

Forensic Archaeology in Ukraine: Towards Broader Application and Integration

Dr. Daria Cherkaska

PhD and candidate of historical science, research fellow University of Huddersfield, Huddersfield, United Kingdom; Consultant, International Commission on Missing Persons Ukraine / United Kingdom,
ORCID: <https://orcid.org/0000-0003-1298-2729>, e-mail: daria.cherkaska@icmp.int

Dr. Soren Blau

PhD, Head of Archaeology and Anthropology Division, International Commission on Missing Persons, Hague, Netherlands,
ORCID: <https://orcid.org/0000-0001-6499-7741>

Prof. Caroline Sturdy Colls

PhD, Professor, Director of the Centre of Archaeology, University of Huddersfield, Huddersfield, United Kingdom,
ORCID: <https://orcid.org/0000-0003-2942-6219>

This paper examines the current state and emerging potential of forensic archaeology in Ukraine, particularly in the context of conflict-related investigations. While the discipline is well established internationally, its development in Ukraine has been limited by institutional, legal, and infrastructural challenges. The paper highlights the importance, interdisciplinary training and improved coordination among stakeholders in order to begin to appreciate the potential value of forensic archaeology in Ukraine. Ultimately, it advocates for a context-specific yet internationally informed approach to ensure forensic archaeology becomes a vital tool in the pursuit of justice, truth, and memory in Ukraine.

Keywords: missing persons; burial sites; forensic archaeology.

Судова археологія в Україні: на шляху до повноцінного застосування та інтеграції

Дар'я Черкаська, Сорен Блау, Керолайн Стюді Коулз

Досліджено сучасний стан і потенціал судової археології в Україні, зокрема, у контексті розслідувань, пов'язаних із конфліктами. Хоча ця дисципліна добре відома на міжнародному рівні, її розвиток в Україні обмежений інституційними, правовими й інфраструктурними проблемами. Зауважено важливість міждисциплінарної підготовки та покращення координування між зацікавленими сторонами з метою усвідомлення потенційної користі від запровадження судової археології в Україні. Наголошено на важливості застосування підходу, що враховуватиме не тільки конкретний контекст, а й спиратиметься на міжнародно обґрунтований досвід, щоби судова археологія стала життєво важливим інструментом і сприяла відновленню справедливості, правди та збереженню пам'яті в Україні.

Ключові слова: зниклі безвісти; місця поховань; судова археологія.

While the application of archaeological methods and techniques to assist in crime scene investigations can be traced as far back as the early 19th century, the full potential first emerged in the United States of America (USA) in the late

1970s [1, p. 2; 2, p. 26]¹. Formalisation of a dedicated discipline of “forensic archaeology” subsequently developed in the USA, and later in the United Kingdom, Northern Europe (particularly in the Netherlands), and Australia [3; 4, p. 149; 5, p. 11]. Defined as “*the application of archaeological theory and methods to the resolution of medico-legal and humanitarian issues*” [6], forensic archaeology today has a solid foundation, requiring practitioners to be aware of the ethical obligations of the profession and in many countries, to complete certification [7]. Forensic archaeologists are employed by police forces in many jurisdictions to assist in the search for the bodies of missing individuals.

Since the 1980s, forensic archaeology has also played a crucial role in the investigation of major crimes, including genocide and crimes against humanity, as well as mass disasters as it provides systematic methods for locating, recovering, and analysing human remains and associated evidence within complex and often concealed contexts. Forensic archaeologists provide detailed information that may be pivotal to the identification of the deceased as well as for prosecution purposes. Forensic archaeologists have used their skills in investigations of conflict-related deaths and disappearances in multiple contexts around the world including, but not limited to, in the former Yugoslavia, Rwanda, South Africa, Armenia, multiple countries in South America, and

Spain [8]. Cultural and social anthropologists Francisco Ferrándiz and Antonius Robben have contended that archaeological investigations — including exhumations — have increasingly become vital tools for reasserting the existence of forgotten or unknown victims and for reconstructing their history, including their final minutes, hours, or days [9]. Moreover, investigations of mass graves are becoming central to transnational human rights discourses and transitional justice practices as evidenced by the role exhumations play in truth commissions.

