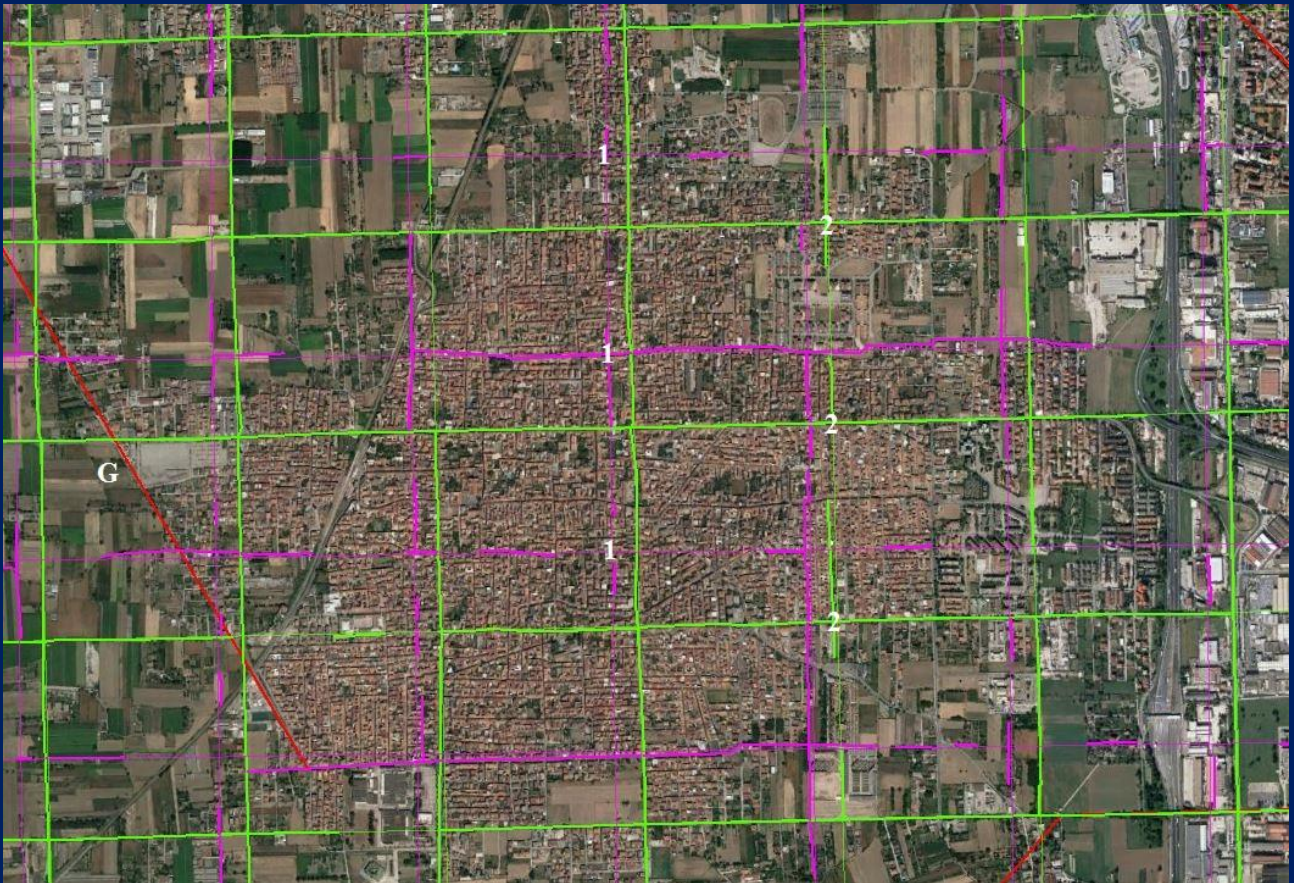


LIBER COLONARIVM **(THE BOOK OF THE COLONIES)**

**From the *Gromatici Veteres* (The Ancient Land Surveyors)
in the transcription of Karl Lachmann (Berlin 1848),
with translation into English and figures concerning the persistences
of traces of the ancient *limitationes* in modern places**



**Edited by
GIACINTO LIBERTINI**
Translation into English by Giacinto Libertini and Wayne Lorenz

ISTITUTO DI STUDI ATELLANI

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Series directed by Giacinto Libertini
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On the cover: Detail of persistences and grids of the centuriations *Ager Campanus I* (in green) and *Ager Campanus II* (in reddish purple) in the area of Marcianise, Capodrise and Recale (CE).

On the back cover: Persistences and grids of the centuriations *Caudium I* (in green) and *Caudium II* (in yellow).

INDEX

Preface to the English Edition – 2019 (Wayne Lorenz)	p. 3
Introduction to the Italian Edition – 2018 (Giacinto Libertini)	p. 4
Text of the <i>Gromatici veteres</i> with the translation into English:	
Liber coloniarum I	p. 16
[Book I of the colonies]	
- (<i>ex libro Augusti Caesaris et Neronis</i>) <i>Provincia Lucania, Brittiorum, Apulia, Calabria, Sicilia</i>	p. 17
[- (from the book of <i>Augustus Caesar</i> and <i>Nero</i>) <i>Province Lucania, of the Bruttii, Apulia, Calabria and Sicilia</i>]	
- <i>Provincia Tuscia</i>	p. 26
[- <i>Province Tuscia</i>]	
- <i>Pars Piceni</i>	p. 40
[- <i>Pars of the Picenum</i>]	
- <i>Ex libro Balbi provincia Piceni</i>	p. 40
[- From the book of <i>Balbus</i> , province <i>Picenum</i>]	
- <i>Provincia Valeria</i>	p. 43
[- <i>Province Valeria</i>]	
- (<i>ex commentario Claudii Caesaris</i>) <i>Civitates Campaniae ex libro regionum</i>	p. 50
[- (From the commentary of <i>Claudius Caesar</i>) <i>The towns of the Campania from the book of the regions</i>]	
- <i>Ager Carsolis etc.</i>	p. 249
[- <i>The land of Carsioli</i>]	
- <i>Provincia Dalmatiarum</i>	p. 250
[- <i>Province Dalmatia</i>]	
Liber coloniarum II	p. 253
[Book II of the colonies]	
- <i>Civitates Piceni</i>	p. 253
[- <i>Towns of the Picenum</i>]	
- <i>Civitates regionis Samnii</i>	p. 264
[- <i>Towns of the region Samnium</i>]	
- <i>Nomina civitatum Apuliae</i>	p. 265
[- <i>Names of the towns of the Apulia</i>]	
- <i>Civitates provinciae Calabriae</i>	p. 267
[- <i>Towns of the province Calabria</i>]	
APPENDIX	
Table A – Special characters used	p. 268
Table B1 – Multiples of the <i>uncia</i>	p. 268
Table B2 - Fractions of the <i>uncia</i>	p. 268
Table C – Roman measures for the lengths	p. 269
Table D – Roman measures for the areas	p. 269
Table E – Roman measures for the weights	p. 270
Table F – Roman measures for the liquids	p. 270
Glossary	p. 271
List of the <i>limitationes</i> illustrated in the figures	p. 279
Overall images of the <i>limitations</i>	p. 282
Bibliography	p. 306

PREFACE TO THE ENGLISH EDITION – 2019

The study of ancient Roman land surveyors and the Roman system of property boundaries was carried out in the nineteenth century mainly by German scholars. One of them was Karl Lachmann who published *Gromatici Veteres* (The Ancient Land Surveyors) [Lachmann 1848], a compilation of texts that address aspects of ancient surveying which are fundamental to Civil Engineering as we know it today.

Most of the original texts, as published by Lachmann and with some corrections proposed by Thulin [Thulin 1913], was published together with the English translation by Campbell [Campbell 2000]. A complete re-proposal of Lachmann's text with the Italian translation was recently proposed by Giacinto Libertini [Libertini 2018].

An important part of this collection of texts, the *Liber Coloniarum* (The Book of the Colonies), together with a rich cartography illustrating the modern persistences of the ancient agrarian boundaries, was subsequently published by the same author [G. Libertini, *Liber Coloniarum* - Libro delle Colonie, Istituto di Studi Atellani, Frattamaggiore (Italy), 2018].

In order to allow an understanding of this text for a wider audience, it was necessary to have an English translation, which is offered in this work.

The Introduction provides a fascinating description of the ancient Roman surveying and setting of boundary signals. The author has also applied Google Earth® and a special software to many of the Roman settlements in the Lazio and Campania regions to define the property grids (*centuriationes* and *strigationes*) that are in Italy from Rome to Nocera Superiore (near Salerno).

As with the title of this book, many of the technical descriptions presented here are left in the original Latin. The reader is directed to the Glossary for the meaning of the Latin terms used.

Wayne Lorenz, P.E.
Wright Paleohydrological Institute
Wright Water Engineers, Inc.

INTRODUCTION TO THE ITALIAN EDITION - 2018

The complete text of the *Gromatici Veteres*, as transcribed by Lachmann in 1848 [Lachmann 1848], with some minor modifications or integrations, among other things stimulated by successive partial editions of the text [Thulin 1913; Josephson 1950; Campbell 2000; Del Lungo 2004], has already been reported in another work together with the translation into Italian and appropriate comments, schemes and illustrations [Libertini 2018].

The present book is not a new edition of this work but only the deepening of an important part of it. For the many things that are not uselessly repeated here, it is expressly recommended to consult the complete edition.

The research presented in this book was stimulated by the study of the persistences of ancient agrarian boundaries (*limitationes*), which were more or less evident in many parts of Italy and elsewhere. The study of these persistences, which has long been investigated [Dilke 1971], in recent years had been the main topic of studies carried out by me or in collaboration with others [Libertini 1999, 2011, 2013, 2015a, 2015b, 2017; Libertini e Petrocelli 2014; Libertini *et al.* 2014, 2017a, 2017b, 2017c; Lorenz *et al.* 2017], spurred mainly by an important work by Chouquer and collaborators [Chouquer *et al.* 1987]. A fundamental reference for these studies is the early medieval¹ collection of ancient texts known as *Gromatici Veteres* [Lachmann 1848], or also as *Corpus Agrimensorum Romanorum* [Thulin 1913], and this was my main motivation for the efforts to result in a new translated edition with additional comments.

In this publication the two parts of it commonly known as *Liber coloniarum* were enriched with a series of colour illustrations in which to the topographical images of today's places obtained through Google Earth® were superimposed the hypothetical routes of the *limites* (singular *limes*, plural: *limites*) of the *limitationes*², and the likely correspondences between such routes and modern elements such as roads and boundaries. Moreover, these maps were integrated with the presumable traces of roads and city walls of the time as well as of aqueducts and other elements taken from (i) previous works of others [Talbert 2000; Guandalini 2004; Ruffo 2010; De Caro 2012], (ii) my previous works already mentioned, and (iii) further personal observations.

The wealth of information of these images, the importance of their implications for the study of the influence of ancient eras on today's reality and, let me allow this judgment, their beauty led me to believe that their enlargement and deepening could be useful and necessary.

As a consequence, this work reports only the two sections of the *Gromatici Veteres* commonly known as *Liber Colanarium* together with their translation and an expanded set of figures relating to the persistences of the ancient agrarian delimitations (*limitationes*; mainly *centuriationes* – centuriations - and *strigationes*).

In some cases these images are integrated with figures taken from the work of Chouquer and collaborators [Chouquer *et al.* 1987], that is, when there are important differences in the interpretation of the scheme of a *limitatio*.

¹ The presence of some writings attributed to *Boethius* indicates that the collection was organized not before the epoch of this important figure. It is not possible, however, to exclude that the work had a first draft in earlier times and was then integrated into the epoch of *Boethius* or shortly thereafter.

² The routes of the *limites* have been obtained by the use of a specific program specially developed by the author.

Also because of the many differences in the interpretation of the single persistences, a detailed comparison would be very difficult or impossible, in particular as Chouquer et al.'s schemes are not superimposed on the image of the territory concerned and therefore a precise localization of the persistences, or even of the entire *limitatio*, is not always feasible or sure.

It is appropriate now to report some annotations and explanations that represent a selection and a summary of those reported in the full text, with some useful additions and modifications.

The *groma* and the *limitationes* of the territory

The Romans, in order to divide and allocate the conquered lands, at least in a certain phase of their expansion and for a part of their empire, delimited the fields to be divided by a procedure called *limitatio* (plural *limitationes*).

The *groma* (*groma* or *gruma* in Latin [Calonghi 1965]) was the main instrument used by the Romans in the *limitatio* of a land. The Egyptians used an instrument similar to the *groma*, but somewhat more primitive and of which an example was found in Fayum (Egypt). It consisted of two wooden arms crossed on the horizontal plane, suspended on a rope and with four weights hanging from the four vertices [Dilke 1971; Lewis 2001]. Through Greeks and Etruscans, the *groma* was transmitted to the Romans who used it after appropriate improvements [Libertini 2018].

The Greeks called it γνώμων (*ghnòmon*), the same term used for the *gnomon* of a sundial or solar clock [Lewis 2001], while for the Etruscans the sound of the term had to be intermediate between the Latin *gruma* and *groma* (γρούμα), which is reflected in the double writing, *gruma* / *groma*, found in Latin³.

The identity of meaning between the Greek γνώμων and the Latin *groma*, understood as instrument, is attested in *Festus*, 86, 1-3 [*Festus* II century A.C.]. Another important clue is that for Greeks and Romans the two terms had a second identical meaning, namely the crossing point between two wooden arms or between two roads [Lewis 2001]. It is likely that even for the Etruscans it had the same meaning, which has been hypothesized as the etymological origin of the centre of Campania of *Grumum* (today's Grumo Nevano) and of the same *Roma* [Libertini 2011].

A reconstruction of the *groma* as used by the Romans is presented in Fig. 1. This image is that proposed by Della Corte [Della Corte 1922] with the addition of explanatory writings and a fundamental detail, namely the lead-weighted rope (or plumb bob) at the lower end that branched off from the *umbilicus soli* ("navel of the ground", or the central point of the place where the measurement was carried out). The stick (*ferramentum*) of the *groma* was placed at the side of the boundary stone so that the rope that descended from the *umbilicus soli* to the plumb bob fell precisely at the centre of the stone, indicated by the crossing of the arms of an X (*terminus decussatus*, or boundary stone with above an X, where X indicates the number ten and not the letter X). Turning then the *groma*, that is the four arms of the *groma*⁴, it was made so that two opposite binds (*nervia*) and the central rope were exactly on the line that you wanted to define while the orthogonal line was indicated by the alignment of the other two opposing *nervia* and of the central rope.

³ For the transformation from the Greek γνώμων to the Etruscan γρούμα, and then to the Latin *gruma/groma*, see [Libertini 2018].

⁴ The *groma* was only the upper part of the instrument and consisted of four arms pivoting around an axis. By extension the whole apparatus was called *groma*. An alternative name, often used in the *Gromatici Veteres*, was *ferramentum*, by extension of the meaning of the supporting stick that had this name.

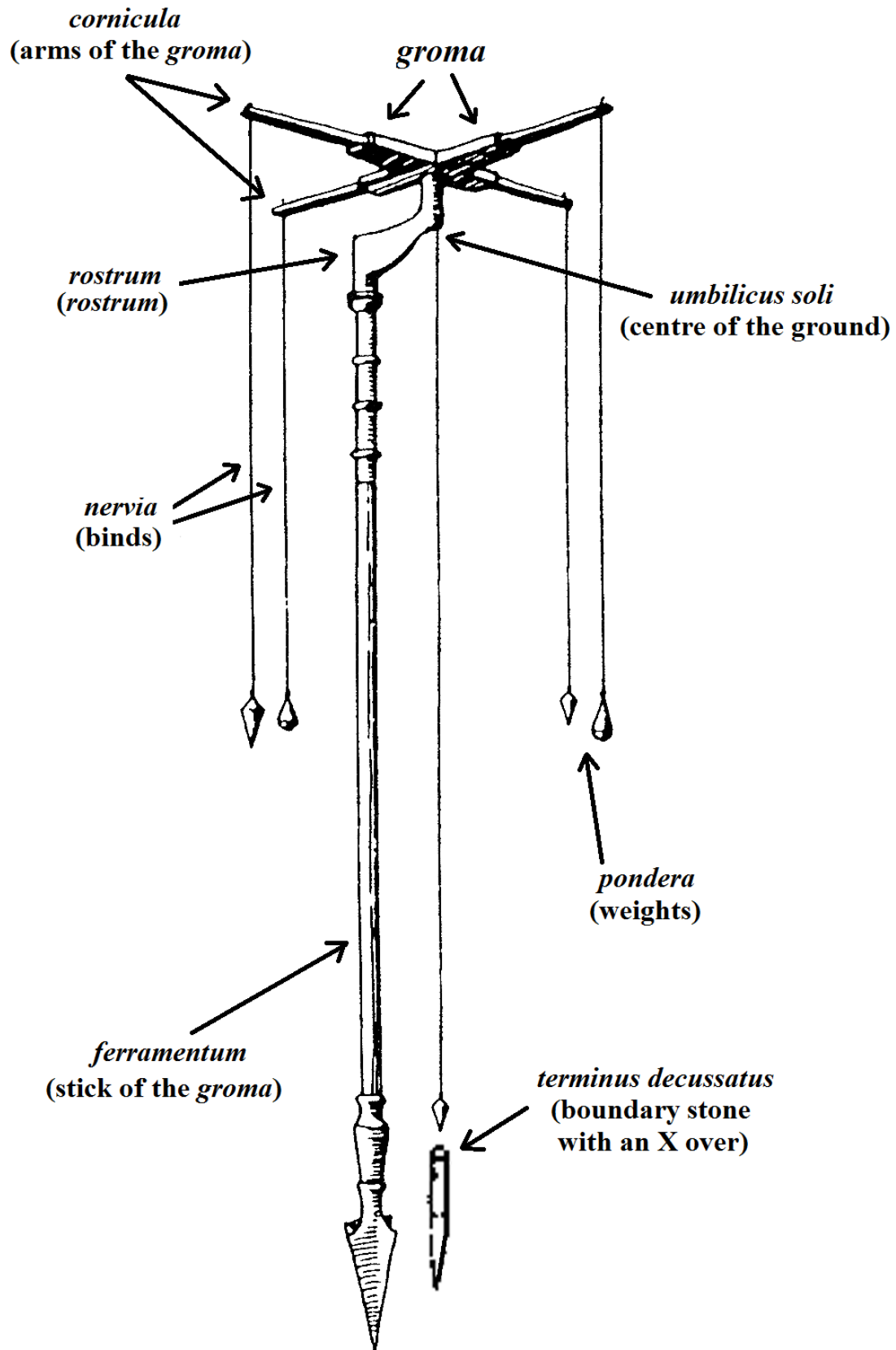


Fig. 1 – The *groma* in the reconstruction of Della Corte (starting from the remains found in *Pompeii*, presumably in the premises of a land surveyor [Della Corte 1922]), with the addition of writings that highlight its various parts and also with the plumb line that started from the *umbilicus soli* (literal translation: “navel of the ground”) and reached the central point of the boundary stone from which the measurement was to start.

By the use of the *groma*, it was possible to align signals on a line you wanted to track and also, after centring on a boundary stone, it was possible to draw a line orthogonal to another line already defined.

The distances were then measured using a stick called *pertica* (plural *perticae*), or *decempeda*, with a fixed length equal to ten feet = 2.957 m, as the name *decempeda* (= ten feet) indicates. In the measurement of lengths, by a method called *cultellatio*, the vertical differences in height were ignored, that is to say the separation between two points was measured as if observed from an infinite distance (Fig. 2A).

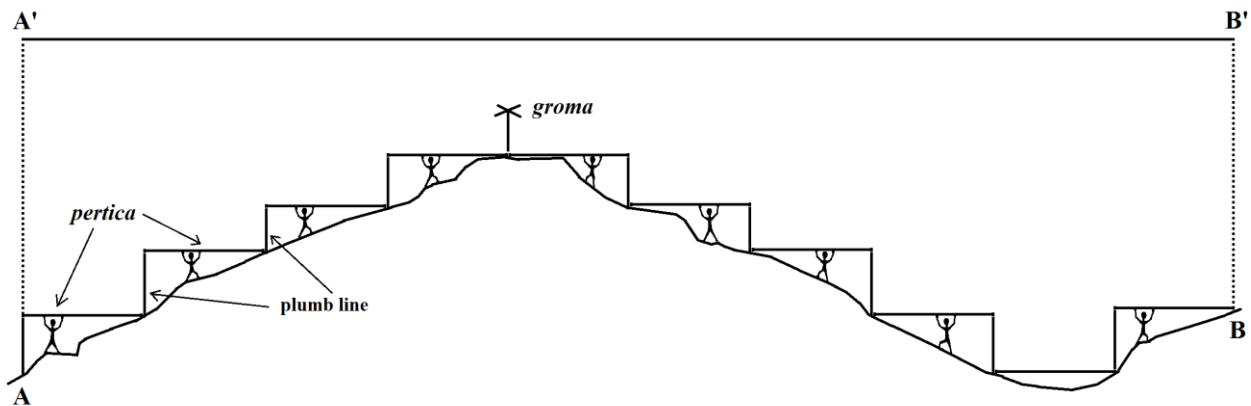


Fig. 2A – By the method called *cultellatio*, a distance in a non-level surface was measured as length, following a straight line (*rigor*), only for the horizontal part and therefore ignoring the differences in height. Along the *rigor*, carefully respected by the use of the *groma*, one pole (*pertica*) was placed after the other and, in case of difference in height, the plumb line was used - hanging from the head of the *pertica* farther from the ground - to align the heads of two subsequent perches. In the figure, the distance A-B is equal to the length of 10 *perticae*, regardless of the differences in altitude, i.e. equal to the distance A'-B'. In practice, it was as if the distances were measured horizontally, having an observation point placed at the top at an infinite distance.

The importance of the *pertica* was such that even the whole land of a *limitatio*, or also its map, was defined as a *pertica* too.

The *pertica* was used for a very long time. For example, Giovanni Antonio Rizzi Zannoni, in the definition of the first modern cartography of the Kingdom of Naples, in the years around 1783, to measure the bases of the necessary trigonometric triangulations used as instrument *perticae* made with walnut wood and the tips covered with iron [Principe 1993].

By particular techniques, using the *groma* and the *pertica*, it was also possible to measure the width of a space that could not be crossed, such as a river, and this was very useful in some war operations. These combined uses of the *groma* and the *pertica*, and others, such as measuring a surface of any shape or circumventing an obstacle while maintaining a straight line, and the methods employed, are described in the *Gromatici Veteres* and, for their description, the full edition of this work should be consulted.

The *limitationes*, or *delimitationes*, were mainly of two types (Fig. 2B):

1) The *strigatio* (plural: *strigationes*) was obtained by tracing boundary country roads, i.e. *limites*, which were rectilinear, parallel and separated by a distance that was constant and always equal to a multiple of an *actus* (1 *actus* = 120 feet = 35.48 m). Elements that define a *strigatio*, in addition to the extent of land defined by the *limites*, are the distance between the *limites*, here defined as “module”, and the inclination of the *strigatio*. The angle of inclination is defined as the minimum angle between the north-south axis and any of the *limites* or a line orthogonal to them. This implies that the angle cannot be higher than 45°

and is open to the east (E) or to the west (W). An example of *strigatio* is the *Aquinum I* (drawn in early epoch no better specified, module 10 *actus* - 354.8 m -, and inclination $22^{\circ} 30'$ W).

2) The centuriation (*centuriatio*, plural: *centuriationes*) was obtained by tracing two groups of *limites* that were rectilinear and parallel to each other and separated by a constant distance in each group equal to a multiple of an *actus* or, for older centuriations, of a *vorsus* (1 *vorsus* = 100 feet = 29.57 m). If this constant distance, the “module”, was equal between the two groups of *limites*, we had a square centuriation, that is with square *centuriae*, whereas if it was different between the two groups, we had a centuriation with rectangular *centuriae*. Elements that define a centuriation, in addition to the extension of land defined by the *limites*, are the two modules of the two groups of *limites*, and the inclination of the centuriation. The angle of inclination is defined as the minimum angle between the north-south axis and any of the *limites* of each group. This implies that the angle cannot be higher than 45° and is open to the east (E) or to the west (W). An example of square centuriation is the *Beneventum I*, (triumviral, 20 x 20 *actus* - 706 x 706 m -, inclination $42^{\circ} 00'$ E), while an example of rectangular centuriation is the *Beneventum II* (Augustan or subsequent, 16 x 25 *actus* - 567.68 x 887 m -, inclination $02^{\circ} 00'$ W).

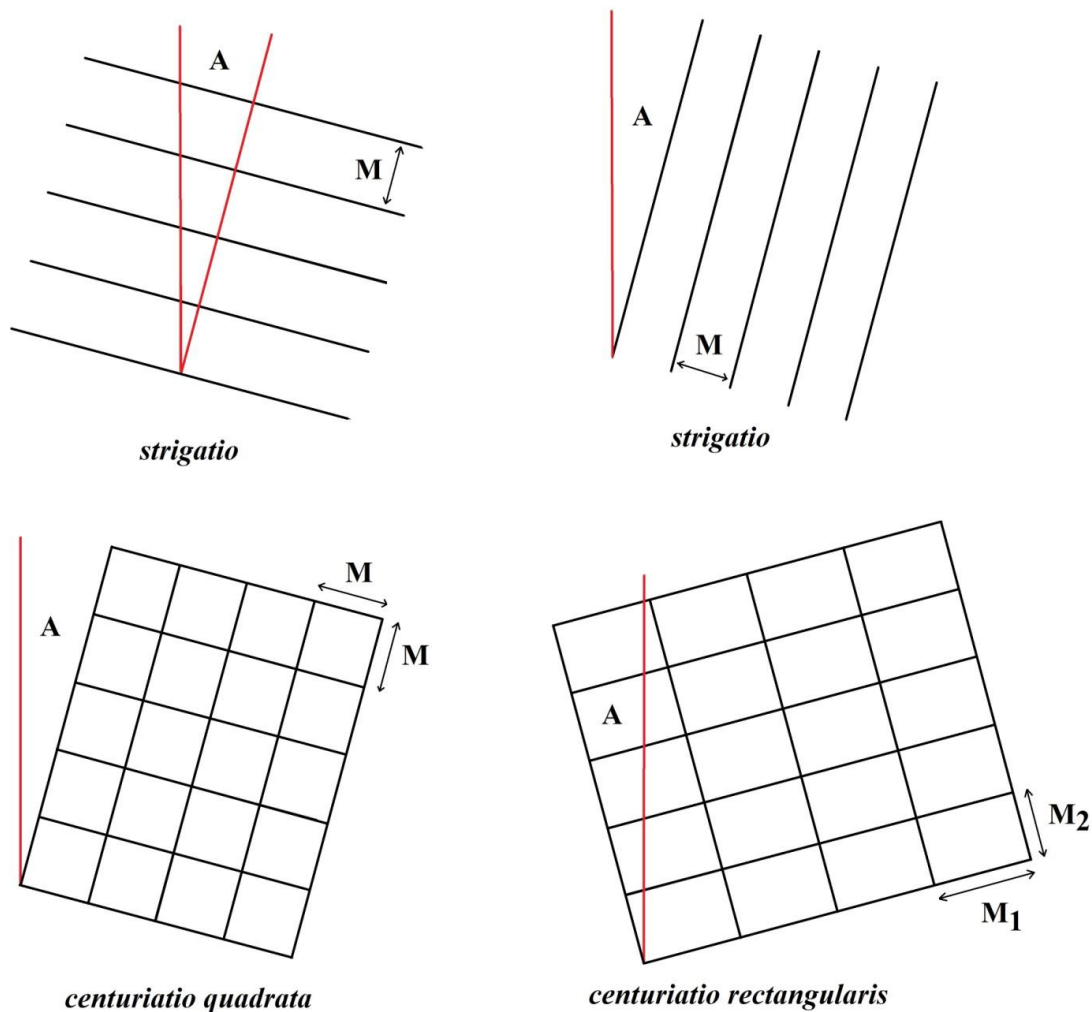


Fig. 2B – Schematic representation of two *strigationes*, of a square centuriation and of a rectangular centuriation, and of the definitions of module/modules (*M*, *M₁*, *M₂*) and of angle of inclination (*A*) of a *limitatio*.

The ideal structure of a centuriation is illustrated in fig. 2C. To obtain it, a *decumanus maximus* that went from east to west and a *kardo maximus* that went from south to north were defined.

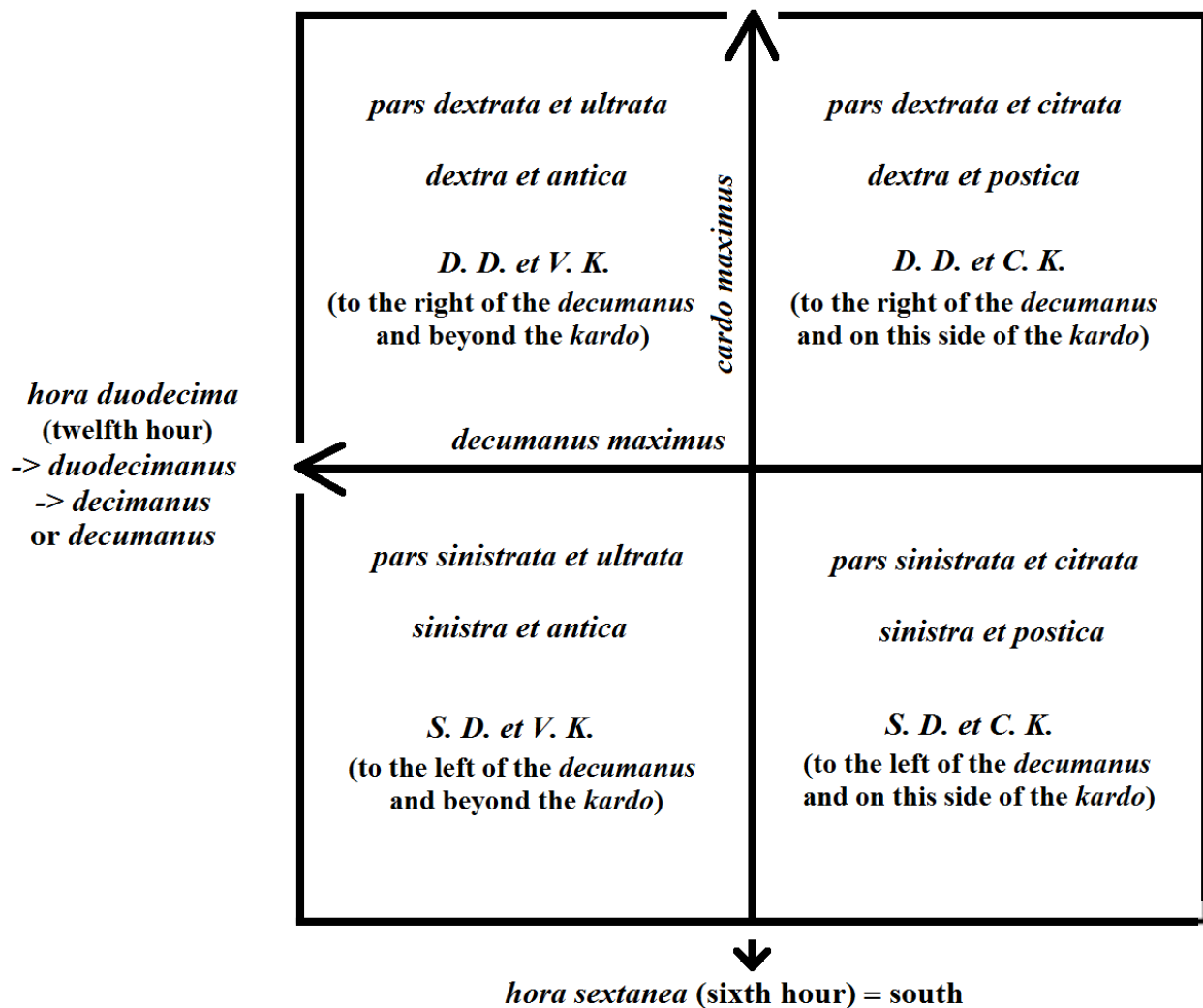


Fig. 2C – According to the orthodox arrangement of a centuriation, the *decumanus maximus*, like any other decuman, went from east to west. It is likely that was so said because it indicated the same direction as the twelfth (*duodecima*) hour and so was a *duodecimanus limes*. The *kardo maximus*, like any other *kardo*, pointed towards north and had the name of the hinge (*cardo / kardo*) around which it was believed to turn the world.

In practice, the orientation of a centuriation was influenced by various factors, in particular the shape and orientation of the arable land, and the ideal structure was hardly ever respected. It could also happen, as for the centuriation *Ager Campanus II*, and for other centuriations, that the direction of *decumani* and *kardines* was quite different (east-oriented *kardines* and *decumani* oriented towards the south)⁵.

In any case, placing ourselves on the crossing point between *decumanus maximus* and *kardo maximus* (central point, or *umbilicus*, of the centuriation) and having behind the ideal origin of the decuman, the ground was divided into a part on the right (DEXTRA) and another on

⁵ For the *Ager Campanus II* s. L. 29.5. and for other centuriations s. L. 209.17-210.2. It is as if *decumanus maximus* and *kardo maximus* were rotated 180° around an oblique axis going from south-west to north-east.

the left (SINISTRA) of the decuman, and moreover into a part beyond (VLTRA) and another on this side (CITRA) of the *kardo*.

The whole *limitatio* or *pertica* was therefore divided into four parts: 1) *pars dextrata et ultrata* (*pars dextra et antica*⁶); 2) *pars sinistrata et ultrata* (*pars sinistra et antica*); 3) *pars dextrata et citrata* (*pars dextra et postica*); 3) *pars sinistrata et citrata* (*pars sinistra et postica*) (fig. 2C).

Each *limes* was defined according to this subdivision and to the distance from the *decumanus maximus* and from the *kardo maximus*. For example, the first decuman to the right of the *decumanus maximus* was called DD I (first right – *dextra* - of the *decumanus maximus*). Another example: the second *kardo* beyond the *kardo maximus* was called VK II (second beyond – *ultra* - the *kardo maximus*) (fig. 2D).

Every fifth *decumanus* or *kardo* was then defined *quintarius*. A *decumanus* or a *kardo* that was not *maximus* or *quintarius* was defined *subruncivus*.

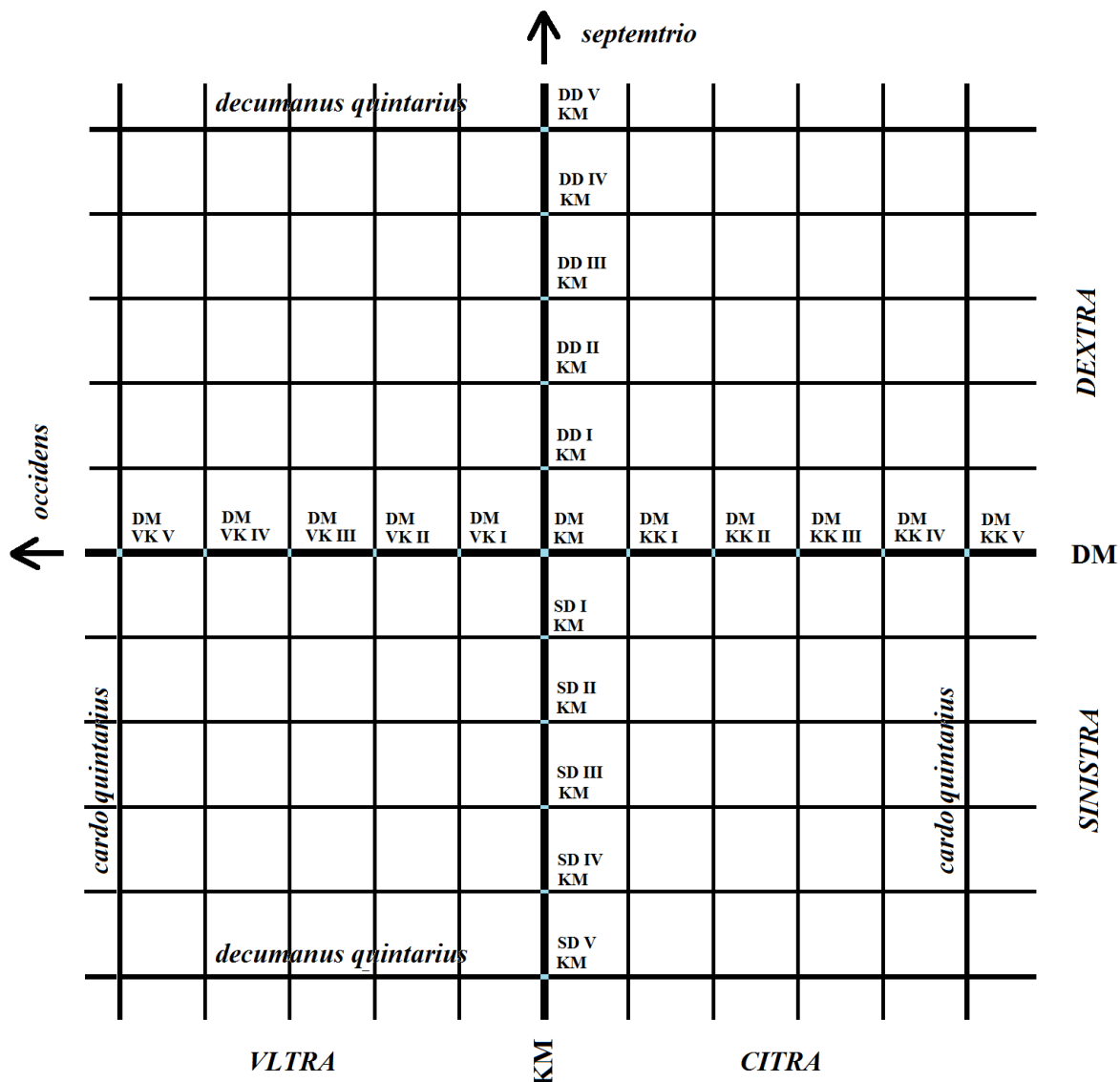


Fig. 2D - Inscriptions on the frontal boundary markers (*frontales*), i.e., those in the corners of the *centuriae* placed on the *decumanus maximus* or on the *kardo maximus* that were the furthest from the *umbilicus*.

⁶ *Antica* (with the accent on the first <a>) is the opposite of *postica* and should not to be confused with *antiqua* (ancient, in Italian 'antica' with the accent on <i>).

Along the *decumanus maximus* or the *kardo maximus*, boundary stones called *frontales*, one for each *centuria*, were placed. They had the same writing of the *decumanus* or of the *kardo* different from the *maximus* that passed through them (Fig. 2D). Each *centuria* was then defined with a boundary stone placed on the *angulus clusaris* (closing corner) defined as that further from the *umbilicus* (Fig. 2E).

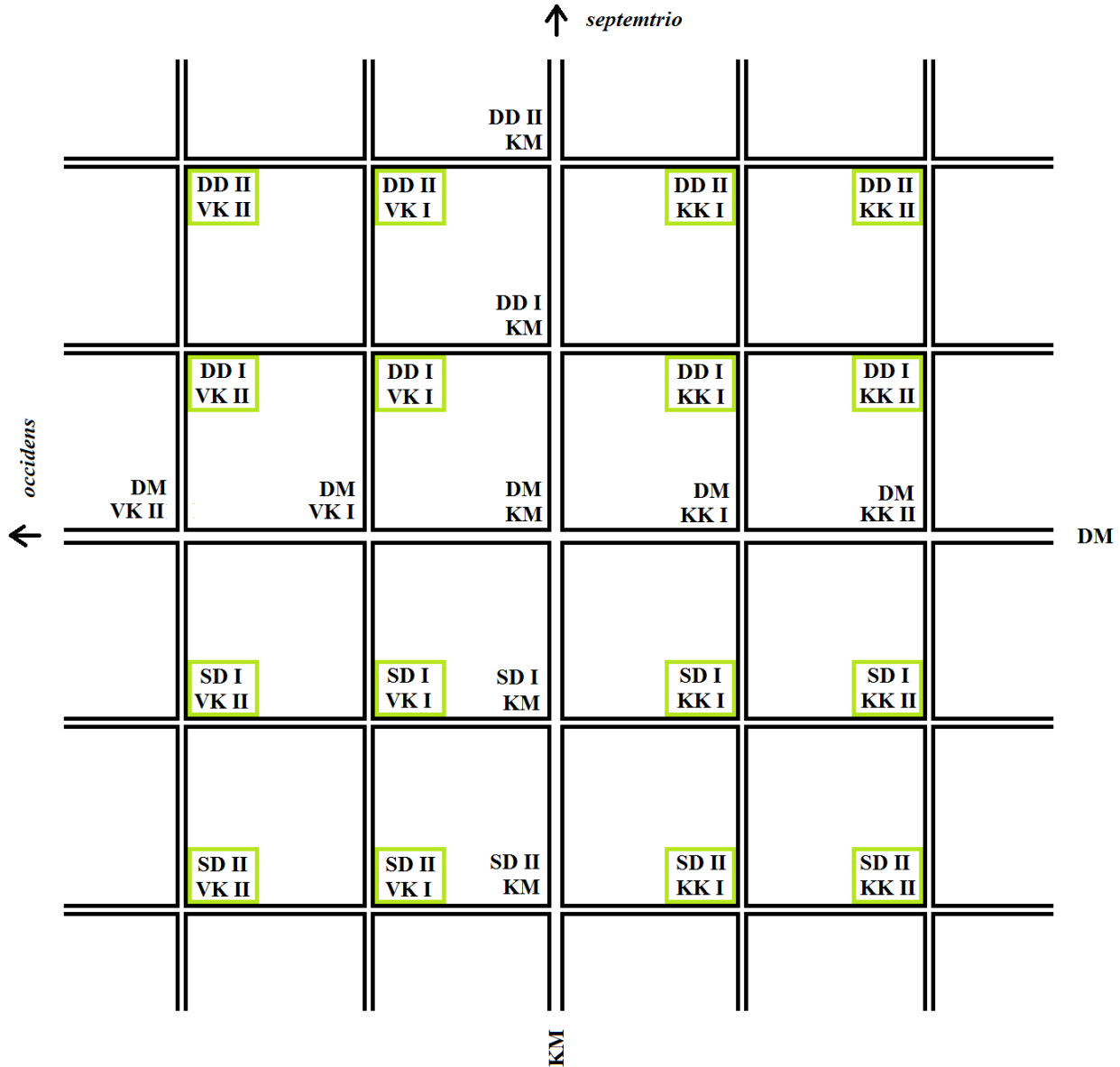


Fig. 2E – Inscriptions on the boundary stones according to *Hyginus 2*. The stones placed on the *decumanus maximus* or on the *kardo maximus* are on corners that are defined as frontal (*frontales*). Those that are on the closing corner (*angulus clusaris*; highlighted with a rectangle) define the adjacent *centuria* in the direction of the crossing between *decumanus maximus* and *kardo maximus* (*umbilicus*). At each crossroads, to economize the number of boundary stones, only one of them was placed in a closing corner (*angulus clusaris*) and in one point for each frontal corner (*angulus frontalis*). In this way, apart from the *frontales* boundary stones, only one stone, placed in the closing corner, was necessary for each *centuria* and it uniquely identified the *centuria* too.

Sometimes, one can derive indirectly from the text the module of a centuriation. For example, for various *civitates* of the *provincia Lucania*, it is reported that there are square *centuriae* of CC *iugera*. Two hundred *iugera* were equal to 400 square *actus* (120 x 240 x 200 = 120 x 120 x 400 = 5,760,000 square feet) or to 100 *heredia* (240 x 240 x 100 = 5,760,000 square feet). This means a square with sides of 2,400 feet or 20 *actus*. Therefore,

a square *centuria* of CC *iugera* was a *centuria* of 20 x 20 *actus* (Fig. 2F).

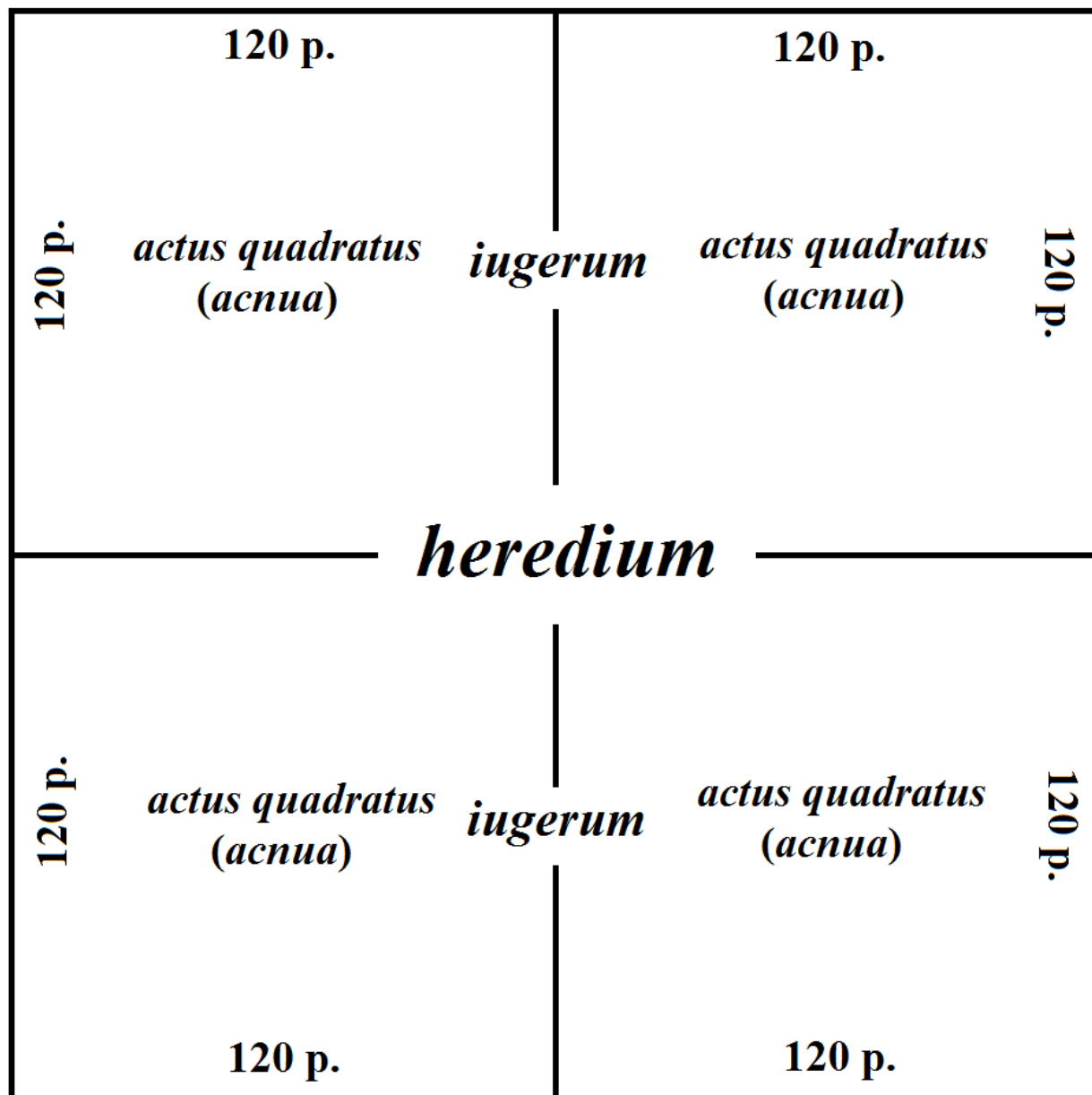


Fig. 2F – One *iugerum* was equal to 2 square *actus* (or *acnua*) and two *iugera* constituted a *heredium*, i.e., a square field with sides of 240 feet (= 2 *actus*). One hundred *heredia*, that is, a square with sides of 20 *actus* (= 2,400 feet), formed a *centuria* in its most common dimension.

Origins and meaning of the persistences

Unless they coincided with important roads, the *limites* were not paved roads and were therefore only narrow-width⁷ dirt ways with fields on both sides. The number of main boundary markers, usually in stone, was one for each *centuria* (*termini clusares*), to which a single frontal boundary stone (*terminus frontalis*) should be added for each *centuria* that appeared on the *decumanus maximus* or on the *kardo maximus* (fig. 2E).

In the archaeological exploration, these boundary stones either are not found or are

⁷ [L. 211.22] “PROVINCE TUSCIA. AGRARIAN LAW FROM THE COMMENTARY OF CLAUDIUS CAESAR ... Anyone who will be in charge of it, make a *decumanus* [*maximus*] wide XL feet [= 11.8 m] and a *kardo* [*maximus*] wide XX feet [= 5.9 m], and from the *decumanus* and *kardo maximus* make every fifth *limes* wide XII feet [= 3.5 m], and the other *limites*, which are *subruncivi*, wide VIII feet [= 2.4 m]”.

recovered in places completely different from the original location, with very rare exceptions⁸. Therefore the archaeologist has almost no material remains to investigate.

To this must be added that the descriptions of the *limitationes* that have come from the ancient literature are rare and only in some cases offer precise elements (for example, in the *Liber Coloniarum*, the modules of the rectangular *centuriae* of *Beneventum II*). In no case the inclination of a *limitatio* and its exact extension is precisely defined.

With these premises, how is it possible to identify and describe a *limitatio* and which is the significance of this operation? And, similarly, if we want to get valid results, is it reliable to study something that in archaeological terms is almost non-existent and in terms of written testimonies is object only of rare and imprecise mentions?

In fact this is possible, sometimes to a surprising extent, as the *limites* were not roads drawn in a depopulated desert but constituted boundaries between cultivated fields. In the centuries-old succession of the owners (no matter if by inheritance, donation, sale, exchange, usurpation, appropriation, conquest or otherwise), each of the neighbours had an interest in having the border respected. This “persistence” of the borders was lost when and where the fields remained abandoned, even for one generation only, or for other reasons (for example, merging the properties existing on both sides of a *limes*). Also, as a *limes* was not rigidly defined by stones, it could over time deviate from its path on the basis of the use made by those who passed through it, and this in particular in areas with altitude differences if a different route was easier.

The definition of the layout of a *limitatio* is therefore not the excavation and identification of an archaeological site, but the observation that in certain areas current routes of roads and boundaries present a pattern compatible with the layout of an ancient *limitatio*. Whereas a section of an ancient hypothetical *limes* coincides with the current route of a road or with a modern boundary, this coincidence is defined as a “persistence”.

The identification of a *limitatio* and of its persistences is therefore something that derives from the general observation of a territory and has clearly a probabilistic character. A single persistence, even in the context of an evident *limitatio*, means a probability and not a certainty that it represents a continuity from the ancient to the modern world. However, it is also true that a large and harmonic set of probable persistences becomes more and more indicative for the definition of an ancient agrarian delimitation.

But even with these reservations, the identification of a *limitatio* goes beyond the mere identification of an ancient layout of land division.

First of all this identification shows us that in an era of the past, to be specified with the help of other sources where possible, that territory has been the subject of an important territorial and social reorganization. Even more, in proportion to the degree of persistence of the *limitatio*, it shows us that the territory has always been cultivated from antiquity to the present day without it being abandoned even for a single generation.

This is very important for the historical implications that derive from it. In many cases the harshness of the invasions and of the destructions, attested by more sources and elements, would suggest that entire areas were completely abandoned, even for centuries, and this would seem confirmed by the total abandonment of important and illustrious cities that flourished in the same areas. But the persistences of a *limitatio*, or even of multiple agrarian boundaries overlapping in the same areas, shows us that the populations, while finding shelter in the better defensible neighbouring places, never completely abandoned the

⁸ For example, for the centuriation *Ager Campanus II*, a boundary stone remained *in situ* with the inscription on the top “KK XI SD I” (s. note 369 in [Chouquer *et al.*, 1987]).

cultivation of the land. For example, while towns like *Cales*, *Calatia* and *Forum Popilii* were completely abandoned, leaving for the modern observer only archaeological remains in the ancient sites, their territories show dense traces of overlapping *limitationes* (up to four in the case of *Cales*) that prove an uninterrupted cultivation of the lands owned by the surviving inhabitants, even if they took refuge elsewhere.

Other annotations

The reference to the Lachmann text of 1848 is reported by abbreviations of the type [L. 100.5], which means: Lachmann's text, page 100, line 5. A subsequent notice of the type [10] indicates that, remaining the page unchanged, we are referring to line 10.

It is also important to be aware that the texts of the *Gromatici Veteres* are not the exact copy of the originals from the Roman era but only the transcription and re-writing of ancient works, by amanuenses who did not always have full understanding of what they repeated and so they are sometimes unfaithful and lacunose. For example, limiting ourselves only to the infidelities in the transcription of the names of places, we have [Libertini 2017]:

Table 1 - Examples of corruption of place names in the *Liber Coloniarius*

In the text	Correct diction ⁹
<i>Adteiatis oppidum</i>	<i>Attidium oppidum</i>
<i>Afidena</i>	<i>Aufidena</i>
<i>Ardona</i>	<i>Ardaneae/Herdoniae</i>
<i>Cadatia</i>	<i>Caiaitia</i>
<i>Calagna</i>	<i>Anagnia</i>
<i>Calis</i>	<i>Cales</i>
<i>Capys</i>	<i>Capena</i>
<i>Cassioli</i>	<i>Carsioli/Carseoli</i>
<i>Castrimonium</i>	<i>Castrimoenium</i>
<i>Clibes</i>	<i>Cluviae</i>
<i>Ecicylanus ager</i>	<i>Aequicolanus ager</i>
<i>Forum Populi</i>	<i>Forum Popilii</i>
<i>Grauiscos</i>	<i>Graviscae</i>
<i>Nomatis</i>	<i>Numana</i>
<i>Plentinus</i>	<i>Pelutinus</i>
<i>Sentis</i>	<i>Sentinum</i>
<i>Tarquinius</i>	<i>Tarquinius</i>
<i>Teanum Siricinum</i>	<i>Teanum Sidicinum</i>
<i>Teramne Palestina</i>	<i>Interamnina Praetuttiorum</i>
<i>Tribule</i>	<i>Trebula</i>
<i>Veios</i>	<i>Veii</i>

About the *limitationes* with illustrations accompanying the text, their list is shown in Appendix. In most cases they reflect what is indicated in the masterly work of Chouquer and collaborators [Chouquer *et al.* 1987] and in the papers cited in it, except for some greater differences that are appropriately highlighted (see Appendix).

⁹ In the table, for the correct diction, it is used the distinction between u / U and v / V implemented from the Renaissance period, while in Latin there was only V that indicated an intermediate sound between our <u> and <v>.

Some *limitationes* have other sources as reference. In particular,

- for the two centuriations *Ager Stellatis I* and *II*, see: [Guandalini 2004; Ruffo 2010; De Caro 2012];
- for the centuriation *Suessula*: [Libertini 2013];
- for the centuriation *Potentia* (in the province *Picenum*): [Corsi 2008];
- for the *strigatio Caelanum*: [Libertini 2017];
- for the centuriation *Iader*: [Suić 1955] and the observations of the author.

Conclusion

For the sake of brevity, the conclusions expressed in the introduction to the integral edition of the *Gromatici Veteres* are intended as repeated here. The reader who wants to read them will consider them here as fully confirmed also for this work.

I repeat only the hope that the imperfections and shortcomings of this work will be overcome by further future works that can best express what has been reported here. However, I am perhaps allowed for such work to reserve the pride of having them stimulated in some way.

Giacinto Libertini

GROMATICI VETERES
EX RECENSIONE
CAROLI LACHMANNI
(CORPVS AGRIMENSORVM
ROMANORVM)

THE ANCIENT LAND SURVEYORS
IN THE TRANSCRIPTION
OF KARL LACHMANN
(COLLECTION OF WRITINGS OF
THE ROMAN LAND SURVEYORS)

[L. 209.1] INCIPIT LIBER AVGVSTI CAESARIS ET NERONIS	HERE BEGINS THE BOOK OF AUGUSTUS CAESAR AND NERO¹⁰
<LIBER COLONIARVM I>	<BOOK I OF THE COLONIES>
IN PROVINCIA LVCANIA prefecture. iter ¹¹ populo non [5] debetur.	<i>Praefecturae</i> in the PROVINCE of <i>LUCANIA</i> . No right of way is due to the community.
Vulcentana, Pestana, Potentina, Atenas et Consiline, Tegenensis. quadrate centuriae in iugera n. CC.	[<i>Praefectura</i>] of <i>Volcei</i> (Buccino) <i>Paestum</i> (Capaccio, 5 km west of the town), <i>Potentia</i> (Potenza), <i>Atina</i> (Atena Lucana) and <i>Consilinum</i> (Sala Consilina), <i>Tegianum</i> (Teggiano). <There are> square centuries of CC iugera.
Grumentina. limitibus Graccanis quadratis in iugera n. CC. decimanus in oriente, kardo in meridiano.	[<i>Praefectura</i>] of <i>Grumentum</i> (Grumento Nova, about 1.2 km east of the town). <Divided> by Gracchan <i>limites</i> into squares of CC iugera. The decuman <faces> east, the <i>kardo</i> south.
[10] Veliensisis. actus n. Xç ¹² per XXV.	[<i>Praefectura</i>] of <i>Velia</i> (Ascea, about 3 km north- west of the town). XVI by XXV <i>actus</i> .

[L. 209.11] PROVINCIA BRITTIORVM. centuriae quadratae in iugera CC. et cetera in laciniis sunt praecisa post demortuos milites.	PROVINCE OF THE <i>BRUTII</i> . Square <i>centuriae</i> of CC iugera. The remaining land was divided into strips after the death of the soldiers.
Ager Buxentinus †alirestertianis† est adsignatus in [15] cancellationem limitibus maritimis.	The land of <i>Buxentum</i> (Santa Marina, hamlet of Policastro Bussentino) was allocated to veteran soldiers (?) by a land division with <i>limites</i> facing the sea.
Ager Consentinus ab imp. Augusto est adsignatus limitibus Graccanis in iugera n. CC. kardo in orientem, decimanus in meridianum.	The land of <i>Consentia</i> (Cosenza) was allocated by the emperor <i>Augustus</i> with Gracchan <i>limites</i> in <centuriae of> CC <i>iugera</i> . <i>Kardo</i> <faces> east, decuman south.
Ager Viuonensis. actus n. Xç per XXV. kardo in orientem, [20] decumanus in meridianum.	The land of <i>Vibo Valentia</i> (Vibo Valentia). XVI by XXV <i>actus</i> . <i>Kardo</i> <faces> east, decuman south.
Ager Clampetinus limitibus Graccanis in iugera n. CC. kardo in orientem, decimanus in meridianum.	The land of <i>Clampetia</i> (Amantea) was divided by Gracchan <i>limites</i> into <centuriae of> CC <i>iugera</i> . <i>Kardo</i> <faces> east, decuman south.

¹⁰ About three emperors it is known that they had as name *Nero*: *Tiberius* (adoptive son of *Augustus*), *Claudius* (son of *Drusus maior* that was a brother of *Tiberius*) and *Nero*, son of *Claudius* and of *Agrippina minor*. It is probable, as held by Campbell [Campbell 2000], that in this case the reference is to *Tiberius Claudius Nero*, successor of *Augustus* and better known as *Tiberius*.

¹¹ The *iter*, or right of way, in many cases is referred to as a certain number of feet while in many other cases it is something not due to the community. If one wanted to interpret this right as a right of physical access that is wide a certain number of feet, the widths sometimes would be unrealistic and, on the contrary, the cases in which the community has no right of passage would be unlikely. It is easier to assume that the right of way was the measure of some tribute or toll due to the community for road maintenance or for other reasons. It is interesting that the Italian modern term ‘pedaggio’ (etimologically: toll or tribute based on the feet) seems to echo this interpretation.

¹² The symbol “ç” is used to indicate “VI” (i.e., 6).

[L. 210.1] Ager Benebentanus. actus n. Xç per XXV. kardo in orientem, decimanus in meridianum.

The land of *Beneventum* (Benevento). XVI by XXV *actus*. *Kardo* <faces> east, decuman south (fig. 3).

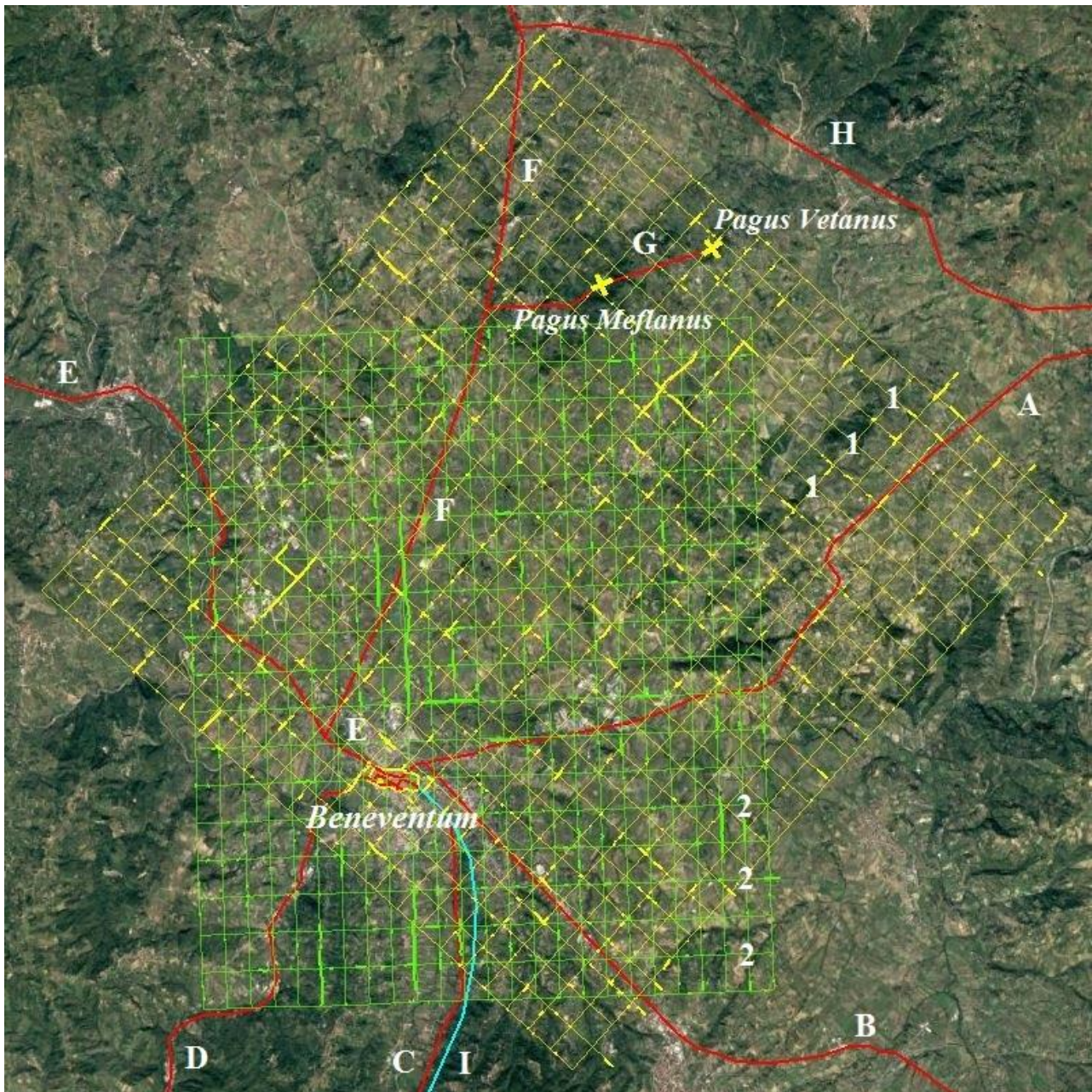


Fig. 3A – In the land of *Beneventum* there are the persistences of two centuriations, largely overlapped: 1, *Beneventum I*, triumviral, 20 x 20 *actus* – 706 x 706 m -, inclination 42° 00' E; 2, *Beneventum II*, Augustan (or subsequent?), 16 x 25 *actus* – 567.68 x 887 m -, inclination 02° 00' W. This second centuriation, for the size of the modules, is certainly that referred in the text. Other indications: A = via *Beneventum-Aequum Tuticum*; B = via *Beneventum-Aeclanum*; C = via *Beneventum-Abellinum*; D = via *Beneventum-Caudium-Capua*; E = via *Beneventum-Telesia*; F = branch of E for *Saepinum*; G = branch of F for *Pagus Meflanus* and *Pagus Vetanus*; H = branch of F for *Aequum Tuticum*; I = aqueduct of *Abellinum-Beneventum*. Same indications for the following figures too.

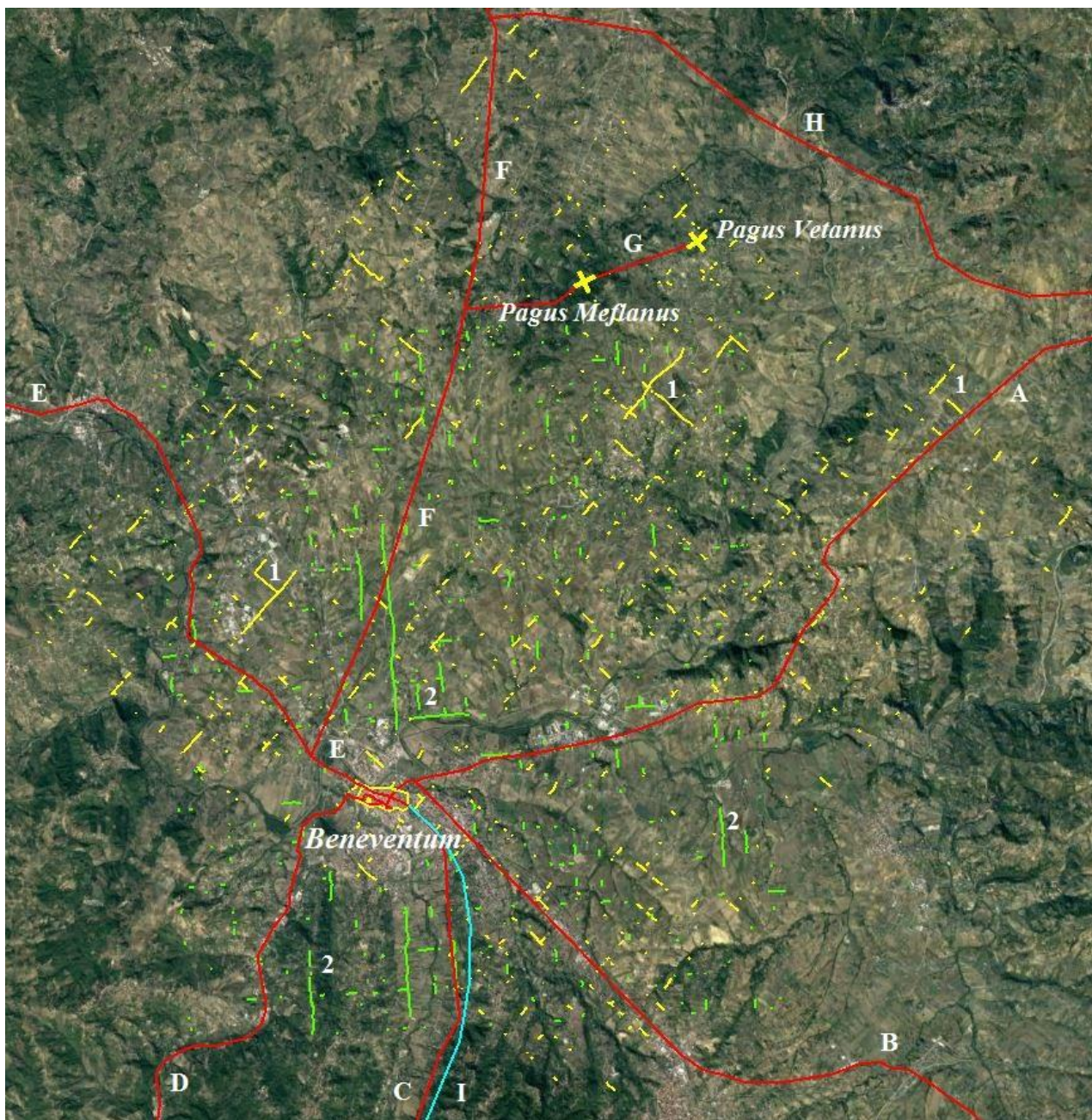


Fig. 3B – Persistences of the centuriations *Beneventum I* and *II*.

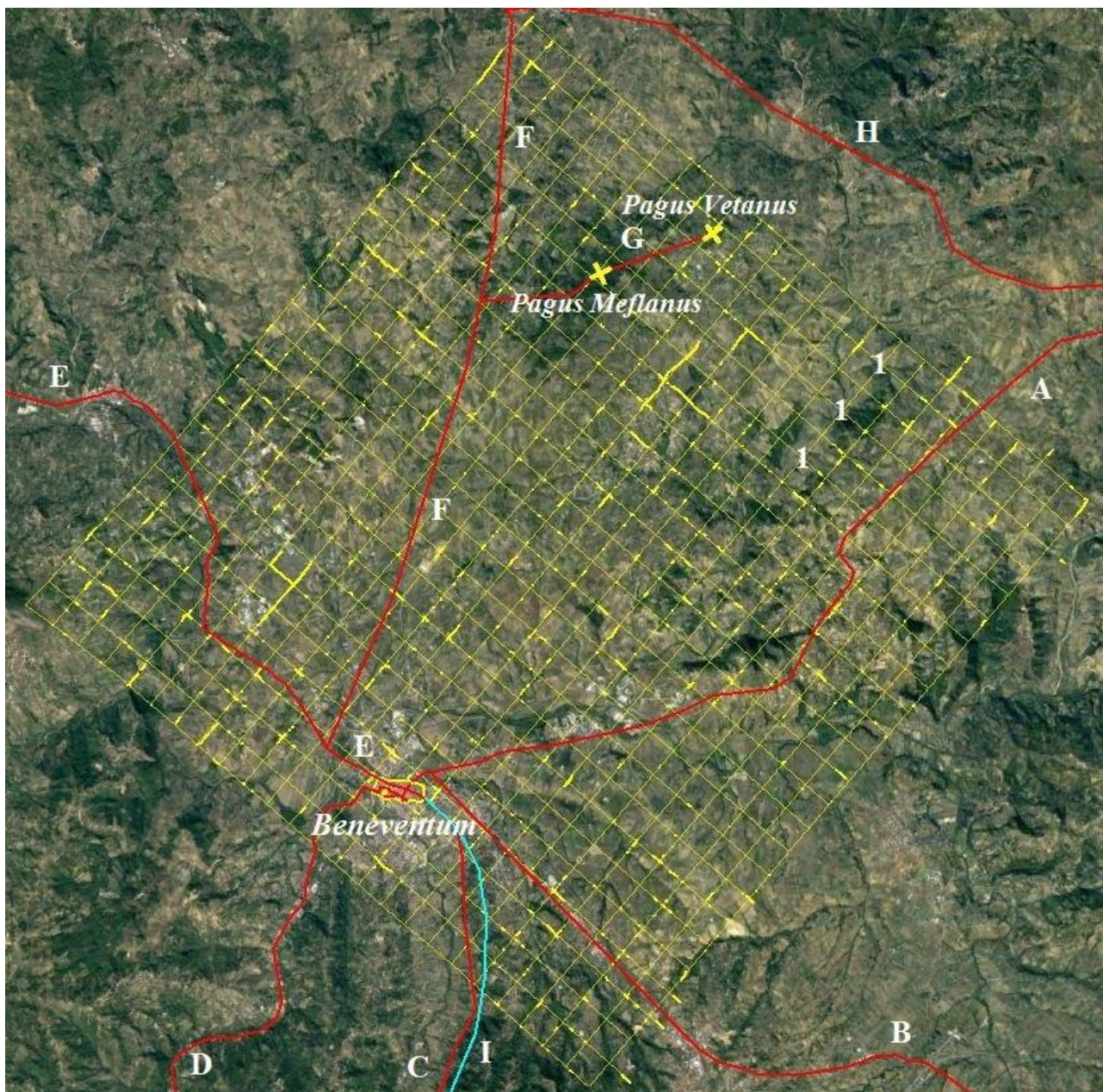


Fig. 3C – The centuriation *Beneventum I*.

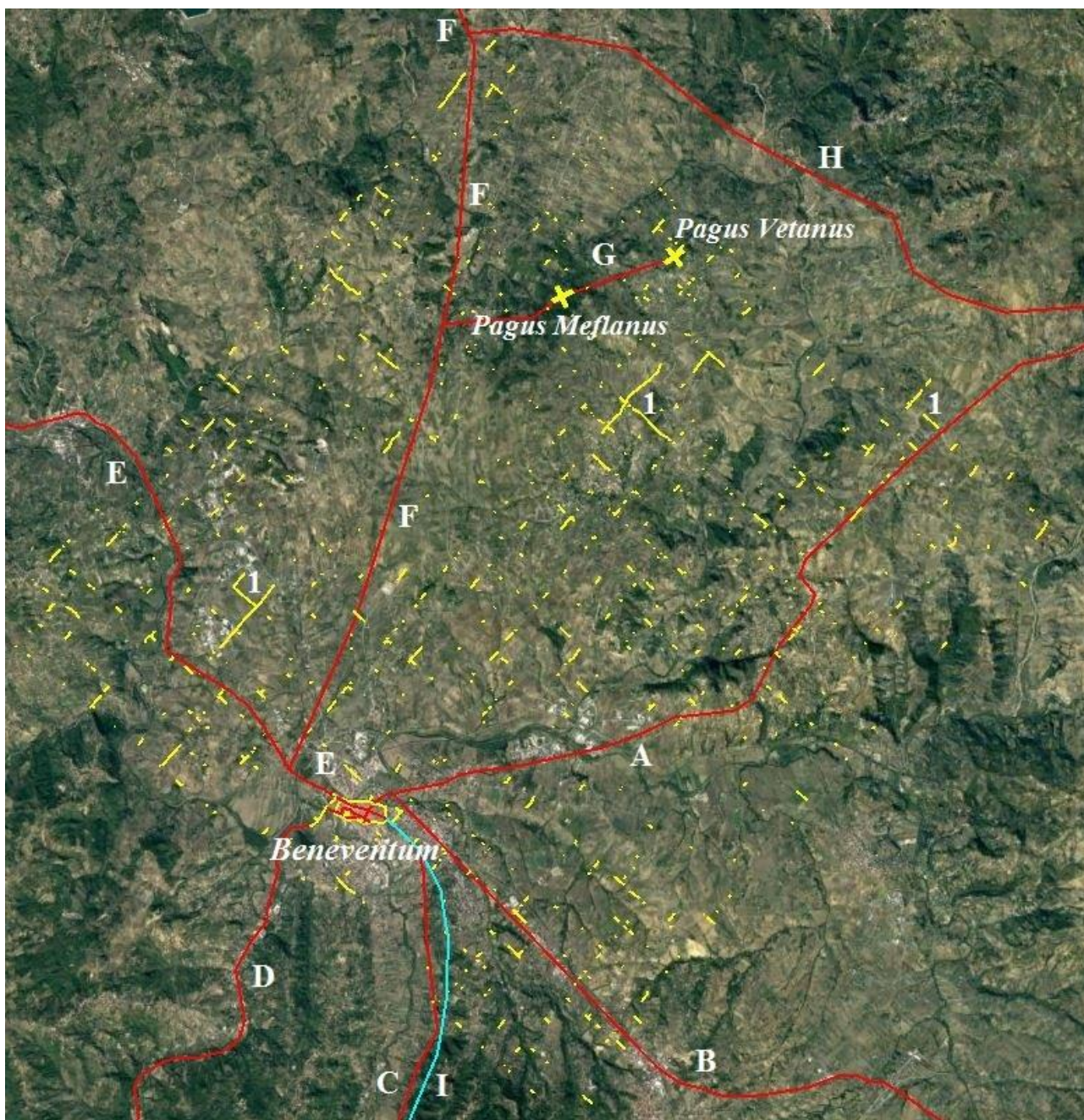


Fig. 3D – Persistences of the centuriation *Beneventum I*.

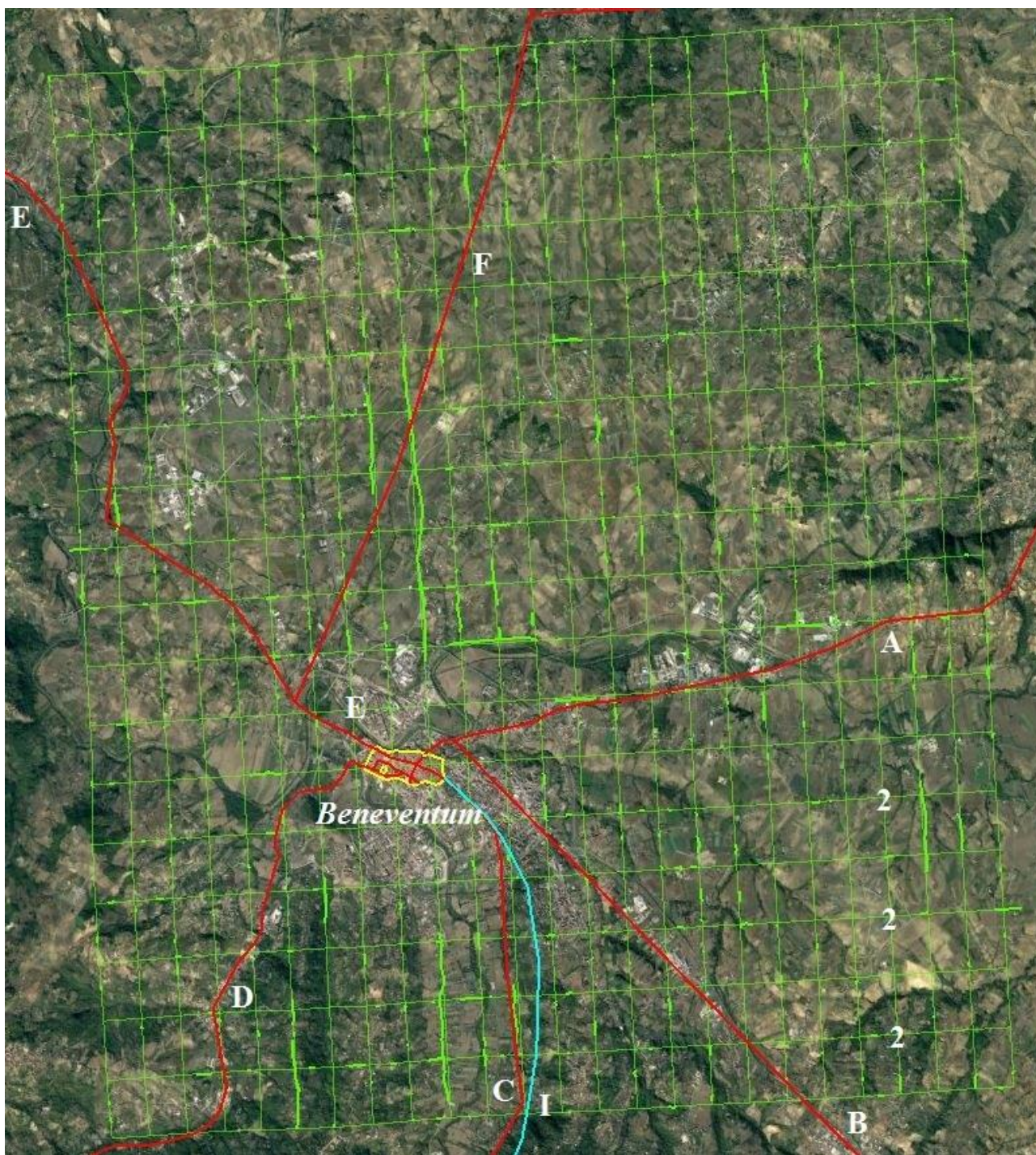


Fig. 3E – The centuriation *Beneventum II*.

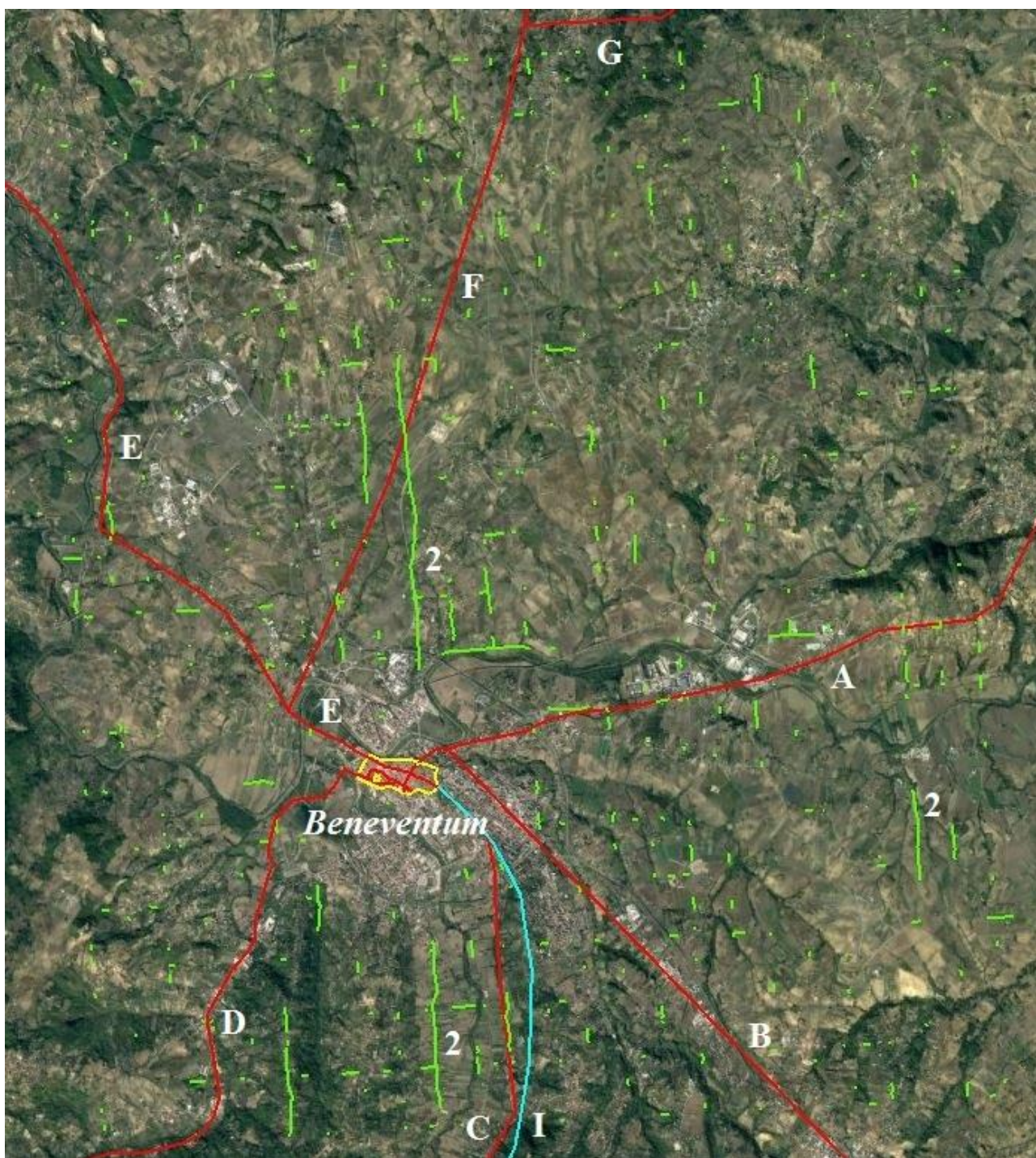


Fig. 3F – Persistences of the centuriation *Beneventum II*.

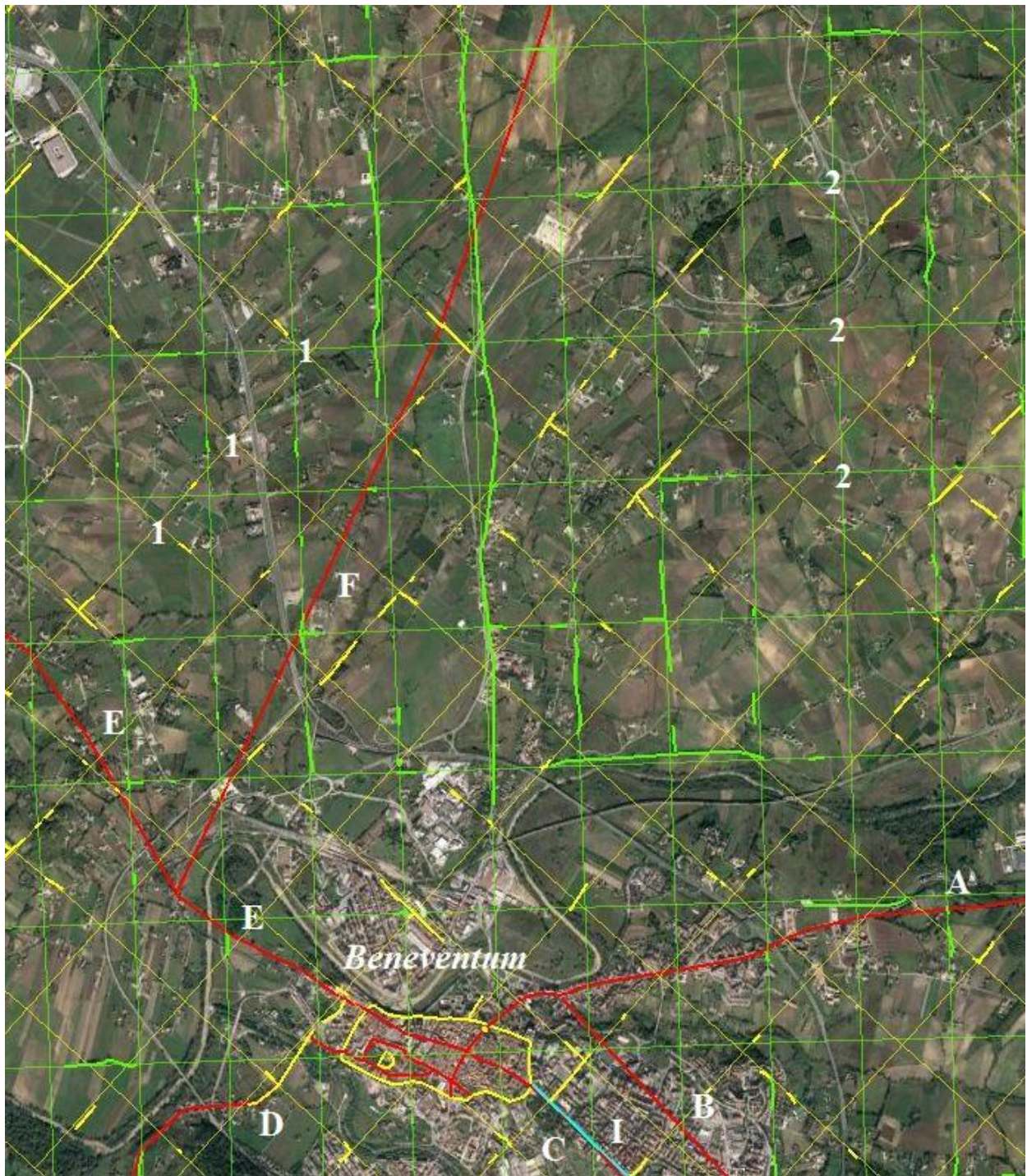


Fig. 3G – Detail of the two centuriations in the area near *Beneventum*.

[L. 210.3] PROVINCIA APVLIA.	PROVINCE APULIA
Ager Aeclanensis. iter populo non debetur. actus [5] n. XX per XXIII in iugera n. CCXL. decimanus in orientem, kardo in meridianum.	The land of <i>Aeclanum</i> (Mirabella Eclano). No right of way is due to the community. XX by XXIII <i>actus</i> , in <centuriae of> CCXL <i>iugera</i> ¹³ . Decuman <faces> east, <i>kardo</i> south.
Ager Benusinus, Comsinus, limitibus Graccanis.	The lands of <i>Venusia</i> (Venosa), <i>Compsa</i> (Conza della Campania), with Gracchan <i>limites</i> .
Vibinas, Aecanus, Canusinus. iter populo non debetur. in iugera n. CC.	[The lands of] <i>Vibinum</i> (Bovino), <i>Aecae</i> (Troia), <i>Canusium</i> (Canosa di Puglia). No right of way is due to the community. <Divided> into <centuriae of> CC <i>iugera</i> .
[10] Item et Herdonia, Ausculinus, Arpanus, Collatinus, Sipontinus, Salpinus, et quae circa montem Garganum sunt, centuriis quadratis in iugera n. CC, lege Sempronia et Iulia. kardo in meridianum, decimanus in orientem.	Similarly, <i>Herdonia</i> (Ortona), the lands of <i>Ausculum</i> (Ascoli Satriano), <i>Arpi</i> (north of Foggia), <i>Collatia</i> (s. <i>Carmeia</i>), <i>Sipontum</i> (Manfredonia, locality Lido di Siponto), <i>Salapia</i> (west of Trinitapoli), and the area around Mount <i>Garganus</i> , in square <i>centuriae</i> of CC <i>iugera</i> , under <i>lex Sempronia et Iulia</i> . <i>Kardo</i> <faces> south, decuman east.
Item et Teanus Apulus. iter populo non debetur.	Similarly, the land of <i>Teanum Apulum</i> (San Paolo di Civitate, 3 km north-west of the town). No right of way is due to the community.
[15] Ager Lucerinus kardinibus et decimanis est adsignatus: sed cursum solis sunt secuti, et constituerunt centurias contra cursum orientalem actus n. LXXX, et contra meridianum actus n. Xç: efficiuntur iugera n. DCXL. iter populo non debetur.	The land of <i>Luceria</i> (Lucera) was allocated by <i>kardines</i> and decumans. But they followed the course of the sun, and established <i>centuriae</i> LXXX <i>actus</i> long facing east and XVI <i>actus</i> long facing south: <i>centuriae</i> of DCXL <i>iugera</i> are produced ¹⁴ . No right of way is due to the community.

[L. 211.1] PROVINCIA CALABRIA.	PROVINCE CALABRIA
Territoria Tarentinum Lyppiense Austranum Varinum in iugera n. CC limitibus Graccanis. et cetera loca uel territoria in saltibus sunt adsignata et pro aestimio ubertatis [5] sunt praecisa. nam uariis locis mensurae acte sunt et iugerationis modus conlectus est. cetera autem prout quis occupauit posteriore tempore censita sunt et ei possidenti adsignata, ab imp. Vespasiano censita ex iussione. iter populo non debetur. nam eadem prouincia habet [10] muros macerias scorofiones congerias et terminos Tiburtinos, sicut in Piceno fertur.	The lands of <i>Tarentum</i> (Taranto), <i>Lupiae</i> (Lecce), <i>Austranum</i> (Ostuni), and <i>Barium</i> (Bari) were divided by Gracchan <i>limites</i> into <centuriae of> CC <i>iugera</i> . Other areas or territories were allocated in <i>saltus</i> , and divided according to an estimation of their fertility. Now, in many places surveys were carried out and an area divided into <i>iugera</i> was added. Other places, just as individuals had appropriated them, were assessed afterwards and allocated to the persons in possession of them, after they had been assessed by order of the emperor <i>Vespasianus</i> . No right of way is due to the community. Now, the same province has <as border markers> walls, dry-stone walls, heaps

¹³20 *actus* · 24 *actus* = 480 square *actus* = 240 *iugera*.

¹⁴80 *actus* · 16 *actus* = 1280 square *actus* = 640 *iugera*.

	and piles of stones and boundary markers of Tiburtine stone, as it is said for the <i>Picenum</i> .
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[L. 211.12] PROVINCIA SICILIA.	PROVINCE <i>SICILIA</i>
Territorium Panormitanorum imp. Vespasianus adsignauit militibus ueteranis et familiae suae. ager eius [15] finitur terminis Tiburtinis pro parte scriptis: nam sunt et cyppi oleaginei, qui loco termini obserbantur, et distant a se in pedibus CL CC CCL CCCC DL, prout ratio postulabit: nam sunt termini proportionales, quos milites ueterani inter se emensos posuerunt et custodiunt lineas [20] consortales.	The emperor <i>Vespasianus</i> allocated the land of the people of <i>Panormus</i> (Palermo) to veteran soldiers and to his family. It is demarcated by boundary markers of Tiburtine stone that are inscribed according to their collocation. There are also stumps of olive wood that are used as boundary markers, and the intervals between them are CL, CC, CCL, CCCC, DL feet, as it is necessary. There are also boundary markers that demarcate the portions of land (<i>proportionales</i>), which the veteran soldiers set up after measuring the properties, and they preserve common boundary lines (<i>consortales</i>).
Item Segestanorum ut supra, uel ad Leucopetram.	The same for the lands of the people of <i>Segesta</i> (near Calatafimi Segesta) and near <i>Leucopetra</i> (south of Reggio Calabria?).

[L. 211.22] PROVINCIA TUSCIA. LEX AGRORVM EX COMMENTARIO CLAVDI CAESARIS.	PROVINCE <i>TUSCIA</i> . AGRARIAN LAW FROM THE COMMENTARY OF <i>CLAUDIUS CAESAR</i>
Lex agris limitandis metiundis partis Tusciae prius [L. 212.1] et Campaniae et Apuliae [et uariae regiones, uel loca, territoria. uariae autem regiones non habent aequales centurias uel mensuras: in agro Florentino in centurias singulas iugera CC.] Qui conduxerit, decimanum latum [5] ped. XL, kardinem latum p. XX facito, et a decimano et kardine m. quantum quemque facito ped. XII, ceteros limites subbrunciuos latos p. ς II facito. quos limites faciet, in his limitibus reciproce terminos lapideos ponito ex saxo silice aut molari aut ni deteriore, supra terram sesquipedem: [10] facito crassum pedem, item politum rotundum [facito], in terram demittito ne minus ped. II ς ¹⁵ .	Law for the division and measuring of lands formerly in the region of <i>Tuscia</i> and later of <i>Campania</i> and <i>Apulia</i> [and <there are> different regions, or places, or territories. However, different regions do not have similar <i>centuriae</i> or measurements: in the land of <i>Florentia</i> (Firenze) CC <i>iugera</i> for each <i>centuria</i> .] Whosoever will have the office, shall establish a decuman XL feet wide and a <i>kardo</i> XX feet wide, and from the <i>decumanus maximus</i> and the <i>kardo maximus</i> shall make every fifth <i>limes</i> XII feet wide, and the other <i>limites subbruncivi</i> VIII feet wide. In respect of the <i>limites</i> he establish, on them he shall place reciprocally stone markers, made from flint or volcanic stone or something no less though, projecting one feet and six <i>unciae</i> above the earth; he shall ensure that the stone is one foot thick, round in shape and finished, and set into the earth to a depth of not less than II feet and six <i>unciae</i> .

¹⁵ For this and for other special characters, see in the appendix the Table B1 – Multiples of the *uncia* and Table B2 – Fractions of the *uncia*. It is necessary to point out that the unit was divided into twelve *unciae* and not into ten parts. For example, as in this case, six *unciae* were equal to 6/12 or 1/2.

<p>ceteros terminos, qui in opus erunt, robustos statuito, supra terram pd. II, crassos pedem Ιζ, in terram demittito ne minus pd. III, eosque circum calcato, scriptos ita ut iusserit. [L. 213.1] quod subsicivum amplius iugera C erit, pro centuria procedito: quod subsicivum non minus iugera quinquaginta, id pro dimidia centuria procedito. hoc opus omne arbitrato C. Iuli Caesaris et Marci Antoni et Marci Lepidi [5] triumvirorum r. p. c.</p>	<p>The other markers that will be necessary, must be made of oak, II feet above the ground, I foot and eight <i>unciae</i> thick, and set in the earth to a depth not less than III feet, with the earth around them well pressed and inscribed in accordance with his orders. In respect of a <i>subsicivum</i> greater in extent than C <i>iugera</i>, he shall treat it as a <i>centuria</i>, a <i>subsicivum</i> not less than L <i>iugera</i> must be treated as a half <i>centuria</i>. All this work by the decision of C. <i>Iulius Caesar</i>, <i>Marcus Antonius</i> and <i>Marcus Lepidus</i>, <i>triumviri</i> for organizing the State.</p>
<p>Colonia Florentina deducta a triumviris, adsignata lege Iulia, centuriae Caesarianae in iugera CC, per kardines et decimanos. termini rotundi pedales, et distant a se in pd. ΙΙCCCC, sunt et medii termini, qui dicuntur epipedonici, pedem longum crassum, et distant a se in pd. [10] ∞CC.¹⁶ ceteri proportionales sunt et intercisiuos limites seruant; quos ueterani pro obseruatione partium statutos custodiunt; qui non ad rationem uel recturas limitum pertinent, sed ad modum iugerationis custodiendum, et [15] distant a se alius ab alio pedes sescentenos. quorum limitum [L. 214.1] cursus nulla interiecta distantia in utroque latere territorii concurrunt, ut infra monstraui.</p>	<p>The colony <i>Florentia</i> (Firenze), founded by the <i>triumviri</i>, allocated under <i>lex Iulia</i>; Caesarean <i>centuriae</i> of CC <i>iugera</i>, by <i>kardines</i> and <i>decumans</i>. There are round boundary stones, measuring one foot, with intervals of MMCCCC feet between them. There are also mid-point boundary markers, which are called <i>epipedonici</i>¹⁷, one foot long and one foot thick, with intervals of MCC feet between them. Other boundary markers are placed to demarcate the portions of land and to observe the <i>intercisivi</i> (intermediate) <i>limites</i>. The veteran soldiers preserve these markers established to define the individual holdings. They are not relevant to the overall plan or to the straight lines of the <i>limites</i>, but to preserve the areas of the divided land, and there are six hundred feet apart from one another. The paths of these <i>limites</i>, as I have demonstrated below, meet on both sides of the territory with no gap placed between them.</p>
<p>Colonia Fida Tuder ea lege qua et ager Florentinus. in centuriis singulis iugera CC. termini lapidei alii [5] saxei alii molares, crassum semipedem longum dodrantem: distant a se pedes sescentenos et DCCXX. quod si fuerit crassus [ζτ] dodran. [= ζIII] aut [ζττ] deun. [= XI], est alius ab alio ped. DCCCCLX <aut> ∞LXXX. si scriptus tysilogramus fuerit terminus, est alius ab alio ped. ∞CC.</p>	<p>The colony of <i>Fida Tuder</i> (Todi) <was founded> under the same law of the land of <i>Florentia</i> (Firenze). Each <i>centuria</i> <consists of> CC <i>iugera</i>. There are boundary stones, some of rock, others of volcanic stone, half foot thick and a <i>dodrans</i>¹⁸ long. The intervals between them are six hundreds and DCCXX feet. But if the stone is a <i>dodrans</i> or a <i>deunx</i>¹⁹ thick, each one lies DCCCCLX or MLXXX feet from another. If a boundary stone has been inscribed with a <i>tysilogramus</i>, it lies MCC feet from another.</p>
<p>[10] Colonia Volaterrana lege triumvirale, in centurias singulas iugera CC, decimanis et</p>	<p>The colony of <i>Volaterrae</i> (Volterra) was allocated under a triumviral law, with <i>centuriae</i></p>

¹⁶ The symbol “∞” is used to indicate “M” (one thousand).

¹⁷ Flat.

¹⁸ Nine *unciae*, i.e., 9/12 = 3/4 (of a foot).

¹⁹ Eleven *unciae*, i.e., 11/12 (of a foot).

<p>kardinibus est adsignata. quam omnem ueterani in portionibus diuisam pro parte habent; in quas limites recipit interuallo ped. $\overline{\text{IICCCC}}$, in quibus centuriis unus quisque miles accepit iugera XXV [L. 215.1] et L et XXXV et LX. termini ea lege sunt constituti qua superius diximus.</p>	<p>each of CC <i>iugera</i>, by decumans and <i>kardines</i>. The veteran soldiers hold all this land, divided into allocations in proportion. In respect of this division, it has <i>limites</i> with intervals of MMCCCC feet and in the <i>centuriae</i> each soldier received XXV or L or XXXV or LX <i>iugera</i>. The boundary stones were set up according to the law that we mentioned above.</p>
<p>Colonia Arretium lege Augustea censita, limitibus Graccanis, qui recturas maritimas et montanas spectabant, [5] postea per cardines et d. est adsignata, et numerus centuriarum manet.</p>	<p>The colony of Arretium (Arezzo) assessed under <i>lex Augustea</i>, by Gracchan <i>limites</i> with straight lines facing the sea (<i>maritimi</i>) and the mountains (<i>montani</i>). Later, it was allocated by <i>kardines</i> and decumans and the number of the <i>centuriae</i> remained <the same>.</p>
<p>quae quadratae sunt. si in pedibus $\overline{\text{IICCCC}}$, quae pro parte terminos lapideos recipit semissales, distant a se in ped. CCC. si $\overline{\text{II}}$, $\gamma\lambda$, distant a se ped. CCXL. si $\overline{\text{IIICC}}$, dodran., ped. CCCCLXXX. si V milia et CCL, dodrant., [10] pd. DC. si VII milia, $\gamma\lambda$, distant a se p. DCCCXL. si ped. XI milia, $\gamma\lambda$, in ped. MCCCXX. haec ratio in eadem regione numeri est: [L. 216.1] pro parte enim pro modo iugerationis pedaturae numerus est designatus.</p>	<p>They are square. If <a <i>centuria</i> has one side> MMCCCC feet long, for to the division has boundary stones measuring half of a foot with intervals between them of CCC feet. If <the side is> MM <feet>, <boundary stones measure> four <i>unciae</i> of foot²⁰, intervals are CCXL feet. If MMMMCC, a <i>dodrans</i>²¹, CCCCLXXX f. If V thousand and CCL, a <i>dodrans</i>, DC f. If VII thousand, four <i>unciae</i>, DCCCXL f. If XI thousand, four <i>unciae</i>, MCCCXX f. This numerical rule is used throughout the same region: in fact, the number was arranged in proportion, in relation to the quantity in feet of <i>iugera</i> of the area.</p>
<p>Colonia Ferentinensis lege Sempronia est adsignata. sed quod ante limitibus centuriatis fuit adsignata, postea [5] deficientibus ueteranis iuxta fidem possessionis est recensita, sed numeris uncialibus termini sunt constituti. id est alii silicei, crassi p. $\text{I}\eta$, $\gamma\lambda$ longi, qui distant a se in pd. ∞CCCCXL. alii albi, $\gamma\lambda$ [IIII] longi, distant a se CCCCLXXX. alii longi dodran. distant a se pd. DC. ceteros prout [10] natura locorum inueinit positi sunt.</p>	<p>The colony of <i>Ferentis</i> (Ferento) was allocated under <i>lex Sempronia</i>. But whatever land had been allocated previously by <i>limites</i> and <i>centuriae</i>, afterwards, as the veteran soldiers died out, was assessed on the evidence of existing owner. The boundary stones were set up by numbers defined as <i>unciae</i>²². That is, some were of flint stone, a foot and two <i>unciae</i>²³ thick, IIII <i>unciae</i> long, with intervals between them of MCCCCXL f.; other were white, IIII <i>unciae</i> long, intervals between them CCCCLXXX f.; others a <i>dodrans</i> long, intervals between them DC f. Other boundary stones were set up according to the nature of the terrain.</p>
<p>Colonia Capys. pro aestimio ubertatis et natura locorum sunt agri adsignati. nam</p>	<p>The colony of <i>Capena</i> (Capena, locality Civitùcola or Castellaccio, 4 km north of the</p>

²⁰ I.e., $4/12 = 1/3$.

²¹ S. the previous note 18.

²² I.e., duodecimal fractions of a foot.

²³ I.e., $2/12 = 1/6$.

<p>termini uariis locis sunt adpositi, id est in planitia, ubi miles portionem habuit. qui termini distant a se in ped. LX LXXX C CXX CXL CL [15] CLX CLXXX CC CCXX CCXL CCC. et si longius natura loci tendatur, sunt in pedibus DC DCCCXL DCCCCLX ∞XX ∞CC [L. 217.1] ∞CCCCXL ∞D. ceteris autem locis uias cauas itinera coronas et ante nominata. quae si ita sunt, exequi oportet. ne id sequaris quod aliqua pars posteriori tempore pacti decisionisue causa inter se sunt censiti.</p>	<p>town). The fields were allocated according to their fertility and the nature of the terrain. The boundary markers were set up in different places, that is, on the plain, where the soldier had his portion. These boundary markers have intervals between them of LX, LXXX, C, CXX, CXL, CL, CLX, CLXXX, CC, CCXX, CCXL, CCC feet, and, if for the nature of the terrain they must be more distant, the intervals are DC, DCCCXL, DCCCCLX, MXX, MCC, MCCCCXL, MD feet. In other places, <boundary markers are> roads, hollows in the ground, paths, fences, and others mentioned before. If they are used in this way, it is necessary to observe them. But you should not be guided by what some parties have subsequently assessed on their own initiative, in order to reach a settlement or an agreement.</p>
<p>[5] Colonia Iunonia quae appellatur Faliscos a triumuiris adsignata et modus iugerationis est datus. in qua limites intercisiui sunt directi et lege agraria sunt mensurae conlecte. termini autem non sunt omnibus locis siti, sed numero pedature sunt limites constituti. in locis quibusdam [10] riui finales et cauae quae ex pactione sunt designatae, hae tamen quae recturam limitum recipiunt. nam termini sunt silicei pro parte, et distant a se in ped. CCXL CCC CCCLX CCCCXX et CCCCLXXX et DC. ceterum normalis longitudo per riuorum cursus seruatur.</p>	<p>The colony of <i>Iunonia</i>, which is also called <i>Falerii</i> (Civita Castellana) was allocated by the <i>triumviri</i> and an area of division into <i>iugera</i> was granted where <i>intercisiui</i> (intermediate) <i>limites</i> were laid out and the measurements were arranged in accordance with the agrarian law. Boundary markers were not set up in every location, but the <i>limites</i> were established in relation to the size of the measured areas. In some places, streams and hollows in the ground, defined by agreement, mark the boundary, however only those that follow the straight lines of the <i>limites</i>. Now, the boundary markers are in part of flint, and the intervals between them are CCXL, CCC, CCCLX, CCCCXX, CCCCLXXX and DC feet. But a right-angled side is marked by the course of streams.</p>
<p>[15] Colonia Nepis eadem lege seruatur qua et ager Faliscorum.</p>	<p>The colony of <i>Nepet</i> (Nepi) is maintained under the same law of the land of <i>Falerii</i> (Civita Castellana).</p>
<p>Colonia Sutrium ab oppidanis est deducta. ante limites contra orientalem recturam dirigebantur. postea ex omni latere sunt extenuati: et licet omnes agri ad modum [L. 218.1] iugerationis sint adsignati, tamen pro parte naturam loci secuti artifices agros censuerunt, id est fecerunt gammatos et scamnatos, riparum et coronarum natura, et iuga collium sunt emensi. terminos autem pro parte lapideos [5] posuerunt, alios uero ligneos, qui sacrificales pali appellantur. qui distant a se ped. CCCC, p. D, ped. DC, p.</p>	<p>The colony of <i>Sutrium</i> (Sutri) was founded by the people of the town. Previously, the <i>limites</i> followed a straight line eastwards. Later, they were reduced on all sides. Although all the land was allocated in accordance with the area of <i>iugera</i> required, nevertheless in part the surveyors assessed the land following the nature of the terrain, that is, they made fields in the form of a gamma (<i>gammati</i>) and of a rectangle (<i>scamnati</i>), according to the layout of river banks and fences, and included hill ridges in the survey. In part they set up boundary markers of stone, and others made of wood, which are called sacrificial</p>

DCC, ped. DCCC, ped. DCCCC, ped. ∞, et pd. ∞CC. ceterum pro natura loci designatum est in ripis.	(<i>sacrificales</i>) stakes. The intervals between them are CCCC, D, DC, DCC, DCCC, DCCCC, M, and MCC feet. As for the rest, due to the nature of the terrain, the boundary was demarcated by river banks.
Campi Tiberiani in iugeribus uicenis quinis sunt [10] adsignati a Tiberio Caesare, et termini Tiberiani nuncupantur. qui distant a se ped. DC per ∞CC, ped. DCCC, ped. CCC. alibi ped. DC per DC, alibi ped. D per DCCXX.	The <i>Campi Tiberiani</i> (area between <i>Roma</i> and <i>Tibur</i> , modern Tivoli) were allocated in lots of twenty five <i>iugera</i> by <i>Tiberius Caesar</i> , and the boundary markers are called <i>Tiberiani</i> (fig. 4). The intervals between them are DC by MCC feet, DCCC <by> CCC feet, elsewhere DC by DC feet, elsewhere D by DCCXX feet.
qui termini recipiunt mensuram pedum [VI] semis per p., ς [ϿII], ϣ [=III], pedis Ͽ per Ͽ, ϣϣ per Ͽ [ϿII] ²⁴ . ceterum limitibus normalibus [15] recturae concurrunt.	These boundary stones have dimensions of half foot by one foot, eight <i>unciae</i> by three <i>unciae</i> ; half foot by six <i>unciae</i> , five <i>unciae</i> by eight <i>unciae</i> . As for the rest straight lines cross orthogonal <i>limites</i> .

²⁴ The interpretation of the text given in a note by Lachmann is the following (the first line is the text reported, the second and third lines are the interpretation, and the fourth the translation):

pedum sex semis per	CC ϿII p.=II	per dua sela per Ͽ	ϣ, ϿIII
pedum [VI] semis per p.,	ς [ϿII], ϣ [=III],	pedis Ͽ per Ͽ	ϣϣ per Ͽ [ϿII]
pedis semis per pedem	bessis, quadrantis,	pedis semis per semissem,	quincuncis per bessem
half foot by a foot	eight <i>unciae</i> by three <i>unciae</i>	half foot by six <i>unciae</i> ,	five <i>unciae</i> by eight <i>unciae</i>

But the writing of the last column (ϿIII) indicates nine *unciae* and not eight *unciae*.

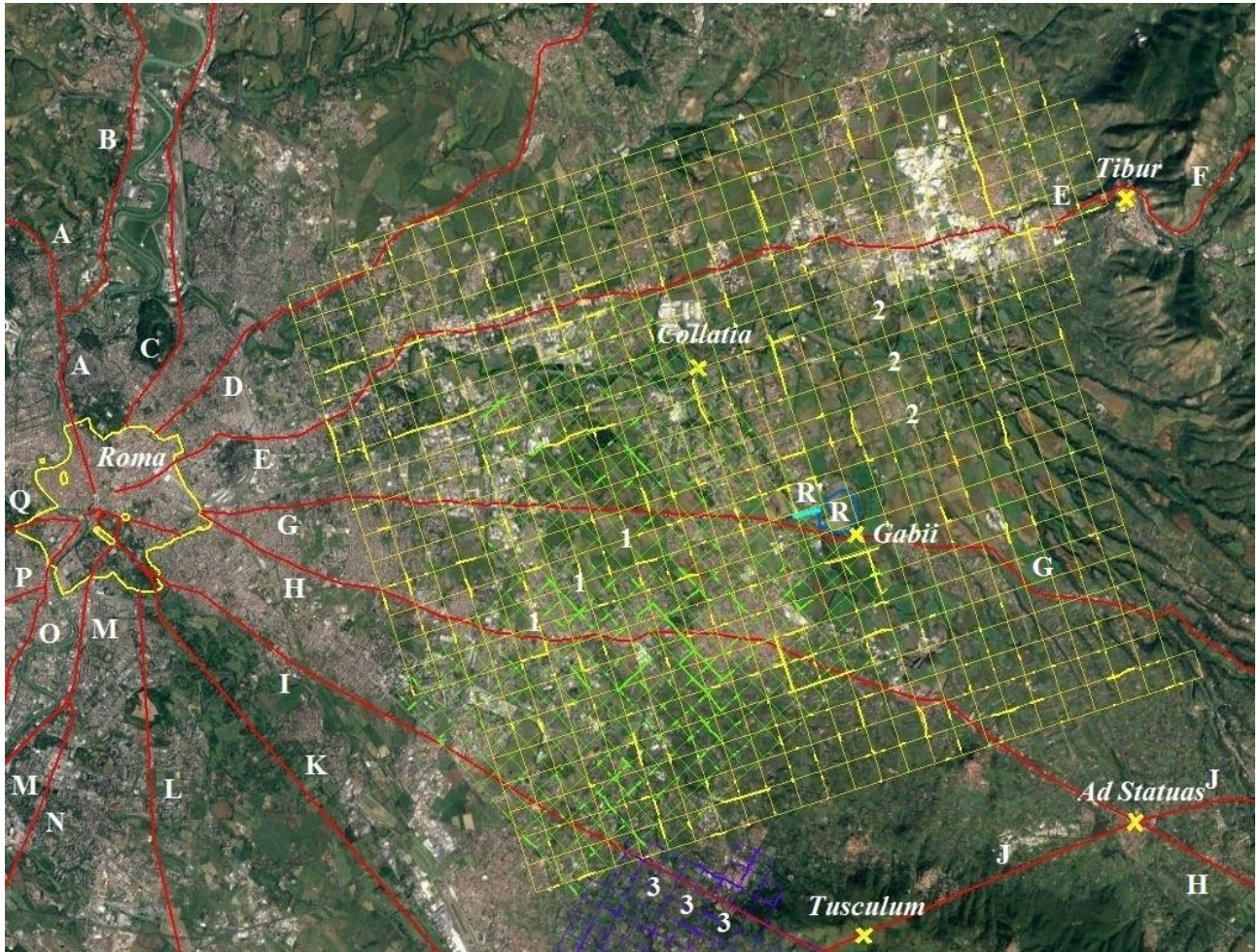


Fig. 4A – The lands of *Collatia* e *Gabii* were divided by the centuriation *Collatia-Gabii* (1, Sullan, 15 x 15 *actus* – 532.2 x 532.2 m -, inclination 42° 00' W) and later together with the land of *Tibur* by the centuriation called *Campi Tiberiani* (2, Tiberian, 20 x 20 *actus* – 710 x 710 m -, inclination 18° 00' W). The extension of these centuriations is best appreciated in comparison with that of *Roma* surrounded by walls. Other indications: 3= centuriation *Bovillae-Tusculum*; A = *via Cassia*; B = *via Flaminia*; C = *via Salaria*; D = *via Nomentana*; E = *via Tiburtina*; F = *via Valeria*; G = *via Praenestina*; H = *via Labicana*; I = *via Latina*; J = branch of the *via Latina* for *Tusculum-Ad Statuas-Praeneste*; K = *via Appia*; L = *via Ardeatina*; M = *via Ostiensis*; N = *via Laurentina*; O = *via Campana*?; P = *via Portuensis*?; Q = *via Aurelia*. For simplicity the aqueducts of *Roma* are not drawn. The indications are the same for the following figures too.

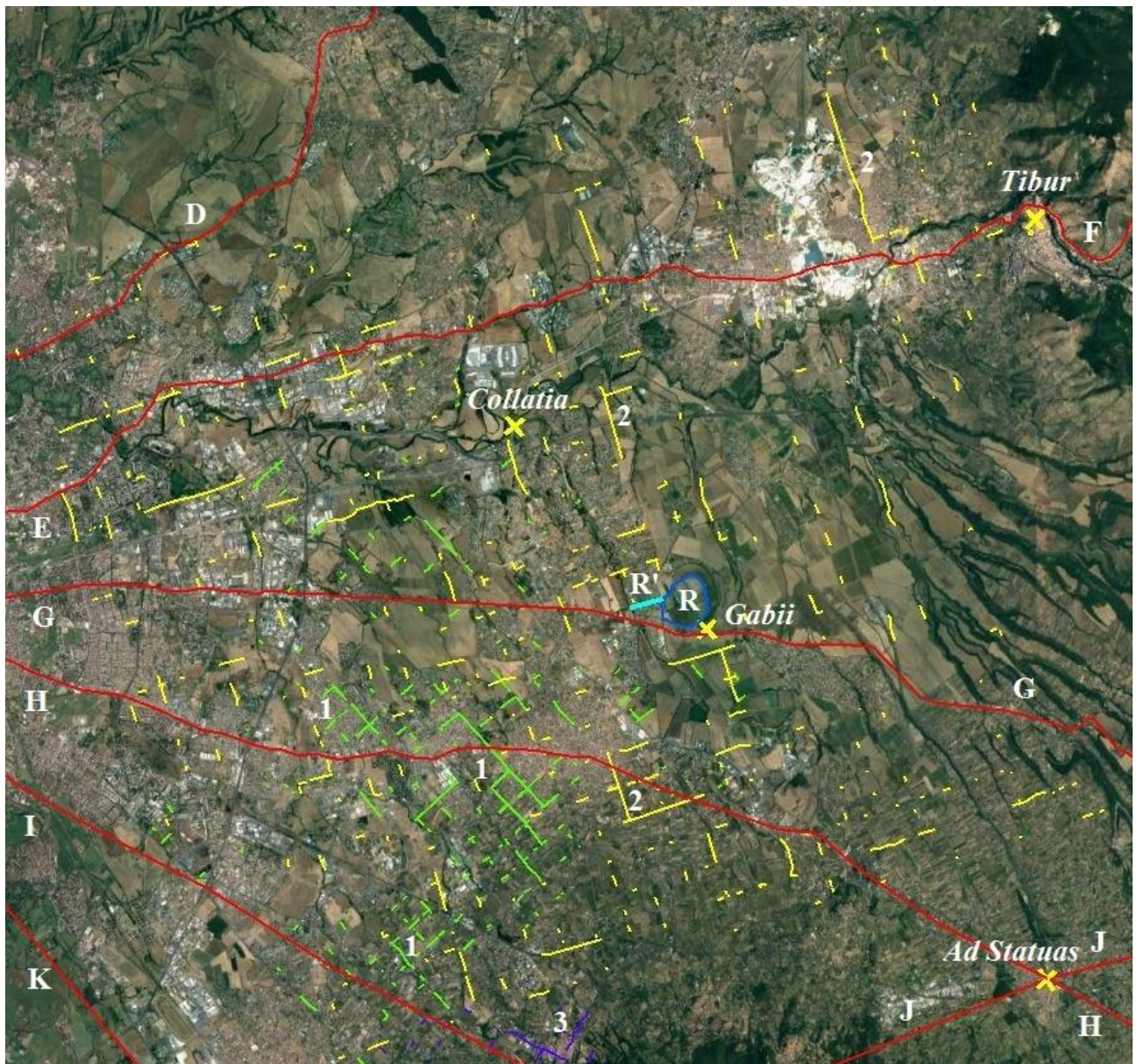


Fig. 4B – Persistences of the centuriations *Collatia-Gabii* and *Campi Tiberiani*.

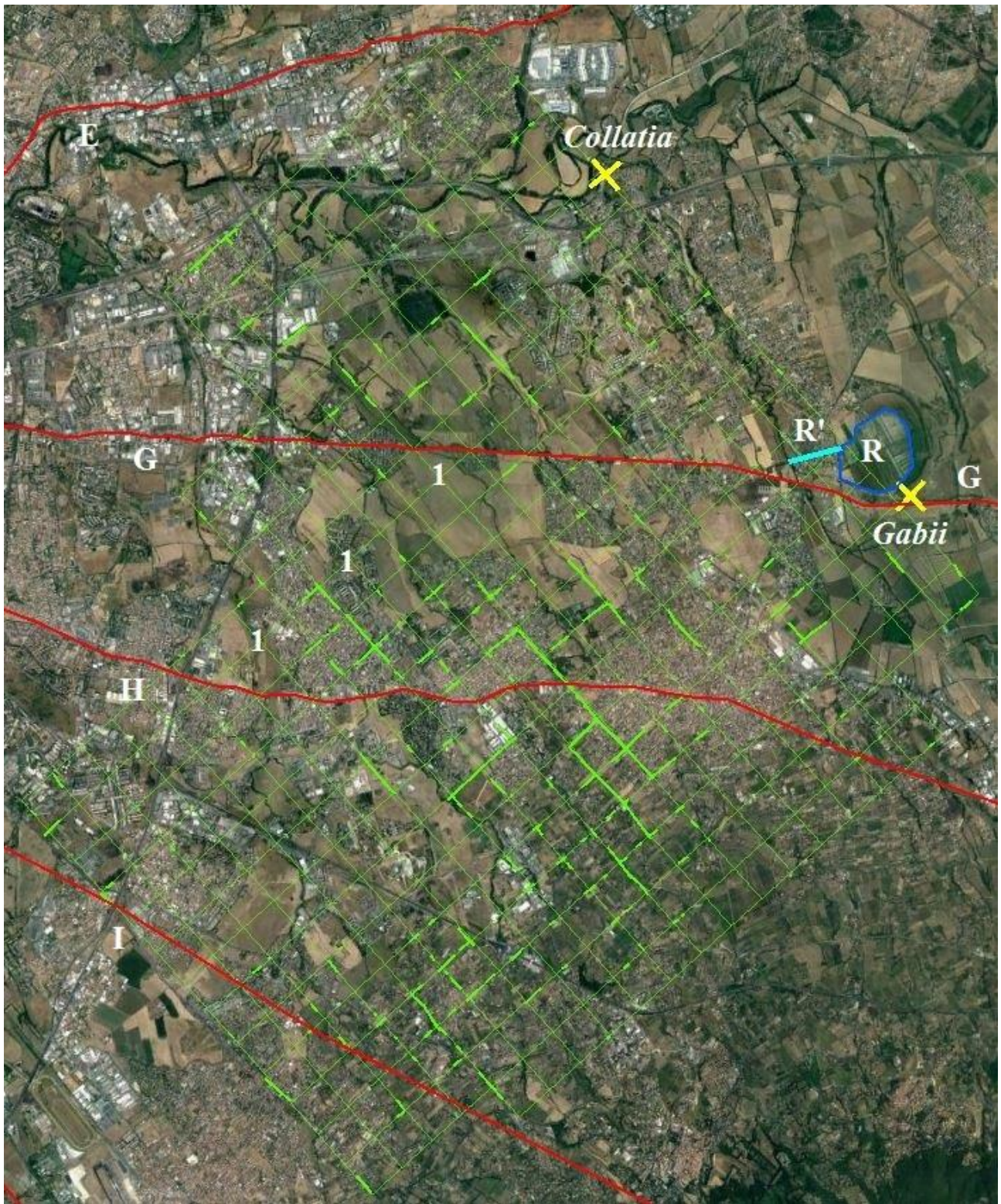


Fig. 4C – The centuriation *Collatia-Gabii*.

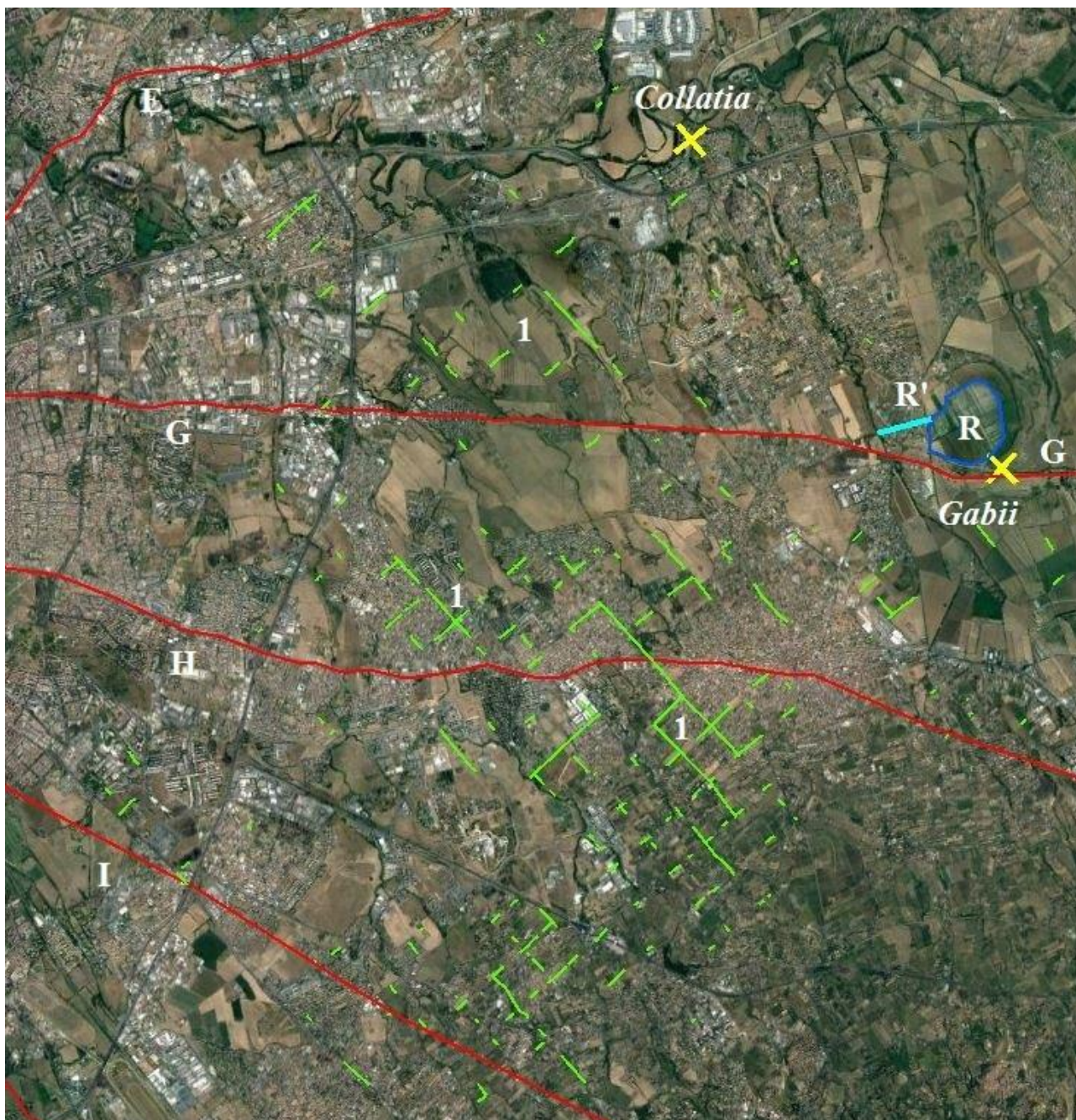


Fig. 4D – Persistences of the centuriation *Collatia-Gabii*.

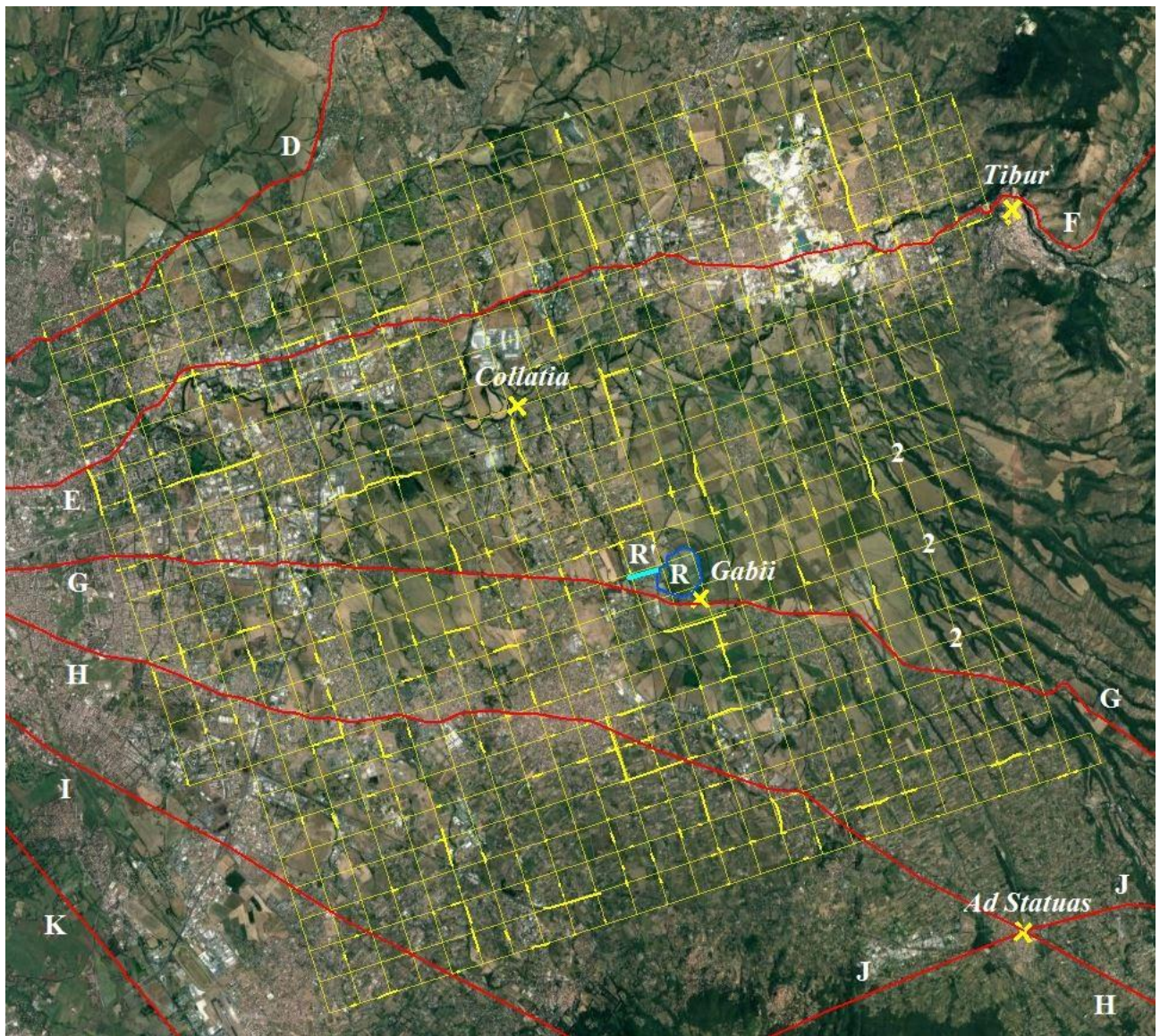


Fig. 4E – The centuriation so called *Campi Tiberiani*.

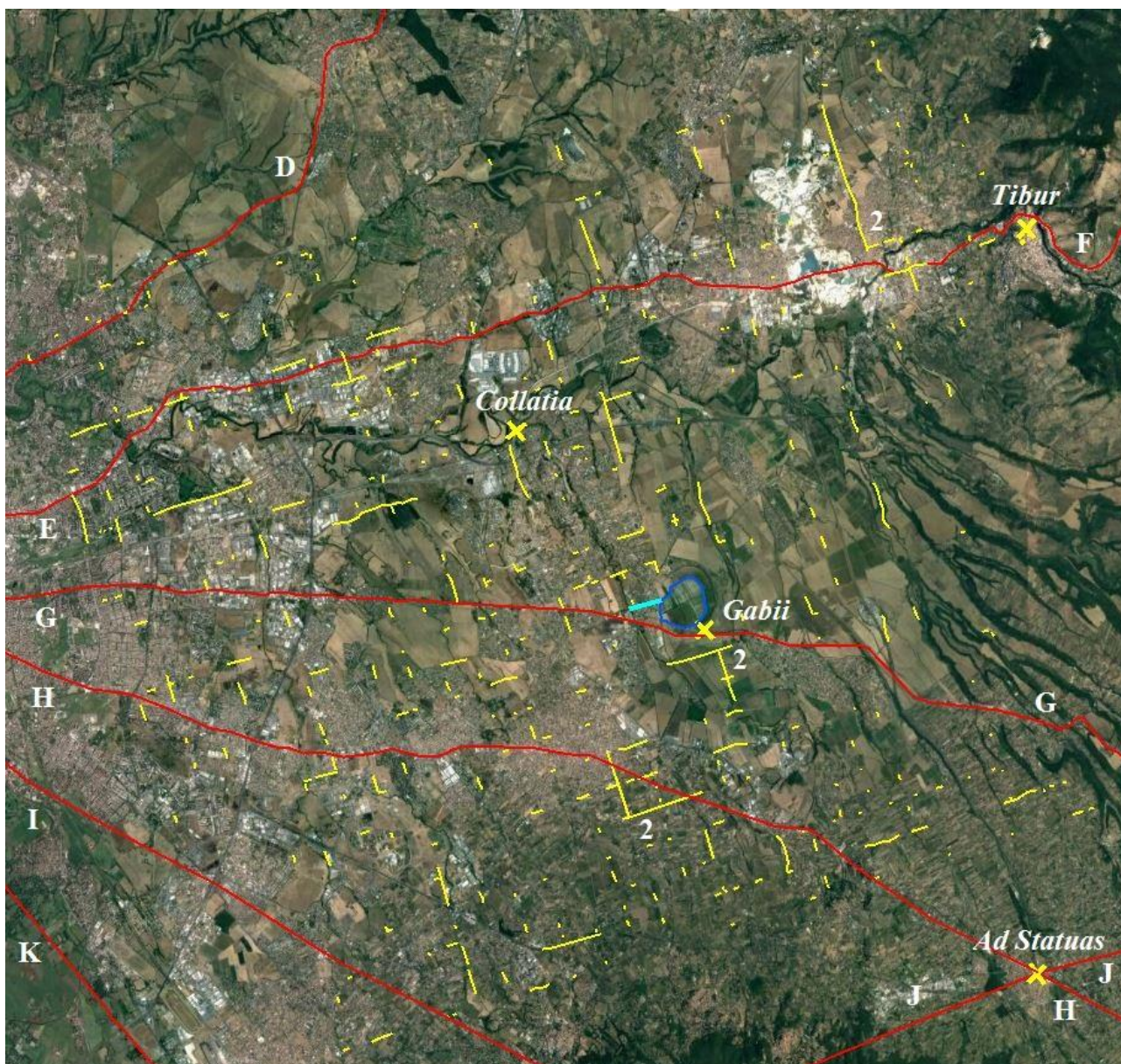


Fig. 4F – Persistences of the centuriation *Campi Tiberiani*.

<p>[L. 219.1] Colonia Tarquinius lege Sempronia est adsignata. cuius agri mensura in tetragonon uariis locis est conlecta, et termini silicei sunt adpositi. quorum mensura est deun. [ζϛ, XI] per longum, et distant a se in pedibus [5] DCCXX. alii per longum trien., III, distant a se in ped. DCCCXXX, DCCCLX. hoc in locis montanis: in quibus alii iuxta loci naturam spissiores sunt siti, id est sine mensura suae numero podismati sunt, inter ped. CXX, inter ped. CLX, in ped. CLXXX, in ped. CC et CCXL. nam circa regionem [10] maritimam limites rectos censuerunt et lapidibus his compactis cursum demonstraerunt, aliis uero locis aggeres conuallium ordinari disposuerunt.</p>	<p>The colony of <i>Tarquinius</i> (Tarquinia) was allocated under <i>lex Sempronia</i>. The measurement of its land was arranged in many places in the shape of a four-sided area and flint stone boundary markers were set up. Their dimensions are a <i>deunx</i>²⁵ in length, with intervals between them of DCCXX feet. Others are four or three <i>unciae</i> in length, and the intervals between them are DCCCXXX or DCCCLX feet. This in mountainous locations, where because of the nature of the terrain some are positioned more closely together, that is, they were set up without reference to their own dimensions, with intervals between them from CXX and CLX up to CLXXX, CC and CCXL feet. Indeed, around an area near the sea they established straight <i>limites</i>, and marked their course by piles of stone, but in other locations they arranged that the upper ridges of the valleys should be considered <as the boundary>.</p>
<p>[L. 220.1] Colonia Grauisca ab Augusto deduci iussa est: nam ager eius in absoluto tenebatur. postea imp. Tiberius Caesar iugerationis modum seruandi causa lapidibus emensis r. p. loca adsignauit. nam inter priuatos egregios [5] terminos posuit, qui ita a se distant ut breui interuallo facile repperiantur. nam sunt et per recturas fossae interiectae, quae communi ratione singulorum iura seruant.</p>	<p>The colony of <i>Graviscae</i> (Tarquinia, hamlet of Tarquinia Lido) was founded by order of <i>Augustus</i>: indeed, its land was held without survey. Later, the emperor <i>Tiberius Caesar</i>, in order to preserve the division into <i>iugera</i>, made measurements and set up boundary stones, and allocated some areas to the community. Indeed, between <the properties of> private individuals set up <i>egregii</i> boundary stones, which are separated from one another by a short distance so that they can easily be found. And along straight <i>limites</i>, ditches were placed, and by common agreement these protect the rights of the individuals.</p>
<p>Colonia Veios prius quam oppugnaretur, ager eius militibus est adsignatus ex lege Iulia. postea deficientibus [10] his ad urbanam ciuitatem associandos censuerat diuis Augustus. nam uariis temporibus et a diuis imperatoribus agri sunt adsignati. cuius ratio sic ostenditur.</p>	<p>The land of the colony of <i>Veii</i> (Roma, near Isola Farnese, a medieval centre), before it was attacked, was allocated to soldiers under <i>lex Iulia</i>. Afterwards, when these died out, the divine <i>Augustus</i> decided it should be added to the urban settlement. Indeed, at different times, lands have been allocated by the divine emperors, and the methods by which this was done is now illustrated.</p>
<p>circa oppidum Veios sunt naturae locorum quae uicem limitum seruant. sed non per multa milia pedum [15] concurrunt. in quibus etiam termini siti sunt pro parte silicei et alii Tiburtini. silicei uero distant a se in ped. CCCXX CCCLX CCCCXX CCCCLXXX DXL DC, Tiburtini uero in [L. 221.1] ped.</p>	<p>Around the town of <i>Veii</i> there are places that the natural features of terrain preserve as <i>limites</i>. However, over a distance of many thousands of feet they do not coincide with the <i>limites</i> and on them boundary stones have been positioned, some made of flint, others of Tiburtine stones. Flint stones have intervals between them of CCCXX,</p>

²⁵ Eleven *unciae* = 11/12 (of a foot).

