

RESEARCH ARTICLE

The Study Of The History Of Weapons In Central Asia

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VOLUME: Vol.06 Issue01 2026

PAGE: 15-19

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Abstract

This article examines the historiography and material evidence related to the history of weapons used in the Central Asian khanates during the medieval and late medieval periods. The study focuses on ranged and melee weapons as integral components of military organization rooted in Turkic-Mongol traditions, emphasizing mobility, tactical flexibility, and psychological impact on the enemy. Based on archaeological findings, written sources, miniature paintings, and museum collections, the article analyzes the development, typology, and functional characteristics of weapons such as bows and arrows, spears, swords, maces, shields, firearms, and artillery. Particular attention is given to the composite bow as the primary armament of cavalry forces and to the gradual introduction of firearms into the military system of Central Asia. The paper critically evaluates earlier scholarly interpretations, highlighting methodological shortcomings related to uncritical generalization and insufficient comparative analysis. By reassessing written sources, visual materials, and archaeological data, the study contributes to a more nuanced understanding of the military culture of Central Asian khanates and enriches the historiography of medieval warfare in the region.

KEYWORDS

Central Asia; medieval warfare; weapons and armaments; military history; composite bow; cavalry; firearms; Central Asian khanates; military culture; historiography.

INTRODUCTION

The history of warfare and armaments constitutes an essential field of historical research, as it reflects broader processes of political organization, technological development, economic capacity, and cultural tradition. In this regard, the study of weapons used in Central Asia during the medieval period is of particular scholarly importance. Situated at the crossroads of major civilizations, Central Asia played a significant role in the transmission and transformation of military technologies, tactical concepts, and martial traditions across Eurasia.

During the medieval era, the armies of Central Asian khanates were largely shaped by Turkic-Mongol military traditions, which emphasized mobility, maneuverability, and the effective use of ranged combat. Cavalry units formed the backbone of

these armies, relying primarily on composite bows, spears, and edged weapons, while later periods witnessed the gradual introduction of firearms and artillery. The structure, design, and tactical application of these weapons were closely connected to steppe warfare, mounted combat, and psychological strategies aimed at weakening the enemy before direct engagement.

From the mid-twentieth century onward, extensive archaeological excavations and source-based studies conducted in Central Asia significantly expanded the corpus of available material related to medieval weaponry. Numerous studies have addressed individual categories of arms or specific military practices of the khanate period. However,

much of the existing scholarship tends to provide generalized descriptions, often extrapolating conclusions based on weapon specimens preserved in European and American museum collections without sufficient comparative analysis with local written sources or archaeological data. Such approaches have, in some cases, led to uncritical assumptions regarding the uniformity of military equipment across different regions of the Islamic and Turkic worlds.

Given these limitations, a re-evaluation of the history of weapons in Central Asian khanates is both necessary and timely. This article seeks to analyze the development, typology, and functional characteristics of weapons employed in Central Asia during the medieval and late medieval periods by integrating written sources, archaeological evidence, visual materials such as miniature paintings, and historiographical studies. By adopting a comparative and critical methodology, the study aims to clarify the distinctive features of Central Asian military culture and to contribute to a more balanced understanding of medieval warfare in the region.

Review of the Literature on the Topic. During the medieval period, the armies of the Central Asian khanates were from the outset organized on the basis of Turkic-Mongol traditions, forming a system that reflected speed and tactical ingenuity. In warfare, weapons designed for ranged combat constituted one of the most important components of the army. The primary purpose of ranged weapons was to instill fear in the enemy by engaging them from a distance. The ranged weaponry of the Central Asian khanates included bows and arrows, spears, wheeled devices or so-called “Tatar bows,” as well as a variety of heavy and light artillery weapons.

As a result of large-scale archaeological and source-based studies conducted in Central Asia in the mid-twentieth century, a substantial body of material related to this subject began to be accumulated. In particular, numerous small-scale publications devoted to the weapons and armaments of the khanate period started to appear. An illustrative example is the article by A. M. Belenitsky, which examines the emergence and spread of firearms in Central Asia and Iran[1].

METHODOLOGY

This study employs a qualitative historical methodology combining comparative analysis, source criticism, and archaeological interpretation. Written sources, archaeological findings, and visual materials such as miniature paintings are

examined to analyze the development and functional characteristics of weapons used in Central Asian khanates during the medieval period. A historiographical approach is applied to critically assess previous research and to identify regional specificities of Central Asian military culture within a broader Eurasian context.

RESULTS

In the articles by historians U. Mavlonov and N. Nuriddinova, information and conclusions regarding the weapons and armaments of the Central Asian khanates period are also presented[2].

