

# NEW EVIDENCE FOR A ROMAN MILITARY CAMP AT VIRUNUM (NORICUM): THE GARRISON OF THE GOVERNOR'S GUARD (*SINGULARES*):\*

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**Keywords.** Virunum, Noricum, *singulares*, governor's guard, Roman military barracks, Roman military camp, provincial administration

**Abstract.** Since the year 2001, aerial photographs have indicated a densely built-up zone to the east of the Roman town of Virunum (near Klagenfurt, Carinthia, Austria), the capital of the province of Noricum. The visible crop marks have been interpreted as a Roman military camp. The Ludwig Boltzmann Institute for Archaeological Prospection and Virtual Archaeology (LBI ArchPro) conducted an initial ground penetrating radar survey on November 19, 2013, in order to gather further information regarding the close proximity of a military installation to the civilian town. An area of 2.56 ha was surveyed using a motorized high resolution MIRA ground penetrating radar array from Malâ Geoscience. In the northern part of the plot, numerous building structures are visible, obviously from Roman times, which were situated within a walled-in area. A gateway was located on the south side of this enclosed zone. The forested western and northern sides of this enclosure seem to coincide with the modern land division. Three long rectangular structures, which appear to be Roman military barracks with double chambers and so-called "Kopfbauten" (habitation area for the officers), are a key for the interpretation of the entire complex. Another densely occupied area is located to the south of the enclosure and was probably inhabited by civilians. These new GPR data clearly provides novel insights in the manner Roman troops were housed at the governor's seat of Noricum.

**Rezumat:** Începând din anul 2001, pe fotografiile aeriene s-a evidențiat o zonă construită densă, la est de orașul roman Virunum (lângă Klagenfurt, Carinthia, Austria), capitala provinciei romane Noricum. Formele de relief create de aceste ruine au fost interpretate ca aparținând unui castru roman. Institutul Ludwig Boltzmann for Archaeological Prospection and Virtual Archaeology (LBI ArchPro) a desfășurat un relevu geofizic în data de 19.11.2013 cu scopul de a obține informații suplimentare asupra zonei limitrofe și distanței mici dintre garnizoană și oraș. A fost cercetată o arie de circa 2.56 ha utilizând un georadar cu sistem MIRA. În partea de nord a suprafeței au fost evidențiate numeroase structuri construite, databile în epoca romană, poziționate într-o incintă. O poartă este vizibilă pe latura de sud a acestei incinte. Laturile de vest și de nord ale incinte coincid cu granițele lotizării de epocă modernă, actualmente împădurită. Trei structuri lungi rectangulare, similare barăcilor militare romane cu două camere și așa-numitele "Kopfbauten" (locuințele ofițerilor) sunt un indiciu vital pentru interpretarea întregului complex. O altă zonă dens construită este localizată la sud de incintă și probabil a fost construită de civili. Este evident că investigațiile cu GPR vor oferi noi informații privind garnizoana trupelor romane de pe lângă sediul guvernatorului provinciei Noricum.

## From a Balloon Ride in 2001 to a Ground Penetrating Radar Survey in 2013

Since the onset of aerial archaeology in Virunum in the 1970s, the scientific debate about the existence of a Roman military camp in the vicinity of the provincial capital of Noricum has not ceased (Fig. 1). Epigraphic evidence of a military presence has long since been known in Virunum. Yet, concrete evidence of a military facility only came to light during a balloon flight over the Zollfeld area, north of Klagenfurt, in the summer of 2001, when Renate Jernej discovered exceptional crop marks on the ridge east of the ancient town centre (Fig. 2). The crop marks, appearing in a field of corn, were interpreted as a military camp, including a civilian suburb (*vicus*) to the south.<sup>1</sup>

The notion of the existence of a Roman military camp was further substantiated by an aerial photograph taken in 2010, and the topographic data derived from airborne laser scanning made available by the State of Carinthia. Based on this data the following picture emerged (Fig. 3)<sup>2</sup> The Capitol and Forum, excavated some years prior to World War I lay in the valley of the Zollfeld (Fig. 3, C-D). Just east of the city centre the terrain rises in multiple terraced levels. Several large, antique structures, such as the theatre (Fig. 3, G) and the amphitheatre (Fig. 3, E) were located in this area; the amphitheatre was excavated in large part from 1998 to 2001.<sup>3</sup> An

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<sup>1</sup> Gugl, Jernej 2002, p. 26; Doneus, Gugl, Jernej 2003, pp. 397-399; Jernej 2004, p. 21; Doneus, Gugl, Jernej 2005, pp. 224-227.