CCXL CCLXXX CCCXL CCCC CCCCLX DXX DLXXX DCXL DCLX quod si spissiores non sunt, riparum cursus seruatur;	CCCLX, CCCCXX, CCCCLXXX, DXL, DC feet; those of Tiburtine stones <intervals of> CCXL, CCLXXX, CCCXL, CCCC, CCCCLX, DXX, DLXXX, DCXL, DCLX feet. If the stones are not positioned more closely, the course of the river banks is observed.
harum tamen quae per multa milia pedum recturas separationesue agrorum ab initio suo usque ad occasum [5] custodiunt. et ne eas ripas sequendas sperarent quae intra corpus agri nascuntur et in suo latere decidunt, lex limitum eas praedamnauit. ne id aliquando sequamini quod maior potestas limitum recturarumue cursus non confirmat. sed si conuentionis causa eas partes inter se [10] custodiendas censuerunt, non recturae inputandum est, sed concurrenti definitioni fides adhibenda: erit enim uiarum riparum cauarum multorum agrorum separando rumpere meantium cursus seruandus.	Yet, some of these <river banks> mark out straight boundaries and divisions between fields over many thousands of feet, from their own source right down to their end. In case anyone would think to follow <as boundary> those river banks that begin inside an area and then die out on a side of it, the law pertaining to the <i>limites</i> had ruled them out in advance, and also forbids to follow anything that the greater authority of the <i>limites</i> or the course of straight lines do not confirm. However, if the parties, in order to reach an agreement, have decided to keep them as boundaries between their properties, trust must be placed not in the straight lines but in the agreed boundary definition. Indeed, the line of roads, banks, and hollows in the ground should be observed since they provide the borders between many fields.
pars uero camporum et silue, regionis Campaniae a [15] Veii tenuis uel Aureliae, ante a diuo Augusto ueteranis pro parte data fuit. in qua regione limites maritimi appellantur. ubi sunt termini lapidei, sed et lignei sacrificales [L. 222.1] exordio sunt constituti. nam postea iussu imp. Adriani uice numero limitum termini positi sunt lapidei, qui ab uno incipiunt scripti numerum continuere, ut puta TERMINVS PRIMVS, TERMINVS SECVNDVS, TERMINVS TERTIVS, [5] TERMINVS QVARTVS, TERMINVS QVINTVS, usque ad numerum suum [facit] uel conclusionem angulorum agri adsignati. quorum mensura licet diuersa sit, tamen distant a se in pedibus C, in CXL, in ped. CC, in ped. CCXX, in ped. CCC, in ped. CCCLX, in ped. CCCC, in ped. CCCCLXXX, in ped. D, in [10] ped. DLX, in ped. DC.	In truth, a part of plain and woodland of the region <i>Campania</i> from <i>Veii</i> (Roma, near Isola Farnese, a medieval centre) to the <via> <i>Aurelia</i> , was previously distributed in proportion to veteran soldiers by the divine <i>Augustus</i> . In this region the <i>limites</i> are called <i>maritimi</i> . There the boundary markers are of stones, but also wooden sacrificial (<i>sacrificales</i>) stakes were set up at the start. Later, by order of the emperor <i>Adrianus</i> , boundary markers of stones with the number of the <i>limites</i> were established. These numbers start with the number one and then continue, by example FIRST BOUNDARY STONE, SECOND BOUNDARY STONE, THIRD BOUNDARY STONE, FOURTH BOUNDARY STONE, FIFTH BOUNDARY STONE, right up the appropriate number, or the final corners of the allocated land. The dimensions of the markers are different and the intervals between them are C, CXL, CC, CCXX, CCC, CCCLX, CCCC, CCCCLXXX, D, DLX, and DC feet.
nam pars agri quae circa Portum est Tiberis, in iugeribus adsignata adque oppidanis est tradita, et pro aestimio ubertatis professionem acceperunt.	Indeed, part of the land around <i>Portus</i> (Fiumicino, 2 km east of the town) <and near> the <i>Tiberis</i> (River Tevere) was allocated in <i>iugera</i> and granted to the people of the fortified town and they received a declaration according to the an evaluation of the fertility.
media autem pars inter Romam et Portum	Moreover, the land between <i>Roma</i> and <i>Portus</i>

<p>actis [15] quidem mensuris est adsignata, et stipitibus oleagineis adfixis numeri ad singulos angulos sunt designati. [ad] quorum palorum loco postea lapides gregales ob numeros podismi [L. 223.1] custodiendos sunt adpositi. quibus etiam praeceptum est ut pali annui sacrificales renouarentur. postea uariis locis deficientibus ueteranis iussu imp. Caesaris Traiani agri terminis lapideis sunt adsignati. qui termini recipiunt [5] mensuram parallelogrammam, et distant a se in ped. DC DCCCXL DCCCCLX ∞XX ∞CC ∞CCCCXL ∞DCLXXX et ∞DCCC. huius enim territorii forma in tabula aeris ab imperatore Traiano iussa est describi, quod limitibus normalibus maritimisque sit adsignatus.</p>	<p>was allocated after it was surveyed. Numbers <written> on stakes of olive-trees wood were set up at every corner, and afterwards each stake was substituted by stones to preserve the numbers <of the <i>limites</i>> in the measured area. In these areas, it is also ordered that the sacrificial (<i>sacrificales</i>) stakes must be renewed each year. Later, when in some locations the veteran soldiers died out, by order of the emperor <i>Traianus</i> the fields were allocated with boundary markers of stone. These markers have the shape of a parallelogram and the intervals between them are DC, DCCCXL, DCCCCLX, MXX, MCC, MCCCCXL, MDCLXXX, and DCCC feet. Indeed, the emperor <i>Traianus</i> ordered that a map of this territory should be inscribed on a table of bronze. It was allocated by orthogonal and <i>maritimi</i> (facing the sea) <i>limites</i>.</p>
<p>[10] pars autem intra Etruriam proxime coloniam Veios omnis limitibus intercisuiis est adsignata, ut supra ostendi. in quo territorio omnis ager iugerationis modum habet collectum, sicut in aere est nominatum.</p>	<p>A part of territory in <i>Etruria</i> near the colony of <i>Veii</i> (Roma, near Isola Farnese, a medieval centre) was allocated in its entirety by <i>intercisivi limites</i>, as I pointed out before. In this territory all the land, divided into <i>iugera</i>, has a total of <i>iugera</i> as noted on the bronze table.</p>
<p>Ager Lunensis ea lege qua et ager Florentinus. [15] limites in horam sextam conuersi sunt et ad occidentem plurimum dirigunt cursus. termini aliqui ad distinctionem numeri positi sunt, alii ad recturas linearum monstrandas.</p>	<p>The land of <i>Luna</i> (Luni) <was allocated> under the same law of that of <i>Florentia</i> (Firenze). The <i>limites</i> face south (<i>in horam sextam</i>), but stretch out further towards the west. Some boundary markers were set up to indicate the numbers, others to indicate the directions of the <i>limites</i>.</p>
<p>[L. 224.1] Ager Tiferinus in centuriis fuit assignatus. postea iussu imp. Tiberi Caesaris, quis prout occupauit miles, deficientibus, aliis paucioribus est adsignatus. termini pleurici positi, qui rationem obseruationis tantum ostendunt [5] quam recturam limitum.</p>	<p>The land of <i>Tifernum</i> (Città di Castello) was allocated in <i>centuriae</i>. Afterwards, by order of the emperor <i>Tiberius Caesar</i>, when the soldiers who had occupied this land died out, was allocated to others, fewer in number. Boundary markers were set up at the sides, which show only the general scheme of the <i>limitatio</i> but do not indicate the direction of the <i>limites</i>.</p>
<p>Ager Spellatinus lege Iulia est adsignatus in modum iugerationis. termini lapidei . . . distant a se in ped. ∞CC: ζζ distant a se pd. ∞DCCCCXX, I ζI: p. Ιζ, ζ, pd. ΙΙC: ζ, pd. ΙΙ, distant a se ped. ΙΙCCCC. ea lege et mensura [10] seruari a nostris iussum est.</p>	<p>The land of <i>Hispellum</i> (Spello) was allocated in iugera under <i>lex Iulia</i>. Stone boundary markers . . . the intervals between them are MCC feet; if ten <i>unciae</i> long and one foot and seven <i>unciae</i> thick, MDCCCCXX feet; if one foot and nine <i>unciae</i> thick and six <i>unciae</i> long, MMC feet; if nine <i>unciae</i> long and II feet thick, MMCCCC feet. In accordance with this law, it was ordered that that the measurements should be preserved by us.</p>
<p>Ager Amerinus lege imp. Augusti est assignatus. ueteranis est quidem adiudicatus, et pro aestimio ubertatis legem sunt secuti, ubi termini ambiguum numquam receperant, circa ipsum oppidum. sed extra tertium</p>	<p>The land of <i>Ameria</i> (Amelia) was allocated under a law of the emperor <i>Augustus</i>. Indeed it was attributed to veteran soldiers and they followed the law on the basis of an evaluation of the land's fertility, and there the boundary markers did not</p>

<p>miliarium [15] <i>lex Caesariana</i> operata est in absoluto. termini siti sunt [L. 225.1] <id est> ϣϣ, p. ϣ, distant a se ped. DCCCC: alii ped., pd. ϣϣ, ped. ∞CC: alii p. Iϣ, ped. ϣϣ, ped. ∞CCCCXL.</p>	<p>allow any ambiguity around the town itself. But beyond the third milestone <i>lex Caesariana</i> operated in unsurveyed territory. Boundary stones were positioned nine <i>unciae</i> thick and six <i>unciae</i> long, with intervals between them of DCCCC feet; others are one foot thick and ten <i>unciae</i> long, with intervals of MCC f.; others one foot and three <i>unciae</i> thick, and ten <i>unciae</i> long once, with intervals of MCCCCXL f.</p>
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[L. 225.3] PARS PICENI.	PART OF <i>PICENUM</i>
<p>Ager Anconitanus ea lege qua et ager Florentinus [5] est assignatus limitibus Augusteis siue k. et d. uel maritimos aut montanos limites. ab oriente ad occidentem qui in groma sunt designati, qualis diametralis appellatur. de meridie in septentrionem qui circulum secat, uerticalis diagonalis appellatur. nam quaedam pars Tusciae his [10] limitibus et nominibus ab Hetruscorum aruspicum doctrina uel maiorum designatione nuncupantur. ceteri limites iuxta formas et inscriptiones polygoniorum nomina acceperunt, uel ex litteris Graecis.</p>	<p>The land of <i>Ancona</i> (Ancona) was allocated with Augustan <i>limites</i> under the same law of <i>Florentia</i> (Firenze), by <i>kardines</i> and decumans facing the sea (<i>maritimi</i>) or the mountains (<i>montani</i>). A <i>limes</i>, defined by the <i>groma</i>, that runs from east to west is called <i>diametralis</i>, and if runs from south to north and cuts the circle is called <i>verticalis diagonalis</i>. In part of the <i>Tuscia</i> these <i>limites</i> and their names derive from the learning of Etruscan soothsayers or by the usage of our ancestors. Other <i>limites</i> in maps and inscriptions got the name <i>polygonii</i> from the Greek language.</p>

[L. 225.14] EX LIBRO BALBI PROVINCIA PICENI.	FROM THE BOOK OF <i>BALBUS</i> PROVINCE <i>PICENUM</i>
<p>[15] Ager Spoletinus in iugeribus et limitibus intercisuiis est adsignatus ubi cultura est: ceterum in soluto est [L. 226.1] relictum in montibus uel subsiciuiis, quae rei publicae alii cesserunt. nam et multa loca hereditaria accepit eius populus. ager qui a fundo suo tertio uel quarto uicino situs est, in iugeribus iure ordinario possidetur, sicut est [5] Interamnae Flaminiae et Interamnae Paletino Piceni.</p>	<p>The land of <i>Spoletium</i> (Spoleto) where there is cultivation was allocated in <i>iugera</i> by <i>limites</i>. The rest was not allocated, not surveyed in the mountains or in the parts that are <i>subsiciva</i>, and others granted it to the community. Indeed, its people received many places by way of inheritance. The field that is separated from its farm by three or four neighbours is possessed in <i>iugera</i> according to the ordinary law, as for <i>Interamna Nahars</i> (Terni) and <i>Interamnina Praetuttiorum</i> (Teramo).</p>
<p>Ager Vrbis Saluiensis limitibus maritimis et montanis lege triumuirale. et loca hereditaria eius populus accepit.</p>	<p>The land of <i>Urbs Salvia</i> (Urbisaglia) was allocated under a triumviral law by <i>maritimi</i> and <i>montani limites</i>. Moreover its people received some places by inheritance.</p>
<p>Ager Tolentinus item est adsignatus.</p>	<p>The land of <i>Tolentinum</i> (Tolentino) was allocated in the same way.</p>
<p>Ager Firmo Piceno limitibus triumuiralibus in [10] centuriis est per iugera ducena</p>	<p>The land of <i>Firmum Picenum</i> (Fermo) was allocated in <i>centuriae</i> of CC <i>iugera</i> with <i>limites</i></p>

adsignatus.	<i>established by the triumviri.</i>
Ager Senogalliensis et Potentinus, Ricinensis et Pausulensis. item sunt adsignati.	The lands of <i>Sena Gallica</i> (Senigallia), <i>Potentia</i> (Santa Maria a Potenza) (fig. 5), <i>Helvia Ricina</i> (Villa Potenza, hamlet of Macerata), and <i>Pausulae</i> (Corridonia, near Chiesa di S. Claudio al Chienti) were allocated in the same way.

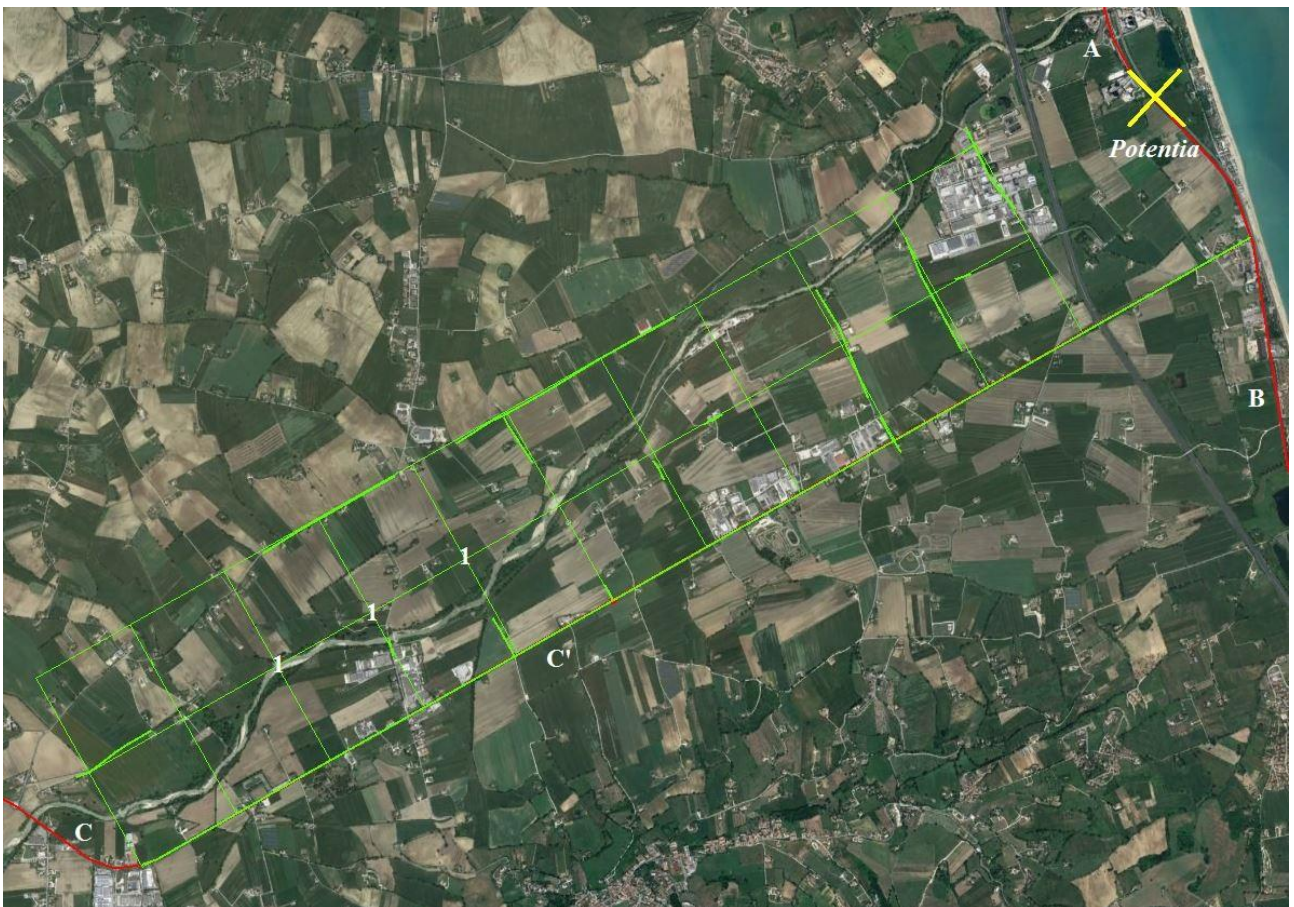


Fig. 5A – The land of *Potentia* (*Picena*) was divided by a centuriation (1, *Potentia*, ?, 20 x 20 *actus* - 710 x 710 m -, inclination 29° 30' W). Other indications: A = *via Potentia-Numana*; B = *via Potenza-Cluana*; C = *via Potentia-Helva Recina*; C' = section of C that coincides with a main *limes* of the centuriation.



Fig. 5B – Persistences of the centuriation *Potentia*.

Ager Cuprensis Truentinus Castranus Aternensis lege Augustiana sunt adsignati.	The lands of <i>Cupra Maritima</i> (Cupra Marittima), <i>Castrum Truentinum</i> (Martinsicuro, north-west of the town), <i>Castrum Novum</i> (Giulianova) and <i>Aternum</i> (Pescara) were allocated under <i>lex Augustea</i> .
[L. 227.1] Ager Anconitanus limitibus Graccanis in centuriis est adsignatus.	The land of <i>Ancona</i> (Ancona) was allocated in <i>centuriae</i> by Gracchan <i>limites</i> .
Ager Ausimatis item est assignatus.	The land of <i>Auximum</i> (Osimo) was allocated in the same way.
Ager Asculanus locis uariis limitibus intercisuiis est [5] adsignatus, et terminis Claudianis, qui in modum arcellae facti sunt, est demetitus, et aliis ligneis sacrificalibus. quorum limitum distantia est ped. ∞CC et infra. ceterum in absoluto remansit, et riuorum tenor finitimus obseruabatur. ager eius militibus est adsignatus: sed sunt loca [10] quae in assignationem non uenerunt.	The land of <i>Asculum</i> (Ascoli Piceno) was allocated in some places by <i>limites intercisivi</i> , and <was marked out> with Claudian boundary stones, which are made in the shape of a small chest (<i>arcellae</i>), and by other wooden sacrificial stakes. The distance between these <i>limites</i> is MCC feet or less. The rest of the land remained unsurveyed, and the course of the rivers is observed as boundary. Its land was allocated to soldiers, but there are places that were not included in the allocation.
Ager Adrianus, item et ager Nursinus et Falerionensis et Pinnensis, limitibus maritimis et Gallicis quos dicimus decimanos et kardines. nam eorum delimitatio est per rationem arcarum uel riparum. uel canabula et	The land of <i>Hatria</i> (Atri) and likewise also that of <i>Nursia</i> (Norcia), <i>Falerio Picenus</i> (Falerone, locality Piane di Falerone) and <i>Pinna</i> (Penne) was allocated by <i>limites</i> facing the seas and by <i>gallici limites</i> , which we call decumans and

nouerca, [15] quod tegulis construitur. aliis uero locis muros macerias scorofiones congerias carbunculos, et uariis locis terminos [L. 228.1] Augusteos, per quorum cursus in Piceno fines terminantur.	<i>kardines</i> . Their demarcation is by <i>arcae</i> , or banks, or canals, or drainage channels, which are made of tiles. Elsewhere there are walls, dry-stone walls, heaps and piles of stones, rough boundary stones, and in some places Augustan boundary stones, by whose line boundaries are marked in <i>Picenum</i> .
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[L. 228.3] PROVINCIA VALERIA.	PROVINCE VALERIA
Ager Amiternus. iter populo non debetur. nam ager [5] eius in tetragonon est assignatus per nomina arcarum riparum, macerias scorofiones congerias carbunculos. nam locis montuosis loca saxuosa. termini sunt constituti Tiburtini in effigie tituli in tetragonon, alii trigonii, alii rotundi in effigie columnae. quorum mensura licet diuersa [10] sit, tamen distant a se in pedibus CCXXX, in p. CCCXL, in p. CCCXX, in p. DCLX, in p. DCLX, in p. DCCXC, in p. DCCXC, in p. DCCCCXX, in p. ∞CC, in p. ∞CCCXL, in p. II, in p. IICCCCCL. interiectis locis petrae natiuae signatae inueniuntur, aut certe saxa constituta sunt, quae et ipsa sine dubio finitima [15] obseruanda sunt.	The land of <i>Amiternum</i> (San Vittorino, hamlet of L'Aquila, about 0.5 km north-west of the town). No right of way is due to the community. Its land was allocated in the shape of quadrangles ²⁶ defined by <i>arcae</i> , river banks, dry-stone walls, heaps and piles of stones, and stones not finished. Indeed, there are rocky locations in mountainous areas. Boundary markers of Tiburtine stone were set up, some square-shaped like a tablet, others triangular, others round like a column. Their dimension is various, and the intervals between them are CCXXX, CCCXL, CCCXX, DCLX, DCLX, DCCXC, DCCXC, DCCCCXX, MCC, MCCCXL, MM, and MMCCCCCL feet. In some intervening places, natural stones, which have been marked, are found, or some boulders have been positioned that should be undoubtedly observed as boundary markers.
Ager Aueias ea lege est assignatus qua et ager Amiternus.	The land of <i>Aueia</i> (Fossa) was allocated under the same law of that of <i>Amiternum</i> .

Ager Corfinius lege Sempronia est assignatus. iter populo debetur ped. LXXX. cuius agri mensura in tetragonon [20] uariis locis est collecta, et termini silicei sunt apposit, quorum distantia est in p. DCCXX, in p. DCCCLX. hoc in locis montuosis: in quibus alii iuxta naturam loci spissiores sunt, id est sine mensura sunt apposit. et interiectis locis muros, macherias, lacos conuallium, aras, [25] canabula, quod tegulis construitur.	The land of <i>Corfinium</i> (Corfinio) was allocated under <i>lex Sempronia</i> (fig. 6). A right of way of LXXX feet is due to the community. The measurement of this land was arranged in many places in the shape of quadrangles, and flint stone boundary markers were set up with intervals between them of DCCXX feet and DCCCLX feet. This is the practice in mountainous locations where, because of the nature of the terrain, some markers are positioned more closely together, that is, they are set without a measurement of the intervals between them. And in some intervening places they use walls, dry-stone walls, lakes in the valleys, altars, and canals made of tiles.
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²⁶ *Tetragonon*, a Greek term, indicated a polygon with four angles and so with four sides.

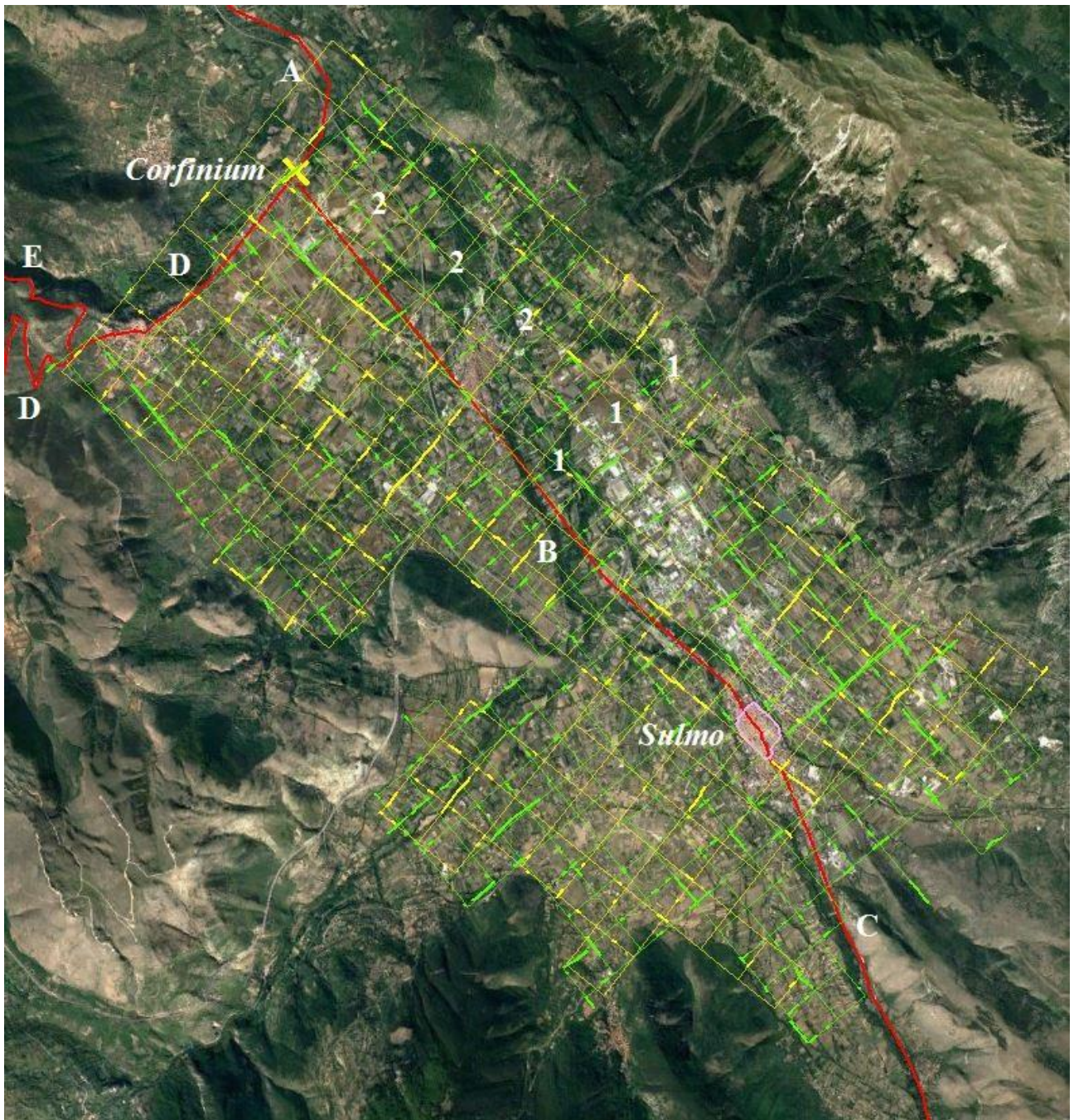


Fig. 6A – The lands of *Corfinium* and *Sulmo* were allocated by two centuriations (1, *Corfinium-Sulmo I*, Gracchan, 15 x 15 *actus* – 532.2 x 532.2 m – inclination 38° 45' W; 2, *Corfinium-Sulmo II*, Augustan, 20 x 20 *actus* – 709.6 x 709.6 m -, inclination 39° 30' E). Other indications: A = *via Corfinium-Interpromium-Teate*; B = *via Corfinium-Sulmo*; C= *via Sulmo-Aufidena*; D = *via Corfinium-Alba Fucens*; E = branch of D for *Superaequum*, *Aveia*, etc. The circuit of the walls of *Sulmo* is that of the medieval age. The indications are the same for the following figures too.

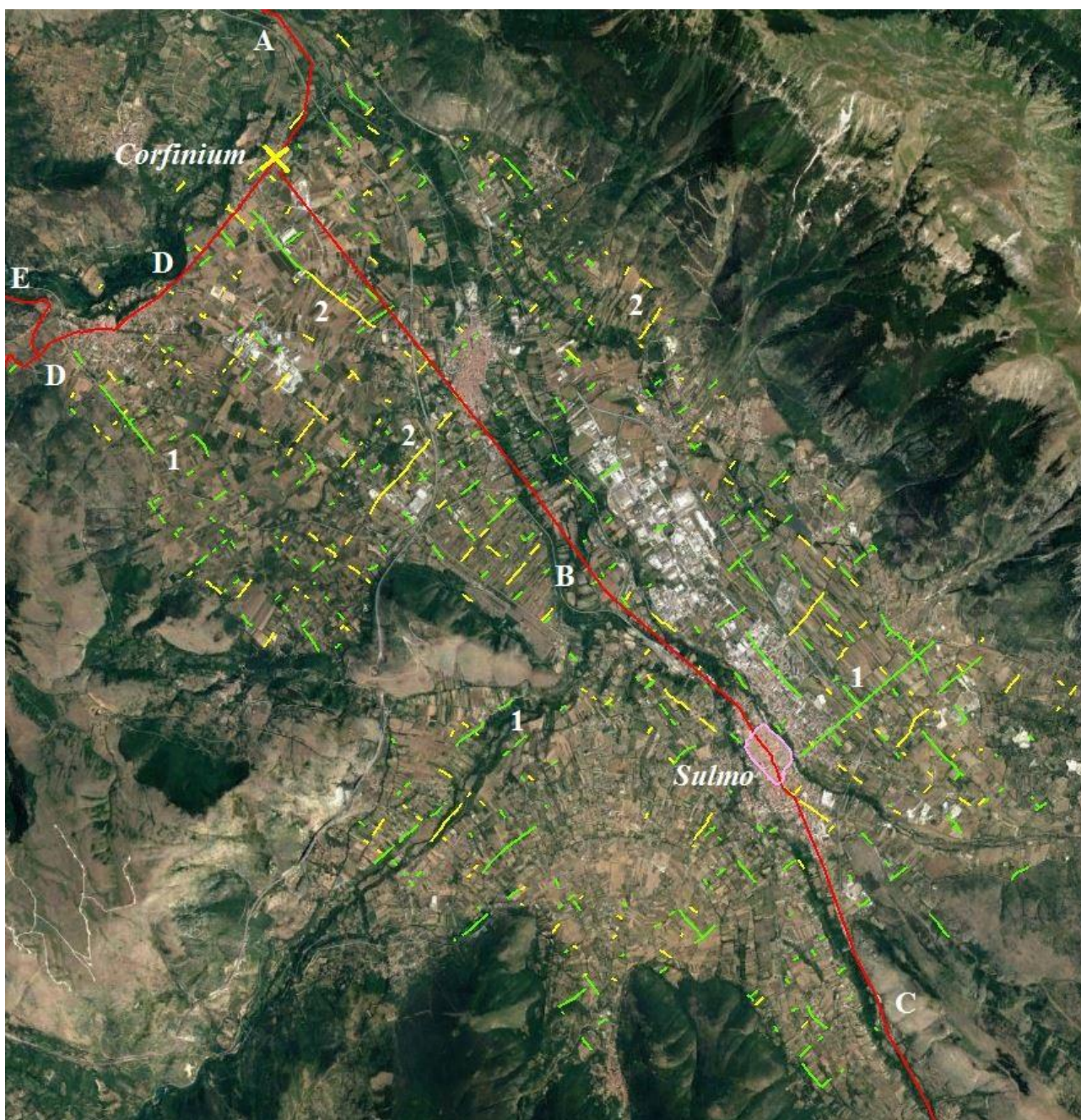


Fig. 6B – Persistences of the centuriations *Corfinium-Sulmo I* and *II*.



Fig. 6C – The centuriation *Corfinium-Sulmo I*.

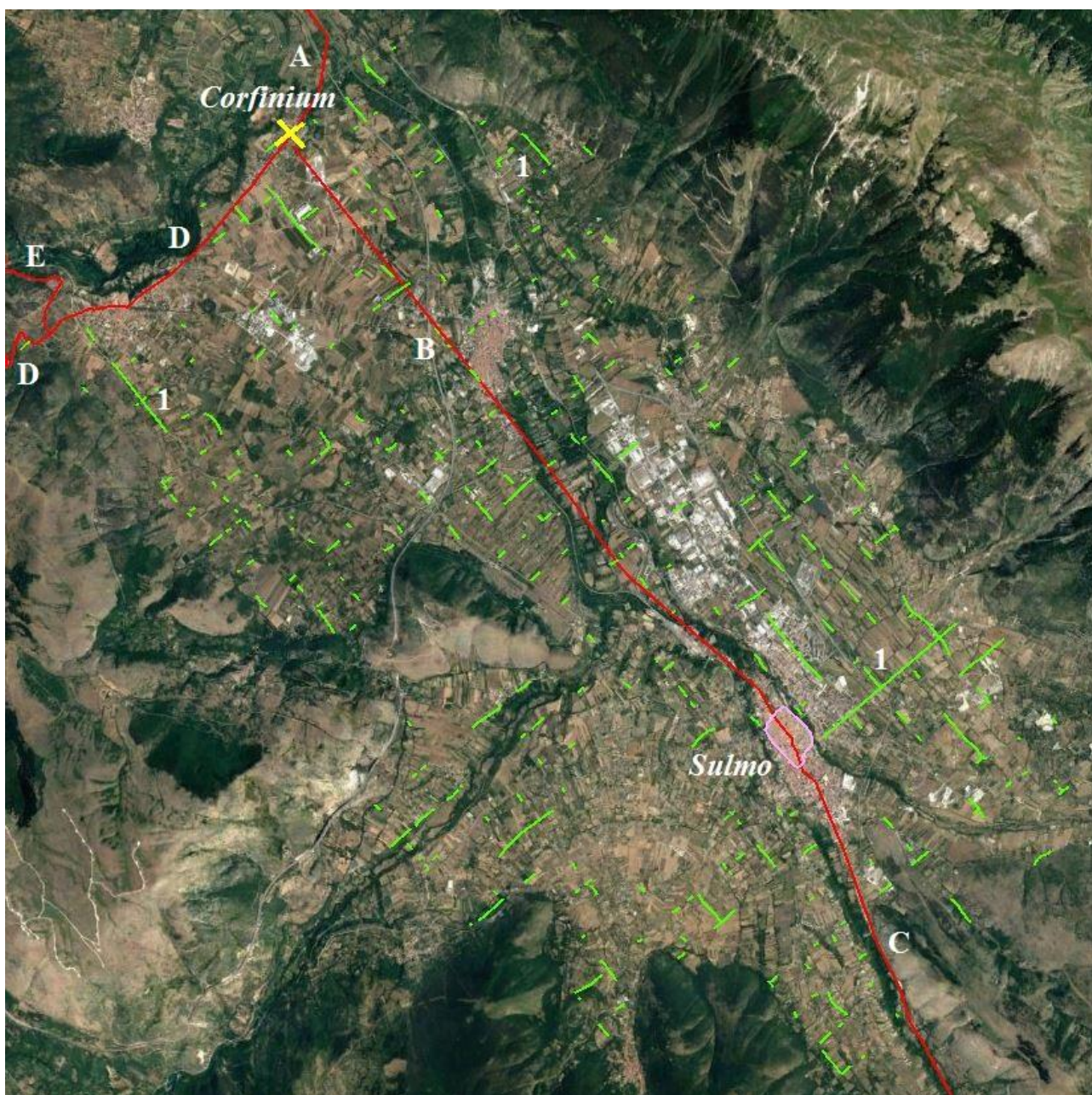


Fig. 6D – Persistences of the centuriation *Corfinium-Sulmo I.*

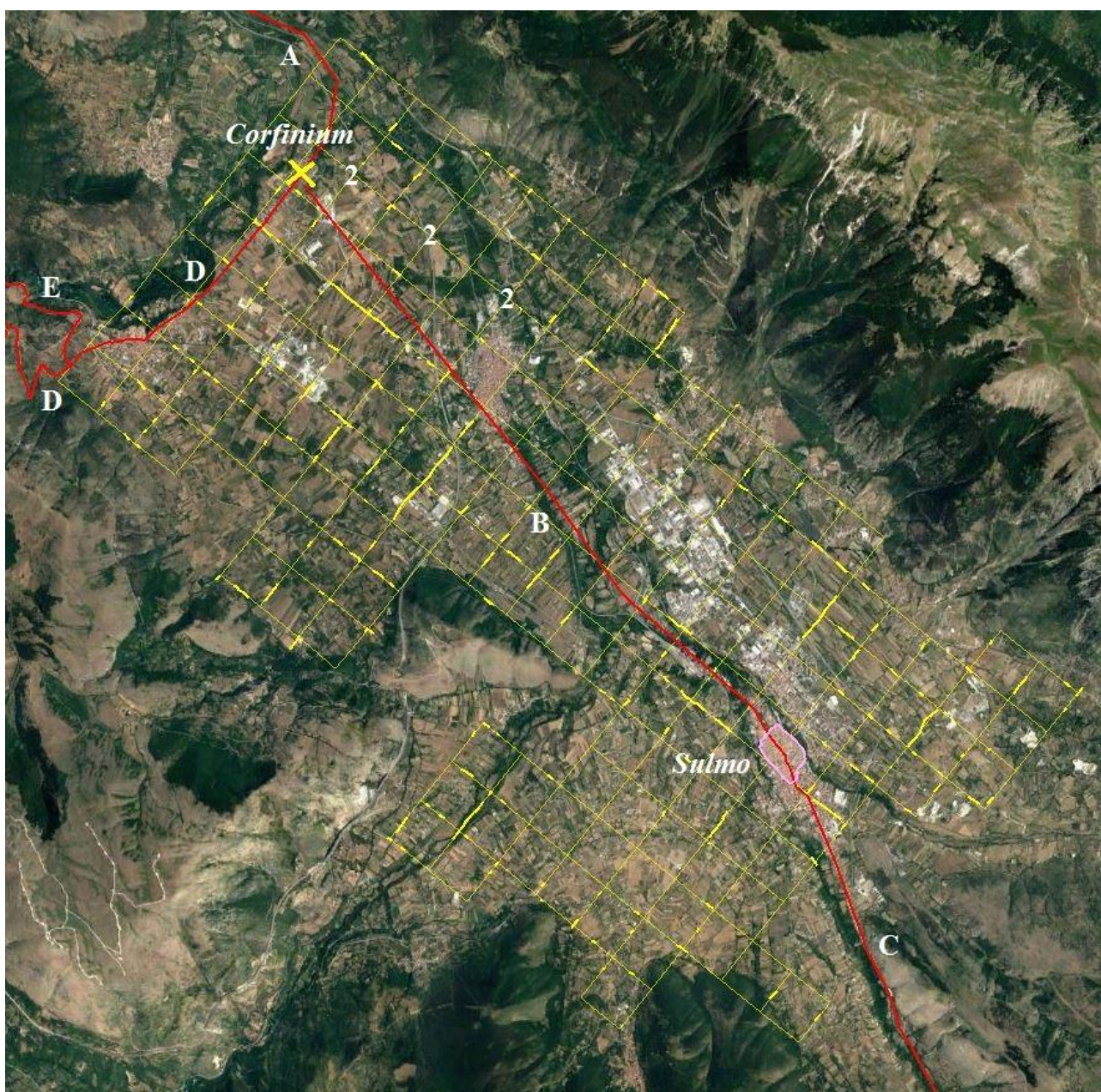


Fig. 6E – The centuriation *Corfinium-Sulmo II*.



Fig. 6F – Persistences of the centuriation *Corfinium-Sulmo II*.

[L. 229.1] Colonia Superaequana. ager eius ueteranis est assignatus: sed postea Verus et Antoninus et Commodus aliqua priuatis concesserunt.	The colony of <i>Superaequum</i> (Castelvecchio Subequo). Its land was allocated to veteran soldiers, but later <Lucius> Verus, Antoninus <Marcus Aurelius> and Commodus granted some places to private individuals.
Colonia Peltuinarum. iter populo non debetur. ager [5] eius limitibus intercisuiis est assignatus.	The colony of <i>Peltuinum</i> (Prata d'Ansidonia, 1 km north-east of the town). No right of way is due to the community. Its land was allocated by <i>intercisivi limites</i> .
Marsus municipium licet consecratione ueteri maneat, tamen ager eius intercisuiis limitibus est assignatus.	<i>Marruvium</i> (San Benedetto dei Marsi). Although it remains a <i>municipium</i> by long-standing tradition, nevertheless its land was allocated by <i>intercisivi limites</i> .
Colonia Solomontina ea lege est assignata qua et Corfinius.	The colony of <i>Sulmo</i> (Sulmona) was allocated under the same law as <i>Corfinium</i> (Corfinio) (fig. 6)

[L. 229.10] EX COMMENTARIO CLAVDI CAESARIS SVBSEQVITVR, QVI SEORSVM DESCRIPTVS EST.	FROM THE COMMENTARY OF <i>CLAUDIUS CAESAR</i> ²⁷ , WHICH HAS BEEN SET OUT SEPARATELY.
CIVITATES CAMPANIAE EX LIBRO REGIONVM.	THE TOWNS OF <i>CAMPANIA</i> FROM THE BOOK OF THE REGIONS
Aquinum, muro ducta colonia, a triumuiris deducta. iter populo debetur ped. XXX. ager eius perennis limitibus [15] est adsignatus.	<i>Aquinum</i> (Aquino), colony surrounded with a wall, founded by the <i>triumviri</i> . A right of way of XXX feet is due to the community. Its land was allocated by <i>limites perenni</i> (fig. 7).

²⁷ He could be the emperor *Claudius* (*Tiberius Claudius Drusus Nero*) but also the emperor *Tiberius* (*Tiberius Claudius Nero*).

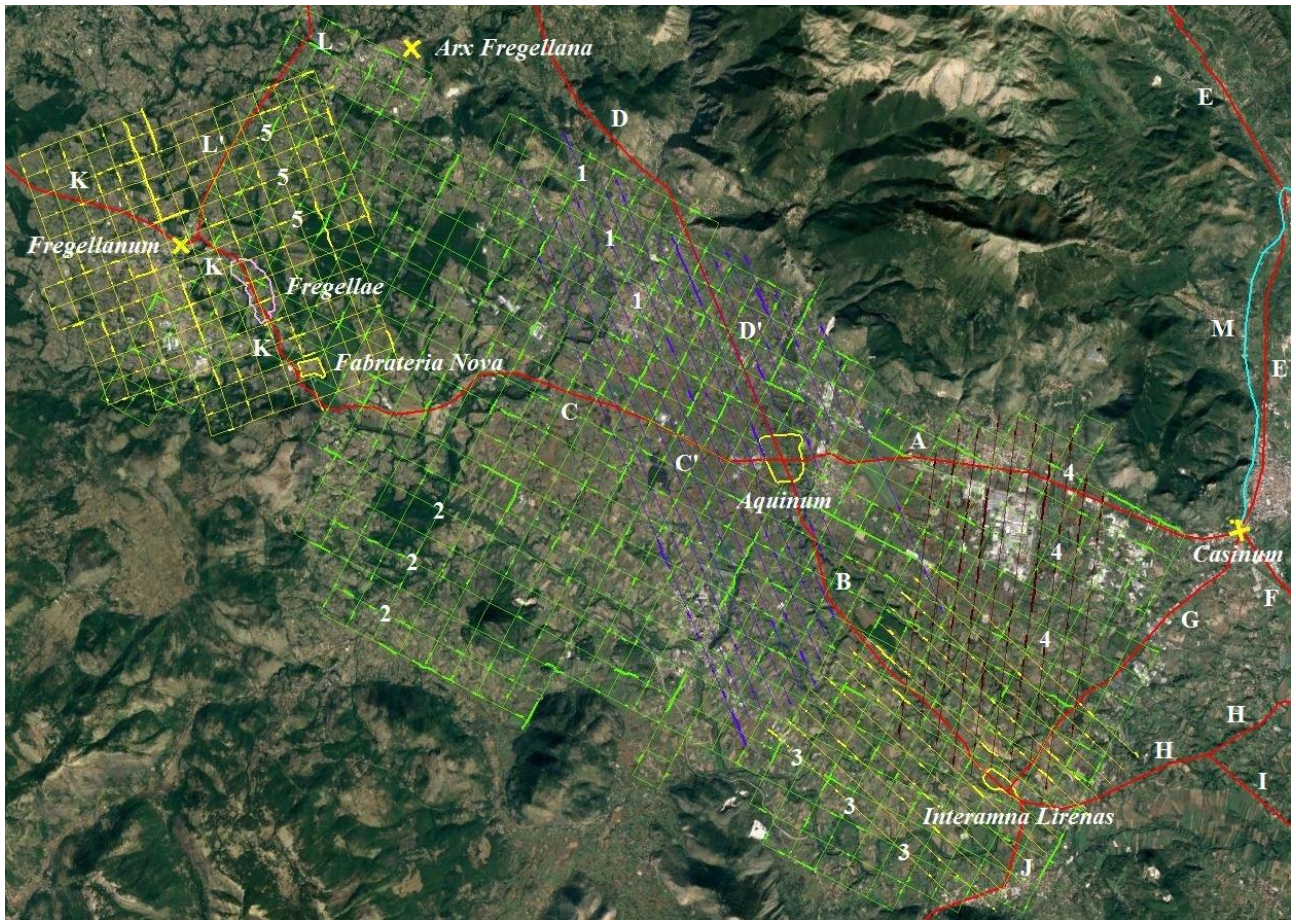


Fig. 7A – The lands of *Aquinum*, *Casinum*, *Interamna Lirenas* and *Fabrateria Nova* were divided by five *limitationes* (1, *Aquinum I*, *strigatio*, precocious, 10 *actus* – 354.8 m -, inclination 22° 30' W; 2, *Aquinum II-Fabrateria Nova II-Interamna Lirenas III-Casinum*, centuriation, triumviral, 20 x 20 *actus* – 709 x 709 m -, inclination 28° 00' E; 3, *Interamna Lirenas I*, *strigatio*, 312 b.C., 13 *actus* – 461.24 m, 43° 00' E; 4, *Interamna Lirenas II*, *strigatio*, 312 b.C., 13 *actus*, 461.24 m, 8° 00' E; 5 = *Fabrateria Nova I*, centuriation, Gracchan, 15 x 15 *actus* – 532.2 x 532.2 m -, 19° 45' W). Other indications: A = *via Aquinum-Casinum*; B = *via Aquinum-Interamna Lirenas*; C = *via Aquinum-Fabrateria Nova*; C' = a section of C that coincides with a *limes* of the triumviral centuriation; D = *via Aquinum-Arpinum*; D' = a long stretch of D that coincides with a *limes* of the *strigatio* *Aquinum I*; E = *via Casinum-Atina*; F = *via Casinum-Ad Flexum*; G = *via Casinum-Interamna Lirenas*; H = *via Interamna Lirenas-Ad Flexum*; I = branch of H for *Aquae Vescinae*; J = *via Interamna Lirenas-Minturnae*; K = *via Fabrateria Nova-Fregellanum-Frusino*; L = *via Fregellanum-Sora*; L' = sections of L that coincides with a *limes* of the triumviral centuriation; M = aqueduct of *Casinum*. It is worth noting that the once flourishing *civitas* of *Fregellae*, was destroyed as a consequence of a revolt against *Roma* in 125 b.C. and later the *civitas* of *Fabrateria Nova* was founded. Same indications for the following figures too.

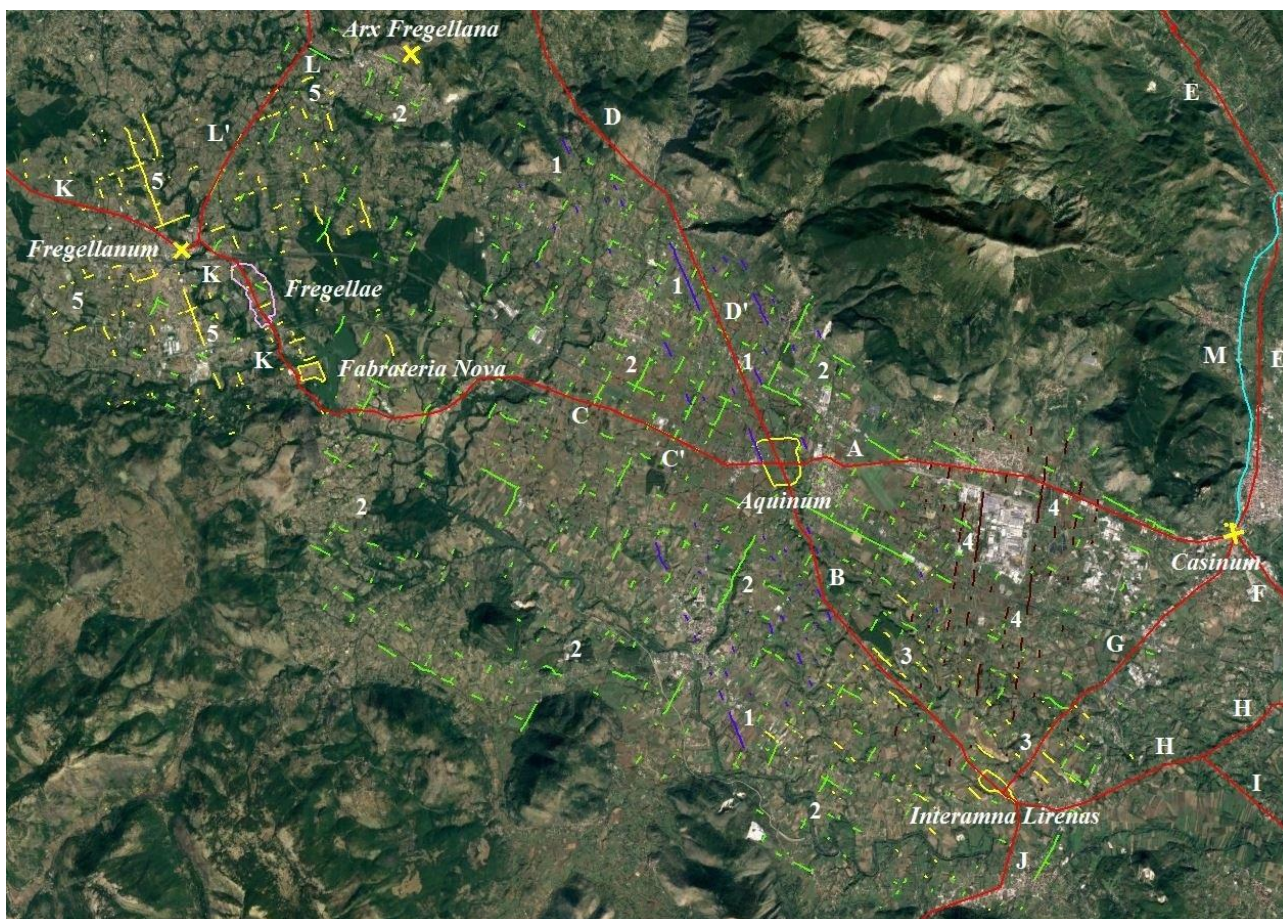


Fig. 7B – Persistences in the lands of *Aquinum*, *Casinum*, *Interamna Lirenas* and *Fabrateria Nova*.

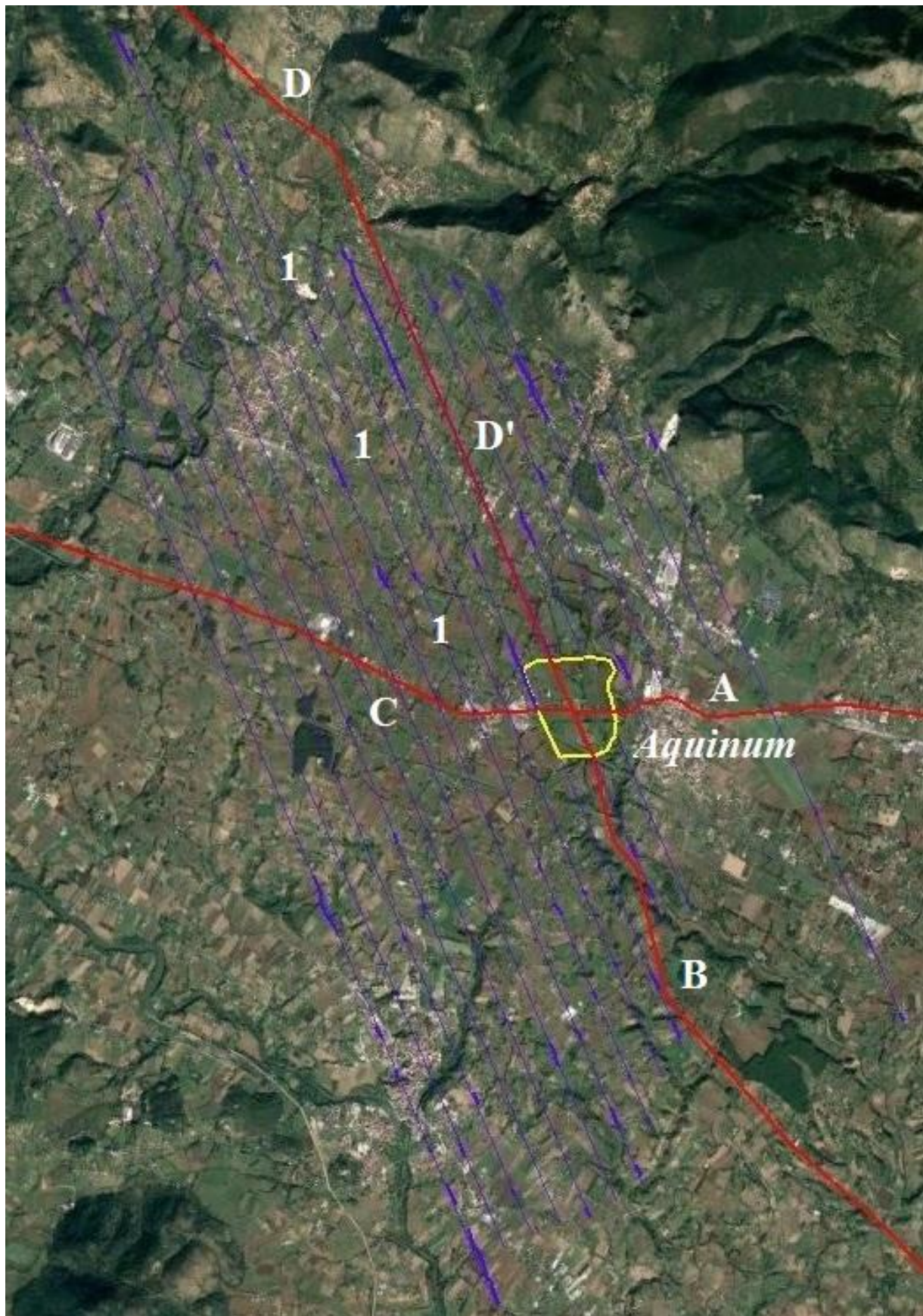


Fig. 7C – The *strigatio Aquinum I.*

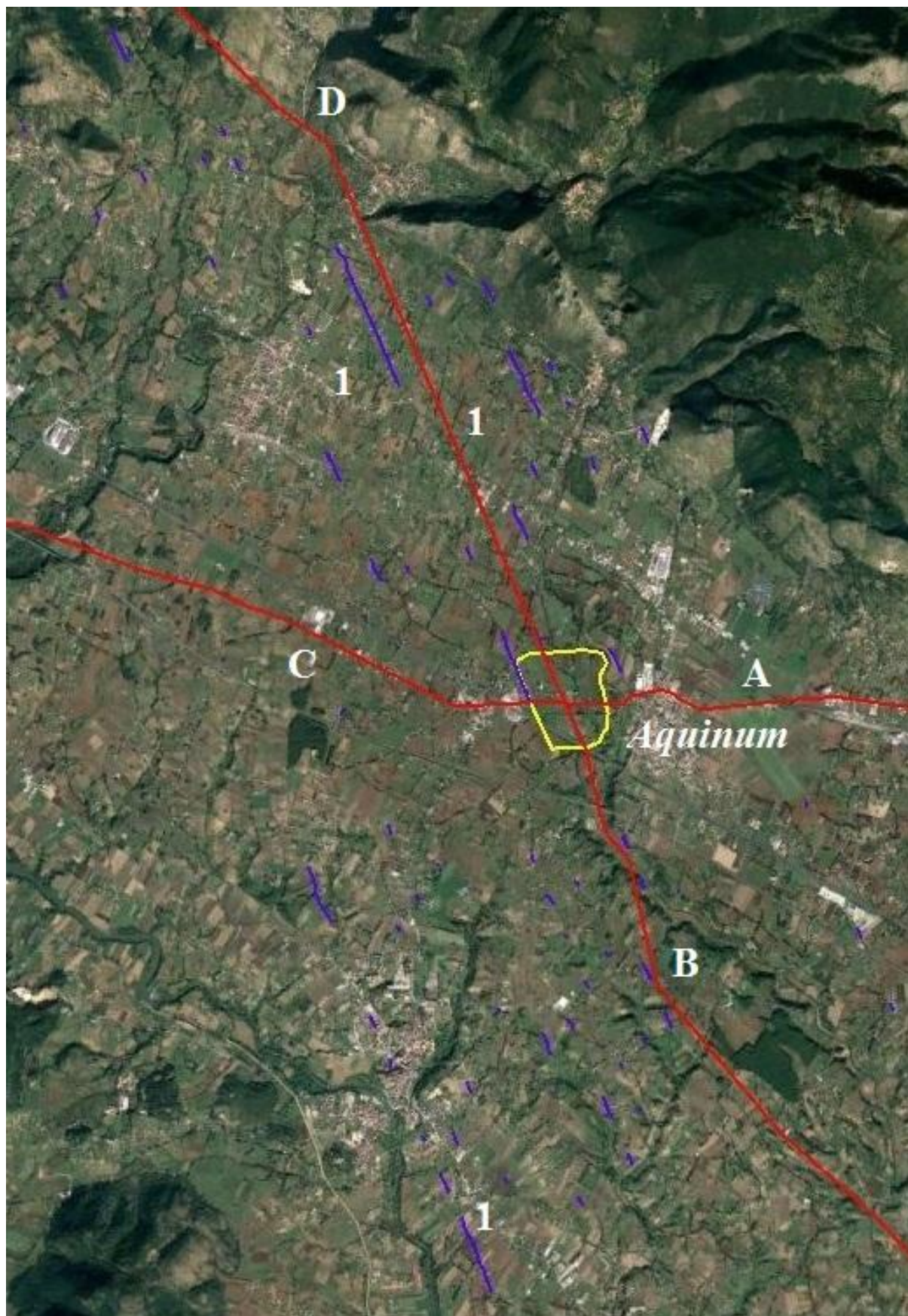


Fig. 7D – Persistences of the *strigatio Aquinum I.*



Fig. 7E – The centuriation Aquinum II-Fabrateria Nova II-Interamna Lirenas III-Casinum.

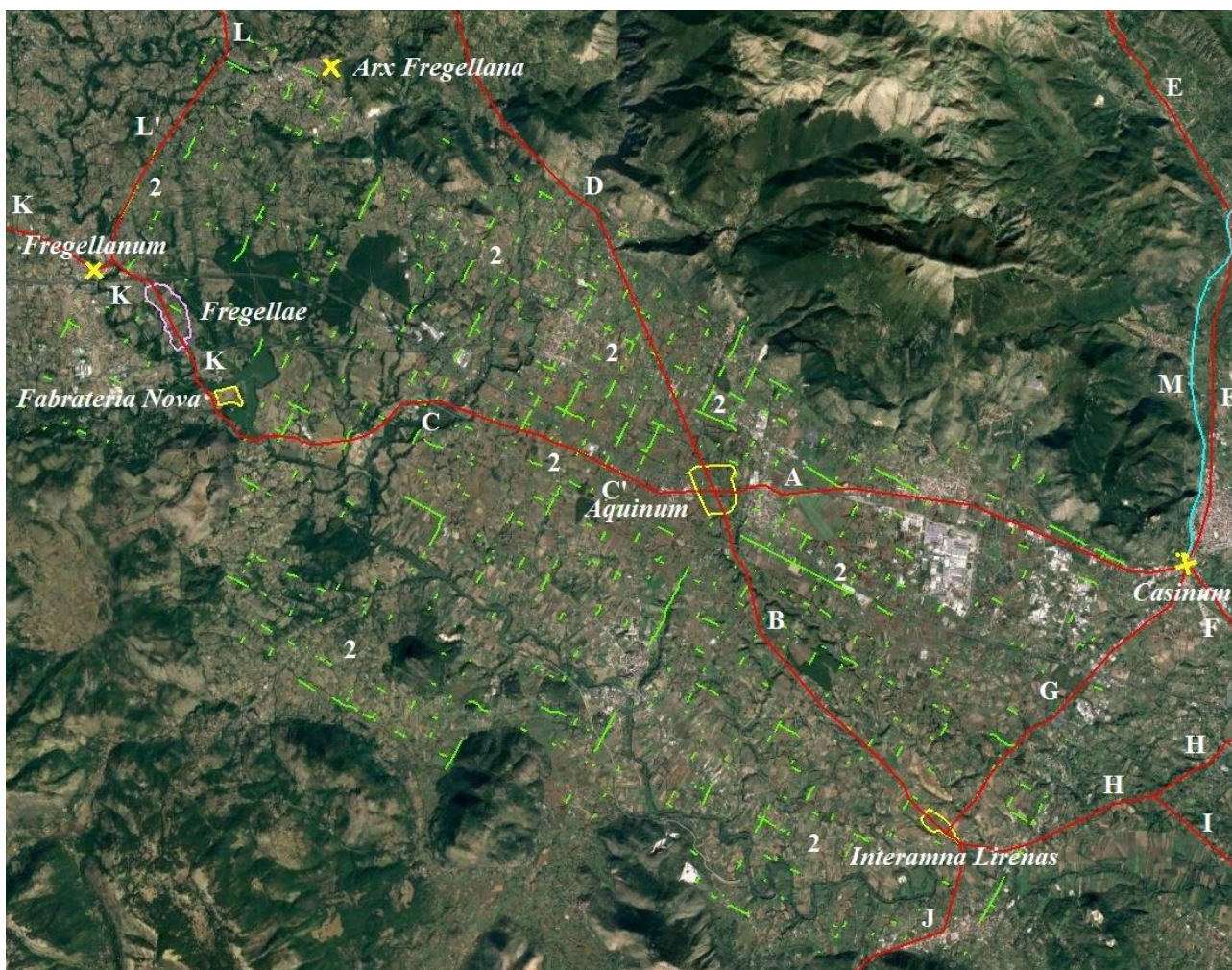


Fig. 7F – Persistences of the centuriation *Aquinum II-Fabrateria Nova II-Interamna Lirenas III-Casinum*.

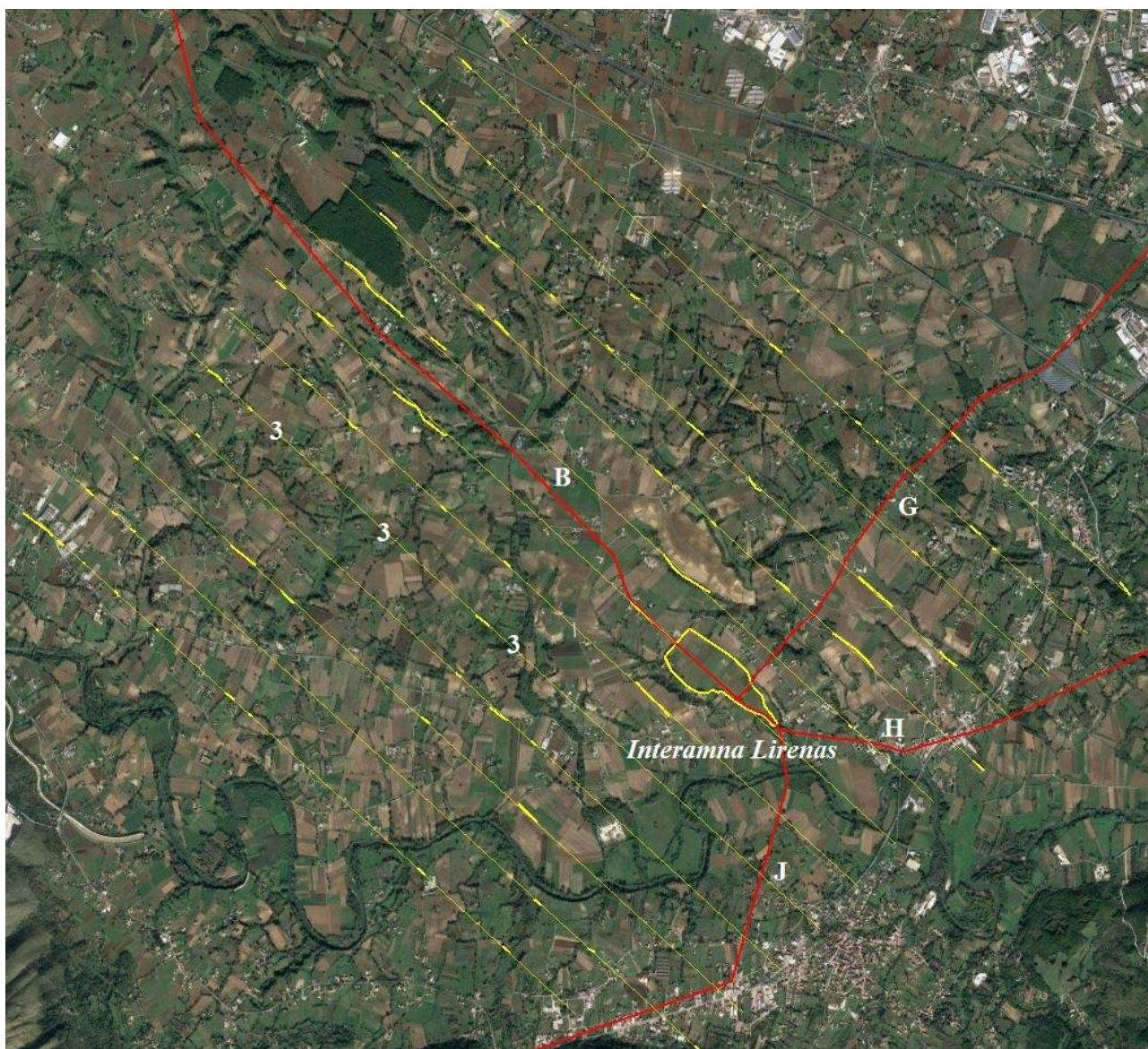


Fig. 7G – The *strigatio Interamna Lirenas I.*

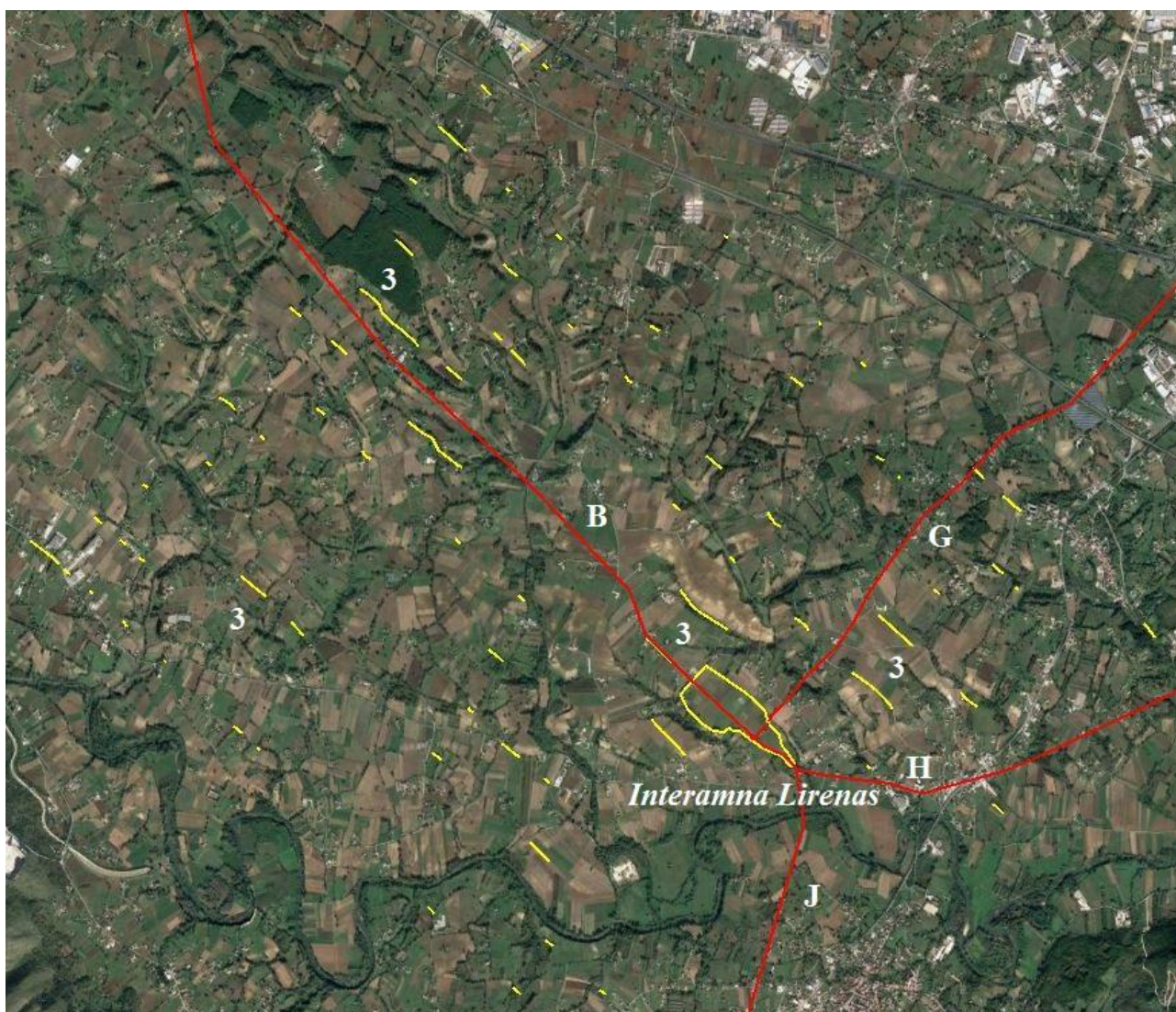


Fig. 7H – Persistences of the *strigatio* *Interamna Lirenas I.*



Fig. 71 – The strigatio Interamna Lirenas II.

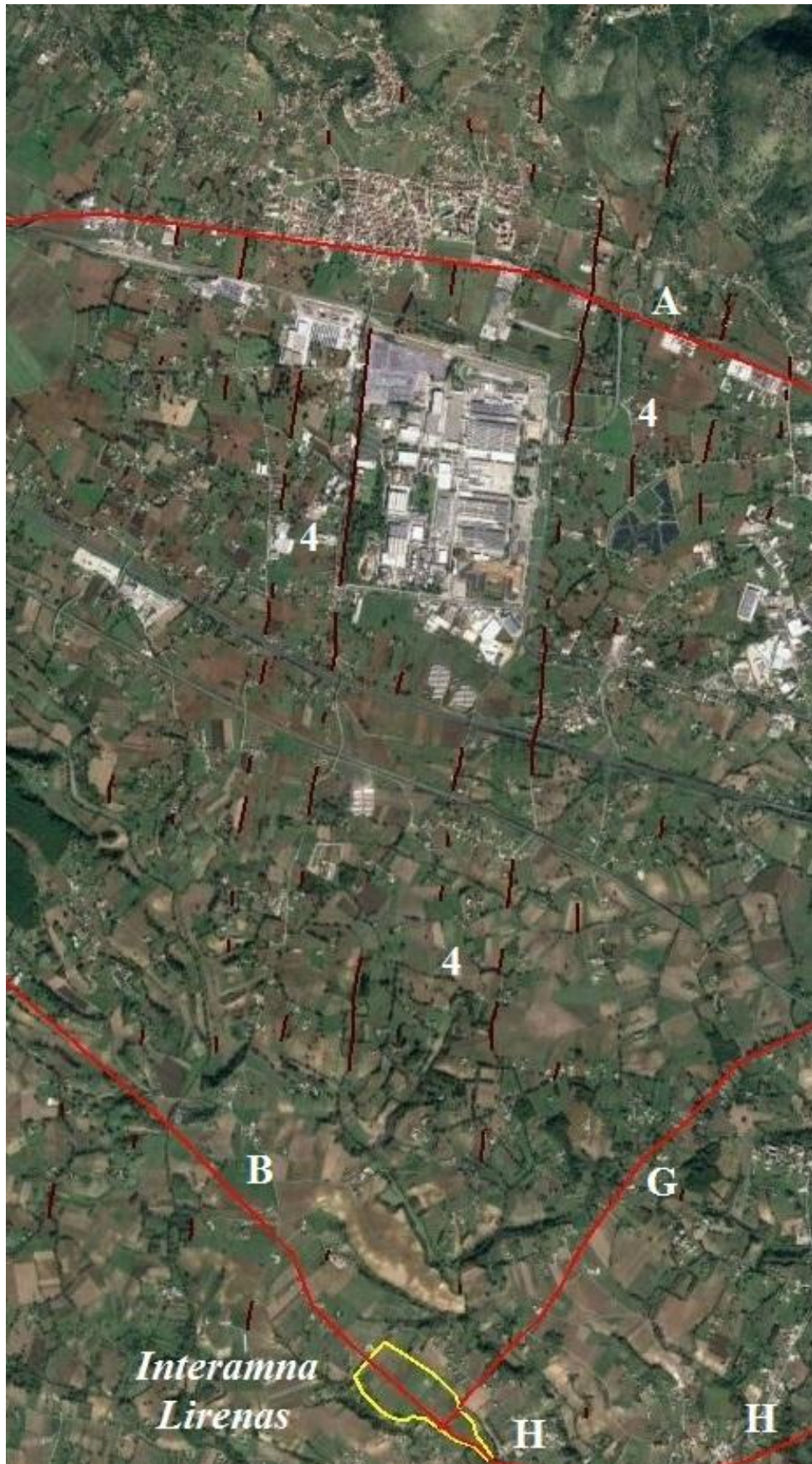


Fig. 7J – Persistences of the *strigatio* *Interamna Lirenas II*.

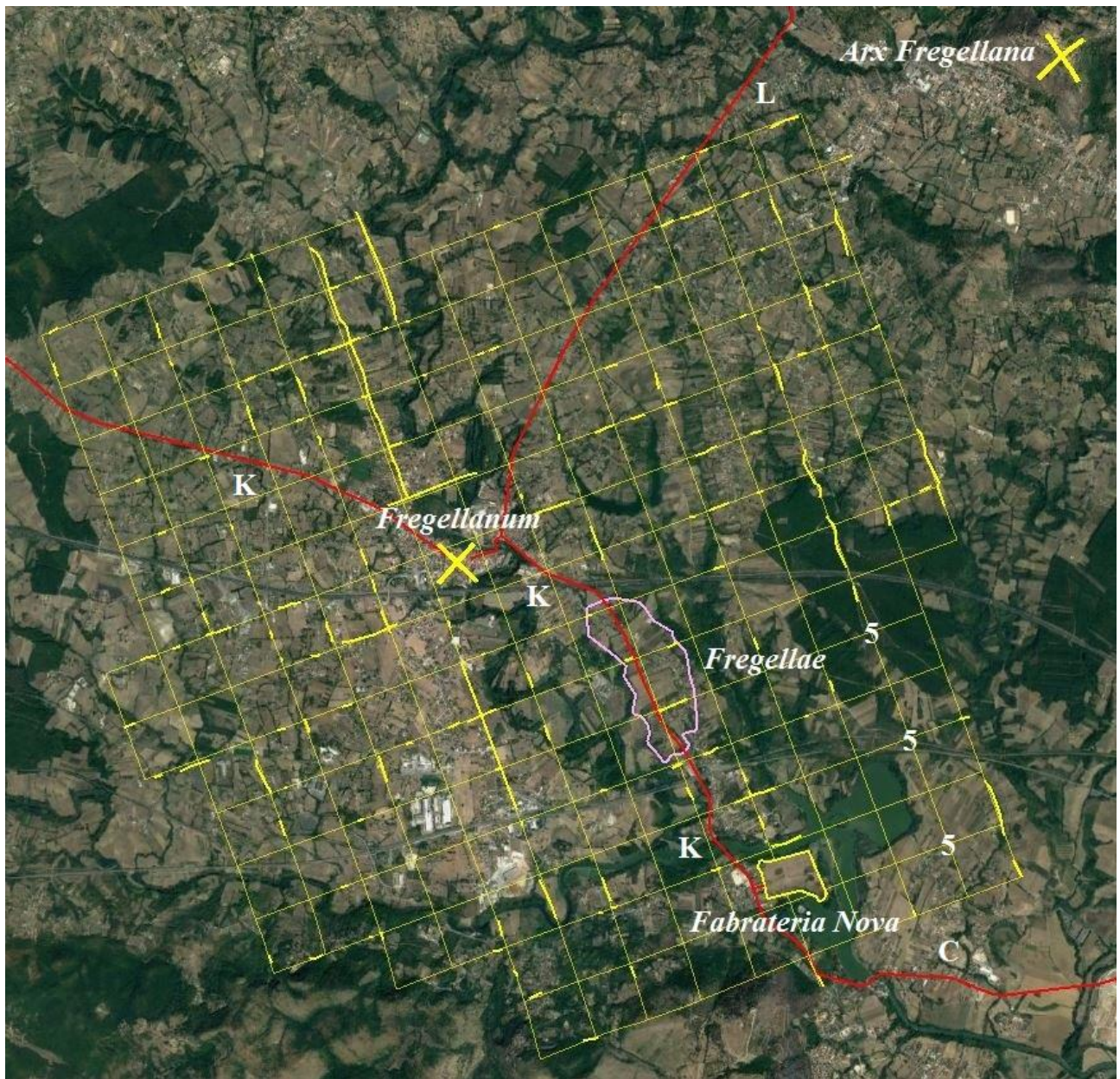


Fig. 7K – The centuriation *Fabrateria Nova I*.

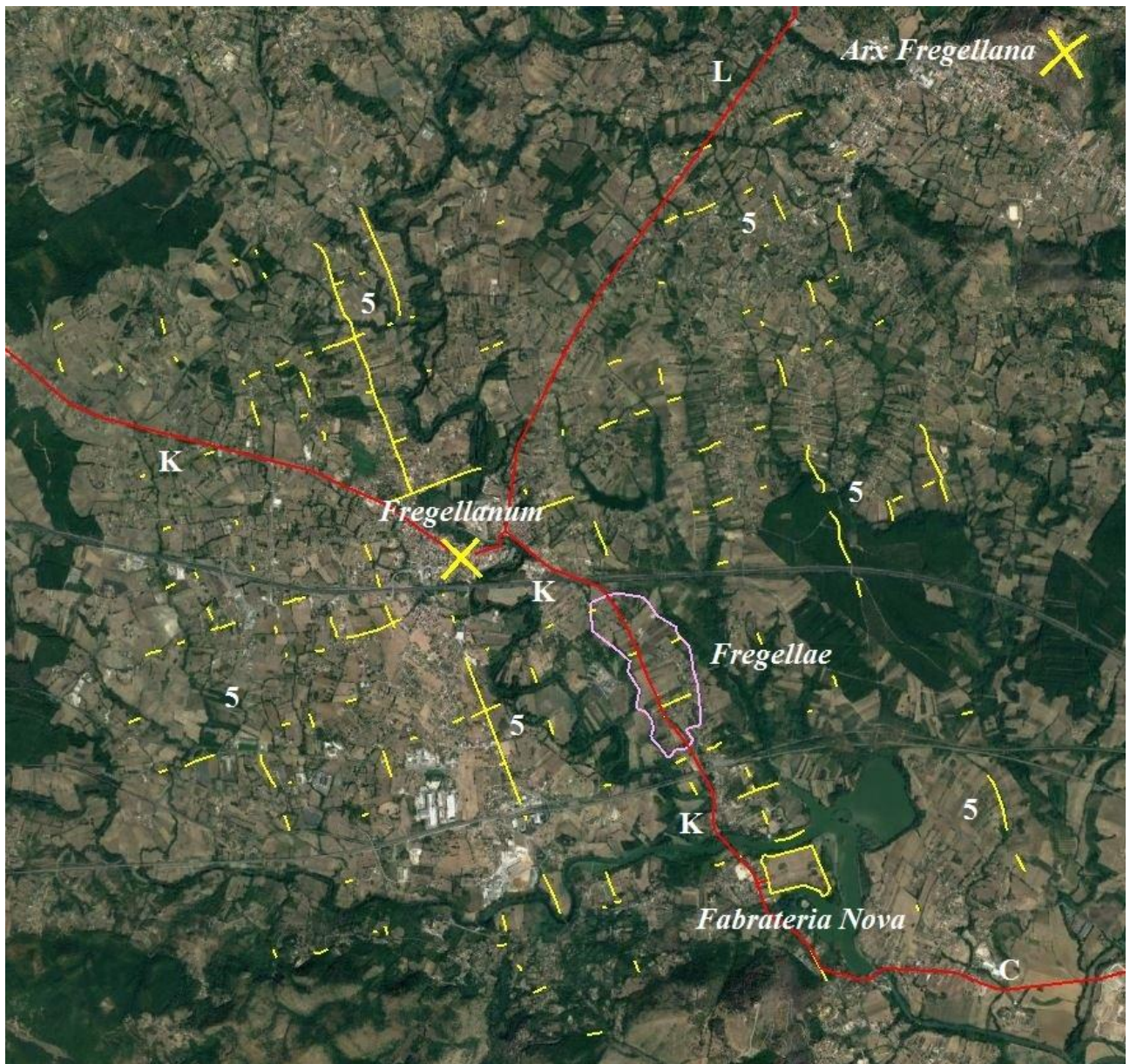


Fig. 7L – Persistences of the centuriation *Fabrateria Nova I*.

Abellinum, muro ducta colonia, deducta lege Sempronia. iter populo non debetur. ager eius ueteranis est adsignatus.	<i>Abellinum</i> (Atripalda, north of the town; the population moved in the Middle Ages where it is now Avellino), colony surrounded with a wall, founded under <i>lex Sempronia</i> . No right of way is due to the community. Its land was allocated to veteran soldiers (fig. 8).
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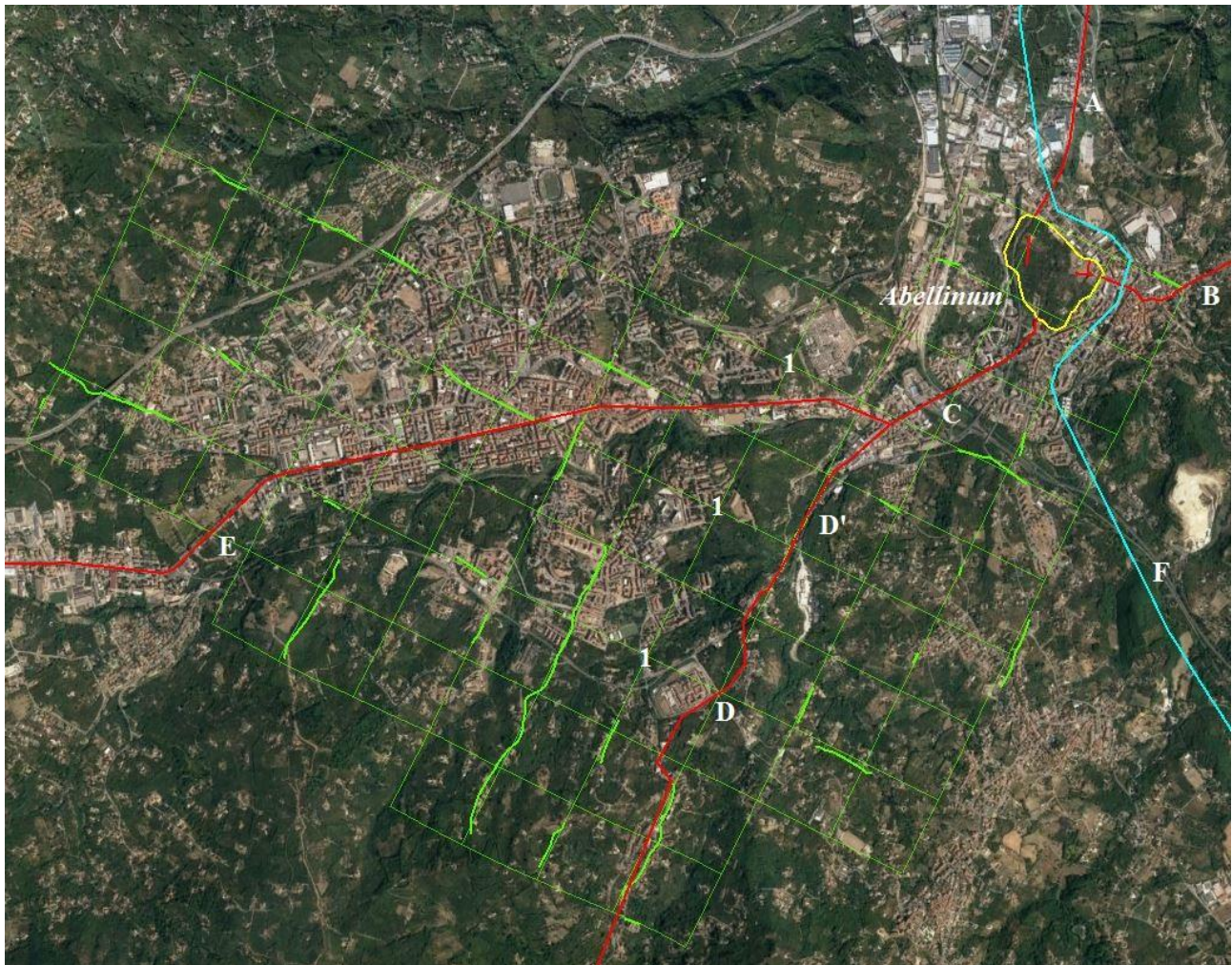


Fig. 8A – The land of *Abellinum* was divided by a centuriation (1, *Abellinum*, Gracchan or Sullan, 14 x 14 *actus* – 496.72 x 496.72 m -, inclination 27° 30' E). Other indications: A = *via Abellinum-Beneventum*; B = *via Abellinum-Friquentum*; C = common trunk of D and E; D = road that goes to *Nuceria Alfaterna*; D' = section of D that coincides with a main *limes* of the centuriation *Abellinum*; E = road that goes to *Abella* and *Nola*; F = aqueduct of *Abellinum-Beneventum*.



Fig. 8B – Persistences of the centuriation *Abellinum*. Same indications of the preceding figure.

Antium. populus deduxit. iter populo non debetur. [20] ager eius in lacineis est adsignatus.

Antium (Anzio). The people founded it. No right of way is due to the community. Its land was allocated in strips²⁸.

²⁸ *Striga* = rectangular field; *Lacinia* = strip; *centuria* = square field.

Acerras, muro ducta colonia. diuus Augustus deduci iussit. iter populo debetur ped. LXXX. ager eius in iugeribus militibus est adsignatus.	<i>Acerrae</i> (Acerra), colony surrounded with a wall. The divine <i>Augustus</i> ordered its foundation. A right of way of LXXX feet is due to the community. Its land was allocated to soldiers in <i>iugera</i> (fig. 9).
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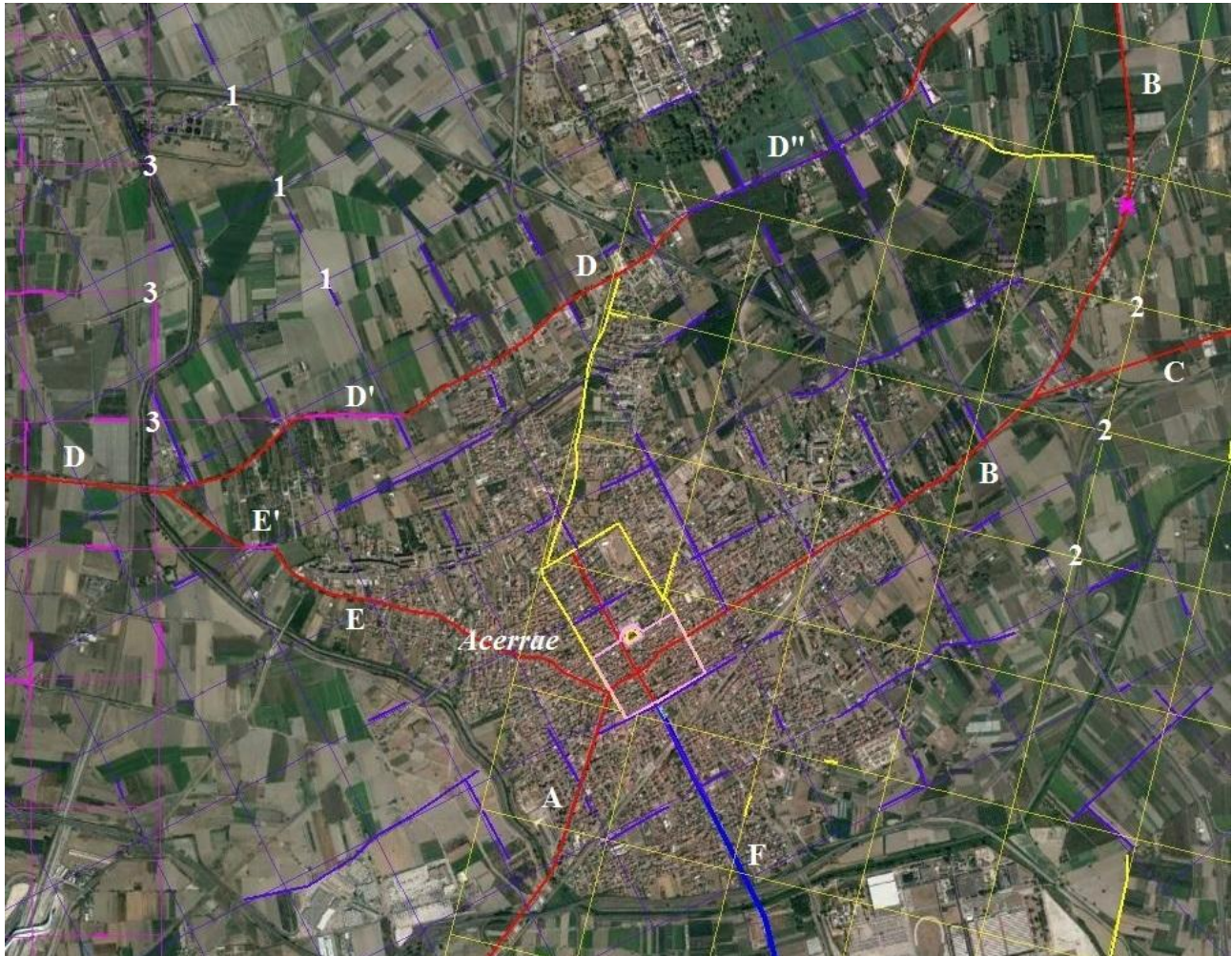


Fig. 9A – The land of *Acerrae* was divided by two centuriations (1, *Acerrae-Atella I*, Augustan, 16 x 16 *actus* – 567.68 x 567.68 m -, inclination 26° 00' W; 2, *Nola III*, 20 x 20 *actus* – 707 x 707 m -, inclination 15° 00' E). Other indications: 3 = centuriation *Ager Campanus I*; A: via *Acerrae-Neapolis*; B = via *Acerrae-Suessula*; C = branch of B for the via *Popilia*, in the direction of *Nola*; D = via *Atella-Suessula*; D' = section of D that coincides with a *limes* of the centuriation *Ager Campanus I*; D'' = section of D that coincides with a *limes* of the centuriation *Acerrae-Atella I*; E = branch of D for *Acerrae*; E' = section of E that coincides with a *limes* of the centuriation *Ager Campanus I*; F = branch for *Acerrae* of the Augustan aqueduct of the Serino. About the centuriation *Acerrae-Atella I* see *Atella* and about the centuriation *Nola III* see *Nola*. Same indications for the following figure.

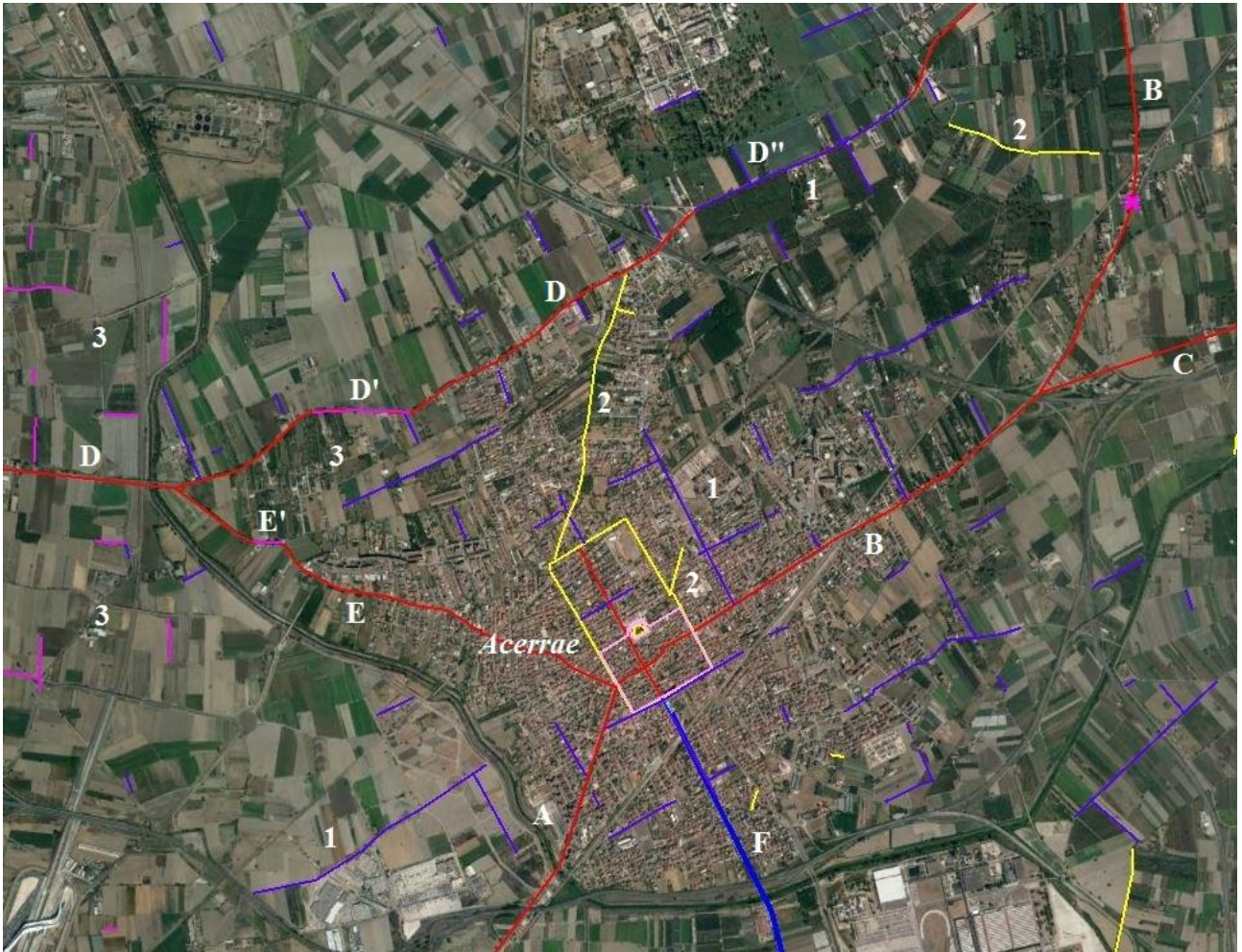


Fig. 9B – Persistences in the area of *Acerrae*.

[L. 230.1] Atella, muro ducta colonia, deducta ab Augusto. iter populo debetur ped. CXX. ager eius in iugeribus est adsignatus.

Atella (Sant'Arpino, among Sant'Arpino, Succivo, Orta di Atella and Frattaminore), colony surrounded with a wall, founded by *Augustus*. A right of way of CXX feet is due to the community. Its land was allocated in *iugera* (fig. 10).

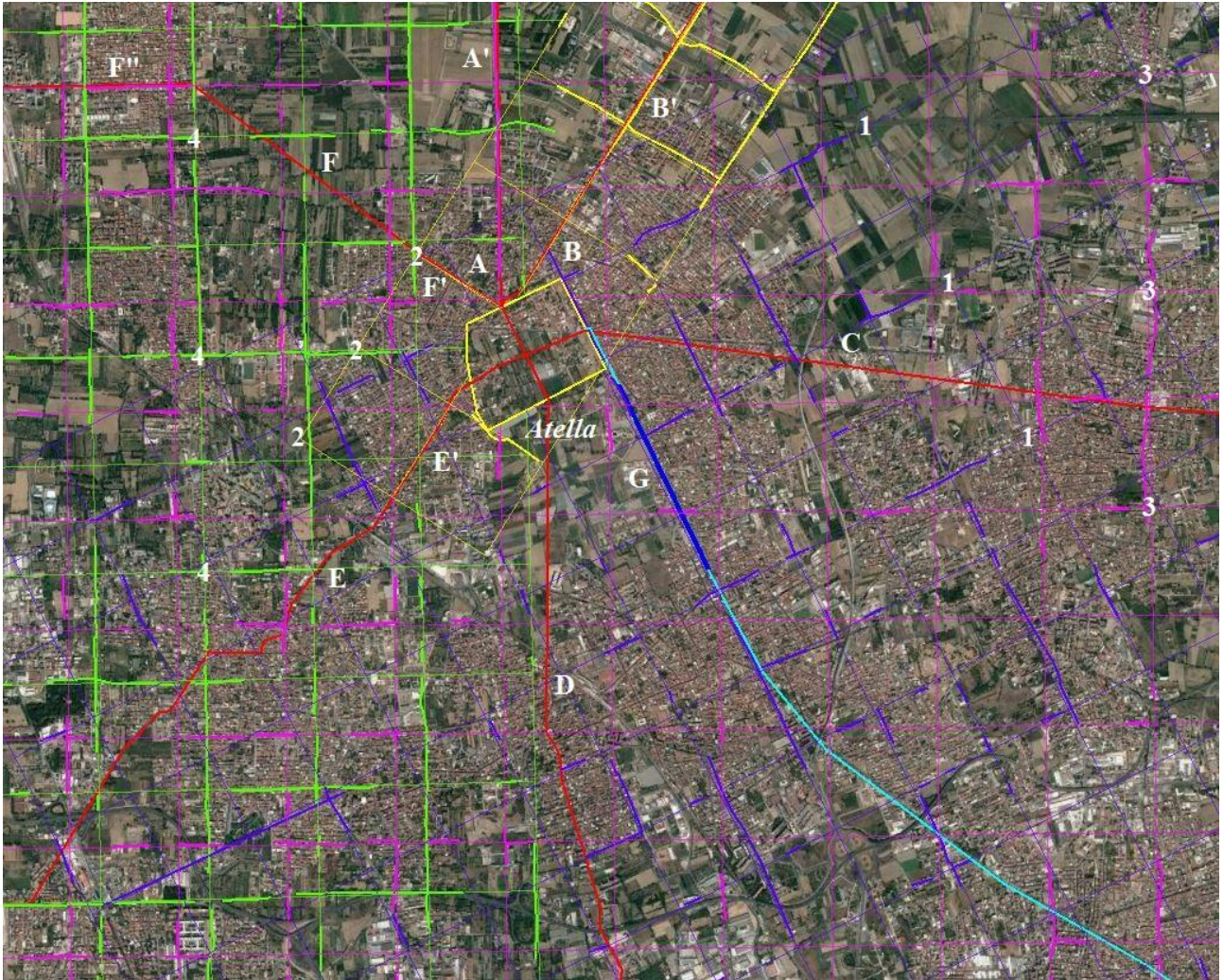


Fig. 10A – The land of *Atella* was divided by four centuriations (1, *Acerrae-Atella I*, Augustan, 16 x 16 *actus* – 567.68 x 567.68 m -, inclination 26° 00' W; 2, *Atella II*, subsequent to Sulla?, 20 x 20 *actus* – 710 x 710 m -, inclination 33° 00' E; 3, *Ager Campanus I*, Gracchan, 20 x 20 *actus* – 705 x 705 m -, inclination 00° 10' E; 4, *Ager Campanus II*, Sullan and Caesarean, 20 x 20 *actus* – 706 x 706 m -, inclination 00° 26' W). Other indications: A = *via Atella-Capua*; A' = section of A that coincides with a *limes* of the centuriation *Ager Campanus I*; B = *via Atella-Calatia*; B' = section of B that coincides with a *limes* of the centuriation *Atella II*; C = *via Atella-Suessula*; D = *via Atella-Neapolis*; E = *via Atella-Cumae*; E' = section of E that coincides with a *limes* of the centuriation *Atella II*; F = *via Atella-Velxa-Liternum*; F' e F'' = sections of F that coincide with *limites* of the centuriations *Atella II* and *Ager Campanus I*, respectively; G = branch for *Atella* of the Augustan aqueduct of the Serino. Same indications for the following figures.

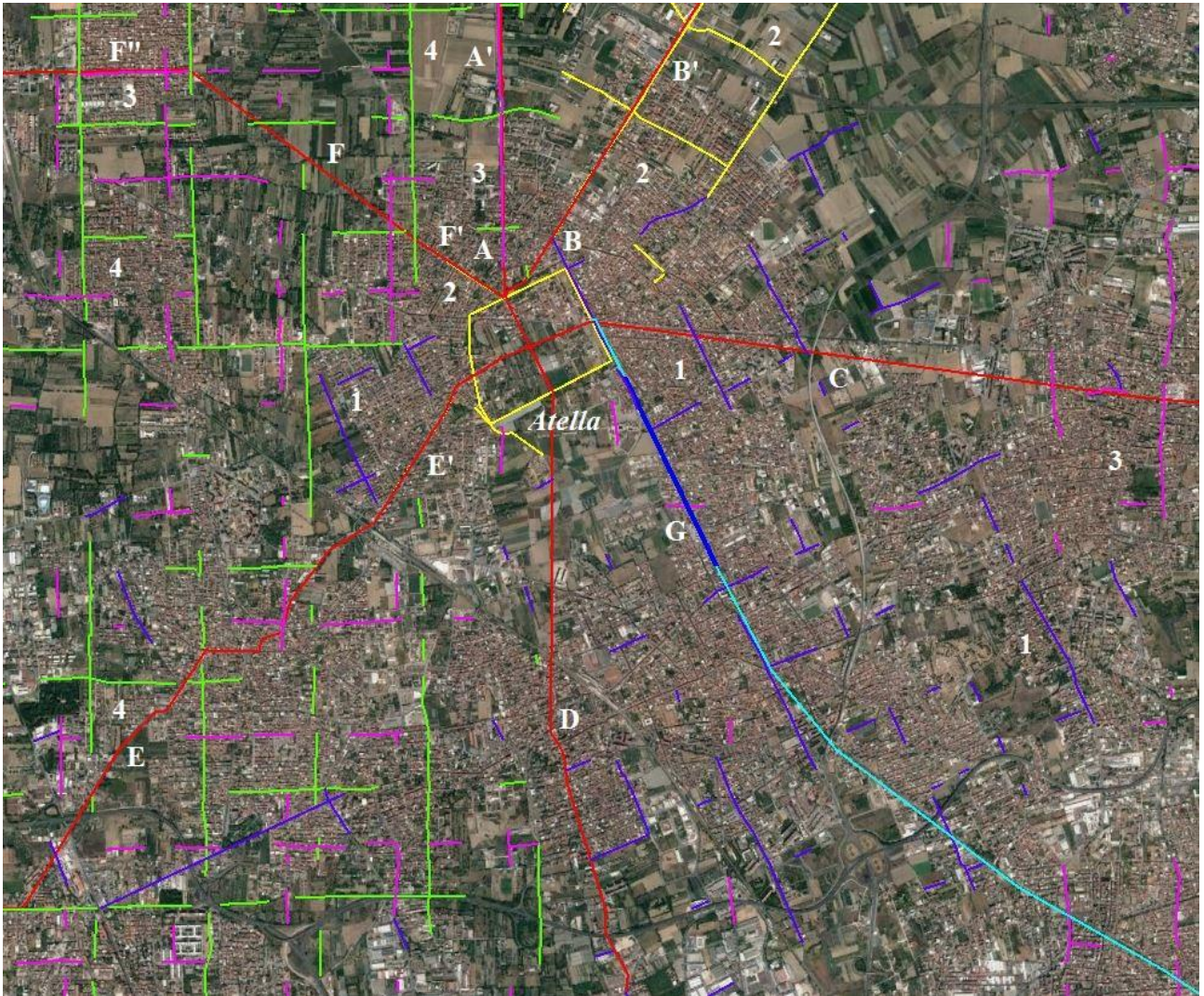


Fig. 10B – Persistences in the area of *Atella*.

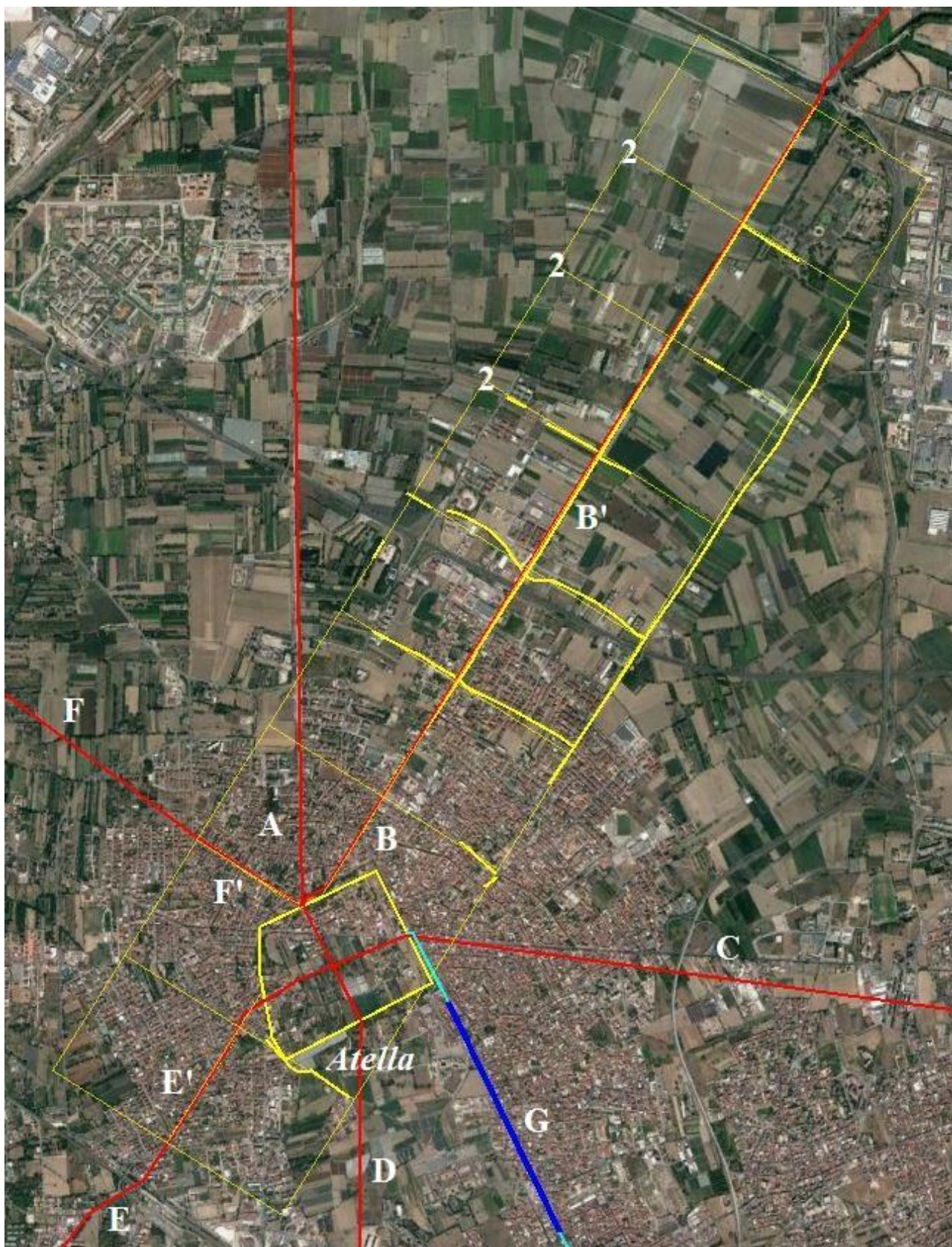


Fig. 10C – The centuriation *Atella II*.

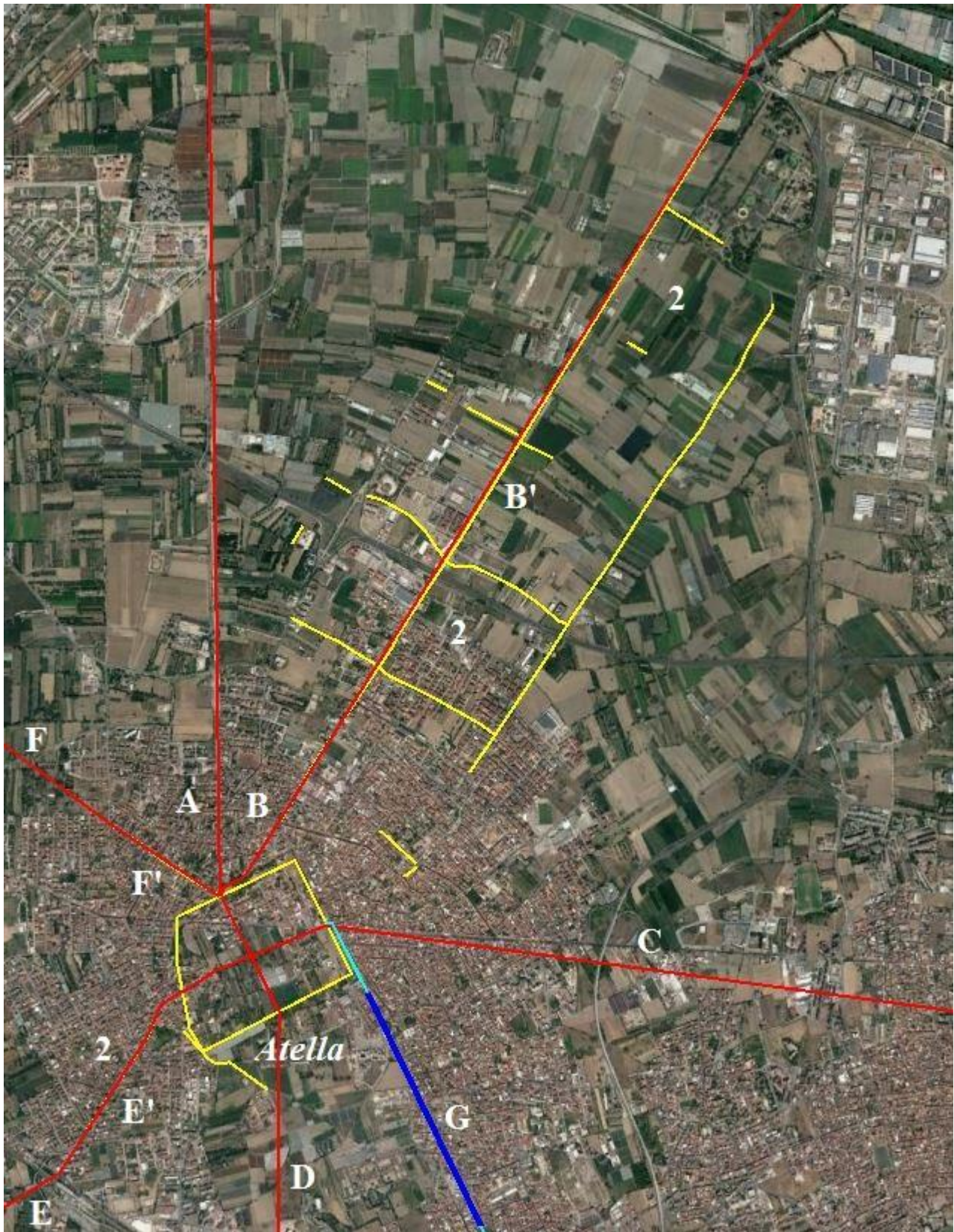


Fig. 10D – Persistences of the centuriation *Atella II*.

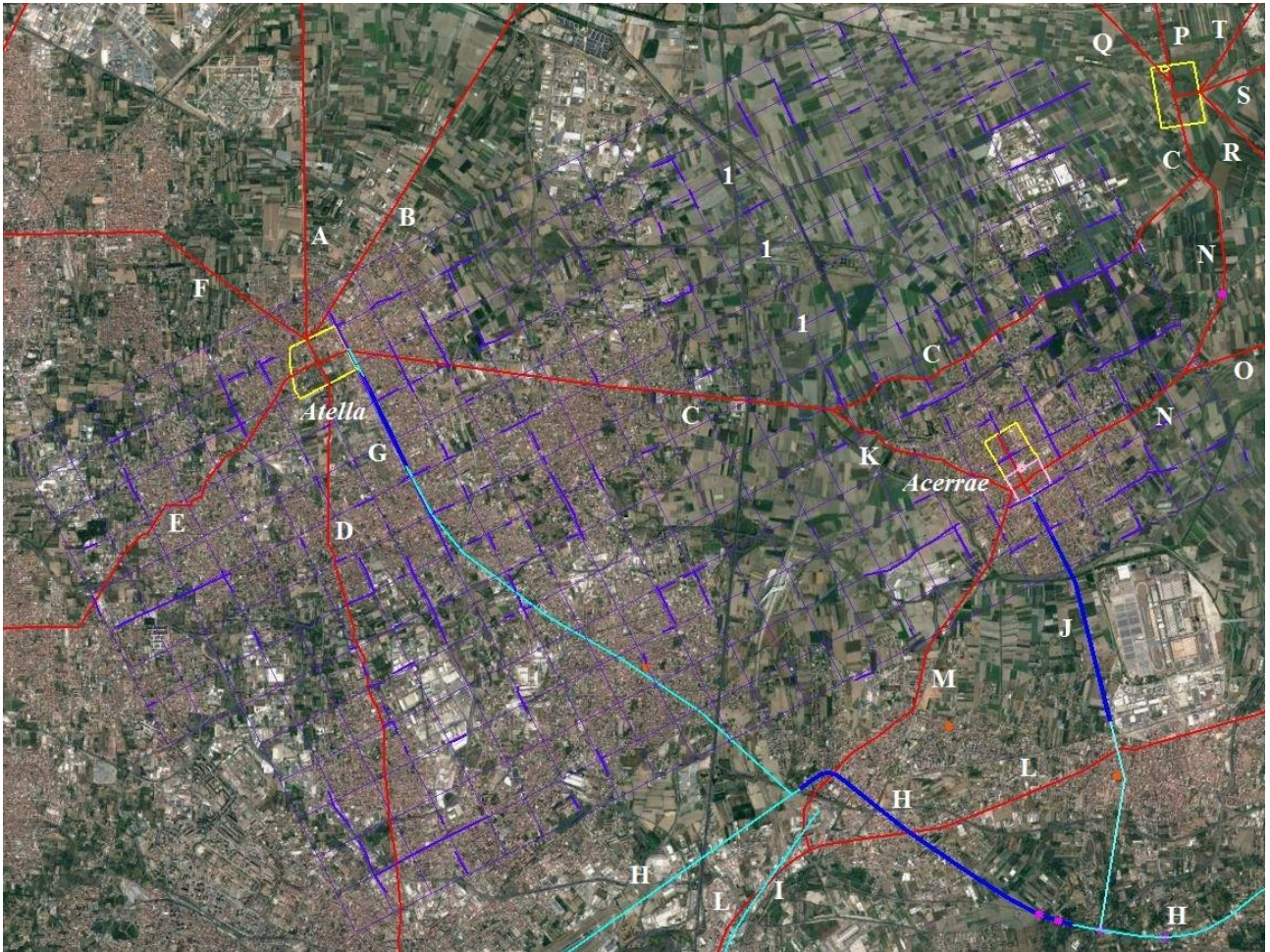


Fig. 10E – The centuriation *Acerrae-Atella I*. Further indications: H = Augustan aqueduct of the Serino; I = aqueduct of the Bolla; J = branch of the aqueduct of the Serino for *Acerrae*; K = branch for *Acerrae* of the *via Atella-Suessula*; L = *via Neapolis-Nola*; M = branch of L for *Acerrae*; N = *via Acerrae-Suessula*; O = branch of N for *Nola*; P = *via Suessula-Telesia*; Q = *via Suessula-Capua (via Popilia)*; R = *via Suessula-Nola (via Popilia)*; S = *via Suessula-Caudium*; T = *via Suessula-Saticula*. The indications are the same for the following figure too.

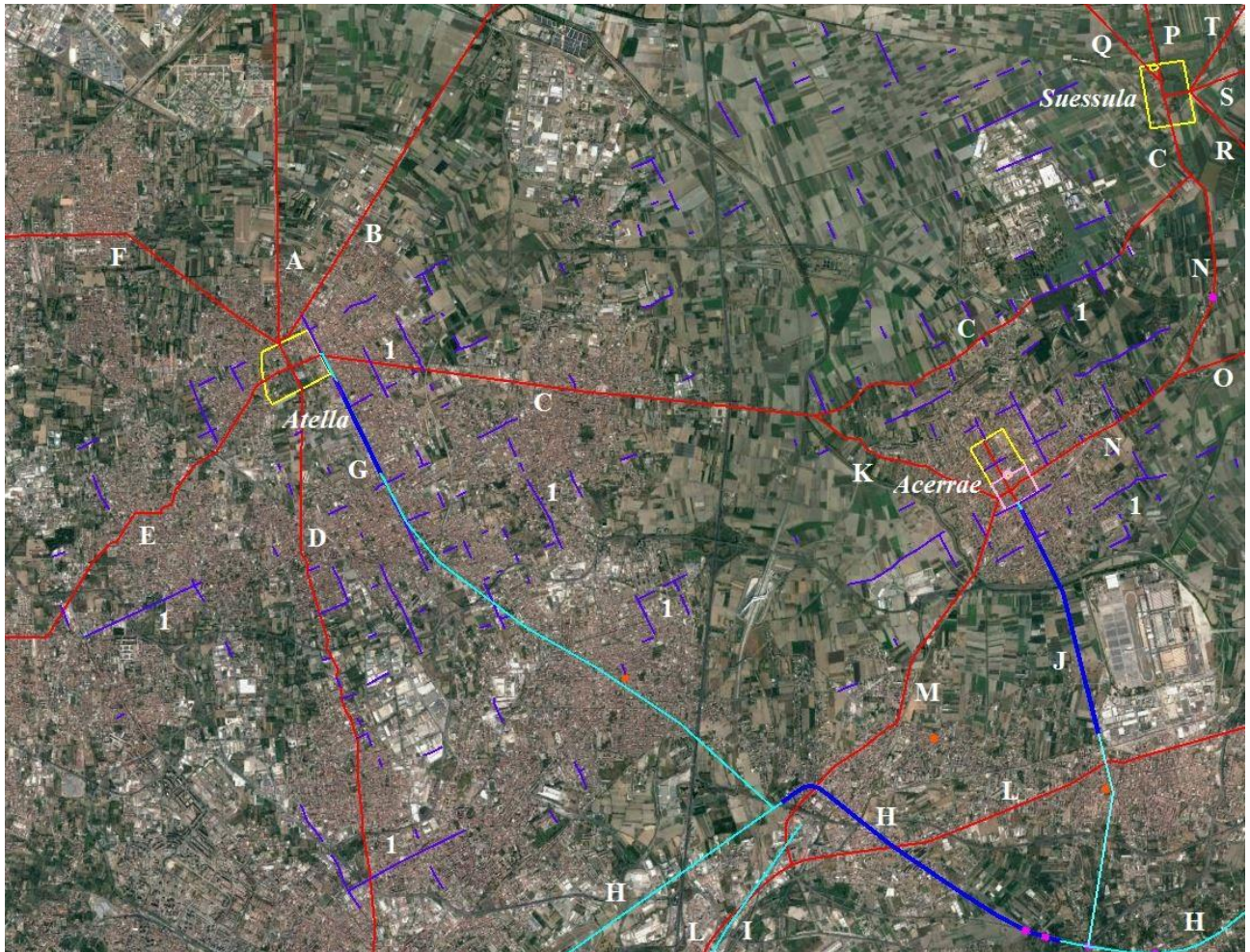


Fig. 10F – Persistences of the centuriation *Acerrae-Atella I.*

Atina, muro ducta colonia. deduxit Nero Claudius. [5] iter populo non debetur. ager eius pro parte in lacineis et per strigas est adsignatus.	<i>Atina</i> (<i>Atina</i>), colony surrounded with a wall. <i>Nero Claudius</i> founded it. No right of way is due to the community. Its land was allocated proportionately in strips and <i>per strigas</i> (fig. 11).
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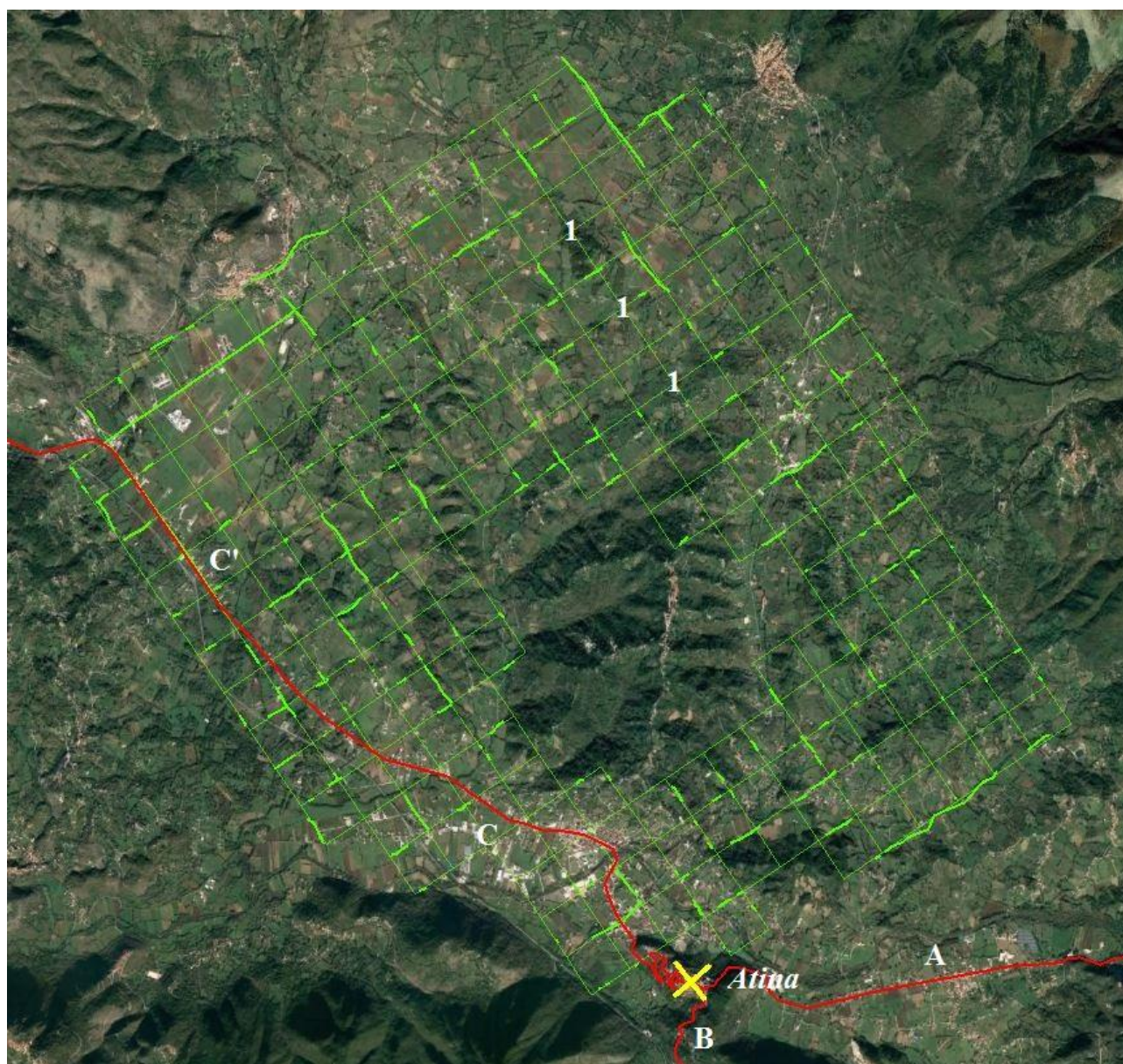


Fig. 11A – The land of *Atina* was divided by a centuriation (1, *Atina*, end II or I century b.C.?, 14 x 14 actus – 496.72 x 496.72 m, inclination 33° 30' W). Other indications: A = *via Atina-Venafrum*; B = *via Atina-Casinum*; C = *via Atina-Sora*; C' = section of C that coincides with a *limes* of the centuriation *Atina*.

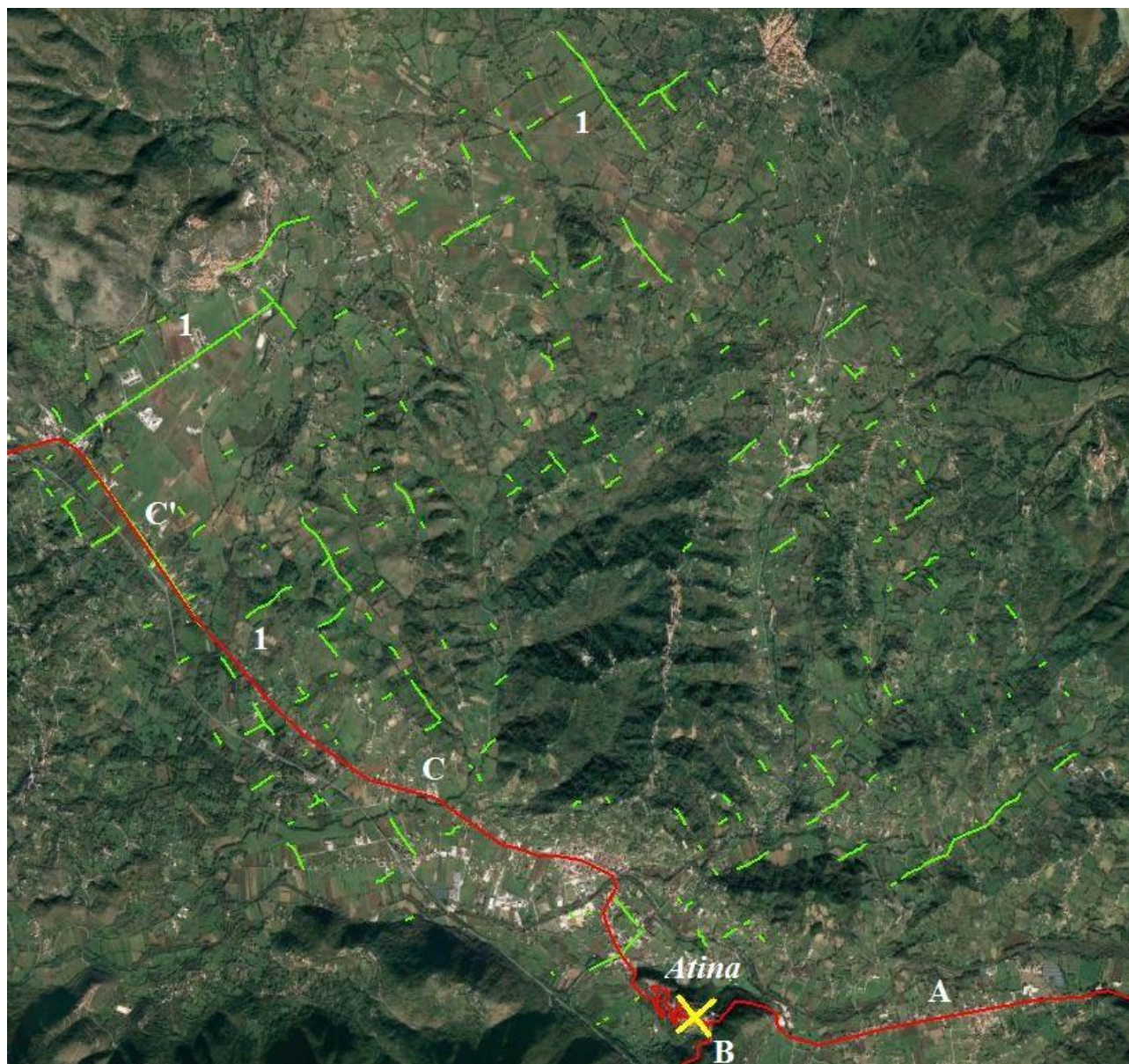


Fig. 11B – Persistences of the centuriation *Atina*. Same indications of the preceding figure.

Alatrium, muro ducta colonia. populus deduxit. iter populo non debetur. ager eius per centurias et strigas est adsignatus.

Alatrium (Alatri), colony surrounded with a wall. The people founded it. No right of way is due to the community. Its land was allocated by *centuriae* and *strigas* (fig. 12).

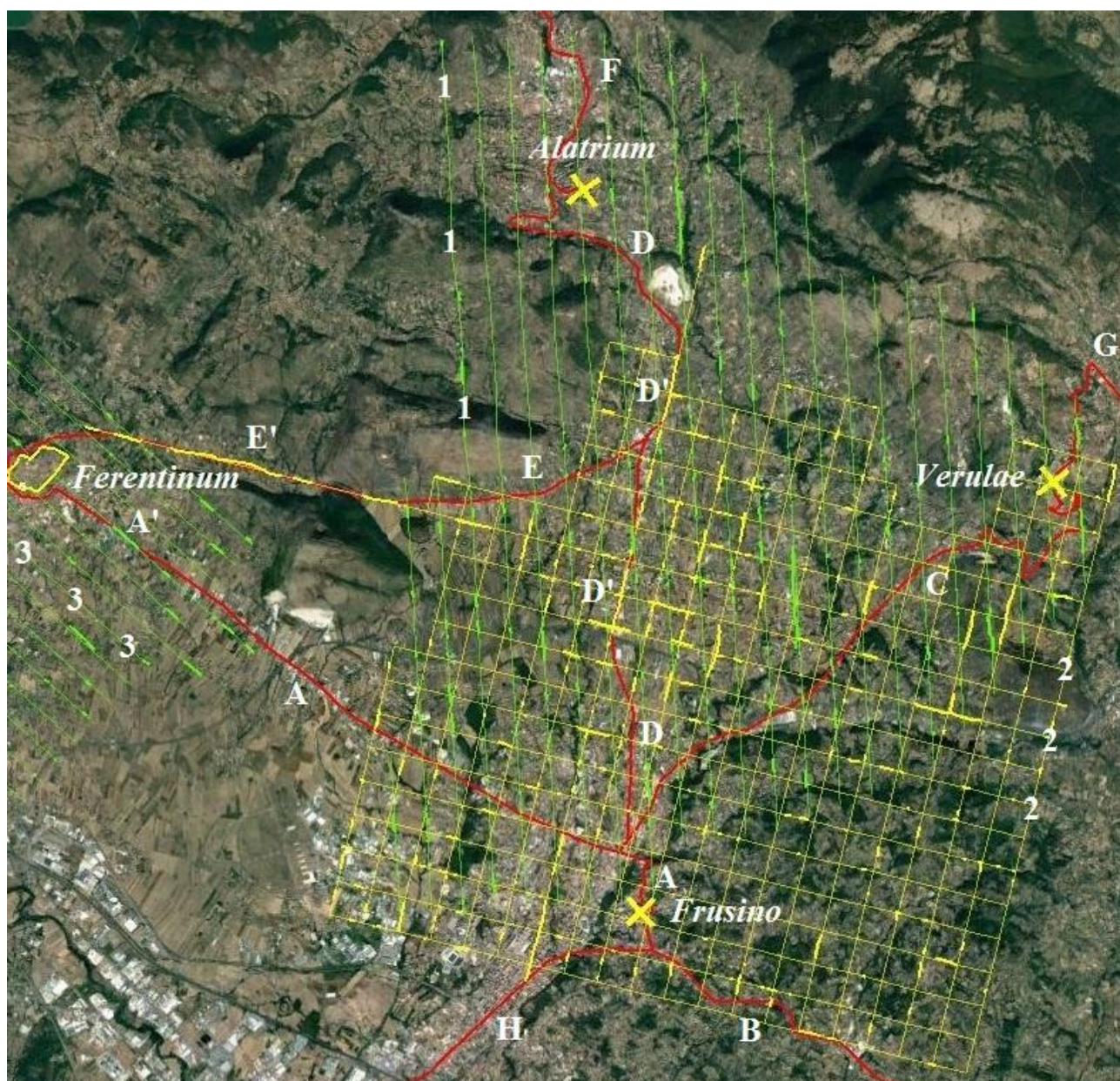


Fig. 12A – The lands of *Frusino*, *Alatrium* e *Verulae* were divided by two *limitationes* (1, *Alatrium-Frusino-Verulae I*, *strigatio*, second half IV century b.C., 12 *actus* – 425.76 m -, inclination 03° 00' W; 2, *Alatrium-Frusino-Verulae II*, centuriation, 13 x 13 *actus* – 461.24 x 461.24 m -, inclination 14° 00' E). Other indications: 3 = *strigatio Ferentinum*; A = *via Latina*, stretch *Frusino-Ferentinum*; A' = section of A that coincides with a *limes* of the *strigatio Ferentinum*; B = *via Latina*, stretch *Frusino-Fregellanum- Fabrateria Nova*; C = branch of the *via Latina* for *Verulae*; D = branch of the *via Latina* for *Alatrium*; D' = sections of D that coincide with a *limes* of the centuriation *Alatrium-Frusino-Verulae II*; E = *via Ferentinum-Alatrium*; E' = section of E that coincides with the prolongation of a *limes* of the centuriation *Alatrium-Frusino-Verulae II*; F = *via Alatrium-Afilae*; G = *via Verulae-Cereatae Marianae-Sora*; H = *via Frusino-Privernum*. Same indications for the following figures too.

