

Forensic Institutions under Martial Law: Challenges and Prospects

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The primary concerns of this paper are to consider situations faced by Ukrainian forensic science institutes under martial law. Specifically, the author analyses how National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» of the Ministry of Justice of Ukraine responds to the war. It is highlighted that the efforts and resources of all forensic science institutes should be consolidated to fulfil common goals. The Center's staff participation in events organised by the International Commission on Missing Persons Working Group, according to priority areas, and in online training sessions under the Panacea Cooperative Research Group Programme by Spanish researchers, is emphasised. Traditionally, articles included in the current issue of the Research Paper Collection—both research papers and case notes—are analysed. A brief overview of the content is provided.

Keywords: forensic examination; criminalistics; expert support of justice; DNA-identification; forensic anthropology; international cooperation; methods of crime investigation; counteracting investigation; subject under study.

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Russia's full-fledged military aggression against the sovereign territory of Ukraine poses an unprecedented challenge across all areas of Ukrainians' lives, including the system of justice and forensic expert activity. Under martial law, when all institutions of our country are exposed to serious threats, forensic experts' activities have turned out to be essential not only for documenting military crimes but also for ensuring justice in criminal, civil, economic, and administrative cases.

Just like other specialized scientific and expert institutions operating under the Ministry of Justice, the Ministry of Internal Affairs, the Security Service, and the Ministry of Defense of Ukraine, National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» (hereinafter – NSC «Hon. Prof. M. S. Bokarius FSI») adjusts its activities in response to evolving circumstances. Despite all the problems and challenges of martial law, National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» staff conduct forensic examinations and expert research, develop novel methodologies and upgrade equipment.

The leadership of the National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» places special emphasis on cooperation with other research institutions of the Ministry of Justice of Ukraine, thus promoting the pooling of efforts and resources to achieve common goals within forensic expert activities. This cooperation also extends to international partnerships with foreign institutions.

National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» takes part in the Working Group activities of the International Commission on Missing Persons (hereinafter – the ICMP). The Commission's areas of research focus are supporting families affected by

war and searching for missing persons as a result of war, as well as using DNA analysis for large-scale identifications (in the event that a significant number of people go missing). Within the framework of the Memorandum of Understanding signed between National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» and the ICMP, experts in forensic archaeology and anthropology from the ICMP provide advising and support to forensic experts working at National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» during relevant training sessions and advising held in both online and offline formats. Our forensic experts have repeatedly travelled to the Netherlands and Poland to participate in internships funded by the host organization. For a period of six months, an ICMP forensic expert taught future anthropologists from our institution, following a special schedule. Exchange of experience, conduct of joint educational measures, and provision of material and technical resources along with methodological assistance play a pivotal role in strengthening the potential of the Ukrainian expert system and in using resources rationally.

NSC «Hon. Prof. M. S. Bokarius FSI» staff are actively involved in online trainings organized by a group of Spanish researchers from *Panacea Cooperative Research*. In the course of such activities, forensic anthropologists assess the efficiency of using machine learning and artificial intelligence to determine the age of a person, etc. Such cooperation helps NSC «Hon. Prof. M. S. Bokarius FSI» staff adapt global best practices in this area to the needs of Ukrainian practice. This is of utmost importance for documenting and investigating crimes against humanity and other military crimes. The large-scale war in Ukraine

has resulted in the deaths of thousands of people. Unfortunately, due to considerable damage, a lot of people cannot be identified by traditional methods (face recognition or DNA analysis). In Ukraine, introduction of a new forensic examination type—forensic anthropology—is of great social importance: this is another step towards restoration of justice and humanity in brutal wartime conditions.

Therefore, in the context of martial law, forensic experts and researchers from NSC «Hon. Prof. M. S. Bokarius FSI» not only retained their professional potential, but also improved it. They also maintain new domestic and international contacts in order to provide Ukraine's justice with an independent, qualified and objective forensic analysis focused on the maximum use of science and technology achievements. This stands as a cornerstone of upholding the rule of law in our country.

Currently, the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection is indexed in *Google Scholar*, and in the following international online databases: *Academic Scientific Journals Indexing*, *Bielefeld Academic Search Engine (BASE)*, *ERIH PLUS*, *Europub*, *Index Copernicus International (ICV 2021: 100)*, *RefSeek*, *ResearchBib*, *WorldCat*, as well as in the Register of Scientific Publications of Ukraine and in DOI Foundation. The Research Paper Collection's electronic versions are posted on the Internet on the platforms of the National Library of Ukraine named after V. I. Vernadsky, libraries of forensic institutions of the Ministry of Justice of Ukraine, institutions of higher education of the Ministry of Internal Affairs of Ukraine, etc. This facilitates the exchange of scientific developments between the edition's authors and researchers worldwide.

Research papers in the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection are traditionally categorized into two groups: *Research Papers* and *Case Notes*.

