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Service dogs in military affairs: historical development and significance under martial law

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Modern challenges related to Ukraine's defense and national security necessitate the continuous improvement of mechanisms for stabilizing and protecting the state – both during peacetime and under martial law. In the current security environment, particular importance is attached to areas capable of effectively strengthening the activities of the defense and law enforcement sectors. One of the key elements of this system is the involvement of service dogs, whose role in defense, law enforcement, and humanitarian fields continues to grow steadily. The history of using animals in warfare spans many centuries. In different historical periods, animals have performed both strategic and auxiliary functions. It is known that thousands of years ago, dogs served as guards, scouts, and combat companions, becoming reliable allies of humans in various military activities. During World War I and World War II, dogs were actively employed for locating the wounded, reconnaissance, message delivery, and escorting military units. Horses were the primary means of transporting equipment and artillery, while pigeons provided reliable communication between units. At the same time, animals also played an important emotional and psychological role—they became symbols of home, hope, and moral support amid the chaos of war. The systematic use of dogs in military conflicts across eras laid the foundation for the formation of modern military cynology. At the present stage, particularly in the context of the full-scale Russian-Ukrainian war, the canine service plays a significant role within the structure of the Armed Forces of Ukraine and other security formations. The modernization of canine units is being carried out in accordance with NATO (STANAG) standards, the legal and regulatory framework and logistical support systems are being improved, and the specialization of service dogs is expanding. Special attention is given to the training of mine-detection dogs, which effectively perform tasks in combat zones. Today, service dogs are involved not only in military and law enforcement agencies but also in civilian sectors. They work as guards, search and rescue assistants, guide dogs, rescuers, and even as therapeutic companions in medical and rehabilitation practices. Such multifunctionality determines their high demand across various fields of service activity. The research methodology is based on historical analysis and the generalization of practical experience in the use of service dogs. The scientific novelty lies in the comprehensive examination of the historical and modern experience of employing service dogs in military, law enforcement, and humanitarian contexts, emphasizing their effectiveness and training for specialized tasks. The purpose of this article is to summarize the historical experience of using dogs in military affairs and to analyze the current state and prospects of their involvement under martial law in Ukraine. To achieve this goal, a set of general scientific (analysis, synthesis, systematization, comparison) and historical (problem-chronological, comparative-historical) methods were applied. The obtained generalizations indicate that dogs have been and remain an important component of the national security system. The combination of historical experience and modern training techniques ensures the effective utilization of dogs' potential in military, law enforcement, and humanitarian domains.

Key words: service dogs, military training, cynology, dog socialization, selection and behavior assessment, specialized training, effectiveness of service animals.

Службові собаки у військовій справі: історичний розвиток та значення в умовах воєнного стану