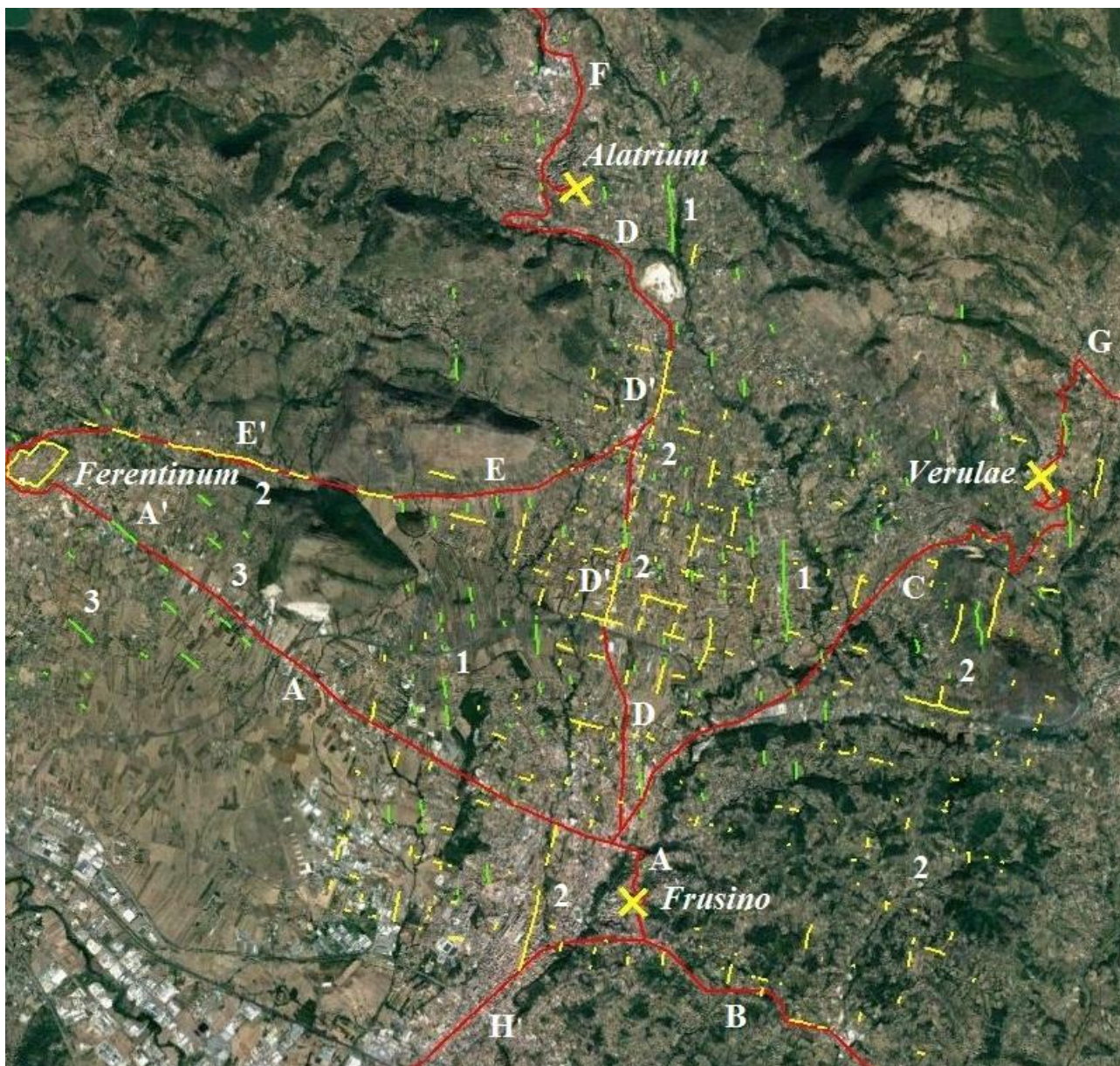


Fig. 12B – Persistences in the area of *Frusino*, *Alatrium* and *Verulae*.

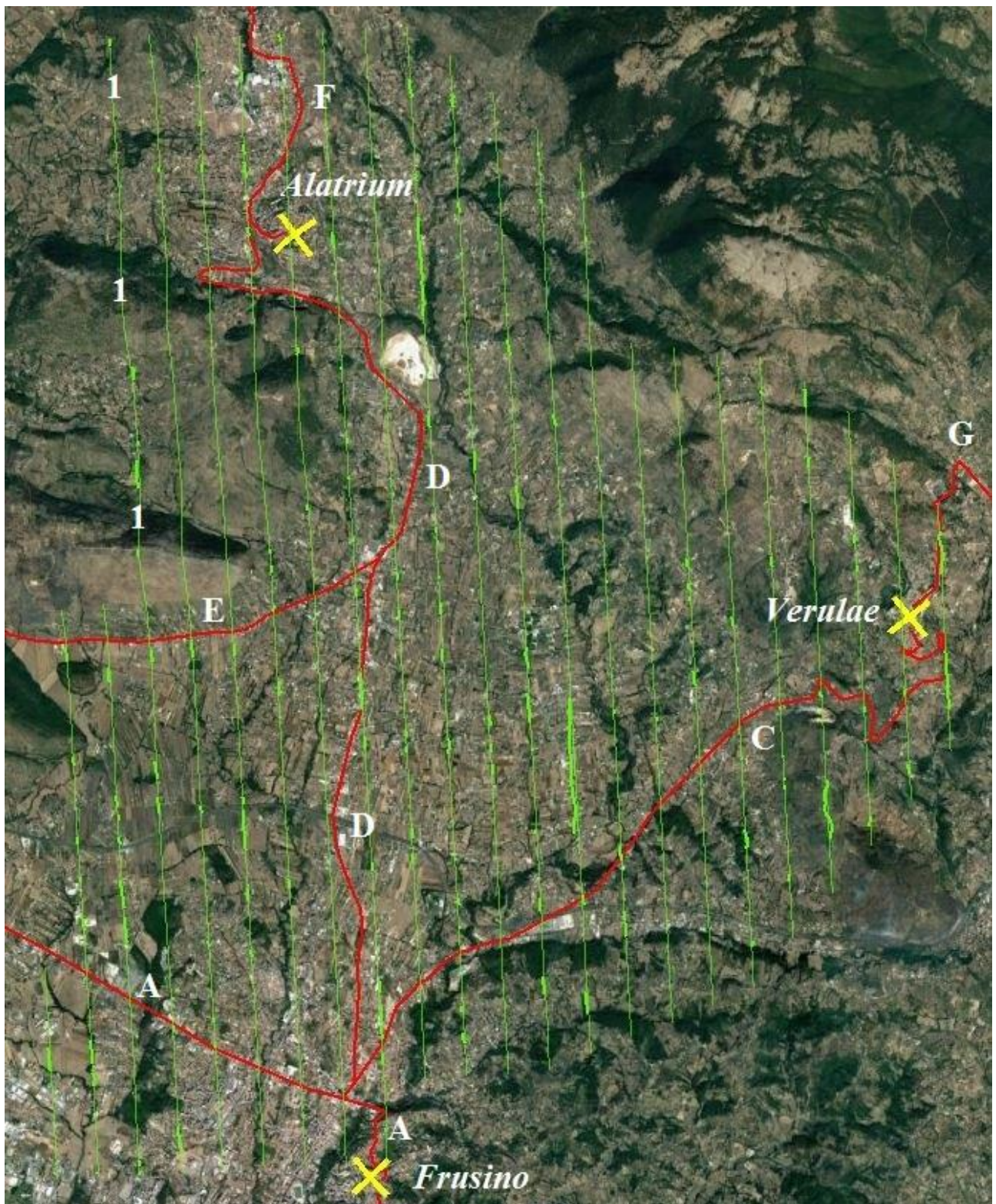


Fig. 12C – The strigatio Alatrium-Frusino-Verulae I.

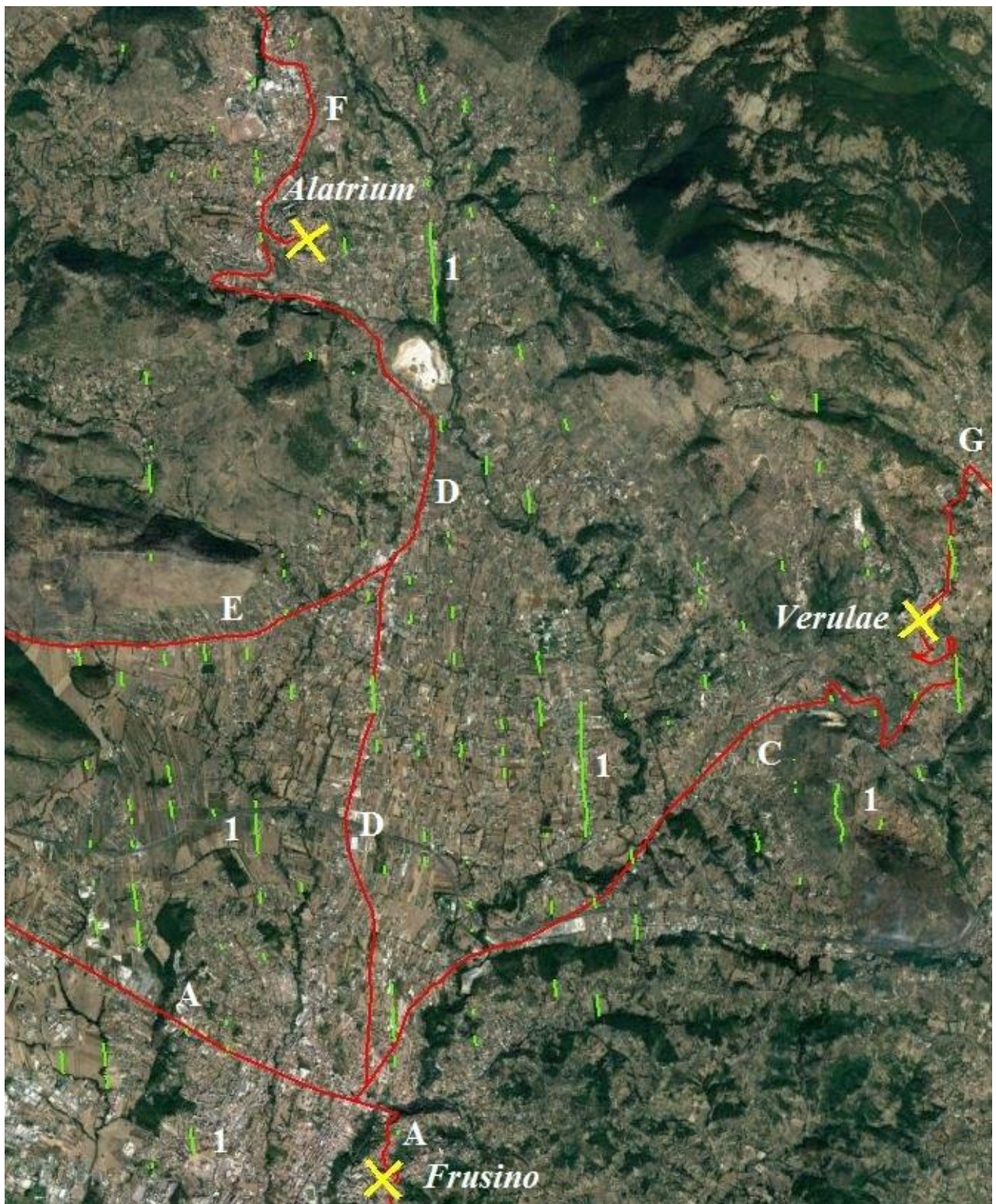


Fig. 12D – Persistences of the *strigatio* Alatrium-Frusino-Verulae I.

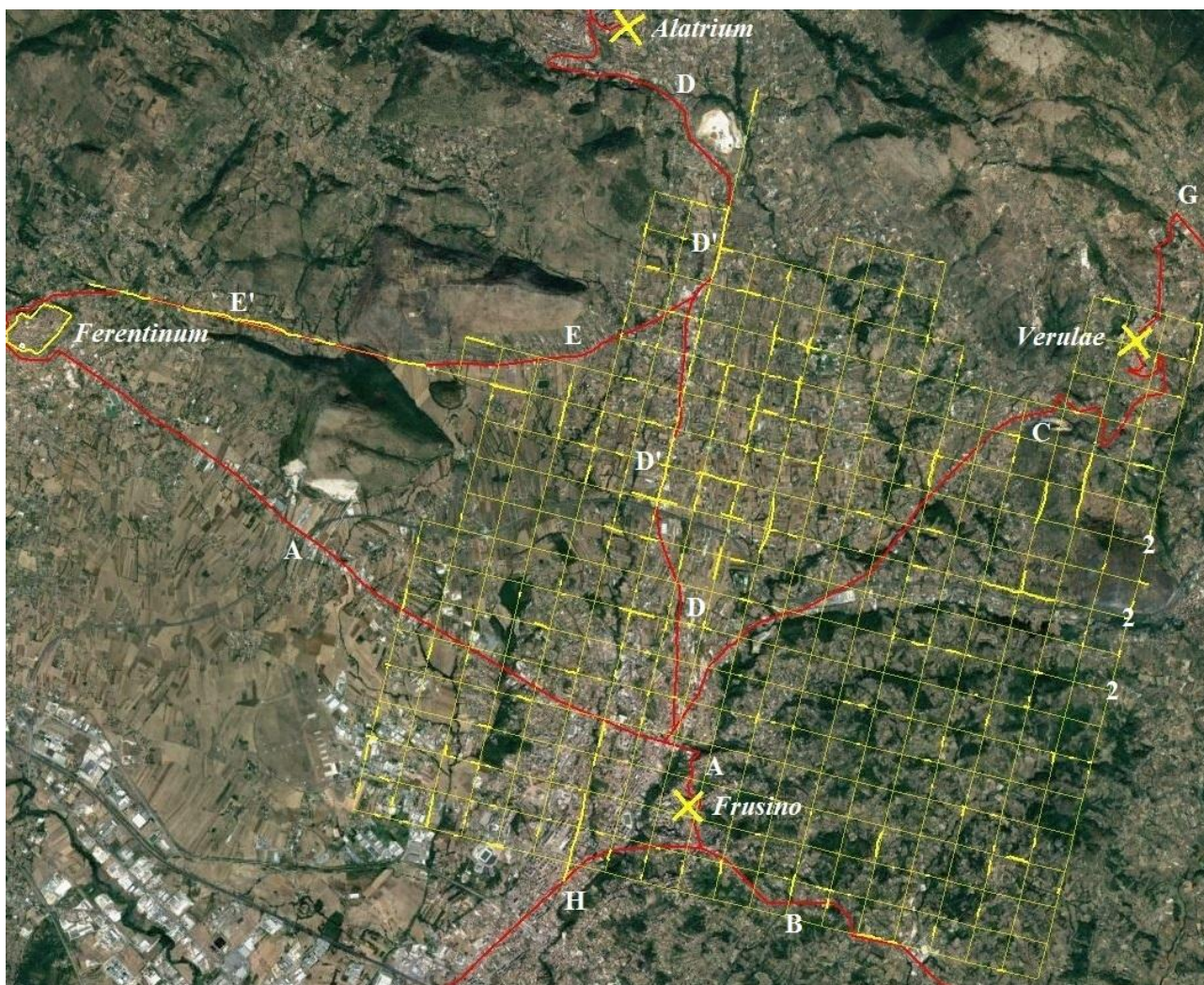


Fig. 12E – The centuriation *Alatrium-Frusino-Verulae II*.

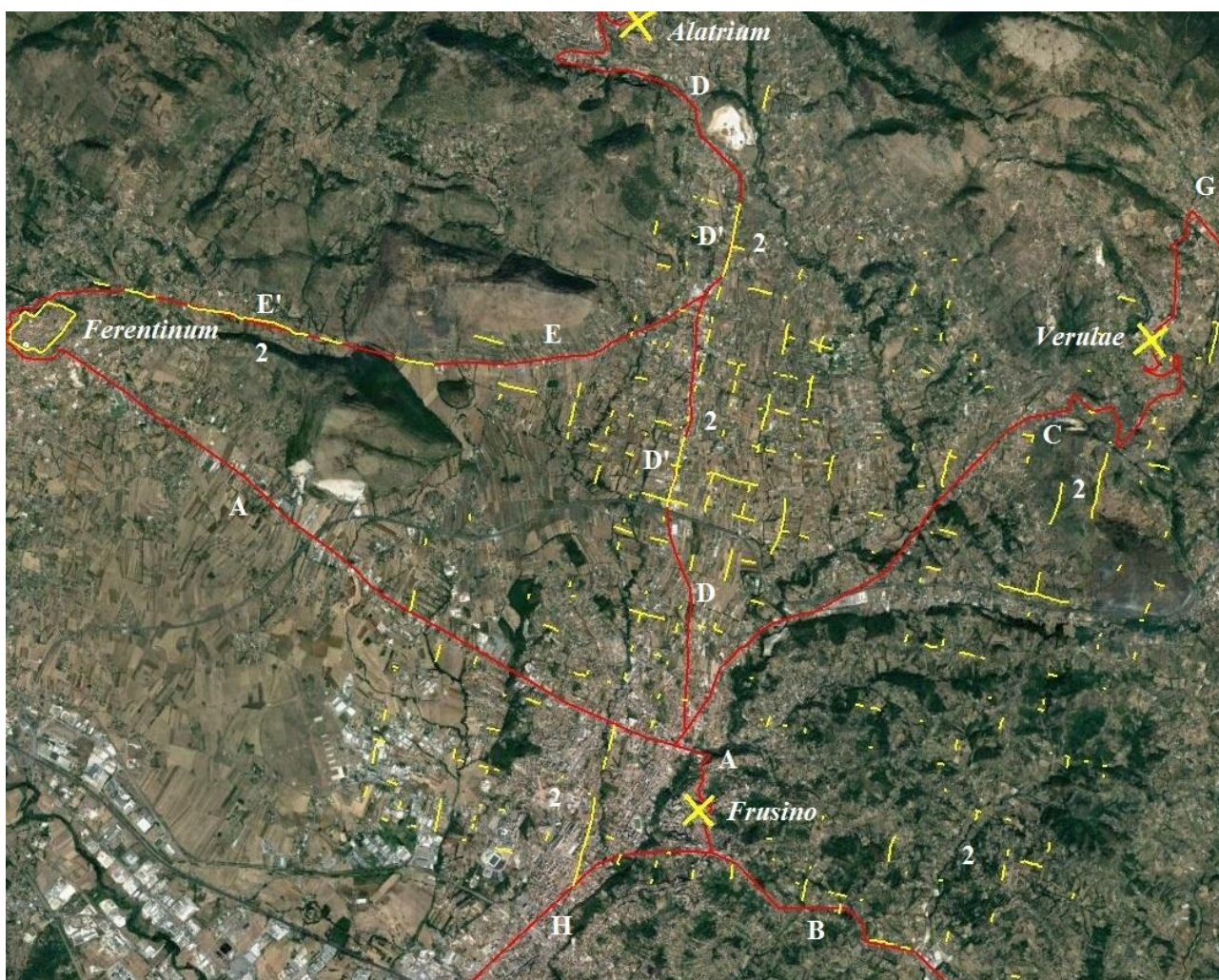


Fig. 12F – Persistences of the centuriation *Alatrium-Frusino-Verulae II*.

[10] Aricia, oppidum. lege Sullana est munita. iter populo non debetur. ager eius in praecisuris est adsignatus.	<i>Aricia</i> (Ariccia), town fortified under <i>lex Sullana</i> . No right of way is due to the community. Its land was allocated in parcels.
Asetium, muro ducta lege triumvirale. iter populo non debetur. ager eius militi est adsignatus.	<i>Asetium</i> (<i>Caelanum</i> ? ²⁹), surrounded with a wall under a triumviral law. No right of way is due to the community. Its land was allocated to soldiers.

²⁹ S. the note for *Casentium*, L. 231.14.

Anagnia, muro ducta colonia. iussu Drusi Caesaris [15] populus deduxit. iter populo non debetur. ager eius per strigas et ueteranis adsignatus.

Anagnia (Anagni), colony surrounded with a wall. The people founded it by order of *Drusus Caesar*³⁰. No right of way is due to the community. Its land was allocated *per strigas* to veteran soldiers (fig. 13).

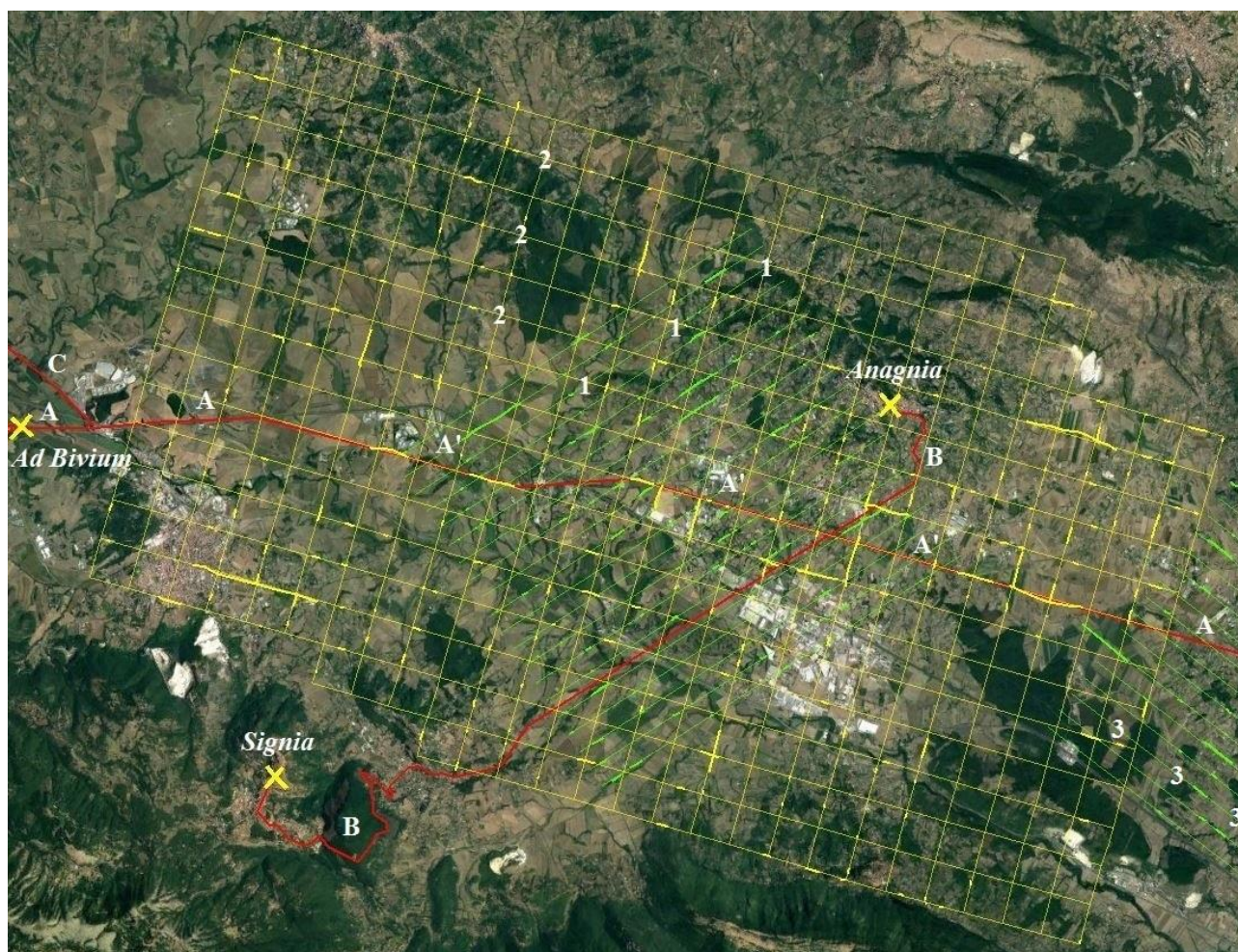


Fig. 13A – The land of *Anagnia* appears divided by a *strigatio* (1, *Anagnia I*, 306 b.C.?, 10 *actus* - 354.8 m -, inclination 28° 00' E) and by a centuriation (2, *Anagnia II-Signia*, triumviral, 20 x 20 *actus* - 706 x 706 m -, inclination 22° 30' E). Other indications: 3 = *strigatio Ferentinum*; A = *via Latina*, stretch *Ad Bivium-Ferentinum*; A' = sections of A that coincide with *limites* of the centuriation *Anagnia II-Signia*; B = scheme of the *via Anagnia-Signia*; C = *via Labicana*. Same indications for the following figures too.

³⁰ The emperor Claudius (*Tiberius Claudius Drusus Nero*).

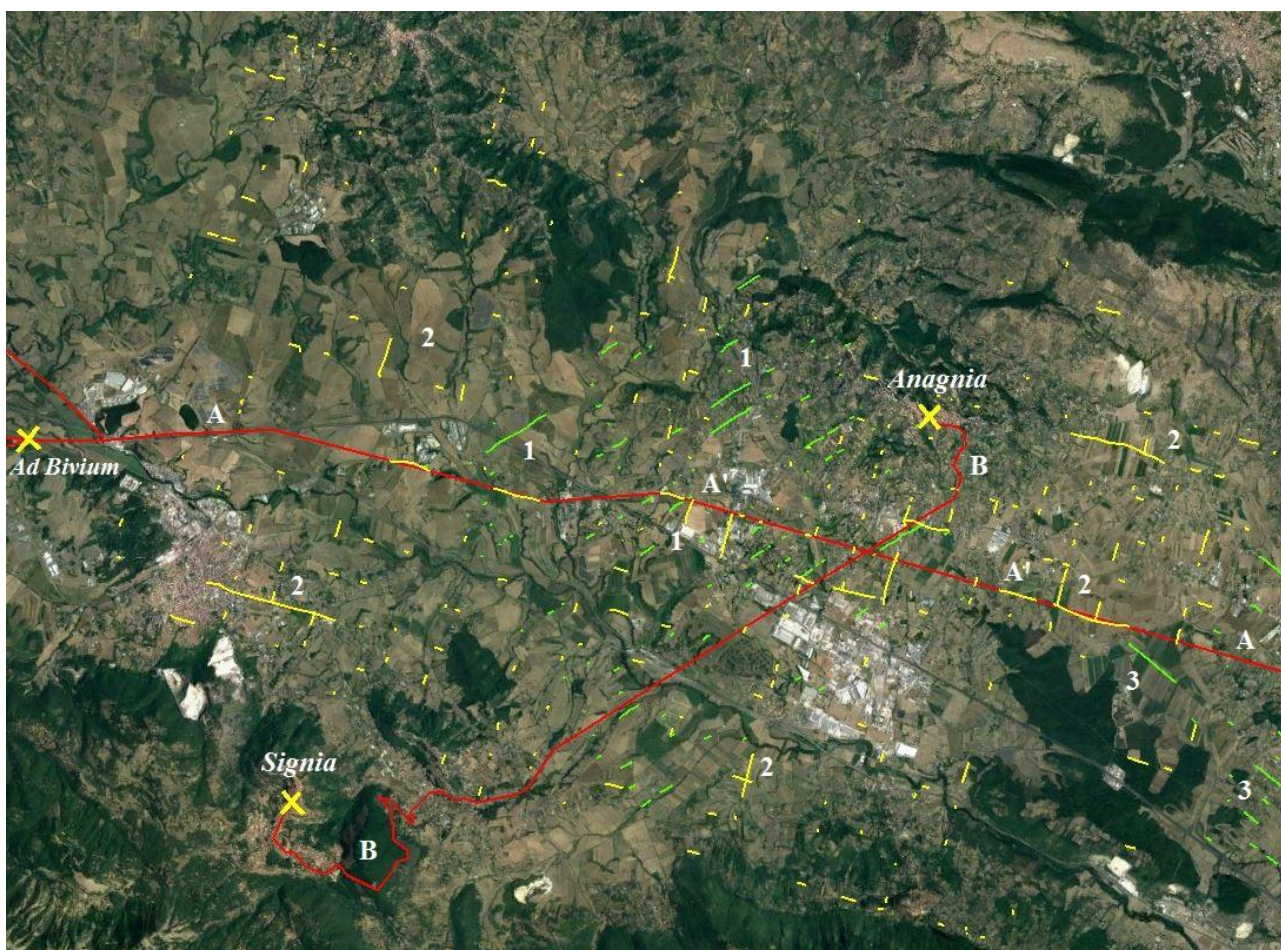


Fig. 13B – Persistences in the area of *Anagnina*.

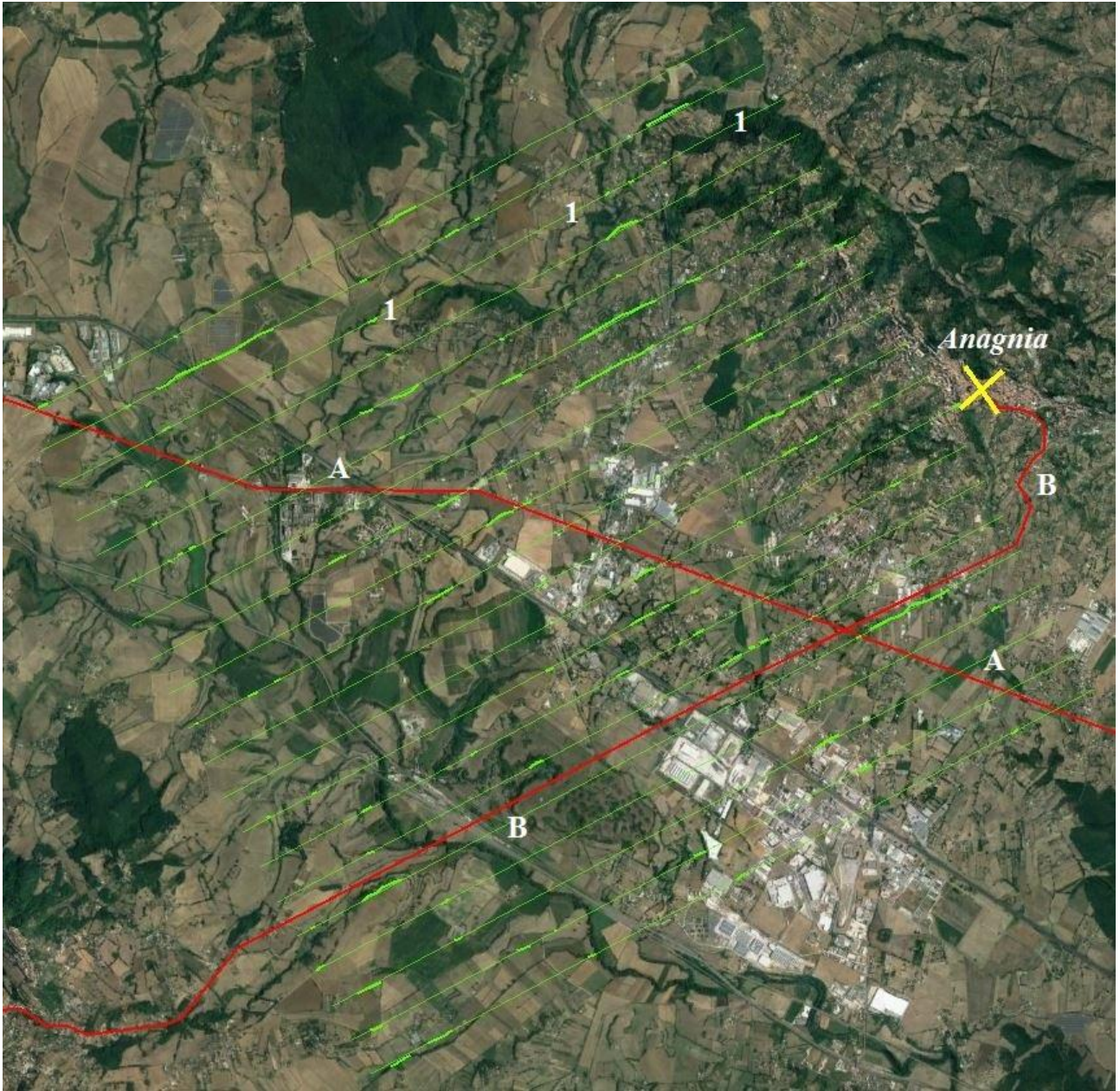


Fig. 13C – The centuriation *Anagnina I*.

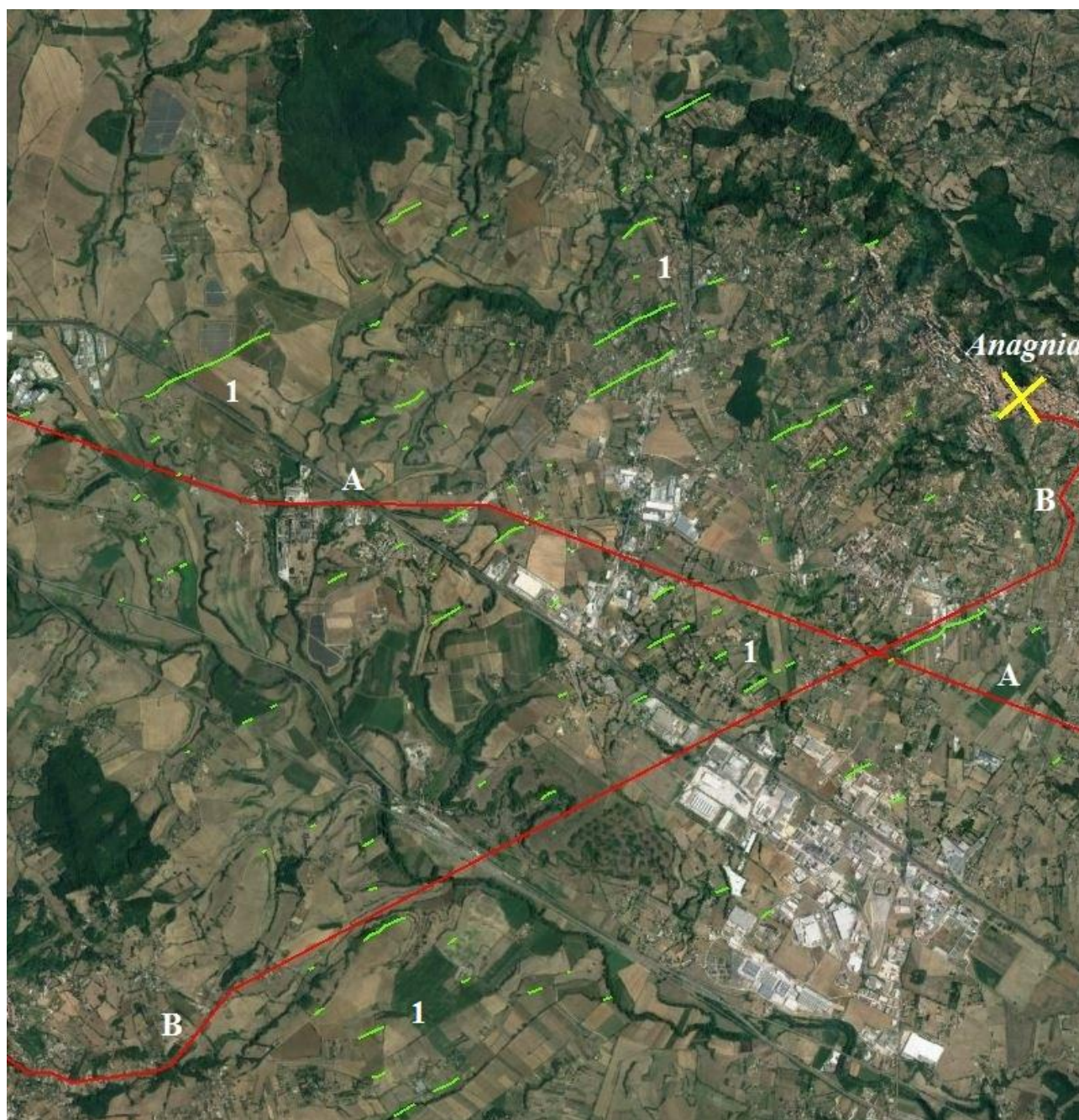


Fig. 13D – Persistences of the centuriation *Anagnina I*.



Fig. 13E – The centuriation *Anagnia II-Signia*.



Fig. 13F – Persistences of the centuriation *Anagnina II-Signina*.

Abella, municipium. coloni uel familia imperatoris Vespasiani iussu eius acceperunt. postea ager eius in [20] iugeribus militi est adsignatus.

Abella (Avella), *municipium*. The colonists and the family of the emperor *Vespasianus* received it on his orders. Later, its land was allocated to the soldiers in *iugera* (fig. 14).

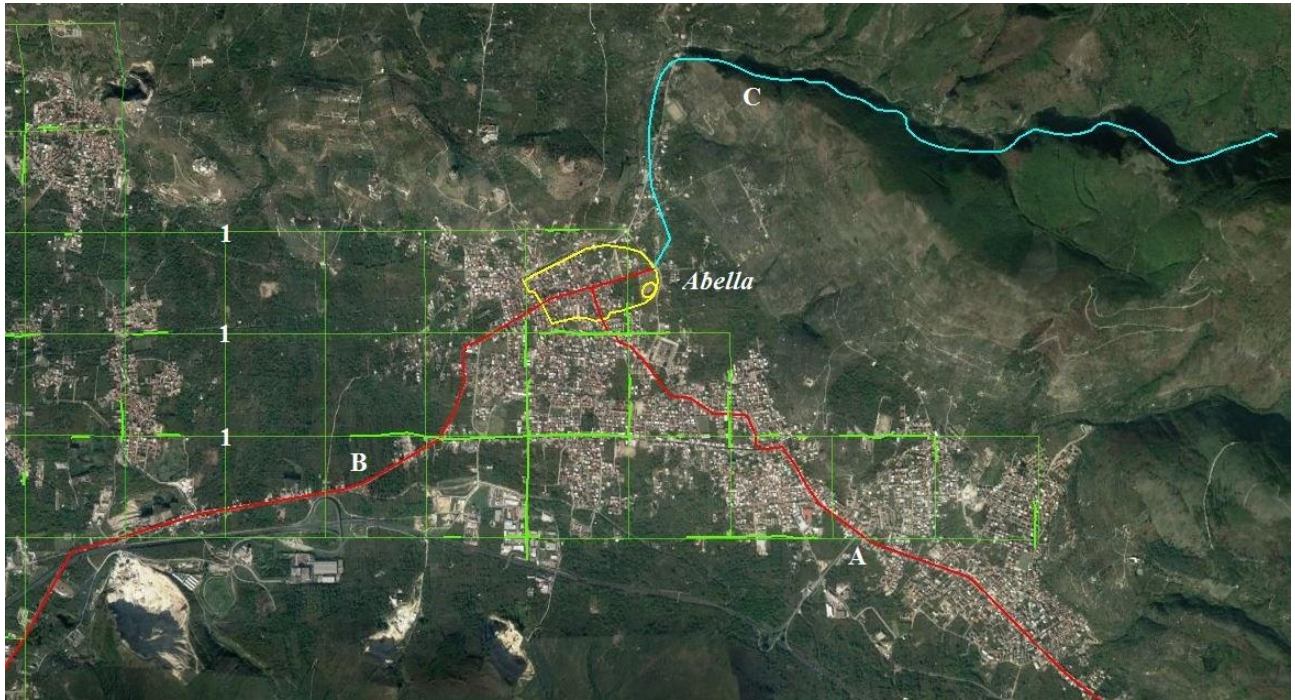


Fig. 14A – The land of Abella was divided by part of a centuriation (1, *Nola I-Abella*, Sullan, 20 x 20 *actus* – 706 x 706 m -, inclination 00° 00'). The text refers to an assignment of land under *Vespasianus*, which perhaps was a reassignment in times subsequent to Sulla. Other indications: A = *via Abella-Abellinum*; B = *via Abella-Nola*; C = aqueduct of Abella.

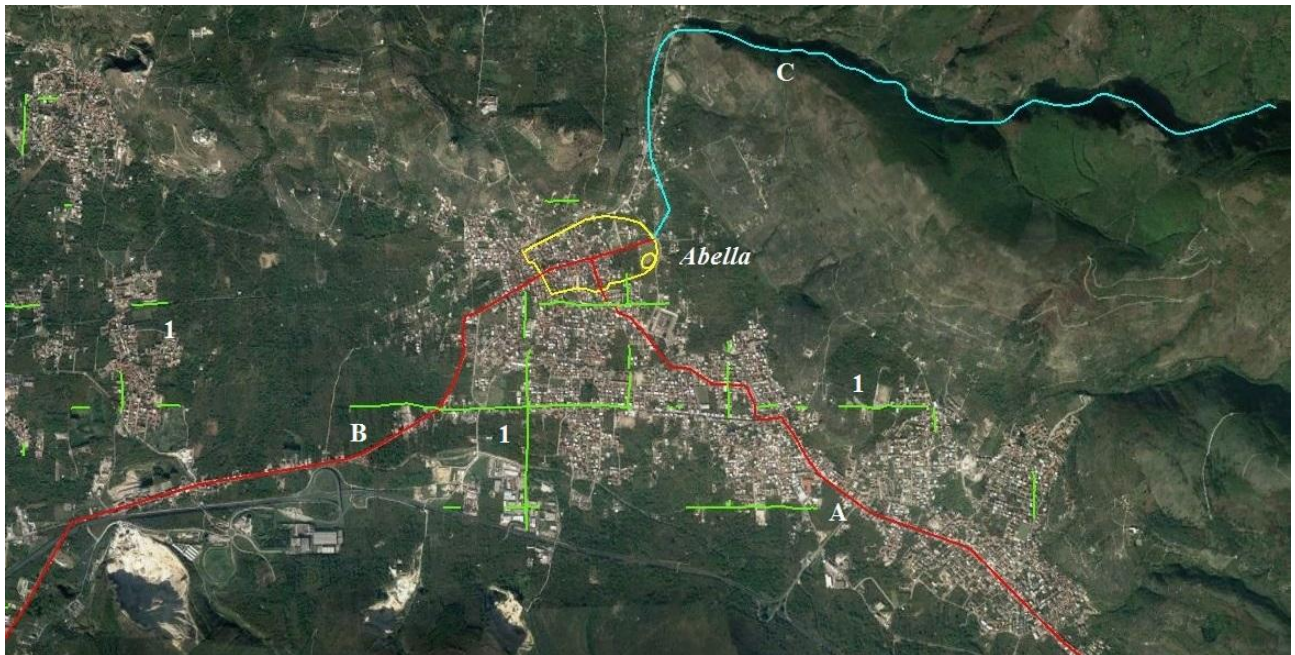


Fig. 14B – Persistences of the centuriation *Nola I-Abella* in the area near Abella.

Afile, oppidum. lege Sempronia in centuriis et in lacineis ager eius est adsignatus. iter populo non debetur.	<i>Afilae</i> (Affile), fortified town. Its land was allocated under <i>lex Sempronia</i> in <i>centuriae</i> and in strips. No right of way is due to the community.
[L. 231.1] Ardea, oppidum. imperator Adrianus censiit. iter populo non debetur. ager eius in lacineis est adsignatus.	<i>Ardea</i> (Ardea), fortified town. The emperor <i>Adrianus</i> assessed it. No right of way is due to the community. Its land was allocated in strips.
Allifae, oppidum muro ductum. ager eius lege triumvirale est adsignatus. iter populo non debetur.	<i>Allifae</i> (Alife), fortified town surrounded with a wall. Its land was allocated under a triumviral law. No right of way is due to the community (fig. 15).

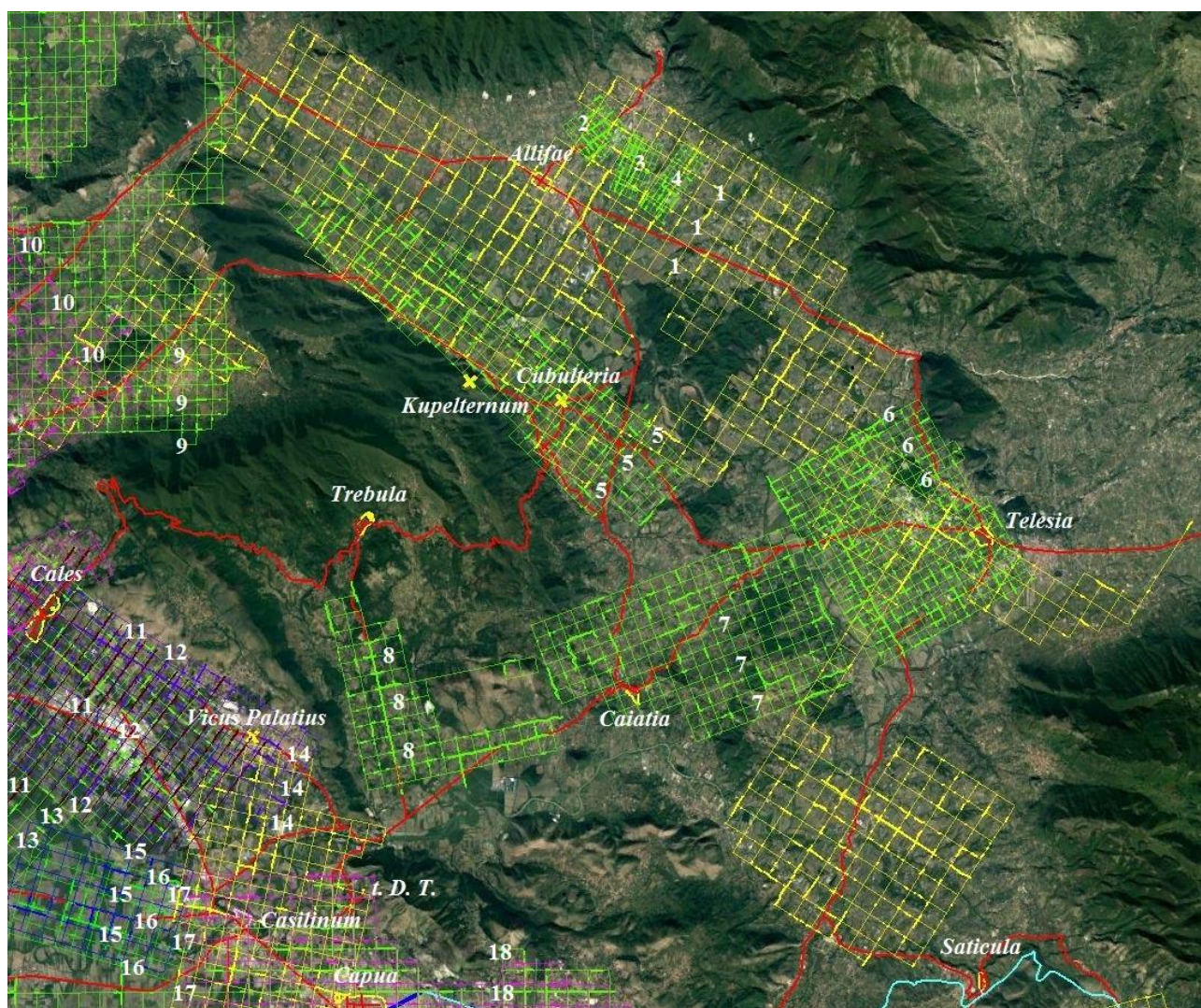


Fig. 15A – The main centuriation that regards *Allifae* is the *Allifae II-Teanum II-Telesia II-Saticula*, better known as centuriation of the Middle Volturno (1, 20 x 20 *actus* – 701.3 x 701.3 m – inclination 32° 15' E). Other indications for the centuriations: 2-4 = *Allifae I-a, b, c*; 5 = *Cubulteria*; 6 = *Telesia I*; 7 = *Caiatia*; 8 = *Trebula*; 9 = *Teanum I*; 10 = *Teanum III-Cales IV*; 11-13 = *Cales I, II, III*; 14 = *Capua-Casilinum*; 15, 16 = *Ager Stellatis I e II*; 17, 18 = *Ager Campanus I e II*. For simplicity, the indications about the roads have been omitted.

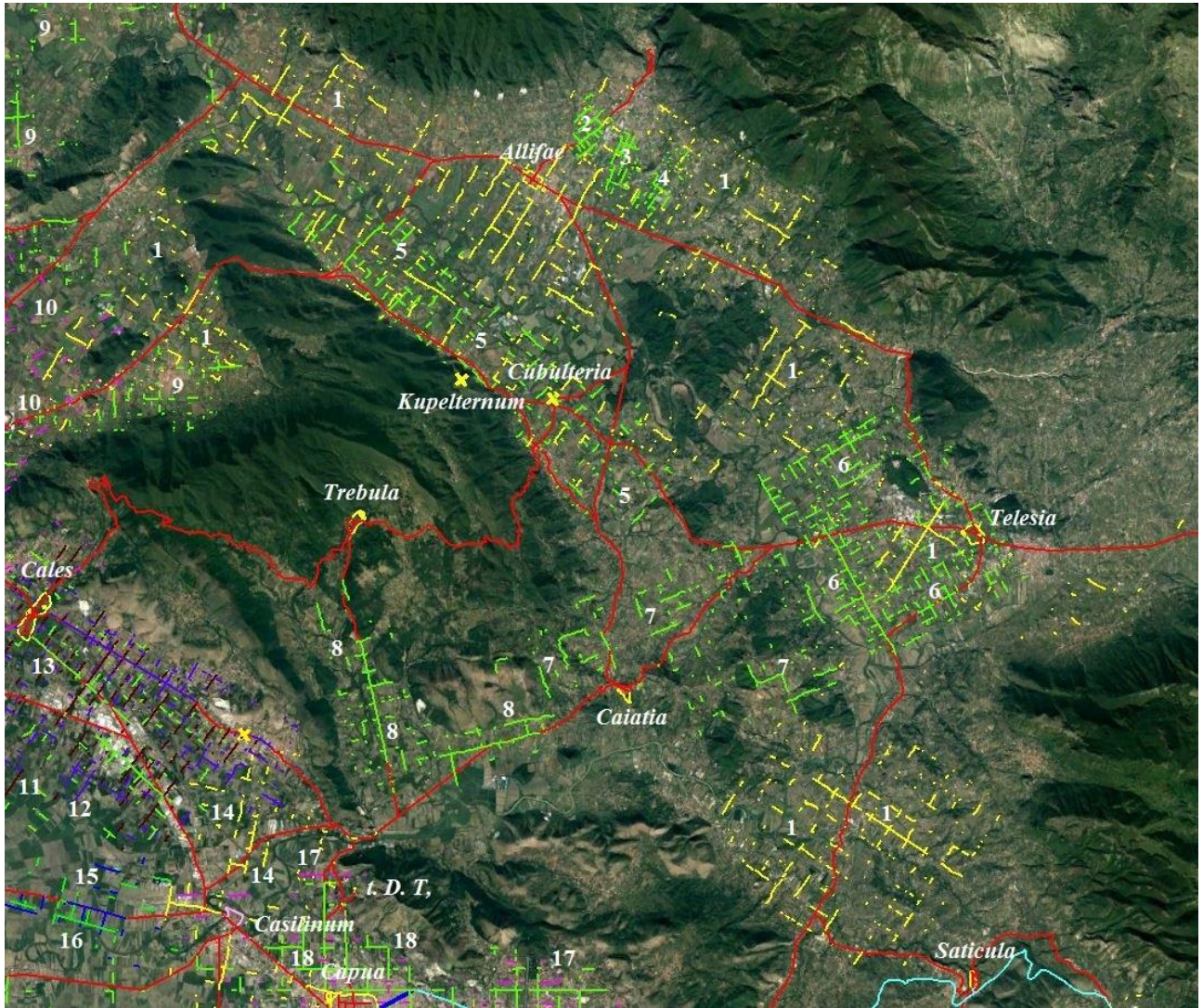


Fig. 15B – Persistences in the same area of the previous figure. Same indications of the preceding figure.

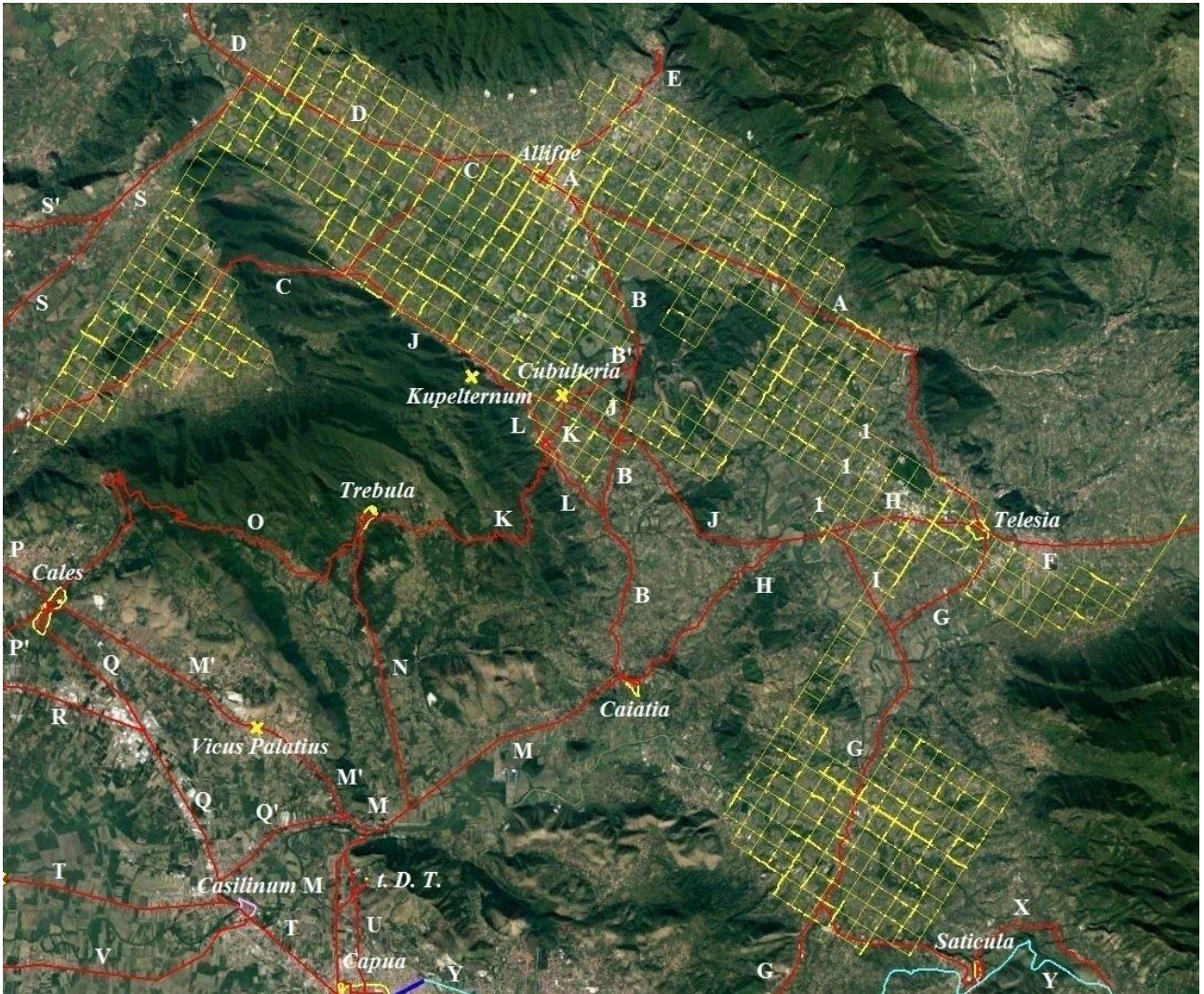


Fig. 15C – The centuriation of the Middle Volturno. Indications: 1 = *Allifae II-Teianum II-Telesia II-Saticula*, better known as centuriation of the Middle Volturno, 20 x 20 *actus* – 701.3 x 701.3 m – inclination 32° 15' E; A = *via Allifae-Telesia*; B = *via Allifae-Caletia*; B' = branch of B for *Cubulteria*; C = *via Allifae-Teianum*; D = *via Allifae-Venafrum*; E = road from *Allifae* towards the *Tifernus mons* (massif of the Matese) and the probable site of the ancient pre-roman town (Castello del Matese, until 1970 Castello d'Alife); F = *via Telesia-Beneventum*; G = *via Telesia-Suessula*; H = *via Telesia-Caletia*; I = road of connection between G and H; J = branch of H for *Cubulteria* and for the *via Allifae-Teianum*; K = *via Cubulteria-Trebula*; L = road of connection between B and J; M = *via Caletia-Capua*; M' = branch of M for *vicus Palatius* and *Cales*; N = branch of M for *Trebula*; O = *via Trebula-Cales*; P = *via Latina*, stretch *Teianum-Cales*; P' = *via Cales-Forum Popilii*; Q = *via Latina*, stretch *Cales-Casilinum*; Q' = branch of Q to reach M'; R = *via Appia* (through *Suessa Aurunca*); S = road from *Teianum* to the *via Allifae-Venafrum*; S' = branch of S for the *via Latina*; T = *via Appia* (through *Sinuessa*); U = *via Capua-templum Dianae Tifatinae* (t. D. T.) and continuation to reach M; V = *via Casilinum-Volturnum*; X = branch of G for *Saticula* and *Caudium*; Y = Augustan aqueduct of *Capua*. Same indications for the following figure too.

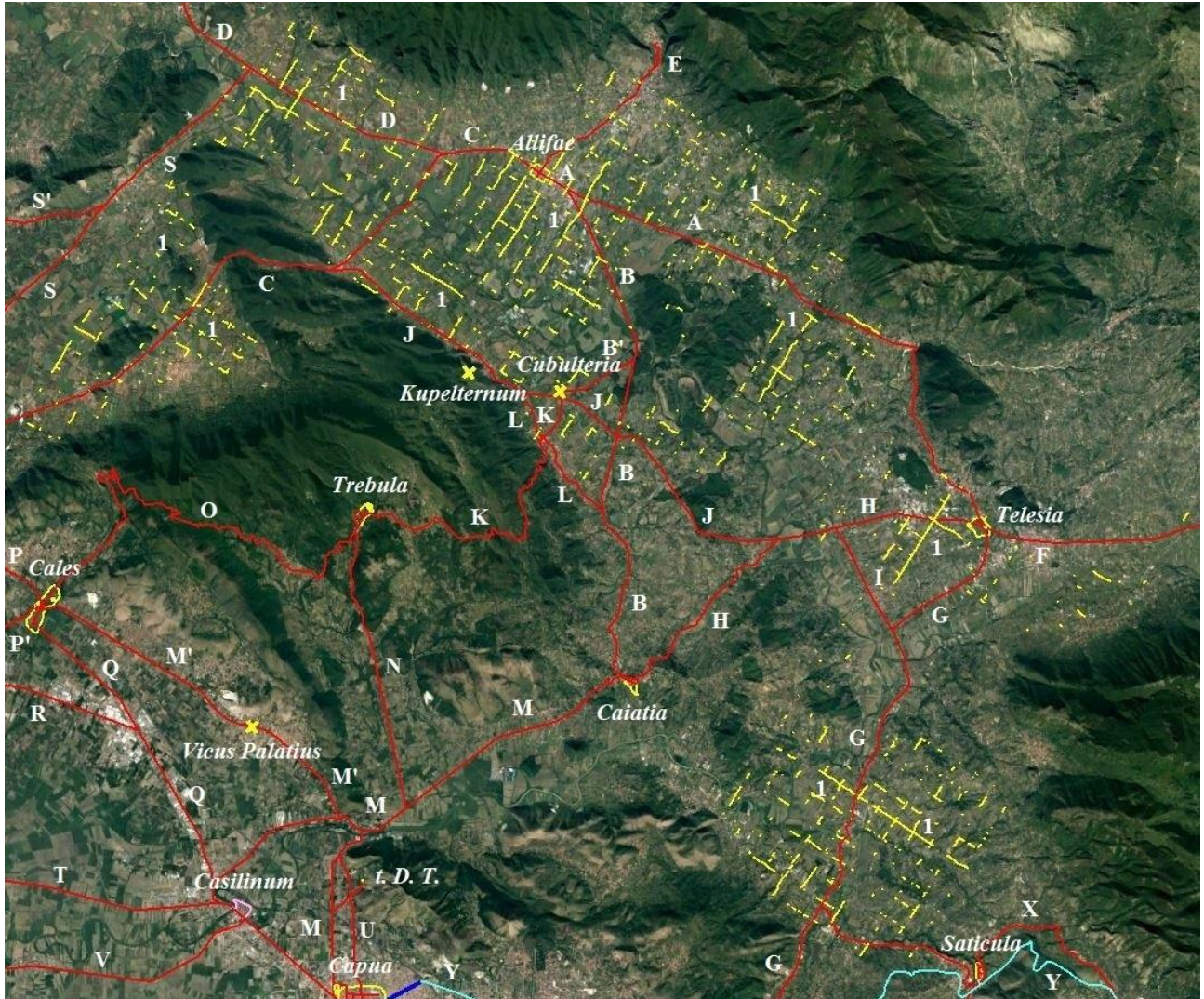


Fig. 15D – Persistences of the centuriation of the Middle Volturno.

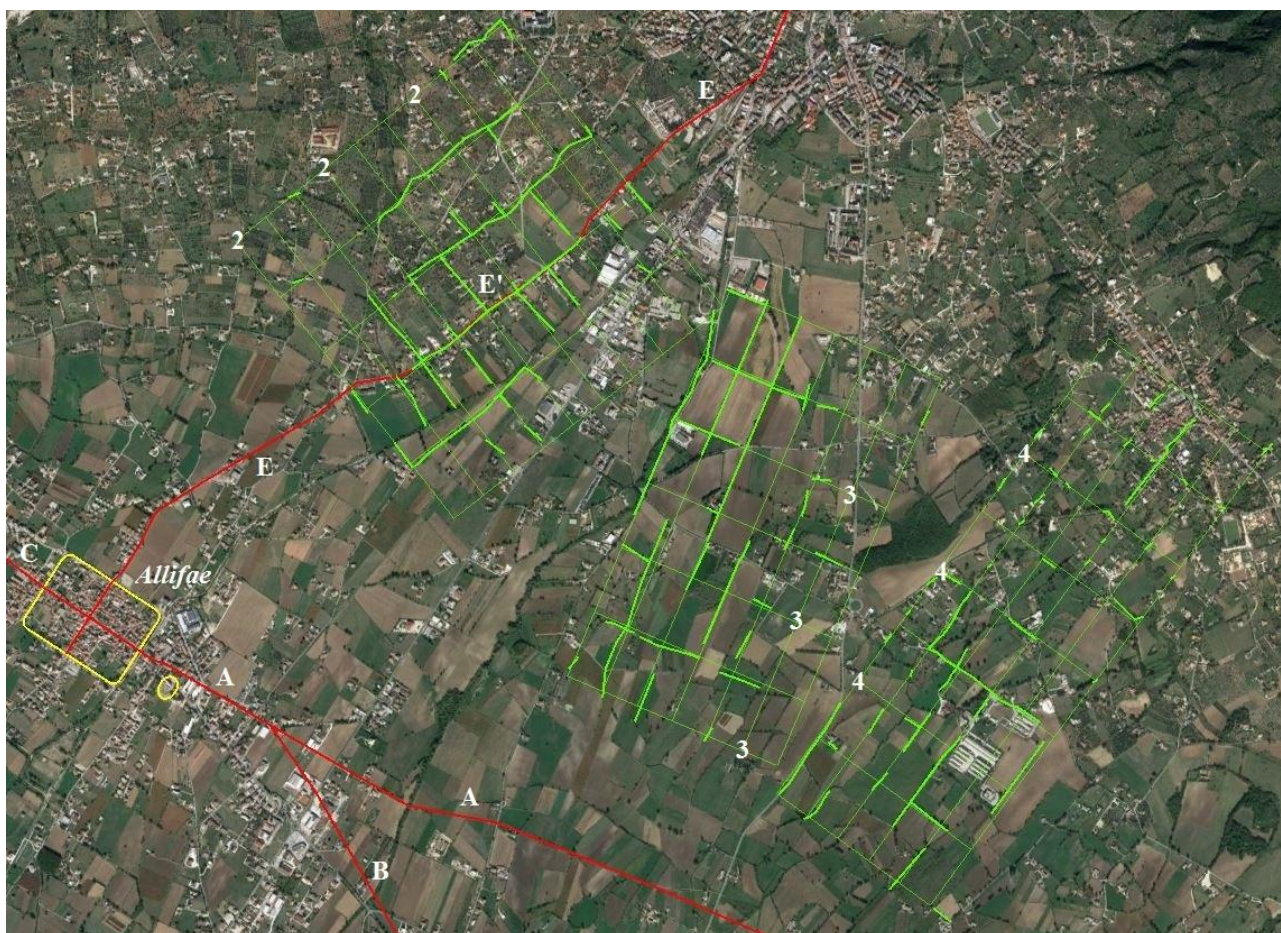


Fig. 15E – The centuriation *Allifae I*, divided into three parts: *Allifae I-a* (2), *Allifae I-b* (3) e *Allifae I-c* (4). Same indications of the preceding figures and, moreover, E' = section of E that coincides with a *limes* of *Allifae I-a*.



Fig. 15F – Persistences of the centuriation *Allifae I*.

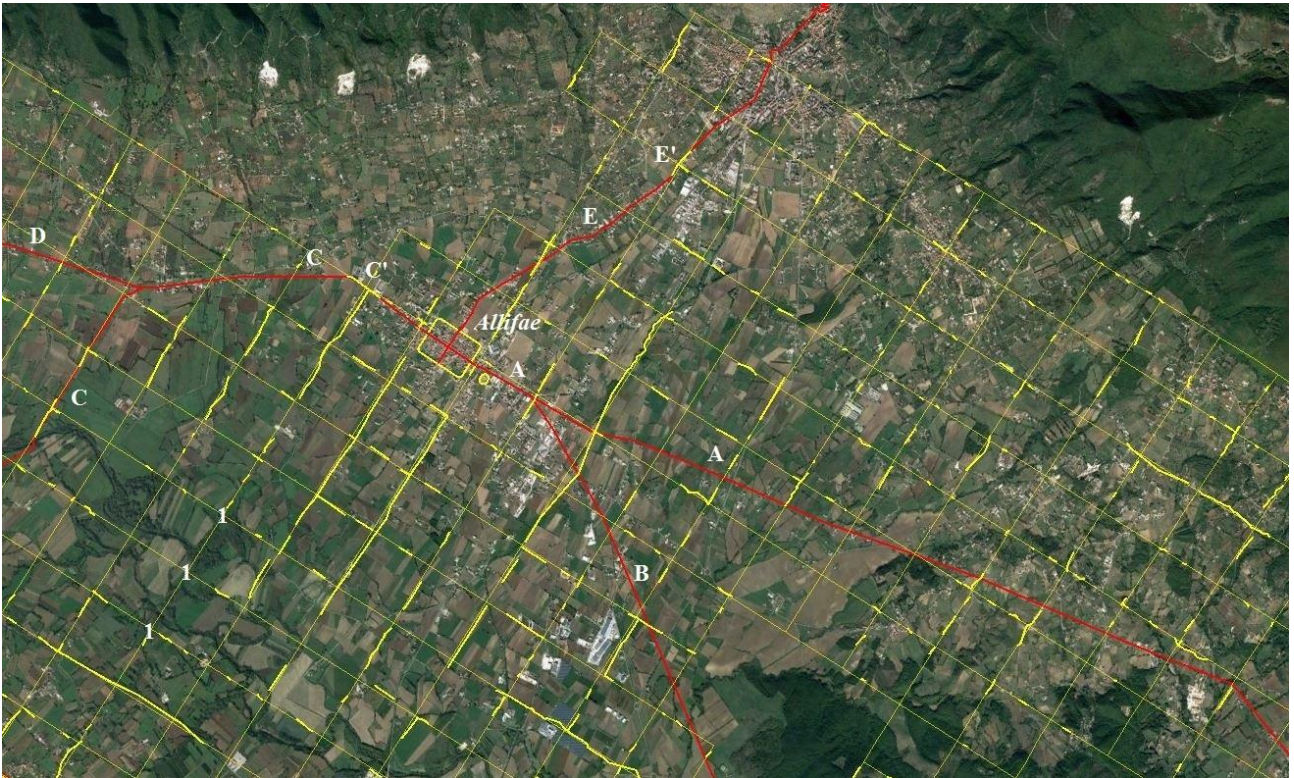


Fig. 15G – The centuriation of the Middle Volturno in the area of *Allifae*. Further indications: C' = section of the *via Allifae-Teanum* that coincides with a *limes* of the centuriation; E' = section of E that coincides with a *limes* of the centuriation.



Fig. 15H – Persistences of the centuriation of the Middle Volturno in the area of *Allifae*. Same indications of the preceding figure.

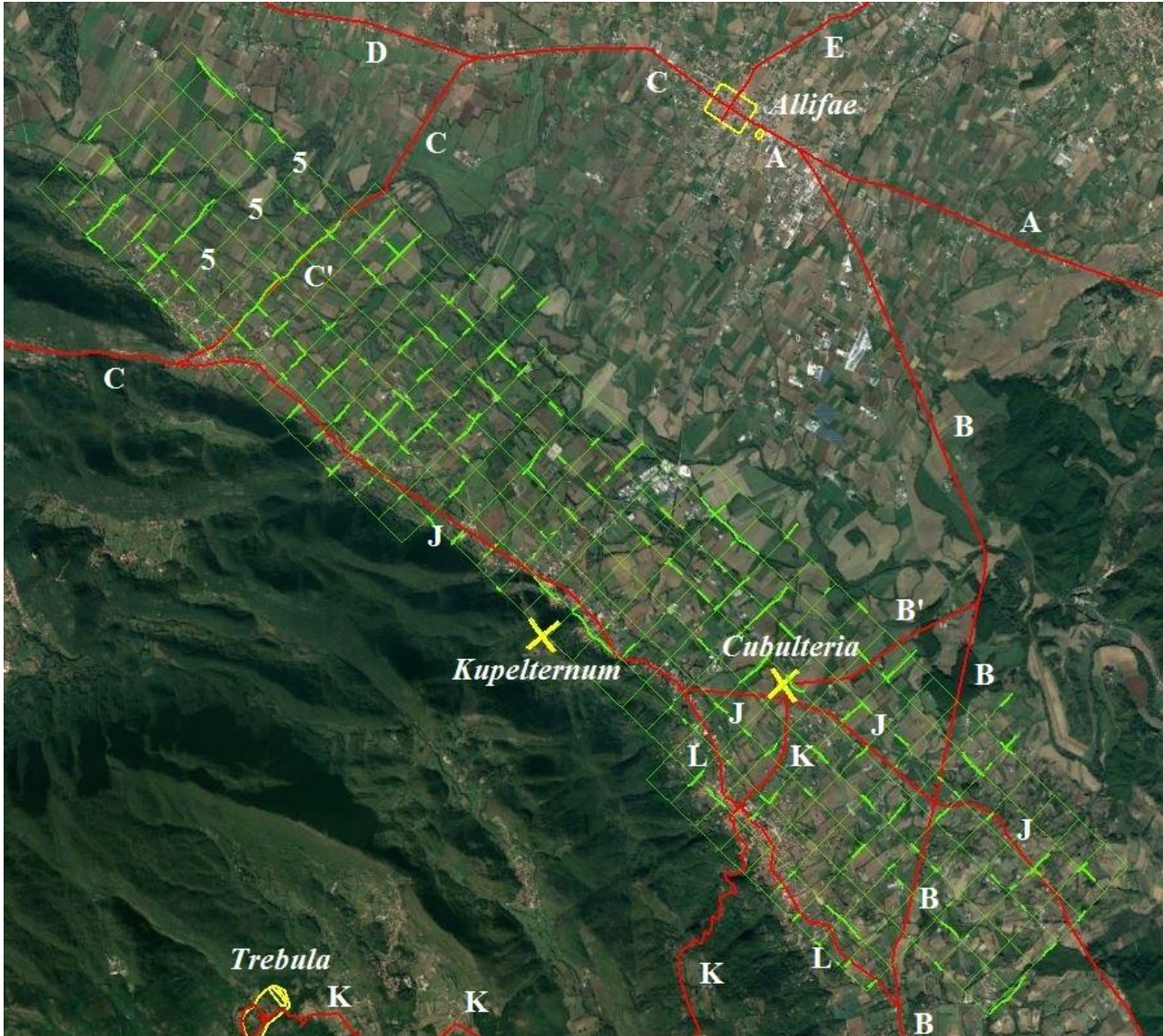


Fig. 15I – The centuriation of *Cubulteria* (5, *Cubulteria*, III or II sec. b.C.?, 12 x 12 *actus* – 425.76 x 425.76 m -, inclination 44° 00' E). Example of a centuriation oriented according to the greater extent of its territory. *Cubulteria* is not mentioned in the *Liber Coloniarum*. The place indicated as site of *Cubulteria* is not sure while that of *Kupulternum*, the centre in its pre-roman location, appears sure. Other indications as for the preceding figures and, moreover, C' = section of the *via Allifae-Teanum* that coincides with a *limes* of the centuriation *Cubulteria*.

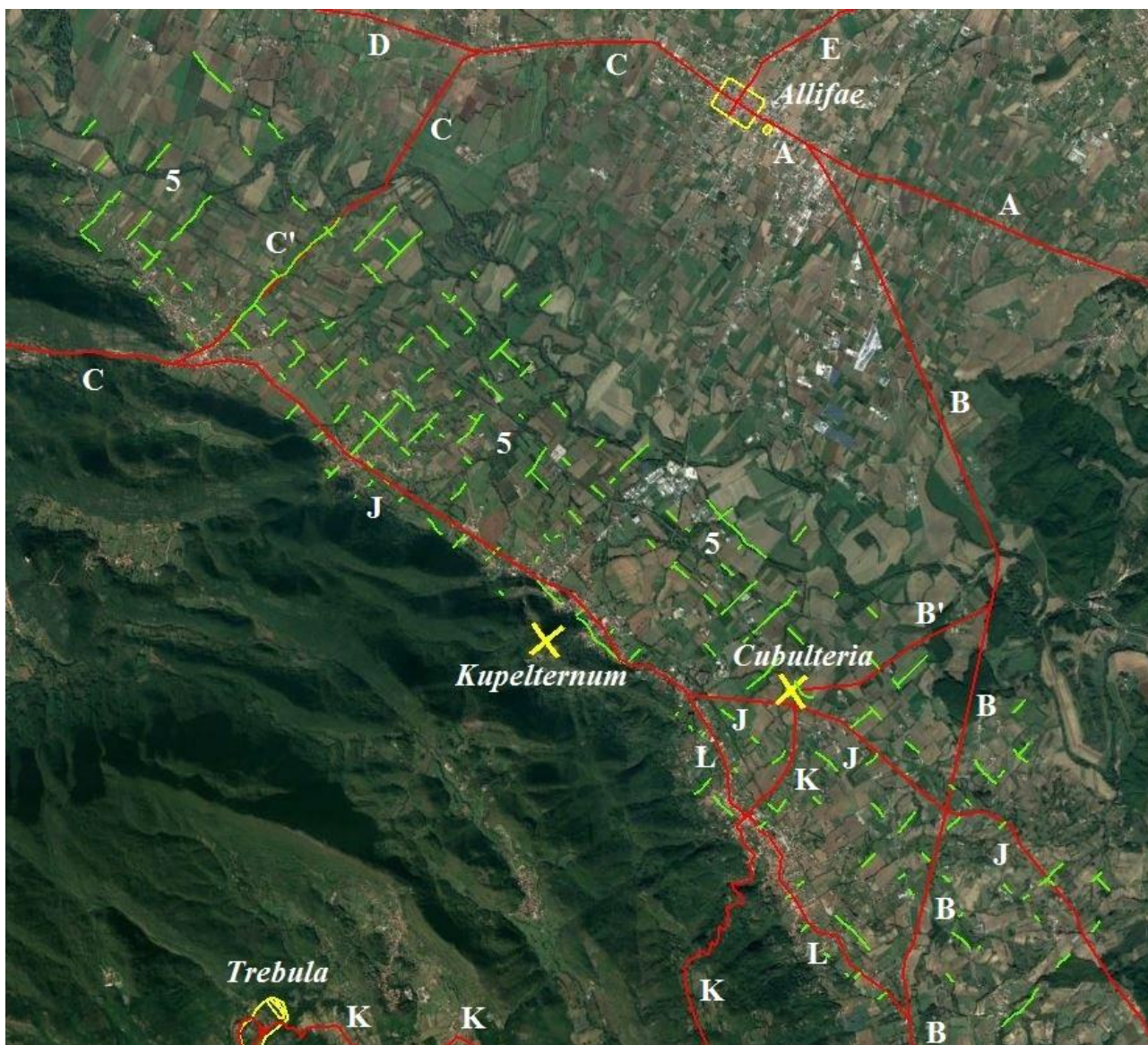


Fig. 15J – Persistences of the centuriation *Cubulteria*.

[5] Beneuentum, muro ducta colonia Concordia. deduxit Nero Claudius Caesar. iter populo non debetur. ager eius lege triumvirale ueteranis est adsignatus.

Beneventum (Benevento), *Concordia* colony surrounded with a wall. *Claudius Nero Caesar* founded it. No right of way is due to the community. Its land was allocated to veteran soldiers under a triumviral law (fig. 2).

<p>Bovianum, oppidum. lege Iulia milites deduxerunt sine colonis. iter populo debetur ped. X. ager eius per [10] centurias et scamna est adsignatus.</p>	<p><i>Bovianum Undecimanorum</i> (Boiano), fortified town. The soldiers founded it under <i>lex Iulia</i> without colonists. A right of way of X feet is due to the community. Its land was allocated per <i>centuriae</i> and <i>scamna</i> (fig. 16).</p>
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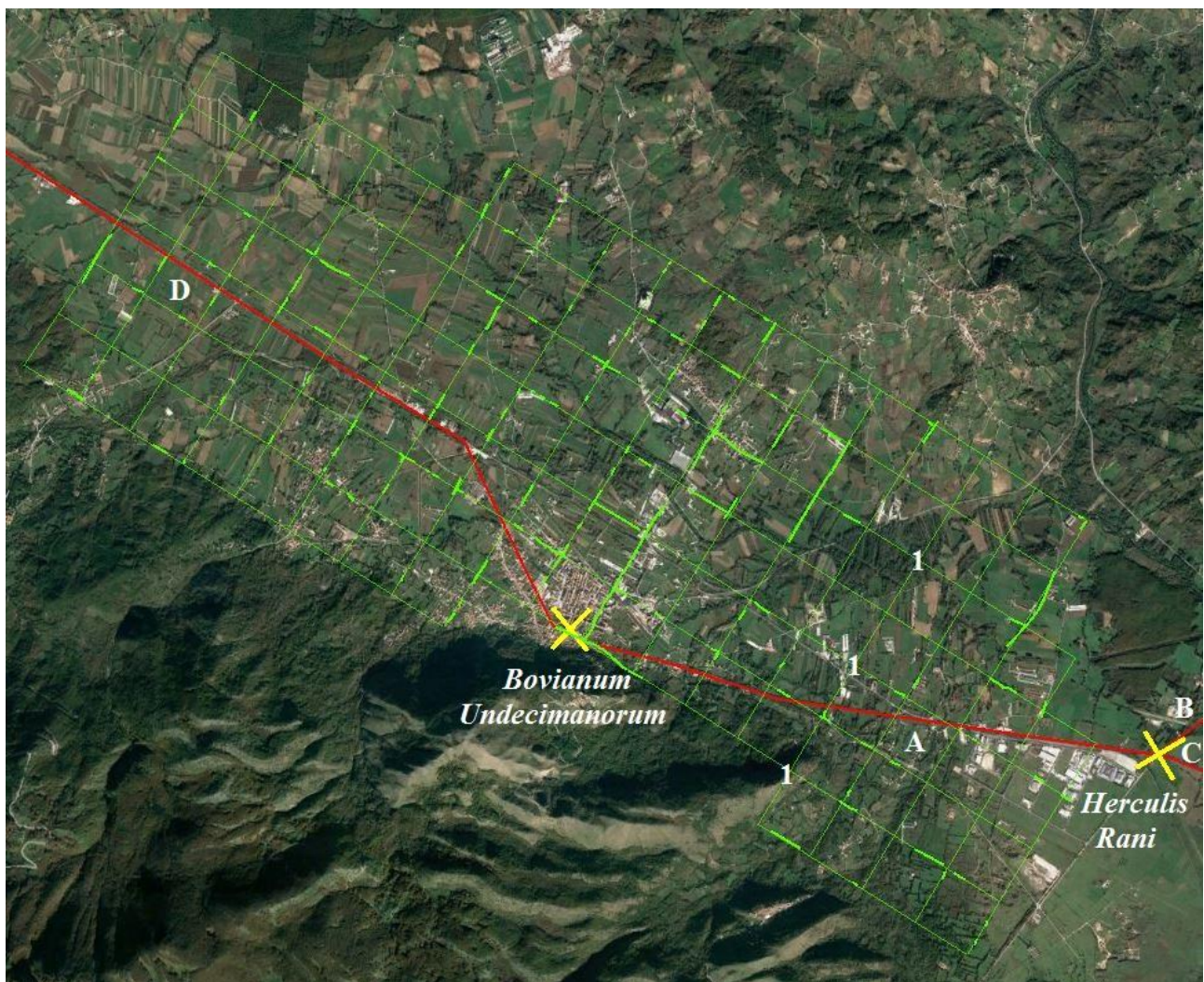


Fig. 16A – The land of *Bovianum Undecimanorum* was divided by a centuriation (1, *Bovianum Undecimanorum II*, Augustan, 16 x 16 actus – 567.68 x 567.68 m -, inclination 33° 00' E). Chouquer *et al.* describe another centuriation (*Bovianum Undecimanorum I*) with the same inclination but irregular and badly definable [Chouquer *et al.* 1987] and that therefore has not been reported here. Other indications: A = via *Bovianum-Herculis Rani*; B = via *Herculis Rani-Kalena-Larinum*; C = via *Herculis Rani-Saepinum*; D = via *Bovianum-Cluturnum-Aesernia*.

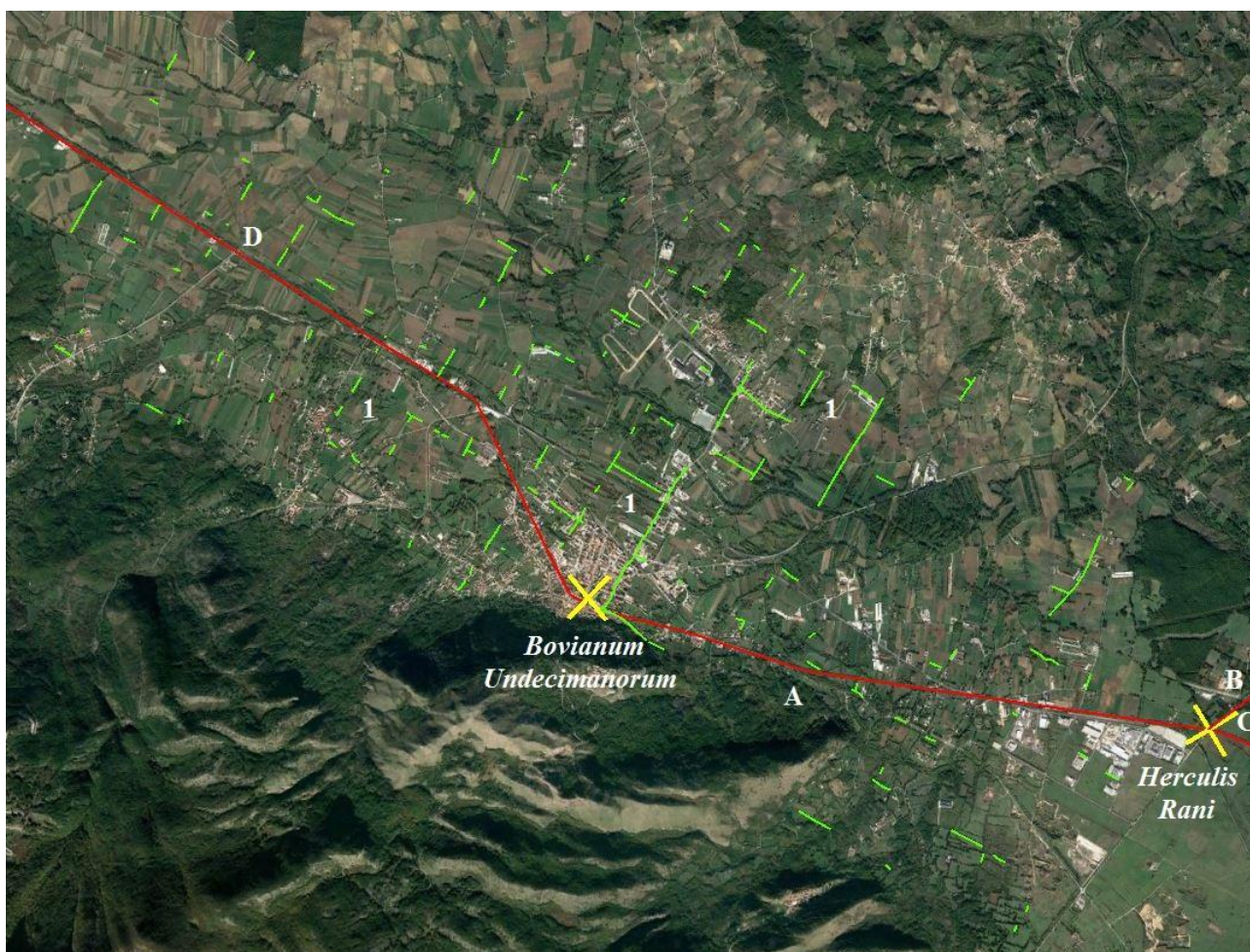


Fig. 16B – Persistences of the centuriation *Bovianum Undecimanorum II*. Same indications of the preceding figure.

Bobillae, oppidum. lege Sullana est circum ducta. iter populo non debetur. agrum eius ex occupatione milites ueterani tenuerunt in sorte.

Bovillae (Frattocchie, hamlet of Rome), fortified town, surrounded with a wall under *lex Sullana*. No right of way is due to the community. The veteran soldiers held its land in lot as a result of appropriating it (fig. 17).

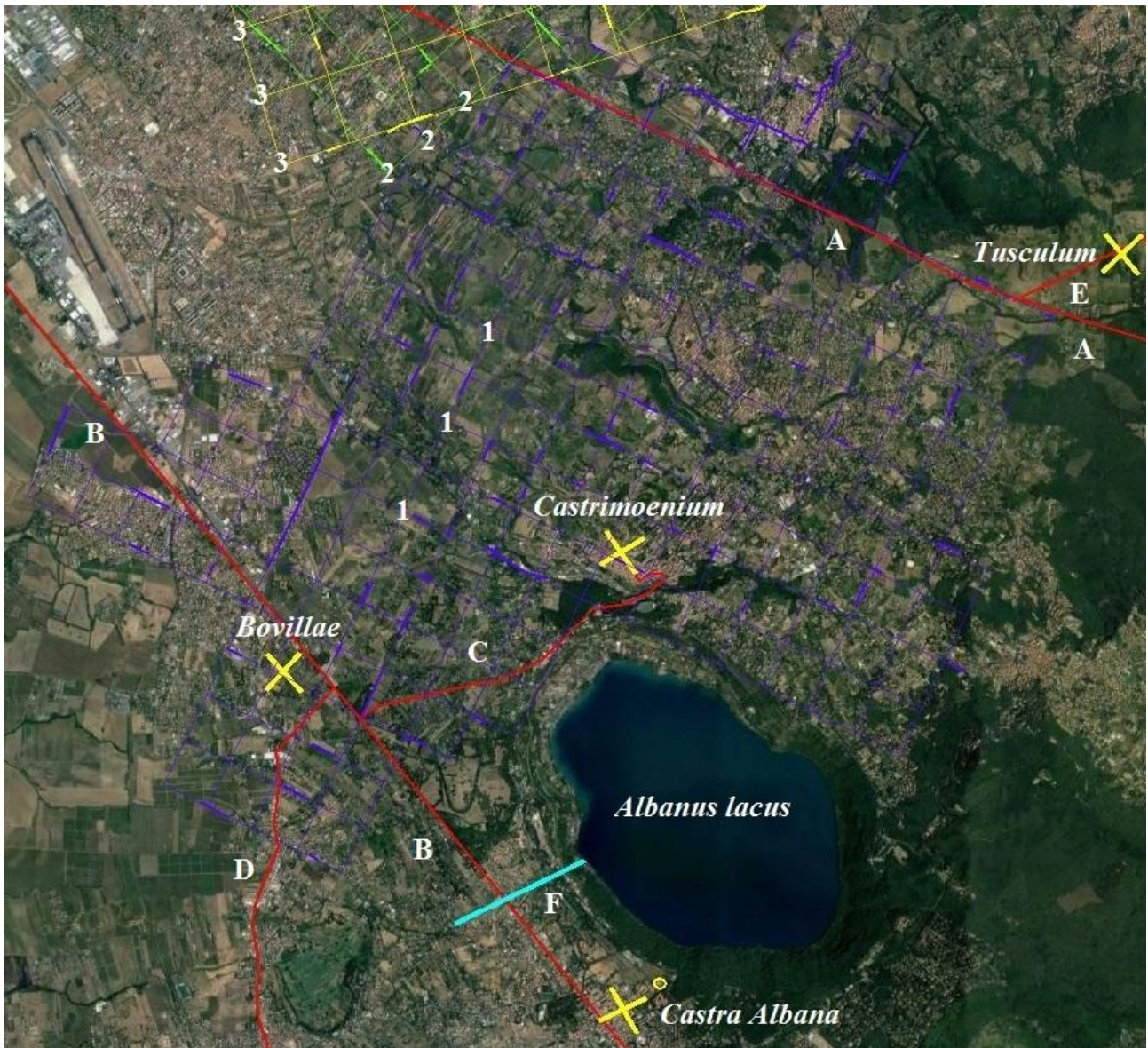


Fig. 17A – The lands of *Bovillae*, *Castrimoenium* and *Tusculum* were divided and allocated by the centuriation *Bovillae-Tusculum* (1, Sullan, 14 x 14 *actus* – 496.72 x 496.72 m -, inclination 25° 30' E). Other indications: 2 = centuriation *Collatia-Gabii*; 3 = centuriation *Campi Tiberiani*; A = *via Latina*; B = *via Appia*; C = branch of the *via Appia* for *Castrimoenium*; D = branch of the *via Appia* for *Antium*; E = branch of the *via Latina* for *Tusculum-Ad Statuas-Praeneste*; F = artificial effluent of the *Albanus lacus*.



Fig. 17B – Persistences in the area of *Bovillae*, *Castrimoenium* and *Tusculum*. Same indications of the previous figure.

Casentium, muro ducta lege triumvirale. iter populo [15] non debetur. ager eius militibus est adsignatus.	<i>Casentium</i> (<i>Caelanum</i> ? ³¹ , Celano), surrounded with a wall under a triumviral law. No right of way is due to the community. Its land was allocated to soldiers.
Calagna, muro ducta colonia. iussu Drusi Caesaris populus deduxit. iter populo non debetur. ager eius ueteranis est adsignatus.	<i>Calagna</i> ³² (Anagni), colony surrounded with a wall. The people founded it by order of <i>Drusus Caesar</i> . No right of way is due to the community. Its land was allocated to veteran soldiers (fig. 13).

Capua, muro ducta colonia Iulia Felix. iussu [20] imperatoris Caesaris a uiginti uiris est deducta. iter populo [L. 232.1] debetur ped. C. ager eius lege Sullana fuerat adsignatus: postea Caesar in iugeribus militi pro merito diuidi iussit.	<i>Capua</i> (S. Maria Capua Vetere), colonia <i>Iulia Felix</i> surrounded with a wall. By order of the emperor <i>Caesar</i> , it was founded by a board of twenty men (<i>vigintiviri</i>). A right of way of C feet is due to the community. Its land had been allocated under a Sullan law: afterwards, <i>Caesar</i> ordered it to be allocated in <i>iugera</i> among the soldiers according to their merits (fig. 18).
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³¹ The place is also in the list of the towns of the *Samnium* (L. 255.6) and is a probable corruption of *Asetium* (L. 230.13). Regarding the identification of this place in *Caelanum* (Celano), see [Libertini 2017] and the figures related to *Alba Fucens*.

³² Repetition of *Anagnia*.

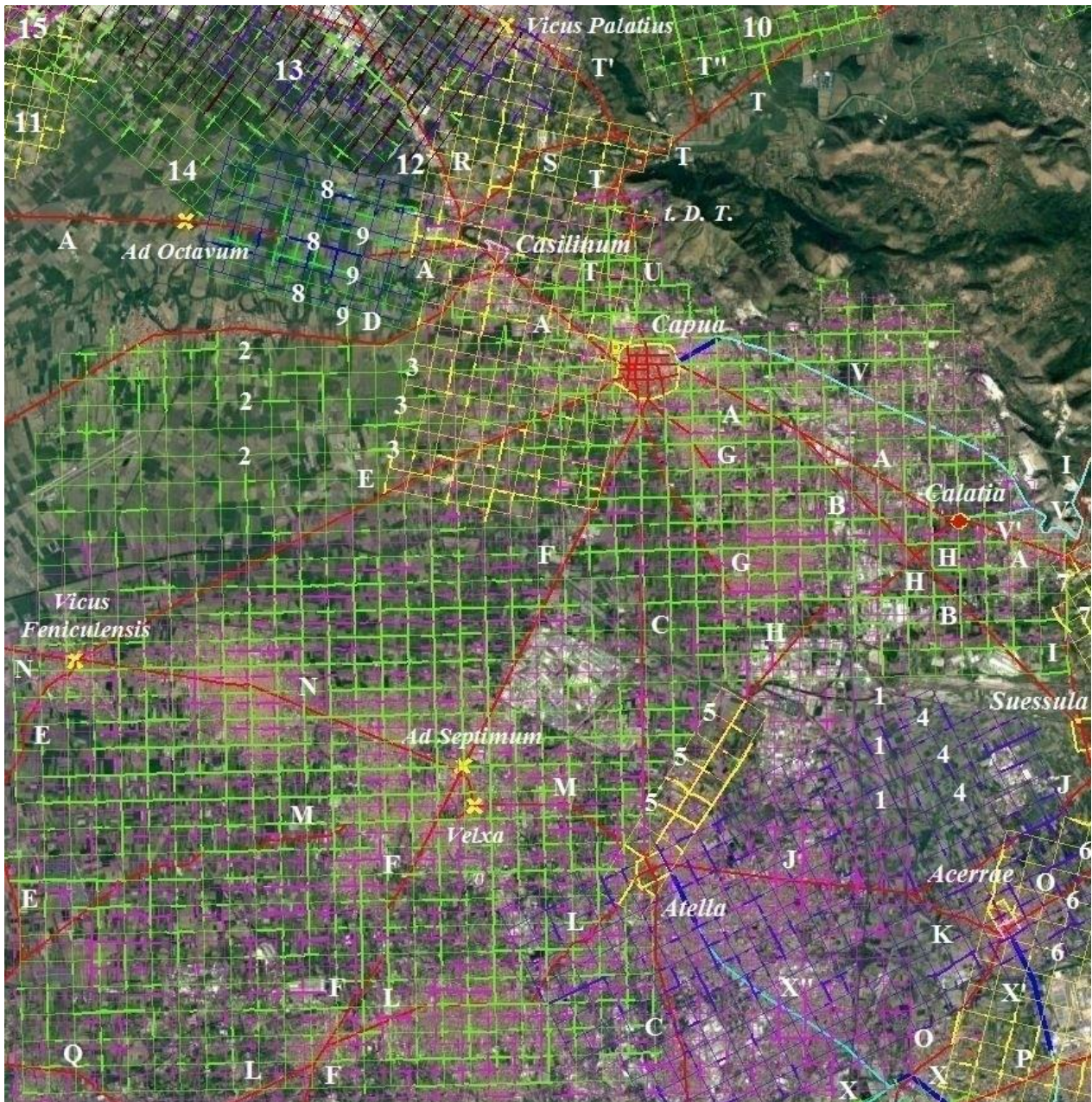


Fig. 18A – *Ager Campanus I* and *Ager Campanus II* (1, *Ager Campanus I*, Gracchan, 20 x 20 *actus* – 705 x 705 m -, inclination 00° 10' E; 2, *Ager Campanus II*, Sullan and Caesarean, 20 x 20 *actus* – 706 x 706 m -, inclination 00° 26' W) were the main centuriations regarding the land of *Capua*. The *Ager Campanus II* had the decuman facing south and the *kardo* facing east, as stated in [L. 29.5]. Other indications: 3 = centuriation *Capua-Casilinum*; 4 = centuriation *Acerrae-Atella I*; 5 centuriation *Atella II*; 6 = centuriation *Nola III*; 7 = centuriation *Suessula*; 8, 9 = centuriations *Ager Stellatis I e II*; 10 = centuriation *Trebula*; 11 = centuriation *Ager Falernus II*; 12 = *strigatio Cales I*; 13-14 = centuriations *Cales II e III*; 15 = centuriation *Teanum-Cales IV*; t. D. T. = *templum Dianae Tifatinae*; A = *via Appia*; B = *via Popilia*; C = *via Capua-Atella-Neapolis*; D = *via Casilinum-Volturnum*; E = *via Capua-Vicus Feniculensis-Liternum*; F = *via Capua-Ad Septimum Puteoli*; G = secondary roads from *Capua* to the surrounding fields; H = *via Calatia-Atella*; I = *via Suessula-Telesia*; J = *via Atella-Suessula*; K = branch of J for *Acerrae*; L = *via Atella-Cumae*; M = *via Atella-Velxa-Liternum*; N = branch of M for *Ad Septimum-Vicus Feniculensis-Volturnum*; O = *via Neapolis-Acerrae-via Popilia*; P = *via Neapolis-Nola*; Q = *via Liternum-Ad Quartum-Neapolis?*; R = *via Latina*; S = branch of R that reaches T'; T = *via Capua-Caiatia*; T' = branch of T for *vicus Palatius* and *Cales*; T'' = branch of T for *Trebula*; U = *via Capua-Temple of Diana Tifatina* (today's church of S. Angelo in Formis); V = Augustan aqueduct of *Capua*; V' = branch of V for *Calatia*; X = Augustan aqueduct of the *Serino*; X' = branch of X for *Acerrae*; X'' = branch of X for *Atella*. About the route of the Augustan aqueducts of the *Serino* and of *Capua*, in this and in other figures, s. [Libertini *et al.* 2017a, 2017b, 2017c; Lorenz *et al.* 2017]. Same indications for the following figures too.

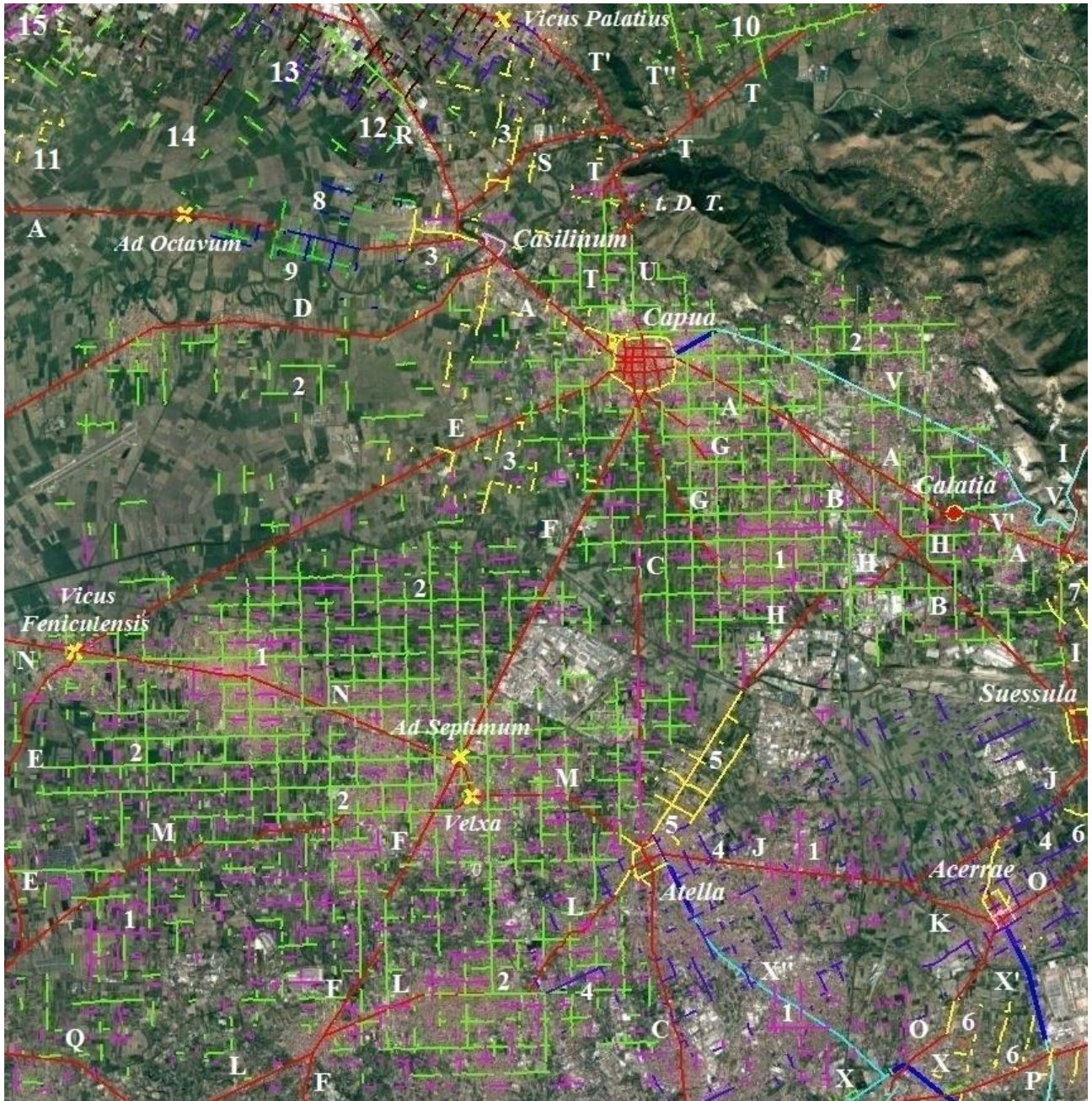


Fig. 18B – Persistences in the area of *Capua*.

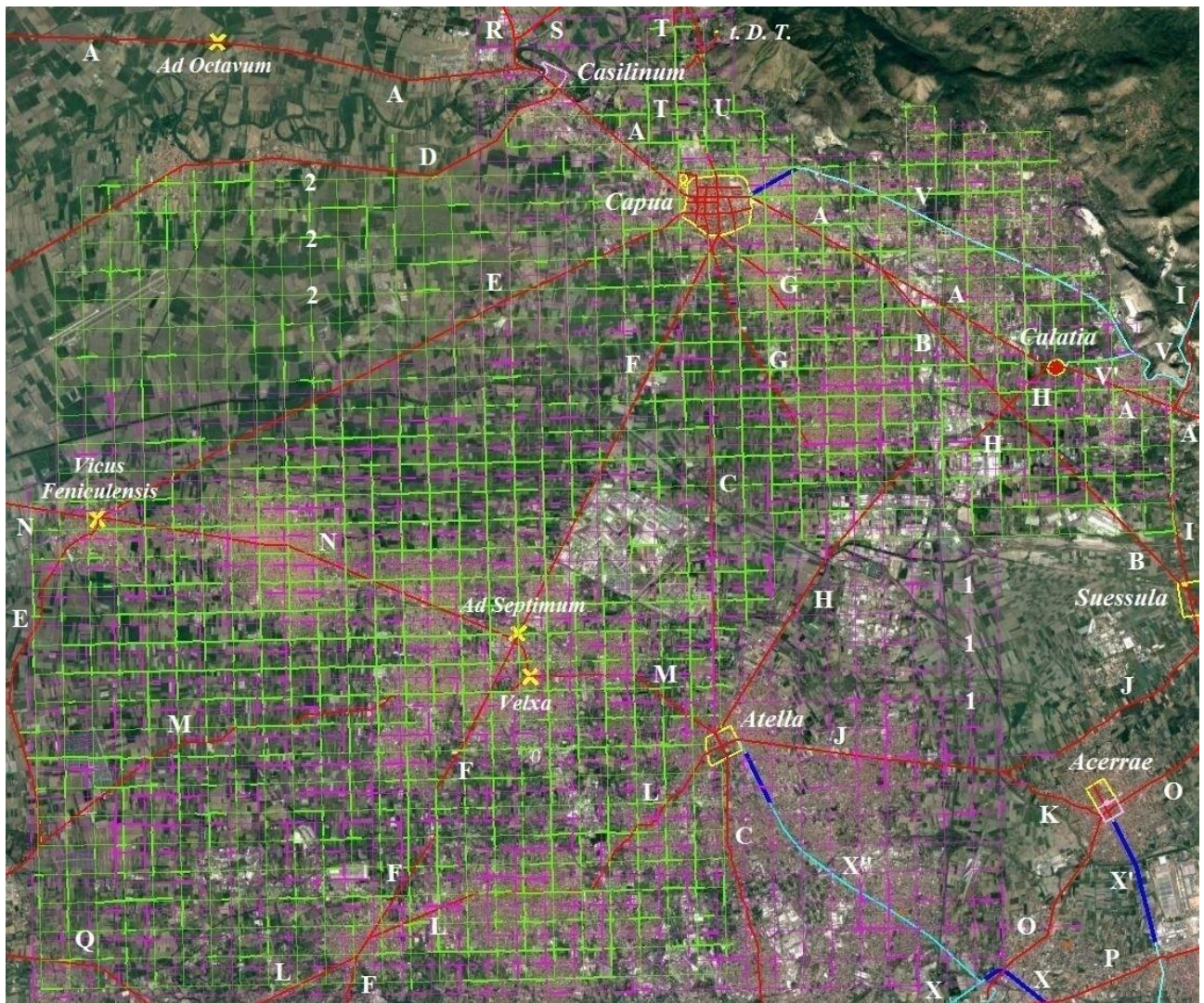


Fig. 18C – The centuriations *Ager Campanus I* and *II*.

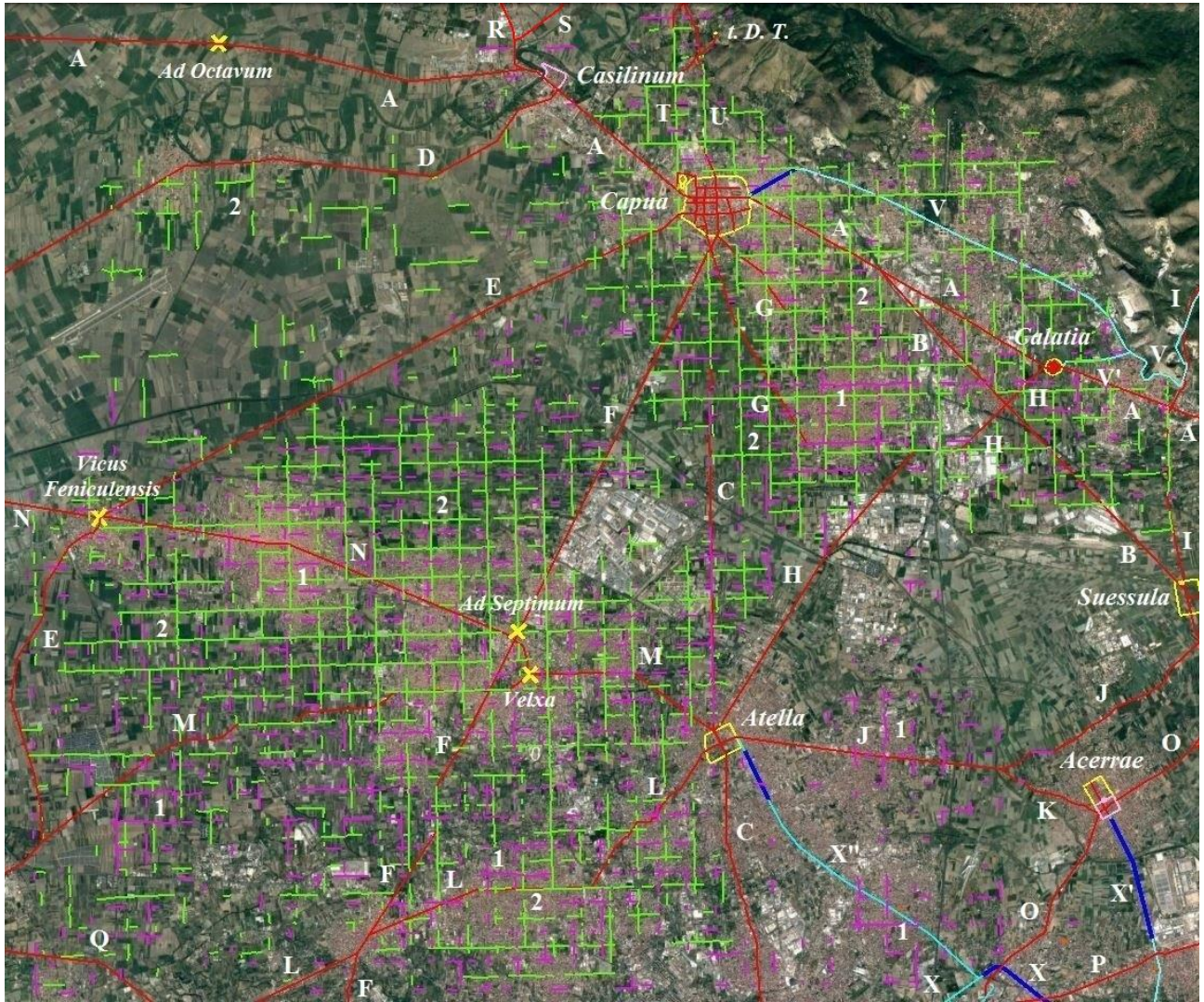


Fig. 18D – Persistences of the centuriations *Ager Campanus I* and *II*.

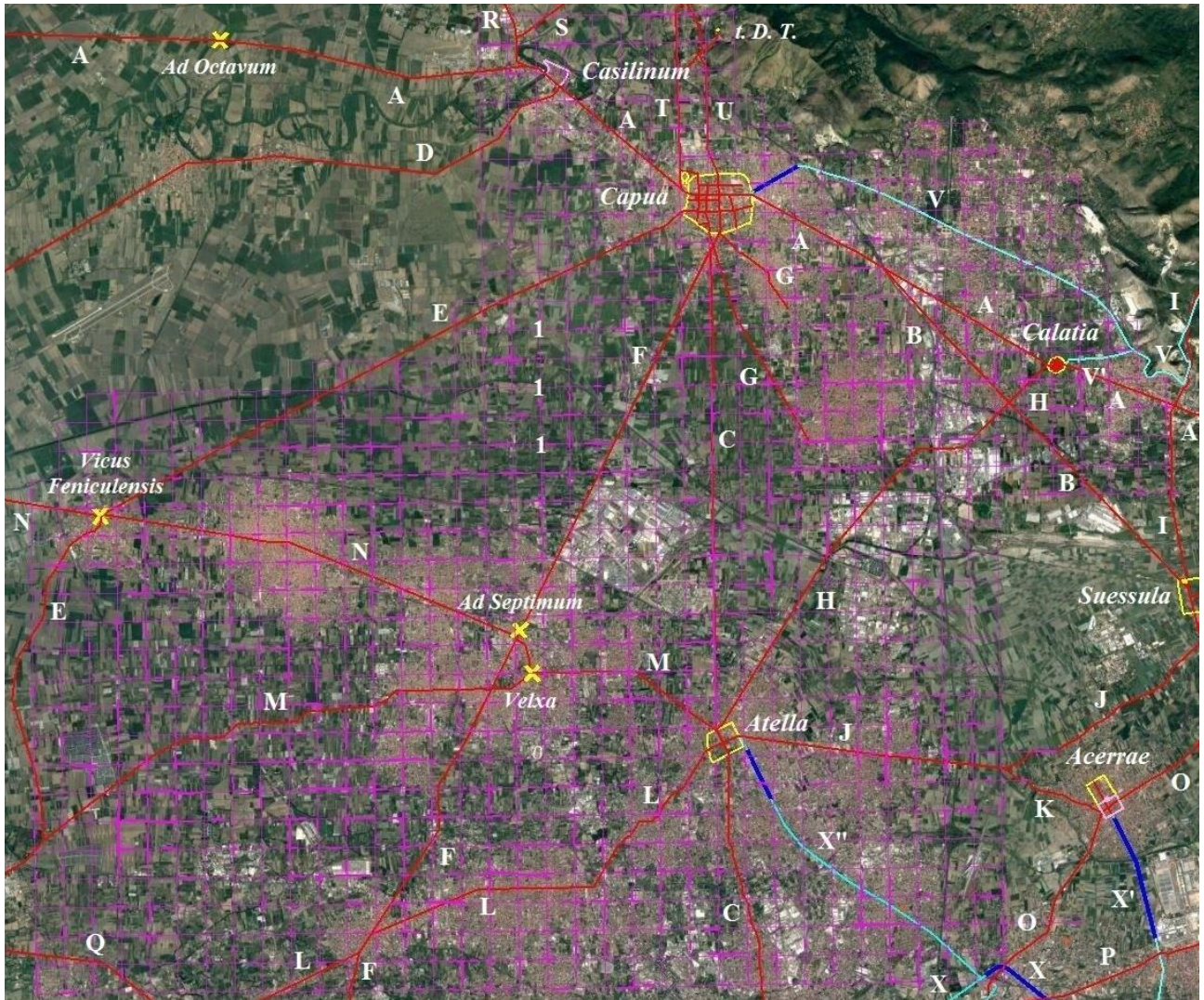


Fig. 18E – The centuriation *Ager Campanus I*.

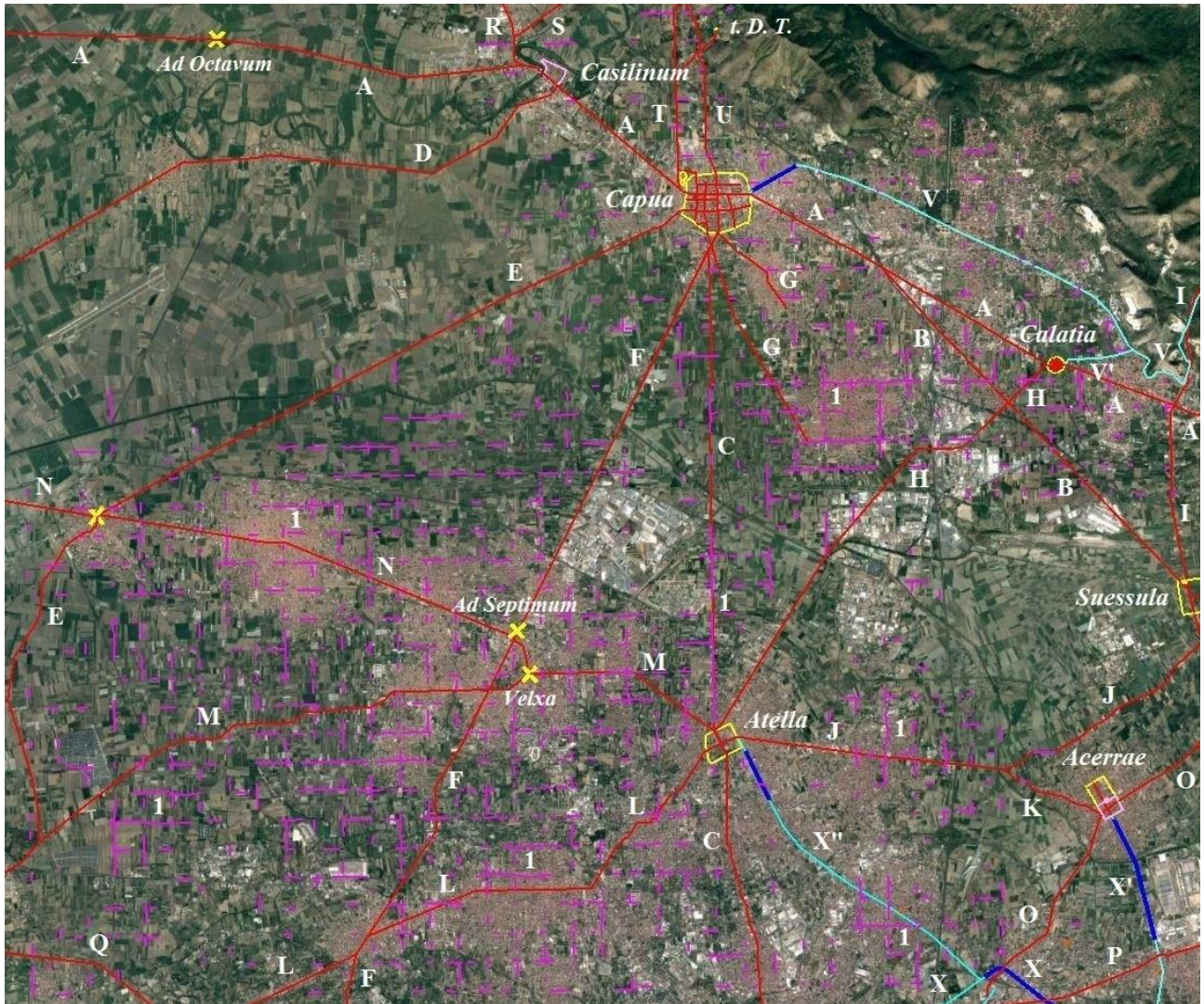
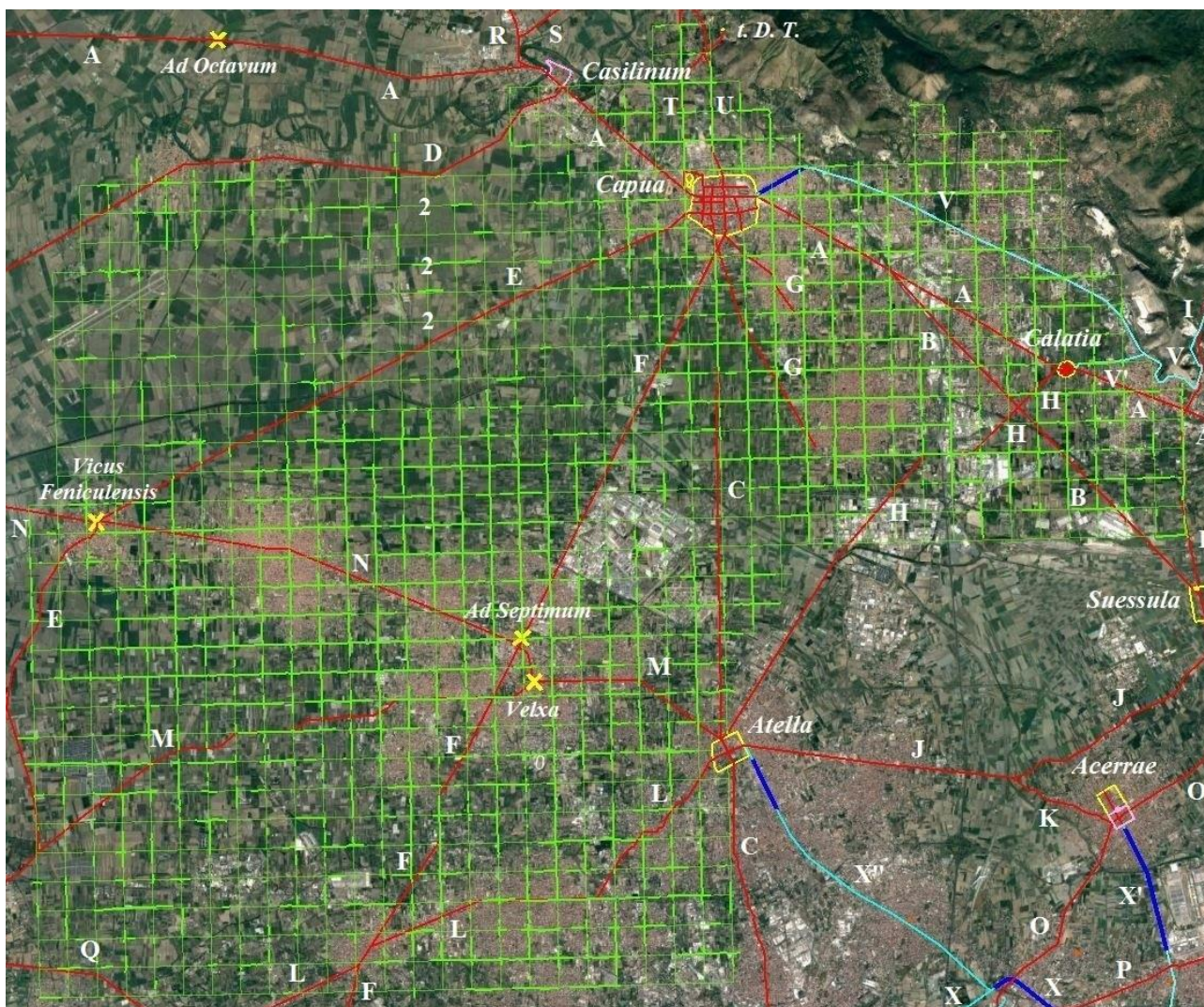


Fig. 18F – Persistences of the centuriation *Ager Campanus I*.



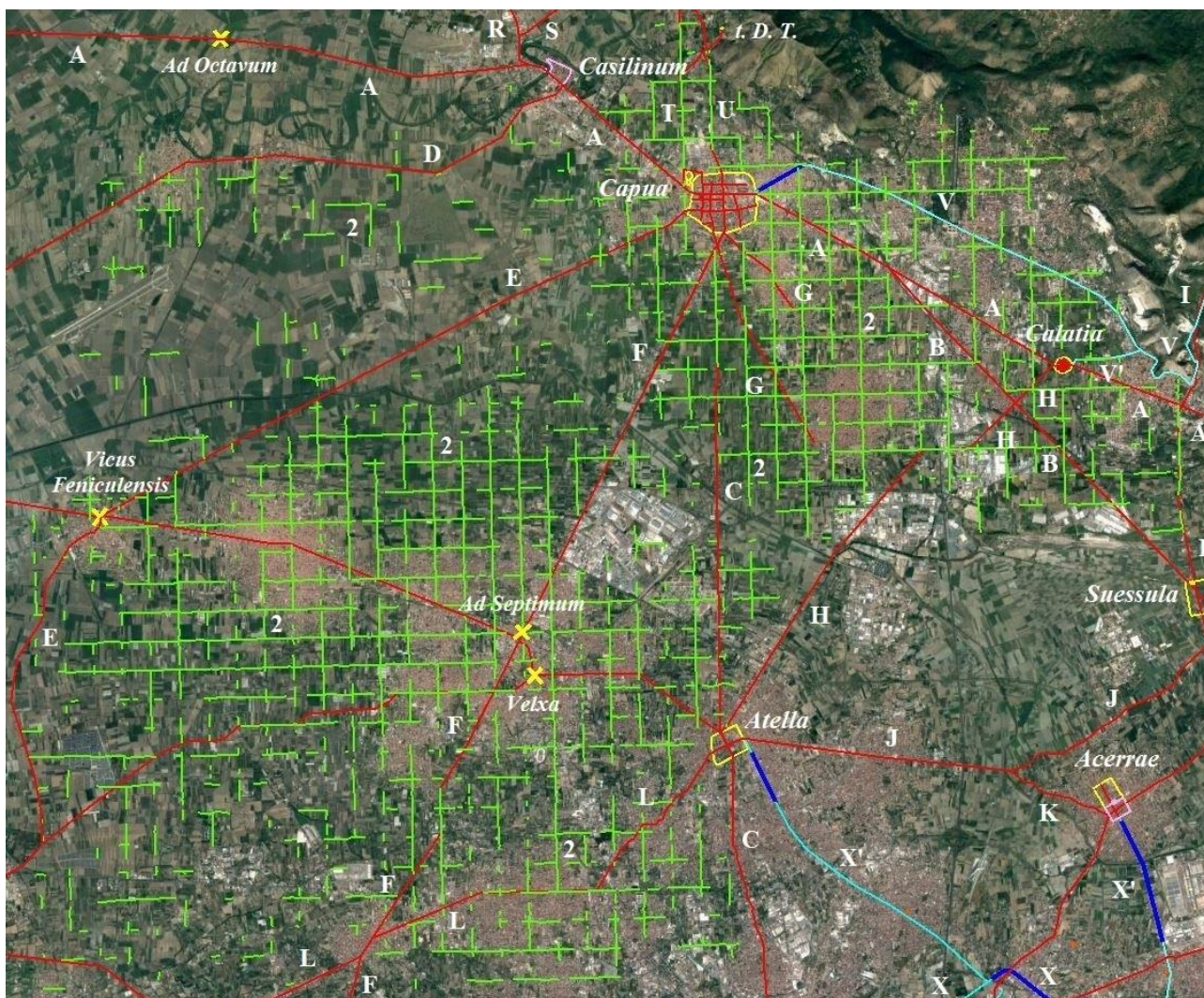


Fig. 18H – Persistences of the centuriation *Ager Campanus II*.

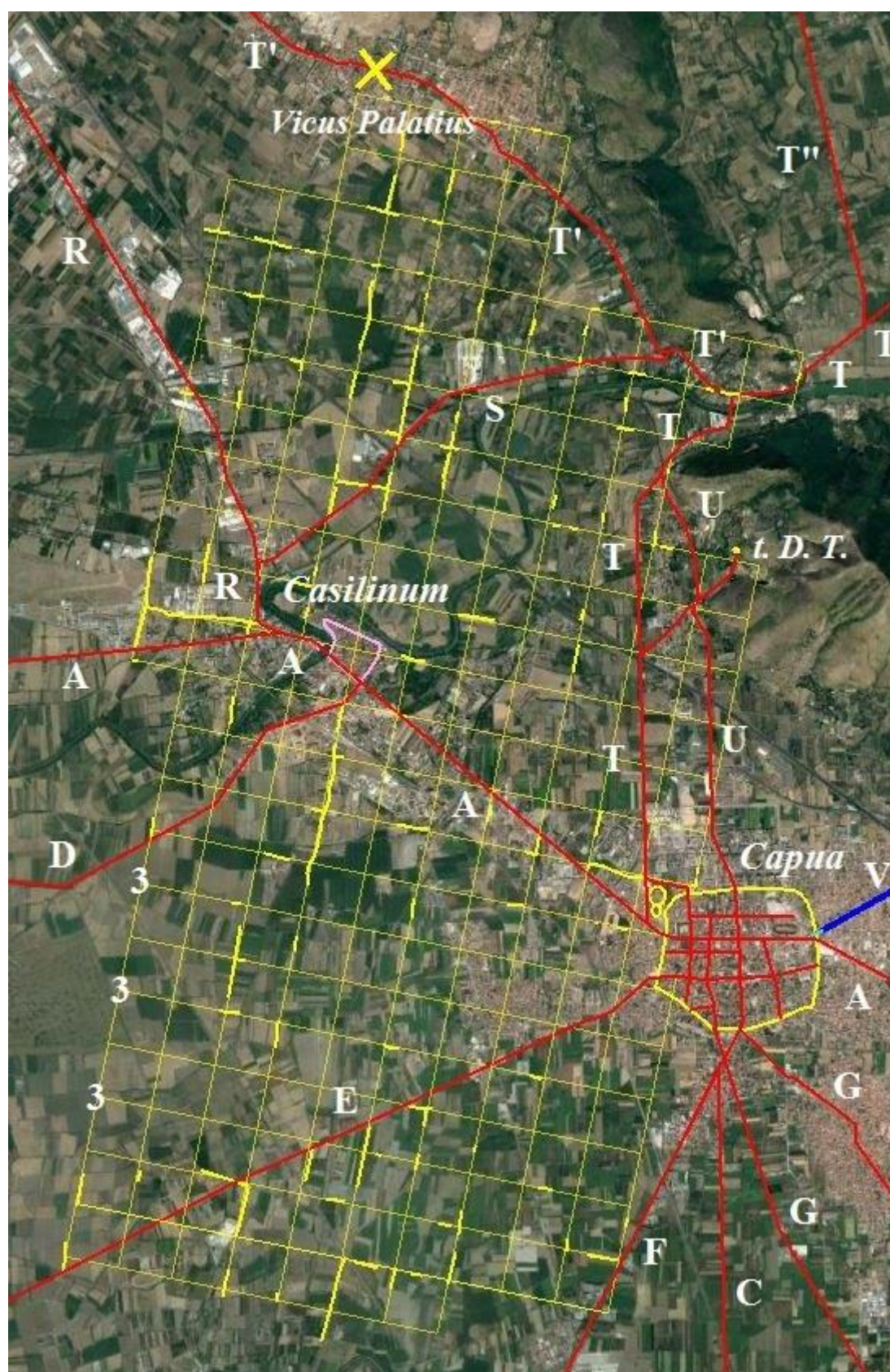


Fig. 18I – The centuriation *Capua-Casilinum*.

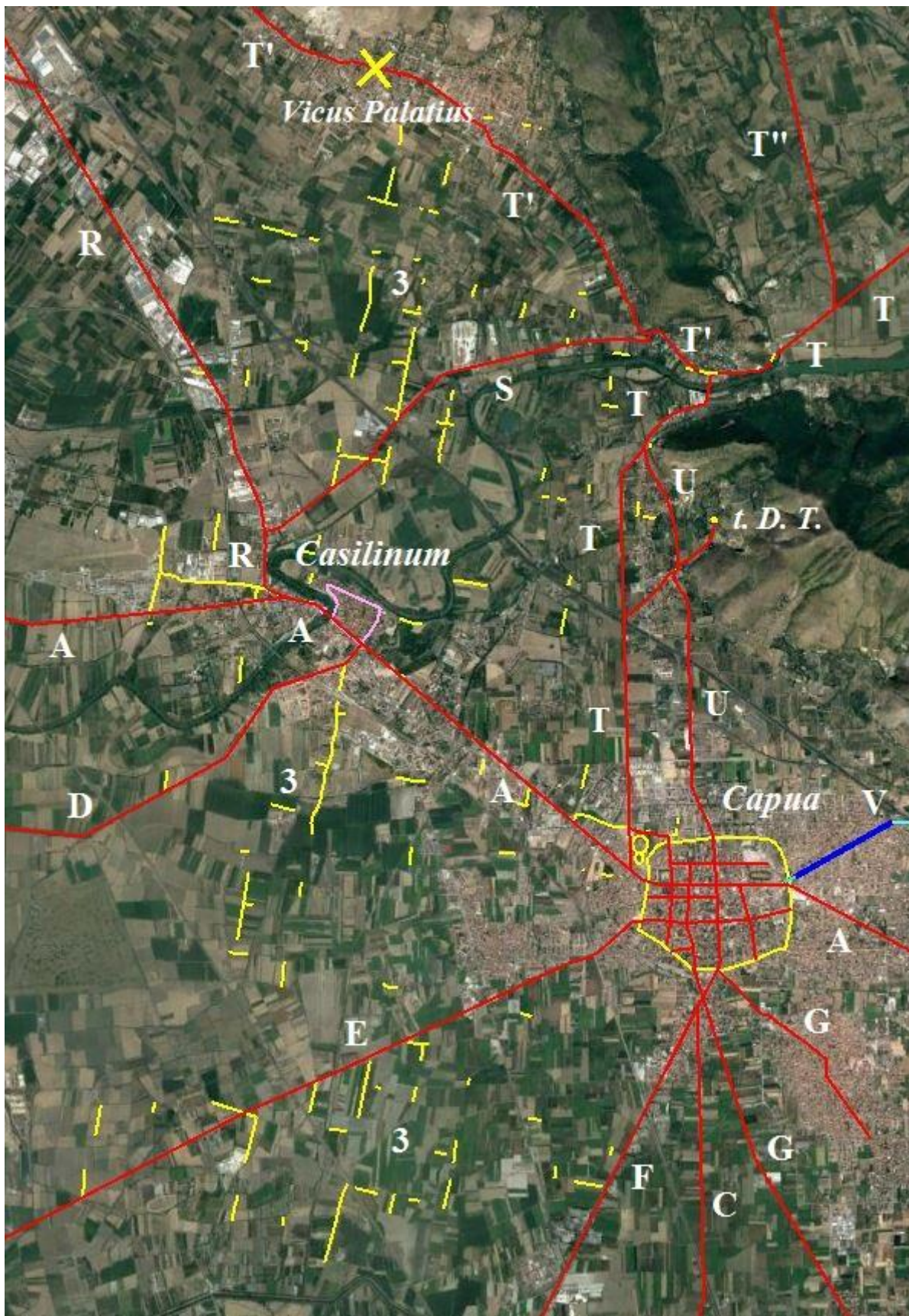


Fig. 18J – Persistences of the centuriation *Capua-Casilinum*.



Fig. 18K – The centuriation *Ager Stellatis I* and *II*. Further indication: A' = section of the *via Appia* (A) that coincides with a *limes* of both centuriations.

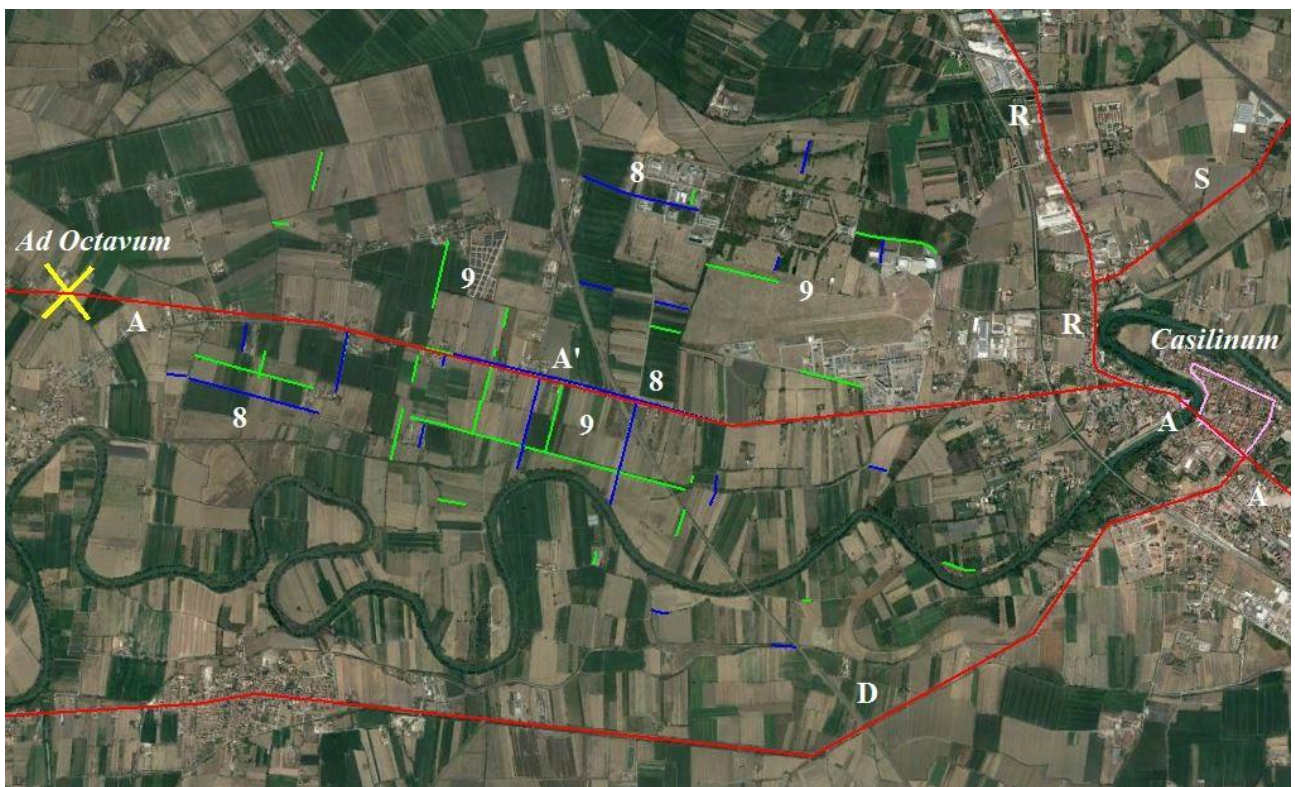


Fig. 18L – Persistences of the centuriations *Ager Stellatis I* and *II*.