<sup>2</sup> Gugl, Jernej 2013.

<sup>3</sup> Jernej, Gugl 2004.

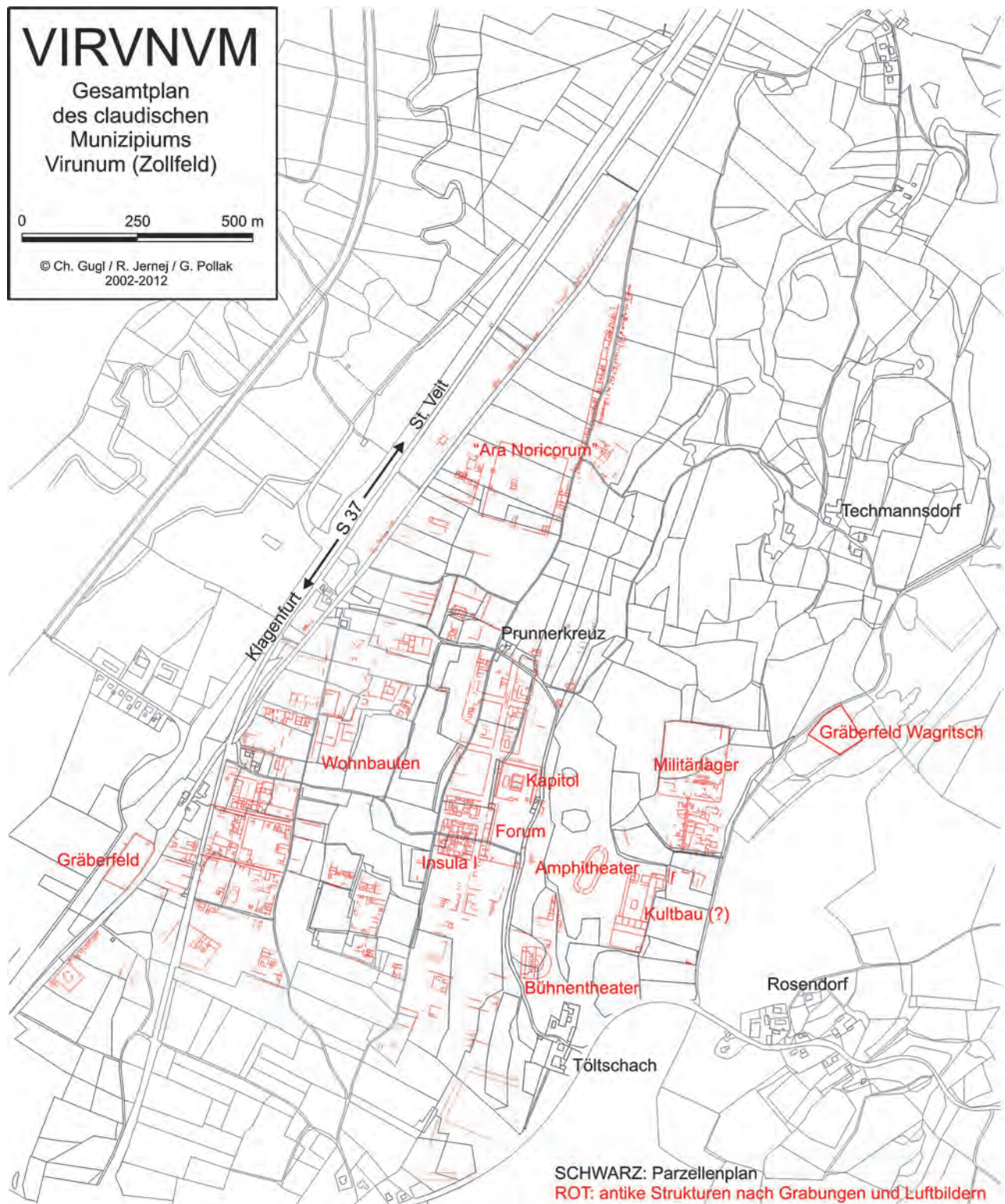


Fig. 1. Map of the Claudian – era municipium Virunum (© C. Gugl, R. Jernej, G. Pollak 2002–2012).

Excerpt from Caiete ARA 6, 2015.





Fig. 2. Photograph of the eastern city limits of Virunum taken from a balloon in 2001. The walled-in grounds of a possible military camp are indicated with white arrows (© 2001 R. Jernej).

extensive building complex was discovered above the amphitheatre; its function is unknown but was addressed by others as the procurator's palace (Fig. 3, F).<sup>4</sup> North-east of the capitol another, probably antique structure of unknown function has been identified on a well-defined terrace (Fig. 3, A).

