

# Experts guide millions at Yungang Grottoes

Zhang Xiaoqin, Wang Nan lead online class on Chinese Cultural and National Heritage Day



By YUAN SHENGGAO

It is almost impossible for tourists to get a group of renowned history and cultural heritage experts as their guides when visiting Yungang Grottoes, one of the most renowned sites in North China's Shanxi province. However, on the fourth Chinese Cultural and Natural Heritage Day, which was celebrated on June 13, two famous experts on ancient Chinese culture from Tsinghua University, Zhang Xiaoqin and Wang Nan, hosted an online show at Yungang Grottoes in Datong city. More than 2 million viewers logged on to explore this famous Buddhist cultural asset as well as other heritage sites in the rest of Shanxi.

Shanxi is one of the provinces and regions in China with the largest number of cultural sites. Yungang Grottoes is representative of all the ancient cultural assets in Shanxi.

Located at the southern foot of Wuzhou Mountain, some 16 kilometers west of Datong's city center, Yungang Grottoes was carved out of the mountainside and extends about 1 km from east to west.

Comprising 252 caves and 51,000 statues within an area of 18,000 square meters, Yungang Grottoes represents an outstanding achievement of Buddhist cave art in China during the 5th and 6th centuries.

A classical masterpiece of Chinese Buddhist art, Yungang Grottoes played an important role among early Oriental Buddhist grottoes with a far-reaching effect on Buddhist cave art in China and East Asia.

Yungang Grottoes was added to the World Cultural Heritage List in December 2001.

During the online show, the two experts led the viewers into a thor-

ough study of the precious cultural wealth in Yungang from a unique perspective, as the theme of the show indicated: "Following the Footsteps of Liang Sicheng and Lin Huiyin to explore China's Ancient Architecture and Arts".

Liang and his wife, Lin, were among the founders of the Society for the Study of Chinese Architecture.

In the first five years after its establishment in 1932, society members conducted a great deal of field research throughout the country.

While their trips covered a great many areas in Shanxi, Liang said his experience in Yungang Grottoes was the most impressive.

Wang Nan is also the deputy curator of the Memorial Museum for the Society for the Study of Chinese Architecture. He said the reason why the grottoes impressed Liang and Lin so much is that a study of the site is crucial to understand how Buddhist culture was spread in China.

Using pictures and videos, Wang showed many details of statues and structures of the grottoes. For instance, the various gestures of the Buddha and transformation of clothing styles.

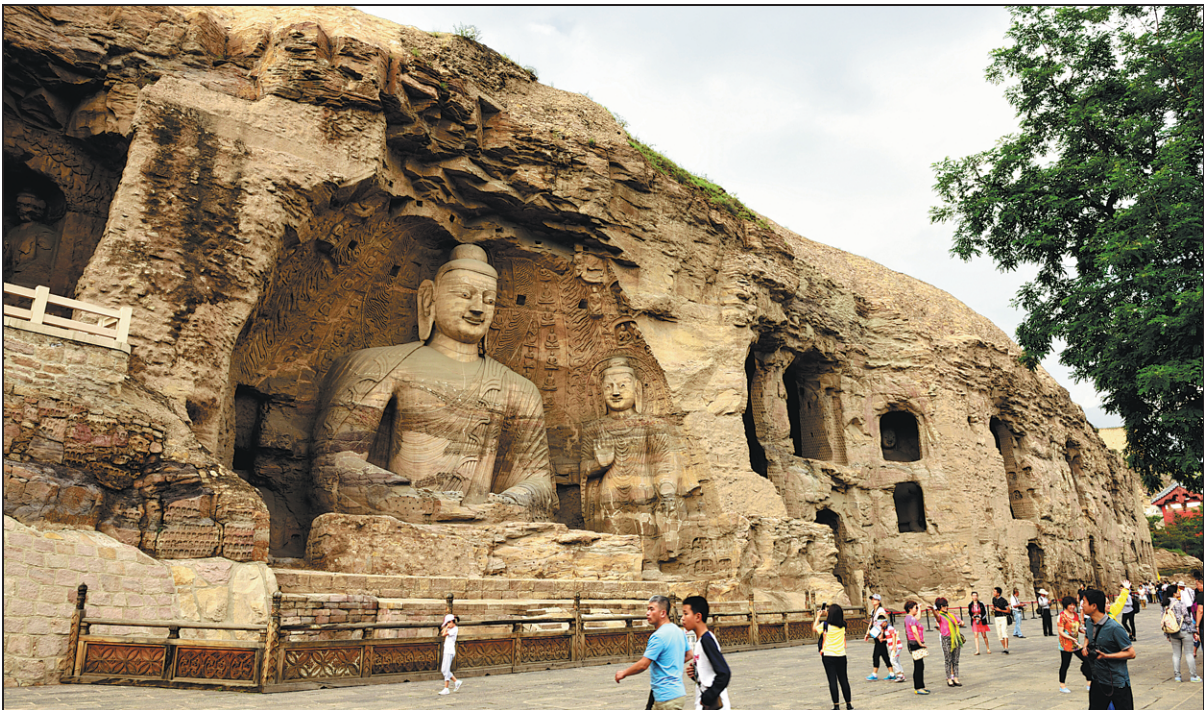
"Judging from the clothing style, Buddha statues built in an earlier stage feature characteristics of India, Persia, Central Asia and even Greece.

