

A First Glimpse into the Roman-Period Mass Grave from Wien-Simmering

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Abstract

In October 2024, a mass grave dating to the 1st–2nd century AD was discovered during construction in Wien-Simmering, Austria. Excavations revealed 129 men buried without systematic orientation or positioning and displaying extensive perimortem trauma through projectiles, sharp and blunt weapons. Recovered equipment associates the men with the Roman military, though the historic background of the event remains to be determined through further research.

Keywords

Roman archaeology, conflict archaeology, bioarchaeology, military history, *Pannonia*

In October 2024, construction work on the Ostbahn XI football grounds in the Vienna district of Simmering unexpectedly uncovered a large quantity of human skeletal remains. Following the confirmation of the archaeological relevance of the skeletal remains, an archaeological excavation – conducted under the guidance of Stadtarchäologie Wien – was initiated. Over the course of six weeks, a shallow pit holding the intact human remains of 129 individuals was excavated. Post-excavation analysis revealed that numerous individuals had sustained perimortem traumas. Scientific research aiming to reveal the historic background and the identities of the deceased is still in the early stages. This contribution presents the initial archaeological, bioarchaeological and historic findings from the Simmering mass grave.

The Archaeological Context

The Simmering archaeological site conforms to standard archaeological and forensic criteria applied to define a mass grave, a term that refers to the deposition of multiple individuals in a singular event in a single feature, departing ‘from the norm in a given time and place’ (Knüsel,

Robb 2016). The feature consists of an oval-to-rectangular pit measuring 4.49 m (NW–SO) by 5.09 m (SW–NO) with a depth of 0.55 m. Its eastern third was largely destroyed by the construction work that led to its discovery. As a result, only a few articulated skeletal remains from the bottommost layer remained in situ. Additional disturbances that created further damage and disarticulation to the burial feature were caused by a narrow modern utilities trench running in a NE–SW direction and a rectangular pit on the northern side that cut into the pit during the 20th century. Within the burial context, 129 complete and partially complete skeletons have been recovered (Fig. 1). However, the total number of individuals is likely higher, as a large quantity of disarticulated bones – displaced during construction – were recovered from the spoil heap. Up to four distinct layers of human remains were documented from the burial. The lack of disturbance to the uppermost layer suggests it being the original surface of the feature. No systematic orientation or positioning of the skeletal remains was observed. The absence of sediment layers between individuals attests to a single burial event. In addition, evidence of scavenging or disarticulation of bones was absent,



Fig. 1. The mass grave (Photo: A. Slonek, Novetus GmbH).

indicating that the grave was covered shortly after deposition. The presence of fully articulated skeletal remains further supports the conclusion that the individuals were not left above ground for an extended period and identifies the site as their primary place of burial.

The Skeletal Human Remains

After the archaeological excavation at Simmering, an initial bioarchaeological analysis of the 129 human skeletal remains was undertaken within the framework of the documentation required by the Austrian Federal Monuments Office (Bundesdenkmalamt 2024). Over 70 % (92/129) of the individuals were sufficiently well preserved to estimate biological sex and age at death (Buikstra Ubelaker 1994; Mitchell, Brickley 2017). All the individuals were estimated to be biologically male with ages at death mainly ranging between 20 and 35 years old (Fig. 2). Based on these demographics, the burial context and archaeological finds, it can be assumed that these individuals were soldiers. The average stature was estimated to be 174 cm (Trotter 1970). When compared to Roman skeletons from a similar period from Italy (average stature 164 cm), the individuals from Simmering were significantly taller (Giannecchini, Moggi-Cecchi 2008). Larger stature could be an indication of genetic variation, an effect of an individual's environment (nutrition and health in childhood) or these specific individuals

could have been chosen to fit requirements set by military standards (Gowland, Walther 2018).

