



*The*  
**TERRACOTTA ARMY**  
**OF CHINA**

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Terracotta Army pit one. Photo credit: Christel Sagniez.

## 01 INTRODUCTION

The Terracotta Army is a collection of terracotta sculptures depicting the armies of Qin Shi Huang, the first Emperor of China. This funerary art was buried with the emperor in 210–209 BCE to protect him in his afterlife.

Local farmers in Lintong County, outside Xi'an, Shaanxi, China, discovered the late third century BCE figures<sup>1</sup> in 1974. The figures vary in height according to their roles, with the tallest being the generals. The figures include warriors, chariots, and horses. Early estimates surmised that the three pits containing the Terracotta Army held more than eight thousand soldiers, 130 chariots with 520 horses, and one hundred fifty cavalry horses, the majority of which remained buried in the pits near Qin Shi Huang's mausoleum.<sup>2</sup> Other terracotta nonmilitary figures were found in other pits, including officials, acrobats, strongmen, and musicians.<sup>3</sup>

## 02 DISCOVERY

For centuries, occasional reports mentioned pieces of terracotta figures and fragments of the Qin necropolis—roofing tiles, bricks, and chunks of masonry, tiny pieces of an enormous hidden puzzle.<sup>4</sup>



Pieces of broken terracotta litter the excavation site. Photo credit: Gary Lee Todd.

### A FARMER DIGS A WELL

On March 23, 1974<sup>5</sup>, in the middle of a drought, a forty-one-year-old farmer Yang Zhifa from Xiyang, a village of the Lintong county<sup>6</sup> 21.7 miles east from the city of Xi'an,<sup>7,8</sup> decided to dig a well with his five brothers—Yang Wenhai, Yang Yanxin, Yang Quanyi, Yang Peiyan, and Yang Xinam—and neighbor, Wang Puzhi,<sup>9</sup> to water their crops. They chose a small wooded area south of their village, approximately .93 miles east of the Qin Emperor's tomb mound at Mount Li (Lishan)<sup>10,11,12,13</sup>. After five days of digging, the well reached a depth of sixteen feet,

and, bringing up dirt, Zhifa found a bronze arrowhead and a warrior's head, mistaking it for a jar.<sup>14</sup>

Yang immediately reported the find. He was ultimately offered three hundred yuan as a reward, an amount equivalent to his annual salary. The government evicted him from his 1797-square-foot property, along with the other villagers for archeologic and touristic needs. Yang received a land grant in Qinyong, a neighboring village.<sup>15</sup> After the site became accessible to the public, the

museum hired him to sign books in a souvenir shop, six days a week, from 9:00 a.m. to 5:00 p.m.,<sup>6</sup> for a salary of three hundred yuan per month, which increased to one thousand yuan after Yang's retirement.<sup>16</sup>

## ARCHAEOLOGICAL STUDY BEGINS

Amateur archaeologist, Zhao K'ang-min, worked as a farmer but loved history.<sup>17</sup> In 1961, he was assigned to work at the Lintong County Cultural Center (and later the Lintong Museum). Lintong, located just outside of Xi'an, an ancient capital of China, is rich with archaeological sites, but the museum was tiny and Zhao was its only employee in charge of cultural relics and archaeology. He had no formal education in the field, and largely taught himself archaeology and ancient Chinese scripts by reading journals such as *Kaogu* and *Wenwu* and studying the sparse collection of the museum.<sup>18</sup>

In 1962, Zhao excavated three kneeling terracotta crossbowmen,<sup>17</sup> but was unable to date them with certainty.<sup>19</sup> During the Cultural Revolution, when Mao Zedong encouraged the destruction of the Four Olds, the Red Guards destroyed a Qin dynasty statue in the museum, and forced Zhao to publicly criticize himself for "encouraging feudalism."<sup>17</sup>

