Journal of Ancient Egyptian Interconnections

Orvieto and the Waterways Network

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Abstract
In antiquity "road networks" of various kinds played an essential role in defining the territory and determining where settlements and production villas and farms were to be located. This study deals in particular with the waterways in Umbria, involving rivers such as the Tiber, the Paglia and the Chiani, which were all navigable at the time, and how present place names provide an insight into how these waterways were exploited. Corroborated by archaeological finds, descriptions from ancient authors also provide a lively picture of what these villas were like.

Preface[1]

Two distinct methods of analysis can be used in an attempt to understand the phenomenon connected to the creation and exploitation of a communication and transportation network: physical and chronological. The current connotation of the term "road network" refers to a complex system dependent in turn on the manner in which it is exploited (by rail, wheels, etc.). It might therefore be more correct to think of an ancient system as a network of connectivity, that changes, is updated, "breathes," in line with the historical events connected to the territory in question. The analysis[2] of these networks as presented here will deal first of all with the "waterways," subsequently to be followed by a study of the "land" network. The sciences that deal with the processes involved in the humanization of a territory—and not that alone—can hardly be considered exact since it is after all the human element that furnishes the greatest number of variables. They are sometimes hard to identify and understand, difficult to classify, or even to subdivide into categories.

Any discussion of communication networks must obviously include the waterways. The presence of water was generally one of the requisites for a human settlement, a determining element in the land routes as ineluctable geographic boundaries, along which salt,[3] one of the most important products for antiquity and the Middle Ages, moved.

The Waterways

The area in question in this study includes the Tiber, Paglia, and Chiani[4] rivers, to name only the most important. They were all navigable in antiquity, including the use of a haulage system, where a system of locks[5] permitted the exploitation of rivers with a minimum discharge. In Roman times precise laws regulated river traffic insofar as the *flumen* (a waterway with a permanent flow as distinguished from the *rivus* and which existed even in exceptional periods of drought) vitally enabled free circulation. Drawing water from the river was prohibited so as not to interfere with navigation and the banks were also safeguarded, making access availble to all.[6]

Merchandise was transported from the maritime to the river ports of Rome on the *caudicariae* or *naves cadicariae*, large river barges. [7] Depending on their size, they had no sails, and were drawn by men pulling ropes (the *helciarii* cited in the classic sources[8]) or by oxen, which moved along the riverbanks[9]. This system, known as *alaggio*, or towing, was in use up to the end of the 19th century. The term *alzaia,* or also *alzan,* has a twofold semantic value. It is the rope that serves to pull vessels upstream along the canals. It is the road along the banks or along the river for the transit of the animals and men who were towing the vessels. *Alzaia* is derived from the Late Latin *helciaria* (he who pulls the rope), from *helcium* (yoke) and this from the Greek meaning "to pull."

In the Venetian territory the term *restara* also had multiple meanings: rope, road, station for changing animals, horses or oxen, and tolls (the right of *restara*, a real *ius* of Roman law).[10] *Restara* is also derived from the Latin: *restis*, rope, cord. *Restiarius* is therefore the rope maker (*funaio*). In a broader sense in addition to tow road for the boats the term was also applied to the rope itself. Therefore *restarolus* is he who hauls the boats and the *resta* is the linen tow, the hemp for the ships, also referred to the braid of

vegetable fibers (the *resta* or "rope, string" of garlic or onions). The place name "funara" is also significant, appearing for example in reference to a road near the Nera River in correspondence to the bridge of Augustus, in Narni, that could have had the same meaning or indicate the craft activity connected with the production of ropes.

An analysis of the 1363 cadaster[11] of Civitello d'Agliano provides us with a good idea of the importance of transportation via river in the Middle Ages. Cited are the *sandali* (sandals), flat-bottomed vessels "suitable for sliding over stretches of rapids; in case of riverbeds that are muddy or covered with brush, they easily move without remaining entangled."[12] In 1500, in the stretch Baschi-Orte–Rome, the types of vessels with characteristics suitable for river navigation and of various sizes included *sandali, navicelli, ciarmotte, ciarmottelle, barchette, bastardelle, chiode.* The *navicello* for example was up to 21 meters long and 5 wide, with one or two masts and a hold, the *barchettone* 15 by 4 meters, the *chioda* a sort of floating raft.[13]

The river routes in the territory in question serve as a useful compendium for the subsequent correct identification of the land routes.

The Tiber is obviously the most important river and receives water from the Paglia, which in turn received water from the Chiani and subsequently that of the Nera, as well as a series of minor streams that run through the territory and are often the inroads into the countryside. A series of archaeological elements that determine the parameters for an understanding of the importance, above all in antiquity, of these courses can be identified from north to south. The Tiber is the boundary for the Etruscan territories, those on the right bank of the river: *ripa veientana* and then the *polis* of Veio[14] or *litus Etruscorum*.[15] The Italic populations on the left bank appertain to a Faliscan and/or Umbrian ambience.

In the territory of Orvieto, the river Paglia runs along the valley floor below the butte. Now of a torrential nature, in antiquity it bore the interesting hydronym *Tinia*.[16] Coming from Monte Amiata, it cuts transversally through the territory, creating the Paglia valley, which, broadly speaking, separates the volcanic plateau of the Alfina from the hills at the foot of the massif of Monte Peglia. Towards the source, in the west, are the territories currently part of the administrative areas of Lazio and Tuscany, with Acquapendente at the center, and those gravitating around the upper valley of the Fiora. Limited interest in these western territories together with the meandering nature of the course of the Paglia do not seem to have been conducive to making much use of this stretch of the waterway.[17] One of the settlements controlling the western portion of the Paglia valley seems to have been Castel Viscardo, a hypothesis based on the presence of the necropolis known as Conventaccio or of the Caldane,[18] dating to between the 6th and the 4th century BCE. There was probably a ford along the Via Traiana Nova,[19] just after the ravines that narrow the riverbed coming from Acquapendente. A place name still found in the area is that of Barca Vecchia,[20] or Old Boat, evidently connected to the local geomorphological conditions near the two banks and their use even relatively recently. The road of 108 CE in line with the river followed the orientation of the side roads of the Cassia, which deviated slightly in the direction of Orvieto and crossed the river in loc. Colonnacce[21] before heading towards Ficulle. The so-called Ponte Giulio,[22] currently far from the course of the river due to the migration of the Paglia riverbed,[23] must have served the same function.

The territory of Chiusi lies to the northwest, communicating with the district of Volsini via the *Clanis*, currently a rather modest river, but which, like the Paglia,[24] was navigable in antiquity. The boundary between the areas belonging to the two *poleis* can be identified thanks to the trajectory of the previously mentioned Via Traiana Nova. This more recent road led *a Volsinis ad fines Clusinorum*.[25] On the basis of the miles given in the *miliario* of Monte Regole, the boundaries can be placed in correspondence to the site of the Colonnacce,[26] in the municipality of Ficulle. This interruption was probably due to the presence of stagnant water that led to the formation of wetlands in the lower Valdichiana. In the Middle Ages the area was still characterized by these stagnant waters which was probably why the cultivated fields were abandoned in Roman times, even though an environment of this sort generated an economy connected to water[27] (fishing, canes, hemp). The riverbed of the Chiani has changed and the river had a more abundant flow. This can be conjectured by the presence of a bridge and a sort of containing weir in concrete, significantly called "Murogrosso," near Fabro Scalo,[28] where the water begins its winding torrential route from the Valdichiana towards *Volsinii.* The concern expressed by the Roman Senate in 15 CE with regards to the floods of the Tiber, and the need to regularize the flow of its affluents, is shown in references to such constructions. Five containment structures in opus poligonalis on ditches leading into the Tiber[29] have been documented in the administrative areas of Guardea and Lugnano in Teverina, south of Orvieto. A long series of reconstructions are mentioned in Bianchi–Boscherini–Fuschiotto, where various archive sources including that of the War of Castro are cited. With regards to this war, in 1643 "the wall was destroyed..." on the occasion of the hostilities in the Barberina war. In the third part of his histories, Count Gualdo Priorato tells us that Colonel Adami from Pistoia was sent to tear down the wall of the Chiane built (what the basis for this statement was is not given) in Carthaginean times. I have a small brochure titled: *Fatto D'arme Del Serenissimo Granduca di Toscana Contro Gli Barberini L'anno 1643. Ottave Composte Dal Caporale Annibale Di Ruggiero Monanni Da Pigli Contado D'arezzo*. This draft for a poem consists of three long cantos in *ottava rima* (….). Mention is made of the ruins of the wall of Carnaiolo (…). Our poet found himself with other men who were tearing down the wall so as to (as they then thought) flood Rome with the overflow of the Chiani.