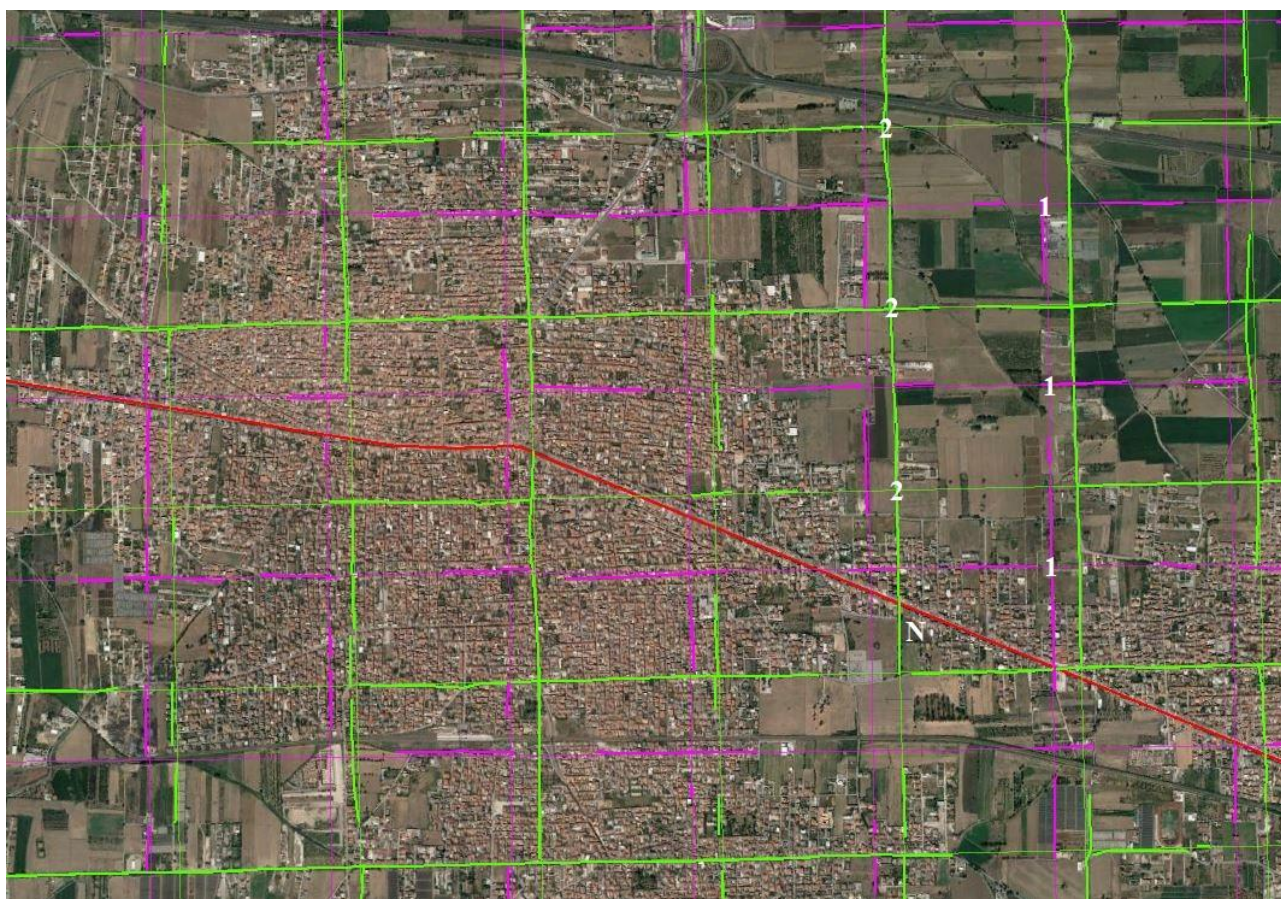


Fig. 18M – Detail of the centuriations *Ager Campanus I* and *II* in the area of Casal di Principe, San Cipriano di Aversa, Frignano d'Aversa, and San Marcellino.

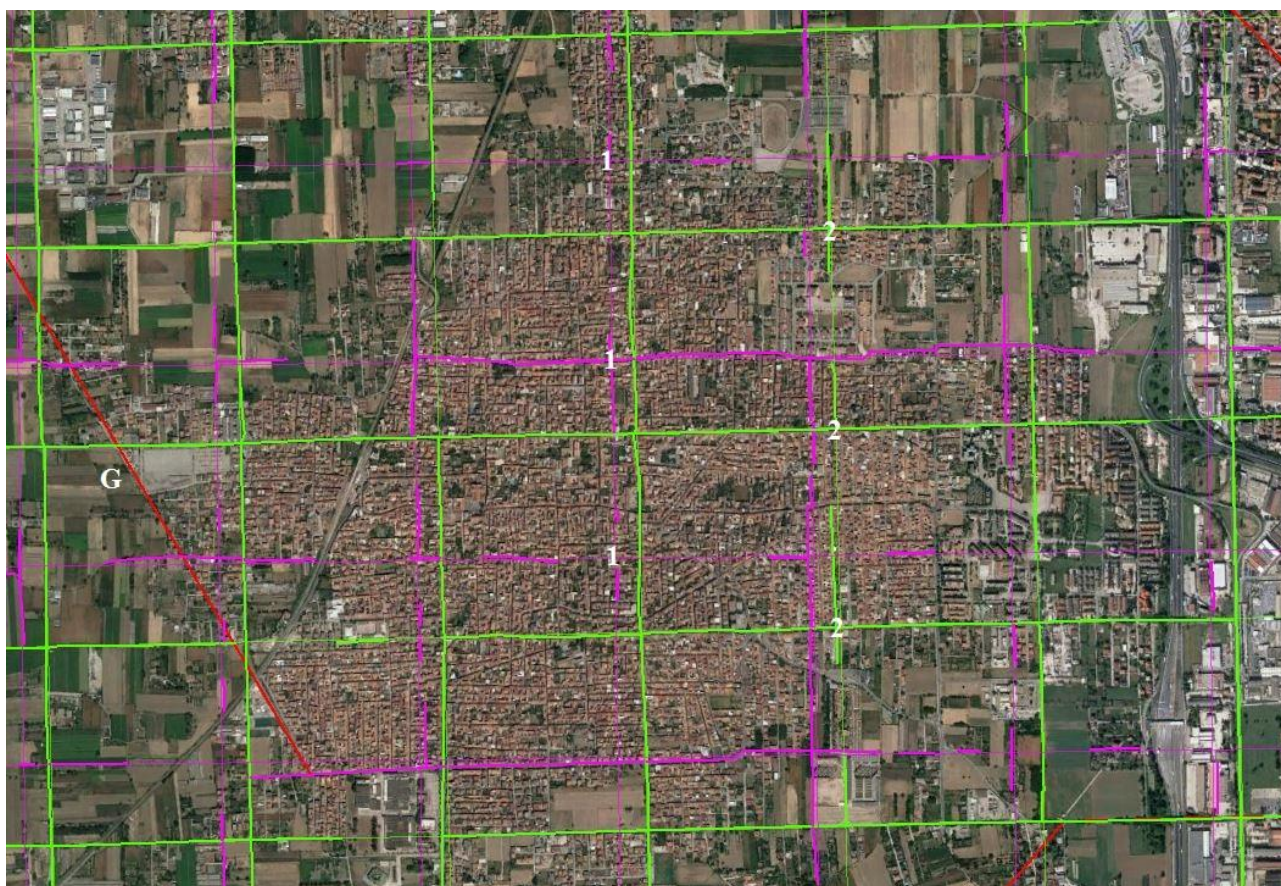


Fig. 18N - Detail of the centuriations *Ager Campanus I* and *II* in the area of Marcianise, Capodrise, Recale, and Portico di Caserta.



Fig. 18O – Detail of the centuriation *Ager Campanus I* in the area of Caivano, Crispano, Cardito and Afragola.

Calatia, oppidum. muro ducta. iter populo debetur ped. LX. coloniae Capuensi a Sulla Felice cum territorio [5] suo adiudicatam olim ob hosticam pugnam.

Calatia (Maddaloni, 2 km west of the town), fortified town surrounded with a wall. A right of way of LX feet is due to the community. The town along with its land was aggregated to the colony of *Capua* by *Sulla Felix* as a consequence of a hostile battle (fig. 19).

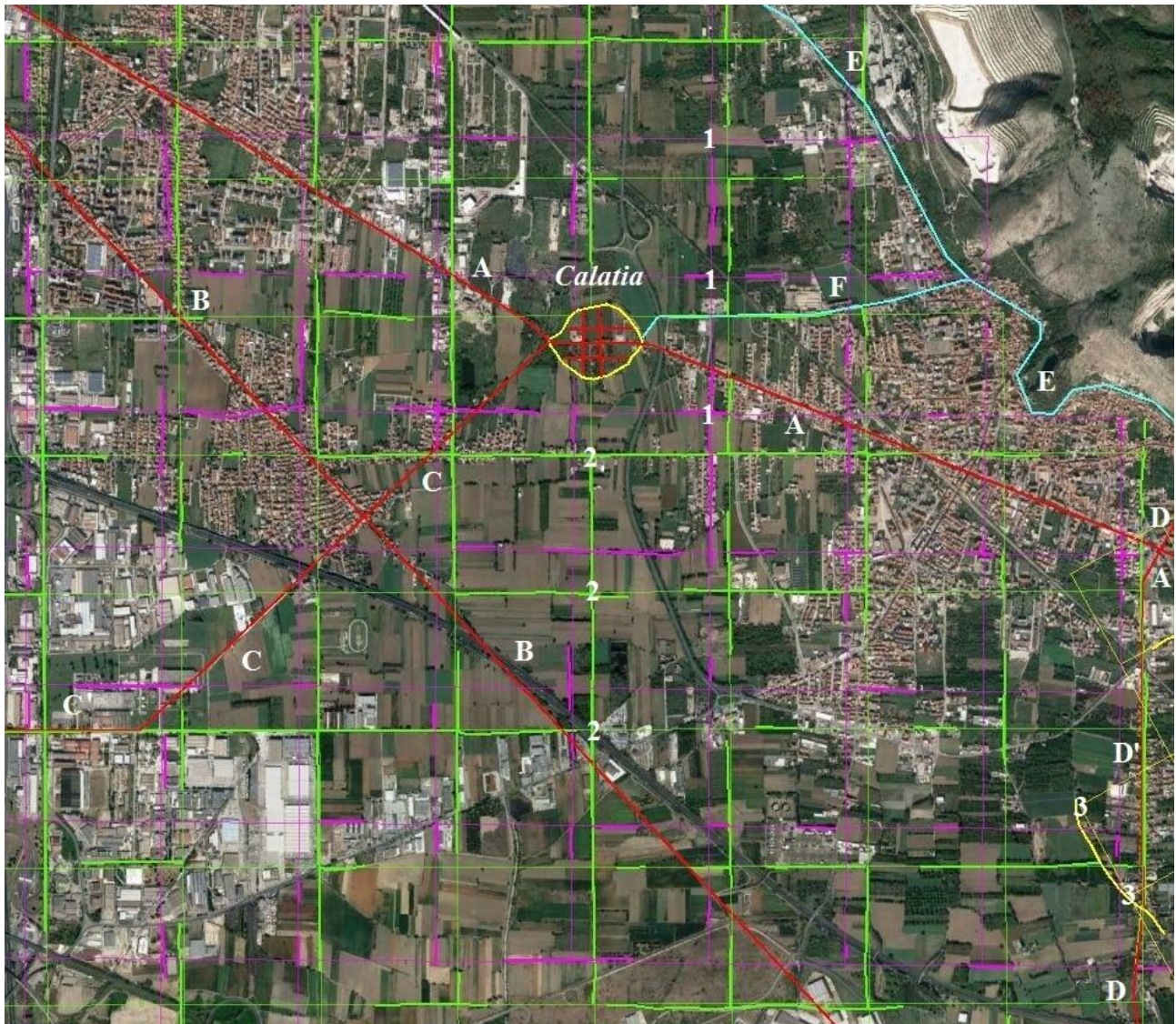


Fig. 19A – The land of *Calatia* was divided by two centuriations (1, *Ager Campanus I*, Gracchan, 20 x 20 *actus* – 705 x 705 m -, inclination 00° 10' E; 2, *Ager Campanus II*, Sullan and Caesarean, 20 x 20 *actus* – 706 x 706 m -, inclination 00° 26' W). Other indications: 3 = centuriation *Suessula*; A = *via Appia*; B = *via Popilia*; C = *via Calatia-Atella*; C' = section of C that coincides with a *limes* of the centuriation *Ager Campanus II*; D = *via Suessula-Telesia*; D' = section of D that coincides with a *limes* of the centuriation *Ager Campanus II*; E = Augustan aqueduct of *Capua*; F = possible branch of the aqueduct of *Capua* for *Calatia*.

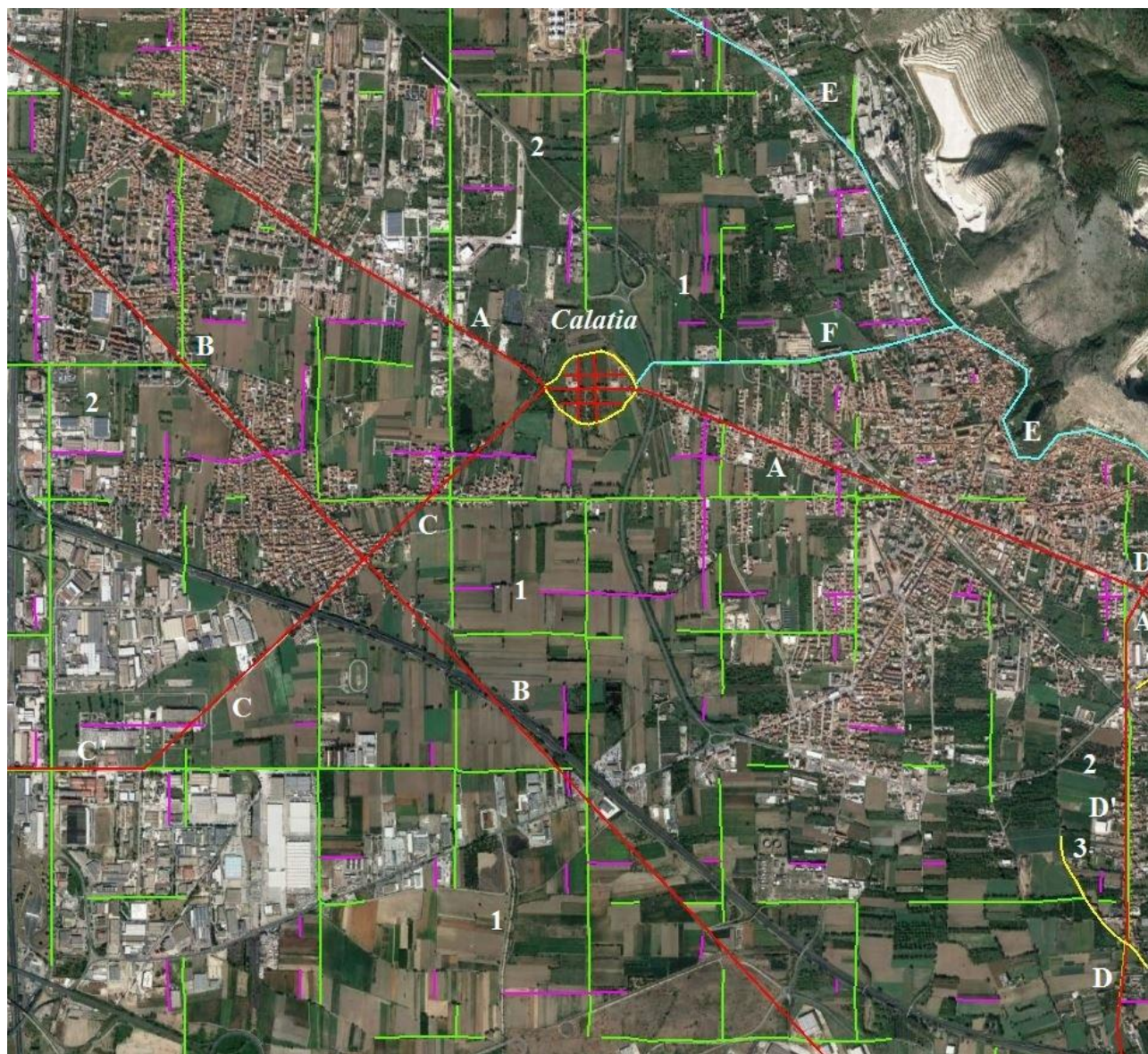


Fig. 19B – Persistences in the area of *Calatia*.

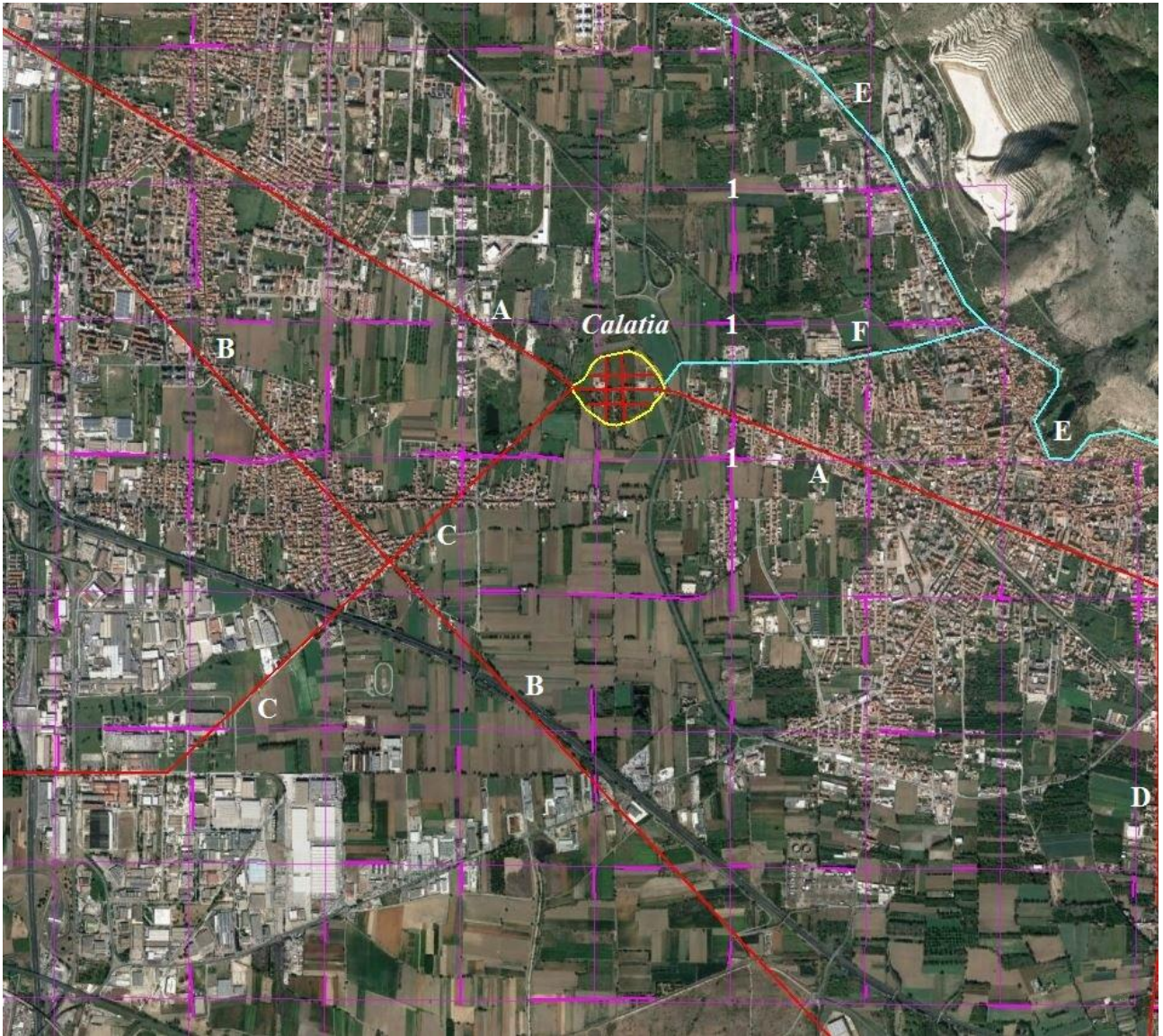


Fig. 19C – The centuriation *Ager Campanus I* in the area of *Calatia*.

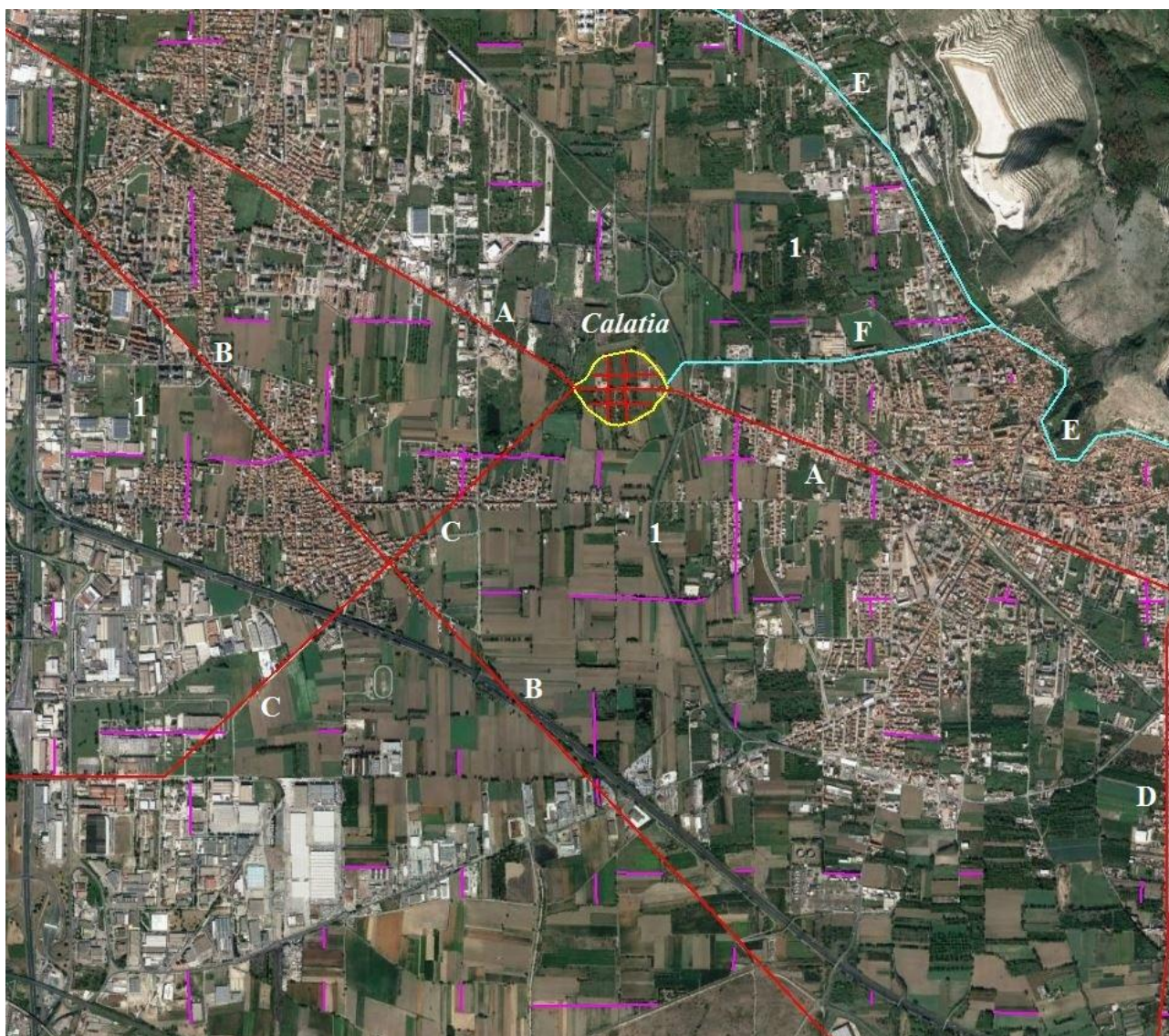


Fig. 19D – Persistences of the centuriation *Ager Campanus I* in the area of *Calatia*.

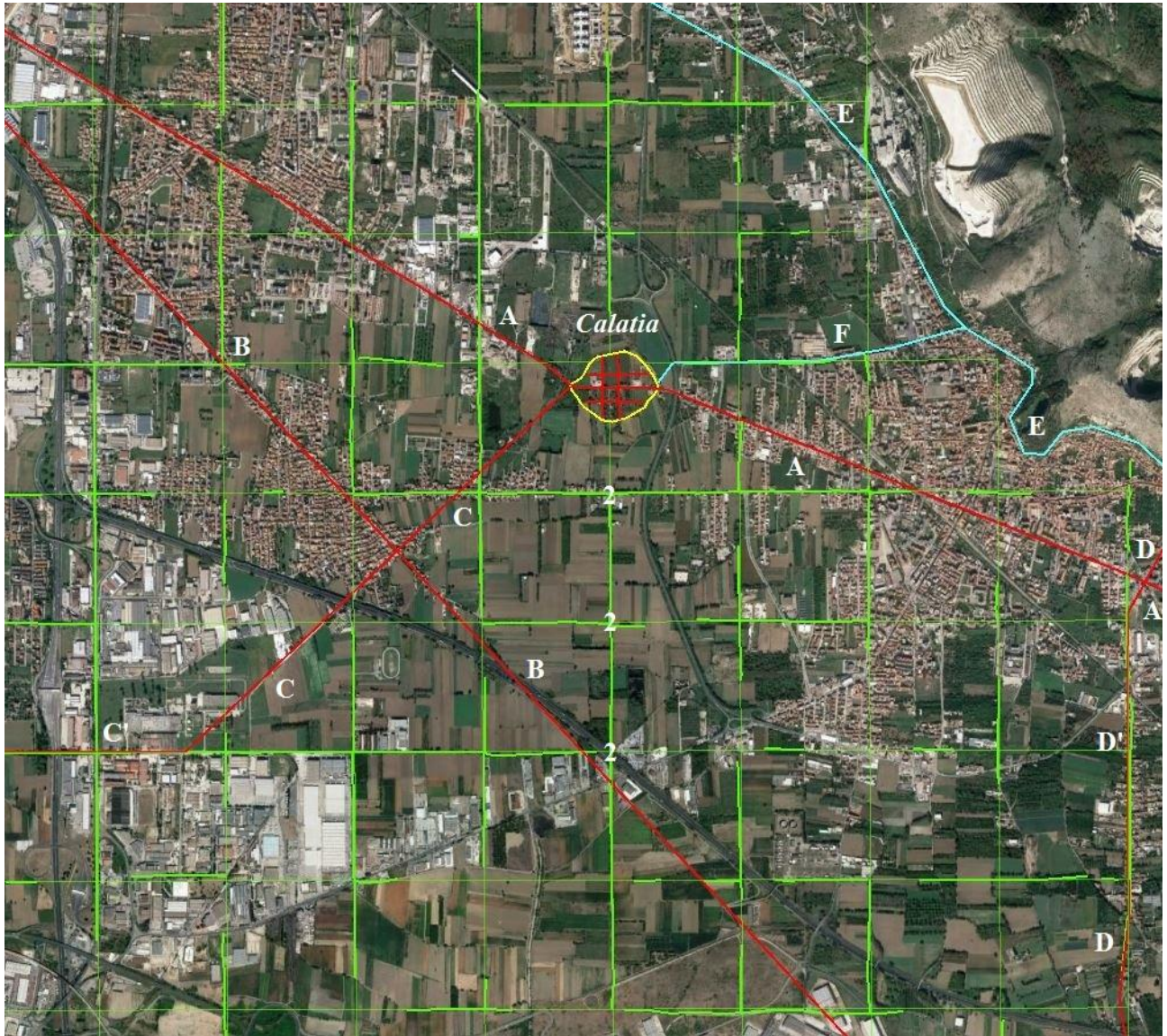


Fig. 19E – The centuriation *Ager Campanus II* in the area of *Calatia*.

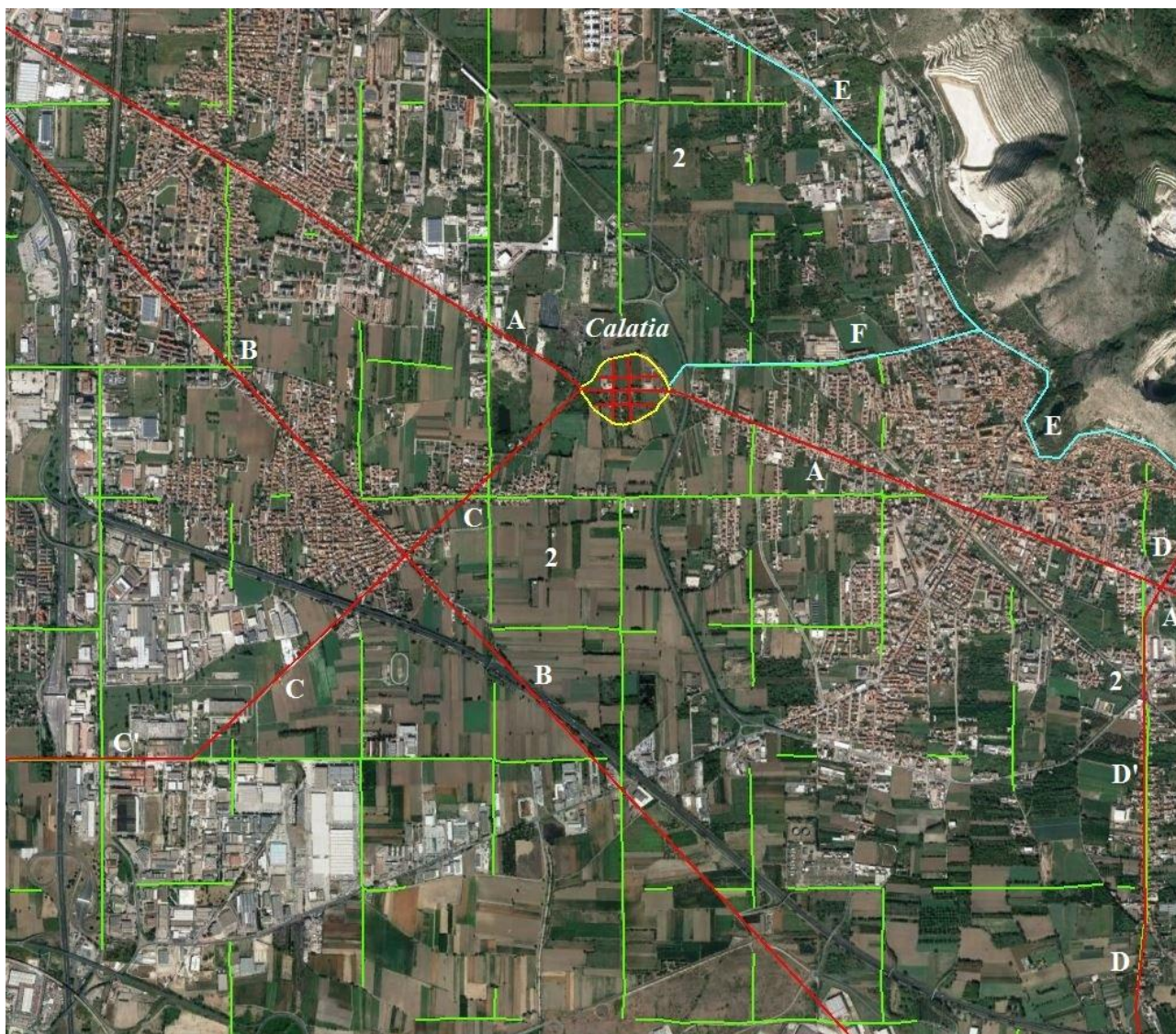


Fig. 19F – Persistences of the centuriation *Ager Campanus II* in the area of *Calatia*.

<p>Caudium, oppidum. muro ducta. iter populo debetur ped. L. a Caesare Augusto coloniae Beneventanae cum territorio suo est adiudicata. ager eius ueteranis fuerat adsignatus, postea mensuratus limitibus est censitus.</p>	<p><i>Caudium</i> (Montesarchio, about 1 km south-west of the town), fortified town surrounded with a wall. A right of way of L feet is due to the community. It was aggregated with its land by <i>Caesar Augustus</i> to the colony of <i>Beneventum</i> (Benevento). Its land had been allocated to veteran soldiers, later was assessed by <i>limites</i> (fig. 20).</p>
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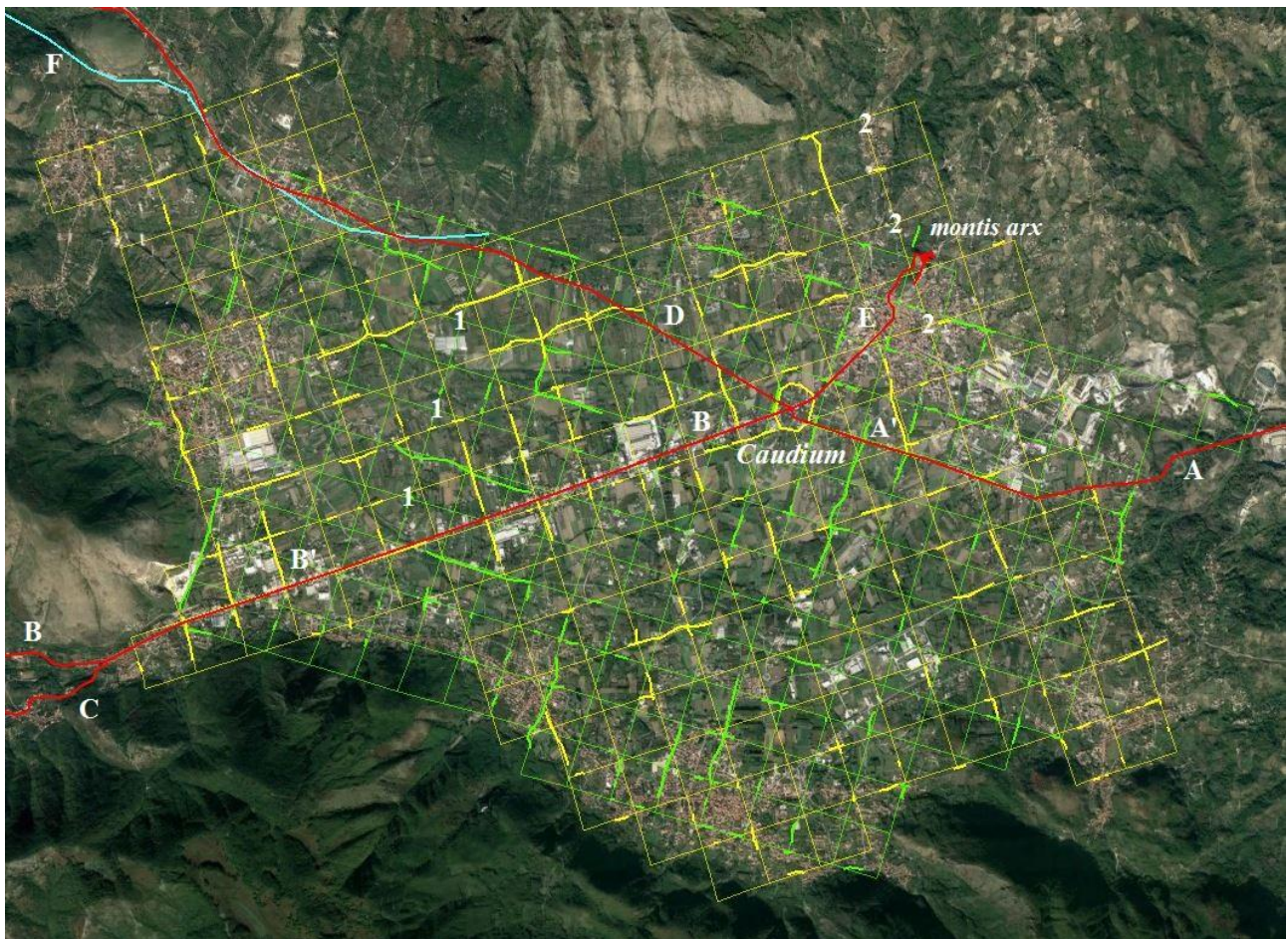


Fig. 20A – The land of *Caudium* was divided by two centuriations (1, *Caudium I*, III or II century b.C., 13 x 13 *actus* – 461.24 x 461.24 m -, inclination 17° 30' E; 2, *Caudium II*, Augustan, 15 x 15 *actus* – 532.2 x 532.2 m -, inclination 16° 30' W). Other indications: A = *via Caudium-Beneventum*; A' = section of A that coincides with a main *limes* of the centuriation *Caudium I*; B = *via Caudium-Calatia-Capua*; B' = section of B that coincides with a main *limes* of the centuriation *Caudium II*; C = branch of B for *Suessula*; D = *via Caudium-Saticula*; E = possible *via Caudium-montis arx*³³; F = Augustan aqueduct of *Capua*. Same indications for the following figures too.

³³ It is likely that the name Montesarchio derives from *montis arx* (rock of the mountain, accusative: *montis arcem* -> **montisarce* -> Montesarchio). In Latin the <k> was pronounced as a <k>, e so *arcem* was pronounced as *arkem*. The *montis arx* was place of refuge of the people of *Caudium* when the town had to be abandoned due to the assaults suffered.



Fig. 20B – Persistences of the centuriations *Caudium I* and *II*.

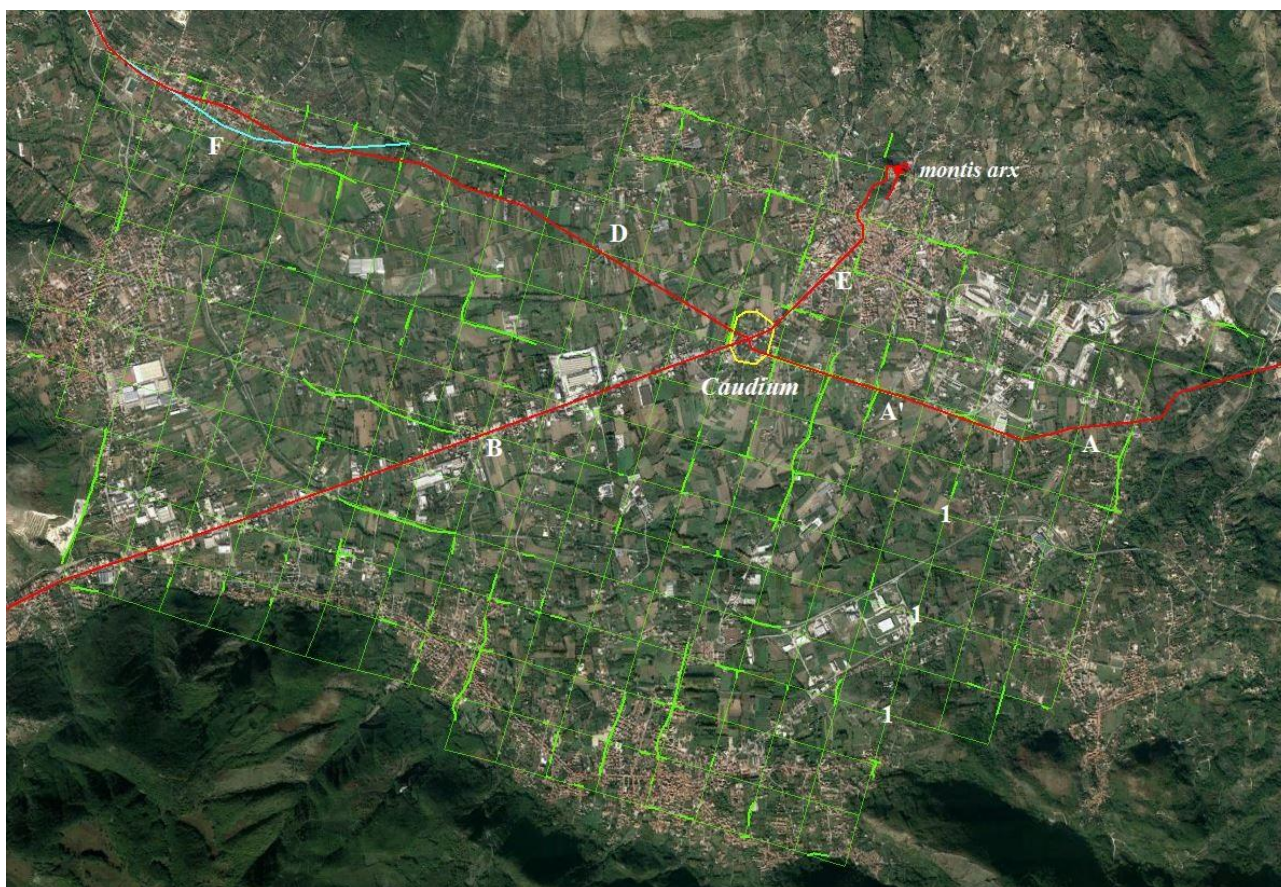


Fig. 20C – The centuriation *Caudium I*.

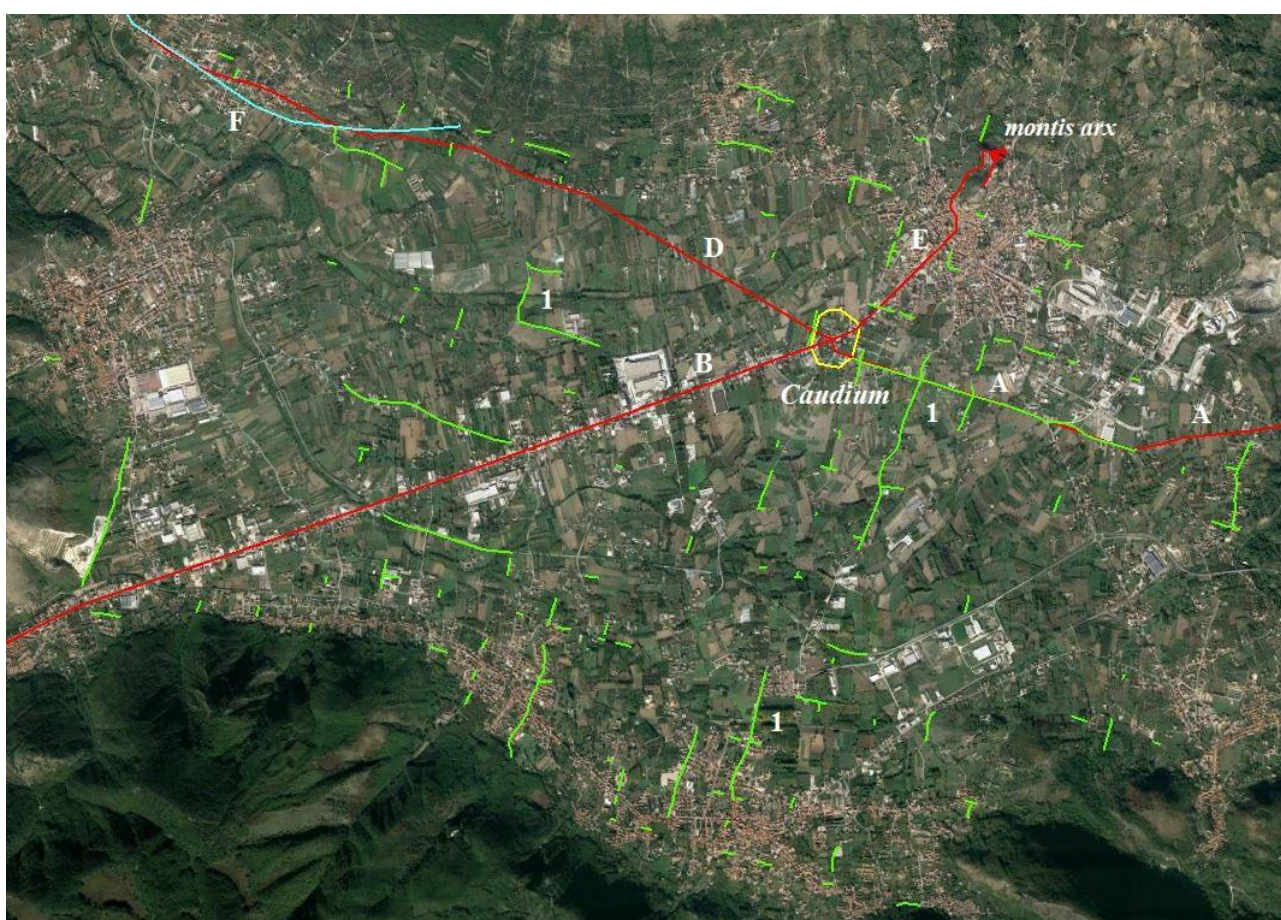


Fig. 20D – Persistences of the centuriation *Caudium I*.

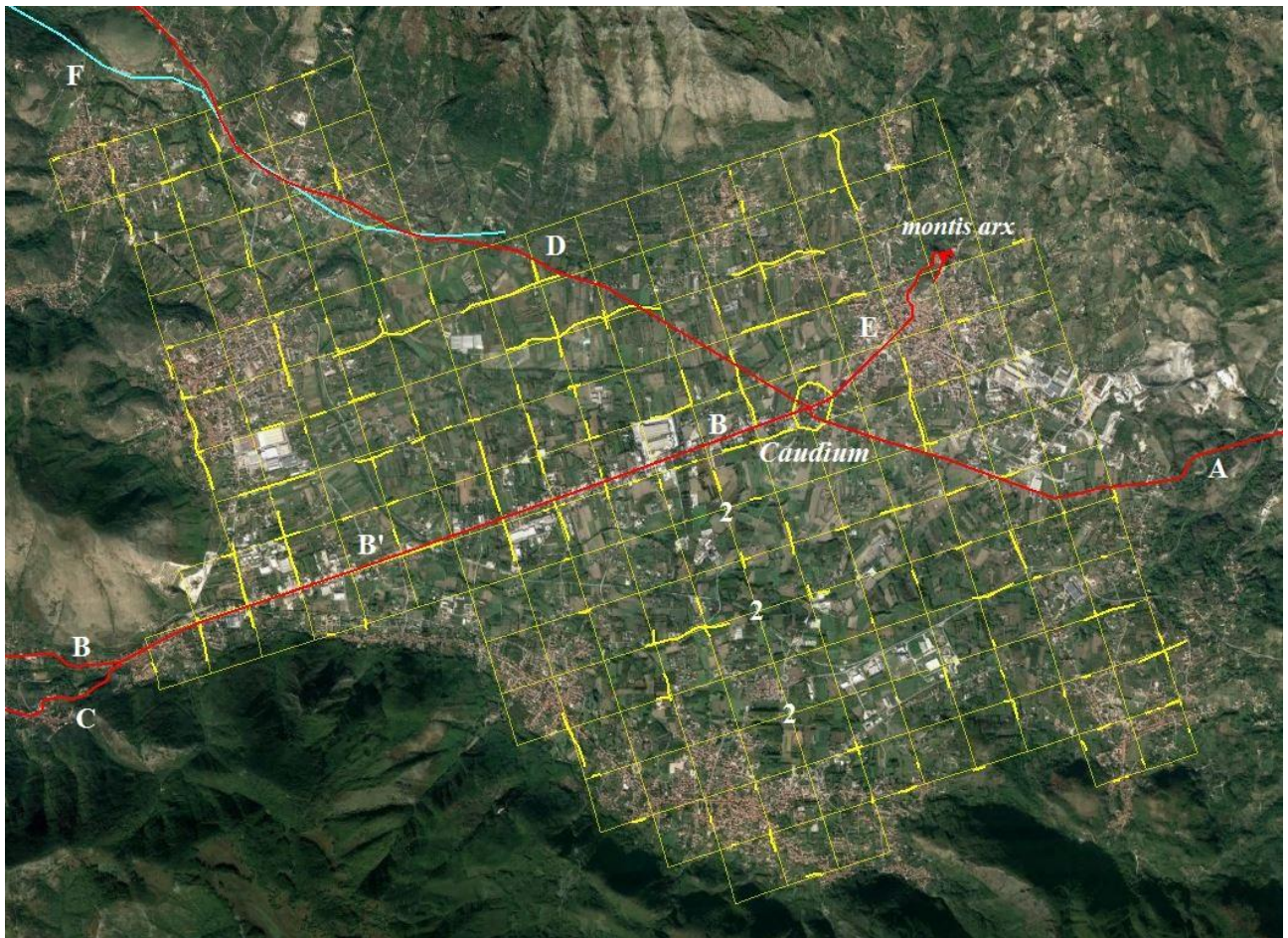


Fig. 20E – The centuriation *Caudium II*.

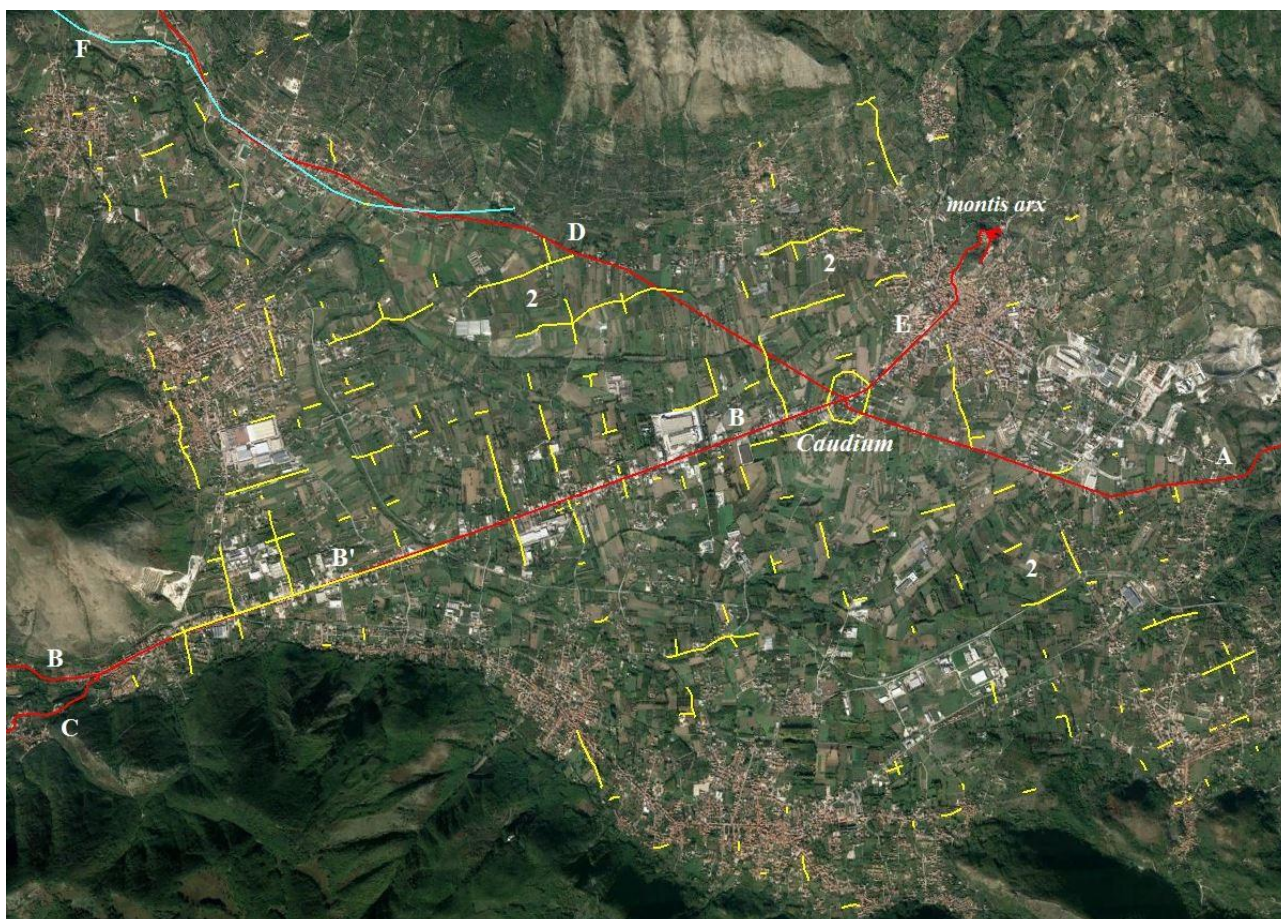


Fig. 20F – Persistences of the centuriation *Caudium II*.

[10] Cumis, muro ducta colonia, ab Augusto deducta. iter populo debetur ped. LXXX. ager eius in iugeribus ueteranis pro merito est adsignatus iussu Claudi Caesaris.

Cumae (Bacoli, about 5 km north of the town), colony surrounded with a wall, founded by *Augustus*. A right of way of LXXX feet is due to the community. By order of *Claudius Caesar* its land was allocated in *iugera* to veteran soldiers according to their merits.

Calis, municipium muro ductum. iter populo non debetur. ager eius limitibus Graccanis antea fuerat [15] adsignatus, postea iussu Caesaris Augusti limitibus nominis sui est renormatus.

Cales (Calvi Risorta, 2 km south of the town), *municipium* surrounded with a wall. No right of way is due to the community. Its land had been previously allocated by Gracchan *limites*, later by order of *Caesar Augustus* it was measured again by *limites* with his name (fig. 21)³⁴.

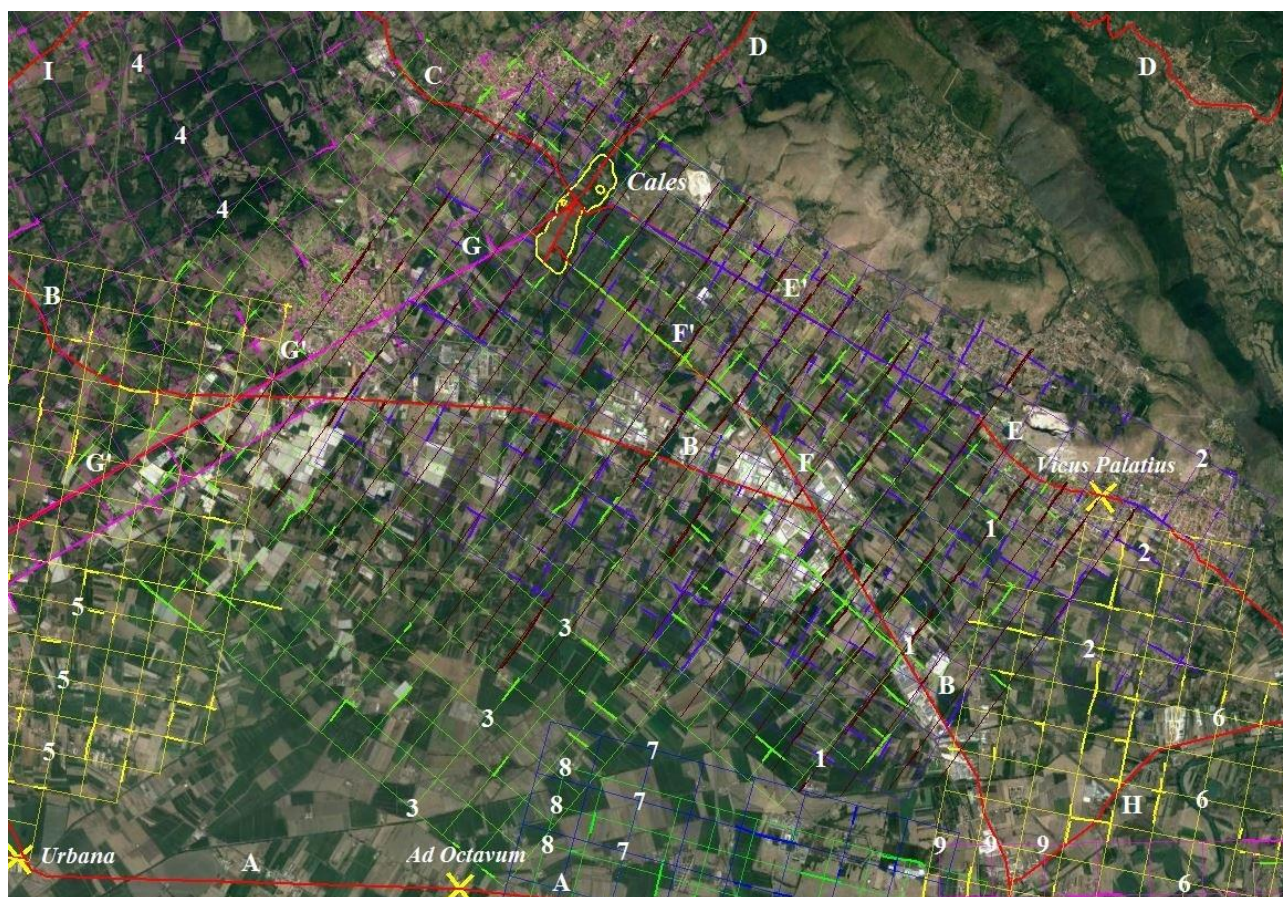


Fig. 21A – The land of *Cales* was divided four times (1, *Cales I*, *strigatio*, 334 b.C., 13 *actus* – 470 m -, inclination 37° 00' E; 2, *Cales II*, centuriation, Gracchan, 14 x 16 *actus* – 496.72 x 567.68 m -, inclination 31° 00' E; 3, *Cales III*, centuriation, Augustan, 15 x 15 *actus* – 532.2 x 532.2 m -, inclination 41° 00' E; 4, *Teinum III-Cales IV*, centuriation, Augustan, 16 x 16 *actus* – 567.68 x 567.8 m - inclination 29° 00' W). Other indications: 5 = centuriation *Ager Falernus II*; 6 = centuriation *Capua-Casilinum*; 7, 8 = centuriations *Ager Stellatis I, II*; 9 = centuriation *Ager Campanus I*; A = *via Appia* (through *Sinuessa*), stretch *Urbana-Ad Octavum-Casilinum*; B = *via Appia* (through *Suessa Aurunca*), stretch *Suessa-Casilinum*; C = *via Latina*, stretch *Teinum-Cales*; D = *via Cales-Trebula*; E = *via Cales-Vicus Palatius-Caiatia*; E' = section of E that coincides with a *limes* of the centuriation *Cales II*; F = *via Latina*, stretch *Cales-confluence with the via Appia* (through *Suessa Aurunca*); F' = section of F that coincides with a *limes* of the centuriation *Cales III*; G = *via Cales-Forum Popilii*; G' = section of G that coincides with a *limes* of the centuriation *Teinum III-Cales IV*; H = *via Casilinum-Caiatia*; I = road from *Teinum* to the *via Appia* (through *Suessa Aurunca*). Same indications for the following figures.

³⁴ The Gracchan centuriation is the *Cales II* while the Augustan centuriation is the *Cales III*. The *strigatio Cales I* is archaic while the centuriation *Teinum III-Cales IV* concerned only part of the land of *Cales*. The last two are not referred to in the text.

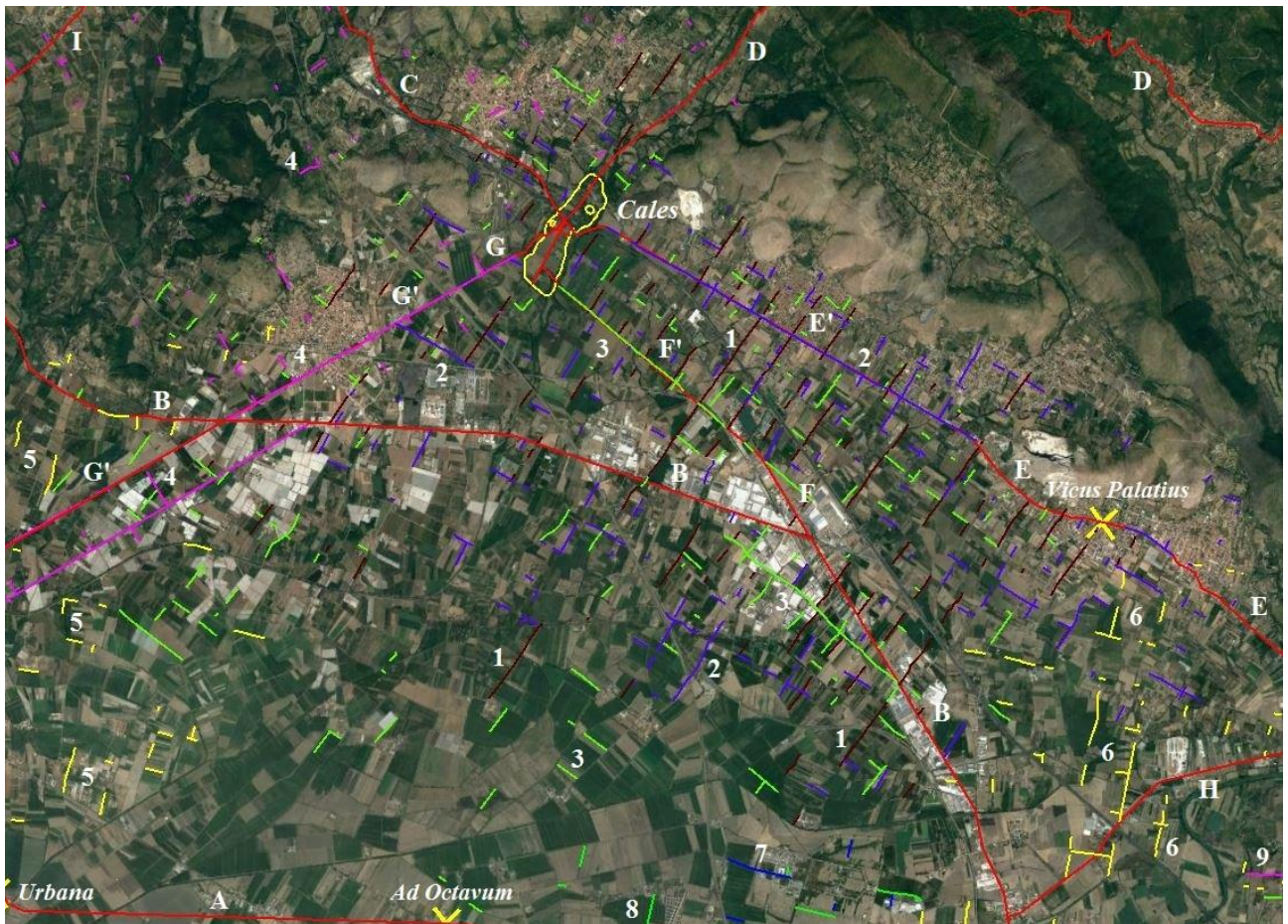


Fig. 21B – Persistences of the centuriations in the area around *Cales*.

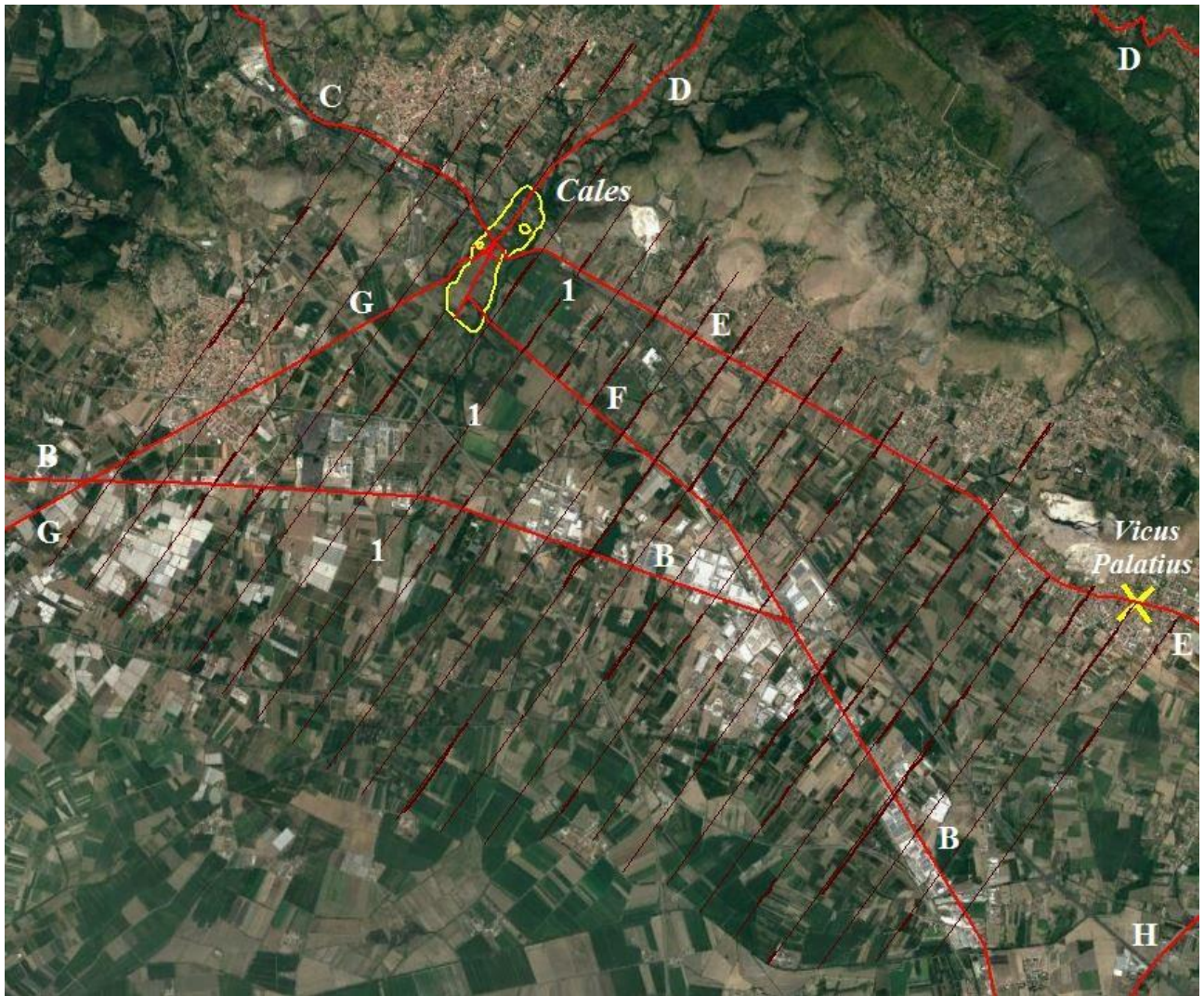


Fig. 21C – The *strigatio Cales I.*



Fig. 21D – Persistences of the *strigatio Cales I.*

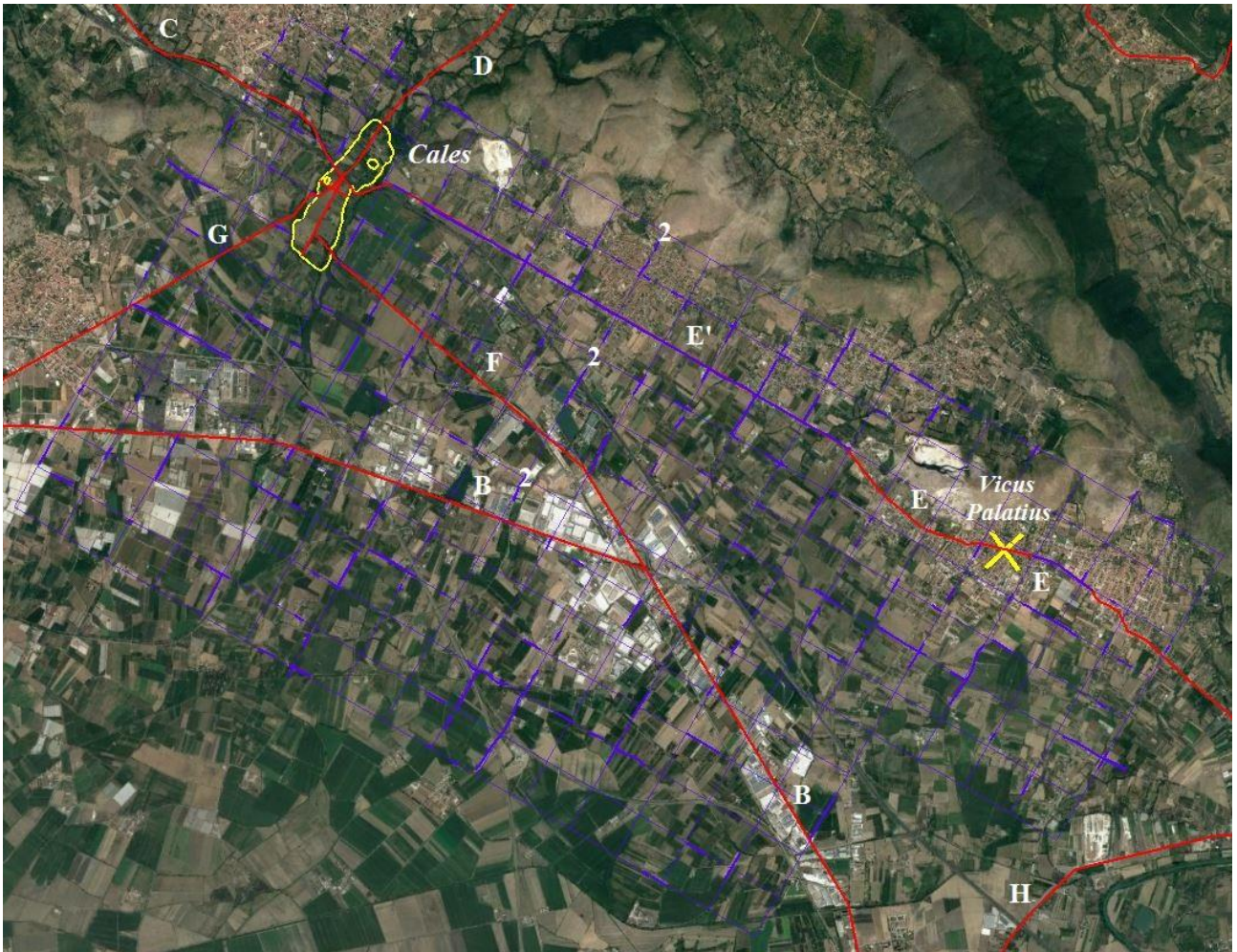


Fig. 21E – The centuriation *Cales II*.

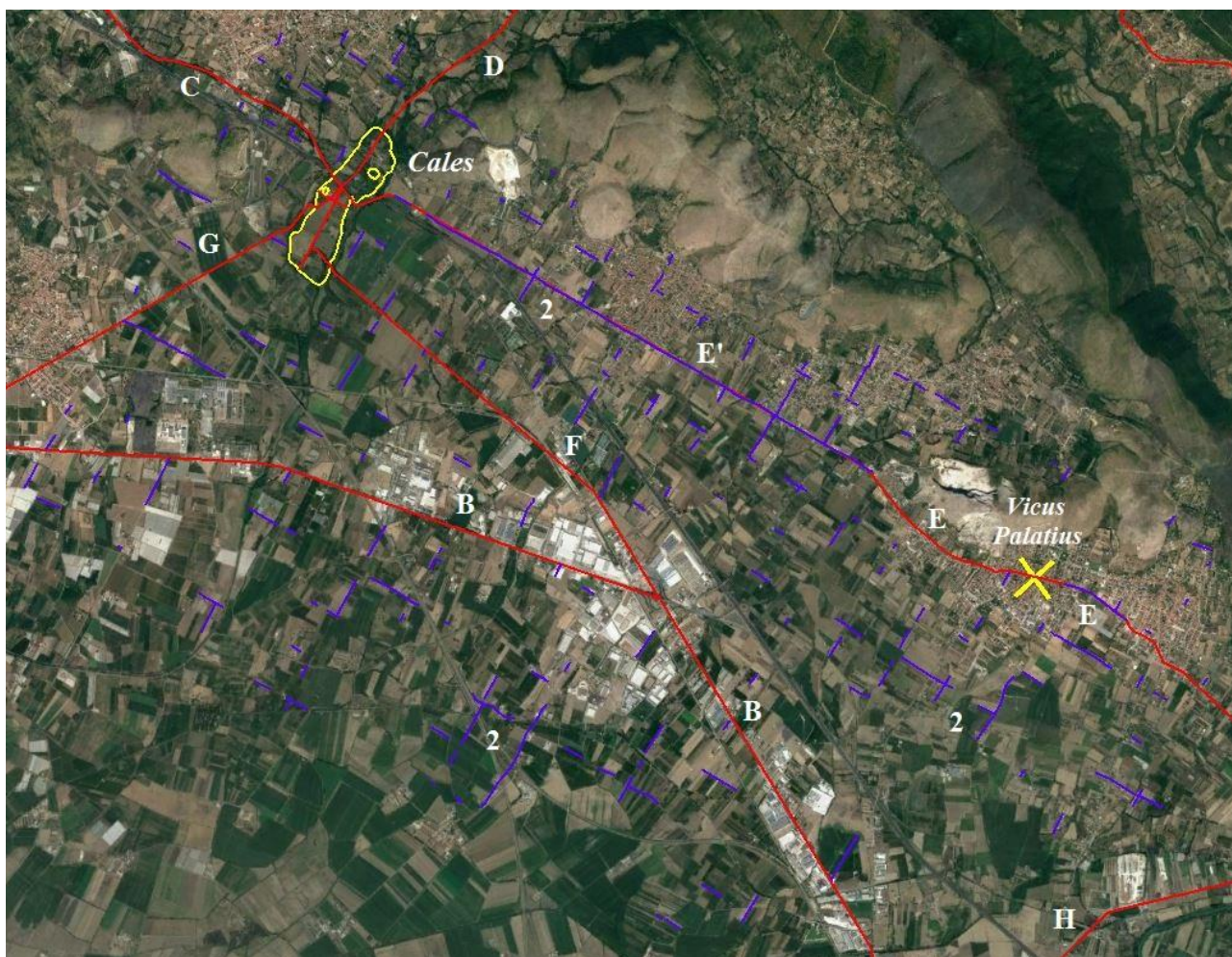


Fig. 21F – Persistences of the centuriation *Cales II*.

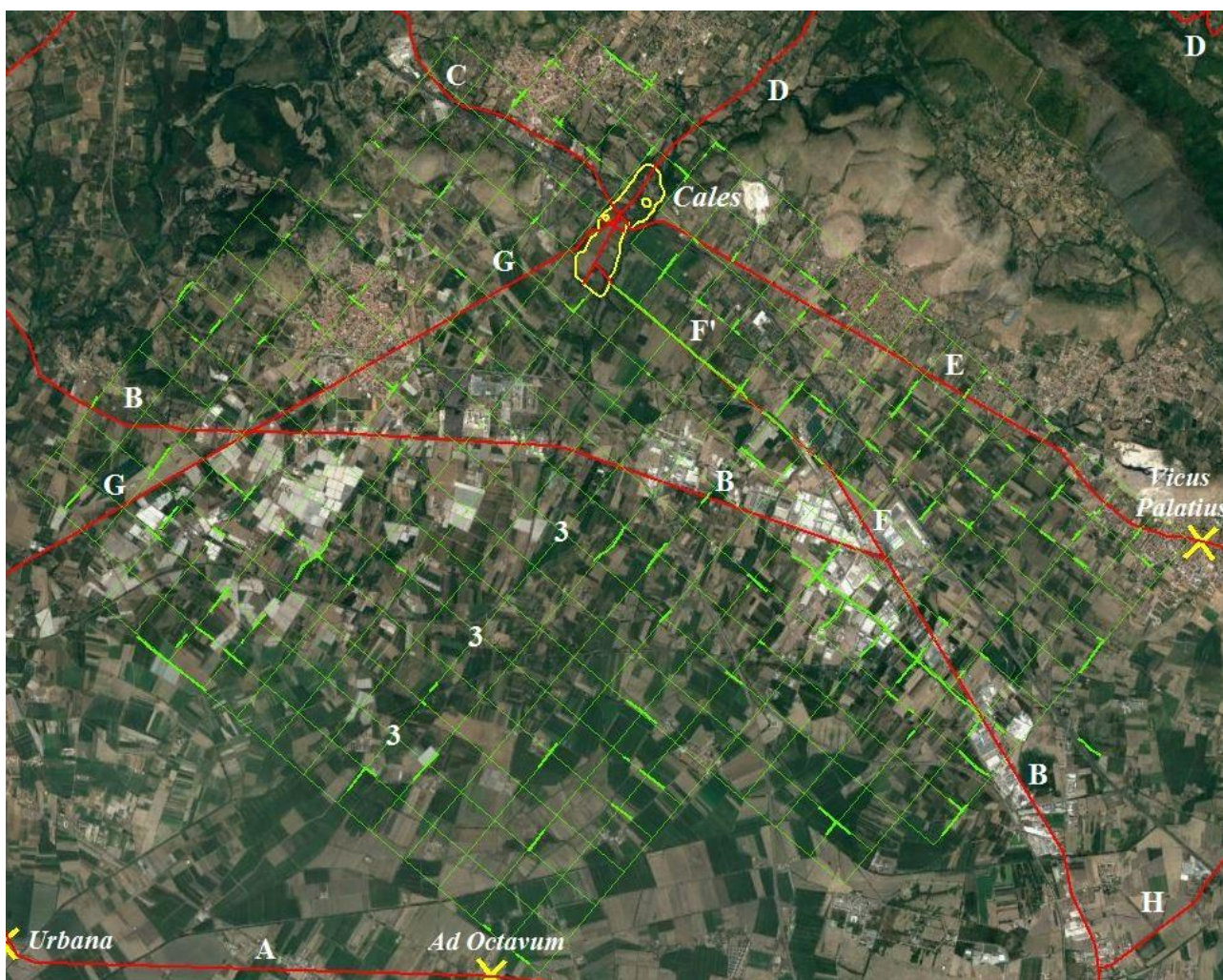


Fig. 21G – The centuriation *Cales III*.

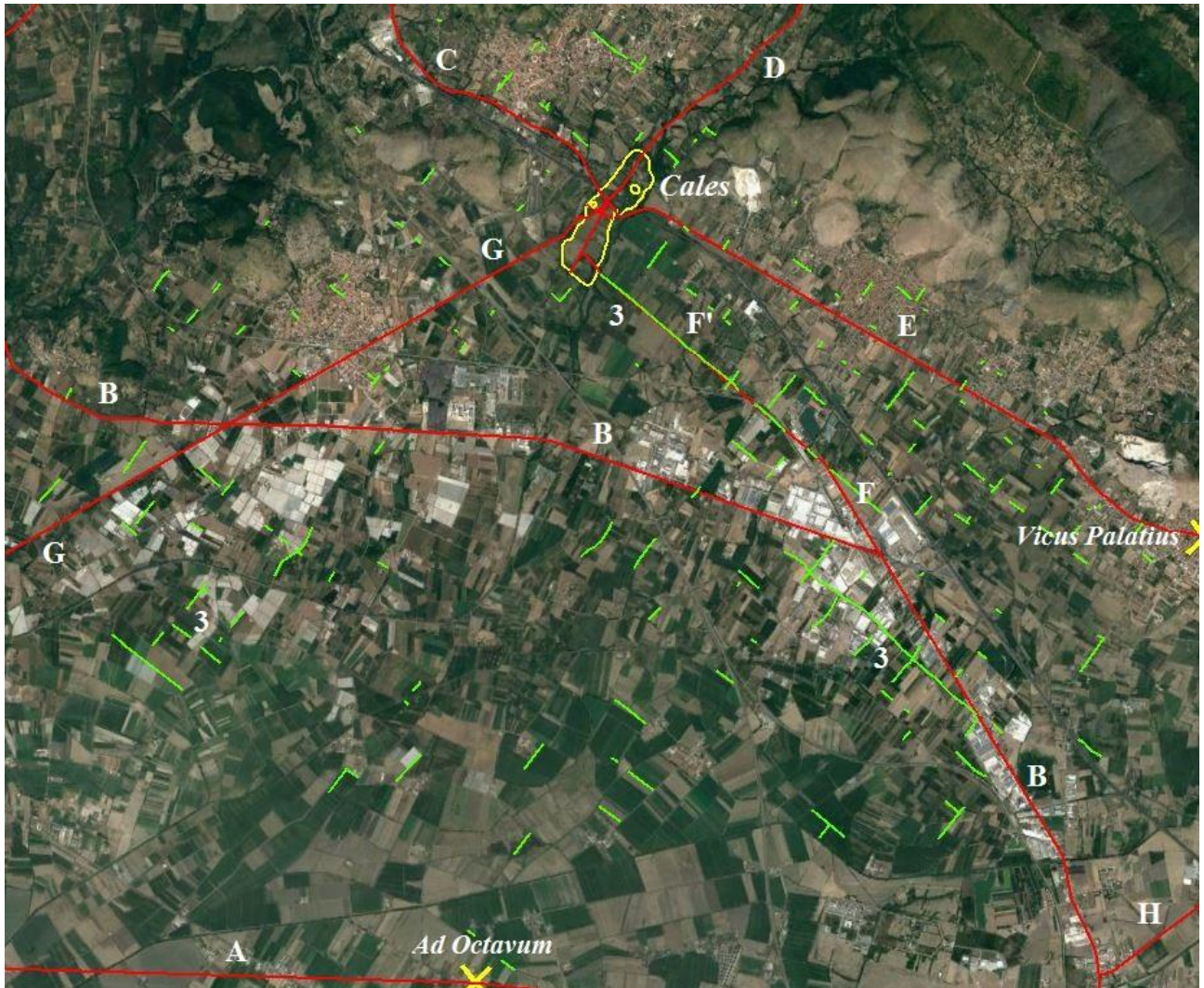


Fig. 21H – Persistences of the centuriation *Cales III*.

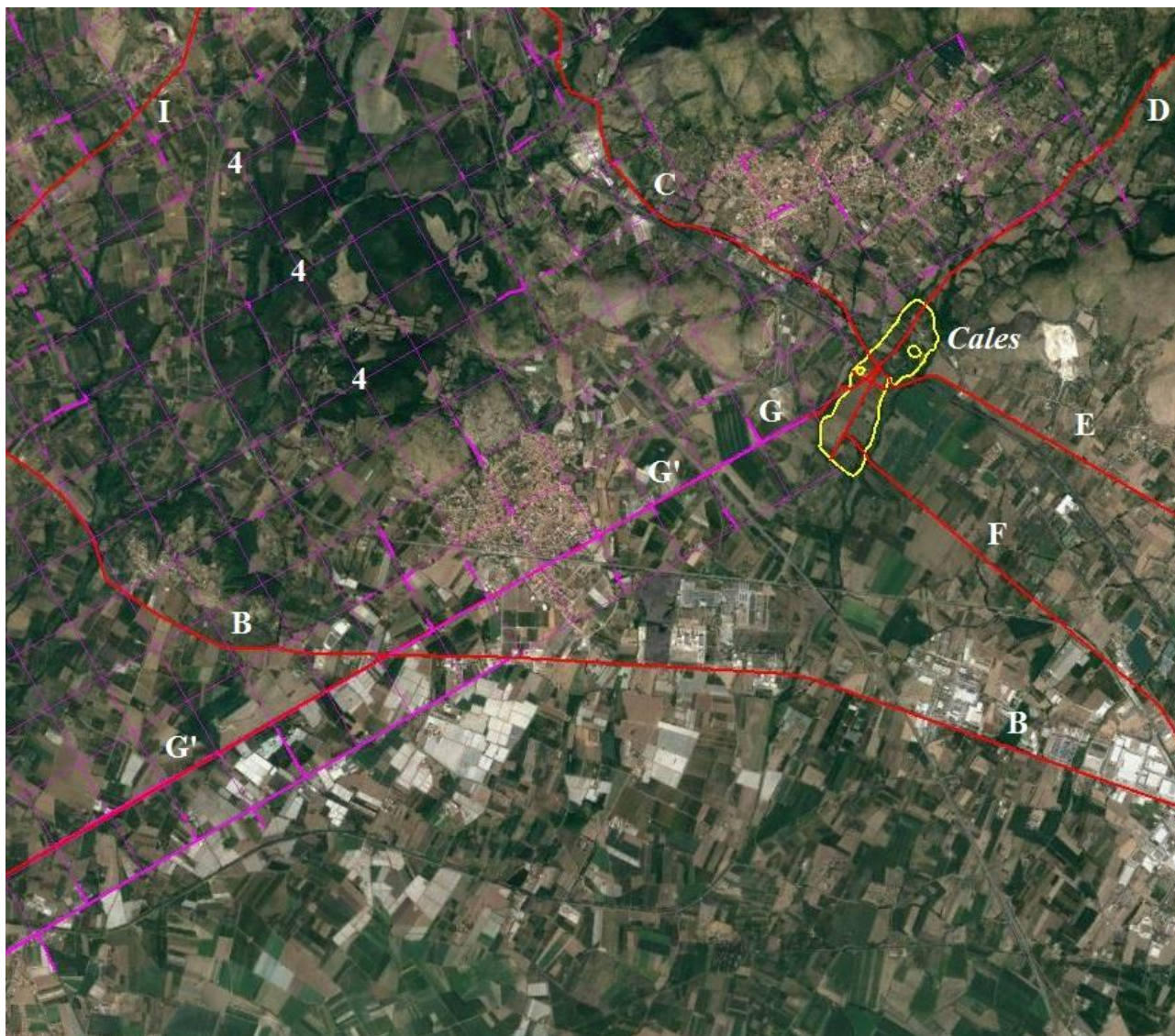


Fig. 21I – The centuriation *Teaum III - Cales IV*, southern part.

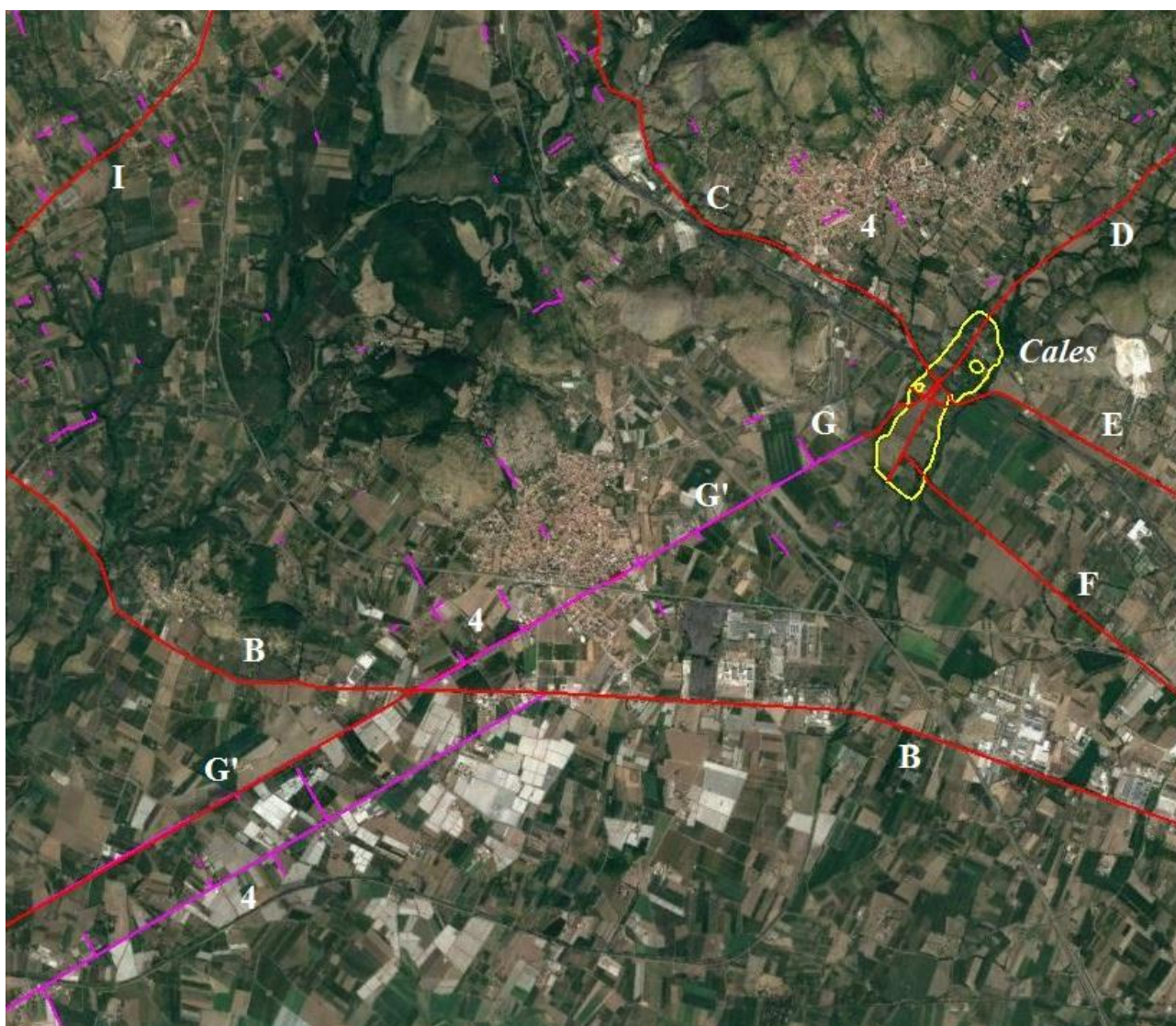


Fig. 21J – Persistences of the centuriation *Teaunum III - Cales IV*, southern part.

<p>Casinum, oppidum. milites legionarii deduxerunt. iter populo non debetur. nam eidem militi ager eius in praecisura est adsignatus.</p>	<p><i>Casinum</i> (Cassino, south of the town), fortified town. Legionary soldiers founded it. No right of way is due to the community. Certainly its land was allocated to the same soldiers in parcels³⁵ (fig. 7).</p>
<p>[20] Capitulum, oppidum, lege Sullana est deductum. iter populo non debetur. ager eius pro merito [L. 233.1] et quis prout agrum occupavit tenuit; sed postea Caesar limites formari iussit pro merito.</p>	<p><i>Capitulum</i> (Piglio?), fortified town, was founded under <i>lex Sullana</i>. No right of way is due to the community. Its land <was allocated> according to the merits and each man kept whatever land he appropriated; but later <i>Caesar</i> ordered that <i>limites</i> be established <to allocate the land to the soldiers> according to their merits.</p>
<p>Castrimonium, oppidum, lege Sullana est munitum. iter populo non debetur. ager eius</p>	<p><i>Castrimoenium</i> (Marino), town fortified under <i>lex Sullana</i>. No right of way is due to the community.</p>

³⁵ For the division of the land of *Casinum*, see *Aquinum*.

ex occupatione [5] tenebatur: postea Nero Caesar tribunis et militibus eum adsignavit.	Its land was held as a result of appropriation: later, <i>Nero Caesar</i> allocated it to tribunes and soldiers (fig. 17).
Cereatae Mariana, municipium. familia Gai Mari obsidebat: postea a Druso Caesare militibus et ipsi familiae in iugeribus est adsignatum. iter populo non debetur.	<i>Cereatae Mariana</i> (Veroli, abbey of Casamari), <i>municipium</i> . The family of <i>Gaius Marius</i> appropriated it: later, it was allocated by <i>Drusus Caesar</i> in <i>iugera</i> to soldiers and to his family. No right of way is due to the community.
[10] Cadatia, oppidum, lege Graccana est munitum ager eius ueteranis est adsignatus. iter populo non debetur.	<i>Caiatia</i> (Caiazzo), town that was fortified under <i>lex Graccana</i> . Its land was allocated to veteran soldiers. No right of way is due to the community (fig. 22).

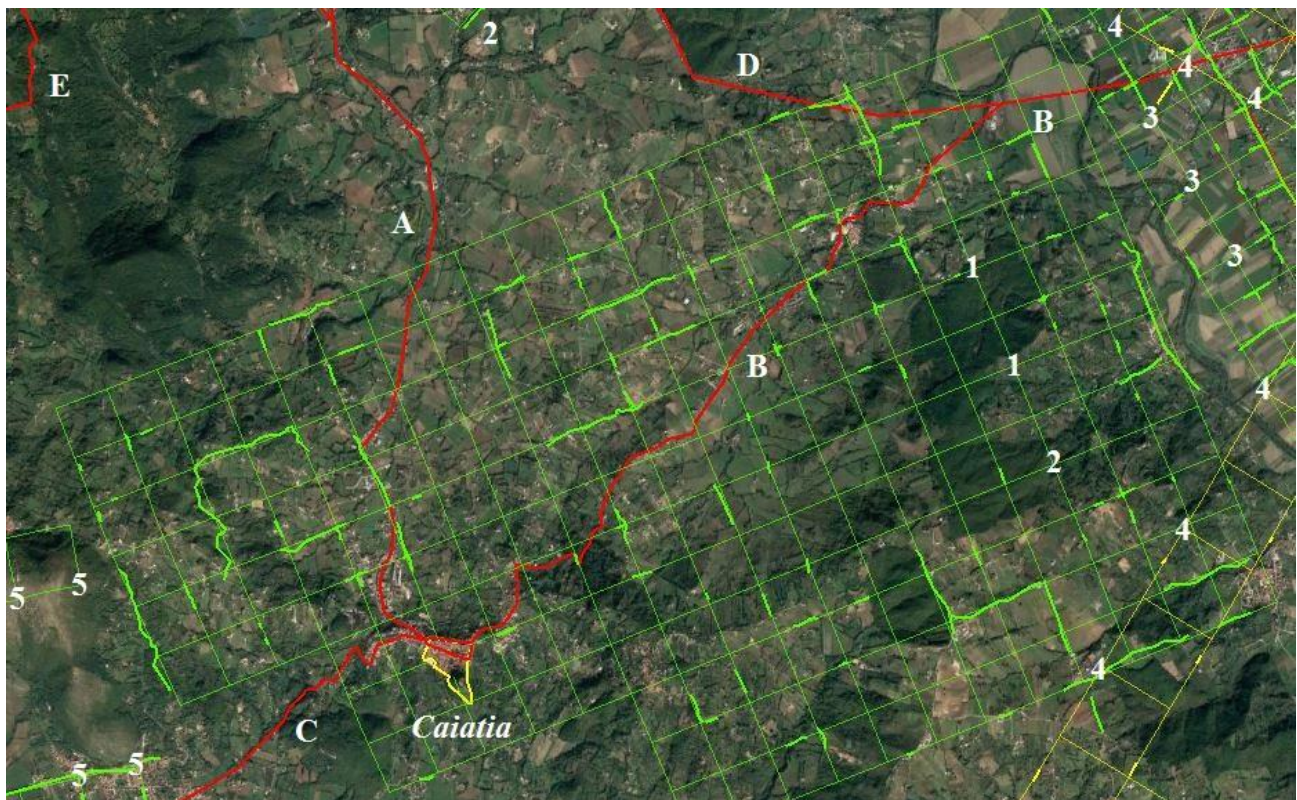


Fig. 22A – The land of *Caiatia* was divided by a centuriation (1, *Caiatia*, Gracchan, 13 x 13 *actus* – 461.24 x 461.24 m -, inclination 21° 00' W). Other indications: 2 = centuriation *Cubulteria*; 3 = centuriation *Telesia I*; 4 = centuriation *Allifae II-Teanum II-Telesia II-Saticula* (centuriation of the Middle Volturno); 5 = centuriation *Trebula*; A = *via Caiatia-Allifae*; B = *via Caiatia-Telesia*; C = *via Caiatia-Capua*; D = *via Cubulteria-Telesia*; E = *via Trebula-Cubulteria*.

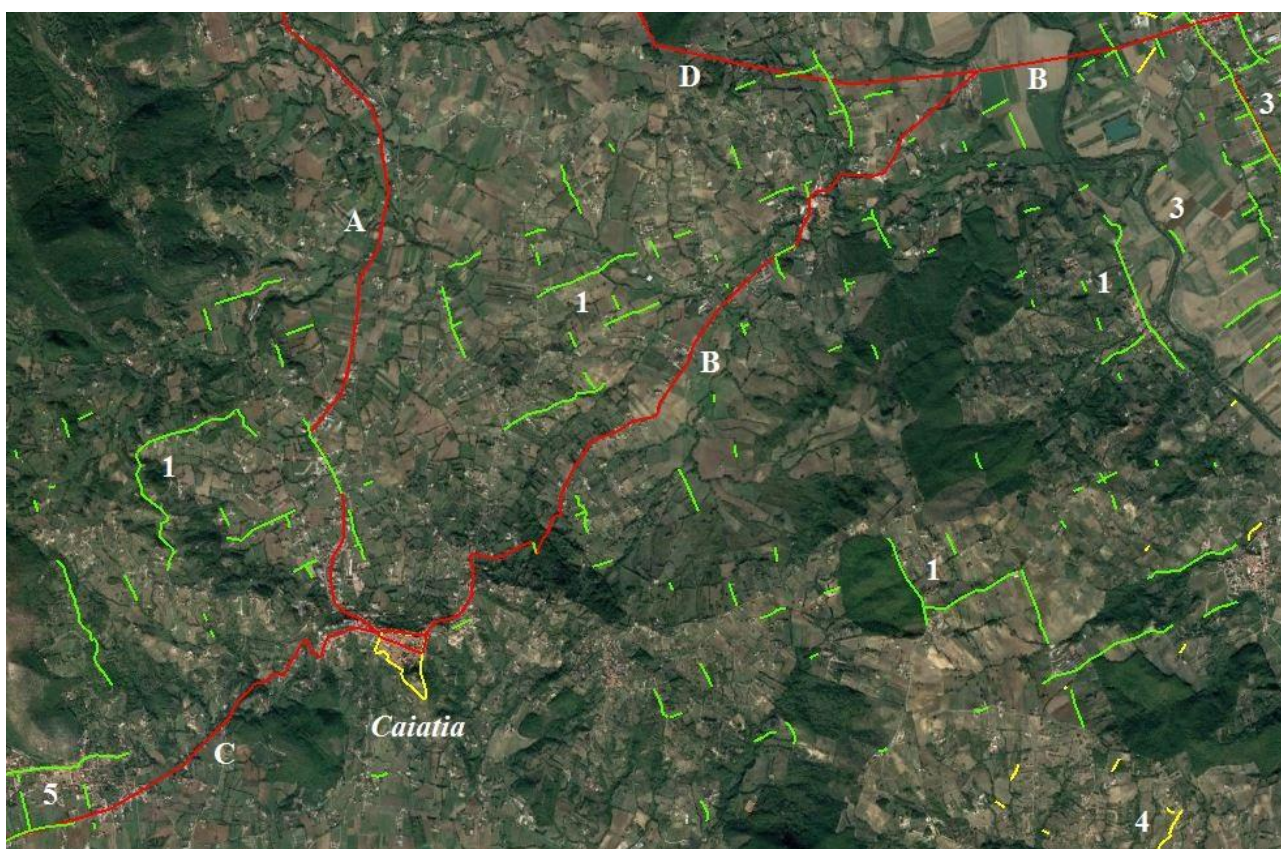


Fig. 22B – Persistences of the centuriation *Caiatia*. Same indications of the preceding figure.

<p>Diuiños, municipium. familia diui Augusti condidit, et ager eius isdem est adsignatus sine lege.</p>	<p><i>Divinos</i> (<i>Invinias</i>³⁶ between <i>Puteoli</i> and <i>Cumae</i> in the <i>Tabula Peutingeriana</i>?), <i>municipium</i>. The family of the divine <i>Augustus</i> founded it, and its land was allocated to it without any law.</p>
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³⁶ *Divinos* and *Invinias* would be correct or erroneous transcriptions of (ad) *Divinas* or *Divinos*. *Divinus* also meant august, imperial, and therefore the term would have indicated something relative to the emperor, which is in accordance with the text. About this subject see [Libertini 2017].

Esernia, colonia deducta lege Julia. iter populo [15] debetur ped. X. ager eius limitibus Augusteis est adsignatus.

Aesernia (Isernia), colony founded under *lex Iulia*. A right of way of X feet is due to the community. Its land was allocated by Augustan *limites* (fig. 23)³⁷.

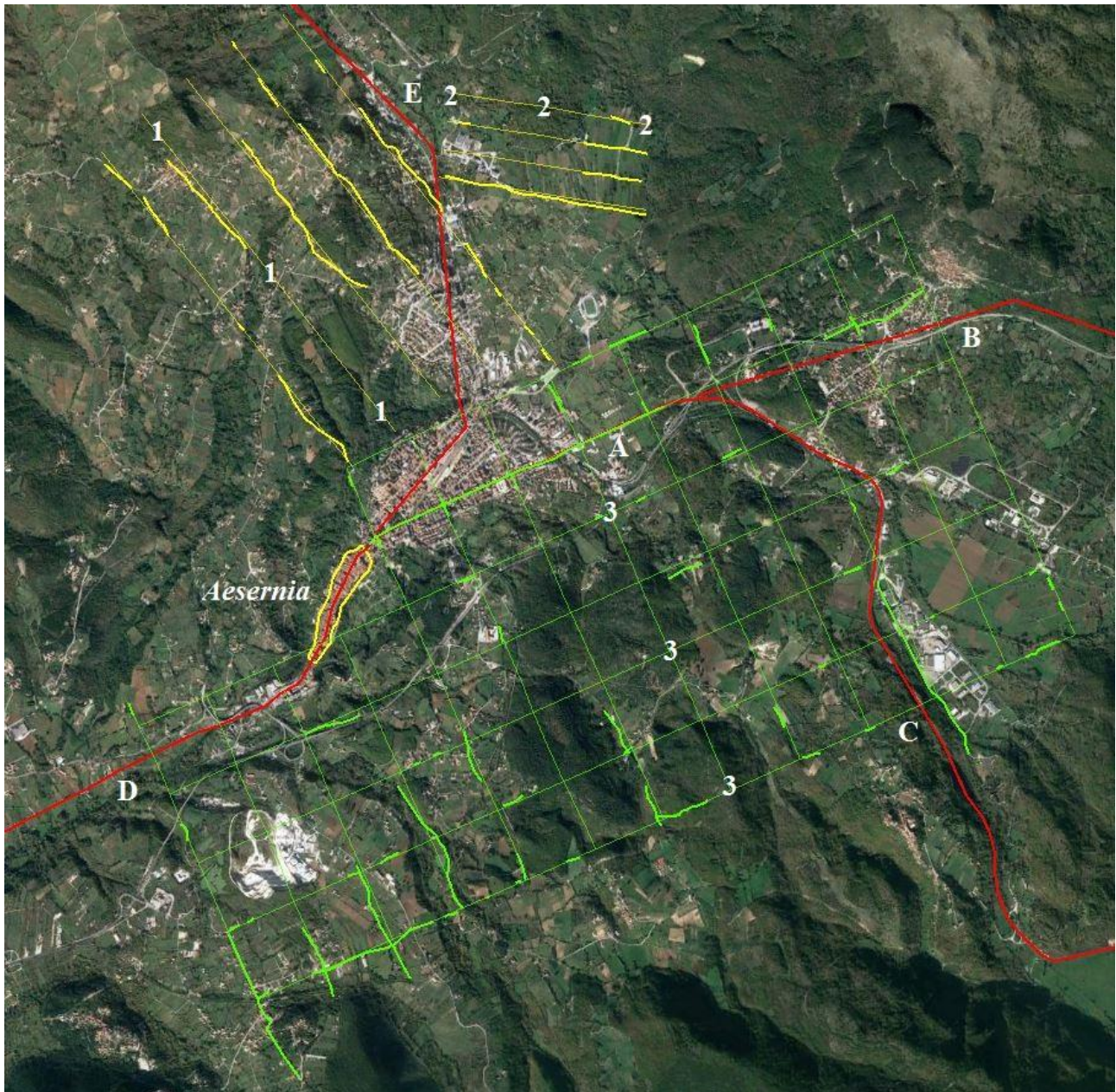


Fig. 23A – The land of *Aesernia* was divided by a double *strigatio* and by a centuriation (1, *Aesernia I a*, *strigatio*, 263 b.C.?, 12 *actus* – 425.76 m -, inclination 37° 00' W; 2, *Aesernia I b*, *strigatio*, 263 b.C.?, 6 *actus* – 212.88 m -, inclination 10° 00' E; 3, *Aesernia II*, centuriation, Augustan, 16 x 16 *actus* – 567.68 x 567.68 m -, inclination 23° 00' W). Other indications: A = common trunk of the roads for *Terventum* and *Bovianum Undecimanorum*, which coincides with a *limes* of the centuriation *Aesernia II*; B = branch of B for *Terventum*; C = branch of B for *Bovianum*; D = *via Aesernia-Venafrum*; E = *via Aesernia-Aufidena*.

³⁷ The Augustan centuriation is the *Aesernia II* while the *strigationes* are archaic.

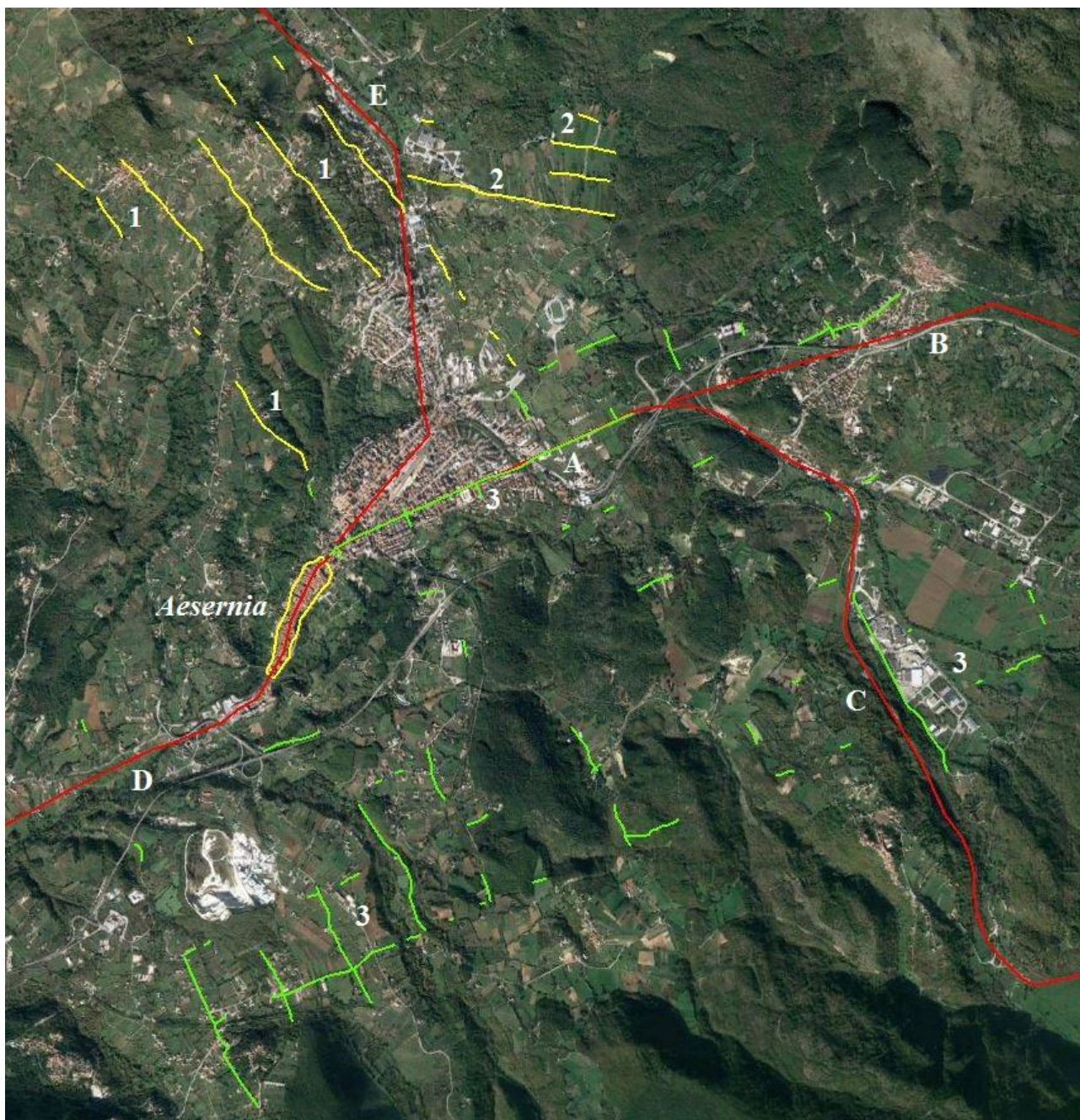


Fig. 23B – Persistences of the *limitationes* of Aesernia. Same indications of the preceding figure.

Frusinone, oppidum. muro ducta. iter populo non debetur. ager eius ueteranis est adsignatus.

Frusino (Frosinone), fortified town surrounded with a wall. No right of way is due to the community. Its land was allocated to veteran soldiers (fig. 12)³⁸.

³⁸ About the *limitationes* regarding the land of *Frusino*, see *Alatrium*.

Forum Populi, oppidum muro ductum. iter populo debetur ped. XV. limitibus Augusteis ager eius in iugeribus [L. 234.1] est adsignatus. nam imperator Vespasianus postea lege sua agrum censiri iussit.

Forum Popilii (Carinola, locality Civitarotta), fortified town surrounded with a wall. A right of way of XV feet is due to the community. Its land was allocated by Augustan *limites* in *iugera*. Later, the emperor *Vespasianus* ordered its land be assigned under his own *lex* (fig. 24).

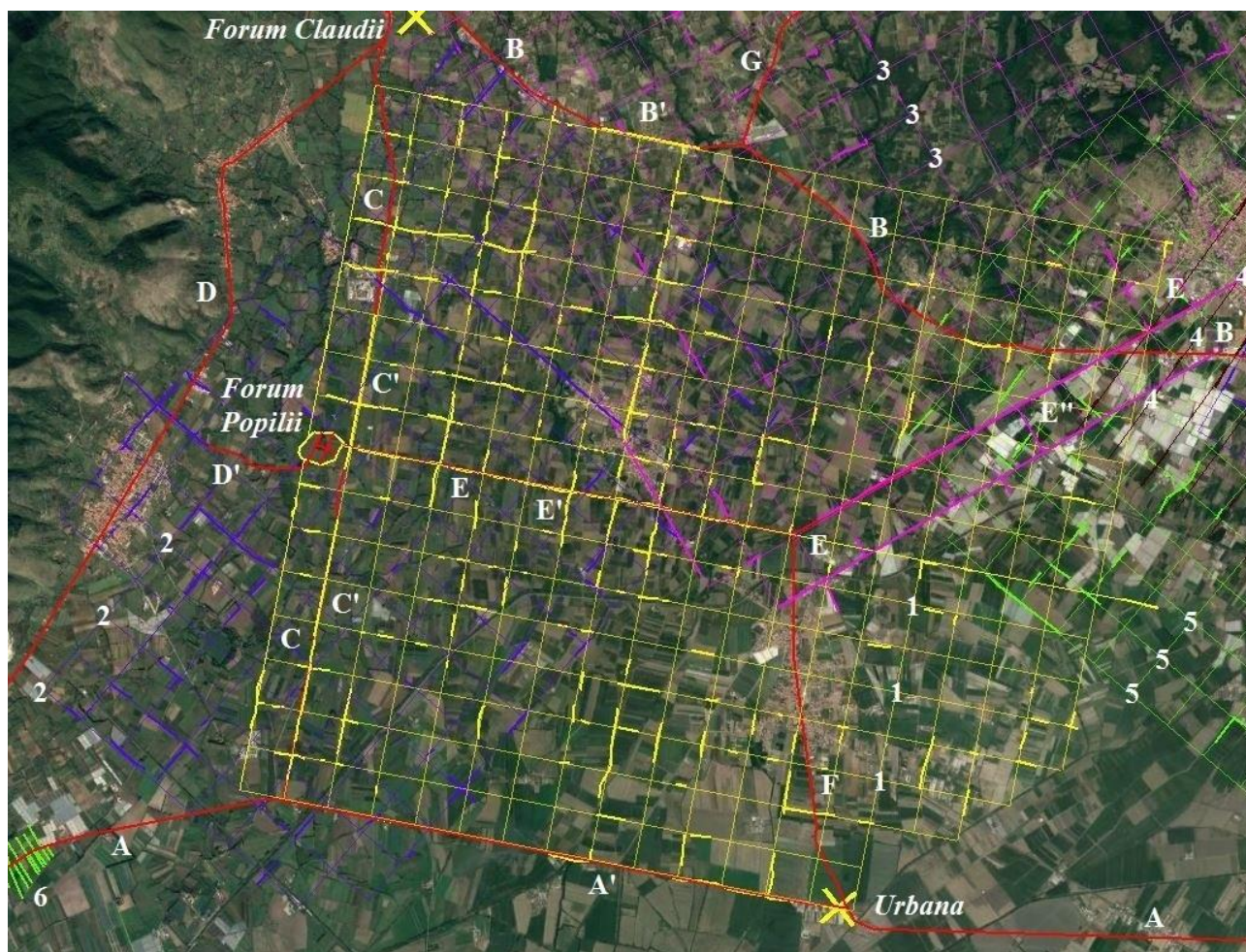


Fig. 24A – The land of *Forum Popilii* was divided by two centuriations (1, *Ager Falernus II*, Gracchan, 14 x 14 *actus* – 496.72 x 496.72 m -, inclination 12° 00' E; 2, *Forum Popilii*, Augustan, 15 x 15 *actus* – 532.2 x 532.2 m -, inclination 41° 00' E). Other indications: 3 = centuriation *Teanum III-Cales IV*; 4 = *strigatio Cales I*; 5 = centuriation *Cales III*; 6 = *strigatio Sinuessa VI*; A = *via Appia* (through *Sinuessa*), stretch *Sinuessa-Urbana-Ad Octavum*; A' = section of A that coincides with a *limes* of the centuriation *Ager Falernus II*; B = *via Appia* (through *Suessa Aurunca*), stretch *Suessa-Casilinum*; B' = section of B that coincides with a *limes* of the centuriation *Ager Falernus II*; C = road from the *via Appia* (through *Sinuessa*) to the *via Appia* (through *Suessa Aurunca*), passing through *Forum Popilii*; C' = sections of C that coincide with a *limes* of the centuriation *Ager Falernus II*; D = *via Falerna*, from the *via Appia* (through *Sinuessa*) to *Forum Claudii*; D' = branch of D for *Forum Popilii*; E = *Forum Popilii-Cales*; E' = section of E that coincides with a *limes* of the centuriation *Ager Falernus II*; E'' = section of E that coincides with a *limes* of the centuriation *Teanum III-Cales IV*; F = branch of E for *Urbana*; G = branch of B for *Teanum*. Same indications for the following figures.

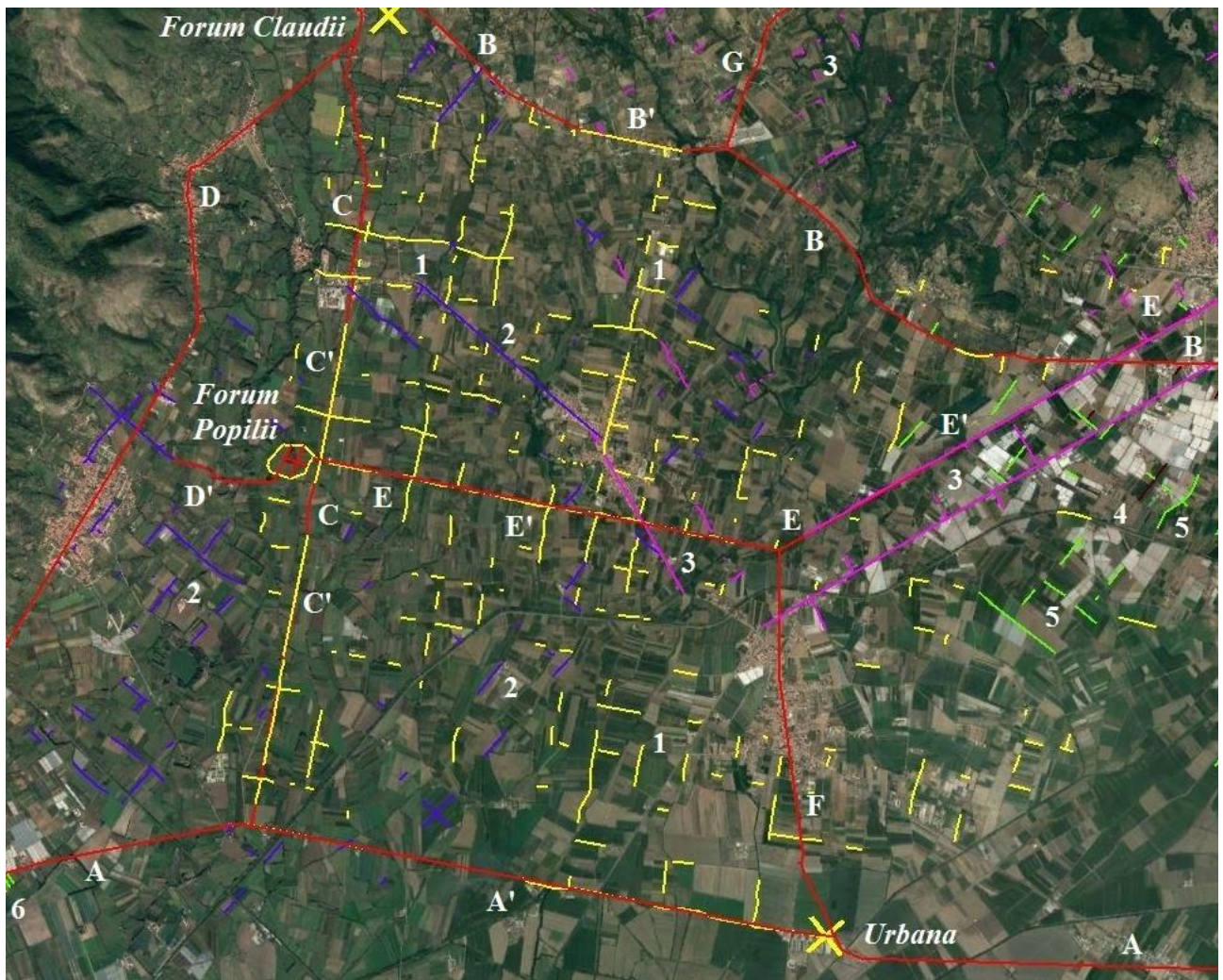


Fig. 24B – Persistences in the area of *Forum Popilii*.

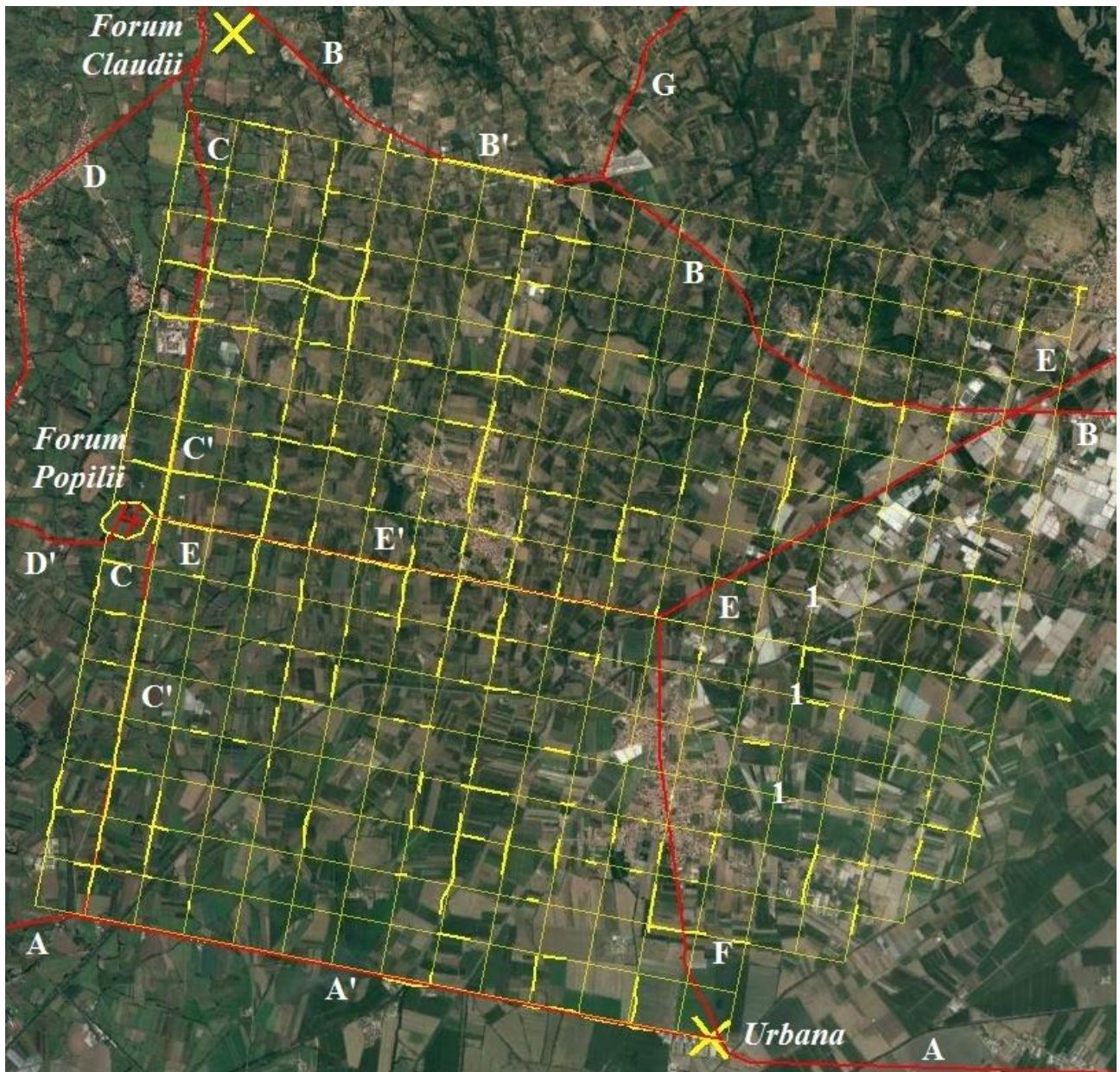


Fig. 24C – The centuriation Ager Falernus II.

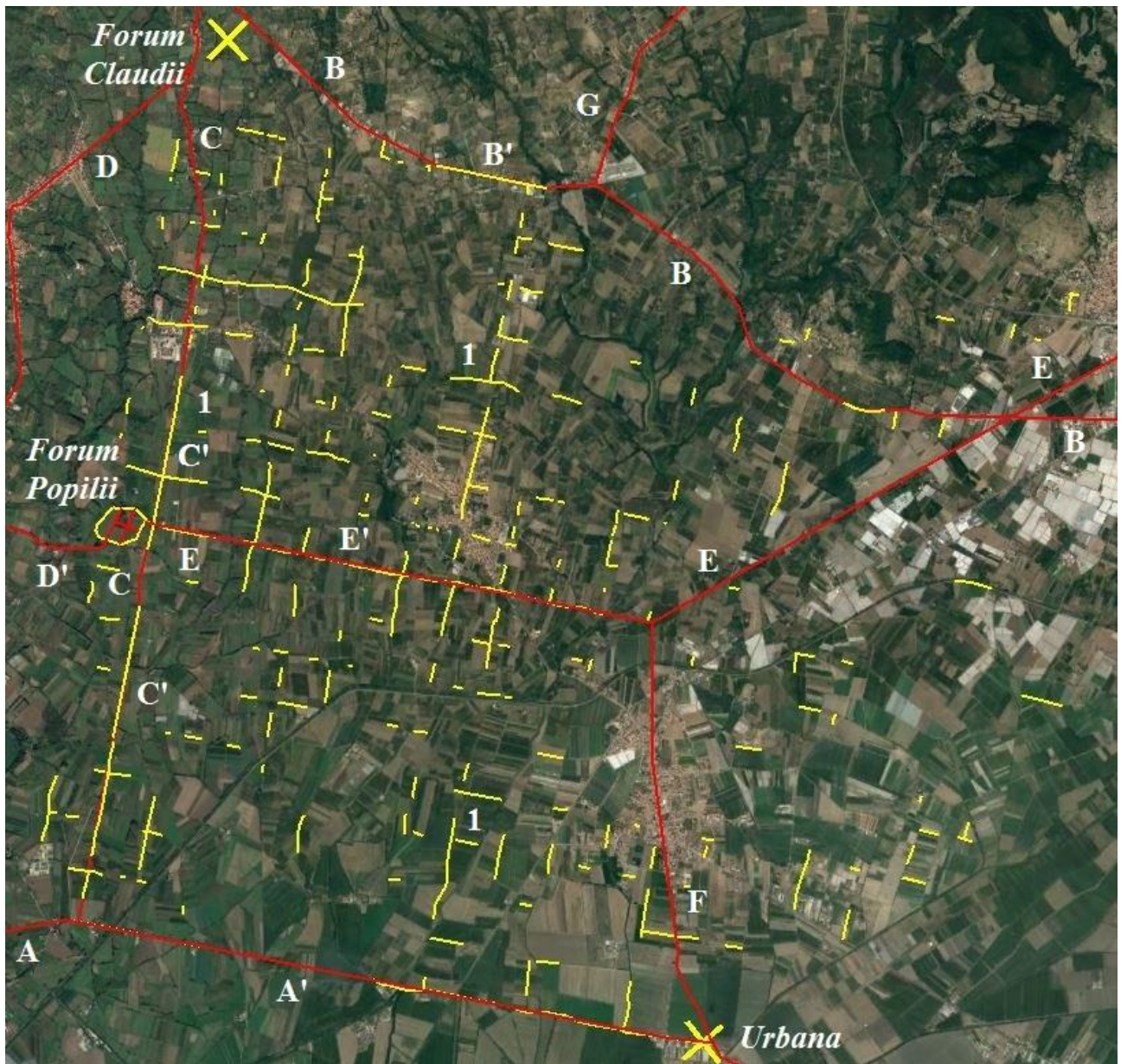


Fig. 24D – Persistences of the centuriation *Ager Falernus II*.

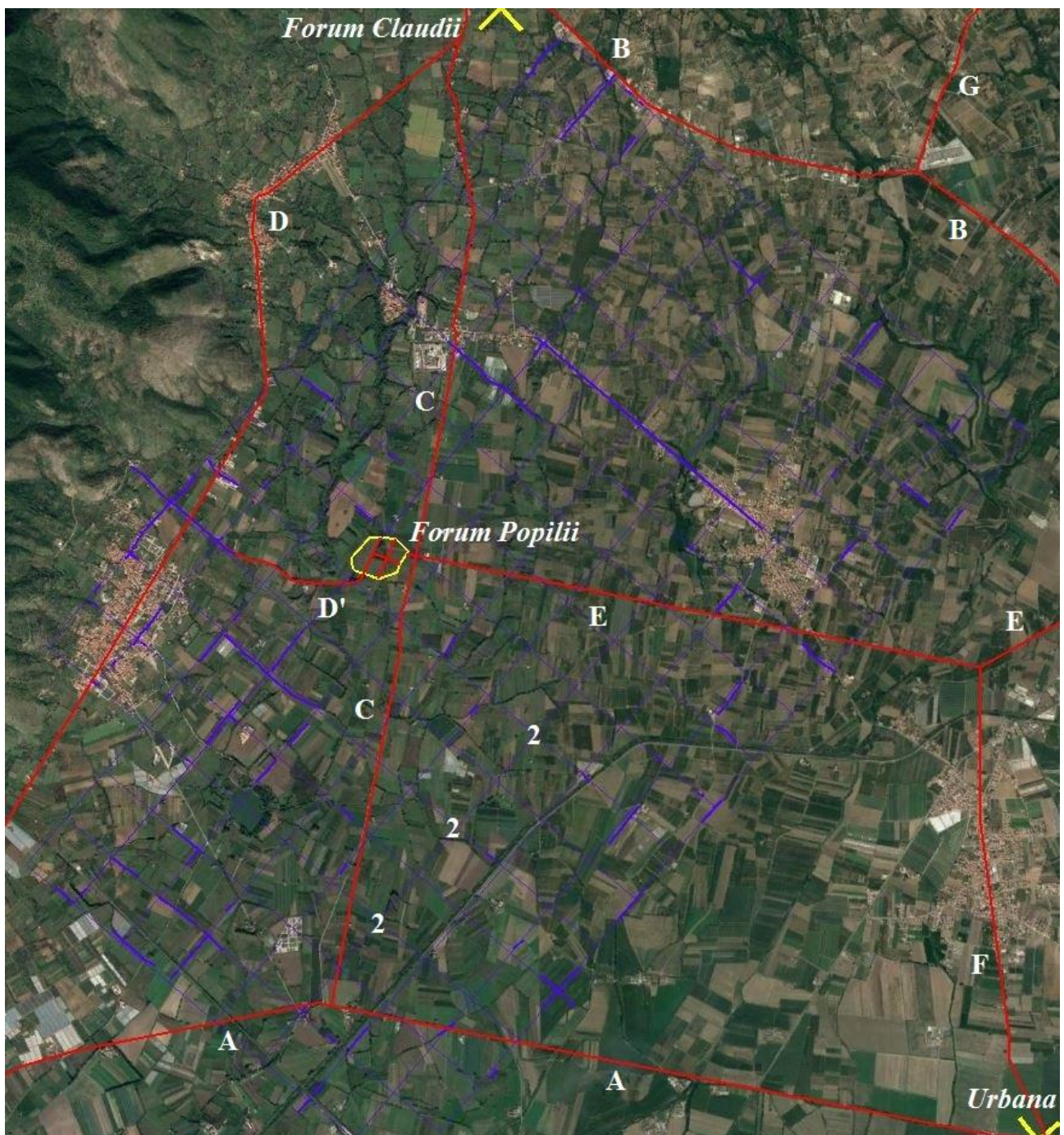


Fig. 24E – The centuriation *Forum Popilii*.

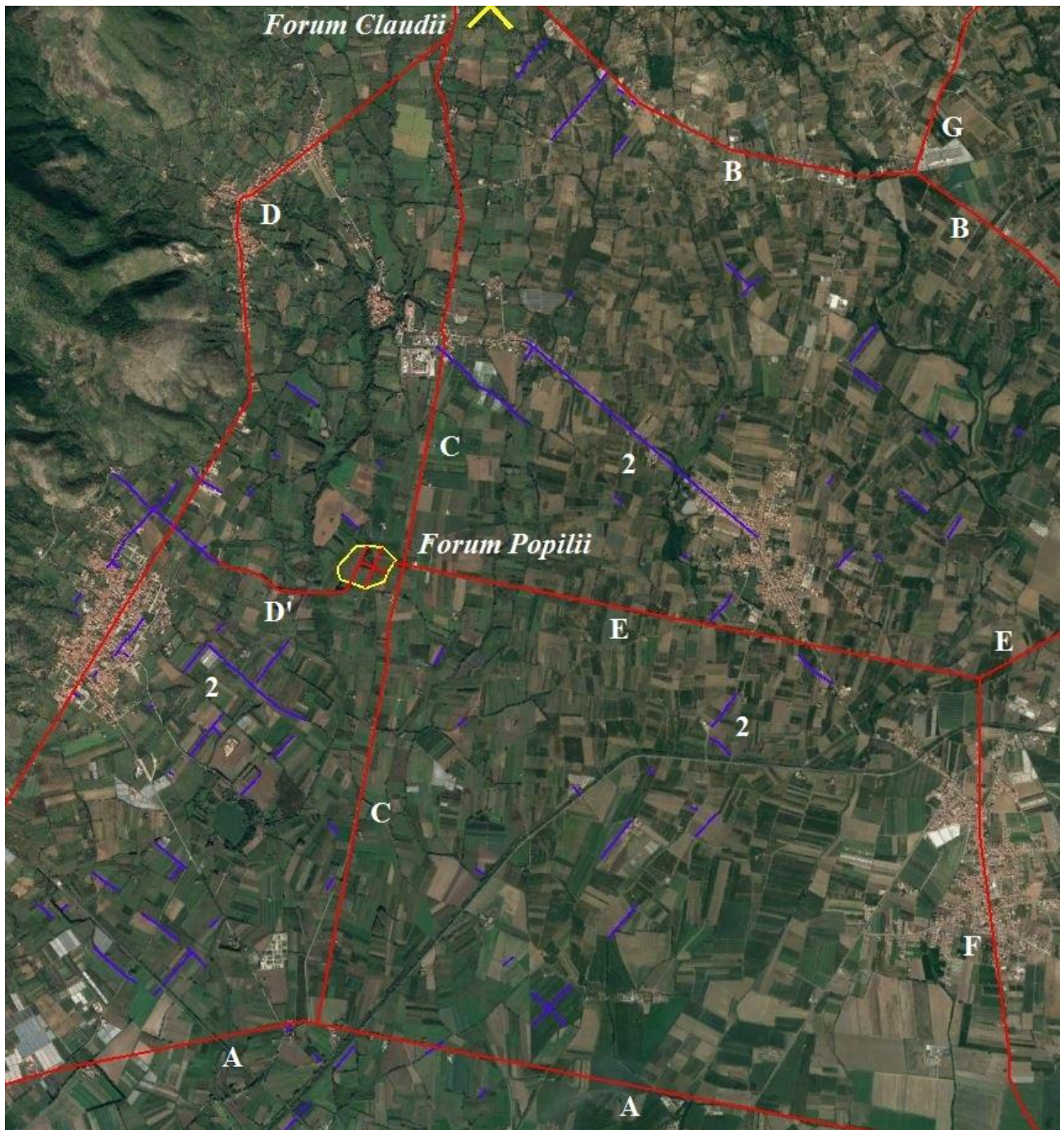


Fig. 24F – Persistences of the centuriation *Forum Popilii*.

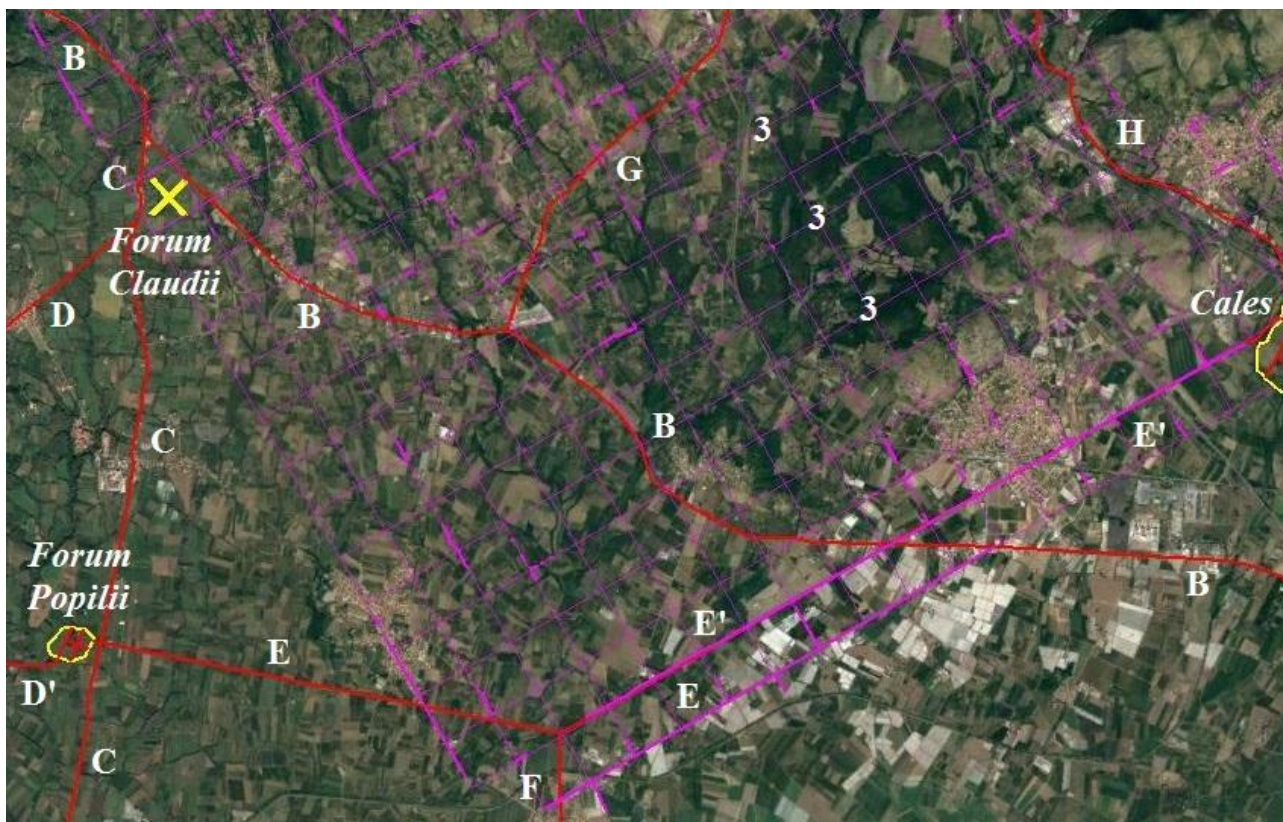


Fig. 24G – The centuriation *Teanum III-Cales IV*, southern part. Further indications: H = *via Latina*, stretch *Teanum-Cales*.