On April 25, 1974, Zhao received a phone call from Yanzhai Commune of Lintong

and was told that farmers in Xiyang Village found terracotta human heads and other fragments.<sup>14,20</sup> Given the location of the village, near the Mausoleum of Qin Shi Huang, Zhao immediately recognized its potential significance. He rushed to the village and learned the relics had been found twenty-eight days before by local farmers digging a well.<sup>18</sup> The farmers, all brothers, threw most fragments away in the field without knowing what they were.<sup>17</sup> Some villagers took pieces as souvenirs, and children played with others as toys.<sup>14</sup>

**The farmers...threw most fragments away in the field without knowing what they were. Some villagers took pieces as souvenirs, and children played with others as toys.**

When Zhao reached the scene, what he saw confirmed his suspicion. He collected all the pieces he could find, even fragments the size of a fingernail. He took them back to the museum, and began putting the body parts together.<sup>14,19</sup> He successfully reconstructed life-size armored soldiers, and named them "Qin Dynasty Terracotta Warriors." However, he did not report the finding to the national government. He worried about the destruction of the statues just like the previous "Four Olds"<sup>14,19</sup> in the ongoing Cultural Revolution.

## THE CHINESE GOVERNMENT TAKES OVER

A few months later, Lin Anwen, a journalist of the Xinhua News Agency, heard about the discovery while visiting relatives in Lintong.<sup>20</sup> When Lin visited the museum and saw the restored warriors, Zhao asked him not to write about them. However, Lin ignored his request and publicized the finding when he returned to Beijing.<sup>19,20</sup> When the news reached the top Chinese leadership, they decided not to destroy them as Zhao had feared. Instead, within months, a formal excavation unearthed more than five hundred warriors.<sup>19</sup>



The discovery of the Terracotta Warriors quickly became worldwide news, hailed as one of the world's most important archaeological discoveries of the twentieth century.<sup>19</sup> In 1979, a museum opened on the site,<sup>18</sup> attracting visitors from all over the world, transforming sleepy Lintong into a tourism hotspot.<sup>17</sup>

In 1990, Zhao was officially credited as the discoverer of the Terracotta Army as he was the first to recognize the significance of the fragments and reconstruct them into life-size statues. He also led or participated in many other excavations and served as a longtime curator of the Lintong Museum.

Partially buried Terracotta Warrior. Photo credit: Gary Lee Todd.

## 03 HISTORICAL ACCOUNTS



Sima Qian

Historian Sima Qian (145–90 BCE) described the tomb construction in *Records of the Grand Historian*, the first of China’s twenty-four dynastic histories, written a century after the mausoleum’s completion. Geographer Li Daoyuan, writing six centuries after the first emperor’s death, recorded in *Shui Jing Zhu* that Mount Li was a favored location due to its auspicious geology: “Famed for its jade mines, its northern side was rich in gold, and its southern side rich in beautiful jade; the first emperor, covetous of its fine reputation, therefore chose to be buried there.”<sup>4,21</sup>

According to Sima Qian, the first emperor burial included palaces, towers, officials, valuable artifacts, and wondrous objects. One hundred rivers of mercury simulated flowing water. Heavenly bodies decorated the ceiling, below which were the features of the land. Some translations of this passage refer to “models” or “imitations”; however, those words do not appear in the original text, which also makes no mention of the terracotta army.<sup>2,22</sup> High levels of mercury were found in the soil of the tomb mound, giving credence to Sima Qian’s account.<sup>2</sup>

# 04 FIRST EMPEROR QIN SHI HUANG



First Emperor Qin Shi Huang. Photo credit: Vitsuha.

**Q**in Shi Huang, literally “First Emperor of Qin,” February 18, 259 BC–September 10, 210 BC, was the founder of the Qin dynasty and the first emperor of a unified China. From 247 to 221 BC he was Zheng, King of Qin (Qín Wáng Zhèng, personal name Yíng Zhèng or Zhào Zhèng). He became China’s first emperor at thirty-eight after conquering all of the other Warring States and unifying all of China in 221 BC.<sup>23</sup> Rather than maintain the title of “king” (wáng) borne by the previous Shang and Zhou

rulers, he ruled as the First Emperor of the Qin dynasty from 221 to 210 BC. Chinese rulers adopted his self-invented title “emperor” (huángdì) for the next two millennia.