North of it the military camp was located by the aerals. A surrounding wall is particularly visible on the aerial photographs on the south and east side of the enclosure. Taking the topographical data and the modern land divisions into consideration for the reconstruction of the full extent, the rectangular enclosure measures 165 x 141 m (Figs. 2-3).

The north-western half of the 2.33 ha rectangular area is currently wooded, while the area in front of the east and south sides is today open terrain. Crop marks outline the remains of Roman military barracks in the south-eastern part. In the forest the terrain is noticeably undulated and structured. Whereas the open arable land is sloping towards the south, the forested area descends towards the west. In addition, a prominent rock formation is located in the northern third of the rectangular enclosure (Figs. 5, 8) and remnants of walls are discernible in the topography.

Various questions vital to the interpretation of the facility regarding the construction of the enclosing wall and the nature of the interior buildings remain unanswered by the interpretation of the aerals. To get more detailed insight into the structure, the LBI ArchPro<sup>5</sup> undertook a ground penetrating radar survey on November 19th, 2013 on the open land.<sup>6</sup> Using the motorized ground penetrating radar array MIRA<sup>7</sup> from Malå

<sup>4</sup> Gugl, Jernej 2013, pp. 61-63 pl. XXXI, 9 F. XXXVI, 21.

<sup>5</sup> Doneus, Neubauer 2010; Trinks 2011.

<sup>6</sup> The survey was undertaken by Erich Nau and Thomas Zitz – The Ludwig Boltzmann Institute for Archaeological Prospection and Virtual Archaeology (archpro.lbg.ac.at) is based on an international cooperation of the Ludwig Boltzmann Gesellschaft (A), the University of Vienna (A), the Vienna University of Technology (A), the Austrian Central Institute for Meteorology and Geodynamic (A), the Province of Lower Austria (A), Airborne Technologies (A), 7reasons Medien GmbH (A), RGZM – Roman-Germanic Central Museum Mainz (D), RAÄ – Swedish National Heritage Board (S), IBM VISTA – University of Birmingham (GB), NIKU – Norwegian Institute for Cultural Heritage Research (N) and Vfk – Vestfold Fylkeskommune (N).

<sup>7</sup> Trinks *et al.* 2010; Trinks, Neubauer, Hinterleitner 2014.



