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## LATE ANTIQUE *VILLAE* IN THE *AGER TARRACONENSIS*. TERRITORIAL AND FISCAL TRANSFORMATIONS.

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Recent studies have pointed out the deep changes in the rural settlement patterns of the *Ager Tarraconensis* from the 3rd to the 6th c. AD. The reduction of the number of rural sites from the early Empire, and the increase of the size and richness of those who survive, has been usually interpreted as a phenomenon of land concentration. Despite this logical interpretation, some features have to be also taken into account, such as the changes of the road network and the new tributary role of some *villae* as fiscal units.

### **Territorial changes in the rural world in the NE of the Iberian Peninsula (3<sup>rd</sup> to 6<sup>th</sup> c. AD).**

In recent decades, the studies of the land settlement patterns in several areas from the NE of the Iberian Peninsula (such as the *Ager Tarraconensis*, the *Ager Barcinonensis* or the *Ager Iluronensis*) have pointed out the deep changes suffered in these zones from the late 2<sup>nd</sup> c. AD onwards. In general, the most impressive transformation is the abandonment of many of the rural sites from the 1<sup>st</sup>-2<sup>nd</sup> c. AD (farms, *cellae vinariae*, amphora workshops), and the development of some large *villae*, in a process of concentration of the rural population (and production) in these rich sites. Of course, the process is complex (some rural sites are not totally abandoned, but transformed into productive centres, reforming the domestic areas into productive spaces), but in general it has been interpreted as a process of concentration of the land around some *villae*, newly developed as rural territorial centres. This process of land property concentration has been connected to the model of the *latifundia*, mentioned by the ancient literary sources.<sup>2</sup> It was a general phenomenon in the Roman West, identified both by the monumentalization of some of the 4th-5<sup>th</sup> c. *villae* and by the transformation of previous residential areas in productive zones, combined with a process of decrease of the smaller and middle properties (Brogiolo-Chavarria 2008: 195).

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Research Project: proyecto de investigación "Control, gestión y explotación del territorio en la Hispania romana: del modelo agrimensor al Paisaje Histórico", PID2021-122879OB-I00, del MICIN.

<sup>2</sup> A reference to the convenience of unifying several domains in one large property, buying the neighbouring properties, in Pliny the Younger (*Ep.* 3. 19)

In general terms, most of the specialists consider that the development of *latifundia* was the main explanation to understand the archaeologically documented diminution of *villae*, and the consequent concentration of the rural land (and population?) in the surviving ones. A brief overview could begin with the work of Marta Prevosti, focused on the Baix Camp area (*Ager Tarraconensis*), where the number of rural sites decrease from the Julio-Claudian period (15 *villae*, and 66 rural sites), to the 2<sup>nd</sup> c. (19 and 55), the 3<sup>rd</sup> c. (13 and 36) and the 4<sup>th</sup> c. (7 and 24) (Prevosti 2015: 158). In another sector of the *Ager Tarraconensis*, the river Francolí area, Josep M. Macias and J. Menchón (2007: 159-161) have identified the same process of rural abandonments from the 1<sup>st</sup>-2<sup>nd</sup> c. to the 3<sup>rd</sup> c. The authors also pointed out the relationship between the surviving *villae*, their enrichment, and the reform of the Roman road, documented by a milestone of *Licinius Valerianus* (253-256 AD) in El Morell. Macias-Menchón identify the development of the *villae* placed close to this *Tarraco-Ilerda* road, and the decrease or abandonment of the *villae* placed along the coastal road, the *Via Augusta*, proposing a likely change of the distribution of the land properties during this period (Macias-Menchón 2007: 161).

This is also the case of the central coast of Catalonia, where C. Ruestes (2002) has analysed the changes of the rural landscape from the 1<sup>st</sup>-2<sup>nd</sup> c. AD to the 4<sup>th</sup>-5<sup>th</sup> c. AD. In the *Ager Baetulonensis* the number of rural sites decreased from the 1<sup>st</sup>-2<sup>nd</sup> c AD (44 well documented, 66 including the uncertain examples) to the 3<sup>rd</sup> c. (21) and recovers in the 4<sup>th</sup> (35 sites). In *Iluro*, from 107 rural well documented sites during the 1<sup>st</sup>-2<sup>nd</sup> c. (147 including the uncertain examples), only 33 are documented in the 3<sup>rd</sup> c., and 46 in the 4<sup>th</sup> c. (Ruestes 2002: 720-722). If we take into account only the *villae*, the reduction is also clear, but less radical. In *Baetulo* were documented 17 *villae* from the 1<sup>st</sup>-2<sup>nd</sup> c., 12 from the 3<sup>rd</sup>, and 16 from the 4<sup>th</sup>. In *Iluro* 25 *villae* were documented from the 1<sup>st</sup>-2<sup>nd</sup> c., 14 from the 3<sup>rd</sup>, and 18 from the 4<sup>th</sup> c. (Ruestes 2002: 724). The reduction of the rural sites, but the relative continuity of the *villae*, is interpreted as a phenomenon of land concentration around the surviving sites (Ruestes 2002: 725).

Finally, not exactly in the NE but not so far away, in the Aragon area, Javier Andreu (2015) has pointed out a similar phenomenon. The 1<sup>st</sup>-2<sup>nd</sup> c. was the period with a major number of rural sites in the Cinco Villas region, surrounding the Roman city of “Los Bañales” (2015: 17), but, as happens in other areas, a process could be also identified of decrease and concentration of the rural population around some rich sites during the 4<sup>th</sup> c., many of them placed close to a Roman road reformed during the government of Constantine II (milestones published by Lostal 1992: 201, 220-221).

If we move to the province of *Narbonensis*, a similar process has been documented in the Nîmes area. In the territory of this city, between one third and half of the sites were abandoned at the end of the 2<sup>nd</sup> c. (Raynaud 2015: 114). Most of the 1<sup>st</sup>-2<sup>nd</sup> c. sites were located on the coastal plain, articulated by a secondary Roman road (“Camin Salinié”, Raynaud 2015, fig. 2), but most of the late antique or early mediaeval sites were placed on the slopes of the foothills, articulated by another road, the “Camin Romieu” (Raynaud 2015, fig. 4).

As we have seen, there is an interesting relationship in many territories between most of the surviving rural sites, in many cases luxury *villae*, and the Roman roads, most of them reformed or arranged during the 3<sup>rd</sup> and 4<sup>th</sup> centuries. This is also the case in the Central coast of Catalonia, where the “Camí del Mig”, part of the *via Augusta* network, was reformed at the beginning of the 4<sup>th</sup> c. (milestone from *Licinius II*, Nolla-Rodà 2012), or in the surroundings of *Barcino*, with three examples: a milestone from Constantine in Montjuïc (IRC I 186), one from Galerius (IRC I 179) and another in Sant Cugat (milestone from *Licinius II*, IRC I supl. 235). The activity in the Roman road network is also attested close to *Gerunda* (Palau-Sacosta) by another *Licinius II* milestone (IRC III 193) and one from *Flavius Claudius Constantinus* (337-340, IRC III 192), and close to *Ausa* from a *Galerius* milestone in Centelles (IRC 172). This is also the case in the *Ilerda* area, where a milestone from Constantine II was identified in Artesa de Segre (IRC II 92). In most of these cases, it is possible to identify some important 4<sup>th</sup> c. *villae* not far from the reformed roads.

This was not an exceptional phenomenon in the western Empire. Recently, F. López Sánchez (2018: 126-127) has emphasised the richness of many Gallic and Hispanic 4<sup>th</sup> c. *villae* placed along the main roads, *villae* whose owners should be connected to the network of the imperial government, and that deployed a territorial role similar to public centres. As an indicator, López Sánchez mentions the presence of abundant coins in these *villae*, and that 23 % of these *nummi* present marks of oriental mints (2018: 128).

A brief overview about these areas indicates some regular procedures in the transformation of the settlement patterns:

- 1- Large reduction of rural settlements during the 3<sup>rd</sup> c. AD, and recuperation from the 4<sup>th</sup>, but on a minor scale compared to the 1<sup>st</sup>-2<sup>nd</sup> c. AD.
- 2- Significant reduction of *villae* during the same period, but on a minor scale compared to the rest of rural sites.

- 3- Highest continuity of the *villae* and farmhouses placed close to the alluvial areas, and especially close to the main Roman roads.
- 4- Significantly, the remaining *villae* are close to roads remodelled or reformed during the 3<sup>rd</sup>-4th c. AD, as attested by the milestones.
- 5- Increase of luxury areas in some *villae* from the 4th c. AD, but also some processes of transformation of residential areas to industrial ones in others.
- 6- Increase in the average area of land controlled by any of the surviving *villae* (from the 4th c. AD), a possible process of land concentration.

### **Land, Properties and Landlords.**

The process of land concentration during the 4th c. should be linked to the enrichment of some local families, the urban aristocracies of the mentioned cities, as happened during the urban development of the 1<sup>st</sup>-2<sup>nd</sup> c AD (Olesti 2020). In fact, the epigraphical register of the 1st-2<sup>nd</sup> c. AD documents the relation among the main *gentes* of these cities, for instance *Tarraco* or *Barcino*, and the structure of the land ownership. Recent studies from Marta Prevosti and Diana Gorostidi have identified some members of the *Tarraco* elite as owners of land properties in the *ager* of the colony (Prevosti-Guitart 2010, Gorostidi 2014: 218), following the social structure of the Roman cities: *decuriones* and magistrates based their social position as landlords of large extensions of the *ager civitatis*. This is also the case of the *Ager Barcinonensis* and the *Laeetanian* region, where the analysis of the main *fundi* documented in the area indicates an exceptional relation among properties and the main colonial families. The territorial identification of the *fundi* through the mediaeval place-names and the epigraphy of the *instrumenta* (Olesti-Carreras 2013), identifying for instance the *fundi Corneliano, Liciniano, Miniciano, Valeriano, Porciano, Aemiliano.....*, demonstrates the deployment of the urban elites in the *ager*, owning important *villae* but also wine production centres or amphora workshops.

Unfortunately, the reduction of the public epigraphic habit from the late 2<sup>nd</sup> c. and the 3<sup>rd</sup> c AD doesn't allow us to follow this process of development of the local elites as in the previous centuries, and it is difficult to identify the *gentes* that carried out the process of land concentration. We could analyse the rich *villae* developed from the 3<sup>rd</sup> and 4th c. AD, but it is difficult to identify their owners (through the *nomen fundi* and the *instrumenta*) and evaluate their relation with the urban magistrates and *decuriones*. We are able to identify the new rural centres concentrating the wealth and the rural

production, but we do not have much information about their owners, and their hypothetical role as urban aristocracies.