"Later there was an evolution to adapt to the Chinese culture, featuring loose robes, broad belts and slim bodies," Wang said.

Flying Apsaras are the common images in China's three most renowned grottoes sites: Mogao in Dunhuang, Gansu province; Yungang in Datong; and Longmen in Luoyang, Henan province.

Apsaras refer to spiritual beings in Hindu and Buddhist cultures taking the form of beautiful females.

In Yungang, according to Wang, the Apsaras carved in an earlier period were usually full-grown women, just as those in Hindu or Indian Buddhist cultures. They



**Above:** The Buddha in the 20th cave is the largest statue at Yungang Grottoes. **Right:** Buddha statues in Yungang are usually surrounded by Flying Apsaras. PROVIDED TO CHINA DAILY

became slender gradually, more resembling the immortals of China's native legends.

Wang said it is because of the transformation of such details that Liang reached a conclusion: Chinese architectural culture maintained its unique characteristics independent from other cultures, despite having absorbed foreign ingredients during the past two millennia.

In one of his research reports, Liang said: "To enthusiasts of the ancient Chinese carving and sculpture arts, Yungang was the most exciting site."

He reached the conclusion because he discovered the construction of the grottoes involved the participation of different segments of society.

When Datong — then called Ping-

cheng — served as the capital of the Northern Wei Dynasty (386-534), most people were faithful Buddhists. In addition to the royal family and the imperial court, common people were allowed to create caves and carve Buddha statues in Yungang, according to the report. It added that the enthusiasm and creativity of those people had lifted Buddhist arts to a new height.

Liang and Lin's research trips in Shanxi also brought a lot of ancient structures to light.

These included the Nanchan and Foguang temples — the country's oldest buildings — in the Wutai Mountains; and the Sakyamuni Pagoda in Yingxian county, the oldest wooden structure in China.

Guo Yanjie contributed to this story.



The ancient Xikou Ford has developed into a prosperous city that now serves as the county seat of Hequ. MA LIMING / FOR CHINA DAILY

## Western Pass reveals storied history of Shanxi's renowned merchant traders

By YUAN SHENGGAO

Xikou, or Western Pass, is one of the most storied places in Shanxi, being a symbol of departure when the ancient Shanxi merchants — or Jinshang — started their north-westward trips to regions afar.

Shanxi has been known for its historical commercial tradition developed by the famed Jinshang businesspeople. It is said Shanxi's merchants dominated commercial circles in North China for about 500 years since the Ming Dynasty (1368-1644).

However, many of these successful merchants started as small vendors wandering outside Shanxi, with their travels extending as far as Russia.

As the Western Pass was always their last stop in Shanxi, it has stood as a silent witness to farewells between merchants and their loved ones.

The pathos of departure has touched the hearts of many Shanxi locals through the popular folk song *Out of the Western Pass*, with lyrics that go:

"When you started your trip out of the Western Pass, my dear, I know there's no way to hold you back..."

