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THE CONSTRUCTION OF THE BEACON AND WATCHTOWER SYSTEM OF THE GREAT WALL DURING THE HAN DYNASTY

Аннотацион

The beacon and watchtower system centered around the Great Wall during the Han Dynasty represented a significant and systematic enhancement and perfection of ancient China's beacon and watch system. This scaled and standardized system played a crucial role in the northwest frontier region of ancient China, holding special historical significance for the ancient Chinese border defense.

Key words: Han Dynasty, Frontier, the Great Wall, Emperor Wu, Convey information.

СТРОИТЕЛЬСТВО МАЯКА И СТОРОЖЕВОЙ БАШНИ ВЕЛИКОЙ СТЕНЫ ВО ВРЕМЯ ДИНАСТИИ ХАНЬ

Аннотация

Система маяков и сторожевых башен, сосредоточенная вокруг Великой стены во времена династии Хань, представляла собой значительное и систематическое усовершенствование и совершенствование системы маяков и часов Древнего Китая. Эта масштабированная и стандартизированная система сыграла решающую роль в северо-западном приграничном регионе древнего Китая, имея особое историческое значение для защиты древней китайской границы.

Ключевые слова: династия Хань, Граница, Великая стена, Император Ву, Передавать информацию.

HAN SULOLASI DAVRIDA BUYUK DEVORNING MAYACH VA QO'SHIRGAN MINORASI TIZIMINING QURILISHI

Annotatsiya

Xan sulolasi davrida Buyuk devor atrofida joylashgan mayoq va qo'riq minorasi tizimi qadimgi Xitoyning mayoq va soat tizimining muhim va muntazam takomillashtirilishi va takomillashtirilishini ifodalagan. Ushbu masshtablangan va standartlashtirilgan tizim qadimgi Xitoyning shimoli-g'arbiy chegara hududida hal qiluvchi rol o'ynagan va qadimgi Xitoy chegaralarini himoya qilish uchun alohida tarixiy ahamiyatga ega edi.

Kalit so'zlar: Xan sulolasi, chegara, Buyuk devor, Imperator Vu, ma'lumotni etkazish.

Introduction. This article focuses on the Han Dynasty beacon and watchtower system, a unique information transmission system created by the ancient Chinese people in an era of limited technology and information development. The text explores the distinctive features of this system, with the Great Wall serving as the central component of the beacon and watchtower system. Externally, the system involves espionage and intelligence gathering, with the Great Wall beacon towers serving as channels for information transmission. Internally, there are military garrisons and defenses, collectively forming the military facilities for ancient border defense. The Han Dynasty beacon and watchtower system was relatively perfected in the northwest border region, playing a crucial role and laying the foundation for subsequent developments in northwest border defense.

Research Methodology. Currently, research on the beacon and watchtower system primarily focuses on the study of its core element, the Great Wall. This paper combines literature review with on-site surveys to investigate the construction characteristics of the Han Dynasty's beacon and watchtower system centered around the Great Wall.

Literature review. The beacon and watchtower system of the Han Dynasty has become a focal point of interest for scholars researching the history of frontier defense during that period. The paper "Qin and Han Great Wall Beacon and Watchtower Sites in Yongjing County, Gansu"[1], along with Chen Mengjia's "Han Dynasty Yancai Frontier and Defense Organization as Seen in Han Documents"[2], have provided insights into the current status of beacon towers, passes, forts, and blockhouses, as well as information on beacon signals, defense alert methods, beacon and watchtower arrangements, defense officials, policies, and

regulations. These scholars, drawing from various sources, have approached the study of the Han Dynasty Beacon alarm system from their respective perspectives. The results and differing opinions of their research have provided us with the impetus and opportunities for further exploration.

Analysis and results. In an era of limited technological and informational development, ancient China innovatively created a border defense communication system known as the beacon and watchtower system. Centered around the Great Wall, this system involved intelligence gathering, reconnaissance, and information transmission, primarily serving the purpose of delivering military reports within the frontier defense system. The name of the system originates from its use of beacons to transmit messages, with "beacon fire" referring to "watchtowers". The number of individuals in each watchtower varied, ranging from one or two to a maximum of around 30, typically averaging around 10 people per tower[3]. They were the grassroots soldiers of the watchtower system, responsible for tasks such as observing the celestial field, monitoring enemy movements, signaling with beacons, transmitting messages, and maintaining frontier facilities. Among the officials of the Han Dynasty, the commandants divided their jurisdictions into several watchtower areas, referred to as "hòu guān". The head of a watchtower area was called "hòu". As these watchtowers were typically stationed within barriers, they were also known as "zhàng hòu" or "sāi hòu"[4]. "hou wang" refers to keeping watch and observing. Once there is an alert, the stationed soldiers would light beacons at designated locations. Those in the vicinity, upon seeing the beacons, would immediately understand that there is an impending enemy attack. In an era with limited communication, this system allowed for the swift transmission of information. The interconnected beacons formed a line, becoming a channel for relaying frontier defense alerts.