"*Quivi ci eran molti lavoranti/Chi in mano aveva la subbia, e chi il martello/E fatigar ne viddi tanti, e tanti/Chi portava la marra, e chi il corbello/E chi passeggia, e chi gira d'avanti/Chi adopera la braccia, e chi il cervello/E chi li sassi faceva portare/Giù per il fiume per farli annegare....*"[30]

In 1878 the discovery, in località Volpara just north of Murogrosso, of an oval chamber tomb *con soffitto a calotta incavato nel masso* (with a domed ceiling hollowed out in the rock) confirms this supposition.[31] According to contemporary reports, there were either six or nine urns inside, arranged in a circle around one at the center. Six bore Etruscan and Latin inscriptions, and some had additional decorations such as fluted columns, rosettes, capitals, oinochoai and phialai. The inscriptions were transcribed as follows:

1) *luci cic(unias) a(rn)J svenias*
2) *a(rn)J cicu(nias) svenias*
3) *l(u)ci cicu(nias) (...)un:ial*
4) *a(rn)J cicu(nias) a(rn)J crapilun*
5) *C(AIUS) GELLIUS / GRASSUS / ANNIA NATUS*
6) *C(AIUS) GELLIUS C(AII) F(ILIUS) / ARN(ENSI TRIBU) CRASSUS / MURTIA NATUS*

This thus testifies to a late Etruscan settlement, frequented up to the 1st century BCE. On the basis of the inscriptions this does not seem to concern interparental relationships (the Etruscan depositions belong to the *Cicunias* family, and the Latin inscriptions give a *Caius Gellius Crassus* father of the second *Caius Gellius*), while the arrangement of the urns when they were discovered would seem to indicate the existence, or at least the tentative presence, of a dynasty. The gentilitial *Cicunias* furnishes interesting information with regards to the organization of the territory for it appears especially in the ambience of Chiusi. It is therefore a reflection of the geo-political ambience of the area of Fabro and Monteleone of Orvieto around the 2nd century BCE. This agrees with the evidence furnished by the urns, related to the Hellenistic types of the production of Chiusi.[32] An important element for the dating of the last deposition, if the person belonging to the Arnense tribe is the son of the first Caius Gellius, is represented by the fact that Chiusi became part of the Arnense tribe in 89 BCE, *terminus post quem* therefore for the dating of the last inscribed urn.[33]

The importance as roadway of the Chiani River in the tract that runs through the territory of Volsini[34] is further confirmed by the broad chronological range of the archaeological finds along the two banks. The site of Monte Melonta, controlling the river course, has provided traces of frequentation in Neolithic times,[35] proto-historical tombs and documents of Etruscan times,[36] including a sandstone disk[37] with the inscription *(than)chvil nuzarnai*, a female gentilitial which once more takes us to the area of Chiusi in the form *nuzernei*[38] and the later *nuzrni*.[39] The settlement related to the necropolis discovered in loc. Bagni[40] must also have gravitated around the course of the Chiani. The sites of Pian Di Meana[41] and Pian Di Mealla, where the remains of important production villas[42] have been discovered, confirm the importance of the river route for the Hellenistic and Roman periods.

The Tiber River was in any case one of the principal connections between Orvieto and the territories to the northeast and south. Its extensive rain-collecting basin ensured a discharge of water that was probably more consistent than today and, consequently, easier to navigate, even if the ancient sources seem to disagree on the subject. For Dionysius of Halicarnassus it was navigable up to the sources;[43] for Pliny the Younger the summer was particularly problematical due to a lack of water;[44] for Pliny the Elder sluices were required to raise the level, in particular upstream, after the confluence with the Paglia and the Chiani,[45] both important affluents. It was therefore near Orvieto that the type of river traffic changed, probably concentrating on vessels with a reduced draught, still capable of exploiting the advantages of the river route. It is in correspondence to the confluence of the Paglia with the Tiber that one of the principal archeological sites in the territory of Orvieto is located: the river port known as Pagliano. In 1889[46] and 1890[47] the first studies of the Roman structures plausibly identified as a river port were carried out along the right bank of the Tiber. An area of at least 8,000 square meters was investigated and 28 rooms were identified, built in *opus incertum* and *opus reticulatum*. Except for a dedication to a *Venus Vincitrice* in the Museo dell'Opera del Duomo in Orvieto, the present whereabouts of the materials recovered, a rather conspicuous amount, is unknown. Included however were a large number of coins ranging from the Augustan to the Constantine period, Aretine pottery, stamped bricks, grindstones, weights, fishhooks, keys, bronze statuettes and oil lamps. Subsequent studies by Morelli in the fifties[48] led to the drawing up of a new ground plan that brought the number of rooms to 70. The structures still visible were therefore part of an extensive settlement, and it seems reasonable to suppose that the origins went back further than indicated by the available documentation, probably to archaic times in relationship to the historical events involving the nearby center of Orvieto. The multifunctional aspect of the structures—warehouses, mills, docks, places of worship, residential and productive rooms[49]—points to such a hypothesis. The road network by land must also have been rather extensive, connecting the river junction with the surrounding territories.[50] Particularly important in this sense is the site of Castellunchio,[51] located on the opposite bank of the river Paglia, for which a long uninterrupted frequentation has been documented. Evidence dates at least to the Early Iron Age (but on the basis of recent hypotheses it could go back to the late Bronze Age) and continues through the Etruscan and Roman periods.

In the passage previously cited, Pliny the Younger says that a great quantity of agricultural produce was sent

towards the Urbe, some of which from his villa in the territory of Arezzo, in communication with the Tiber via the Chiani. The advantage of moving merchandise by water seems obvious, in consideration also of the fact that it could go in both directions. While vessels could exploit the current of the river in taking merchandise to its mouth, barges could also be used, probably not exclusively drawn by animals.[52] The frequent presence of toponyms including the word *barca* (boat) along the entire course of the rivers mentioned above (Tiber, Paglia, Chiani) can be related to fords: Barca Vecchia on the Paglia near Monterubiaglio, Barca di Slaviano on the Tiber before the gulleys of the Forello, Ponte di Barche near Todi, to cite only a few[53]. As L. Quilici[54] notes it must be kept in mind that river navigation lasted a long time, with the relative maintenance works of the fords, the banks, and the wharfs, up to and including the Middle Ages, while with modern times there was an involutive process that rapidly cancelled all traces of works of this kind, above all when bound to a natural environment in continuous change such as that of the courses of water.

Of the archaeological sites that characterize the territory along the banks of the Tiber of particular note is the presence of numerous Roman villas. A brief discussion of their nature can help us understand the organization of the areas in question.

The System of Production Villas

In addition to the archeological finds, ancient sources provide us with a fairly accurate picture of the complex organization of what we call productive farm villas in the Roman period. One of the principal ancient authors providing us with information is Cato (*Marcus Porcius Cato*—234/149 BCE—known as "The censor," author of *De Agri Cultura*), who tells the wealthy owner who lives elsewhere how to manage his farm estate. A century later Varro (*Marcus Terentius Varro*—born 116 BCE in Rieti) writes three books on agriculture (*De Re Rustica*). He also endorses the transformation of public soil for private use, a factor that involves amplifying the tenancy contract with the tenant-farmers.

Columella (*Lucius Junius Moderatus Columella*—4/70 CE) is a real agronomist. His treatise in twelve books (*De Re Rustica*) provides an even more articulated picture and constitutes an essential source of information on ancient agriculture. Of particular importance for the architectural aspects is Vitruvius's *De Architectura* (*Marcus Vitruvius Pollio*—circa 80/15 BCE).

The Romans used the term *villa* to indicate a building complex located outside the city walls. Initially the villa came into being as a family-run farm. It had a farmhouse and a *fundus*, and was managed personally by the owner. In this first phase there was no distinction between the *pars rustica*, sector destined for the servants and workers, and the *pars urbana* or *dominica*, reserved for the *dominus*, that is the owner and his family. Between the end of the 3rd century and the beginning of the 2nd century BCE with the economic development of Roman society a transformation took place. The *villae* dedicated to *otium* came into being, homes reflecting the social status and wealth of the owner, above all if located in the *suburbana regio Italiae* (the territory of central Italy today occupied by Lazio, Campania and Umbria).

During the period of the Roman Republic, the *villa* had well-defined requisites, some dictated above all by a search for self-sufficiency. It was to be built near courses of water or springs, in healthy surroundings and therefore on a hill or on the slopes, not far from the sea or a navigable river, better if near a city and so on.

Varro divides the villa into three sectors: *pars urbana*, *pars rustica*, *pars fructuaria*.[55]

The *pars urbana* was the residence of the *dominus* and his *gens*. Generally it consisted of the *basis villae* (the basement with vaulted rooms that could be used as cryptoporticus, nymphaeum or cistern[56]), the *vestibolum*, the *fauces* (the entrance), the *atrium* with the *impluvium* (the tub for collecting rain water), the *tablinum* (the reception room of the Roman house, set on an axis with the entrance), the *peristilyum* (porticoed garden with columns), the *cubicula* (bedrooms), and the *triclinia* (dining rooms).