During his reign, his generals greatly expanded the size of the Chinese state. Campaigns south of Chu permanently added the Yue lands of Hunan and Guangdong to the Chinese cultural orbit. Campaigns in Central Asia conquered the Ordos Loop from the nomad Xiongnu,





## HEIRLOOM SEAL OF THE REALM

In 221 BC, when Qin Shi Huang destroyed the remaining Warring States and united China under the Qin Dynasty, Heshibi, a famous piece of jade previously belonging to the Zhao state, passed into the hands of the new Emperor of China. He ordered it made into his imperial seal. Prime Minister Li Si commissioned the words, "Having received the Mandate from Heaven, may (the emperor) lead a long and prosperous life" carved onto the seal by Sun Shou. Known as the Heirloom Seal of the Realm, it passed on even as dynasties rose and fell until it was lost at the beginning of the Ming Dynasty (c. 1368–1644).

eventually leading to their confederation under Modu Chanyu.

Qin Shi Huang also worked with his minister Li Si to enact major economic and political reforms aimed at the standardization of the diverse practices of the earlier Chinese states.<sup>23</sup> Tradition says he banned and burned many books and executed scholars. His public-works projects included the unification of diverse state walls into a single Great Wall of China and a massive new national road system, as well as the city-sized mausoleum guarded by the life-sized Terracotta Army.

## METEORIC DEATH PROPHECY

In 211 BC, a large meteor fell in Dongjun. On it, someone inscribed the words "The First Emperor will die and his land will be divided."<sup>24</sup> When the emperor heard of this, he sent an imperial secretary to investigate this prophecy. No one confessed to the deed, so all people living nearby were put to death. The stone was then pulverized.<sup>25</sup>

## MAUSOLEUM CONSTRUCTION

Work on the mausoleum began soon after Emperor Qin ascended the throne in 246 BC when he was thirteen, although its full-scale construction only started after he conquered the six other major states and unified China in 221 BC. The source of the account of the construction of the mausoleum and its description came from Sima Qian in chapter six of his *Records of the Grand Historian*, which contains the biography of Qin Shi Huang:

In the ninth month, the First Emperor was interred at Mount Li. Digging and preparation work at Mount Li began when the First Emperor first came to the throne. Later, after he had unified his empire, 700,000 men were sent there from all over his empire. They dug through three layers of groundwater, and poured in bronze for the outer coffin. Palaces and scenic towers for a hundred officials were constructed, and the tomb was filled with rare artifacts and wonderful treasure. Craftsmen were ordered to make crossbows and arrows primed to shoot at anyone who enters the tomb. Mercury was used to simulate the hundred rivers, the Yangtze, Yellow River, and the great sea, and set to flow mechanically. Above were representation of the heavenly constellations, below, the features of the land. Candles were made from fat of “man-fish,” which is calculated to burn and not extinguish for a long time. The Second Emperor said: “It would be inappropriate for the concubines of the late emperor who have no sons to be out free,” ordered that they should accompany the dead, and a great many died. After the burial, it was suggested that it would be a serious breach if the craftsmen who constructed the mechanical devices and knew of its treasures were to divulge those secrets. Therefore after the funeral ceremonies had completed and the treasures hidden away, the inner passageway was blocked, and the outer gate lowered, immediately trapping all the workers and craftsmen inside. None could escape. Trees and vegetations were then planted on the tomb mound such that it resembles a hill.

**After the funeral ceremonies had completed and the treasures hidden away, the inner passageway was blocked, and the outer gate lowered, immediately trapping all the workers and craftsmen inside. None could escape.**

— Sima Qian, *Shiji*, Chapter 6.<sup>22,26</sup>

Some scholars regard the claim of having “dug through three layers of groundwater” as figurative.<sup>2</sup> The term “man-fish” in the text is an unknown referral. In modern Chinese it means “mermaid.” Interpretation of the term varies from whale to walrus and other aquatic animals such as the giant salamander.<sup>27,28</sup>



Damaged terracotta figures. Photo credit: Shankar S.

