

# On the case and possible origin of double human inhumation in the backyard of a private house in the city of Tver

• Zinoviev AV •

Zoology Division, Tver State University

## Address for correspondence:

Andrei V. Zinoviev

Tver State University

Faculty of Biology, Zoology Division

Chaikovskogo pr. 70a

170002 Tver, Russia

E-mail: [m000258@tversu.ru](mailto:m000258@tversu.ru)

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## Abstract

The buried remains of two women found in the backyard of a private house in the city of Tver, Russia, have been investigated. Although both deceased have been buried without coffins and under the floor of a wooden building, their skeletal remains do not show any traces of criminal misconduct leading to their death. The results of the examination performed on both skeletons and accompanying archaeological material suggest that both women most probably died of natural causes during the occupation of Tver by German troops from October to December, 1941.

**Keywords:** Archaeoanthropology; World War II; Occupation; Burial; Tver

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## Introduction

The skeletal remains of two individuals were discovered during the course of archaeological excavation carried out by the Tver Archaeological Research and Restoration Centre in the city of Tver (Figure 1) in 2008. The position of the burial site outside of the cemetery, in the backyard of a private house, as well as the absence of coffins, raises a number of questions. The present study provides the answers to some of these questions by combining anthropological studies with available archaeological data.

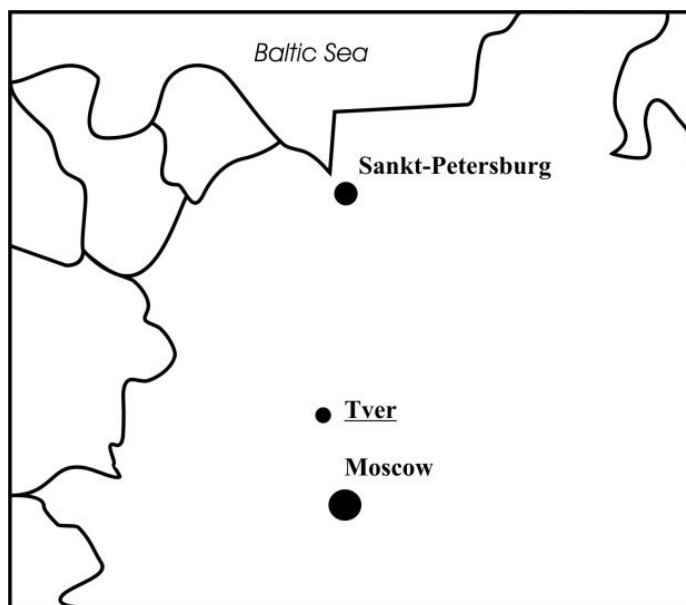


Figure 1. Location of Tver in European Russia

### Materials and methods

Two almost completely well-preserved human skeletons were available for the study (Figure 2, Figure 3). The skeletons were discovered in a pit, dug out under the floor of a former wooden building in the backyard of a private house. The heads were buried towards the east, with hands crossed across the chest; both carcasses were once wrapped in pieces of fabric. The wrapping of the first body was completely decayed, leaving cherry-colored traces in the adjacent soil. The second body was wrapped in some sort of artificial material, most likely in leatherette, traces of which were still visible on various parts of the skeleton (Figure 4 A, D). Coffins were missing in both cases. The burial pit was filled with soil, containing various debris items dating from the 19<sup>th</sup> century to the first half of the 20<sup>th</sup> century. The age of the buried individuals was determined by a combination of several methods, using cranial (1-8) and postcranial features (9-18). The reliability of each particular method has been taken into account (19).

The stature estimation was based on a number of methods, provided by Alekseev (1). To check the results several other methods were applied (13, 20-28). An original computer program named "Stature of Buried" (2007), developed at the Physics-Technical Faculty of Tver State University, has been used to find the optimal value for the stature of buried individuals.

The skeletons were sexed using well-preserved pelvic bones (29, 30) together with other morphological characteristics (24).