The rooms for the slaves were in the *pars rustica.* For Varro, slaves were simply "agricultural equipment" in the service of the villa, defined *instrumentum vocale*, to distinguish them from the *instrumentum semivocale*, such as beasts of burden, or *instrumentum mutum*, a hoe, a rake, a plow. The *cellae familiae* consisted of storage rooms for the clothing and food supplies of the slaves, while other *cellae* were for the helpers of the *vilicus* (the overseer) and for the *operarii* and the *artefices*, that is the artisans. There was also the *ergastolum* where slaves were punished and the *valetudinarium* for the ill, the storerooms, the *habitatio* of the *vilicus* and the *culina* (kitchen) and the latrine.

The *pars fructuaria* was for the processing of the products of the land and the farm animals, under the charge of the *vilica*, the *promi* (stewards) and the *cellarii* (vintners). Included were the *torcularium* (the press) for wine with the *lacus* (collecting tub); the *corticale*, where the must was boiled down; the *fumarium* where the wine was artificially aged using the fumes from the kitchen or the *prefurnio* of the thermal installations; the *cella vinaria* (where the wine was kept in large *dolia,* terracotta jars that were partially buried); the *trapetum* (the press); the *cella olearia* for preserving oil; the *granaria* for wheat and the *farraria* for the spelt; the *foenilia* (hay barns); and the *nubilarium* (sheds to protect the wheat from the rain before it was threshed). There was also the *area*, corresponding to the barnyard; the *oporotheca*, storeroom for fruit; the *pistrinum* or mill for the cereals; and the *carnarium*, for the conservation of salted meats.

One of the villas that has been most throughly studied from an archaeological point of view is that of Settefinestre,[57] near Orbetello, an ancient territory of the Roman colony of Cosa. Between the end of the 2nd and the 1st century BCE the villa was subjected to a profound socio-economical transformation. The small farm owners

disappeared, giving way to a system of "rustic" villas or productive estates based on intensive and specialized cultivations, with a massive use of slave labor. Production was aimed above all at the exportation of wine and oil.

It is once more Cato[58] who provides us with a general listing:

1) *vinea* (vineyard that could also be sowable land with trees);
2) *hortus* (fenced enclosure for prized crops);
3) *salictum* (willows, the branches of which served to tie up the vines);
4) *oletum* (olive grove);
5) *pratum* (hay fields);
6) *campus frumentarius* (land for growing cereal crops);
7) *silva caedula* (copses);
8) *arbustum* (lots with trees);
9) *glandaria silva* (oak woods for collecting acorns used in feeding the pigs).

For Columella too the ideal property should have cultivated fields around the villa with meadows, cereal crops, willows and canes, as well as olive groves and vineyards on the hillsides, or fields, pastureland, woods for firewood and construction purposes, and quarries for building materials, in other words everything needed to be self-sufficient. Of note were activities connected to animal husbandry, distinguished in *pastio agrestis* and *pastio villatica*.[59]

Pastio agrestis was for the cattle, sheep, pigs, horses, and useful animals such as mules and dogs.

The *pastio villatica* concerned the more prized and profitable courtyard animals such as pigeons, doves, thrushes, geese, ducks, peacocks and hare, but also boar, roe and fallow deer and even snails, dormice, freshwater and saltwater fish.

The Roman villa was also the privileged place for *otium*, a combination of intellectual and meditative, as well as recreational, activities, that characterized the lifestyle, personal freedom, the moral constitution. *Otium* was a sort of spiritual dimension but also a place for the bodily pleasures and was the maximum aspiration for the right balance between the public and private aspects of life. In his letters dating to the end of the 1st and early 2nd century CE, Pliny the Younger (*Caius Plinius Caecilius Saecundus*, born in Como in 61 CE) described his villas and the type of life led there, lingering particularly on two: the Laurentina, on the sea, near Anzio, and the one *in Tuscis*, that is in Etruria, in the upper valley of the Tiber. The picture he paints is particularly charming. Topiary art, the pruning of trees and bushes into unnatural forms for specifically ornamental purposes, is of considerable importance. The function of the neighboring course of water is also of note and Pliny writes: "that river (the Tiber), that runs through the fields, is navigable and transports to the city all the products of the land, at least during winter and spring; in summer the level of the water drops and the dried-up bed loses its name of large river, to reassume it in autumn."[60]

This brief description provides an idea of how the presence of villas defined the territory from the point of view of landscape as well as function and production. With this in mind let us turn to the areas in question and try to understand the changes that took place over time. What M. A. Tomei[61] writes with regards to the territory of Narni-Terni-Amerino is of particular note: "on the basis of the still incomplete documentation, it has so far been possible to identify over 50 villas in the territory of the municipalities of Guardea, Terni, Alviano, Lugnano, Giove, Penna in Teverina, Amelia, Narni, Otricoli, Sangemini, with a first phase dating to the period from the middle of the first century BCE to the Augustan age. The Narni-Amerina zone was already considered particularly fertile in antiquity…."

Various interesting elements are to be found on the left bank of the Tiber, historically falling into the Italic ambience.

M. Bergamini[62] suggests a hypothetical route that begins in the territory of Todi and moves along the banks of the river, connecting the Roman villas of Pontecuti to Baschi and beyond, although archaeological evidence has not been clearly identified. Bergamini mentions the fact that "there is no particular confirmation" for Becatti's original hypothesis[63] except for a very short stretch in loc. Carpinaro, a stretch not right along the river but "higher up" due to problems of an orographic nature (this would then be connected to a route of which the via "Straccalasini" was part[64]). In any case the previously mentioned place names are significant, specifically those connected to ferry crossings: pian di Porto—hypothetically connected with the Latin term *portorium*, excise or customs, referring to bridges for which toll was paid, or more simply with *portus*, port or harborage, not the same in a river as in a marine ambience; Fosso della Barca; and Fosso dei Varconi. Mention must also be made of those throughout the territory in question: Barca Vecchia; Chiusa or le Chiuse; la Nona; and obviously the toponym Ponte. The productive settlement of Scoppieto,[65] fundamental for an understanding of the "river system" and the part it played in the economy of the region in Roman times, is in the municipality of Baschi. Archaeological excavation identified a village of artisans producing mostly fine tableware, known as *terra sigillata*, from the early Imperial Age to the early 2nd century CE, when it became a more anonymous settlement. In this case the *terra sigillata* is characterized by the fact that it bears the signatures of the workers/artisans. This makes it possible to trace the flow of trade that went via river to the principal distribution centers on the coasts of the Mediterranean. The location of the site was determined by geo-pedological factors such as the presence of banks of clay but also—and above all—by the proximity of the river that allowed for the movement of the products. This is followed, along the left bank of the river, by the localities Carpinare or Carpinaro,[66] piano di Salviano,[67] and Barca di Salviano.[68]

The area was in any case characterized by the manifest presence of high-level materials pertaining to "important" inhabited centers, one of which had a lead acqueduct, to which a lead fistula with the seal of the emperor Galba, found near Civitella del Lago,[69] bears witness. The sporadic recovery[70] of a *dispensator* stamp may also refer to him. The burials and places of worship, of which traces remain in the stone materials in the churches of S. Gemini presso Civitella,[71] of S. Maria,[72] S. Martino,[73] and Poggio di Castagnola,[74] must also be connected to these centers. While isolated materials have been recovered in the walls of the historical center of Baschi, of particular note in the southern part of the town are the finds near the Fosso delle Macee.[75] Late antique cappuccina tombs and burials in amphoras have been documented next to remains of masonry structures. The so-called *fragmentum tudertinum*, a bronze plaque with legislative regulations of Roman times and a dedication to the god Tiberinus,[76] was recovered at the confluence of the ditch with the Tiber river. West of Montecchio, the presence of a funerary cippus[77] of the Carsulae type has been documented. This increases the number of sites gravitating along the course of the river in Roman times, in an area not far from the one where the so-called *lex tudertina* mentioned above was recovered. We should keep in mind the pre-Roman site indicated by the necropolis of Montecchio/Baschi, that of the Fosso di S. Lorenzo, is in an Umbrian-Faliscan ambience with strong Volsinian influences and connected with the settlement of Copio.[78] The localities Valsarana[79] and Cocciano[80] are in the territory of the municipality of Guardea, while the municipality of Alviano has given us evidence of a production villa of Roman times in loc. Pupigliano[81] where activity seems to have begun in the 1st century BCE and continued to the 4th century CE. It was therefore an extremely long-lived settlement and would have truly taken advantage of the presence of the Tiber and the crops that were probably grown on the adacent level terrain—it is in fact one of the few productive villas located at a low altitude. Loc. Fontanelle[82], Ramici[83], Archignano[84] and, in a broad sense, the villa of Poggio Gramignano[85] are in the municipality of Lugnano. For the municipality of Penna in Teverina other outstanding sites are the villa in loc. Muralto,[86] with traces of a paved road, and above all that of the monumental villa in loc. Pennavecchia.[87]

Geographically the area is defined by the course of the Tiber River and the reliefs of the pre-Appenine Amerino-Narnese ridge. Significant in particular is the belt between the left bank of the Tiber and the hilly ridges at an altitude of between 100 and 500 meters above sea level, a sort of terrace overlooking one of the most important rivers in Italy. The presence of consistent banks of pliocenic clay deposits are responsible for the constant erosion of the surroundings, with what are known as *calanchi* or badlands, in the shape of sharp ridges, slowly but continuously transforming the landscape. This must be kept in mind in analyzing the archaeological evidence in the territory. The period of Romanization and the subsequent exploitation of the agricultural and natural resources by production villas is particularly important with regards to the evidence that characterizes the area in question. As early as the 3rd–2nd century BCE polygonal masonry walls were being built in the ditches in the localities of Marutana, Porcianese and Galluzzo, in the adjacent municipalities of Guardea and Lugnano in Teverina,[88] to regulate the flow of water towards the main river course in the valley floor.