But, could we use other kinds of information to interpret and understand these territorial changes from the 2<sup>nd</sup> to the 4th c. AD? Is something missing in this process of land concentration and social change? We consider that the fiscal and tributary issue has to be also taken into account.

### ***Fundi and the Roman census.***

In the Roman world, land was the source of subsistence and of wealth. The land was not only the most important basis of production, or a sure shelter for the incomes obtained in other business, but also a symbol of social privilege and promotion. There were other sources of wealth, but often this kind of business (pottery production, loans, trade) were closely related to the property of land. Attempting to study forms of land ownership in the Roman period through archaeological evidence is often considered a fanciful aim. As we have seen, landscape archaeology, survey studies and diachronic analyses of settlement's pattern have allowed a general approach to the question, but there are difficulties in identifying the size and number of land properties of any Roman local elites, the main urban *gentes*.

The legal consolidation of the “urban model” from the Caesarian/Augustan period in the Iberian NE implies the genesis of the local/colonial elites, and in the landscape the emergence of the “*villa* system”. But in fact, the key point of the Roman territorial model was the *fundus* or *praedium*, the rural property (a consequence of the spread of Roman citizenship, and the consolidation of the *dominium*). These *fundi* were the “core” of the *census*, the inventory of the citizens and their properties. Based on this *census* the political, social and economic life of the city was set up.

The *fundi* were delimited and attributed at the initial moment of the juridical foundation of the new city. In the case of a colony, *Tarraco* for example, the *fundi* were assigned through the centuriation system, the *ager divisus et adsignatus* (Palet et al. 2010). In other cases, the *praedia* were distributed through the *Ager Arcifinius* procedure, where natural boundaries or former land division markers were used for the delimitation of the properties. In both cases, land was organized according to the respective form of ownership (*dominium*) and declared by *professio* (declared at the *census*), as we know very well from the *Veleia tabula* (CIL XI 1147).

From the juridical point of view, the promotion to the Roman right of these cities (and their rural territories) supposed the establishment of the *dominium ex iure Quiritium* and the full property on their estates. The land formerly possessed by the land owners in a precarious way (*possessio*) was transformed in *dominium*, and for the first time it was included in a real *census* (the colonial *census* in the case of *Tarraco*). From the Roman land surveyors' point of view (*agrimensores*), the elaboration of the new *forma*, the mapping of these properties, was combined with a real new delimitation or marking of these estates. In fact, this is the case in *Tarraco*, where the new plots of the colonists had to be delimited (with the help of the *centuriatio system*) in the fields.

The origin of the name of the *fundus* is clear in the Roman law: it was named by the first owner registered in the first census (logically, in the case of *Tarraco*, at the moment of /the Caesarian *deductio*). The name of the first owner was kept especially for fiscal and administrative purposes, with the aim of maintaining control over that land despite the ownership changes: the *vocabulum fundi* (Olesti 2020). Any original *fundus* or *praedium* could have been transferred to other hands over time (marriage unions, inheritances, purchases and sales...), however, the name of the original *fundus* was retained while the *census* and property system was active. Despite some logical changes, they were to survive until the beginning of Late Antiquity, when the taxation model profoundly changed. This continuity has been documented in the case of the *Ager Barcinonensis* (Olesti 2020, Olesti-Carreras 2013), where the preservation of most of the Roman *fundi* in the mediaeval landscape (as place names mentioned in the early mediaeval documentation) has been connected to the main families in the colony (*Cornelii-Corneliano*, *Licinii-Liciano*, *Porcii-Porciano*, *Minicii-Mizano*, *Valerii-Valeriana*, and many other examples). The *fundi* names from the mediaeval documentation of the *Ager Barcinonensis* refer to the original landlords of Roman estates. The names survived during Late Antiquity and the mediaeval period due to the continuity in the agricultural exploitation and taxation. Probably not all, but the main estates were preserved in the mediaeval toponymy, as they were useful indicators for defining and articulating the mediaeval landscape.

In the Roman cities, the distribution and register of the land was perfectly controlled by the magistrates and the local *census*, where all the *fundi* were inscribed, described and named. The famous text of Ulpian (Dig. 50, 15, 4), indicates very well the procedure.

Far from being just a model, the Ulpian's description has been documented in several epigraphical examples, such as the *Veleia alimenta* table (CIL XI 1147) or the *tabula* of

the *Ligures Baebiani* (CIL IX 1455), from the Trajan period, as is also the case in some 4th c. document, such as the *Volcei Tabula* (CIL X 407), indicating the continuity of this juridical habit.

### **Concentration of land, or concentration of land taxes?**

The analysis of the *Veleia* table is in this case very interesting. Recent studies about this document have pointed out an interesting feature: the *fundus* was the key of the census system (*forma censualis*), but in fact the responsibility of the *vectigalia* established for properties (*alimenta*, road maintenance, several local *munera*) was not individual, but collective, and there were also examples of *fundi* where some citizens were responsible for the payment of the whole area, not just their own *fundus* (Chouquer 2010). Following Chouquer and Maganzani (2014) the list of the owners and *fundi* from *Veleia* was based in the *forma censualis*, the inventory of *fundi* and *praedia*, but it was not the real *census*. Each of the citizens who declared (by *professio*) a group of properties, were in reality not the owners of the *fundi*, but responsible for the taxes of that land. The *alimenta* system of *Veleia* is based on the *obligationes* (contributions linked to properties) of 51 citizens that declare (by *professio*) a list of *fundi*, *saltus*, *casae*, etc. Usually they were considered the owners of the *fundi* mentioned in their *obligatio*, as rich landowners, but in fact there are some indicators that do not align properly with this explanation (Chouquer 2010, 2018: 78 ss). For instance, *Marcus Mommeius Persicus* declares the *obligationes XIII* and *L*, but at the same time he appears as an owner of *fundi* in the *obligationes XVIII* and *XXXI*, declared by other citizens. If the *tabula* was just the list of properties of any landholder, these properties should appear in his *obligationes*, not in the limits of others. For this reason G. Chouquer argues that in reality the *obligatio* was not the land, the *fundus*, but the rent of that land involved in the *obligatio*, the land tax established by the city and the state over that property. He proposes the existence of fiscal allotments of the *vectigalia* of these lands, unifying several *fundi* in one unity: a good example is in the *obligatio* including the *fundus Cornelianus Collecterianus Flacelliacus cum colonia Munatiana Artefigia et colonia Vettiana Cornelianana*, an intermediate structure among *fundi* and *obligatio*. In fact, it is a phenomenon of *contributio* among some lands (*fundi*) to others for tax purposes. Another indication of this fiscal perspective is the fact that the *obligationes* involve not only private properties, *fundi*, *saltus*, *casae*, but also *agri* or *praedia vectigales*, in other words public land ascribed to citizens who use the land, paying a perpetual *vectigal*. They were not the actual owners of the land, but of course

paid the taxes accorded to that land. Another clue could be also the existence, in some *obligationes*, of secondary responsibility for land in the territory of other cities: the collection of taxes from there is more logical than the real ownership of that land.

It is also surprising that many of the *obligationes* were declared by freedmen in the name of their patrons, the citizens-landowners, which would be strange if the object of the *obligationes* were a group of properties, or *fundi*, and not their taxes. A freedman could be easily a tax-collector, allowed to declare them.<sup>3</sup>

This fiscal responsibility of some of the local landlords is also clearly established in the municipal laws, as the *Lex Flavia Malacitana*, where the 63rd article clearly indicates the role of the *duumviri* in managing the *obligationes* of the tenants of the local taxes, and their properties as guarantee, in a similar system to that reflected by the *alimenta* in Veleia.

Finally, there are other examples in the juridical sources where *obligatio* is a fiscal concept. Hyginus (79, 50 Th.) mentions that “Lands yielding revenue are legally liable, in some cases to the Roman state, in others to the government of colonies or *municipia* or other communities (translation, Campbell 2000: 82)” *Vectigales autem agri sunt obligati, quidam r(ei) p(ublicae) p(opuli) R(omani), quidam coloniarum aut municipiorum aut civitatum aliquarum*. The sentence leaves no doubt about the fiscal sense of *obligatio*, and its connection to the *agri vectigali*, as were the case of the *obligationes* from Veleia, subjected to the *alimenta*. Some lines later, Hyginus focused on the tax collection (Hyg. *De Cond.* 116. 35): “The lessees who bought the right to collect the rents due according to the conditions imposed, themselves rented this out by *centuriae* or sold it to some of the adjacent landholders. In these lands (i.e. subject to rents), therefore, some places did not find any buyers (i.e. lessors) because of rough or infertile terrain. (...) These areas

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<sup>3</sup> In the case of Veleia, there were 51 *obligationes*, in the hands of less than 50 persons. The number of land units (most of them *fundi* and *praedia*, but also some *casae*, *vici*, *saltus*, *merides*, *coloniae*...), was a minimum of 620, some of them divided in several parts (*pro parte dimida*, *pro parte quarta*). The taxation of these units had to be based on a grouping of units, a quote, that were the useful *obligationes*. We have also to keep in mind that there were no properties registered in the *tabula* of Veleia under 50,000 sesterces, but they should have existed. Likely, they were not suitable for the purposes of the *alimenta*, but of course they should pay the land taxes and *munera*, and they should be also bunched in other *obligationes* not mentioned in the *tabula*. The allotments or groups of land taxes, under a limited number of tax collectors, was an easy way to manage these revenues, specially when the responsibility for the whole payment of the tax was from those responsible for the *obligatio*, and his declaration. We know that the collective responsibility for a tax was usual in the Roman fiscal system (as happened with the provincial *stipendium* in peregrine communities), and this was also the case of the local taxes in Veleia: the 50 tax collectors of the *obligationes* were those responsible for of the whole imposition, an efficient method to get the final amount.

should therefore belong to those adjacent landholders whose boundaries touch them. This type of land, that is, common pasture, can still occur nowadays in certain allocations” (Campbell 2000: 85).