Let us briefly review the content of the current issue. The *Methods of Investigating Crimes in Ukrainian Lands in Middle Ages* research paper authored by **Anatolii Starushkevych** (Ukraine), Candidate of Sciences in Law, Docent, analyses methods of investigating crimes used in the Ukrainian lands during the Middle Ages on the basis of the norms of customary law of “Vast Edition of Pravda” and clarifies their role in the formation of the forensic doctrine of the methods of investigating criminal offenses (in particular, forensic methodology as a component of modern forensics). The researcher proves that the legal procedures of customary law (“corpus”, “trace persecution”) became the basis for the development of modern methods of investigating criminal offenses on hot leads and on information about the subjects and objects of a criminal attempt, forensic analysis of the trace picture, forensic profiling, forensic retrospection, etc. It is concluded that the transfer of experience in investigating crimes within the boundaries of one territorial community from older members of the community to younger ones not only contributed to the improvement of skills in applying investigative methods, but also had a certain preventive effect on the participants in these legal actions, deterring them from committing offenses and concealing illegal actions known to them committed by other members of the community.

A research paper by **Vlada Husieva**, Doctor of Law, and **Oleksandr Tarakan**, Candidate of Sciences in Law, both from Ukraine, determines prerequisites and regularities of the emergence and

development of such phenomena as resistance to investigation and abuse of rights in law enforcement activities. The researchers summarized that resistance to investigation is a complex, dynamic and multifaceted phenomenon that is formed in the conditions of a criminal conflict and manifests itself in the purposeful behaviour of persons interested in concealing the actual circumstances of a criminal offense. Its activity side consists in committing both active and passive actions that affect the course and results of pre-trial investigation. At the same time, counteraction mechanism is variable and depends on the stage of criminal proceedings, chosen tactical methods and the presence of corrupt, organizational and social connections. The scientists identify stages and structural components of the forensic characteristic of counteraction to investigation and suggest viewing it as a complex, dynamic and multifaceted phenomenon.

The section continues with the *Circumstances to be Clarified During Investigation of Criminal Offenses Committed by Professional Participants in Legal Proceedings* research paper by **Yevhen Sup** (Ukraine), Candidate of Sciences in Law, which outlines proof topic specifics and circumstances that are subject to clarification during investigation of criminal offenses committed by professional participants in the legal proceedings. It was determined that topic proof in cases of this category has a multi-level structure, which includes both circumstances common to all criminal proceedings and specific specifics associated with the special status of the offender. It was confirmed that the leading factor in the effectiveness of evidence is the detailing of the methods of committing a criminal offense and specification of their trace picture. A list of circumstances

that constitute a mandatory topic proof and that are subject to clarification during the investigation has been formed. The latter are specified in the context of individual groups that cover criminal offenses of the type under research.

The *Forensic classification of criminal offenses committed in the field of professional legal assistance* research paper by **Kristina Romanaukas** (Ukraine), Doctor of Philosophy in Law, outlines the author's forensic classification of this group of criminal offenses. The proposed approach involves identifying the following main criteria: object of the criminal offense and the specifics of encroachment subject, subject of the criminal offense, method and circumstances of its commission, consequences and the tools (means) used. The developed forensic classification not only fills the existing gap in science, but also has practical significance. It creates a basis for developing specific investigation methods, optimizing the planning of pre-trial investigation, forming tactical techniques and predicting the behaviour of criminals. In addition, its application will contribute to strengthening the guarantees of independence of the legal profession, increasing the effectiveness of the protection of individual rights and confidence in the justice system.

The *Formulation and Justification of Questions Posed in Document on Appointment of Forensic Veterinary Examination of Live Animals* research paper authored by **Ivan Yatsenko** (Ukraine), Doctor of Veterinary Medicine, Professor, discusses the range of questions that can be posed to a forensic veterinary expert when ordering an examination for offenses committed against the health and life of animals. All questions are conditionally combined into three groups: 1) identification of distinguishing features and physiological

specifics of live animal; 2) determining the fact of injury (mechanism, prescription and independence (independence) of formation, consequences for the animal's health, severity, mutilation, type of traumatic instrument, etc.); 3) clarifying the cause-and-effect relationship between the bodily injuries inflicted on the animal and its health disorder; determining traces that indicate its torture, infliction of physical pain and suffering, period of the animal's loss of general economic or special use or full-fledged existence in the environment of a wild or homeless animal, as well as the impact on its health and life of actions related to prolonged deprivation of heat, food, drink and/or keeping it in harmful conditions.

The *Case Notes* Section begins with the *Technical and Forensic Support at the Initial Stage of Smuggling Investigation* research paper by **Yurii Kovalov** (Ukraine), Candidate of Legal Sciences. This article primarily considers the essence, content and peculiarities of technical and forensic support at the initial stage of investigating crimes involving smuggling. Having generalised theoretical approaches and practices in the investigation of criminal offences, the author points out that peculiarities of applying scientific and technical means are conditioned by investigative situations characteristic of smuggling, which in turn determine the algorithm of investigative (search) and covert investigative (search) actions. Prospects for enhancing technical and forensic support for smuggling investigations primarily lie in combining technological innovations, refining methodological approaches, upgrading the skills of pre-trial investigation agencies, expanding material and technical resources, and ensuring proper legal regulation of the use of scientific and technical means.