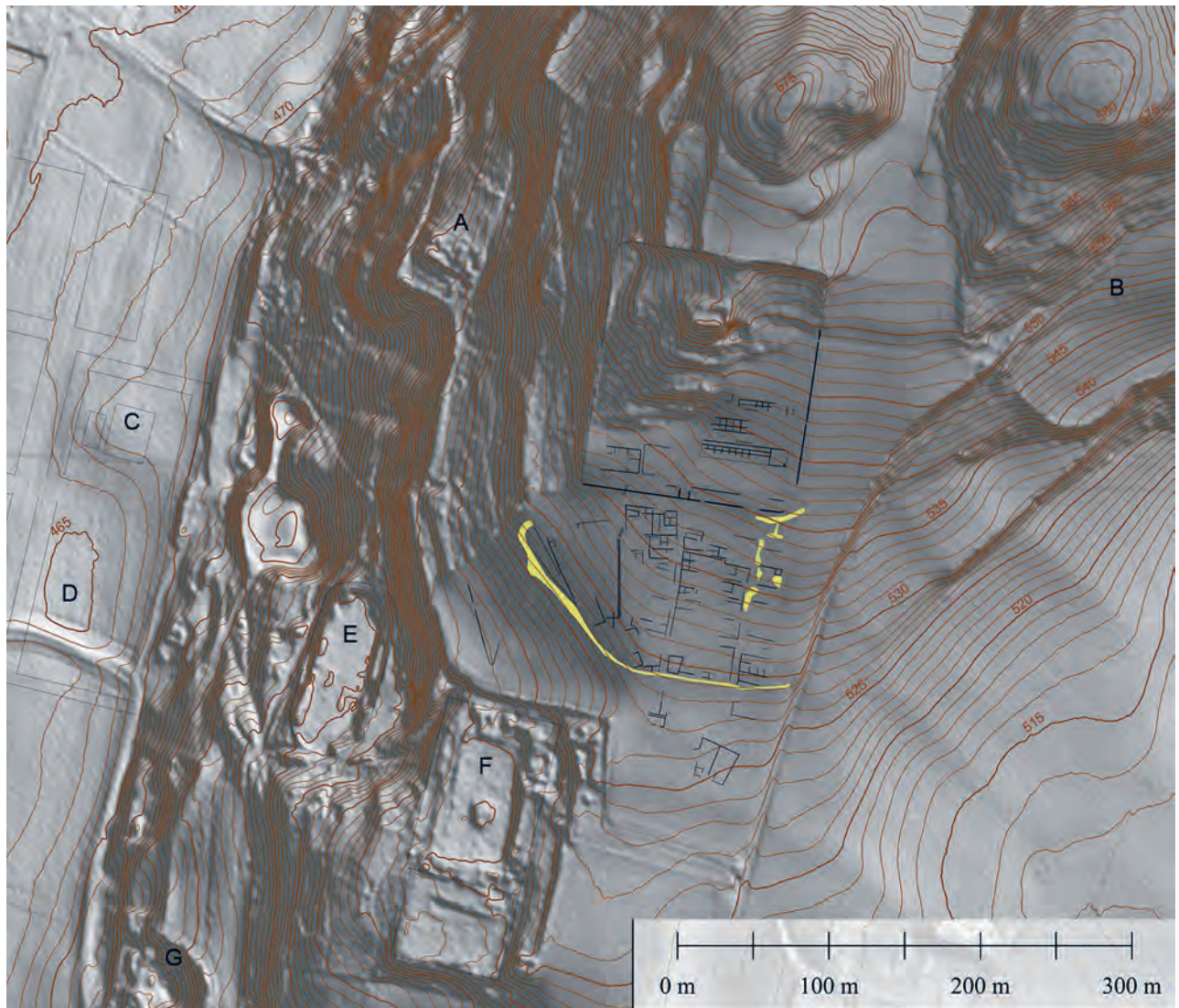


Fig. 3. Interpretation of an aerial photograph, taken in 2010: Black indicates dry characteristics and yellow positive crop marks. In the city centre, the central *insulae* are indicated with dashed lines. A: buildings still visible on the surface and in the LIDAR data; B: burial area Wagritsch; C: the capitol; D: Forum; E: amphitheatre; F: “cult building” on the Sepunacker and G: the theatre (see Fig. 1). (© 2012 C. Gugl, R. Jernej – LIDAR-Daten: Amt der Kärntner Landesregierung, Abteilung 8, Kompetenzzentrum Umwelt, Wasser und Naturschutz, Unterabteilung IT-Umweltdaten).

Geoscience, an area measuring 2.56 ha was scanned at very high resolution of 10 x 5 cm within approximately three hours focusing on the located military camp. The habitation quarter located south of the camp has been only partially surveyed. With the exception of two major disruptions in the south-east, indicating demolition the enclosing wall could be reliably documented. An eastern gate could not be located and likely never existed.

The survey data clearly indicates that the south-east corner was not rounded, as was usual for military installations of the *Principate*, but a sharp, right-angled corner. In contrast, the corresponding south-west corner is rounded. At the same time, this preserved corner proves that the complex followed the edge of the terrace towards the north confirming the reconstructed extent of the enclosure.

No towers are visible along the entire length of the enclosure wall. The only disruption is the south gate (Figs. 6-7) which consisted of a simple gated passage formed by two about 5 m long side walls extending into the interior. The remnants of a threshold in line with the enclosure wall and two massive foundations at



the ends of the side walls are visible. Close to the rounded south-west corner, on the inner side of the enclosure wall, a ca. 13.0 x 3.50 m building is visible (Figs. 5, 11); this building could have been used as a latrine, as it is drained by a channel located right beneath it.

Several buildings in the south-eastern part of the enclosure support its interpretation as a military complex (Figs. 6-7). Three of these are identical in construction and can easily be identified as military barracks. The building (Figs. 5, 2) that was most clearly visible in the aerals from 2010 is also the most distinct in the GPR data. The outer walls are more massive than the interior dividing walls. The total length of the building is 56.50 m; the width is 11.50 m, including a portico along the northern side. The officer's accommodation clearly divided into several rooms is situated on the east side and measures ca. 11 x 9 m. The accommodations for the soldiers are attached to the west and comprise of a 2.50 m wide portico at the front, small rooms with an interior extent of ca. 4.30 x 2.40 m and larger principle rooms with an interior extent of ca. 4.30 x 4.90 m. Ten *contubernia*, each comprising of an anteroom and a main room can be reconstructed. Inside three of the main rooms stone structures are visible alongside the centre of the dividing wall interpreted as hearths or fire pits. Five of the anterooms notably show longitudinal central pits arranged parallel to the side walls. In two cases, the pits appear in pairs. These are most likely cesspits often been identified by excavations in barracks attributed to the cavalry.

