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中国画报

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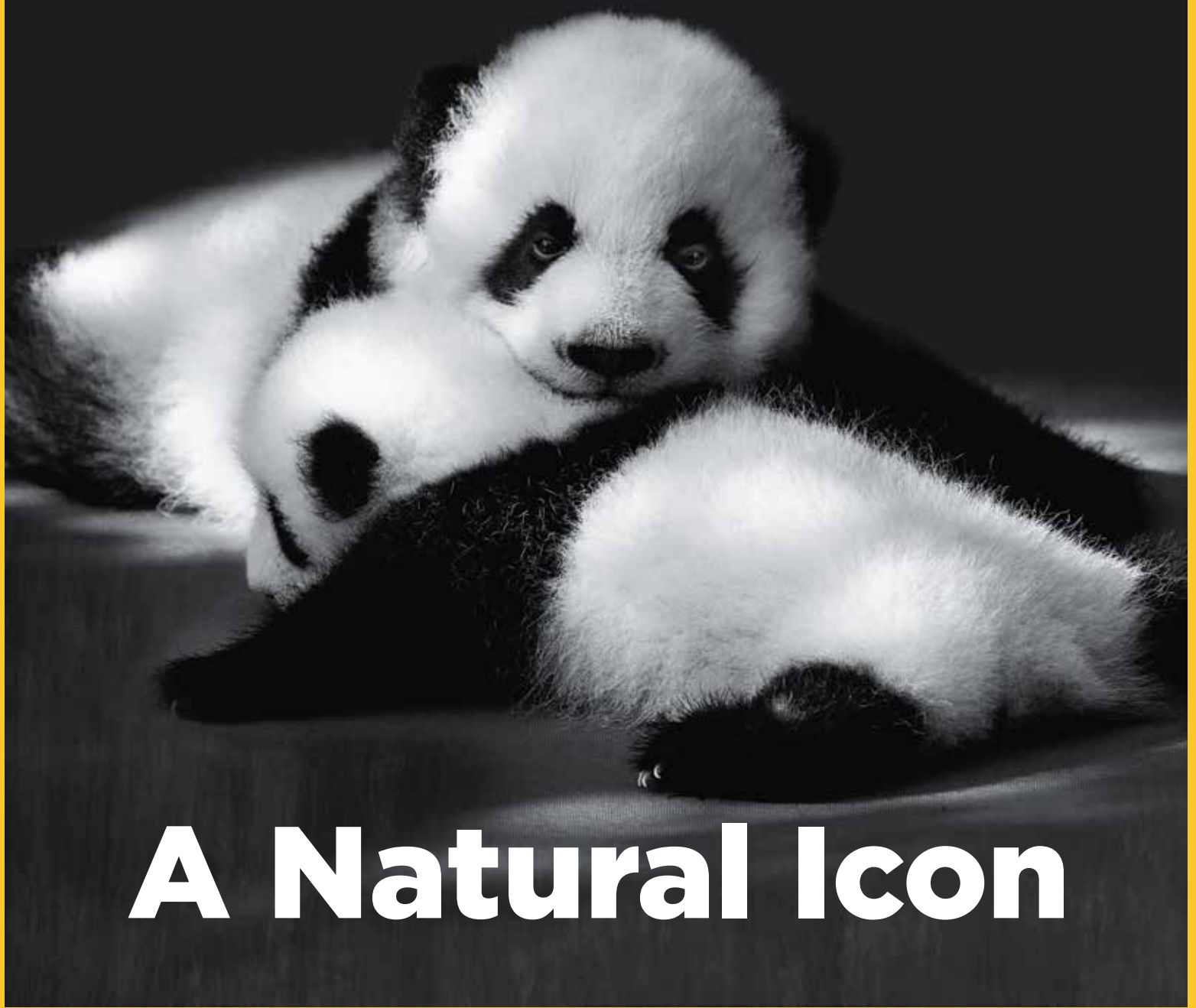
CHINA PICTORIAL



A Natural Icon

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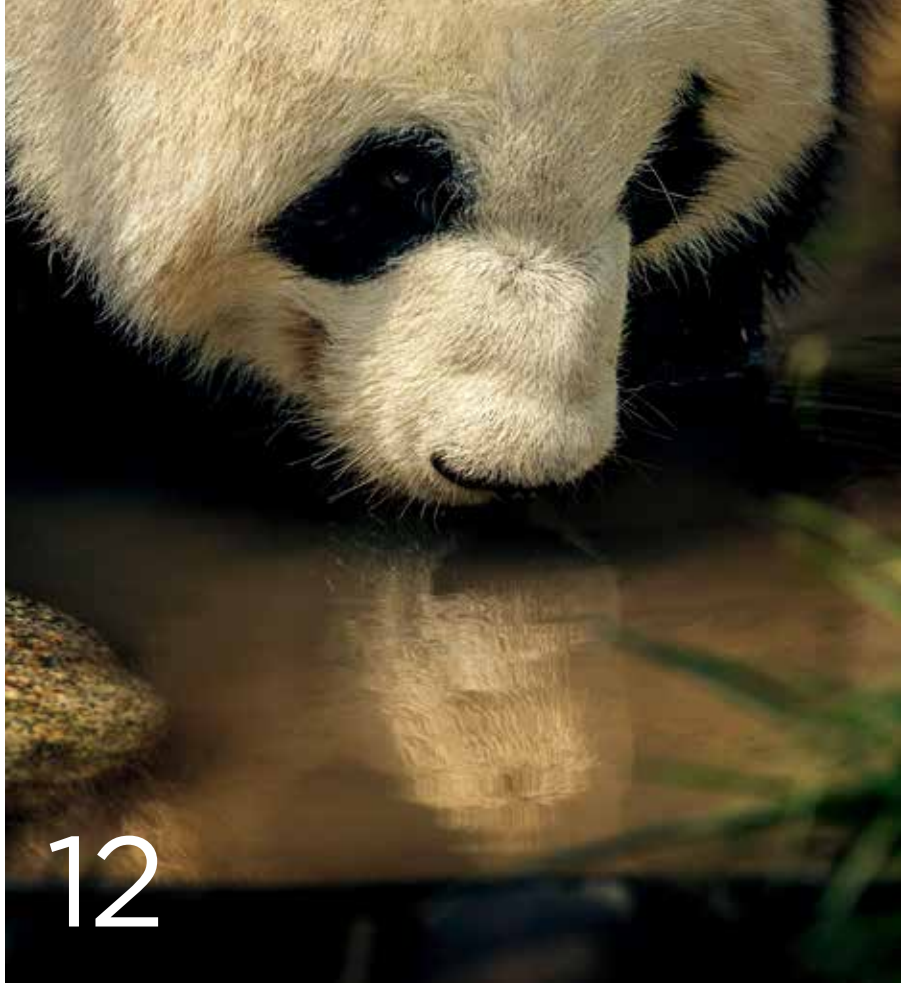


Features

Cover caption

Two giant panda cubs, one a month and a half old and the other 35 days old, at Chengdu Research Base of Giant Panda Breeding in Sichuan Province. by Zhou Mengqi

by Xie Huanchi/Xinhua

Xi Stresses Quality Poverty Alleviation

April 15, Chongqing: Chinese President Xi Jinping talks with villagers to learn about the progress of poverty alleviation in solving problems such as meeting the basic need of food and clothing and guaranteeing compulsory education, basic medical care and safe housing in Huaxi Village of Shizhu Tujia Autonomous County.

President Xi emphasized the significance of quality in the fight against poverty at a symposium on April 16 during his inspection tour. He called for the establishment of a long-term mechanism for poverty relief, reinforcement of developing local industries as a means to alleviate poverty, improvement of training for the poor and facilitation of employment.

by Wan Quan

PLA Navy 70th Anniversary

April 23, Qingdao, Shandong Province: A new nuclear submarine of the Chinese People's Liberation Army (PLA) Navy debuts during a grand naval parade.

The parade is part of the multinational naval events marking the 70th anniversary of the PLA Navy, which was founded on April 23, 1949.

China's first aircraft carrier, the Liaoning, and latest nuclear submarines, destroyers and fighter jets were among the 32 Chinese vessels and 39 warplanes displayed in the parade.

Also joining the parade were nearly 20 foreign vessels from over 10 countries including Russia, Thailand, Vietnam and India, demonstrating to the world firm determination to safeguard peace and seek development with joint efforts.

IC

First Black Hole Image

April 10, Shanghai: The first-ever image of a supermassive black hole at the heart of the distant galaxy M87 is released during a press conference held by Shanghai Astronomical Observatory.

The image of the black hole, based on observations made through the Event Horizon Telescope (EHT), a planet-scale array of eight ground-based radio telescopes aligned through international collaboration, was unveiled in coordinated press conferences across the globe at 9 p.m. (Beijing time) that day. The landmark result offered scientists a new way to study the most extreme events in the universe predicted by Albert Einstein's general relativity.

Notre Dame Fire Scorches Chinese Hearts

April 15, Paris, France: The spire of Notre Dame Cathedral collapses after the building was engulfed in flames. The world shared grief after the 850-year-old cathedral was devastated by a ferocious blaze. The accident caused great concern across China and called for more attention on the protection of classical structures.

Chinese President Xi Jinping sent a condolence message to his French counterpart, Emmanuel Macron, after the fire. Xi called Notre Dame a significant symbol of French civilization and a great treasure of human civilization. Like the French people, the Chinese people were also deeply saddened by the devastating fire, he said. China firmly believes that restoration will be carried out smoothly and that Notre Dame will regain her splendor thanks to the efforts of the French people and with support from the international community, Xi added.

IC

by Xiao Yijiu/Xinhua

700 Chinese Sturgeons Released

April 13, Yichang, Hubei Province: Chinese sturgeons are about to be released into the Yangtze River. A total of 700 Chinese sturgeons, nicknamed "aquatic pandas," were released by the Chinese Sturgeon Research Institute (CSRI) of the China Three Gorges Corporation that day to save the species from extinction.

The sturgeons released into the river will help boost the endangered species' survival rate in the wild and enhance their genetic diversity, said Li Zhiyuan, deputy director of the CSRI.

Since 1984, Chinese experts have carried out reintroduction programs to increase the population of sturgeons, a rare fish that dates back to the time of dinosaurs.

Straightforward Development and Boosts in African Investment

Text by Albert Rugaba

Infrastructure projects under the framework of the Belt and Road Initiative streamline necessary arrangements to build infrastructure in Africa and enable local businesses to invest more in their own operations.

Plentiful international media coverage of the Belt and Road Initiative (BRI) focuses on criticism of the BRI infrastructure funding model and the so-called "debt" it creates in recipient countries, but the key point missed by these commenters is the supreme importance of these projects for the economic development of African countries (with East Africa being a good example).

As far as Africa is concerned, this is one of the few times that a credible infrastructure funding alternative has been presented, considering that multilateral institutions have almost deserted this field. From Africa's point of view, the concern is not about taking on debt to finance the infrastructure projects, but on the speed that these crucial levers of economic development are put in place, especially projects such as power plants, roads and railway tracks.

For example, it costs around US$1,200 to move a container from the Mombasa port to Nairobi, Kenya by road, a distance of around 500 kilometers (expensive by any standards), while moving the same container on the new Mombasa-Nairobi Standard Gauge Railway constructed with the help of China would only cost around US$550, a 54-percent cost saving. The gains are tangible and immediately felt from a business perspective. Instead of paying extra for transporting goods, business operators can immediately reinvest the saved funds and receive more value for money.

These are issues that need to be considered when discussing and commenting on the BRI and its flagship infrastructure projects.

Moreover, there are not many alternatives to the single-window financing option that China is advocating, in which Chinese companies offer a complete development process through one entity (financing, construction of the project and training of the required technicians), contrasting usual financing models involving multiple separate entities. Should participating countries decide on the usual model, they would need to negotiate with a financing party, then with different Engineering, Procurement and Construction (EPC) contractors and finally with a technical training entity. For massive infrastructure projects, the traditional model comes with a high chance of failure, so the fact Chinese companies can act as a single entity to handle all the above-mentioned functions has been a blessing for African countries—especially those with limited human resources and technical capacities.

Given the fact China has developed from a poor country to an economic power over the past 40 years since the beginning of its reform and opening up, I firmly believe in the value of its first-hand experience and better understanding of the important role of infrastructure in developing countries. After all, four decades ago, China had similar developmental problems that Africa is confronting now.

Going forward, we need to see more inclusion of local companies and better technical training on the part of Chinese contractors, which is in both parties' long-term interests.

On the African side, we need to take pages from Chinese development experience and strive to develop as fast as China. Whether or not we call it the "China model" doesn't really matter as long as it works for the intended purposes.

Finally, African countries participating in the BRI should focus more on the long-term economic value of infrastructure projects and their repayment capabilities.

"Who cares if the cat is black or white as long as it catches mice," goes a proverb. It is about time we move past rhetoric and judge infrastructure projects by their results on the ground.

I believe that China will do everything it can to maintain its commitments and promised funding levels of the BRI infrastructure program.

The author is a China-Africa investment advisor and commodity trader based in Shenzhen, China. He studied at the University of International Business and Economics in Beijing. He is originally from Rwanda.

现代化都市圈

Metropolitan Areas

Edited by Li Zhuoxi

City clusters are the main forms of urbanization and important platforms to support national economic growth, promote regional coordinated development and participate in international competition and cooperation.

Metropolitan areas are regions in city clusters, encircling a big city and usually affording an hour commute or less. China aims to build several metropolitan areas with global influence by 2035, according to the guidelines released by the National Development and Reform Commission.

The concept of actively building metropolitan areas is not new for many developed countries, which have been able to improve the influence of big cities in the city clusters and strengthen coordination between cities and surrounding suburbs in many ways.

Developing metropolitan areas helps optimize demographic and economic structures and stimulate effective investment and potential consumption demands, thus fostering economic expansion. This photo shows the Prince Bay Cruise Homeport in Shenzhen, which offers direct ferry connections to Zhuhai, Hong Kong and Macao, forming a "one-hour circle" within the Greater Bay Area. Xinhua

罪错未成年人分级制度

Multi-level Juvenile Delinquency Correction

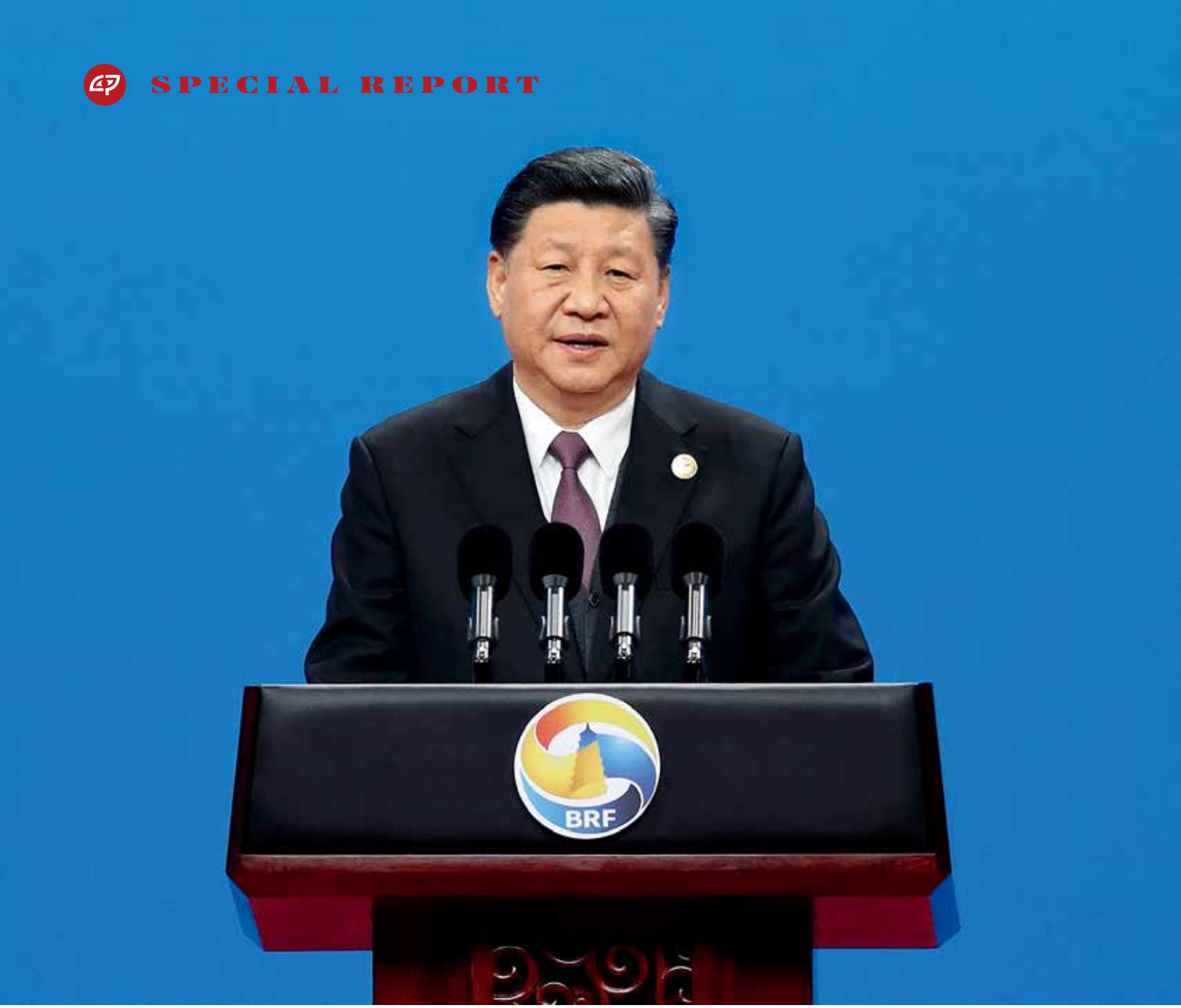
Edited by Li Zhuoxi

Dealing with juvenile delinquency is a global concern.