However, it might be an effort in vain for any tourist to find where the exact location of the Western Pass is.

There were a lot of performances on the stage in the olden days. People hired folk opera troupes to perform when they held celebrations for the river god or sent off their relatives to do business overseas."

**Ren Junwen**, curator of Hequ County Museum

In the northwest of Shanxi, a number of Great Wall passes and several ferry crossings along the Yellow River are claimed to be the Western Pass.

The ancient Xikou Ford by the Yellow River in Hequ county is one of the claimed legendary locations.

The history of the Xikou Ford can be traced back to the Han Dynasty (206 BC-AD 220) and its ferry service business flourished in the Ming and Qing (1644-1911) dynasties with the prosperity of Shanxi merchants, who used it as a major hub for cargo transporta-

tion, according to Ren Junwen, curator of Hequ County Museum.

With the development of modern transport means like highways and railways, Ren said the ferry business was put to an end decades ago, leaving the ford and its neighborhood as a large park for local residents to relax in.

At the center of the park is the River God Temple built in the Ming Dynasty, with an opera stage standing opposite its entrance.

"There were a lot of performances on the stage in the olden days. People hired folk opera troupes to perform when they held celebrations for the river god or sent off their relatives to do business overseas," Ren said.

There are Qing Dynasty murals on the walls of the temple, describing the local customs.

One picture on a wall depicts the tradition of floating lanterns on the river to celebrate Zhongyuan Festival.

Zhongyuan, celebrated on the 15th day of the seventh lunar month, is a festival paying tribute to deceased family members and ancestors.

"People set the lanterns afloat on the river and watch them float afar, as if seeing off their beloved ones on a trip with no return," Ren said.

Li Yali contributed to this story.

## 5G helps unearth more efficiency in coal mines

By YUAN SHENGGAO

Coal mining companies in Shanxi province are turning smart, safer and more efficient by using the latest 5G technologies.

Xinyuan Coal Mine, a subsidiary of Yangquan Coal Industry Group, became the nation's first 5G-connected coal mine with a 5G mining control center put into operation in late April.

"After deploying the 5G network in the 537-meter-deep shaft and launching smart drilling, mining and checking operations, we have made fully automatic in-shaft production a reality," said Zhai Hong, board chairman of Yangquan Coal Industry Group.

At the control center, a huge display shows the gas level, temperature, humidity and other conditions in the shaft. The operators can control the processes of drilling, excavating and conveying with simple clicks of a mouse. The very few workers in the shaft are connected with the control center via video link.

Zhai said the number of staff working in the shaft has been reduced by 321 in the past few years thanks to the use of various smart technologies.

"Our next step is to make in-shaft mining totally free from manpower," Zhai said, adding that a no-man shaft can greatly alleviate a coal mine's safety concerns and prevent casualties.

The chairman said that before the use of the 5G network, the company's many intelligent equipment could only be used for monitoring, instead of controlling production.

Xinyuan's 5G system was built by the Shanxi branch of China Mobile and Huawei.

Another company that has followed suit is Pangpangta Coal Mine under Huozhou Coal and Electricity Group.

Pangpangta's 5G mining control center became operational after the 5G network was installed in the shafts covering a total length of 100

kilometers and depth up to 800 m underground.

The company's network was developed by the Shanxi branch of China Unicom.

Network construction began in late March and was completed in about 50 days.

"In 50 days, we had built 144 underground base stations and installed cables and all kinds of monitoring and control devices in

the shafts," said Li Yi, general manager of the Shanxi branch of China Unicom.

Executives said that totally man-free in-shaft operation is expected to be realized at Pangpangta Coal Mine sometime next year.

The 5G-connected mining will be quickly promoted in Shanxi's coal industry, said Hu Yuting, vice-governor of the province.

He predicted that there will be 10 coal mines going fully smart in the next three years and intelligent production will be realized throughout the industry by 2030.

Guo Yanjie contributed to this story.



**Top:** A huge display at the control center of Xinyuan Coal Mine shows the operational status in the shaft. **Above:** Workers test a 5G monitoring device in Xinyuan's shaft.

PHOTOS BY YE HAIFENG / FOR CHINA DAILY