Another northern barrack (Figs. 5, 3) of the same size is located opposite of the first one and divided by a 4.5-5.0 m wide courtyard giving access to both buildings. Only faint traces of a portico alongside the southern front are discernible mainly in the eastern part of the building, whereas the division between the anterooms and the main rooms is clearly identifiable only in the western part.

A third barrack of roughly the same size as the other barracks (ca. 54.50 x 11.50 m) is identified close to the south-eastern corner of the enclosure (Figs. 5, 1). It is offset 5.50 m to the east, probably due to an adjoining separate building of unknown function at the western end. The officer's habitation is subdivided into several compartments. While the foundation of the portico along the northern front is still largely intact, the wall dividing the anterooms and the main rooms is only partially preserved. The internal walls are also not recognizable, but in seven to nine cases, the hearths or fire pits are. Although no traces of cesspits could be found in the anterooms, we assume that this barrack was constructed more or less identically to the northern barracks.

Two rectangular buildings (Figs. 5, 4-5) are located north and parallel to the three 10-*contubernia* barracks (Figs. 5, 1-3). The radargrams indicate for the southern building (Fig 5, 4) a similar subdivision into anterooms and main rooms. These two barracks without traces of porticoes are due to the missing officer's billet with a length of 37 m significantly shorter. The distance between barracks 2, 3, 4 and 5 to the enclosing wall measures 8.5-9.0 m, whereas the southern barrack 1 and a further parallel building north of 5 are located in a distance of 4.0-4.50 m from the enclosure wall.

The south-western corner of a large central building (Figs. 5, 7) with massive walls or a foundation platform lays within the survey area. The road which ran northward from the southern gate may have reached the southern front of this building, provided the steeply rising terrain allowed it. Assuming the road met the centre of a symmetrical building a width of 44-45 m of the central building can be reconstructed. The extension to the north could not be measured, but the terrain further north with its prominent rock formation (Figs. 5, 8) would have restricted the area available for any construction.

Three buildings are visible in the south-western part of the enclosed area (Figs. 5, 12-14). The largest of the three is a tri-partite complex measuring ca. 40 x 16 m; it was also detected through large concentrations of building material remnants on the surface. A sewer runs from this building to the exterior of the enclosure wall via the supposed latrine. Because of the building's layout, its connection to the sewage system and its close proximity to a possible latrine, this may have been a bath complex (Figs. 5, 12). A north-south oriented rectangular building (Figs. 5, 14) of unknown function and no apparent internal structures with an extent of ca. 16.0 x 9.50 m, is situated between the tri-partite building and the road. To the north lies another east-west orientated building (Figs. 5, 13) of undetermined function measuring ca. 18 x 10 m. Within the enclosure partly remnants of roads can be detected together with evidence indicating an earlier use of the site (Fig. 7). Traces of another structure could be detected between the two southernmost barracks-blocks, which seem to prolong into the (later period) road. The clearest indication for earlier building activity can be found in the area



Fig. 4. Ground-penetrating radar measurements taken during 2013. The accumulated depth slices measure between 60 and 90 centimetres below surface level (© 2013 Ludwig-Boltzmann-Institut für Archäologische Prospektion und Virtuelle Archäologie (LBI ArchPro)).

of barrack 2. The remains of three walls are visible under the officers quarter and the adjoining *contubernium*. Even though their orientation is parallel to the barracks, they clearly extend beyond them.

How construction was adapted to the very hilly terrain becomes obvious from the overall plan of the site (Fig. 5). The layout of the rectangular buildings located in the eastern half situated on a slightly sloping terrain as well as the three buildings located in the south-west is clearly parallel to the enclosure. The central building is situated on a slightly higher terrace.

The GPR survey also provides new evidence regarding the residential structures located outside the enclosure starting in a distance of 8.50 m south of the enclosing wall (Fig. 5). A densely occupied residential area flanks both sides of the main road. Clearly defined residential structures are not recognizable, yet one can see that the residential blocks situated on the west side of the street were at a depth of 30-35m. A channel marks the western boundary; it drained wastewater from the interior of the enclosure and also served as the sewage channel for facilities reaching beyond the south-west corner of the enclosed area. Because of the course of this channel, it is assumed that the residential development continued on the terrace below the walled-in area. Development extends east of the main road (Figs. 5, 16) and is bounded to the east by another road (Figs. 5, 17). The average width of this residential strip is 45 m wide. The development continues east of the second street. As well, in the south-west part of the survey area there are also signs of buildings which were aligned along a road to the north. (Figs. 5, 18). Another building is situated between these densely placed buildings, the road, and the south-west corner of the enclosed area, however, only the south and west are visible.