There is no mention in archaeological literature of pre-Roman settlements with regards to the municipality of Alviano, but only a generic mention of "tombs" in località Madonna del Porto,[89] a toponym that interestingly enough alludes to a ford or a landing on the Tiber River.

The complete Romanization of the area in question came to a close with the Social War of 90–88 BCE (the name depending on the fact that the *socii*, the Italic allies of Rome, rebelled, invoking the right to citizenship). The creation of new *municipi*, including Amelia, favored the aggregation of settlements and the depopulation of the countryside, cultivated up to then by small farm owners with mixed techniques that included pastures at altitudes higher than the first hill ridges. Shortly thereafter the first large rustic villas and productive farm estates appeared, organized on the basis of slave labor, the effect more of a reoccupation than an actual *ex novo* installation. The Umbrian stretch of the Tiber naturally attracted many wealthy Roman families, to which a letter by Pliny the Younger to his friend Gallo[90] bears witness, in which he describes one of his villas, perhaps the one in the municipality of San Giustino, near Città di Castello. We can now identify many place names we define as predial, that is the belonging of a place (in the specific case of a holding or farm—*praedium* in Latin) to a Roman *gens*, whose name is "hidden" in the place name itself. One example will do: the *gens Popilia* to whom the name of the villa of Alviano, in loc. Popigliano, referred. An example of this correlation is in the toponym Rosciano: the great orator Marcus Tullius Cicero presents us with the story of a wealthy land owner of Ameria (Amelia), accused of parricide, in defense of whom Cicero composed the oration *Pro Roscio Amerino* in 80 BCE. This was Sextus Roscius Amerinus, who had 10 of his 13 holdings located around the Umbrian city confiscated by the dictator Lucius Cornelius Sulla. These farms were subsequently bought at a (so to say) public auction by one of Silla's freedmen, L. Cornelius Chrysogonus, who paid two thousand sestertians for a property whose real value was six million. The predial toponym connected to this story is Rosciano, but the same holds for Alviano, Aquilano, Cocciano, Archignano, Marcignano, Gramignano, and so on. The repeated appearance of these predials in the belt near the course of the river suggests that further investigation of the motives behind the presence of this binomial villa/river would be in order.

Another important contribution to an understanding of the territory of the Tiber valley ranging from the gorge of the Forello to the Amerina area is supplied by a recent

study of the aforementioned villa of Poggio Gramignano,[91] located in the municipality of Lugnano in Teverina. Plausible estimates of the average area of a property characterized by architecturally important buildings, such as the villas of Popigliano and Poggio Gramignano, come up with between 300 and 600 *iugeri*, that is 75 and 150 hectares. They are therefore, in both cases, rather large agricultural holdings. For the territory in question the same types of production identified in adjacent properties can be hypothesized. First of all there were the vineyards, including willows, since their flexible branches were used to tie up the vine shoots. Baskets were also woven of willow shoots, a practice still common in our rural zones up to not long ago. Cato[92] insists that an agricultural holding has to have a good supply of *corbulae amerinae*, the top quality wicker baskets produced in the territory of Amelia.

Another reason why the settlements were located in areas overlooking the valley floor along the course of the Tiber was the presence of an ecosystem with humid areas in which to integrate the products of the *hortus*, consisting of fruit trees as well as vegetables.

The swampy areas along the courses of water also provided cane and paludal grasses, all used in agriculture, favored and stimulated fishing and the hunting of resident and migratory fauna. Unfortunately the gradual deterioration of the techniques connected to agricultural procedures and the presence of the *latifundium* or large landed estate led to the abandonment of widespread areas. No longer cultivated and drained, they became unhealthy and generated epidemic diseases such as malaria, identified in the osteological remains of the villa of Poggio Gramignano.[93]

The hills of the Amerine mountain chain, covered with a dense growth of holm and English oaks and hornbeams, were also teeming with wildlife.

Lastly to be mentioned is the presence of imposing banks of clay, the basic material for making bricks and tiles and, probably, ceramics. Of particular interest is the production of the so-called megarese cups attributed to workshops of central Italy, specifically Otricoli, signed by *Caius Popilius*.[94]

The port known as dell'Olio, no longer visible, was in Otricoli, the ancient *Ocriculum*. It was located on a bend of the Tiber, a canonic position for docks since the currrent here falls off and makes it easier to maneuver the boats. The toponym clearly indicates that one of the products commercialized in the port of call was oil, in addition to bricks and tiles and tableware, known to have been important in the production of *Ocriculum*. To the north, on the same bank of the Tiber, is the port of Orte, loc. Seripola, an important commercial junction with material dating to the 6th–5th century BCE. This was the *Castellum Amerinum*, the crossing of the Tiber by the Via Flaminia, indicated on the Tabula Peutingeriana. Recent studies employing geophysical techniques have made it possible to identify a series of structural elements outside the excavated area: an over-140-meter-long stretch of the Flaminia flanked by a series of tombs and mausolea.[95]

Another factor in an analysis of the territory is the presence of brick stamps dating to the Roman period. G. Filippi[96] used these as his point of departure in locating some of the kilns that supplied the Roman construction yards in the area in question. The inscriptions in these stamps furnish information concerning where the kilns were, the workforce, the clients and the chronology. Particular attention is given to the *Ager Amerinus*, defined as "one of the most representative territories in the middle Tiber valley with the location of the most important kilns which supplied the Roman market in the Imperial Age"[97] and much larger than the modern city of Amelia. Filippi excludes the possibility of transportation by barge for the products of these kilns, perhaps also because the barges in his hypothetical reconstruction must have been very heavy.

Stamps that cite Theodoric and Atalaric come from the previously mentioned Fosso delle Macee near Baschi, a transparent toponym that indicates, also in the Tuscan variation *macia*, a concentration of stone materials from various sources—the demolition of pre-existing buildings, and masses of rubble (from agricultural work). Like some of those from Poggio Gramignano (municipality of Lugnano in Teverina), they represent the northernmost finds and belong to workshops defined as "urban." In the latter complex 30 bricks with stamps subdivided into 11 types, for a chronology that ranges from the 1st century BCE up to the 3rd, were recovered. Further down, near the Tiber, two sites with the remains of kilns were located in loc. Ramici and Fontanelle. The first was also for ceramics and the second for bricks with the stamp of *C. Viccius*, connected by Filippi to the toponym Vicci, in the municipality of Attigliano[98], where the remains of a Roman villa with stamps of that name were found. Another kiln has been located in podere S. Valentino, west of the remains of a Roman villa in loc. "i Piani." The dock of Giove is eight hundred meters to the south, as well as a site where terracotta materials were disposed of, an evident sign of the presence of a kiln, as is the case in other localities that run through the valley for around two kilometers: la Barca, with three distinct areas of shards and masonry remains dating to Roman times. Further south, in loc. Apparita, next to the Fosso della Penna that marks the boundary between Giove and Penna in Teverina, is a production center where a stamp identifying the site as that of the *figlinae Caepionianae ab Euripo* was found. Filippi sees it in relation to the geomorphological conformation of the area, with a ditch surrounding the site. This would be the basis for the toponym Apparita,[99] for the Euripo was originally the arm of the sea that separated the island of Eubea from the mainland and the term was subsequently used by the Romans to define any kind of canal. The last locality Filippi takes into consideration is once again the port of Seripola where he locates a temple to Isis on the basis of the *figlinae ab Isis*, where the Isis tile was produced, a hypothesis confirmed by an inscription on a travertine altar with a dedication to *Bona Dea Isiaca*, dating to the 2nd

century BCE.[100]