When applied to sites of genocide and mass violence, forensic archaeology must be guided by both international standards and local legislation. In any context, including Ukraine, this necessitates the development of comprehensive protocols that include non-invasive techniques, ethical exhumation practices, and culturally sensitive approaches to recovery and documentation.

The investigation of World War 2 mass graves sites in Ukraine included archaeologists and the results played a pivotal role in demonstrating the value of the discipline at certain crime scenes. However, since this time, forensic archaeology, although holding promising potential, has not yet developed in Ukraine. One of the most pressing obstacles is the limited engagement and oversight by national authorities. In the absence of clear legal frameworks and institutional supervision, activities such

1 Forensic archaeology relates to different fields of knowledge depending upon the country. For instance, in the USA forensic archaeology and physical anthropology are considered a subfield of anthropology, but in the UK and some other countries, they are a separate discipline of forensic science.

as the search for and exhumation of mass graves (both historical and recent) remain vulnerable to being undertaken by amateurs, risking the loss of potentially crucial forensic evidence.

Encouragingly, this situation is evolving. The full-scale invasion of Ukraine by Russian Federation in 2022 has catalysed significant engagement from both Ukrainian and international experts in documenting war crimes and crimes against humanity [10; 11]. This collaboration has already fostered a deeper institutional understanding of forensic archaeology and the potential the discipline may play in documenting potential war crimes.

The success of future forensic archaeological initiatives will depend heavily on coordinated efforts among various stakeholders, including academic institutions, governmental bodies and local communities. International experience shows that respectful, inclusive, and transparent approaches produce the most ethically sound and rigorous outcomes. Sites of mass violence must be treated as crime scenes, irrespective of whether investigations are legally defined as criminal proceedings. Consequently, international best practices and forensic standards must be adapted to the Ukrainian context [12; 13].

A significant challenge is still the lack of effective communication and coordination between institutions and individuals. Improved networking, information sharing, and professional collaboration — especially among state organisations, international forensic experts, and non-government — will be vital to advancing the field. Furthermore,

training programmes such as summer schools, academic mobility schemes, and interdisciplinary workshops should be developed to ensure that professionals are equipped with the necessary forensic, archaeological, and ethical expertise. As demonstrated in international practice, the likelihood of successfully locating and identifying missing persons is significantly influenced by the existing forensic infrastructure, technical capabilities, and — most crucially — the presence of political will, both in individual cases and from a broader, systemic perspective [14, p. 200–201].

However, recognition of the limitations of current scientific methods, along with the practical obstacles to accessing certain areas, underscores the need to raise awareness of another crucial component in forensic archaeological investigations concerning missing persons: the importance of maintaining realistic expectations — both on the part of investigators and among stakeholders, including family members [12].

The integration of remote sensing technologies presents a promising frontier. Since 2022, there has been a marked increase in the availability and use of satellite imagery, which could prove instrumental in locating historic and more recent mass grave sites. However, comprehensive analysis remains limited due to the ongoing War, which restricts access to up-to-date satellite data.

At the same time, the war has accelerated the development of forensic infrastructure in Ukraine. The growing number of missing persons and burial sites has made forensic identification

and documentation a national priority. This is evidenced by the establishment of the Unified Register of People Went Missing Under Special Circumstances in Ukraine (*Algorytm dii dlia rozshuku znyklogo bezvisti ta otrymannia z Reye-stru osib, znyklykh bezvisti za osoblyvykh obstavyn* 2022), and discussions between relevant Ukrainian authorities and the International Commission on Missing Persons (ICMP) about the importance of an integrated data management system. In addition, a special leaflet on safeguarding illicit burial sites,

based on the Ukrainian context, was published by the ICMP in 2023.