To improve the correctional education of minors involved in crimes, a multi-level system will be established to prevent juvenile delinquency, improve family education and diversify correction measures according to a recent work plan released by the Supreme People's Procuratorate of China for the period from 2018 to 2022. Chinese prosecutors will clarify offense levels in crimes committed by juveniles to properly align punishments with the severity of the criminal acts.

For judicial protection of juveniles, China insists on education first, with punishment reserved only as a supportive approach. China believes in forgiveness but also in strict discipline through deep love.

July 19, 2013: A juvenile defendant (second left) weeps over the birthday cake at the People's Court of Shizhong District in Zaozhuang City, Shandong Province. IC



April 26, 2019: Chinese President Xi Jinping delivers a keynote speech at the opening ceremony of the second Belt and Road Forum for International Cooperation in Beijing. by Xu Xun/*China Pictorial*

Next Chapter for the Belt and Road
High-Quality Cooperation

Text by Hu Zhoumeng

The second BRF has witnessed the joint efforts of participants to refine the blueprint for the BRI with a consensus on promoting "high-quality cooperation."

Amid rising protectionism and unilateralism adding uncertainty to today's world, the Belt and Road Initiative (BRI), a commitment to multilateralism and an open global economy, embraced the vision for a brighter future shared by humanity as the second Belt and Road Forum for International Cooperation (BRF) closed in Beijing.

From April 25 to 27, 2019, about 5,000 participants from more than 150 countries and 90 international organizations attended the second BRF, including nearly 40 heads of state and government. This year's forum, themed "Belt and Road Cooperation: Shaping a Brighter Shared Future," had 12 themed sub-forums, twice that of the first BRF in 2017. It also hosted a leaders' roundtable, a high-level meeting, a CEO conference and other side events.

In total, 283 items of practical achievement were made in the preparatory process and during the forum. Cooperation agreements worth more than US$64 billion were signed at the CEO conference that was held for the first time.

Since it was proposed by Chinese

April 27, 2019: The leaders' roundtable meeting of the second Belt and Road Forum for International Cooperation is held at the Yanqi Lake International Convention Center in Beijing. by Wan Quan/*China Pictorial*

April 26, 2019: Chinese President Xi Jinping, his wife Peng Liyuan and guests of the second Belt and Road Forum for International Cooperation (BRF) pose for a group photo before a banquet at the Great Hall of the People in Beijing. From April 25 to 27, about 5,000 participants from more than 150 countries and 90 international organizations attended the second BRF in Beijing, including nearly 40 heads of state and government. by Xu Xun/*China Pictorial*

President Xi Jinping in 2013, the BRI has reaped tangible results from Asia and Europe to Africa, the Americas and Oceania. In less than six years, 126 countries and 29 international organizations have signed BRI cooperation documents with China.

Under the Belt and Road framework, China has advocated and practiced the principle of "extensive consultation, joint contribution and shared benefits," seeking self-development while bringing opportunities, experience and capital to its BRI partners and the broader world as well.

From 2013 to 2018, the trade volume between China and the countries participating in the BRI exceeded US$6 trillion, with more than 244,000 jobs created for the

April 25, 2019: Guests at a themed sub-forum of the second Belt and Road Forum for International Cooperation discuss how to green the Belt and Road and realize the United Nations 2030 Sustainable Development Goals. by Hu Zhoumeng

locals. China's investment in these countries exceeded US$90 billion.

The latest studies by the World Bank and other international institutions show that BRI cooperation will cut the costs of global trade by 1.1 to 2.2 percent and contribute at least 0.1 percent of global growth in 2019.

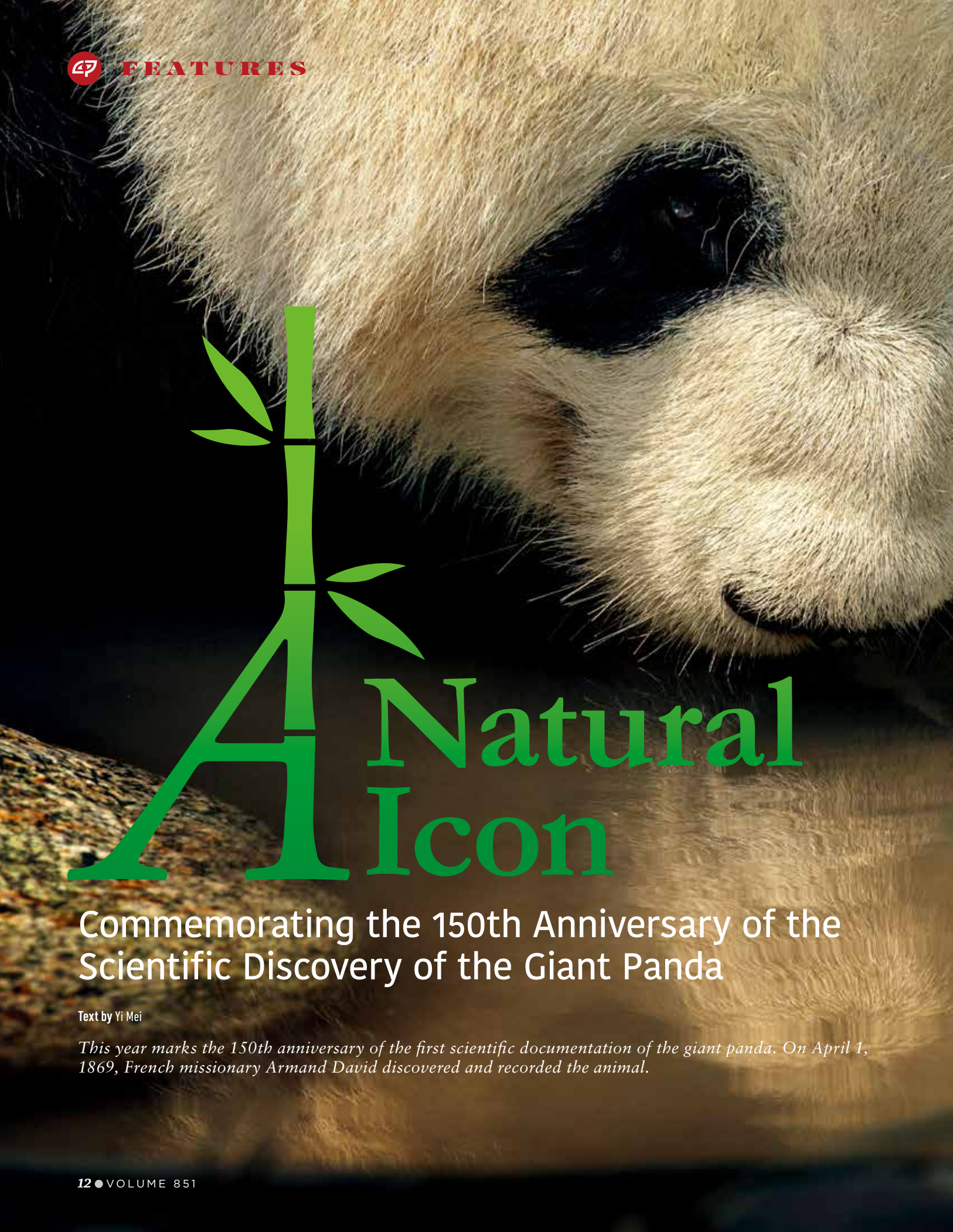
Mirroring the BRI's relevance and significance for the world, its vision has been included in documents of major international institutions and cooperation platforms, including the United Nations, the Group of 20, the Asia-Pacific Economic Cooperation and the Shanghai Cooperation Organization.

The BRI's five pillars—policy coordination, facilities connectivity, unimpeded trade, financial integration, and people-to-people exchanges—serve as "conceptual pillars that can be translated into real-life progress for all people," said UN Secretary-General Antonio Guterres.

Delivering a keynote speech at the forum's opening ceremony, President Xi called for greater connectivity, openness and inclusiveness as well as high-quality development of the BRI. He announced a package of proposals to advance high-quality Belt and Road development, calling on the international community to join hands to work out a "meticulous painting" of the BRI.

The principle of extensive consultation, joint contribution and shared benefits should be upheld, said Xi, stressing open, green and clean approaches, as well as goals of high-standard, livelihood-improving and sustainable development.

Since its birth nearly six years ago, the BRI has become one of the most promising platforms for international cooperation. With consensus built and cooperation plans adopted at the second BRF by all parties concerned, new horizons are now opened for high-quality Belt and Road cooperation.



A Natural Icon

Commemorating the 150th Anniversary of the Scientific Discovery of the Giant Panda

Text by Yi Mei

This year marks the 150th anniversary of the first scientific documentation of the giant panda. On April 1, 1869, French missionary Armand David discovered and recorded the animal.

A panda bends down to drink water. A healthy panda usually spends less than three minutes to drink water before going back into a bamboo forest. by Zhou Mengqi

Twenty-seven-year-old female giant panda Bai Yun and her six-year-old son Xiao Liwu, residents of the San Diego Zoo, left for China at the end of April when a long-term conservation agreement with China ended. American netizens had expressed sadness about the animals' departure. Some called it the end of an era: "The last pandas at the San Diego Zoo are heading back to China."

Discovery of the Giant Panda

Despite now serving as an icon of China, the giant panda was initially "discovered" by a foreigner.

On February 22, 1869, when French missionary Armand David left Chengdu in southwestern China for the Qionglai Mountains, he could have never imagined that he would become the first person to discover a species that continues to enchant the world 150 years later.

> "After millions of years of evolution, the giant panda has survived, but it is not here on this planet to entertain humans at the zoo."

Born into a doctor's family in western France in 1826, David developed a strong interest in nature at a young age. In 1862, he arrived in China as a missionary and also worked as a naturalist, collecting animal and plant samples unique to China for the Paris-based National Museum of Natural History.

On March 11, 1869, on his way back from a field survey, David found a piece of white-and-black fur in a farmer's house. He was surprised. The farmer told him it was from an animal hidden deep in the forest. On April 1, David finally saw a living giant panda with his own eyes. The same evening, he immediately wrote a report on the creature and sent it to Miller Edwards, director of the National Museum of Natural History in Paris. After studying the sample David sent back and his report, Edwards concluded that it was a rare new species. In order to differentiate it from the also bamboo-eating lesser panda discovered in 1821, scientists named the new species the "giant panda." April 1, 1869 has since been considered the formal

A new-born. by Zhou Mengqi

A baby panda. by Chen Jian

day of the scientific discovery of the giant panda.

Ancient Favorite

Scientific studies show that 500 million species have lived successively on Earth, with most going extinct and only 10 million surviving to this day. The giant panda has lived on the planet for eight million years, keeping most of its original appearance but adopting drastically different habits. Thanks to its antediluvian history, the giant panda is considered a living fossil and a "legacy" of primitive life.

Characterized by white-and-black colors, round face and plump body, the ancient animal has become a national treasure of China and a global favorite. Almost no other animal in the world has enjoyed the privileges giant pandas have: private planes, fighter escorts, magnificent pavilions, fresh bamboo flown in from around the world and grand birthday parties.

The Chinese government gave 24 pandas as national gifts to nine countries including the Soviet Union, the Democratic People's Republic of Korea, the United States, Japan, Spain, Britain, France, Mexico and West Germany between 1955 and 1980, making the giant panda a "friendly ambassador." Starting in the 1980s, the population of giant pandas witnessed a sharp decrease due to environmental deterioration of its habitats. In the global context, appeals to protect endangered animals were rising. Responding to the calls, the Chinese government stopped giving giant pandas to other countries in favor of lending or renting giant pandas to foreign zoos to carry out joint research of the species.

Protection and Studies

Even the cutest animals in the world cannot escape threats of human activity and climate change. Over the past century, as their hidden places and food sources have decreased due to disappearing woods and bamboo forests, giant pandas have constantly lost their habitats, with less than a third of their living territory left from their historical range.

In 1963, China set up its first giant panda reserve at Wolong

Kids look at giant panda Huanhuan at ZooParc de Beauval in Saint-Aignan, central France. Huanhuan and another giant panda, Yuanzai, arrived at the zoo on January 15, 2012, under a 10-year agreement on giant panda breeding cooperation between China and France. AFP/Xinhua

Unlike those in captivity, wild giant pandas still keep ferocity and wildness like other bears. by Xiang Dingqian

A mother panda helps her baby learn to climb trees. by Zhou Mengqi

in the southwestern province of Sichuan. Later, a dozen other nature reserves for the giant panda were established in the country. The fourth census of giant pandas showed that by the end of 2013, there were 538 captive giant pandas around the world and 1,864 wild pandas in China, with the latter group growing by 268 compared to the count of the third survey. Given the increasing number of giant pandas and more effective protection measures, the International Union for Conservation of Nature re-classified the species from "endangered" to "vulnerable" in 2016. Still, the giant panda is facing persistent challenges caused by shrinking and fragmented habitats. To ensure better protection, in January 2017, the Chinese government released a plan to build a giant panda national park. And the Sichuan bureau of the national park was formally set up last year.

"After millions of years of evolution, the giant panda has survived," beams Pan Wenshi, former director of the Giant Panda and Wild Animal Protection Center at Peking University. "But it is not here on this planet to entertain humans at the zoo. The protection of the giant panda should not be limited to increasing its population but should extend to protecting the entire ecological system in which it is an iconic species. A healthy environment can provide a safe home for diverse species as well as soil and water resources. The giant panda is a bellwether of the environment. Protecting the giant panda is protecting the future for ourselves."

The Office of Sichuan Province Local Records contributed resources for the completion of this article.

Hu Jinchu
We Are All Giant Pandas

Text by Yin Xing **Photographs courtesy of** Hu Jinchu

When a male panda leaped to within feet of our faces, we locked eyes in a tense stare-down.

Hu Jinchu, born in 1929, is a professor at China West Normal University. He is regarded globally as the pioneer of ecological and biological research of pandas and is hailed as the "godfather" of the field. George Schaller, a renowned German-born American mammalogist, once called him the top panda researcher ever.

Hu started his research of pandas in 1974. He headed the first field study of pandas in Sichuan Province and organized the construction of the world's first observation station for wild pandas. He has cultivated many experts in researching and protecting pandas. Hu has made immense contributions to China's endeavors to protect pandas.

Recently, *China Pictorial* (CP) sat down for an exclusive interview with Hu, who believes that "protecting giant pandas is protecting mankind."

CP: How did you get into doing research on pandas?
Hu Jinchu: After I received a master's degree in biology from Beijing Normal University, I started teaching classes on birds and mammals at Sichuan Normal University. In 1972, then-U.S. President Richard Nixon visited China, and he expressed hope of getting some pandas. On April 26 of that year, pandas Ling Ling and Xing Xing arrived at the National Zoological Park in Washington, D.C., causing a sensation in the United States. Subsequently, countless senior foreign politicians expressed hope to get pandas during their visits to China. Zhou Enlai, then premier of China, realized the significance of "panda diplomacy." But how many pandas could China share? No one knew for sure in those days. In 1973, to determine the population of giant pandas, China's State Council organized a meeting of forestry departments of such provinces as Sichuan, Shaanxi and Gansu to order a precise count of wild pandas.

The forestry department of Sichuan Province invited me to head the research there. In the first half of 1974, we organized a team of about 30 members and began the first national field research of pandas. After four and a half years, we finished a 200,000-word report to make the government aware of the conditions of pandas in Sichuan.