In the studies by historians R. G. Mukminova and G. A. Agzamova devoted to the military organization of the Central Asian khanates during the medieval period, information on weapons and armaments—particularly the use of firearms (tufang)—as well as data on the activities of weapon-making craftsmen are presented on the basis of contemporary sources. The research also pays special attention to military training, providing information on the military education of princes, the organization of combat exercises, and hunting activities[3].

In the studies by historians J. H. Ismoilova and L. G. Levteeva devoted to the history of military art in Uzbekistan, hunting and military weapons are presented in a systematic manner[4].

Among these, it is worth noting the works of specialists who focused specifically on the history of military weapons, such as von Winkler and H. R. Robinson[5].

While acknowledging the significance of these studies, it should be noted that they primarily provide only general descriptions of the weapons used by the armies of Asian countries during the medieval period. A distinctive feature of these works is that they offer extensive descriptions of the weapons employed by militarily powerful Asian states of the Middle Ages—such as the Mongol Empire, Iran, the Ottoman Empire, the Mughal Empire, and the countries of the Middle East—based mainly on well-preserved specimens that have survived to the present day and are housed in museums in Europe and the United States. Their appearance, form, size, striking power, level of protection, and other similar characteristics are analyzed in detail in these studies.

However, it is also important to note that some of the conclusions drawn in these works were adopted almost

without critical review, without sufficient analysis, and without comparative evaluation against data from other written sources or the results of archaeological research. As a result, unsupported conclusions were made regarding the applicability of these findings to the armies of Bukhara and Khiva in the late medieval period. At present, the results of these studies can be re-examined and, through systematic comparative historical analysis, can serve to enrich the historiography of the subject.

At the same time, figures depicted wearing military attire and bearing weapons in battle and hunting scenes shown in various medieval wall paintings identified during archaeological research conducted in the cultural regions of Central Asia also constitute an important source. Descriptions of individuals portrayed in military dress with corresponding weapons are likewise found in miniature paintings created in Turkestan and neighboring regions during the sixteenth and seventeenth centuries. In several scholarly studies by G. A. Pugachenkova[6], the clothing of the Shaybanid period—particularly military garments and defensive equipment—has been analyzed through comparison with representations found in contemporary miniature paintings.

DISCUSSION

From ancient times onward, the use of the bow and arrow—widely practiced by all Turkic tribes—developed over time and successfully maintained its significance until the late medieval period. The effectiveness of the bow and arrow, particularly when skillfully employed on horseback, made it the principal military weapon of cavalry forces. The Greek historian Herodotus, in his accounts, noted that the Massagetae skillfully employed complex mounted archery tactics, including the ability to shoot accurately while turning backward on horseback and inflicting significant losses on the enemy even while retreating. This indicates that the populations of Central Asia had, since ancient times, been unparalleled in their mastery of archery.

Among the Central Asian khanates, the Bukhara Khanate (Emirate) was considered the strongest in terms of both military power and troop numbers. The khanate's army initially possessed several cannons cast from copper and, from the early nineteenth century, from cast iron. Soldiers were armed with relatively simple weapons such as bows and arrows, spears, swords, and battle-axes. The army of the khanate consisted predominantly of cavalry units. According to data

from the late eighteenth century, the khan was capable of assembling an army of up to 10,000 troops. In the 1830s, the number of mercenary soldiers reached approximately 19,000, who served in various cities and military fortresses. By the mid-nineteenth century, the number of military units, as well as cannons and firearms, increased. Overall command of the army was vested in the amir al-lashkar.

In general, however, the khanate's military forces lagged behind the requirements of the time in many respects. Highly mobile mounted archers skillfully employed bows and arrows while riding, and the army possessed several carefully selected types of bows and arrowheads, chosen according to strategy, the enemy's armament, the targeted unit, and the intended level of damage. According to A. Zamonov, who studied the military organization of the Bukhara Khanate during the Shaybanid period, military terminology related to weapons—such as swords, daggers, spears, axes, cannons, firearms (tufang), bows and arrows, maces, thumb rings (zihgir), shields, armor, firearms, six-flanged maces (shashpar), ox-head maces (govsar), clubs, flails (kestan), and tabarzin—is explicitly listed in the Baburnama, which served as one of the principal sources for that period[7].

At the same time, another important source for this period is the work *Shaybaniynameh* by Muhammad Salih (1455–1535). The text lists the names of the weapons used by Shaybani Khan during the siege of the city of Samarkand, including javshan, shoti, takhsh (a stock-mounted bow with short arrows capable of long-range fire), khud (helmet), sword, and long spear[8].

