “Augusta,” having followed Dio. However, even this prop does not sufficiently strengthen Angeloni’s opinion; according to Frontinus [*Aq.* 10.1], Agrippa “brought the Virgo that he had tapped to Rome” and did not indeed reintroduce it a second time, as Angeloni’s words indicate.

The eleventh, the Caerulea, is part of the Claudia, which “took its beginning from two most abundant and beautiful springs, the Caeruleus and Curtius,” as Frontinus says [*Aq.* 14.1].

The twelfth, the Julia, gave a name to its own aqueduct, from Frontinus [*Aq.* 9] afterward distinguished by the title *Venocis* by Ligorio, who transferred the name from the man discovering the aqueduct to the aqueduct—indeed, not the same one.<sup>53</sup> As Frontinus says [*Aq.* 5.2], “Indeed, to Gaius Fabius, the name *Venox* was given, on account of his discovery of the *venae*

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51. Nardini, 503.

52. Angeloni, 11.

53. Ligorio, *Collectanea*, Ottob. lat. 3365, fol. 5v.



of the Aqua Appia.” Since, properly speaking, *Venox* otherwise means “searcher of the source,” attribution of such a name to the water source itself being searched for and sought out seems to be truly Ligorian.

The name of the thirteenth, the Argentiana, will be able to match that conduit on the Via Tusculana, because it most directly faces the Algidus, as our map shows [fig. 37]. Certainly, to no other aqueduct is it to be equally well applied, unless our identification is deceptive.

Mount Algidus, we argue, was that one that the monastery of S. Silvestro and Rocca Priora occupy, stretching with more than one peak behind Tusculum to the left of the Via Latina, toward Praeneste and the south-east. That intervening valley, in which the ruins of Castra Molaria are seen, used to separate both Algidus and Tusculum (which was on the same ridge) from the Alban Mount. The Via Latina, rising indeed on the right—I have discovered traces of it more than once—was brought to the sides of the Tusculan Mount and that of the Algidus and the valley already mentioned, as is clear from the following passage of Strabo [5.3.12], not cited by Clüver among so many statements of this writer and others that he amasses:<sup>54</sup> “Between the mountains against which Tibur and Praeneste are established, there stretches forth another mountainous and lofty ridge, leaving behind the valley between Algidus and the Alban Mount; in that place, Tusculum was situated.”

This also is very well confirmed by Livy’s description of Hannibal’s march [26.9.11–12]: “Hannibal, after the territory of Fregellae had been laid waste in hostile fashion, because the bridges had been cut, came into Labican territory through that of Frusinum, Ferentinum, and Anagnia; from here, he sought Tusculum by way of the Algidus.” If Hannibal sought Tusculum through the Algidus from the territory of Labicum (this is, with Holste, next to the town Colonna),<sup>55</sup> then the Algidus, Tusculum, and Labicum, with all its territory, are on the same left side of the Via Latina, as we have claimed. For those who claim that the Algidus is to the right of the Via Latina, with that valley intervening, on the same and unbroken high ground with the Alban Mount, today called Monte Cavo (as Fr. Kircher does in his *Latium*),<sup>56</sup> Hannibal’s march is conceived as not straight, like that of a man hurrying, but in a circle, like that of one overflowing with leisure.

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54. Clüver, 472.

55. Holste, 194.

56. Kircher, 37, 70–72.

But the excellent Fr. Kircher will perhaps introduce another error in his defense of this one, namely, the location of Labicum at the town of Valmontone (as he promises he will demonstrate shortly thereafter), from which a means of crossing was given from his Mount Algidus to Tusculum. Nevertheless, Kircher cannot make use of this assumption, since, later (forgetful of his promise), he orders “Labicum to remain for pressing reasons” on the Via Praenestina and in the place where the town Zagarolo now stands.<sup>57</sup> Even if we admitted this and transferred Labicum from the right of its own Via Labicana to the right of the Via Praenestina, Hannibal’s march will still have been to the left of the Via Latina over the Algidus; from this, we have perceived correctly from Strabo that the ridge of the Algidus was continuous with the high ground of Tusculum but not with that of the Alban Mount.

So that we may sample something about the true position of Labicum, beyond the authority of Holste, who places it at the town Colonna, I will introduce here, from my daybooks for the work I am planning about the *ager suburbanus*, the text of the following inscription recently discovered and fixed today in the wall of the Vigna Lazarini; from it, not only is the position of the ancient town obvious, but, moreover, it is clear why Antoninus, in his itinerary [*It. Ant.* 304.7], and the Peutinger Table<sup>58</sup> mark as “ad Quintanas” the place at the same distance of fifteen miles that Strabo attributes to Labicum. From this little-known marble—

To the spirits of the dead, to Parthenius, treasurer of the republic of the  
Lavicani Quintanenses [*CIL* XIV, 2770]

—the “Lavicani” are the same as the “Quintanenses,” so that Fr. Athanasius Kircher may decide on a fixed and lasting home for them at long last.<sup>59</sup>

What, finally, will we do about Gronovius? In his third epistolary dissertation to Goefius,<sup>60</sup> boasting that he is emending the passage of Livy already cited [26.9.11–12]—indeed, intact and correct—he throws every-

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57. Kircher, 120–21.

58. *Tab. Peut.* V.1 (cf. Bosio, *La Tabula Peutingeriana*, segment 5.1).

59. Kircher, 120–21.

60. *Epistula tertia Wilhelmo Goefio*, in J. Gronovius, *Epistolae in quibus multa Titi Livii loca geographica emendantur et illustantur* (Amsterdam, 1678), 21–28, reprinted in A. Drakenborch, ed., *T. Livi Patavinii Historiarum libri, qui supersunt, omnes* (Stuttgart, 1828), 15:246–54.



Fig. 37. Topographical map of Latium showing the course of the Via Latina, with the Algidus and Praenestine mountains. (Courtesy of Biblioteca Apostolica Vaticana, Vatican City.)



1. M. della Montevilla  
 2. M. della Montevilla  
 3. M. della Montevilla  
 4. M. della Montevilla  
 5. M. della Montevilla  
 6. M. della Montevilla  
 7. M. della Montevilla  
 8. M. della Montevilla  
 9. M. della Montevilla  
 10. M. della Montevilla  
 11. M. della Montevilla

thing into marvelous confusion so that he may then substitute “Pedum” for “Algidus,”<sup>61</sup> with not only Livy but Silius Italicus contradicting him and with no similarity at all. Oh how plentiful a crop of jokes and witticisms would that Marcus Meibom, wounded by so many reproaches, gather from here! With them, he would attack his antagonist in turn and fart in the face of “Pedum,” so inappropriate a word! Indeed, refraining from such things, we will warn you and others in brief fashion that Gronovius is mistaken on three very serious points.

First, [Gronovius is mistaken] in his strict acceptance of the word *Algidus* for a town by that name lying at the base of its mountain on the Via Latina.<sup>62</sup> Livy, in all the passages cited by Gronovius, permits this to be understood not about a town of Algidus itself but about the mountain or the ridge of the same place, which has a not inconsiderable extension. Therefore, not at all carelessly does Silius [*Pun.* 12.536–37] refer to the Algidus with a plural noun in the description of Hannibal’s march: “nor do pleasant Algida hold him back.” Indeed, so many mountains could seem to the poet Silius (by an especially poetic figure of speech) as tops of a mountain, even though a single one.

Gronovius is mistaken a second time when he denies that between the Alban Mount on this side and the ridge of Tusculum and the Algidus on that side, a deep valley is opened up, extended for many miles.<sup>63</sup> He does this in error, according to others, as a result of what he believes is Strabo’s judgment, but it is actually Strabo badly interpreted. From our point of view, however, he acts very foolishly, since we know these places better than Gronovius knows his own home. In the valley, by a gigantic device and in a continuous line, from the city Tusculum to the Alban Mount, Gronovius constructs a stupendous earthwork of twenty-five stades at least. Yet according to Strabo himself, it is understood, in no obscure fashion, from these words next to those already cited [5.3.12], that each height is separated by an intervening valley: “next to this”—[Tusculum]—“there lie regions sloping toward the Alban Mount.”

Finally, Gronovius is mistaken when he dryly and grammatically interprets the passage of Strabo (discussed by us in our first dissertation [I.4d]) concerning the branch road of the Via Latina—“The Via Latina takes its

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61. Gronovius, *Epistolae*, 28 (= Drakenborch, *T. Livi*, 15:254).

62. Gronovius, *Epistolae*, 25 (= Drakenborch, *T. Livi*, 15:250–51).

63. Gronovius, *Epistolae*, 26 (= Drakenborch, *T. Livi*, 15:252).

beginning from the Appia, bending off to its right near Rome, and above the height of Tusculum, it passes between the town Tusculum and the Alban Mount” [5.3.9]—reading this as a crossing of the high ground of Tusculum to suit his own thesis.<sup>64</sup> With the aid of the topography itself, we shall demonstrate to the believers of this sort what we are setting forth with pragmatic truthfulness concerning that lofty climb of the Via Latina at the sides of the Tusculan height that we have discussed.

I would not know how to conceive even in my mind how we might include among the Roman aqueducts the fourteenth, the Aqua Ciminia of Publius Victor, except by combining it with the Sabatina. I have seen that this pleased the distinguished Fulvio Orsini, in the margin of the Aldine book published at Venice in the year 1518, access to which the abbot Michelangelo Riccio, distinguished for his learning and his mode of life, made available to me; here, Riccio noted “Ciminia, or Sabatina” in Fulvio’s own handwriting. It is not that I do not recognize that the Lacus Ciminius is different from Sabate, both in Strabo [5.2.9] and in Silius [*Pun.* 8.490–91], in passages cited by Clüver.<sup>65</sup> Instead, either the proximity of the places deceived Victor or the author of the *Notitia*, in an age not yet given to scholarship, or the breadth of the Ciminian glade, very greatly expanded by Livy [9.36.1], also included the Lacus Sabatinus.

Panciroli, in his notes on Publius Victor, derives the name *Ciminia* “from the Ciminian forest near Tusculan territory, concerning which Pliny writes in book 9.”<sup>66</sup> As a result, our hopes were raised that it could have been the same as the Argentina. We believe, however, that the most famous man was mistaken because of the lack of punctuation of his text. Because the dividing punctuation had been removed, Panciroli joined by chance different things that Pliny keeps separate in different places. These are the words of Pliny in that passage where he reports different wonders of the lands [*HN* 2.211]: “At the Arae Murtiae in Veii, and near Tusculan territory, and in the Ciminian forest, there are places in which things fixed in the earth are not drawn forth.”

The fifteenth, the Sabatina, we believe to have been that water that, according to Frontinus [*Aq.* 71.1], brought from the Lacus Sabatini, was tapped into the Aqua Alsietina in the vicinity of Careiae. The text is as follows, with a slight emendation: “The capacity of the source of the Alsi-

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64. Gronovius, *Epistolae*, 26 (= Drakenborch, *T. Livi*, 15:251).

65. Clüver, 331.

66. Panciroli, *De quattuordecim regionibus* (= Graevius, 3:448F).

etina neither is listed in the record books nor could be determined with accuracy under present circumstances, since from the Lacus Alsietinus and then from the Lacus Sabatinus in the vicinity of Careiae, as much as the watermen have arranged, it has no more than two thousand *quinariae*.”

The sixteenth, the Aurelia, must be said to be the same as the Traiana, since the Traiana was brought to Rome for a long distance along the Via Aurelia, as we have already shown.

The seventeenth, the Septimiana, Nardini thinks was drawn from some principal conduit reworked for new purposes and given its name.<sup>67</sup> But we exclude this sort of minute listing of aqueducts by Victor as secondary and spillover (so to speak). All the other lines either had their own aqueducts or, having received an appropriate name of their own, were a substantial part of them. Indeed, someone who had thought to leave his own name on water drawn from a nearby *castellum* would rightly have incurred the censure of vanity.