As a result, the road curves around this and then follows the enclosure wall. The road bends at the south-east corner and then extends toward the north-east (Figs. 5, 19), where remnants of walls flank both its





Fig. 5. Interpretation of ground penetrating radar measurements taken in 2013. 1-3: barracks with end buildings for officers; 4-5: barracks without end buildings; 7: central building (?); 6, 9, 13-14: building of unknown function; 8: cliff with quarry; 10: south gate; 11: latrine; 12: baths; 15: channel; 16-19: streets (© 2013 Ludwig-Boltzmann-Institut für Archäologische Prospektion und Virtuelle Archäologie (LBI ArchPro)).

sides; the character of these walls are not necessarily similar to those found south of the enclosed area. These very possibly belong to the burial ground, located somewhat to the north-east that was discovered during earlier excavations (Fig. 3, B: Graveyard “Wagritsch”). As such, it is likely that the burial ground and funerary monuments were located close to the eastern perimeter wall.

### **A particular “military camp” – part of the governor’s seat in Noricum**

The walled-in facility located on the eastern edge of Virunum is not a conventional imperial-era military camp. It is unlike the usual type of military facility found along the borders of the Roman Empire, which would normally include one or more trenches, as well as a fortification wall with a rampart, corner and intermediate towers. In a military camp of this size one would also expect to have an east gate as the *porta principalis*. Lastly, the rough terrain within the walled-in area, as well as the ridges to the north and north-east of the facility are inexplicable for a fortified military facility (Figs. 3, 8). The area of the camp was lower than the adjacent area in front of it. Such a site would not have been selected for a border fort and its primarily military duties.

Therefore the hypothesis had already been formulated that the military unit stationed here was attached to the governor of Noricum. *Singulares* and other military personnel assigned to the procurator which had no strictly military duties, such as policing and surveillance, would have been billeted here.<sup>8</sup>

<sup>8</sup> Gugl, Jernej 2013, pp. 63-64. 69-72.