In summary, while challenges remain considerable, there is growing momentum for the institutionalisation and advancement of forensic archaeology in Ukraine. With continued international support, legal reform, academic training, and public engagement, forensic archaeology can become a crucial tool for uncovering historical truths, ensuring justice, and commemorating the victims of both past and ongoing atrocities.

References

1. Introduction / A. M. Christensen, N. V. Pas-salacqua, and E. J. Bartelnink. Forensic anthropology: Current Methods and Practice. Academic Press, 2014. Pp. 1–32.
2. Nafté M. Flesh and bone: an introduction to forensic anthropology. Durham, N. C. ; Carolina Academic Press, 2009. 185 p.
3. Handbook of Forensic Anthropology and Archaeology / ed. S. Blau and D. H. Ubelaker. Part One. Routledge, 2009. Pp. 27–115.
4. Sturdy Colls C. Holocaust Archaeologies. Approaches and Future Directions. Cham : Springer International Publishing, 2015. 358 p.
5. Blau S. Forensic Archaeology in Australia: Current Situations, Future Possibilities. *Australian Archaeology*. 2004. Vol. 58. Is. 1. Pp. 11–14. DOI: 10.1080/03122417.2004.11681775 (date accessed: 10.04.2025).
6. Scientific Working group for Forensic Anthropology. Age Estimation. URL: https://www.nist.gov/sites/default/files/documents/2018/03/13/swganth_age_estimation.pdf (date accessed: 15.12.2022).
7. Blau S. and Ubelaker D. Forensic Anthropology and Archaeology: Introduction to a Broader / Handbook of Forensic Anthropology and Archaeology ; ed. S. Blau and D. H. Ubelaker. Routledge, 2009.
8. Hunter J. and Sturdy-Colls C. Forensic Archaeology / J. Siegel, G. Knupfer and P. Sauk-ko. Encyclopaedia of Forensic Sciences ; 3rd ed. Three-Volume Set, 1–3. London : John Wiley & Sons Ltd, 2013. Pp. 18–23.
9. Ferrándiz F., Robben A. C. G. M. Necropolitics: Mass Graves and the Exhumations in the Age of Human Rights. Philadelphia : University of Pennsylvania Press, 2015. 269 p. DOI: 10.1111/maq.12330 (date accessed: 10.04.2025).
10. Sachalko B. Ukrainian, French Forensic Experts Exhume Bucha Victims / RadioFreeEurope : web. 14.04.2022. URL: <https://www.rferl.org/a/ukraine-bucha-mass-graves-exhumation/31803751.html> (date accessed: 10.04.2025).
11. Ukrainian forensic investigators start exhuming bodies from Bucha mass grave / Reuters : web. 08.04.2022. URL: <https://www.reuters.com/world/europe/ukrainian-forensic-investigators-start-exhuming-bodies-bucha-mass-grave-2022-04-08/> (date accessed: 10.04.2025).
12. Bournemouth Protocol on Mass Grave Protection and Investigation published / Bournemouth University : web. 27.01.2021. URL: <https://www.bournemouth.ac.uk/news/2021-01-27/bournemouth-protocol-mass-grave-protection-investigation-published> (date accessed: 10.04.2025).
13. The Minnesota Protocol on the Investigation of Potentially Unlawful Deaths (2016).

The Revised United Nations Manual on the Effective Prevention and Investigation of Extra-legal, Arbitrary and Summary Executions. New York and Geneva, 2017. 99 p. URL: <https://www.ohchr.org/Documents/Publications/MinnesotaProtocol.pdf> (date accessed: 10.04.2025).

14. Blau S. Missing Persons Investigations and Identification: Issues of Scale, Infrastructure, and Political Will / Handbook of Missing Persons ; ed. S. J. Morewitz, and C. Sturdy Colls. Cham : Springer International Publishing, 2016. Pp. 191–206. DOI: 10.1007/978-3-319-40199-7_14 (date accessed: 10.04.2025).