## REBELLION AND A PLUNDERING WARLORD

Before completion of the Mausoleum of the First Qin Emperor, a peasant rebellion broke out. General Zhang Han redeployed all the seven hundred thousand people building the mausoleum to suppress the rebellion, and construction of the mausoleum ceased. Warlord Xiang Yu entered Xianyang and looted the tomb.

Afterward, a shepherd searching for his sheep unintentionally burnt down

the tomb after venturing into the mausoleum.<sup>29</sup> A fire started from the torch he carried, burning away the tomb structures.<sup>30,31</sup> No solid evidence of the destruction of the tomb has been found, although evidence of fire damage has been found in the pits housing the Terracotta Army.<sup>32</sup> Some scholars think the mausoleum did not suffer any large-scale destruction.

## QIN'S DEATH AND AN ELABORATE SCHEME

During his fifth tour of Eastern China, the emperor became seriously ill after arriving in Pingyuanjin, Pingyuan County, Shandong. He died on September 10, 210 BC, at the palace in Shaqiu prefecture (Shāqiū Píngtái), about two months' travel by road from the capital Xianyang.<sup>33,34,35</sup>

The cause of Qin Shi Huang's death is still largely unknown. He reportedly died from Chinese alchemical elixir poisoning after ingesting mercury pills made by his alchemists and court physicians, believing it to be an elixir of immortality.<sup>36</sup> A possible contributing factor was illness due to the stress of running the empire.<sup>37</sup>

After the emperor's death, Prime Minister Li Si worried that the news of his demise would trigger a general uprising in the empire.<sup>33</sup> The trip to Xianyang required two months' travel, and it would not be possible to stop the uprising. Li Si enacted a plan to conceal the death of the emperor and return to the capital.<sup>33</sup> Most of the imperial entourage accompanying the emperor were ignorant of the emperor's death. Only a few people knew—Li Si, the eunuch Zhao Gao and his young son Ying Huhai, and five or six favorite eunuchs.<sup>33</sup>

Li Si ordered two carts containing rotten fish placed immediately before and after the emperor's wagon to mask the foul smell emanating from his wagon, where his body was starting to decompose severely in the summer heat.<sup>33</sup> The elaborate ruse included drawn shades so no one could see his face, daily clothes changes, and regularly served meals. They also pretended he wanted them to send messages after important discussions.<sup>33</sup>



Ox Cart. Photo credit: Gary Lee Todd.

## QIN SHI HUANG'S LEGACY

Chinese historian Sima Qian wrote a century after the First Emperor's death that it took seven hundred thousand men to construct the emperor's mausoleum. British historian John Man points out that this figure is larger than the population of any city in the world at that time. He calculated that sixteen thousand men could build the foundations in two years.<sup>38</sup> Sima Qian never mentioned the terracotta army.<sup>39</sup>