Following Hyginus, the abandonment of some plot, *fundi, casae, saltus*, was in fact balanced out because their taxes were also the responsibility of the collector of the *vectigalia*, that is in the case of *Veleia* the collector of the *obligatio*. The infertile land was “contributed” (*contributio*), associated with the productive ones. Of course, that land was not in cultivation, but it kept a reduced tax, as a property. Again, as we mentioned in the text of Hyginus quoted above, the *contributio* among several properties was the solution to the owner to improve their management (of the lands, and of the taxes).

A similar case occurs in the Digest (50. 15.4): “The tax assessor (*censitor*) must be as just as is consistent with his duty in relieving anyone who, for some reason or other, has not been able to enjoy a certain part of his property which is recorded in the Public Registers. Therefore, where a part of his land has been swallowed up by an earthquake, he should be relieved from taxation upon it by the assessor. If his vines have died, or his trees have dried up, it is unjust that, so far as they are concerned, he should be included among persons liable to taxation. If, however, he has cut down his trees and vines, this cannot benefit him in any respect when the tax had been assessed at the time; unless he gives a satisfactory reason to the assessor for having cut them down.”

Many dispositions of the Roman legislation (just 32 from the Theodosian code) deal with these *agri deserti* and the need for the recovery of the land taxes. In fact, when the emperor Pertinax distributed abandoned lands in 193 AD, private and public, he cancelled their taxes during 10 years for the new occupants (Herod. *Hist.* 2, 6, 1), an indicator of the importance of these taxes.

If we recapitulate this information, it is clear that already during the 1<sup>st</sup>-3<sup>rd</sup> c. AD the distribution of *fundi* among the different *gentes* of a Roman city was controlled by the *forma censualis*, the inventory of all properties declared by the owners, but their taxes were managed not *fundus* by *fundus*, but by allotments or groups of *fundi*, where a collector - and guarantor - was responsible for the whole payment. This system, reflected in the *Veleia* tabula but also in other documents mentioning the local *vectigalia*,

contributed to the creation of fiscal sub-units that helped the tax collection, focusing on some owners (and their *fundi*) the responsibility of the total tax amount.<sup>4</sup>

### **From taxes to land concentration.**

The creation of these tributary sub-units had at the same time some territorial consequences. A same owner, responsible for the taxes of a sub-unit, could group their *fundi* in a new unit. This situation was also envisaged by the Roman law and the Roman land surveyors. Hyginus (*De Generibus controversiarum*, Lach. 129, 13) setting up clearly the procedure:

“Furthermore, as generally happens, the owners of several contiguous farms (*fundi*) normally attach (*contribuere*) two or three fields (*agri*) to one farmhouse (*villa*) and leave (in place) the boundary markers that used to demarcate the individual fields (*agri*). When the other farmhouses (*villae*) were abandoned, except the one to which the fields were attached, the neighbours, not content with their own land, remove the boundary markers by which their own holding is demarcated, and claim as their the markers by means of which the boundaries between the farms (*fundi*) of the single owner are recognized. Therefore we shall have to be on the lookout for this.” (Translation Campbell 2000: 97). The text of Hyginus is very interesting for different reasons. First of all, it shows the procedure of unifying, *contributio*, some land - *agri* and *fundi* - to one “central” *fundus*. The text demonstrates the existence of landowners possessing several *fundi*, rural properties, attached to a unique *villa*, a rural residence. All of these *fundi* had an original farmhouse, *villa*, but when the owner decided to concentrate his properties, the *villae* of the “secondary” *fundi* were abandoned, maintaining only the *villa* of the “central” *fundus*. *Contribuere* is also a fiscal term, indicating the unification of the taxes of the different *fundi* in the new one. Hyginus points out this situation because, as the *agrimensor* reflects, sometimes the neighbours could take advantage of the new situation and occupy, illegally, the *agri* of the secondary *fundi*, and eliminating the original *termini*, claiming the new land as their property. The case is interesting because it shows the continuity of the land occupation of the secondary *fundi* and the preservation of their limits (by *termini*), despite the fact that their respective *villae* were already abandoned. The abandonment of the

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<sup>4</sup> Other references where the *fundus* is not just a property, but a bunch of lands and properties for tributary reasons, could be identified in Digest, 50. 15. 5, and especially in Digest, 32, 91, 3, both texts from the Severan period (Papinianus). In the second case, the joining (or not) of two *fundi* under the same name, likely a fiscal unit, is explicitly mentioned by Papinianus.

*villae* doesn't mean the abandonment of their land. In other words, there is no change of property ownership at all, as the original landowner maintains their lands and likely their productivity, but there is a real abandonment of several farmhouses, not used by the owner.

Of course, the abandonment of these "secondary" *villae* is an interesting feature, and could be linked to the transformation of the agricultural works, perhaps not focused on intensive productions such as wine or oil, but it is not a real indicator of a concentration of land, as we could suppose from the archaeological point of view, due to the reduction of *villae*: there was not a real change of property or land concentration. The abandonment of *villae*, as mentioned by Hyginus, documents in this case the loss of value of some farmhouses, perhaps because there is no need to maintain several luxury residences in a new context, as before, or perhaps because the new forms of agricultural production (and the increase of *coloni* and free peasants) no longer required the existence of central residences and stores, in the form of *villae*.

But also the text from Hyginus is interesting for another reason. The *fundi* mentioned were attached to the main *villa* in a specific way: the Latin word used by the land surveyor, *contribuere*, is a technical word used in the fiscal vocabulary, and means the link between several parts to one unit, a fiscal allotment. The owner of the "central" *fundus* is also responsible for their secondary ones, united in an unique fiscal allotment, a unique fiscal quota.

It is also envisageable that in the case mentioned by Hyginus, where the neighbours eliminated the former *termini* of the *fundi* and occupied their lands, a certain quantity of that land was previously abandoned, wasted, by the legal owner. Otherwise it is difficult to understand the clear breaking of the legal rules: the legal owner of the land, unified the best lands of their *fundi* in a new unity, and the wasted *agri* were illegally occupied by the neighbours. The *agrimensor* has to act because the *agri deserti* also had to pay their taxes, for which someone had to be responsible. The removal of the *termini*, mentioned by Hyginus, was also a serious problem, as the loss of the territorial landmarks could imply the effacement of the properties, and their taxes.

The question of the *agri deserti* was also one of the major issues of the Roman *agrimensores*, and there was a vast legislation from the imperial chancellery about their management, at least from the Antonine dynasty. The protection of the *termini*, the global responsibility of the *curiales* about the land taxes, or the measures to cultivate the *agri*

*deserti*, were developed from the 2<sup>nd</sup> c. AD to avoid the crisis of the system, but until the 4th c. they were not very effective.

### **The 3rd and 4th c. Reforms and continuities.**

The 3<sup>rd</sup> c. crisis deeply affected the Imperial taxation system. The loss of population due to plagues, political instability, the consequences of the first invasions (well documented in the Iberian northeast in the case of the Frankish raids)<sup>5</sup>, and urban transformations, impacted the local economy, increasing phenomena such as the *agri deserti*, the occupation of former public lands, and tax avoidance. The measures deployed by Diocletian and Constantine were in this sense very effective, as they could simplify the evaluation of taxes, fix the rural population to the land, and reconstruct the Imperial *fiscus*.<sup>6</sup> But these new measures were still supported by the former system based on the *forma censualis*, the land register, its categories, and the evaluation of its area. The inventory of properties was still the bedrock of the taxation system. In fact, some of the tetrarchic reforms were planned by previous emperors, linking the traditional register of land and taxes with new obligations, such as the collective responsibility of the *decuriones*. This is the case of *Aurelianus*, as Constantine himself indicates (C.J. 11. 58 1):

“As Our relative, the Divine Aurelian, ordered the decurionates of cities to be responsible for the taxes due on abandoned lands, as well as on those whose owners cannot be found, so We decree that, after the first three years of possession, they shall be exempt from all enforced contributions. We decree that this law shall be observed, and if it should be established that the said decurionates are not able to pay the taxes assessed on said lands, the latter shall be divided among the citizens.”

We also know of Constantine’s efforts to preserve the limits of the *fundi*, the key point of the land register and land taxation:

In CTh 2. 26. 1, a decision of Constantine (330) mentions the *agrimensor* as the first step for any boundary dispute: “If any person should be the first to lodge a complaint that parcels of land of his ownership have been forcibly entered and seized and if this complaint involves a dispute as to boundaries as well as ownership, the question of possession shall be settled first; and then a surveyor shall be ordered to go to the parcels

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<sup>5</sup> *Tarraco* is precisely one of the best documented examples (Macias et al. 2013).

<sup>6</sup> We have not taken into account other important reforms, such as monetary, administrative or social ones, despite their clear relation with the land fiscality. On these reforms, see Carrié 1982 and 1994, Grey 2007.

of land, so that such litigation may be ended when the truth is made known.” The measure is reinforced in CTh 2. 26. 2, where any landowner who fraudulently claims an extension of their boundary limits will be punished by the deduction of the extra land claimed as well as a part of his own land equal in size to that fraudulently claimed. Finally, in CTh 2. 26. 3, Constantine argues that a boundary dispute of less than 5 feet, could be settled by an *arbitrator*, but more than that has to be settled before the governor: the management of any piece of land matters.

“If there should be a boundary dispute, the appointment of an arbitrator shall be permitted only when it is established that the land concerning which suit has been brought before the governor is less than five feet in width.’ When the case concerns a greater space of land than five feet in width, it must be settled before the governor himself, since it is a case of ownership and not one of boundaries.”

It is also worth pointing out that some imperial prescriptions from the 4th c. also contributed to the concentration of land and parcels into new units, again with a clear fiscal objective, with the aim of setting up large properties where tax collection could be guaranteed, being arable land or *agri deserti* (CJ. 11. 58. 7, 383):

“Anyone who cultivates an abandoned tract of land belonging to Our private domain, and renders it fertile and valuable shall, in accordance with the rule established in such cases, become the private owner of the same forever, and shall hold it as his own property (...) Moreover, We order that those who are in possession of rich and fertile lands, or even think that they are now entitled to any such, shall be liable for all taxes due at the time on lands which have been abandoned. Those, likewise, who hold lands which are neither fertile nor altogether sterile, under the tenure of emphyteusis, as in the case of those who are also in need of relief, must remember that after the term of two years has expired they shall, in conformity with the ordinary rule, be liable for the regular taxes which may be due. (...) It should also be specially observed that the adjoining owners will primarily be liable for this payment, and if the said lands do not join, and are not in the same neighborhood, those farther away will be responsible. The appointment should be made in such a way as to be based upon propinquity, or regulated by the intervening space, and in such a way as to be in conformity with justice and moderation, so that what is for the profit of all may be effected by universal consent.”

