



# UNVEILING ANCIENT CIVILIZATION ALONG THE SILK ROAD

ARCHEOLOGISTS AT CHINA'S NORTHWEST UNIVERSITY are exploring and protecting cultural heritage sites across western China and Central Asia.

**The 1938 excavation of the tomb of Zhang Qian**, a pioneering envoy who helped establish the ancient Silk Road across Central Asia, launched the study of archaeology at Northwest University in China's Shaanxi province. The research laid the foundations for the university to become, in 1956, one of China's first to establish an archaeology department.

Located in the ancient capital Xi'an, the university has long focused on archaeological research in the northwestern region of China, uncovering civilizations from Zhou, Qin, Han and Tang dynasties on and around the Silk Road. It was the first to build a system integrating an evaluation of cultural heritage, as well as the preservation and management of important sites and artefacts. Today, the university's School of Cultural Heritage hosts the Belt and Road Joint Laboratory on China-Central Asia Human and Environment, and has seven research groups focusing on archaeological science and the

preservation of cultural heritage in western China, Central Asia, and across Eurasia.

Xinjiang, located in western China, was an important geographical region between the east and west of Eurasia and witnessed China's technological, ideological and cultural exchanges with other civilizations. Migration routes might have influenced the genetic makeup of ancient peoples here. To learn more, Qiaomei Fu, a distinguished professor at the school and a geneticist at the Chinese Academy of Sciences, led a team in sequencing 237 ancient genomes from 41 archaeological sites across Xinjiang. As reported in *Science Advances*<sup>1</sup>, they found that people there in the Bronze Age showed a mix of Steppe and northeastern Asian ancestry. In the Iron Age there was an increase in movement of Steppe, Central Asian, and East Asian people into the region.

Another study, led by Yue Li, revealed the emergence and adoption of horse riding in the

region through an analysis of eight horse skeletons dated to 350 BC from two sites in Xinjiang. The results, detailed in *PNAS*<sup>2</sup>, suggest that this region may have been a hub in the spread of horse riding from Eurasia to China, where horses facilitated the rise of the earliest Chinese empires, including those of the Qin and Han dynasties, and the emergence of transcontinental trade networks.

## PRESERVING HERITAGE

In addition to archaeology, the school has provided policy consultation on the preservation of historic Chang'an City. The city, in today's Xi'an, was once the ancient capital of Han and Tang dynasties. Protecting it requires the balancing of different sometimes contradictory needs. The research team devised a preservation plan, dividing the city's ruins into four categories, each requiring different levels of protection, and proposed specific measures to allow cultural heritage and contemporary residents to coexist.

Researchers here are also working on the protection of cultural relics. Ancient settlements featuring earthen

objects are commonly found in arid environments in northwest China and Central Asia. The artefacts are frequently cracked and damaged. Manli Sun took the lead in establishing an assessment and classification system of the sites and invented many novel techniques and materials to reinforce and protect them against decay<sup>3</sup>. The results have helped in the gazetting of the Ancient Ruins of Jiaohe City and the Site of Xanadu as UNESCO World Heritage Sites.

The school will continue to carry out archeological research in significant sites along the ancient Silk Road and explore new systems and technologies to protect cultural relics and preserve heritage, economically contributing to the region, while building a world-class reputation in archeological research. ■

## REFERENCES

1. Wang *et al.*, *Sci. Adv.* 2021 Mar 31;7(14): eabd6690
2. Li *et al.*, *PNAS* **117** (47)29569-29576
3. Mao *et al.*, *International Journal of Architectural Heritage* 2019, vol. 13, no. 6, 769-781

▲ (Images, from left to right) Ancient horse skeletons were unearthed in Xinjiang; The prehistoric Lushanmao Site in Yan'an city of Shaanxi; NWU archeologists were reinforcing the Ancient Ruins of Jiaohe City.