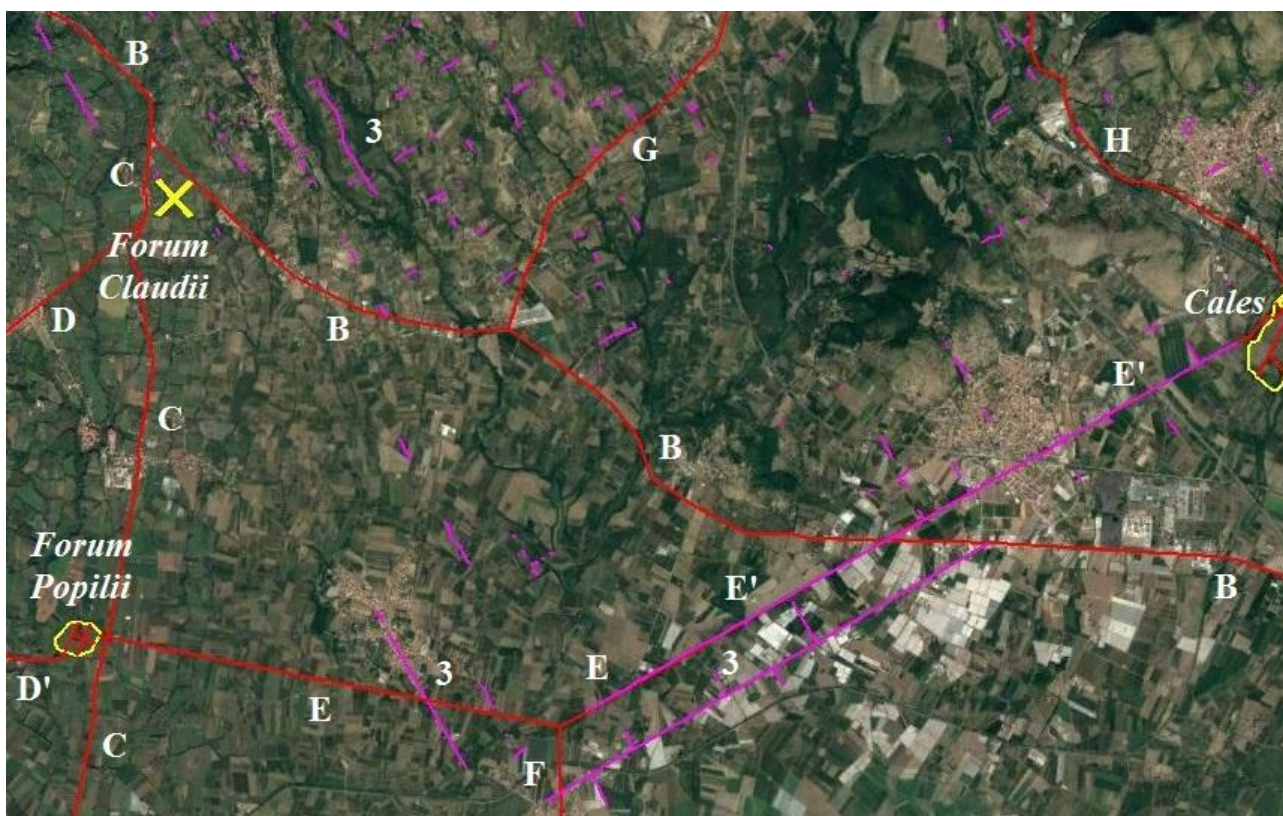


Fig. 24H – Persistences of the centuriation *Teanum III-Cales IV*, southern part.

Ferentinum, oppidum muro ductum. iter populo non debetur. ager eius perennis limitibus pro parte in [5] iugeribus et in lacineis est adsignatus.

Ferentinum (Ferentino), fortified town surrounded with a wall. No right of way is due to the community. Its land was allocated by continuous *limites* proportionally in *iugera* and in strips (fig. 25).



Fig. 25A – The land of *Ferentinum* was divided by a *strigatio* (1, *Ferentinum*, 338 b.C.?, 10 *actus* - 354.8 m -, inclination 42° 00' W). Other indications: 2 = centuriation *Anagnina II-Signia*; A = *via Ferentinum-Alatrium*; A' = sections of A that coincide con the prolongation of a main *limes* of the centuriation *Alatrium-Frusino-Verulae II*; B = *via Latina*, stretch *Ferentinum-Frusino*; B' = section of B that coincides with a *limes* of the *strigatio Ferentinum*; C = *via Latina*, stretch *Ferentinum-Ad Bivium*; C' = section of C that coincides with a *limes* of the centuriation *Anagnina II-Signia*. Same indications for the next figure.

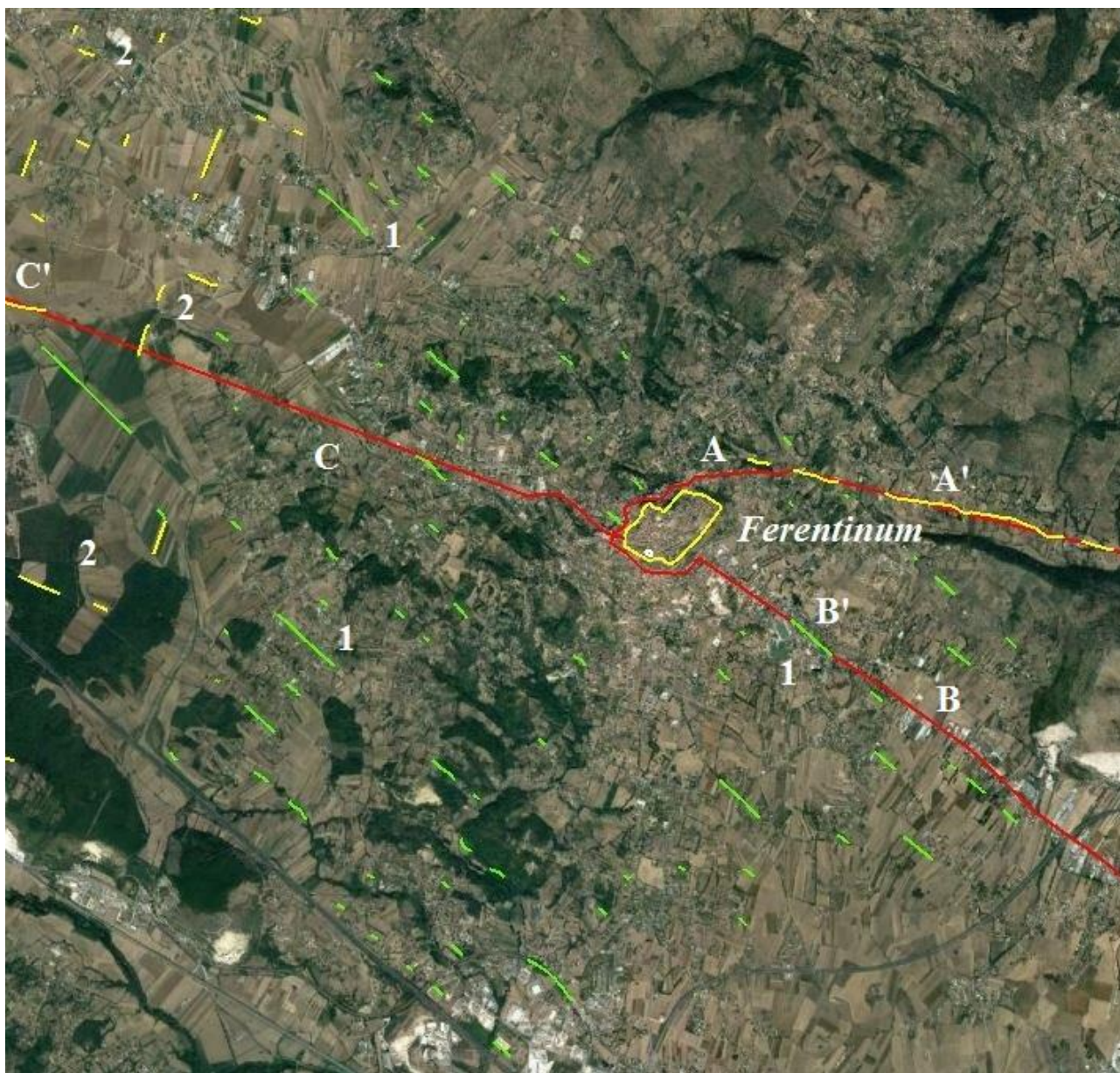


Fig. 25B – Persistences in the area of *Ferentinum*.

<p>Fabrateria, muro ducta. iter populo non debetur. ager eius iure ordinario est diuisus.</p>	<p><i>Fabrateria <Nova></i> (San Giovanni Incarico, about 2 km north of the town), surrounded with a wall. No right of way is due to the community. Its land was divided according the ordinary law (fig. 7).</p>
<p>Fundis, oppidum muro ductum. iter populo non debetur. ager eius iussu Augusti ueteranis est cultura [10] adsignatus: ceterum in eius iure et in publicum resedit.</p>	<p><i>Fundi</i> (Fondi), fortified town surrounded with a wall. No right of way is due to the community. Its cultivated land by order of <i>Augustus</i> was allocated to veteran soldiers: the rest <of the territory> reverted to its jurisdiction and to public control (fig. 26).</p>

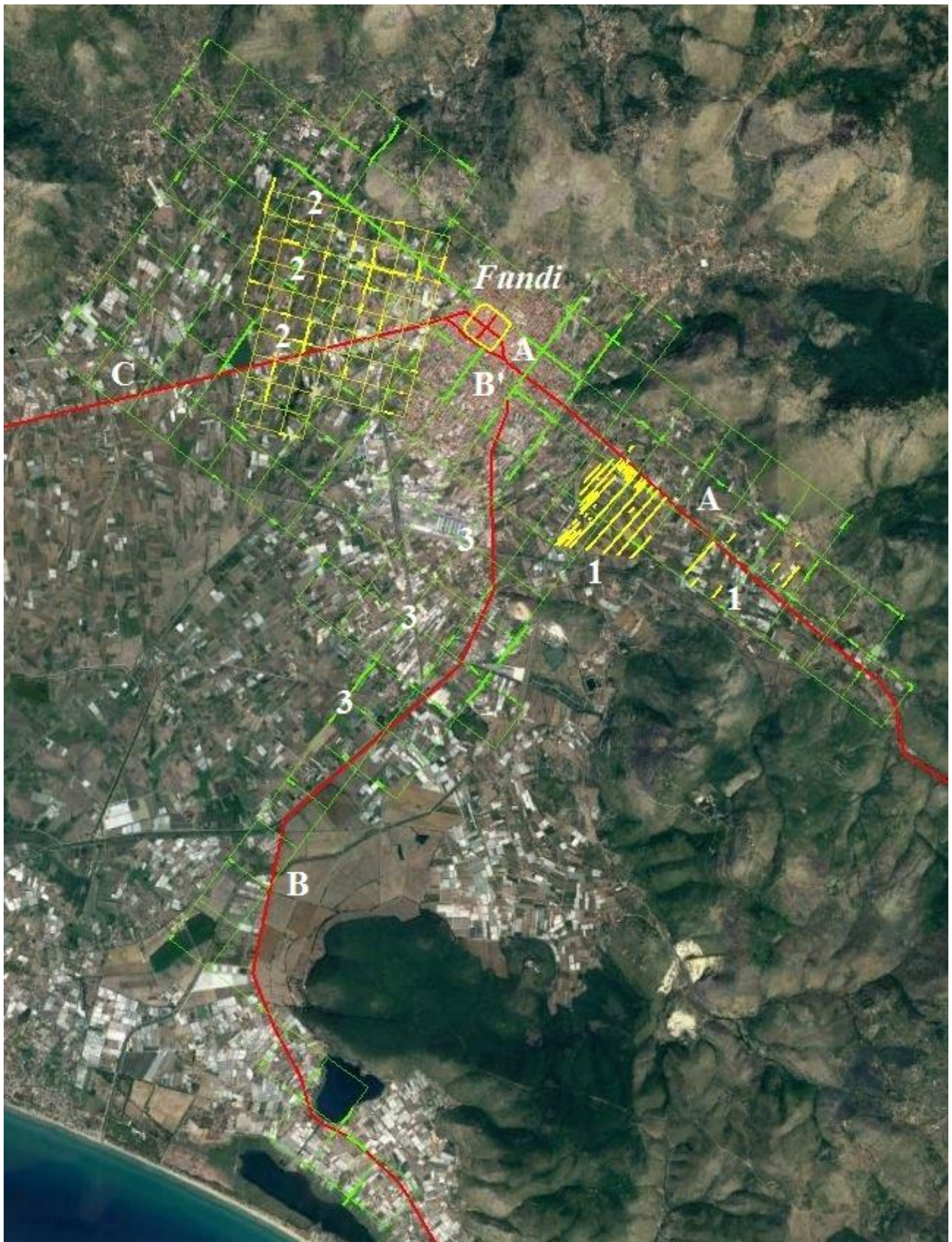


Fig. 26A – The land of *Fundi* was divided by a precocious irregular *strigatio* (1, *Fundi I*, precocious - 330 b.C.? - irregular, inclination about $41^{\circ} 30'$ E) and by two centuriations (2, *Fundi II*, unspecified age, 7×7 *actus* – 248.36×248.36 m -, inclination $15^{\circ} 00'$ E; 3, *Fundi III*, Augustan, 15×15 *actus* – 532.2×532.2 m -, inclination $37^{\circ} 00'$ E). The reference in the text is clearly to *Fundi III*. Other indications: A = *via Fundi-Formiae*; B = *via Fundi-Spelunca*; B' = section of B that coincides with a *limes* of the centuriation *Fundi III*; C = *via Fundi-Tarracina*. Same indications for the following figures too.

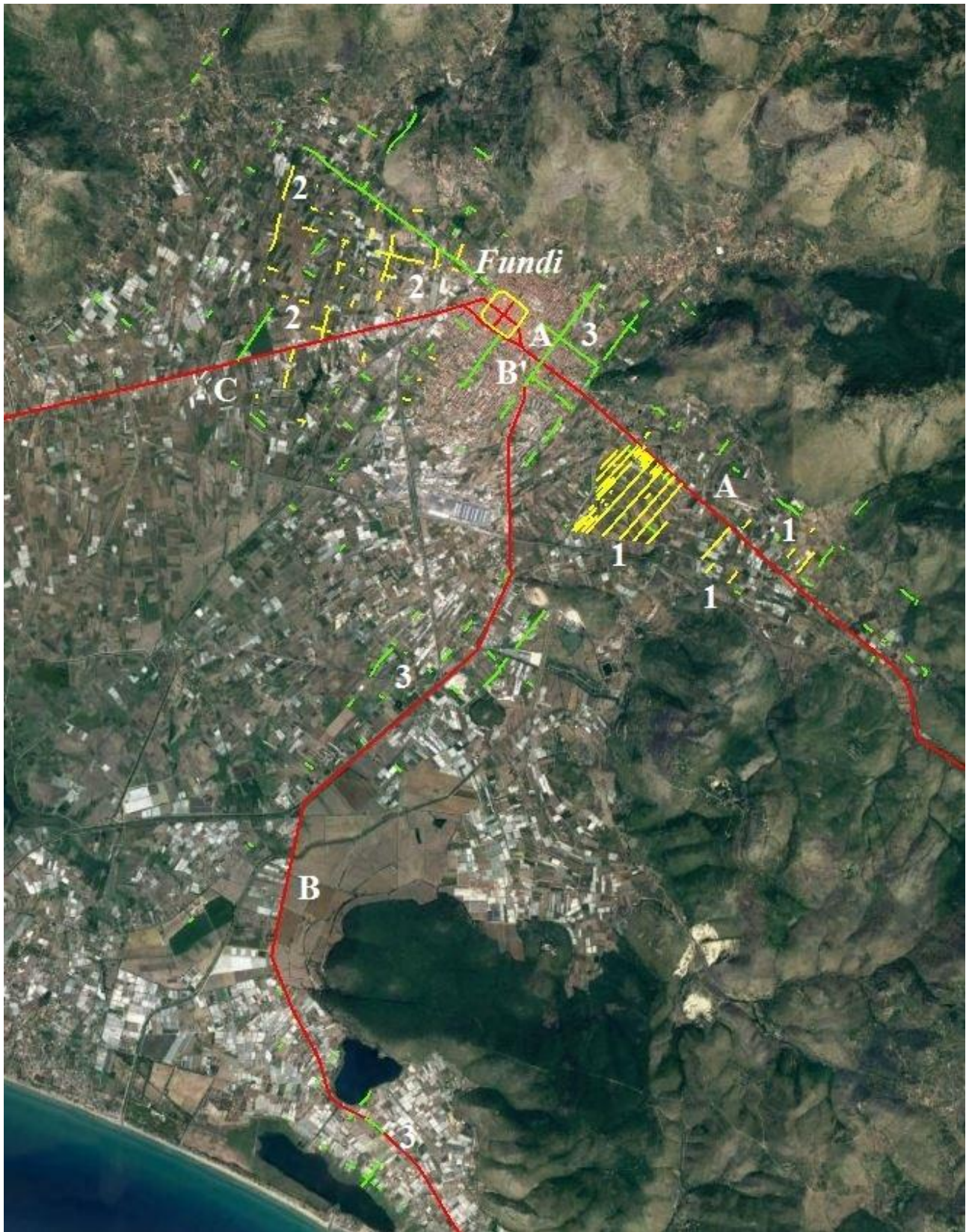


Fig. 26B – Persistences in the area of *Fundi*.



Fig. 26C – The irregular *strigatio Fundi I*.



Fig. 26D – The centuriation *Fundi II*.



Fig. 26E – Persistences of the centuriation *Fundi II*.

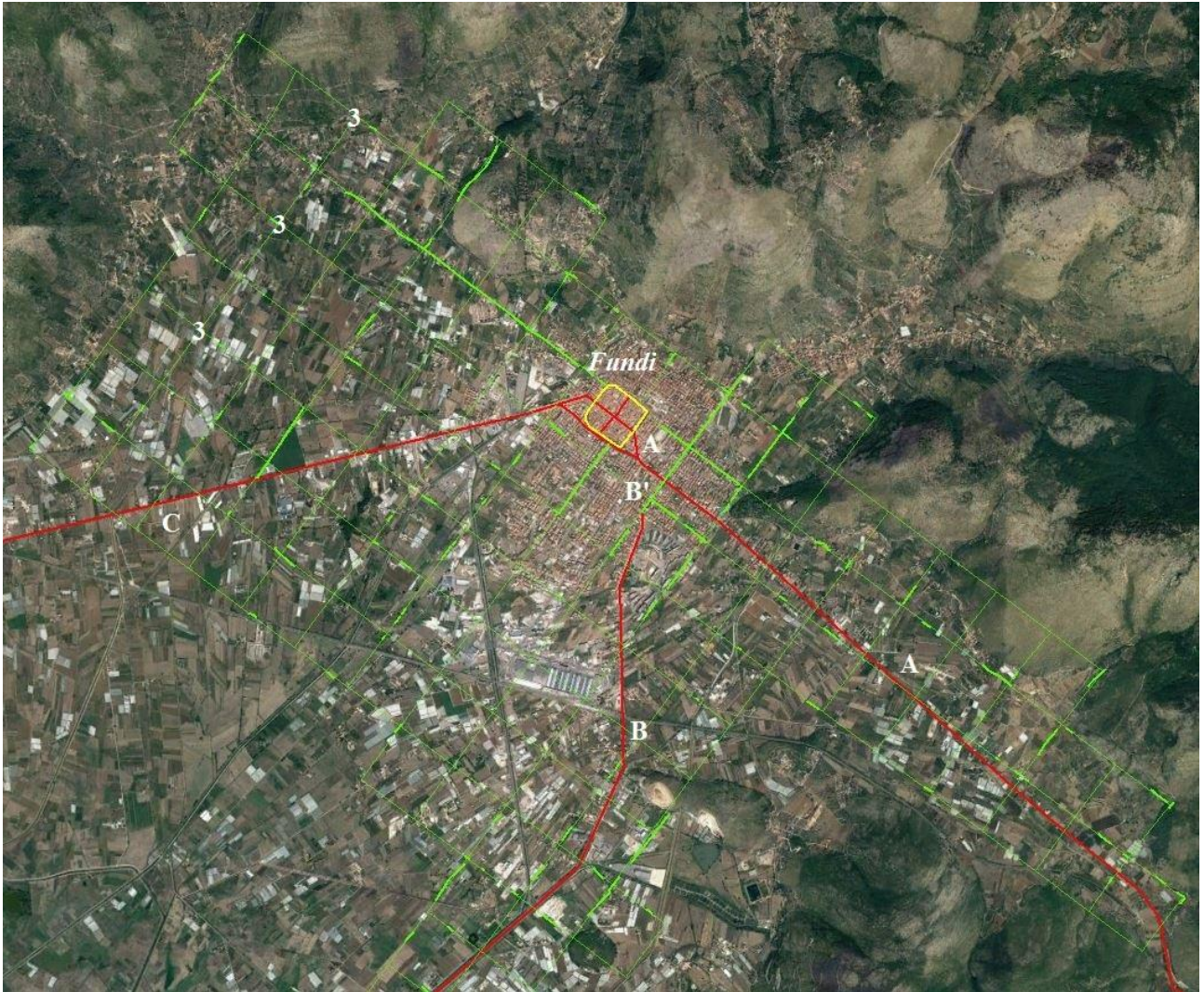


Fig. 26F– The centuriation *Fundi III* (southern part excluded).

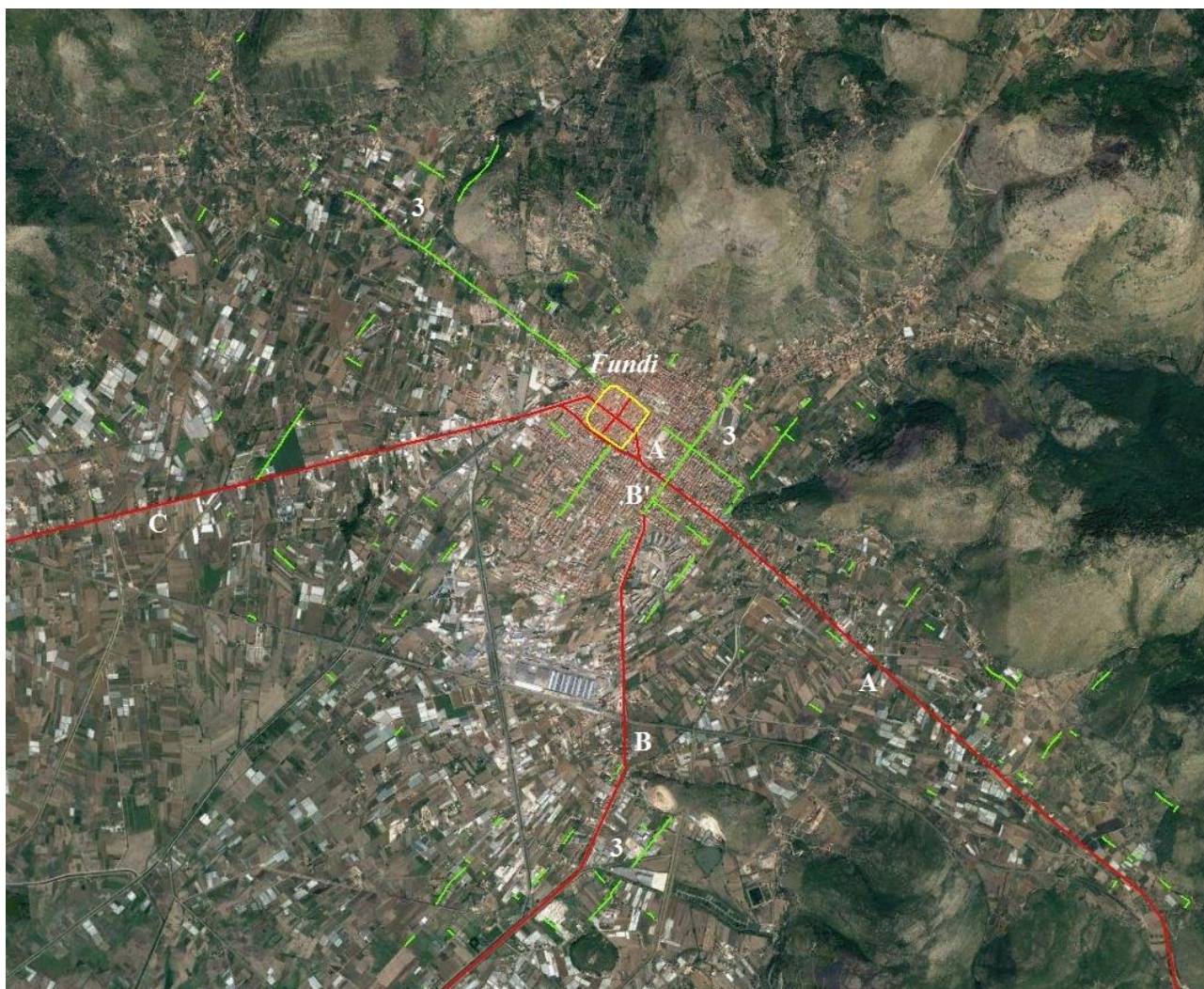


Fig. 26G – Persistences of the centuriation *Fundi III* (southern part excluded).

Formias, oppidum. triumviri sine colonis deduxerunt. iter populo non debetur. ager eius in absoluto resedit. pro parte in lacineis est adsignatus. finitur terminis siliceis et Tiburtinis.

Formiae (Formia), fortified town. The *triumviri* founded it without colonists. No right of way is due to the community. Its land remained unsurveyed. It was proportionately allocated in strips. Its boundary is demarcated by flint stones and Tiburtine stones (fig. 27).

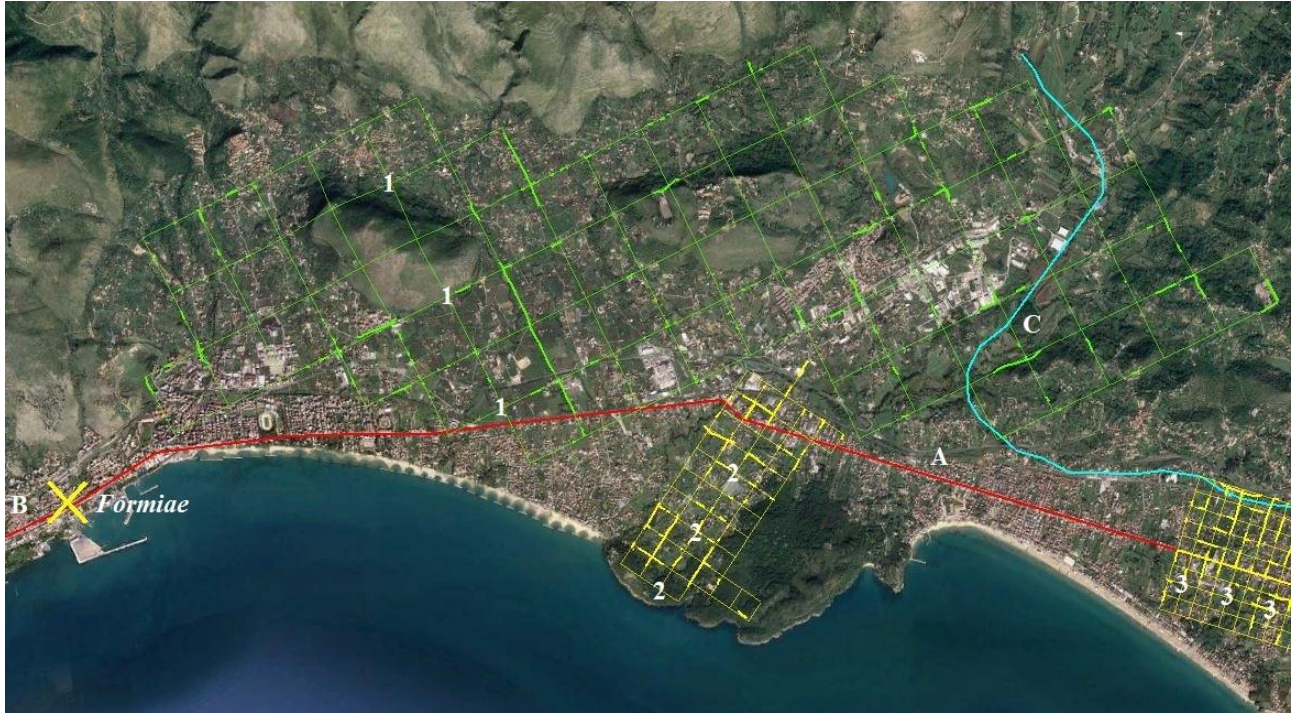


Fig. 27A – The land of *Formiae* was divided by a centuriation (1, *Formiae*, probably Augustan, 16 x 16 *actus* – 567.8 x 567.8 m -, inclination 25° 30' W). An area near to its land, but pertaining to *Minturnae*, was divided by a particular centuriation, perhaps inside a private *fundus* (2, *Scauri*, Augustan centuriation within a *fundus*?, 6 x 6 *actus* – 212.88 x 212.88 m -, inclination 34° 00' E). Other indications: 3 = centuriation *Minturnae* I; A = *via Formiae-Minturnae*; B = *via Formiae-Fundi*; C = aqueduct of *Minturnae*.



Fig. 27B – Persistences in the area of *Formiae*.

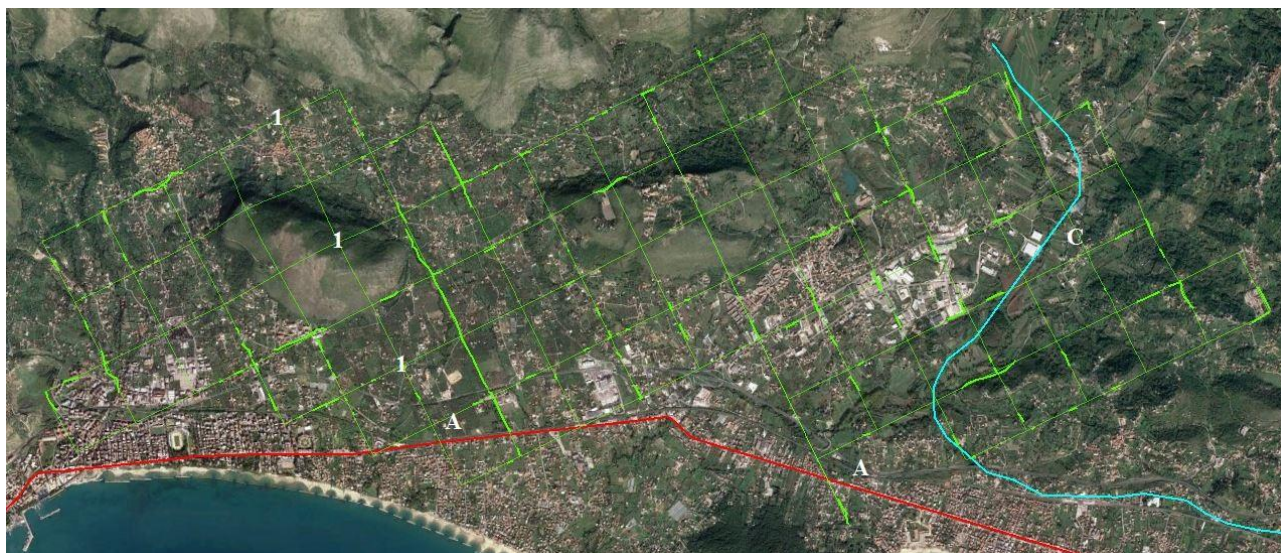


Fig. 27C – The centuriation *Formiae*.

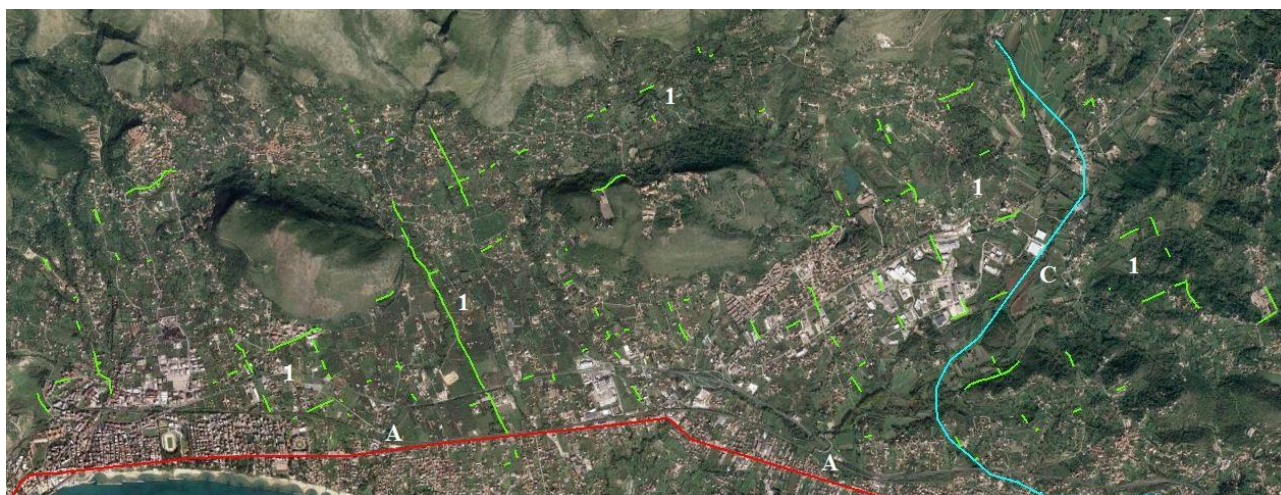


Fig. 27D – Persistences of the centuriation *Formiae*.

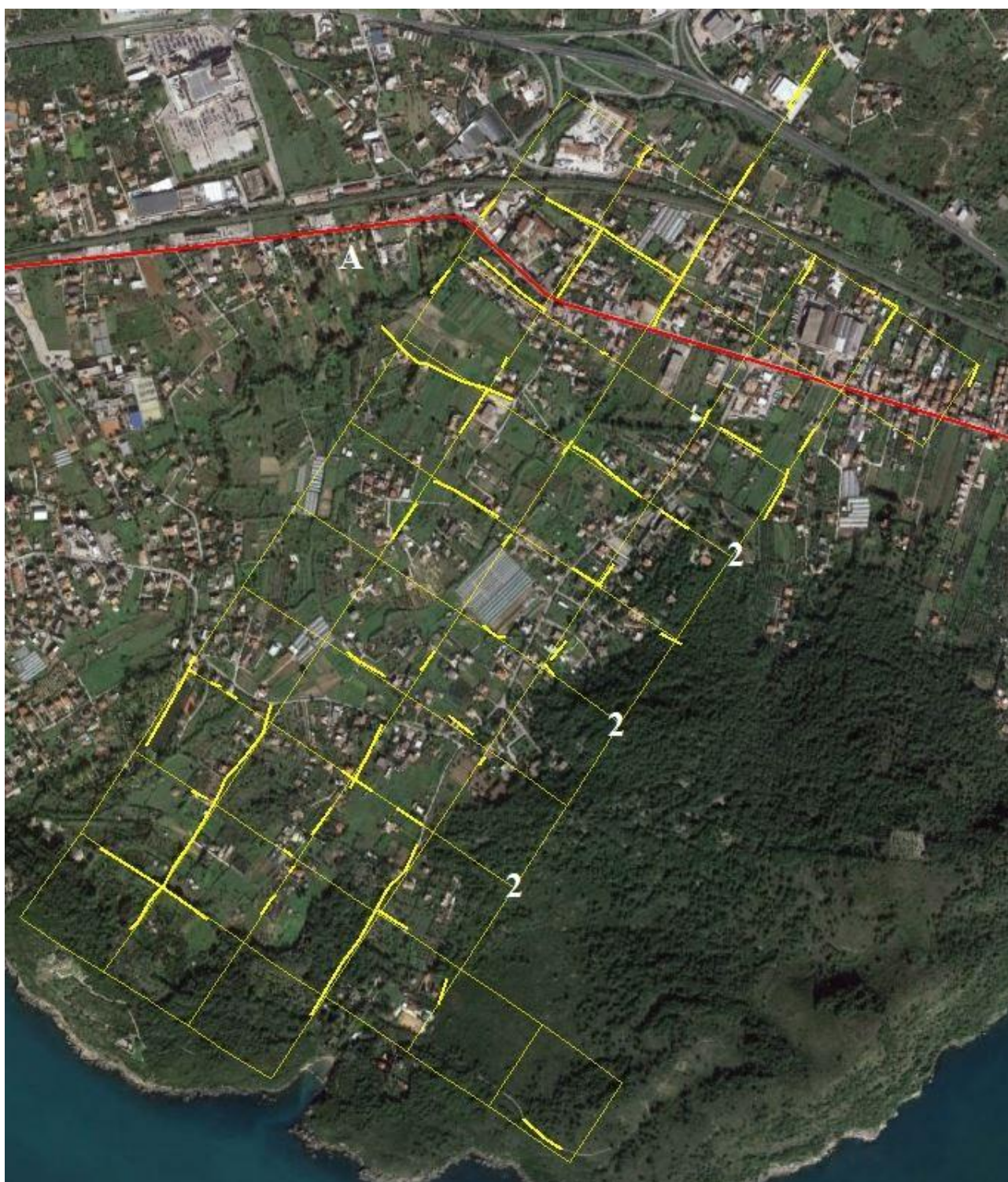


Fig. 27E – The centuriation Scauri.

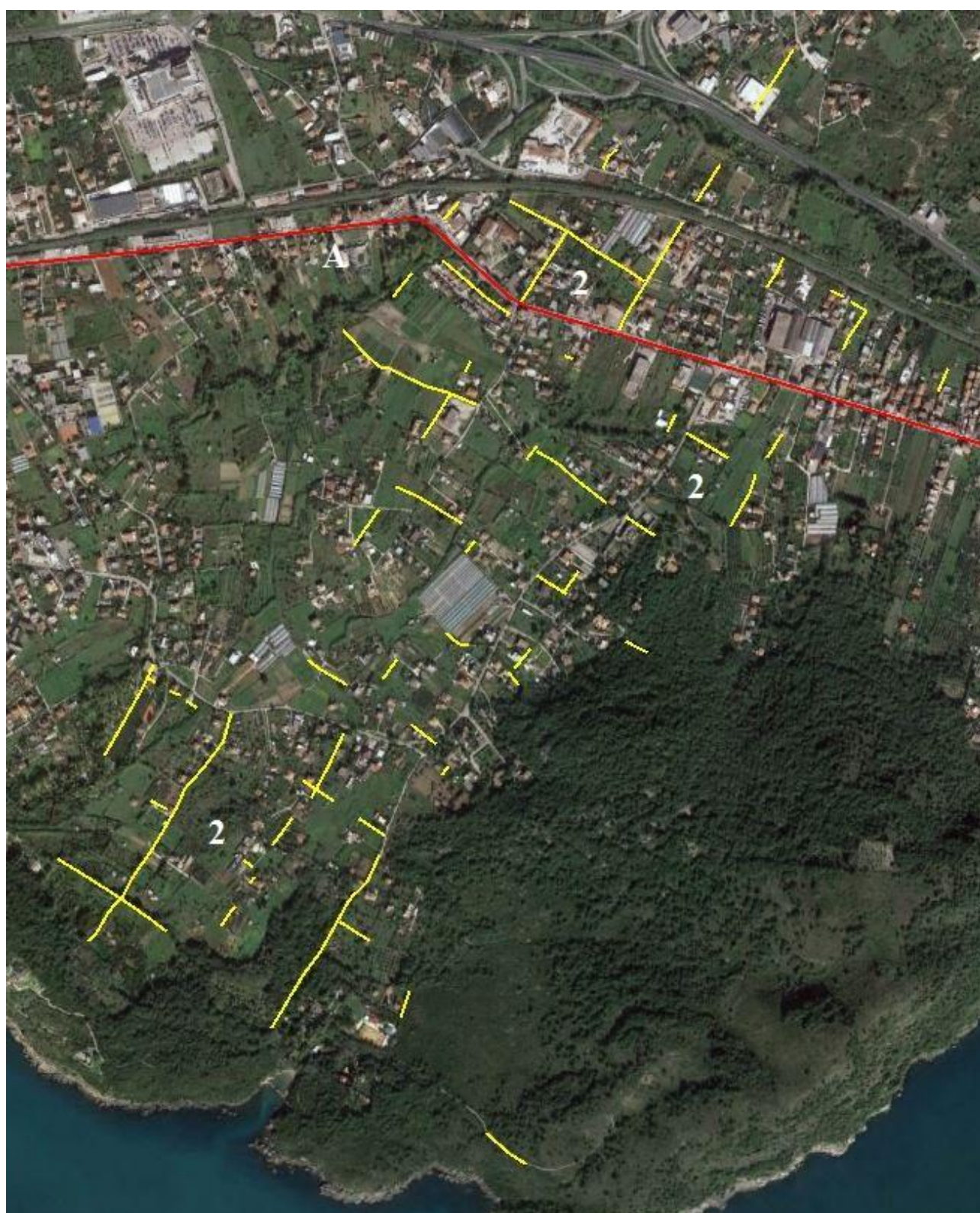


Fig. 27F – Persistences of the centuriation Scauri.

[15] Gaus, oppidum lege Sullana munitum. ager eius militi ex occupatione censitus est. iter populo non debetur.	<i>Gabii</i> (Rome, on the via Prenestina, 8 km from the ring road), town fortified under <i>lex Sullana</i> . Its land was assessed for soldiers on the basis of their appropriation (fig. 3). No right of way is due to the community.
Interamna, oppidum, muro ducta a triumuiris est munita. iter populo non debetur. ager eius militi metyco [20] est adsignatus in lacineis limitibus intercisuiis.	<i>Interamna <Lirenas></i> (Pignataro Interamna, about 3 km south-west of the town), fortified town surrounded with a wall, was fortified by the <i>triumviri</i> . No right of way is due to the community. Its land was allocated to non-native soldiers in strips by <i>limites intercisivi</i> (fig. 7) ³⁹ .
Laurum Lauinia lege et consecratione ueteri manet. ager eius ab imp. Vespasiano Traiano et Adriano in lacineis est adsignatus. iter populo non debetur.	<i>Laurum Lavinia</i> (<i>Lavinium</i> , Pratica di Mare, hamlet of Pomezia) remains according to its old law and consecration. Its land was allocated in strips by the emperors <i>Vespasianus</i> , <i>Traianus</i> and <i>Adrianus</i> . No right of way is due to the community.
[L. 235.1] Liternum, muro ductum, colonia ab Augusto deducta. iter populo debetur ped. CXX. ager eius in iugeribus ueteranis est adsignatus.	<i>Liternum</i> (Giugliano in Campania, near Lake Patria), colony surrounded with a wall founded by <i>Augustus</i> . A right of way of CXX feet is due to the community. Its land was allocated in <i>iugera</i> to veteran soldiers.
Lanuuium, muro ductum, colonia deducta a diuo [5] Iulio. ager eius limitibus Augusteis pro parte est adsignatus militibus ueteranis, et pro parte uirginum Vestalium lege Augustiana fuit. sed postea imp. Hadrianus colonis suis agrum adsignari iussit.	<i>Lanuuium</i> (Lanuvio), surrounded with a wall, colony founded by the divine <i>Iulius</i> . Its land was allocated in part by Augustan <i>limites</i> to veteran soldiers, and in part belonged to the Vestal Virgins under <i>lex Augustea</i> , but later the emperor <i>Adrianus</i> ordered the land to be allocated to his own colonists.
Liguris Bebianus et Cornelianus, muro ductus [10] triumuirale lege. iter populo non debetur. ager eius post bellum Augustianum ueteranis est adsignatus.	<i>Ligures Baebiani et Corneliani</i> (near Circello), surrounded with a wall under a triumphal law. No right of way is due to the community. Its land after the Augustan war was allocated to veteran soldiers.
Minturnas, muro ducta colonia, deducta a Gaio Caesare. iter populo non debetur. ager eius pro parte in iugeribus est adsignatus: ceterum in absoluto est relictum.	<i>Minturnae</i> (Minturno, 2.5 km south-west of the town), colony surrounded with a wall, founded by <i>Gaius Caesar</i> . No right of way is due to the community. Its land was allocated partly in <i>iugera</i> : the remainder was left unsurveyed (fig. 28).

³⁹ About the *limitationes* regarding the land of *Interamna Lirenas*, see *Aquinum*.



Fig. 28A – The lands of *Minturnae*, *Suessa Aurunca* and *Sinuessa* (western part) were divided by five *limitationes*: 1, *Minturnae I*, centuriation, triumviral, 4 x 4 *actus* – 141.92 x 141.92 m -, inclination 17° 30' E; 2, *Minturnae II-Suessa IV-Sinuessa III a e b*, centuriation, triumviral, 20 x 20 *actus* – 710 x 710 m – inclination 40° 00' E (This centuriation appears divided into two parts, *a* and *b*, slightly offset from each other [165 m, about 500 feet] and it is possible that the western part was pertaining to *Minturnae* while the eastern part to *Suessa Aurunca* and *Sinuessa*); 3, *Suessa III*, centuriation, Gracchan, 13 x 13 *actus* – 461.24 x 461.24 m -, inclination 32° 00' W; 4 = *Suessa I-Sinuessa I*, centuriation, pre-roman?, 8 x 8 *vorsus* – 240 x 240 m -, inclination 40° 30' W; 5 = *Sinuessa II*, centuriation, 296 b.C.?, 16 x 16 *vorsus* – 480 x 480 m -, inclination 21° 00' E. Other indications: 6 = centuriation *Formiae*; A = *via Appia* (through *Sinuessa*); A' = section of A that coincides with a main *limes* of the centuriation *Minturnae I*; B = *via Appia* (through *Suessa Aurunca*); C = *via Sinuessa-Suessa Aurunca*; D = *via Minturnae-Pagus Vescinae-Aquae Vescinae*; D' = section of D that coincides with a *limes* of the centuriation *Minturnae II-Suessa IV-Sinuessa III a*; E = *via Minturnae-Interamna Lirenas*; F = common trunk of D and E; G = road from *Suessa Aurunca* toward the basin of *Roccamonfina*; H = branch of E until reaching a ferrying point (*traiectus*) on the river *Garigliano* and subsequent continuation until reaching the *via Appia* (through *Suessa Aurunca*); I = aqueduct of *Minturnae*; J = *via Falerna*. Same indications for the following figures too.

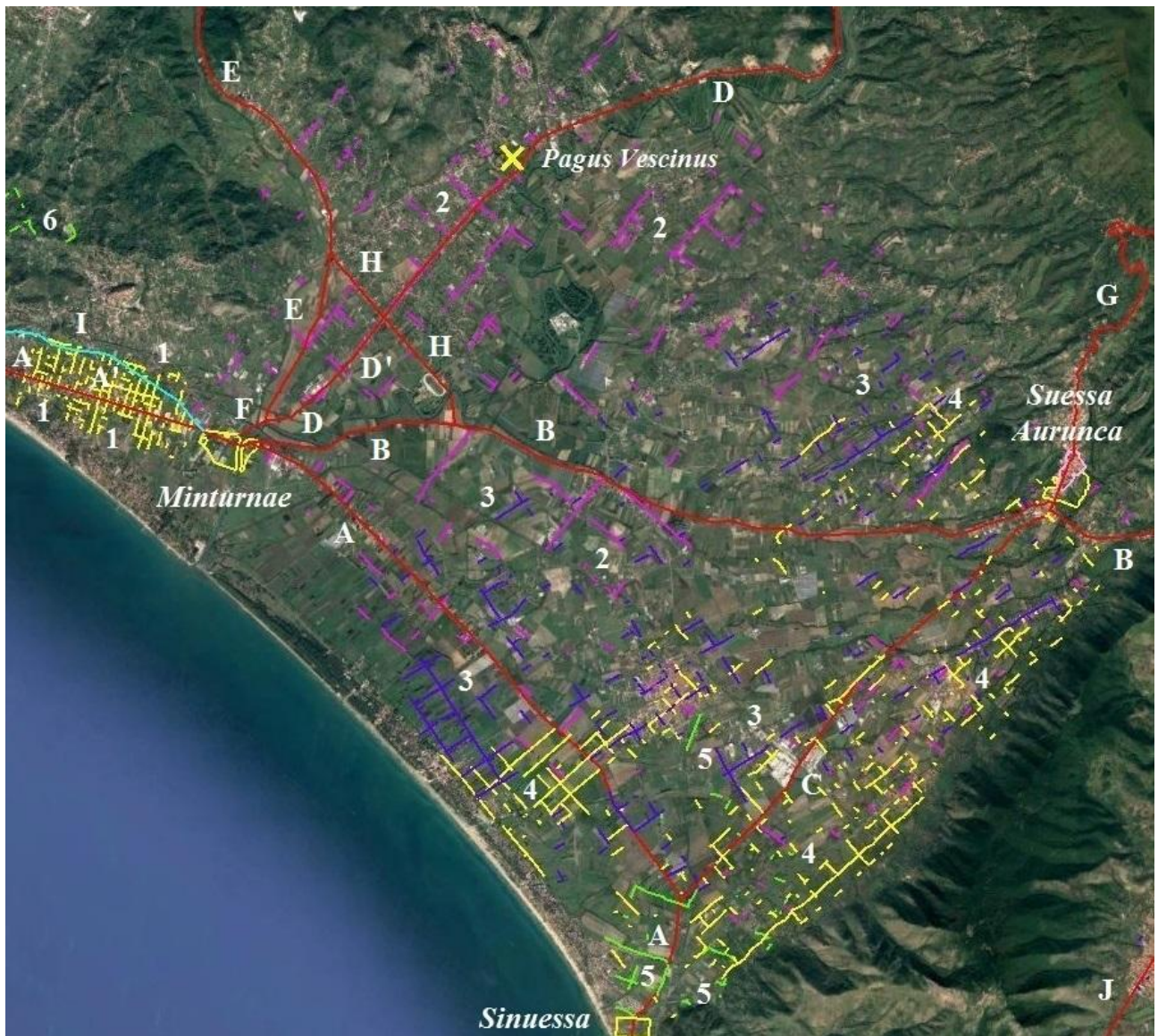


Fig. 28B – Persistences in the lands of *Minturnae*, *Suessa Aurunca* and *Sinuessa* (eastern part).

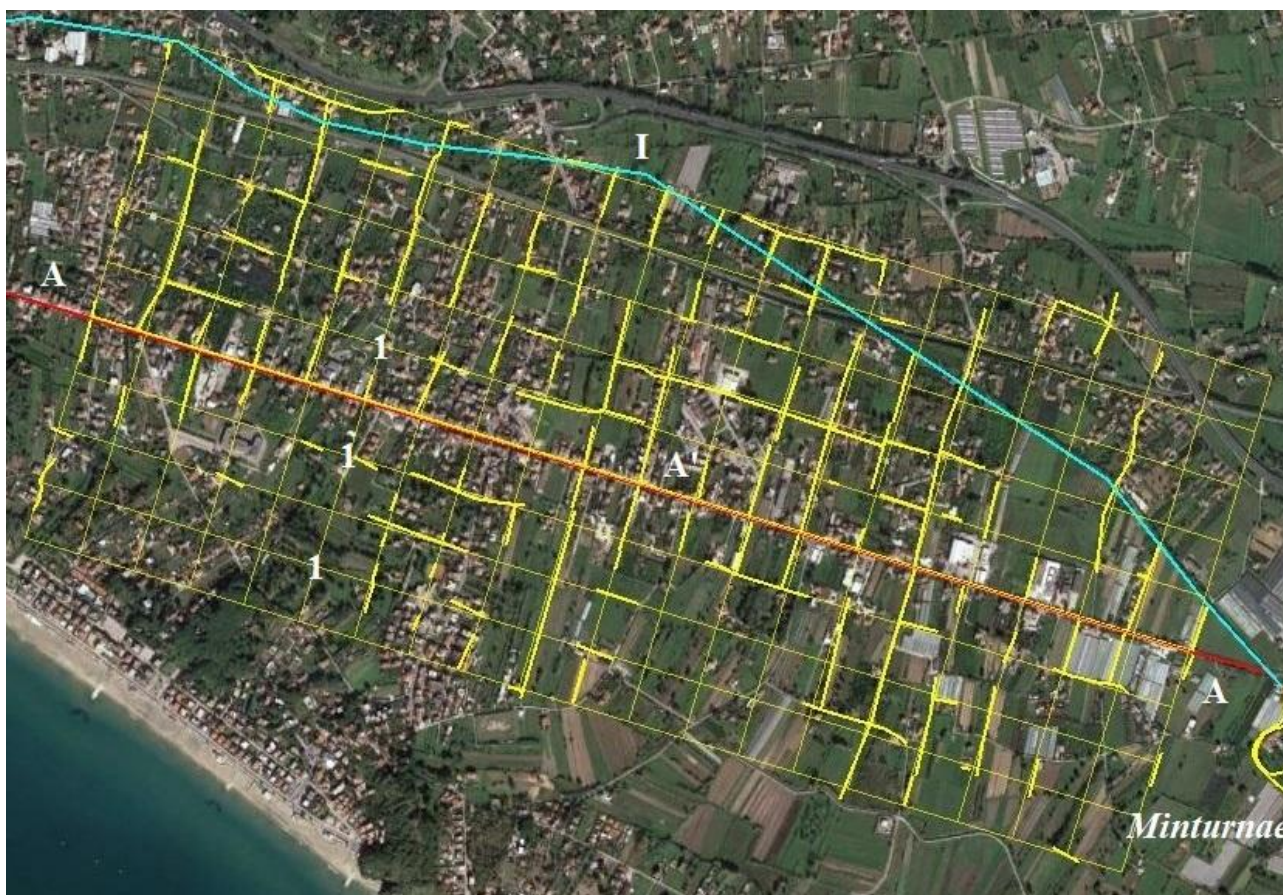


Fig. 28C – The centuriation *Minturnae I*.



Fig. 28D – Persistences of the centuriation *Minturnae I*.



Fig. 28E – The centuriation *Minturnae I* in the interpretation of Chouquer *et al.* (fig. 49) that present an unusual and unique hypothesis, that is, *centuriae* with dimensions 4 x 8 *actus* arranged some in one direction and others in the orthogonal direction.

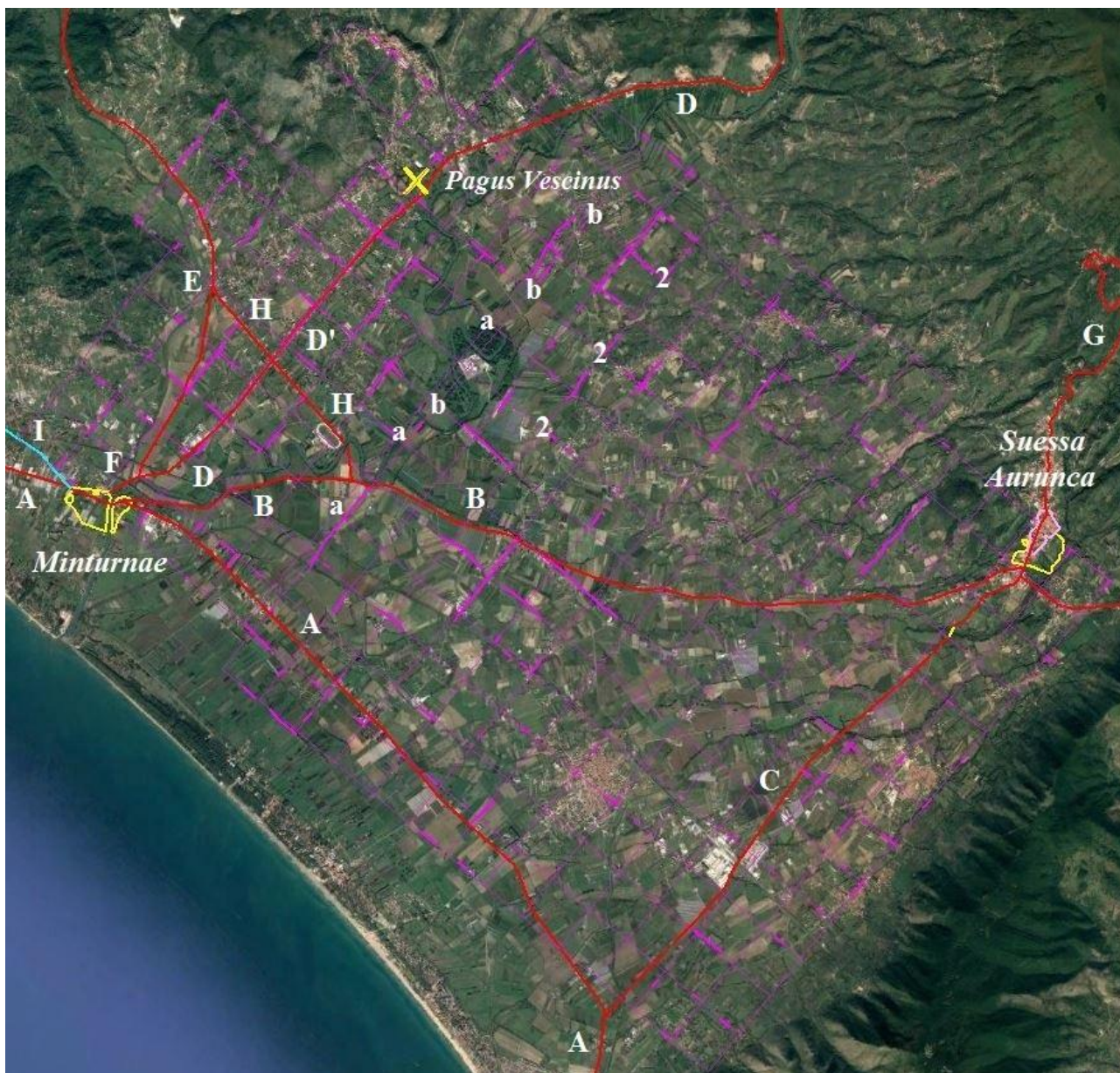


Fig. 28F – The centuriation *Minturnae II-Suessa IV-Sinuessa III*, divided into two parts, *a* and *b*.

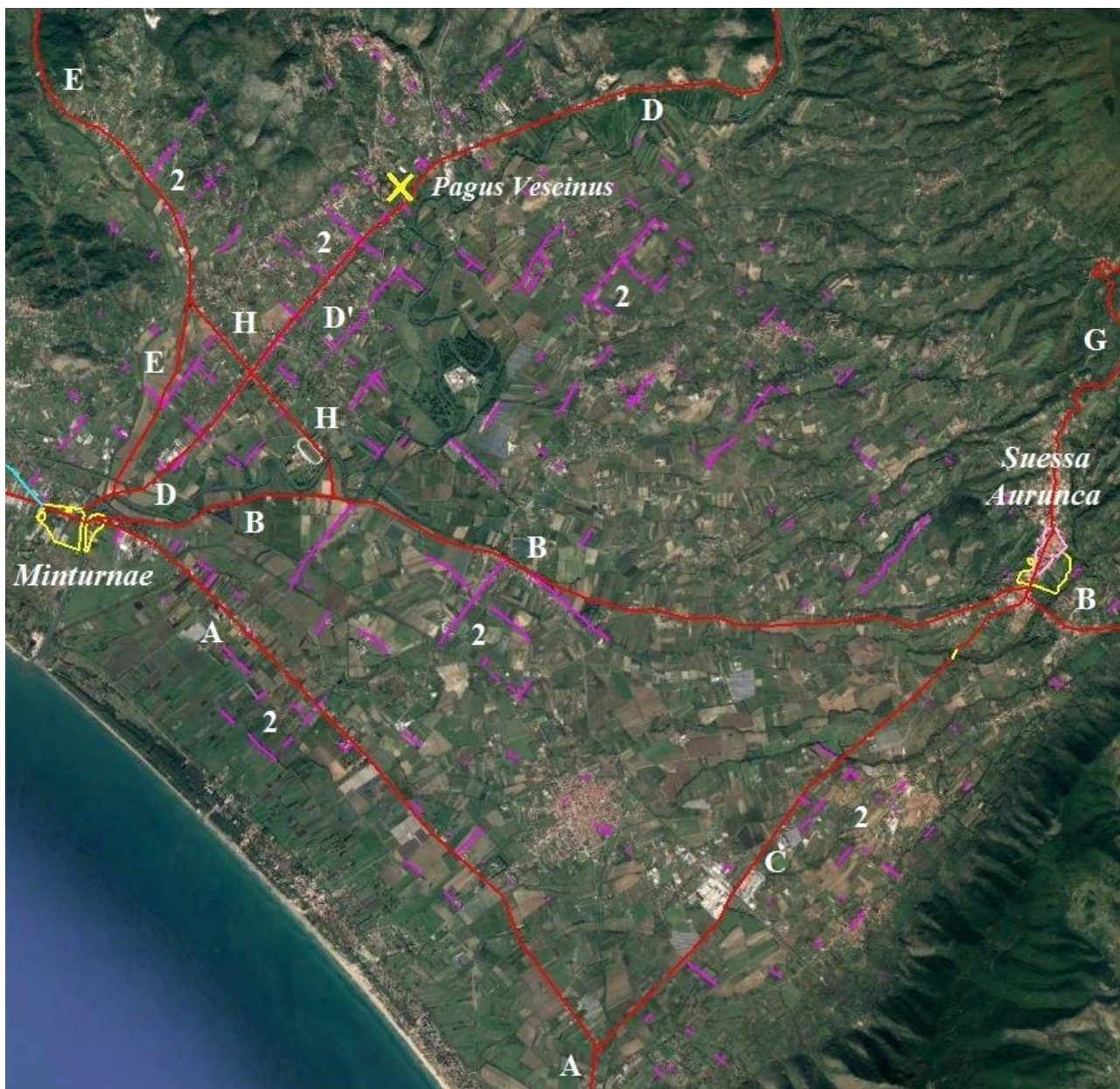


Fig. 28G – Persistences of the centuriation *Minturnae II-Suessa IV-Sinuessa III*.

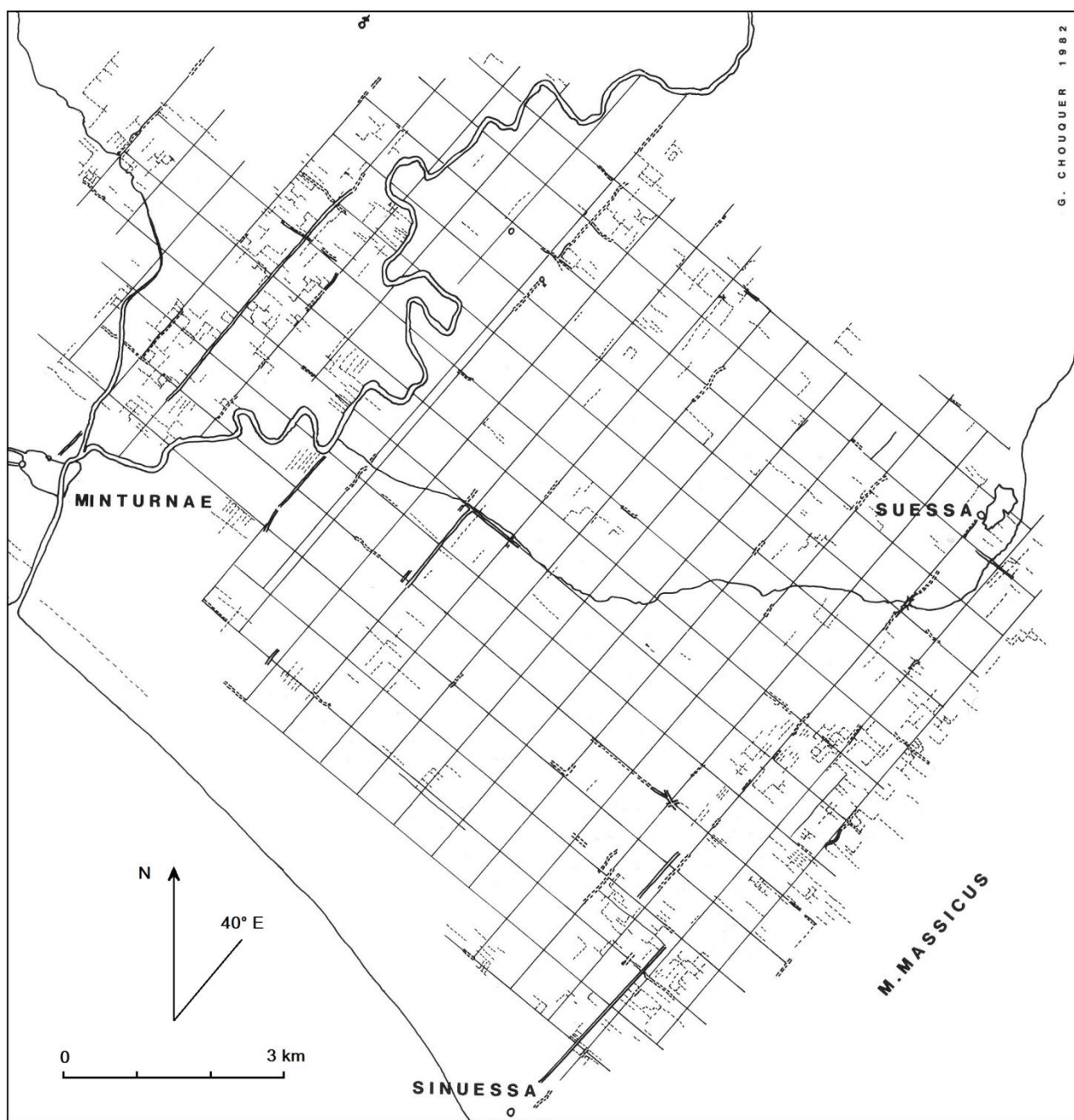


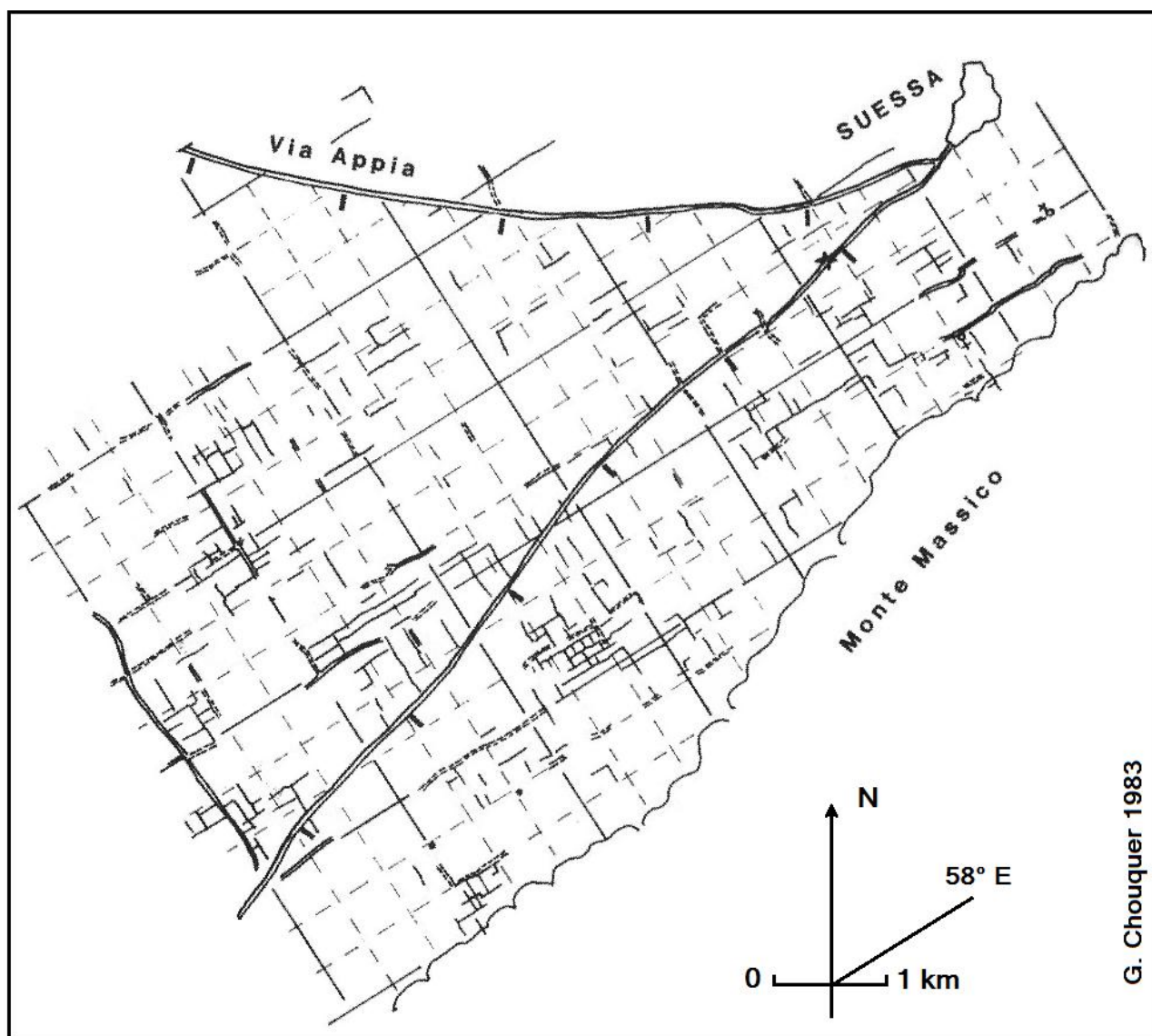
Fig. 28H – The centuriation *Minturnae II-Suessa IV-Sinuessa III* in the interpretation of Chouquer *et al.* (fig. 54). It should be noted that for the French authors the intermediate area between the two parts of the centuriation is completely east of the route of the river Garigliano, while in the interpretation before proposed the intermediate area is over the course of the river.



Fig. 28I – The centuriation *Suessa III*.



Fig. 28J – Persistences of the centuriation *Suessa III*.



G. Chouquer 1983

Fig. 28K - The centuriation *Suessa III* in the interpretation of Chouquer *et al.* (fig. 53). It should be noted that this interpretation does not highlight persistences of the centuriation west of the route of the *via Appia* (through *Sinuessa*).



Fig. 28L – The centuriation *Suessa I-Sinuessa I*.



Fig. 28M – Persistences of the centuriation *Suessa I-Sinuessa I*.



Fig. 28N – The centuriation *Sinuessa II*.



Fig. 280 – Persistences of the centuriation *Sinuessa II*.

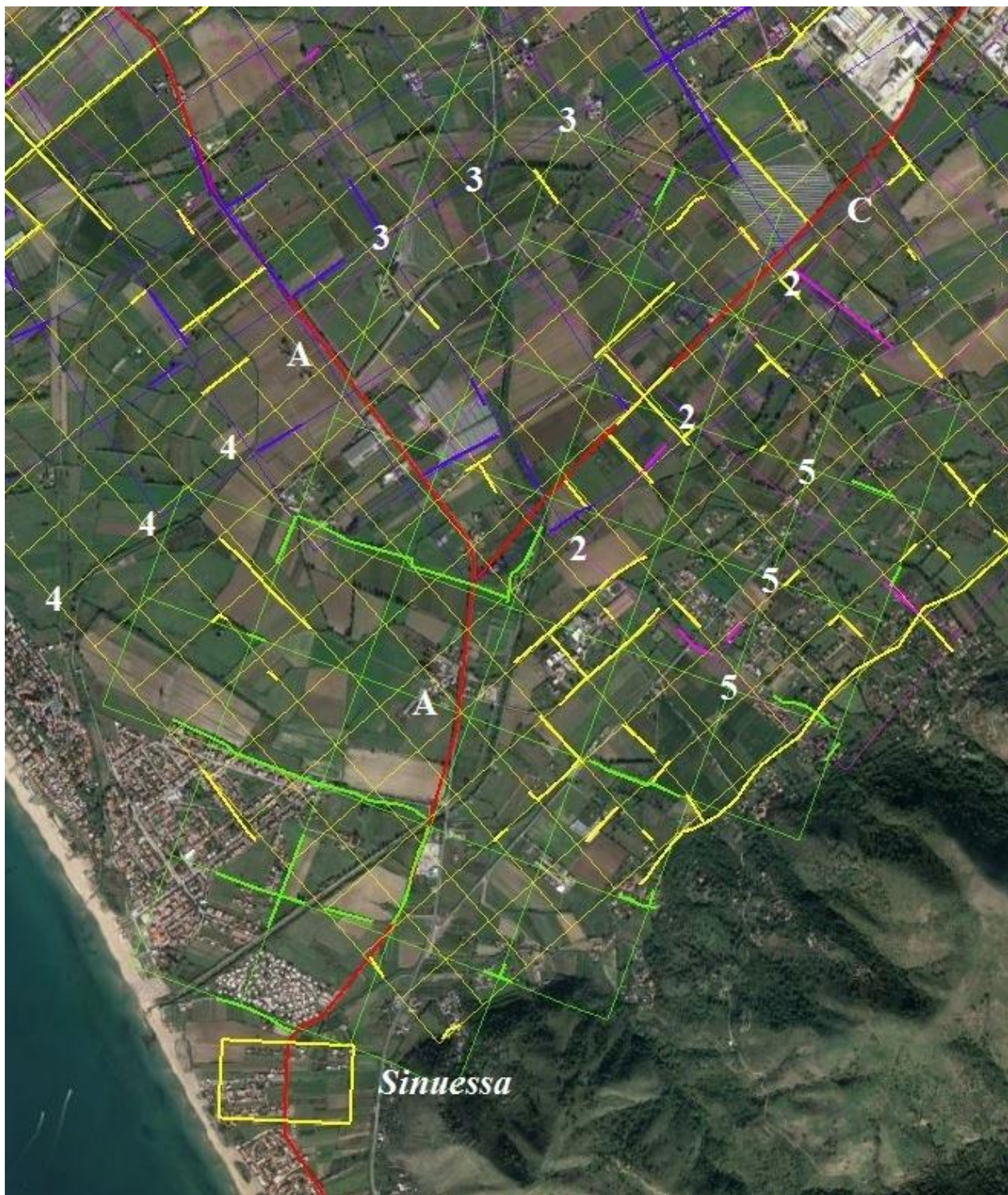


Fig. 28P – Detail of the centuriations north of *Sinuessa*.

[15] Neapolim, muro ducta. iter populo debetur ped. LXXX. sed ager eius Sirenae Parthenopae a Grecis est in iugeribus adsignatus, et limites intercisivi sunt constituti, inter quos postea et miles imp. Titi lege modum iugerationis ob meritum accepit.

Neapolis (Napoli), surrounded with a wall. A right of way of LXXX feet is due to the community. But its land was allocated in *iugera* to *Sirena Parthenopa*⁴⁰ by Greeks, and *limites intercisivi* were established, within which also the soldiers, under a law of the emperor *Titus*, received an area of land in *iugera* according to their merits (fig. 29).

⁴⁰ Perhaps, the text means *Palepolis*, the more ancient part of *Neapolis*, which was once called *Partenope*.

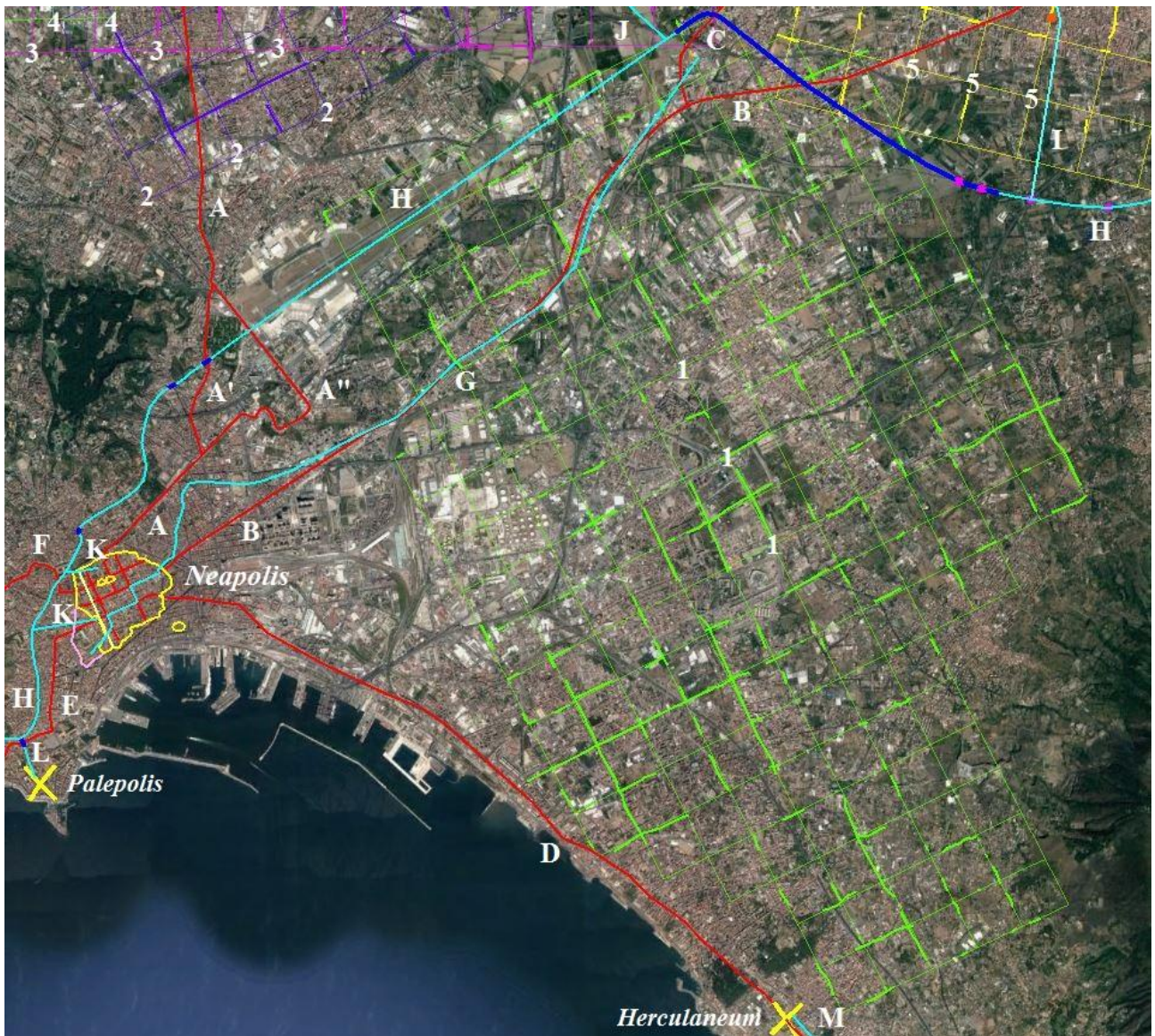


Fig. 29A – The land of *Neapolis* was divided by a single centuriation (1, *Neapolis*, Augustan, 16 x 16 *actus* – 567.68 x 567.68 m -, inclination 26° 00'). Other indications: 2 = centuriation *Acerrae-Atella I*; 3 = centuriation *Ager Campanus I*; 4 = centuriation *Ager Campanus II*; 5 = centuriation *Nola III*; A = *via Neapolis-Atella-Capua*; A' and A'' = the two alternative roads to climb to the *Caput Clivi* or to come down from it; B = *via Neapolis-Nola*; C = branch of B for *Acerrae*; D = *via Neapolis-Herculaneum-Pompeii*; E = *via Neapolis-Puteoli* through the grotto; F = *via Neapolis-Puteoli* through the hilly way; G = aqueduct of the Bolla; H = Augustan aqueduct of the Serino; I = branch of H for *Acerrae*; J = branch of H for *Atella*; L, K = branches of H for *Neapolis*; L = branch of H for *Palepolis*; M = possible branch of H for *Herculaneum* (coming from *Pompeii*). Same indications for the following figures too.



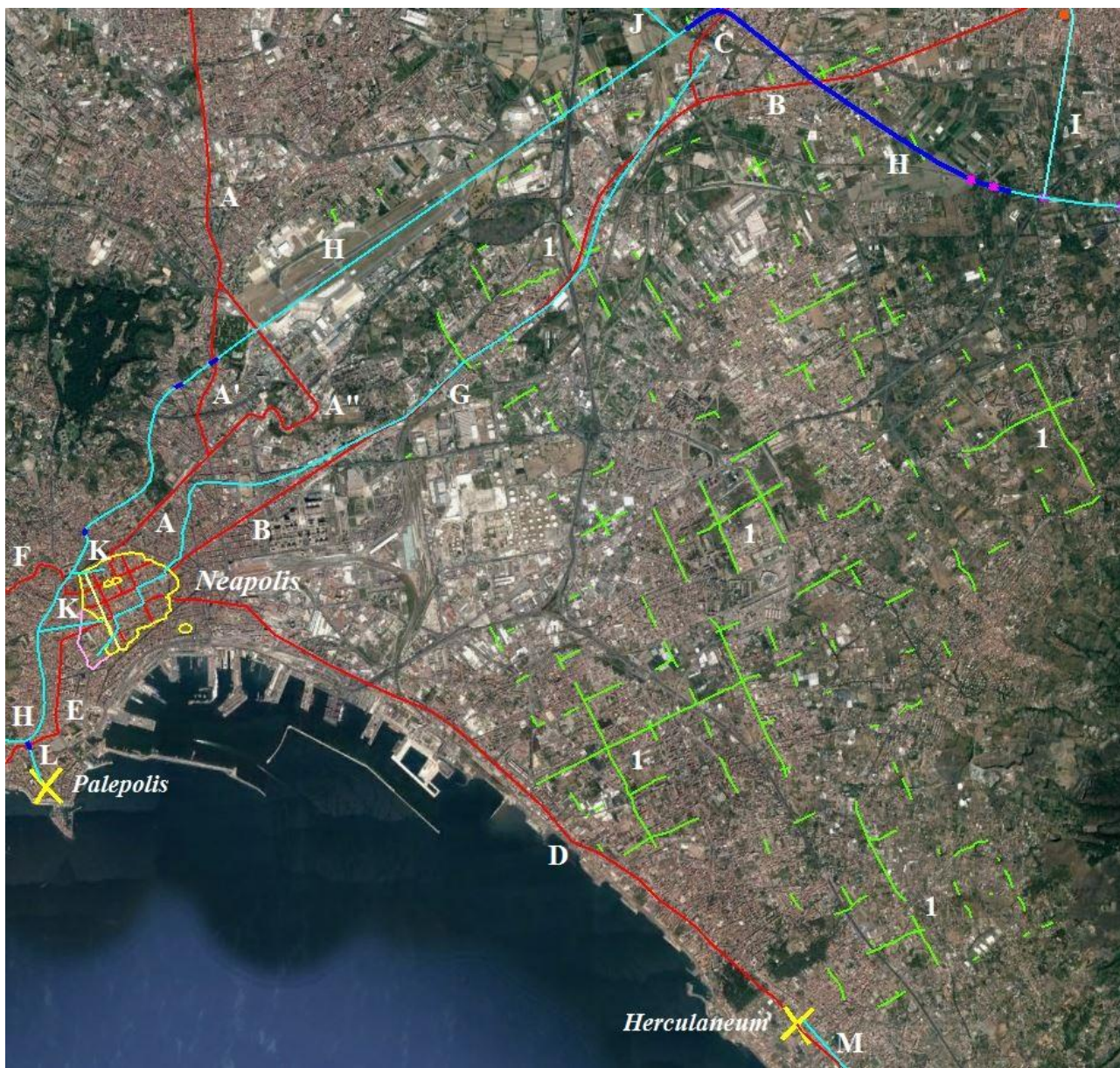


Fig. 29C – Persistences of the centuriation *Neapolis*.

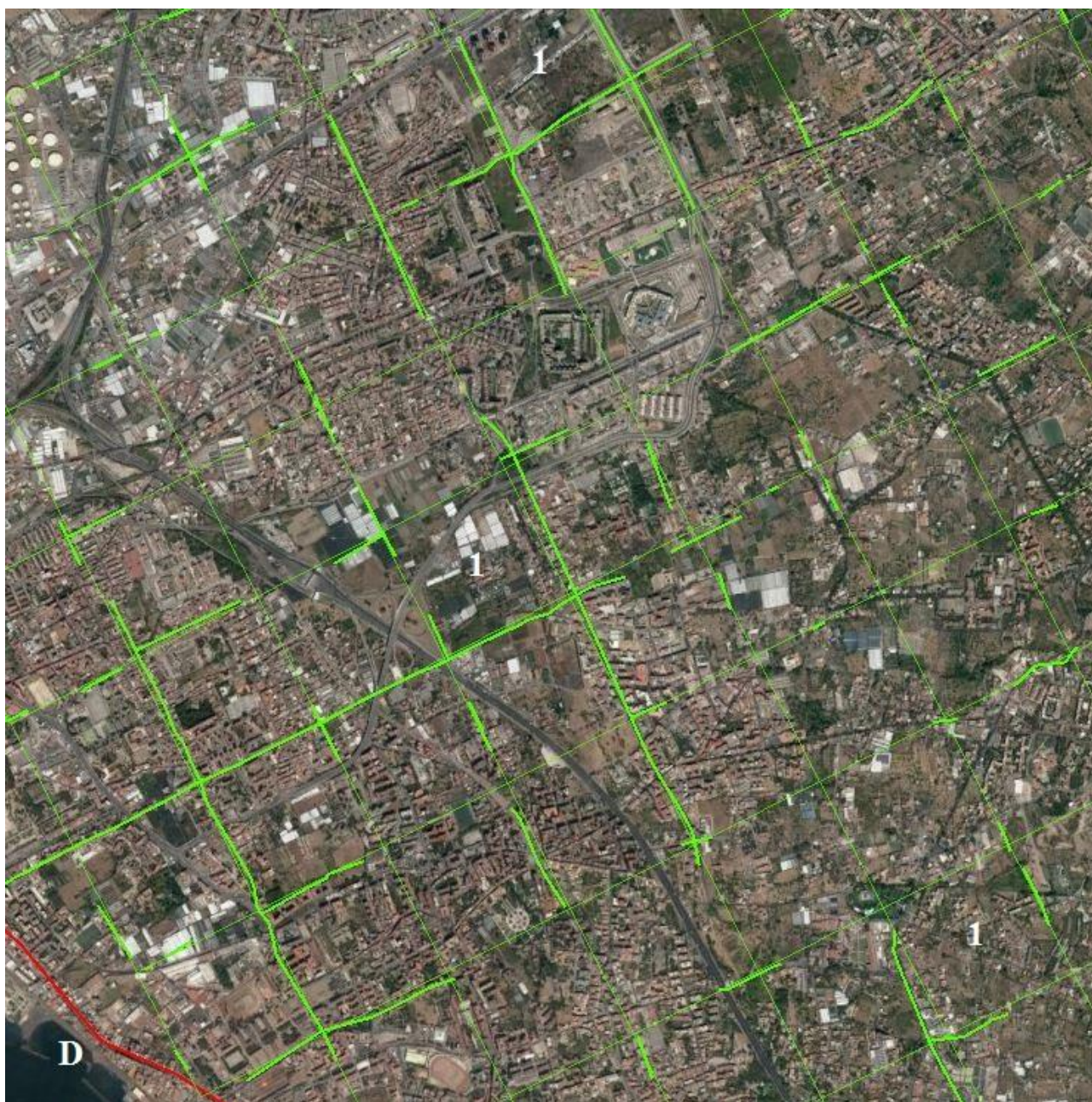


Fig. 29D – Detail of the centuriation *Neapolis* that allow to see how persistences of the routes of the *limites* are also evident in very urbanized areas.

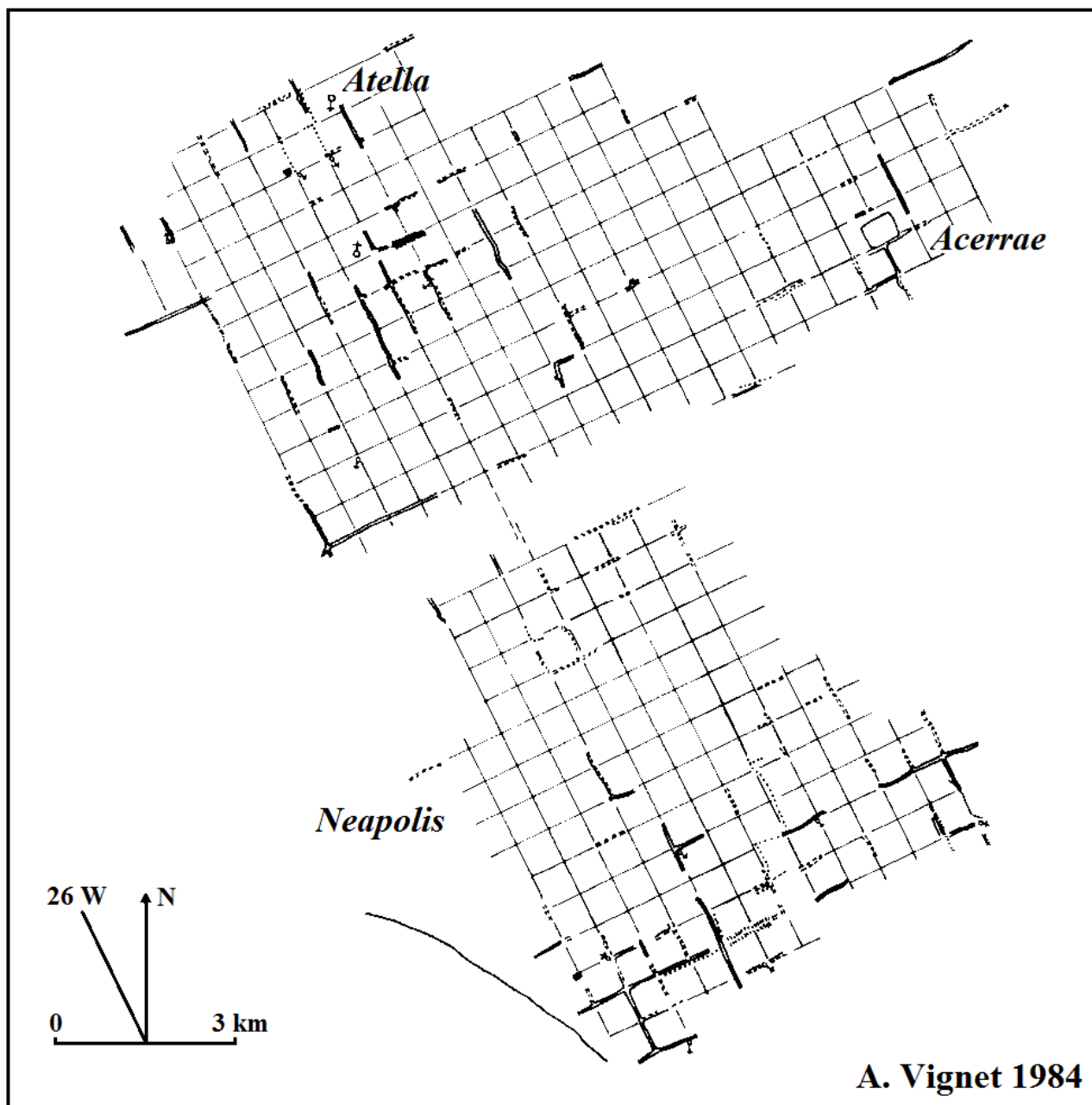


Fig. 29E – The centuriations *Acerrae-Atella I* and *Neapolis* as interpreted by Chouquer *et al.* (fig. 70). In the interpretation of the French authors, apart from the interval between the two centuriations (a likely marker of the boundary between the territories of *Atella* and *Neapolis*), there is a phase shift in the horizontal direction which does not appear supported by the evidence.

[20] Nuceria Constantia, muro ducta colonia, deducta iussu imp. Augusti. iter populo debetur ped. LX. ager [L. 236.1] eius limitibus Iulianis lege Augustiana militibus est adsignatus, et alibi in absoluto resedit.

Nuceria Constantia (*Nuceria Alfaterna*, between Nocera Inferiore and Nocera Superiore), colony surrounded with a wall, founded by order of the emperor *Augustus*. A right of way of LX feet is due to the community. Its land was allocated to soldiers by Julian *limites* under *lex Augustiana*, and elsewhere it remained unsurveyed (fig. 30).

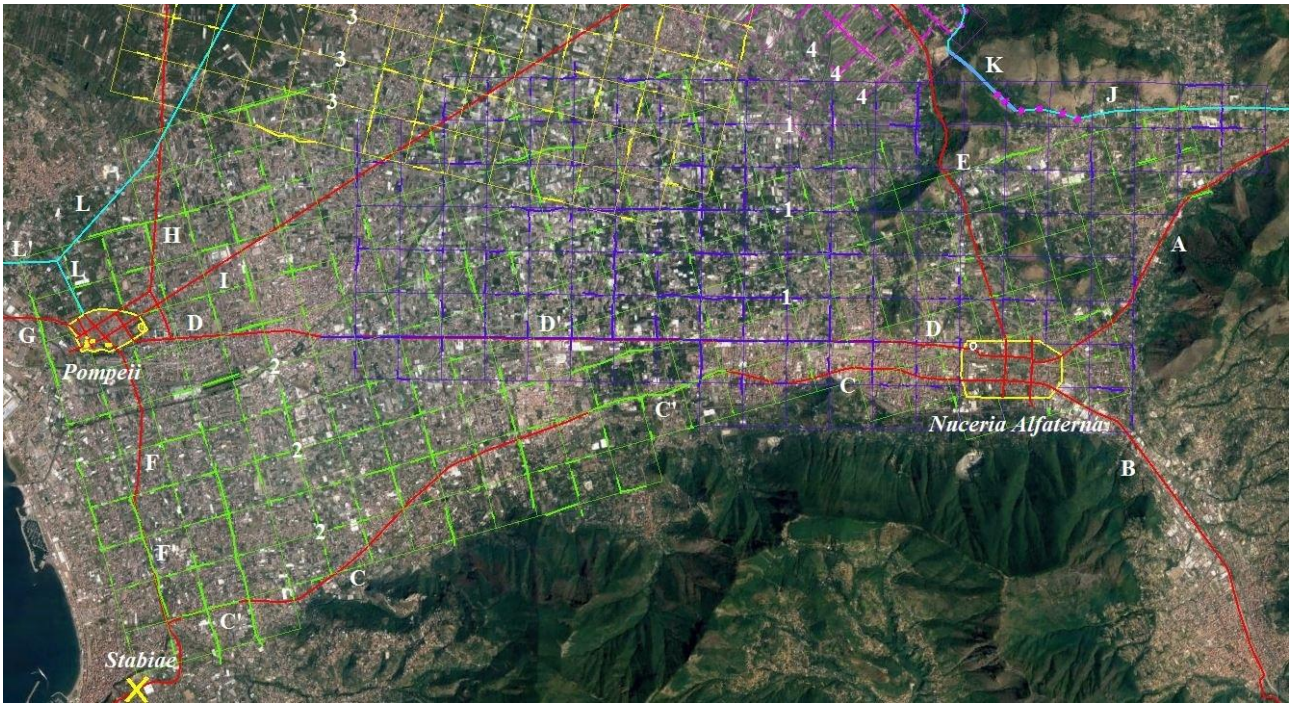


Fig. 30A – The land of *Nuceria Alfaterna* was divided by two centuriations (1, *Nuceria I*, Augustan?, 20 x 20 *actus* – 710 x 710 m -, inclination 02° 00' E; 2, *Nuceria II*, triumviral? Neronian?, 20 x 20 *actus* – 708 x 708 m -, inclination 14° 30' W). The second centuriation should be defined more precisely as *Nuceria II-Pompeii* but the second town was buried by the eruption of 79 A.D. Later, for this centuriation, in the area covered by volcanic materials, it is likely that the *limites* were restored as there are evident persistences of them (s. also the next figures). Other indications: 3 = centuriation *Nola III*; 4 = centuriation *Nola IV-Urbula*; A = *via Nuceria-Abellinum*; B = *via Popilia*, stretch *Nuceria-Salernum*; C = *via Nuceria-Stabiae*; C' = sections of C that coincide with *limites* of the centuriation *Nuceria II*; D = *via Nuceria-Pompeii*; D' = a long section of D that coincides with a *limes* of the centuriation *Nuceria I*; E = *via Popilia*, stretch *Nuceria-Urbula-Ad Teglantum-Nola*; F = *via Stabiae-Pompeii*; F' = section of F that coincides with a *limes* of the centuriation *Nuceria II*; G = *via Pompeii-Herculaneum-Neapolis*; H = *via Pompeii-Nola*; I = *via Pompeii-Urbula*; J = Augustan aqueduct of the Serino; K = tunnel for the aqueduct under a hill (monte Paterno); L = branch of the aqueduct for *Pompeii*; L' = possible branch of J for *Herculaneum*. Same indications for the following figures too.

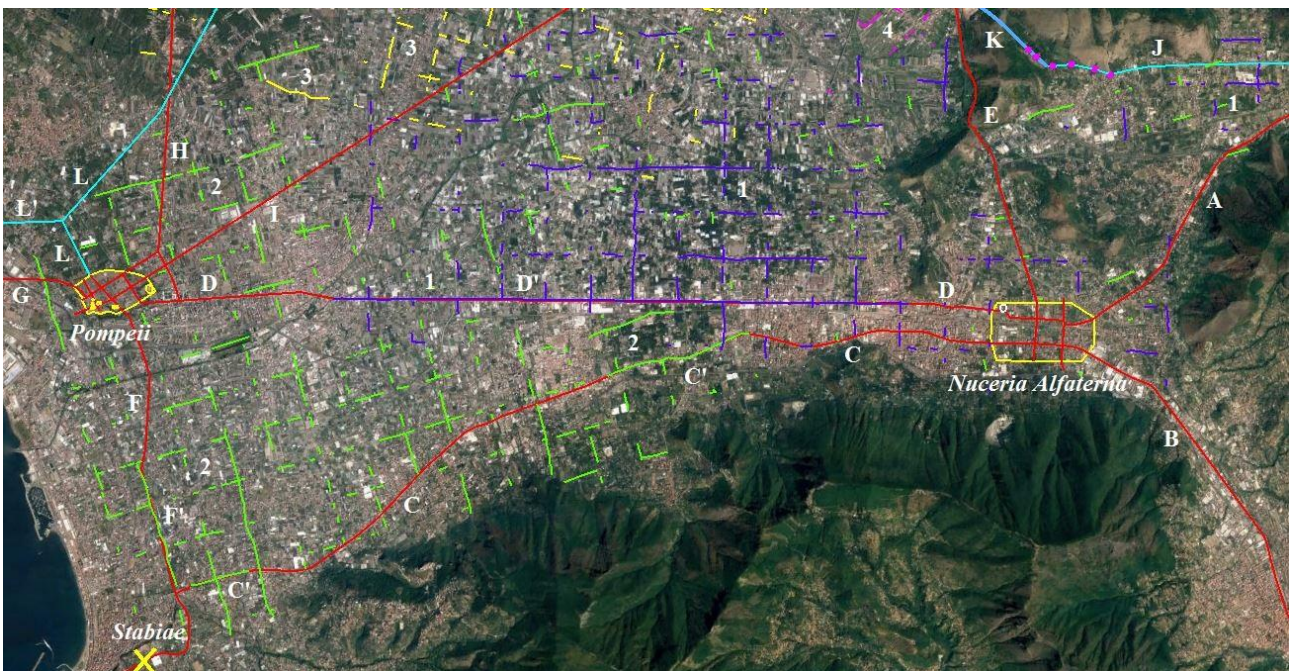


Fig. 30B – Persistences in the area of *Nuceria Alfaterna*.

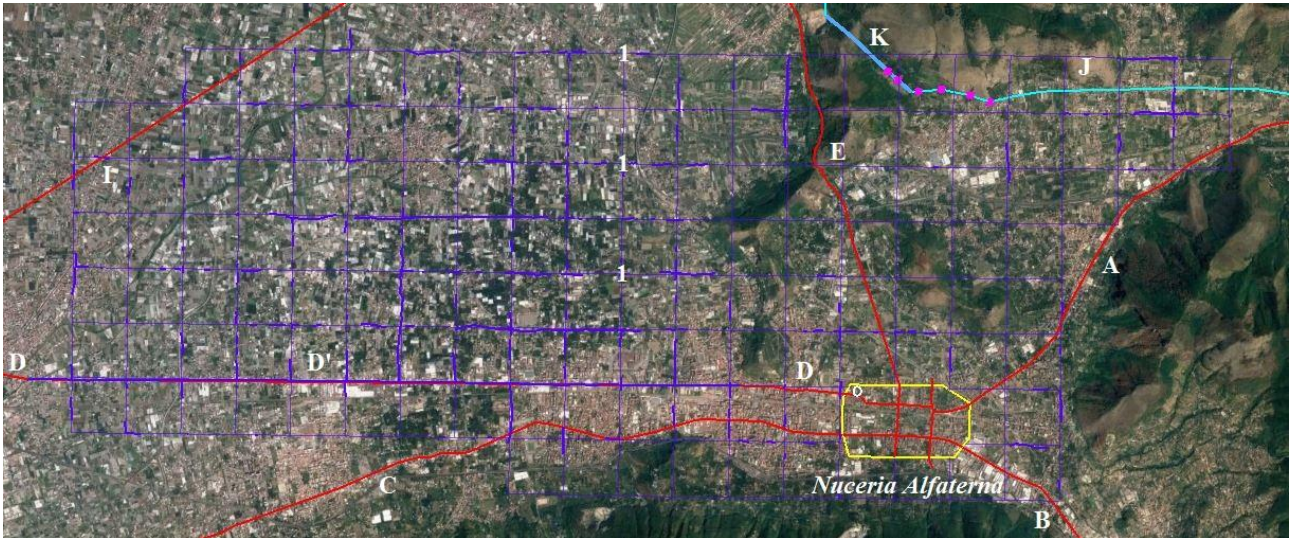


Fig. 30C – The centuriation *Nuceria I*.

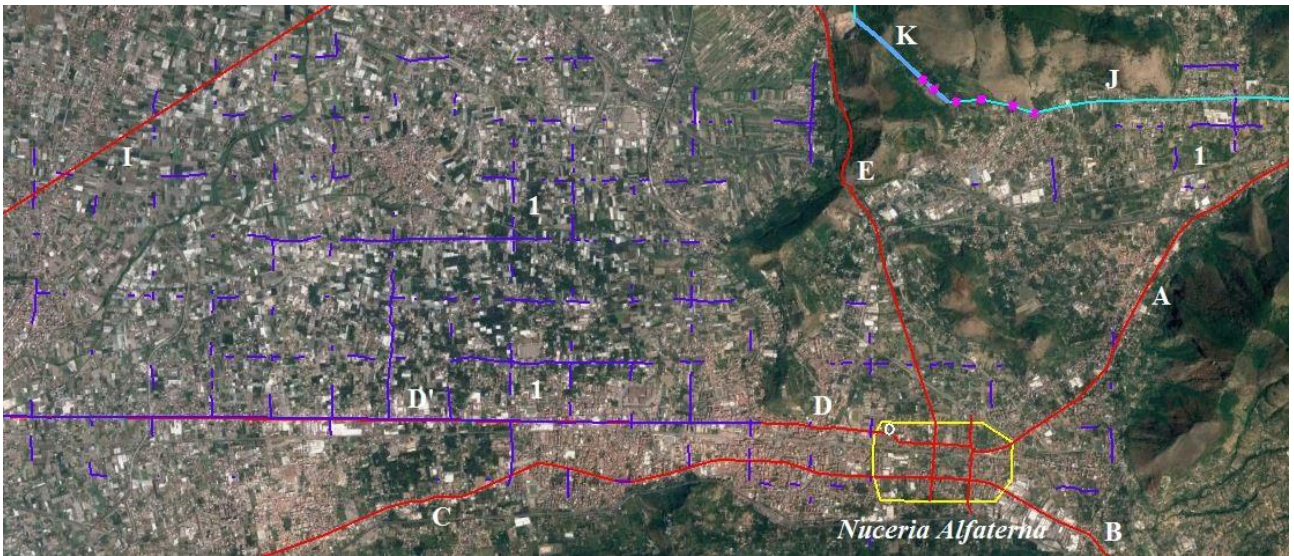


Fig. 30D – Persistences of the centuriation *Nuceria I*.

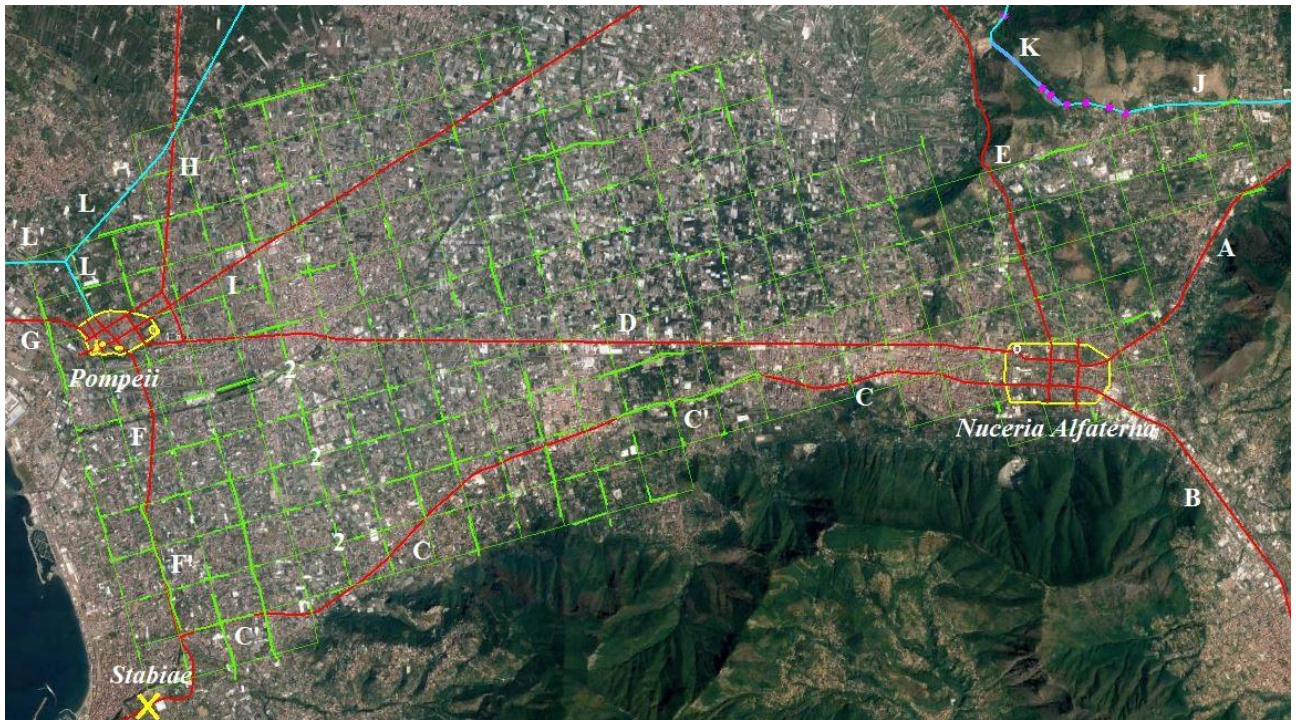


Fig. 30E –The centuriation *Nuceria II*.

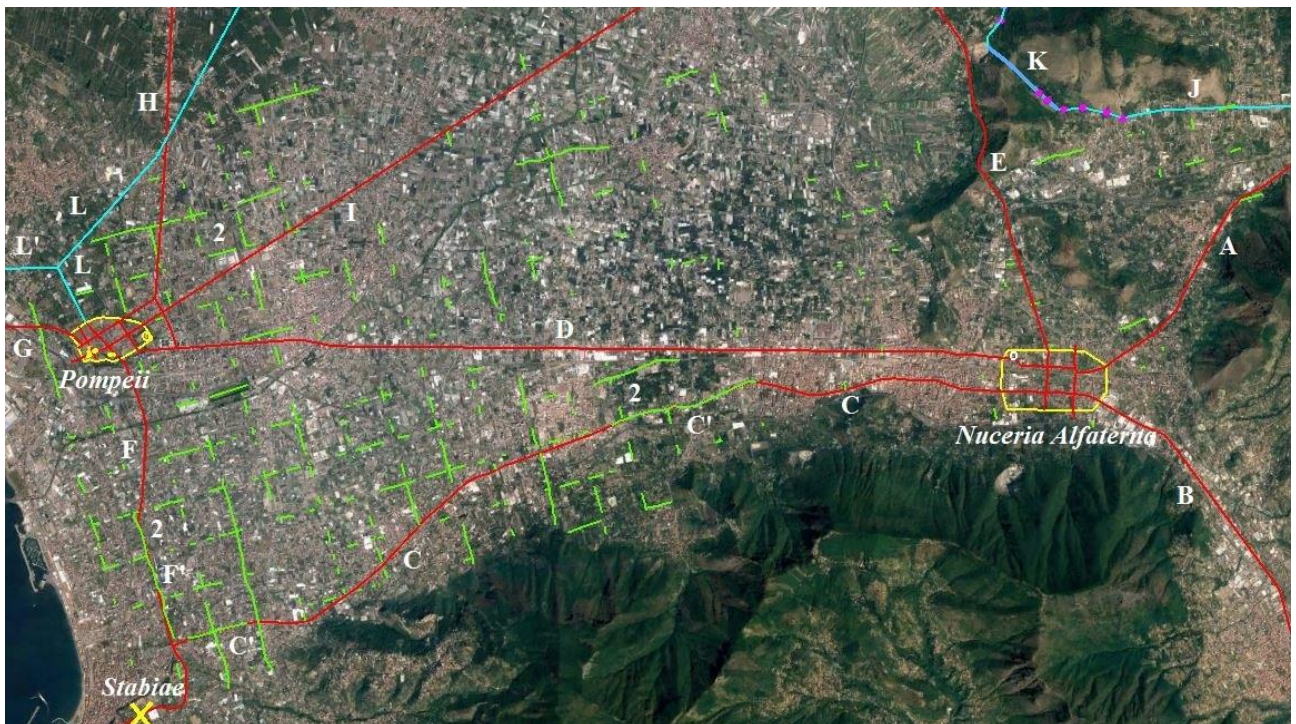


Fig. 30F – Persistences of the centuriation *Nuceria II*.

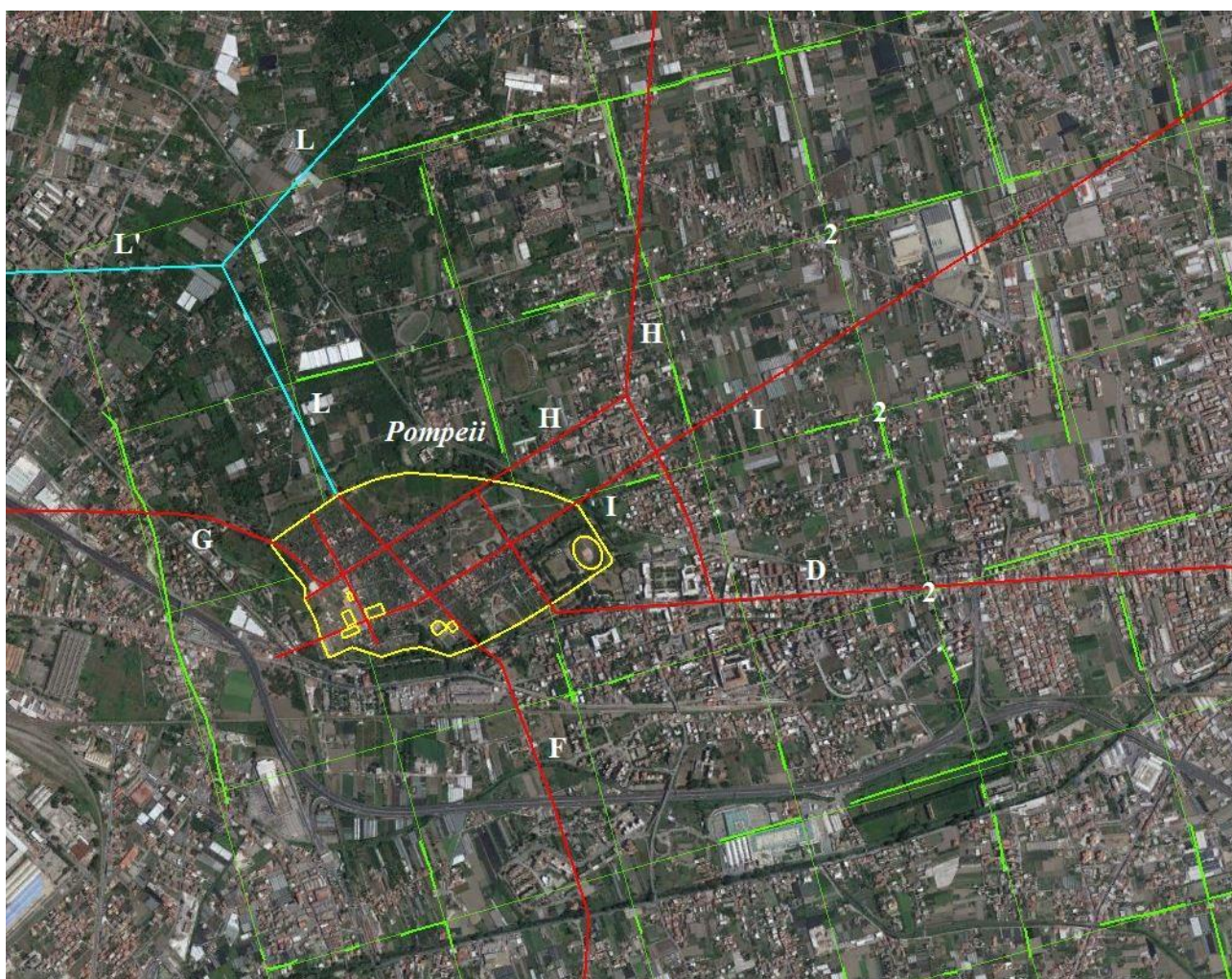


Fig. 30G – Detail of the area of *Pompeii*. The *limites* are evident around *Pompeii* from every side. As the town was buried by the volcanic materials of the eruption, this indicates that in later times the *limites* were restored.

Nola, muro ducta colonia Augusta. Vespasianus Aug. deduxit. iter populo debetur ped. CXX. ager eius limitibus [5] Sullanis militi fuerat adsignatus, postea intercisuiis mensuris colonis et familiae est adiudicatus.

Nola (Nola), Augustan colony surrounded with a wall. *Vespasianus Augustus* founded it. A right of way of CXX feet is due to the community. Its land had been allocated to soldiers by Sullan *limites*, later it was allocated to colonists and to his family by internal lines (*mensurae intercisivae*) (fig. 31).

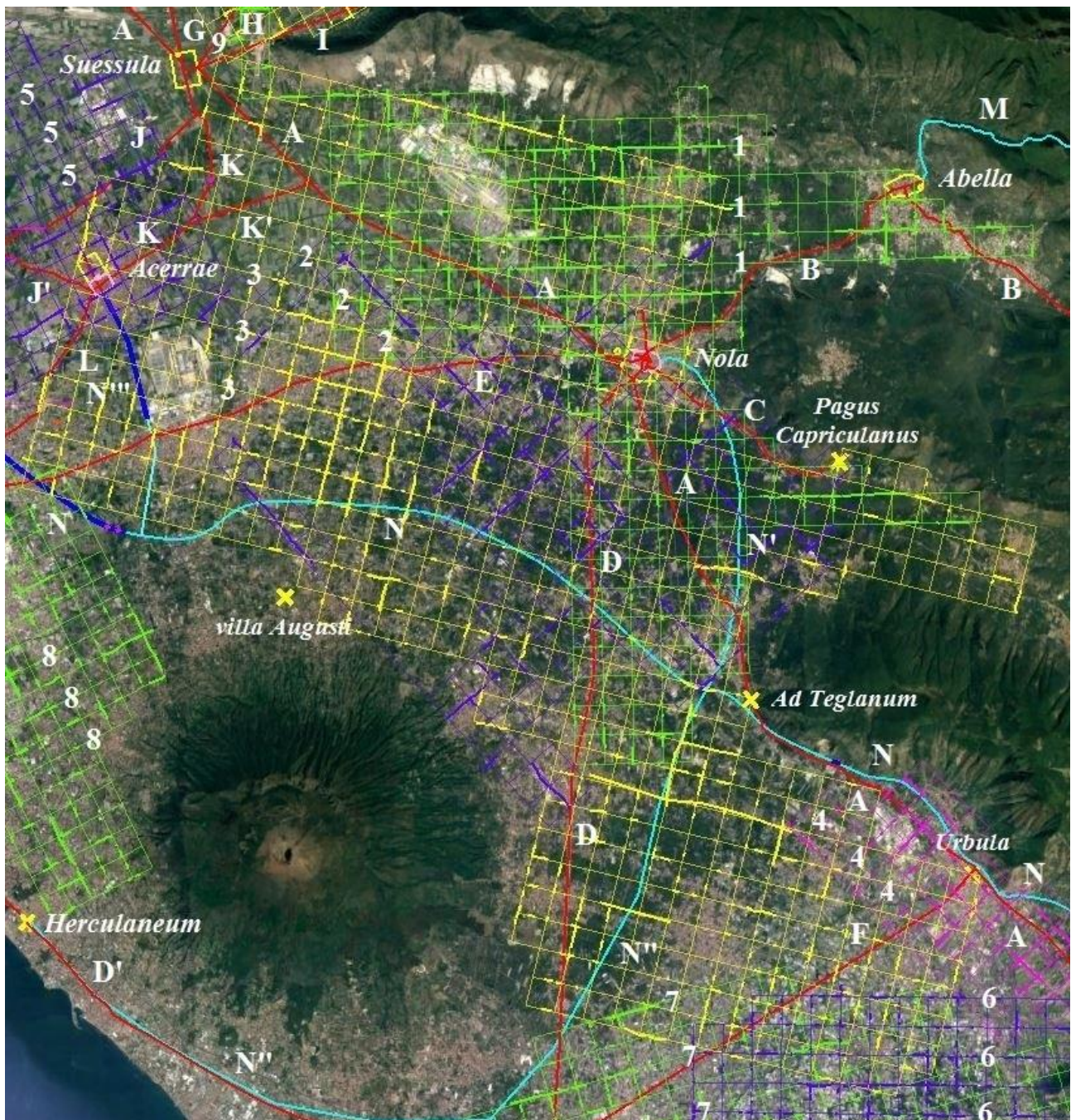


Fig. 31A – The land of Nola was divided by four centuriations with various orientations (1, *Nola I-Abella*, Sullan, 20 x 20 *actus* – 706 x 706 m -, inclination 00° 00'; 2, *Nola II*, unknown age, 20 x 20 *actus* – 707 x 707 m -, inclination 41° 30' W; 3, *Nola III*, under emperor *Vespasianus*, 20 x 20 *actus* – 707 x 707 m -, inclination 15° 00' E; 4, *Nola IV-Urbula*, Augustan, 16 x 16 *actus* – 567.68 m x 567.68 m -, inclination 43° 30' W). Depending on the various areas the persistences of this or that centuriation are more preserved. Other indications: 5 = centuriation *Acerrae-Atella I*; 6, 7 = centuriations *Nuceria I e II*; 8 = centuriation *Neapolis*; 9 = centuriation *Suessula*; A = *via Popilia*; B = *via Nola-Abella-Abellinum*; C = *via Nola-Pagus Capriculanus*; D = *via Nola-Pompeii*; D' = *via Pompeii-Herculaneum*; E = *via Nola-Neapolis*; F = *via Urbula-Pompeii*; G = *via Suessula-Telesia*; H = *via Suessula-Saticula*; I = *via Suessula-Caudium-Beneventum*; J = *via Atella-Suessula*; J' = branch of J for *Acerrae*; K = *via Acerrae-Suessula*; K' = branch of K for the *via Popilia*; L = *via Neapolis-Acerrae*; M = aqueduct of *Abella*; N = Augustan aqueduct of the *Serino*; N' = branch of N for *Nola*; N'' = branch of N for *Pompeii* and perhaps for *Herculaneum*; N''' = branch of N for *Acerrae*. Same indications for the following figures too.

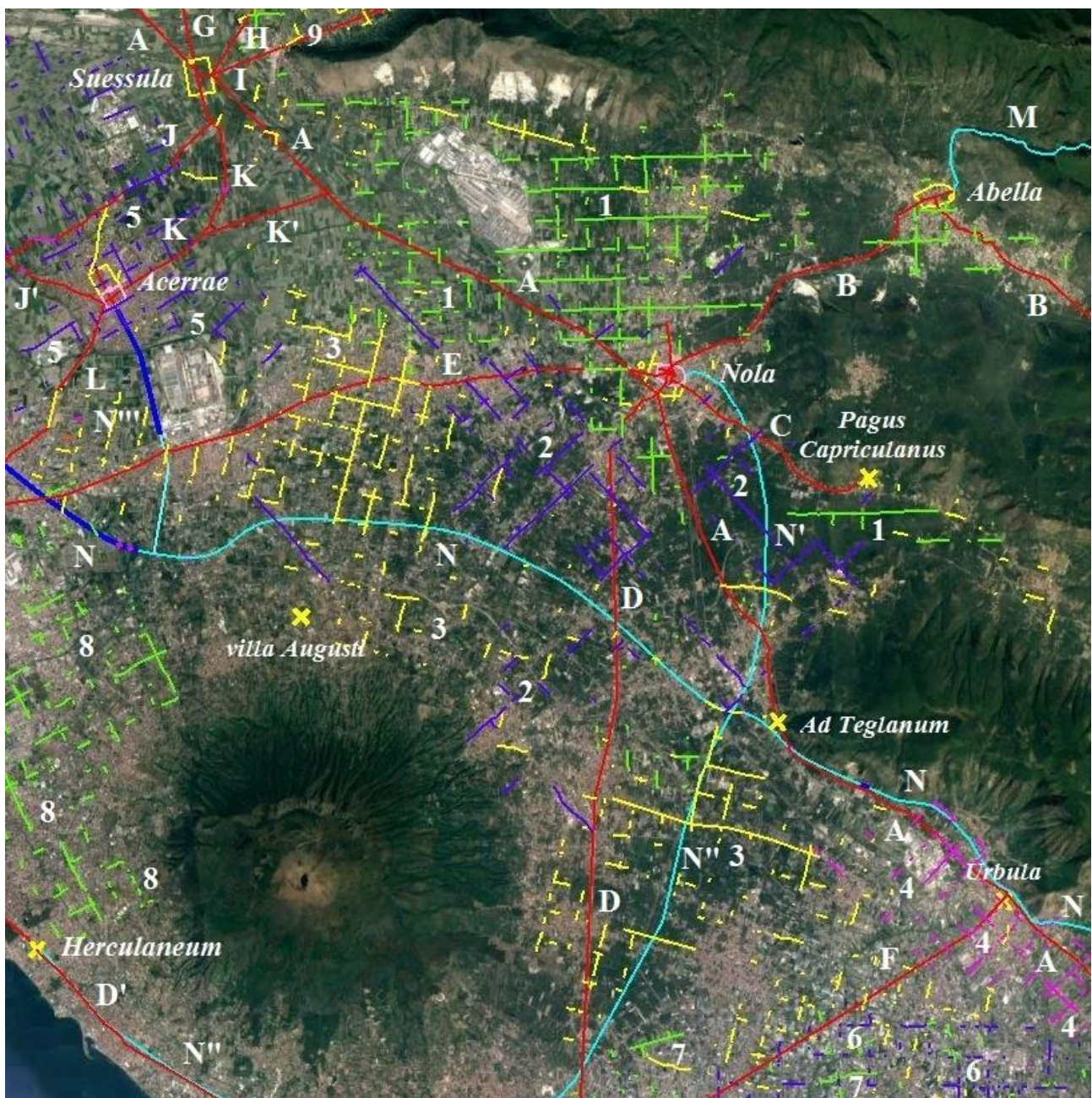


Fig. 31B – Persistences in the area of Nola.

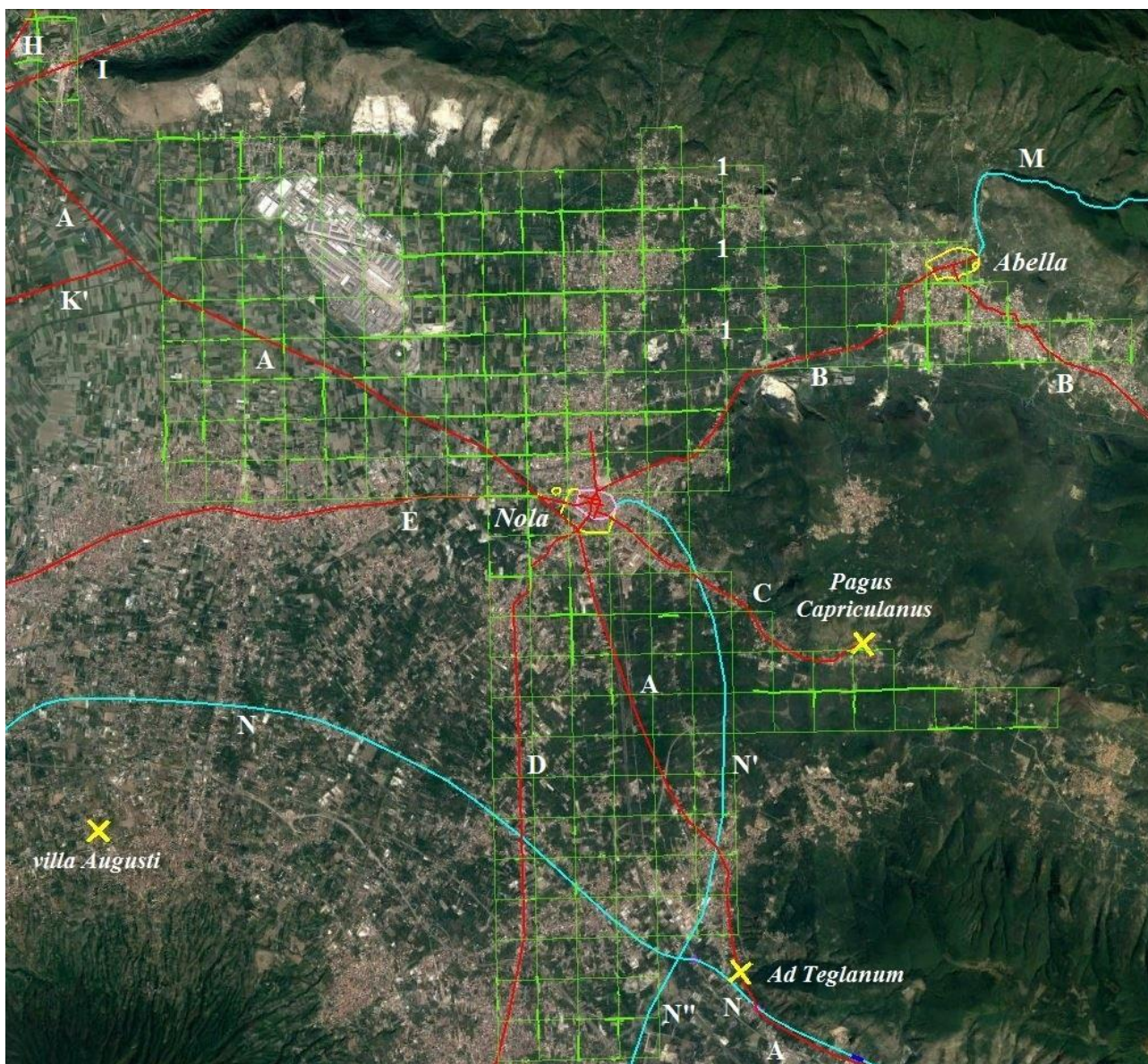


Fig. 31C – The centuriation *Nola I-Abella*.

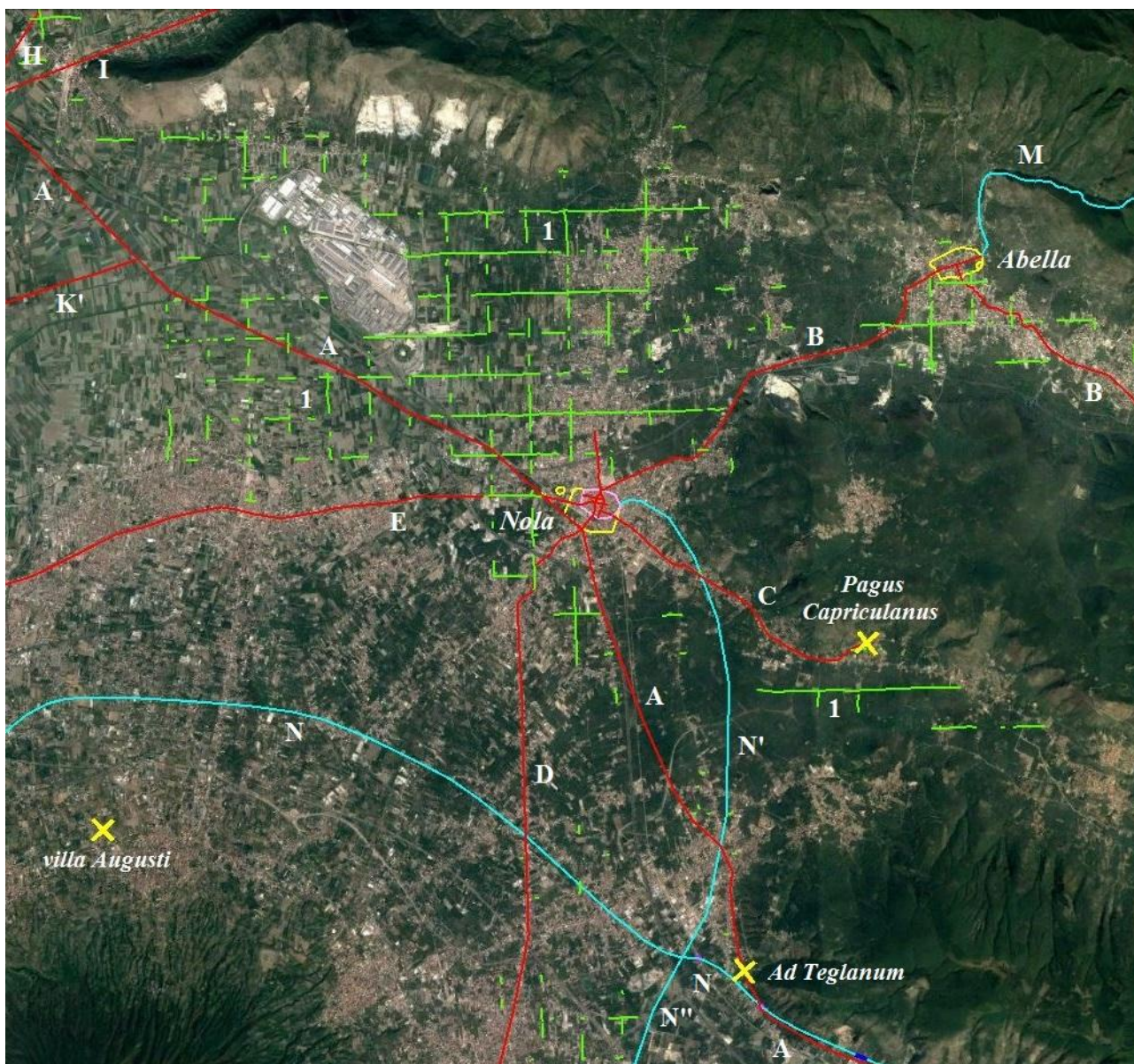


Fig. 31D – Persistences of the centuriation *Nola I-Abella*.

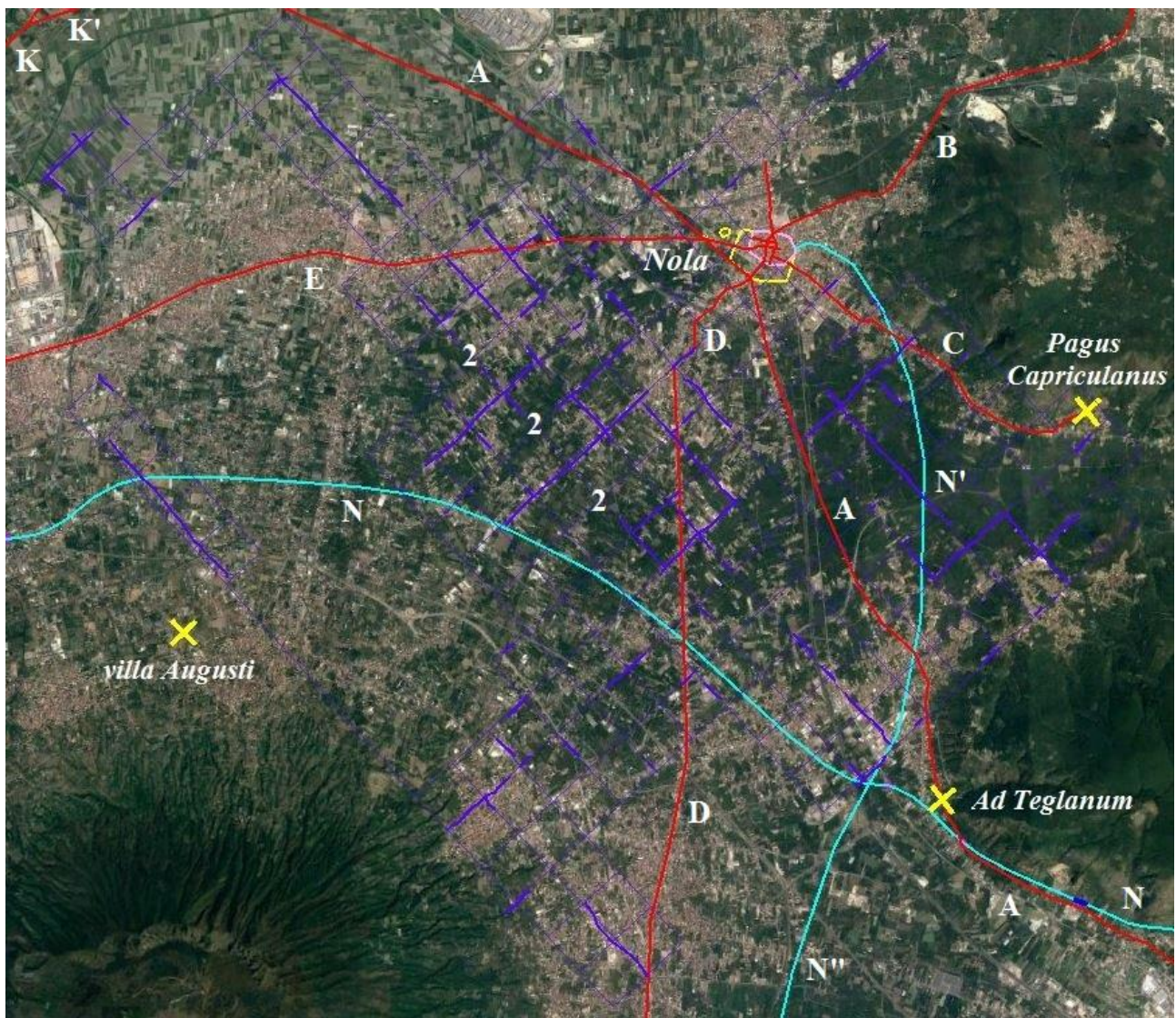


Fig. 31E – The centuriation *Nola II*.

