ORIGINAL ARTICLE

INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE

ISSN: 2692-515-x, Impact Factor: 9.23

American Academic publishers, volume 6, issue 01,2026

Journal: https://www.academicpublishers.org/journals/index.php/ijai

THE EVOLUTION OF WEAPONRY IN THE STATES OF CENTRAL ASIA DURING THE MIDDLE AGES

Kadirov Ilkhomjon Odiljonovich

Lecturer at the University of Military Security and Defense of the Republic of Uzbekistan

Abstract

The article examines the evolution of the weaponry used by the military forces of ancient states in Central Asia (detailing the widespread use of armor and helmets, shields, bows, daggers and swords, arrowheads, spears, and other armaments) utilized in battles to defend their territories and conquer the lands of other states.

Keywords

Central Asia, armor, helmet, shield, bow, bow and arrow, dagger, sword.

The emergence and improvement of the most ancient types of weaponry are inextricably linked with the development of labor tools that our ancestors used in the household, for food production through hunting, and in fishing. Examples of these include stone knives, spearheads, axes, and others. Initially, these weapons were used exclusively in the labor process and against animals during hunting.

Over time, the bow and arrow-the most effective of hunting tools-evolved into the most formidable weapon of mass destruction in the ancient period of human history. For thousands of years, this weapon claimed human lives far more often than those of the animals and birds being hunted. In Central Asia, the bow and arrow maintained its significance as an effective offensive weapon even through the late Middle Ages.

Below is the English translation of the second part of your article, translated with attention to historical accuracy and technical military terminology.

With the progress of society, the types of weaponry multiplied and were continuously refined. The emergence of settled communities, the formation of ancient states, and the creation of regular armies generated a constant demand for military equipment. A crucial milestone in the evolution of weaponry was the emergence of copper and bronze metallurgy. Specifically, during the Bronze Age (the second half of the 3rd millennium BCE - 2nd millennium BCE), bronze spearheads, arrowheads, daggers, pikes, and other armaments became widely used among the settled agricultural and pastoral populations of Central Asia.

The formation of ancient states in Central Asia began at the start of the 1st millennium BCE. This led to a significant advancement in the local population's weaponry and military art. It is essential to emphasize that military leaders of tribes played a central role in the establishment of early states; military-political criteria were paramount in the socio-political processes and the formation of alliances between neighboring kin tribes [1].

Information regarding the types of ancient weaponry distributed across Central Asia is found not only in archaeological records but also in numerous ancient written sources. In particular, such data can be found in the “Avesta”-the oldest written source on the history of Central Asia.

ORIGINAL ARTICLE
INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE
ISSN: 2692-515-x, Impact Factor: 9.23
American Academic publishers, volume 6, issue 01,2026
Journal: https://www.academicpublishers.org/journals/index.php/ijai

The drive to resolve conflicts arising between various tribes through military force during the socio-political development of society also effectively influenced the evolution of armaments. Consequently, both offensive and defensive equipment were refined, and their quality increased. Considering that highlighting the origin, development, and extent of use of offensive and defensive weapons is vital to studying the history of the military art of Central Asian peoples, it is appropriate to describe them in detail.

The peoples of Central Asia have long possessed specific defensive means and types of weapons; numerous types of armor (cuirasses) and helmets, which served as the primary means of protection, are known. Most of these initially appeared in the East and the Eurasian steppes before spreading to other regions. In early periods, armor made of iron plates in the shape of fish scales was widespread among Central Asian peoples. Later, under the influence of the Greco-Macedonians and Kushans, it evolved and was further improved.

It is worth noting that several types of armor were in use simultaneously. Below, we provide descriptions of some of them, as they continued to be widely used-with minor modifications-well into the Middle Ages [2].

- **Armored Long-Sleeved Cuirass:** The shoulder section is high, rigid, and armored. It includes a section that fully covers the legs; the collar widens slightly toward the top, with the back part being slightly higher than the front. The collar diameter is quite large, only slightly smaller than the width of the shoulders. This wide collar allows for free movement of the head. Hand protection is uniquely structured, consisting of interlocking rings (in the upper section). For leg protection, leather and iron scale plates were utilized.
- **Long Cuirass:** Its upper and lower sections differ from one another. The upper part is protected by small scales, while the lower part features larger scales. It also differs from the armored cuirass mentioned above by the absence of a standing collar and a different leg protection design. Here, instead of scales, semi-circular metal pieces sewn onto soft materials were used.
- **Long Palm-Shaped Cuirass:** In this type, a standing collar is also absent. According to Arrian's accounts, Alexander the Great's troops first encountered the armor of the Sakas. Xenophon, in his work "On Horsemanship", even advised the adoption of Central Asian cavalry armor for the Hellenic army. At that time, mesh armor with scale-like decorations was widely used in Alexander's forces.