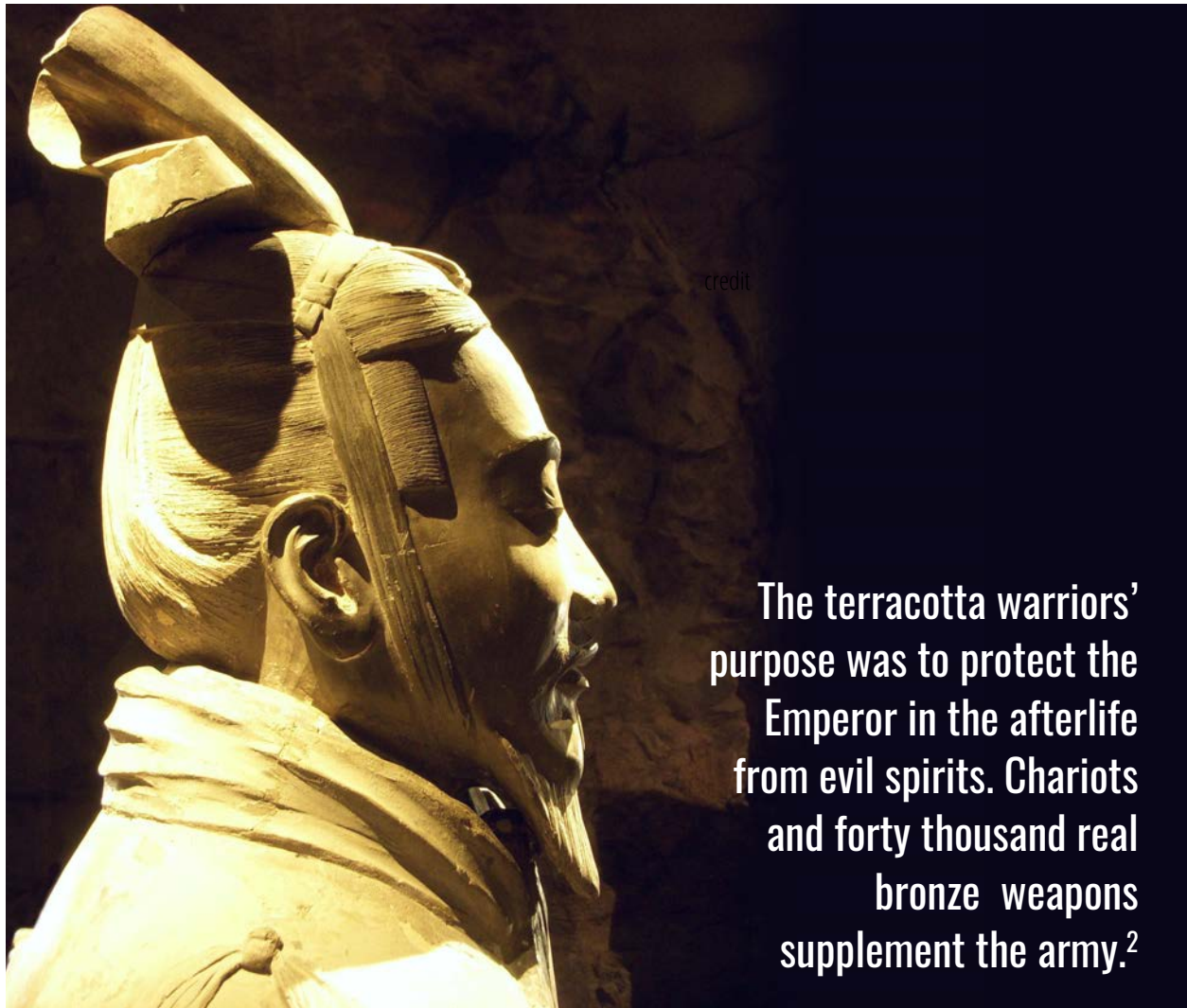
One of the first projects the young king accomplished was the construction of his own tomb. In 215 BC Qin Shi Huang ordered General Meng Tian to begin its construction with the assistance of three hundred thousand men.<sup>40</sup> Other sources suggest he ordered seven hundred twenty thousand unpaid laborers to build his tomb according to his specifications.<sup>41</sup> These historical estimates are debatable, given John Man's observation regarding populations at the time.



First Emperor Qin Shi Huang by unknown artist.

Evidence suggests the emperor's main tomb (located at 34°22'53"N 109°15'13"E) is still sealed and intact.<sup>42</sup> Sima Qian's description of the tomb includes replicas of palaces and scenic towers, "rare utensils and wonderful objects," one hundred rivers made with mercury, representations of "the heavenly bodies," and crossbows rigged to shoot anyone who tried to break in.<sup>38</sup> Killing the workmen who built the tomb helped protect its secrets.<sup>36,43</sup>

The tomb lies at the foot of Mount Li, 18.6 miles away from Xi'an. Modern archaeologists have inserted probes deep into the tomb. The probes revealed abnormally high quantities of mercury, some one hundred times the naturally occurring rate, suggesting that some parts of the legend are credible.<sup>36</sup>



**The terracotta warriors' purpose was to protect the Emperor in the afterlife from evil spirits. Chariots and forty thousand real bronze weapons supplement the army.<sup>2</sup>**

Terracotta Army general. Photo credit: Ellgaard Holger.