CP: According to the survey conducted back then, you counted about 2,400 wild pandas. Because pandas have sharp sense of smell, it is difficult for humans to get near them. It is more difficult to do the survey because they tend to live alone. How could you be sure of the population?
Hu: Many people assumed that we

The 90-year-old Hu Jinchu remains hale and hearty. He still goes to the office every day. He scans the previously handwritten materials and some photos into an electronic version, in preparation for a new book.

Hu Jinchu has taught graduate students since 1979. Over decades, Hu has trained a large number of giant panda research and protection experts, and they have remained active in this field.

encountered many pandas during the survey. The truth is we hardly saw any. Even when we encountered one, it usually disappeared before we could grab the camera to take a photo.

So I started brainstorming how to gather data about pandas when it is impossible to see them without disturbing them. Their feces turned out to be good sources. Panda droppings differ considerably across age groups. Different ages cause drastically different conditions of the teeth, so they chew bamboo at different lengths and angles. Moreover, because pandas live alone, feces rarely overlap. Comparing just the size of the droppings and the condition of chewed bamboo in the feces gives a rough indication of a panda's age, size and sphere of activity. This is a rather basic way to estimate the number of pandas. Now, we use molecular biology to identify them. This method is more accurate. However, no matter which method is applied, the number counted is a relative number, not an absolute number.

CP: Why is the Wuyipeng observation a symbol in the eyes of panda researchers worldwide?

Hu: After the first field survey, China decided to strengthen ecological research concerning pandas. In 1978, we built an observation station in the Wolong nature reserve which was known as the Wuyipeng—a tent pitched on a hill. It was the world's first observation station for wild pandas. Because the tent of the observation station was 51 steps from the nearest water source, we called it Wuyipeng (literally, "Fifty-one Tent").

I began to take students out for field studies in 1979. My students would have to man the observation station and sleep in the tent. They collected samples in the mountains during the day and attended theory classes in the tent in the evening, recording their findings around

In 1980, China began cooperating with the World Wide Fund for Nature (WWF) to set up the China Conservation and Research Center for the Giant Panda. Hu cooperated with renowned zoologist George Schaller on the research.

May 1992: Hu Jinchu checks a giant panda cub at the Foping National Nature Reserve in Shaanxi Province.

a bonfire. In 1980, China began cooperating with the World Wide Fund for Nature (WWF) to set up the China Conservation and Research Center for the Giant Panda. Renowned zoologist George Schaller and many foreign experts often did research at the Wuyipeng observation station. Observation there enriched our knowledge of the habits and reproduction behaviors of pandas. We published the book *The Giant Pandas of Wolong*, describing the animal from the perspective of ecology, the first such book in China, but of course books on pandas were rare internationally.

CP: How many phases has China's research of pandas passed through? How would you describe those phases?

Hu: From my point of view, China's panda studies have gone through four phases. The first phase lasted from 1974 to 1978, when the major work was conducting surveys of the population and distribution of wild giant pandas. The second phase was from 1978 to 1980, when the Wuyipeng observation station was set up in Wolong and field studies of pandas began in earnest. The third phase was from 1981 to 1985, when international cooperation reached the Wuyipeng observation station, and advanced foreign technology and methods were introduced as quantitative analysis was made. The fourth phase started in 1984 and continues to this day. That year, I organized postgraduate students to build observation stations in different mountain ranges to conduct macro ecological research on pandas in China. Nowadays, researchers have integrated molecular ecology into the studies of pandas.

CP: Can you describe some of your experiences meeting pandas in the wild?

Hu: Once we heard a female panda make the courting call as we were doing a survey in a valley. A male panda on a hill in front of us about 50 meters up heard her. He galloped down quickly along the ridge like a rolling rock. He happened to fall unharmed only a few meters away from us. He stared at us in surprise, and of course we were also startled. We just stared each other down—it was so dramatic.

One winter as we were tracking pandas through the snow, the pawprints we found became strange. Many tracks in the snow overlapped again and again, and there were other weird marks in the snow as well. Ultimately, we realized that the pandas had climbed up the hill and sledded down over and over like children.

George Schaller
Wild About Pandas

Text by Zoe Zhao

"On the panda, China has made great progress since the late 1980s. Captive breeding has been highly successful. Intensive field research has continued, and the results now provide wonderful insights into what the panda does and needs."

At 86, German-born American George Schaller is a man of the world. For the past six decades, he has traveled the world for conservation efforts, studying and helping protect some of the world's most endangered and iconic species ranging from mountain gorillas in the Democratic Republic of the Congo, jaguars in Brazil, tigers in India and lions in Tanzania to, of course, giant pandas in China.

One of the most preeminent field biologists and conservationists in the world, Schaller is no stranger to China. For nearly four decades, he has visited the country for various field research missions almost every year. However, everything started with giant pandas.

In 1979, soon after the implementation of China's historic reform and opening up, the country signed a cooperation agreement on nature conservation with the World Wide Fund

Dr. Schaller (center) and his Chinese coworkers measure giant panda Xue Xue in the Tangjiahe reserve in Qingchuan County, Sichuan Province, 1984. In 1980, invited by WWF, Schaller came to Sichuan Province to study wild giant pandas. courtesy of WWF

Dr. Schaller (right) and Professor Hu Jinchu examine a den in a hollow tree in which a giant panda had given birth. courtesy of WWF

July 7, 2014: Dr. Schaller (right) carries out a field mission to track snow leopards in Yushu Tibetan Autonomous Prefecture, Qinghai Province. by Shen Bohan/Xinhua

for Nature (WWF). In 1980, upon an invitation from WWF, Schaller was thrilled to visit China as the first Western scientist to set foot in Sichuan Province, home of the giant panda, in decades.

Schaller worked with a group of Chinese scientists on field studies of the behaviors and ecology of the giant panda. He stayed at Wuyipeng, the world's first observation station for the cuddly animal established on a small hill in today's Wolong National Nature Reserve shortly before his arrival. As the first Westerner since 1939 to study wild giant pandas in China, Schaller faced extensive problems carrying out field research in the rugged, inaccessible mountain habitat, not to mention cultural and political challenges stemming from engaging in international cooperation in the early days of China's opening to the outside world. Nevertheless, a shared commitment to nature made it possible for him and Chinese researchers to continue their legwork for giant panda conservation.

Working with Professor Hu Jinchu from China West Normal University (then Nanchong Normal University) and Professor Pan Wenshi from Peking University, Schaller conducted in-depth studies of the natural history of wild giant pandas, using radio tracking to obtain first-hand information about movement, food, courtship and fertility, among many other behaviors and habits. These efforts laid the foundation for the assessment of the overall giant panda situation and their habitats in Sichuan, paving the way for solid conservation and management plans.

"I believe each side has learned much from the other all to the panda's benefit," he stated years later. Alongside his Chinese colleagues, Schaller sought to refute the notion that the giant panda population was declining due to natural bamboo die-offs. He also found evidence that pandas were originally carnivores, but underwent an evolutionary change to accommodate a diet of bamboo, which is so difficult to digest that there is hardly competition with other animals for the food.

In 1985 after five years of hard work, Schaller and Professor Hu Jinchu published the world's first book fully documenting habitats and habits of giant pandas, *The Giant Pandas of Wolong*, in both Chinese and English. Schaller was satisfied with his work in Sichuan and used the momentum from the panda program to carry out research in China's remote Qiangtang region on the Qinghai-Tibet Plateau to study the Tibetan antelope. He has continued returning to the country ever since.

Today, more than 30 years after his panda project started in China, how does Schaller evaluate the country's efforts in giant panda protection? How does he see the animal's future? *China Pictorial* (CP) talked with George Schaller about China's national treasure.

CP: In your 1993 book *The Last Panda*, you described many problems plaguing China's giant panda conservation efforts in the 1980s. Now, do you still worry about the future of the species?

Schaller: I had the honor to partner with a Chinese team during my panda research in the early 1980s. I met several excellent colleagues in the field such as Hu Jinchu and Pan Wenshi. The key problem was that some local

leaders were careless and uninterested at that time, as I described in my book *The Last Panda*. But when higher-up leaders in Sichuan and Beijing became aware of the problems in Wolong, things started improving drastically.

I have continued collaborating with China because of the good cooperation and steady progress in conservation. China's leadership is aware that they need to protect the environment not only for the wildlife but to ensure the people enjoy a healthy future. Destroy nature and you destroy yourself. I have been greatly impressed with all the protected areas China has established in recent years and all the positive steps taken to protect the panda.

CP: What's your most memorable experience in the wild with giant pandas?

Schaller: I shared my various memorable experiences with pandas in the book *The Last Panda*. But my mind always come back to the female panda Zhen Zhen who became familiar with our Wuyipeng camp set up within her home range. One day when Kay (editor's note: Schaller's wife) and I returned to our tent, cold and wet from tracking a panda through a dense and snowy bamboo forest, Zhen Zhen was there looking out at us through the window. While we were gone, Zhen Zhen entered the tent and took a nap on our bed. As a reward for offering her such a comfortable rest site, she left several of her droppings on our blanket.

Dr. George Schaller. by He Bing/WWF China

CP: With so many cutting-edge technological instruments now at hand to help research and observation, what changes have taken place in field studies related to wild panda conservation?

Schaller: Yes, radio-collars, camera-traps and related technology have helped capture data on individual pandas. But these can never take the place of a researcher being in the field and actually observing what is happening to the animals and their habitats. As the wonderful research in the Qinling Mountains has shown, pandas readily become used to an observer and you can obtain detailed observations directly from them. You can learn what the panda needs to survive just by being there: a supply of bamboo to eat, a hollow tree as a den in which to give birth, a peaceful forest and protection. Newborn pandas are tiny and fragile and grow slowly, and a female produces so few in her lifetime that the loss of any panda in a population is of grave concern. Given the large and increasing human population in China, those issues need constant attention.

CP: Compared to other threatened or endangered species, what unique challenges and difficulties face wild giant panda conservation?

Schaller: On the panda, China has made great progress since the late 1980s. Captive breeding has been highly successful. Intensive field research has continued, and the results now provide wonderful insights into what the panda does and needs. Many nature reserves have been set up and the forest protected. But realizing that very small populations of a species are unlikely to survive because of inbreeding, China is now connecting these reserves by creating forest corridors and building the Giant Panda National Park. Censuses have shown that there may be up to 2,000 giant pandas in the wild, which is still a very low number. However, the population of pandas will surely increase if their forests and the pandas themselves are protected. Even a hundred years ago, pandas were distributed more widely throughout China.

CP: In recent years, China has been gradually releasing captive giant pandas into the wild. What do you think of this effort?

Schaller: There are now several hundred pandas in captivity. China has a good program of renting these to zoos in other countries and using the funds for panda conservation. Reintroducing captives into the wild in areas where pandas used to live and are now gone is an excellent idea. But it's never an easy task because released pandas have to learn to adapt to the wild and humans have to learn how best to reintroduce them. As with any reintroduction program, you must be prepared to lose a few animals from various causes such as predators, accidents and wandering too far away.

Wei Fuwen
Learn from the Panda

Text by Hu Zhoumeng **Photographs courtesy of** Wei Fuwen unless otherwise credited

Academician Wei Fuwen has spent most of his life seeking answers to the mysteries of the giant panda. He believes that the panda is a species with a bright future.

Across more than eight million years of evolution, how did the seemingly clumsy giant panda survive the jaws of extinction while other powerful animals of the period, such as the saber-toothed tiger and the mammoth, died out? From *Ailurarctos lufengensis* to *Ailuropoda microta*, then to *Ailuropoda melanoleuca baconi* and finally to the modern giant panda, its evolution process has drawn great interest from countless biologists. Wei Fuwen, an academician at the Institute of Zoology of the Chinese Academy of Sciences (CAS), is one of them.

Over the past three decades, Wei trekked dense forests and steep mountains in the habitats of giant pandas to research their habits and traits. Using advanced research methods and theories such as population genomics and metagenomics, he gradually solved mysteries about the animal's evolution. In his eyes, the panda is clumsy but adorable, and has many things worth learning for humans.

"We humans should constantly change like giant pandas have done to adapt to the changing natural environment and society and survive."

Wei Fuwen during a field survey of the southern slope of the Qinling Mountains in Foping County, Shaanxi Province. His research showed that the giant panda subpopulation in the Qinling Mountains is different from those in Sichuan Province.

Foundational Work

Since French missionary Armand David first discovered the giant panda in China's Sichuan Province in 1869, the cuddly animal has won adoration and curiosity from people around the world. At first, biologists studied the giant panda from the perspectives of morphology and morphological anatomy, and gained knowledge about its physical structure as well as the functions and structures of its organs and tissues. However, debates on the speciation of the giant panda persisted for more than 100 years.

Wu Fuwen at the Wuyipeng observation station in the Wolong National Nature Reserve in the winter of 1989. In the decade after 1984, he worked at many observation stations throughout Sichuan Province.

"Not until the mid-1980s did scientists confirm that the giant panda belongs to the Ursidae family and has a close connection to the Andean bear of South America," Wei said.

Wei himself joined research of giant pandas in the mid-1980s. In 1984 before he graduated from the Department of Biology of Nanchong Normal University (today's China West Normal University), Wei became one of the first master's degree students of Professor Hu Jinchu, who is considered the "first Chinese person to study the giant panda."

Over the following decade as he worked on his master's degree and then stayed at the university as a researcher, Wei trekked almost every mountain in Sichuan to research giant pandas. He worked at numerous observation stations including those at Wuyipeng and Baixiongping. In 1994, Wei was admitted to the doctoral program at the CAS Institute of Zoology. He gradually dove deeper into research of the giant panda.

"In the past, we had already found some important hints about the panda's adaptive evolution, but hadn't tried to explain them systematically," Wei recalled. How did the giant panda evolve from a carnivorous or omnivorous animal to a vegetarian feeding exclusively on bamboo? Given that the giant panda doesn't produce digestive enzymes for cellulose, how does it digest bamboo fiber? Why did the giant panda develop a pseudothumb? Such questions inspired Wei to find answers through innovative research.

In recent years, Wei led a team to determine the basal metabolic rate of the giant panda with the doubly labeled water method. They found that the panda's basal metabolic rate is only 37.7 percent of that of other mammals with the same weight. "Its basal metabolic rate is even lower than that of the koala and close to that of the sloth," said Wei. According to him, the giant panda's low basal metabolic rate can be attributed to its relatively shrunken organs, less activity and low thyroid hormone level. "Its DUOX2 gene, which is crucial for thyroid hormone synthesis, mutated. This is probably why the giant panda maintains a relatively low thyroid hormone level." Moreover, the giant panda's thick fur keeps the animal dry and warm, cutting energy loss.

In the future, Wei and his team will determine the reason behind the embryonic diapause of the giant panda. Wild pandas mate in spring, but instead of immediately implanting in the uterus, the embryonic blastocyst remains suspended until June or July. So far, the cause of the phenomenon remains unknown. "Only challenging problems inspire my passion and interest," Wei said.

"Some research projects are difficult and produce few results even after years of effort. Nevertheless, they are still worth doing."

No Dead Ends

Many were once pessimistic about the future of the giant panda. News reports such as "Parasitic worm presents panda threat" and "Blossoming bamboo results in starvation of giant pandas" often appeared in headlines. In Wei's opinion, however, such worries were unfounded.

"By studying the excrement of wild giant pandas, we found that up to 70 percent of them were infected by ascariasis, but the disease's fatality rate wasn't as high as we thought," Wei explained. "Some believe that pandas will starve to death when bamboo blooms into flowers. In fact, bamboo blossoms once every 30 to 80 years. Bamboo has blossomed many times throughout history, but the giant panda hasn't gone extinct yet."