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Сучасні виклики, пов'язані з обороною та національною безпекою України, зумовлюють необхідність постійного вдосконалення механізмів стабілізації та захисту держави як у мирний період, так і в умовах воєнного стану. В нинішній безпековій ситуації особливого значення набувають напрями, здатні ефективно підсилювати діяльність силових структур. Одним із важливих елементів цієї системи є залучення службових собак, чия роль в оборонній, правоохоронній та гуманітарній сферах послідовно зростає. Історія використання тварин у військовій справі налічує багато століть. У різні історичні періоди вони виконували як стратегічні, так і допоміжні функції. Відомо, що ще тисячі років тому собаки виконували охоронні, розвідувальні та бойові функції, ставши надійними супутниками людини в різних видах військової діяльності. Зокрема, під час Першої та Другої світових воєн собаки активно застосовувалися для пошуку поранених, розвідки, передавання повідомлень і супроводу військових підрозділів. Коні були основним засобом транспортування спорядження та артилерії, а голуби забезпечували надійний зв'язок між підрозділами. Водночас тварини виконували й важливу емоційно-психологічну роль – ставали символами дому, надії та підтримки в умовах бойового хаосу. Систематичне використання собак у військових конфліктах різних епох стало підґрунтям для формування сучасної військової кінології. На сучасному етапі, зокрема в умовах повномасштабної російсько-української війни, кінологічна служба відіграє вагомий роль у структурі Збройних Сил України та інших силових формувань. Відбувається модернізація кінологічних підрозділів відповідно до стандартів НАТО (STANAG), вдосконалюється нормативно-правова база та система матеріально-технічного забезпечення, розширюється спеціалізація службових собак. Особлива увага приділяється підготовці мінно-розшукових тварин, які ефективно виконують завдання у зонах бойових дій. Службові собаки сьогодні залучаються не лише у військових та правоохоронних структурах, але й у цивільних сферах. Вони працюють як охоронці, пошуковці, поводитири, рятувальники та навіть як елементи терапії у медичній і реабілітаційній практиці. Така багатофункціональність зумовлює високу затребуваність собак у різних напрямках службової діяльності. Методологія дослідження базується на історичному аналізі та узагальненні практичного досвіду використання службових собак. Наукова новизна полягає у комплексному розгляді історичного та сучасного досвіду залучення службових собак у військовій, правоохоронній та гуманітарній діяльності, підкреслюється їхня ефективність та підготовка для виконання спеціалізованих завдань. Метою статті є узагальнення історичного досвіду використання собак у військовій справі та аналіз сучасного стану й перспектив їх залучення в умовах воєнного стану України. Для досягнення цієї мети використано комплекс загальнонаукових (аналіз, узагальнення, систематизація, порівняння) та історичних методів (проблемно-хронологічний, порівняльно-історичний). Отримані узагальнення свідчать, що собаки були і залишаються важливим елементом системи національної безпеки. Поєднання історичного досвіду та сучасних методик підготовки забезпечує ефективне використання потенціалу собак у військовій, правоохоронній та гуманітарній сферах.

Ключові слова: службові собаки, військова підготовка, кінологія, соціалізація собак, відбір та оцінка поведінки, спеціалізоване навчання, ефективність службових тварин

Introduction

In the current conditions of martial law, the issue of ensuring Ukraine's national security and defense has acquired particular urgency. According to the Concept for the Development of Ukraine's Security and Defense Sector (On the decision..., 2016), state authorities are facing a wide range of crisis challenges that significantly affect the country's stability and defense capability (Serkhovets, 2014; Syrovatko, 2025). Such situations include military and armed conflicts of both external and internal nature; provocations and escalations along the state border; terrorist acts; participation in peacekeeping missions; as well as the elimination of consequences of emergencies of natural, technogenic, or terrorist origin (Kimhi et al., 2023; Levy, 2025).

The resolution of these tasks requires the involvement of various forces and means, among which canine units occupy an important place (Seliukov, 2020). The use of service dogs within the structure of the security and defense sector has proven to be a highly effective tool for maintaining law and order, detecting threats, and carrying out operational and service missions (Bezpalova, 2020).

Their role is indispensable both in peacetime and during military operations, which determines the need for further study of the historical aspects and current significance of dogs in Ukraine's national security system.

The history of human–dog relations spans thousands of years (Ollivier, 2024; Fallahi et al., 2024). Since their domestication, these animals have become indispensable companions of humans in everyday life, economic activities, and protection. For humans, the dog has always remained a faithful friend, a reliable helper, and a devoted guardian (Case, 2008). Depending on social needs, dogs have performed a wide range of functions. Sled breeds facilitated transportation across hard-to-reach terrains and carried loads, while guard dogs protected livestock herds from predators and safeguarded agricultural facilities and residential properties.

With the development of civilization and the increasing complexity of social structures, the role of service dogs has also grown. They are now actively involved in guarding national borders, detecting and apprehending criminals, and searching for narcotic and explosive substances. In addition, dogs effectively perform the functions of messengers and medics, rescue people in water,

and participate in search and rescue operations following natural disasters such as earthquakes, avalanches, and landslides (Gordon, 2018; Westnes & Hjortdahl, 2024).