Of particular note on the Nera river is the presence of the Roman ruin in Stifone, loc. le Mole, interpreted as a river port or a naval yard.[101] Not far off is the stone quarry in loc. Scatafosse,[102] which might have used the port to transport its products. To be verified, since they are not far from the water, are the localities S. Casciano[103] or Cassiano (probable cappuccina necropolis, reused Roman materials) and S. Sofia[104] at Nera Montoro (also a necropolis), next to which is the site of Montoro Vecchio, a plateau that controlled the river along the Flaminia, where there are the remains of a wall in *opus poligonalis*.[105]

The organization of the territory in Roman times disintegrated in the late antique period and in the phase of the communes acquired new characteristics and, in this area, the larger centers expanded beyond measure. The situation is summed up in the study of Civitella d'Agliano and its statute of 1363.[106] The countryside and the areas bordering the course of the Tiber—and of the rivers in general—were connected to agricultural production that depended on the type of terrain. They are indicated in the specific terminology used in notarial and other documents: *costa*, the slopes of the hill worked in ledges, *ripa*, a sort of terracing below inaccessible areas with *colture di pregio* (vegetable gardens); *plagia*, the softly rolling hill zone normally used for grains and vineyards; the *planum*, the Italian "piano," sometimes originally humid areas, with land characterized by river sediments and in contact with the river bank; *fossatus*, a natural and/or artificial drainage canal for rain water in rainy periods; *rivo* is the perennial ditch also used by mills; the *flumen* in this case was the Tiber. Courses of water and humid zones also meant fish and game. There are archive sources that list the qualities and prices for the catch, such as in the case of the Orvieto market where a basket of fish from the Paglia, Tiber, or another river brought 2 *soldi*.[107] The same quality of fish—tench, pike, eels, etc.—from the area of the Valdichiana were priced less because their taste did not compare with fish from lakes or rivers with a constant flow of water. The same thing held for the fowl in the humid areas and, therefore, were of an economic nature.[108] Another extremely productive activity which generally is underevaluated from a point of view both of its impact on the environment and for its economic value was that connected to the extraction of inert river materials used for various purposes: primarily gravel and sand used for building, for roads, and to be used as filters in cisterns.[109]

Abbreviations

CIE *Corpus Inscriptionum Etruscarum* (1893–)
CIL *Corpus Inscriptionum Latinarum* (Berlin: Akademie der Wissenschaften, 1893–)
TLE M. Pallottino, *Testimonia Linguae Etruscae* (Firenze: Nuova Italia, 1954)

1 Heartfelt thanks to David Soren for the long journey, which together with Alba Frascarelli, took us so far, some along courses of water, leading to a sincere friendship and mutual professional respect.

2 This analysis would not have been possible without the support of M. Conticelli, P. Binaco, R. Galli, and S. Manglaviti, all of whom I thank for their competence and willingness. Particular thanks to Erika Pauli-Bizzarri for her patience in translating the text into English.

3 G. Baciarello, *"Liber Tiberinae". Il Catasto di Civitella d'Agliano del 1363* (Montefiascone: Tipografia Silvio Pellico, 2004), 119.

4 Plin. *Nat. Hist.* III, V. "The Tiber, the former name of which was Thybris, and before that Albula, rises in about the middle of the Apennine chain in the territory of Arezzo. At first it is a narrow stream, only navigable when its water is dammed by sluices and then discharged, in the same way as its tributaries, the Tinia and the Chiana, the waters of which must be so collected for nine days, unless augmented by showers of rain" (Pliny, *Natural History*, Volume II: *Books 3-7*, translated by H. Rackham, Loeb Classical Library 352 [Cambridge, Mass.: Harvard University Press, 1942], 41).

5 Silvio Manglaviti's hypotheses in this sense are of interest ("Contributo delle scienze geografiche alle ricerche archeologiche del Fanum Voltumnae: ipotesi geonomastiche su alcuni toponimi nell'Orvietano," whom I thank for having generously shared his hypotheses): the place names in which the word *nona* appears (molino la Nona, fosso Albergo la Nona, Ponte Albergo la Nona) does not refer to a ninth stopover or to the ninth mile from a given point, but can be traced both to the term *annona*, reserves of grain to be distributed to the citizens, and to the *nona*e, bridges or dams that can raise the level of the water in a torrential stream, making it navigable even when there is little rain. Indirectly Vittorio Fossombroni gives the same interpretation in his treatise on the Val di Chiana, important insofar as it is relative to the river system deal with here: "In conclusion, Fossombroni maintains that there is no proof that certifies that the ditches were *meant to hinder the course of the river Chiana*, to the contrary he believed they could have been built to hold back the water to make navigation on the *Clanis* easier, for as we have noted, it was navigable thanks to the aid of weirs and walls …." (R. Bianchi, F. Boscherini, and S. Fuschiotto, *Il mulino di Ficulle e la gestione delle acque nella val di chiana romana* [Città della Pieve: Tipolit. Pievese, n.d.], 94).

6 See W. A. Hunter, *A Systematic and Historical Exposition of Roman Law in the Order of a Code* (London: Sweet and Maxwell, 1903), in which the Digest of Justinian, part of the Corpus Iuris Civilis is cited.

7 Boats on exhibit in the Museo delle Navi in Fiumicino, connected to the stretch that led from Portus–Ostia to Rome. See also Lietta de Salvo, *Economia privata e pubblici servizi nell'impero romano: i corpora navicolariorum* (Messina: Samperi, 1992), in which there is mention of the *lintres*, vessels with a flat elongated hull.

8 Martial, 4.64.22.

9 For the area in question here buffaloes seem to have been preferred in medieval times since they were more suitable to a swampy environment (Baciarello 2004, 116).

10 See F. Vallerani, *Praterie vallive e limpide correnti: uomini e paesaggi tra Livenza e Tagliamento in epoca veneta* (Portogruaro: Nuova Dimensione Edizioni, 1992), 136, note 8.

11 Baciarello 2004, 115 ff.

12 See preceding note.

13 Baciarello 2004, 119.

14 *CIL* VI. 31547.

15 In one of Horace's odes: Hor. *Carm.* I.2.14.

16 Plin. *Nat. Hist.*, III, V, 53.

17 It must also be mentioned that it is an area full of woods and of great environmental interest; however, no precise archaeological survey of the area has been carried out.

18 A. E. Feruglio, "Uno specchio della necropolis di Castel Viscardo presso Orvieto, con Apollo, Turan e Atunis," in *Etrusca et Italica, Scritti in onore di Massimo Pallottino*, vol. 2 (Pisa: Istituti editoriali e poligrafici internazionali, 1997), 299. The site of the antique *castellum* is so far unknown, but hypothetically it can be located on the first level territories above the necropolis. Currently not known, but the presence in correspondence to the first level areas above the necropolis must be hypothesized. Numerous tunnels open on the slopes overlooking the river and must have served as drainage for the inhabited area and to supply a reserve of water. The Speleo Club Orvieto has recently explored this complex.

19 W. Harris, "The Via Cassia and the Via Traiana Nova between Bolsena and Chiusi," *Papers of the British School at Rome* 33 (1965): 122 for the discovery of the Montemoro farmhouse, on the left bank of the Paglia River.

20 See below.

21 P. Perali, *Orvieto: Note storiche di topografia e d'arte dalle origini all'800* (Orvieto: Moretti, 1919), 14; E. Moretti, *La Via Cassia e la Via Traiana Nova a Volsiniiis ad Fines Clusinorum* (Orvieto, 1925), 13; G. Buccolini, *Il problema archeologico di Orvieto Antica* (Orvieto: Rubega & Clementi, 1935), 55; Harris 1965, 113–133; G. M. DellaFina, *Orvieto Romana* (Orvieto: Marsili, 1988), file card 11.

22 The present bridge was built by Pope Julius II at the beginning of the 16th century, and putting it in the Roman or even Etruscan period is hardly correct (L. Santini, *Guida di Orvieto e dell'orvietano* [Perugia: Quattroemme, 2002], 284).

23 Moretti 1925, 12–13; E. Martinori, *Le Vie Maestre d'Italia: Via Cassia (Antica e moderna) e sue derivazioni, Via Clodia—Via Trionfale—Via Annia—Via Traiana Nova—Via Amerina* (Roma: Studio Storico-Topografico, 1930), 98–99; Harris 1965, 128.

24 Plin. *Nat. Hist.*, III, V, 53. The presence of sluices along the course of the Chiani River must also be taken into consideration.

25 The miliary found not far from the river, in loc. Monte Regole, is a benchmark for the reconstruction of the route (W. N. Bates, "Archaeological News," *American Journal of Archaeology 18* [1914]: 394; E. Galli, "L'opera delle Sovrintendenza dei Monumenti, delle Gallerie, dei Musei e degli Scavi: Sovrintendenza Archeologica dell'Etruria," in *Bollettino d'arte supplemento* 9–10 (1916): 55 f.; B. Klakowicz, *Il Contado Orvietano* V, *I Terreni a Nord* [Roma: L'Erma di Bretschneider, 1978], 34 f.; Harris 1965, 123).