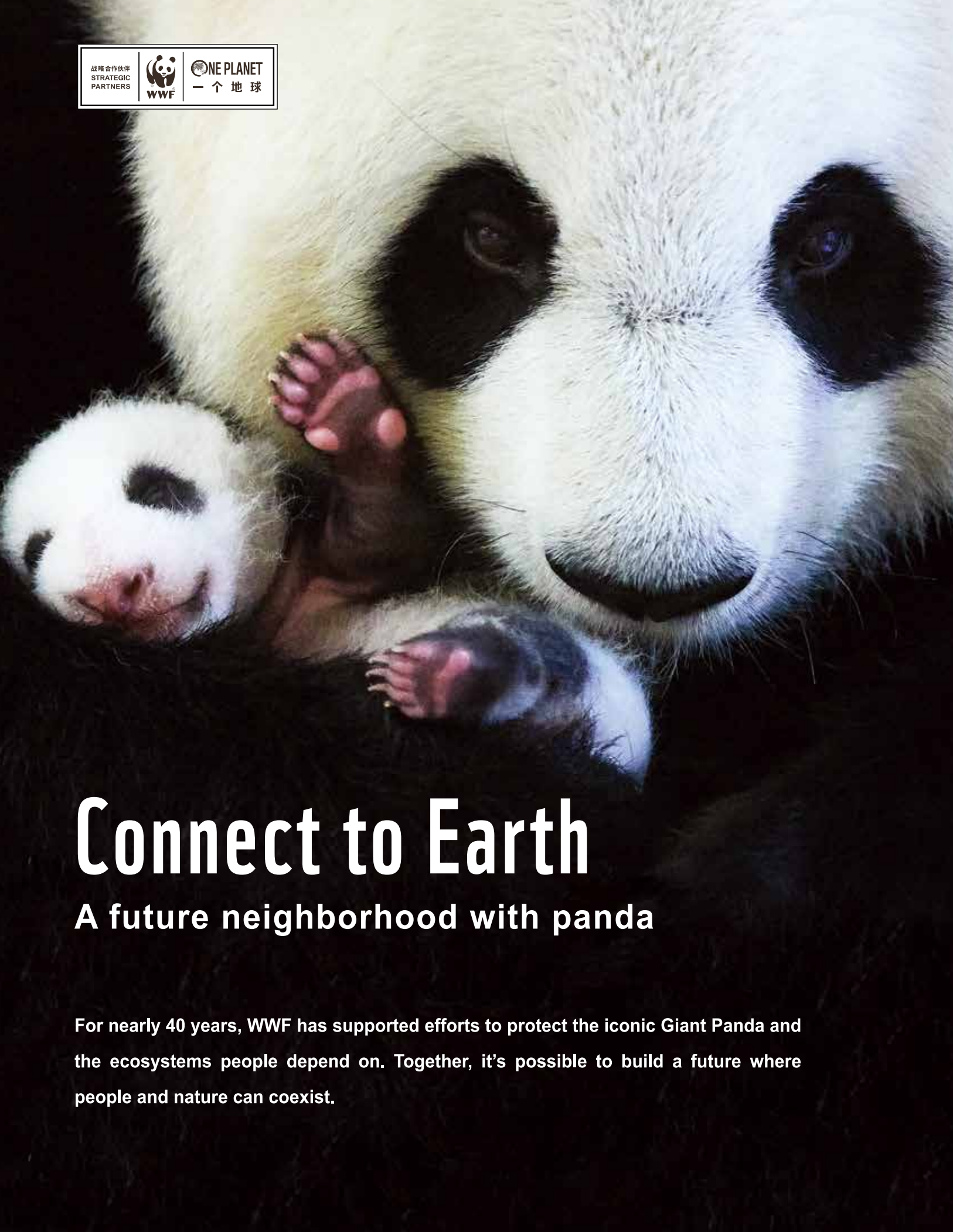
Wei believes that the giant panda has a bright future ahead. His research proves that evolution of the animal has never actually ceased. Through using molecular scatological and genomic research methods to analyze wild pandas' droppings, hair, tissue, blood and fur discovered in six mountain ranges, his team found that the gene heterozygosity of the giant panda is 10 times that of the snub-nosed monkey. Compared to other bears, the giant panda has relatively high genetic diversity and a greater potential for sustainable evolution. Even giant pandas in captivity have similar genetic diversity to those living in the wild.

Today, China has established 67 giant panda nature reserves, covering 55 percent of panda habitats and more than 65 percent of the wild panda population. The country is planning to set up a giant panda national park to expand the conservation scope for wild pandas. The Fourth National Giant Panda Survey in 2014 showed that China had 1,864 wild pandas, a sharp increase from the figure of the third survey conducted 10 years earlier. In September 2016, the International Union for Conservation of Nature announced that the giant panda's status had been downgraded from "endangered" to "vulnerable." According to Wei, this marked the international community recognizing the Chinese government's effort to protect the species.

"The giant panda's population and habitat area are both increasing, and China has raised a banner for international efforts in biodiversity protection," remarked Wei. "However, that doesn't mean we can ease up on our conservation efforts for the animal." Based on his genomic analysis of the giant panda, Wei concluded that the fragmentation of their habitats has impeded migration of wild pandas and gene flow between different panda communities, resulting in genetic divergence. Some small subpopulations are even on the verge of extinction. In this context, he actively calls for building ecological corridors and freeing captive pandas into the wild. Currently, several ecological corridors are in planning or under construction in giant panda habitats in the Daxiangling and Minshan mountain ranges. A giant panda named Luxin successfully gave birth to a cub after returning to the wild, leaving researchers with great hope.

"Research and conservation are not independent—they work hand in hand," declared Wei. "The giant panda species has a bright future, and through careful protection by mankind, the animal will definitely coexist in harmony with us for a long time."

Wei Fuwen, an academician with the Chinese Academy of Sciences, has spent most of his life on biological research of endangered animals such as the giant panda and the red panda. He was the first to introduce advanced research methods and theories such as population genomics and metagenomics into the research of the giant panda, which pinpointed many answers for persisting mysteries about the species. by Xu Xun



Connect to Earth

A future neighborhood with panda

For nearly 40 years, WWF has supported efforts to protect the iconic Giant Panda and the ecosystems people depend on. Together, it's possible to build a future where people and nature can coexist.

Giant Pandas by the Numbers

Edited by Zhao Yue

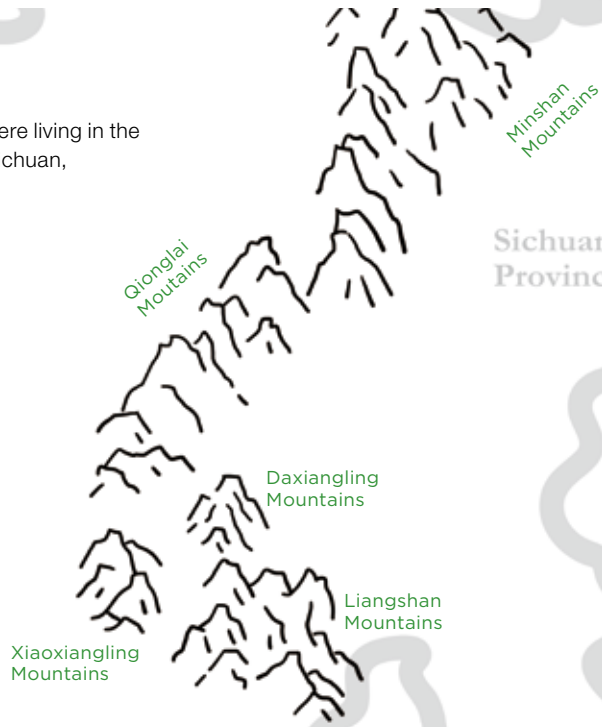
Overview of Giant Pandas

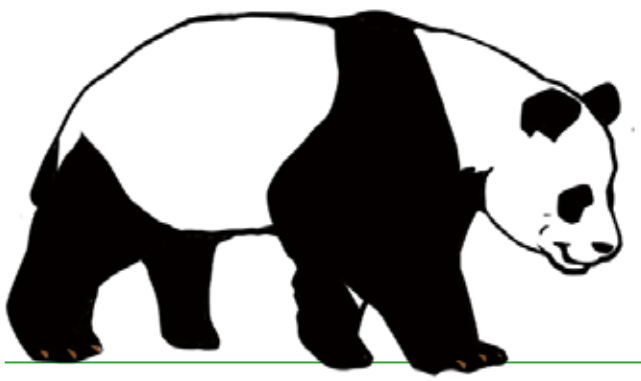
As of the end of 2013, **1,864 giant pandas** were living in the wild in China. The southwestern province of Sichuan, home to most of the country's wild pandas, counted a total of **1,387**, **74.4 percent** of the total in China. Neighboring Shaanxi and Gansu provinces tallied **345** and **132**, respectively.

As of November 2018, the count of captive pandas had reached **548** worldwide, of which 482 were in Sichuan Province.

Giant pandas live in a few mountain ranges including the Qinling, Minshan, Qionglai, Daxiangling, Xiaoxiangling, Daliang and Xiaoliang mountains, covering **17 cities** (prefectures), **49 counties** (county-level cities and districts) and **196 townships** in Sichuan, Shaanxi and Gansu provinces.

By the end of 2013, the total area of wild giant panda habitats had reached 2.58 million hectares, with potential habitats totaling 910,000 hectares.





Nationwide Giant Panda Census

To ensure accurate data on wild giant pandas, the Chinese government carried out national surveys from 1974 to 1977, 1985 to 1988, 2000 to 2004 and 2011 to 2014. The surveys indicated a panda population of **2,459**, **1,114**, **1,596** and **1,864**, respectively, showing the number of wild giant pandas in China declining first and then increasing slowly. In the fourth survey, DNA analysis was first utilized to identify the gender of pandas and evaluate the genetic diversity of wild pandas.

Living Habits

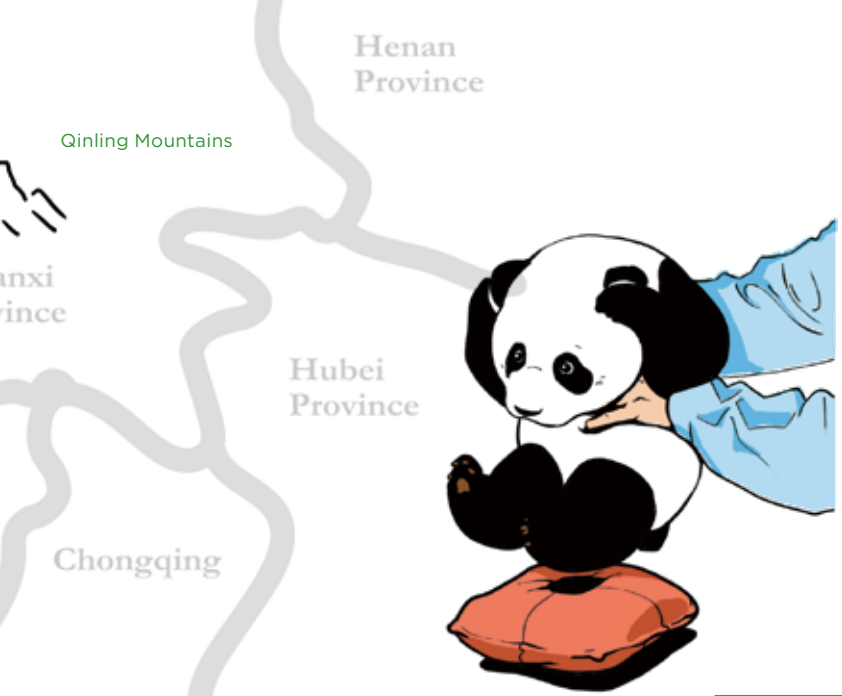
The primary daily activities of a wild giant panda are eating and resting. The animal spends almost half of the day resting, with a single rest of about two to three hours.

Giant pandas are known to eat more than **50 kinds** of bamboo, of which around 20 kinds are preferred. A panda needs to eat **10 to 20 kilograms** of bamboo per day.

Wild female giant pandas normally have a cub once every two years and ovulation lasts from several days to more than 10 days. When a female is in heat, at least two to three males, sometimes up to six or seven, fight fiercely for mating rights.

Panda cubs usually live with their mothers until they are **one and a half years old** (some up to two and a half years old) and then start living alone.

Scan to watch the cuddly animal!



Panda Conservation in China

By the end of 2013, China had established **67 nature reserves** with giant panda habitats and potential habitats, **58 of which had detected giant pandas**.

A total of **1,246 wild giant pandas** live in these nature reserves, accounting for 66.8 percent of the total population in China. The habitat area of giant pandas in nature reserves is about **1.39 million hectares**, accounting for **53.8 percent** of the total area in China.

National nature reserves of China play a key role in panda conservation by maintaining relatively high population and density compared to other areas.

Into the Wild

On August 8, 2005, a wild giant panda named Shenglin I was freed into the Longxi-Hongkou National Nature Reserve in Sichuan Province, a habitat for wild pandas, and researchers began to track and monitor her activity in the wild.

On April 28, 2006, a giant panda named Xiangxiang was released into the wild in the Wolong National Nature Reserve in Sichuan Province, the first captive-born giant panda to be released in China.

From 2009 to 2013, a wild giant panda named Luxin and three captive giant pandas—Tao Tao, Zhang Xiang and Xue Xue—were released one by one in the Liziping National Nature Reserve of Sichuan Province.

On October 21, 2016, two captive giant pandas, Hua Yan and Zhang Meng, were released into the wild, the first time a pair of pandas were sent into the wild together.

On November 23, 2017, two captive giant pandas, Baxi and Yingxue, were released into the Liziping National Nature Reserve, the first time two pandas of different genders were sent into the wild together.

On December 27, 2018, two captive giant pandas, Qinxin and Xiaohetao, were released into the Longxi-Hongkou National Nature Reserve in Sichuan Province.

Challenges in Protection

Wild giant pandas in some regions still face substantial risk. According to the results of the fourth national giant panda survey, the wild giant panda population is divided into 33 subpopulations, some of which number fewer than 30.

Among them, 24 subpopulations faced "high risk of collapse," affecting **223 giant pandas**, **12 percent** of the total population in the wild, especially the 18 subpopulations with fewer than 10 pandas each.

Severely fragmented natural habitats also threaten giant pandas. By the end of 2013, **319 hydroelectric dams**, **1,339 kilometers of roads** and **268.7 kilometers of high-voltage transmission lines** had been built in giant panda habitats around China. Human activities have further aggravated habitat fragmentation.

International Cooperation

As of November 2018, China had carried out panda conservation and research cooperation projects with **22 zoos** in **17 countries**, involving a total of **58 giant pandas**.

Sources: Results of China's Fourth National Giant Panda Survey, reports of the International Conference for the Giant Panda Conservation and Breeding, and the book Panda *by Wei Fuwen*

Giant Panda

FAQ

Edited by Zhao Yue

The giant panda, one of the most adorable creatures in nature, is loved by people around the world. However, as a "living fossil" with an evolutionary history of eight million years, the biological characteristics of giant pandas are even more fascinating. China Pictorial *has compiled a few facts to sketch a clearer picture of the animal.*

1 Do pandas only live in China?

Evidence of prehistoric giant pandas has also been found in other countries. Fossil evidence shows that they once lived throughout Southeast Asia. It would be more accurate to say that the surviving giant pandas only live in China. This is a result of the animal's living habits and the changes of the ecological environment.

2 How is the age of a giant panda determined?

By observing a giant panda's tooth enamel, scientists can see growth lines like those in a tree trunk, which can be used to determine the age of a panda. However, this method can only be used for giant pandas that are dead, captured or rescued—not for those living in the wild. How to determine the age of wild giant pandas will be a focus of future research.

3 How do giant pandas get so fat although they only eat bamboo?

Giant pandas look big and round, but they are not actually very fat. Actually, a giant panda's body has very limited fat, accounting for only seven to eight percent of its weight. Its big size is mainly because of the large skeleton and strong muscles.

A panda mom and her baby enjoy time together. Scientists have found that wild giant pandas mostly give birth in middle and late August. by Chen Jian

4 Why don't giant pandas hibernate like other bears?

Giant pandas don't get enough calories from bamboo to survive through hibernation. Moreover, their food sources are quite abundant throughout the year, so they don't need to hibernate.

A brown panda spotted in the Qinling Mountains. by Wang Fang

5 Is the reproductive rate of wild giant pandas extremely low?

No. Theoretically, a female wild giant panda can give birth to seven cubs in her lifetime, with an annual reproductive rate of 62.5 percent.

6 Are giant pandas all black and white?

There is an incredibly rare subspecies, known as the brown giant panda, which looks quite different from the iconic black and white variety. This rare subspecies has been spotted only in the Qinling Mountains in northwestern China's Shaanxi Province. But the reasons behind the changes in fur color require further research.

The habitat of giant pandas in the Qinling Mountains, where the pandas live at the highest latitude with the highest population density. by Wang Fang

Scientists found panda traces during a field monitoring at the Wanglang National Nature Reserve in Sichuan Province. by Wang Fang

7 How can scientists distinguish two giant pandas that look identical?

Many people think giant pandas all look the same, but that's because they don't know much about them. Like humans, each giant panda has unique characteristics that distinguish it from others.

8 Considering cloning technology, do we have to worry about the extinction of giant pandas?

At present, we don't need to worry about the question. Because the population of giant pandas is developing well in general, they won't need many special technologies to prevent extinction.