The Thermae Severianae, named from Septimius Severus (as Spartianus reports in his *Life*), Victor and the *Notitia* in agreement describe as being in the first region of the Porta Capena, which stretched far outside the city, including the Almo stream and the settlement of the Camenae. From this, we may conjecture that our thirteenth aqueduct [III.4d], which was brought on the back of the Appia toward this region, was perhaps called the Septimiana, which we are seeking. This is more probable because we find that great conduit without a name and without a builder from those previously cited.

The eighteenth, the Severiana (after we have seen Victor overflowing with use of synonyms), could indicate by another name the same aqueduct of either Septimius Severus or Severus Alexander.

That the nineteenth, the Aqua Antoniniana, was added to the conduit of the Marcia is shown by the inscription [CIL VI, 1245]—which we cited in the first dissertation [I.4a]—at the arch under which the Via Collatina once certainly passed, today serving the modern Via Tiburtina (for the ancient road runs along the south side of the Castra Praetoria, as we have said).

Fr. Athanasius Kircher, as an aside in his *Latium*, makes Marcus Aurelius Antoninus, the son of Pius, the builder of the conduit and author of this inscription.<sup>68</sup> He also cites an inscription of Antoninus Pius concern-

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67. Nardini, 510.

68. Kircher, 208–9.



ing the rebuilt conduits of the Claudia and Anio Novus at the Porta Maggiore.<sup>69</sup> But beware of each statement, for the third inscription at the Porta Maggiore, which Kircher wishes to be understood as Antonine, is that of Titus Vespasianus, inscribed with this message:

The emperor Titus Caesar, son of a god, Vespasianus Augustus, pontifex maximus, in the tenth year of tribunician power, imperator seventeen times, father of his country, censor, consul seven times, at his own expense saw to the reintroduction with a new conduit of the Curtian and Caerulean aqueducts brought by the divine Claudius and afterward restored to the city by his father, the divine Vespasian, since, from their source, they had collapsed from their foundations because of age. [CIL VI, 1258]

The other inscription on the arch on the Via Collatina [CIL VI, 1245] certainly pertains to Caracalla, the son of Severus. To be sure, the name *Marcus Aurelius Antoninus* is common to both [emperors], along with the added titles *Pius Felix Augustus* and *Parthenicus Maximus*, but the title *Britannicus Maximus* fits Caracalla alone. With such similar titles, Caracalla is also honored in the following inscription.

The emperor Caesar Marcus Aurelius Antoninus Pius Felix Augustus Parthicus Maximus Britannicus, pontifex maximus, father of his country, consul three times, consul designate four times, rebuilt the road cut off by flood. [CIL X, 6876]

Moreover, the designation here of a fourth consulship is not appropriate for Marcus Aurelius, for he is found as only consul for the third time in that year in which his death occurred or when he is inscribed also with a third consulship on coins cited by Occo, under “tribunician power for the thirty-fourth year.”<sup>70</sup> The designation could not yet be assumed for the following year, since this office was not taken except at the end, with the year waning, but Marcus Aurelius himself died in the month of March, as is known from excerpts of Dio Cassius [71.1] and all the *Fasti*. In short, so common is this, from the great number of coins with the title *Britannicus*, more than forty of which you will see cited by Occo,<sup>71</sup> that, among schol-

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69. Kircher, 31.

70. Occo, *Numismata*, 227–28.

71. Occo, *Numismata*, 284–97.

ars, Caracalla is accustomed to be marked by the name *Britannicus* to distinguish him from the son of Pius and from Elagabalus. If you indeed should demand both how this Aqua Antoniniana could be brought from the channel of the Appia and how it arrived over an arcade at the hippodrome of Caracalla on the Via Appia and from there again along the Via Latina to the *Thermae Antoninianae*, as the distinguished Ligorio fearlessly affirms,<sup>72</sup> “you would do nothing more than to make an effort to be mad with reason” [Ter. *Eun.* 62–63].

Concerning the twentieth, the Aqua Alexandrina, you may read thoroughly our entire [first] dissertation, which, unless we are mistaken, proves that this is the same source of water brought to Rome with its own conduit and notable arcade by the emperor Severus Alexander and afterward delivered to Rome by Pope Sixtus V, although by a different route.

Of the following four, which are found in the new edition of Victor, the twenty-first, the Anio Novus, and the twenty-second, the Anio Vetus, are among the nine aqueducts listed by Frontinus. The twenty-third, the Albudina, was part of the Claudia, as is apparent from the following words of Frontinus [*Aq.* 14.2]: “The Claudia also receives that spring that is called the Albudine, of such good quality that it serves as a supplement to the Marcia whenever there is need, with the result that it changes nothing of its quality by its addition.” The twenty-fourth, the Crabra, last of all, was the same as the *Damnata*, as we have already argued at length [III.4c].

The *Notitia Imperii* presents nothing new beyond what has already been stated, except the name of some Aqua Setia, which Nardini, by sufficiently good conjecture, believes came about by the error of some unskilled scribe, when the name of the *Alsietina* was divided, by replacing “*Alsietina*” with “*Alsia*” and “*Setina*.”<sup>73</sup> Another name, *Aufeia*, was an old name of the Marcia, according to Pliny [*HN* 31.41]: “The Marcia was once called the *Aufeia* and its source itself the *Piconia*.”

## 7. UNDERGROUND CONDUITS IN ROME

There will indeed not go unmentioned some underground water conduits that are believed to remain from antiquity, one showing itself between the Church of S. Anastasia in Circo and the Church of S. Giorgio in Velabro

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72. Ligorio, *Collectanea*, Ottob. lat. 3365, fol. 6r.

73. Nardini, 510.

and flowing at once into the channel of the Cloaca Maxima very close by there; the second under the Palazzo Grimani on the Quirinal; finally, the third, flowing not far away, in the well of the Pharmacopolium below the statue of King Mithridates, on the street of the Blessed Virgin of Constantinople, which they say is the same as that which is seen at the Piazza dell'Olmo under the Dye Factory and is carried away by an uncertain course toward the West and the Tiber.

We think, however, that all of them, as a spurious work of Roman magnificence in these conduits, should be removed from the family of aqueducts about which we are speaking, first because of the moderate and uneven supply of water with which they are provided. It is unlikely to think that this water was brought from a distance, since we find that the watery and mossy soil around the city and in the city itself is not lacking in natural springs. Indeed, it can be no wonder that level places, especially under the hills, spring forth with different water sources, even when springs are idle, since falling rainwater has been filtered through and is seeping frequently in this wet season. Another reason for excluding them is the humble and poor construction, in comparison with that we see in our aqueducts. As a result, it is better that you allow these channels to creep unseen with their inglorious moisture than that “you give the honor of this name” [Hor. *Sat.* 1.4.44] to them.

If, indeed, they boast anything from antiquity, they are accordingly to be linked not to aqueducts proper but to urban springs, once irrigating the city or suburbs, to which we saw Galen made mention in the passage cited in our earlier dissertation [II.4e]. Among their number was the Petronia Amnis in the Campus Martius, about which Festus reports as follows [p. 206L]: “The Petronia is a stream flowing into the Tiber, which the magistrates cross, having taken the auspices, when they wish to conduct some business in the Campus; this sort of auspices is called perennial. Ancient sources, moreover, used to treat *amnīs* as feminine.” Likewise, we find the spring of Mercury near the Porta Capena (which is under [the Church of] S. Anatasia, very close to its course, from our account of the Porta Capena [I.4d]), cited by Ovid [*Fasti* 5.673]: “There is the spring of Mercury, close to the Porta Capena. If you wish to believe those who know, it has divine power.” Finally, there is the spring of Juturna, that of Picus and Faunus, the spring of the Lupercal, and others that Nardini lists.<sup>74</sup>

Our delightful Ligorio (to close happily the dissertation and, at the

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74. Nardini, 502.



same time, the book with him), not having read Festus or contradicting him, wished to give as follows the course and etymology of the Petronia Amnis: "It is the name of a spring and small river that runs in the Tiber, and it is renowned as that pretty and clear stream that comes from the roots of the Palatine Hill and is called the spring of S. Giorgio, from the nearby church that was built there. It was named Petronia from issuing under the rock."<sup>75</sup> In another place, as he overflowed with little inventions, "Ligorio thought it was that spring of the Euripus, which flowed in the Circus Maximus," if we believe Holste, making reference to him in his annotations to Ortelius's *Geographical Thesaurus*<sup>76</sup> (for where Ligorio says this, I considered it hardly worthwhile to investigate in the such great mishmash of his books)—as if this little spring could suffice to fill a ditch ten feet deep and wide, almost a mile in length, as Dionysius describes it [Dion. Hal. *Ant. Rom.* 3.68.2]! We read in Frontinus [*Aq.* 84.2] that 460 *quinariae* of the Aqua Virgo were supplied to the Euripus of Agrippa, to which the aqueduct itself gave its name.

Nardini reports, from the same Ligorio, that the water of the fountain of Piazza Mattei, distinguished by bronze statues of boys, tortoises, and dolphins, was once brought by Augustus for the use of a second Euripus at the Circus Flaminius.<sup>77</sup> But Nardini's mistake is clear. By whatever stake you wish, I would contend that Ligorio was referring not to the water of this fountain (which in its highest jet is that of Sixtus, or the Acqua Felice, with that of the Aqua Virgo in the four lower pipes issuing from the mouth of the dolphins) but to another spring that we have said was under the Dye Factory, in the Palazzo Mattei from the other side to the west, with only the next street separating it. Indeed, because of this channel, believed (not incorrectly) to be ancient, it is probable that Ligorio also concocted his own Euripus. For why would Nardini's observation that the Circus Flaminius indeed was surrounded by no Euripus stand in his way? According to the old adage, Hippocleides does not care about these things [Hdt. 6.129]. Ligorio, who announced that he was always self-sufficient, is so untroubled and unconcerned about the truth, I say, that we must exercise the highest scruples in dealing with him.

Nardini was childish and disgracefully ignorant that the fountain of

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75. Ligorio, *Collectanea*, Ottob. lat. 3372, fol. 119v.


76. Holste, 101.

77. Nardini, 324.

Piazza Mattei, thirty-six feet higher than this fullers' water, supplied not waters unknown but those of the Aqua Virgo and Acqua Felice, as we have said. While he believes he is criticizing someone else, he stirs up trouble and disputes for himself. Again, he seems to have fallen back into the same shadows, still doubting whether the water of the fountain of Piazza Mattei should be called the Petronia,<sup>78</sup> an idea that ought not to have fallen into the mind of a sensible man, especially one open to investigations of these matters.

Wearied by extensive reading, you will sing at me with your Martial, "Oh, enough is enough now, oh little book!" [Mart. 4.89.1]. It is time, therefore, to close the channels, and with all the water drained, which we have taken for abundant speaking, at long last let us be silent by law of the court. To you, my friend, a fond farewell. I wrote this from my museum, on September 27, 1679.

## Commentary



Fabretti's third dissertation was published, like the first two, without section headings, but it is here organized as follows:

1. Introduction
2. Topographic Map
3. The Eastern Gates of the "Servian" Wall and Their Roads
4. The Number of the Aqueducts
  - a. Frontinus's Evidence and Pliny
  - b. The Evidence of the Regionary Catalogs and Procopius
  - c. The Aqua Crabra
  - d. The Aqua Septimiana
  - e. The Aqua Argentiana
5. The Limits of the Ancient City
  - a. Settlement on the Via Ostiensis
    - (1) The Emporium

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78. Nardini, 357.