## 05 THE NECROPOLIS

The Terracotta Army is part of a much larger necropolis. Ground-penetrating radar and core sampling measured the area at approximately 38 square miles.<sup>44</sup>

The burial site replicates the emperor's imperial palace or compound and covers a large area around the tomb mound. The pyramidal earthen tomb's location at the foot of Mount Li is surrounded by two solidly built rammed-earth walls with gateway entrances. The necropolis consists of several offices, halls, stables, and other structures as well as an imperial park surrounding the tomb mound.

The warriors stand guard at the east side of the tomb. Despite an accumulation of almost 250 feet of reddish, sandy soil over two millennia following its construction, there was evidence of earlier disturbances at the site. During the excavations near the Mount Li burial mound, archaeologists found several graves dating from the eighteenth and nineteenth centuries, where diggers apparently struck terracotta fragments. These discarded fragments and soil backfilled the excavations.<sup>4</sup>



The warriors face east, suggesting protection from the Qin Emperor's conquered states. Photo credit: AEJ Bailey.



Map of the Terracotta Army site and surroundings. Photo credit: Erwyn van der Meer.

## MAUSOLEUM LAYOUT

The First Qin Emperor's mausoleum resides in the Lintong District, Xi'an, Shaanxi province of China. The mausoleum construction lasted thirty-eight years, from 246 to 208 BC, and rests under a 250-foot-high tomb mound shaped like a truncated pyramid.<sup>45</sup> The mausoleum layout mirrors the Qin capital Xianyang, divided into inner and outer cities. The city circumference measures 1.55 miles inside and 3.9 miles

on the outside. The tomb faces east in its southwest position in the inner city. The main tomb chamber housing the coffin and burial artifacts are the core of the architectural complex of the mausoleum.

Four main pits approximately 23 feet deep have been excavated,<sup>46,47</sup> located approximately .93 miles east of the burial mound.



## PIT ONE

Pit one is 750 feet long and 203 feet wide,<sup>47</sup> and contains the main army of more than six thousand figures.<sup>48</sup> It has eleven corridors, most more than ten feet wide and paved with small bricks with a wooden ceiling supported by large beams and posts. This design was also used for the tombs of nobles and would

have resembled palace hallways when built. Reed mats and layers of clay for waterproofing cover the wooden ceiling, and then materials mounded with more soil raising them about 6 feet, 7 inches to 9 feet, 10 inches above the surrounding ground level when completed.<sup>2</sup>

Pit one. Photo credit: Monika Neumann.





Pit two. Photo credit: Gary Lee Todd.



Pit three command center. Photo credit: DEZALB.

## OTHER PITS

Pit two contains cavalry and infantry units as well as war chariots and is thought to represent a military guard. Pit three is the command post, with high-ranking officers and a war chariot. Pit four is empty, perhaps left unfinished by its builders.

Some of the figures in pits one and two suffered fire damage, and burnt ceiling rafters have also been found.<sup>32</sup> These, together with the missing weapons, serve as evidence of the reported looting by Xiang Yu and the subsequent burning of the site, which is thought to have caused

the roof to collapse and crush the army figures below. But successful restoration from the fragments resulted in the terracotta figures currently on display.

Other pits forming the necropolis have also been excavated.<sup>49</sup> These pits lie within and outside the walls surrounding the tomb mound. They contain bronze carriages, terracotta figures of entertainers such as acrobats and strongmen, officials, stone armor suits, burial sites of horses, rare animals, and laborers, as well as bronze cranes and ducks set in an underground park.<sup>3</sup>



Qin Shi Huang's burial mound. Photo credit: Scott Sherrill-Mix.