Humanity began using dogs immediately after their domestication. Owing to their unique natural abilities – exceptionally acute hearing, a highly developed sense of smell, vigilance, memory, courage in confronting enemies, and unconditional loyalty to their owners – dogs quickly became indispensable human companions. These traits determined their widespread involvement in various types of human activity. Initially, they were used for guarding and hunting, and later—as combat units and means of communication (Carballo et al., 2020; Kryda et al., 2021).

In the northern regions of the world, dogs became the main means of transportation across snowy expanses, which greatly facilitated human life in harsh climatic conditions. Thus, the coexistence of humans and dogs since ancient times has had not only a domestic but also a strategic character. The experience of cooperation accumulated over centuries formed the basis for the development of modern branches of service dog training, which today hold great importance in the system of national security, particularly under martial law (Rodriguez et al., 2020).

By utilizing the exceptional natural abilities of dogs, humans gradually created a distinct category of animals—service dogs—that perform specific professional tasks across various fields of activity. Breeds with high intelligence, endurance, loyalty, and trainability were selected for this purpose. Among the main breeds most commonly employed in service work are German, Belgian, and Caucasian Shepherds, Dobermans, Rottweilers, and others. Their physiological and behavioral traits make these animals irreplaceable assistants in performing security, search, rescue, and military tasks (Pustova & Shuplyk, 2021).

Dog breeding has deep historical roots and has accompanied humankind since ancient times (Tancredi & Cardinali, 2023). It is no coincidence that in various cultures the dog symbolized loyalty, devotion, vigilance, and courage. There is a hypothesis that it was precisely thanks to dogs that our ancestors increased their chances of survival, as these animals assisted in hunting, guarding settlements, and ensuring safety. In many ancient civilizations, dogs held sacred significance – in Greece, India, Iran, Mexico, and Mesopotamia, they were revered as holy animals. In the territory of Kyivan Rus, dogs played an important role in guarding towns and villages, accompanied princes' retinues on military campaigns, and assisted hunters and warriors. Over time, humans learned to purposefully use dogs in various types of activities, which contributed to the development of new breeds adapted to specific tasks and the improvement of training systems. On this historical foundation arose the modern service dog system, which combines the traditions of the past with the latest achievements in cynology (Potushynska & Zhdanova, 2014).

In modern warfare, particularly during the full-scale Russian-Ukrainian war, service dogs have become an integral part of the country's defense and security system. They perform a wide range of tasks – from mine detection

and patrol service to the evacuation of the wounded, search for missing persons, and guarding of strategic facilities. Owing to their highly developed sense of smell, advanced training, and unwavering loyalty, these animals often save human lives, prevent sabotage, and assist military units in accomplishing combat missions under extreme conditions (Kosenko, 2023).

Canine units of the Armed Forces of Ukraine, the National Guard, the State Border Guard Service, and other security structures are actively developing, adapting the training of dogs and specialists to NATO standards. Today, service dogs are not only a means of enhancing combat capabilities but also a symbol of resilience, humanity, and mutual trust between humans and animals, even under the most difficult conditions of war.

Therefore, the study of the historical development and modern use of dogs in military affairs is of great scientific and practical importance. It allows tracing the evolution of the dog's role—from an ancient hunter's companion to a highly skilled participant in defense operations—and assessing the prospects for further improvement of the canine service under the martial law conditions in Ukraine.

Research aim

The purpose of this study is to analyze the historical development of the use of dogs in military affairs and to determine their current significance under martial law in Ukraine.

Materials and Methods

The research materials included scientific publications, archival sources, historical references, official legal acts of Ukraine in the field of security and defense, as well as analytical materials highlighting the activities of canine units of the Armed Forces of Ukraine, the National Guard, the State Border Guard Service, and other security agencies. Additionally, modern European and international standards for the training of service dogs (in particular, the STANAG requirements applied within the NATO system) were analyzed.