- b. Other Settlements on Main Roads
- c. Measurements from the Golden Milestone
6. The Water Sources Listed in the Regionary Catalogs
7. Underground Conduits in Rome

## OPENING

**Giulio dei Conti di Montevecchio.** Giulio dei Conti was *scriptor in Graeca lingua* [Greek secretary] of the Vatican Library and one of the learned friends of Giovanni Ciampini. See Ashby, 2 n. 4 (20 n. 9). The commentator of the Barbiellini edition writes of Giulio (127 n. a): “Romae diu, multumque vixit, litteratis viris carus, et iis maxime, qui nocturnis horis frequentes aderant apud clarissimum Ciampinum, cuius domi omnium fere musarum chorus consedissee videbatur. Poeticam facultatem sedula cura excoluit; quod testantur aliqua typis edita, ac longe plura, quae MSC. apud haereditas reperiuntur” [He lived much at Rome over a long period, dear to its literati, and especially to those present in great numbers in the evenings at the home of the famous Ciampini, at whose home the chorus of almost all the Muses seems to have gathered. He cultivated his poetic talent with constant care, as his published works and far more things found in manuscripts belonging to his heirs bear witness].

## I. INTRODUCTION

The literary interests of Fabretti’s addressee no doubt inspired Fabretti’s many quotations of Latin poetry in his introduction, particularly those from Ovid and Horace.

In this introduction, Fabretti lists the four aqueducts functioning in Rome at his time, citing them not by their modern names but by those of the ancient conduits with which they are associated: the Crabra (which, as in his first dissertation [I.2], Fabretti mistakenly names the twelfth-century papal Marrana Mariana); the Virgo, or Acqua Vergine, restored by Luca Peto in the mid-sixteenth century; the Traiana, reworked by Pope Paul V as the Acqua Paola; and the Alexandrina, or Acqua Felice of Sixtus V, which tapped the same sources as the ancient Aqua Alexandrina.

None of Fabretti’s references is favorable: the Marrana Mariana, Acqua

Vergine, and Acqua Paola are described as polluted; the Vergine's conduits are cited as leaking, with its flow reduced; and the Acqua Felice is described as frequently muddy. Given the relatively recent date of introduction for the last three lines, Fabretti's criticisms appear exaggerated for rhetorical effect, and his citation of Pliny's far-fetched explanation of the name of the Aqua Virgo seems to be little more than a joke to amuse Giulio, whom Fabretti describes as devoted to wine and indifferent to the city's water supply. The final quote from Horace's *Satires* confirms the conclusion that we are not to take this discussion too seriously.

## 2. TOPOGRAPHIC MAP

As in his first two dissertations, Fabretti begins the third with a detailed map depicting the topography of the area to be discussed. This map, entitled "Plan of the Ancient City with Adjacent Neighborhoods or Settlements," presents the Roman roads issuing from the city, with the settlements and monuments, focusing primarily on the eastern *suburbium*. Fabretti's numerical listing of monuments and ruins is again selective, omitting many topographical details; his numbering corresponds to descriptions and identifications of modern topographers as follows:

1. Aqua Virgo substructure: Ashby, 172–73 (203); Van Deman, 171.
2. Aqua Virgo conduit: Ashby, 172 (203–4); Van Deman, 171–72, text-cut 18.
3. Aqua Virgo conduit: Ashby, 172 (203–4); Van Deman, 171.
4. Aqua Virgo: Ashby, 172 n. 1 (203 n. 40); Van Deman, 171.
5. "Villa dei Gordiani": Tomassetti, 3:546–53.
6. Centocelle: Tomassetti, 3:478–80.
7. "Villa delle Vignacce": Tomassetti, 4:81–82.
8. Imperial complex at Settebassi: Tomassetti, 4:102–5.
9. Imperial complex of Maxentius: G. Pisani Sartorio, *La villa Massenzio sulla via Appia* (Rome, 1976); A. Frazer, "The Iconography of the Emperor Maxentius' Buildings in Via Appia," *Art Bulletin* 48 (1966): 385–92.
10. Imperial Villa of the Quintilii: L. Quilici, "La villa dei Quintilii sulla Via Appia," *Bollettino Unione Storia ed Arte* 1–2 (1974): 15–26.
11. Neighborhood of Tor Marciana, perhaps to be identified with the

- ancient Capitonus, located at the third milestone of the *Via Ardeatina*: Tomassetti, 2:488–89.
12. *Vicus Alexandri*: Tomassetti, 5:154–57.
  13. Emporium (Fabretti's identification of the *Navalia* here is problematic): Nash, 1:380–86; Richardson, 143–44; *LTUR*, 3:139–40 (C. Mocchegiani Carpano).
  14. Area of S. Passera on the *Via Portuense*: Tomassetti, 6:348–54.
  15. *Specus Octavianus*: Ashby, 87 (107).
  16. *Via Asinaria* at the *Via Latina*: Tomassetti, 4:47–48; Ashby, "Classical Topography-III," 43.
  17. Temple of *Fortuna Muliebris*: Tomassetti, 4:81–82; Quilici, *Via Latina*, 62–65.
  18. Settling tanks of the *Marcia/Tepula/Julia*: Ashby, 133–35 (160); Pisani Sartorio, "Punto di derivazione dell'acqua Marcia."
  19. Branch line of the *Claudia*: Ashby, 234–35 (272–74); Lanciani, 277.
  20. "Settebassi" branch of the *Anio Novus*: Ashby, 228 (266–67); Van Deman, 322; Aicher, 102.
  21. Tomb of S. Urbano: Tomassetti, 2:124–25; on the name *Torre dei Borgiani*, see Tomassetti, 2:97.
  22. Imperial villa of the *Quintilii*: Quilici, "La villa dei Quintilii," 15–26.
  23. *Ustrinum* (crematorium): Tomassetti, 2:129–30.
  24. Settling tanks of the *Claudia/Anio Novus*: Ashby, 225 n. 6 (264 n. 143).
  25. Emissary of the *Marrana Mariana*: Ashby, 222–23 n. 5 (262 n. 130).
  26. *Via Labicana* cisterns (also shown in fig. 1).
  27. *Villa dei Centroni* aqueduct: Ashby, 222 (261 n. 121); G. M. de Rossi, *Bovillae*, FI 1.15 (Florence, 1979), 155–56 (nos. 109–10).
  28. Another branch conduit along the *Via Labicana* (also shown, but not identified, in fig. 1).

This map is in many respects a more detailed enlargement of much of the area shown on the topographical map of the first dissertation (fig. 1), with many of the same topographical features depicted: the tributaries of the Tiber and Anio Rivers, the courses of the major Roman roads from the city, and important topographical landmarks along them. Also included are the courses of the *Aqua Marcia/Tepula/Julia* and the *Claudia/Anio Novus* from *Capannelle* into Rome, the line of the *Aqua Alexandrina*, and remains of three aqueducts to be discussed in this dissertation, those



which Fabretti identifies as the Septimiana, Crabra, and Argentiana. Although Fabretti does not discuss the Aqua Virgo in any detail in this dissertation, sections of that aqueduct and its course are also depicted. Surprisingly, the Aqua Alsietina and Traiana are not shown west of the city, although the course of the papal Acqua Paola does appear. The remains of cisterns and an unidentified branch of an aqueduct along the Via Labicana (fig. 31, nos. 26, 28) do not figure in Fabretti's discussion of the *ager Romanus* but might have been included as evidence of the existence of an ancient settlement along that road, discussed in III.5b. They are, however, some distance east of the *pagus* (to be identified with Centocelle) indicated on the same road (fig. 31, no. 6).

Fabretti's presentation of Rome itself on the map is also selective, showing only those features to be discussed in III.3: the topography of the seven hills, the Emporium along the Tiber below the Aventine, and the circuits of the republican "Servian" Wall and Aurelian Wall.

### 3. THE EASTERN GATES OF THE "SERVIAN" WALL AND THEIR ROADS

Fabretti first addresses a topographical issue not directly germane to the subject of this dissertation but important in arguments to be presented later concerning the size and extent of the ancient city (III.5).

Fabretti's locations of the three gates of the eastern republican wall along the *agger*, the **Porta Collina**, **Porta Viminalis**, and **Porta Esquilina**, agree with those posited by modern topographers; see G. Säflund, *Le mura di Roma repubblicana*, 43–44, 63–66, 74–75; *LTUR*, 3:319–24 (M. Andreussi); Richardson, 262–63. Fabretti's presentation of the circuits of the "Servian" Wall and Aurelian Wall in the map accompanying his discussion (fig. 32) also generally coincides with those in modern studies.

However, the map and arguments presented here focus primarily not on the walls and locations of the gates but rather on the courses of the major Roman roads issuing from them: the **Via Praenestina** and **Via Labicana**, the **Via Collatina** and **Via Tiburtina**, and the **Via Nomentana** and **Via Salaria**. Here, Fabretti's map becomes more problematic, and the arguments and evidence presented become more complex.

The Via Salaria and Via Nomentana did indeed issue from the Porta Collina, as Fabretti argues, the Nomentana branching off from the Salaria

just outside the gate. See Ashby, *Campagna*, 82; *LTUR*, 3:326 (F. Coarelli); Richardson, 417–19. Fabretti's map, which shows the *Via Salaria Vetus* diverging from the main road outside the *Porta Nomentana*, is generally correct on the course of these roads. Cf. S. Quilici Gigli, *La Via Salaria da Roma a Passo Corese*, *Passeggiate nel Lazio 3* (Rome, 1977), 11–12. Fabretti's criticism of **Georg Fabricius** in this section is somewhat imprecise: in chapter 4 of his *Descriptio urbis Romae* ("De portis veteris novaeque urbis" = Graevius, 3:476F) Fabricius does not specifically name a "*Porta Salaria*" but does cite a gate that he says "*nomen a deportando sale adepta est*" [got its name from the transport of salt].

The courses of the *Via Tiburtina* and *Via Collatina* are more uncertain. Topographers generally agree that the *Via Collatina*, the less important of the two roads, diverged from the *Via Tiburtina* outside the *Porta Tiburtina* (*Porta S. Lorenzo*) of the *Aurelian Wall*: Ashby (*Campagna*, 143–45) traced its course outside the city along the route of the *Aqua Virgo*, as Fabretti depicts it in his topographical map (fig. 31). The more important *Via Tiburtina*, having diverged from the *Via Praenestina* outside the *Porta Esquilina* of the "*Servian*" *Wall*, appears to have run to the later *Porta Tiburtina* (*Porta S. Lorenzo*) in the *Aurelian Wall*; Augustus's monumentalization of the conduits of the *Aquae Marcia/Tepula/Julia* carried above that gate points to its significance as a major thoroughfare at the end of the first century B.C. See Ashby, *Campagna*, 94; *LTUR*, 3:312–13 (G. Pisani Sartorio); Richardson, 419. Fabretti, however, reconstructs the course of the *Via Tiburtina* as issuing from the *Porta Viminalis* and running to the so-called *Porta Chiusa* (or *Porta Clausa*), a postern gate southeast of the *Castra Praetoria* in the circuit of the *Aurelian Wall*. This is highly unlikely, given the prominence of the road that ran under the modern *Porta S. Lorenzo* and Augustus's monumentalization of the aqueduct conduits above it. On the *Porta Chiusa*, see Richmond, 181–84; Nash, 2:208–9; *LTUR*, 3:303 (G. Pisani Sartorio); Richardson, 302.