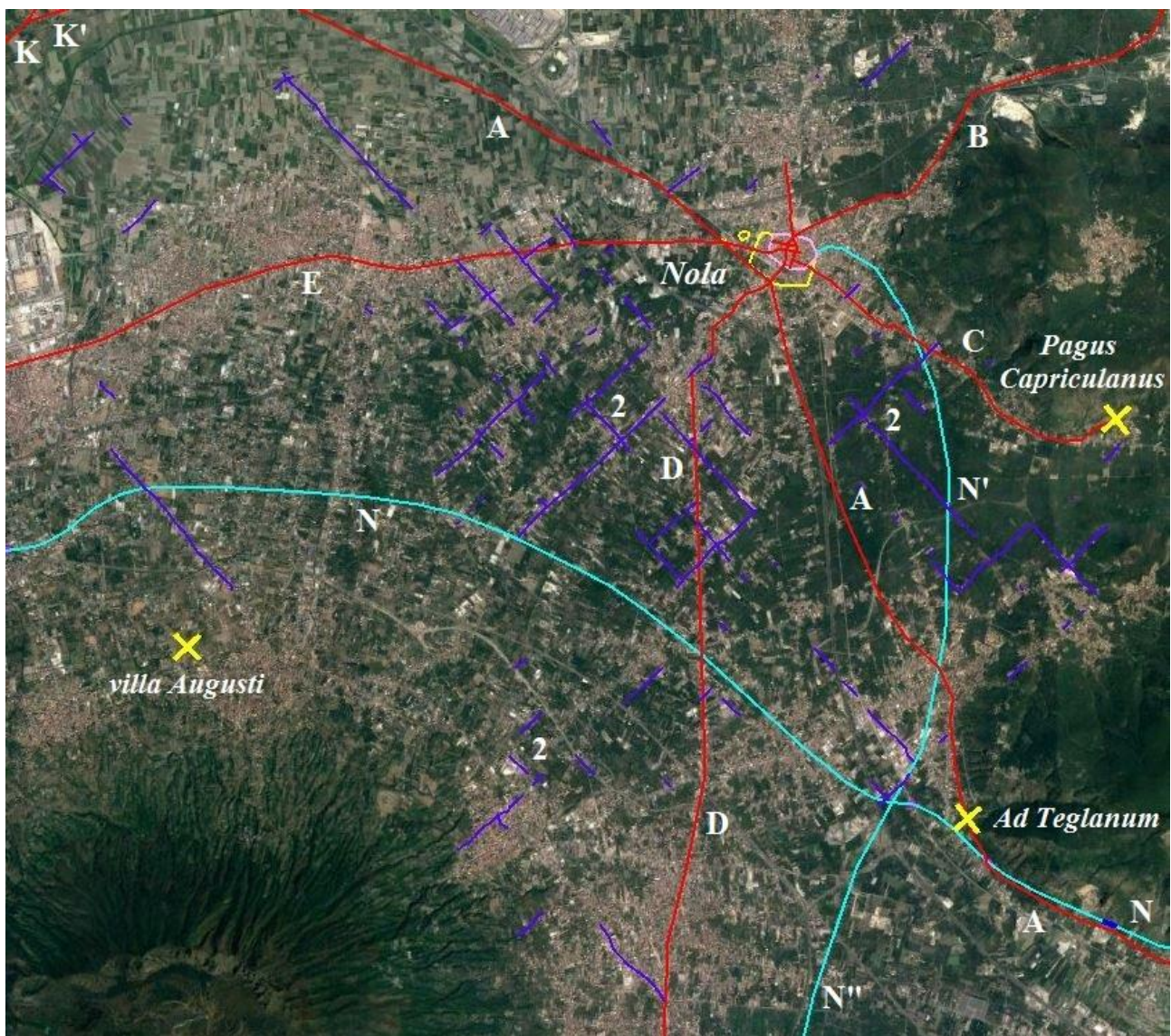


Fig. 31F – Persistences of the centuriation *Nola II*.



Fig. 31G – The centuriation *Nola III*.



Fig. 31H – Persistences of the centuriation *Nola III*.

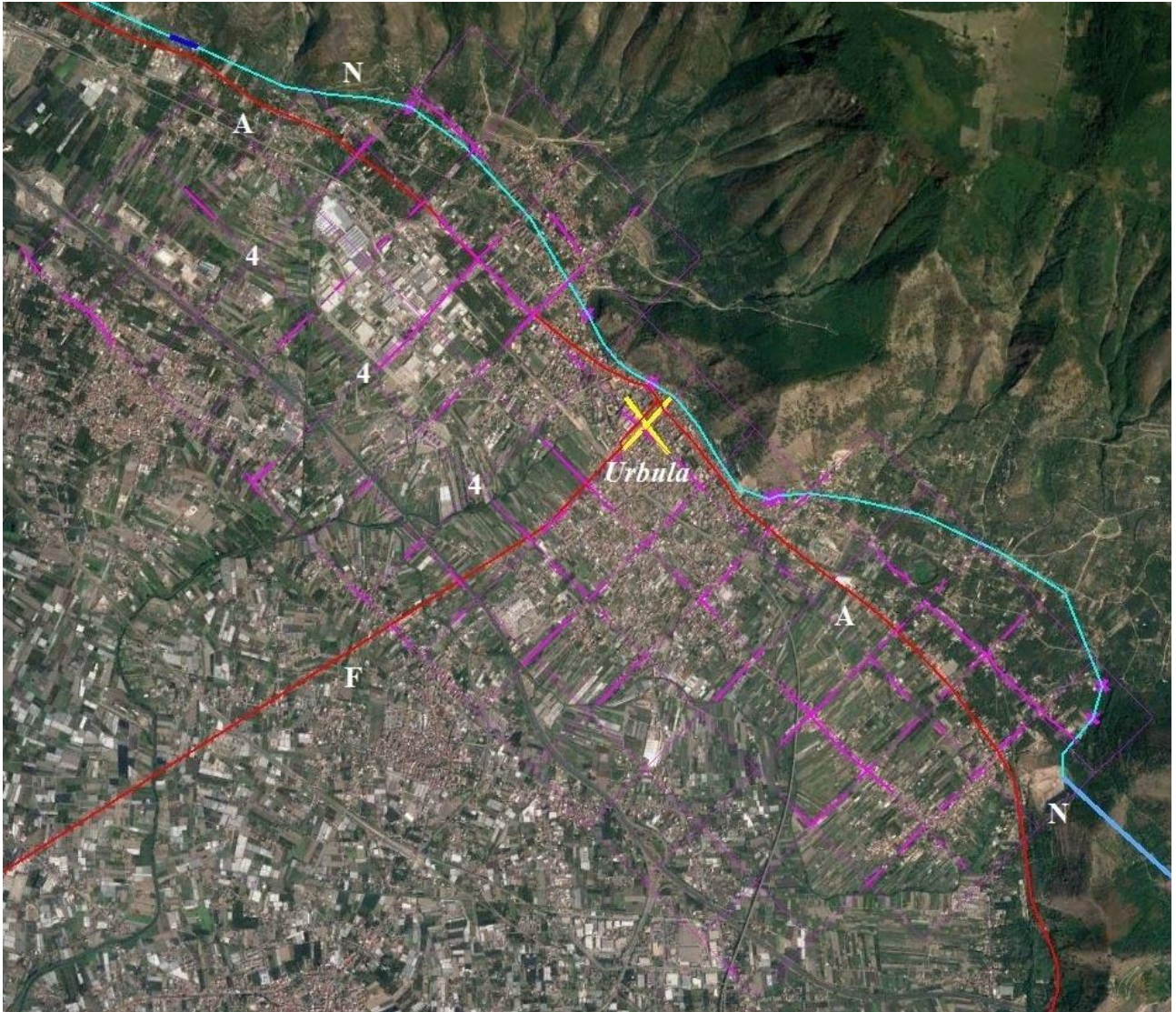


Fig. 31I – The centuriation *Nola IV-Urbula*.

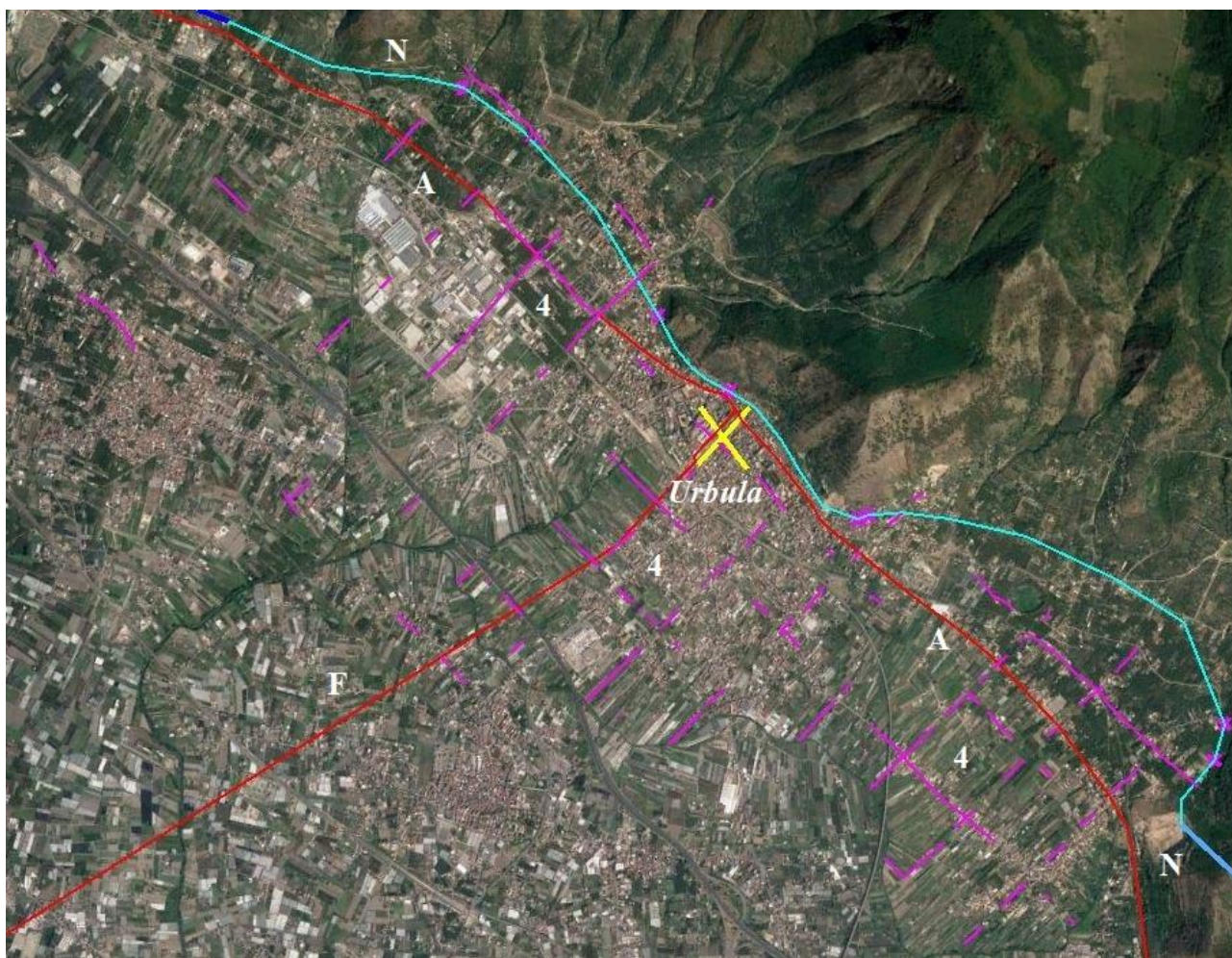


Fig. 31J – Persistences of the centuriation *Nola IV-Urbula*.

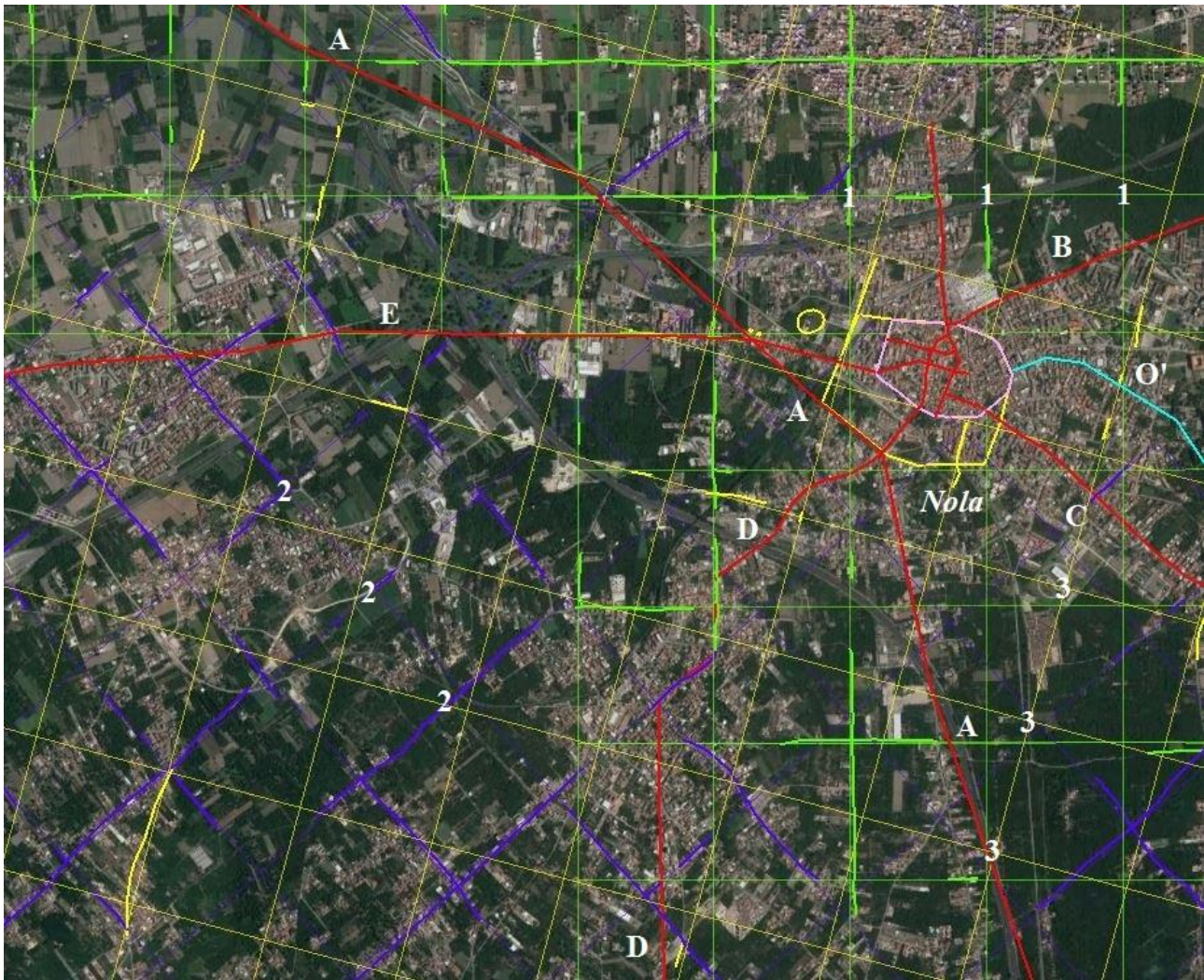


Fig. 31K – Area west of *Nola* where the persistences of two centuriations (*Nola I-Abella* and *Nola II*) with different orientation are clearly visible. Same indications of the preceding figure. In L. 163.3-7, regarding the territory of *Nola*, mention is made of the overlapping of several centuriations and the difficulties deriving from this: “Sometimes something similar happened, as we found in the territory of *Nola* (*Nola*), and likewise the division did not start from a single point but from different *limites* that cross obliquely. Therefore, it will be necessary to see with which meaning of the boundary lines the place can be recognized, so that we can distinguish TO THE RIGHT or TO THE LEFT OF THE DECUMAN THAT IS MORE ON THE RIGHT or TO THE RIGHT or TO THE LEFT OF THE DECUMAN THAT IS MORE ON THE LEFT.”

<p>Ostensis ager ab imp[er]at[or]e Ves[er]p[er]asiano Traiano et Hadriano, in precisuris, in lacineis, et per strigas, colonis [10] eorum est adsignatus. sed postea imp[er]at[or]e Verus Antoninus et Commodus aliqua privatis concesserunt.</p>	<p>The land of <i>Ostia</i> (<i>Ostia</i>) was allocated by the emperors <i>Vespasianus</i>, <i>Traianus</i> and <i>Adrianus</i>, in parcels, strips, and <i>strigae</i>, to their colonists. But later the emperors <i>Verus</i>, <i>Antoninus</i>, and <i>Commodus</i> granted some land to private individuals.</p>
<p>Puteolis, colonia Augusta. Augustus deduxit. ex uno latere iter populo debetur ped. XXX. ager eius in iugeribus ueteranis et tribunis legionariis est adsignatus.</p>	<p><i>Puteoli</i> (<i>Pozzuoli</i>), Augustan colony. <i>Augustus</i> founded it. On one side a right of way of XXX feet is due to the community. Its land was allocated in <i>iugera</i> to veteran soldiers and to legionary tribunes.</p>

<p>Praeneste, oppidum. ager eius a quinque uiris pro [15] parte in iugeribus est adsignatus ubi cultura est: ceterum in absoluto est relictum circa montes. iter populo non debetur.</p>	<p><i>Praeneste</i> (Palestrina), fortified town. Its land, where cultivated, was allocated partly by a board of five men (<i>quinqueviri</i>) in <i>iugera</i>: the remainder, close to the mountains, was left unsurveyed. No right of way is due to the community.</p>
<p>Priuernum, oppidum muro ductum, colonia. miles deduxit sine colonis. iter populo debetur ped. XXX. ager [20] eius pro parte cultu in iugeribus est adsignatus: ceterum in lacineis uel in soluto remansit.</p>	<p><i>Privernum</i> (Priverno), fortified town, colony surrounded with a wall. The soldiers founded it without colonists. A right of way of XXX feet is due to the community. In the cultivated part its land was allocated in <i>iugera</i>: the rest in strips, or remained unsurveyed (fig. 32).</p>

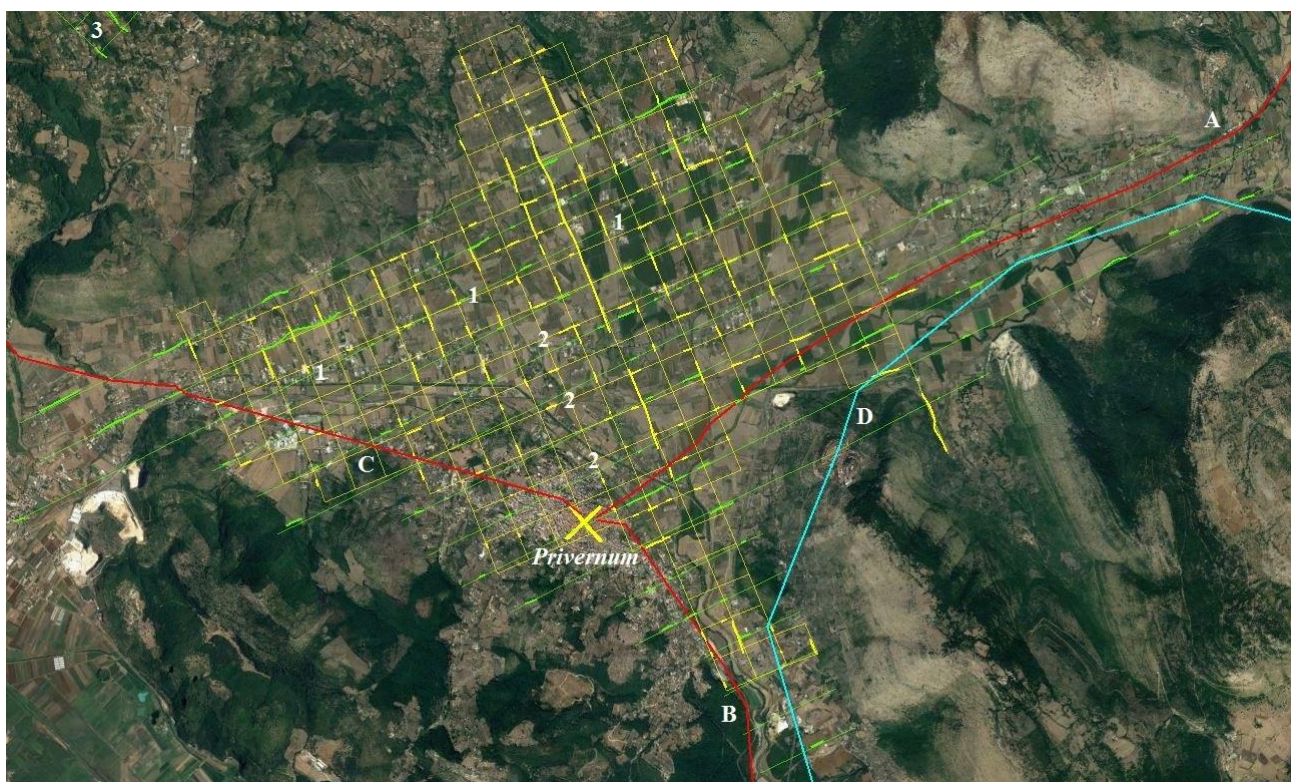


Fig. 32A – The land of *Privernum* was divided by a *strigatio* (1, *Privernum I*, 340 b.C.?, 13 *actus* – 461.24 m - inclination 74° 00' W) and by a centuriation (2, *Privernum II*, II sec. b.C.?, 10 x 10 *actus* – 354.8 x 354.8 m, inclination 22° 30' W). Other indications: 3 = centuriation of *Setia*; A = *via Privernum-Frusino*; B = *via Privernum-Lucus Feroniae-Tarracina*; C = *via Privernum-Setia*; D = aqueduct of *Tarracina*. Same indications for the following figures too.



Fig. 32B – Persistences of the two *limitationes* of *Privernum*.



Fig. 32C – The *strigatio Privernum I.*



Fig. 32D – Persistences of the *strigatio Privernum I.*

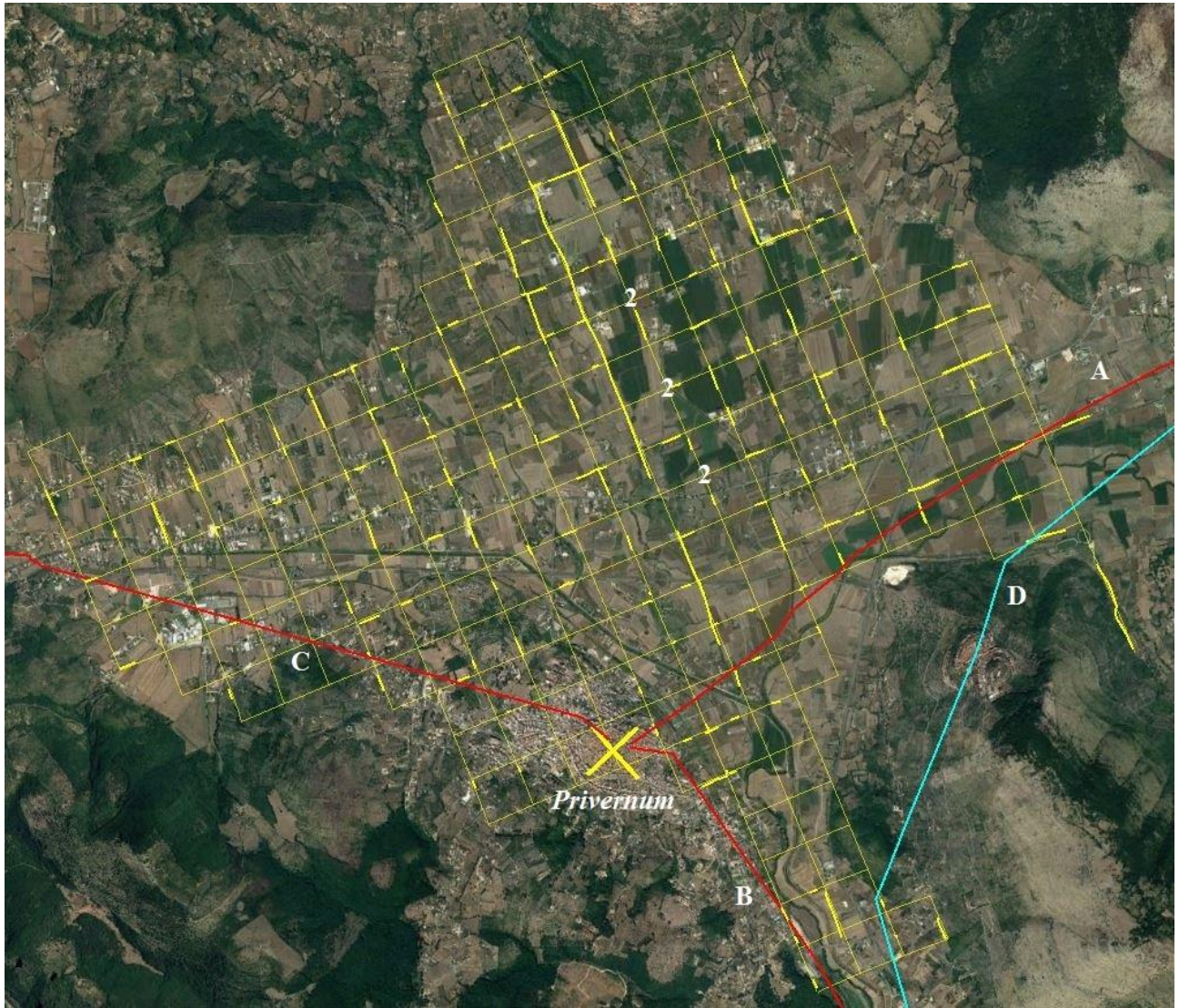


Fig. 32E – The centuriation *Privernum II*.



Fig. 32F – Persistences of the centuriation *Privernum II*.

<p>Surrentum, oppidum. ager eius ex occupatione [L. 237.1] tenebatur a Grecis ob consecrationem Mineruae. sed et mons Sirenianus limitibus pro parte Augustianis est adsignatus. ceterum in soluto remansit. iter populo debetur ubi Sirenae.</p>	<p><i>Surrentum</i> (Sorrento), fortified town. Its land was held by Greeks by appropriation for the consecration to <i>Minerva</i>. But Mount <i>Sirenianus</i> was allocated also by <i>limites</i> that were partly Augustan. The rest remained unsurveyed. A right of way is due to the people where the <i>Sirena</i> is⁴¹.</p>
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⁴¹ I.e., the sanctuary dedicated to the *Sirena*.

[5] Suessula, oppidum, muro ducta. lege Syllana est deducta. ager eius ueteranis limitibus Syllanis in iugeribus est adsignatus. iter populo non debetur.

Suessula (Acerra, about 5 km north-north-east of the town), fortified town surrounded with a wall. It was founded under *lex Sullana*. Its land was allocated in *iugera* to veteran soldiers by Sullan *limites*. No right of way is due to the community (fig. 33).



Fig. 33A – The land of *Suessula* was divided by a centuriation (1, *Suessula*, Sullan, 15 x 15 *actus* – 532.2 x 532.2 m -, inclination 29° 00' W). Other indications: 2 = centuriation *Nola III*; 3 = centuriation *Ager Campanus I*; 4 = centuriation *Ager Campanus II*; A = *via Suessula-Caudium*; B = *via Suessula-Nola* (*via Popilia*); C = *via Suessula-Acerrae*; D = *via Suessula-Capua* (*via Popilia*); E = *via Suessula-Telesia*; E' = section of E that coincides with a *limes* of the centuriation *Ager Campanus II*; F = *via Suessula-Saticula*; G = *via Appia*, stretch *Calatia-Ad Novas-Caudium*. Same indications for the following figures too.



Fig. 33B – The centuriation *Suessula*.

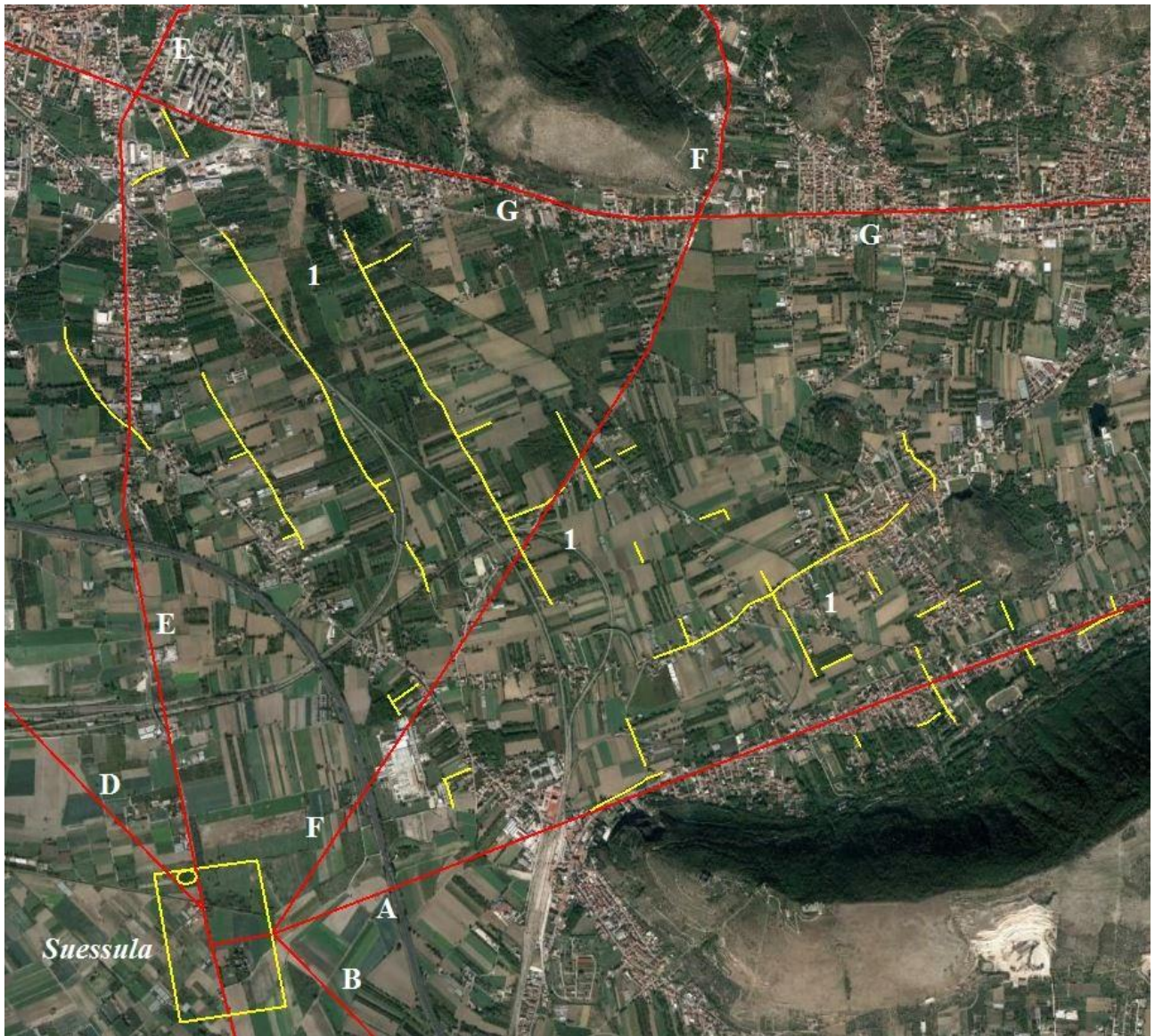


Fig. 33C – Persistences of the centuriation *Suessula*.

Sinuessa, oppidum, muro ducta. iter populo non debetur. ager eius in iugeribus limitibus intercisivis [10] militibus est adsignatus.

Sinuessa (Mondragone, about 5 km north-west of the town), fortified town, surrounded with a wall. No right of way is due to the community. Its land was allocated in *iugera* to soldiers by *limites intercisivi* (fig. 34).

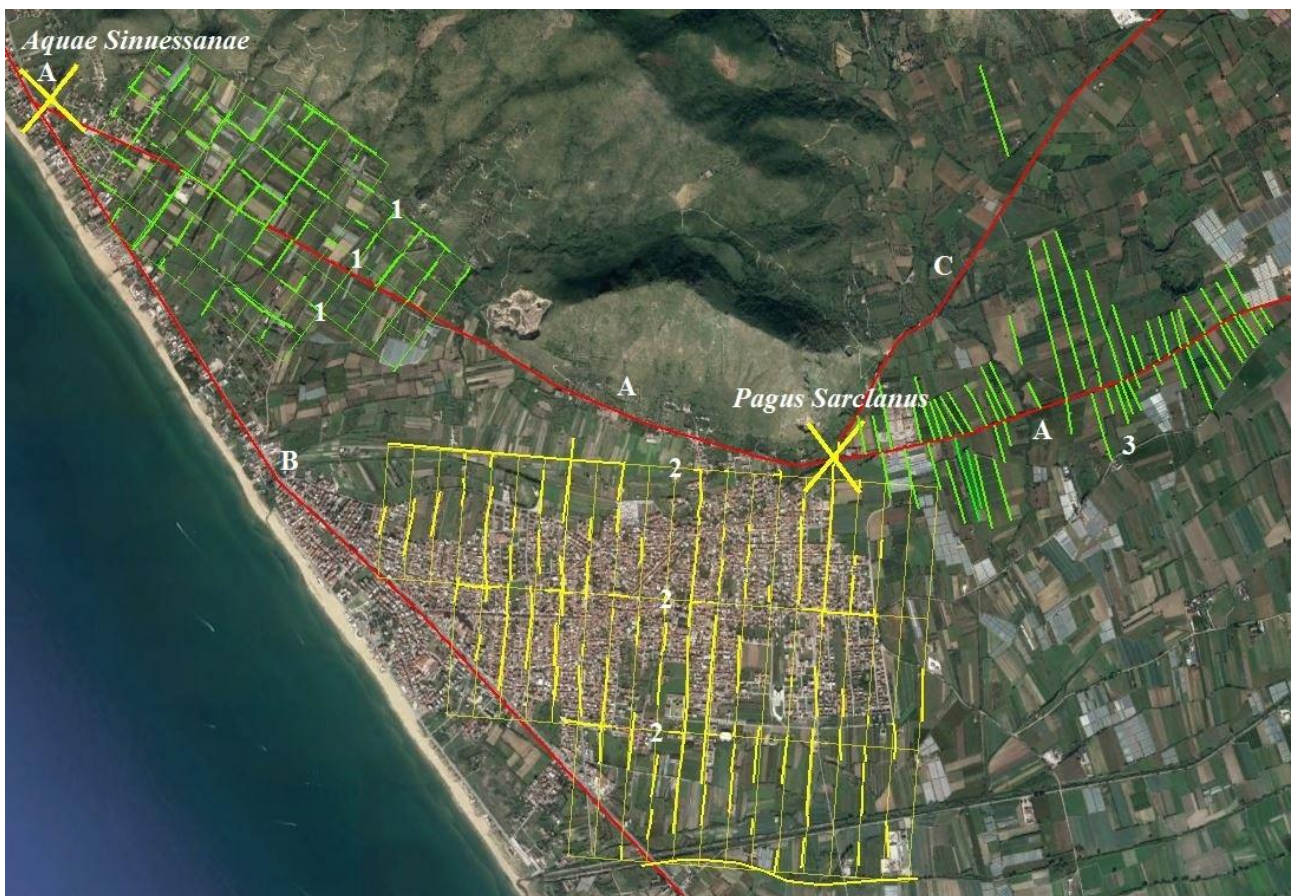


Fig. 34A – In this image the eastern part of the territory of *Sinuessa*, where there was *Pagus Sarclanus*, is visible. In this area we can see the persistences of two centuriations (1, *Sinuessa IV*, 296 b.C.? pre-roman?, 6 x 6 *vorsus* – 180 x 180 m -, inclination 38° 00' E; 2, *Sinuessa V*, 296 b.C.? pre-roman?, 25 x 6 *vorsus* - 750 x 180 m -, inclination 05° 00' E) and of an irregular *strigatio* (3, *Sinuessa VI*, *limites* slightly inclined towards west). The centuriation *Sinuessa V* coincides largely with the modern urbanized area of Mondragone. Other indications: A = *via Appia* (through *Sinuessa*); B = *via Domitiana*, stretch *Sinuessa-Volturnum*; C = *via Falerna* (from the *via Appia* - through *Sinuessa* - to *Forum Claudii*). Same indications for the next figure too.

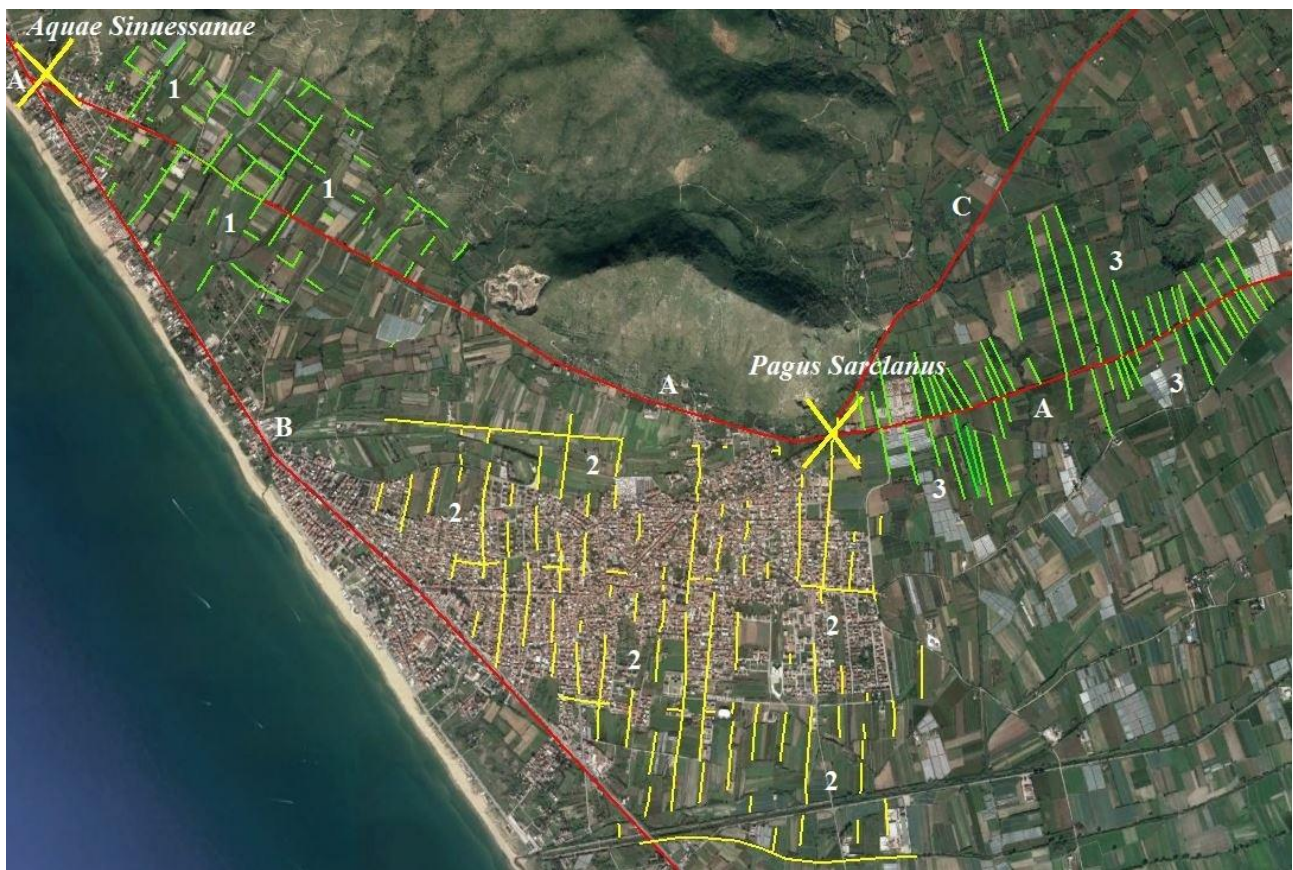


Fig. 34B – Persistences in the area east of *Sinuessa*.

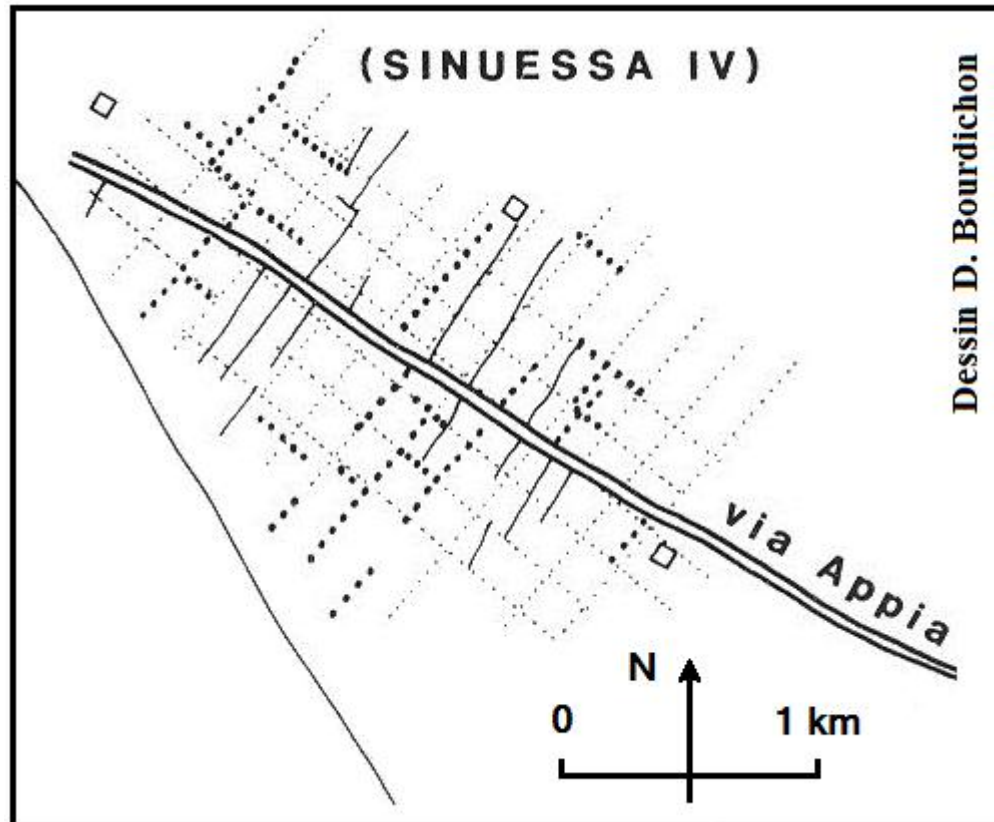


Fig. 34C – The centuriation *Sinuessa IV* in the interpretation of Chouquer *et al.* (fig. 55, detail).

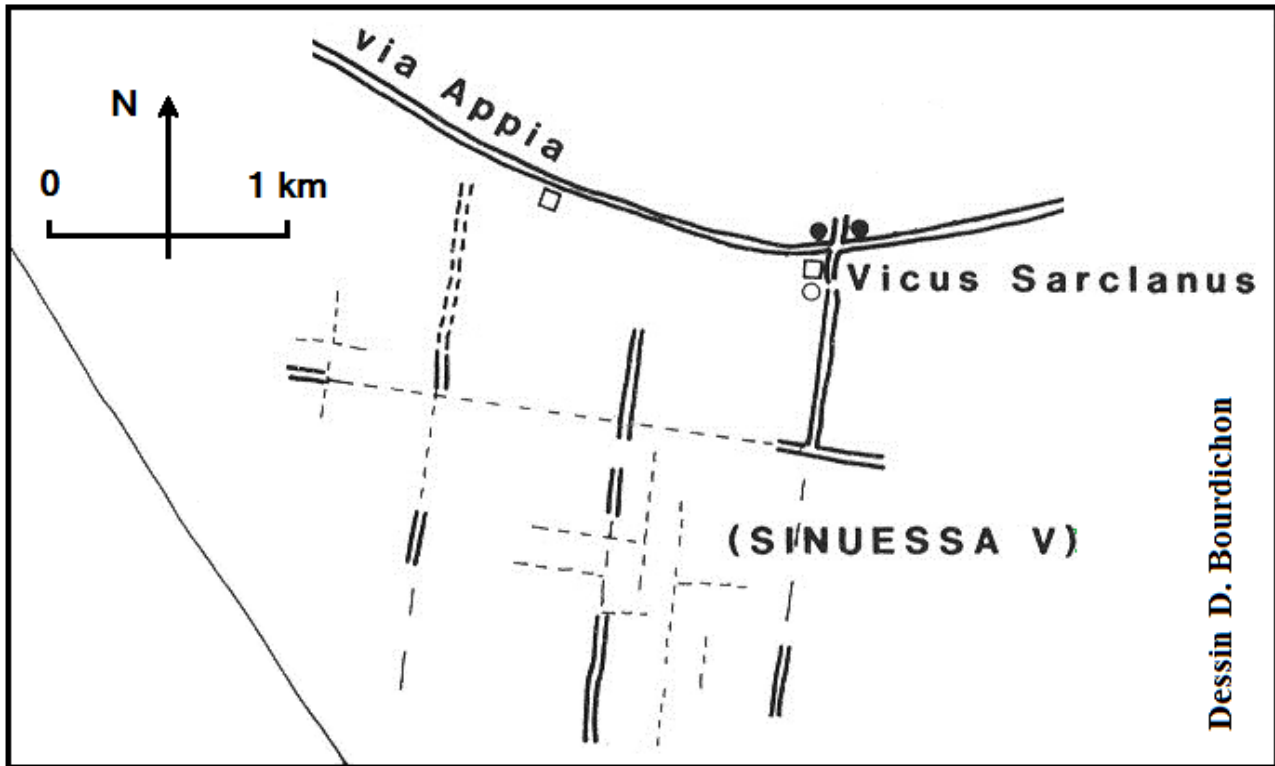


Fig. 34D - The centuriation *Sinuessa V* in the interpretation of Chouquer *et al.* (fig. 55, detail).

Suessa Aurunca, muro ducta. lege Sempronia est deducta. iter populo non debetur. ager eius pro parte limitibus intercisiviis et in lacineis est adsignatus.

Suessa Aurunca (Sessa Aurunca), surrounded with a wall. It was founded under *lex Sempronia*. No right of way is due to the community. Its land was allocated partly by *intercisivi limites* and in strips (fig. 28).

<p>Saepinum, oppidum, muro ductum. colonia ab imp. [15] Nerone Claudio est deducta. iter populo debetur ped. L. ager eius in centuriis Augusteis est adsignatus.</p>	<p><i>Saepinum</i> (Sepino, about 2.5 km north of the town), fortified town, colony surrounded with a wall, was founded by the emperor <i>Nero Claudius</i>. A right of way of L feet is due to the community. Its land was allocated in Augustan <i>centuriae</i> (fig. 35).</p>
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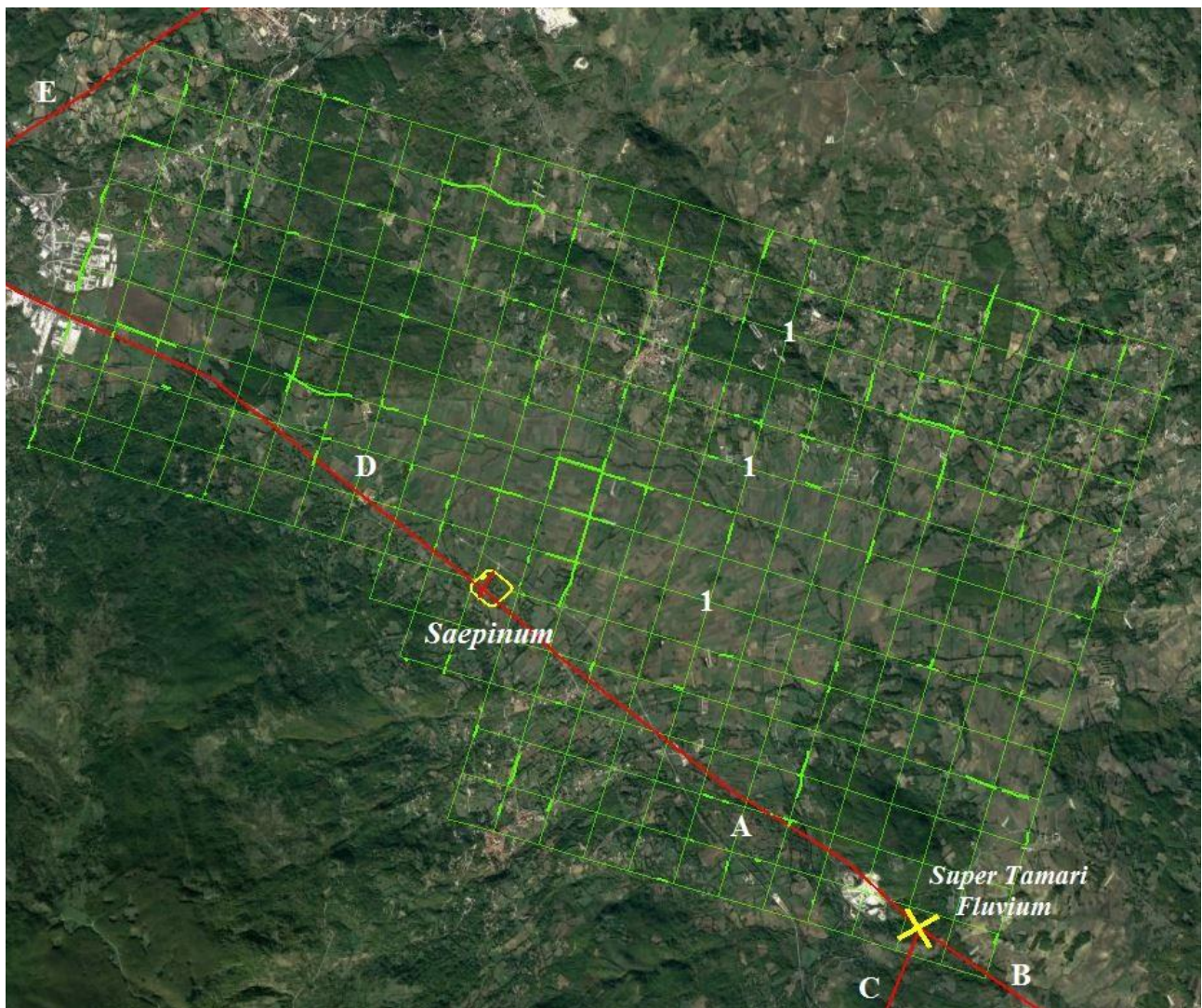


Fig. 35A – The land of *Saepinum* was divided by a centuriation (1, *Saepinum*, Augustan, 15 x 15 *actus* – 532.2 x 532.2 m -, inclination 18° 00' E). Other indications: A = *via Saepinum-Super Tamari Fluvium*; B = *via Super Tamari Fluvium-Beneventum*; C = *via Super Tamari Fluvium-Sirpium*; D = *via Saepinum-Herculis Rani-Bovianum*; E = *via Herculis Rani-Kalena-Larinum*.

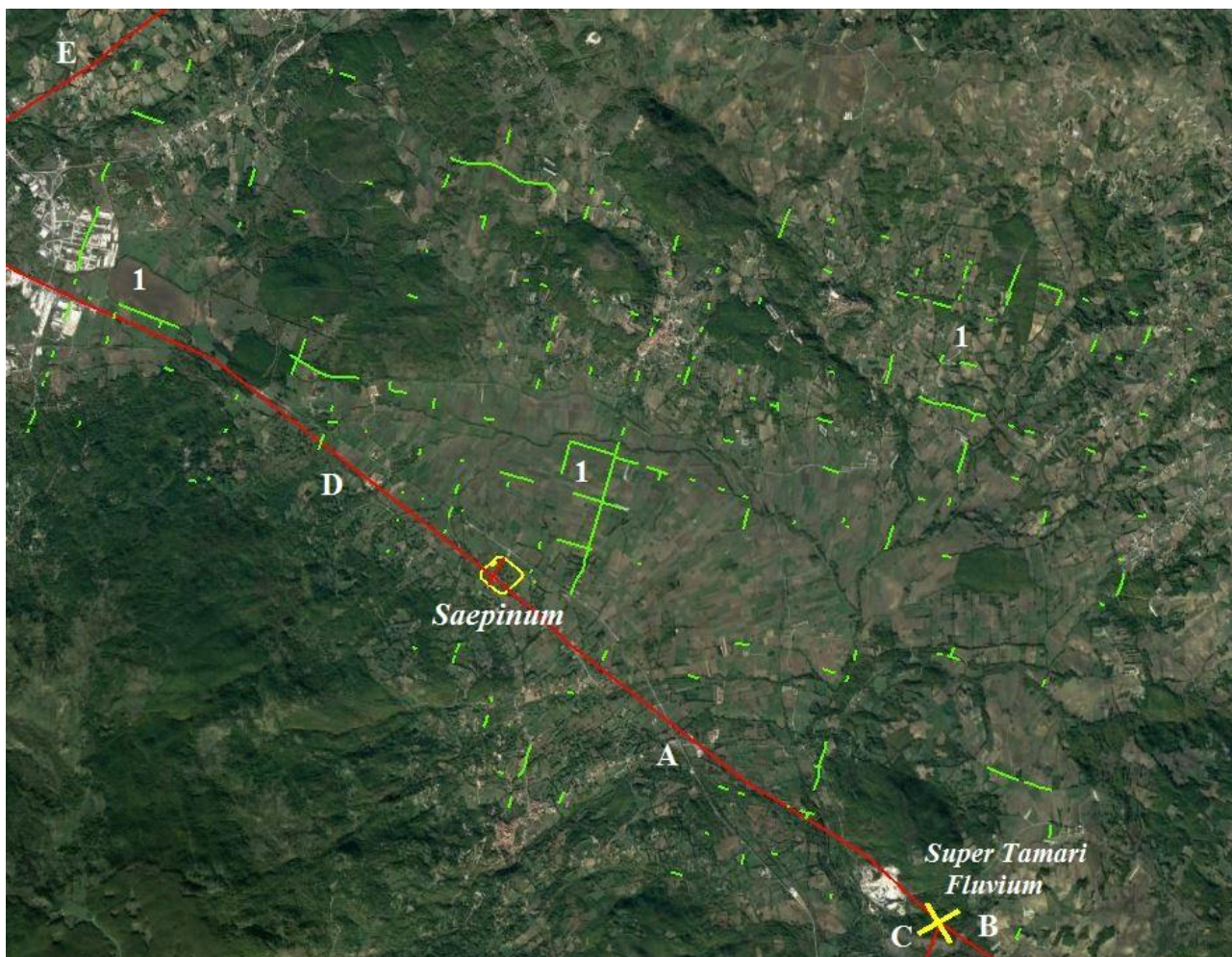


Fig. 35B – Persistences of the centuriation *Saepinum*. Same indications of the preceding figure.

Sora, muro ducta colonia, deducta iussu Caesaris Augusti. iter populo debetur ped. XV. ager eius limitibus Augusteis ueteranis est adsignatus.

Sora (Sora), colony surrounded with a wall, was founded by order of *Caesar Augustus*. A right of way of XV feet is due to the community. Its land was allocated to veteran soldiers by Augustan *limites* (fig. 36).

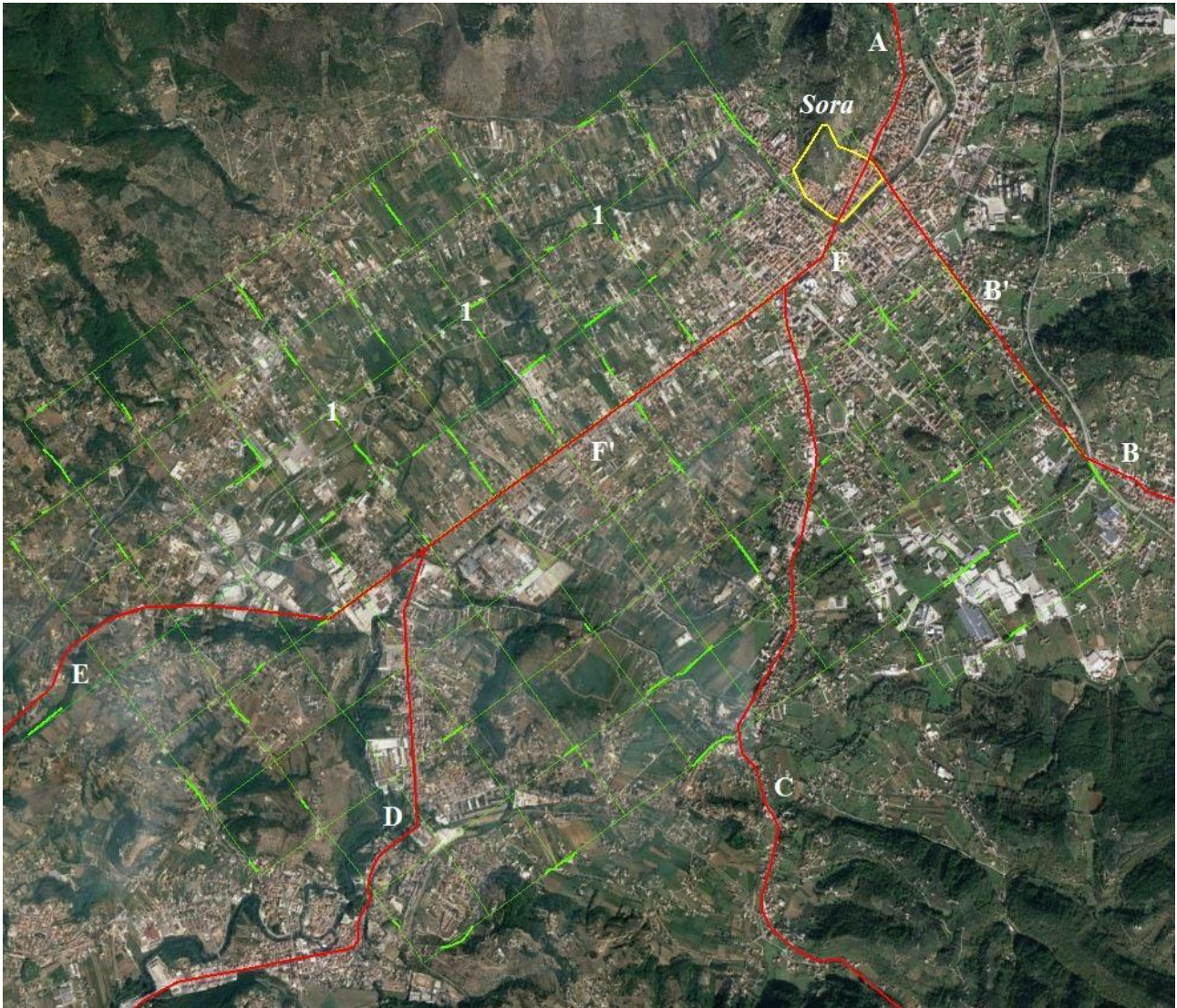


Fig. 36A – The land of *Sora* was divided by a centuriation (1, *Sora*, Augustan, 15 x 15 *actus* – 532.2 x 532.2 m - inclination 35° 30' W). Other indications: A = *via Sora-Antinum*; B = *via Sora-Atina*; B' = section of B that coincides with a *limes* of the centuriation *Sora*; C = *via Sora-Arpinum*; D = *via Sora-Fregellatum-Fabrateria Nova*; E = *via Sora-Cereatae Marianae-Verulae*; F = road that is common to D and E and, in its initial part, to C; F' = large part of F that coincides with a *limes* of the centuriation *Sora*.

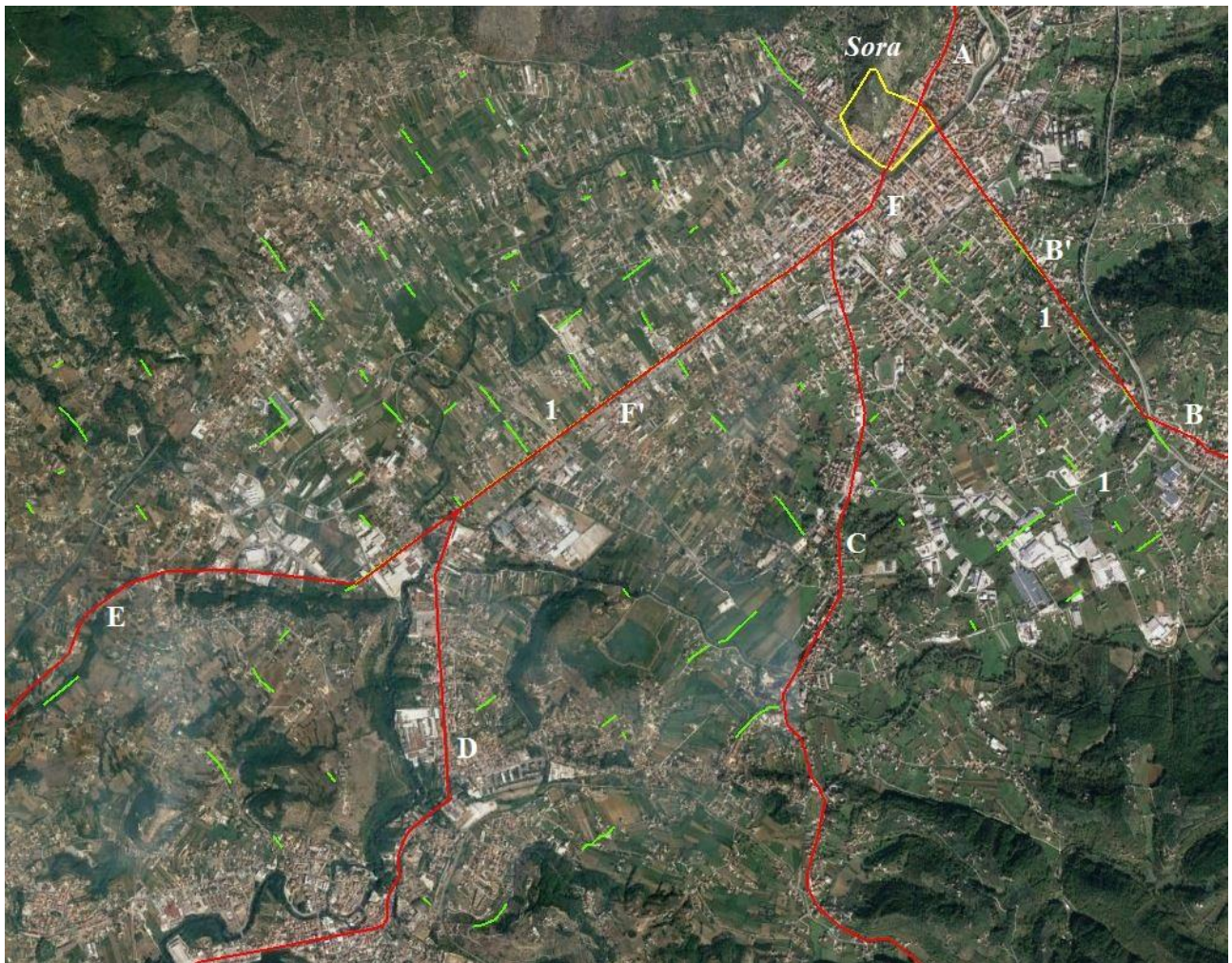


Fig. 36B – Persistences of the centuriation *Sora*. Same indications of the preceding figure.

[20] *Signia*, muro ducta colonia, a militibus et triumviris munita. iter populo non debetur. ager eius in praecisuris limitibus triumviralibus est adsignatus.

Signia (Segni), colony surrounded with a wall, fortified by the soldiers and by the *triumviri*. No right of way is due to the community. Its land was allocated in parcels by triumviral *limites* (fig. 13).

Setia, muro ducta colonia. triumviri munierunt. iter [L. 238.1] populo debetur ped. XV. ager eius in soluto ex occupatione a militibus tenetur.	<i>Setia</i> (Sezze), colony surrounded with a wall. The <i>triumviri</i> fortified it. A right of way of XV feet is due to the community. Its land is held unsurveyed by soldiers by appropriation (fig. 37).
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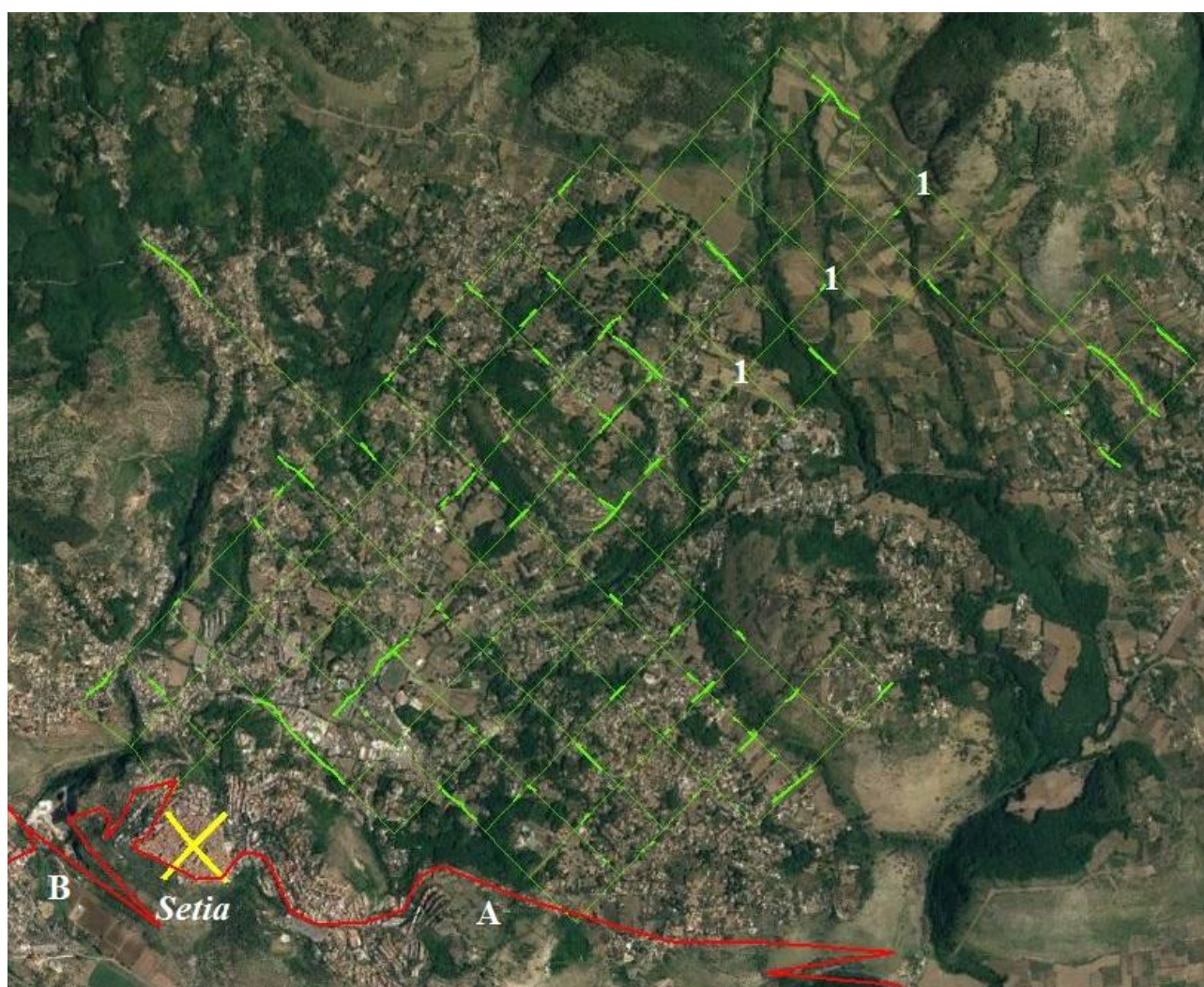


Fig. 37A – The land of *Setia* was divided by a centuriation (1, *Setia*, precocious or triumviral, 10 x 10 actus – 354.8 x 354.8 m -, inclination 44° 00' E). Other indications: A = *via Setia-Privernum*; B = *via Setia-Norba*.



Fig. 37B – Persistences of the centuriation *Setia*. Same indications of the preceding figure.

<p>Telesia, muro ducta colonia, a triumviris deducta. iter populo debetur ped. XXX. ager eius limitibus Augusteis [5] in nominibus est adsignatus.</p>	<p><i>Telesia</i> (S. Salvatore Telesino, about 1 km south of the town), colony surrounded with a wall, founded by the <i>triumviri</i>. A right of way of XXX feet is due to the community. Its land was allocated by individual names by Augustan <i>limites</i> (fig. 38).</p>
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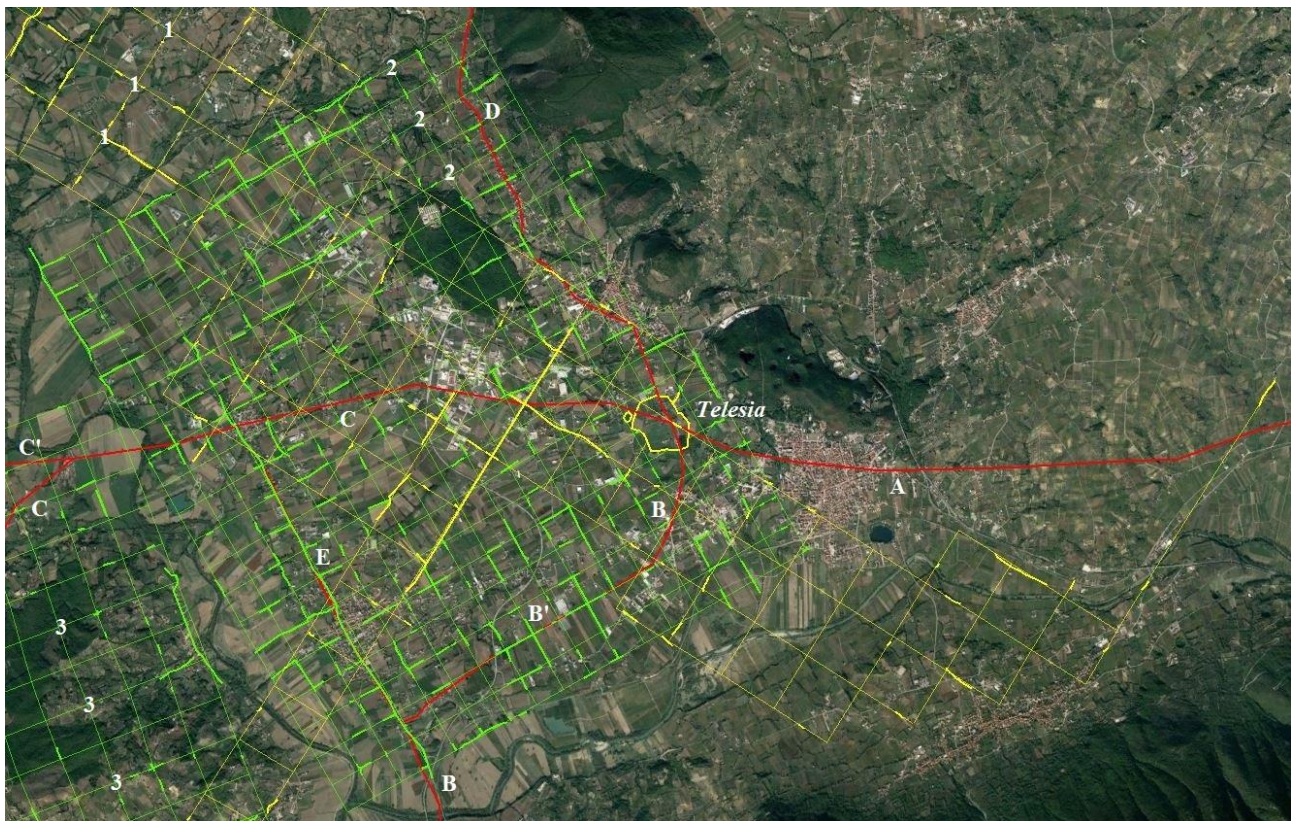


Fig. 38A – The land of *Telesia* was divided by two centuriations (1, *Allifae II-Teanum II-Telesia II-Saticula* or centuriation of the Middle Volturno, 20 x 20 *actus* – 701.3 x 701.3 m – inclination 32° 15' E; 2, *Telesia I*, Gracchan or Sullan, 10 x 10 *actus* – 354.8 x 354.8 m, inclination 29° 30' W). Other indications: 3 = centuriation *Caiatia*; A = *via Telesia-Beneventum*; B = *via Telesia-Suessula*; B' = section of B that coincides with a *limes* of the centuriation *Telesia I*; C = *via Telesia-Caiatia*; C' = branch of C for *Cubulteria*; D = *via Telesia-Allifae*; E = road that joins B and C and coincides with a *limes* of the centuriation *Telesia I*.

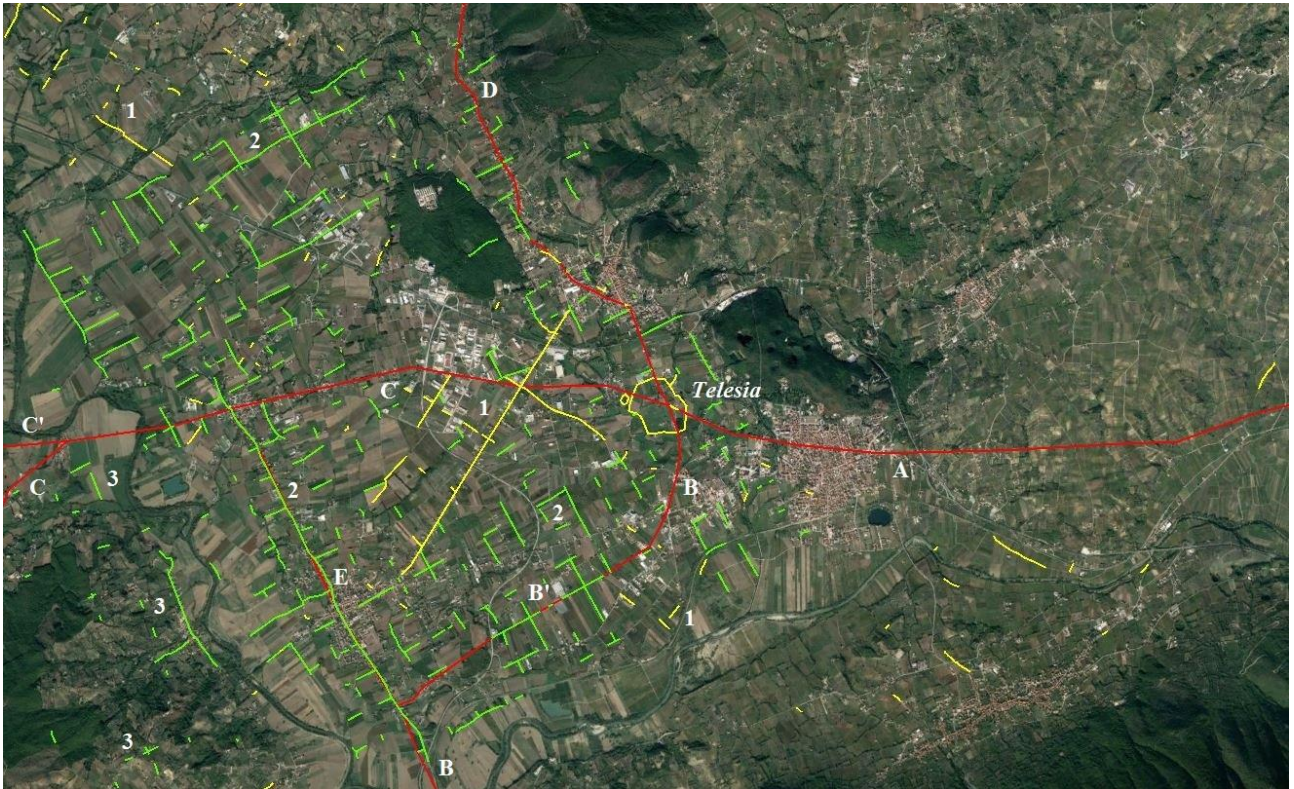


Fig. 38B – Persistences in the area of *Telesia*.

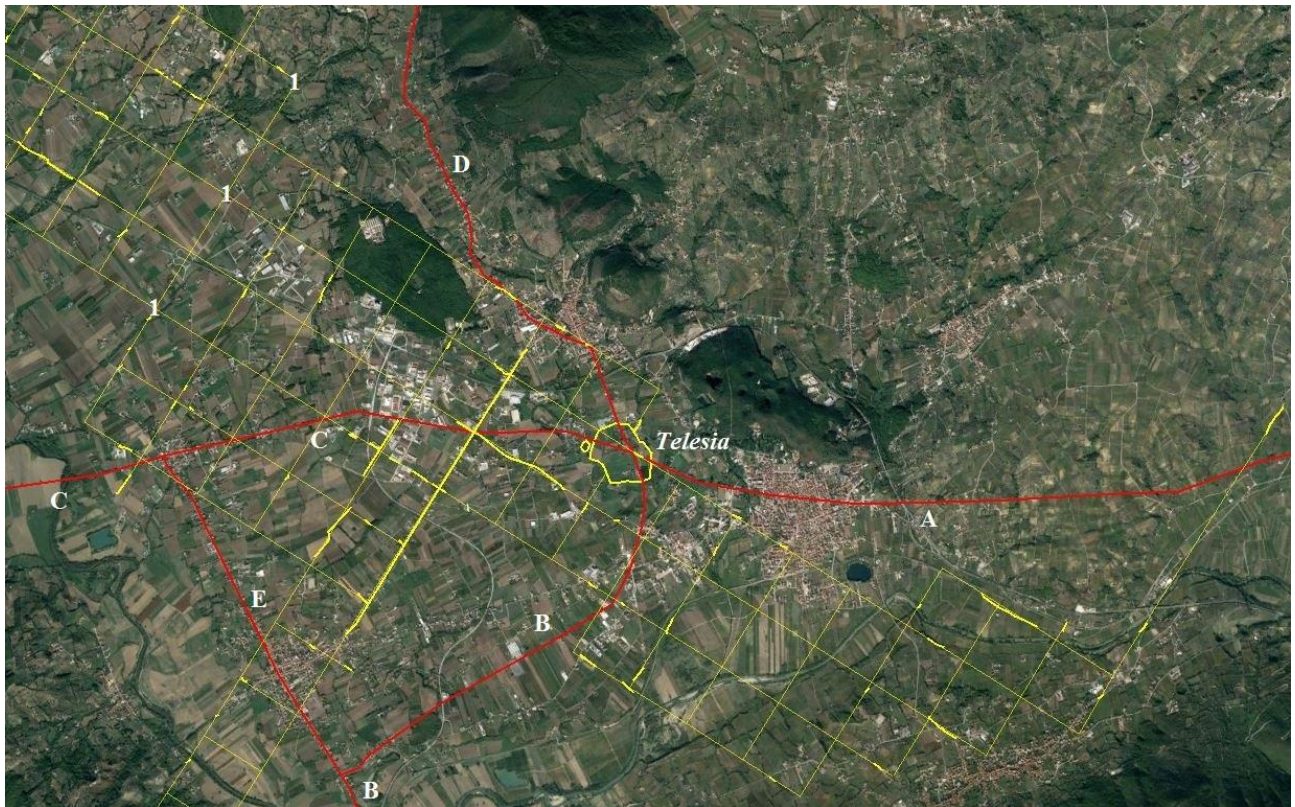


Fig. 38C – The centuriation *Allifae II-Teianum II-Telesia II-Saticula*, known as centuriation of the Middle Volturno, in the area of *Telesia*.

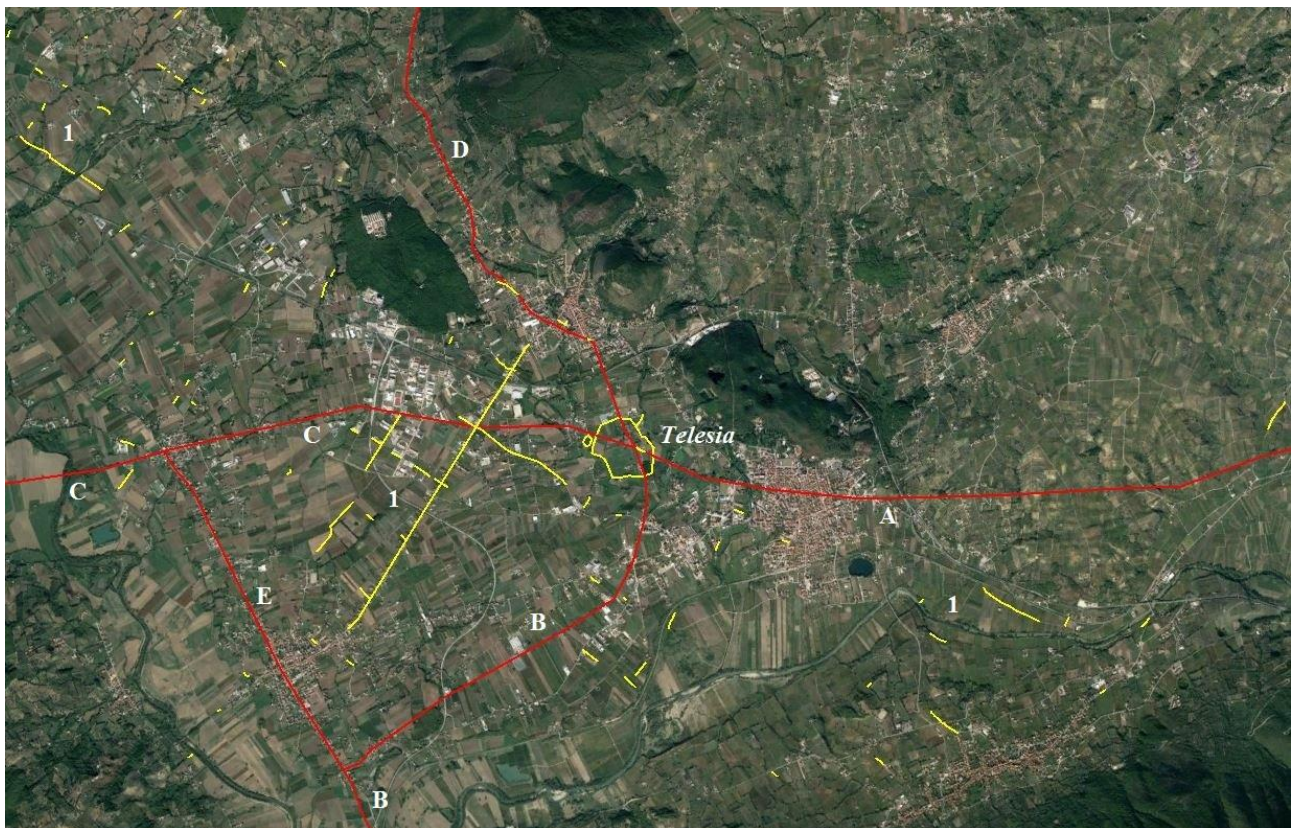


Fig. 38D – Persistences of the centuriation of the Middle Volturno in the area of *Telesia*.



Fig. 38E – The centuriation *Telesia I*.

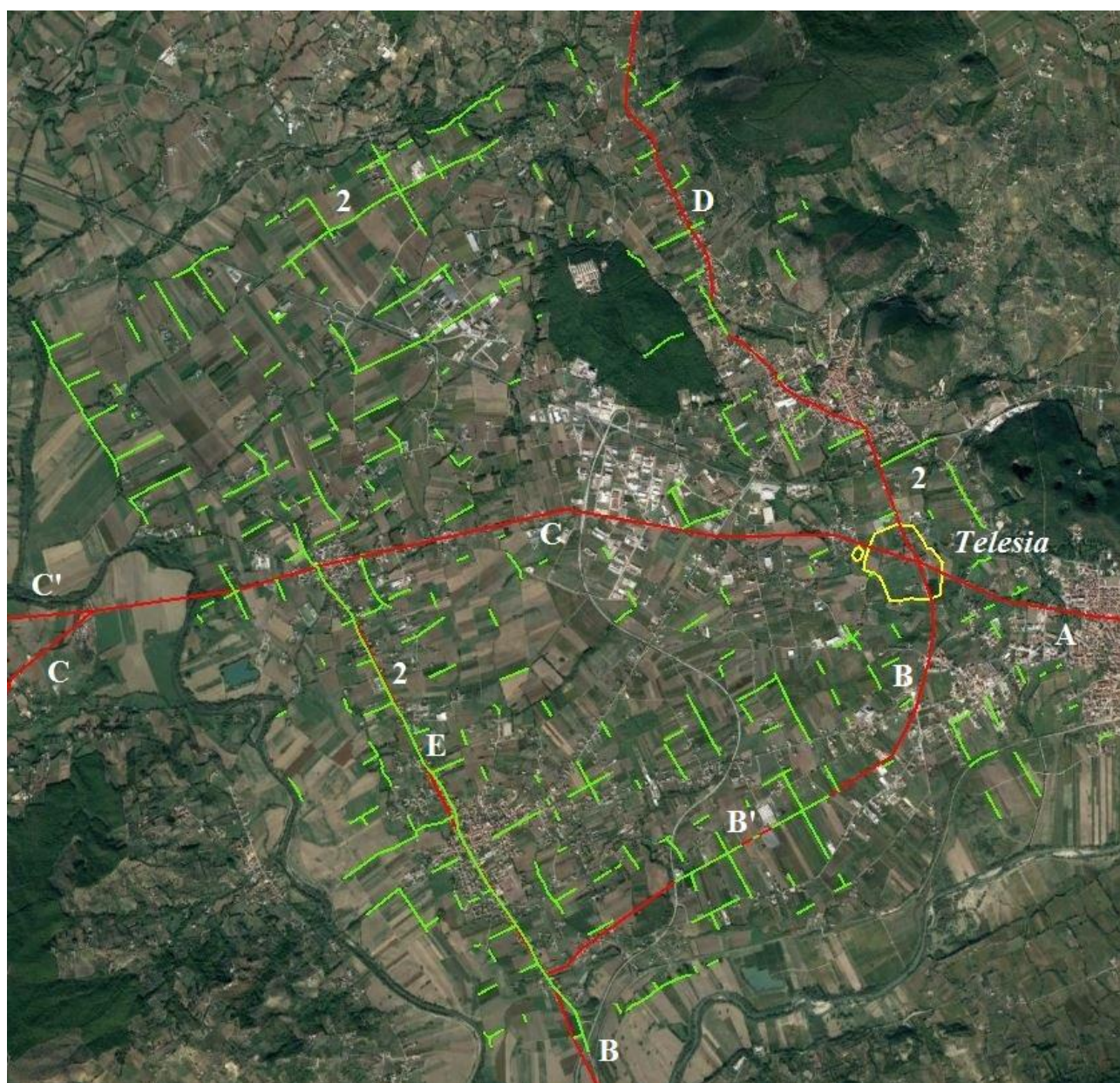


Fig. 38F – Persistences of the centuriation *Telesia I.*

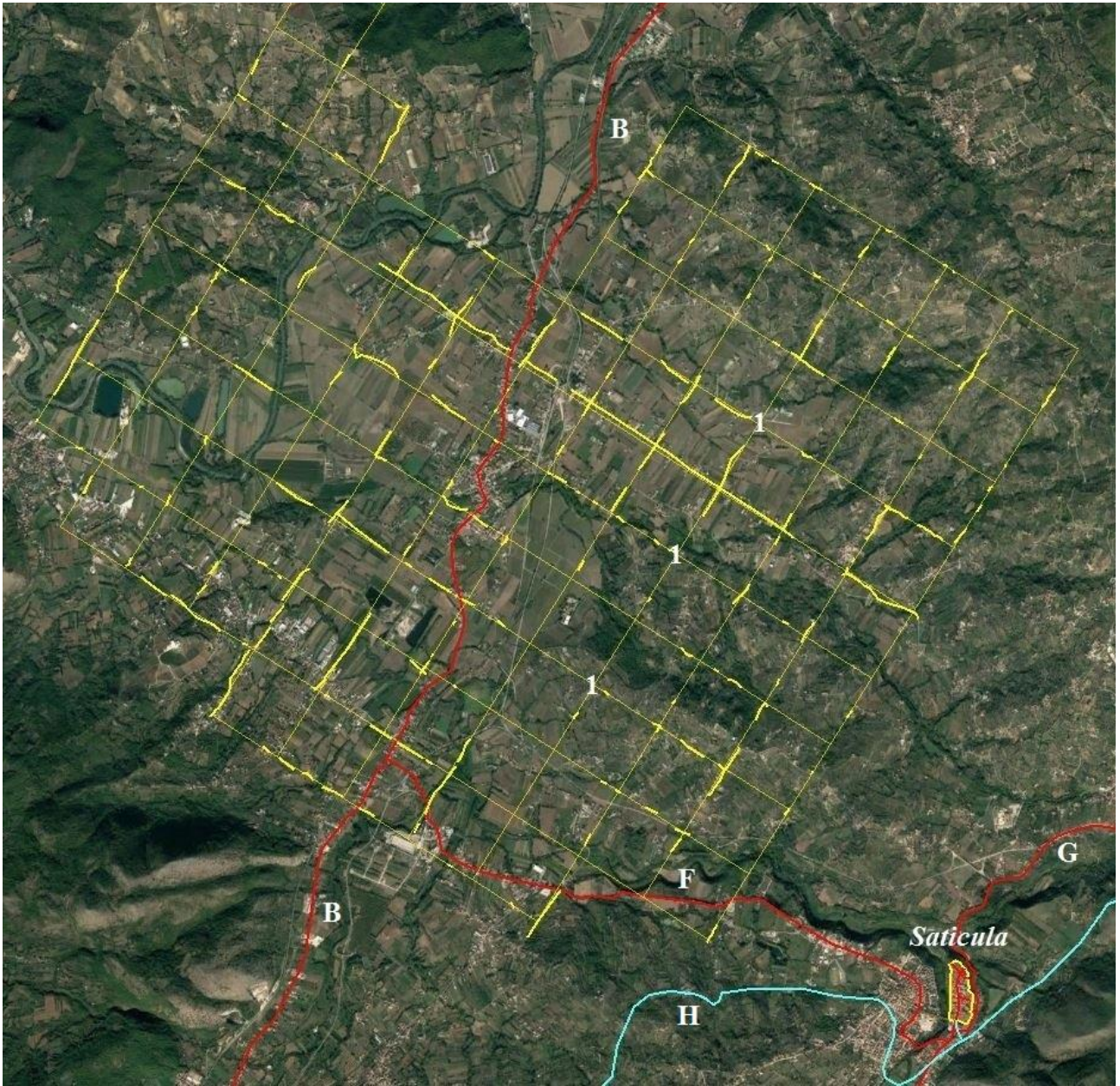


Fig. 38G – The centuriation of the Middle Volturno in the area of *Saticula*. Other indications: F = road from *Saticula* to the *via Suessula-Telesia*; G = *via Saticula-Caudium*; H = aqueduct of *Capua*.

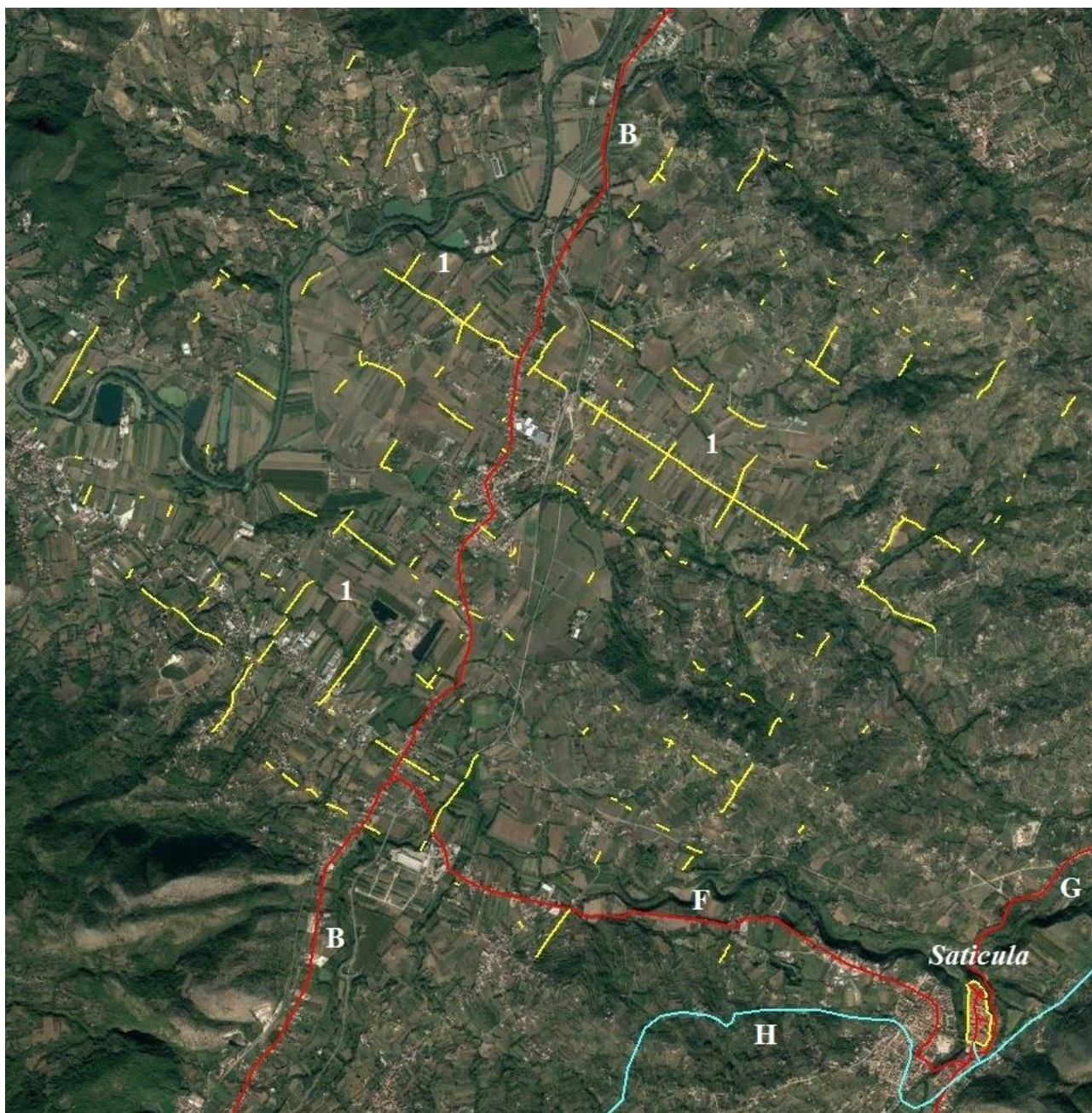
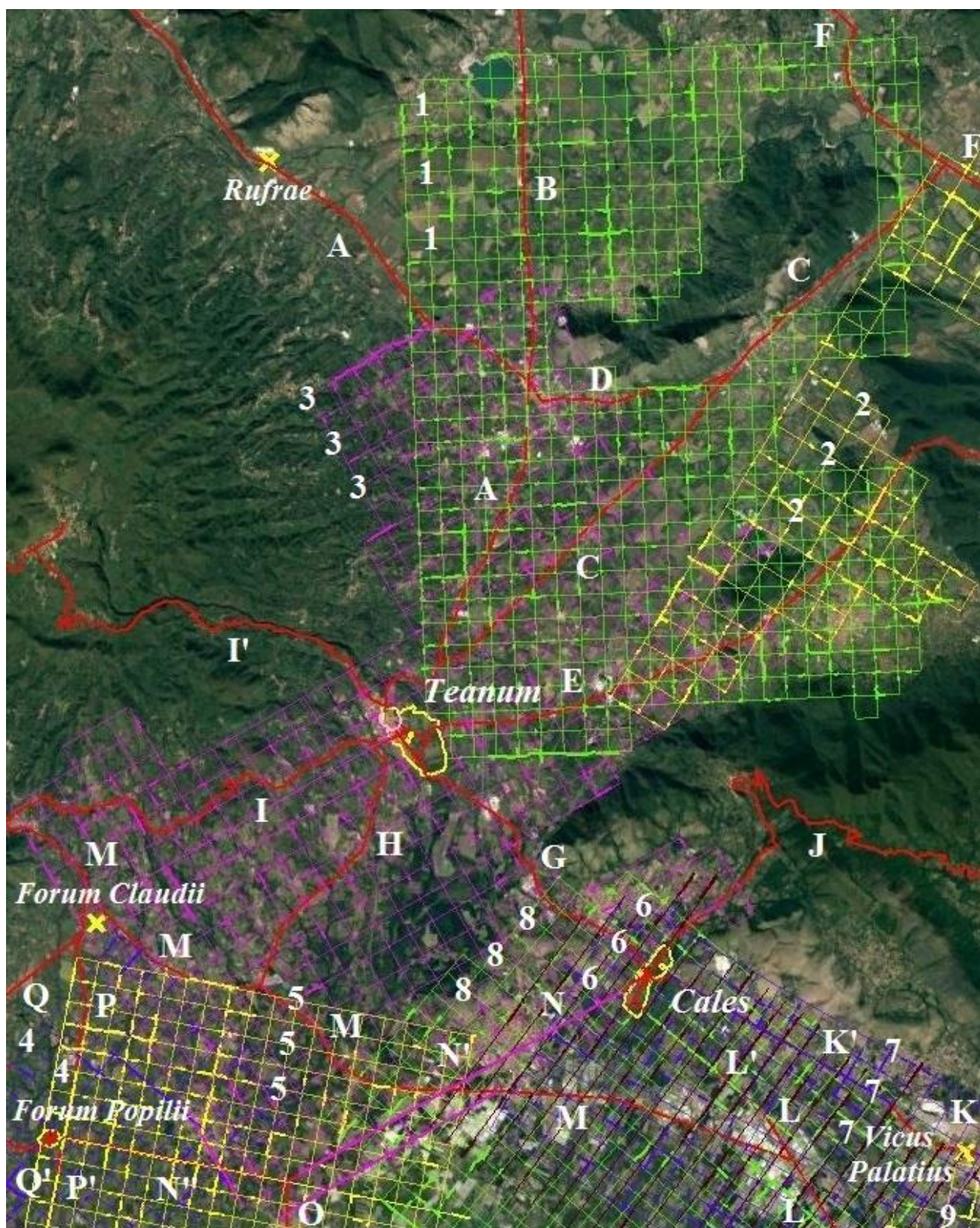


Fig. 38H – Persistences of the centuriation of the Middle Volturno in the area of *Saticula*.

Teanum Siricinum, colonia deducta a Caesare Augusto. iter populo debetur ped. LXXXV. ager eius militibus metycis nominibus IIIICL limitibus Augusteis est adsignatus.

Teanum Sidicinum (Teano), colony founded by *Caesar Augustus*. A right of way of LXXXV feet is due to the community. Its land was allocated by individual names to MMMMCL non-native soldiers by Augustan *limites* (fig. 39).



*The legend is in the next page.

Fig. 39A – The land of *Teanum Sidicinum* was divided by three centuriations (1, *Teanum I*, Gracchan or Sullan, 14 x 14 *actus* – 496.72 x 496.72 m -, inclination 01° 30' W; 2, *Allifae II-Teanum II-Telesia II-Saticula* or centuriation of the Middle Volturno, 20 x 20 *actus* – 701.3 x 701.3 m – inclination 32° 15' E; 3, *Teanum III-Cales IV*, Augustan, 16 x 16 *actus* – 567.68 x 567.68 m -, inclination 29° 00' W). Other indications: 4 = centuriation *Forum Popilii*; 5 = centuriation *Ager Falernus II*; 6 = *strigatio Cales I*; 7, 8 = centuriations *Cales II e III*; 9 = centuriation *Capua-Casilinum*; A = *via Latina*, stretch *Ad Flexum-Rufrae-Teanum*; B = *via Teanum-Venafrum*; C = *via Teanum*-crossroads on the *via Allifae-Venafrum*; D = link between *via Latina* and C; E = *via Teanum-Allifae*; F = *via Allifae-Venafrum*; G = *via Latina*, stretch *Teanum-Cales*; H = *via Teanum-via Appia* (through *Suessa Aurunca*, stretch *Teanum-Casilinum*); I = *via Teanum-Suessa Aurunca*; I' = *via Teanum*-basin of *Roccamonfina*; J = *via Cales-Trebula*; K = *via Cales-Vicus Palatius-Caiatia*; K' = section of K that coincides with a *limes* of the centuriation *Cales II*; L = *via Latina*-confluence with the *via Appia*; L' = section of L that coincides with a *limes* of the centuriation *Cales III*; M = *via Appia* through *Suessa Aurunca* (stretch *Suessa-Casilinum*); M' = section of M that coincides with a *limes* of the centuriation *Ager Falernus II*; N = *via Cales-Forum Popilii*; N' e N'' = sections of N that coincide with *limites* of the centuriations *Teanum III-Cales IV* and *Ager Falernus II*; O = branch of this road for *Urbana* (on *via Appia* through *Sinuessa*); P = road from the *via Appia* through *Sinuessa* to the *via Appia* through *Suessa Aurunca*, passing through *Forum Popilii*; P' = section of O that coincides with a *limes* of the centuriation *Ager Falernus II*; Q = *via Falerna*, from the *via Appia* through *Sinuessa* to *Forum Claudii*; Q' = branch of Q for *Forum Popilii*.

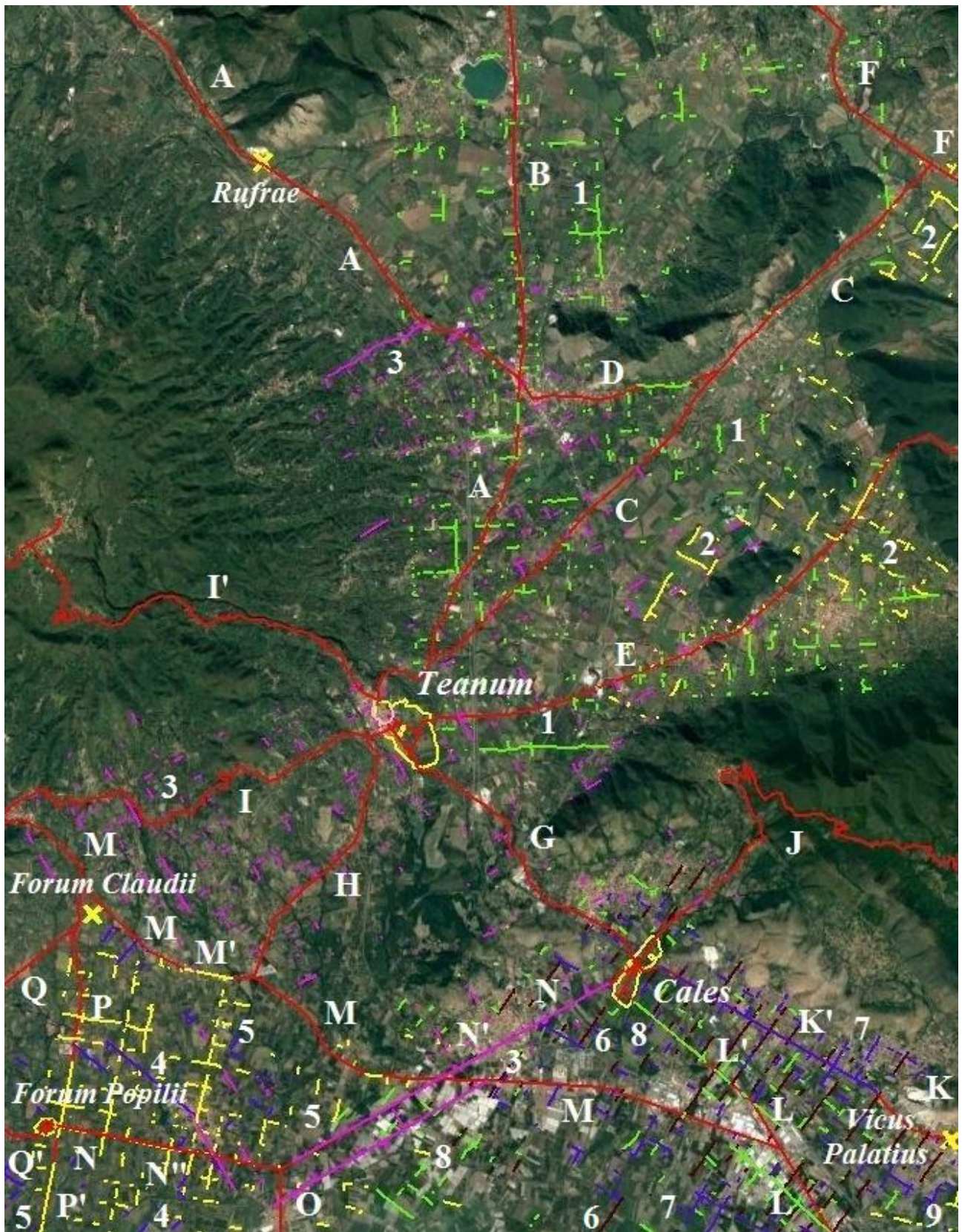


Fig. 39B – Persistences in the area of *Teanum*.

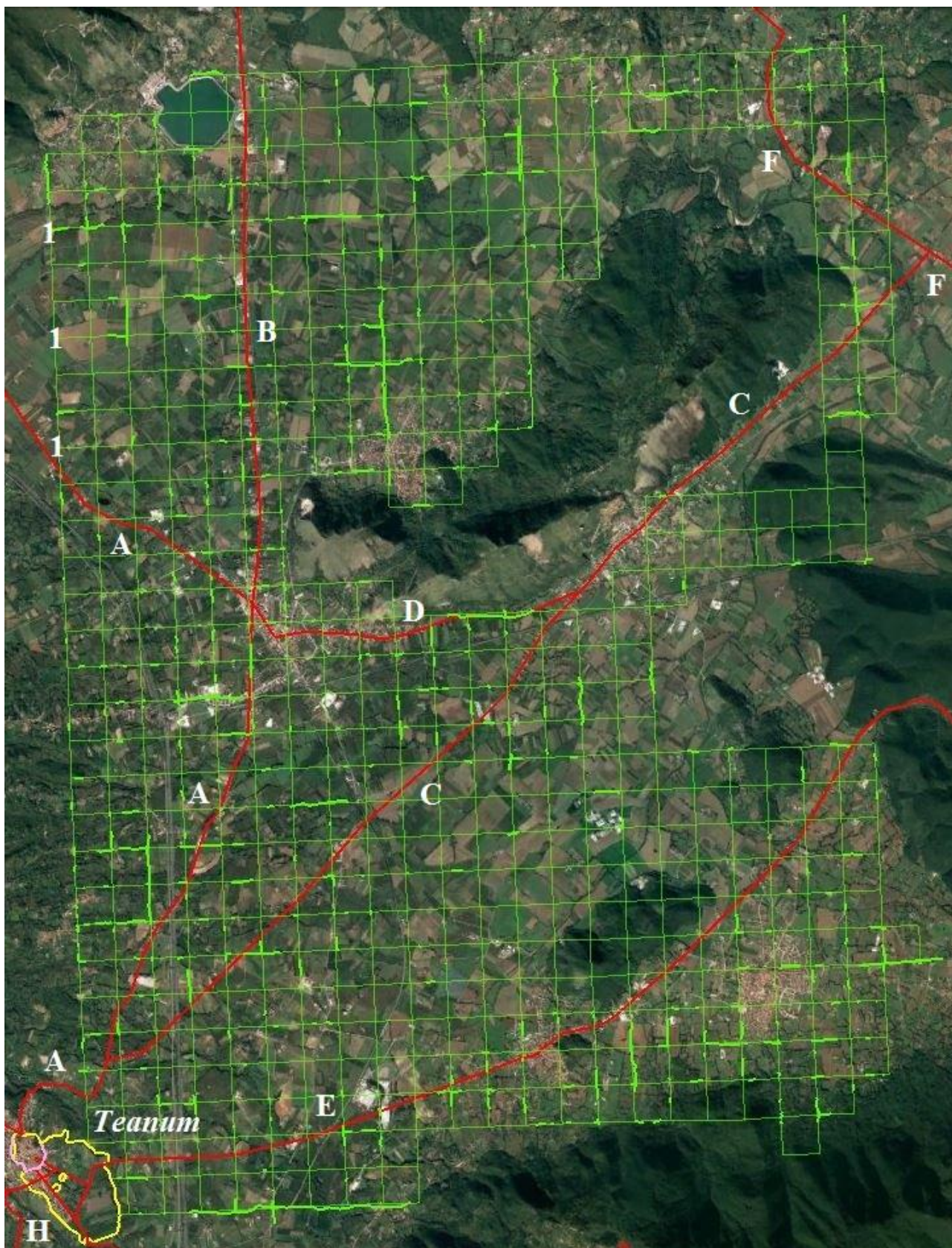


Fig. 39C – The centuriation *Teanum I.*

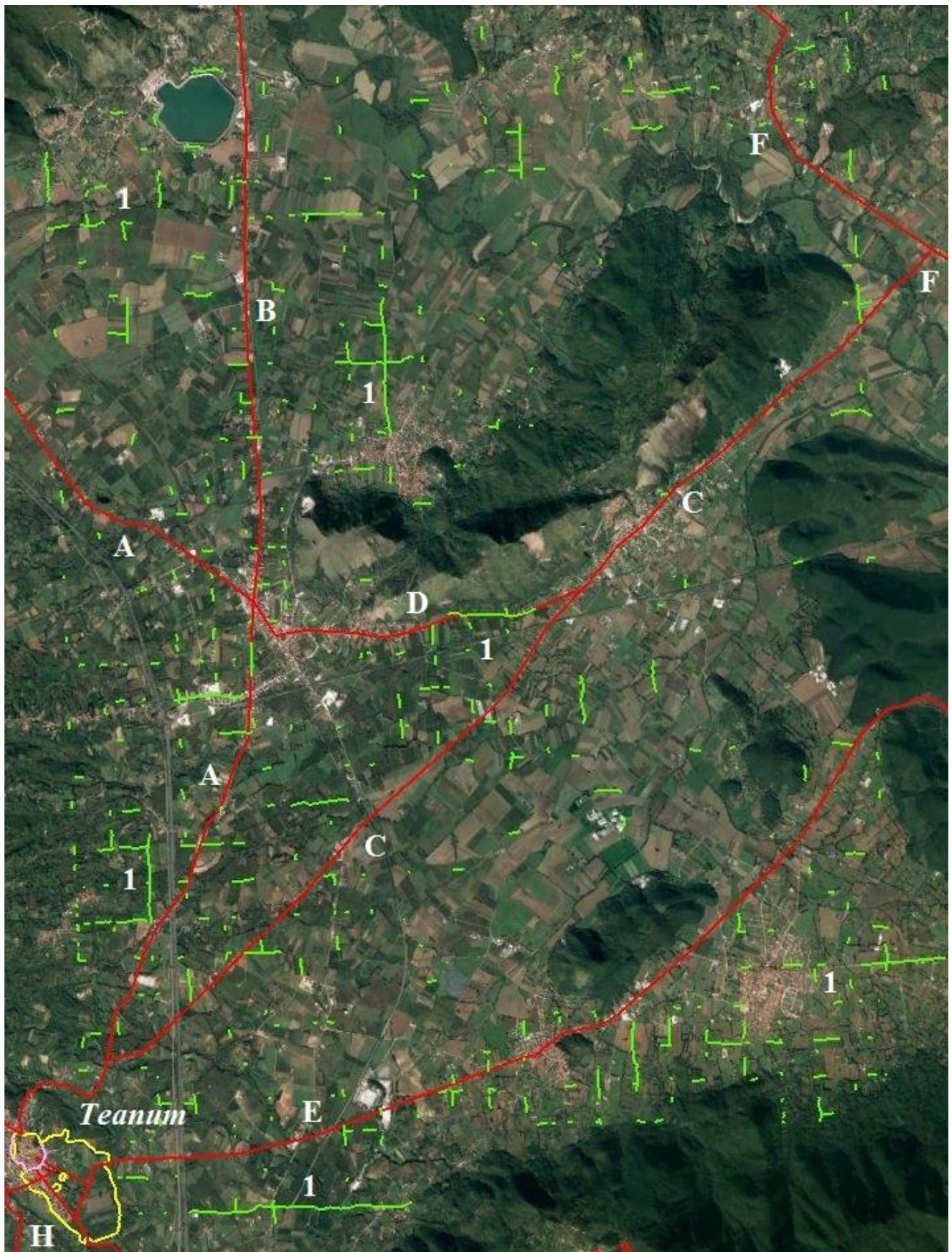


Fig. 39D – Persistences of the centuriation *Teanum I.*

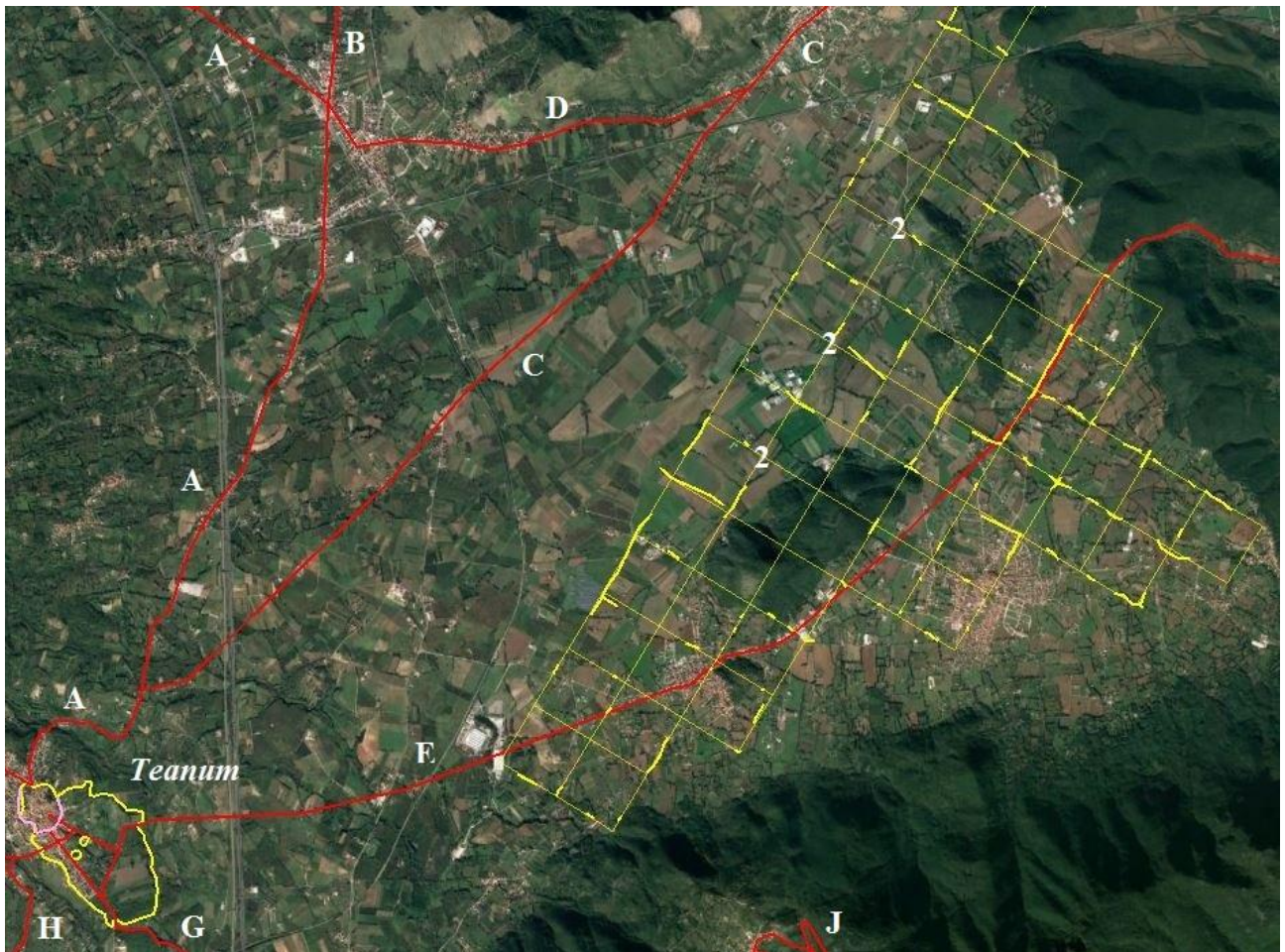


Fig. 39E – The centuriation of the Middle Volturno in the area of *Teanum*.

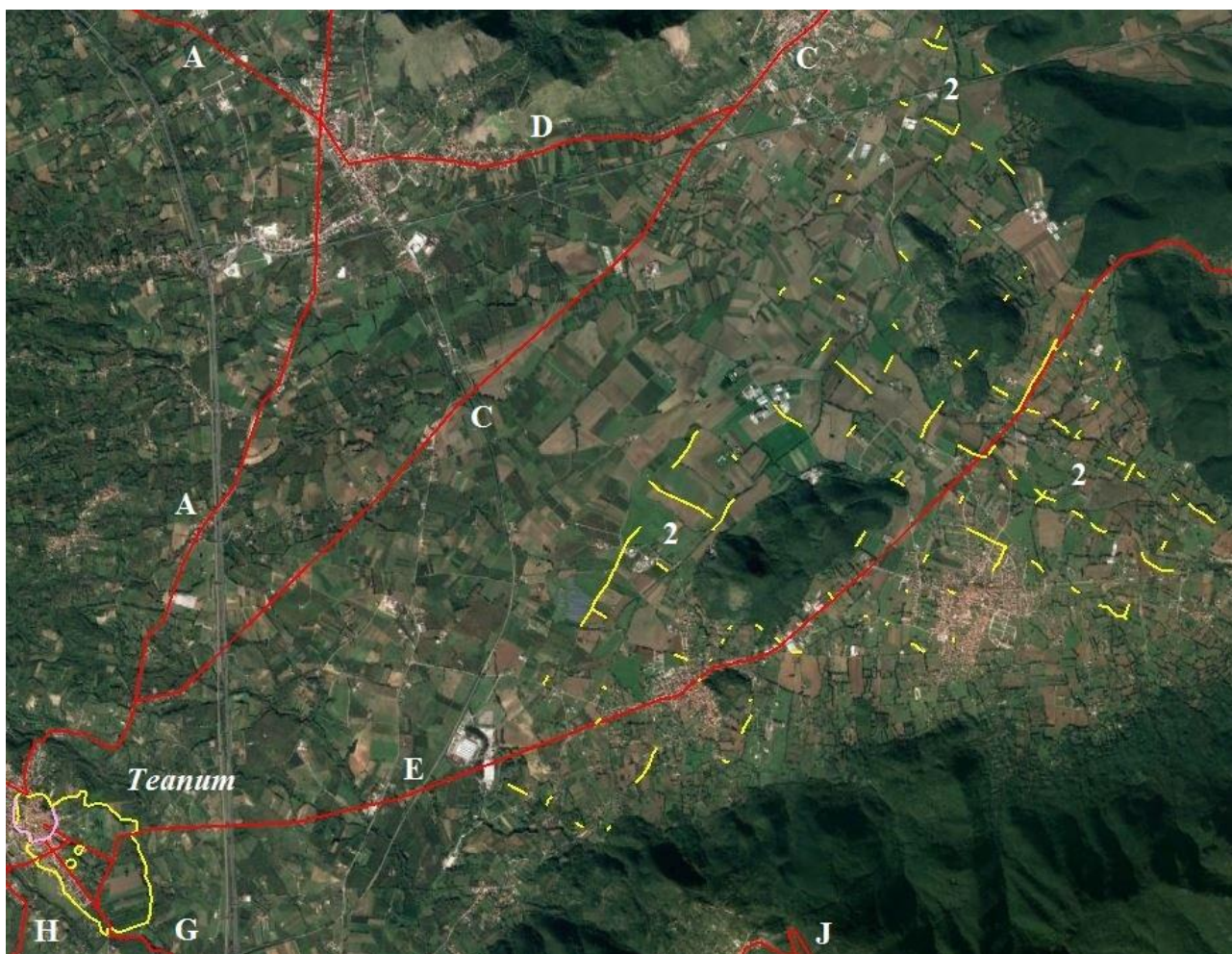


Fig. 39F – Persistences of the centuriation of the Middle Volturno in the area of *Teanum*.

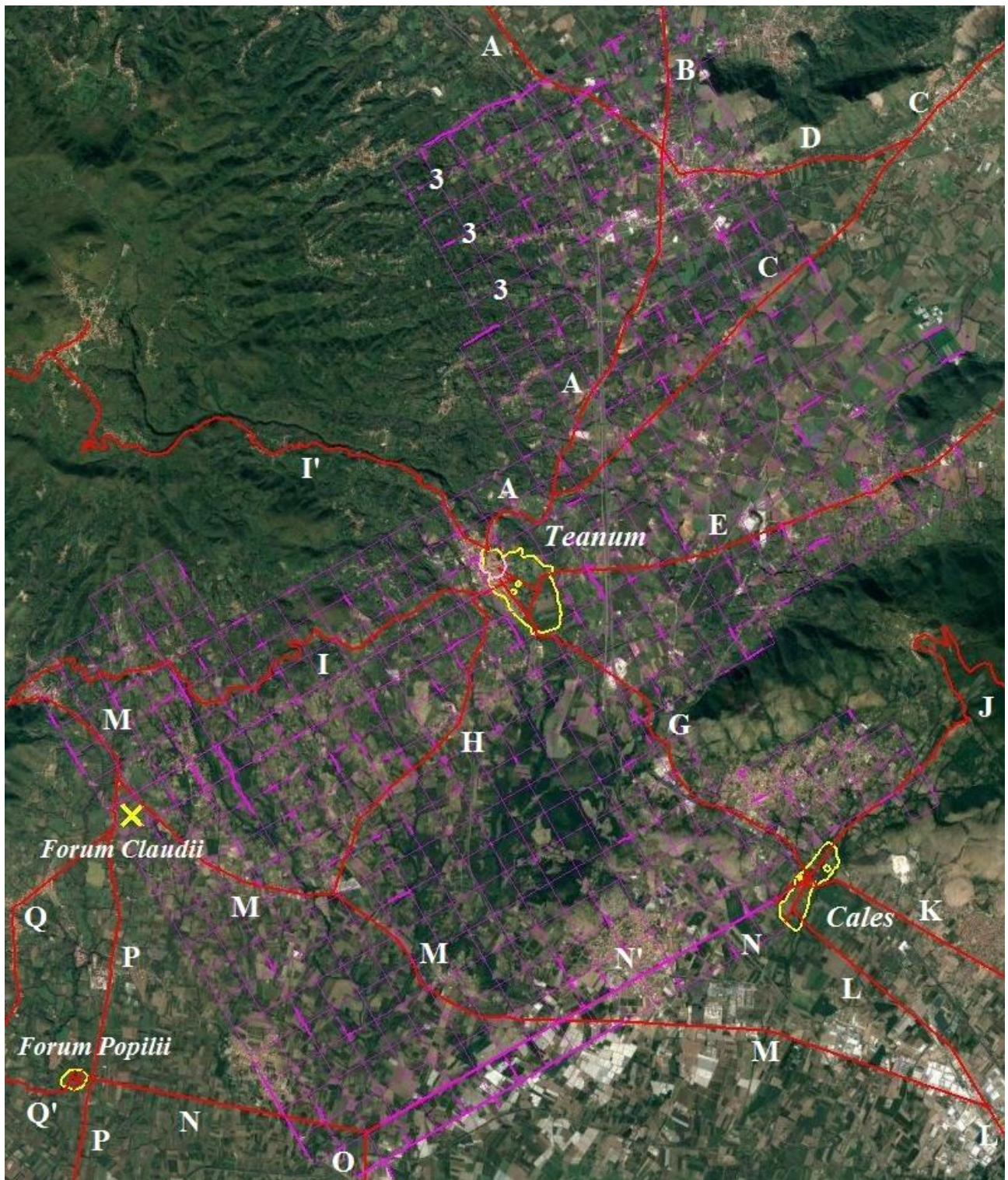


Fig. 39G – The centuriation *Teanum III-Cales IV*.

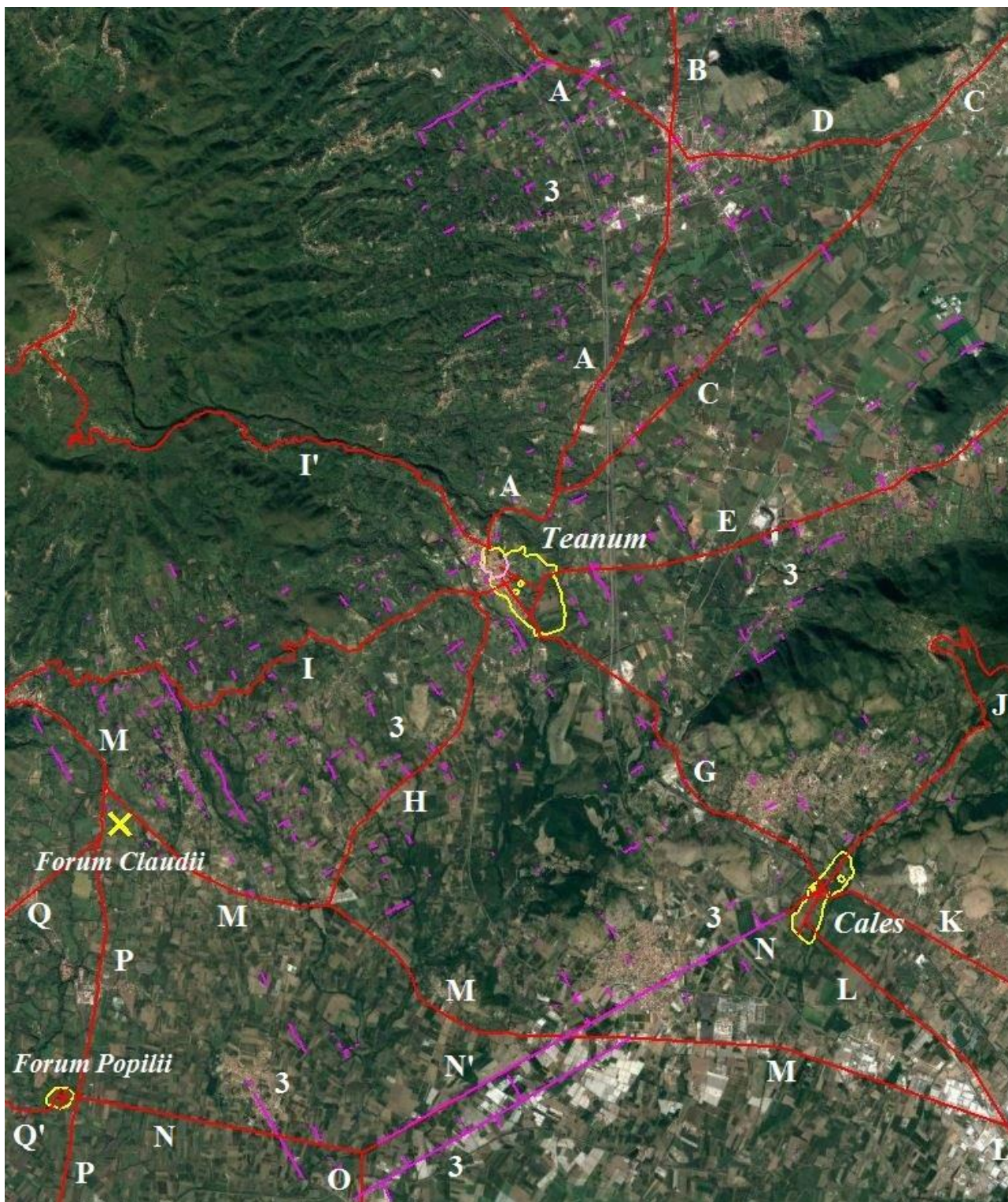


Fig. 39H – Persistences of the centuriation *Teanum III-Cales IV*.

[10] Tusculi oppidum muro ductum. iter populo non debetur. ager eius mensura Syllana est adsignatus.

Tusculum (Monte Compatri, 2 km south-west of the town), fortified town surrounded with a wall. No right of way is due to the community. Its land was allocated according to a Sullan survey.

Terracina, oppidum. iter populo non debetur. ager eius in absoluto est dimissus.	<i>Tarracina</i> (Terracina), fortified town. No right of way is due to the community. Its land was left unsurveyed (fig. 40) ⁴² .
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Fig. 40A – The land of *Tarracina* was allocated in ancient times by a *strigatio* (1, *Tarracina I*, 329 b.C.?, 2 *actus* – 70,96 m -, inclination 30° 00' E) and later by a centuriation (2, *Tarracina II*, triumviral, 20 x 20 *actus* – 709.6 x 709.6 m, inclination 30° 00' E). Other indications: A = *via Appia* (stretch *Tarracina-Fundi*); B = *via Tarracina-Circeii*; C = *via Appia* (stretch *Tarracina-Lucus Feroniae-Ad Medias*); C' = section of C that coincides with the *decumanus maximus* of the centuriation *Tarracina II*; D = *via Lucus Feroniae-Privernum*; E = aqueduct of *Tarracina*. Same indications for the following figures.

⁴² This is contradicted by the persistences of a *strigatio* and of a centuriation that are clearly visible in the land.



Fig. 40B – Persistences of the *strigatio Tarracina I* and of the centuriation *Tarracina II*.



Fig. 40C – The *strigatio Tarracina I.*



Fig. 40D – Persistences of the *strigatio Tarracina I.*

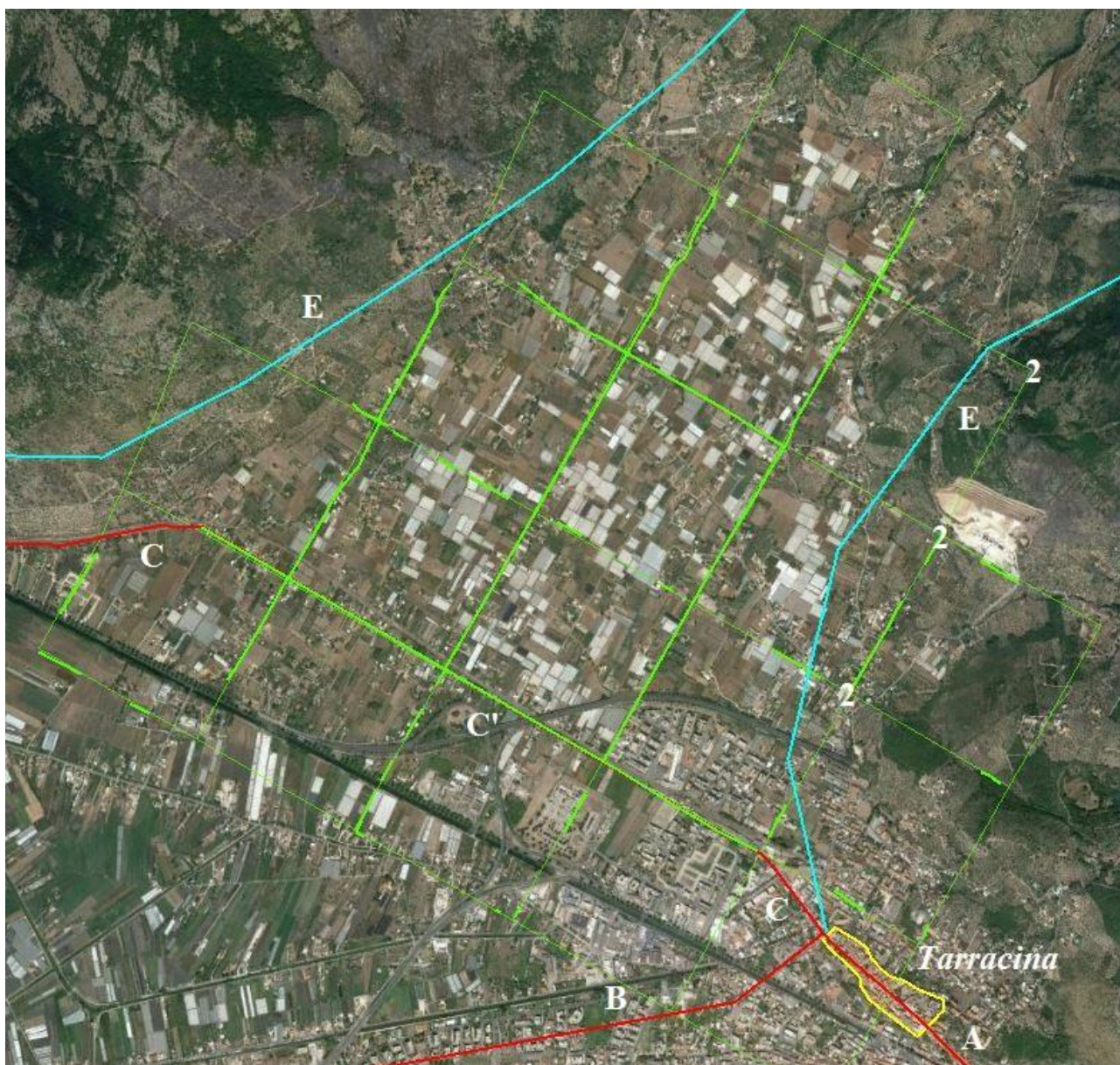


Fig. 40E – The centuriation *Tarracina II*.



Fig. 40F – Persistences of the centuriation *Tarracina II*.

<p>Terebentum, oppidum. ager eius in praecisuras et [15] strigas est adsignatus post tertiam obsidionem limitibus Iulianis. iter populo non debetur.</p>	<p><i>Terventum</i> (Trivento), fortified town. After the third siege its land was allocated in parcels and <i>per strigas</i> by Iulian <i>limites</i>. No right of way is due to the community.</p>
<p>Trebula, municipium. iter populo non debetur. ager eius limitibus Augusteis in nominibus est adsignatus.</p>	<p><i>Trebula</i> <Balliniensis> (Treglia, hamlet of Pontelatone), <i>municipium</i>. No right of way is due to the community. Its land was allocated by individual names by Augustan <i>limites</i> (fig. 41).</p>

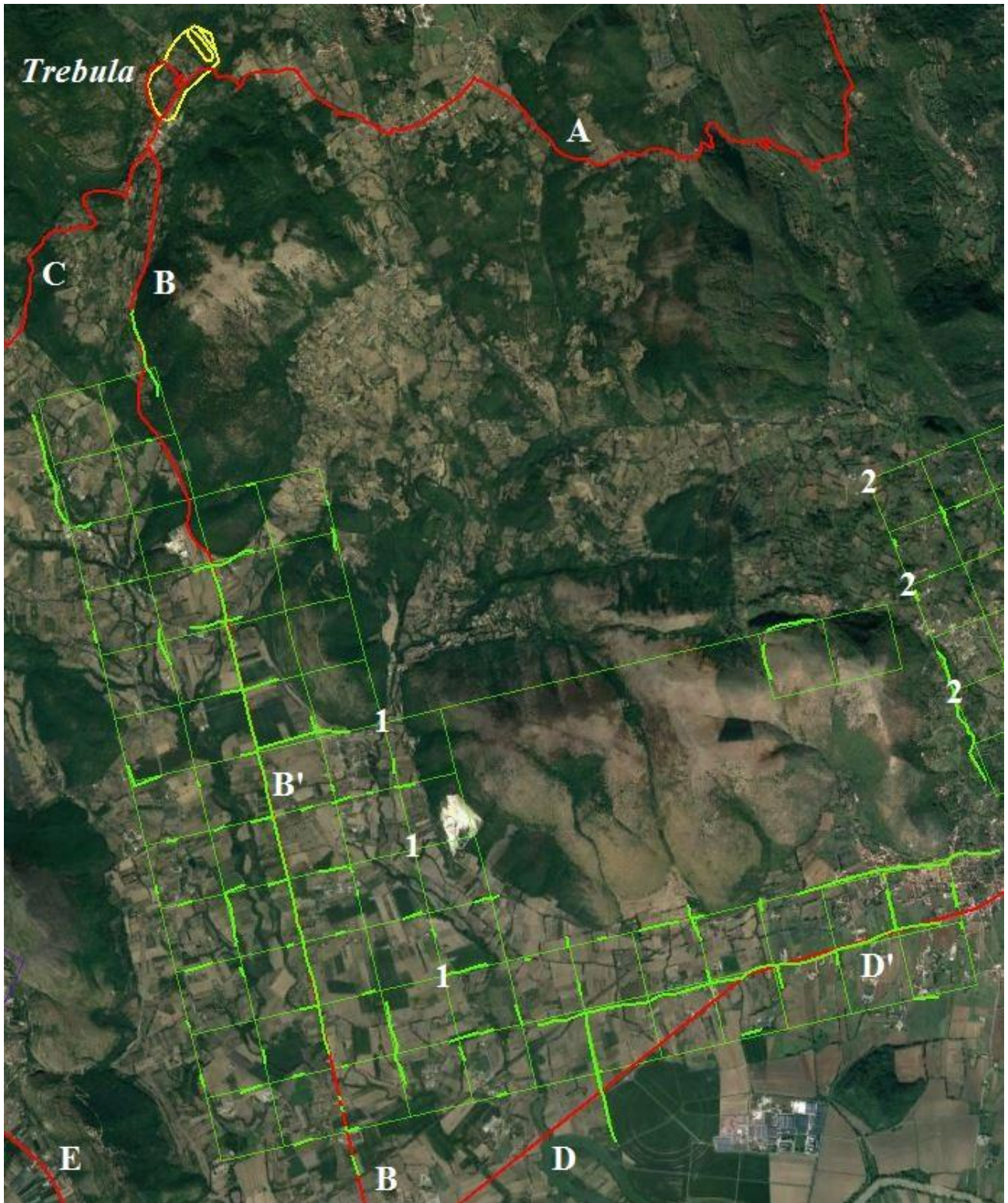


Fig. 41A – The land of *Trebula* was divided by a centuriation (1, *Trebula*, Augustan, 15 x 15 *actus* – 532.2 x 532.2 m -, inclination 12° 00' W). Other indications: 2 = centuriation *Caiatia*; A = *via Trebula-Cubulteria*; B = *via Trebula-Capua*; B' = section of B that coincides with a *limes* of the centuriation *Trebula*; C = *via Trebula-Cales*; D = *via Capua-Caiatia*; D' = section of D that coincides with a *limes* of the centuriation *Trebula*; E = *via Cales-Caiatia*.