26 Moretti 1925, 13; G. Becatti, *Edizione della Carta Archeologica d'Italia al 100.000, Foglio 130, Orvieto* (Firenze : R. Istituto geografico militare, 1934), 39; Harris 1965, 129; DellaFina 1988, file card 37.

27 S. Bosi, "La formazione del sistema degli insediamenti e delle relazioni," in E. Rampiconi (ed.), *Il Piano territoriale di coordinamento provinciale, Collana dell'Istituto Nazionale di Urbanistica* 9 (Roma: INU, 2003), 46.

28 See G. Mancini, *Ficulle, a spasso nella storia e nella leggenda di un castello del monte orvietano* (Grotte di Castro: Tip. Ceccarelli, 2009), 8–17 for a fine iconographic rendering.

29 F. Della Rosa, "Opere poligonali della bassa Umbria, cinque recenti rinvenimenti nel comune di Guardea e Lugnano in Teverina," in *Secondo seminario internazionale di studi sulle mura poligonali* (Alatri: Comune, 1990), 85–98; F. Della Rosa, C. Medori, G. Medori, and E. Ragni, *Guardea—Pagine di storia* (Guardea: Comune, 1995). See also S. Sisani, "Roma, Ameria e la via Amerina tra IV e III sec. a.C.," in Maria Cristina De Angelis (ed.), *Uomini, terre e materiali: aspetti dell'antica Ameria tra paleontologia e tardoantico; atti Convegno Amelia, 26. novembre 2005, Sala Boccarini* (Amelia: Comune, 2006), 83–98, where these structures are interpreted as agricultural terracing; mixed function in M. Bertacchini, "Geologia tra passato e presente nel territorio di Otricoli," in L. Cenciaioli, *Un museo per Otricoli: L'antiquarium di Casale San Fulgenzio* (Perugia: Fabrizio Fabbri Editore, 2006), 11–17, for Otricoli.

30 Bianchi et. al. n.d., 95 ff. It is Fossombroni who speaks

in the first person in his *Memorie idraulico-storiche sopra la Val di Chiana* (Firenze: Cambiagi, 1789). Vittorio Fossombroni was superintendent of reclamation works in the 18th century.

31 W. Helbig, "Scavi presso Orvieto e nei dintorni," *Bulletino dell Instituto di corrispondenza archeologica* 1882: 239ff.; *CIL* XI 2250–2252; *CIE* 1641–1646; R. Bianchi-Bandinelli, "Scoperto un cippo miliario della Via Traiana Nova," in *Notizie degli scavi di antichita 1925* (1925): 39; R. Bianchi-Bandinelli, "Clusium, ricerche archeologiche e topografiche su Chiusi e il suo territorio in età etrusca," *Monumenti antichi* 30 (1925): 246; Becatti 1934, 38; Klakowicz 1978, 55f; Harris 1965, 113 ff.

32 Giulio Paolucci's relative recent analysis even indicates the Paglia River as the possible nothern boundary of the district of Volsinii (G. Paolucci, "Il confine settentrionale del territorio di Orvieto e i rapporti con Chiusi,"*Annali della Fondazione per il Museo «Claudio Faina»* 6 [1998]: 281–295).

33 The division into tribes began in Rome as early as the età regia (before the Republic), but here it applies to 387 BCE and obviously refers to the rural tribes, social groupings on a territorial base.

34 See note 24 for the boundary with the territory of Chiusi.

35 Laminas, scrapers, punches attesting to a neolithic stone industry came to light and they are now in the National Archaeological Museum of Umbria in Perugia (O. Panfili and L. Pirro, *Storia dei luoghi della "montagna orvietana,"* Volume I: *dalla preistoria al secolo XVIII* [Arrone: Thyrus, 1994], 16).

36 Between July 1962 and June 1963 the ravaged remains of late Villanovian and Etruscan burials came to light during agricultural work. Subsequently in 1966 sporadic finds were unearthed. Among the objects appertaining to the grave goods were bronze fibulas of the sanguisuga type with the body decorated with geometric motifs; a bronze necklace with clusters of drops; a spherical recipient in bronze lamina with three cutout supports in the same material applied to the main body by large rivets right below the rim of the container. Ceramic finds consisted of fragments of bucchero and reddish impasto ware (M. Bizzarri, "La necropoli di Crocifisso del Tufo," *Studi Etruschi* 31 (1963): 173–174; M. Bizzarri, "La necropoli di Crocifisso del Tufo II," *Studi Etruschi* 34 (1966): 302.; A. Talocchini, "Forma Etruriae. Carta Archeologica d'Italia al 100.000," *Studi Etruschi* 34 (1966): 271; Klakowicz 1978, 51–52).

37 The slab is now in the shape of a half disk with a diameter of 74 cm. and a height of 36 cm. The letters are incised and move in a circle, measuring from 5.5 to 9 cm. The disk is in the Archaeological Museum of Florence (L. Rosi Bonci, "Un disco di pietra con epigrafe arcaica da Monte Melonta (Comune di San Venanzo)," *Annali della Fondazione per il Museo «Claudio Faina»* 4 (1990): 227 ff., with the preceding bibliography; *CIE*, II, 5128; Becatti 1934, 21). For the significance in "emporici" sanctuaries see A. Chierici, "Sui dischi—donario di Monte Melonta, Orvieto, Pieve a Socana e sulla via del Falterona," in *Annali della Fondazione per il Museo «Claudio Faina»* 9 (2002): 581–584.

38 *CIE* 2497; *TLE* p. 259.

39 *CIE* 2494; *CIE* 2495.

40 In 1890 Luigi Giulietti obtained regular authorization for an excavation campaign in his lands near loc. Bagni. All in all seven tombs were explored, already in ruins. The materials recovered, defined as "archaic," were described as follows: "ten vases in different forms, an impasto amphora, four spindle whorls and iron fragments of firedogs and spits" (Klakowicz 1978, 6).

41 In 1958, in the course of agricultural work, a headless clay statuette was recovered. It depicted a seated male figure wearing a cloak and with his right shoulder and breast uncovered. M. Bizzarri suggests identifying the personage with a Jupiter or an Aesculapius, of Etruscan make in the Hellenistic period. The piece is currently in the Museo Civico of Orvieto. The site where it was found is topographically of particular significance, for the torrent Chiani at that point forms a particularly accentuated bend, probably providing favorable conditions for a ford (M. Bizzarri, "La necropoli di Crocifisso del Tufo II," *Studi Etruschi* 34 [1958]: 190; Klakowicz 1978, 45).

42 A marble base with a cornice on three sides comes from the zone, as well as an inscription with a dedication to Diana (*CIL* XI 2683) and a marble fragment showing fauns making wine. Building structures were associated with these finds. (G. Mancini, "Notizie degli scavi" *Notizie degli scavi di antichita* 1883 [1883]: 161s; Becatti 1934, 20, 1; Klakowicz 1978, 41s; DellaFina 1988, file card n. 6-7; Istituto Regionale di Ricerche Economiche e Sociali [IRRES], *Umbria: itinerari turistici ed ecologici. Orvietano / Amerino Narnese Ternano* [Perugia: Salvi, 1995], file card n. 11, p. 91).

43 Dion. Hal., III, 44

44 Plin. *Ep*. V, 6

45 Plin. *Nat. Hist.* III, V, 53.

46 R. Mancini, "Notizie Degli Scavi. Gennaio 1889. Regione VII (Etruria)," *Notizie degli scavi di antichita* 1889 (1889): 4–5.

47 R. Mancini, "Notizie Degli Scavi. Gennaio 1889. Regione VII (Etruria)," *Notizie degli scavi di antichita* 1890 (1890): 6–7; R. Mancini, "Notizie Degli Scavi.

Marzo. Regione VII (Etruria), IV. Orvieto," *Notizie degli scavi di antichita* 1890 (1890): 72–74; R. Mancini, "Notizie Degli Scavi. Aprile. Regione VII (Etruria), VIII. Orvieto," *Notizie degli scavi di antichita* 1890 (1890): 110–112; R. Mancini, "Notizie Degli Scavi. Marzo. Regione VII (Etruria), IV. Orvieto," *Notizie degli scavi di antichita* 1890 (1890): 72–74; R. Mancini, "Notizie Degli Scavi. Maggio. Regione VII (Etruria), VII. Orvieto," *Notizie degli scavi di antichita* 1890 (1890): 144–147; R. Mancini, "Notizie Degli Scavi. Gennaio 1890. Regione VII (Etruria)," *Notizie degli scavi di antichita* 1891 (1891): 23–26; Becatti 1934, 31f., n. 20;

48 C. Morelli, "Gli avanzi romani di Pagliano presso Orvieto," *Bollettino dell'Instituto Storico Artistico Orvietano* 13 (1957): 3–60.