1.Reasons for the Construction of the Beacon and Watchtower System. The Great Wall serves as the core of the Han Dynasty's beacon and watchtower system, referred to as "sai" or "sai yuan" in Chinese. Regarding the reasons for the construction of the Great Wall, scholars widely believe it was built to defend against the invasions of nomadic tribes. Some scholars also argue that the construction of the Han Great Wall resulted from a combination of psychological distinctions between the Chinese and barbarians, along with the establishment of a tangible defensive line[5]. The American scholar De Yuzhou views the Great Wall as a military facility for offensive purposes[6]. Subjectively, the construction of the Great Wall aimed to prevent invasions from the northwest by the Xiongnu. Han Dynasty historian Sima Qian, in his work "Shi Ji: Biography of the Xiongnu," counted the initial goal from the contemporary perspective, stating, "The beacon and watchtower system in the border regions of Han was astute, and the Xiongnu could not cause harm"[7]. The viewpoint in "Houhan Shu" suggests that the construction of the Great Wall aimed to "separate the inside from the outside, distinguishing customs. If there is no danger of internal humiliation, it is acceptable. Why engage in exchanges with cunning foes, like insects and clams?"[8]. In essence, the Great Wall was constructed to create a barrier between the distinct customs of the northern nomadic tribes and the settled regions, preventing internal humiliation resulting from external threats. The emphasis was particularly placed on guarding against potential dangers posed by the northern nomadic tribes. Objectively, during military actions in the northwest during the Han Dynasty, the Great Wall indeed served as a barrier to safeguard the northwest, and even as a supplementary facility for westward offensives. When considering the traditional psychological aspects of ancient Chinese people, Gao Kaijun's mention of the psychological distinction between the Chinese and barbarians, as expressed in the concept of Huá Yí zhī biàn, could also be considered. His perspective might find support in the notion of "separating the inside from the outside, distinguishing customs," indicating the traditional mindset of differentiating between the settled and nomadic societies in ancient China.

2.Characteristics of the Beacon and Watchtower System's Construction. The early establishment of the watchtower alert system in ancient China dates back to approximately the Western Zhou period, but initially, the system was incomplete, and the connections were not smooth. Qin Shi Huang made significant contributions by connecting some of the walls built by the six states, creating an essential barrier in the north. Following the Qin model, the Han Dynasty, building on the foundation laid by the Qin Dynasty, constructed numerous defensive structures along the northwest border. These structures, often referred to as forts, barriers, watchtowers, tunnels, trenches, embankments, and cultivated fields, were strategically coordinated to form a multi-layered defense system.

Beyond the beacon and watchtower system, there were barriers and forts. The construction of the Great Wall involved selecting suitable terrain and relying on natural geographical features. Forts were established with stationed troops at crucial locations, and the Great Wall was built to intercept potential threats. One such defensive structure was the "Hǔ Luò", as mentioned in "Shi Ji:

Biography of Huang Chong" with a note by Shi Gu: "Hǔ Luò" refers to using bamboo to connect and cover, creating a barrier." In Han Dynasty documents, it is also known as "Jiāng Luò" or "Shuān Zhù" . According to Han Ying's description of "Mù Chái Qiáng Luò" , it likely falls into the same category. Excavations at sites such as Jiashui Jinguang and Diwan Cheng in the Hexi region have revealed the existence of Hǔ Luò structures. The construction method involved vertically burying neatly arranged pointed wooden stakes or tree branches in a trench, connected by ropes. Some stakes were buried in square pits, while others had a groove in the lower part, with a short piece of wood transversely crossing to prevent the stakes from shaking. Discovered Hǔ Luò structures are primarily located inside and outside the gate and outside the barrier cities[9]. Following that were trenches and ditches. Large numbers of "pǐn" character-shaped pits or trenches, known as háo qiàn, were excavated on flat terrain. Iron spears and blades were set within these pits. Closer to the Great Wall, obstacles such as horse-deterrent walls and thickets were installed to increase the difficulty of enemy movement. When an enemy attack was detected, a small number of ambush troops might be dispatched to lure the enemy into the pits, preventing them from approaching and damaging the obstacles. If the enemy managed to breach the barriers and forts and could not be stopped, the tiān tián would be utilized to assess the enemy's numbers and status. tiān tián, or "sky fields," were a tracking facility consisting of a strip of fine sandy soil with a certain width. Typically laid outside the area of pointed wooden stake barriers and at major intersections beyond the Great Wall, tiān tián took advantage of the loose sand, leaving traces if enemies infiltrated during the night. Useful information gained from tiān tián observations was then transmitted through beacons to report the situation.