In the course of the work, a combination of general scientific and specialized research methods was used:

Analytical method – for processing scientific sources and determining the main directions of the development of military cynology;

Historical method – for tracing the evolution of the use of dogs in military operations across different historical periods;

Comparative-analytical method – for comparing domestic and foreign experience in the training and utilization of service dogs;

System-generalizing method – for forming a comprehensive understanding of the place and role of service dogs within the structure of the modern Armed Forces of Ukraine.

Results and Discussion

At the present stage, the dog serves as a universal assistant to humans in many areas of activity. Sled dogs enable movement across hard-to-reach terrains and transport of goods in harsh climatic conditions. Guard breeds effectively protect herds of farm animals from predators and perform security duties at industrial and residential facilities (Yevstafiieva & Buchkovska, 2021). In the field of security and law enforcement, service dogs perform a wide range of tasks – from patrolling and escorting to searching for narcotics, explosives, and missing persons. They assist rescuers during the aftermath of natural disasters, locating victims under rubble, and even participate in water rescue operations. In addition, hunting dogs remain important companions of humans in both commercial and sport hunting, ensuring high efficiency and preserving the traditional human connection with nature (Tsvigun et al., 2020).

The history of the military use of dogs has deep roots. It is likely that the first cases of involving dogs in combat date back to the time when domesticated animals began to accompany humans during collective hunts. Observing their strength, agility, and fearlessness, people gradually began to use dogs for guarding settlements, accompanying warriors, and even taking part in battles. Later, purposeful breeding of dogs with pronounced guarding and combat qualities emerged, forming the foundation for the development of the first elements of military cynology (Proschowsky et al., 2025).

Dogs are important not only during combat missions but also in peacetime, when they perform a wide variety of functions – from service-related to therapeutic (Nieforth & Leighton, 2024). They assist in search and rescue operations, help maintain order in civilian environments, and are used in police, customs, medical, and psychological rehabilitation services. Their role is particularly valuable in supporting military personnel who have experienced combat-related stress (Gordon, 2018; Kmin, 2024).

The presence of animals helps to reduce stress levels through several psychological mechanisms. Interaction with a dog stimulates the production of endorphins – the so-called “happiness hormones” that improve mood and reduce anxiety. Simply petting an animal or playing with it quickly relieves tension and creates a sense of calm. Caring for an animal distracts from negative thoughts, provides an opportunity to express care, and fosters a sense of personal significance. In addition, animals promote social interaction: they become a unifying factor within a group, creating an atmosphere of friendliness, trust, and mutual support. In military units, joint care of a dog or cat enhances cohesion, improves communication, and increases the effectiveness of teamwork. Thus, the role of dogs goes far beyond purely service-related functions – they become an important component of a person’s emotional and psychological recovery (Stadnik & Didenko, 2025).

Historical sources indicate that the use of dogs in military conflicts has a millennia-old tradition (Kmin, 2024). The first documented evidence dates back to the reign of Tutankhamun in Ancient Egypt (1333–1323 BCE). In

archival depictions of battles, alongside the pharaoh’s chariot, dogs can be seen participating in attacks against enemies. Similar dog breeds are shown in numerous hunting scenes of the royal household, which indicates the early use of dogs as combat and guard animals. It is likely that the use of dogs in military operations in the Nile Valley was limited and gradually ceased over time (Mykhailuk, 2018).

In the first century BCE, Roman legions encountered the unusual military tactics of the Celts. Before the attacking warriors advanced, the Celts released packs of large, specially trained dogs equipped with steel collars studded with spikes and with blades attached to their armor. During the Battle of Vercellae, the Roman general Marius defeated the Cimbri, but his soldiers had to engage in combat with enraged dogs guarding the enemy’s rear positions. Later, the Romans themselves began training dogs for combat purposes, using them in numerous battles and for guarding important facilities, including the walls of the Capitol. Alongside dogs, at different points in history, humans also employed other animals for military purposes – animals capable of warning of danger or aiding in defense through their behavior. For instance, legends recount that during a nighttime attack by the Gauls, the salvation of Rome was ensured not by the dogs, but by the vigilance of the geese (Mykhailuk, 2018; Phillips, 2021).