The courses of the *Via Praenestina* and *Via Labicana*, which Fabretti discusses at greatest length, are the most problematic of all. Fabretti cites Strabo 5.3.9 and archaeological evidence to argue that the *Via Labicana* diverged from the *Via Praenestina* just outside the *Porta Esquilina* to run to the *Porta Praenestina* of the *Aurelian Wall* (the modern *Porta Maggiore*) and that the ancient *Via Praenestina* itself ran to the north, crossing the circuit of the *Aurelian Wall* midway between the *Porta Maggiore* and *Porta S. Lorenzo*. Strabo's description of the course of the *Via Col-*

latina and the point of its divergence is too vague to be decisive: Strabo states only that the Via Collatina leaves the Via Praenestina and Campus Esquilinus to the left, to run 120 stades to Collatia (5.3.9). However, the archaeological evidence cited here merits closer scrutiny.

Fabretti argues that a gate (closed at this time) in the Aurelian Wall, between the Porta Maggiore and Porta S. Lorenzo, accommodated the Via Praenestina. A postern gate in the area has indeed been documented by modern topographers; see Lanciani, *FUR*, 24; Richmond, 231–32. Richmond names it “the postern of the Licinian Gardens” and also observes that the gate may “have served a road passing through the Horti Liciniani, in front of the *nymphaeum* known as the temple of Minerva Medica,” a monument that Fabretti specifically mentions in this discussion. Fabretti also cites traces of an ancient road described by Famiano Nardini (perhaps to be identified with the road labeled “Via Strata” in Lanciani *FUR*, 24), as well as the orientation of the north and south sides of the “Trophies of Marius” *castellum* just outside the Porta Esquilina, as evidence of the course of the Via Praenestina.

Fabretti’s argument from the “Trophies of Marius” is particularly interesting, since the orientation of the third century A.D. *nymphaeum* might well have been determined by surrounding street patterns; certainly, the modern Via di Porta Maggiore, which follows the line of the southern side of the *castellum*, appears to indicate the course of an ancient route directly to the Porta Maggiore itself. The northern orientation of the *castellum* is, however, more problematic: a road running at that angle would pass far north of the Minerva Medica *nymphaeum* and would meet the circuit of the Aurelian Wall, not at the postern of the Licinian Gardens, but much further to the northwest, near the second curtain of the wall south of the Porta S. Lorenzo. Fabretti’s argument is therefore not persuasive.

However, Fabretti’s methodology, that of arguing from the orientation of the “Trophies of Marius” *nymphaeum* to reconstruct the course of the roads it fronts, demonstrates ingenious foresight, even if his conclusions are incorrect. Fabretti was not (and could not have been) aware of the most telling archaeological evidence for the courses of the Via Labicana and Via Praenestina, that of the plan and orientation of the tomb of Eurysaces just outside the Porta Maggiore. This evidence was unknown to Fabretti because in the seventeenth century, the tomb was still encased in a semicircular tower of the gate complex, not cleared until 1838. The trapezoidal form of this tomb of the late first century B.C. and its orienta-

tion indicate clearly what Fabretti sought to argue from the evidence of the “Trophies of Marius,” the bifurcation of the two roads the tomb fronts one kilometer from the Porta Esquilina. The two routes in question must be the Via Praenestina and Via Labicana.

Strabo’s comment (5.3.9) does not conflict with this interpretation of the evidence. Strabo merely locates the point of divergence in the Campus Esquilinus, the size and extent of which are unknown. This campus was certainly bounded by the Esquiline necropolis to the south but may well have extended as far east as the circuit of the Aurelian Wall or even beyond it. See *LTUR*, 1:218–19 (F. Coarelli); Richardson, 64–65.

One last piece of evidence omitted by Fabretti must also be cited here: the ancient name *Porta Praenestina* for a gate in the Aurelian Wall clearly indicates that the gate was identified with the course of the Via Praenestina and the destination of Praeneste reached by the road passing through it. Fabretti’s arguments about the courses of the Via Tiburtina and Via Praenestina are therefore incorrect; his methodology, however, was sound. We are left with the impression that he might well have argued for a different (and presumably correct) course for the Via Praenestina if he had been aware of the evidence available today.

**Minerva Medica.** The name of a temple listed in the regionary catalogs as in Region V (Esquiliae). Fabretti follows the common attribution of the *nymphaeum* on the Via G. Giolitti between the Via Labicana and the Aurelian Walls to the temple complex. See *LTUR*, 3:255–56 (C. Carlucci); Richardson, 269–70.

**Sextus Rufus.** Fabretti’s citation of the regionary catalogs under this name reflects an erroneous attribution of the listings to an imaginary late-third-century *vir consularis* (former consul), an attribution that originated in Flavio Biondo’s *De Roma instaurata* (Venice, 1510) and that later led to the *Sexti Rufi V. C. de Regionibus Urbis Romae Libellus* published by Onofrio Panvinio as part of his *Reipublicae Romanae commentariorum libri tres* (Venice, 1558). Panvinio’s text of Rufus, however, was in actuality a compilation of Pirro Ligorio, a fact unknown to Fabretti, who attacks Ligorio frequently elsewhere. For discussion, see *VZ*, 1:200–206; Jordan, 2:300–302.

**Nardini’s double agger.** Although Fabretti cites Famiano Nardini to support his own arguments for the course of the Via Praenestina in this section, he vigorously attacks Nardini for having posited a double *agger*

along the eastern circuit of the “Servian” Wall, the first constructed by Servius Tullius and a second by Tarquinius Superbus. This error, he argues, is based on a distorted reading of Strabo and Dionysius’s *Antiquitates Romanae*. For the text of Dionysius, Fabretti cites the sixteenth-century translation of **Gelenius** (Siegmond Ghelen, 1497–1554) and the later edition by **Friedrich Sylburg** (1536–96).

**The circuit of the walls.** Fabretti’s final subject in this section is criticism of **Justus Lipsius** and **Philip Clüver** for positing extensive walls for Athens to make sense of Dionysius of Halicarnassus’s comparison of the size of Rome and Athens at *Antiquitates Romanae* 4.13.4–5. Fabretti’s criticism of these two scholars seems gratuitous, perhaps inserted only to introduce his praise of the Jesuits **Alessandro Donati** and **Athanasius Kircher**; however, Fabretti severely criticizes Kircher elsewhere, in the first and second dissertations (I.2, II.4b) and later in this one (III.4c–d, 6).

#### 4. THE NUMBER OF THE AQUEDUCTS

Because Fabretti’s introduction to Giulio dei Conti did not directly indicate the specific subject of this dissertation (in contrast to the introductions of the first two dissertations), the author begins by citing famous passages of Dionysius, Strabo, Pliny, Frontinus, Cassiodorus, and Rutilius Numantianus on the achievement of the Roman aqueduct system. Lipsius (157–61) cites the same passages in his chapter on the aqueducts.

##### a. Frontinus’s Evidence and Pliny

The discrepancy between Frontinus’s listing of nine aqueducts (*Aq.* 4) and Pliny’s cite of seven (*HN* 36.123) permits Fabretti to attack Nardini once more; otherwise, his citation of Pliny appears gratuitous.

##### b. The Evidence of the Regionary Catalogs and Procopius

As claimed here, Fabretti appears to have been the first to confront the discrepancies between Frontinus’s listing of nine aqueducts (*Aq.* 4), the citation of fourteen aqueducts by Procopius, the much longer listings of water sources found in the fourth-century regionary catalogs, and the list



given by Publius Victor. As in his first dissertation (I.3), Fabretti treats Victor as an authentic source—indeed, presenting his evidence before that of the *Notitia Imperii*.

Fabretti does not specify the edition of the *Notitia* he cites here, but it appears to have been that of **Guido Panciroli** (1523–99), whose *De quatuordecim regionibus urbis Romae earumdemque aedificiis tam publicis quam privatis libellus* was first published in Rome in 1602 and was reprinted several times in the seventeenth century; Panciroli's text also appears in Graevius, 3:383–456. Fabretti cites Panciroli by name in his discussion of the Aqua Annia and Aqua Ciminia later in this dissertation (III.6).

Procopius's citation of fourteen aqueducts (*Goth.* 1.19.3) provides a starting point for the discussion. Fabretti logically begins with the smaller number from Procopius because it is directly concerned with conduits, not water sources, and can be more easily reconciled with Frontinus than can the longer lists of the regionary catalogs.

### c. The Aqua Crabra

Fabretti's identification of this conduit as Rome's tenth aqueduct is based primarily on the evidence of Frontinus's *De aquaeductu* 9.5, which Fabretti quotes at length, although glossing the text of Frontinus to support his argument; the commentator of the Barbiellini edition writes (143 n. c): "Cuius loci Frontiniani verba Fabretti nonnihilo detorsit, quamquam sensus est idem prorsus" [Fabretti twists somewhat the words of this passage of Frontinus, although the sense is indeed the same]. The major change is Fabretti's citation of the phrase "hanc Aquam ab Agrippa emissam" (which he glosses with the phrase "a ductu Iuliae exclusam") for the manuscript reading "hanc Agrippa omisit."

Fabretti seems unaware, however, that in this notice on the Aqua Crabra, Frontinus may have been describing a natural stream, not an aqueduct proper. For a summary of the evidence, see Hodge, 448 n. 17.

Fabretti accepts Frontinus's description of the Crabra as an aqueduct "in agro Tusculano" (in Tusculan territory [Aq. 9.5]), arguing that it ran underground near the Villa dei Centroni at the ninth milestone of the Via Latina, then emerged to be channeled into an artificial aboveground canal for delivery to Rome. Much of this argument is highly problematic, the result of a faulty understanding of the evidence. As the commentary to the first dissertation (chap. 3) indicates, the water brought to Rome by the

ancient conduit that Fabretti describes here was that of the twelfth-century Marrana Mariana, introduced by Pope Calixtus II to supply the area around S. Giovanni in Laterano. Calixtus used part of the *specus* of the Aqua Claudia below the Villa dei Centroni for his conduit, then channeled the water in an open canal for delivery into Rome. The channel can be seen today between the arches of the Claudia/Anio Novus and the substructure of the Aqua Marcia in the area of Roma Vecchia; for a description, see Aicher, 97.

Fabretti is certainly correct in recognizing the emissary as an ancient construction (see Ashby, 222 n. 5 [262 n. 131]), but he is wrong in identifying its water as that of the Aqua Crabra; Callixtus's aqueduct was in fact fed by sources that had supplied the Aqua Julia. It is also surprising that Fabretti pays absolutely no attention to conduit levels in his discussion here.

Fabretti's additional statement that the Crabra receives water from the same sources supplying the ancient Tepula and Julia introduces criticism of the author of a contemporary guidebook, **Fioravante Martinelli**, whose *Roma ex ethnica sacra exposita* was published in 1653.

The **Villa dei Centroni**, which made extensive use of water in its architecture, was certainly supplied by an aqueduct linked to a castellum some seven hundred meters southeast of the complex; the source of its water, however, is unknown. For a description, see de Rossi, *Bovillae*, 70–98 (nos. 101, 109–10); Quilici, *Via Latina*, 133–37, table IV; Ashby, *Campagna*, 159–60.

Fabretti goes on to argue that the rationing scheme described by Frontinus was perhaps followed as well in distribution of the Crabra within the city, citing the evidence of an inscription found on the Aventine (*CIL* VI, 1261), without directly connecting it with the Crabra itself. The inscription, which depicts what appears to be a plan of an aqueduct, with reservoirs and sluices marked, along with names of property owners and a schedule of distribution, does not identify its conduit. Mommsen (*CIL* VI, 1261) attributed the inscription to the Aqua Crabra, but the aqueduct it depicts may well have been one in a nonurban setting; see Bruun, 87 n. 48, for a description of the plan and its listings.