## THE EMPEROR'S UNOPENED TOMB

The tomb appears to be a hermetically sealed space roughly the size of a soccer pitch (109 x 82 yd.).<sup>50,51</sup> The tomb remains unopened, possibly due to concerns over preservation of its artifacts.<sup>50</sup> For example, after the excavation of the Terracotta Army, the painted surface present on some terracotta figures began to flake and fade.<sup>52</sup> The lacquer covering the paint can curl in fifteen seconds once exposed to Xi'an's dry air and can flake off in just four minutes.<sup>53</sup>

Archaeological explorations currently concentrate on various sites of the extensive necropolis surrounding the tomb, including the Terracotta Army to the east of the tomb mound.<sup>54</sup> The army served as a garrison to the mausoleum and has yet to be completely excavated.<sup>55,56</sup>

## TERRACOTTA WARRIOR FIGURES

### FIGURE CONSTRUCTION

Workshops manned with government laborers and local craftsmen constructed the terracotta army using local materials. Heads, arms, legs, and torsos were created separately and then assembled by luting the pieces together with wet clay. After completion, the terracotta figures were placed in the pits in precise military formation according to rank and duty.<sup>62</sup>

Workmen used at least ten different molds to create the warrior faces.<sup>57</sup> After assembly, they used clay to provide individual facial features, making each figure appear different.<sup>2</sup> Construction of the warriors' legs is thought to mimic the terracotta drainage pipes manufactured at the time, classifying the process as assembly-line production, with specific parts, manufactured and assembled after being fired, as opposed to crafting a figure as one solid piece and subsequently firing it.

Tight imperial regulations required each workshop place its name on items produced to ensure quality control, aiding modern historians in verifying which workshops made tiles and other mundane items for the terracotta army.



Photo Credit: Dezalb

### BRILLIANT LIFELIKE COLOR

Ground precious stones originally adorned the colorful figures, including intensely fired white bones, dark red iron oxide, and red cinnabar pigments, green malachite, blue azurite, black charcoal, Chinese purple or Han purple from cinnabar barium copper silicate mix, and brown tree sap from a nearby source, more than likely from the Chinese lacquer tree.<sup>59</sup> Other colors used included pink, lilac, red, white,<sup>60</sup> and one unidentified color.<sup>59</sup> The colored lacquer finish and individual facial features would have given the figures a realistic feel, with eyebrows and facial hair in black and the faces done in pink.<sup>61</sup>



Terracotta general. Photo credit: Dezalb.



Terracotta officer. Photo credit: Gary Lee Todd.

## MILITARY RANKING AND UNIFORMS

The life-sized terracotta-figure heights range from 5.74 to 6.6 feet; the officers are typically taller. They vary in height, uniform, and hairstyle in accordance with rank. Each figure has a different face. Scholars have identified ten basic face shapes.<sup>57</sup> The types of figures include armored infantry, unarmored infantry, cavalrymen wearing pillbox hats, helmeted drivers of chariots with more armor protection, spear-carrying charioteers, kneeling crossbowmen or archers (also armored); unarmored standing archers, generals and other lower-ranking officers.<sup>58</sup> There are many variations in the uniforms within the ranks. Some wear shin pads while others do not; trouser length may be long or short, some of which may be padded. Body armor differs according to rank, function, and position in formation.<sup>58</sup> Terracotta horses are also placed among the warrior figures.



Terracotta soldier. Photo credit: Gremelm.



Xian horses. Photo credit: Ian and Wendy Sewell.

## A HELLENISTIC LINK?

Some scholars suspect a possible Hellenistic link to these sculptures because of the lack of life-sized and realistic sculptures before the Qin dynasty.<sup>63,64</sup> They argue that potential Greek influence is particularly evident in some terracotta figures such as those of acrobats, combined with findings of Indo-European DNA in Xinjiang and rare bronze artifacts made with a lost-wax technique known in Greece and

Egypt.<sup>65,66</sup> However, scholars dispute this idea, claiming “no substantial evidence at all” exists for any contact between ancient Greeks and Chinese builders of the tomb.<sup>67</sup> They argue that such speculations rest on flawed and old “Eurocentric” ideas assuming other civilizations were incapable of sophisticated artistry like the Western-style traditions.<sup>67</sup>

## WEAPONRY

Most of the figures originally held real weapons, increasing their realism. Looting shortly after the creation of the army and decay claimed most of these weapons. Despite this, over forty thousand bronze items of weaponry, including swords, daggers, spears, lances, battle-axes, scimitars, shields, crossbows, and crossbow triggers remain.