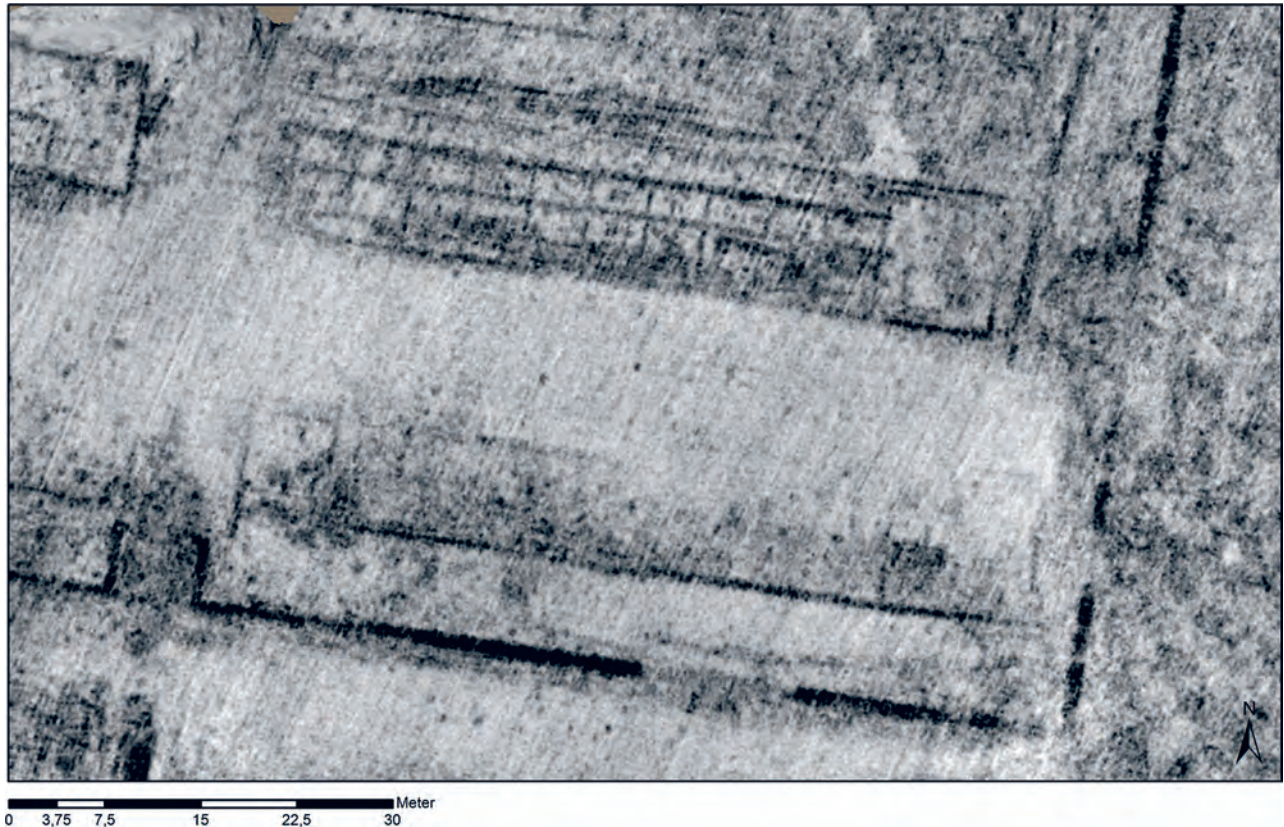


Fig. 6. Ground penetrating radar measurements of 2013, in the south-east of the walled-in area. Accumulated depth slices from 50 to 100 cm below surface level (© 2013 Ludwig-Boltzmann-Institut für Archäologische Prospektion und Virtuelle Archäologie (LBI ArchPro)).

A procurator of equestrian rank resided at *Municipium Virunum* from the Claudian era until the turbulent years of the Marcomanni wars. The personnel made available to this provincial governor consisted mainly of soldiers. The *singulares*, the governor's guard, were the largest group in service. They consisted of cavalry and infantry transferred from the auxiliary forts along the Danube Limes in Noricum. Due to a lack of historical information general assumptions regarding their overall strength in numbers cannot be made. A general guide of a 5% quota of all auxiliary forces stationed in the province is often used.<sup>9</sup> In Noricum this would mean a total of approximately 250-300 infantry and 120-150 cavalry.<sup>10</sup> This would correspond to the number of (*pedites*) *singulares* (225-250) stationed in neighbouring Raetia.<sup>11</sup>

Little information is available regarding the accommodation of troops assigned to the governor. Potentially, the barracks were part of the governor's palace or located in the immediate vicinity, and this could be the case in Virunum. This raises the question as to whether more antique architectural remains can be expected on the terraces to the west of the facility, based on the airborne laser scan data (Fig. 3, A). Intensive use of these hillside terraces can be observed on the surface as well as in the laser scan data. These built up areas are situated near the Capitol and the city centre. It would not be surprising if this were the location of the *praetorium* of the governor of Noricum, in the immediate vicinity of the barracks housing the provincial *singulares*. In our estimation there is no substantiated evidence, given the current state of research, to assign a different location of the governor's seat.

<sup>9</sup> Speidel 1978, pp. 11-15.

<sup>10</sup> Gugl, Jernej 2013, p. 70.

<sup>11</sup> Dietz 1983, p. 517 n. 99; Zanier 1992, p. 168.





Fig. 7. Interpretation of the measurement data in the south-east of the walled-in area. Soldiers barracks, possible pre-existing building, South Gate, and south-east corner (© 2013 Ludwig-Boltzmann-Institut für Archäologische Prospektion und Virtuelle Archäologie (LBI ArchPro)).

The administrative situation in Virunum changed fundamentally with the relocation of the *legio II Italica* to the Danube border. The *propraetorian legate*, coming from the senatorial order, was the highest-ranking official of Rome in the province as of the 170s. He would have commanded the legion, as well as holding the position of *legatus Augusti propraetor provinciae Norici*.<sup>12</sup> It is not fully understood how and especially where the financial administration was organized and located after this change in provincial organization. It seems possible that the financial procurator continued to reside in Virunum. It is doubtful whether the guard of the Norican governor would have remained there after the transfer of the governor's seat to Lauriacum during the reign of Marcus Aurelius. In this context, the situation at Ellingen (Bavaria) must be taken into consideration; here, the *pedites singulares* of the Raetian *legatus Augusti* constructed a fort along the border in the year 182. It is not impossible that they remained so far from the governor's seat for a longer period of time.<sup>13</sup> If the Raetian *singulares* were entrusted with defence duties along the Limes, it stands to reason that the Norican *singulares* may have been entrusted with special duties in the province's interior, perhaps in connection with the mining of iron and gold.<sup>14</sup>

Only through excavation can be more said regarding the chronology of military accommodation in Virunum. The presence of soldiers in the city can only be proven through artefacts. During the excavations

<sup>12</sup> Winkler 1969, pp. 29–32. 67–76; Alföldy 1974, pp. 159–165; Hainzmann 1991, pp. 62–63. 71–73. 78–80; Haensch 1997, pp. 353–360; Winkler 2012, p. 84.