A unique type of protective garment worthy of note is the armored cape. Its plates resemble a flower with petals opening in four directions, with a central opening for the head. Four triangular edges protected the warrior's chest, shoulders, and back. There is limited evidence regarding the widespread use of this specific equipment. Another similar protective device consisted of two metal disks (mirror armor or *zentza*), one protecting the chest and the other the back. These were joined together by leather straps. This element later became widely distributed among the Sassanids and European peoples. Another means of protection were armored skirts (tassets), which were also renowned for their variety of forms.

Such armors remained widespread in Central Asia throughout the Middle Ages. With the emergence and refinement of modern firearms, defensive equipment continued to evolve. In the present day, bulletproof vests serve the function of ancient armor as the primary means of individual protection.

The second vital component of defensive gear is the helmet. Various archaeological sources confirm that from the 4th to the 3rd centuries BCE, the **"Kuban" type** helmet was widely used in territories stretching from Semirechye and Dzungaria to China. By the middle of

ISSN: 2692-515-x, Impact Factor: 9.23
American Academic publishers, volume 6, issue 01,2026
Journal: https://www.academicpublishers.org/journals/index.php/ijai

the 1st millennium BCE, this type of helmet spread from Scythia and Iran to southwestern Manchuria, suggesting its use by the Saka and Yuezhi tribes.

The next type of helmet featured an angular shape. In the 2nd and 1st centuries BCE, these helmets utilized a composite construction: metal strips formed the base, to which segments of metal or leather were fastened. These helmets, where open sections were covered with metal and leather, possessed a distinctive form.

A third form of helmet also existed, which served as both a crown and a battle headpiece for Kushan kings. In ancient depictions, these helmets are notable for their exceptional beauty and elegance.

In modern armed forces, helmets made of composite materials have replaced these ancient designs. This is a logical outcome of the development of military art, testifying to the continuous and ongoing evolution of weaponry.

Shields played a major role in the protection of medieval warriors. They can be categorized into several types based on size and construction:

- **Round Shield:** Crafted from various metals, this relatively small shield protected the body from the shoulder to the waist. Its front side was slightly convex. These shields were made of thin wood, covered with leather or reinforced with metal. They were extensively used throughout the Middle Ages.
- **Large Circular Shield:** Known as the "Celtic shield" or "**clipeus**", this was significantly larger than the former. The foundation of this shield consisted of a frame of long and short wooden slats joined crosswise and covered with leather or metal.
- **Figured Shield:** This type differs substantially from those mentioned above. These shields were not particularly large; the lower part was rectangular, while the upper part was triangular or circular. This shield type, which initially formed in the territory of Central Asia, later became widely used in India.

The earliest protective equipment in Central Asia dates back to the 8th-7th centuries BCE; over time, these means evolved and reached a high degree of sophistication. The interaction between defensive elements refined under Hellenistic influence and those of the Yuezhi tribes led to the emergence of even more advanced defensive systems. Many of these were adopted by the Romans, Parthians, Greeks, and various European peoples to protect their own forces [3].

Offensive weaponry also holds a distinct place in the military art of Central Asian peoples. The ancient populations of the region utilized various types of offensive arms in warfare. From the earliest times, the most widespread weapon was the bow. The bows and arrows used by ancient tribes were remarkably similar to those used by nomadic tribes across the Eurasian steppes, particularly Scythian bows.

This composite bow was a complex structure made of several distinct parts joined together. It was manufactured from materials such as wood, reed, birch bark, horn, and bone. The raw components were soaked in water for up to three days and then slowly dried over a smoldering fire. Once dried, the parts were joined, placed in a special mold, and stored in a dry place for up to a year. Wrapped in leather and coated with a special lacquer, the bow became battle-ready only after a full year of dry storage. This type of bow, which initially developed in Central Asia, was considered the primary weapon of the Achaemenid army. Researchers studying the evolution of the composite bow have proven that it spread to Iran and several other regions specifically from Central Asia.