In fairness to Fabretti, it should be noted that he cites and illustrates the inscription only to document a rationing scheme comparable to that described by Frontinus in *De aquaeductu* 9.5; Fabretti does not specifically identify the aqueduct shown as the Crabra. Although he was in error in



identifying what was the papal Marrana Mariana as the Aqua Crabra itself, Fabretti's citation of the inscription to illustrate the staggered system of distribution described by Frontinus in *De aquaeductu* 9.5 was remarkably astute, perhaps our earliest documented attempt to link epigraphical and literary evidence on this point. Poleni (41 n. 16) comments on Fabretti's observation here about possible distribution by allotments of time. That such arrangements were used in ancient Rome is now confirmed by the discovery of an inscription indicating staggered distribution of the Aqua Alsietina (*CIL* VI, 31556). See Ashby, 183–84 n. 1 (214 n. 9).

Fabretti's next argument is to identify the Aqua Crabra with the Aqua Damnata listed in the regionary catalogs. This identification, supported only by his gloss of the textual evidence of Frontinus's *De aquaeductu* 9.5 mentioned earlier in the commentary on this section ("emissam, improbatam, atque exclusam"), is not persuasive, especially since the water of the Aqua Crabra itself was not brought to Rome. No topographer to date, however, has made convincing sense of the name *Aqua Damnata*. A recently discovered citation in a thirteenth-century Hebrew translation of a commentary by Galen suggests that the Aqua Damnata may well have been a mineral spring with therapeutic properties in the *ager Romanus* rather than an aqueduct proper; see. A. Wasserstein, "Aqua Damnata," *Hermes* 103 (1975): 382–83; *LTUR*, 1:65 (D. Palombi); Richardson, 17.

To close this part of his discussion, Fabretti devotes considerable attention to another topic not in dispute, the course and length of the Almo (or modern Caffarella), a natural tributary of the Tiber (shown as the Almo Fluviolus in figs. 31–32); this introduces criticism of Kircher and Georg Fabricius for their errors about the Crabra. Finally, Fabretti returns to the passage of Procopius cited earlier, to argue that the details it gives about the brick construction and dimensions of Rome's aqueduct channels are not to be taken literally; this comment introduces a sharp attack on two other scholars, **Robert Keuchen** (1636–73) and **Thomas Dempster** (ca. 1579–1625).

Keuchen, whose edition of Frontinus appeared in Amsterdam in 1661, is severely criticized for having confused *libratio* (the term Frontinus uses for the elevation of the aqueducts) with the dimensions of the conduits themselves. Poleni (6–7 n. 8) comments on Fabretti's criticism here, "Quam turpiter autem hallucinatus sit in sua Nota adcitata verba Keuchenius, qui hanc altitudinem, ceu *altitudinem subterraneorum meatuum et fornicum* sumere visus est, si scire cupit, is consulat Fabrettum, a quo satis iam, immo fortasse nimis, Keuchenius vapulat" [If someone wants to know how



disgracefully Keuchen, who took “elevation” here as the height of the underground channels and arches, wandered in his misinterpretation of the words cited in his note, he should consult Fabretti, by whom Keuchen is thrashed sufficiently—indeed, perhaps too much].

Keuchen’s source for this misinterpretation was the *Antiquitatum romanarum corpus absolutissimum* of Dempster, a Scottish scholar who studied in Europe and eventually became a professor at Bologna. Most famous for his study *De Etruria Regali* (Florence, 1723–24), a comprehensive account of the Etruscans published a century after his death, Dempster reprinted, with corrections and additions, the *Antiquitates romanae* of Johann Rossfeld, or Rosinus, in 1585. For accounts of his life and career, see R. Leighton and C. Castelino, “Thomas Dempster and Ancient Etruria: A Review of the Autobiography and *De Etruria Regali*,” *BSR* 58 (1990): 337–52; *EHCA*, 357–58 (C. L. Sowder).

#### d. The Aqua Septimiana

After references to the Aqua Traiana and Aqua Alexandrina, which he designates the eleventh and twelfth aqueducts of the fourteen cited by Procopius, Fabretti identifies as the thirteenth aqueduct what is actually a branch of the Aqua Claudia or Anio Novus supplying the Villa dei Quintilii on the Via Appia. Its arcade is visible today from the Via Appia Nuova near the Gran Raccordo Anulare; nothing, however, is known of its course southeast of the modern Via Appia Nuova, and its point of divergence from the main conduit of the Claudia cannot be determined. After reaching the high ground on which the Via Appia Antica runs, at the area of the Torre di Selce, which Fabretti cites, this branch line runs underground to the villa complex, which seems to have been its terminus. Ashby (223–24 n. 4 [263 n. 137]) writes: “[Fabretti] wrongly says that it goes on to Rome, having seen what he believes to be traces of it between the third and fourth mile on the west of the Via Appia near the tomb of S. Urbano. . . . I have never seen anything of the kind there myself.” Parker (*Aqueducts*, 133) also connected reservoirs in the valley of the Caffarella with this aqueduct, which he identified as the Aurelia; but Parker’s observations are too vague to be significant and have been challenged by Ashby (235 [272–74]). For the state of the aqueduct today near the Villa dei Quintilii, see P. Meogrossi, “Villa dei Quintilii: Il restauro dell’acquedotto,” in *Trionfo* II, 211–15; Aicher, 103–4.

Although Fabretti assigns this aqueduct to the Aqua Claudia, he



acknowledges that because of its high level, it may well have been a branch tapped from the conduit of the Anio Novus, which ran at a higher elevation. Modern identification of the branch seems to be in question: Ashby (223 [262]) assigns it to the Claudia from deposit found in the villa itself; Meogrossi (“Villa dei Quintilii,” 211) associates it with the Anio Novus. In contrast to his interest in levels in the first dissertation, Fabretti is surprisingly vague here, both about the elevation of the branch—indeed, stating that exact measurements are unnecessary—and about the course of the aqueduct itself north of the Villa dei Quintilii. As Ashby (224 n. 4 [263 n. 137]) observes, Fabretti later, in his discussion of the Aqua Argentiana (III.4e), qualifies the statements made here about delivery of the Septimiana to Rome, given the absence of any substructure or bridge carrying an aqueduct line along the Via Appia across the valley of the Caffarella.

Fabretti devotes much of his discussion here to sharp criticism of Kircher and Ligorio, ending with a comment from **Salmasius** (Claude de Saumaise, 1588–1653) concerning Scaliger. The reference, however, is cryptic; Salmasius was distinguished for his learned commentaries on the *Scriptores Historiae Augustae* and his *Plinianae Exercitationes* (Heidelberg, 1629), but no specific source for this quote can be identified. The commentator of the Barbiellini edition writes (149 n. a): “In catalogo librorum, qui Claudium Salmasium auctorem agnoscunt, quemque catalogum lucubrationi de illius laudibus, et vita subiiciebat Antonius Clementius, nullus est, qui inscribitur adversus Scaligerum. Quocirca sentiebam, vel Fabretti memoria, qua multum poterat, esse deceptum, vel haec forte a Salmasio aliquo ex multis eius scriptis obiter esse” [In the listing of books with Salmasius as author and in the listing Antonio Clement added to his eulogy of his life, there is no title listed against Scaliger. I feel, therefore, that Fabretti was deceived by his great memory or that perhaps these things were said in passing by Salmasius somewhere in his many writings].

#### e. The Aqua Argentiana

Fabretti’s fourteenth aqueduct in Procopius’s citation is to be identified with remains of a conduit seen in the Fosso di S. Mauro northeast of the ninth kilometer of the modern Via Tuscolana, described by L. Quilici (FI 1.10, 820 [no. 711], figs. 1854–57) and Ashby (126–27 [157–58]; cf. Ashby, “Classical Topography-III,” 140–41. The aqueduct appears to have

been a branch of another conduit supplying a suburban villa rather than a principal aqueduct itself; remains of a large villa were indeed found south-west of it. In contrast to his discussion of the tenth through the thirteenth aqueducts, Fabretti appears very tentative about this last line, saying almost nothing about it and expressing uncertainty about the name itself and whether the aqueduct even reached the city of Rome.

## 5. THE LIMITS OF THE ANCIENT CITY

Fabretti's uncertainty about the aqueducts he calls the Septimiana and Argentiana now introduces a new problem (to which he had alluded in the first dissertation, at I.5), the limits of the ancient city of Rome. He begins this discussion by citing laws implying that Rome extended far beyond the circuit of the "Servian" Wall and the later Aurelian Wall, as far as its built-up area of continuous buildings. This point then permits him to introduce criticism of inconsistencies in Justus Lipsius's arguments on the size and extent of the ancient city; Fabretti cites two passages of Lipsius's treatise *De magnitudine Romana*.

In chapter 3 of his second book ("Magnitudo suburbiorum Romae"), Lipsius included Tibur, Otricoli, Ostia, and Aricia, towns some distance from Rome, in defining the overall area of the city, but in the chapter immediately preceding ("Diuturna opera, et caput omnium Roma"), he had argued that the figures in Pliny's famous passage on the size of Rome, indicating the distances from the Golden Milestone to the individual gates, the *extrema tectorum*, and the circuit of the city's wall (*HN* 3.66–67, quoted and discussed by Fabretti in III.5c), should be emended to reflect a circuit of twenty-three miles and a distance of seven miles from the Golden Milestone to the edge of the built-up area.

Fabretti's discussion of the extent of the ancient city touches on an important problem still unresolved and probably insolvable: the boundaries of ancient Rome were themselves ambiguous and subject to change, according to purpose and definition. For the concept of the *suburbium* itself and its relation to the city, see E. Champlin, "The *Suburbium* of Rome," *AJAH* 7 (1982): 97–117; on the city's expansion into its surrounding territory during the empire, see E. Frézouls, "Rome ville ouverte: Réflexions sur les problèmes de l'expansion urbaine d'Auguste à Aurélian," in *L'urbs*, 373–92.



Fabretti adopts a compromise position on the issue, rejecting Lipsius's arguments for a wide expansion of the city, as well as views of other topographers (whom he does not identify) restricting the boundaries of Rome within the circuit of the republican or imperial walls or its *pomerium*, or sacred boundary. While Fabretti's arguments that the area of the ancient city extended as far as its continuous buildings certainly echo those advanced by modern scholars (on this physical expansion of ancient Rome, see L. Quilici, "La Campagna romana come suburbio di Roma," *PP* 29 [1974]: 410–38), he introduces the point here primarily to support later arguments that those aqueducts that did not run all the way to the city itself are still to be considered part of Rome's system and are therefore to be included in both the number cited by Procopius and the number expressed in the regionary catalogs.

#### a. Settlement on the Via Ostiensis

To demonstrate the extension of the populated areas of ancient Rome beyond the circuit of the walls, Fabretti now presents a lengthy discussion of settlements along the major roads issuing from the city. The first road to be treated is the Via Ostiensis, chosen no doubt because it permits Fabretti to include digressions on several problems of urban topography, the identification and location of the Porta Ostiensis, as well as structures he identifies as the Emporium and Navaliam.

The settlement on the Via Ostiensis is that of the **Vicus Alexandri**, located at its third milestone, before the divergence of the Via Laurentina cited by Fabretti. For a description of the topographical and archaeological evidence for the Vicus Alexandri, see R. Lanciani, "Miscellanea topografica," *BC* 19 (1891): 217–22; Tomassetti, 5:154–57. Tomassetti cites the same passage of Ammianus Marcellinus appearing here but rejects Fabretti's statement that a deviation of the Tiber after antiquity divided the original settlement into two parts. Fabretti's topographical map (fig. 31) appears to indicate remains of a settlement on the west bank of the Tiber directly across from the Vicus Alexandri itself.

The Vicus Alexandri appears to have been a settlement that grew up on either side of the Via Ostiensis, probably to be connected with shipping operations along the river. Ammianus's notice that the obelisk brought by Constantius was off-loaded at the Vicus Alexandri for transport by land

into the city through the *Porta Ostiensis* seems significant here for understanding the location and growth of the settlement.