The same idea is present in CTh. V, 14, 30. “he must take care to choose first lands which are near of his own and in the same districts. If he should find no lands which are adjoining his own or situated in the same district, then he may take lands situated farther away, but

with consideration for the space between these lands, so that they shall adjoin each other as far as is possible.”

In any case, the whole territory has to be registered and censed, as it was from the early Empire:

“All land shall be inscribed upon the rolls of the Census, and whenever relief is demanded, the amount of tax assessed upon sterile and barren soil shall be made up by a levy upon that which is cultivated and productive. (C.I, 11, 57, 4, 393)

Even at the beginning of the 5<sup>th</sup> c. the Imperial administration tried to maintain the system of land registry in function, despite the abandonment of land or former owners leaving in order to avoid the payment of taxes. This is the case of Honorius and Valerius’ indication about the register of abandoned land (CTh. 13. 11. 13, 412):

“We command that if any districts are unable to meet their tax payments, their assessments shall be equalized, so that whatever they can pay shall be written down with pure fidelity and entire truthfulness, but that which is impossible shall be removed from the public records. In the first place the landed estates themselves must be assigned for tax payment to their old masters. If the persons of such masters or their heirs cannot be found. We decree that the neighbours or extraneous persons, if they wish, shall be established as owners, provided only that they are financially responsible.”

### **From the model to the landscape: the example of the Northeast area of the *Ager Tarraconensis*.**

As we have seen, from the literary sources it is possible to identify some different steps in the process of inventory and tax control of the *fundi* in the Western Roman Empire, from the original *census* of the *municipia* and *coloniae*, to the collective taxation through *numerii* or regional tax collectors. At the same time, this process was accompanied by a process of land concentration. Is it possible to identify both processes through the archaeological data? Is it possible to identify some significant changes in the rural settlement patterns connected to these ownership and fiscal modifications?

We will try to test this on one of the most significant Roman territories in the Western Empire: the *Ager Tarraconensis*, the *ager* of the provincial capital.

As we have seen, *Tarraco's* territory has been the object of multiple historical and archaeological studies, some of them very recent (Prevosti 2015, Macias 2014). Surprisingly, little research has been done on the forms of rural land ownership in this area, which has been carried out in other areas, such as the *Ager Barcinonensis* (Oleisti

2020, Olesti-Carreras 2013). One of the most interesting studies has focused on the distribution of rural epigraphy (funerary inscriptions, *instrumentum scriptum*), with the identification of some *fundi* owned by local families, such as the *Iulius Statutus* owning the Vil·la dels Antigons, *Q. Gargulius* the Vil·la Ceratònia, *M. Fulvius* the Vil·la de Centcelles, or *L. Bennius* the Vil·la de Mas Sardà (Gorostidi 2014: 218).

But, despite the lack of the identification of most of the colonial *fundi* and their land owners, it is possible to identify the changes in the distribution of the rural sites in the *Ager Tarraconensis*, analysing the changes in the distribution and size of the sites -and their corresponding land plots- through the Roman period. We will focus not on all the *ager* of the colony, but on a trial area occupying the nearest areas of the city, especially to the west.

#### The archaeological evidence & the rural landscape. The 1<sup>st</sup>-2<sup>nd</sup> c. AD

We do not know the precise boundaries (*fines*) of *Tarraco's* territory, but we can be sure about the occupation of the coastal and inland area between the river Gaià to the north, a mountainous area to the west (“Muntanyes de Prades”) and the river Llastres to the south: the modern-day districts of Tarragonès, Alt and Baix Camp and Baix Penedès. This area was crossed by the coastal *Via Augusta* and the *Via de Italia in Hispanias* through *Ilerda* and the Ebro Valley.

Despite the scarcity of well-studied archaeological evidence,<sup>7</sup> different indications suggest a first organization of the territory in the late Republican period, as some authors have pointed out (Arrayás 2005). But it was during the 1st century AD that we can identify a regular system of rural settlements reaching its definitive establishment (Olesti, 1997; Macias, 2005: 79-80).

As a study case, we can mention the case of Vilardida (Alt Camp), a recently excavated *villa*. At this site, located in the eastern part of the *Ager Tarraconensis*, a sector of the site presents several walls corresponding to various rooms, as well as ditches and silos. The exhumed material corresponds to a clear 2<sup>nd</sup> century BC context. The presence of typically Iberian elements and structures, in the same contexts as Italic materials, are

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<sup>7</sup> For the main *villae* excavated in the western part of *Tarraco's* territory, see: Cal·lipolis (Díaz, Macias 2008), Centcelles (Remolà 2008), Els Hospitals (Macias, Menchón 2007), Paret Delgada (López, Puche 2011), La Burguera (López 1993, Remolà 2023), La Llosa (López, 2021), La Villditchesa dels Castelletes (Morera, 2021).

typical of a late Iberian-early Roman presence, and it is not easy to determine whether there was a Roman or indigenous population occupying this rural farm (Olesti, 1997). This kind of hybrid site, not *villae*, have been documented in different areas of the Iberian NE (Bosch et al. 2011, Olesti, 2010). Later, during the 1<sup>st</sup>-2<sup>nd</sup> c. AD, there are indicators of a Roman *villa*, only partly preserved but with interesting fields of vineyards preserved in the landscape (Morera 2020 and in this volume).

As occurred at *Vilardida*, the spread of *villae* as a social and architectural pattern appeared in the *Tarraco* area from the Augustan period onwards. Its development has to be connected to the growth of the local economy, and to the judicial and historical changes in the region.<sup>8</sup>

In most of the territories of the Iberian NE, we have to wait to the Augustan period and the 1<sup>st</sup> c. AD to identify the deployment of the “*villa* system”. These structures, based in Italo-Hellenistic patterns, are characterized by a *pars rustica* and a *pars urbana*. In most cases, the rooms are arranged harmoniously and according to a planned procedure. It is common for these structures to feature a central courtyard that distributes the different rooms of the *aedificium*. In terms of its immediate environment, it is frequent to identify productive structures and installations, such as *lacus*, *fossae doliae*, *horreum*, etc.

As we have already mentioned, the legal consolidation of the “urban model” from the Augustan period in the area of *Tarraco* implied the genesis of the local/colonial elites, and in the landscape the emergence of their *villae*. Following the system of centuriation (*ager divisus et adsignatus*, Palet et al. 2010), land in *Tarraco* was then organized according to the respective form of ownership (*dominium*) and declared by *professio* (declared at the *census*). As *Tarraco* was a Caesarian colony, this was the starting point for the diffusion of the land distribution, the consolidation of Roman property rights, and the spread of the *villa* system.

Is it possible to observe these changes at the archaeological level? How could we analyse the land ownership structure? Could the mapping of *villae* represent the “social landscape” of the *Tarraco* area, and their diachronic changes?

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<sup>8</sup> In fact, there are few examples of *villae* in N.E. Hispania Citerior dating back to the middle of 1st. c. BC, and they must have been linked to the emergence of some Roman urban foundations, such as Gerunda or Emporion (Nolla-Palahí 2013). Only when the first urban elites were consolidated in these two cities, did some rural settlements appear in their territories with courtyards, luxury rooms, and the main characteristics that we define as “*villa*”, including hypocausts and modest baths.

Land survey studies and diachronic analyses of settlement patterns on the basis of archaeological databases, for instance the distribution of *villae*, have allowed a general approach to the question. We have tried to advance in this field, especially taking into account the historical dimension of the process, the evolution from the early Empire to Late Antiquity.

Figure 1 indicates the distribution of establishments in the early Empire, not all of them *villae*, but also secondary rural settlements, such as farms, workshops, warehouses, wine centres, and so on (Fig. 1). In the map we have differentiated the *villae* (in red) from the rest of the rural sites (in orange). Assuming, from a theoretical point of view, that all *villae* belonged to different owners, we have defined through the Thiessen polygons the land, the possible *fundus*, of each property (Fig. 2). Thiessen polygons are a way to divide a given area into regions based on the proximity to a set of points, in our case Roman *villae*. The boundaries of the Thiessen polygons are constructed in such a way that they are equidistant between the generating points, hypothetically defining the land managed by each of the *villae*. In this case, each *villa* was owned by a landowner, and the rest of secondary sites were also part of the *fundus*, including farms from the *coloni*, workshops, etc. However, the number of *villae* in the analysed area is just 17, a very small amount of owners for such a large rural space (aprox. 260 km<sup>2</sup>).<sup>9</sup> That means that the surface “controlled” by a *villa* cannot be just his *fundus*, his property, but another territorial reality, otherwise the number of owners would be very low for a city of 50 ha and a large territory. Here, we have to come back to the fiscal role of some landowners, mentioned in the legal documentation. They were responsible for a large territorial centre, collecting taxes from other medium-sized and small properties which fiscally “contributed” to their *fundi* and their *villae*.

Our interpretation is that the *villae* are not the centre of the large *fundi* defined by the Thiessen Polygons, but the central point of the tax collection districts defined by the Polygons. In other words, we cannot define the *fundi*, the properties, but through the *villae* distribution we could define the rural tax system. That also means that behind the enormous number of rural secondary sites, there were multiple medium-sized and small *fundi*, modest properties, where we cannot define their limits and the extension. Some of the rural sites were likely part of the same *fundus* of the corresponding *villa*-owner, such

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<sup>9</sup> Of course, we just only know the number of preserved *villae*, but in any case, the total number is surprisingly low. In Veleia, a modest provincial city, we know of 51 *obligationes*, and 620 individual properties.

as farms, residences of *coloni* or specialized buildings, but others were just neighbouring properties, owned by other farmers. In the *villae* we might find the local aristocracy, *curiales* and regional tax collectors, while in the secondary settlements there would be descendants of modest veterans or previous local families. An interesting feature that the map shows is the dense occupation of the rural space, the presumed existence of a medium-small properties documented by modest farms, and the appearance of larger *fundi*, administrated from the central *villa*. These *villae* had a double function: the exploitation of their own land (and secondary settlements) and the tax control of a large district, the 17 Thiessen Polygons indicated on the map.