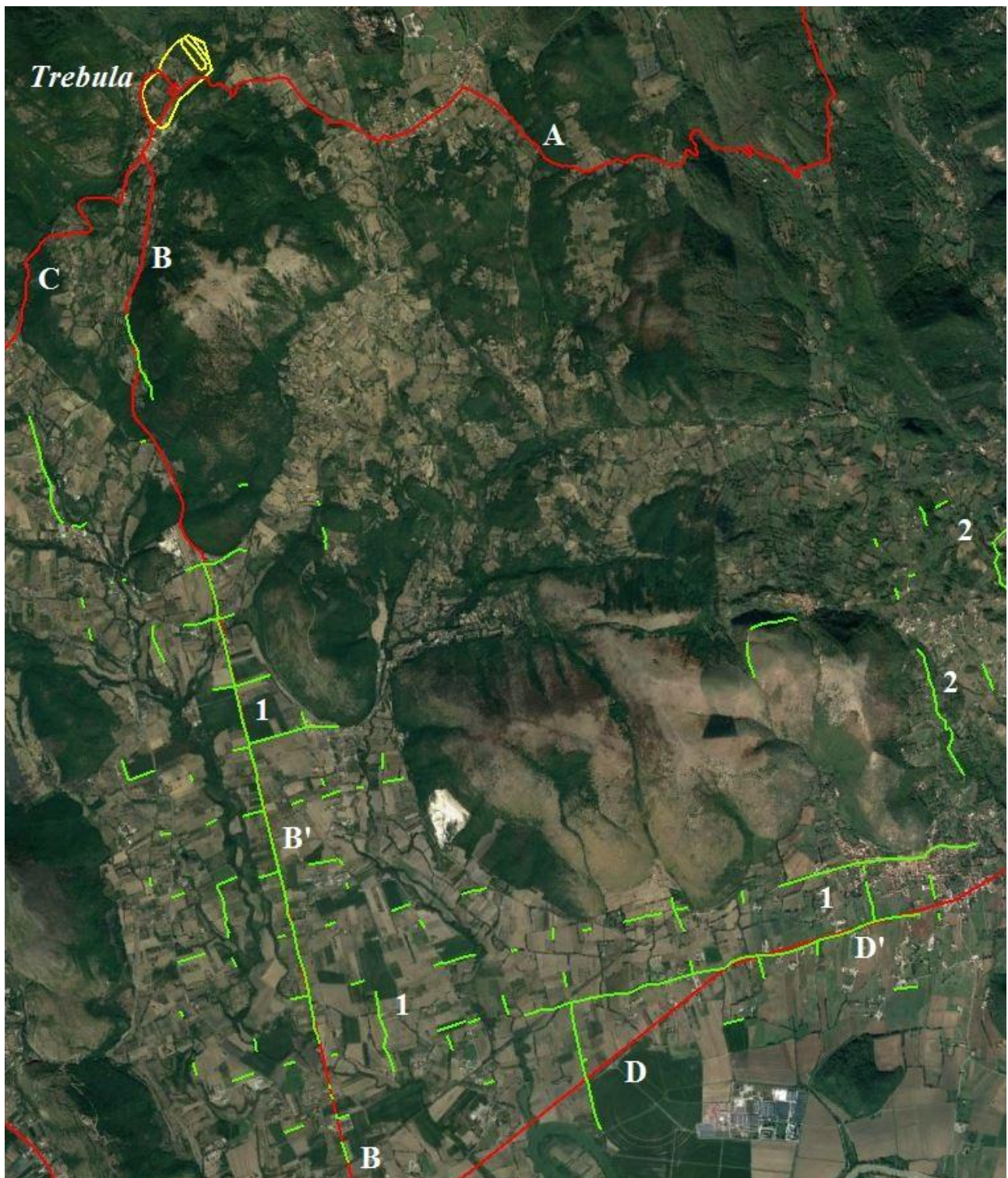


Fig. 41B – Persistences of the centuriation *Trebula*. Same indications of the preceding figure.

Vellitras, oppidum, lege Sempronia fuerat deductum: [20] postea Claudius Caesar agrum eius limitibus Augusteis censitum militibus eum adsignari iussit.

Velitrae (Velletri), fortified town, had been founded under *lex Sempronia*: later *Claudius Caesar* ordered its land, surveyed by Augustan *limites*, to be allocated to soldiers (fig. 42).

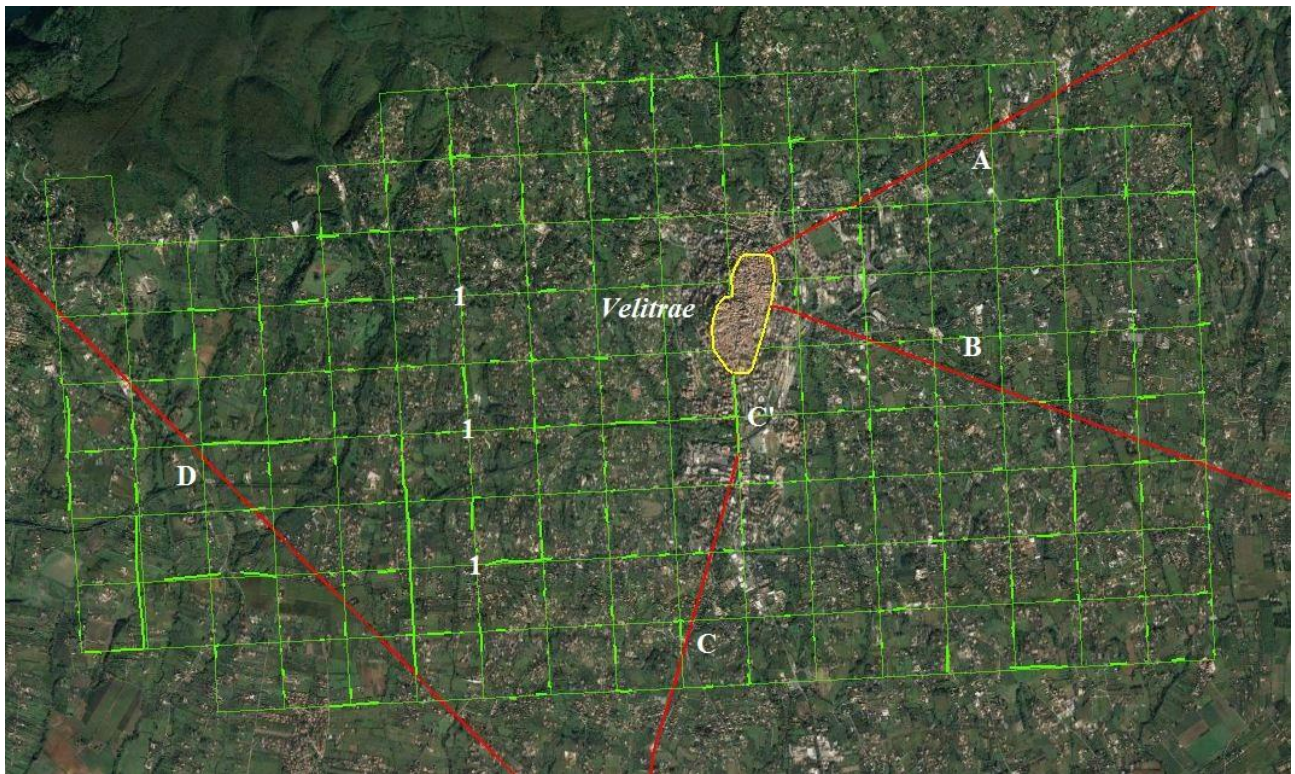


Fig. 42A – The land of *Velitrae* was divided by a centuriation (1, *Velitrae*, Augustan, 15 x 15 *actus* – 532.2 x 532.2 m -, inclination 03° 00' W). Other indications: A = *via Velitrae-Ad Pictas* (on the *via Latina*); B = *via Velitrae-Cora-Norba*; C = *via Velitrae-Ad Sponsas* (on the *via Appia*); C' = section of C that coincides with a *limes* of the centuriation *Velitrae*; D = *via Appia*, stretch between *Aricia* and *Ad Sponsas*.

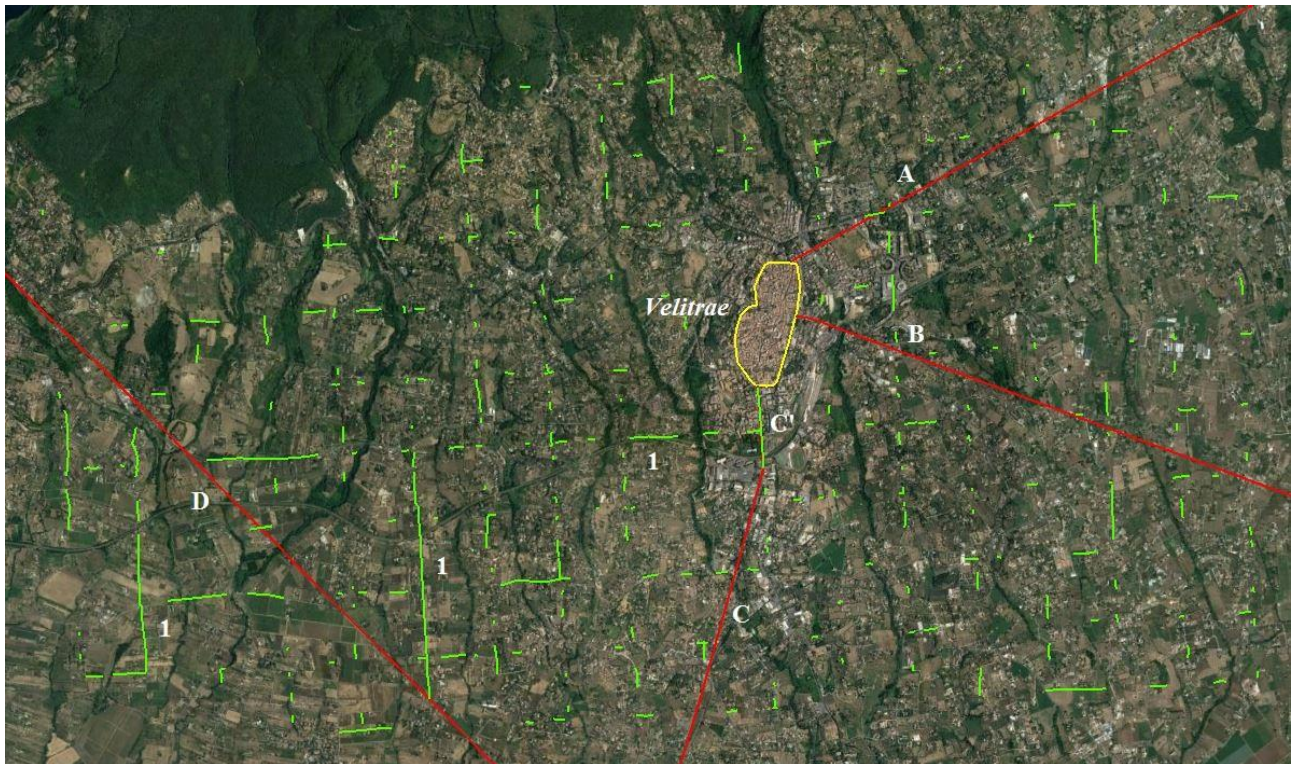


Fig. 42B – Persistences of the centuriation *Velitrae*. Same indications of the preceding figure.

[L. 239.1] Ulubra, oppidum, a triumviris erat deducta: postea a Druso Caesare est inruptum. ager eius in nominibus est adsignatus. iter populo non debetur.

Ulubrae (Cori, about 3.5 km south of the town), fortified town, had been founded by the *triumviri*: later, it was attacked by *Drusus Caesar*. Its land was allocated by individual names. No right of way is due to the community (fig. 43).

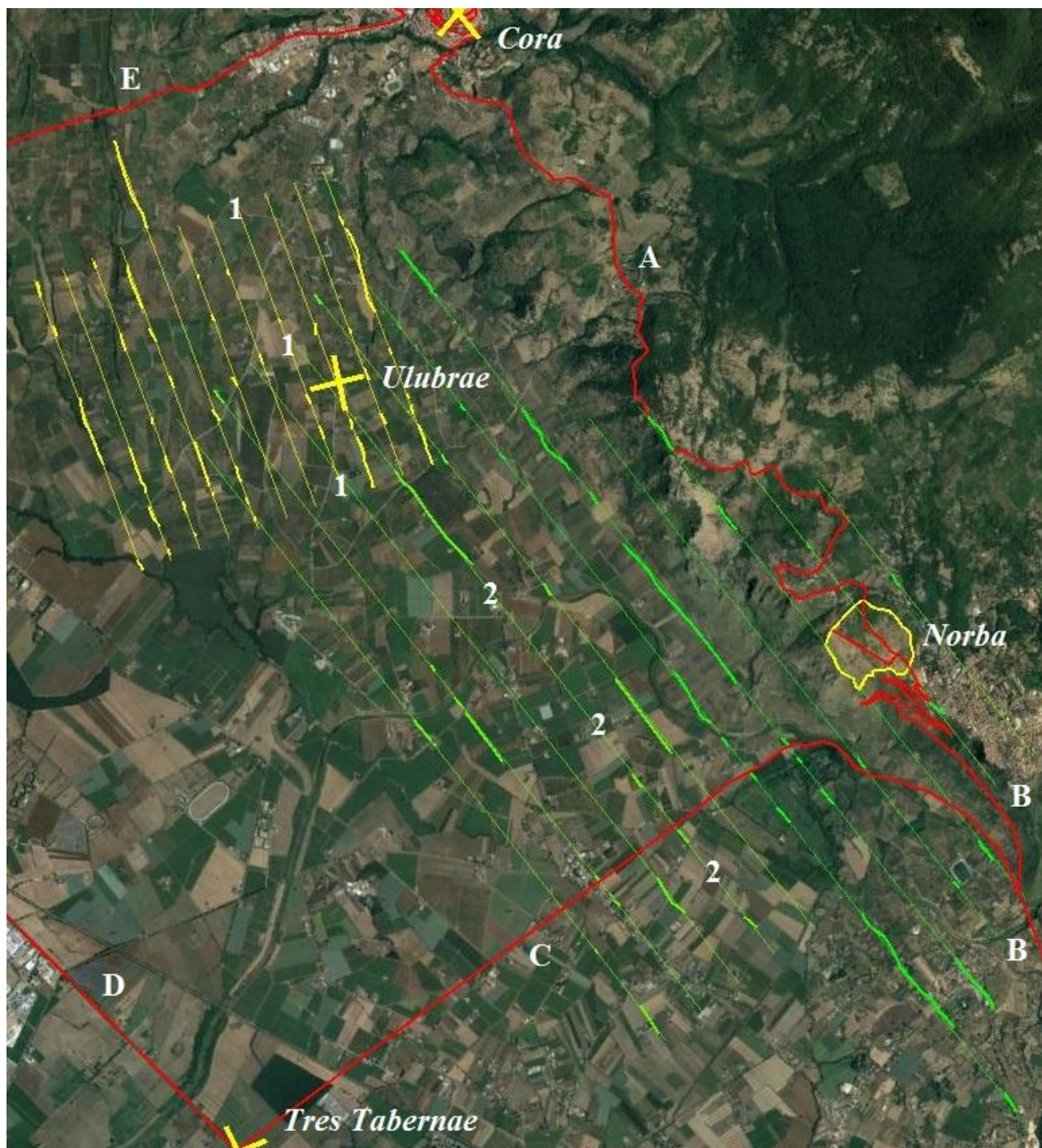


Fig. 43A – The land of *Ulubrae* was divided by a *strigatio* (1, *Ulubrae*, precocious, 8 *actus* – 283.4 m -, inclination 20° 00' W) and was partially divided by another *strigatio* (2, *Norba*, end IV-beginning III century b.C., 12 *actus* – 425.76 m -, inclination 38° 00') related to a quite important *civitas* which was however destroyed during the Civil War between *Gaius Marius* and *Sulla* (88-82 b.C.). Other indications: A = *via Norba-Cora*; B = *via Norba-Setia*; C = branch of B for *Tres Tabernae* (on the *via Appia*); D = *via Appia* (stretch *Pometia-Tres Tabernae*); E = *via Cora-Pometia*.

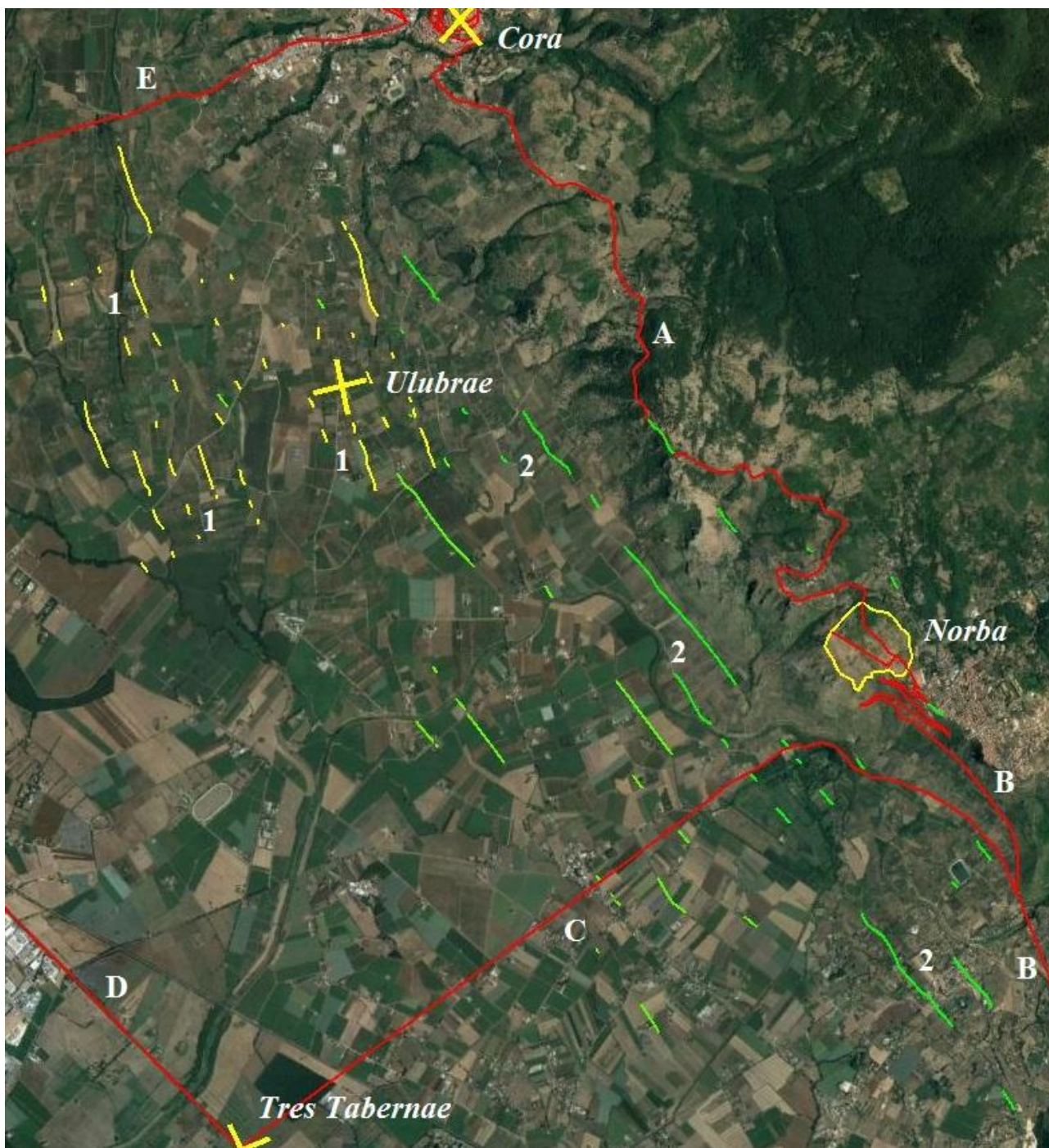


Fig. 43B – Persistences of the two *strigatio* Ulubrae e Norba.
Same indications of the preceding figure.

Volturnum, muro ductum. colonia iussu imp. [5] Caesaris est deducta. iter populo debetur ped. XX. ager eius in nominibus uillarum et possessorum est adsignatus.

Volturnum (Castelvoturno), surrounded with a wall. Colony founded by order by order of the emperor *Caesar*. A right of way of XX feet is due to the community. Its land was allocated according to the names of the *villae* and of their landholders.

Venafrum, oppidum. quinque uiri deduxerunt sine colonis. iter populo debetur ped. XX. ager eius in lacineis limitibus intercisiuus est adsignatus. sed et summa [10] montium iure templi Ideae ab Augusto sunt concessa.

Venafrum (Venafrò), fortified town. A board of five men (*quinqueviri*) founded it without colonists. A right of way of XX feet is due to the community. Its land was allocated in strips by *limites intercisivi* (fig.44). But mountain ridges were also granted by *Augustus* in accordance with a law concerning the temple of *Idea*.

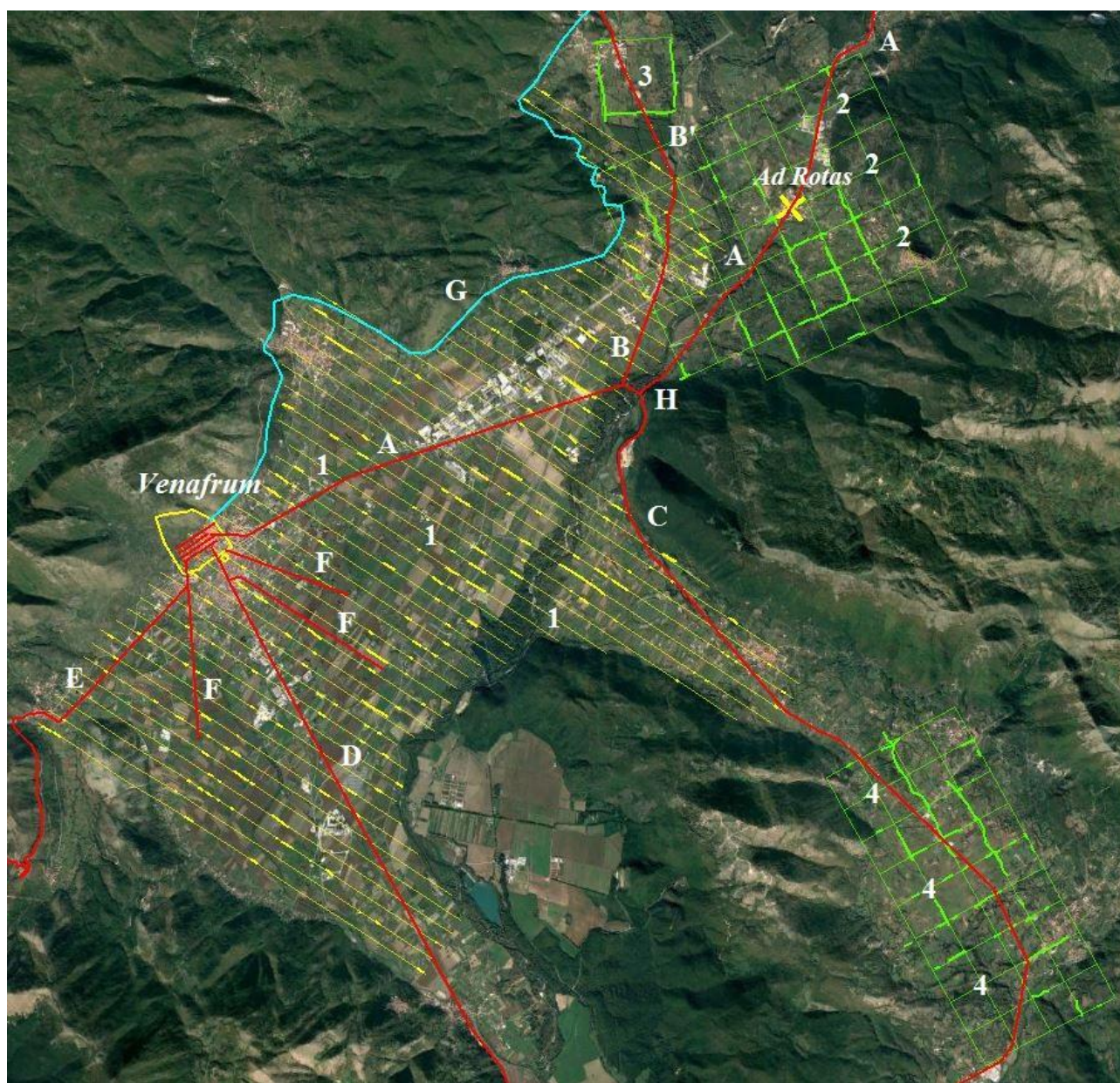


Fig. 44A - The land of *Venafrum* was divided by four *limitationes* (1, *Venafrum I*, *strigatio*, 268 b.C.?, 7 *actus* – 248.36 m -, inclination 34° 00' E; 2, *Venafrum II* – Monteroduni, centuriation, Augustan, 16 x 16 *actus* – 567.68 x 567.68 m -, inclination 23° 45' W; 3, *Venafrum III*-Roccaravindola, possible delimitation of a *fundus*, 32 x 32 *actus* – 1135.36 x 1135.36 m -, a single *centuria*, inclination 03° 00' W; 4, *Venafrum IV*–Prata Sannita, centuriation, Augustan, 16 x 16 *actus* – 567.68 x 567.68 m -, inclination 28° 00' W). Other indications: A = *via Venafrum-Aesernia*; B = branch of A for *Atina*; B' = section of B that coincides with a *limes* of the centuriation *Venafrum II*; C = branch of A for *Allifae*; D = *via Venafrum-Teanum*; E = *via Venafrum-Ad Flexum* (*via Latina*); F = secondary roads from *Venafrum* to its fields; G = aqueduct of *Venafrum*; H = bridge on the river *Volturnum*. Same indications in the following figures too.

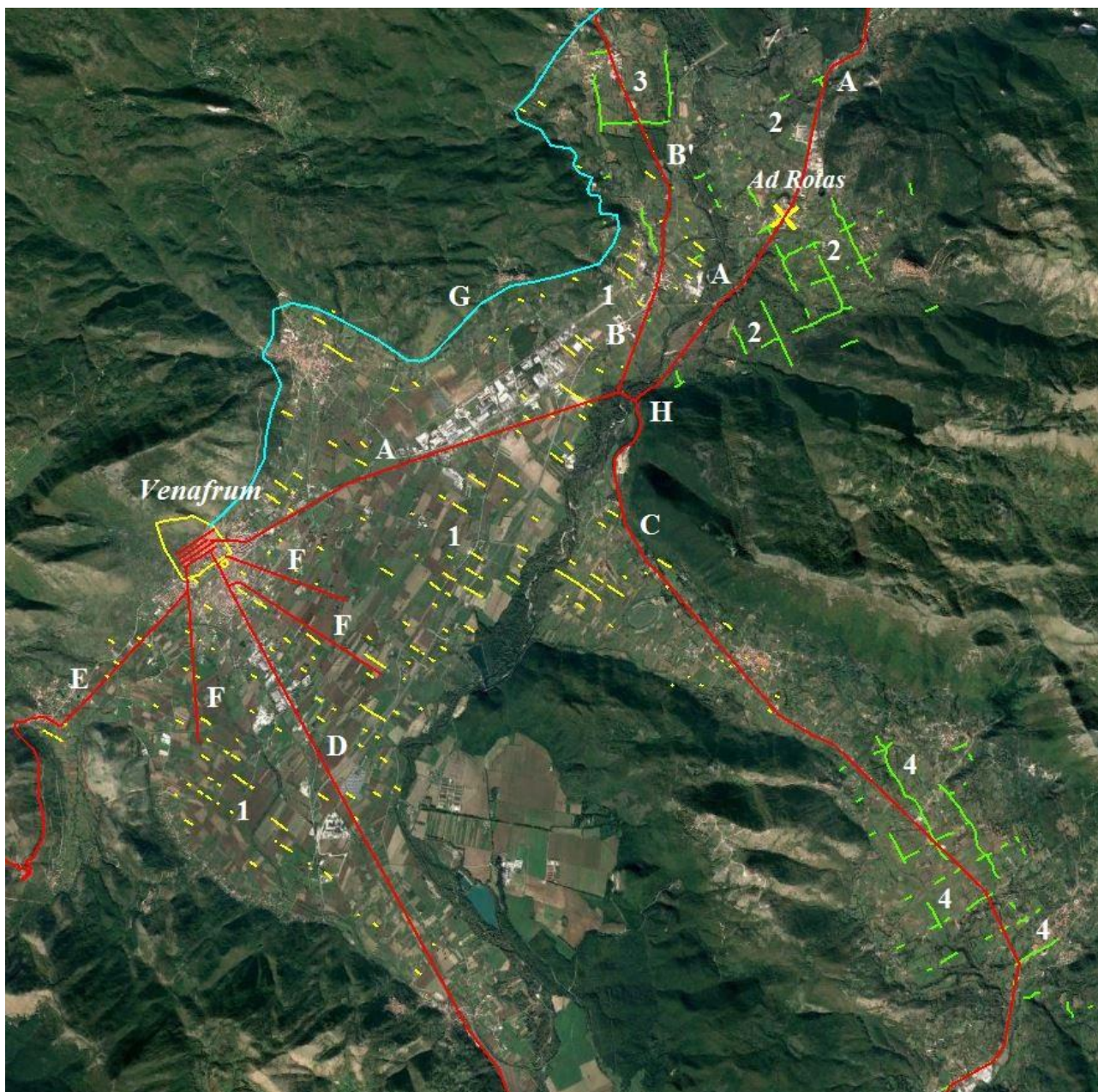


Fig. 44B – Persistences of the four *limitationes* ofi Venafrum.

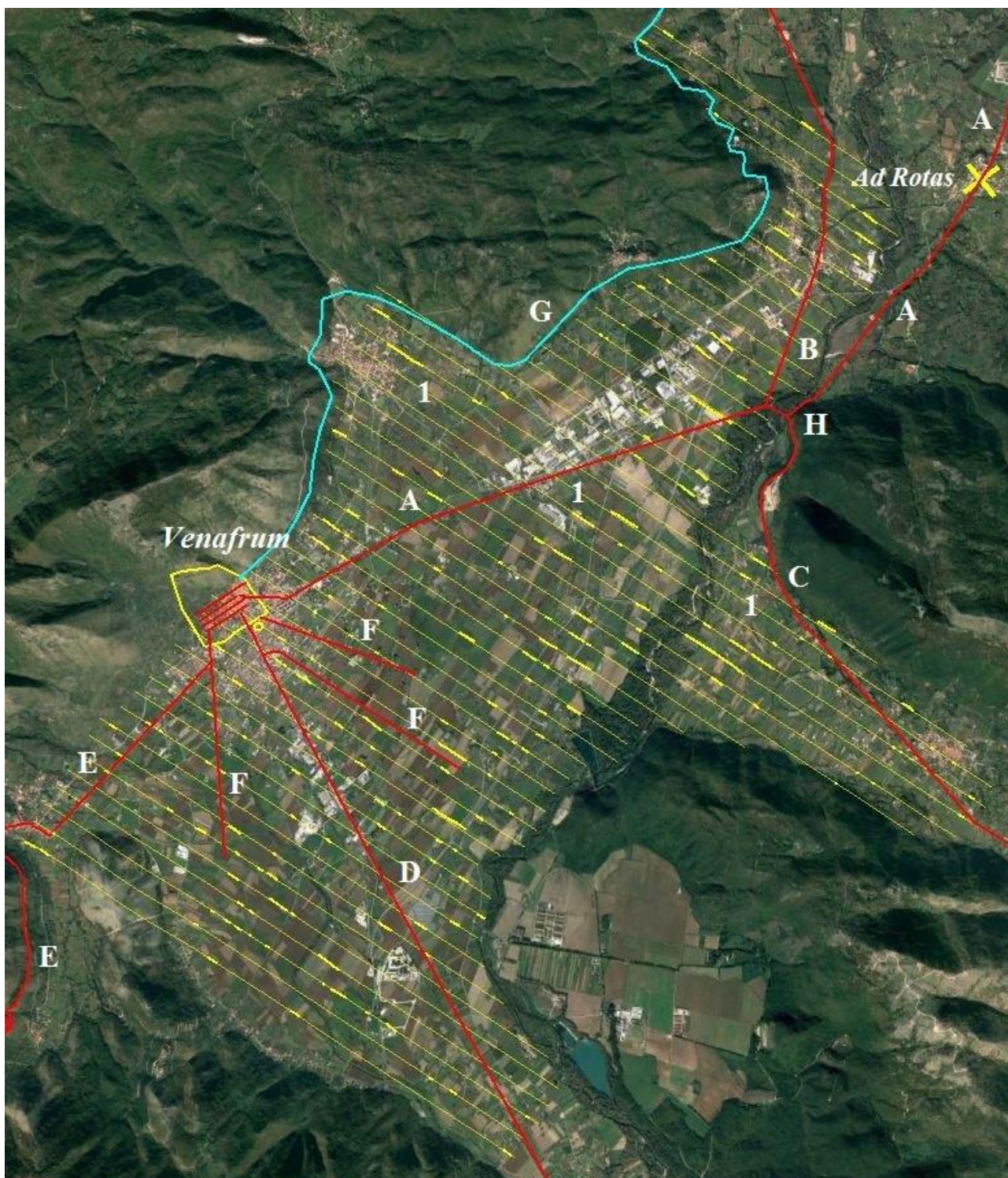


Fig. 44C – The *strigatio* Venafrum I.

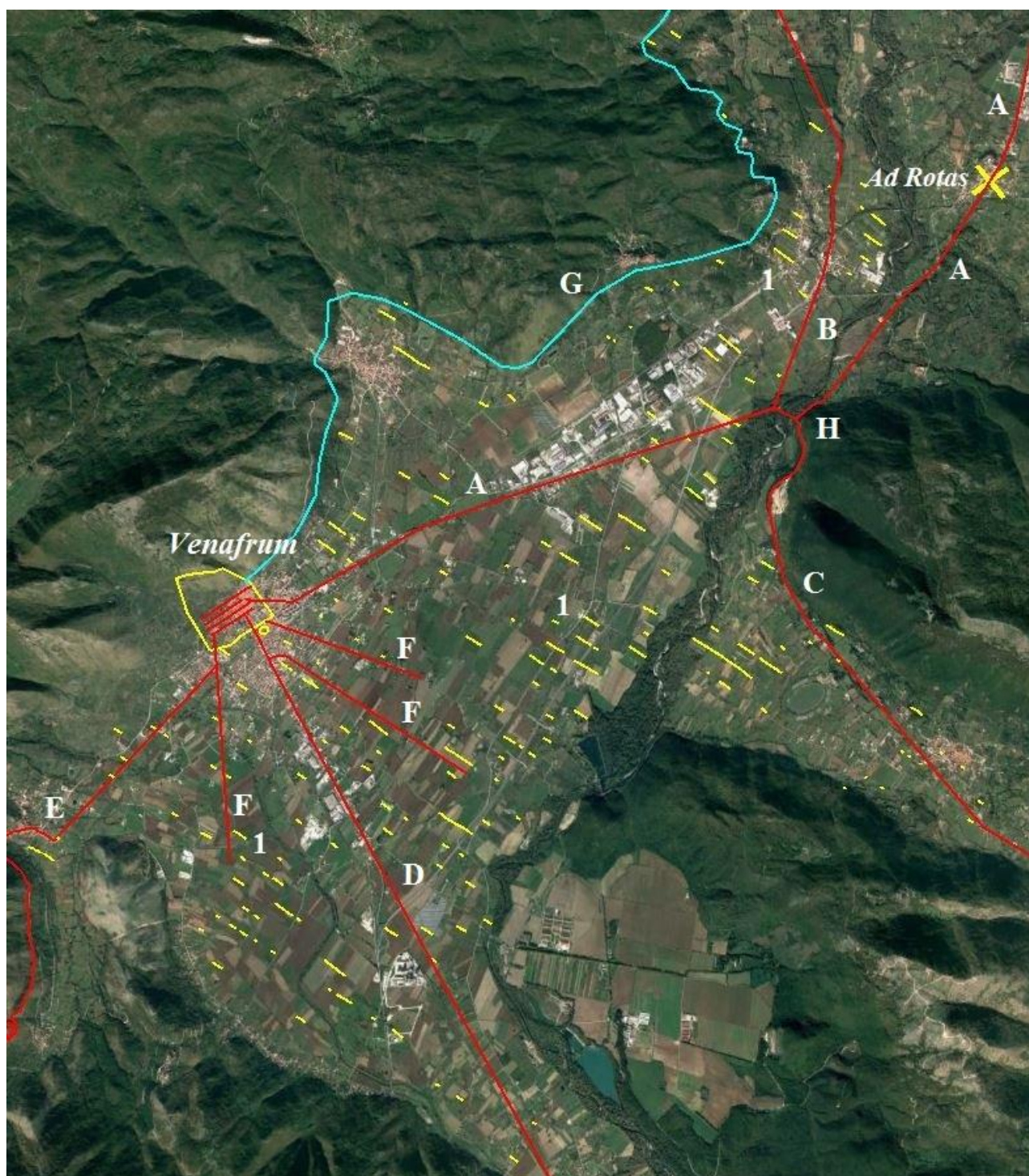


Fig. 44D – Persistences of the *strigatio* Venafrum I.

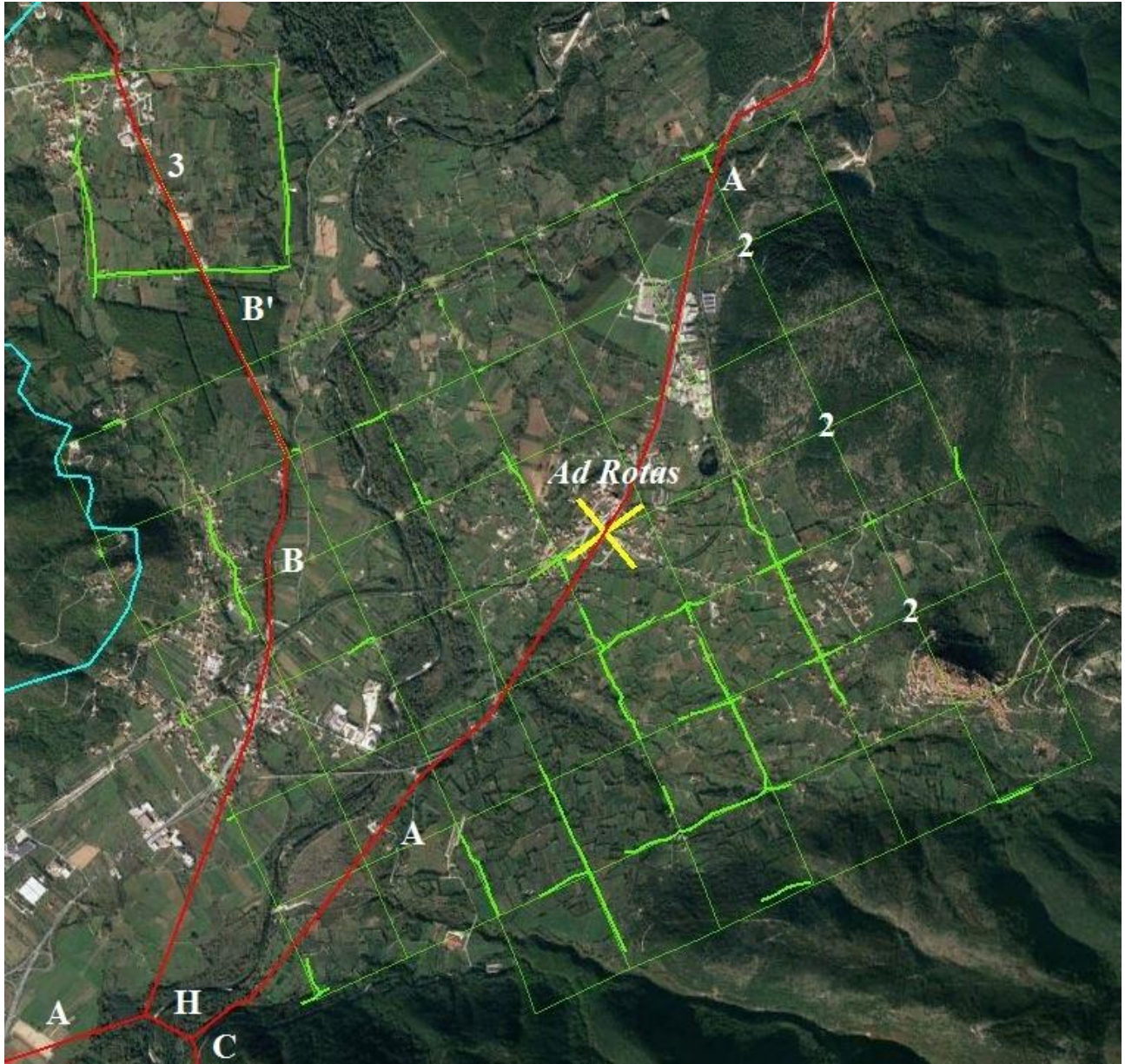


Fig. 44E – The centuriation *Venafrum II*–Monteroduni and the possible *limitatio* of a *fundus* (*Venafrum III*).

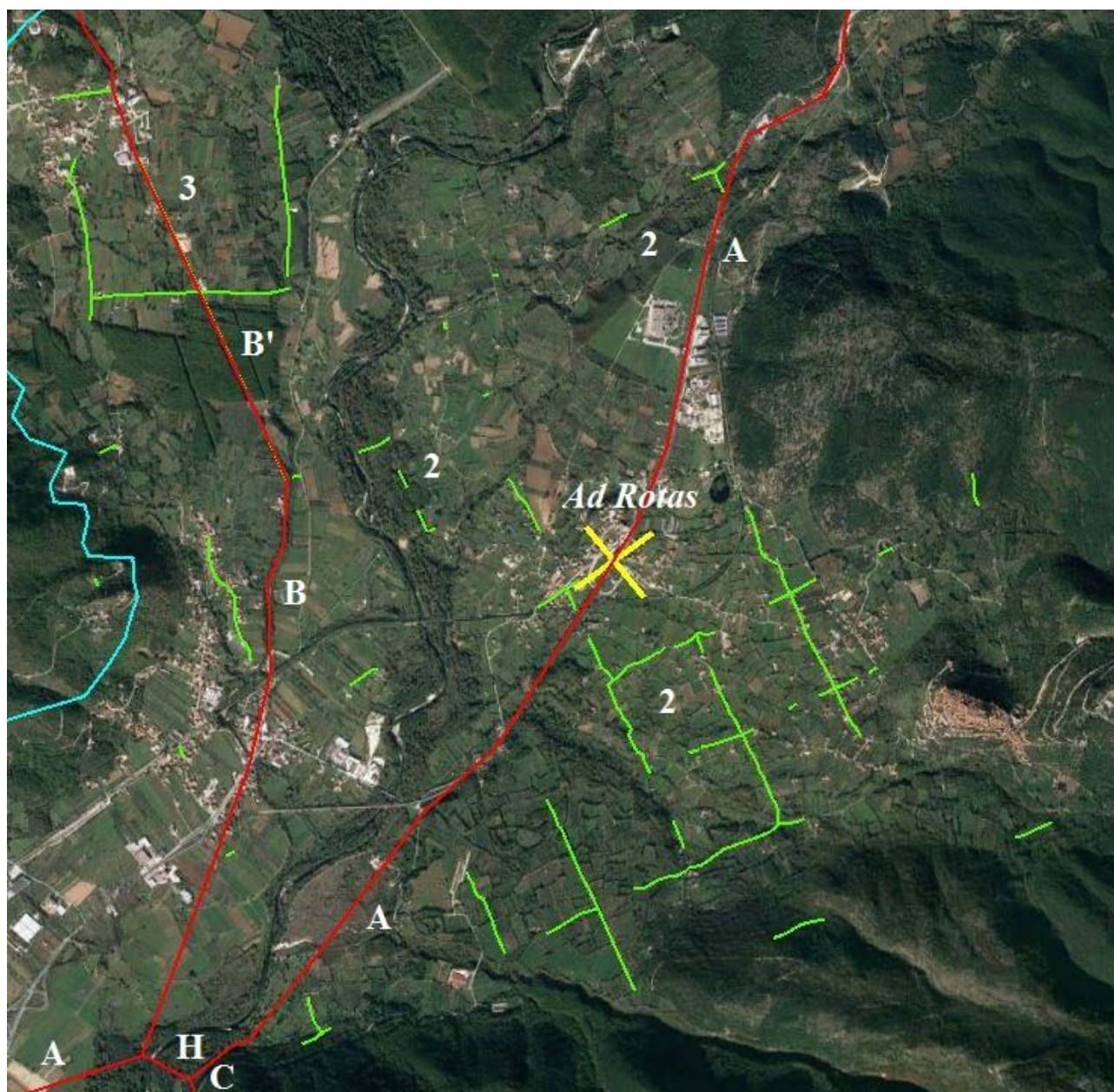


Fig. 44F – Persistences of *Venafrum II* and *III*.

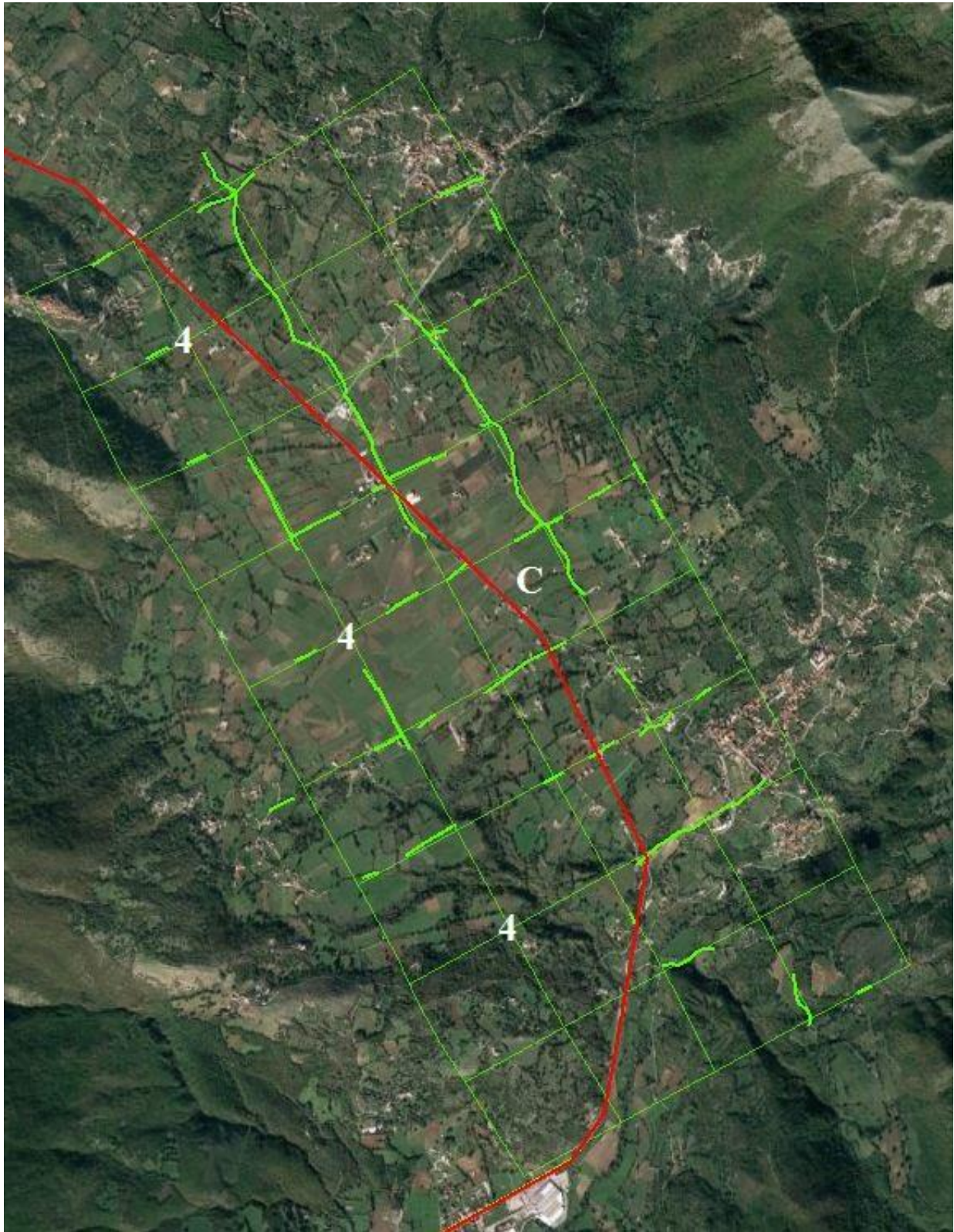


Fig. 44G – The centuriation *Venafrum IV*–Prata Sannita.

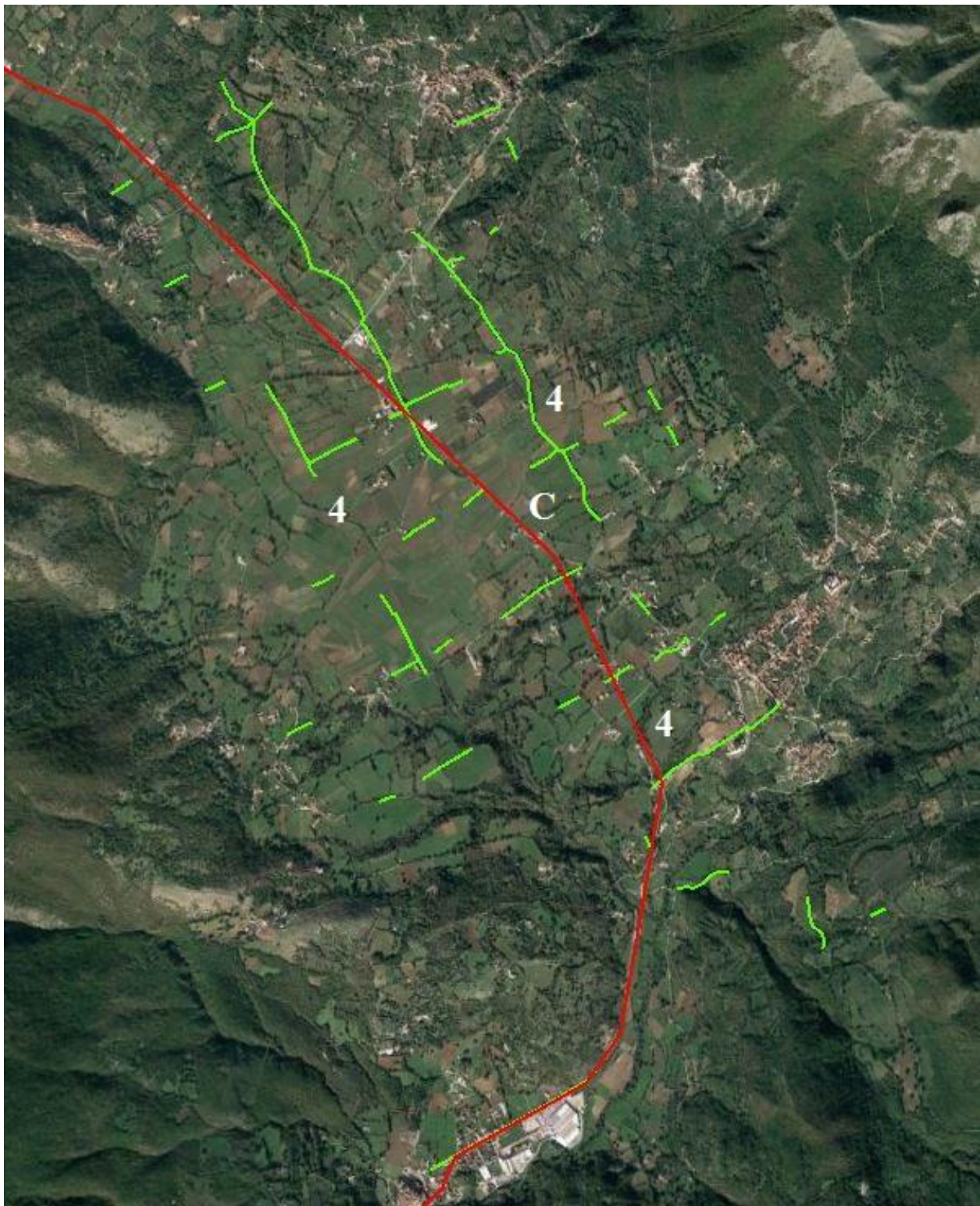


Fig. 44H – Persistences of the centuriation *Venafrum IV*.

Verulae, oppidum muro ductum. ager eius limitibus Gracchanis in nominibus est adsignatus, ab imp. Nerua colonis est redditus.

Verulae (Veroli), fortified town, colony surrounded with a wall. Its land was allocated by individual names with Gracchan *limites* (fig. 12)⁴³. It was returned by the emperor *Nerva* to the colonist.

⁴³ About the territory of *Verulae*, see *Alatrium*.

<p>[L. 239.14]</p> <p>HVIC ADDENDAS MENSVRAS LIMITVM ET TERMINORVM EX [15] LIBRIS AVGVSTI ET NERONIS CAESARVM, SED ET BALBI MENSORIS, QVI TEMPORIBVS AVGVSTI OMNIVM PROVINCIARVM / ET FORMAS CIVITATIVM ET MENSVRAS COMPERTAS IN COMMENTARIIS CONTVLIT ET LEGEM AGRARIAM PER DIVERSITATES PROVINCIARVM DISTINXIT AC DECLARAVIT.</p>	<p>TO THIS SHOULD BE ADDED THE MEASUREMENTS OF <i>LIMITES</i> AND BOUNDARY MARKERS FROM THE BOOKS OF THE <i>CAESARES AUGUSTUS</i> AND <i>NERO</i>, AND ALSO OF <i>BALBUS</i> THE LAND SURVEYOR, WHO, IN THE TIME OF <i>AUGUSTUS</i>, ASSEMBLED FOR ALL THE PROVINCES BOTH MAPS OF COMMUNITIES AND SURVEYS FOUND IN THE ARCHIVES AND DEFINED AND PUBLISHED THE AGRARIAN LAW IN ALL ITS VARIATIONS IN THE PROVINCES.</p>
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<p>[20] Ager Carsolis. iter populo non debetur, usque ad muros priuati possident montes nomine [L. 240.1] Romanos, qui usque ad sura deficiunt. in quibus montibus positi sunt rotundi termini . . . iugis montium, ripis, per deuxa loca, arboribus, diuergiis aquarum, uel uniuerſa positione terminorum, in campis uero terminos [5] quadratos, cursorias spatulas, uel metas assignatur. interiectis locis arcae et monumenta, uel alia testimonia.</p>	<p>The land of <i>Carsioli/Carseoli</i> (Carsoli). No right of way is due to the community. Right up to the walls of the town, private individuals possess the mountains called Roman, which come to an end near fences (?). In these mountains, round boundary stones have been set up. <Boundaries are marked> by mountain ridges, river banks, sloping grounds, trees, watersheds, or by the general placing of boundary markers. Indeed, the fields are defined by square boundary stones, intermediate boundary stones shaped like a spatula (<i>cursorii</i>), or marked rocks. In the intervening areas, <i>arcae</i>, tombs or other markers.</p>
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<p>Camerinum, muro ducta, iter populo non debetur.</p>	<p><i>Camerinum</i> (Camerino), surrounded with a wall. No right of way is due to the community.</p>
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<p>Matilica, oppidum, iter populo debetur ped. LXXX.</p>	<p><i>Matilica</i> (Matèlica), fortified town. A right of way of LXXX feet is due to the community.</p>
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<p>Septempeda, oppidum, iter populo non debetur.</p>	<p><i>Septempeda</i> (San Severino Marche, east of the town), fortified town. No right of way is due to the community.</p>
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<p>[10] Ager Atteiatſ. oppidum, populo iter non debetur. nam agri eorum intercisiuis limitibus sunt assignati et in centuriis. per quorum limitum sunt ped. ∞CCCC ∞DC IICC ICCCC IID. eorum cursus est per rationem arcarum riparum canabularum uel nouercarum. et uariis locis [15] terminos Augusteos.</p>	<p>The land of the people of <i>Attidium</i> (Attiggio, hamlet of Fabriano), fortified town. No right of way is due to the community. Its land was allocated in <i>centuriae</i> with <i>limites intercisiui</i>. The distances between them are MCCCC, MDC, MMCC, MMCCCC, MMD feet. Their path is indicated by <i>arcae</i>, river banks, canals and drainage channels, and in many places by Augustan boundary stones.</p>
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[L. 240.16] PROVINCIA DALMATIARVM	PROVINCE <i>DALMATIA</i> (fig. 45)
<p>In diuersas regiones siue uocabula, uicos uel possessiones, haec sunt testimonia agralia diuidentia. in montibus et per loca arida et confragosa petras signatas [20] inuenimus, summa montium, terminos Augusteos, id est [L. 241.1] rotundos in effigiem columnae, aliquos littera signatos (alii uero non sunt signati), arcas finales, grumos, arbores ante missas, intactas a ferro, congerias, macherias, id est ubi saxa collecta ab utrisque partibus limites dederunt, petras, [5] sacrificales aras. in quibus locis arbores intactae stare uidentur, in his locis ueteres sacrificium faciebant. per certa loca uiae militares finem faciunt, alibi uero deuexa montium, id est per latera montium ripae currentes, finem faciunt. aliquando monumentis sepulchris. terminos [10] cursorios in effigiem tituli constitutos, et in trigonium. per certa loca riui et canabulae et nouercae, scorofiones.</p>	<p>As regards different regions and terminologies, and villages or landholdings, these are the markers for the divisions between the fields. In mountainous areas and in dry and rocky places, we found marked stones, mountain ridges, Augustan boundary stones, that is, round stones like a column, some marked with a letter (others however are unmarked), <i>arcae</i> demarcating boundaries, heap of rocks, trees pre-existing and untouched by the axe, piles of stones, dry-stone walls, that is, where rocks collected by both parties have established the boundary, boulders, and sacrificial altars. In the places where trees are seen to stand untouched, there men of old used to make sacrifices. In certain areas military roads make the boundary, elsewhere mountain slopes, that is, bank running across the sides of mountains, and sometimes sepulchral monuments. <There are> intermediate boundary markers (<i>cursorii</i>) in the shape of a tablet, or in a triangular shape, and in some places rivers, canals, drainage channels, and heaps of stones.</p>
<p>ubi duo fines cuneati se iungunt, si forte, in campestribus locis. ubi agri in planitia sunt, in iugeribus assignata sunt. praetereo uicum Saprinum et Cliniuatium, in terra [15] †uoratos† et Sardiatas, testimoniis diuidi ripis, riuis, arboribus ante missis, ut supra dixi. . . . loca sacrificales, tumor terrae in effigiem limitis constitutus. aliquotiens [L. 242.1] enim petras quadratas inscriptas: non enim omnis titulus inscriptionibus indutus est. nam et ipsi montes sic terminantur. alia loca sunt subseciua, quae in mensuram non uenerunt. si conuenerit inter possessores, possidentur: [5] si non conuenerit, remanent potestati, alia loca sunt praefecturae, quae ad publicum ius pertinent.</p>	<p>Where two boundaries meet at an angle, for example in cultivated areas, <boundary markers are placed>. Where the fields are in a flat area they were allocated in <i>iugera</i>. I pass over the villages of <i>Saprinum</i> and <i>Clinivatium</i> in the land of <i>uoratos</i> (?) and <i>Sardiatae</i>, where boundary markers are banks, rivers, pre-existent trees, as I said above ... sacrificial sites, a raised mound of earth set up in the shape of a <i>limes</i>, sometimes squared stones with an inscription, however not every stone is equipped with an inscription. Indeed the mountains have these boundary markers. Other places are <i>subseciua</i>, that is, not included in the land division. These are possessed if the landholders agree among themselves. If the landholders do not agree they remain under the public control. Other places are <i>praefecturae</i>, that is, under the public jurisdiction.</p>



Fig. 45A – In *Dalmatia*, the land of *Iader* (Zara) was divided by a centuriation (1, *Iader*, ?, 20 x 20 *actus* - 700 x 700 m -, inclination 37° 0' W). Other indications: A = *via Iader-Aenona*; B = *via Iader-Senia*; C = *via Iader-Asseria*; D = *via Iader-Scardona*; E = aqueduct of *Iader*; F = supplementary aqueduct that increases E; G = aqueduct of *Aenona*.



Fig. 45B – Persistences of the centuriation *Iader*. Same indications of the preceding figure.

[L. 252.1] <LIBER COLONIARVM II>	<BOOK II OF THE COLONIES>
CIVITATES PICENI	COMMUNITIES OF THE <i>PICENUM</i>
<i>Adrianus ager limitibus maritimis et Gallicis, quos nos d. et k. appellamus, finitur per rationem arcarum riparum canabularum uel nouercarum, quod tegulis [5] construitur, aliis uero locis muris macheriis scorofionibus congeriis carbunculis, terminibus Augusteis, fluminum cursibus.</i>	<i>The land of Hatria (Atri) <was allocated> by limites facing the sea (maritimi) and Gallic limites, which we call decumani and kardines. It is demarcated by arcae, banks, canals, or drainage channels, which are made by tiles. Indeed, in other places by walls, dry-stone walls, heaps and piles of stones, rough boundary stones (carbuncoli), Augustan boundary stones, and the courses of rivers.</i>
<i>Adteiatis oppidum. ager eius aliquibus locis tribus limitibus est assignatus in centuriis: quorum limitatio [10] pedaturae haec est, a ped. ∞CCCC et supra usque in ped. IID. nam aliorum cursus est per rationem arcarum riparum canabularum uel nouercarum, et uariis locis terminibus Augusteis; sed et aliis finitimis signis.</i>	<i>Attidium (Attiggio, hamlet of Fabriano), fortified town. Its land in same places was allocated in centuriae by means of three limites. The dimensions of its limites are these: from MCCCC feet right up to MMD feet. Their path is marked out by arcae, banks, canals or drainage channels, and in some places by Augustan boundary stones but also by other boundary markers.</i>
<i>Asculanus ager uariis locis limitibus intercisiui est [15] assignatus et terminibus Claudianis in modum arcellae est demetitus, qui si tres fuerint in unum, trifinium faciunt, et palis ligneis, siliceis, sacrificalibus, per quos ratio limitum seruatur. qui distant a se in pedibus ∞CC et infra. ceterum in absoluto remansit, et riuorum [20] tenor et uiarum finitimus obseruatur. maxime in his limitibus carbunculi et scorofiones. mensura uero acta est in separationibus fundorum per Vettium Rufinum cohortis VI p <r.> p. iugera IIIICL.⁴⁴ accepit et XII agros in montibus Romani acceperunt familiariter, qui montes [25] Romani appellantur, per Manilium Nepotem militem cohortis III pro consule et Coenio Seuero et Stola consulibus.</i>	<i>The land of Asculum (Ascoli) was allocated in many places by limites intercisiui and marked out by Claudian boundary stones shaped like a small chest (arcella), which, if three occur together, mark the boundary of three properties (trifinium), sacrificial wooden stakes or stones, by which the layout of the limites is marked. They are MCC feet, or fewer, distant from each other. The rest of the land remained unsurveyed, and the course of the rivers and of the roads is observed as boundary. For the most part, on these limites there are rough boundary stones and piles of stones. Indeed the survey for the division of the fields was carried out by Vettius Rufinus of the VI praetorian cohort. The community received four thousand CL iugera and the Romans received friendly XII fields in the mountains that are called Romani, by means of the work of Manilius Nepos a soldier of the III cohort, in the consulship of Hoenius Severus and Stloga⁴⁵.</i>
[L. 253.1] <i>Ausimatis ager limitibus Graccanis per centurias est assignatus.</i>	<i>The land of Auximum (Osimo) was allocated in centuriae with Gracchan limites.</i>
<i>Anconitanus ager ea lege continetur qua et ager Ausimatis, limitibus Graccanis in iugeribus.</i>	<i>The land of Ancona (Ancona) is covered by the same law of that of Auximum (Osimo), in iugera with Gracchan limites.</i>
[5] <i>Albensis ager locis uariis limitibus intercisiui est assignatus, terminis uero</i>	<i>The land of Alba Fucens (Albe) in various places was allocated by limites intercisiui, and also by</i>

⁴⁴ In L. 244.10, MMMCLV iugera are reported.

⁴⁵ V. L. 244.12.

Tiburtinis, qui Cilicii nuncupantur et in limitibus constituti sunt. aliis uero locis sacra sepulchraue uel rigores. quorum ratio distat a se in pedes ∞CCL et infra. et quam maxime limitibus est assignatus, [10] *terminatio autem eius facta est VI id. octb. per Cilicium Saturninum centurionem cohortis VII et uicies mensoribus interuenientibus.* et termini a Cilicio Cilicii nuncupantur. *haec determinatio facta est Orfito seniore et Quinto Scitio Prisco consulibus.*

Tiburtine boundary stones, which are called *cilicii* and were set up on the *limites* (fig. 46). Indeed, in other places, sacred things, tombs and straight lines <were used as markers>. The distance between two *limites* is MCCL feet or fewer. As much of the land as possible was allocated by *limites*. *Its limitatio was made on the VI day of the Ides of October by Cilicius (Cecilius) Saturninus, centurion of the VII cohort and by the collaboration of twenty surveyors.* And the boundary stones are called *cilicii* after *Cilicius*. *This limitatio was completed in the consulship of Scipio Orfitus and Quintus Nonius Priscus*⁴⁶.

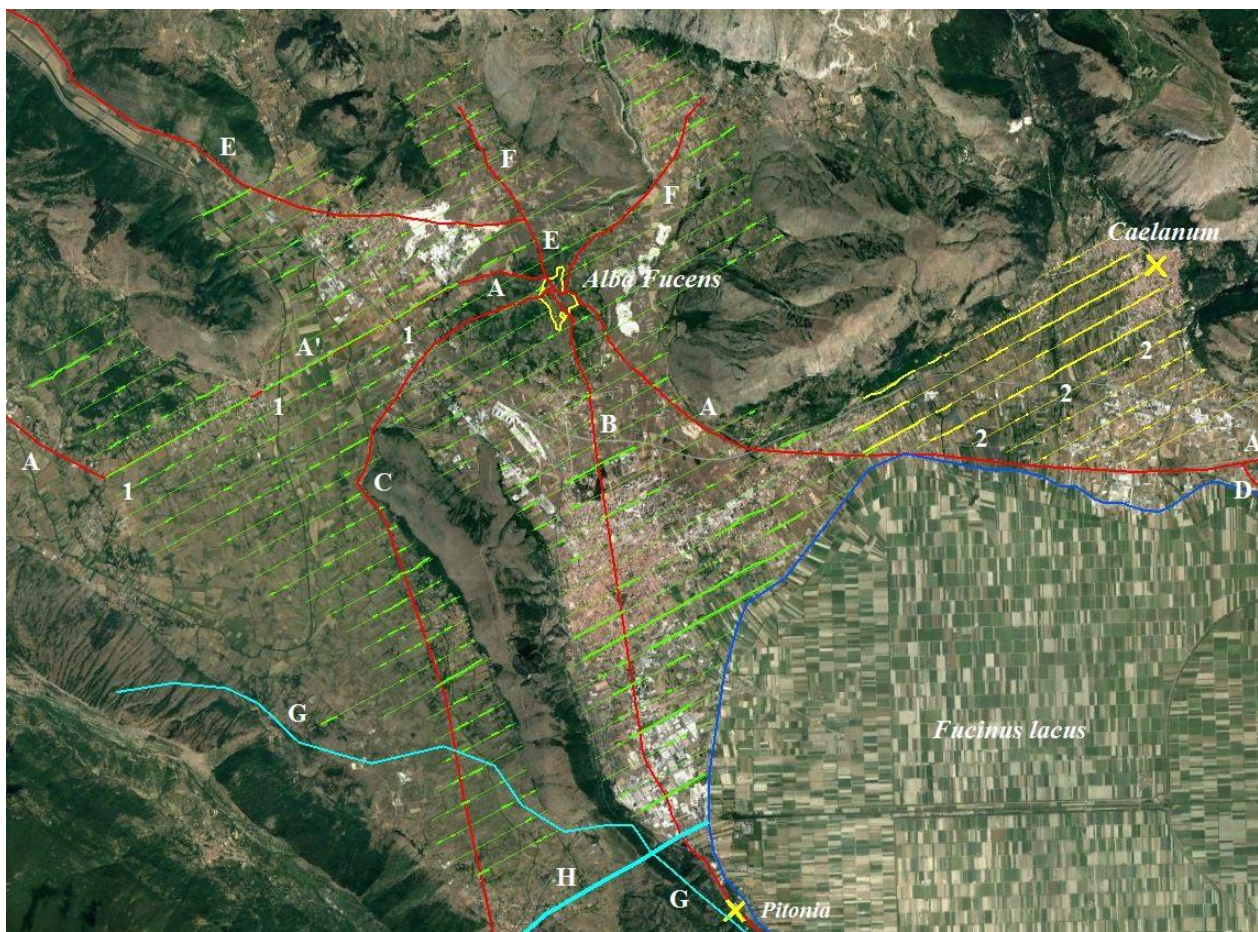


Fig. 46A – The area around Alba Fucens was described by Chouquer *et al.* as divided by a single *strigatio* (1, Alba Fucens, 303 b.C. perhaps done again under Antoninus Pius, 12 *actus* – 425.76 m -, inclination 28° 00' W). A closer examination allows us to observe that in the eastern zone the limits appear all offset in an orthogonal direction by 2 *actus* (71 m). This makes one think of a distinct *strigatio* and therefore belonging to another *civitas*, Caelanum, reported twice but in an altered way in the *Liber Colanarium* (2, Caelanum, ?, 12 *actus* – 425.76 m -, inclination 28° 00' W). The subject is discussed in detail in an article [Libertini 2017]. Other indications: A = via Valeria (Roma–Tibur–Carsoli–Alba Fucens–Corfinium–Aternum); A' = section of A that coincides with a *limes* of the *strigatio*; B = via Alba Fucens - Pittonia – Angitiaie Lucus – Supinum; C = via Alba Fucens–Antinum–Sora; D = branch of A for Marruvium; E = via Alba Fucens–Aequicoli; F = local roads from Alba Fucens to its territories in the north; G = aqueduct of Angitiaie Lucus; H = effluent of the emperor Claudio for the Fucinus lacus. Same indications in the next figures too.

⁴⁶ See L. 244.13-16.

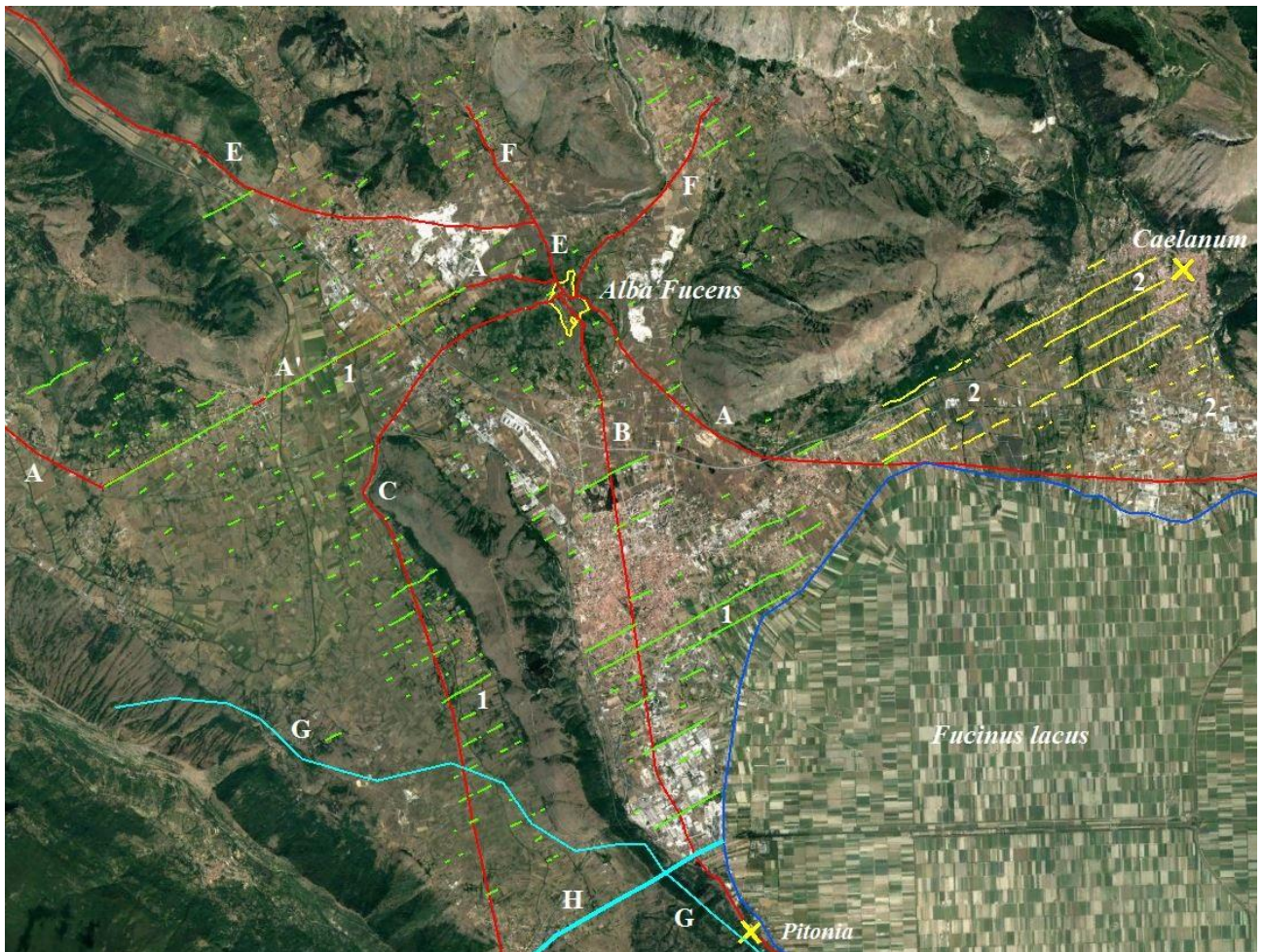


Fig. 46B – Persistences of the two *strigationes* Alba Fucens and Caelanum.

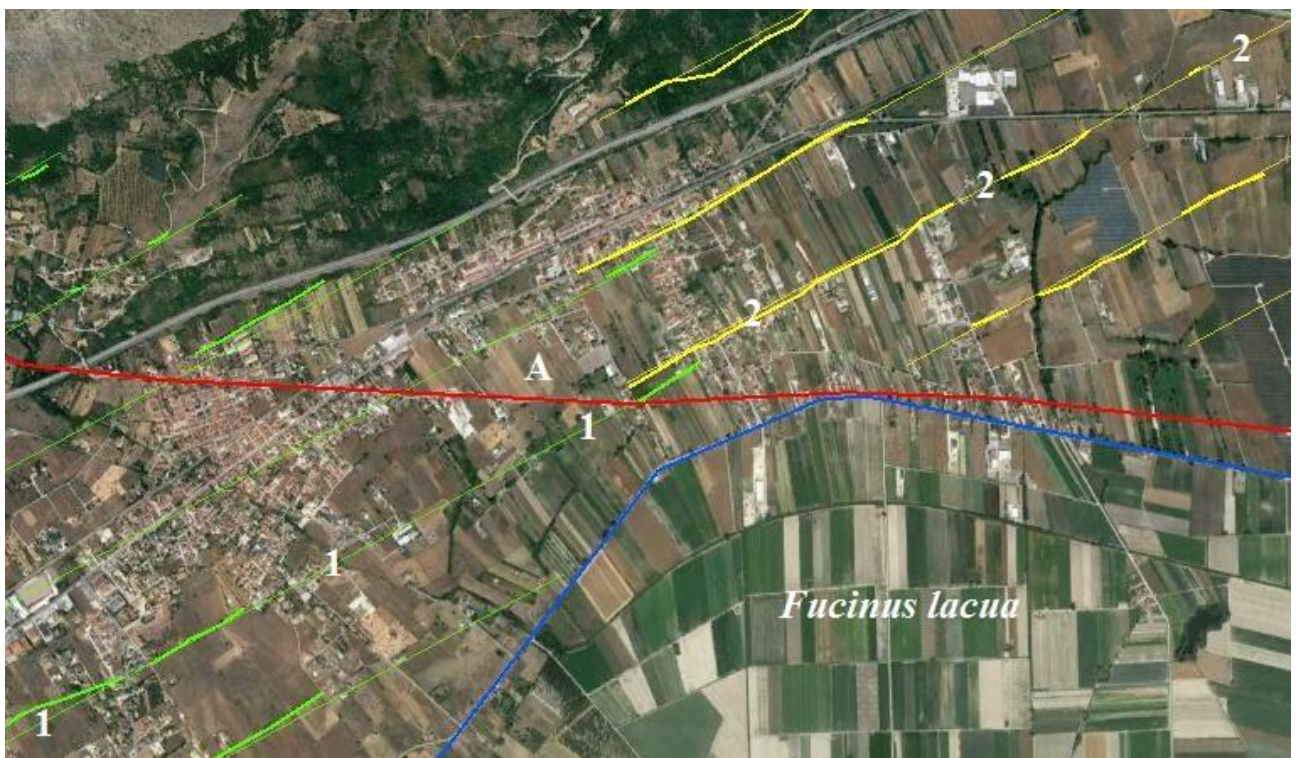


Fig. 46C – The border area between the two *strigationes*. It is worth noting the displacement of the two groups of limits which is exactly equal to two *actus* (71 m) in an orthogonal direction to the limits.

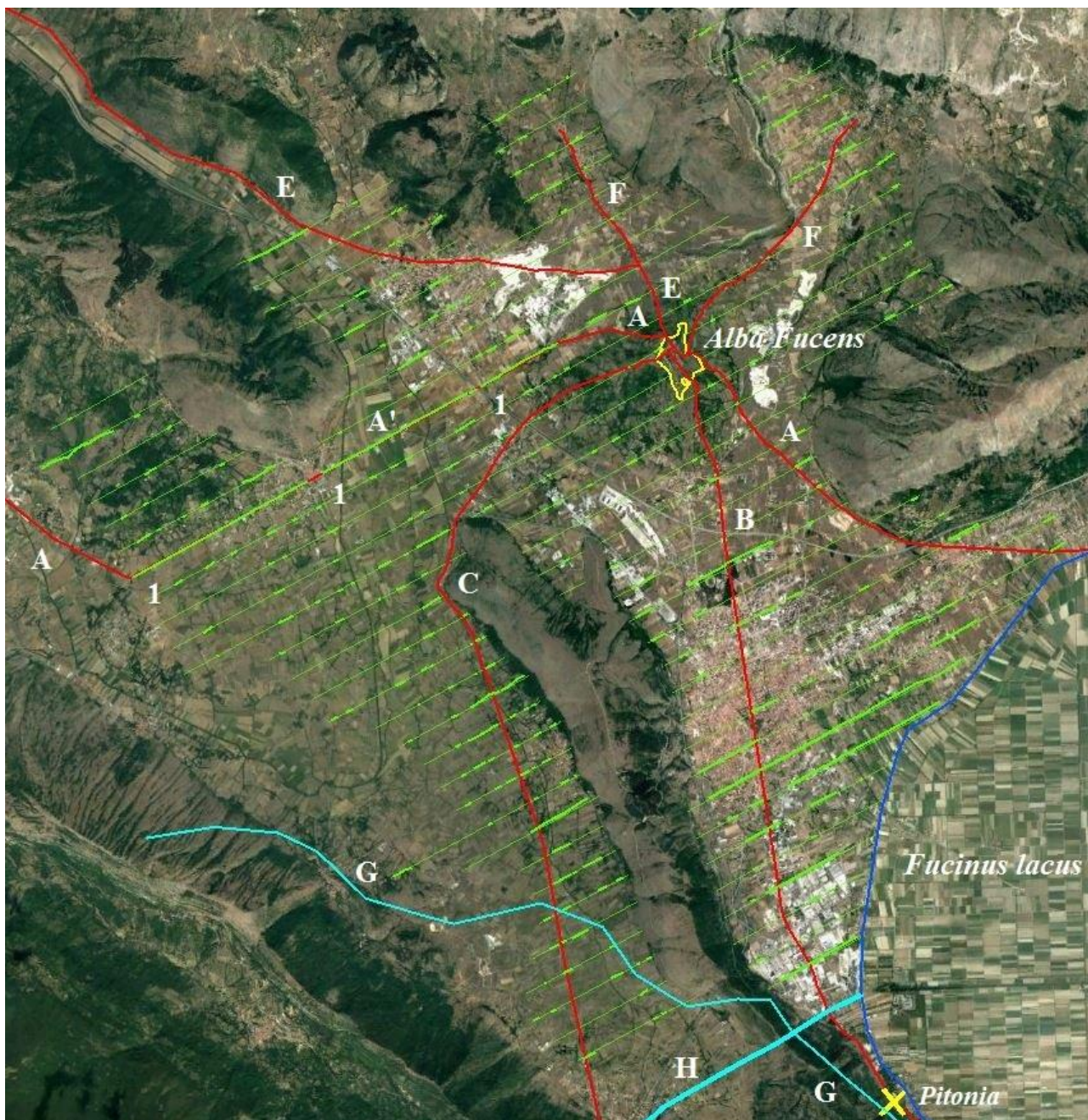


Fig. 46D – The strigatio Alba Fucens.

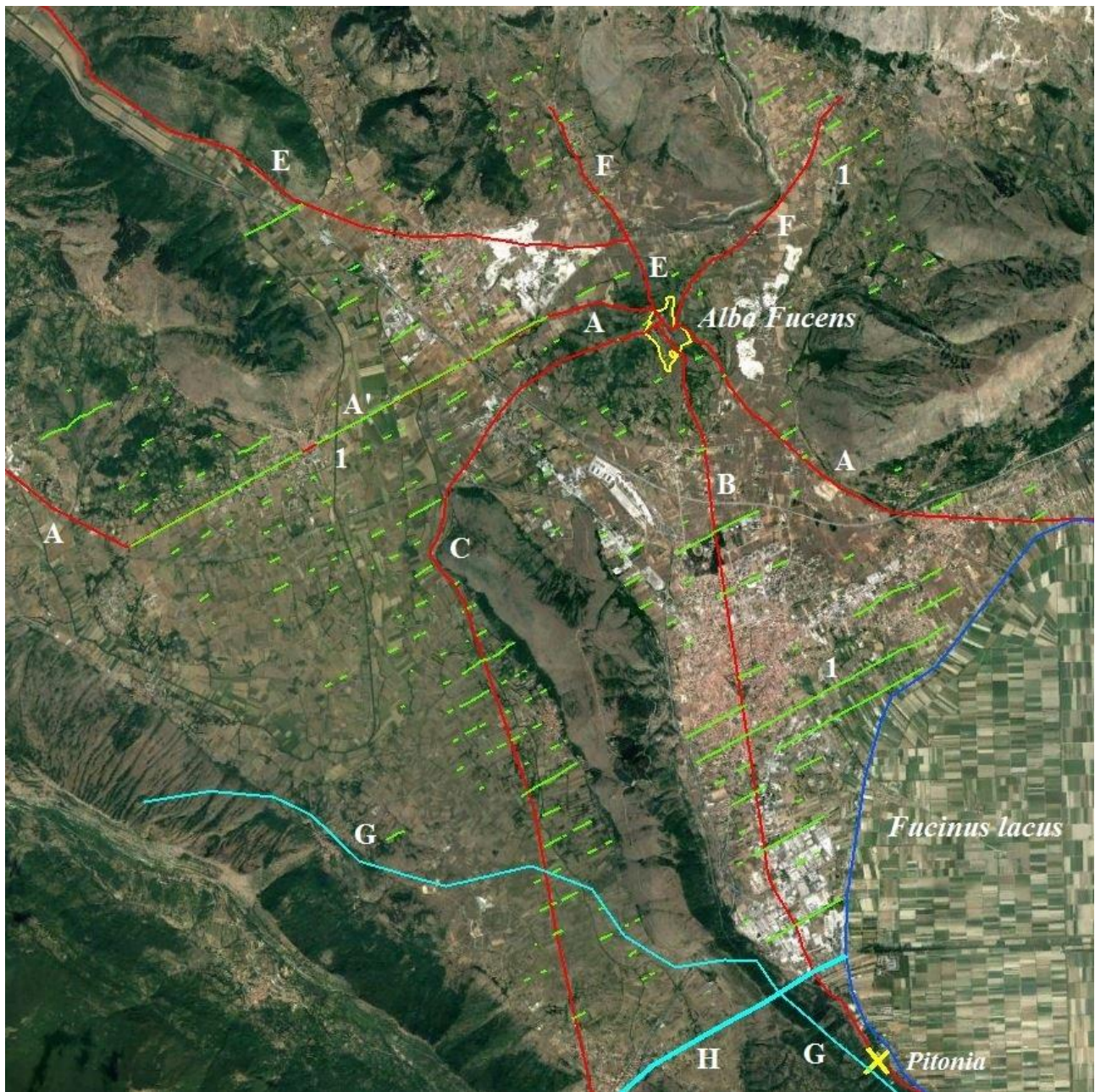


Fig. 46E – Persistences of the *strigatio Alba Fucens*.

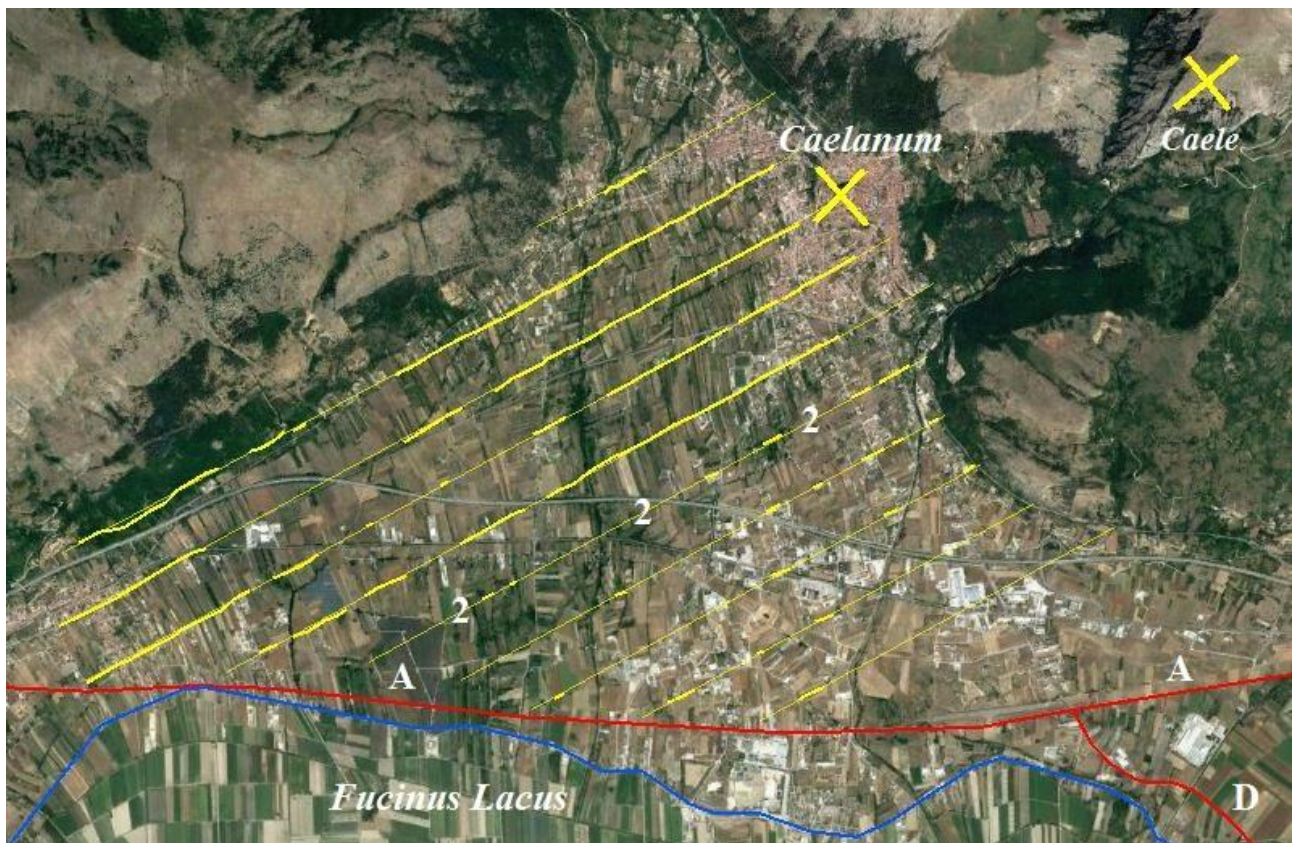


Fig. 46F – The *strigatio* Caelanum.

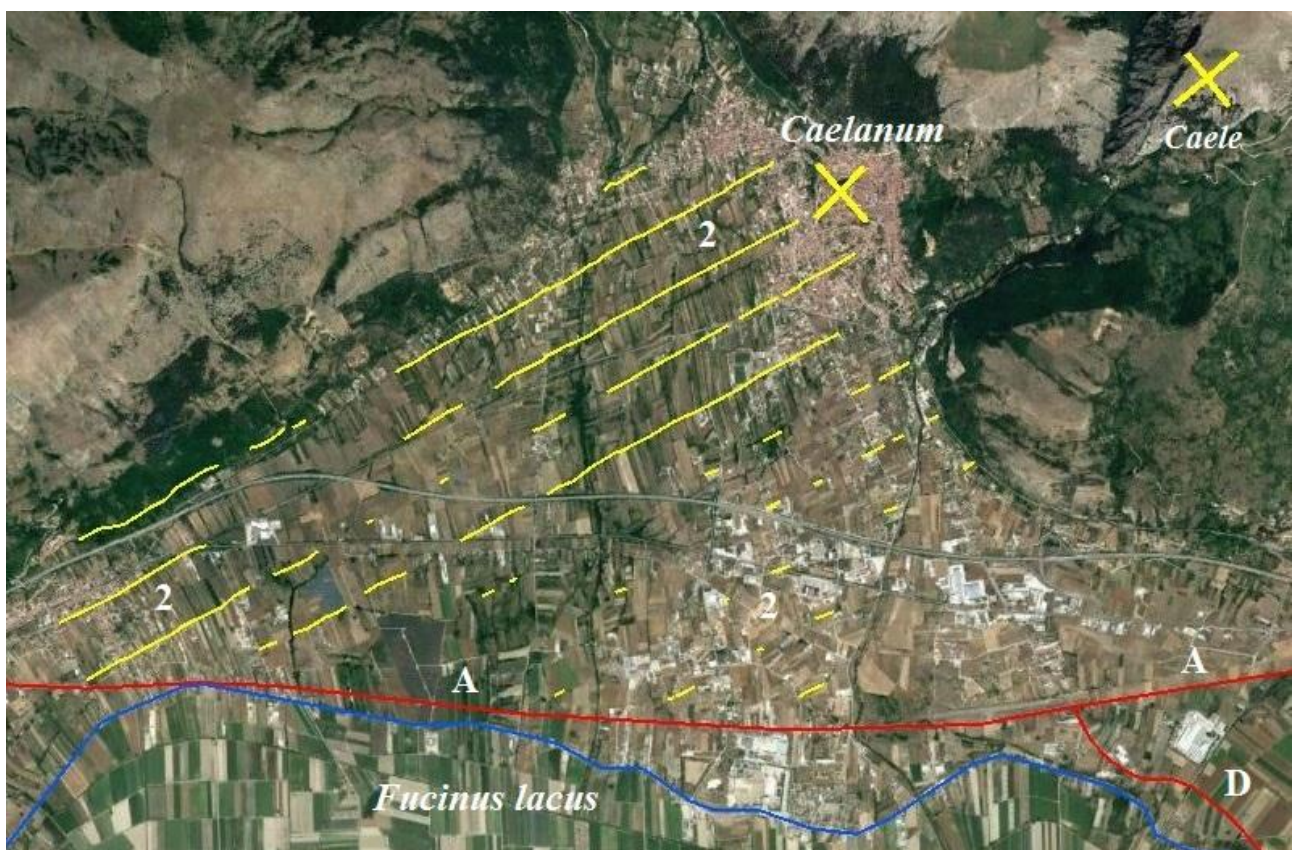


Fig. 46G – Persistences of the *strigatio* Caelanum.

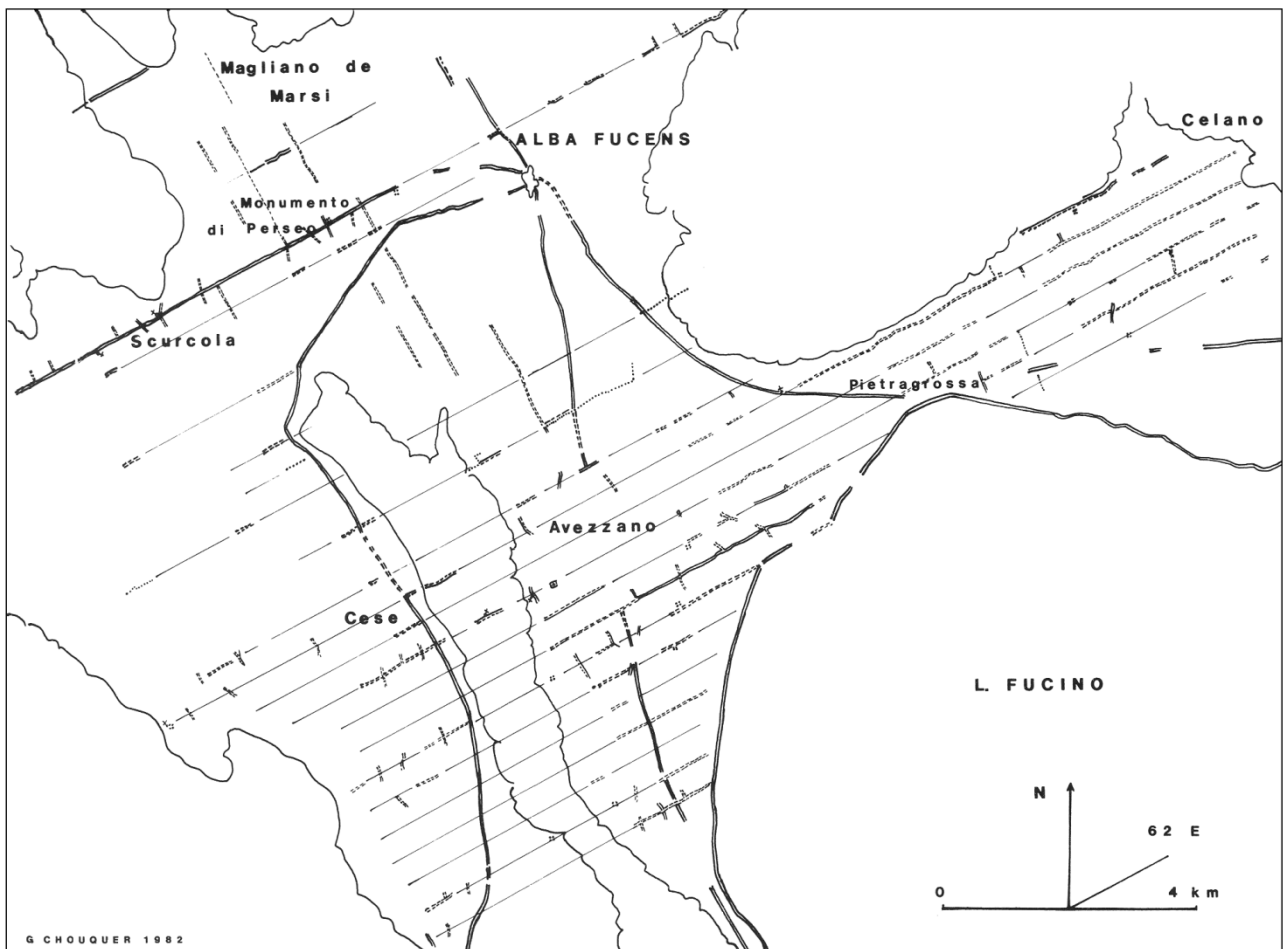


Fig. 46H – The *strigatio Alba Fucens* in the interpretation of Chouquer *et al.* (fig. 27). Apart from other differences, it should be noted that the area of Celano shows no difference towards the rest of the *strigatio*.

<p>[15] <i>Aternensis ager lege Augustea est assignatus. riuorum et uiarum cursus seruatur.</i></p>	<p>The land of Aternum (Pescara) was allocated under lex Augustea. The course of rivers and roads is observed as boundary.</p>
<p>Curium Sabinorum ager eius per quaestores est uenundatus, et quibusdam laterculis quinquagena iugera inclusus est, postea uero iussu Iuli Caesaris per centurias [20] et limites est demetitus. termini uero Tiburtini affixi sunt, sed et lapides enchorii et signati sunt. uariis autem locis muros macherias sepulchra monumenta, riuorum uel fluminum cursus, arbores ante missae uel peregrinae et putea finem faciunt; sed et alia signa quae in [25] libris auctorum leguntur. quod si signa haec non inueniantur, arbores oliuarum si sibi in transuerso occurrerint, [L. 254.1] pro rigore seruandum est. qui rigor pinnalis dicitur. si certe ordines sibi conuenerint et hic rigor iungatur cum pinnale, hebes appellatur. sic enim colliges fines inter possessiones.</p>	<p>The land of <i>Cures Sabini</i> (Fara in Sabina, 5 km south-west of the town) was sold by the quaestors and was enclosed in squares of fifty <i>iugera</i>. Indeed, later, by order of <i>Iulius Caesar</i> was divided into <i>centuriae</i> by <i>limites</i>. Boundary markers of Tiburtine stone were put in place, but marked local stones were also used. In various places, walls, dry-stone walls, sepulchral monuments, courses of streams or rivers, pre-existing trees, non-native trees, and wells mark the boundary. Moreover, <there are> also other boundary markers that we read about in the works of writers <on land surveying>. But if markers of this kind are not found, line of olive-trees can be taken to indicate a boundary, if they meet each other at an angle. Such a boundary is called ‘acute’ (<i>pinnalis</i>). If rows of trees tally exactly with one another, and this straight line is joined with the <i>pinnalis</i>, it is called ‘obtuse’ (<i>hebes</i>). In this way you may establish the</p>

	boundaries between landholdings.
[5] <i>Campi Tiberiani</i> , qui inter Romam et Tibur esse uidentur, a Tiberio Caesare sunt demetiti in iugeribus XXV, et termini Tiberiani nuncupantur. qui distant a se in ped. D et supra usque in ped. ∞CC. ceterum uero limitibus normalibus recturas concurrunt.	<i>The Campi Tiberiani</i> , which are between <i>Roma</i> and <i>Tibur</i> (Tivoli), were allocated by Tiberius Caesar in <lots of> XXV iugera, and the boundary stones are called <i>tiberiani</i> . The distances between them is D feet and more, right up to MCC feet. For the rest, indeed, the straight limites cross each other orthogonally (fig. 2).
[10] <i>Cassiolis</i> , ager eius. iter populo non debetur. usque ad muros priuati possident. sunt etiam montes qui Romani appellantur, ea ratione qua in agro Asculano supra diximus. qui montes ad suram finem habent. finitur enim iugis montium, terminis Augusteis, ripis per [15] <i>deuexa collium</i> , arboribus, diuergiis aquarum, sed et per alia finitima documenta. in campis uero terminos quadratos, Tiburtinos, spatulas cursorias, limitibus, interiectis uero locis per arcas instructas et monumenta finitur.	<i>Carsioli</i> (Carseoli, Carsòli). No right of way is due to the community. Right up to the walls of the town there are private fields. There are also mountains that are called “Roman” for the same reason as in the land of Asculum (Ascoli) as before mentioned. These mountains have fences (?) as boundary. The boundaries are marked by mountain ridges, Augustan boundary stones, banks through the sloping areas of hills, trees, watersheds, but also by other indicators of boundary. In the fields there are square boundary stones, Tiburtine stones, intermediate boundary stone (cursorii) shaped like a spatula, and, indeed, in places where the limites cross, the boundary is marked by constructed arcae and tombs.
[20] <i>Castranus</i> ager lege Augustea est assignatus.	The land of <i>Castrum Novum</i> <Piceni> (Giulianova, near the mouth of the river Tordino) was allocated under <i>lex Augustea</i> .
<i>Cyprensis</i> ager ea lege est assignatus qua et ager <i>Castranus</i> .	The land of <i>Cupra Maritima</i> (Cupra Marittima) was allocated under the same law of <i>Castrum Novum</i> <Piceni>.
<i>Castellense</i> municipium. ager eius limitibus d. et k. continetur. in centuriis est assignatus.	<i>Castellum Firmanorum</i> (Porto San Giorgio, locality Santa Maria a Mare), <i>municipium</i> . Its land was defined by <i>limites</i> , <i>decumans</i> and <i>kardines</i> , and allocated in <i>centuriae</i> .
[25] <i>Cingulanus</i> ager. iter populo non debetur. ea lege continetur qua et ager <i>Potentinus</i> . in iugeribus et limitibus intercisuiis est assignatus ubi cultura. ceterum uero insolutum est. reliqua in montibus idem censuerunt. nam multa loca hereditaria accepit earum populus. ager qui a fundo suo tertio uel quarto uicino situs est, in [L. 255.1] iugeribus iure ordinario possidetur, sicut est <i>Interamna Palestinae Piceni</i> .	The land of <i>Cingulum</i> (Cingoli). No right of way is due to the community. It is dealt with under the same law of the land of <i>Potentia</i> (south of Porto Recanati). Its land, where cultivated, was allocated in iugera by <i>limites</i> <i>intercisivi</i> , the rest was not surveyed. They also assessed the remaining areas on the mountains. Indeed the community received many places through inheritance The field that is separated from its farm by three or four neighbours is possessed in iugera according to the ordinary law, as it is for <i>Interamna Praetuttiorum</i> (Teramo) in <i>Picenum</i> .
<i>Corfinius</i> ager limitibus maritimis et montanis in iugera CC sunt assignati, lege Augustea sunt censiti, et [5] termini Augustei ibidem nuncupantur.	The land of <i>Corfinium</i> (Corfinio) was allocated by <i>limites</i> that face the sea (<i>maritimi</i>) and the mountains (<i>montani</i>), in <i>centuriae</i> of CC iugera, assessed under <i>lex Augustea</i> , and there the boundary stones are called Augustan (fig. 6).

<i>Casentium, muro ductum. ager eius lege triumvirale est assignatus limitibus per terminos et alia signa finalia. iter populo non debetur.</i>	<i>Casentium (Caelanum?⁴⁷, Celano), surrounded with a wall. Its land was allocated under a triumviral law by limites <demarcated> by boundary stones and other markers (fig. 46). No right of way is due to the community.</i>
<i>Capenus, ager eius finitur terminibus Tiburtinis, ex [10] alia parte siliceis, qui distant a se a pedibus CC usque in ped. ∞CCL. habet ripas uias et riuos finales.</i>	<i>Capena (Capena, locality Civitùcola or Castellaccio, 4 km north of the town). Its land is demarcated by Tiburtine stones, and in other places by flint-stones, which lie from CC up to MCCL feet apart from one another. It has banks, roads, and streams as boundary markers.</i>
<i>Corfinius ager lege Sempronia est assignatus. iter populo debetur ped. LXXX. ager eius in tetragonon est assignatus, et silicei termini sunt apppositi, qui distant [15] a se in ped. a DCXX usque in ped. DCCCLX. et alia signa secundum auctorum doctrinam.</i>	<i>The land of Corfinium (Corfinio) was allocated under lex Sempronia. A right of way of LXXX feet is due to the community. Its land was allocated in quadrangles, and boundary stones were set up, which lie from DCXX up to DCCCLX feet apart from one another. There are other boundary markers in accordance with the teaching of writers on surveying (fig. 6).</i>
<i>Ecicylanus ager per strigas et scamna in centuriis est assignatus, termini uero rotundi et spatulae cursoriae constituti. per montes autem congestiones petrarum et [20] termini, sed et signa quibus ager arcifinius finitur.</i>	<i>The land of Aequicoli (Civitella, hamlet of Pescorocchiano, west of the town) was allocated in centuriae divided per strigas and per scamna. Round boundary stones were set up and also middle stones shaped like a spatula (cursorii). On the mountains piles of rocks and boundary stones were used, and also those markers by which an arcifinius field is demarcated.</i>
<i>Foro Nouanus per limites et centurias est assignatus. termini uero Tiburtini et Augustei, canabulae uel nouercae, muri, macheriae, putea. sed et sacrificales pali affixi sunt, qui distant a se in pedibus CCL et supra [25] usque in pedes ∞CC. uariis autem locis per instructuras, arcas, riuorum uel fluminum cursus, sed et iuga montium atque supercilia, fines seruantur.</i>	<i>Forum Novum (Torri in Sabina, locality Vescovio) was allocated by limites and in centuriae. There are Tiburtine and Augustan boundary stones, canals or drainage channels, walls, dry-stone walls, wells, and also sacrificial (sacrificales) wooden stakes, which lie from CCL up to more than MCC feet apart from one another. In other places the boundaries are demarcated by constructions, arcae, the courses of streams or rivers, but also by mountain ridges and terraces.</i>
<i>Fidenae, ager eius ea lege seruatur qua et Campi Tiberiani</i>	<i>Fidenae. Its land is dealt with under the same law of the Campi Tiberiani.</i>
<i>[L. 256.1] Ficiliensis ager ea lege seruatur qua et ager Curium Sabinorum.</i>	<i>The land of Fiscellus is dealt with under the same law of Cures Sabini.</i>
<i>Firmo Picenus. ager eius lege triumvirale. in centuriis singulis iugera CC. finitur sicuti ager Foro [5] Nouanus.</i>	<i>Firmum Picenum (Fermo). Its land <was allocated> under a triumviral law in centuriae each of CC iugera as that of Forum Novum.</i>
<i>Falerionensis ager limitibus maritimis et Gallicis est assignatus, quos nos d. et k. appellamus. finitur arcarum riparum canabularum siue nouercarum, muris macheriis scorofionibus congeriis caruunculis,</i>	<i>The land of Falerio (Falerone, locality Piane di Falerone) was allocated by limites facing the sea (maritimi) and limites gallici, which we call decumani and kardines. Its boundaries are demarcated by arcae, banks, canals or drainage</i>

⁴⁷ See the note regarding *Casentium*, L. 231.14.

<i>terminibus</i> [10] <i>Augusteis</i> , riuīs, fluminibus, arboribus ante missis, iugis montium, superciliis, petris naturalibus signatis, sicut in <i>Piceno fines terminantur</i> .	<i>channels, walls, dry-stone walls, heaps and piles of stones, rough boundary stones, Augustan boundary stones, streams, rivers, pre-existent trees, mountain ridges, terraces, marked natural stones, just as the boundaries are demarcated in Picenum</i> .
Fanestris Fortuna. ager eius limitibus maritimis et montanis est assignatus, et per ea signa quibus [15] Falerionensis ager.	<i>Fanum Fortunae</i> (Fano). Its land was allocated by limits facing the sea (<i>maritimi</i>) and the mountains (<i>montani</i>), and by the same boundary markers of <i>Falerio</i> (Falerone, locality Piane di Falerone).
<i>Kamerinus. iter populo non debetur</i> . ager eius limitibus maritimis et Gallicis continetur: finitur enim sicut ager Fanestris Fortuna.	<i>Camerinum</i> (Camerino). <i>No right of way is due to the community</i> . Its land is enclosed by <i>limites</i> facing the sea (<i>maritimi</i>) and by <i>limites gallici</i> . In fact, it is demarcated as the land of <i>Fanum Fortunae</i> (Fano).
Luco Feronia. ager eius finitur arboribus ante [20] missis, sed et aliis signis, quibus fines seruantur in prouincia Piceni, terminibus Tiburtinis, qui distant a se in ped. XL usque in ped. ∞CLXX.	<i>Lucus Feroniae</i> (Capena, 4.5 km east of the town). Its land is bounded by pre-existent trees, but also by other markers with which boundaries are indicated in the province of <i>Picenum</i> , and by Tiburtine stones that lie from XL up to MCLXX feet apart from one another.
<i>Marsus municipium licet consecratione ueteri maneat, tamen ager eius aliquibus locis in tribus limitibus</i> [25] <i>lege Augustea est assignatus</i> , limitibus maritimis et montanis. ager eius aliquibus locis in iugeribus CC continetur. terminibus uero Tiburtinis et siliceis, et aliis documentis, quibus ager Fallerionensis finitur.	<i>Marruvium</i> (San Benedetto dei Marsi). <i>Although by long-standing tradition it remains a municipium, nevertheless its land was allocated by three limites under lex Augustea</i> , by <i>limites</i> facing the see (<i>maritimi</i>) ⁴⁸ and the mountains (<i>montani</i>). Its land in some places is divided in parts of CC <i>iugera</i> . It is demarcated by Tiburtine stones and flint boundary markers, and by other markers used in the land of <i>Falerio</i> (Falerone, locality Piane di Falerone).
[L. 257.1] <i>Matilica, oppidum. iter populo debetur ped. LXXX</i> . ager eius ea lege continetur qua et <i>Kamerinus</i> .	<i>Matilica</i> (Matélica), <i>fortified town</i> . <i>A right of way of LXXX feet is due to the community</i> . Its land is dealt with under the same law of <i>Camerinum</i> (Camerino).
Numentum. ager eius ea lege continetur qua et ager Foro Nouanus.	<i>Nomentum</i> (Casali, hamlet of Mentana). Its land is dealt with the same law of <i>Forum Novum</i> .
[5] Nursia. ager eius per strigas et per scamna in centuriis est assignatus. <i>finitur sic uti ager Asculanus</i> .	<i>Nursia</i> (Norcia). Its land was allocated in <i>centuriae</i> divided <i>per strigas</i> e <i>per scamna</i> , and is demarcated as that of <i>Asculum</i> (Ascoli).
Nomatis. ager eius ea lege continetur qua et ager Ausimatis.	<i>Numana</i> (Numana). Its land is dealt with under the same law of <i>Auximum</i> (Osimo).
Ostrensis ager ea lege continetur qua et ager [10] <i>Camerinus</i> .	<i>Ostra</i> (Ostra Vetere, 3 km south-west of the town). Its land is dealt with under the same law of <i>Camerinum</i> (Camerino).
<i>Pinnes. ager eius ea lege continetur qua et ager Adrianus</i> .	<i>Pinna</i> (Penne). <i>Its land is dealt with under the same law of Hadria</i> (Atri).
<i>Pausulensis ager per limites in centuriis singulis iugera CC est assignatus</i> . finitur sicut	<i>The land of Pausulae</i> (south-east of Macerata) <i>was allocated by limites in centuriae each of CC</i>

⁴⁸ Here there is not the sea but a lake (*lacus Fucinus*).

ager Asculanus.	iugera. It is demarcated as the land of <i>Asculum</i> (Ascoli).
[15] <i>Potentinus ager ea lege finitur qua et Pausulensis.</i>	<i>The land of Potentia</i> (south of Porto Recanati) <i>is demarcated under the same law of Pausulae</i> (south-east of Macerata).
<i>Plentinus. colonia. iter populo <non> debetur, ager eius limitibus intercisiuis est assignatus. finitur sicut ager Asculanus.</i>	<i>Peltuinum</i> (Prata d'Ansidonia, 1 km north-east of the town), <i>colony. No right of way is due to the community. Its land was allocated by limites intercisiui.</i> It is demarcated as that of <i>Asculum</i> (Ascoli).
Potentinus ager in iugeribus et limitibus intercisiuis [20] est assignatus ubi cultura: ceterum in absoluto remansit. reliqua in montibus censuerunt. et multa loca hereditaria accepit eorum populus.	The land of <i>Potentia</i> (south of Porto Recanati), where cultivated, was allocated in iugera by limites intercisiui. <i>The rest remained unsurveyed. The remaining part in the mountains were assessed and its people received many places as a result of inheritance</i> (fig. 5).
Pisaurensis ager finitur riuorum riparum fluminum cursu, terminorum fide, et palis sacrificabilibus, sicut in [25] prouincia Piceni.	The land of <i>Pisaurum</i> (Pesaro) is demarcated by the course of streams, banks and rivers, by the confidence on boundary stones, and by sacrificial (<i>sacrificales</i>) wooden stakes, as in the province of <i>Picenum</i> .
Reate, ager eius per strigas et per scamna in centuriis est assignatus. terminos uero rotundos et spatulas [L. 258.1] cursorias posuimus, per montes autem foueas, sed et aggestum petrarum, ut est in libro regionum. finitur enim sicuti ager Foro Nouanus.	<i>Reate</i> (Rieti). Its land was allocated in <i>centuriae</i> divided <i>per strigas</i> and <i>per scamna</i> . Indeed, we set up round boundary stones and middle stones shaped like a <i>spatula</i> (<i>cursorii</i>), and moreover in mountainous areas pits and heaps of rocks too, as it is set out in the book of the regions. It is demarcated as the land of <i>Forum Novum</i> .
<i>Ricinensis ager limitibus et centuriis est assignatus, [5] finitur sicut ager Asculanus.</i>	<i>The land of Helvia Ricina</i> (Macerata, locality Villa Potenza) <i>was allocated in iugera and divided in centuriae. It is demarcated as the land of Asculum</i> (Ascoli).
Sentis, oppidum. ager eius limitibus maritimis et montanis lege triumuirale est assignatus. et loca hereditaria populus eius accepit. finitur sicuti consuetudo est regioni Piceni.	<i>Sentinum</i> (Sassoferrato), fortified town. <i>Its land was allocated under a triumviral law by limites facing the sea (marini) and the mountains (montani). Its people received some place as a result of inheritance.</i> It is demarcated according to the custom in the region of <i>Picenum</i> .
[10] <i>Sinogalliensis ager lege triumuirale est assignatus limitibus et centuriis, terminibus atque riuis, sed et aliis signis quae in libro conditionum Italiae agrorum leguntur.</i>	<i>The land of Sena Gallica</i> (Senigallia) <i>was allocated under a triumviral law by limites and centuriae, <and it is demarcated> by boundary stones and streams, and other markers that are discussed in the book about the categories of lands in Italia.</i>
<i>Septempeda, oppidum, iter populo non debetur. ea lege continetur qua et ager Cingulanus.</i>	<i>Septempeda</i> (San Severino Marche), <i>fortified town. No right of way is due to the community.</i> It is dealt with under the same law of <i>Cingulum</i> (Cingoli).
[15] <i>Superequum. ager eius limitibus maritimis et montanis est assignatus, in centuriis singulis iugera CC. finitur sicuti</i>	<i>Superaequum</i> (Castelvecchio Subequo). <i>Its land was allocated by limites facing the sea (maritimi) and the mountains (montani), in centuriae each</i>

supra legitur ager Marsensis	of CC <i>iugera</i> , and is demarcated as it is noted above for the land of the <i>Marsi</i> (<i>Marruvium</i>).
Tibur. ager eius a Tiberio Caesare est assignatus. ea lege continetur qua et Campi Tiberiani leguntur inter [20] Tibur et Romam.	<i>Tibur</i> (Tivoli). Its land was allocated by <i>Tiberius Caesar</i> under the same law of the <i>Campi Tiberiani</i> that are between <i>Tibur</i> and <i>Roma</i> (fig. 2).
<i>Tribule, municipium. iter populo non debetur. limitibus Augusteis est assignatus. finitur sicuti ager Curium Sabinorum.</i>	<i>Trebula</i> < <i>Balliniensis</i> > (Treglia, hamlet of Pontelatone, north of the town), <i>municipium</i> . <i>No right of way is due to the community. <Its land> was allocated by Augustan limites</i> (fig. 41). It is demarcated as the land of <i>Cures Sabini</i> (Fara in Sabina, 5 km south-west of the town).
Teate, qui Aternus. ager eius lege Augustea est [25] assignatus. finitur sicuti consuetudo est in regione Piceni.	<i>Teate</i> (Chieti), where is also <i>Aternum</i> (Pescara). < <i>Its land</i> > <i>was allocated under lex Augustea</i> , and is demarcated according to the custom in the region of <i>Picenum</i> .
<i>Troento. finitur sicut supra diximus de agro Teatino.</i>	<i>Castrum Truentinum</i> (Martinsicuro, north-west of the town). <i>It is demarcated as we described above for the land of Teate</i> (Chieti).
[L. 259.1] <i>Teramne Palestina Piceni. ager eius in iugeribus et limitibus est assignatus ubi cultura est. nam ceterum in absoluto remansit. reliqua autem in montibus sub ipsius rei censuerunt. nam multa loca hereditaria accepit eius populus. tertio uel quarto uicino fundo suo situs [5] est, iure ordinario possidetur.</i>	<i>Interamnia Praetuttiorum</i> (Teramo) in <i>Picenum</i> . <i>Where there is cultivation, its land was allocated in iugera and by limites. The rest remained unsurveyed. They assessed the remaining areas in the mountains in the same way. Its people received many places as a result of inheritance. The field that is separated from its farm by three or four neighbours is possessed according to the ordinary law.</i>
Tuficum, oppidum. iter populo debetur ped. LXXX. ager eius ea lege continetur qua et ager Adteiatas.	<i>Tuficum</i> (Albacina, hamlet of Fabriano), fortified town. A right of way of LXXX feet is due to the community. Its land is dealt with under the same law of that of <i>Attidium</i> (Attiggio).
<i>Tolentinus ager limitibus maritimis et montanis est [10] assignatus lege triumvirale. et loca hereditaria accepit eius populus.</i>	<i>The land of Tolentinum</i> (Tolentino) <i>was allocated under a triumviral law by limites facing the sea (maritimi) and the mountains (montani), and its people received some places as the result of inheritance.</i>
Treensis ager. iter populo non debetur. ea lege continetur qua et ager Potentinus.	The land of <i>Trea</i> (west of Treia) is dealt with under the same law of <i>Potentia</i> (south of Porto Recanati). No right of way is due to the community.
Veragranus ager ea lege continetur qua et ager [15] Teatinus.	The land of <i>Veragranum</i> (?) is dealt with under the same law of <i>Teate</i> (Chieti).

[L. 259.16] CIVITATES REGIONIS SAMNII	COMMUNITIES OF THE REGION SAMNIUM
Afidena, muro ducta. iter populo debetur ped. X. milites eam lege Iulia sine colonis	<i>Aufidena</i> (Castel di Sangro) ⁴⁹ , surrounded with a wall. A right of way of X feet is due to the

⁴⁹ The population in medieval times took refuge in Alfedena, which repeats its name.

deduxerunt. ager eius per centurias et scamna est assignatus. termini Tiburtini [20] sunt apppositi limitibus intercisivis.	community. The soldiers founded it without colonists under <i>lex Iulia</i> . Its land was allocated by <i>centuriae</i> and <i>scamna</i> . Tiburtine boundary stones were placed on the <i>limites intercisivi</i> .
Antianus ager item est assignatus ut ager Alfidenatis.	The land of <i>Antinum</i> (Civita d'Antino ⁵⁰) was allocated in the same way as that of <i>Aufidena</i> (Castel di Sangro).
<i>Bobianus. oppidum. iter populo debetur ped. X. lege Iulia est deductum. termini rotundi sunt apppositi. [25] finitur testimonio arcarum riparum sepulturarum congeriarum caruuncolorum riuorum superciliorum et limitum dd. et kk.</i>	<i>Bovianum</i> (Boiano), <i>fortified town. A right of way of X feet is due to the community. It was founded under lex Iulia</i> . Round boundary stones were set up. Boundaries were demarcated by the presence of <i>arcae</i> , banks, tombs, piles of stones, rough boundary stones, rivers, terraces, and <i>decumani</i> and <i>kardines limites</i> (fig. 16).
[L. 260.1] Clibes. ager eius lege Iulia est assignatus. finitur sicut ager Bobianus.	<i>Cluviae</i> (Casoli, locality Piano Laroma). Its land was allocated under <i>lex Iulia</i> as the land of <i>Bovianum</i> (Boiano).
Corfinius ager limitibus maritimis et montanis. in centuriis singulis iugera CC. finitur terminis Tiburtinis et [5] riuus, arboribus peregrinis uel ante missis, monumentis uis nymphis. ager eius in precisuris est assignatus.	The land of <i>Corfinium</i> (Corfinio) <was divided> by <i>maritimi</i> and <i>montani limites</i> , into <i>centuriae</i> each of CC <i>iugera</i> . The boundaries are demarcated by Tiburtine stones, streams, non-native trees or pre-existent trees, tombs, roads, fountains. Its lands was allocated in parcels (fig. 6).
<i>Esernia, oppidum muro ductum. iussu Neronis est deductum. iter populo debetur ped L. in centuriis et Augusteis terminis est assignatus.</i>	<i>Aesernia</i> (Isernia), fortified town surrounded with a wall. It was founded by order of <i>Nero</i> . <i>A right of way of L feet is due to the community. <Its land> was allocated in centuriae and Augustan boundary stones</i> (fig. 23).
[10] Istoniis, colonia. ager eius per centurias et scamna est assignatus. finitur sicuti ager Bobianus.	<i>Histonium</i> (Campomarino), colony. Its land was allocated in <i>centuriae</i> and <i>scamna</i> . It is demarcated as that of <i>Bovianum</i> (Boiano).
Iobanus. ager eius ea lege continetur qua et ager Eserniae.	<i>Iuvanum</i> (Torricella Peligna, 1 km south-east of Fallascosa hamlet). Its land is dealt with under the same law of the land of <i>Aesernia</i> (Isernia).
Larinus lege Iulia est assignatus. iter populo debetur [15] ped. X. finitur sicut ager Corfinius.	The land of <i>Larinus</i> (Larino) was allocated under <i>lex Iulia</i> . A right of way of X feet is due to the community as for the land of <i>Corfinium</i> (Corfinio).
Solmona ea lege est assignata qua et ager Eserniae.	<i>Sulmo</i> (Sulmona) was allocated under the same law by which the land of <i>Aesernia</i> (Isernia) was allocated (fig. 6).

[L. 260.17] INCIPIVNT NOMINA CIVITATVM APVLIAE	HERE THE NAMES OF THE <i>CIVITATES</i> OF <i>APULIA</i> BEGIN
<i>Ager Ausculinus lege Sempronia et Iulia est assignatus. ubi est d. in oriente, k. in</i>	<i>The land of Ausculum (Ascoli Satriano) was allocated under lex Sempronia and lex Iulia,</i>

⁵⁰ Less likely that it is *Anxanum* (Lanciano).

<i>meridianum. finitur [20] per terminos et terrarum tumores, aliquibus locis arboribus ante missis et uiis, sed et collectione petrarum. in centuriis singulis iugera CC.</i>	<i>with decumani facing east and kardines facing south. It is demarcated by boundary stones and mounds of earth, in some places by pre-existent trees and roads, and also by piles of stones. In each centuria <there are> CC iugera.</i>
<i>Ardona et Aspanus. agri earum ea lege et diuisione sunt assignati qua et ager Ausculinus.</i>	<i>Herdoniae/Ardaneae (Ordona) and Arpi (Argos Hyppium, Foggia, about 5.5 km north-north-east of the town). Their lands were allocated under the same law and division of that of Ausculum (Ascoli Satriano).</i>
<i>[25] Canusinus ager. iter populo non debetur. finitur uiis et signis quibus in libris descripsimus. in centuriis singulis iugera CC. d. in oriente.</i>	<i>The land of Canusium (Canosa di Puglia). No right of way is due to the community. It is demarcated by roads and by those markers we have described in the books. <Divided> into centuriae of CC iugera. Decumans face east.</i>
<i>[L. 261.1] Comsinus. ager eius limitibus Graccanis. iter populo non debetur. finitur sic uti ager Canusinus.</i>	<i>The land of Compsa (Conza della Campania, locality Conza Vecchia) <was allocated> with Gracchan limites. No right of way is due to the community. It is demarcated as the land of Canusium (Canosa di Puglia).</i>
<i>Conlatinus, qui et Carmeianus, et qui circa montem Garganum sunt, finiuntur sicut ager Ausculinus.</i>	<i>The land of Collatia, which is also called Carmeia (Foggia, 5 km south-east of the town, locality San Lorenzo in Carmignano), and the fields that are around the Mount Garganus, are demarcated as the land of Ausculum (Ascoli Satriano).</i>
<i>[5] Eclanensis. iter populo non debetur. ager eius in centuriis singulis iugera CCXL, actus numero XX et per XXIII, lege est assignatus qua et ager Canusinus. d. est in oriente.</i>	<i>The land of Aeclanum (Mirabella Eclano, about 1.5 km north-east of the town). No right of way is due to the community. It was allocated in centuriae of CCXL iugera, XX per XXIII actus, under the same law of the land of Canusium (Canosa di Puglia). The decuman faces east.</i>
<i>Lucerinus ager kk. et dd. est assignatus: sed [10] cursum solis sunt secuti, et constituerunt centurias contra cursum orientalem. finitur sic uti ager Ausculinus.</i>	<i>The land of Luceria (Lucera) was allocated by kardines and decumani, but they followed the course of the sun and established centuriae facing east. It is demarcated as the land of Ausculum (Ascoli Satriano).</i>
<i>Salpis, colonia, littore terminatur. finitur finitimis muris, uiis, aquarum ductibus, fossis, in centuriis singulis iugera CC.</i>	<i>Salapia (Salpia / Salpi / Elpia, Trinitapoli, about 8.5 km west of the town), a colony, is bounded by the shore. The land is demarcated by boundary walls, roads, water channels, and ditches, <and is divided> in centuriae of CC iugera.</i>
<i>Sipontum ea lege et finitione est qua et ager [15] Salpinus.</i>	<i>The land of Sipontum (Manfredonia, locality Lido di Siponto) is dealt with under the same law and type of limitatio as the land of Salapia.</i>
<i>Teate. iter populo <non> debetur. ager eius finitur uiis sepulturis et ceteris signis, sicut</i>	<i>Tiati/Teate, Teanum Apulum⁵¹ (San Paolo di Civitate, about 2.7 km north-west of the town).</i>

⁵¹ *Tiati* and *Teate* are the original Daunian variants of the name (*Tiati* was the oldest form). The name was then transformed by the Romans into *Teanum* with the addition *Apulum* to distinguish it from *Teanum Sidicinum* in Campania.

consuetudo prouvinciae est.	<No> <i>right of way is due to the community</i> . Its land is demarcated by roads, tombs, and other markers, according to the custom of the province.
<i>Venusinus</i> .	<i>The land of Venusia (Venosa)</i> .

[L. 261.20] CIVITATES PROVINCIAE CALABRIAE	CIVITATES OF THE PROVINCE CALABRIA
Quando terminauimus prouinciam Apuliam et Calabriam secundum constitutionem et legem diui Vespasiani, <i>uariis locis mensurae actae sunt et iugerationis modus collectus est. cetera autem prout quis occupauit</i> [25] <i>posteriore tempore censita sunt et possidenti assignata. alia loca pro aestimio ubertatis precisa sunt.</i> finiuntur enim [L. 262.1] terminibus, riuus, fossis, arboribus ante missis, tumore terrae, collectione petrarum, sed et naturalibus signatis lapidibus, uiis, sepulchris, arboribus peregrinis; sed et aliis signis quibus superius in libris docuimus.	When we established boundaries for the provinces of <i>Apulia</i> and <i>Calabria</i> according to the edict and law of the divine <i>Vespasianus</i> , <i>in several places surveys were carried out and the area of land divided into iugera was calculated. But other places were assessed in a subsequent time, because individuals had appropriated them, and allocated to the persons in possession of them. Other places were divided according to the estimation of their fertility.</i> The boundaries were demarcated by boundary stones, streams, ditches, pre-existent trees, mounds of earth, pile of rocks, but also by marked natural rocks, roads, tombs, non-native trees, and other markers, which we explained earlier in the books.
[5] Ciuitates autem hae sunt.	These are the <i>civitates</i> .
Brondisinus ager pro aestimio ubertatis est diuisus: cetera in saltibus sunt assignata. diuiduntur sicut supra legitur prouinciam esse diuisam.	The land of <i>Brundisium</i> (Brindisi) was divided according to an estimation of the fertility; the remaining parts were allocated in <i>saltus</i> . They were divided in the same way as the province is divided, as pointed out above.
Botontinus, Caelinus, Genusinus, Ignatinus, <i>Lyppiensis</i> , Metapontinus, Orianus, Rubustinus, [10] Rodinus, <i>Tarentinus</i> , <i>Varinus</i> , Veretinus, Vritanus, Ydrontinus, ea lege et finitione finiuntur qua supra diximus.	The lands of <i>Butuntum</i> (Bitonto), <i>Caelia</i> (Ceglie di Bari), <i>Genusia</i> (Ginosa), <i>Egnatia</i> (Fasano, locality Torre Egnàzia), <i>Lupiae</i> (Lecce), <i>Metapontum</i> (Bernalda, locality Metaponto), <i>Uria</i> (Oria), <i>Rubi</i> (Ruvo di Puglia), <i>Rudiae</i> (Lecce, 2.5 km south-west of the town), <i>Tarentum</i> (Taranto), <i>Barium</i> (Bari), <i>Veretum</i> (Patù, about 1 km south-west of the town), <i>Neretum</i> (Nardò) ⁵² , <i>Hydruntum</i> (Otranto), were divided and demarcated according to the same law and rules that we said before.

⁵² Campbell [Campbell 2000] hypothesizes that *Vritanus* could be attributed to *Urium* on the Mount Garganus in *Apulia* (Plinio, *Historia Naturalis* 3.103, reported in the Barrington Atlas as *Hyria/Uria*), assuming a confusion between *Apulia* and *Calabria* and not explaining the diction *Vritanus* instead of *Vrianus*. An alternative hypothesis, perhaps more plausible, is that *Vritanus* is a corruption of *Neretanus*, that is to say, pertinent to the territory of *Neretum*, a well-known centre of *Calabria*.

APPENDIX

Table A – Special characters used (with their unicode exadecimal codes)

∞ (WP MathA: 52, code 0034) = M (a thousand)

Ī (latin capital letter I with macron, code 012A) = M (a thousand)

ς (greek small letter final sigma, code 03C2) = six *unciae* (6/12)

ℓ (latin small letter squat reversed esh, code 0285) = two *unciae* (2/12)

℥ (idem, with a horizontal line on) = three *unciae* (3/12)

Ҁ (cirillic smaller letter koppa, code 0481) = VI (six)

Table B1 – Multiples of the *uncia*

(1 *uncia* = 1/12 of the unity; 12 *unciae* = 1 unity or 1 *as* or 1 foot)

Latin term	<i>Unciae</i>	Symbol used in the text of L.	Symbol used
<i>uncia</i>	1	-	-
<i>uncia semis (sescuncia)</i>	1+1/2	⸥	ϵ
<i>sextans</i>	2	ℓ	ℓ
<i>quadrans</i>	3	℥	℥
<i>triens</i>	4	ℓ ℓ	ℓ ℓ
<i>quincunx</i>	5	ℓ ℥	ℓ ℥
<i>semis</i>	6	ς	ς
<i>septunx</i>	7	ς -	ς-
<i>bes</i>	8	ς ℓ	ς ℓ
<i>dodrans</i>	9	ς ℥	ς ℥
<i>dextans</i>	10	ς ℓ ℓ	ς ℓ ℓ
<i>deunx</i>	11	ς ℓ ℥	ς ℓ ℥

Table B2 – Fractions of the *uncia*

Latin term	<i>Unciae</i>	Symbol used in the text of L.
<i>semuncia</i>	1/2	⸥
<i>sicilicus</i>	1/4	⸥
<i>sextula or sela</i>	1/6	⸥
<i>dimidia sela</i>	1/12	⸥
<i>scripulum (scrupulum)</i>	1/24	

Table C – Roman measures for the lengths

Latin name	English name	feet	paces	inches	cm	m
<i>digitus</i>	<i>digitus (inch)</i>	1/16	1/80	1	1.85	
<i>uncia</i>	<i>uncia</i>	1/12	1/60	1+1/3	2.46	
<i>palmus</i>	palm	1/4	1/20	4	7.39	
<i>pes</i>	foot	1	1/5	16	29.57	
<i>cubitus</i>	cubit	1 + 1/2	3/10	24	44.36	
<i>gradus</i>	<i>gradus</i> (simple pace)	2 + 1/2	1/2		73.93	0.74
<i>ulna / agna</i>	<i>ulna / agna</i> (arm)	4	4/5			
<i>passus</i>	<i>passus / pace</i> (double pace)	5	1		29.57	1.48
<i>decempeda</i>	<i>decempeda</i>	10	2			2.96
<i>pertica</i> ⁵³	<i>pertica</i> (perch)	10	2			
<i>actus</i>	(linear) actus	120	24			35.48
<i>stadium</i>	<i>stadium</i>	625	125			184.81
<i>miliarum</i>	mile	5000	1000			1,478.50
<i>levua</i>	league	7500	1500			2,217.75
<i>rasta</i>	<i>rasta</i>		3000			4,435.50

Table D – Roman measures for the areas

Latin name	English name	Actus	Sides (in feet)	Square feet	Square meters	Hectares
<i>pes prostratus</i>	square foot	1/14400	1 · 1	1	0.0874	
<i>scripulum</i>	square <i>pertica</i>	1/144	10 · 10	100	8.74	
<i>actus minimus</i>	<i>actus minimus</i>	1/30	4 · 120	480	41.97	
<i>porca</i>	<i>porca</i>	1/6	30 · 80	2,400	209.85	
<i>clima</i>	<i>clima</i>	1/4	60 · 60	3,600	314.78	
<i>actus quadratus</i> / <i>acnua</i> / <i>fundus</i> / <i>arapennis</i>	square actus	1	120 · 120	14,400	1,259.11	
<i>iugerum</i>	iugerum	2	240 · 120	28,800	2,518.23	
<i>heredium</i>	<i>heredium</i>	4	240 · 240	57,600	5,036.46	0.50
<i>centuria</i>	<i>centuria</i>	400	2,400 · 2,400	5,760,000		50.36
<i>saltus</i>	<i>saltus</i>	1600	4,800 · 4,800	23,040,000		201.44

⁵³ It is also reported in L.245.12-13 and L. 339.11-12 that the *pertica* is equal to XII feet of XVIII inches.