<sup>13</sup> A summary of this: Zanier 1992, pp. 167–170.

<sup>14</sup> Piccottini 1994, p. 473; Gugl 2003, pp. 114–116; Thür 2005, p. 42. See also: Winkler 1969, pp. 163–167; Alföldy 1974, pp. 113–114; Alföldy 1989, pp. 39–40. 50–54; Graßl 1989.



Fig. 8. The eastern edge of Virunum according to the current state of aerial archaeological and geophysical evaluation. Legend: cf. Fig. 3 (© 2013 Ludwig-Boltzmann-Institut für Archäologische Prospektion und Virtuelle Archäologie (LBI ArchPro). – Orthofoto: Amt der Kärntner Landesregierung, Abteilung 8, Kompetenzzentrum Umwelt, Wasser und Naturschutz, Unterabteilung IT-Umweltdaten.).

at the amphitheatre numerous finds, such as weapons, military equipment and horse harnesses were found; these date from the late first century to well into the third century. Parallels with these finds can be found along the Limes of Germania Superior and Raetia.<sup>15</sup> On the basis of a consecration inscription,<sup>16</sup> hundreds of hobnails from the arena,<sup>17</sup> and military artefacts it can be assumed that regular training exercises took place in the Virunum amphitheatre (Fig. 1), which was located only about 150 m from the supposed barracks of the *singulares*. It seems likely that one of the soldiers training here was the cavalryman, Verecundus, of the *ala I Thracum*, who is attested in an altar he dedicated to the gods of the parade grounds (*Campestres*) in the *Nemeseum* of the amphitheatre. This cavalry unit was stationed at the fort in Traismauer, on the Danube River. It seems that Verecundus was likely one of the soldiers who was reassigned to Virunum, although hit remains uncertain as to when this altar was erected. H. Dolenz estimates that it was dedicated in the third century, at which time the senatorial governor no longer resided in Virunum.<sup>18</sup>

The selection of small finds from the amphitheatre does not provide sufficient evidence for a precise chronological differentiation as to whether a change in use occurred in the middle of the Antonine era. This likely never happened. What can be concluded is that soldiers were present in Virunum during the 3rd century.

<sup>15</sup> Flügel, Gugl 2004, pp. 343–394.

<sup>16</sup> Dolenz 2004, pp. 306–308 fig. 6.23 and fig. 6.24.

<sup>17</sup> According to Junkelmann 2000, p. 53 gladiators would normally have fought barefooted. If this were also the case for the animal fighters, it could point to the hobnails, found in the Virunum amphitheater, as coming from soldiers.

<sup>18</sup> Dolenz 2004, p. 306 and p. 308.



Of the approximately 35 inscriptions naming soldiers in the “Virunum (Zollfeld)” area, not one can clearly be linked to the provincial *singulares*. Yet, one inscription, dedicated to Victoria and dating to 238, was sponsored by two auxiliary soldiers from the *ala Augusta* and the *cohors I Aelia Brittonum*; Flavius Tacitus and Aelius Martius defined their functions with the abbreviation “SC”. G. Winkler and R. Haensch interpret this to stand for *singularis consularis*. An alternative interpretation is that “SC” stands for *summus curator*, namely soldiers who were assigned duties related to military logistics.<sup>19</sup>

Currently, neither the epigraphic sources, nor the archaeological finds and results can provide further evidence regarding the *singulares* in Noricum. The ground radar survey results from 2013, however, clearly demonstrate the Roman military presence in the enclosed area above the city. Conclusive evidence that the *singulares* of the provincial governor were housed here will likely only be possible with the lucky discovery of an inscription. Nevertheless, the most recent investigations demonstrate very well what level of information can be gained from state-of-the-art archaeological prospection.

Starting with the evaluation of aerial photographs from a balloon flight in 2001, to the interpretation of orthophotos of 2010, and the ALS data provided by the province of Carinthia as well as the new ground penetrating radar measurement, great advances in knowledge have been achieved; these emphasize the great potential of contemporary archaeological prospecting methods.

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<sup>19</sup> Winkler 1969, p. 133 nr.5, 1–2; Haensch 1997, p. 699 nr.A II 2 n. 277. Compare against Davies 1976, pp. 134–144; Speidel 1978, pp. 70–71 n. 362; Hainzmann 1991, p. 72 n. 34.

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