49 DellaFina 1988, file card 14; IRRES 1995, 96, n. 51. Lastly P. Bruschetti, "Il porto romano di Pagliano presso Orvieto," in *Mercator Placidissimus: The Tiber Valley in Antiquity: New Research in the Upper and Middle River Valley: atti del convegno Roma, 27–28 Febbraio 2004* (Roma: Edizioni Quasar, 2009), 323–343.

50 B. Klakowicz, *Il Contado Orvietano* I, *Pagliano ed i Terreni ad Est* (Roma: L'Erma di Bretschneider, 1977), 3–37 and 41; *CIL* XI, 7275; *CIL* XI, 4644; *CIL* XI, 8109; DellaFina 1988, file card 14; IRRES 1995, 96, n. 51.

51 G. F. Gamurrini, A. Cozza, A. Pasqui, and R. Mengarelli, *Carta archeologica d'Italia (1881–1897) Materiali per l'Etruria e la Sabina*: (Firenze: L.S. Olschki, 1972), 18 all. 4; Morelli 1957, 5.; F. di Gennaro, "Il popolamento dell'Etruria meridionale e le caratteristiche degli insediamenti tra l'Età del Bronzo e l'Età del Ferro," in *Etruria meridionale. Conoscenza, conservazione, fruizione, atti del convegno, Viterbo 29-XI/1-XII 1985* (Roma: Edizioni Quasar, 1988), 80 note 30; P. Tamburini, "Contributi per la storia del territorio volsiniese, II. L'abitato di Castellonchio (Orvieto-TR): qualche nota sul popolamento del territorio volsiniese tra il Bronzo finale e la prima età del Ferro," *Archaeologia Classica* 42 (1990): 1–28; C. Bizzarri, Bonifica idraulica ed opere di canalizzazione nel territorio orvietano, in M. Bergamini (ed.) *Gli Etruschi maestri di idraulica, atti del convegno Perugia 23-24 febbraio 1991* (Perugia: Electa-Editori umbri associati, 1991), 61; P. Tamburini, "Orvieto e il territorio volsiniese nella prima età del Ferro," *Bollettino dell'Instituto Storico Artistico Orvietano* 44–45, 1988–1989 (1992): 21–23.

52 See L. Quilici, *Le strade. Viabilità tra Roma e Lazio* (Roma: Edizioni Quasar, 1990), 215, fig. 20, with an abundant bibliography.

53 Four were counted in the medieval period in the 8–9 kilometer stretch from Alviano to Baschi (Baciarello 2004, 64).

54 Quilici 1986, 217.

55 *R. R.* 1.17.1; 3.2.1

56 Vitr., 6.8.

57 A. Carandini and A Ricci (eds.), *Settefinestre: Una Villa Schiavistica Nell'Etruria Romana*, (Modena: Panini, 1985).

58 Cat., 1.

59 Var. 3.2.4.

60 *Ep.* V, 6; trans. L. Rusca.

61 Ministero per i beni culterali e ambientali Soprintendenza archeologia per l'Umbria, *Ville ed insediamenti: Ville ed insediamenti rustici di età romana in Umbria* (Perugia: Umbra 1983), 195.

62 M. Bergamini, *Todi antica città degli Umbri* (Assisi [Perugia]: TAU, 2001), 123.

63 G. Becatti, *Tuder-Carsulae. Forma Italiae. Regio VI*, I (Roma: Danesi, 1938), col. 52. N. 68.

64 G. Comez, "La Massa civitellese dal X al XIX secolo," in G. Comez, M. Bergamini, E. Nunzi, and F. Vici, *Civitella di Massa, di Todi, dei Pazzi, del Lago. Castelli, ville, paesi, chiese di una massa di Todi* (Civitella del Lago, 1985), 125.

65 See M. Bergamini, "Ricerca e studi dal 2007 al 2011," in M. Bergamini (ed.), *Scoppieto II. I materiali* (Borgo San Lorenzo: All'insegna del giglio, 2011), 13–26 for a general picture of the site and its historical-economical importance, or: M. Bergamini (ed.), *Antiquarium Comunale di Baschi, Catalogo Regionale dei Beni Culturali dell'Umbria* (Perugia: Editori umbri associati 2008); M. Bergamini, "Scoppieto e i commerci sul Tevere," F. Coarelli and H. Patterson (eds.), *Mercator Placidissimus: The Tiber Valley in Antiquity: New Research in the Upper and Middle River Valley, Atti del Convegno, Roma, British School at Rome, 27–28 February 2004* (Roma: Quasar, 2009), 285–321.

66 During agricultural work "traces" of mosaic pavements and a stretch of Roman road with a drainage channel below the cobblestone layer (almost a *glareatio* more than real paving) were identified. The area, in addition to its ideal topographical location and where a certain number of remains of Roman times have been found, seems to have been provided with spring water and abundant reserves of clay, required for making bricks and tiles and ceramics (G. Comez, M. Bergamini, E. Nunzi, and F. Vici, *Civitella di Massa, di Todi, dei Pazzi, del Lago. Castelli, ville, paesi, chiese di una massa di Todi* [Civitella del Lago, 1985], 22, file card n. 13).

67 In concomitance with agricultural work, Roman tombs were unearthed, probably in relation to the finding in the Corsini property or with an analogous settlement on the course of the Tiber, which today, in correspondence with that place name, became the lake of Corbara. In the Salviano farm there is the cover of an urn from Piano di Salviano, with a peacock looking backwards in relief, also a sign of the

medium-high level of the depositions (Comez et al. 1985, 22, file card n. 11).

68 The remains of a Roman villa with pavements in *opus spicatum* were found around 50 meters from the course of the Tiber River. They were probably structures for important productive and inhabitative activities since the materials recovered include, besides tiles, oil lamps and coins, two marble statues, for one of which identification with a copy of the Palatine Apollo by *Skopas* has been proposed. The territorial site of the settlement should be noted, and its relation to the point where the river emerges from the ravine of the Forello, the first possible ford of the middle Tiber valley (Becatti 1938, cc. 47–48, n. 49; G. Becatti, Orvieto, "Iscrizione latina in frazione Titignano," *Notizie degli scavi di antichita* 1936 [1936]: 25; Comez et al. 1985, 22, file card 10).

69 The presence of lead fistulas, weighing "more than 20 libbre," from a water conduit of Roman times, bears witness to the existance of structures of a certain complexity and monumentality. The fistulas bore the stamp IMP. CAES. GALBA II ET.T. / VINIO COS (Becatti 1938, c. 51, n. 63; Comez et al. 1985, p. 22, file card n. 14).

70 Numerous archaeological materials have been reported in correspondence to the present center of Baschi. They therefore seem to suggest the superposition of modern over ancient structures. The nature of some of the finds can also give an indication of what the preceding settlement was like. Documented are two seals of an imperial *dispensator*, an institutional figure employed in large estates belonging to the emperor and who, with his seal, marked the merchandise that was leaving the property. The seals of Baschi read: 1) SUCCESSI AU / GG.NN DISP 2) SEVER / AUG.N / DISP. A funerary inscription now in Orvieto was also fond in Baschi, in the southern part: D. M. / C. POMPONI / SUBSTITUTI / POMPONIUS / ANICETUS / FILIO PIISSIMO (1—*CIL* XI 6712, 6; 2—*CIL* XI 6712, 5; 3—*CIL* XI 4707 and 7350; A. Ricci, *Storia di un Comune rurale dell'Umbria (Baschi)* (Pisa: Tip. Nistri, 1913), 14; Becatti 1938, c. 52, n. 68; Comez et al. 1985, 24, file card n. 21.

71 An urn and funerary inscriptions have been documented. In 1698 a square marble urn was recovered, with the inscription of a freedwoman: PAPINIA. M. L. / EPICTESIS. Also in the vicinity of the church an inscription of a freedman was documented: C. BAEBIUS . C. L. / AGATO. Like the urn described above, it testifies to the considerable presence in the middle-Tiber area in the Roman period. The first of the two finds is now in the Museo Oliveriano in Pesaro (1—*CIL* XI 4703; 2—*CIL* XI 4679; Comez et al. 1985, 23, file cards nn. 16–17).

72 Two fragmentary inscriptions were documented in the vicinity of the church, unfortunately now lost, which bear witness to a cult probably to Mars Pomonius and a Faun, two typical sylvan figures specifically connected to agriculture (see Civitella 1985, 14f.). The text, cited in *CIL*, is as follows: 1) MARTI / (PO)MONIO / L. M. ; 2) C.CAESIUS / STERNATUS / SILVANO D.D. (1—*CIL* XI 4641; 2—*CIL* XI 4642; Becatti 1938, cc. 47–48, n. 49; Comez et al. 1985, 22, file card 12).

73 A funerary inscription of a freedwoman has been documented near the church. The inscription reads: IANUARIAE. L / MURRUS. F. (*CIL* XI 4697; Comez et al. 1985, 24, file card n. 19).