Longxi-Hongkou National Nature Reserve
Protecting a Perfect Species

Text by Zhao Yue **Photographs courtesy of** Longxi-Hongkou National Nature Reserve Administration unless otherwise credited

Some have called the giant panda a perfect species. It can attract public attention to the protected area as a flagship species and thus protect the many other species that make up the ecological community of its habitat as an umbrella species, driving maintenance of the integrity of the entire regional ecosystem.

The three-day 2019 New Year holiday differed considerably from previous years for monitoring personnel at the Longxi-Hongkou National Nature Reserve in Dujiangyan City, Sichuan Province. Unlike most Chinese who celebrated the holiday with their families and friends, monitoring personnel stationed there spent the holiday in the wild in heavy snow. They were tracking and monitoring Qinxin and Xiaohetao (Little Walnut), two giant pandas they recently released into the reserve.

Qinxin and Xiaohetao

Qinxin and Xiaohetao are two female giant pandas born in 2016. Having been prepared for release since their birth, the captive-born pair received two years of systematic wilderness training at the Sichuan-based Wolong National Nature Reserve. On December 27, 2018, the two mammals were released into the Longxi-Hongkou reserve. Before their release, the two giant pandas received careful physical examinations, which showed that their growth and various physical indicators were healthy. Qinxin weighed 64 kilograms and measured 117 centimeters. Xiaohetao weighed 62 kilograms, with a length of 99

Located in Dujiangyan, the Longxi-Hongkou reserve boasts a total area of 310 square kilometers with a rich biodiversity.

centimeters.

After the pair were released, a monitoring team composed of researchers from the China Conservation and Research Center for the Giant Panda and the Longxi-Hongkou reserve immediately began tracking and monitoring them. The monitoring team is big, consisting of four experts from the conservation and research center, eight full-time monitoring personnel from

Qinxin in her wilderness training.

Xiaohetao in her wilderness training.

December 27, 2018: Qinxin is released into the Longxi-Hongkou reserve. Studies show that female giant pandas need to be released into the reserve to preserve regional genetic diversity. IC

The research team responsible for tracking and monitoring Qinxin and Xiaohetao works in heavy snow.

the reserve, and six mobile field investigators.

The application of multiple devices and methods, including radio monitoring, GPS collar data download and analysis, feces sample collection, surveys of living and food-collecting environment, and infrared camera monitoring, enables researchers to track the movement of the two pandas at any time. By collecting data and conducting field research, the monitoring team hopes to determine whether Qinxin and Xiaohetao can gradually adapt to the wild and integrate into the wild giant panda population and more importantly why or why not.

Qinxin and Xiaohetao are not the first giant pandas to be released into the Longxi-Hongkou reserve. On July 16, 2005, a wild giant panda managed to wander into the downtown area of Dujiangyan City. After receiving medical treatment, the panda, which was named "Shenglin (Forestry Prosperity) No. 1," was released into the reserve on August 8, 2005.

"Our reserve is located in the middle of a narrow curved belt of the modern natural distribution area for giant pandas," notes Jiang Lili, vice head of Longxi-Hongkou National Nature Reserve Administration. "It connects the two largest wild panda habitats in the Minshan and Qionglai mountain systems, so it serves as a natural corridor for living and reproduction of wild pandas, making it ideal for reintroducing captive-bred giant pandas to the wild."

Maintaining Genetic Diversity

Located in Dujiangyan City, the Longxi-Hongkou reserve boasts a total area of 310 square kilometers, with a core area of 203 square kilometers, a buffer area of 37 square kilometers, and an experimental area of 70 square kilometers. It was established in 1997 with the approval of China's State Council. Alongside giant pandas, protecting other endangered and threatened wildlife in the area such as snub-nosed monkeys and takins, as well as the reserve's forest ecosystem, is the primary goal. With complex natural conditions, a unique climate, and an elevation spanning from 1,200 to more than 4,500 meters, the nature reserve preserves a primitive alpine valley natural ecosystem and a complete vegetation vertical spectrum boasting rich biodiversity.

Such abundant animal and plant resources call upon the giant panda to fully play the role of umbrella species. However, according to the results of China's Fourth National Giant Panda Survey released in early 2015, only nine giant pandas were living in the reserve, which means if the population does not expand, the species in the reserve will face the risk of inbreeding.

For this reason, the Longxi-Hongkou reserve enthusiastically welcomes the release of captive giant pandas into the wild. Studies show that over the next 40 years, if a female giant panda can be released into the wild every year, the regional genetic diversity for giant pandas in the Longxi-Hongkou reserve can be maintained at 90 percent, and the extinction probability will drop to less than two percent. If two giant pandas are released into the wild every year, the same standard can be reached in less than 20 years.

Xiaohetao is spotted by monitoring personnel in the wild after release.

"Releasing Qinxin and Xiaohetao was a decision carefully made by our reserve and experts," says Jiang. Like other animals, wars for mating rights exist among wild giant panda populations. According to the China Conservation and Research Center for the Giant Panda, adult male giant pandas often fight for territories and spouses. Thus, wild giant pandas overwhelmingly welcome new females more readily than males. The release of female giant pandas Qinxin and Xiaohetao was conducive to their healthier and quicker integration into the wild population.

"Visible" and "Invisible" Protection

To better protect the habitat of giant pandas and conduct scientific research and monitoring, the reserve carries out both regular patrols and specific monitoring programs. Each year, specific protection campaigns featuring armed patrols are launched in key areas and during important time ranges, targeting activities such as poaching, illegal logging, illegal herb collection and unlicensed fires, all of which harm forest resources. Staffers regularly check to see if any facilities or equipment are threatening wildlife and remove them if needed.

Protection of the giant panda is, of course, beneficial not only to the species itself, but also to other animals and plants in the reserve. A recent example was the discovery of *Magnolia dawsoniana Rehd. et Wils*, a magnolia species with an extremely small population, in the Longxi-Hongkou reserve. Neighbors such as these make the giant panda seem like a perfect species. It can attract public attention to the protected area as a flagship species and thus protect the many other species that make up the ecological community of its habitat as an umbrella species, driving maintenance of the integrity of the entire regional ecosystem.

During each patrol, field personnel perform an additional task: They check infrared cameras installed in the protected area. Every one to two months, they collect data and maintain the cameras. With the help of the equipment, researchers can better interpret the activity patterns of giant pandas and many other rare species in the reserve.

In addition to "visible" protective action, the Longxi-Hongkou reserve also attaches great importance to "invisible" protective measures such as various green development campaigns and publicity activities with giant panda protection at the core. Alongside activities directly related to giant pandas, campaigns also cover forest fire prevention, bird protection and forest waste cleaning. Furthermore, the reserve created a science popularization brand "Giant Panda Class" featuring two teams of lecturers and volunteers totaling 219 people. A total of 12 volunteer service bases were set up to publicize knowledge on giant pandas and enhance public awareness on environmental protection.

Jiang Lili hopes that the Longxi-Hongkou reserve will continue its lead role in this regard. "In the long run, only public environmental protection awareness can provide lasting momentum for giant panda protection," stresses Jiang.

Low-hanging Fruit

Text by Hu Zhoumeng

Photographs courtesy of WWF unless otherwise credited

WWF hopes to help residents gain economic benefits while protecting the local ecological environment by changing practices related to collecting wild medicinal herbs in areas around giant panda habitats. Such a campaign in Pingwu County, Sichuan Province proved a resounding success.

Located in northwestern Sichuan Basin, Pingwu County is home to the Wanglang National Nature Reserve, one of the earliest protected areas for wild giant pandas in China. Statistics show that of the nearly 6,000 square kilometers of land in Pingwu, about half serves as the habitat for giant pandas. A total of 335 wild giant pandas live there, accounting for 18 percent of the total number in China.

Previous Worries for Panda County

Known as the "No.1 county for giant pandas under heaven," Pingwu, with a population of 186,000, was once a national poverty-stricken county. For many rural residents of Pingwu, collecting wild Chinese medicinal herbs was an important source of income.

Xu Qiang, giant panda project director of the World Wide Fund for Nature (WWF), recounted that

Two panda cubs, two to three months in age, in the Wanglang National Nature Reserve, Pingwu County, Sichuan Province. It is one of the first nature reserves that feature habitat protection for pandas. Xinhua

a decade ago, local villagers would trek deep into protected areas for giant pandas to collect medicinal herbs, cut down trees, pitch tents, make fires and sometimes even hunt. These activities were damaging the panda habitat and creating headaches for local forestry workers.

Xu joined WWF in 2008 and soon began participating in protecting giant panda habitats in the upper reaches of the Yangtze River. Xu and his colleagues aimed to help residents of Pingwu gain economic benefits while protecting the local ecological environment by changing the practice of collecting wild medicinal herbs in the giant panda habitat. A plant called Scarlet Kadsura caught their attention.

Luo Peng (second right), a research fellow andethnobotanist from Chengdu Institute of Biology under the Chinese Academy of Sciences, trains representatives from the local forestry department, nature reserves and communities on survey of plants that can be used as medicine.

Scarlet Kadsura is a common medicinal herb in China. It is widely distributed in marginal areas close to giant panda habitats. The plant is believed to effectively treat diarrhea, asthma, night sweats and coughing.

Xu determined that collecting wild Scarlet Kadsura presented low risk and benefited a wide range of people. "The effective constituent of the plant is in its fruit," Xu notes. "Picking it doesn't necessarily destroy rhizomes and in a way, it is sustainable. The villagers don't need to enter the protected areas for giant pandas to collect the herb. And collecting it doesn't require much physical strength, which means the elderly, women and even students on vacation can participate."

September 2010: Facilitated by WWF, representatives from American companies and Shuijing Chinese Herbal Medicine Planting Cooperative strike a deal for 10 tons of Scarlet Kadsura.

Harmonious Coexistence of Humans and Pandas

After communicating with the local government of Pingwu County, Xu Qiang received positive feedback and support. In 2009, a sustainable project promoting picking Scarlet Kadsura was first launched in Shuijing Town. Xu chose Daping Village as the first stop. WWF invited teachers from Chengdu University of Traditional Chinese Medicine and U.S. companies to train villagers with professional skills and teach the standardized picking process.

"We trained villagers either in the field or in a large yard in the village or sometimes just took a few steps into the forest to demonstrate how to pick," Xu illustrates. "We made small brochures the size of a lighter so villagers could easily carry one with them."

"In the past, the villagers began to collect Scarlet Kadsura as early as late July, and underripe fruit

Villagers at Shuijing Town of Pingwu County elect leadership of Shuijing Chinese Herbal Medicine Planting Cooperative at a meeting in late 2009.

was also collected due to vicious competition," says Xu. "In fact, the effective ingredient in Scarlet Kadsura doesn't maximize until September. Furthermore, in order to work faster, villagers sometimes cut the entire branch off or even fell the whole tree, which hurt the forest severely. Our training stresses to pick only the fruit and not to hurt the rhizome and branches that it depends on to grow. And fruits on a single tree cannot be fully harvested all at once—20 percent should be left both for the plant's own renewal and for other animals in the forest to eat."

After training, once simple and rough processing of Scarlet Kadsura has improved. When drying out Scarlet Kadsura, villagers no longer use the boiling method for speed, which would cause a loss in effective ingredients. And for villagers who dried Scarlet Kadsura on their own floors, they supplied clean rolled mats to reduce accumulation of sand and other debris.

In Xu's view, it is important to encourage villagers' autonomy. Xu and his colleagues helped each village participating in the project establish a "sustainable management team on medicinal plants" usually composed of three villagers. All Scarlet Kadsura pickers started registering with them, and a trace card system was established to record information about pickers, picking times and areas.

How to ensure the sale of high-quality Scarlet Kadsura? The Shuijing Herbal Medicine Planting Cooperative, responsible for acquiring Scarlet Kadsura, was set up in October 2008. The cooperative only purchases Scarlet Kadsura that has been approved by the management teams of local villages to ensure it meets international standards for sustainable collection

Scarlet Kadsura is a common medicinal plant in China. It is widely distributed in marginal areas close to giant panda habitats. The plant is believed to effectively treat diarrhea, asthma, night sweats and coughing.

A villager cleans dried Scarlet Kadsura. After training, villagers use clean rolled mats to reduce accumulation of sand and other debris.

of medicinal plants, and then it sells the product to WWF's two U.S. partners—Draco Natural Products and Traditional Medicinals. Scarlet Kadsura fruits are processed and purified before being made into natural products such as herbal tea and sold to consumers in North America.

When the project first started, Xu was puzzled to hear that American manufacturers were finding pesticide residue exceeding standards in testing. "How could Scarlet Kadsura grown in the wild exceed the standards?" He then visited the source village and discovered that the problem was "packaging": Villagers were using old pesticide bags to package Scarlet Kadsura. Then, the villagers were provided with recyclable woven bags customized by the cooperative, which solved the problem completely.

The project ended in 2012. By then, 10 villages in Shuijing Town had participated. Over the past few years, the sustainable harvesting of Scarlet Kadsura has continued to become more industrialized by locals. Now, more than 20 villages in Shuijing Town and surrounding areas are involved. The annual output of Scarlet Kadsura has reached 26 tons.

"Although the project is over, we are still checking on their progress," grins Xu. "The project has been very successful. Now every picker can earn about 2,000 to 5,000 yuan (around US$298 to 742) per year." In October 2018, Scarlet Kadsura produced in Shuijing Town of Pingwu County became the first product to receive "Panda Friendly Certification" from WWF. Xu hopes that the certification will inspire more sustainable ecological products to help facilitate harmonious coexistence of humans and pandas.

Getting to the Bottom of Global Panda Fever

Text by Wang Fang

A mammal native to southwestern China, the giant panda is an important icon for the country's effort to protect nature. For this reason, it has been dubbed an "umbrella species."

Two male giant pandas fight for mating rights. by Zhou Mengqi

Lonely Panda

Unlike cute and cuddly giant pandas in zoos, those living in the wild are more accustomed to solitude. For most of their lives, wild giant pandas live alone in boundless forests, except for when males and females come together in breeding season.

Compared to those in captivity, wild giant pandas seem like a different species and possess the ferocious and opportunistic nature and great strength of animals in the Ursidae family.

Adult pandas in the wild gather once a year in March and April during which time males fight for mating rights. A female climbs a tall fir to send mating signals, which can attract male pandas from several kilometers away.

As they gather beneath the tree, males yowl at each other like barking dogs, then chase and fight each other until all of them are bleeding. At that moment, pandas seem as ferocious as any bears on the planet, and their roars resound through the valley. Even with scientific researchers watching aside, the fights remain spirited as if no humans were around.

Except for mating periods, wild pandas usually live alone in their respective domains. Mother pandas are the exception, who take care of their cubs until adulthood. For this reason, wild female pandas are known as the "greatest mothers" in the world.

Jiaojiao, a wild mother panda, is a good example: In the first several days after the birth of her baby, she continuously hugged it in her den, warming and breastfeeding it and combing its fur. She didn't eat or drink anything for some time. Five days later, Jiaojiao left the den for a short while to defecate. She didn't go out to look for bamboo branches as food until her cub was 14 to 15 days old. Until then, she totally subsisted on stored fat while breastfeeding her baby. For the subsequent year and a half, Jiaojiao helped her cub get acquainted with every nearby mountain and river and taught it skills for surviving in the wilderness until it could live on its own.

Panda cubs are altricial and barely developed when born, but they grow exponentially under the meticulous care of their mothers. Two or three months after birth, a cub can walk by itself and leave the den, at a weight equal to newborns of other mammal species. However, it will continue to live with its mother for another year or more until it learns all skills it needs to survive alone.

Umbrella Species

The whole world is crazy about the giant panda.

To welcome a panda from China, Britain introduced a specially decorated plane with a panda theme and even an honor guard to escort it from the airport to its new home. Belgium and Malaysia provided gardenlike "residences" for pandas. Before sending panda cub Bao Bao back to China, Americans spent several months organizing various kinds of activities to say goodbye. On the day it departed, hundreds gathered at the airport to see it off in tears.

The giant panda isn't that unique among the eight species of bears in the world. In terms of size, it is neither the biggest nor the smallest. In terms of fur color, it isn't the only species in black and white; its cousins—the sun bear, the Asian black bear, the American black bear and the sloth bear—all have black and white fur to some extent. In terms of diet, the giant panda isn't the only vegetarian bear. Except for the polar bear, all other species of bears are omnivores. Even the polar bear sometimes feeds on plant roots, leaves and fruits in summer when sea ice is scarce.

Compared to those in captivity, wild giant pandas maintain the ferocious nature of animals in the Ursidae family. by Xiang Dingqian

Still, the giant panda is considered the most adorable bear in the world in part due to its strict bamboo diet. In the wild, bamboo grows all over mountains, and the giant panda doesn't need a highly developed olfactory organ to look for food. Gradually, its snout has become considerably shorter. Bamboo is hard to chew, so it developed a large, round face with more masticatory muscles, which makes it so cute.