The skeletons in Figures 1 and 2 were vectorized by the author in Corel-Draw 10. Forms for vectorization were generously provided by Thierry Vette (France).

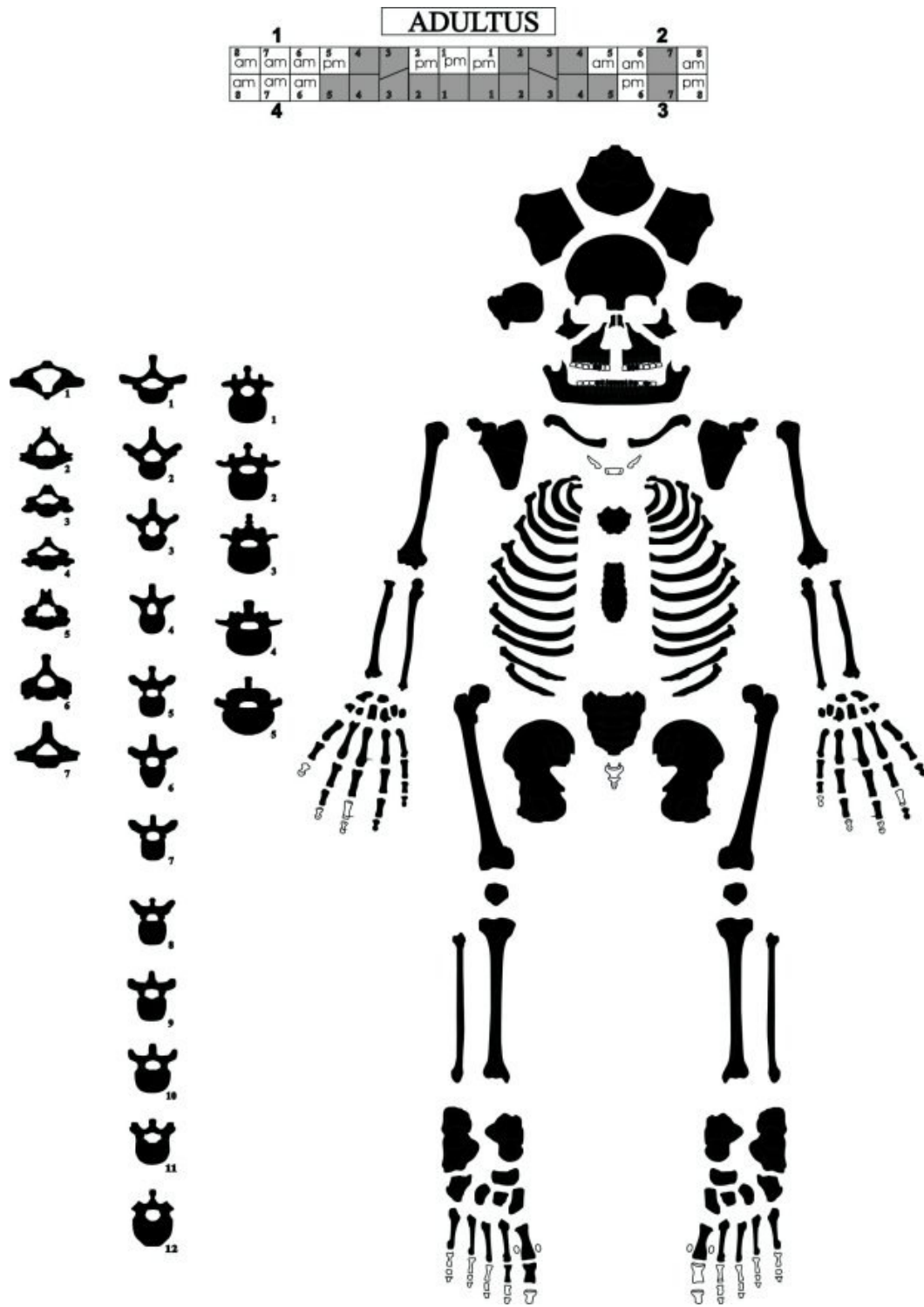


Figure 2. Skeleton No. 1 Bones available for study have been marked black; am – teeth fallen out antemortem, pm – teeth fallen out postmortem