The **Porta Ostiensis** (or the modern *Porta S. Paolo* of the Aurelian Wall) is Fabretti's first topic of digression. While the location and history of the gate are firmly established today (see Richmond, 109–21; *LTUR*, 3:307–8 [G. Pisani Sartorio]), many antiquarians from the fourteenth century on, including Flavio Biondo and Alessandro Donati, had identified the *Porta S. Paolo* with the *Porta Trigemina* of the “Servian” Wall, arguing that the *Via Ostiensis* issued from that gate; for example, Giovanni Battista Falda's 1676 map (Frutaz, 3: table 363) labels the gate “*Porta s. Paolo o Trigemina*.” For discussion, see Tomassetti, 5:18–19.

Fabretti refutes this identification from the evidence of Ammianus mentioned earlier, demonstrating that the route of Constantius's obelisk through the *Porta Ostiensis* could not have been through Region XII (the *Piscina Publica*) unless the obelisk had entered the city through a gate in the area of the *Porta S. Paolo*. To strengthen his argument, he also cites a passage of the *Historia Augusta* concerning the *Septizodium*—a monumental facade constructed by Septimius Severus in the southeast corner of the Palatine—to demonstrate the importance of the approach to the Palatine from the *Porta Ostiensis*. The *Septizodium* itself, as Fabretti remarks, had stood until the late sixteenth century, when its demolition was ordered by Pope Sixtus V. See Richardson, 350.

In contrast to his earlier interest in posterns of the Aurelian Wall in his discussion of the *Via Tiburtina* and *Via Praenestina* (III.3), Fabretti here seems to accept the *Porta S. Paolo* as the sole *Porta Ostiensis*, disregarding the evidence of the small postern (commonly named the *Porta Ostiensis West*) that appears to have served the *Emporium* along the Tiber. Because this *Porta Ostiensis West* had been closed at the time of Maxentius, the gate certainly would not have figured in the transport of Constantius's obelisk. For the *Porta Ostiensis West*, see Richmond, 219–21; *LTUR*, 3:308 (G. Pisani Sartorio). Fabretti does argue sensibly from the physical remains of the *Via Ostiensis* itself that the *Porta Ostiensis* must have occupied the position of the modern *Porta S. Paolo*.

#### (1) *The Emporium*

Fabretti's discussion of the *Porta Ostiensis* and *Porta Trigemina* now permits a further digression on structures he identifies as the **Navalia** and



**Emporium.** Fabretti supports Alessandro Donati's identification of the Porta Navalis with the Porta Trigemina, as well as Donati's location of the Navalía near the Aventine. Donati (252–53 [= Graevius 3:788–89]) had cited the difficulties of positing a location for the ship sheds further up the Tiber in the Campus Martius: “Neque enim Navalía fuerunt in Campo Martio, qui campis illis [Prata Quinctia] est obiectus; etsi non omnibus, et ultra, ad pontem usque Milvium protensis. Quo modo enim si ibi fuissent, intersepto pontibus fluvio, onerariae magnaëque naves praealtis malis, velisque diffusis eo deduci potuissent . . . Ergo enim ad Aventinum, et prima urbis moenia Navale, quo comodus esset traiectus a mari; ut hodie Tiberinus ille tractus navibus opportunam stationem praebet. Porro ager ille quattuor iugerum, seu prata Quinctia, ubi horti sunt ad Aedem S. Francesci, trans tiberim fuere. Neque negotium facessit Plinius scribens: *Cincinnati aranti quatuor sua iugera in Vaticano*. Ut enim Vaticaní montes a ponte Milvio ad Ianiculum pertinent: ita et campi. Qui enim trans Tiberim intra illos montes iacent, vaticani sunt” [Indeed, the Navalía were not in the Campus Martius, which is set against the Prata Quinctia, although not all of them were extended as far as the Pons Milvius and beyond. For if they had been there, since the river was restricted by bridges, how could large merchant vessels with tall masts and full sails have been brought to that point? . . . The Navalía were therefore at the Aventine and the first walls of the city, where there might be an easy passage from the sea, as today that stretch of the Tiber offers a suitable moorage for ships. Furthermore, that field of four *iugera*, or the Prata Quinctia, were across the Tiber, where there are the gardens at the Church of S. Francesco. And Pliny does not create a difficulty when he writes, “to Cincinnati plowing his four *iugera* in the Vatican,” for just as the Vatican mountains run from the Pons Milvius to the Janiculum, so, too, do the fields; those that lie below the mountains across the Tiber are Vatican].

Location of the Navalía remains a problem today, the result of confusing topographical evidence. See, for example, Richardson, 266; *LTUR*, 3:339–40 (F. Coarelli). Onofrio Panvinio, whom Fabretti cites in this passage, had indicated that the Navalía were in Region XIV of the ancient city (see Graevius, 3:377A). Ligorio's argument for the location of the ship sheds is unknown; the commentator of the Barbiellini edition writes (154 n. b): “Quae de situ Navalís Ligorius disputat, ea forte inter illius MSC. adhuc delitescunt” [What Ligorio argued about the location of the Navalía perhaps still lies hidden in his manuscripts].

Fabretti devotes much more attention in this passage to a plan and reconstruction of the adjacent vaulted structure (commonly identified as the “Porticus Aemilia”) situated along the Tiber in the Testaccio area of modern Rome. Fabretti’s description and diagrams are our earliest detailed account of an area not systematically excavated and studied until the mid-nineteenth century and now very much obliterated by buildings of the modern city. For discussions of the complex and nearby structures, see *LTUR*, 2:221–23 (C. Mocchegiani Carpino); Richardson, 143–44; Nash, 1:380–86, 2:238–40; S. L. Tuck, “A New Identification for the ‘Porticus Aemilia,’” *JRA* 13 (2000): 175–82.

Fabretti’s description of the area begins with a quotation of a letter from **Flaminio Vacca** to Anastasio Simonetti of Perugia (which Fabretti also cited in his account of the Monte del Grano in his first dissertation [I.6]), then moves to a presentation of inscriptional evidence found on the site. Vacca describes in particular the large assortment of marbles off-loaded in the vicinity, from which the area derived the modern name *Marmorata*. See Richardson, 244.

Other scholars are also cited in this discussion. **Pomponio Leto** (Julius Pomponius Laetus, 1425–98) was a leading humanist of the fifteenth century who tilled his land according to the instructions of Varro and Columella and whose vineyard on the Quirinal was frequented by his students: see Sandys, 2:92–93; *EHCA*, 678–79 (I. Rowland). **Jacopo Mazochi** published the first printed collection of inscriptions in Rome in 1521; see J. E. Sandys, *Latin Epigraphy* (Cambridge, 1919), 24–25.

## b. Other Settlements on Main Roads

Fabretti’s discussion of settlements along major arteries now becomes much briefer, organized by individual roads from the Via Ostiensis, in counterclockwise fashion. He first discusses the **Via Ardeatina**, which he describes (and depicts on his topographical map [fig. 31]) as branching off from the Via Appia close to the Almo (or modern Caffarella) stream. Some topographers have posited a separate course for the first stage of the Ardeatina, starting from the Porta Ardeatina of the Aurelian Wall and running due south from it, although there are no remains of the bridge by which it crossed the Almo: see *LTUR*, 3:300–301 (G. Pisani Sartorio); Tomassetti, 2:485–86. However, Fabretti’s reconstruction appears to be supported by Ashby (*Campagna*, 207): “The Via Ardeatina at present



diverges to the right from the Via Appia at the Church of *Domine quo vadis?*, and I think we must suppose that it always did so." Cf. L. Quilici, "La posterula di Vigna Casali nella pianificazione urbanistica dell'Aventino e sul possibile prospetto del Tempio di Diana," in *L'urbs*, 713–45, linking the Porta Ardeatina with an ancient street running from the gate to the Via Appia Antica north of the Almo, as Fabretti indicates in figure 32.

Fabretti's settlement along the Ardeatina as described here and depicted on figure 31 (no. 9) is to be identified with Maxentius's circus/palace complex along the Via Appia Antica, along with other ancient structures connected with the estate of Herodes Atticus extending east to the Church of S. Urbano off the modern Via Appia Pignatelli. For a general description, see Quilici, *Via Appia*, 34–43; Pisani Sartorio, *La villa Massenzio*. Fabretti describes this complex and its structures as the first settlement along the **Via Appia**, identifying the area as Ad Camoenas, with the name given to it by Famiano Nardini. The name itself is incorrect, since the Vicus Camenarum is rather to be located in the immediate vicinity of the Porta Capena, according to our evidence; see Richardson, 63–64, 421. Fabretti cites a second settlement, Statuarii, at the fifth milestone of the Appia, to be identified with the imperial complex of the Villa dei Quintilii, also shown in figure 31 (no. 10).

Fabretti also describes a branch of the Aqua Claudia crossing the valley of the Caffarella on an arcade of four hundred paces (fig. 31, no. 19), now completely lost. However, as Ashby, (234–35 [272–73]) observes, the arches do not appear on the famous maps of Ameti (1693) or Cingolani (1704). Lanciani (277) attributed them to a channel supplying the so-called *nymphaeum* of Egeria. This arcade cited by Fabretti cannot be attested and therefore remains one of the mysteries of Roman aqueduct hunting.

The first **Via Latina** settlement, which Fabretti tentatively names the Pagus Lemonius (fig. 31, no. 17), is to be identified with the area of the Via del Quadraro and nearby "Villa delle Vignacce." See Quilici, *Via Latina*, 62–65. The second is the imperial complex at Settebassi (fig. 31, no. 20), on which see N. Lupu, "La villa dei Sette Bassi sulla via Latina," *Ephemeris Daco-romana* 7 (1937): 117–88. For the branch line of the Anio Novus supplying Settebassi cited by Fabretti, see Ashby, 228 (266–67); Van Deman, 322; Aicher, 102.



Fabretti's **Via Praenestina** settlement (fig. 31, no. 5) is the complex commonly known as the Villa dei Gordiani. Fabretti says extremely little about it but moves directly to a much longer discussion of the **Via Collatina**, where he does not cite particular remains of a settlement but instead attacks the topographical work of Lucas Holste and Georg Fabricius.

Fabretti had strongly criticized Holste on his reading of the topography of the Via Praenestina at the end of the first dissertation (I.7); in like spirit, he now censures him for arguing that the Via Collatina diverged from the Via Praenestina in the vicinity of the Villa dei Gordiani. Although some modern topographers reconstruct the beginning of the Via Collatina from that point (see Coarelli, *Dintorni di Roma*, 129), the ancient Via Collatina probably followed a course separate from the modern road until its fifth kilometer: see Ashby, *Campagna*, 143; Tomassetti, 3:554; Richardson, 415. Fabretti is therefore correct on this point.

Fabretti is wrong, however, in his attempt to identify Castellaccio dell'Osa as the ancient Collatia, more accurately located by modern topographers on the site of the modern Lunghezza. See FI 1.10, 199–237; Ashby, *Campagna*, 145; Tomassetti, 3:569–75. The *castello* of S. Giuliano cited in this discussion no longer exists, its name surviving only in the name of a trench just east of the site of Gabii on the Via Praenestina; see Tomassetti, 3:570. As in his first dissertation, Fabretti's censure of Holste here is harsh, but he reserves his greatest scorn for Fabricius, whom he quotes to demonstrate a faulty knowledge of the Roman Campagna and to introduce the next two roads.