Table E – Roman measures for the weights

Latin	English	Drachms	<i>Siliquae</i>	<i>Librae</i>	g*
<i>calculus</i>	<i>calculus</i>	1/24	3/4		
<i>siliqua</i>	<i>siliqua</i>	1/18	1		0.1893
<i>ceratium</i>	<i>ceratium</i>	1/12	3/2		
<i>obolus</i>	<i>obolus</i>	1/6	3		0.568
<i>scripulum</i> or <i>scrupulum</i>	<i>scripulum</i>	1/3	6		1.136
<i>drachma</i>	drachm	1	18		3.408
<i>quadrans</i>	<i>quadrans</i>		27 36		
<i>stater</i>	<i>stater</i>		54 72		
<i>uncia</i>	<i>uncia</i>	(8)	108 144		27.264
<i>libra</i>	<i>libra</i> (pound)	(96)		1	327.168
<i>mina</i>	<i>mina</i>	100			436.224
<i>talentum</i>	talent			72 (/ 50 / 120 / 100)	

* If we place the weight of a drachma equal to 3.408 g.

Table F – Roman measures for the liquids

Latin	English	Drachms	<i>Sextarii</i>	<i>Modii</i>
<i>obolus</i>	<i>obolus</i>	1/6		
<i>scripulum</i>	<i>scripulum</i>	1/3		
<i>cochlear</i>	<i>cochlear</i>	1/2		
<i>drachma</i> or <i>chema</i>	drachm	1		
<i>concula</i>	<i>concula</i>	1 + 1/2		
<i>cignus</i> or <i>mistrion</i>	<i>cignus</i>	3		
<i>cyathus</i>	<i>cyathus</i> (glass)	10		
<i>acetabulum</i>	<i>acetabulum</i> (cup)	12		
<i>oxifalum</i>	<i>oxifalum</i>	15		
<i>hemina</i>	<i>hemina</i>	90 or 48	1/2	
<i>sextarius</i>	<i>sextarius</i>		1	
<i>cenix</i>	<i>cenix</i>		5	
<i>congius</i> or <i>hin</i>	<i>congius</i>		6	
<i>modius</i> ^{*1}	<i>modius</i>		24 (or 16 or 22)	1
<i>urna</i>	<i>urna</i>		36	1 + 1/2
<i>batus</i>	<i>batus</i>		50	
<i>amphora</i> or <i>aephi</i> ^{*2}	<i>amphora</i>		72	3
<i>metreta</i>	<i>metreta</i>		100	
<i>cadus</i> or <i>artaba</i>	<i>cadus</i> (pitcher)		108	4 + 1/2
<i>medimna</i>	<i>medimna</i>		120	5
<i>gomor</i>	<i>gomor</i>			15
<i>chorum</i>	<i>chorum</i>			30
<i>culleus</i>	<i>culleus</i>			60

^{*1} According to the author of the Latin text, a *modius* is equal to the weight of a *medium talentum* (72 *librae*) if the *sextarius* is equal to 3 *librae*, while it is equal to the *maximum talentum* (120 *librae*) if the *sextarius* is 5 *librae*.

^{*2} Term used for dry materials.

GLOSSARY

(from the *Gromatici Veteres* [Libertini 2018])

abluvio = erosion of the banks of a river caused by its waters.

acetabulum = *acetabulum* (cup), measure for the liquids, s. Table F – Roman measures for the liquids.

acnua (plural *acnuae*) = s. *actus quadratus*.

actuarius limes = s. *limes*.

actus (plural *actus*) = (1) *actus*, measure of length equal to 120 feet, s. Table C - Roman measures for the lengths; (2) right of way or also road for wagons or livestock; (3) abbreviated way to say *actus quadratus* (s.).

actus minimus = measure of an area with sides equal to 4 and 120 feet (=480 square feet). Therefore, it was equal to 1/30 of an *actus quadratus* (=14,400 square feet). S. Table D - Roman measures for the areas.

actus quadratus / **actus** = *actus*, measure for the areas equal to 120 · 120 feet = 14,400 square feet, s. Table D - Roman measures for the areas. *Acnua*, *arapennis* and *fundus* were synonyms.

aephi = s. *amphora*.

aes = bronze table on which was shown the map of a *limitatio* and the related assignments. This was the most authoritative type of *forma* (s).

ager = field, estate.

--- **arcifinalis**, **arcifinius** = fields on the edge of a centuriated and assigned area. It was generally not assigned and was bounded by natural boundaries, but often it was later occupied and allocated. The etymology of the name would be a field that defends (*arcere*) the boundaries;

--- **occupatorius** = land occupied without being assigned. Generally intended as synonym of *ager arcifinius*;

--- **publicus** = public land owned by the Roman people;

--- **quaestorius** = land taken from the enemies and then entrusted to a *quaestor* for sale after an appropriate subdivision;

--- **vectigalis** = land subject to tax or rent charged to those who receive it.

--- other types of *ager* in *Nomina Agrorum* (from L. 246.24 to 247.20).

agger (plural *aggeres*) = road that is slightly elevated by stone accumulation, useful as a military route.

agna = s. *ulna*.

agrimensor / **ensor** / **gromaticus** / **metator** = land surveyor, surveyor.

alluvio = deposit of soil by action of the waters of a river.

ambitus = (1) a space of two and a half paces between neighbouring buildings or around a building to allow passage; (2) right of passage around a building.

amphora / **aephi** = *amphora*, measure for the liquids, s. Table F – Roman measures for the liquids.

angulus clusaris = *angulus clusaris* (closing angle). Each square, or rectangle, of a centuriation had four angles. In the corner, defined as *angulus clusaris*, that was the farthest from the crossing point of *decumanus maximus* and *kardo maximus* (*umbilicus*), a boundary stone with the position of the *centuria* written on it was placed. For example, in the *centuria* immediately to the right of the *decumanus maximus* and immediately beyond the *kardo maximus*, the boundary stone in the *angulus clusaris* had the inscription: D.D. I V.K. I. The position of the *centuria* also defined its name.

arapennis = synonym of *actus quadratus* (s.).

arbores ante missae = trees that were pre-existing to the *limitatio* and later left untouched.

arca = s. *terminus*.

arcifinalis / **arcifinius ager** = s. *ager*.

artaba = s. *cadus*.

aspratilis terminus = s. *terminus*.

attinae = s. *terminus*.

batus = measure for the liquids, s. Table F – Roman measures for the liquids.

botontinus = s. *terminus*.

cadus / artaba = *cadus* (pitcher), measure for the liquids, s. Table F – Roman measures for the liquids.

calaviones = s. *scorofio* in *terminus*.

calculus = small measure of weights, s. Table E – Roman measures for the weights.

cancellatio = s. *forma*.

carbunculi = s. *terminus*.

cardo / kardo (plural *cardines / kardines*; abbreviation *K.*) = *kardo* (hinge). In the ancient configuration the *kardines* were oriented from south to north and took their name from the fact that the vault of the sky appeared as if it rotated around a hinge, i.e., in the same direction of the *kardines*.

--- **maximus** = the main *kardo*. As for the decumans, the first *kardo* on each side of the *kardo maximus* was the first *kardo* beyond (*ultra*) or on this side (*citra*) of the *kardo maximus*: if beyond *V.K. I* (first beyond – *VLTRA* - of the *kardo maximus*); if on this side *K.K. I* (first on this side – *CITRA*, abbreviated as *K.* - of the *kardo maximus*). The subsequent *kardines* were clearly the II, III, etc.

casa = country house, farm.

casae litterarum = farms indicated by letters. It is the name of a work, likely with didactic purposes, in which there were schemes of farms, with various types of properties and each marked with a letter, described in the text.

centuria = *centuria*. Square, or rectangle of earth, that was part of a centuriated ground. If the *centuria* had sides with a length of 20 · 20 linear *actus*, it had an area of 400 square *actus*. S. Table D - Roman measures for the areas.

centuriatio = s. *limitatio* and *forma*.

ceratium = small measure of weight, s. Table E – Roman measures for the weights.

chema = s. *drachma* (as unity of measure for the liquids).

chorum = measure for the liquids, s. Table F – Roman measures for the liquids.

cignus / mistron = measure for the liquids, s. Table F – Roman measures for the liquids.

cippus = *cippus*, boundary stone.

clima = an area equal to 30 by 60 feet, s. Table D - Roman measures for the areas.

cochlear = measure for the liquids, s. Table F – Roman measures for the liquids.

colonia = newly founded town, or refoundation of a conquered town, populated with Romans, in general veteran soldiers.

colonus = colonist, inhabitant of a colony.

commentarius = (1) register of the founder of a colony showing the assignees of the fields; (2) commentary, book of memoirs and considerations.

comportionales / conportionales = s. *terminus*.

conciliabulum = small settlement subjected to a *civitas*.

concula = measure for the liquids, s. Table F – Roman measures for the liquids.

congeria = s. *terminus*.

congius / hin = measure for the liquids, s. Table F – Roman measures for the liquids.

cubitus = cubit, s. Table C – Roman measures for the lengths.

culinae = area destined by the community for the funerals of the poor.

culleus = measure for the liquids, s. Table F – Roman measures for the liquids.

cultellatio = a survey method by which a non-flat area was measured taking into account only horizontal distances and disregarding the variations on the vertical axis. In practice it corresponded to the modern description of an area from a point of view placed at the top and at an unlimited distance. For example, to measure a downhill ground, following a straight line defined by the *groma*, a *pertica*, a stick 10 feet long, was placed horizontally: From the furthest head of the *pertica* the point on the ground below was identified by the plumb line. Here a *pertica* was placed again in the defined direction and the procedure was repeated as before.

cursorius = s. *terminus*.

cyathus = *cyathus* (glass), measure for the liquids, s. Table F – Roman measures for the liquids.

decempeda = (1) a stick ten feet long; (2) a length measure of ten feet, s. Table C – Roman measures for the lengths.

decimanus / decumanus = *decumanus* / decuman (abbreviation: *D.*). In the ancient configuration the *decumanus* was turned from east to west, that is to say towards the twelfth (*duodecima*) hour of the day and from this the term *duodecimanus* abbreviated in *decimanus* / *decumanus*.

--- **maximus** = the main decuman. The first decuman on each side of the *decumanus maximus* was the first decuman to the right (*dextra*) or to the left (*sinistra*) of the *decumanus maximus*: if on the right *D.D. I* (first on the right – DEXTRA – of the *decumanus maximus*); if on the left *S.D. I* (first on the left – SINISTRA – of the *decumanus maximus*). The subsequent decumans were clearly the II, III, etc.

decus / decussis = (1) crossing of two lines that form an X (the number ten in Latin, i.e., a *decem* or *decussis* from which the term derives); (2) X-shaped signal placed on a boundary stone to indicate a crossing point, and on which the *umbilicus soli* of the *groma* was placed by means of a plumb line; (3) X-shaped signal placed on a tree, on a stone or on other boundary marker to indicate a crossing or turning point of the border.

digitus = *digitus* (inch) (plural *digiti*), s. Table C – Roman measures for the lengths.

dioptra = s. *groma*.

diverticulum (plural *diverticula*) = transverse road that starts from a main way.

divortium (plural *divortia*) = fork (of a road).

dominium / proprietas = property of an asset. It is to be distinguished from possession (*possessio*) for which one could have the possession of a good, for example for rent, without being the owner.

drachma = drachm, measure for the weights (s. Table E – Roman measures for the weights) and for the liquids (s. Table F – Roman measures for the liquids). In the second meaning it was also called *chema*.

edictum = a proclamation issued by a magistrate or even by the emperor. In the first case it had legal value in the jurisdiction of the magistrate, while in the second case it had legal value throughout the empire.

egregius limes = s. *limes*.

epidecticalis = s. *terminus*.

epistula = a formal letter sent by the emperor to a governor or an officer, to give specific orders or general instructions on a topic or even in response to specific requests concerning administrative or government problems.

extra clusa = they were the places outside (*extra*) of the land covered by the relief but enclosed (*clusa*) within the external borders of the land of the community.

ferramentum = the support stick of *rostrum* + *groma* (s.), or - by extension - the whole instrument (*ferramentum* + *rostrum* + *groma*).

finis (plural *fines*) = (1) boundary of a property; (2) in the plural could indicate a property defined by boundaries.

forma = map of a specific area. The more important maps were on bronze (*aes*) A map could also be on other materials, such as wooden tables, scrolls, marble. *Siculus Flaccus* says that synonyms of *forma*, and also of the land reported in it, were *cancellatio*, *centuriatio*, *pertica*, *typon*.

forum = inhabited place, not fortified and subjected to a *civitas*, mainly used as a place of commerce and exchange.

fundus = (1) farm; (2) synonym of *actus quadratus* (s.).

gallicus limes = s. *limes*.

gamma = the word *gamma*, i.e., the Greek letter *gamma* (Γ), indicated a turn at right angles in a *limes*. The same symbol on a boundary stones, or on a tree used as boundary marker, indicated a corner in a border.

geometri = scholars of geometry, understood as an abstract discipline.

gomor = measure for the liquids, s. Table F – Roman measures for the liquids.

gradus = *gradus* or simple pace. It was the half of a *passus* (or double pace) and so it was equal to two feet and half. S. Table C – Roman measures for the lengths.

groma / gruma = *groma*. The cross-shaped part of the entire device (*ferramentum* + *rostrum* + *groma*), which was generally called *ferramentum* or *groma*. The name derives from the Etruscan γρουμα / *gruma* that was the phonetic transliteration of the Greek γνώμων (*ghnomon*), as *Festus* makes us know⁵⁴. The Etruscans did not have the Greek sounds <ghn> and <o> and transcribed them with <gr> and <ou> but the latter sound was intermediate between a <u> and a <o> (for all these sounds, please consider the Latin phonetic). In fact, the Romans in taking this instrument from the Etruscans, transcribed it and read it as both *gruma* and *groma*, both of which are correct in Latin [Calonghi 1965]. The termination in -a is typical of many Etruscan words and therefore is a further adaptation of the Greek term. However the Greeks to establish straight lines and lines placed at a certain angle with respect to a first line, instead of the *groma* used the *dioptra*, which is not mentioned in the *Gromatici Veteres*. The *dioptra* was also used by the Greeks to establish a horizontal line while the Romans used the *libra* for this purpose. The *libra* and the *dioptra*, as well as the *chorobates*, another important Greek instrument, are never mentioned in the *Gromatici Veteres*.

gromaticus (plural *gromatici*) = s. *agrimensor*. Late meaning: author of works related to the surveyor.

hemina = measure for the liquids, s. Table F – Roman measures for the liquids.

heredium (plural *heredia*)= (1) a measure of land equal to 2 *iugera*, i.e., 4 square *actus*, equal to 240 · 240 feet = 57,600 square feet. S. Table D – Roman measures for the areas. One hundred *heredia* constituted a *centuria* in its most common extension, that is to say with sides of 2,400 feet = 20 linear *actus*; (2) inherited farm.

hin = s. *congius*.

incursorius = s. *terminus*.

indiviso / pro indiviso = land not divided and left for common use.

intercisivus limes = s. *limes*.

interdictum = order issued by a magistrate and whose immediate execution was ordered, for example the assignment of a land to a contender and the expulsion of the other contender. But if the losing party opposed the case, it was then solved by a normal process.

interversura = s. *versura*.

iter = (1) road, way; (2) right of passage.

iugerum (kastrensis) = *iugerum*; measure for the areas equal to 2 square *actus*, i.e. 120 · 240 feet = 28,800 square feet. S. Table D – Roman measures for the areas. One *iugerum (kastrensis)* was equal to 3 *modia kastrenses*.

kalafiones = s. *terminus*.

kardo = s. *cardo*.

lacinia = strip of land.

laterculi = s. *plinthides*.

levua = league, unit of distance used in *Gallia* equal to a mile and a half, s. Table C - Roman measures for the lengths. In the text, it is written *leuua*, which could be read as *leuva* or as *levua*. It is necessary to prefer the second transcription which explains the subsequent phonetic evolution: ‘legua’, ‘league’ in the Spanish or Portuguese speaking countries, ‘league’ in English, ‘lega’ in Italian.

⁵⁴ “*Groma appellatur genus machinolae cuiusdam, quo regiones agri cuiusque cognosci possunt, quod genus Graeci γνώμωνα dicunt.*” (“*Groma* is called a type of small machine by which the areas of each field can be known and that the Greeks call γνώμωνα”) [*Festus* II century A.D.]. The term γνώμων in Greek meant gnomon, i.e. index of the solar clock, but also knower, interpreter, judge.

libra = *libra* (pound⁵⁵); (1) unit of measurement for the weights, divided into twelve *uncia*e, s. Table E – Roman measures for the weights; (2) unit of measurement for the areas used in the *Gallia Narbonensis*; (3) instrument used by the Romans to establish a horizontal line (from *libella*, diminutive of *libra*, derives the Italian ‘livella’ that has the same function).

libri aeris = s. *tabulae aeris*.

limes (plural *limites*) = (1) border, boundary of a land; (2) *limes*, generally unpaved road that divided a *centuria* from another, or parts of an internal subdivision of a *centuria*, or of *strigae* / *scamna* in a *strigatio* / *scamnatio*.

--- *actuarius* = *limes* of greater importance, i.e., *decumanus maximus*, *kardo maximus* and all *limites quintarii*.

--- *cardines* = s. *cardo*.

--- *decimanus* / *decumanus* = s. *decimanus* / *decumanus*.

--- *egregius* = synonym of *actuarius* (s.).

--- *gallicus* = synonym of *montanus* (s. L. 227.12-13, 252.2-3, 256.6-7, 256.16, 308.18, 314.29-30, 328.20-21, 359.15, 359.22-23).

--- *intercisivus* = *limes* that was internal to a centuriation.

--- *linearis* = synonym of *subruncivus* (s.).

--- *maritimus* = *limes maritimus*, maritime *limes*, i.e. that faces the sea.

--- *montanus* = *limes montanus*, i.e. that faces the mountains.

--- *nonanus* = *limes* that faces the ninth hour, i.e., towards south-west.

--- *perennis* / *perpetuus* = continuous *limes*.

--- *quintarius* (plural *quintarii*) = starting from the *limes* following the *decumanus maximus* or the *kardo maximus* each fifth *limes* was called *quintarius*. It is worth pointing out that, by counting the *decumanus maximus* or the *kardo maximus*, the first *quintarius* was the sixth *limes* and not the fifth.

--- *sextaneus* = *limes* that faces the sixth hour, i.e., towards south.

--- *subruncivus* / *linearis* = all the *limites* that were not *actuarii*, that is to say all the *limites* that were intermediate between the *limites quintarii*, or also between the *kardo maximus* / *decumanus maximus* and the first *limes quintarius*.

--- other types of limits are reported in *NOMINA LIMITVM* (from L. 247.21 to 249.31).

limitatio (plural *limitationes*) = (1) procedure with which the fields were divided by defining the *limites*; (2) synonym of *forma*.

--- *centuriatio* = a *limitatio* by which the fields were divided in squares or rectangles of constant dimensions (by example, 20 by 20 *actus*).

--- *metatio* = synonym of *limitatio*, or in a more restricted sense, a *limitatio* in the course of military operations.

--- *strigatio* / *scamnatio* = a *limitatio* by which the fields were divided into strips of earth (*strigae* or *scamna*).

linearis limes = s. *limes*

locus = place, specific part of a larger land extension.

macerias = s. *terminus*.

maritimus limes = s. *limes*.

medimna = measure for the liquids, s. Table F – Roman measures for the liquids.

ensor = s. *agrimensor*.

meta / **moeta** = *meta*; removable marker used by the surveyor during the surveys.

metatio = s. *limitatio*.

metator = land surveyor, or in a more restricted sense who carries out a *metatio*.

metreta = measure for the liquids, s. Table F – Roman measures for the liquids.

miliarum = mile, s. Table 2 – Roman measures for the lengths.

militaris via = s. *via*.

⁵⁵ From the Latin expression *libram pondo* (= the weight - *pondus* - of a *libra*), commonly used in the short form *pondo*.

mina = measure of weight, s. Table E – Roman measures for the weights.

mistron = s. *cignus*.

modius = (1) s. *terminus*; (2) *modius*, measure for the liquids, s. Table F – Roman measures for the liquids.

modius kastrensis = the third part of one *iugerum* (*kastrensis*), i.e., $28,800 / 3 = 9,600$ square feet.

modus = area of measured ground.

montanus limes = s. *limes*.

municipium (plural *municipia*) = community subjugated by the Romans and with less autonomy than a colony. In later times, the differences between a *municipium* and a colony progressively disappeared.

nonanus limes = s. *limes*.

norma = (1) right angle between two lines; (2) square to draw lines at a right angle.

obolus = *obolus*, measure for the weights (s. Table E – Roman measures for the weights) and for the liquids (s. Table F – Roman measures for the liquids).

occupatorius ager = s. *ager*.

oxifalum = measure for the liquids, s. Table F – Roman measures for the liquids.

pagus = village, or any non-fortified centre that was inferior and/or subordinate to a *civitas*.

palmus = palm, s. Table C – Roman measures for the lengths.

parallela = unit of measurement for the areas used in the *Gallia Narbonensis*.

passus = *passus*, pace (double pace). Unit of measurement equal to five feet. It was also equal to two *gradus* or simple paces. S. Table C – Roman measures for the lengths.

pertica = (1) *pertica*, a stick ten or twelve feet long; (2) *pertica*, a length measure of ten feet of 16 *digiti* or twelve feet of 18 *digiti* (if equal to ten feet, it is a synonym of *decempeda*, s.). S. Table C – Roman measures for the lengths; (3) *pertica*, the whole set of fields surveyed by a *limitatio*; (4) the map of a *limitatio* (s. *forma*).

pes = foot, central unit of measurement equal to 29.57 cm, s. Table C – Roman measures for the lengths.

pes prostratus = square foot, s. Table D – Roman measures for the areas.

plethron = among the Greeks the surface of a square of land with sides of 100 feet.

plinthides / laterculi = (1) square surfaces of land equal to 50 *iugera*; (2) square surfaces of land, which King *Tolomeus* left to the Roman people, with sides equal to 6,000 feet and then a total area of 1,250 *jugera*. In fact, $6,000 \cdot 6,000 = 36,000,000 = 1,250 \cdot 240 \cdot 120$.

porca = It was an area with sides of 30 and 80 feet. S. Table D – Roman measures for the areas.

possessio = s. *dominium*.

praefectura = (1) community presided over by a Senate envoy; (2) land attributed to a colony by subtracting it from a nearby community.

pro indiviso = s. *indiviso*.

proportionalis = s. *terminus*.

proprietas = s. *dominium*.

publica via = s. *via*.

publicus ager = s. *ager*.

quadrans = measure for the weights, s. Table E – Roman measures for the weights.

quadrifinium / quatrifinium (plural *quadrifinia* / *quatrifinia*) = boundary between four properties.

quaestorius ager = s. *ager*.

quintarius limes = s. *limes*.

relicta = unallocated goods, for example because they could not be cultivated.

rigor = (1) straight line of boundary traced by man; (2) roughly straight natural border line, like a crest of hills or mountains.

rasta = It was used in *Germania* and was equal to 3 miles (3000 *passus*), s. Table C – Roman measures for the lengths.

rostrum = the part of the instrument defined as a whole *groma* or *ferramentum* that connected the *ferramentum* (s.) with the *groma* (s.).

saltus = (1) a property consisting of forest and pasture; (2) according to *Siculus Flaccus* $5 \cdot 5 = 25$ *centuriae* (5.000 *iugera* for *centuriae* of 200 *iugera*). s. Table D – Roman measures for the areas; (3) according to *Varro* $2 \cdot 2 = 4$ *centuriae* (800 *iugera* for *centuriae* of 200 *iugera*).

scamnatio = s. *limitatio*.

scamnum (plural *scamna*) = rectangle of ground with the longer sides oriented along the axis from east to west (L. 3.10-16) or, for the centuriations not oriented with *decumani* from east to west and *kardines* from south to north, is presumably to be understood according to the *limites* that are closer to that direction.

sciotherum = Greek word indicating the stick placed at the centre of a sundial. The direction of his shadow indicated the hour of the day.

scorofio / scorpio = s. *terminus*.

scripulum / scrupulum = (1) as measure for the weight: 1/24 of an *uncia* [Calonghi 1965] and therefore $(1/24)/12 = 1/288$ of a *libra*. S. Table E – Roman measures for the weights; (2) as measure for the areas: 1/288 of one *iugerum* [Campbell 2000] = 100 square feet, i.e. a square *pertica* (a square with sides of 10 feet). S. Table D – Roman measures for the areas; (3) as measure for the liquids, s. Table F – Roman measures for the liquids.

servitus (genitive *servitutis*) = easement; a right in relation to third parties relating to a property. For example, easement of passage to access a nearby land.

sextaneus limes = s. *limes*.

sextarius = measure for the liquids, s. Table F – Roman measures for the liquids.

siliqua = small measure of weight, s. Table E – Roman measures for the weights.

spatula cursoria = s. *terminus*.

stadium = *stadium*, s. Table C – Roman measures for the lengths.

stater = measure for the weights, s. Table E – Roman measures for the weights.

strata = *lapidibus strata*, road paved with stones (L. 370.12-14).

striga (plural *strigae*) = rectangle of ground with the longer sides oriented along the axis from north to south axis (L. 3.10-16) or, for the centuriations not oriented with *decumani* from east to west and *kardines* from south to north, it is presumably to be understood according to the *limites* that are closer to that direction.

strigatio = s. *limitatio*.

subruncivus limes = s. *limes*.

subsicivum / subsecivum (plural *subsiciva / subseciva*) = (1) unassigned part within a *centuria*; (2) unassigned part between the centuriated zone and the outer border; (3) incomplete *centuria* at the margins of the centuriation.

supercilium = slightly elevated place, terrace. If the difference of elevation was above 30 feet it was considered a hill.

tabulae aeris / libri aeris = bronze plates showing the details of the assignments of the fields illustrated in the bronze map (*aes*).

tabularium = public archive in which the properties and their owners were registered.

tabularium principis = public archive of the emperor. It was a central archive, located in *Roma*.

talentum = talent, measure for the weights, s. Table E – Roman measures for the weights.

terminus = boundary stone, boundary marker. The respect for the border was considered a religious duty and there was the god *Terminus* who protected them.

--- *arca* = *arca*; boundary marker in the shape of a parallelepiped and hollowed on the upper side.

--- *aspratilis* = rough.

--- *attinae* = dry stones that formed a wall to delimit a boundary.

--- *botontinus* = a mound of land used to demarcate a border.

--- *carbunculi* = stones not finished.

--- *comportionales / conportionales / proportionales* = boundary marker that divided a single field or also a *centuria* into parts.

--- *congeria* = piles of stones.

--- *cursorius* = intermediate boundary marker.

--- *epidecticalis* = “indicator boundary stone (*principalis sive in angulo posito*)” [Calonghi 1965], boundary marker placed on a corner of the border.

--- *incursorius* = s. *modius*.

--- *macerias* = dry-stone walls.

--- *modius* = type of boundary stone also called *incursorius*.

--- *proportionalis* = s. *comportionales*.

--- *scorofio* / *scorpio* (plural *scorofiones* / *scorpiones*) = heap of stones. The boundary markers called *kalafiones* (L. 406.25) / *calaviones* (L. 401.21) were perhaps synonyms.

--- *spatula cursoria* = with the shape of a *spatula* and that defines an internal division.

--- *tiburtinus* (*terminus* / *lapis*) = *Tiburtinus*, which means that it was obtained from the territory of *Tibur* (Tivoli).

--- other types of boundary markers are shown in two lists under the title *NOMINA LAPIDVM FINALIVM* (from L. 249.32 to 251.19 and from L. 404.12 to 406.25).

territorium = land; if referred to a community, it was the territory on which the community had jurisdiction.

tetrans = (1) intersection point of two lines; (2) signal placed at such a point.

tiburtinus = s. *terminus*.

trames (plural *tramites*) = transversal path or direct route that runs through the fields.

trifinium (plural *trifinia*) = boundary between three properties.

typon = s. *forma*.

ulna = *ulna* (arm), s. Table C – Roman measures for the lengths.

uncia = *uncia* (ounce). The *uncia* was 1/12 of the unit of any kind. For example, the *uncia* was a twelfth of a foot. For the multiples and fractions of the *uncia* and the related symbols, s. Table B1 – Multiples of the *uncia* and Table B2 – Fractions of the *uncia*. For the equivalences with other measures, s. Table C – Roman measures for the lengths and Table E – Roman measures for the weights.

urna = measure for the liquids, s. Table F – Roman measures for the liquids.

usucapio = Usucaption, acquisitive prescription. It is the acquisition of property rights on a land following the possession without payment of any compensation for a period of time established by law (two years in Roman law).

varatio = method of measuring the size of an object not directly accessible.

vectigalis ager = s. *ager*.

versura / **interversura** = elbow or angle along a border.

versus / **vorsus** = (1) For *Osci* and *Umbri*, it was the area of a square field with 100 feet per side (= 10,000 square feet); in *Dalmatia* and elsewhere the *versus* was equal to 8,640 square feet, i.e., 3/10 of a *iugerum* (that is, 1 *iugerum* = 3,3333 *versus*); (2) measure of length equal to 100 feet, i.e. 29.57 m, about 30 m.

via = road;

--- *publica* = public road.

--- *militaris* = road used for military purposes.

--- *vicinalis* = way between two or more neighbouring properties. Generally, it was not public and open only to the passage of the neighbours.

vicinalis via = s. *via*.

vicus = village, or any non-fortified centre that was inferior and/or subordinate to a *civitas*.

villa = country house and the cultivated fields belonging to it.

LIST OF THE *LIMITATIONES* ILLUSTRATED IN THE FIGURES

Abbreviations

C = centuriation; S = *strigatio*; F = *fundus*; A = *actus* = 35.48 m; V = *vorsus* = 29.57 m.

The first column on the left shows the number assigned by Chouquer et al. [Chouquer et al. 1987].

	Name	Age	Type	Module	Module in metres	Angle
1	<i>Bovillae-Tusculum</i>	Sullan	C	14 x 14 A	496.72 x 496.72	25° 30' E
2	<i>Collatia-Gabii</i> ⁵⁶	Sullan	C	15 x 15 A	532.2 x 532.2	42° 00' W
3	<i>Campi Tiberiani</i>	under <i>Tiberius</i>	C	20 x 20 A	710 x 710	18° 00' W
4	<i>Velitrae</i>	Augustan	C	15 x 15 A	532.2 x 532.2	03° 00' W
5	<i>Norba</i>	end IV-beginning III century b.C.	S	12 A	425.76	38° 00' W
6	<i>Ulubrae</i>	precocious	S	8 A	283.84	20° 00' W
7	<i>Setia</i>	precocious or triumphal?	C	10 x 10 A	354.8 x 354.8	44° 00' E
8	<i>Privernum I</i>	340 b.C.?	S	13 A	461.24	74° 00' E
9	<i>Privernum II</i>	II century b.C.?	C	10 x 10 A	354.8 x 354.8	22° 30' W
10	<i>Tarracina I</i>	329 b.C.?	S	2 A	71	30° 00' E
11	<i>Tarracina II</i>	triumviral	C	20 x 20 A	709.6 x 709.6	30° 00' E
12	<i>Fundi I</i> ⁵⁷	precocious (330 b.C.?)	S	irregular	-	41° 30' E
13	<i>Fundi II</i> ⁵⁸	?	C	7 x 7 A	248.36 x 248.36	15° 00' E
14	<i>Fundi III</i>	Augustan	C	15 x 15 A	532.2 x 532.2	37° 00' E
15	<i>Formiae</i>	likely Augustan	C	16 x 16 A	567.68 x 567.68	25° 30' W
16	<i>Scauri</i> ⁵⁹	Augustan centuriation within a <i>fundus</i> ?	F	6 x 6 A	212.88 x 212.88	34° 00' E
17	<i>Anagnia I</i> ⁶⁰	306 b.C.	S	10 A	354.8	28° 00' E
18	<i>Anagnia II-Signia</i>	triumviral	C	20 x 20 A	706 x 706	22° 30' E
19	<i>Ferentinum</i> ⁶¹	338 b.C.?	S	10 A	354.8	42° 00' W
20	<i>Alatrium-Frusino-Verulae I</i>	second half of IV century b.C.	S	12 A	425.76	03° 00' W
21	<i>Alatrium-Frusino-Verulae II</i>	Gracchan	C	13 x 13 A	461.24 x 461.24	14° 00' E
22	<i>Interamna Lirenas I</i>	312 b.C.	S	13 A	461.24	43° 00' E
23	<i>Interamna Lirenas II</i>	312 b.C.	S	13 A	461.24	08° 00' E
24	<i>Aquinum I</i>	precocious?	S	10 A	354.8	22° 30' W
25	<i>Fabrateria Nova I</i>	Gracchan	C	15 x 15 A	532.2 x 532.2	19° 45' W
26	<i>Aquinum II-Fabrateria II-Interamna Lirenas III-Casinum</i>	triumviral	C	20 x 20 A	709 x 709	28° 00' E

⁵⁶ Chouquer [Chouquer *et al.* 1987] report wrongly in the summary that the centuriation is 16 x 16 A instead of 15 x 15 as indicated in the text and confirmed in the fig. 3.

⁵⁷ Chouquer *et al.* report a *strigatio* with a module of 8 *actus*, but the distances are too irregular and do not appear to correspond to this module.

⁵⁸ Chouquer *et al.* report the possibility of a centuriation with a module of 14 *actus*.

⁵⁹ Chouquer *et al.* hypothesizes a possible centuriation related to a *fundus*.

⁶⁰ Chouquer *et al.* do not show a constant distance between the limits. However, with a distance equal to 10 *actus*, also present in other *strigationes* of the area, it is possible to get a good set of persistences.

⁶¹ Chouquer *et al.* report as doubtful the module of 12 *actus*, and the persistences seem to corroborate a *strigatio* with a module of 10 *actus*.

27	<i>Alba Fucens</i> ⁶²	303 b.C., under <i>Antoninus Pius</i>	S	12 A	425.76	28° 00' W
	<i>Caelanum</i> ⁶³	?	S	12 A	425.76	28° 00' W
28	<i>Corfinium-Sulmo I</i>	Gracchan	C	15 x 15 A	532.2 x 532.2	38° 45' W
29	<i>Corfinium-Sulmo II</i>	Augustan	C	20 x 20 A	709.6 x 709.6	39° 30' E
30	<i>Sora</i>	Augustan	C	15 x 15 A	532.2 x 532.2	35° 30' W
31	<i>Atina</i>	end II or I century b.C.?	C	14 x 14 A	496.72 x 496.72	33° 30' W
32	<i>Venafrum I</i>	268 b.C.?	S	irregular? 7 A? ⁶⁴	248.36	34° 00' E
33	<i>Venafrum II (Monteroduni)</i>	Augustan	C	16 x 16 A	567.68 x 567.68	23° 45' W
34	<i>Venafrum III (Roccaravindola)</i>	<i>fundus</i> ?	C	32 x 32 A	1135.36 x 1135.36	03° 00' W
35	<i>Venafrum IV (Prata Sannita)</i>	Augustan	C	16 x 16 A	567.68 x 567.68	28° 00' W
36	<i>Aesernia I - a</i>	263 b.C.?	S	12 A	425.86	37° 00' W
"	<i>Aesernia I - b</i>	263 b.C.?	S	6 A	212.88	10° 00' E
37	<i>Aesernia II</i>	Augustan	C	16 x 16 A	567.68 x 567.68	23° 00' W
38	<i>Bovianum Undecimanorum I</i>	I-II century b.C. (after 268?)	S	irregular	-	33° 00' E
39	<i>Bovianum Undecimanorum II</i>	Augustan	C	16 x 16 A	567.68 x 567.68	33° 00' E
40	<i>Saepinum</i>	Augustan	C	15 x 15 A	532.2 x 532.2	18° 00' E
41	<i>Cubulteria</i>	III or II century b.C.?	C	12 x 12 A	425.76 x 425.76	44° 00' E
42	<i>Caiaia</i>	Gracchan	C	13 x 13 A	461.24 x 461.24	21° 00' W
43	<i>Trebula</i>	Augustan	C	15 x 15 A	532.2 x 532.2	12° 00' W
44	<i>Telesia I</i> ⁶⁵	Gracchan or Sullan	C	10 x 10 A	351.5 (703)	29° 30' W
45	<i>Allifae I - a</i>	pre-roman	C	6 x 11 V	180 x 330	38° 00' W
"	<i>Allifae I - b</i>	pre-roman	C	6 x 11 V	180 x 330	23° 00' E
"	<i>Allifae I - c</i>	pre-roman	C	6 x 11 V	180 x 330	36° 00' E
46	<i>Allifae II-Teianum II -Telesia II-Saticula</i> ⁶⁶	triumviral	C	20 x 20 A	701.3 x 701.3	32° 15' E
47	<i>Beneventum I</i>	triumviral	C	20 x 20 A	706 x 706	42° 00' E
48	<i>Beneventum II</i>	Augustan (or later?)	C	16 x 25 A	567.68 x 887	02° 00' W
49	<i>Caudium I</i> ⁶⁷	III or II century b.C.	C	13 x 13 A	461.24 x 461.24	17° 30' E
50	<i>Caudium II</i> ⁶⁸	Augustan	C	15 x 15 A	532.2 x 532.2	16° 30' W
51	<i>Abellinum</i>	Gracchan or Sullan	C	14 x 14 A	496.72 x 496.72	27° 30' E
52	<i>Minturnae I</i> ⁶⁹	296 b.C.	C	4 x 4 A	141.92	17° 30' E
53	<i>Suessa I-Sinuessa I</i>	pre-roman?	C	8 x 8 V	240 x 240	40° 30' W
54	<i>Suessa II</i>	313 b.C.	S	irregular	-	-
55	<i>Sinuessa II</i>	296 b.C.?	C	16 x 16 V	480 x 480	21° 00' E

⁶² S. the next note.

⁶³ In the eastern part of the *strigatio Alba Fucens*, practically all the persistences are offset towards north-west by about 71 meters. This would allow us to hypothesize a different *strigatio*, perhaps contemporary to that of *Alba Fucens* and relative to *Caelanum*, a centre that is very little known.

⁶⁴ Chouquer *et al.* describe the *strigatio* as irregular, but with a module of 7 *actus* (248.36 m) it is possible to get a convincing *limitatio* of the territory.

⁶⁵ Chouquer *et al.* report correctly in the summary the angle N-29° 30' W, but the relative figure appears rotated and they report wrongly the angle of N-29° 30' E.

⁶⁶ Chouquer *et al.* report a module of 706 m, but it is possible to get better persistences with 701.3 m.

⁶⁷ Chouquer *et al.* report the angle of 18° 30' E.

⁶⁸ Chouquer *et al.* report wrongly in the summary an inclination of 16° 30' E instead of W.

⁶⁹ Chouquer *et al.* report a module of 4 x 8 A with irregular disposition.

56	<i>Suessa III</i>	Gracchan	C	13 x 13 A	461.24	32° 00'
57	<i>Minturnae II-Suessa IV</i> <i>-Sinuessa III – a</i>	triumviral	C	20 x 20 A	710 x 710	40° 00' E
"	<i>Minturnae II-Suessa IV</i> <i>-Sinuessa III - b</i>	triumviral	C	20 x 20 A	710 x 710	40° 00' E
58	<i>Sinuessa IV</i>	296 b.C.? Pre-roman?	C	6 x 6 V	180 x 180	38° 00' E
59	<i>Sinuessa V</i>	296 b.C.? Pre-roman?	C	25 x 6 V	750 x 150	05° 00' E
60	<i>Sinuessa VI</i>	296 b.C.?	S	irregular	-	-
61	<i>Ager Falernus I</i> ⁷⁰	340 b.C.	S	?	-	12° 00' E
62	<i>Ager Falernus II</i>	Gracchan	C	14 x 14 A	496.72 x 496.72	12° 00' E
63	<i>Forum Popilii</i>	Augustan	C	15 x 15 A	532.2 x 532.2	41° 00' E
64	<i>Cales I</i>	334 b.C.	S	13 A	470	37° 00' E
65	<i>Cales II</i>	Gracchan	C	14 x 16 A	496.72 x 567.68	31° 00' E
66	<i>Cales III</i>	Augustan	C	15 x 15 A	532.2 x 532.2	41° 00' E
67	<i>Teanum I</i>	Gracchan or Sullan	C	14 x 14 A	496.72 x 496.72	01° 30' W
68	<i>Teanum III-Cales IV</i>	Augustan	C	16 x 16 A	567.68 x 567.68	29° 00' W
69	<i>Ager Campanus I</i>	Gracchan	C	20 x 20 A	705 x 705	00° 10' E
70	<i>Ager Campanus II</i> ⁷¹	Sullan and Caesarean	C	20 x 20 A	706 x 706	00° 26' W
71	<i>Capua-Casilinum</i>	Augustan	C	16 x 16 A	567.68 x 567.68	12° 30' E
72	<i>Acerrae-Atella I</i>	Augustan	C	16 x 16 A	567.68 x 567.68	26° 00' W
73	<i>Neapolis</i> ⁷²	Augustan	C	16 x 16 A	567.68 x 567.68	26° 00' W
74	<i>Atella II</i>	subsequent to Sulla?	C	20 x 20 A	710 x 710	33° 00' W
75	<i>Nola I-Abella</i> ⁷³	Augustan	C	20 x 20 A	706 x 706	00° 00'
76	<i>Nola II</i>	?	C	20 x 20 A	707 x 707	41° 30' W
77	<i>Nola III</i>	under <i>Vespasianus</i>	C	20 x 20 A	707 x 707	15° 00' E
78	<i>Nola IV-Urbula</i> ⁷⁴	Augustan	C	16 x 16 A	567.68 x 567.68	43° 30' W
79	<i>Nuceria I</i>	Augustan?	C	20 x 20 A	710 x 710	02° 00' E
80	<i>Nuceria II</i>	triumviral? Neronian?	C	20 x 20 A	708 x 708	14° 30' W
	<i>Suessula</i> ⁷⁵	Sullan	C	15 x 15 A	532.2 x 532.2	29° 00' W
	<i>Ager Stellatis I</i> ⁷⁶	Augustan?	C	20 x 20 A	709 x 709	16° 10' E
	<i>Ager Stellatis II</i> ⁷⁷	subsequent to the preceding centuriation?	C	15 x 15 A	532.2 x 532.2	16° 10' E
	<i>Potentia</i>	?	C	20 x 20 A	710 x 710	29° 30' W
	<i>Iader</i>	Augustan	C	20 x 20 A	700 x 700	37° 00' W

⁷⁰ This *strigatio*, described by Chouquer *et al.*, is poorly defined and hardly distinguishable from the centuriation *Ager Falernus II*. Therefore, it is not possible to indicate its scheme.

⁷¹ Chouquer *et al.* report an angle of 0° 40' and a module of 706 m. A better approximation is obtained by an angle of 0° 26' and a module of 705 m.

⁷² It was identical to the centuriation *Acerrae-Atella I* as module and inclination. The decumans appear to be on the prolongations of the decumans of the other centuriation, but Chouquer *et al.* say that they are a little offset. In any case, the *kardines* are offset and therefore it is a different centuriation.

⁷³ Chouquer *et al.* report an angle of 0° 40' but with an angle of 0° a better approximation is possible.

⁷⁴ Chouquer *et al.* call it *Nola IV-Sarnum*, but there was *Urbula* where now is Sarno (and *Sarnum* is a medieval name).

⁷⁵ S. [Libertini 2013].

⁷⁶ S. [Guandalini 2004; Ruffo 2010; De Caro 2012].

⁷⁷ S. the preceding note.

OVERALL IMAGES OF THE *LIMITATIONES*

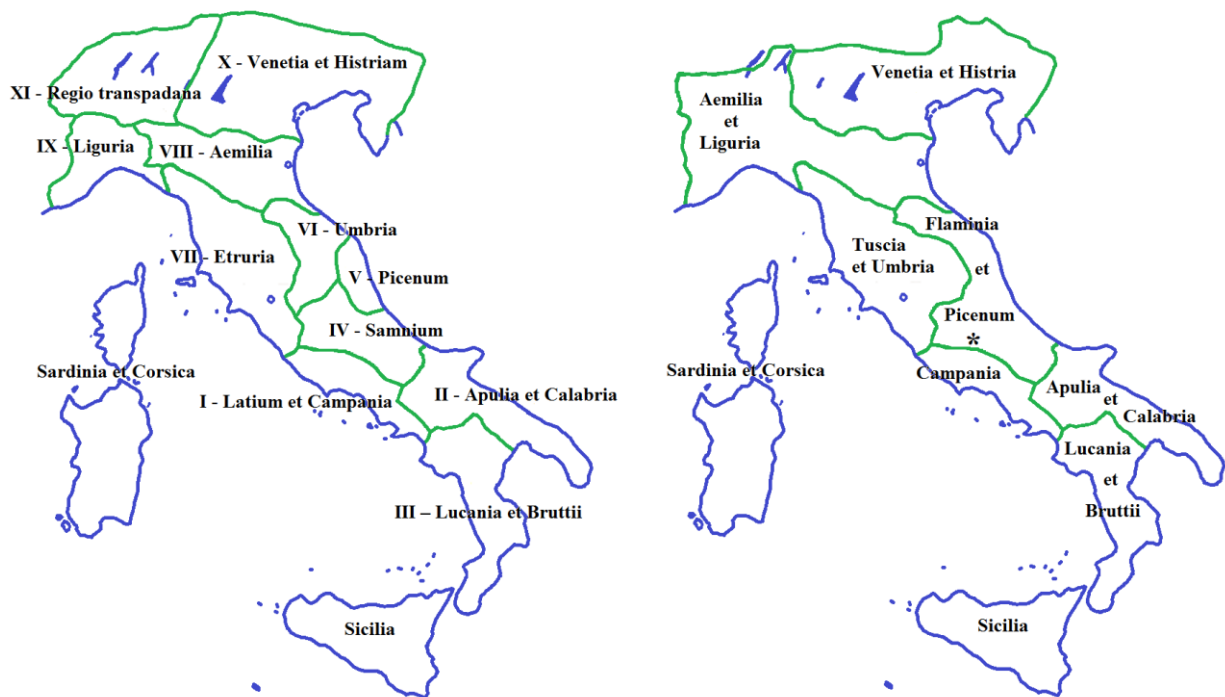


Fig. 47A – On the left: subdivision of *Italia* under the emperor *Augustus* (also the provinces *Sicilia* and *Sardinia et Corsica* are reported). On the right: subdivision of *Italia* in the IV century A.D. (From the tables 100 and 101 of the Barrington Atlas [Talbert 2000]).

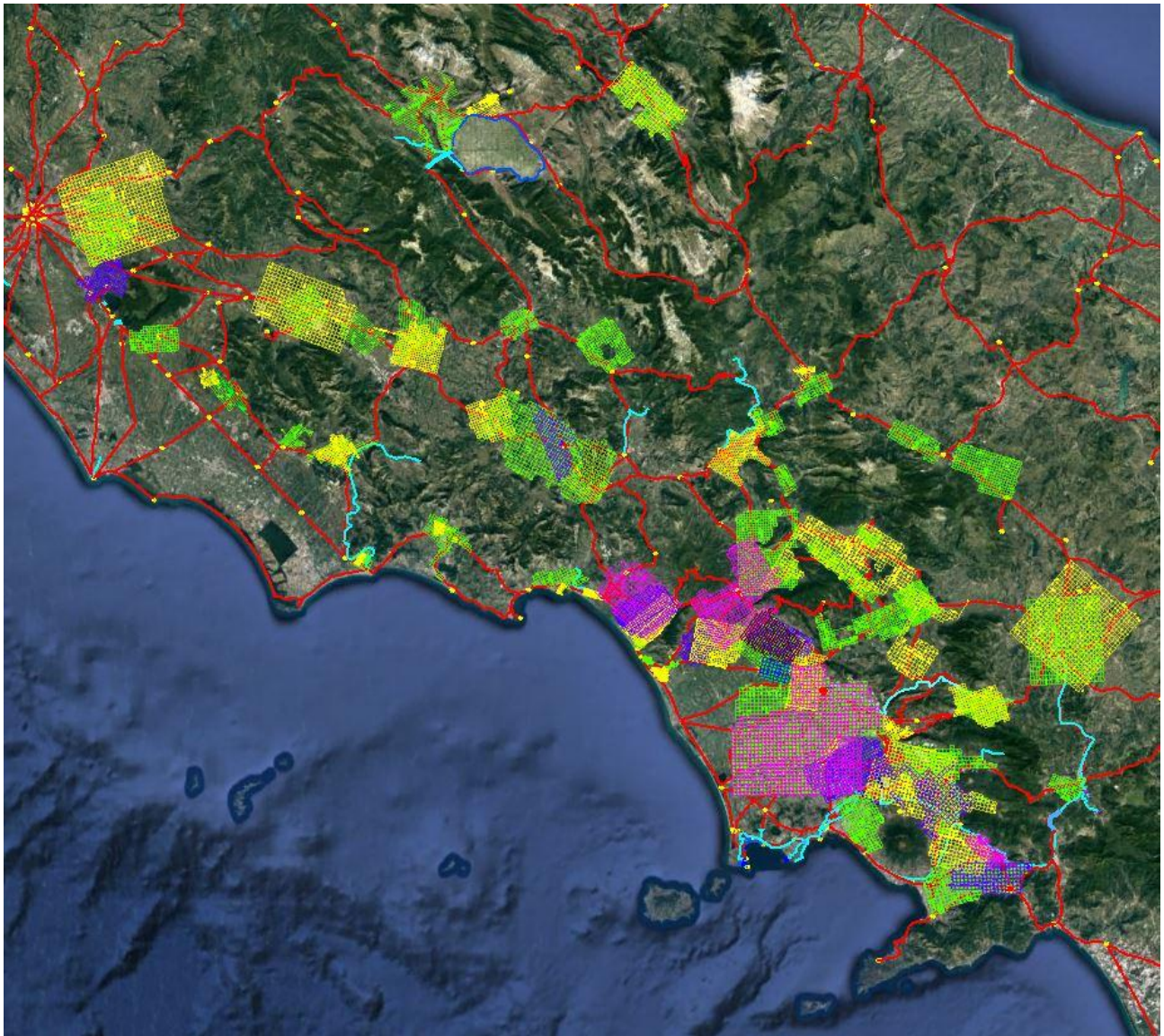


Fig. 47A' – Overall view of all limitations for which there are images accompanying the text (excluding the centuriation of *Iader*). The aqueducts of *Roma* are not reported.

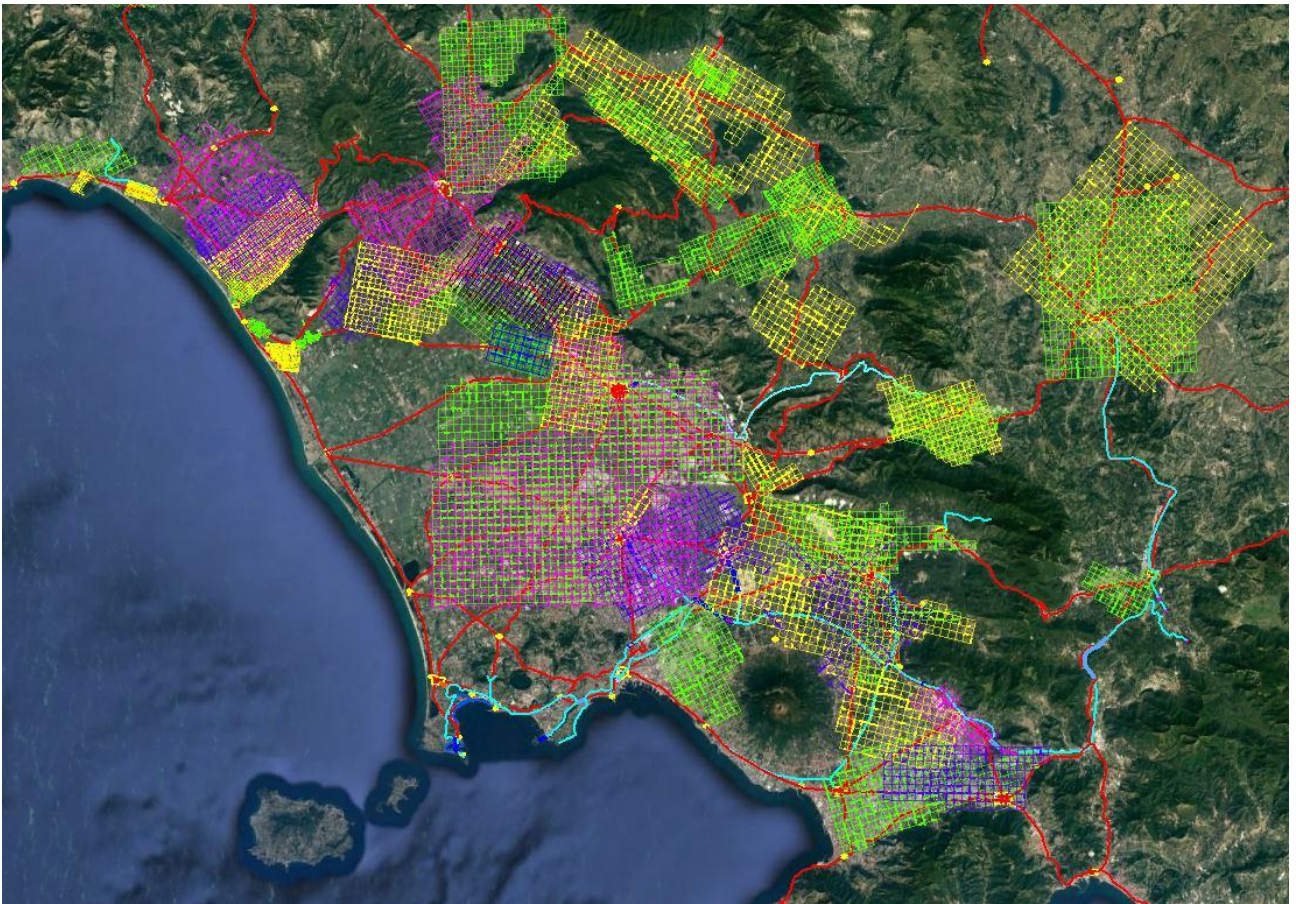


Fig. 47B - *Limitationes* of the *Campania* and of some internal near areas.

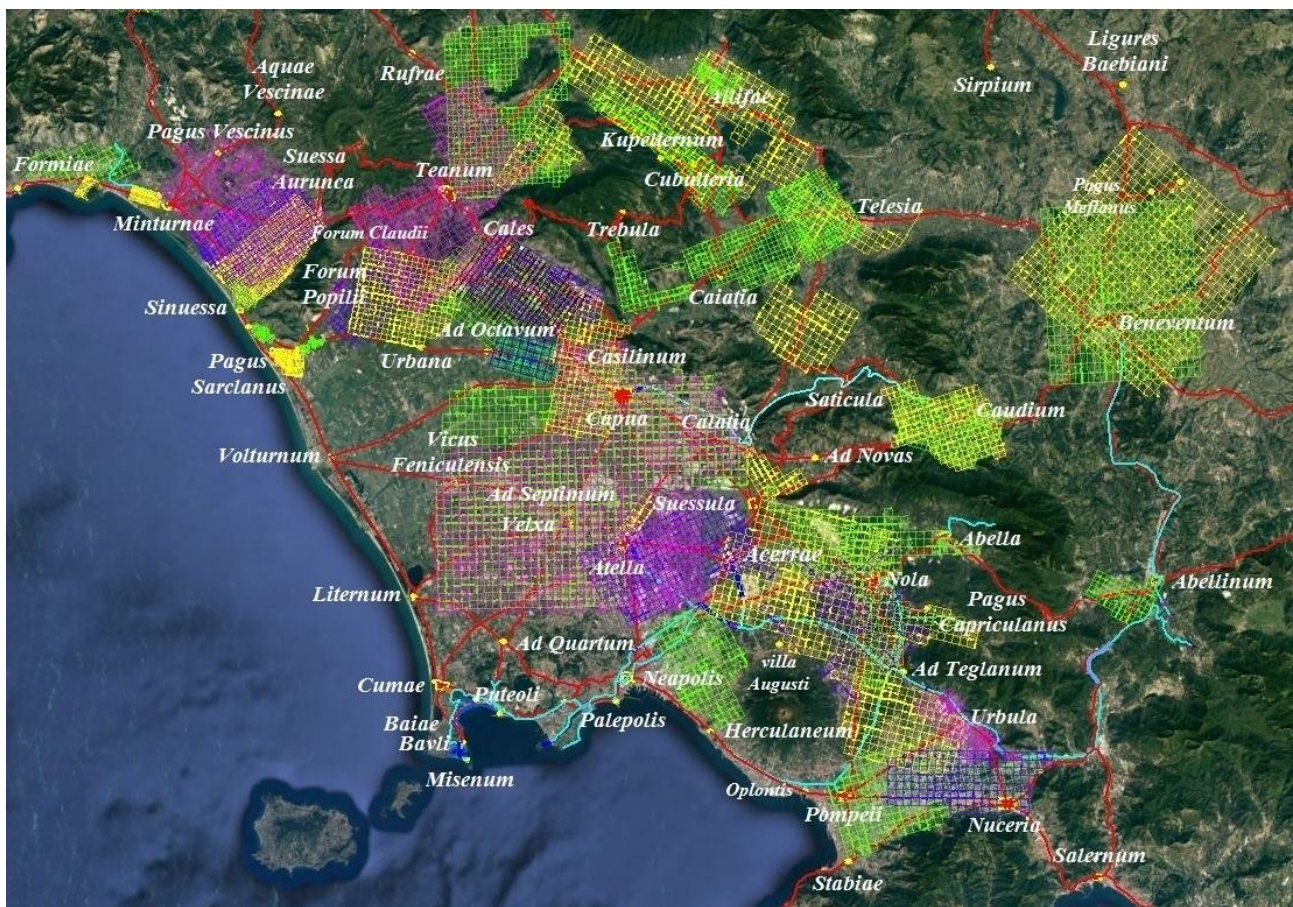


Fig. 47B' - Same image of the previous figure with the names of the towns.

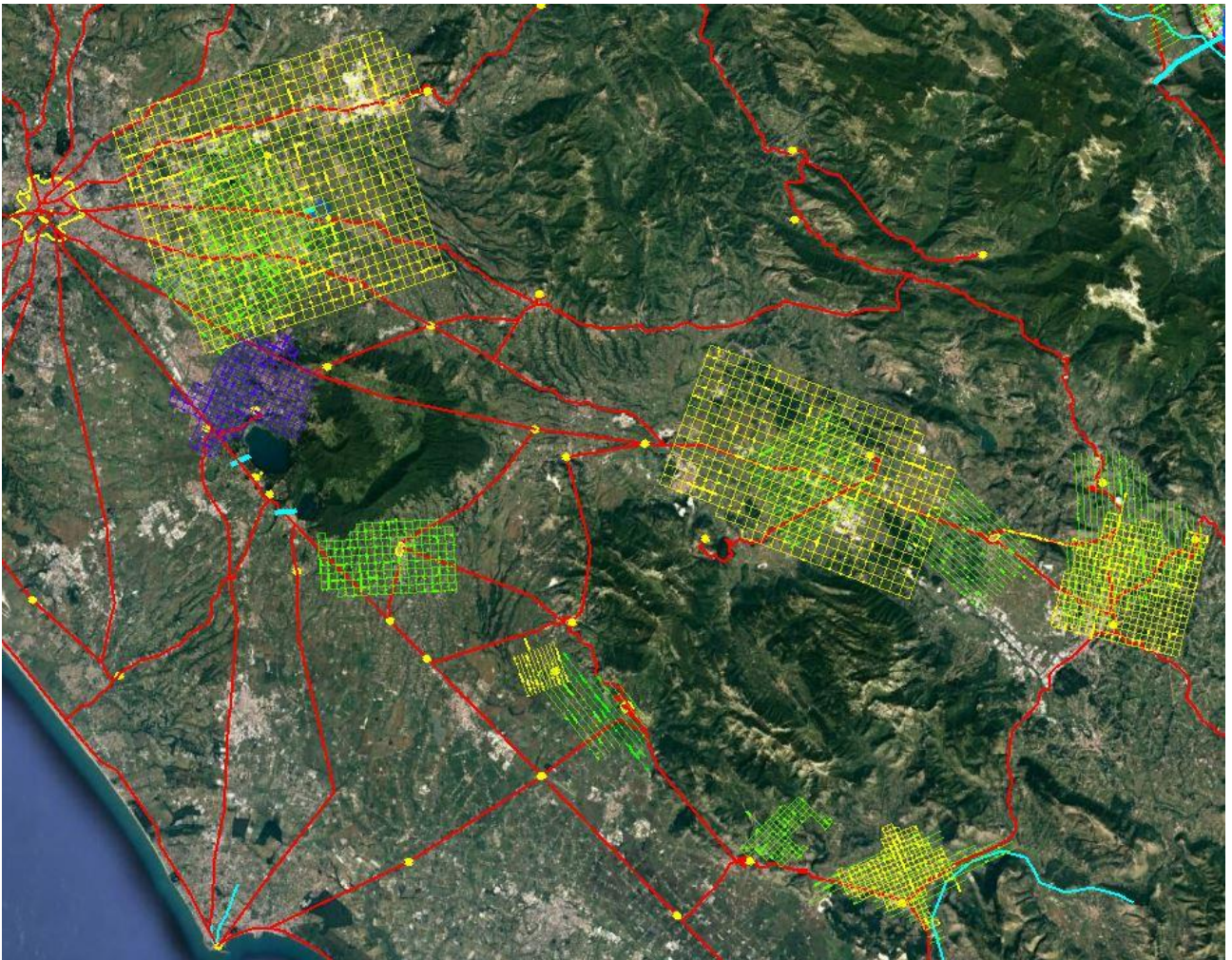


Fig. 47C – *Limitationes* of the *Latium*.

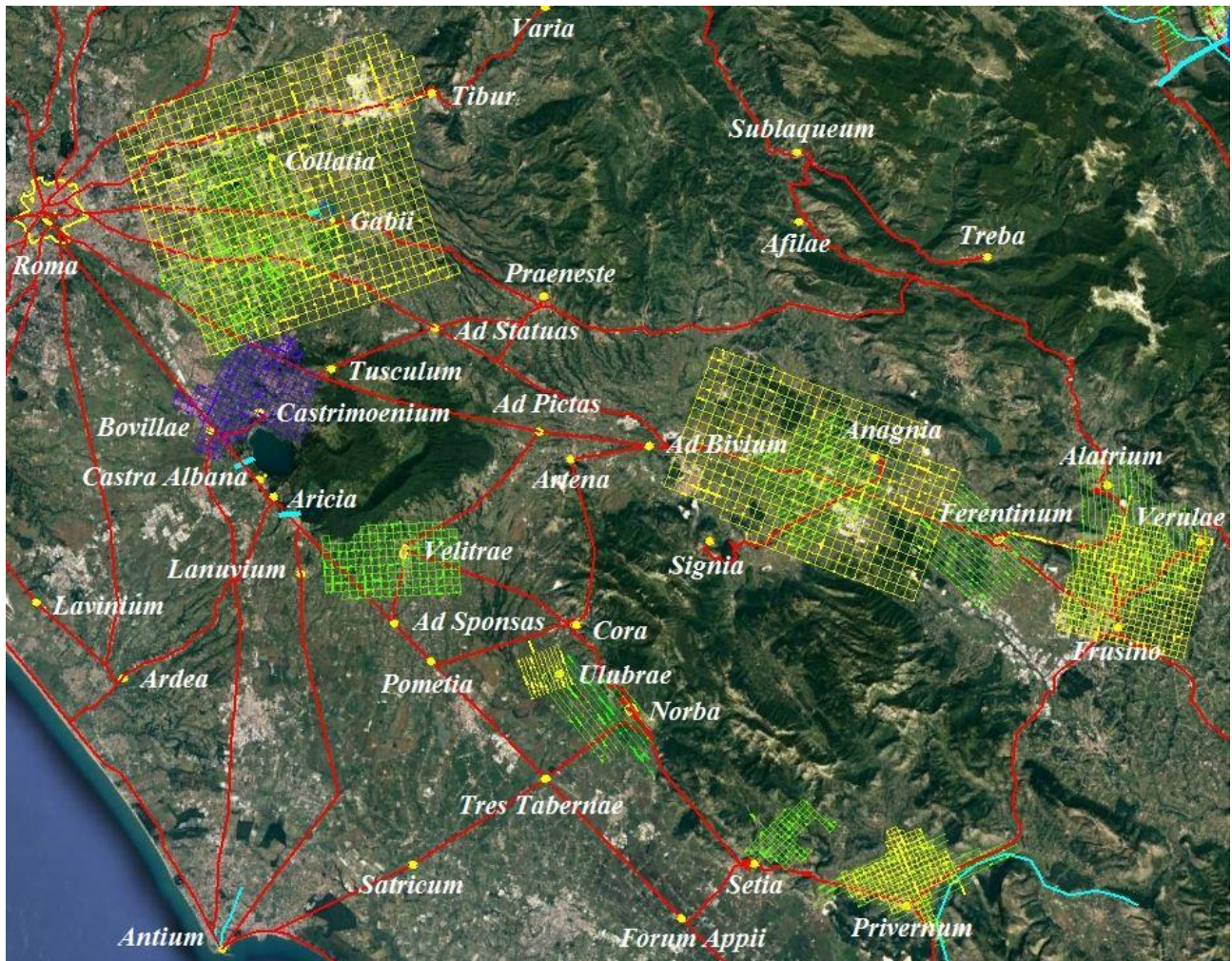


Fig. 47C' - Same image of the previous figure with the names of the towns.



Fig. 47D - *Limitationes* of the *Latium adiectum*.

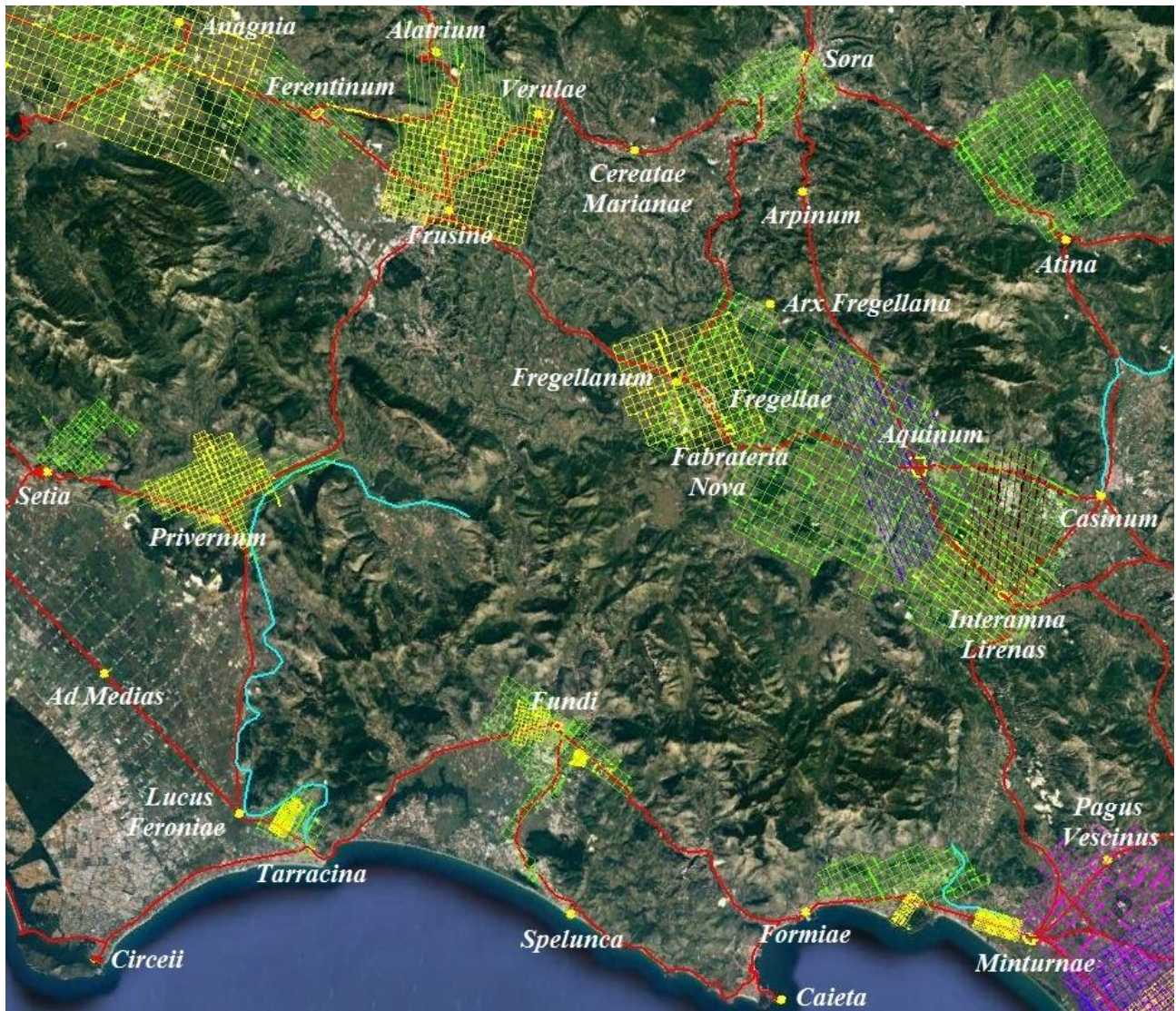


Fig. 47D' - Same image of the previous figure with the names of the towns.

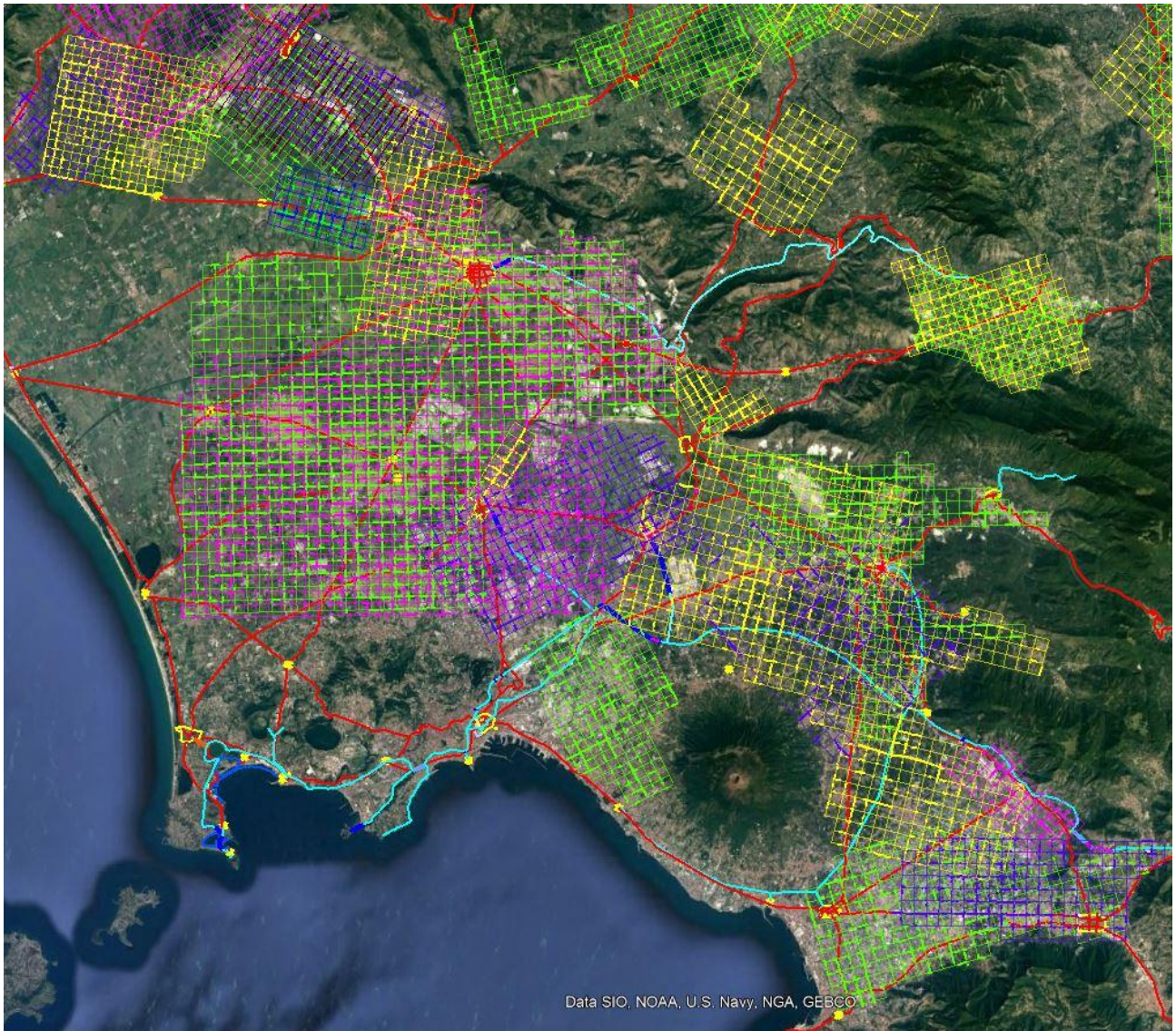


Fig. 47E - *Limitationes* of the *Campania*.

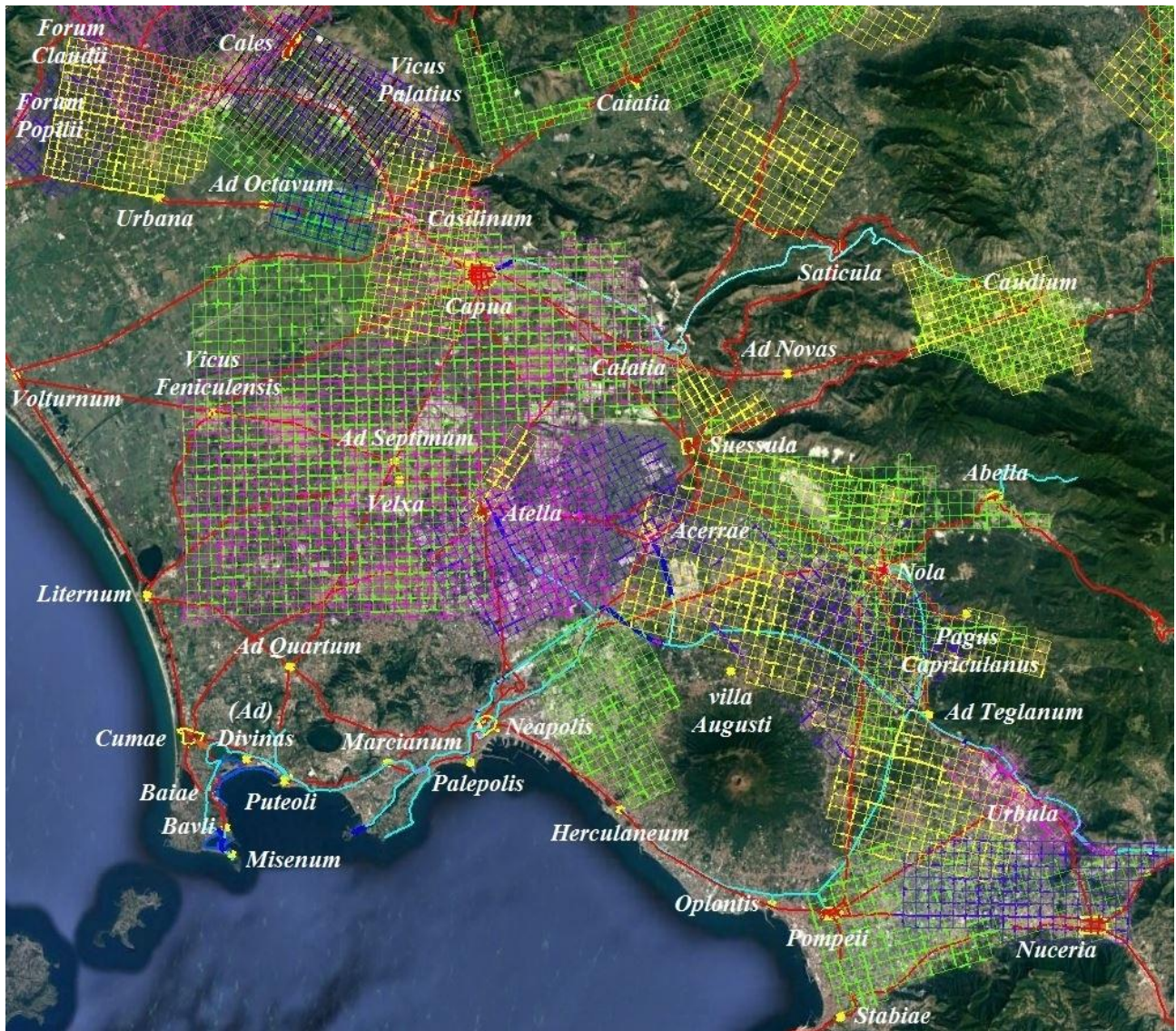


Fig. 47E' - Same image of the previous figure with the names of the towns.

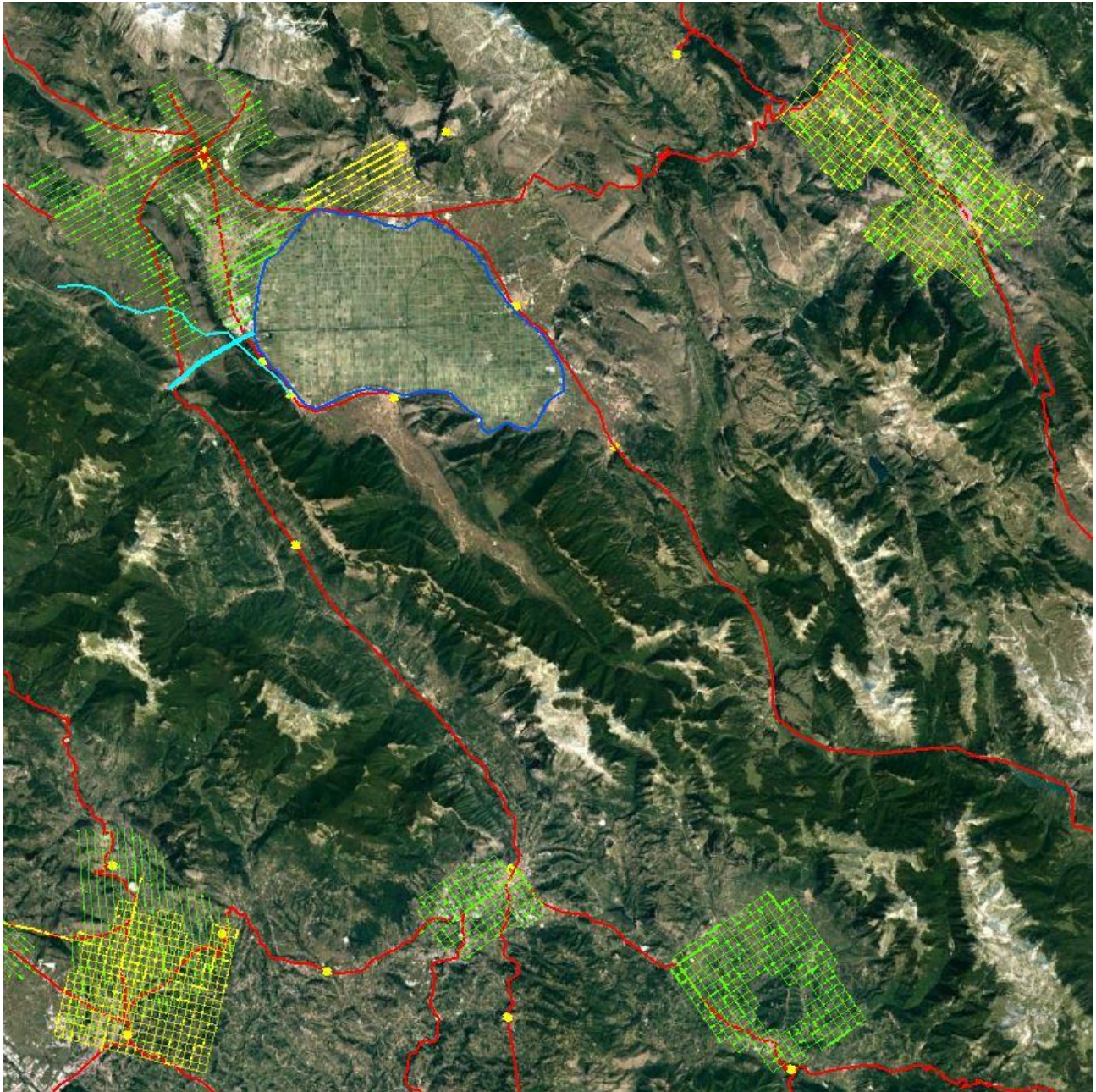


Fig. 47F - *Limitationes* in the area from *Alba Fucens* and *Corfinium* to *Frusino* and *Atina*.

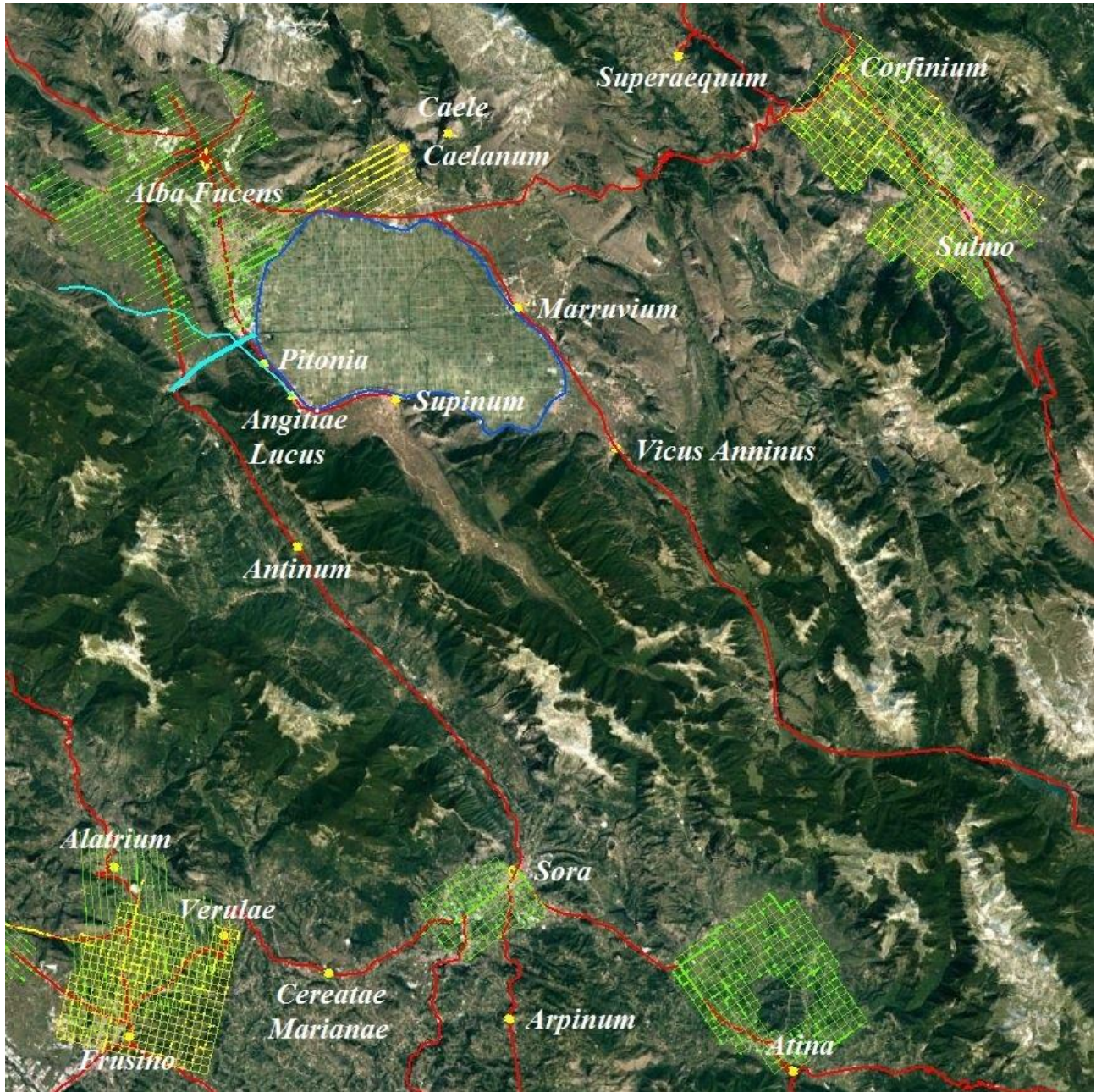


Fig. 47F' - Same image of the previous figure with the names of the towns.

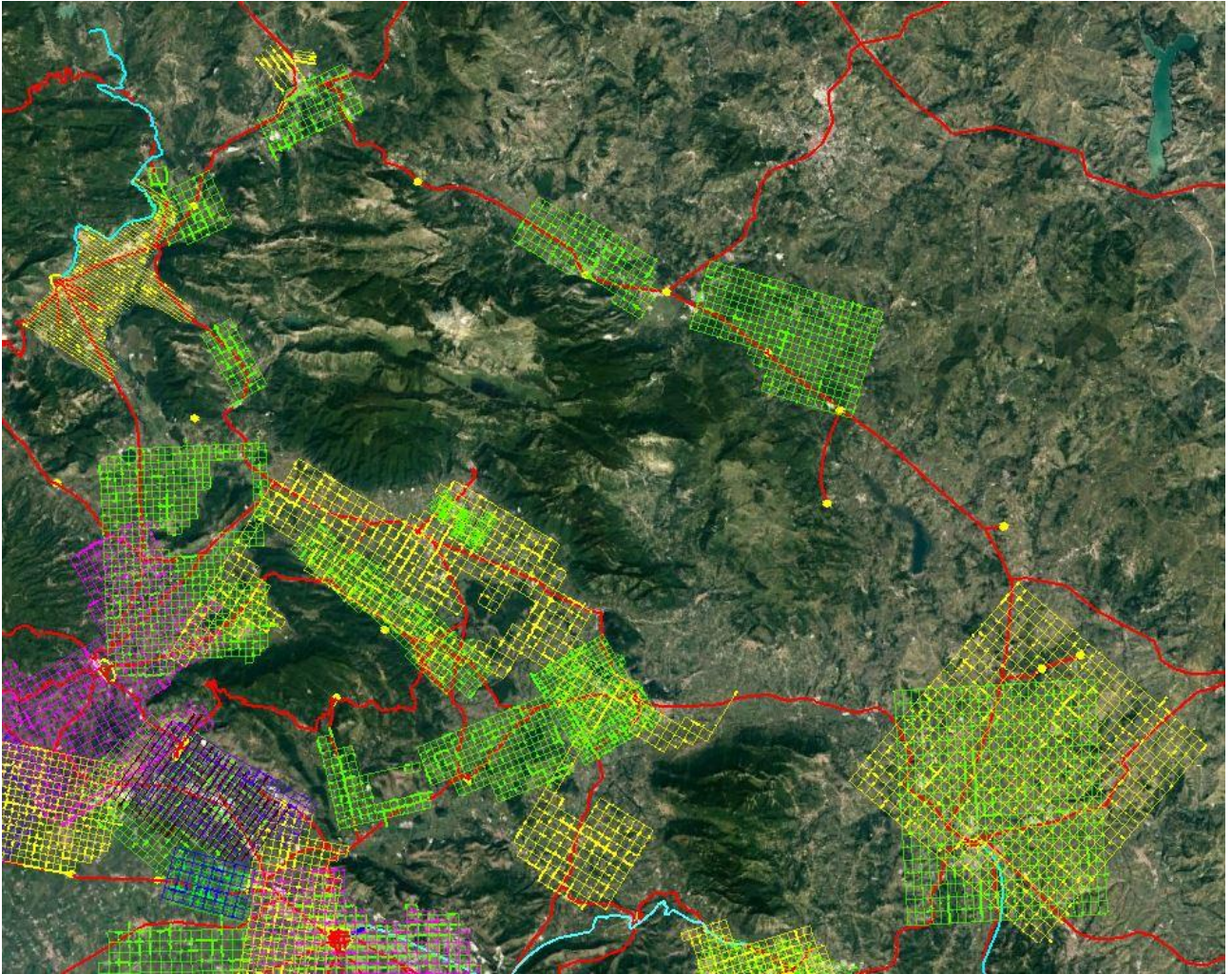


Fig. 47G – *Limitationes* from Venafrum, Aesernia, Saepinum to the campana plain and Beneventum.

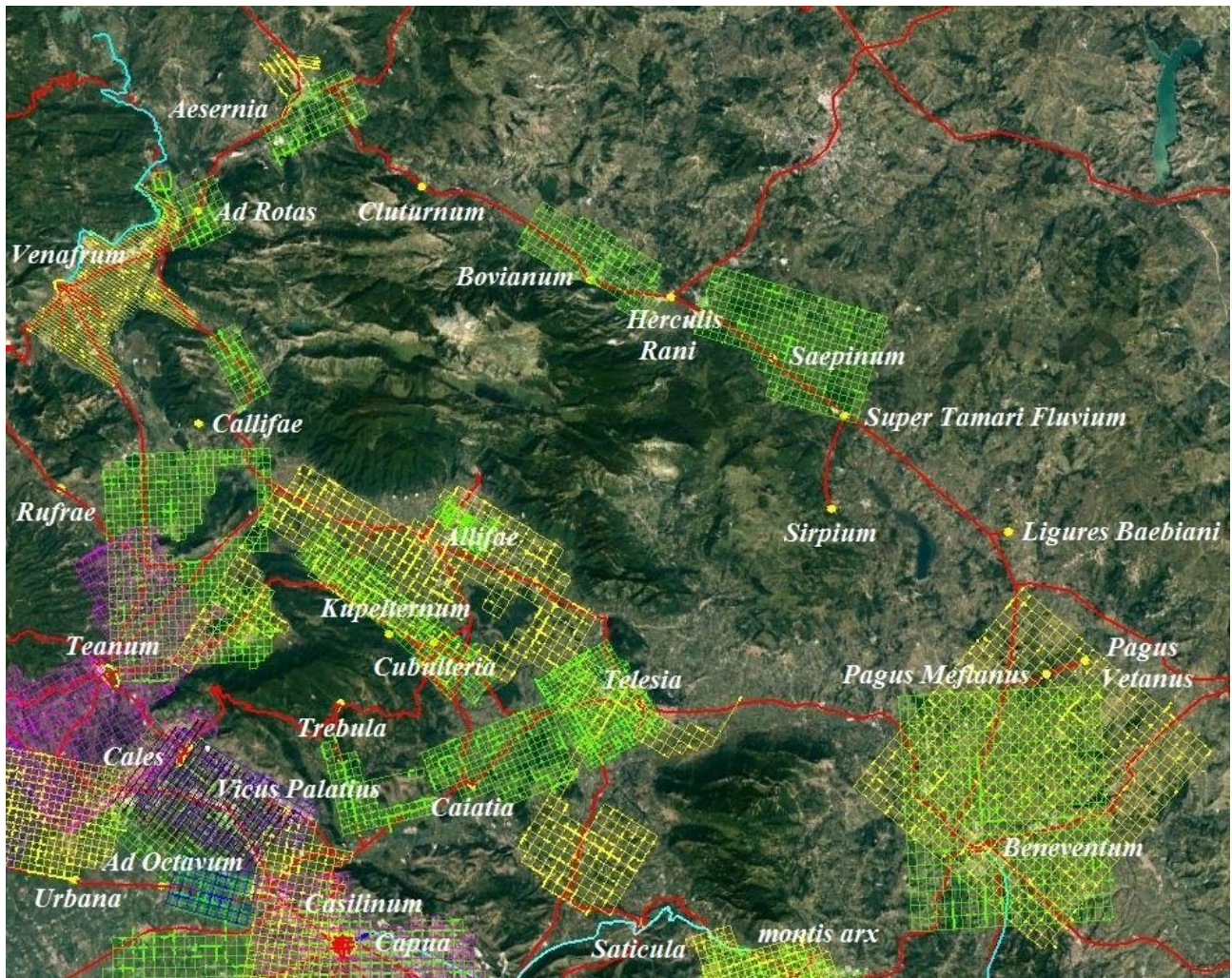


Fig. 47G' - Same image of the previous figure with the names of the towns.

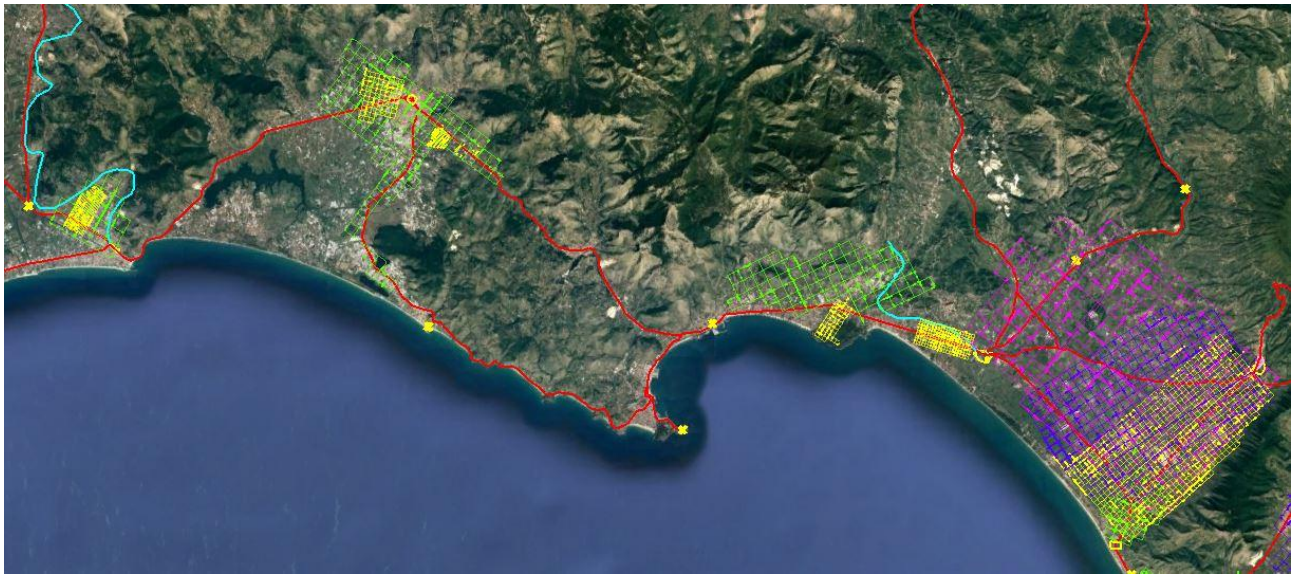


Fig. 47H - *Limitationes* from Tarracina to Suessa Aurunca.

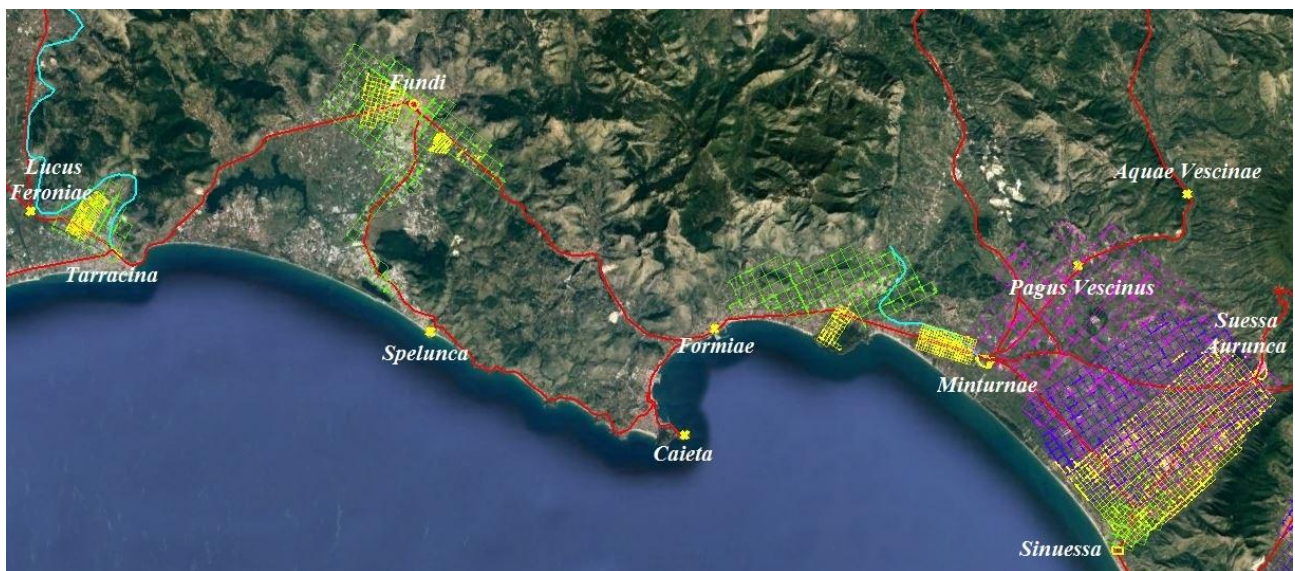


Fig. 47H' - Same image of the previous figure with the names of the towns.

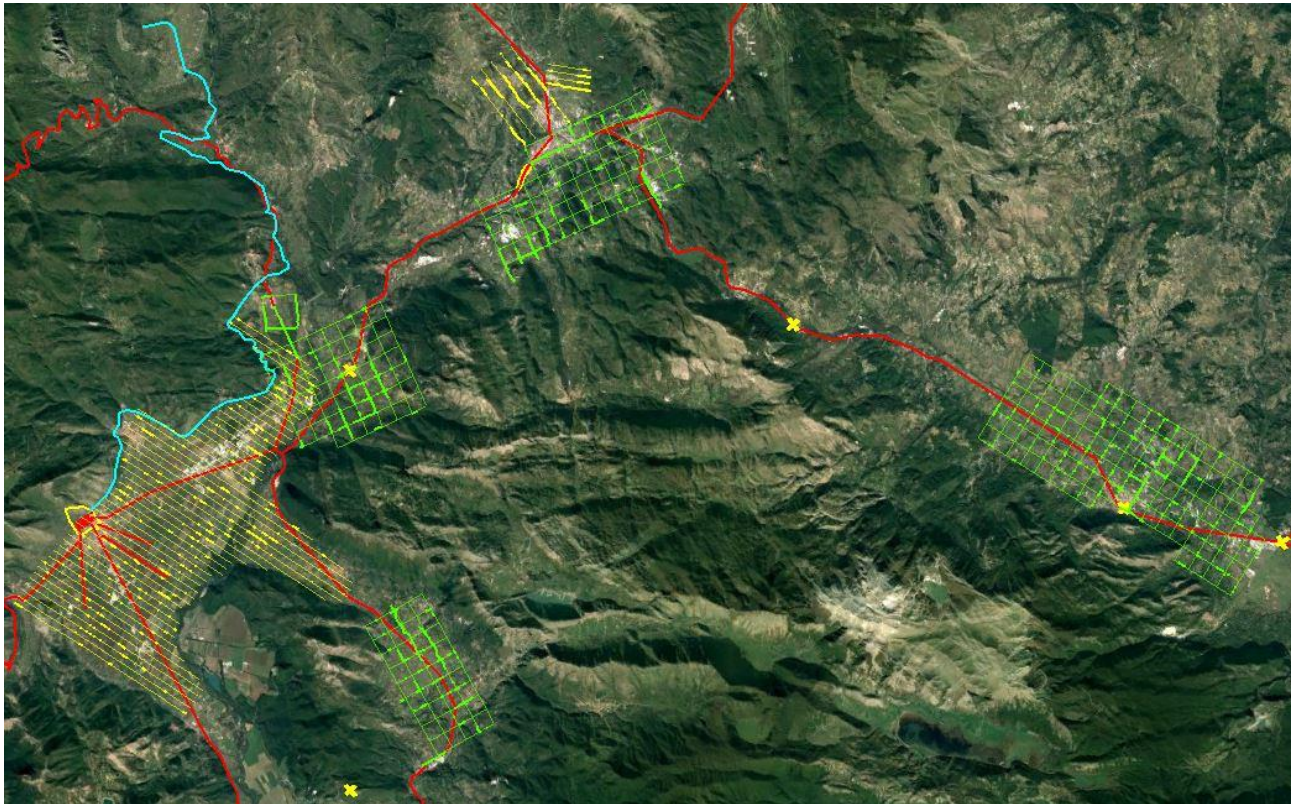


Fig. 47I - *Limitationes* of Venafrum, Aesernia, and Bovianum.

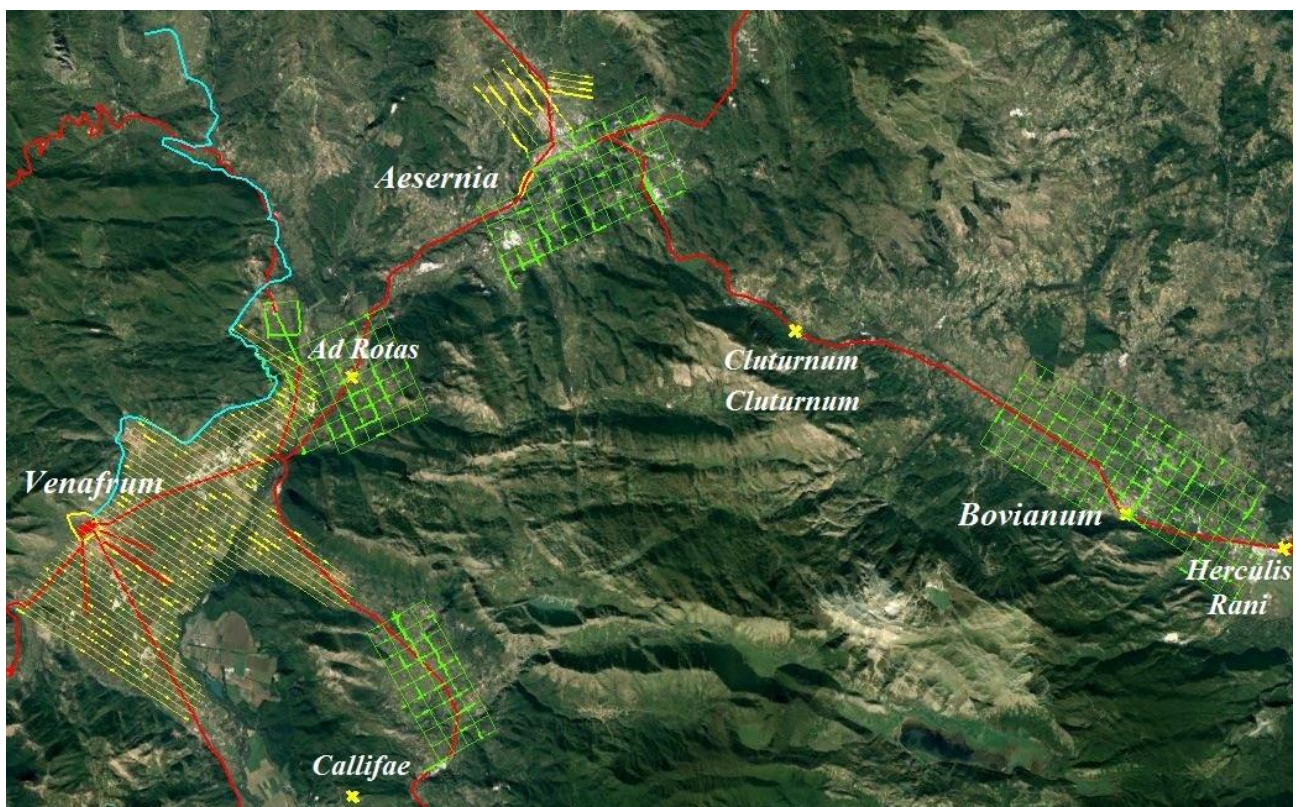


Fig. 47I' - Same image of the previous figure with the names of the towns.



Fig. 47J - *Limitationes* from Velitrae to Privernum.



Fig. 47J' - Same image of the previous figure with the names of the towns.

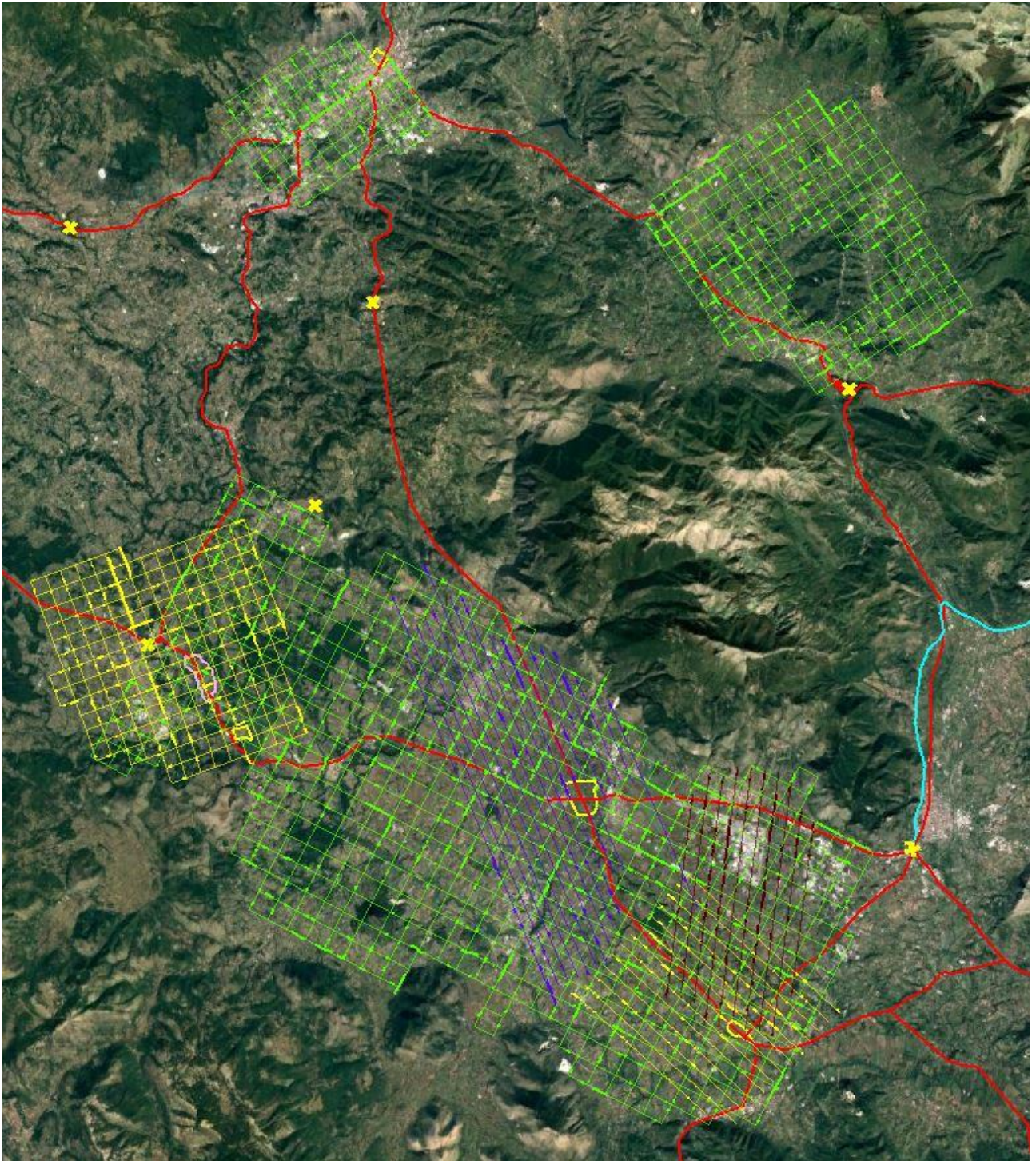


Fig. 47K - *Limitationes* from Sora and Atina to Fregellanum and Interamna Lirenas.

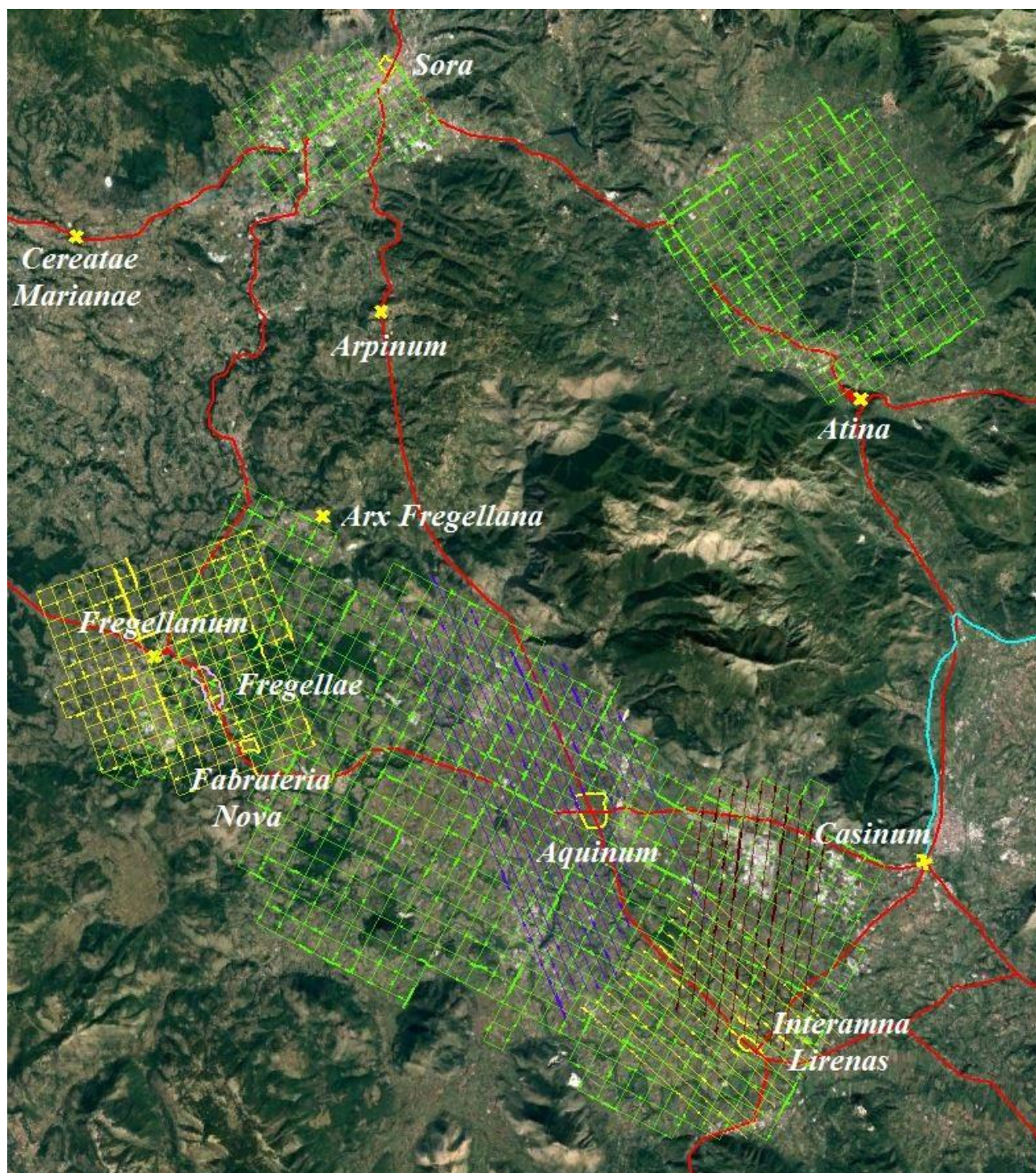


Fig. 47K' - Same image of the previous figure with the names of the towns.

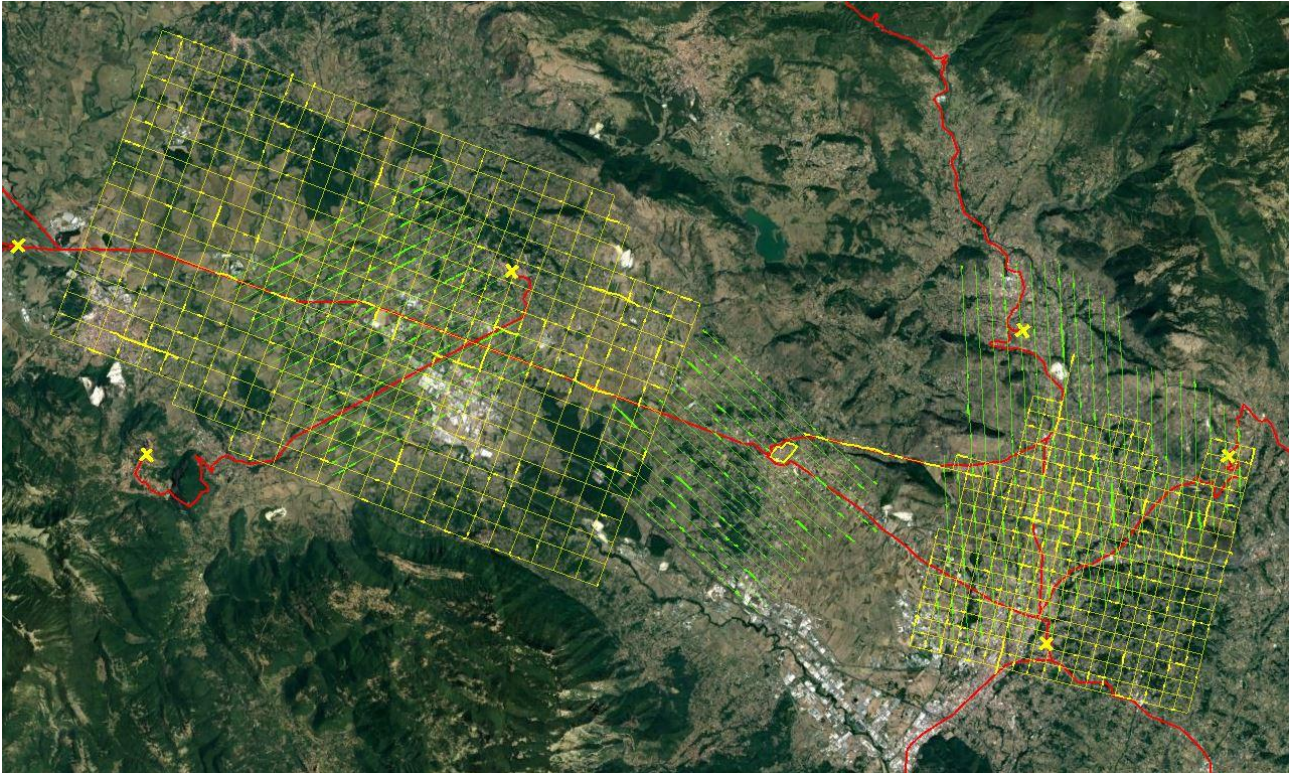


Fig. 47L - *Limitationes* from Anagnia to Verulae.

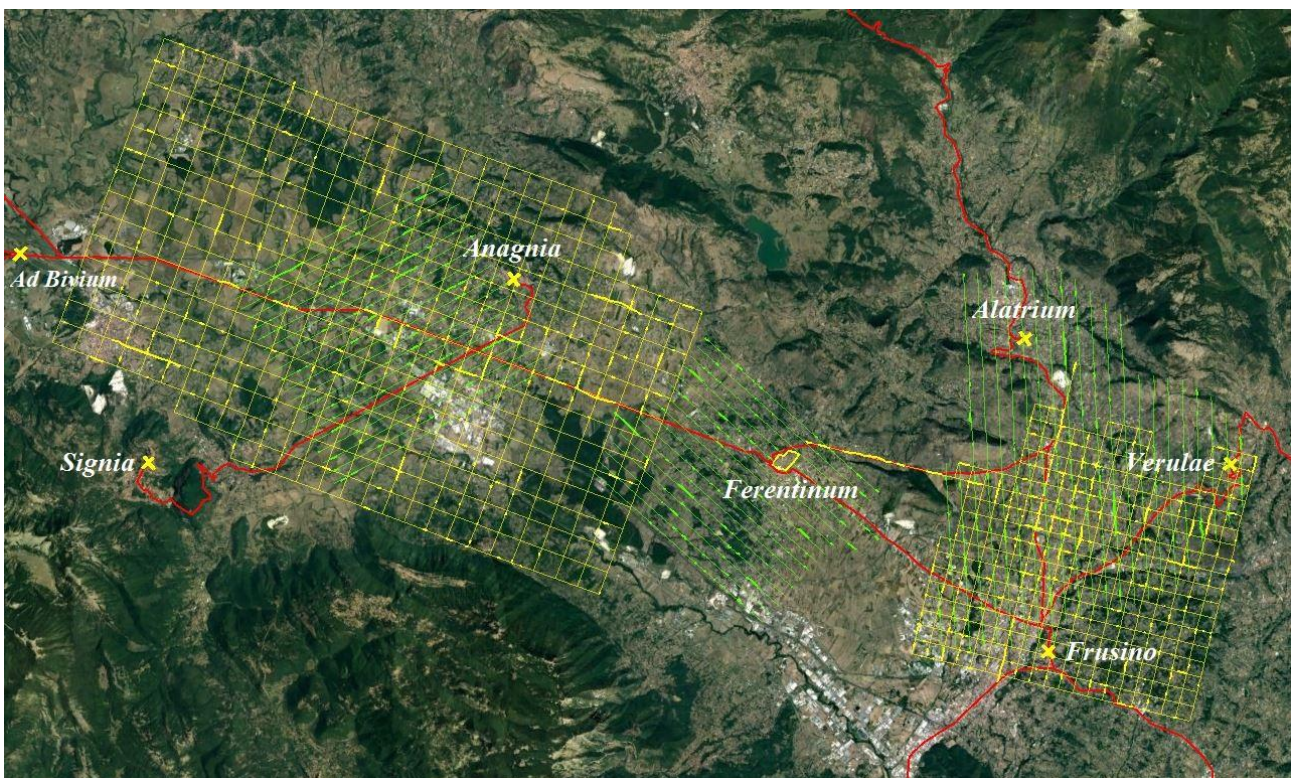


Fig. 47L' - Same image of the previous figure with the names of the towns.

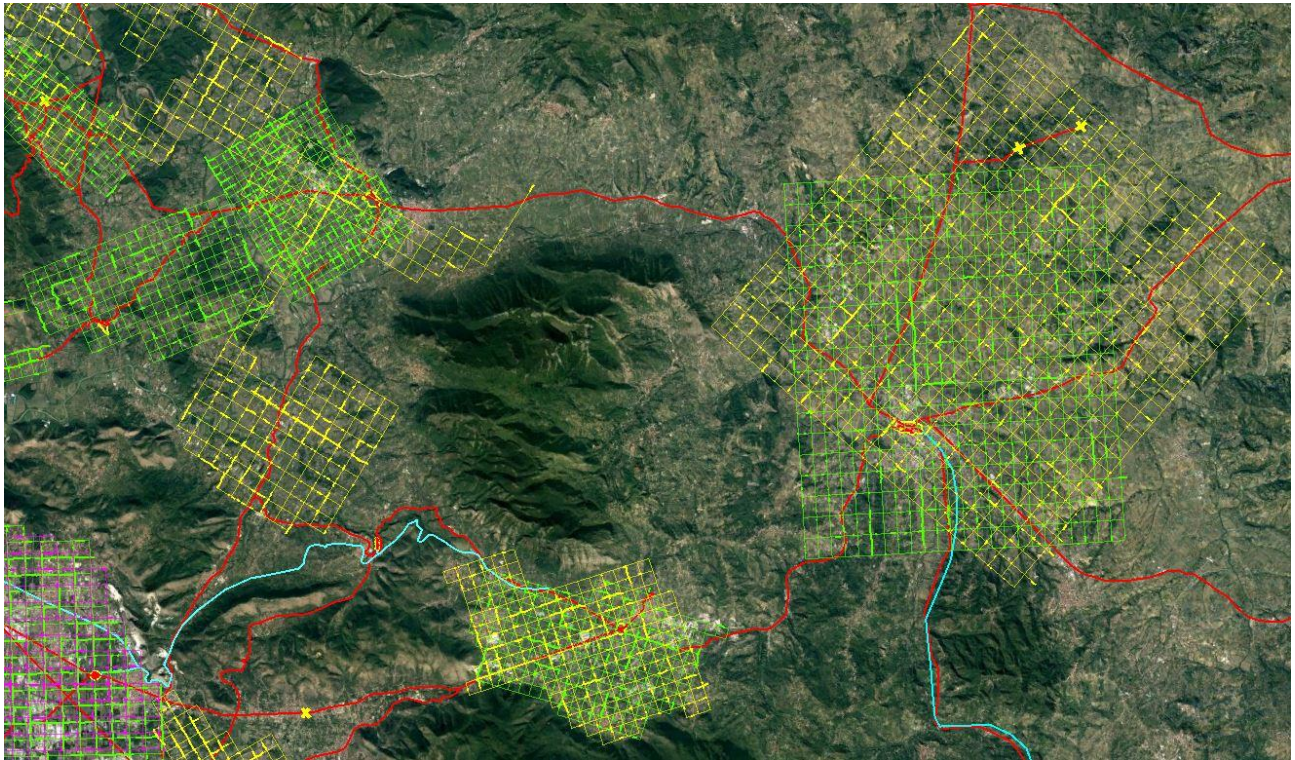


Fig. 47M - Limitationes of Telesia, Beneventum and Caudium.

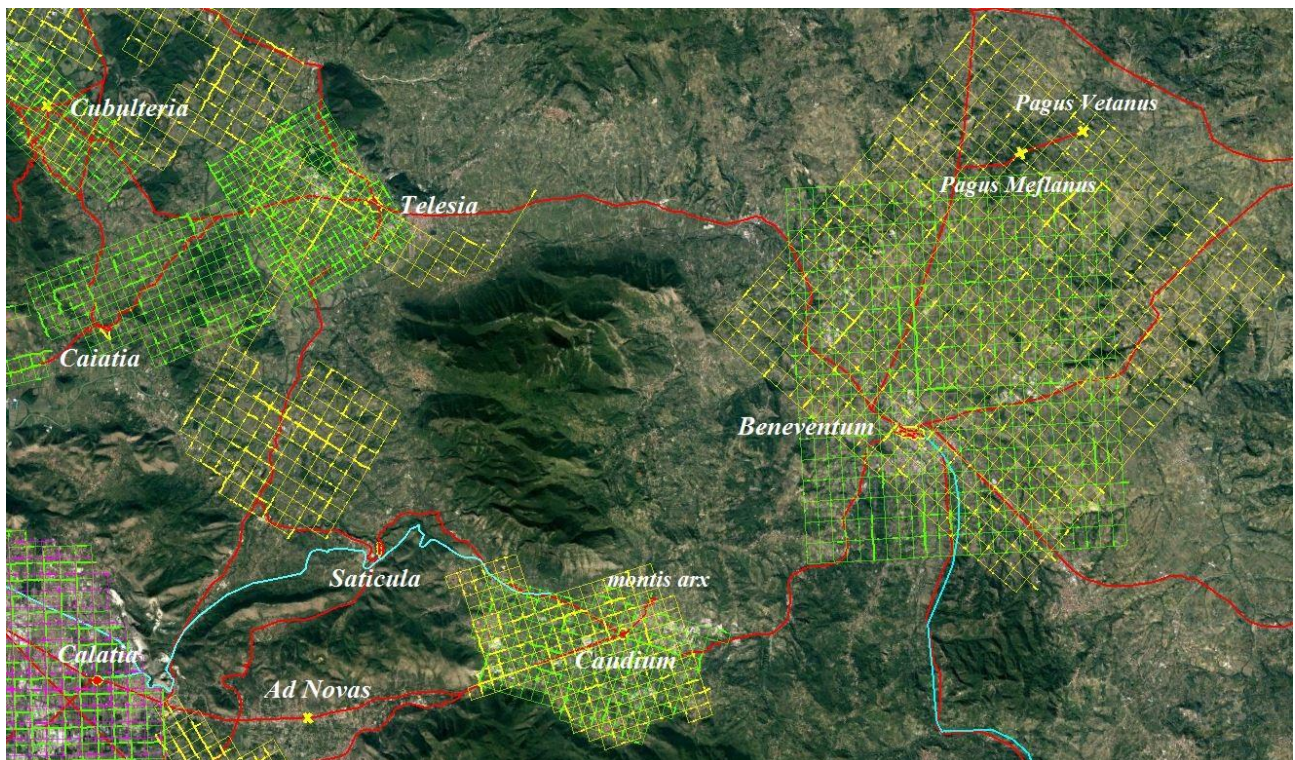


Fig. 47M' - Same image of the previous figure with the names of the towns.

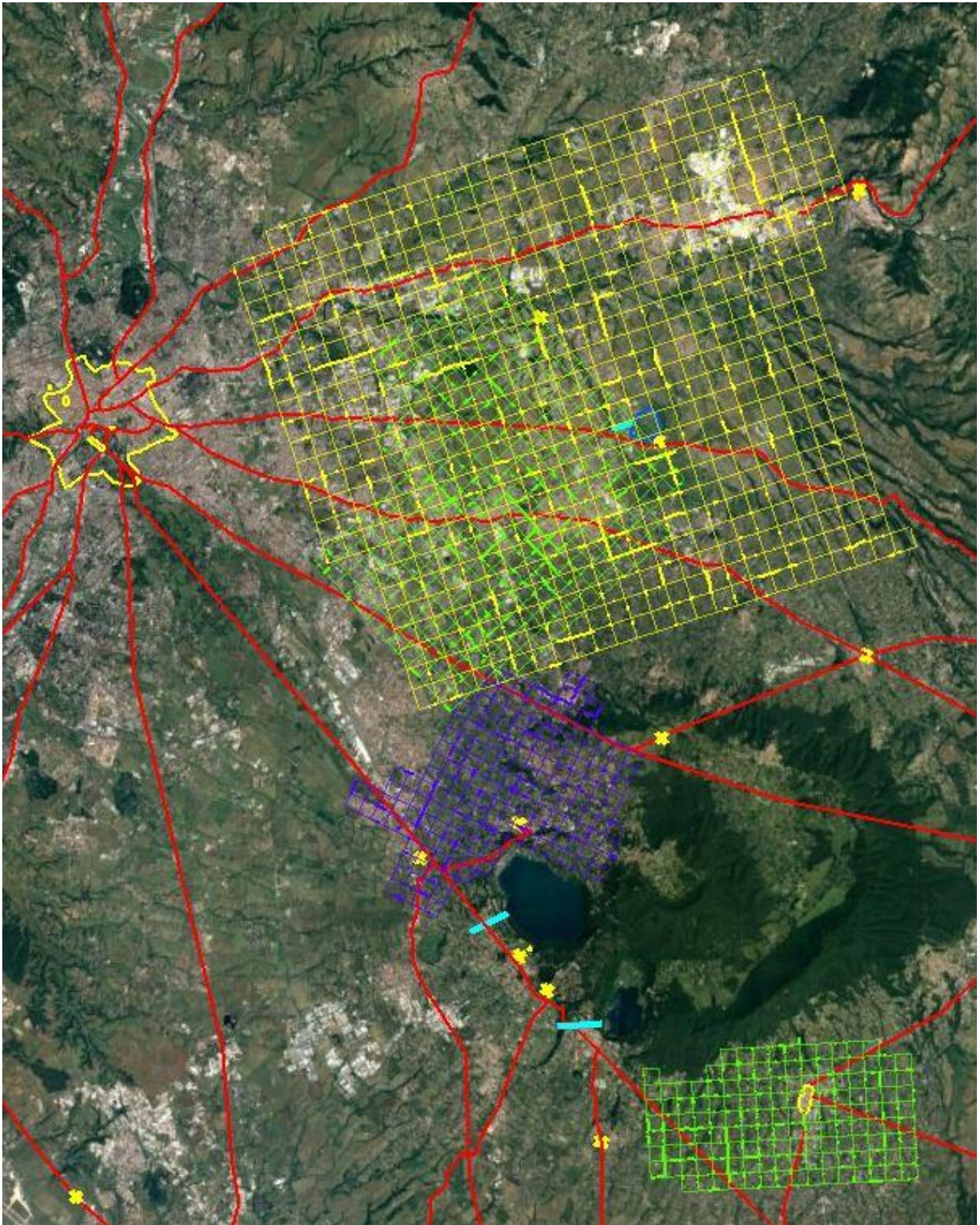


Fig. 47N - *Limitationes* among Roma, Tibur and Velitrae.

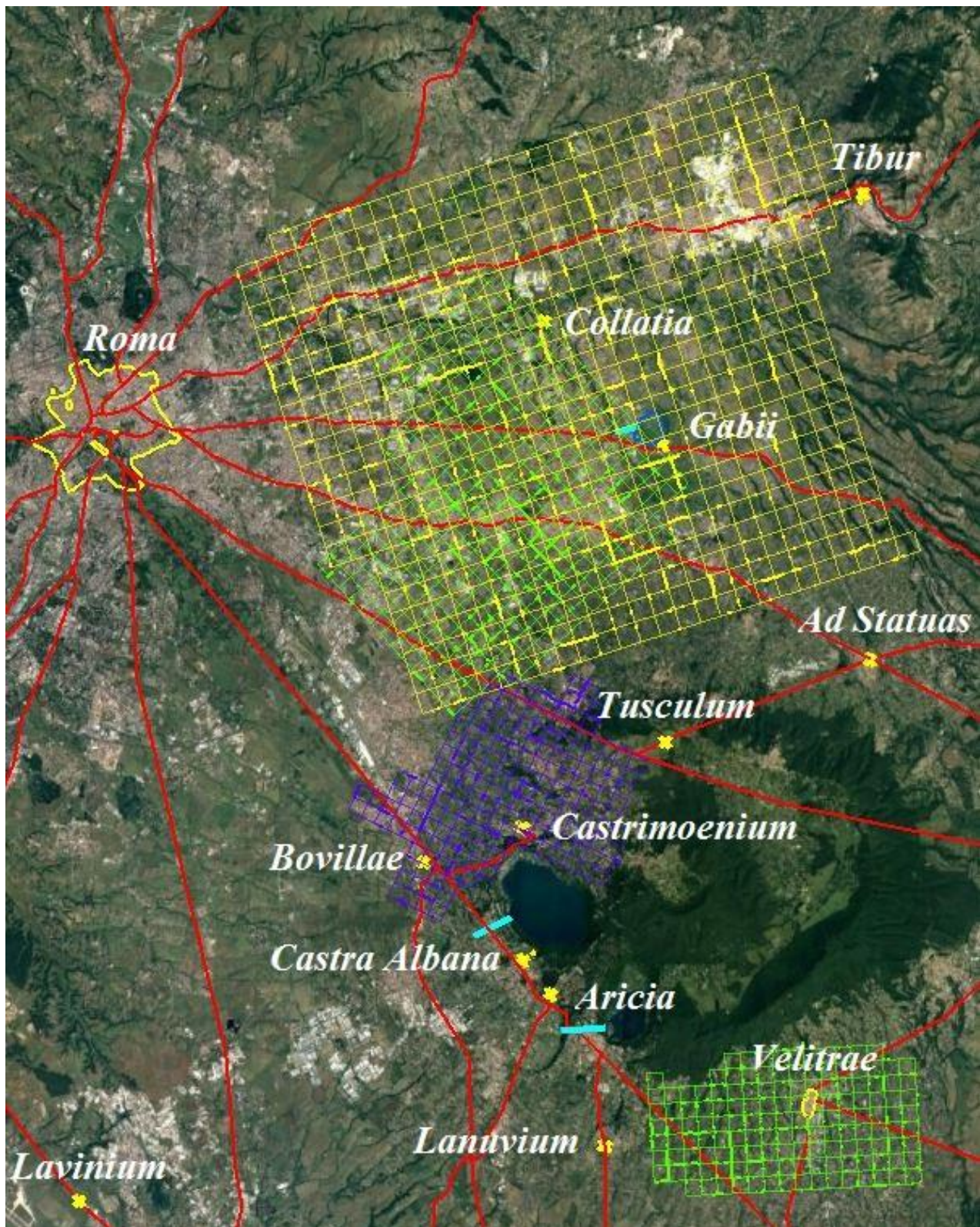
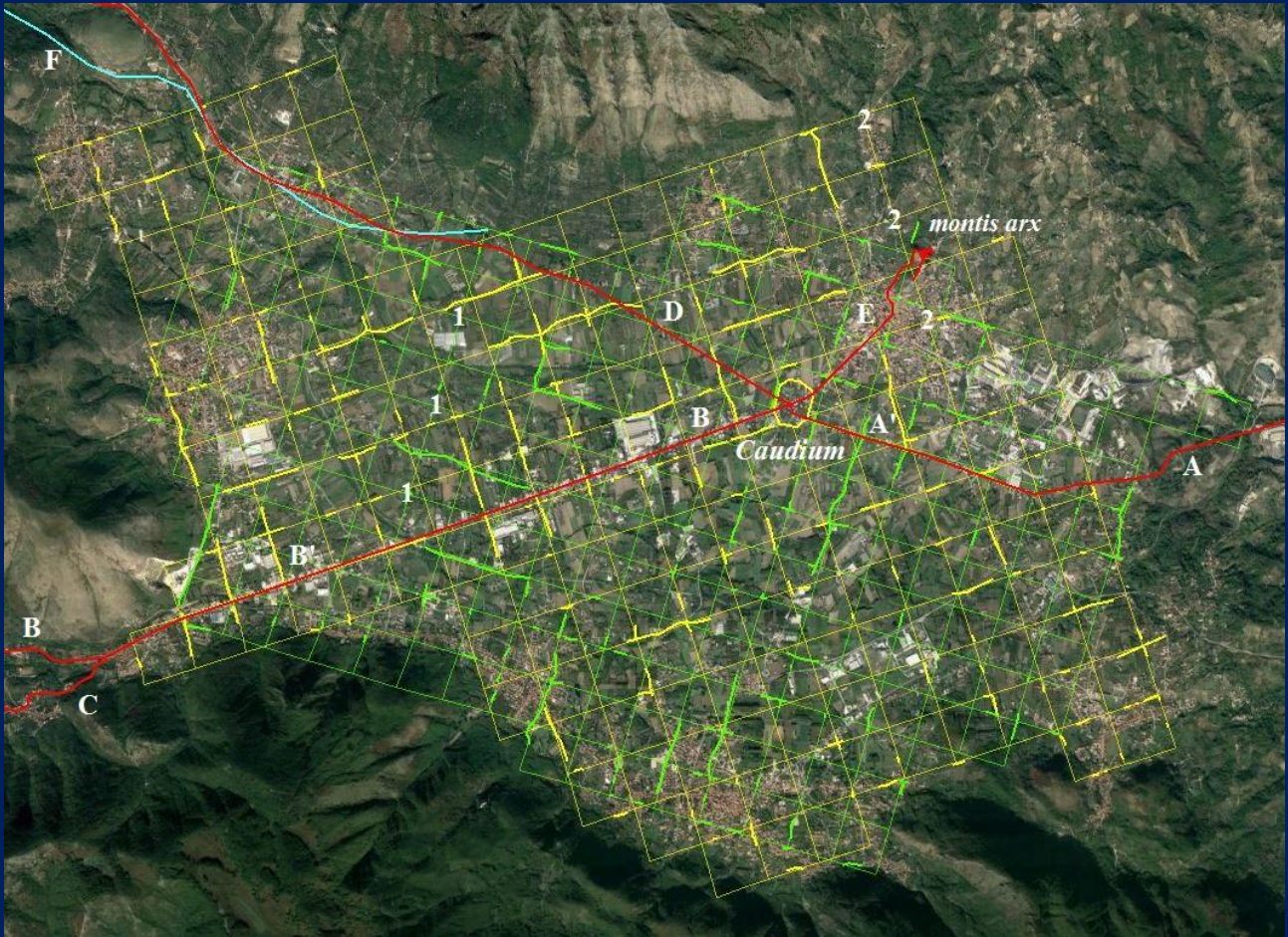


Fig. 47N' - Same image of the previous figure with the names of the towns.

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