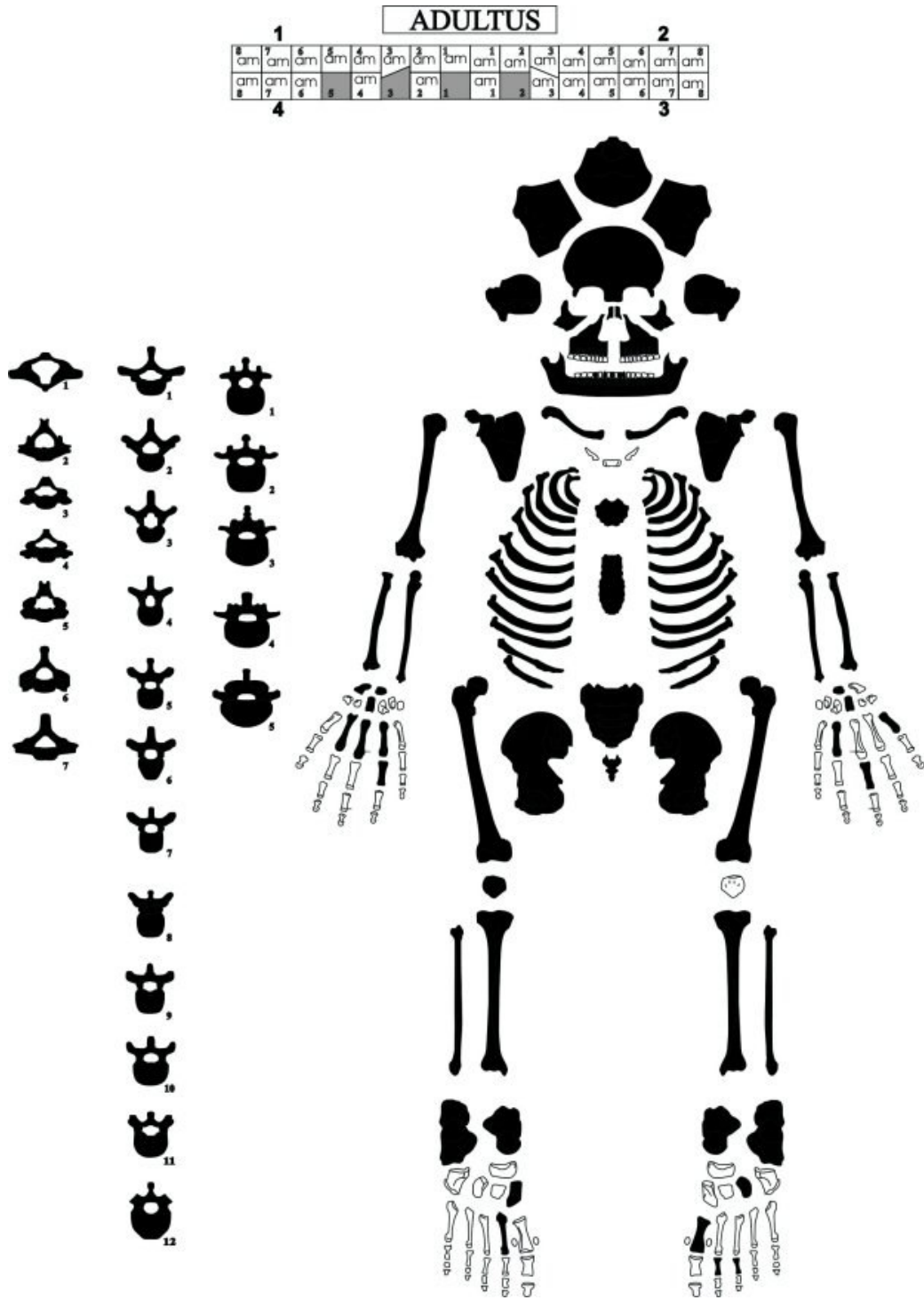


Figure 3. Skeleton No. 2 Bones available for study have been marked black; am – teeth fallen out antemortem, pm – teeth fallen out postmortem