Forty-five individuals (35 %) exhibited various forms of perimortem trauma, suggesting a violent cause of death. However, this prevalence is likely strongly biased due to the incomplete preservation and also to the fact that not every trauma would have affected the skeleton. Thus, based on the context, it appears reasonable to assume that all of these individuals would have been killed through interpersonal violence. The types of documented perimortem trauma include sharp force, blunt force and projectile injuries (Fig. 2). Most of the sharp force trauma was most commonly observed on the skull, particularly to the frontal and facial bones. However, the highest prevalence of trauma in general was seen on and around the pelvis (40 %). The traumatic lesions on the pelvis were mostly projectile markings, which ranged from diamond-shaped possible lance heads to quadratic *pilum* (Fig. 3). This diversity of injuries argues against an execution site such as the mass grave documented at Skopje/*Scupi* (Paleopatologia 2018); together with the archaeological finds, it is reasonable to assume that this mass grave was the result of a military conflict.

Small Finds from the Mass Grave

Despite the large number of individuals, only a very small number of artefacts were recovered from the grave.

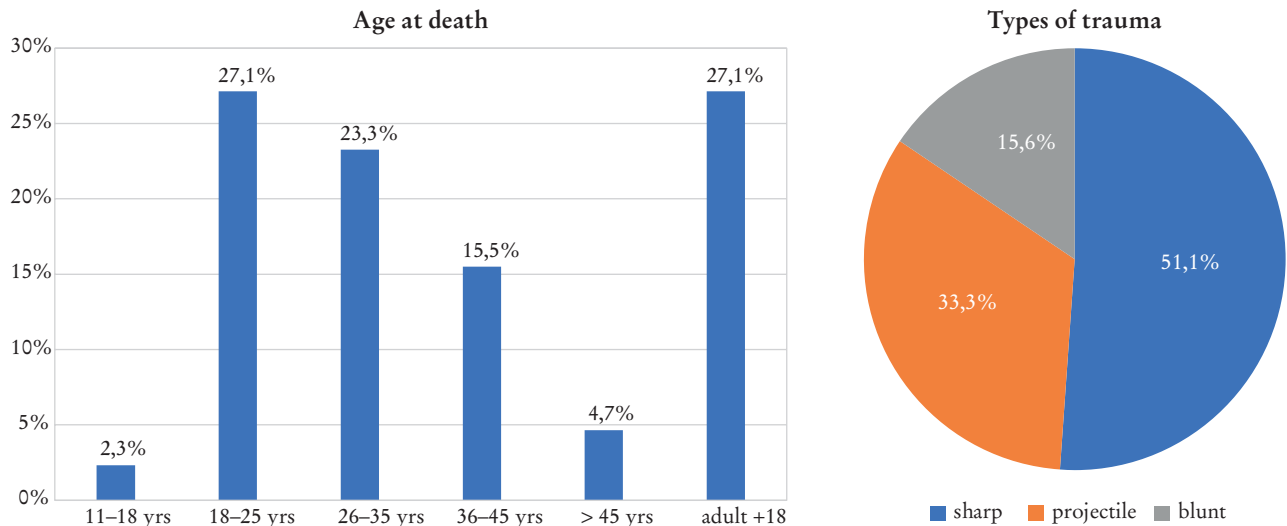


Fig. 2. – Left: Age-at-death distribution. – Right: Types of trauma documented on the individuals (Graphics: S. Strang, M. Binder, Novetus GmbH).

Nonetheless, they are of considerable significance, as they can almost exclusively be identified as equipment associated with the Roman military. A heavily corroded dagger was recovered in direct association with Individual 2 (length: 20 cm, Fig. 4). The radiographic examination of the sheath revealed a silver inlay decoration arranged in four fields with geometrical patterns. Typological analysis placed its production between the mid-1st and early 2nd century AD (Weller, Bloier, Flügel 2020). Additional weaponry included two iron lance heads, one of which was still embedded within the sacrum of Individual 115 (Fig. 5). In two separate locations, copper-alloy scale armour – some still connected by copper-alloy wire – was found scattered amongst the remains. Also associated with Roman military body armour is a copper-alloy cheek flap from a Weisenau-type helmet (Maspoli 2014). In addition, several shoe nails, which are a typical feature of Roman-period military equipment, were recovered from the grave.