The final result is a uniform distribution, with a majority of *villae* placed close to the two main roads crossing the territory, but a regular occupation of the whole area studied. As can be observed, an important number of secondary sites are included in each polygon, with an average of 3-5 for each one, showing a complex model where the *villae* seem to be the central point of a medium-sized fiscal district. In this model, the agricultural surplus from the farmers of the *villa* itself, as well as those from the other rural sites (probably *coloni*), was sent to the warehouses, *pars rustica* and *fructuaria*, of the *villa*. The Kernel density estimation (Fig. 3), an algorithm that points out the concentration of data, emphasizes the regular distribution of sites along the coastal and inland areas, but also marks the presence of *villae* and rural settlements far from the main roads, in a regular system that could be connected to the original colonial land distribution, the *centuriatio* (Palet et al. 2010). The Kernel estimation confirms the continuity of this system until the 1<sup>st</sup>-2<sup>nd</sup> c. AD.

This pattern could be also connected to the indicators of an increase of wealth in the *villae*, as happened during the 2<sup>nd</sup> and first half of 3<sup>rd</sup> c. in the area. During this period the buildings were reformed and enlarged, often with annexed *balnea* and rich decorative programmes: mosaic pavements, painted walls, sculptures, etc. The clearest examples of this kind of settlements in the *Ager Tarraconensis* are Els Munts, Villa de la Llosa or Cal·lipolis, among others (Macias 2014). But the increase of wealth in these *villae* did not imply the increase of their land, as the rest of the *villae* and secondary rural settlements were still in use. If an owner bought or inherited a neighbouring property, the acquisition did not imply the dismantlement of the buildings of the new property (as Hyginus notes, Lach. 129.1), probably because the acquired property was used in the same way as it was before the acquisition. In fact, this was the model of the *latifundia* during the early Empire, the *dominium* of several *fundi*, but not their unification into a single property. It

is logical to assume that many of these landowners were also enriched thanks to their role as regional tax collectors.

#### The archaeological evidence & the rural landscape. The 3<sup>rd</sup>-5<sup>th</sup> c. AD

This model very soon changed. A decline in the number of sites has been noted during the 3<sup>rd</sup> century AD in the *Tarraco* area (Prevosti-Guitart, 2010; Macias, 2014: 454, Morera et al. 2013, Feijoo, 2013: 203), but also in many other regions in the Western Empire. Many *villae*, and also secondary rural settlements, were abandoned or show an important decline. The interpretation of this general phenomenon has been controversial, being related to the Frankish invasions (Macias et al. 2013), but this is not a topic for this paper.

From the 3<sup>rd</sup> and especially 4<sup>th</sup> c. AD, in many or the West Empire territories a reduction of the rural sites can be seen, including *villae*, at the same time as the wealth in the surviving sites increases, the monumental *villae* of the 4<sup>th</sup>-5<sup>th</sup> c. AD.

As we have seen, from the literary sources the process is documented from a double point of view. Firstly, the documentation of rich landowners, owning very large estates, *latifundia*, in the sense of a large, unique and important *fundi*. Secondly, the process of concentration of medium-sized *fundi* under the control of a tax collector. As we know, the needs of Imperial taxation, and the reduction in the number of *curiales* (the former medium-large urban landowners) supposed an increase in taxes on the land, and the need to fix the farmers and peasants to the land.

This process can be inferred from the settlement patterns, where the increase of land properties and the reduction of rural sites is well documented.

This is the case of Figure 4. The number of *villae* has decreased during the 4<sup>th</sup>-6<sup>th</sup> c. AD, but much more significant is the huge number of secondary rural settlements that are abandoned (from 70 to 21) (Fig. 4). In fact, this is the major settlement change: the dramatic disappearance of many farms, workshops and modest rural sites that were the most common sites during the Early Empire.

In our opinion, this reduction is the archaeological evidence of the demographic crisis of the period, but also the evidence of a deep change in the productive activities. Many of the *coloni* and owners of medium—sized rural properties, established in these secondary settlements, vanished from the archaeological record from the 4<sup>th</sup> c. AD.

This “abandonment” of secondary rural sites could be the result of several simultaneous phenomena. First, as has already been mentioned, the general demographic crisis in the whole of the Western Empire. Secondly, the process of concentration of land, also mentioned in the literary sources. As Hyginus mentioned, the buyer of a neighbouring property maintained the cultivation of that land, their fields, but eliminated their buildings, not considered necessary in the frame of the new larger property. Of course, the elimination of these secondary sites, farms, implies that part of their inhabitants were transferred to the surviving sites, probably the large *villae*. That means a process of concentration of the workforce, peasants and *coloni*, in the main buildings of the *villae* and some attached spaces, far from the regular colonial methods of land distribution. Finally, the last consequence of the whole process was the increase in abandoned land, *agri deserti*, land not occupied by settlements from the archaeological point of view, but neither exploited by the new owner.

As a secondary result of these abandonments (some *villae* were also abandoned), the size of the theoretical land districts identified by the Thiessen Polygons, the tax districts, increased significantly (Fig. 5). From 17 Thiessen polygons, we move to 13, and some of them even doubled in size. This means that the regional tax collector was responsible for an increased amount of land, and their taxes. Besides, the secondary settlements that depend on these *caput* districts reduce in number from 70 to 21. This is a total reduction of 60% of the rural settlements, which aligns with this process of land concentration, which is well documented in the literary sources. Not only did the amount of land for each *villae* increase, but much of the farming of these parcels was directly managed from these *villae*, as the secondary rural sites suddenly decreased. This phenomenon implied the appearance of large landlords. This process increased social inequality and the settlements that survived these problems were monumentalized and increased in size between the 4<sup>th</sup> and 5<sup>th</sup> centuries AD (fig. 4). We can see this increase in comfort and prestige in the development of their decorative programmes, such as those at Paretdelgada or Centcelles, among others.

Secondly, the increase of *agri deserti*, a permanent obsession for the emperors and provincial governors: land not in cultivation and, even worse, not paying taxes. Some of the land where the secondary rural sites disappeared in the *Tarraco* area, may be land abandoned and not exploited. This phenomenon leads to the third consequence: the problem for the large owners in collecting taxes from abandoned land for which they were responsible. The 13 owners of the surviving large *villae/obligationes* centres, were now

responsible for a larger area, a larger *obligatio*. That means that the tax collector was responsible for a large amount of taxes, in coins or in kind, and their capacity to manage and control the local population must have increased.

As the mentioned literary sources indicate, some landowners abandoned the buildings of the absorbed *fundi*, but the best land was in production. Some neighbouring owners illegally occupied the rest of the fields, but those responsible for their taxation were the legal owners. From a fiscal point of view, that land was a fiscal unity, an *obligatio*, that should be paid.

Finally, there is also more relevant data from these new settlement patterns. As we can see in Figure 6 most of the surviving *villae* and secondary settlements are placed close to the main roads, and the average number of the abandoned sites is higher in the areas far from the roads. The Kernel density estimation indicates a concentration of data close to the two main roads of the territory of *Tarraco*, but it is even possible to identify a major concentration on the *Tarraco-Ilerda* road than on the coastal one (Fig. 6). We think that this distribution is significant: the surviving and large *villae* were the ones placed close to the communication network.

In our opinion this is due to the fiscal role of these large *villae*, head of a large taxation district. They were not only productive centres, but also territorial focal points where the rural production of a large area was stored, and they acted as taxation units. From this point of view, they were significantly placed close to the roads, the real network of late Antique taxation. In our model, cities, large *villae* and some key roads (most of them reformed during the Tetrarchic period, as indicated by the new milestones) were central to the taxation system in late Antiquity. In this way, the mid-3rd c. milestone near the villa at El Morell is particularly illustrative of this point.

As a final remark on this 3<sup>rd</sup>-5<sup>th</sup> c. period, there is a significant change in the size and distribution of the Thiessen polygons and the distribution of the *villae* from the previous phase (reduction of their number and increase of their dimension). But beyond that, inside each of the polygons there is a huge change in the productive patterns, as the abandonment of the secondary sites indicates. The fiscal districts articulated from the *villae* keep their structure throughout the 1<sup>st</sup> to the 5<sup>th</sup> c. AD, but the internal changes in all these districts, and the enrichment of their central *villae*, testify to the evolution of the land property system.

The archaeological evidence & the rural landscape. The 6<sup>th</sup> c. AD.

A final settlement change can be observed at the end of the 5<sup>th</sup> c. and the beginning of 6<sup>th</sup> c. AD, with the abandonment of most of the surviving rich *villae* (Chavarria, 2007; Brogiolo G.P. and Chavarria, 2008; among others). In many cases, there is continued occupation at the site, but this does not imply the survival of the *villae*. The complex *villae* were substituted by huts or *Grubenhauser*, silos, structures with perishable materials, among others. Roman building traditions, such as walls of lime mortar, or *dolia defossa*, vanished. It seems that in some cases, not in all, they were replaced by techniques probably originating from elsewhere. Some notable exceptions even show reforms of residential spaces, such as Centcelles, Els Hospitals, La Burguera or Paret delgada (Macias, 2014). In Cal·lipolis there are even reforms of the *balnea* in the 7<sup>th</sup> century (Macias, 2014: 455). This means that, despite the deep changes in the productive and settlement patterns, some rural elites still lived in the countryside, preserving some key spaces where the surpluses of rural production were still collected.

## **Bibliography**

J. ANDREU 2015, De la atomización a la concentración del poblamiento rural entre el Alto Imperio y la Antigüedad Tardía: el caso del *territorium* de la ciudad romana de Los Bañales (Hispania Citerior), *Villas, farms, rural settlements. A regional approach. Studies on the Rural World in the Roman Period*, 7, Montpellier, 2015, 11-24.

I. ARRAYÁS 2005, *Morfología histórica del territorio de Tarraco (ss. II-I aC)*, Barcelona: UB Edicions.

F. BOSCH, F. DÍAZ, J.M. MACIAS 2011, La vil·la romana de la Burguera (Salou, ager Tarraconensis), avanç preliminar, en V. REVILLA, J. R. GONZÁLEZ, M. PREVOSTI (eds.), *Les vil·les romanes a la Tarraconense*, vol. II, Barcelona, 155-163.

G. P. BROGIOLO, A. CHAVARRÍA 2008, El final de las villas y las transformaciones del territorio rural en Occidente (siglos V-VIII), C. FERNÁNDEZ, V. GARCÍA, F. GIL (eds.), *Las villae tardorromanas en el Occidente del Imperio, Arquitectura y función*, Gijón, 193-214.

B. CAMPBELL 2000, *The Writings of the Roman Land Surveyors*. JRS, London.

J.M. CARRIÉ 1982, Le colonat du Bas Empire : un mythe historiographique ?, *Opus*, 1, 351-371.