By the end of the 4th century BCE, Central Asian bows were being used as far away as China. Alongside small-sized composite bows, large bows of simple construction were also widely distributed across Central Asian territories. The people of Central Asia, especially the

ORIGINAL ARTICLE
INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE
ISSN: 2692-515-x, Impact Factor: 9.23
American Academic publishers, volume 6, issue 01,2026
Journal: https://www.academicpublishers.org/journals/index.php/ijai

Sakas, were renowned masters of archery. Herodotus provides accounts stating that the bows of the Bactrians, Parthians, Khwarazmians, and Sogdians were very similar to one another. There were also several types of arrows. Their production, much like that of the bow, required immense skill and labor. Even a slight deviation in the weight of the iron arrowhead could significantly impact the weapon's flight range.

While the bow and arrow were vital for long-range combat, the spear was of paramount importance for engaging in close-quarters battle. Both long and short spears were common in the region, with **"short spears"** being particularly characteristic of Central Asian peoples such as the Bactrians, Parthians, Khwarazmians, Sogdians, and Hyrcanians.

Archaeological research in Central Asia, specifically the excavation of burial mounds and kurgans, has yielded numerous swords and daggers belonging to ancient nomadic tribes [4].

Daggers have been used in Central Asia since antiquity, with the earliest examples crafted from bronze. There existed an elongated form of the dagger that served as an intermediate stage between a dagger and a sword. In scientific literature, this form is conventionally referred to as the **"akinakes".** One such dagger, found in the Tashkent region, dates back to the 2nd-1st millennia BCE. Over time, bronze daggers were replaced by iron ones and were refined in shape. Initially, **"iron-bronze"** daggers appeared, featuring an iron blade and a bronze hilt.

Swords also played a significant role in the military art of our ancestors. The widespread use of the sword from ancient times until the early 20th century highlights the enduring importance of this offensive weapon. Observing the evolution of iron swords shows that this weapon transitioned from a short piercing blade into a sharp, slashing and cutting weapon. This evolution can be attributed to shifts in the combat tactics employed by local peoples.

It is known that iron daggers of two distinct types have been discovered in various regions of the Central Asian states. In the first type, the pommel of the hilt featured a semi-circular (or crescent) shape, while the guard was straight and short. In the second type, the pommel took the form of a circular disk, maintained with a similarly straight and short guard. These weapons measured approximately 60 cm in length. At the turn of the era and during the first centuries CE, specific changes occurred in the form of swords and daggers. Their pommels and guards began to be manufactured from wood rather than metal. Furthermore, while earlier sword hilts were small and designed for a single-handed grip, they subsequently became significantly longer, allowing the sword to be wielded comfortably with two hands. The length of such swords reached up to 105 cm. The construction of daggers and *akinakes* did not differ substantially, except for their overall size. At the beginning of the common era, double-edged swords began to be replaced by single-edged blades. In addition to bows, arrows, spears, swords, and daggers, battles also saw the use of maces (*gurzi*), stone-throwing machines, and various other types of offensive armaments [5, 6].

The offensive and defensive means described above continued to be widely used throughout the Middle Ages. Even during the late Middle Ages, with the emergence of firearms and muskets, they retained their place within the armies of the Uzbek Khanates.

During the period under review, manjanaqs (siege engines), slings, and other implements were also utilized in Central Asia, particularly during the siege of cities and fortresses. The *manjanaq* was the Asian counterpart to the ancient Roman catapult; this engine was used to hurl large stones, logs, barrels containing incendiary mixtures based on mercury (or naphtha), and other heavy, wall-breaching projectiles.

In the Middle Ages, great importance was placed on the coloration of defensive and offensive weaponry, as well as the application of various symbolic patterns. High-ranking military commanders sought to adorn their weapons with precious stones. This was rooted in

ISSN: 2692-515-x, Impact Factor: 9.23
American Academic publishers, volume 6, issue 01,2026
Journal: https://www.academicpublishers.org/journals/index.php/ijai

traditions and beliefs preserved in Central Asia since ancient times. For instance, beliefs persisted that painting a shield green symbolized eternity and longevity, red represented courage, gold signified glory, and white brought good fortune.

REFERENCES

1. Askarov, A. Sopollitepa. Tashkent, 1984.
2. Herodotus. The Histories in Nine Books. Translation and Notes.
3. History of Uzbekistan. Tashkent: Gafur Gulyam Publishing House, 2015, p. 185.
4. History of Uzbekistan. Vol. 1, Book 1. Tashkent, 1955.
5. Sagdullaev, A.S., Aminov, B., Mavlonov, U., & Norqulov, N. History of Uzbekistan: Development of State and Society. Tashkent, 2000.
6. From the History of Military Affairs in Uzbekistan: From Ancient Times to the Present. Editor-in-Chief: D.Kh. Ziyaeva. Tashkent: Sharq, 2012.