Top Left: Bronze arrows

Top Right: Qin bronze ge dagger-axe

Bottom Left: Bronze dagger

Photo credit: Gary Lee Todd

The swords contain an alloy of copper, tin, and other elements including nickel, magnesium, and cobalt.<sup>74</sup> Inscriptions on some weapons date their manufacture between 245 and 228 BCE, indicating prior use to burial.<sup>75</sup>

Arrowheads, mostly in bundles of one hundred, make up most of the recovered items.<sup>68,69,70</sup> Studies of the arrowheads suggest production by self-sufficient, autonomous workshops using a process referred to as cellular production.<sup>71</sup>

A number of weapons had a 10- to 15-micrometer coating of chromium dioxide before burial that was thought to have protected them from any form of decay for the last 2,200 years.<sup>70,72</sup> However, research conducted in 2019 indicated the chromium was merely contamination from nearby lacquer, not a means of protecting the weapons. The slightly alkaline pH and small particle size of the burial soil likely preserved the weapons.<sup>73</sup>

## THE BRONZE CHARIOTS

The Qin Bronze Chariot refers to a set of two Qin dynasty bronze model chariots unearthed in 1980 at the Mausoleum of the First Qin Emperor, Qin Shi Huang (reigned 247–220 BCE).<sup>76</sup> When archaeologists discovered the pieces of both half-size models, it took five years to restore them.<sup>77</sup>

The first piece, “bronze chariot number one,” consists of an open chariot drawn by four bronze horses with a single standing driver and a bronze umbrella on a stand placed next to him.

The second piece, “bronze chariot number two,” is a closed carriage with two seats and an umbrella-like roof, also drawn by four bronze horses.

The Museum of the Terracotta Warriors and Horses of Qin Shi Huang in Shaanxi stores the chariots<sup>78,79</sup> and in 2010 the piece showcased an exhibit at the Shanghai Expo inside the China Pavilion building.<sup>80</sup>

The chariots are two of sixty-four designated historical artifacts prohibited from exhibition outside China.<sup>79</sup>



Bronze chariot two driver detail. Photo credit: Gerd Eichmann.





Bronze chariot one horses. Photo credit: Gerd Eichmann.



Bronze chariot two driver. Photo credit: Gary Lee Todd.



Covered bronze chariot two. Photo credit: Gary Lee Todd.



Terracotta Army Museum. Photo credit: Erwyn van der Meer.

## SITE CONSERVATION EFFORTS

In 1987, the United Nations Educational, Scientific and Cultural Organization (UNESCO) listed the mausoleum and the Terracotta Warriors among the World Heritage Sites.<sup>81</sup> It is number 441 on the World Heritage Site list, one of fifteen sites China currently contributes.

A UNESCO World Heritage Site intends practical conservation for posterity, which otherwise would be subject to risk from human or animal trespassing, unmonitored, uncontrolled, or unrestricted access, or threat from local administrative negligence. A UNESCO site is a protected zone.



## 06 CONCLUSION

Excavation efforts continue today, forty-seven years after the tomb's initial discovery. Mausoleum visitors have a unique opportunity to view archaeologists and scientists in their open laboratories.

The contents of the emperor's tomb remain a mystery. Concerns about relic protection coupled with the high levels of mercury in the soil prevent excavation—for now. The tomb's unbroken seal continues to offer Qin Shi Huang privacy in his afterlife, at least until modern technology finds a way to circumvent the toxicity of his rivers of mercury.

Close-up of a general's hands. Photo credit: Gary Lee Todd.



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