The giant panda is an important icon for China's effort to protect nature. For this reason, it is dubbed an "umbrella species." Giant panda habitats are also home to 70 percent of bird species and mammals and 31 percent of amphibians unique to China. Almost all panda habitats (as much as 96 percent of the total) are

Many other rare species under first-class state protection share the same habitat as the giant panda such as the takin, blood pheasant (lower left) and crested ibis (upper left). The giant panda is an important icon for China's effort to protect nature. For this reason, it has been dubbed an "umbrella species." by Wang Fang

also habitats for some of the most important native Chinese species. Consequently, any effort to conserve the giant panda will also benefit many other unique species in China.

As we restore forests and build ecological corridors to help pandas evade disturbances and highways, we are also helping thousands of other species and even the forests, water sources and mountains in southwestern China. Through protecting giant pandas, we are protecting the local ecosystem and all living beings there.

Worrisome Future

So far, China has established 65 giant panda conservation bases covering 56 percent of their habitats. Still, it's hard to consider the future of the species bright.

In the Qinling Mountains, emerging tourist zones and newly built towns are adjacent to giant panda habitats, causing unpredictable risk to the animal. Human activity has not only resulted in direct disturbances, but has also severely fragmented habitats of giant pandas.

At present, more than 300 wild pandas living in the Qinling Mountains are completely cut off from those in Sichuan and Gansu provinces. Minshan Mountain in Sichuan is the largest single habitat for the giant panda. However, the formerly unified habitat has been cut into a dozen pieces. Panda communities in Daxiangling, Xiaoxiangling and Liangshan are only dozens of kilometers from each other. However, rapid economic and population expansion and construction of railways, highways, power plants and mines have made migration of pandas from one mountain to another virtually impossible. The fragmentation of their habitats increases the likelihood of inbreeding, resulting in a drop in survivability and genetic diversity of pandas in some regions.

The author is a research fellow at the School of Life Sciences at Fudan University focusing on the research of population dynamics and conservation solutions for large and medium-sized mammals.

New Hope for Star Children

Text by Yin Xing Photographs courtesy of Wang Xinhui

Tears welled up in the eyes of Wang Xinhui as she recalled the memory of a 7-year-old autistic child calling out to his mother for the first time.

Wang Xinhui is the head of the Star Road Autistic Children's Rehabilitation Center in Chifeng City, northern China's Inner Mongolia Autonomous Region. She often makes home visits to learn about the situations of her students at home.

Children with autism have been likened to stars in the sky. They twinkle, lonely in their own world, so in China many call them "children who come from the stars." But cruel reality lies behind the romantic designation: Autistic children suffer speaking disabilities and endure interpersonal barriers, narrow interest sets and rigid behavior.

Wang Xinhui is the head of the Star Road Autistic Children's Rehabilitation Center in Chifeng City, northern China's Inner Mongolia Autonomous Region. During her 15 years of practice in the field of autism rehabilitation, she has experienced considerable frustration as well as joy. She has overcome countless roadblocks to seize fruitful gains.

Encountering Autism

Wang majored in education in her college years. After graduation, she set up a children's potential development center, integrating the functions of a kindergarten and early childhood education.

In 2004, things changed when a child named Yangyang enrolled in the school.

It didn't take long for Wang to discover that Yangyang was different from other children: He stayed away from others and yet never missed his mother. He always played alone in the corner, and if someone managed to pull him back to his seat, he would leave again a moment later. And he never interacted or even maintained eye contact with anyone.

"At that time, I was totally ignorant of autism," Wang admits. "After discussing Yangyang's behavior with his parents at their home, we all decided to head to Beijing to take Yangyang to a doctor, who officially diagnosed him with incurable autism. Seeing the desperate

As a volunteer, Wang Xinhui provides psychological support for students in a school for left-behind children.

parents and innocent child, I made up my mind to help them no matter what."

But how? At first, Wang had no idea. She tried to use her own methods to teach Yangyang but saw no significant improvement after a whole month. She realized that she had to learn the right way to effectively help the child. Later, she joined several colleagues to survey autism rehabilitation efforts in Beijing, Shanghai, Guangzhou, and Shenzhen among other places to learn from others' work. A year later, the teachers mastered basic skills for teaching autistic children, and Yangyang started making remarkable progress under her guidance.

One summer day as Wang was conducting individual training lessons for Yangyang, she turned to pick up a card when she heard him exclaim, "Mom!"

"What did you say?" Wang couldn't believe her ears.

Yangyang did not look at her, yet he repeated, "Mom!"

"I took him in my arms and cried," Wang recalls. "It was the first time the 7-year-old even spoke or called out to his mother." Remembering the scene years later, Wang still couldn't hold back tears.

Years of hard work and tireless effort paid off, but new problems emerged. Restricted by the size of the venue and the number of faculty, she has to make a choice between continuing to run a kindergarten for ordinary children or becoming a public welfare organization devoted to special education.

Persistent Love

The motivation for Wang to decide to stick to autism-related work was her love for autistic children.

"We were the only school in the region to offer autism rehabilitation," she notes. "If I quit, the children would have had nowhere to

go. More importantly, I was reluctant to part with them. For me, they were not just autistic children, but people who live in different world from us. They have emotions and love. I just couldn't give them up."

In 2008, China promulgated a relief policy for autistic children, which boosted Wang's confidence. "Each autistic child requires three or more teachers," she reveals. "As a non-governmental public welfare organization, it is difficult to survive without government subsidies."

To encourage Wang and other teachers, parents also "bribe" them with self-raised rice, chicken and vegetables.

"I know the pressure that families with autistic children feel, both spiritually and financially," Wang explains. "Although I hesitated for a moment, the children and parents kept me from backing down. Even a small step made by a child could help heal the parents' trauma or even save a family."

In 2009, Wang's potential development center was formally renamed the Star Road Autistic Children's Rehabilitation Center, which continues to use Applied Behavior Analysis (ABA) and combine Relationship Development Intervention (RDI) therapy and sensory training to carry out rehabilitation treatment for autistic children under different conditions.

Today, the center has a faculty of 36 teachers and more than 300 long-term volunteers who provide rehabilitation training for more than 700 autistic children. Every year, about 15 percent of their children are integrated into ordinary primary schools.

Improving Social Environment

Many continue to hold one of the two extreme perceptions of autism. Some consider it a mental illness while others believe that autistic people are gifted, which is true for only a very small number. In fact, early intervention can effectively alleviate the condition and help children engage in normal education and ordinary life.

Now in her 15th year working with autistic children, Wang knows she chose a hard road. She doesn't mind saliva on her face when an autistic child kisses her, and she can accept their often stiff and even aggressive behavior. What she continues to fear most is misunderstanding and discrimination from the outside world.

"Many people questioned my intentions when I chose to stay focused on 'abnormal children,'" she sighed. "I also used to 'beg for alms' everywhere I went to find sponsors for the school."

Passed by the United Nations General Assembly in 2007, World Autism Awareness Day became internationally recognized on April 2 every year. In 2010, *Ocean Heaven*, a Chinese film depicting an autistic patient, greatly popularized awareness of autism and aroused attention for people with the illness. The Chinese government has introduced several targeted rehabilitation programs for such groups. In some economically developed provinces of China, assistance is provided to cover all families with autistic children from birth to age six.

"Slowly and steadily, the entire social environment is changing, and now many generous people and charitable institutions find us on their own to make targeted donations," Wang grins. "Although we still encounter many difficulties and challenges, the increase in public awareness and policy support is creating space for these special children to live normal, productive lives."

The Star Road Autistic Children's Rehabilitation Center uses Applied Behavior Analysis (ABA) and combines Relationship Development Intervention (RDI) therapy and sensory training to carry out rehabilitation treatment for autistic children under different conditions.

An aerial view of a community for relocated residents in Weining County, Bijie City on December 8, 2018. The community, named "Sunshine New City," can house 4,089 relocated households.

Targeted Poverty Alleviation in Bijie

For the Children Left Behind

Text by Liu Min **Photographs by** Chen Jie

By establishing supportive industries for poverty reduction, Bijie hopes to attract more migrant workers back home to stay with their kids. Only by their parents coming back will left-behind children truly live at home.

June 25, 2018: Before relocation, Tang Guantian lives in a dilapidated old house made of earth and wood with her sister and parents in Wushimu Village, Haizijie Township, Qixingguan District of Bijie.

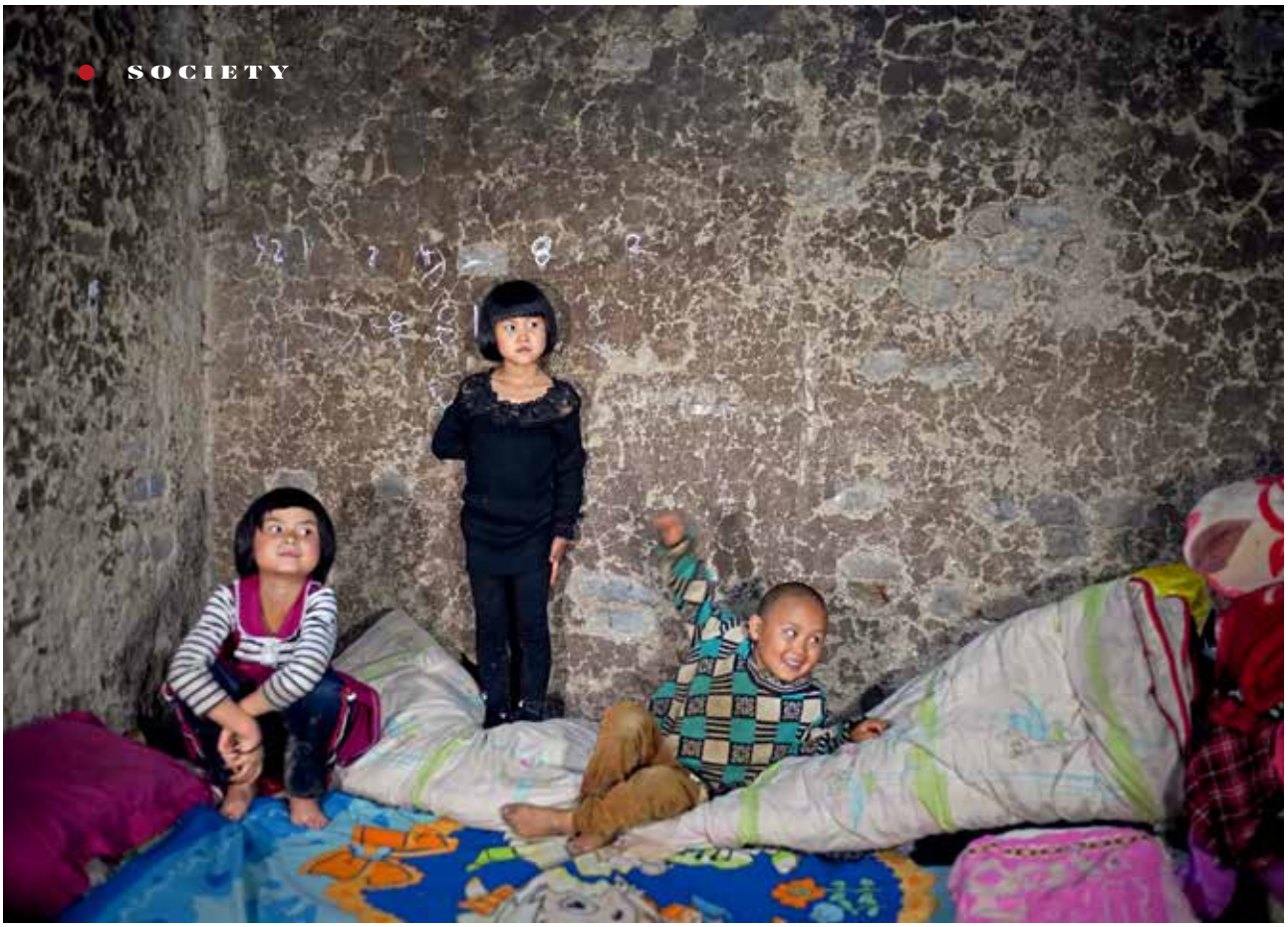
On December 8, 2018, in a residential building used for relocation settlements in Weining County, Bijie City, Guizhou Province, 11-year-old An Lan played with her 3-year-old sister in her bedroom. After the Chinese Lunar New Year in 2019, An Lan headed to an elementary school designated for relocated families. Her parents, who used to work in factories in a bigger city, will soon return to Weining. Using their skills learned at factories, they are confident that they will be very employable in their hometown.

An Lan used to live in Lunhe Village, Zhejue Township in Weining while her parents worked in Zhejiang Province with her younger sister in tow. An Lan lived with her grandma in a rickety shack. A plank covered with a quilt served as her bed. It took her more than an hour to walk to the elementary school serving the village.

Major changes took place in 2018. Last year, based on the different situations of the 370-plus households in the village, the local government implemented targeted poverty alleviation measures. A total of 120 households were relocated, 26 in the county seat and the other 94 to a new village near their previous residence. For poverty-stricken households served by satisfactory public transit systems and located in areas without high occurrence of geological hazards, a subsidy of around US$2,960 was given to each person for home renovation. In just one year, resettlement of all households covered in the targeted poverty alleviation program was completed.

Similar changes also took place in other areas of Bijie. In Wushimu Village, Haizijie Township, Qixingguan District of Bijie, 10-year-old Li Jiayu lives with her grandma, father, younger brother and sister. In June 2018, her family moved into a new 100-squre-meter apartment. Li's parents divorced long ago, and her father used to be a migrant worker in Zhejiang Province. For quite some time, Li and her younger brother and sister lived with their grandmother in her 70s. Every day, the girl spent around four hours traveling to and from school.

She also welcomed dramatic life changes in 2018. Thanks to various industries developed by the local government to attract locals employed in other places to return home, Li's father returned



Upper: In Wushimu Village, Haizijie Township, Qixingguan District of Bijie, 10-year-old Li Jiayu, her younger brother and sister live in a dilapidated house. Below: The Li family in their new 100-square-meter apartment. In 2018, nearly 21,000 relocated people moved into new houses alongside Li's family.

Upper: Nine-year-old An Hua packs her schoolbag in her old home in Jingzhu Village, Zhejue Township of Weining County on December 8, 2018 before moving into a new apartment for relocated households. Below: An Hua in her new home. Now she is a student at Weining No.7 Elementary School.

in 2018 and soon landed a job. Li and her siblings enrolled in a nearby elementary school. A total of 4,489 households composed of 20,521 people moved into new apartments alongside Li's family in 2018.

Poverty has been a long-standing problem for Bijie. Administering seven counties and three districts, Bijie is one of the poorest regions in the Wumeng Mountains. The mountainous area of Wumeng, stretching across the three provinces of Sichuan, Yunnan, and Guizhou, is one of the largest and hardest-hit among the 14 contiguous areas of extreme poverty in China. Of Bijie's total population of 9.28 million, nearly one million people still live in poverty.

Since many locals moved to bigger cities as migrant workers, about 260,000 kids were left behind in Bijie's rural areas. Thus, improving these children's living and educational conditions has become a key part of the local government's targeted poverty alleviation efforts in recent years. Villages in remote areas and plagued by harsh environmental conditions were relocated. And more efforts have been made to establish and promote supportive industries for poverty reduction to attract more migrant workers to return home and live with their kids. Only by their parents coming back will left-behind children truly live at home.

1970 » 1979

A Turning Point in History

Concept by *China Pictorial*
Edited by Li Zhuoxi **Photographs courtesy of** CFB unless otherwise credited
Information sourced from *History of the Communist Party of China*

From 1970 to 1979, China gradually realized a historic turn and opened up an important stage for socialist development in the new era.

To clear political and ideological chaos caused by the "cultural revolution" (1966-1976) and end a long run of leftism, Chinese leaders of the era represented by Deng Xiaoping and the Chinese people made unremitting efforts. At the important historical juncture determining the future direction of China, the country held the Central Working Conference and the Third Plenary Session of the 11th Central Committee of the Communist Party of China (CPC) at the end of 1978, correcting problematic leftism with guiding principles and seizing a turning point as significant as any since the founding of the People's Republic of China in 1949.