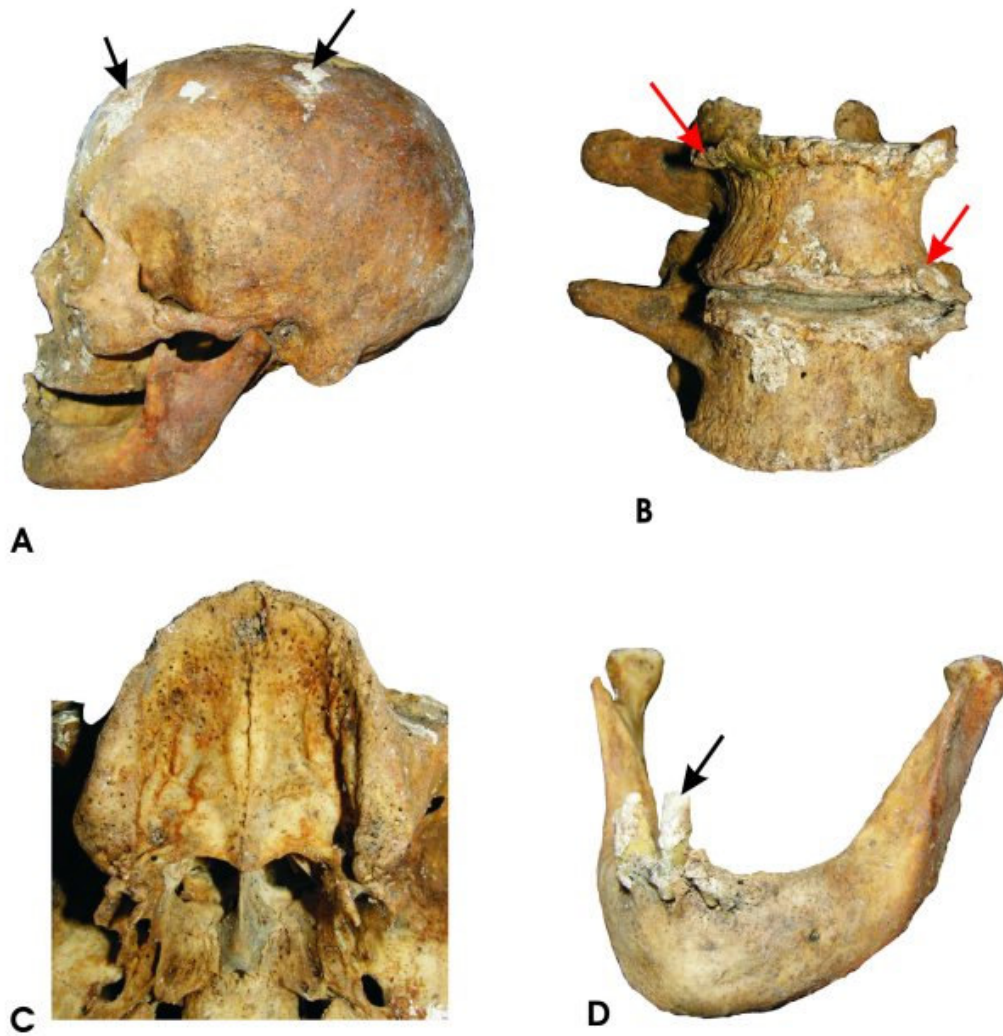


Figure 4. Skeleton No. 2 A – left sided view of the skull; B – two lumbar vertebrae; C – view of the masticatory surface of the upper jaw; D – lower jaw viewed anterolaterally. Black arrows indicate remnants of leatherette, which had been wrapped around the carcass. Red arrows indicate traces of senile arthropathy.