The armies of the Central Asian khanates used recurved and folding bows similar to traditional types, measuring approximately 80–85 cm in length. The Ottoman bow, known as the "composite bow," was distinguished by its relatively short length and compact form. Its maximum draw weight ranged between 40 and 50 kg, which made it suitable for use on horseback and during archery training. The moisture resistance of the wooden components of the bow was of great importance, and various methods were employed during summer preparation to enhance this property. Bone plates were attached to both ends of the bow where the string was fastened, providing additional flexibility. The bowstring and bow components were made from specially treated animal hides, tendons, and occasionally silk. Consequently, the manufacture of such bows required on average between one and one and a half years. Mounted soldiers typically carried

two bows with them, either of the same type or intended for different purposes.

At present, a metal bow produced by the Aq Qoyunlu Turks is preserved in the Ganja Regional Museum. The city is also known as the birthplace of the famous poet Nizami Ganjavi, who adopted the city's name as his pen name—a practice that was common within the vast empires established by Turkic peoples. The bow measures 72 cm in length and is made of steel, decorated with various floral motifs and ornaments. Its crescent-shaped form is distinguished by a specially designed grip section.

The main shaft of the arrows has a rhomboid shape that tapers at both ends. It should be noted that, based on this characteristic, arrowheads assumed various forms, including double-edged, three-edged, four-edged, rhomboid, leaf-shaped, and others. The type of arrowhead, the construction and placement of the shaft, the fletching, and the core rod were all of great importance. Arrow production was a highly significant process and required careful consideration. Particular attention was paid to the type of metal used for arrowheads, with bronze and iron being most commonly employed. Iron arrowheads were intended to penetrate shields and thick hides of varying density. Typically, such "armor-piercing" arrowheads were thick, four-edged types. These arrows were used for hunting animals with thick skins, such as bears, leopards, elephants, and rhinoceroses, or for defeating troops equipped with iron shields and armor. This demonstrates the penetrating capability of the arrowheads used by Turkic archers against heavily armored soldiers and their equipment.

The fletching of arrows sometimes consisted of two or three feathers, positioned either close to the arrowhead or at a distance of 1–2 cm from it, depending on the intended accuracy or destructive effect. Feathers from various bird species or even leaves from trees were used. Mounted soldiers of the Central Asian khanates were typically supplied with 80–100 arrows. Bows and arrows served two primary purposes: offense and defense. Historical records indicate that during Mirza Abu Bakr's campaign against Isfahan in 1405, the city's defenders extensively used bows and arrows as defensive weapons. Another noteworthy aspect of this weaponry was that arrows shot by attackers could be collected from fortress towers and reused.

Like other Turkic groups, the cavalry of the Central Asian khanates employed the technique of shooting arrows while

holding them with three fingers. Generally, analysis of the use of bows and arrows shows that there were no significant differences among the mounted archers of various Turkic peoples, such as the Timurids and the Shaybanids. Bows provided stability when aiming on horseback, enabling hunters or soldiers to strike targets with greater accuracy. As noted above, archery played a crucial role both in hunting and in warfare. In the Timurid army, the strategy of deploying light cavalry armed with bows and arrows to neutralize heavy cavalry forces was implemented in numerous battles.

Later, crossbows also came into widespread use in both hunting and warfare. The crossbow was known as the "Tatar bow" and was fitted with a wooden or metal stock. This type of weapon was fired by drawing the bowstring to stabilize it and placing the bolt inside the stock. In the travel account of a Venetian merchant dating to the medieval period, a description is given of the crossbow of the Safavid ruler Ismail, noting that it was drawn with the aid of a lever mechanism. The bolts of this specialized weapon were sharp and long. Such weapons were mainly used by infantry soldiers, who were able to deliver powerful blows due to the high draw strength of the bowstring. With these crossbows, it was possible to inflict severe wounds on large game or heavily armored enemies.

The regular army of the Central Asian khanates included only a very small infantry component (approximately 5,000–7,000 troops), and only a limited portion of these soldiers made use of crossbows.

CONCLUSION

This study demonstrates that the military armaments of the Central Asian khanates were shaped by long-standing Turkic-Mongol traditions, environmental conditions, and the tactical requirements of steppe warfare. The predominance of cavalry and the widespread use of composite bows and arrows highlight the central role of mobility and ranged combat in regional military practice. Archaeological evidence, written sources, and visual materials collectively indicate that weapon development in Central Asia followed a gradual and selective process, particularly in the adoption of firearms and crossbows.

By critically reassessing previous scholarship and integrating diverse sources, the article underscores the importance of regional specificity in the study of medieval warfare. The findings contribute to a more balanced understanding of

Central Asian military culture and provide a foundation for further comparative research on weapons and warfare in the broader Eurasian context.

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