Beacon fire, high platforms used to transmit signals during wartime, were constructed on the Great Wall and served as the frontline and foundational military structures within the beacon and watchtower system. Since these platforms extended eastward from the Qin-era Great Wall, they were also known as the "Xī Sāi" , with the Qin Great Wall referred to as the "Gù Sāi" , or the "former barrier." The existence of the Great Wall was renowned globally, and it predated the Han Dynasty. During the Han Dynasty, efforts were made to strengthen and extend the Qin Great Wall. Emperor Wu of Han, in particular, carried out two significant renovations on the Great Wall. In 127 BCE, efforts were made to "restore and repair the old barrier built by Meng Tian during the Qin Dynasty, fortifying it along the Yellow River." In 102 BCE, the Qin Great Wall was extended westward from Lingju (modern-day Yongdeng County in Gansu) to Dunhuang. Furthermore, west of Dunhuang, Yumen Pass was constructed as a major gateway for northwest defense. This extension resulted in the Han Great Wall stretching "from Dunhuang to Liaodong, covering a distance of over fifteen hundred miles." Along the Great Wall, there were approximately 5 watchtowers for every li, 1 beacon tower for every 10 li, 1 fortress for every 30 li, and 1 stronghold for every 100 li. These forts and watchtowers were interconnected through signals and beacons. The Han Dynasty's beacon and watchtower system were primarily set up along the Great Wall. Through the beacon system on the Great Wall, the Han border forces could mutually communicate and reinforce each other, making the northwest defense line more robust. The beacon towers and tunnels were mostly square or columnar in shape, wider at the base and narrower at the top. They were constructed using a combination of yellow soil and reeds or yellow soil and red willows, depending on the locally available building materials. In his book "Ancient China and Its Powerful Neighbors," Di Yuzhou describes these "long walls" as composed of defensive earthen walls, trenches, various-sized forts, beacon towers, lookout platforms, watchtowers, and other structures. Typical constructions involved using crushed mud and stones to build walls. These materials were excavated from the outside, and the walls formed naturally as the excavated materials piled up. These city walls were often built on sloping terrain, resulting in the ground inside the wall being much higher than the ground outside[10] .

Within this system, combined with military garrison farming, it formed a mutually supportive northern defense line, playing a crucial role in ensuring the smooth passage of the Silk Road and maintaining the security of the Han Dynasty's frontier. "Han Shu, Emperor Wu's Annals" annotated by Shi Gu in the "Comprehensive Mirror to Aid in Government," says: "According to the Han system, a separate city was built at strategic points in each pass, manned and guarded. It was called a garrison city, which is what is now called a barricade"[11]. In the present day, remnants of Han-era barricades can still be seen in the northwest regions of China, such as Gansu Province.

Conclusion. In summary, the construction of the Han Dynasty's Great Wall, beacon towers, and watchtower system exemplifies the outstanding wisdom and military strategy of ancient China. Through the establishment of the Great Wall, the deployment of beacon towers, and the establishment of watchtowers, the Han Dynasty government successfully created an efficient frontier defense system. This system played a crucial role in preventing external invasions, detecting enemy movements early, and

rapidly transmitting urgent information. Additionally, the Great Wall, beacon towers, and watchtower system have left a profound historical imprint on cultural heritage, becoming symbols of ancient Chinese military wisdom and tradition.

In order to continue the cultural legacy and promote the cultural value of the Han Dynasty's Great Wall, beacon towers, and watchtower system, measures should be taken to strengthen the protection and restoration of the sites. This involves the preservation of historical buildings, beacon tower sites, and watchtowers, ensuring that future generations can personally experience the magnificence of this ancient military system. There is a need for in-depth exploration of the history, technology, and cultural value of the Han Dynasty's Great Wall, beacon towers, and watchtower system. Promoting the dissemination of research findings and incorporating them into the education system can help cultivate a better understanding of ancient Chinese military wisdom among more people. Utilizing the sites of the Han Dynasty's Great Wall, beacon towers, and watchtower system for tourism development can contribute to public awareness of the construction and function of this ancient military system, fostering a sense of pride in the nation's cultural heritage among the public.

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