In ancient Greece, guard dogs also played an important role in military affairs. In cities and fortresses such as Corinth, teams of specially selected dogs were on duty day and night, performing both security and combat functions (Mykhailuk, 2018; Rees, 2021).

In the 20th century, the use of dogs in warfare reached an unprecedented scale. At the beginning of World War I, Germany led the world in the number of military dogs: more than 30,000 four-legged helpers were employed in messenger and guard duties. The Russian, French, and Belgian armies had significantly smaller units, while the United States initially had neither training programs nor service dogs. Impressed by the effectiveness of dogs in the allied armies, American officers quickly began training their own canine assistants. After 1930, Germany resumed the formation of service dog units, which laid the foundation for the further development of military cynology within its armed forces (Mykhailuk, 2018).

Messenger dogs were used particularly actively by the German army during World War I. In 1914, about 6,000 trained service dogs were part of the military – the largest number in the world at that time. They not only transported correspondence between front-line and rear units but also laid telephone cables using specially designed spools and transported ammunition. Throughout the war, dogs were continuously recruited for service, with public appeals made to owners of German Shepherds, Doberman Pinschers, and Airedale Terriers to voluntarily provide their animals. These breeds were preferred because of their obedience, courage, and high endurance, making them ideal assistants in military operations (Kmin, 2025).

Dogs were actively used not only in the German army but also in the armed forces of other nations, including the Soviet army. During World War II, bravery was demonstrated not only by humans. Dogs—both purebred and

mixed-breed—were enlisted in the army and carried out a wide range of tasks: detecting mines, evacuating the wounded from the battlefield or from under rubble, delivering combat reports and ammunition. In addition to their direct participation in combat operations, service dogs also helped maintain law and order, assisted in combating crime, and contributed to ensuring safety and discipline in rear areas (Seliukov, 2020).

Continuing the history of the use of dogs in military affairs, it should be noted that their role has always been multifaceted and critically important for performing various combat and auxiliary tasks. Dogs not only enhanced the effectiveness of operations but also became indispensable assistants to troops under complex and dangerous conditions.

During World War II, the Soviet Army maintained special canine units that included around 60,000 registered dogs. The majority were East European Shepherds, with smaller numbers of Airedale Terriers, Laikas, and Collies. These animals performed a wide range of tasks: destroying enemy tanks and fortifications, delivering ammunition, detecting mines, evacuating the wounded, and carrying combat reports and orders. Many dogs were wounded in action but, after treatment, returned to service, demonstrating exceptional resilience and loyalty.

At the beginning of the 21st century, the number of service dogs in armies around the world continues to grow, and their responsibilities have expanded significantly. For example, the Swedish Army recently purchased dogs worth over one million euros to train them for service in the police and armed forces. The cost of a single German Shepherd reached approximately 20,000 euros, highlighting the importance and value of dogs in modern defense systems (Mykhailik, 2018).

Moving from historical examples to modern conditions, it should be emphasized that the significance of service dogs in ensuring national security and civil protection remains highly relevant today (Seliukov, 2020). Their involvement covers a wide range of missions—from combat to search-and-rescue, communication, and security—making dogs an integral component of the state's security system.

In Ukraine, service dogs are widely used in the activities of security and law enforcement agencies, including the Armed Forces of Ukraine, the National Guard, the State Emergency Service, the State Border and Customs Services, the State Criminal-Executive Service, and the Security Service of Ukraine. In each of these institutions, dogs and canine units perform specific functions: protecting strategic facilities and the population, apprehending offenders, locating and rescuing people trapped under debris, patrolling territories, carrying out combat-related tasks, maintaining communication, and providing transport support. Accordingly, the training and maintenance of service dogs are adapted to the specific requirements of their search, detection, escort, and security functions (Serhovets, 2014).