Settlements along the **Via Tiburtina** and **Via Nomentana** are also not discussed. Fabretti simply repeats arguments made earlier about the course of each road near the Castra Praetoria and promises that there will be further explanation later in the dissertation. Likewise, Fabretti is unable to cite particular settlements along the **Via Salaria**, **Via Flaminia**, and **Via Triumphalis**; for the last two roads, he indicates only their courses through the Campus Martius and an area that he identifies, without explanation, as the Campus Minor. However, the name and location of the Campus Minor are problematic: see *LTUR*, 1:224 (T. P. Wiseman); Richardson, 67. Indeed, Fabretti seems ready to end this part of his discussion as quickly as possible and move to the next topic, an attempt to make sense of Pliny's famous description of the size of ancient Rome.



### c. Measurements from the Golden Milestone

Fabretti now tackles one of the most problematic passages in our literary sources on the size of the ancient city, Pliny's demonstration in his *Natural History* of the size of Rome through measurement of distances from the Golden Milestone in the Roman Forum to the gates of the city and of the lengths of the streets from the same point to the edges of the built-up area (*HN* 3.66–67). Fabretti's citation is partial, omitting Pliny's comments on the number of the gates themselves, primarily because the question was not directly germane to his immediate argument (and certainly would have complicated his earlier discussion of the gates along the eastern *agger* in III.3). The figures Fabretti cites for the sum of the distances from the Golden Milestone to the gates (thirty miles and 765 paces) and from the milestone to the edge of the built-up area (seventy miles) also differ from those accepted by modern editors of the *Historia Naturalis*: while Fabretti's figures are not without manuscript authority, Mayhoff's Teubner edition (*C. Plini Secundi Naturalis historiae libri XXXVII* [Leipzig, 1933], 1:257–58) gives twenty miles and 765 paces, and sixty miles, respectively, for these distances.

The discrepancy between the distances from the Golden Milestone to the gates is not important, because it does not figure in Fabretti's argument. However, his reading of seventy miles as the sum of the distances from the milestone to the edge of continuous inhabitation along the principal roads becomes quite significant, because Fabretti takes it as the foundation for presenting a rough calculation of distances from the milestone to individual settlements along the routes, resulting in a total of 70,500 paces.

Fabretti's argumentation is ingenious but flawed. To produce this figure, roughly equivalent to the seventy miles given by Pliny (itself open to question in the manuscript tradition), Fabretti bases his case on three premises. The first is that the Via Tiburtina and Via Nomentana both led to the *Castra Praetoria*, issuing from the city at that point, not through the gates in the later Aurelian Wall that have been traditionally assigned to them. This assumption rests on Fabretti's earlier arguments concerning the course of the roads in III.3. The second premise is that there was once an ancient settlement (for which Fabretti can cite no physical evidence remaining in the seventeenth century) on the Via Salaria, approximately three and a half miles from the Golden Milestone. The third premise is

that the Via Triumphalis began at the “Servian” Wall and ran across the Campus Martius (which Fabretti identifies as the Campus Minor) to the area of the Pons Neronis, as indicated in figure 32, a distance included in Fabretti’s calculations. However, the topographical evidence for the course of the Via Triumphalis makes this extremely doubtful; see Richardson, 419–20.

Fabretti appears unusually defensive about his attempts to confirm the distances given in Pliny’s passage, conceding that some readers may find them “insolentia” [presumption] and “audacia” [boldness]. By no means is his argument persuasive, but this discussion is a highly interesting attempt to make sense of a notoriously difficult passage, a convincing interpretation of which continues to elude topographers to this day.

Fabretti’s main purpose was to demonstrate that ancient Rome extended to the edge of the built-up area of continuous inhabitation; as a result, aqueducts delivering water to such areas outside the later circuit of the imperial wall are here considered among the fourteen lines cited by Procopius. Fabretti concludes this section with criticism of Famiano Nardini and Onofrio Panvinio, for having exaggerated the size of the ancient city, and with an even more pointed attack on Ligorio, for incorrect statements about the Aqua Alsietina. Panvinio, in his *Descriptio urbis Romae*, had indeed argued for expanding the boundaries of Region I far beyond the line of the Aurelian Wall: “Haec a Porta proxima denominata est Capena, quae omnia loca, quae tunc circa eam partem tam in urbe quam extra, usque as basilicam S. Sebastiani obtinebat” [This region, which held all the places in that area both in the city and outside it, up to the Basilica of S. Sebastiano, took its name from the Porta Capena very close by] (quoted in Graevius, 3:350). Panvinio’s extension of Region I far outside the city was no doubt influenced by the common identification of the Porta Capena itself with the Porta S. Sebastiano, a point refuted by Fabretti in his first dissertation (I.4d).

Ligorio’s statement about distribution of the Aqua Alsietina to the Campus Martius was based on confusion of the Naumachia of Augustus in the Transtiber with another in the northern Campus Martius, possibly a construction of Domitian; see Richardson, 265–66. In correcting him, Fabretti cites Frontinus’s *De aquaeductu* 85, stating that the Alsietina was consumed entirely outside the city. At the time Frontinus wrote his treatise in A.D. 97, the Naumachia of Augustus had probably long ceased to function as a naval amphitheater, and the aqueduct’s water was therefore



distributed outside the city for irrigation and other industrial purposes. For a full discussion, see Taylor, "Torrent or Trickle," 471–74.

**Celso Cittadini** (1553–1627), whom Fabretti cites in his criticism of Ligorio, was a Sienese linguist who produced works on the Latin origins of the Tuscan language. See *DBI*, 26:71–75 (G. Formichetti). Cittadini's criticism of Ligorio here is quoted in Fioravante Martinelli's *Roma ex ethnica sacra* (429), from which Fabretti may have drawn the quotation in this passage.

## 6. THE WATER SOURCES LISTED IN THE REGIONARY CATALOGS

Fabretti now addresses the problem (introduced earlier) of making sense of the listing of water sources in the regionary catalogs in light of Procopius's notice of fourteen aqueducts in Rome. He bases his discussion on the summary of twenty aqueducts given in the listing of Publius Victor cited earlier in this dissertation (III.2b).

The first four sources listed in Victor (the **Appia**, **Marcia**, **Virgo**, and **Claudia**) present no problems. The fifth, the **Herculanea**, Fabretti argues, is to be identified with the Rivus Herculaneus tapped for supplementing the volume of the Anio Novus in the upper Anio Valley. His observation that the Herculanea is listed in the catalogs in place of the Anio Novus itself (nowhere listed in the regionary catalogs) is plausible; however, modern topographers identify the Herculanea with a branch of the Aqua Marcia called the Rivus Herculaneus, distributing water over the Caelian Hill within Rome: see Jordan, 2:224; Richardson, 17. Fabretti does cite the Rivus Herculaneus of the Marcia in this discussion, but he mentions it primarily to correct Alessandro Donati concerning its name and to introduce additional criticism of Ligorio.

Ligorio's *Collectanea* is a massive encyclopedic work on antiquity in eighteen manuscript volumes, now in the Italian National State Archives in Turin. There is also a copy made for Queen Christina of Sweden in the collection of the Vatican Library (Codices Ottoboniani latini 3364–77), but it is incomplete, lacking the first part of the A volume; in addition, the N–O volume is to be found in the Vatican Library's Barberini collection (Barb. lat. 5085), having apparently been stolen at some time from the library of Palazzo Altamps. For a full discussion, see T. Ashby, "The

Bodleian MS. of Pirro Ligorio," *JRS* 9 (1919): 172 n. 5. All citations of Ligorio's *Collectanea* in the notes are taken from the Vatican Library copy.

Fabretti then cites the **Tepula** and **Damnata** as the water sources listed sixth and seventh. The Tepula, cited by Frontinus, presents no problems, but Fabretti's identification of the Damnata with the Aqua Crabra discussed earlier (III.4c) is clearly in error.

The eighth water source listed, the **Traiana**, reintroduces points made in the first dissertation (I.4g) and criticism of earlier topographers, particularly Andrea Fulvio, who had associated it with a reworking of the Aqua Virgo, and Giovanni Pietro Bellori, who had identified it with a Trajanic extension of the Aqua Marcia to the Aventine. As in the first dissertation, Fabretti does not name Bellori here directly. Fabretti repeats his previous argument that the Aqua Traiana entered Rome over the Janiculum, but he now adds an observation omitted in the first dissertation, that Trajan's aqueduct also delivered to the eastern bank of the Tiber. He cites an inscription of a lead pipe purportedly found on the Aventine, attesting to supply by the Aqua Traiana to the *Thermae Variane*.

The inscription introduced here had an interesting history of its own; since Fabretti cites only Gruter as his source, he was apparently unaware that the inscription was a fabrication of Pirro Ligorio, included in the edition of the reginary catalogs published by Onofrio Panvinio in 1558; see Lanciani, 511 (no. 81). Like Gruter and other topographers, Fabretti appears to accept the inscription as genuine—indeed, as evidence that the Aqua Traiana was brought to the Aventine. He therefore argues that water of the aqueduct was carried through pipes over the Pons Aemilius, citing Frontinus (*Aq.* 11.2) and Statius (*Silv.* 1.3.67) for examples of similar bridge crossings.

The notice from Statius is not pertinent, since the passage from the *Silvae* cited here refers not to a bridge crossing but to underwater delivery by pipe of the Aqua Marcia to the villa of Manilius Vopiscus at Tibur; see H. B. Evans, "*In Tiburtium usum*," 452. However, Frontinus's notice that water was carried from the eastern bank over bridges to the Transtiber (*Aq.* 11.2) is clear evidence that the Romans used such arrangements within the ancient city.

Although based on a spurious inscription, Fabretti's reconstruction of a bridge crossing for the Traiana was quite farsighted. Until the discovery of inscribed pipes from the Aqua Traiana near the *Thermae Traianae* on the Oppian Hill and publication of the *Fasti Ostienses* citing distribution of



the Traiana “*omni parte urbis*” [in every part of the city] in this century (see H. Bloch, “Aqua Traiana,” *AJA* 48 [1944]: 337–41; A. DeGrassi, *Inscriptiones Italiae* 13.1 [Rome, 1947], 198–200), scholars were unaware that water from Trajan’s aqueduct was delivered to the eastern bank of the Tiber. For the most recent discussion of the evidence, see R. Taylor, “A *Citioire Ripa Aquae*: Aqueduct River Crossings in the Ancient City of Rome,” *BSR* 63 (1995): 91–102, especially 99–100. Although Taylor’s treatment of the evidence cited by Fabretti and modern topographers is carefully presented, his argument that the Aqua Traiana crossed the river on a specially constructed aqueduct bridge south of the Aventine is not convincing.

Fabretti touches on two other points in this discussion of the Aqua Traiana. The first is that the extension of the Aqua Marcia to the Aventine cited by Frontinus (*Aq.* 87) was the work of Nerva, not Trajan, and is therefore not to be associated with the Aqua Traiana. Fabretti made this point earlier, in the first dissertation [I.4c, 4g], against the views of Bellori. But unlike in the earlier discussion, Fabretti argues here from the date of the publication of the *De aquaeductu* in A.D. 97 to demonstrate that this notice in Frontinus cannot refer to a Trajanic reworking of the Aqua Marcia. His second argument on this point, based on the spurious evidence of Ligorio’s inscription, is less persuasive; even if the inscription were genuine, the practice and protocol of Roman pipe stamps are now known to be far more complicated than Fabretti represents here. For a detailed discussion of the problem, see Bruun, 20–95.

The second point is that the Traiana (as restored by Pope Paul V) was again in the seventeenth century, as in antiquity, being used for driving grain mills on the Janiculum. This observation prompts a complaint against the contemporary use of river mills on the Tiber River itself and a description of Belisarius’s floating mills on the river. For the ancient mills on the Janiculum, see *LTUR*, 3:270–72 (M. Bell); Richardson, 258–59. For water mills in general, see O. Wikander, “The Water-Mill,” in Wikander, *Handbook*, 371–400.