## Results

Both skeletons belong to women. The general data on them is presented in Table 1:

*Table 1. General data on buried individuals*

No. of skeleton	Sex	Age (years)	Age group	Stature ( $\pm 0,2$ cm)
1	Female	45-55	Maturus	158,9
2	Female	70-75	Senilis	152,9

**Skeleton 1** (Figure 5). The skeleton of the mature woman has caused certain difficulties in determining her age at the time of death. Tooth wear and the closure of ectocranial sutures have been pointed out on this younger individual, while postcranial features (development of osteophytes, rugged joint surfaces) revealed an older age. Taking this into consideration we expanded the individual's possible age range. Most likely, hard life and diseases caused premature ageing of the postcranial skeleton. Nine teeth belonging to this buried woman at this site had fallen out prior to the death (Figures 2, 5 A, C); most of the others show caries and pronounced dental calculus (Figure 5 C, E). The gums under the calculus were inflamed, causing periodontitis. The lower incisors, canines and premolars bear two hypoplastic lines (Figure 5E). Formed during childhood, these lines revealing arrested dental growth indicate a metabolic stress, often caused by disease or starvation (31). Reid and Dean's method (32), considered the most precise (33), indicates that the woman in question had experienced stressful events between the ages of slightly over three and four years. The earlier possible stresses cannot be determined due to the tooth wear. Age changes are especially well-manifested in the vertebral column. Lastly, thoracic and lumbar vertebrae show signs of pronounced arthropathy (Figure 5F). The first ribs are fused with the manubrium sterni (Figure 5D). A longer and more powerful skeleton of the right hand indicates the woman's right-handedness. There were two wormian bones in her skull's sutura lambdoidea (Figure 5B). This configuration has only once been recorded for those buried in the city of Tver (34), and thus can be considered rare. The bones displayed no trace of violent death.

**Skeleton 2** (Figure 4). Age estimation for this woman was not as complicated as in the previous case. Despite the lack of almost all of the teeth (Figure 4A,C,D), obliteration of the ectocranial sutures, joint surfaces of long bones, first ribs, pubic and sacroiliac symphyses indicates age at time of death somewhere between 70 and 75 years. The postcranial skeleton of this woman, belonging to the senilis age category, bears traces of arthropathic changes, especially pronounced in thoracic and lumbar regions of the vertebral column (Figure 4B). These changes are only slightly more progressive than in the significantly younger woman described as Skeleton 1 in this study. There are no skeletal traces of violent death in this case, either.