Historical Contextualisation – Initial Findings

In the Roman period the Simmering site was located only 3 km southwest of the Danube, constituting the border with the Germanic tribes to the north, in uninhabited territory between the still small military camp of Vienna/*Vindobona* 5 km to the northwest and Schwechat/*Ala Nova* 4 km to the southeast (Fig. 6). The bioarchaeological and archaeological results thus far leave no doubt that the individuals were victims of a violent battle that occurred between the end of the 1st and the early 2nd century AD. However, historical sources contain only limited reports of military conflicts during this period. In AD 92, under the reign of Emperor Domitian (AD 81–96), numerous attacks on Roman territory were



Fig. 3. *Pilum* injury in a lumbar vertebrae of Individual 117 (Photo: S. Strang, Novetus GmbH).

carried out by Sarmatians in the lower and middle Danube regions, followed by the Germanic Marcomanni and Quadi near *Carnuntum* (Strobel 1989). Whether the Simmering mass grave can be linked to this episode of warfare or another, as yet unidentified, historical event remains to be the subject of further research.

Significance and Outlook

Research into the Simmering mass grave is still in its early stages. However, it is already evident that this discovery is unique and offers unparalleled insights into many aspects of Roman history. While Roman warfare is well documented through historic sources as well as battlefield artefacts such as weaponry and equipment, no direct physical evidence of fallen combatants is known archaeologically to date. The inhumation of the individuals marks a notable deviation from contemporary Roman funerary ritual, which is significant in religious and historic contexts. Thus, this rare find creates



Fig. 4. – Left: The dagger after recovery. – Right: Radiographic image of the sheath (Photo: L. Hilzensauer, Wien Museum; TimTom Wien).



Fig. 5. A lance head logged in the pelvis of Individual 115 (Photo: Novetus GmbH).



Fig. 6. Map of the Limes region of *Noricum* and *Pannonia* (Map: M. Mosser, Stadtarchäologie Wien).

a unique ‘bio archive’ of skeletal human remains. Through bioarchaeological and biomolecular analyses, including ancient DNA and stable isotope studies, it is hoped that their origin can be determined and unprecedented insights into life and living conditions during the 1st and 2nd centuries AD gained. Ultimately, a dignified resting place will be established, ensuring ethical curation and accessibility for future generations of researchers.

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References

- Buikstra, Ubelaker 1994
J. E. Buikstra, D. H. Ubelaker, Standards for Data Collection from Human Skeletal Remains. Arkansas Archeological Survey Research Series 44, Lafayetteville, Arkansas 1994.
- Bundesdenkmalamt 2024
Bundesdenkmalamt (Ed.), Richtlinien Archäologische Maßnahmen: Version 1. Jänner 2024. Vienna 2024.
- Giannecchini, Moggi-Cecchi 2008
M. Giannecchini, J. Moggi-Cecchi, Stature in archaeological samples from central Italy: methodological issues and diachronic changes, *American Journal of Physical Anthropology* 135/3, 2008, 284–292.
- Gowland, Walther 2018
R. Gowland, L. Walther, Human growth and stature. In: W. Scheidel (Ed.), *The Science of Roman History: Biology, Climate and the Future of the Past*. Princeton 2018, 174–204.
- Knüsel, Robb 2016
C. J. Knüsel, J. Robb, Funerary taphonomy: an overview of goals and methods, *Journal of Archaeological Science: Reports* 10, 2016, 655–673.
- Maspoli 2014
A. Z. Maspoli, *Römische Militaria aus Wien: Die Funde aus dem Legionslager, den canabae legionis und der Zivilsiedlung von Vindobona*. Monografien der Stadtarchäologie Wien 8, Vienna 2014.
- Mitchell, Brickley 2017
P. D. Mitchell, M. Brickley (Eds.), *Updated Guidelines to the Standards for Recording Human Remains*. Reading 2017.
- Paleopatologia 2018
Paleopatologia, Scupi, colonia flavia scupinorum, 15.3.2018, <https://www.paleopatologia.it/scupi-colonia-flavia-scupinorum/> (last access 3.6.2025).
- Strobel 1989
K. Strobel, Die Donaukriege Domitians, *Antiquitas* I/38, 1989, 99–104.
- Trotter 1970
M. Trotter, Estimation of stature from intact long bones. In: T. D. Stewart (Ed.), *Personal Identification in Mass Disasters*. Washington, DC 1970, 71–83.
- Weller, Bloier, Flügel 2020
U. Weller, M. Bloier, C. Flügel, *Dolche und Schwerter: erkennen bestimmen beschreiben*. Bestimmungsbuch Archäologie 6, Berlin – Munich 2020.
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