1970: First Satellite Launched

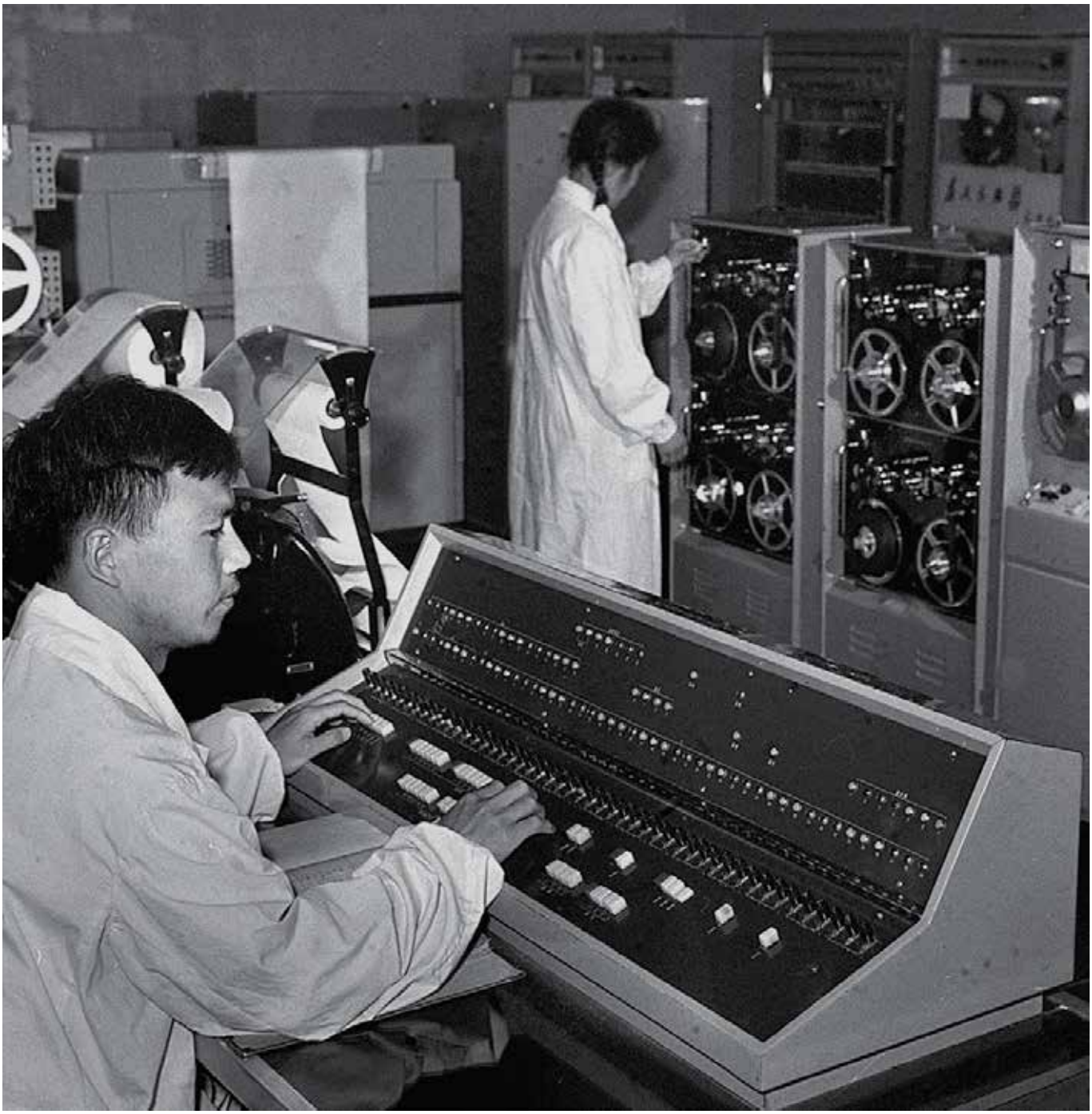
China's first artificial satellite Dongfanghong-1 was successfully launched into space on April 24, 1970. The launch made China become the fifth country in the world to send a domestically produced satellite into space with a homemade rocket after the Soviet Union, the United States, France and Japan. Due to the relatively high perigee of the Dongfanghong-1, the satellite is still in orbit today.

1971: Restoration of China's Lawful Seat in the UN

On October 25, 1971, the 26th Session of the United Nations (UN) General Assembly adopted Resolution 2758 with an overwhelming majority to restore the lawful seat of the People's Republic of China in the UN. The proposal to restore China's lawful seat in the UN was sponsored by 23 countries including Albania and Algeria and passed with 76 votes in favor, 35 votes against and 17 abstentions. On November 15, the delegation of the People's Republic of China attended the UN General Assembly for the first time and was warmly received.

1972: U.S. President Nixon's Visit to China

From February 21 to 28, 1972, upon an invitation from Chinese Premier Zhou Enlai, U.S. President Richard Nixon visited China. On February 28, the historic *Shanghai Communiqué* was released, announcing the normalization of relations between the two countries. The visit brought China-U.S. relations into a new era.



Xinhua

1973: Successful Trial of China's First Integrated Circuit Electronic Computer

On August 26, 1973, China's first integrated circuit electronic computer, capable of making one million calculations per second, ran a successful trial. Jointly developed by Peking University, Beijing Cable Plant and then Ministry of Fuel and Chemical Industries, the computer marked a major achievement in China's scientific and technological development and a milestone in the country's computer development.

1974: Completion of Shengli Oilfield

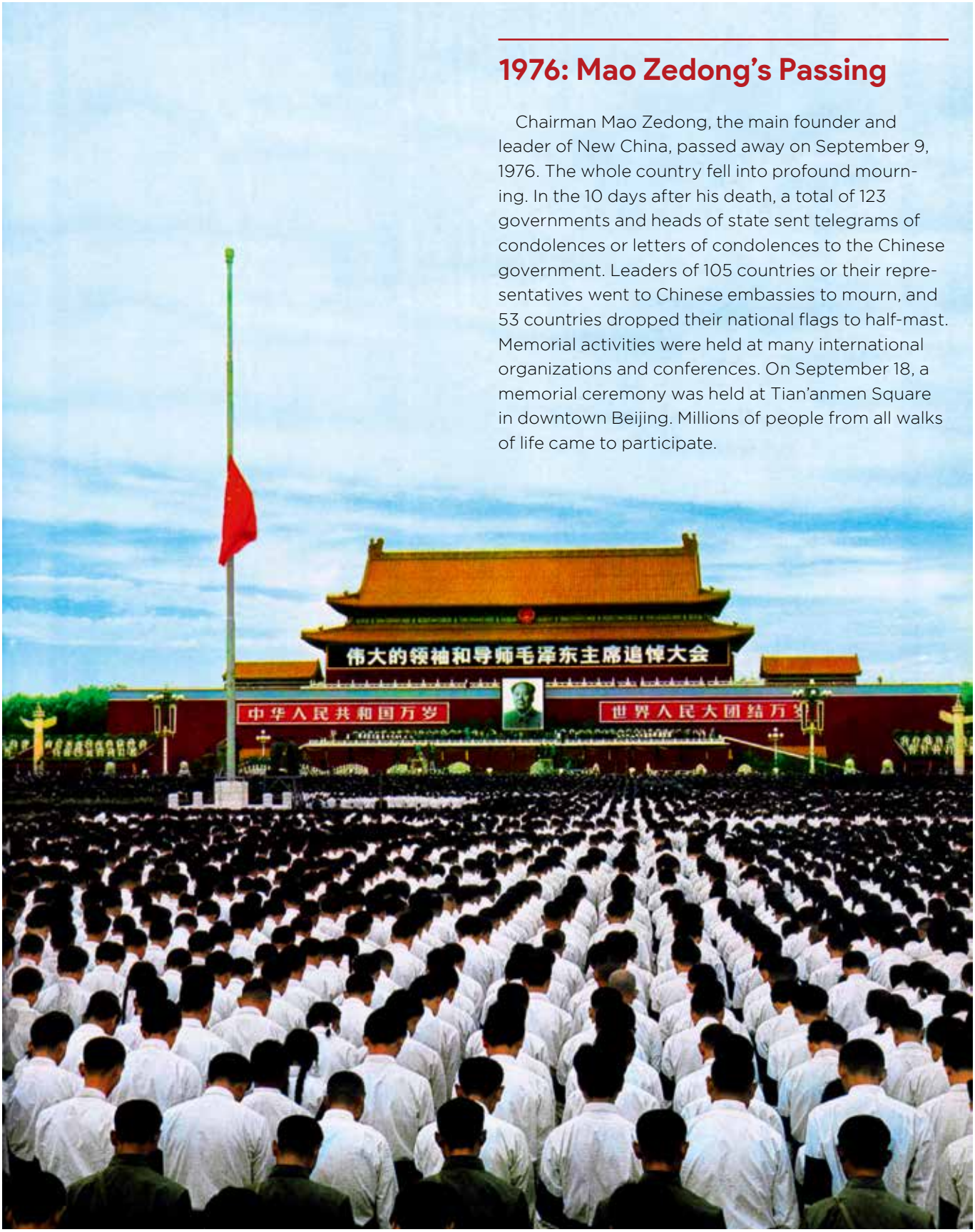
On September 28, 1974, the construction of Shengli Oilfield, the second largest of its kind in China, was completed. Located in northern China, a region previously considered barren of oil, Shengli Oilfield's construction was greatly significant in changing China's fuel landscape and the layout of its energy industry as well as promoting the country's economic development.

1975: Popularization of Hybrid Rice

As the most populous country on the planet, China faces the problem of a huge population and relatively meager cultivated land. Under this context, China's hybrid rice was introduced. With strong support from the government, a research team led by Chinese scientist Yuan Longping developed indica hybrid rice seeds. In 1975, hybrid rice was approved for large-scale promotion across the country after tests. From 1976 to 1987, China's hybrid rice production increased by more than 100 million tons, which contributed greatly to the country's grain production. Hybrid rice solved food problems for China, where 22 percent of the world's population live on less than 10 percent of the world's cultivated land.

1976: Mao Zedong's Passing

Chairman Mao Zedong, the main founder and leader of New China, passed away on September 9, 1976. The whole country fell into profound mourning. In the 10 days after his death, a total of 123 governments and heads of state sent telegrams of condolences or letters of condolences to the Chinese government. Leaders of 105 countries or their representatives went to Chinese embassies to mourn, and 53 countries dropped their national flags to half-mast. Memorial activities were held at many international organizations and conferences. On September 18, a memorial ceremony was held at Tian'anmen Square in downtown Beijing. Millions of people from all walks of life came to participate.



1977: Resumption of College Entrance Examination

In 1977, the *gaokao*, China's college entrance examination, resumed after 10 years of disruption during the "cultural revolution" (1966-1976). That winter, 5.7 million people of different ages participated in the examination. The scale of that year's examination not only set a participation record in China, but also in the world. Destinies of many people were changed due to the resumption of the *gaokao* after a 10-year hiatus. It marked the dawn of a new era of respect for knowledge and professional competency.

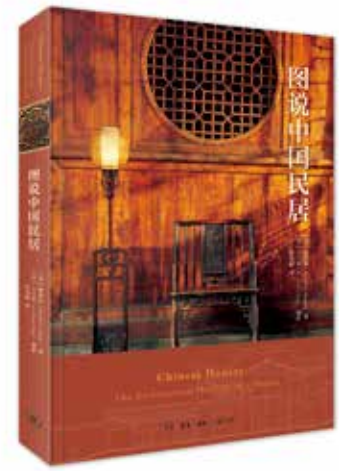
1978: Implementation of Reform and Opening Up

The Third Plenary Session of the 11th CPC Central Committee held in December 1978 in Beijing is of great significance to the country. The session passed the historic decision to shift the focus of the Party and country's work from "class struggle" to economic development. It marked the start of China's reform and opening up and socialist modernization. Rural reform made breakthroughs, urban reform began, the opening up proceeded smoothly, and order was created out of chaos. The country was reinvigorated and revitalized.

1979: Special Economic Zones

China's special economic zones were born in 1979, marking further development of the country's reform and opening up. Any social change requires a breakthrough, and China's reform, opening up and modernization were no exceptions. Soon after the Third Plenary Session of the 11th CPC Central Committee, the Chinese government decided to establish special economic zones in Guangdong Province's Shenzhen, Zhuhai and Shantou cities and Xiamen in Fujian Province, leveraging the provinces' advantages of being adjacent to Hong Kong, Macao and Taiwan and boasting abundant overseas Chinese. Pictured is the Zhuhai Special Economic Zone under construction.

Xinhua



Chinese Houses: The Architectural Heritage of a Nation, a book authored by Ronald G. Knapp with photography by A. Chester Ong, translated by Ren Yu and published by SDX Joint Publishing Group in October 2018.

Timeless Chinese Houses

Chinese houses transcend their physical shells and become the cultural heritage of families and the nation, passed down across generations.

Built as family residences, Chinese folk houses are designed in a variety of architectural styles. This colorful photography collection presents ordinary rectangular huts and cottages, grand and magnificent mansions and luxurious palaces. Ronald G. Knapp, author of *Chinese Houses: The Architectural Heritage of a Nation*, points out that the diversity of Chinese dwellings is comparable to that of Europe which encompasses styles of numerous

Facing south on the northern side of the courtyard and usually only three bays in width, the main hall or *zhengfang* of most *siheyuan* is a low single-story building. Dominant in this courtyard is a pair of persimmon trees. In summer, tables and chairs from adjacent rooms would be moved into the courtyard so that family members and guests could enjoy sunny days and quiet evenings.

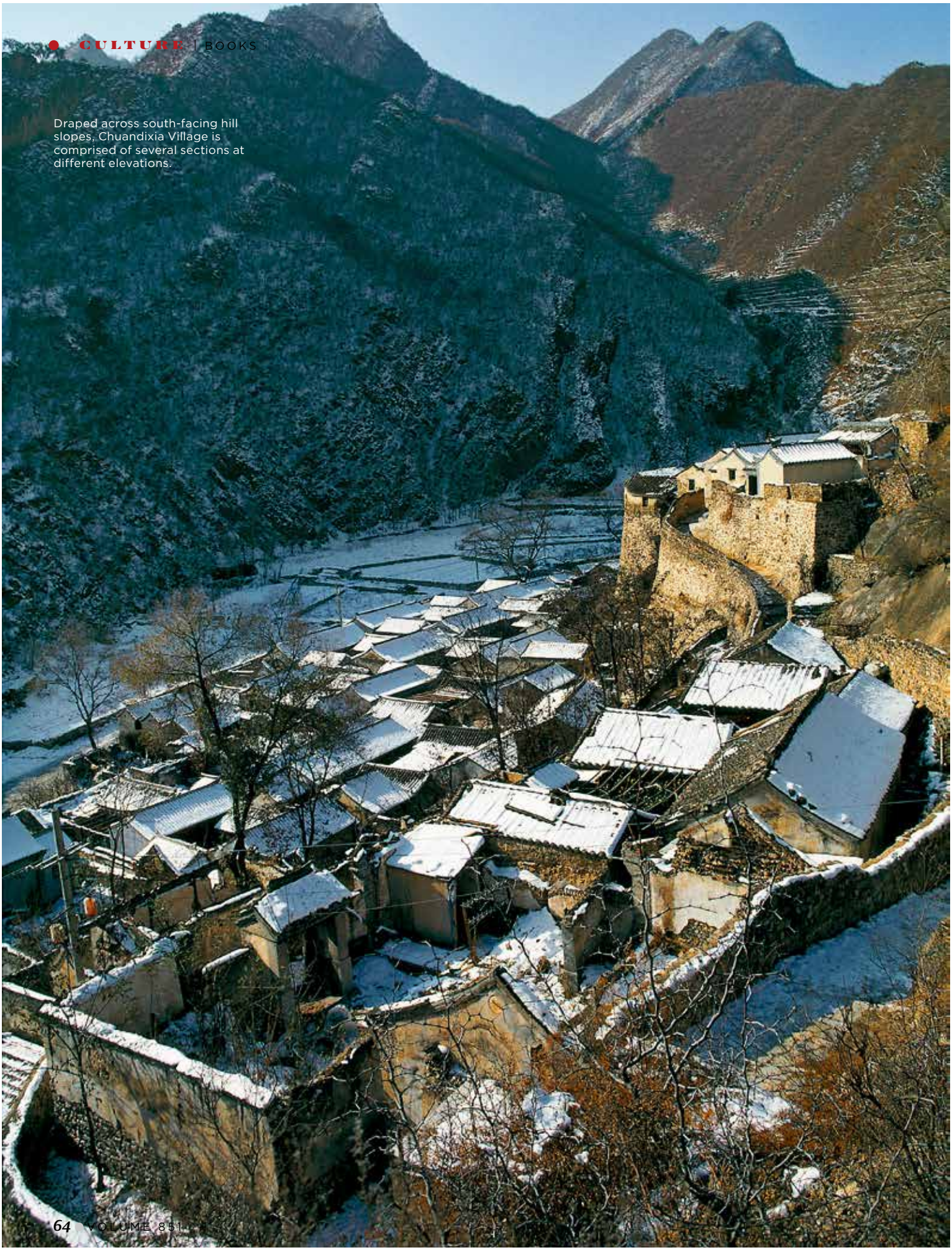
At the heart of Hongcun, the Crescent Pond provides not only a visual delight as it mirrors the surrounding buildings but also serves as a ready source of water for the daily needs of the neighborhood and as a convenient emergency supply of water in the event of fire.

countries, and exceeds that of the United States by far.