For his discussion of the ninth water source listed, the **Annia**, Fabretti follows Guido Panciroli in arguing that the name *Annia* is derived from *Anio* or *Ania*. This explanation is as persuasive as any put forth so far: see Jordan, 2:224; *LTUR*, 1:61 (D. Palombi); Richardson, 15. Fabretti’s discussion also introduces another attack on Ligorio.

Fabretti identifies the tenth water source listed, the **Alsia**, with the *Alsietina* cited by Frontinus (*Aq.* 11.1), who also gives it the name *Augusta*. This reference prompts Fabretti to introduce a digression on three other lines also named *Augusta*: the branch supplementing the *Aqua Marcia* and *Aqua Claudia* in the upper Anio Valley, discussed in the second dissertation (II.4f); a branch supplementing the *Aqua Appia*; and the *Aqua Virgo*, referred to as the *Aqua Augusta* by Dio Cassius. On the notice in Dio, Fabretti is no doubt correct. Even if the name *Augusta* was given to the *Virgo*, as it was to other lines, it does not appear on extant *cippi* of the aqueduct or on the inscription on the *Arco del Nazzareno* commemorating Claudius's reconstruction of it (*CIL* VI, 1245). See Ashby, 168 (200).

The reference to the branch of the *Aqua Appia* also permits Fabretti to introduce a correction of Nardini's observations about the level of the *Appia* at *Spes Vetus*. Here, too, Fabretti is correct: the *Appia* runs underground when it enters the city at *Porta Maggiore*. See Ashby, 51 (67–68); Van Deman, 64. Fabretti's final observation concerns errors made by Francesco Angeloni in his discussion of Augustan aqueducts, to which Fabretti is sharply critical.

Fabretti identifies the eleventh water source listed, the **Caerulea**, with the *Aqua Claudia*, citing Frontinus (*Aq.* 14.8). The twelfth source listed, the **Julia**, is self-explanatory but introduces another attack on Ligorio.

The thirteenth water source listed, the **Argentiana**, described earlier in this dissertation (III.4e), now introduces a lengthy digression on the topography of the *ager Tusculanus*. Fabretti names the aqueduct, less tentatively than in his earlier discussion, from Mount *Algidus*, for which he cites literary references in great detail, in an attempt to fix the location of the mountain on the ridgeline east of *Tusculum* and to correct errors in Kircher's topographical study of *Latium*. **Algidus** is generally fixed today on the high ground southeast of the *Alban Mount*, directly north of *Velletri*: see *Barrington Atlas*, map 43 and Directory, 1:626; F. Melis and S. Quilici Gigli, "Votivi e luoghi di culto nella campagna di Velletri," *Arch-Class* 35 (1983): 19–24.

**Rocca Priora**, which Fabretti describes as occupying the ridgeline of the *Algidus*, is well fixed topographically; for the **monastery of S. Silvestro**, near the modern town of *Monte Compatri*, see Tomassetti, 3:525–26. The **Castra Molaria** cited by Fabretti, in the valley between



Tusculum and the Alban Mount, is identified with the area of Molaria at the twenty-first kilometer of the modern Via Anagnina; see Tomassetti, 4:521–30.

Fabretti treats Kircher with relative restraint but stridently attacks **Jacob Gronovius**, for his emendation of Livy 26.9.11–12, cited earlier in this discussion. Gronovius (Gronov, 1645–1716), a student of his more illustrious father, Johann Friedrich Gronovius (1611–71), was professor of Greek at Pisa and at Leiden from 1679 until his death. In addition to producing new editions of his father's Tacitus, Gellius, and Senecan tragedy, he edited Herodotus and Polybius, Cicero, Livy, and Ammianus Marcellinus. For his career, see Sandys, 2:329.

Gronovius's emendation, which appeared in the third of his *Epistolae in quibus multa Titi Livii loca geographica emendantur* (1678) substituted "Pedo" for the manuscript reading "Algido" at Livy 26.9.11–12; in proposing it, Gronovius interpreted Livy's reference to Algidus as referring to a town, not to the ridgeline east of Tusculum. As Fabretti points out, the emendation makes little sense topographically, since the town of Pedum, the exact location of which is still uncertain, is probably to be placed further northeast, in the area of Gallicano, Zagarolo, and Corcolle. See L. Quilici, "Segnalazioni in margine alla costruenda autostrada Fiano-San Cesareo," *QArchEtr* 11 (1985): 165–66; Tomassetti, 3:596, 645; Ashby, *Campagna*, 137. The ferocity of Fabretti's criticism here, including his coarse pun on the terms *Pedum* and *oppedere*, led to the protracted scholarly battle described in chapter 2 of the present book.

Fabretti's topographical map entitled "Representation of the Double Ridge or Tusculan and Praenestine High Ground and the Course of the Via Latina, according to Strabo" (fig. 37), prepared for his work in progress on the Roman *suburbium*, was first published in his *Ad Grunnovium apologema* and was reprinted in the Barbiellini edition of the *De aquis* in 1788. In contrast to the other topographical maps in the *De aquis*, it is oriented northwest to southeast, to show the valley separating the Alban Mount from the high ground of the Algidus ridge, through which the Via Latina runs. The legend is much less detailed than those in the maps prepared for the *De aquis* itself, focusing on ancient and modern roads and a few of the more prominent ruins of the aqueducts, such as the Ponte Lupo, which Fabretti wrongly assigns to the Aqua Claudia and Aqua Anio Novus.

**Marcus Meibom** (Maybaum, 1630–1710), whom Fabretti cites in his attack on Gronovius, had published a *Liber de fabrica trirremium* (= Grae-



vius, 12:553–680) that provoked severe criticism from **Johann Scheffer** (1621–72), a professor at Uppsala, who issued a fierce response in his *Constantini Opellii De fabrica triremium meibomiana epistula perbrevis ad amicum* (= Graevius, 12:681–704).

The fourteenth water source listed, the **Ciminia**, presents a problem, since its name implies that its water came from the Lacus Ciminius north of Rome near Viterbo, a source from which no aqueduct is attested. Fabretti therefore equates the Ciminia with the Sabatina, which follows immediately in Victor's list, attributing this identification to **Fulvio Orsini** (Fulvius Ursinus, 1529–1600), canon of S. Giovanni in Laterano at Rome, whose large collection of manuscripts and printed books became the center of scholarly and antiquarian interests in Rome. See Sandys, 2:153–54. Fabretti also gently corrects Guido Panciroli for having erroneously associated the aqueduct with a nonexistent Ciminian forest near Tusculum.

The fifteenth water source listed, the **Sabatina**, is easily identified as one of the sources supplying the Aqua Alsietina, through Fabretti's citation of Frontinus (*Aq.* 71.1), with the emendation "Sabatino" for the manuscript reading "Abatino." Likewise, the sixteenth source listed, the **Aurelia**, is readily identified with the Traiana.

Fabretti introduces his discussion of the seventeenth water source listed, the **Septimiana**, with criticism of Nardini, citing the "enumerationem secundarum caducarumque aquarum" [listing of spillover waters] of the regionary catalogs, deliberately alluding to an adjective coined by Frontinus (*Aq.* 94). He then attempts to identify the line with the branch of the Anio Novus (cited in his earlier discussion of Procopius [III.3d]) that ran to the area of the Villa of the Quintilii on the Via Appia. His argument that the aqueduct was named from its delivery to the *Thermae Severianae* in Region I is not persuasive: Fabretti assumes that the bath complex was located outside the circuit of the Aurelian Wall, somewhere in the vicinity of the settlement discussed earlier, south of the Caffarella stream along the Via Appia, and that the aqueduct running to the Villa of the Quintilii at the fifth milestone of the Appia continued northwest along the line of the road, an assumption for which there is no supporting evidence.

Fabretti identifies the eighteenth water source listed, the **Severiana**, with a Severan conduit, probably that of the Alexandrina. He identifies the nineteenth, the **Antoniniana**, through Caracalla's inscription on the Porta S. Lorenzo, which he had also cited in the first dissertation (I.4f).



Fabretti also repeats his early erroneous arguments about the course of the ancient Via Tiburtina, correcting Kircher for a mistaken attribution of the Porta S. Lorenzo inscription to Marcus Aurelius and for his misidentification of the inscription of Titus on the Porta Maggiore. Fabretti concludes this discussion with a much sharper attack on Ligorio's explanation of the Aqua Antoniniana.

Fabretti presents the twentieth through the twenty-fourth water sources listed, the **Alexandrina**, **Anio Novus**, **Anio Vetus**, **Albudina**, and **Crabra**, with little discussion. Only the Alexandrina appears in the listing of Victor published in VZ (1:255–56), and the “new edition” that Fabretti cites as the source for this supplemental listing cannot be identified. In his discussion of these final conduits, Fabretti cites only Frontinus (*Aq.* 14.2) to support his identification of the Albudina with the Claudia. His identification of the Crabra with the Aqua Damnata (presented earlier in III.4c) is of course in error.

Finally, Fabretti turns to one discrepancy between Victor's list and that of the *Notitia*, the listing in the latter of an **Aqua Setina**, which he explains through an argument of scribal error proposed by Nardini. See Jordan, 2:224.

## 7. UNDERGROUND CONDUITS IN ROME

As his final topic, Fabretti discusses remains of several ancient drains within the city to demonstrate that they are not part of the aqueduct system. His topographical observations are limited, since no attempt at a systematic study of Rome's sewers and drains was undertaken until that of P. Narducci in the late nineteenth century (*Sulla fognatura della città di Roma* [Rome, 1889]).

Of the channels cited here, the first is a collector for the Cloaca Maxima in the vicinity of S. Giorgio in Velabro, not far from the Janus Quadrifrons, under which the Cloaca Maxima ran. For its course, see *LTUR*, 1:288–90 (H. Bauer); Lanciani, *FUR*, 29; C. Mocchegiani Carpano, “Le cloache dell'antica Roma,” in *Roma sotterranea*, 171–72. The second is a drain under the Palazzo Grimani on the Via Rasella, just north of the Quirinal Palace, perhaps to be associated with the Fogna della Giuditta. For its course, see Lanciani, *FUR*, 16; Narducci, *Sulla fognatura*, 24–34; Mocchegiani Carpano, “Le cloache,” 170. The third is a drain to be

identified as part of the Chiavica dell'Olmo running south from the Piazza della Minerva to Piazza Mattei. Lanciani shows its course in *FUR*, 21, with the caption "Fabretti p. 183" (a reference to the Barbiellini edition of 1788). See also Nolli, no. 887 (Piazza dell'Olmo), indicating "cloache il di cui imbocco è coperto"; Narducci, *Sulla fognatura*, 34–39; Mocchegiani Carpano, "Le cloache," 170.

Fabretti correctly observes that none of these channels is an aqueduct conduit, although his comments about their appearance ("humili atque abiecta structura" [humble and poor construction]) are too vague to be useful. He correctly cites Festus's notice on the stream of the **Petronia Amnis** to demonstrate the abundance of natural water sources in the city. On the natural springs of ancient Rome, see Lanciani, 220–49; L. Lombardi and M. Polcari, "Acquedotti antichi e moderni," in *Roma sotterranea*, 31–35. However, given the limited knowledge in the seventeenth century about the sewers of ancient Rome, Fabretti was not aware that the Petronia Amnis was probably part of the system of the Chiavica dell'Olmo cited in this discussion. See Richardson, 289–90.

This final section of the dissertation introduces two more attacks on Ligorio, the first for an erroneous explanation of the Petronia Amnis, the second for his misidentification of the water supplied to the Fontana delle Tartarughe in Piazza Mattei, a point on which Fabretti also corrects Famiانو Nardini.

## CLOSING

In contrast to his introduction, full of literary citations, Fabretti closes the dissertation to Giulio with a single quote from Martial, without any specific personal reference to his addressee.