- 1994, Diocletien et la fiscalité, *Antiquité Tardive*, 2, 33-64.

A. CHAVARRÍA 2007, *El final de las villae en Hispania (siglos IV-VII d. C.)*, Turnhout.

G. CHOUQUER 2010, *La Terre dans le monde romain, Anthropologie, Droit, Géographie*, éd. Errance, Paris.

- 2018, *Cadastrés et fiscalité dans l'Antiquité Tardive*, Presses universitaires François-Rabelais, Open Edition Books, 2018.

M. DÍAZ, J.M. MACIAS 2008, La vil·la romana de la Pineda/Cal·lipolis (Vila-seca, Tarragonès), in J. REMOLÀ (eds) 2008, *El territori de Tarraco, vil·les romanes del Camp de Tarragona*, Fòrum 13, Tarragona, 133-151.

J.M. FEIJOÓ 2013, Poblament i cristianització al territori de Tàrraco durant l'Antiguitat Tardana, in J.M. MACIAS, A. MUÑOZ (eds.), *Tarraco christiana ciuitas*, Documenta 24, Tarragona, 199-217.

D. GOROSTIDI 2014, Vida quotidiana a la vil·la: els grafitis sobre ceràmica, In *Ager Tarraconensis 4. La vil·la dels Antigons*, Tarragona 2014, 213-218.

C. GRAY 2007, Contextualizing *Colonatus*: the *origo* of the Late Roman Empire, *Journal of Roman Studies*, 97, 155-175.

J. LÓPEZ 1993, *Les termes inferiors de la vil·la romana dels Munts*, Documents d'Arqueologia clàssica 2, Tarragona, 57-80.

J. LÓPEZ, J.M. PUCHE 2013, *Arquitectura paleocristiana de Tarragona (segles IV-V)*, in J.M. MACIAS, A. MUÑOZ (eds.), *Tarraco christiana ciuitas*, Documenta 24, Tarragona, 149-162.

F. LOPEZ SANCHEZ 2018, Sobre la importancia de las rutas económicas y militares del interior de la Hispania Antigua: de Gibraltar a los Pirineos y más allá. In J.M. Tejada (Ed.) *Vislumbrando la Tardo Antigüedad: una mirada desde la arqueología*, Logroño, 117-136.

J. LOSTAL 1992, *Los miliarios de la provincia tarraconense: (conventos tarraconense, cesaraugustano, cluniense y cartaginense)*, Zaragoza.

J.M. MACIAS 2014, El territorio y la ciudad de Tarraco. In: *La villa restaurata ei nuovi studi sull'edilizia residenziale tardoantica: atti del Convegno internazionale del Centro interuniversitario di studi sull'edilizia abitativa tardoantica nel Mediterraneo (CISEM), (Piazza Armerina, 7-10 novembre 2012)*, 453-466.

- 2005, Els assentaments rurals com a espai de residència: l'exemple del territorium de Tàrraco, *Cota Zero*, 20, 78-86.

J.M. MACIAS, J. MENCHÓN (eds.) 2007, *La villa romana dels Hospitals (el Morell, Tarragona). Un assentament de la via De Italia in Hispanias*, Hic et nunc 1, Tarragona.

J.M. MACIAS, J. MORERA, O. OLESTI, I. TEIXELL 2013, Crisi o invasió?. Els Francs i la destrucció parcial de Tàrraco al s. III, In J. Vidal, B. Antela (Eds.) *Más allá de la batalla. La violencia contra la población en el Mundo Antiguo*. Zaragoza, 193-214

L. MAGANZANI 2014, *L'obligatio praediorum nella tabula alimentaria veleiate: profili tecnico-giuridici*, *Atti del IV Convegno Internazionale di Studi Veleiati Veleia-Lugagnano Val d'Arda*, Bologna, 157-168.

J. MORERA 2021, *Memòria de les intervencions arqueològiques al jaciment dels Castelletes (La Canonja, Tarragonès)*. Servei d'Arqueologia de Catalunya. Unpublished.

- 2020, *Memòria de les intervencions arqueològiques al jaciment de Vilardida (Montferri/Vilarodona, Alt camp)*. Servei d'Arqueologia de Catalunya. Unpublished.

J.M. NOLLA, LL. PALAHÍ 2013, El paisatge del suburbium de Gerunda, in M. PREVOSTI, J. GUITART (eds) *Ager Tarraconensis. Paisatge, poblament, cultura material i historia*, 5, 157-165.

J.M. NOLLA, I. RODÀ, 2012, Novedades en el tramo norte de la vía Augusta, *Anas*, 21-22, 289-299.

O. OLESTI 2020, Villae, Fundi, Peasant Agriculture and Wine Production in the Ager Barcinonensis, in A. Marzano (Ed.) *Villas, Peasant Agriculture, and the Roman Rural Economy*, Panel 3.15, ICCA, Bonn 2018, Heidelberg 2020, 45-56.

- 2010, Urbanització, integració i gestió del territori al NE de la Península Ibèrica en època republicana (s. II-I aC). In: *Time of changes. In the beginning of the Romanisation. Studies on the rural world in the Roman Period*, 5, 11-60.

- 1997, El origen de las villae romanas en Cataluña. *Archivo español de arqueología*, 70(175-176), 71-90.

O. OLESTI, C. CARRERAS 2013, Le paysage social de la production vitivinicole dans l'ager Barcinonensis : esclaves, affranchis et institores, *Dialogues d'Histoire Ancienne* 39/2-2013, 147-189.

PALET, J.M., ORENGO, H., RIERA, S. (2010) Centuriación del territorio y modelación del paisaje en los llanos litorales e Barcino (Barcelona) y Tarraco (Tarragona): una investigación interdisciplinar a través de la integración de datos arqueomorfológicos y paleoambientales, *Agri Centuriati*, 7, 113-129.

M. PREVOSTI 2015, La diversité de l'habitat rural dans l'Ager Tarraconensis à l'époque Républicaine, in *Villas, farms, rural settlements. A regional approach. Studies on the Rural World in the Roman Period*, 7, Montpellier, 2015, 153-170.

M. PREVOSTI, J. GUITART (eds) 2010, *Ager Tarraconensis 1. Aspectes històrics i marc natural*, Documenta, Tarragona.

E. RAMON 2008, *La villa romana de la Llosa*, in J. REMOLÀ (eds) 2008, *El territori de Tarraco, vil·les romanes del Camp de Tarragona*, Forum 13, Tarragona, 153-170.

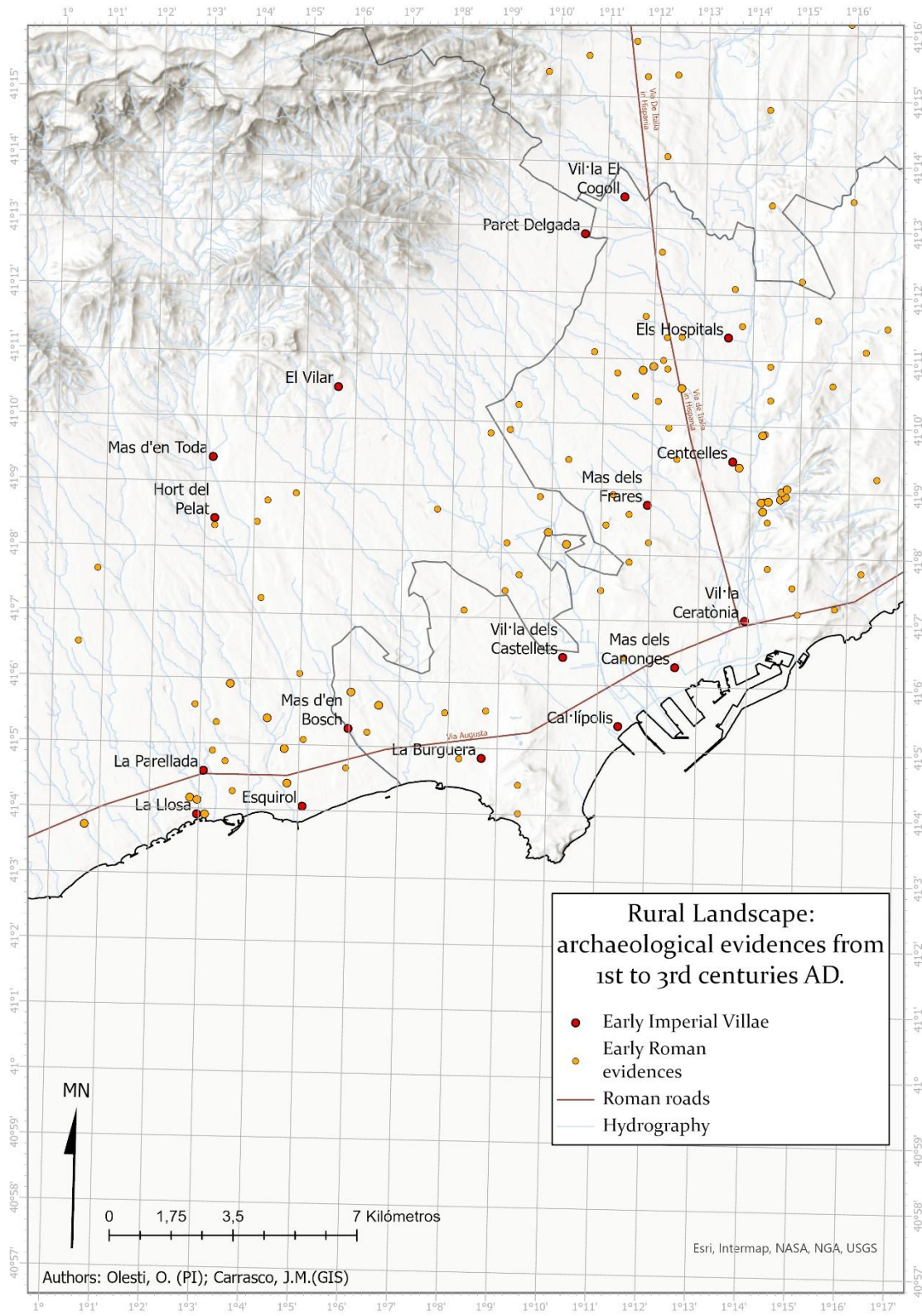
C. RAYNAUD 2015, Les établissements domaniaux du littoral Nîmois entre Antiquité tardive et haut Moyen-Âge (IVe-Xe siècles), in *Villas, farms, rural settlements. A regional approach. Studies on the Rural World in the Roman Period*, 7, Montpellier, 2015, 107-126.