74 A fragmentary inscription probably referring to a Roman funerary monument was discovered in 1724. The text indicates the size of the structure which was thirty feet long (*in agro*) and just as wide (*in fronte*) : IN F. P. XXX / IN AGR. P. XXX. (*CIL* XI 4739; Becatti 1938, c. 51, n. 63; Comez et al. 1985, 22, file card 15).

75 The site that came to light during work on the road Baschi-Montecchio presented structures regarding a probable productive settlement and the relative necropolis. The place name itself denotes the massive presence of rubble. The previously hypothesized presence of an earlier Roman settlement is not to be underestimated. This was convalidated by the finding in the vicinity of the base of a statue dedicated to the god Tiberinus (E. Stefani, "Baschi. Sepolcreto Barbarico, scoperto in contrada 'Macee,'" *Notizie degli scavi di antichita* 1913 [1913]: 113–115; G. Picotti and M. De Dominicis, *Etruria sconosciuta II, Baschi dagli etruschi ai "Sanates," ai Goti* [Todi : Res Tudertinae, 1982]).

76 A bronze tablet with a text regarding various dispositions of a burial nature, in defense of the inviolability of the tombs, was recovered in 1719 "presso l'odierno passo della barca." It is known as *Lex Tudertina* or *Fragmentum Tudertinum* (*CIL* XI 4632; Ricci 1913; M. De Dominicis, "Ancora sul 'Fragmentum Tudertinum,'" in *Revue internationale des droits de l'Antiquite* 12 [1965]: 257–278; Picotti 1982, 16f.). In 1607 a statue of the god Tiberinus with an inscribed base was recovered—today the only find extant. The inscription, in poor condition, reads: TIBERINO / SAC(RUM) and can be compared with similar monuments dedicated to the god discovered along the course of the river (see for example the cult site in Orte). It is currently in the Town Hall of Baschi (*CIL* XI 4644; Becatti 1938, c. 52, n. 68; Picotti 1982, 17).

77 A travertine funerary cippus, belonging to Lucio Varenio Tauro, was recovered on the left bank of the Tiber, opposite the railroad station of Castiglione in Teverina. The type, bearing the inscription L(UCII) VARENII ST(ATII) F(ILII) ARN(ENSE TRIBU) TAURI, decorated with shields framed by triglyphs and with two lesena on either side of the porta infera, generally

defined as carsulana, comparable with cippi from the territory of *Carsulae*, Perugia and Assisi, with respect to which the decoration is more articiulated (D. Monacchi, "Un vitor e l'artigianato delle cestineria ad Ameria," *Melanges d'archeologie et d'histoire de l'Ecole Francaise de Rome* 108 [1996]: 12–14).

78 For Copio, G. Cifani, "Il popolamento umbro nella media valle del Tevere," *Annali della Fondazione per il Museo «Claudio Faina»* 8 (2001): 109–139; for the necropolis of S. Lorenzo, A.E. Feruglio, M. Garofoli, "La necropoli del Fosso San Lorenzo fra Baschi e Montecchio (prov. Terni)," *Annali della Fondazione per il Museo «Claudio Faina»* 8 (2001): 193–227.

79 The local archaeological group has noted the presence of a travertine well or cistern curb, with a few letters in the Etruscan alphabet incised on the rim. The original location of the monoliths needs further study, as well as surveys that might bring to light other chronologically valid evidence (F. Della Rosa, C. Medori, G. Medori, and E. Ragni, *Guardea—Pagine di storia* [Guardea: Comune, 1995], 25 ff.).

80 A production villa and a funerary monument were found in voc. Pian del Ceraso. The thermal rooms and the mosaic paving (sea-horse with youth and marine centaur) belonged to the *pars urbana* (D. Manconi, M. A. Tomei, and M. Verzar, La situazione in Umbria dal III a.C. alla tarda antichità, in A. Giardina and A. Schiavone [eds.] Società romana e produzione schiavistica I. L'Italia: insediamenti e forme economiche [Bari: Laterza, 1981], 387, n. 22; IRRES 1995, 223, file card 11, 203–204 [carte]; Della Rosa et al. 1995, 25ff.).

81 The presence of structures relative to a villa, whose initial phases can be placed in the 1st century BCE, in a zone with such a place name has led to the hypothesis of the presence of a holding of the *gens Popilia*. Rooms with mosaics and excellent intonaci, probably belonging to the *pars urbana*, have been studied (IRRES 1995, 97, file card 63–65; Ministero 1983, 201 [with no specific place name]; Manconi et al. 1981, 387, n. 17).

82 A rustic settlement (D. Monacchi, "Nota sulla stipe votiva di Grotta Bella (Terni)," *Studi Etruschi* 54 [1986]: 77; Arch.SAU, Lugnano in Teverina, 6).

83 In this case too it is a rustic villa (Monacchi 1986, 77ff.)

84 Ministero 1983, n. 29, 199.

85 For the villa of Poggio Gramignano, see note 88.

86 Ministero 1983, n. 31, 256ff.

87 Ministero 1983, n. 32, 258ff.

88 For one of the functions proposed for these structures see also Sisani 2006, where they are interpreted as terracing for agricultural production.

89 Ministero 1983, 201; IRRES 1995, 223, n. 15, 203 (carta); S. Zampolini Faustini, "Documenti per una carta archeologica della provincia di Terni," in *Presenze preistoriche e protostoriche nell'Umbria meridionale, opuscolo realizzato per ARCHEOEXPO 96, Forlì, 11–15 settembre* (Terni: s.n., 1996), file card 41.

90 Epistola II, 17.

91 D. and N. Soren (eds.), *A Roman Villa and a Late Roman Infant Cemetery* (Roma: L'Erma di Bretschneider, 1999); in particular D. Monacchi, "Storia e assetto in età antica del territorio in cui ricade la villa di Poggio Gramignano," 23–42.

92 Cato, *Agr.*. 11,5.

93 D. Soren, T. Fenton, and W. Birkby, "The Infant Cemetery at Poggio Gramignano: Description and Analysis", in Soren and Soren 1999, 477ff.; L. D. Lane, "Malaria: Medicine and Magic in the Roman World," in Soren and Soren 1999, 633ff.

94 P. Puppo, *Le coppe megaresi in Italia* (Roma: L'Erma di Bretschneider, 1995).

95 P. Johnson, S. Keay, and M. Millet, "Lesser urban sites in the Tiber valley: Baccanae, Forum Cassii and Castellum Amerinum," *Papers of the British School at Rome* 72 (2004): 69–100 (with preceding bibliography).

96 G. Filippi and E. A. Stanco, "Epigrafia e toponomastica della produzione laterizia nella Valle del Tevere: l'Umbria e la Sabina tra Tuder e Crustumerium; l'Etruria tra Volsinii e Lucus Feroniae," in Ch. Bruun (ed.), *Interpretare i bolli laterizi di Roma e della Valle del Tevere: produzione storia economica e topografia*, Acta InstitutiRomani Finlandiae 32 (Roma: Institutum Romanum Finlandiae, 2005), 121–199.

97 G. Filippi, "Topografia delle fornaci laterizie romane dell'Ager Amerinus," in Maria Cristina De Angelis (ed.), *Uomini, terre e materiali: aspetti dell'antica Ameria tra paleontologia e tardoantico; atti Convegno Amelia, 26. novembre 2005, Sala Boccarini* (Amelia: Comune, 2006), 151–164.

98 Filippi and Stanco 2005, 153; the local term *vicciuta* must however also be kept in mind. It refers to the vine that has gone wild, common in the surrounding countryside.

99 To be kept in mind is that this place name, which in this specific situation seems to suggest that Filippi's reconstruction of the toponym is correct, appears in many other contexts in centeral Italy; see L. Cassi, "Nuovi toponimi," in *Istituto geografico militare, Italia : atlante dei tipi geografici* (Firenze: Istituto geografico militare, 2004), 723.

100 H. H. J. Brouwer, *Bona Dea: The Sources and a Description of the Cult* (Leiden: E. J. Brill, 1989), 108f. (with preceding bibliography).

101 In this context it is interesting to quote Baciarello on the shipyard activities of Orte, with archive sources: "the boats that navigate the Tebro from Rome are all

made by the Orte masters who are better than anyone else in making them" ("le barche che navigano il Tebro da Roma in su tutte siano per i tempi fabricate da mastri ortani avanzando in queste ogni altro a fabbricarle") (Baciarello 2004, 119).

102 Censimento zone archeologiche 1989, n. 15.

103 Censimento zone archeologiche 1989, n. 7.

104 Censimento zone archeologiche 1989, n. 14.

105 IRRES 1995, 233, n. 83.

106 Baciarello 2004.

107 Baciarello 2004, 125.

108 Probably all the species there were hunted and the most "noble," such as geese, mallards, and mergansers, were sold (Baciarello 2004, 126).

109 Baciarello 2004, 127.