In Ukraine, the canine service is actively developing within the structure of the Armed Forces and other security agencies. Currently, systematic harmonization of the activities of canine units with international standards and NATO (STANAG) requirements is being carried out,

which contributes to improving the effectiveness of their service. At the same time, the legal and regulatory framework governing the organization, training, and use of service dogs is being continuously improved (Koropatnik et al., 2023).

In the context of modern warfare and the complex tasks faced by security forces, special attention is paid not only to the training of personnel but also to the systematic involvement of service animals. For the effective use of dogs' potential, scientifically grounded training, systematization of training methods, and proper breed selection according to specific tasks are essential. In this regard, cynology—the science that studies dogs and ensures their preparation for service in various fields—plays a crucial role.

Cynology (from the Greek words kynos – dog and logos – study) is the science of dogs, studying their origin, biological characteristics, genetics, breeding, training, and use in different spheres of activity (Tsvigun et al., 2020). Individuals who work professionally with dogs in security structures, private enterprises, or research institutions are called cynologists (Tsvigun et al., 2020). As a scientific discipline, cynology emerged in the last quarter of the 19th century and developed rapidly on a global scale, especially during the world wars, when the experience of using dogs in various services—escort, patrol, search, medical, communication, mine detection, and search and rescue—was systematized (Spinella et al., 2022).

The first rescue dogs (Saint Bernards) appeared in Switzerland at the beginning of the 18th century, in the mountain monastery of St. Bernard, where they were used to search for people trapped by avalanches or lost in the snow. Historical data indicate the active involvement of such breeds as Dobermans, German Shepherds, Saint Bernards, Newfoundlands, and Labrador Retrievers in search and rescue operations (Timchenko et al., 2014).

The modern canine service operates successfully within the units of the National Police of Ukraine. As of 2023, the service maintains about 900 service dogs, and more than 600 cynologists, together with their four-legged partners, perform search and patrol duties, detecting weapons, explosives, and narcotics. Service dogs are housed in canine centers that operate within each territorial police department and are deployed jointly with explosive ordnance experts, patrol officers, KORD special forces, and the Security Police (Yusupov et al., 2023).

Achieving high efficiency in the work of canine units depends greatly on the proper selection of dogs and assessment of their suitability for performing specific tasks (Shevchenko & Fedyaeva, 2022). The success of service operations and the safety of the handler largely depend on the systematic nature of this process and on considering the physiological characteristics and individual behavioral traits of the animals.

An important element of effective training for service dogs is the correct selection and evaluation of their suitability for specific operational purposes. It is believed that current approaches to dog selection—which primarily focus on identifying the dominant behavioral response, the strength of excitatory and inhibitory nervous processes, the general state of health, and the condition of senso-

ry organs (smell, hearing, and vision) – do not fully correspond to modern selection principles required for canine units. The foundation for the active use of dogs in service activities lies in the physiological characteristics of their olfactory analyzer and the physical capabilities of the dog's body (Shumlyansky, 2025).

Today, the standard practice for selecting service dogs at an early stage of development involves determining their suitability for future use according to their intended purpose (Serkhovets et al., 2023). When selecting puppies, special attention should be paid to their temperament and character traits. To do this, it is necessary to carefully observe the behavior of all puppies in the litter, as even at an early age, each puppy exhibits individual behavioral characteristics. Puppies with an unbalanced temperament—manifested by inadequate reactions to stimuli—should not be chosen. Such puppies are usually timid or hysterical and may whine or hide when approached by a stranger. An unstable temperament may indicate psychological or mental deficiencies, which are often hereditary and cannot be corrected through training.