J. REMOLÀ (ed.) 2023, *La vil·la romana dels Munts*. Museu Arqueològic Nacional de Tarragona (MNAT), Tarragona.

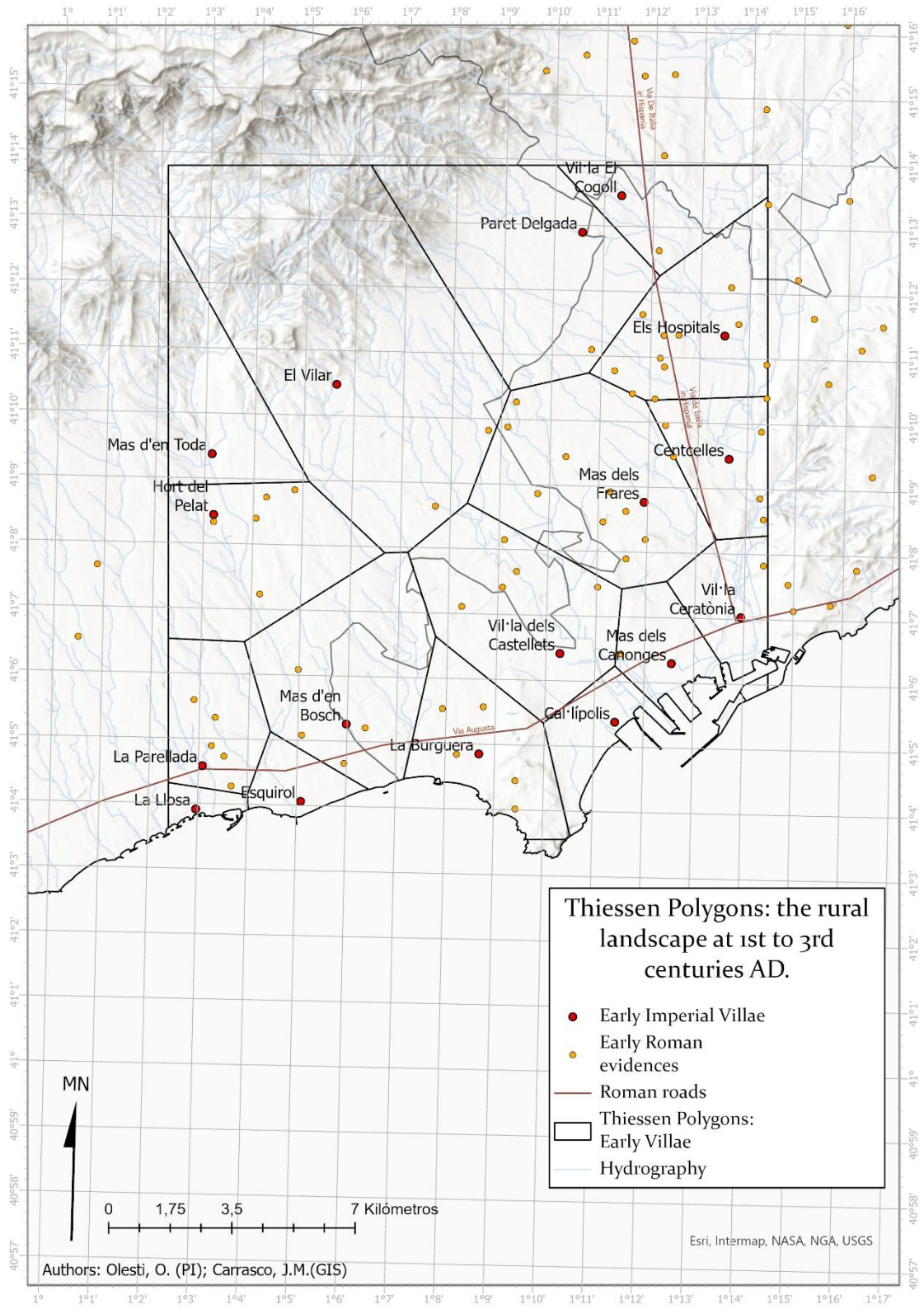
- 2008, *La villa romana de Centcelles (Constantí, Tarragonès)*, in J. REMOLÀ (eds) 2008, *El territori de Tarraco, vil·les romanes del Camp de Tarragona*, Forum 13, Tarragona, 171-189.

C. RUESTES 2002, El poblament antic a la Laietania litoral (del Besòs a la riera de Caldes): l'aplicació d'un GIS (Sistema d'Informació Geogràfica) a l'estudi de la seva evolució i les seves relacions espacials (On-line thesis, Departament de Ciències de l'Antiguitat i de l'Edat Mitjana, Universitat Autònoma de Barcelona. [www.tdx.cesca.es/TDX-0412103-103520/](http://www.tdx.cesca.es/TDX-0412103-103520/) (15-05-2008)).