The *Role of Well-Versed Persons in Identifying Signs of and Documenting Economic Criminal Offences* research paper by **Vitalii Usatii**, Candidate of Legal Sciences, clarifies the role, place and functions of well-versed persons in identifying and documenting (procedurally documenting) signs of economic criminal offences. The researcher provides a comprehensive overview of the legal regulation and emphasizes the practical importance of using specific expertise in criminal proceedings. The findings suggest that effectively and objectively investigating the above offences requires expertise that falls outside the scope of traditional legal expertise. The importance of specialists' participation in various procedural and non-procedural forms of activity is revealed: from consulting (advising) and preliminary research to participation in searches, inspections, interrogations and temporary access to documents. It is stated that the participation of a specialist provides a sufficient evidentiary basis, minimizes the risk of information loss and increases the efficiency of criminal proceedings.

The *Geographical indications as forensic science objects in the field of intellectual property: theoretical aspects and main tasks* research paper by **Nataliia Kisil** (Ukraine), Candidate of Sciences in Agriculture, aims to study the modern theoretical and legal foundations of forensic examinations related to various means of individualizing goods and services, in which one of the objects under study is geographical indications; to analyze the principles of legal protection of geographical indications in Ukraine and the peculiarities of regulating relations arising in connection with their registration, use, and protection; to form an indicative list of the main tasks of expertise related

to geographical indications. The practice of resolving disputes over such designations has been analyzed, the definition of the subject of expertise related to geographical indications has been formulated, and a list of its main tasks has been outlined. The provisions proposed here form the basis for the formation of theoretical and methodological principles of expertise in the field of intellectual property and the improvement of methodological approaches to the performance of expert tasks.

The *Electronic Evidence in Criminal Procedure: Methods for Its Detection, Investigation and Legal Consolidation* research paper by **Valeriia Shulha** and **Lina Kaliuzhna**, both from Ukraine, is devoted to the procedure for formalizing electronic evidence in compliance with the requirements of Ukraine's criminal procedural legislation. The authors analysed current rules governing the procedures for collection, storage and provision of such evidence in court. The main issues in law application practice include insufficient regulation of issues regarding the preservation of electronic evidence, the difficulty of establishing its authenticity, and the risk of falsification. The paper outlines proposals to optimize the collection and formalization of electronic evidence and to introduce modern technical means as well as software that comply with international standards.

The section ends with a research paper by **Olena Savina**, **Vilena Zdor**, and **Dmytro Us** – all authors from Ukraine. This study aims to substantiate a set of criteria for evaluating handwriting analysis expert findings so that they can be utilized in court, and to analyse existing approaches to understanding the probative value of expert findings in the context of judicial practice. Particular

attention is drawn to judicial practice of applying handwriting analysis findings and to principal issues involving their evaluation. Emphasis is placed on the court's discretionary assessment of evidence and the boundaries of its application in cases involving the use of specific expertise. Relying on handwriting studies, the researchers identify criteria for assessing the quality of expert findings which will prove valuable for judges, lawyers, prosecutors and other participants in the process. The paper emphasises the need for judges to undergo advanced training in assessing specific expertise and developing uniform approaches to the use of expert findings as evidence in judicial practice.

The final pages of the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection include the *Scientific News* Section. This part introduces readers to international and All-Ukrainian scientific events in forensic science that took place during the third quarter of this year.

The Board extends its warmest gratitude to all authors for their active cooperation and insightful manuscripts submitted to be published in the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection: we highly appreciate scientific contributions made by each and every author and anticipate further successful cooperation.

We are pleased to collaborate with both known and new authors. All interested parties are cordially invited to participate in our future projects. Only your unique ideas, out-of-the-box thinking and prospective solutions can enrich criminalistics and forensic science and help resolve urgent challenges of the present!

Together to the victory!
Glory to Ukraine!

**Судово-експертні установи
в умовах воєнного стану:
проблеми та перспективи**

Елла Сімакова-Єфремян

Розглянуто ситуації, з якими стикаються судово-експертні установи України в умовах воєнного стану. Зокрема, проведено аналіз реагування Національного наукового центру «Інститут судових експертиз ім. Засл. проф. М. С. Бокаріуса» Міністерства юстиції України на виклики війни. Наголошено на необхідності об'єднати зусилля та ресурси всіх судово-експертних установ держави для досягнення спільних цілей. Увагу акцентовано на участі працівників Центру

в заходах, організованих робочою групою Міжнародної комісії з питань зниклих безвісти за пріоритетними напрямками, і онлайн-тренінгах за програмою групи іспанських дослідників Rapasea Cooperative Research. Традиційно здійснено аналіз статей, уміщених у цьому випуску збірника наукових праць,— як дослідницьких робіт, так і наукових нотаток, стисло схарактеризовано всі матеріали.

Ключові слова: судова експертиза; криміналістика; експертне забезпечення правосуддя; ДНК-ідентифікація; судова антропологія; міжнародна співпраця; методи розслідування злочинів; протидія розслідуванню; предмет дослідження.

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