There are special tests designed to determine a dog's future behavioral tendencies. For most breeds, the most suitable evaluation system is that developed by American zoopsychologist William Campbell (1975) (Van Voorhis et al., 2015). This method allows for the assessment of a puppy's temperament and behavior, degree of socialization, dominance relationships, and suitability for training in search or specialized service work. Campbell's tests help identify the individual personality traits of a puppy, and by analyzing which behavioral responses are dominant, a cynologist can later adjust them through training—strengthening desired traits and moderating undesirable ones. The optimal age for testing is between 6 and 8 weeks. The system was tested on more than 10,000 dogs over an eight-year period (Matviichuk et al., 2023).

The accumulated experience, careful selection, and targeted training of service dogs form a solid foundation for their effective deployment in modern armed conflicts. Systematic preparation of both cynologists and their four-legged partners ensures a high level of performance in tasks that demand speed, precision, and reliability. This organizational and scientific framework enables service dogs to become an indispensable resource in ensuring security and strengthening the defense potential of the state.

The beginning of the full-scale armed aggression of the Russian Federation against Ukraine demonstrated the high effectiveness of service dogs in performing a wide range of tasks – from combat operations to security and search-and-rescue missions. In our opinion, the key factor in the successful use of dogs under such conditions is not only their natural abilities but also the systematic work of canine training centers, the high level of preparation, and regular training of both dogs and cynologists. This ensures the maximum utilization of the animals' potential in maintaining security and supporting the state's defense capabilities.

As of February 24, 2022, service dogs and their handlers had participated in more than 12,000 operational and combat missions at checkpoints, during patrols, inspections of belongings, transport, and official premises, as

well as in the evacuation of civilians. Their involvement led to the detection and seizure of thousands of units of weapons, hundreds of kilograms of explosives, and tens of thousands of rounds of ammunition. The effective use of dogs for tracking “hot trails” helped to solve more than 18,000 criminal offenses, while their participation in preventive operations contributed to enhancing safety in populated areas (Yusupov et al., 2023).

Thus, modern services demonstrate that cynology not only ensures the performance of combat and security functions but is also a key element of the public safety and search-and-rescue system, confirming the strategic and practical significance of service dogs under the current martial law conditions in Ukraine.

Modern armed forces in various countries around the world devote significant attention to the training of service dogs for performing specialized tasks in military operations (Ortmeyer et al., 2023). Particular focus is placed on both standard service duties and highly specialized missions that require precision and efficiency (Peters et al., 2022). As of 2025, approximately 1,600 dogs serve in units of the U.S. Armed Forces. Most of them are dual-purpose animals that, after a 120-day training program, carry out patrol and detection tasks for explosives or narcotics. The selection rate during training is about 50%, meaning that only 100 out of 200 candidates successfully complete the program and are deemed fit for service.

According to military specialists, a separate program for training tracking dogs was established in 2010. These animals specialize in detecting and tracing enemies or explosive devices by scent after battlefield incidents or ambushes. Their use significantly enhances the effectiveness of reconnaissance and counter-sabotage operations (Shumlyansky, 2025).

Conclusions

The generalization of historical, scientific, and practical data indicates that service dogs are an integral element of the national security and defense capability system of the state. Their use encompasses a wide range of tasks — from search, guard, patrol, and mine-detection duties to participation in search-and-rescue and humanitarian operations. The analysis of the current state of the canine service has shown that its development in Ukraine is progressing toward standardization in accordance with NATO (STANAG) requirements, improvement of the legal and regulatory framework, professional training of cynologists, and modernization of the material and technical base.

A crucial factor in the effectiveness of service dogs remains the scientifically grounded selection and early testing of their behavioral and physiological traits, which determine the animals' suitability for performing specialized tasks.

The onset of the full-scale Russian-Ukrainian war has clearly demonstrated the strategic importance of the canine service, as service dogs have proven to be highly effective in real combat, search, and rescue operations. Their use today holds strategic significance for ensuring both national defense and public safety.

Further scientific research should be directed toward studying the interdisciplinary aspects of the interaction between the cynologist and the dog in the context of military psychology (zoopsychology), ethics, and biosafety.

Conflict of interest

The authors declare no conflict of interest.

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