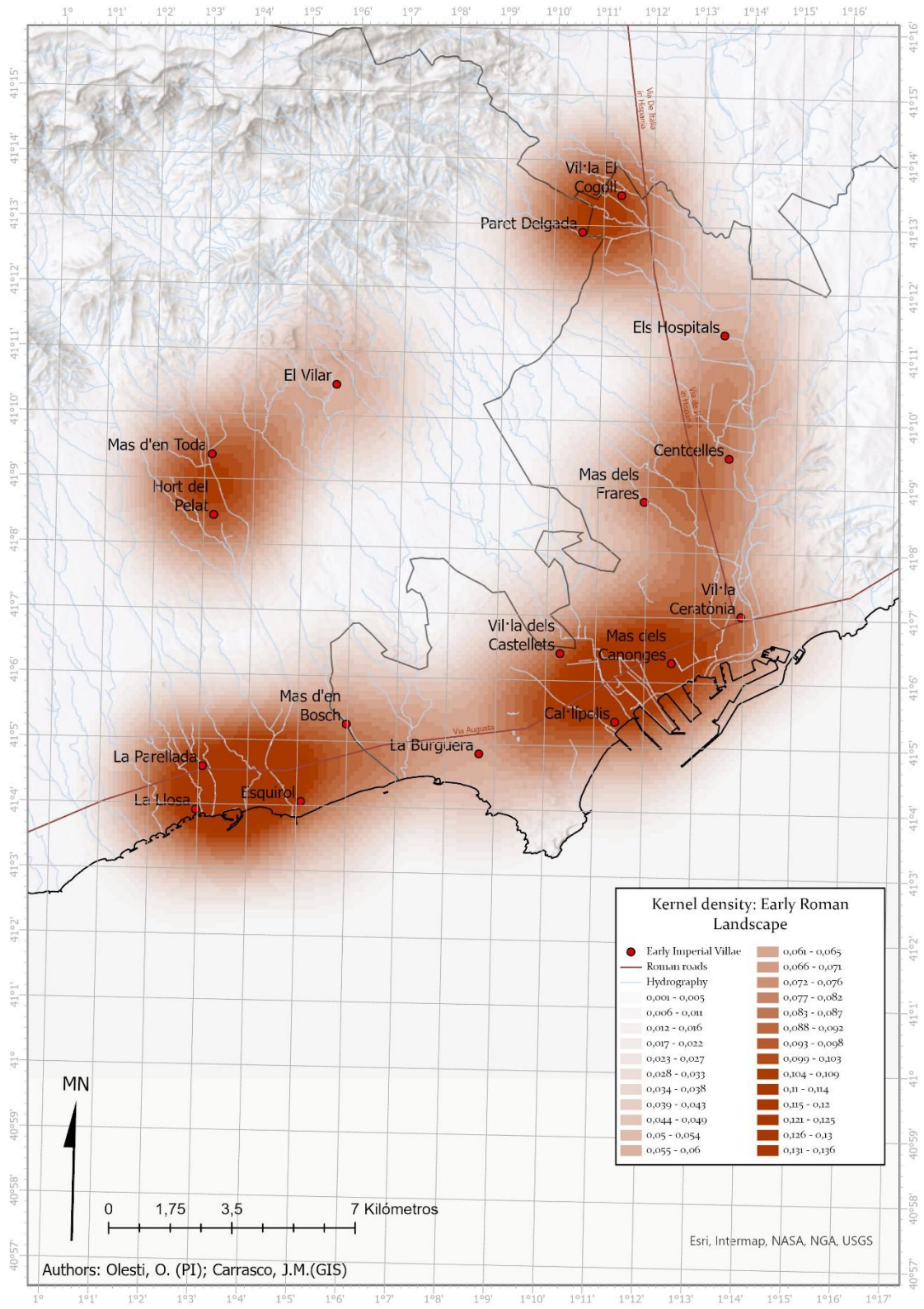
## **FIGURES**



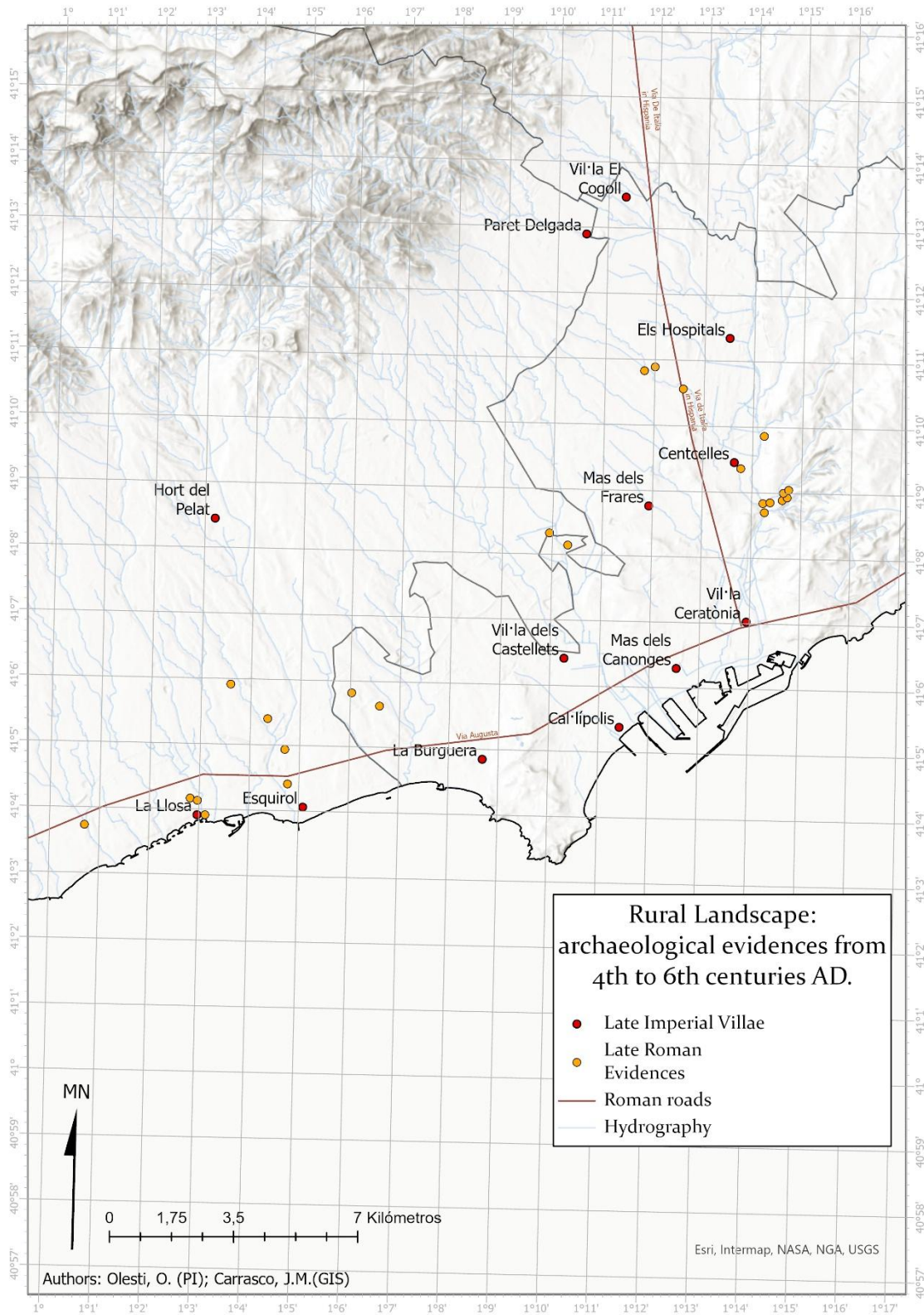
**1 Main villae & rural settlements distribution in the western of Ager Tarraconensis (1st to 3rd AD centuries).**



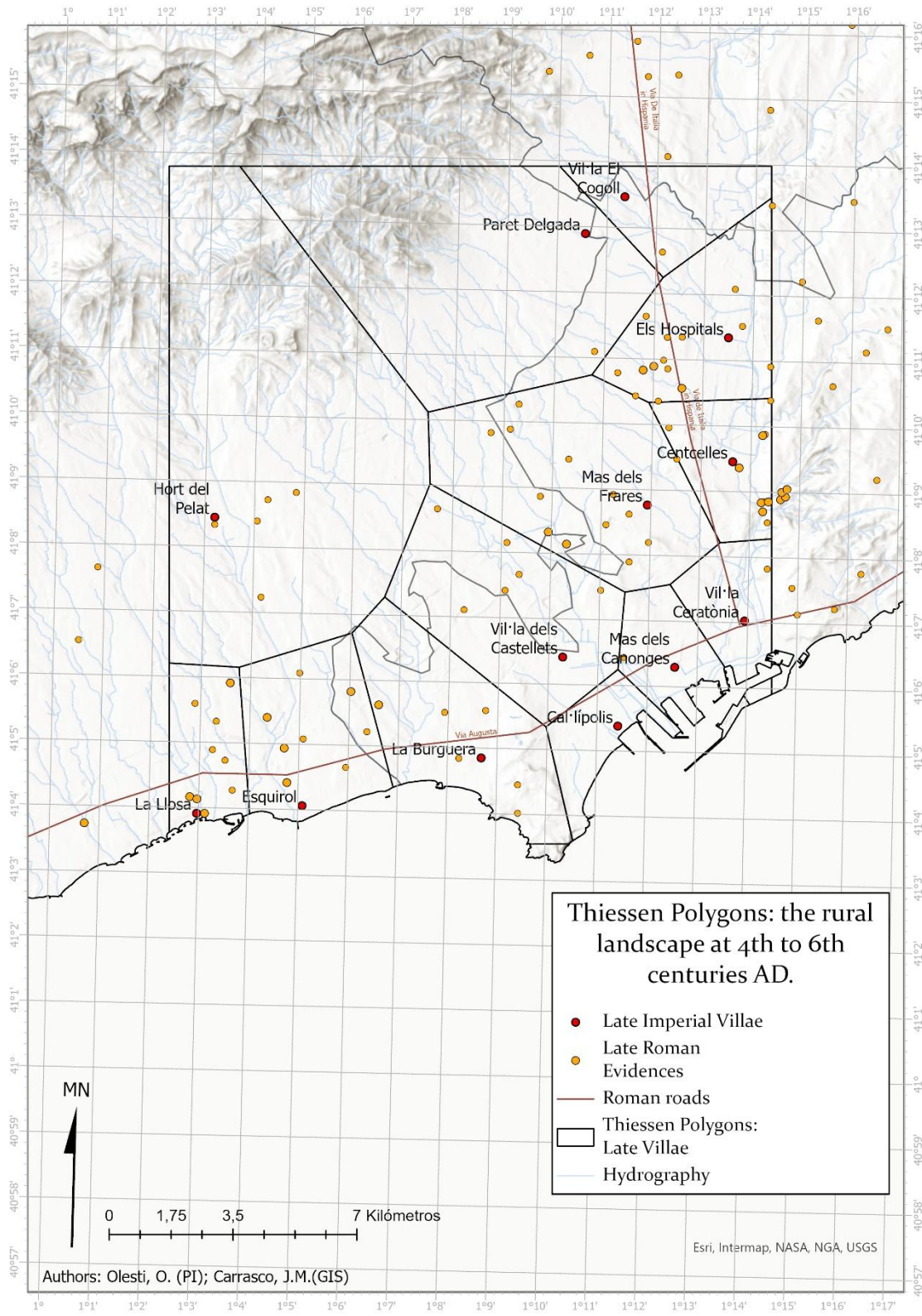
**2 Thiessen polygons applied to Early Imperial villae.**



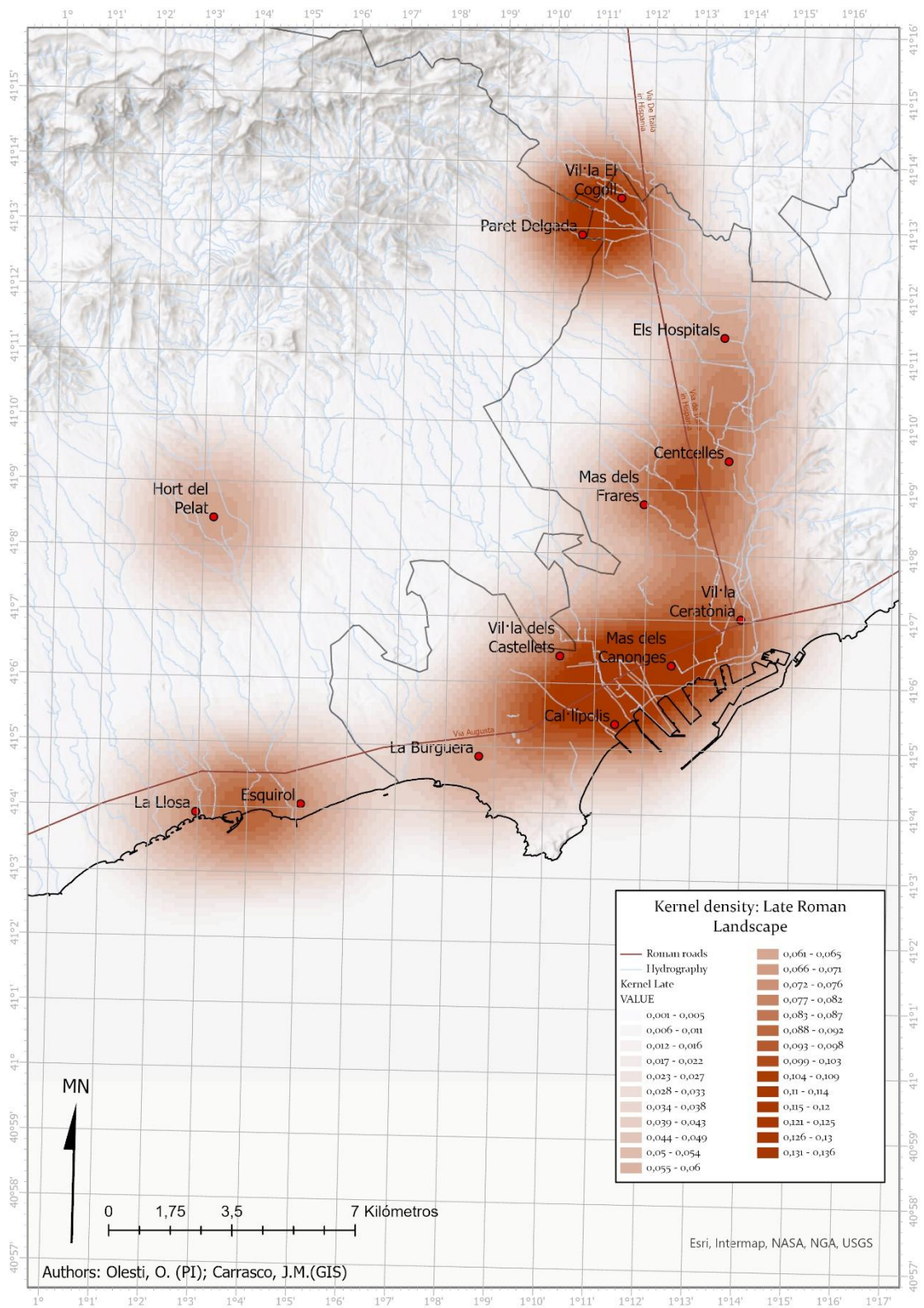
**3 Kernel density estimation applied to rural settlements of the 1st to 3rd centuries AD.**



**4 Main villae & rural settlements distribution in the western of Ager Tarraconensis (4th to 6th AD centuries).**



**5 Thiessen polygons applied to Late Imperial villae.**



**6 Kernel density estimation applied to rural settlements of the 4th to 6th centuries AD.**