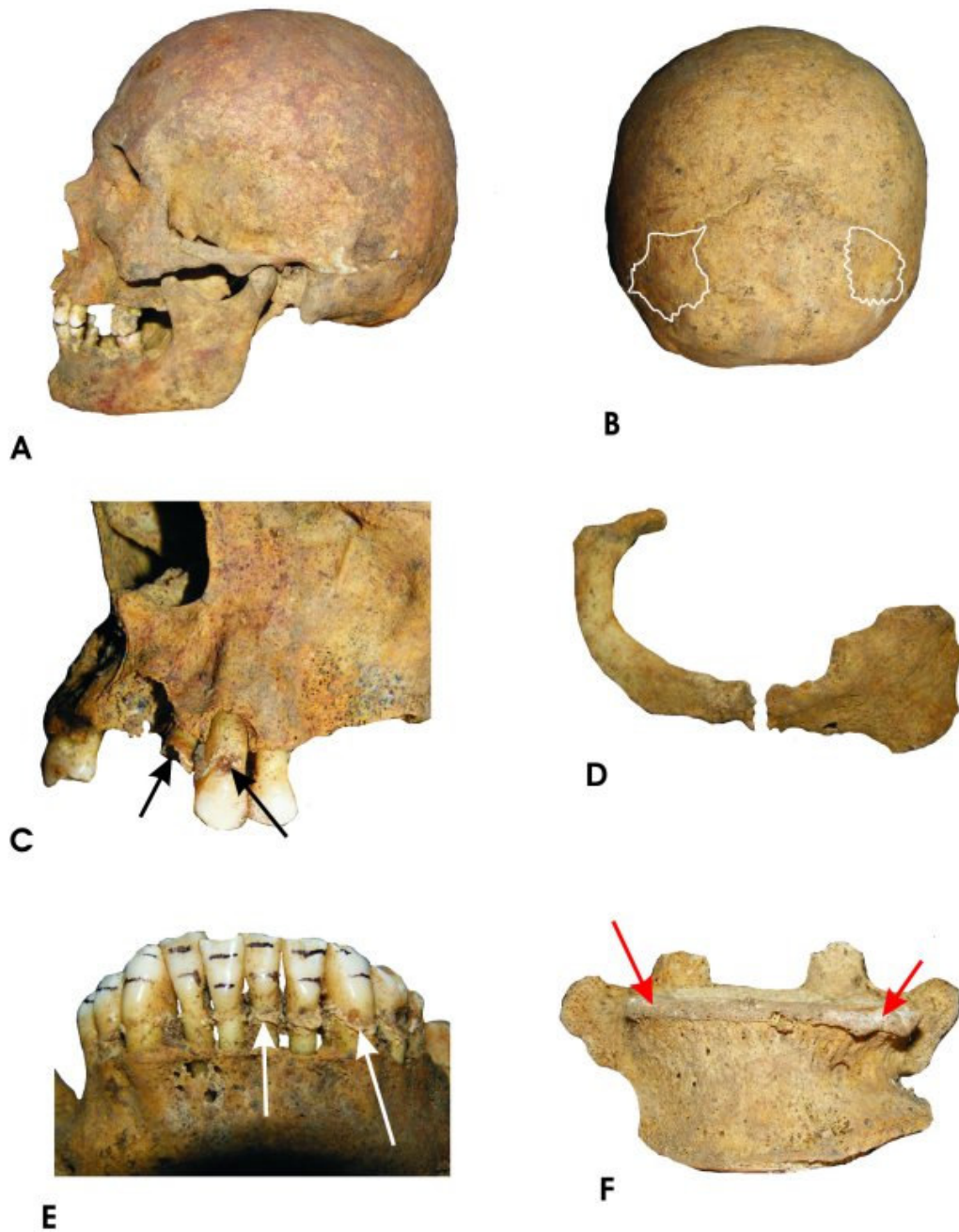


Figure 5. Skeleton No. 1 A – skull from the left; B – occipital view of the neurocranium (wormian bones are outlined in white); C – maxilla anterolaterally; D – manubrium sterni fused with first rib (broken off postmortem); E – anterior view of lower jaw (hypoplastic lines are marked with ink); F – lumbar vertebra. Black arrows show caries; white ones – dental calculus; red ones – arthropathic changes.

## Discussion

The position in which the skeletons were found indicates partial utilization of a burial ritual. This fact and the absence of violent marks on the remains reject possible criminal origin of the skeletons. Thus the absence of coffins and strange position of burial in the backyard of a private house may indicate that the regular funeral ceremony could not be completed. This situation took place during occupation of Tver (formerly Kalinin) by German troops (Oct. 15th– Dec. 16th, 1941) during the Second World War. Due to the curfew restrictions, all the citizens were resettled to the downtown area and were forbidden to leave it. In this case most of the deceased were buried secretly in backyards or even under the floorboards of houses lived in. Both women in question may have died of natural causes; the first one due to old astronomical age, while the second one may have died due to biologically old age, caused by metabolic problems first experienced as early as in childhood. The stress brought on by the German occupation of Tver might have been the last straw, which sped up the death of these two women.

The head-to-east orientation of the carcasses is surprising and contradicts the funeral customs practised by the followers of the Orthodox, Muslim and Jewish faiths. Most likely, the burial was conducted by someone rather unfamiliar with funeral rites.

## Conclusion

This study indicates that the burial of two women in the backyard of a private house in downtown Tver was carried out in secret and with only partial knowledge of funeral rituals. Results from the examination of the skeletons and accompanying archaeological material suggest that both women most likely perished due to natural causes during the occupation of Tver by German troops from October to December 1941. The stress brought on by the occupation may have sped up their demise, especially that of the younger individual.

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