Knapp has been carrying out research on the cultural and historical geography of China's countryside since 1965. Over the past half century, he has visited thousands of traditional Chinese houses and witnessed the disappearance of some along with the great transformation of urban and rural architecture. Many traditional houses were exquisitely made. This book focuses on display and discussion of 17 well-preserved residential buildings including Beijing *siheyuan* (traditional courtyard homes), residences in southeastern China's water towns, study rooms of famous scholars, houses of the Ming Dynasty (1368-1644), mansions, courtyards of the Qing Dynasty (1644-1911) , Fujian earth buildings and other ancient architecture.

The author summarized each building as a fine example of Chinese folk houses built over thousands of years. In the book, he defines Chinese folk houses as a unique category of architecture, and based on their regional differences and historical evolution, he explores construction techniques and function of the houses and how

Arranged like landed UFOs, these five enormous Hakka earth buildings are clustered together along a hill slope in Tianluokeng Village, Shuyang Township, Nanjing County, Fujian Province.



Draped across south-facing hill slopes, Chuandixia Village is comprised of several sections at different elevations.

Believed by some to be a totem as protection against fire, creatures of this type are found on palaces as well as upon dwellings.

Flanked by a pair of esoteric couplets and carved into a panel in the Qiao family manor in Shanxi Province are one hundred different forms of the character *shou* or "longevity." Taken together, they are viewed as an especially powerful invocation for long life.

they transcend their physical shells to become the cultural heritage of families and the nation, passed down through generations. Detailed with abundant photos, carvings, historical images and technical drawings, the book vividly and comprehensively displays the unique beauty and vitality of China's traditional architecture.

Jonathan D. Spence, professor at Yale University and a famous expert in Chinese history studies, wrote the preface for the book. He pointed out that Ronald G. Knapp attempted to prove through the book that these houses are often part of a network of rights and wealth. "Amongst the twenty case studies of specific houses—from Shaanxi to Fujian, from Sichuan to Jiangsu—that Knapp presents in this splendid and comprehensive new book… he has made me reflect on wider issues of Chinese economics and politics," he wrote.

Receiving his Ph.D. at the University of Pittsburgh, Ronald G. Knapp taught at the State University of New York, New Paltz from 1968 to 2001. He is the author, editor, or contributor of more than 20 books, including *China's Traditional Rural Architecture: A Cultural Geography of the Common House* (1986), which was the first book in English to introduce Chinese vernacular architecture to Western readers. Others include *Chinese Bridges: Living Architecture from China's Past*.

The photographer of the book, A. Chester Ong, was born in the Philippines and is currently based in Hong Kong. His specializes in cultural documentary photography, as well as architectural and cuisine photography.

Landscape Values by Zhou Hongru.

Zhou Hongru
Painting a Way Home

Text by Yu Ge **Photographs by** Chen Jian

"Stuck in muddy water today, the creature will fly into the sky and become a dragon when the chance comes."

In 1989 when he first visited the Grand Canyon in Arizona, Zhou Hongru had been living in the United States for four years. The rigid rocks and rivers stunned him, inspiring him to paint the impressive landscape with traditional Chinese painting skills.

Over the following decade, Zhou visited the Grand Canyon six times before he finally finished the painting scroll *Landscapes of the Grand Canyon*, which has become his most famous work.

On April 13, 2019, Zhou's solo exhibition "Landscape Values" opened at the Western Returned Scholars Association in Beijing, displaying the works he produced in recent years such as *Landscape Values, Trees Dressed in Hues, Sanqing Mountains* and *August but Mild* as well as a copy of *Landscapes of the Grand Canyon*. These works not only present the artist's superb skill in traditional Chinese painting but also showcase the interaction and integration of Chinese and Western cultures.

Nearly 100 guests attended the opening ceremony of the exhibition, many of whom knew Zhou for many years and sang high praise of his creation. When the host introduced Zhou's works, he noted that this year marks the 70th anniversary of the founding of the People's Republic of China. Zhou's Chinese ink works, focusing landscapes, are the best gifts for the country. He added that the frequent "travels" of this kind of works can promote exchange between Chinese and foreign art ideas and help more people understand and fall in love with traditional Chinese culture. Chinese art critic Yang Zhaohui declared that Zhou spent 10 years painting *Landscapes of the Grand Canyon* in the United States, which won him high acclaim both at home and abroad. But upon returning to China, well into his sixties, Zhou has not stopped creating, which contributes more touching landscape paintings to the exhibition. Runyin Public Fund with China Social Welfare Foundation provided great support for the show.

Zhou was one of the most famous Chinese artists who ventured to the United States in the 1980s. At a young age, he learned traditional Chinese flower-and-bird painting from Wang Yuyi and Wang Xuetao, two Chinese masters, and also got guidance from landscape painting masters Qin Zhongwen and Xie Shini. In 1985, he planned a solo exhibition in the United States and ended up staying in the country. In the 30 years he lived there, he had the chance to closely examine the differences between Chinese and Western cultures, allowing him to embed contemporary art consciousness and cultural combination into his traditional Chinese painting.

It was not easy to fit in, considering that he lived in another country. In past decades, Zhou always felt an inner drive like he had a mission to finish, which propelled him to continue wielding the brush. In particular, he prepared six years to paint the scroll *Landscapes of the Grand Canyon*. "During that period, I started the painting many times but threw it out because the process was not smooth," he revealed. "I tore up the paper again and again." Over the subsequent four years and after much deliberation, he finally finished the work. "In those days,

April 13, 2019: U.S.-based Chinese painter Zhou Hongru opens his exhibition "Landscape Values" at the Western Returned Scholars Association in Beijing.

Trees Dressed in Hues by Zhou Hongru.

Sanqing Mountains by Zhou Hongru.

Zhou Hongru at work.

I often started working at 3 a.m. and stopped at 9 p.m., avoiding any interruptions."

During his fourth visit to the Grand Canyon, a gust blew his canvas away. He ran after it so hastily that he fell off a cliff and passed out. After he regained consciousness, he could barely move but managed to slowly climb back up. For a long time, he dared not recount the accident to his family.

An American veteran guarding the canyon examined Zhou's painting for a long time. He was astonished to see many familiar landscapes in Zhou's work. In addition to physical mountains and rivers, Zhou also injected his understanding and philosophy about life into this work. He intentionally painted three ancient castles of different styles on the scroll, symbolizing three phases of life: growth, success and fulfillment. The preface of the painting reveals that the three castles stand for three periods of secular life. Zhou hoped they would inject symbolism and vitality into the painting. Focusing on foreign landscapes, the scroll mainly used traditional Chinese painting style but was not confined by it. Nature guided the brush and the magnificent landscape provided inspiration. Zhou endeavored to provide Western audiences a window into Chinese culture through the work.

Alongside landscape paintings, Zhou is also an expert at drawing animals. He is a sharp observer of daily life. Dragons and horses from his brush are modest but unique, dubbed "flying dragon" and "iron-bone horse" by critics. Just a few years after he arrived in the United States, his work *Lion* was selected to be displayed at the White House. Also, he held exhibitions in many places across the United States like Harvard University, having won many acclaims.

Shortly after arriving in the United States, Zhou painted a dozen lifelike shrimp in several casual sketches for an event organized by the local Chinese community. Complementing the painting was a poem, translated literally as "Despite the shrimp stuck in muddy water today, ambitious goals and great competence will ensure that when the time is right, they will fly into the sky and become dragons." This poem and painting gained him a prestige in local Chinese community and also reflected the spirit of Zhou's life. Zhou has always kept the words of one French philosopher in mind: Life is like an old man carrying a parcel who keeps climbing mountains one after another, full of ups and downs. Like him, from foreign land to home, Zhou keeps walking and painting.

Galloping Horse by Zhou Hongru.

Shared Road, Shared Future

Text by Yi Mei

Photographs courtesy of the National Museum of China

The exhibition "Sharing a Common Future—Exhibition of Treasures from National Museums along the Silk Road" opened at the National Museum of China.

The ancient terrestrial Silk Road linked Europe and Asia, while the maritime Silk Road connected Asia and Africa. Traversing tens of thousands of miles across thousands of years, the two routes not only facilitated communication between Eastern and Western cultures but also left countless cultural relics and spiritual legacies.

On April 11, 2019, the exhibition "Sharing a Common Future—Exhibition of Treasures from National Museums along the Silk Road" opened at the National Museum of China. The event is sponsored by the National Museum of China along with other 12 national museums in Cambodia, Japan, Kazakhstan, Latvia, Mongolia, Oman, Poland, South Korea, Romania, Russia, Slovenia and Tajikistan.

A three-leg pot made with tri-color glazing technique prevailing in China's Tang Dynasty, from South Korea.

Panoramic Display

The Chinese title of the exhibition was drawn from a Chinese book by Ban Gu (32-92) of the Eastern Han Dynasty (25-220), which is literally translated as "sharing cultural legacies with the people all over the world." The exhibition is divided into two parts: terrestrial Silk Road and maritime Silk Road, with 234 items (sets) from

Gold warrior (restored), from Cambodia.

A scroll painting about Nanjing, then capital of the Ming Dynasty, from China.

A stone pillar, from South Korea.

A bronze drum, from Cambodia.

13 countries displaying the cultural collision and fusion between different nations along the routes.

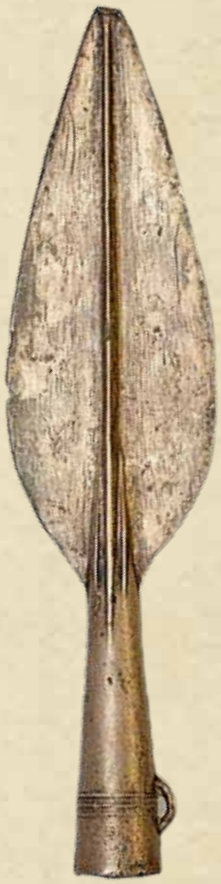
"Previous exhibitions under the same theme usually focused on specific sections of the routes," notes curator Yan Zhi. "But this time, led by the National Museum of China and 12 other national museums, the exhibition brings together a grand display of cultural exchange from a panoramic perspective, to an unprecedented scale and level."

According to Yan, the exhibition adopted various methods of display to prevent fragmented layout and employed bold colors. "People often use yellow to indicate the land route, while blue connotes the maritime one," explains Yan. "But the land Silk Road also crossed grasslands, hills and rivers. And the most representative port cities on the maritime route were even more colorful. So, we introduced more hues to showcase the diversity of the Silk Road network."

Hevajra, from Cambodia.

"Cultural relics can talk," opines Wang Chunfa, director of the National Museum of China. "These beautiful antiques showcase the width and depth of comprehensive communication between countries along the routes in terms of technology, arts and culture, which evidences that building a community with a shared future for humanity is the right direction for the whole world."

A painting of the first giraffe tribute to an emperor of the Ming Dynasty paid by a Bangladesh diplomat, from China.



A leaf-shaped spearhead, from Russia.

Sogdian inscription, from Tajikistan.

A Chinese cup, from Latvia.

An ancient Roman glassware, from Slovenia.

Relics from Land Silk Road

The terrestrial Silk Road part focuses on treasures from China, Russia, Mongolia, Tajikistan, Kazakhstan, Romania, Poland and Latvia.

In the Russian section, a spearhead shaped like a leaf dating back 2,000 years represents the typical Turbino culture. In the Bronze Age as nomadic civilization flourished, metal instruments, metallurgical technology and metalworking began to spread rapidly through western Eurasia. Early civilizations in Russia played an important role in this period, represented by the Seima-Turbino culture which was famous for its well-cast bronze weapons. "People usually consider Zhang Qian's venture to Western Regions in the Western Han Dynasty (206B.C.-24A.D.) as the beginning of the history of the Silk Road," Yan Zhi explained. "In fact, the connection between China and western Eurasia began in prehistoric times. Nomads from the Turbino culture galloped over the grasslands of the Eurasian Steppe and spread their weapons and culture around. In China's Xinjiang, Qinghai and other regions, extensive Turbino cultural remains have been discovered."

Latvia was once a destination on the terrestrial Silk Road. In the exhibition is a cup from China's Tang Dynasty (618-907) which is the only Chinese cultural relic found in Latvia so far. It was unearthed in the Liv Mountain cemetery dating back to the 11th to 12th centuries. Experts speculate that the cup may have arrived in Central Asia along the Silk Road through Bulgaria's Volga River. And then it was carried by Scandinavian merchants and changed hands several times before eventually arriving on the Baltic coast. Its journey to Latvia is a testament to the great history of the Silk Road.

A vessel, from Romania.

A statue of Amida Nyoria, from Japan.

A ceramic bowl with color enamels, from Latvia.

Sohar Lion, from Oman.

Relics from the Maritime Silk Road

The maritime Silk Road part mainly exhibits relics from Oman, Cambodia, Japan, South Korea and China. Links between China and Oman, a nation located on the southeastern coast of the Arabian Peninsula, can be traced back to the Tang Dynasty. The collection of the National Museum of the Sultanate of Oman includes hundreds of precious Chinese artifacts, many of which were brought to Oman via the maritime Silk Road. Exhibits such as the Sohar Lion, the blue-and-white porcelain jar with peony designs and other ceramic relics represent fine porcelain made in China, which was regarded as a precious and rare material in ancient Oman.

"The 15 artifacts from our

A sketch of a Chinese-style pavilion in Wilanów Park, from Poland.

museum on display are witnesses to the friendship between Oman and China," declared Jamal al-Moosawi, director general of the National Museum of the Sultanate of Oman. "The Belt and Road Initiative was proposed based on inspiration from the ancient Silk Road and aims to strengthen interconnection and create a better future for all."

Ancient Cambodia was heavily influenced by both Chinese and Indian cultures. Stone inscriptions at the Sambor Prei Kuk archaeological site from the 6th to 7th centuries are thought to be influenced by Chinese Buddhist stone pillar art. In this exhibition is a 7th-century Sambor Prei Kuk-style sandstone lintel featuring a dragon design.

In the 18th and 19th centuries, the Polish aristocracy developed great interest in Chinese architecture. Aristocrats in the royal family built many Chinese-style pavilions around their residences. Elements and crafts from China could also be seen in European furniture and decoration. From the collection of the Polish National Museum, the clocks and cabinets displayed in this exhibition reflect rich Chinese style.

"What better than art to shine light on mutual learning between civilizations?" asks Jerry Miziolek, director of the National Museum in Warsaw, Poland. "A universal language, art transcends all national boundaries, enabling people with different cultural backgrounds to communicate freely and silently. The Silk Road was not only a trade route, but also a route for exchanging ideas, techniques and even religions and philosophies." Miziolek stressed that the exhibition proved that cooperation between museums not only facilitates collaboration of ideas, technology and personnel, but also creates chances for cultural exchange. This exhibition proves that art is key to understanding ourselves and better communicating with others.

Reflections on Chinese Hospitality

Text by Jed Foster

The Chinese are careful to be good hosts and leave lasting impressions on guests. They highly value relationships with friends and family.

February 28, 2018: Foreign visitors from Russia, Ukraine and Kyrgyzstan learn to make lanterns from flour and carrots at a rural household in Yinan County, Shandong Province. IC

I have visited seven countries outside the United States: Britian, France, Spain, Nicaragua, the Bahamas, South Korea and China. I've seen a lot of interesting and unforgettable things in each of these places, and each nation has left its mark on me. Each has shown me the intricate ways in which the local people express hospitality. The classy wit of Western Europeans, the enthusiastic affection of Latin Americans, and the polite dignity of the Korean people have all left a powerful and positive impact on me. It

seems, however, that I have established an unexplainable connection with the Chinese people, and I have never seen such consistent, intentional displays of hospitality, friendship, and honor as I have in China. Perhaps *yuanfen* (connections ordained by fate) is the best explanation for why I find this land and its people to be the world's most endearing thanks to an unparalleled sense of hospitality.

The Chinese people are careful to make good impressions on guests, and they treasure relationships with friends and family. This stood out to me during my first trip to China four years ago when I arrived with my American university classmates and teachers as part of a short-term cross-cultural program. I fell in love with China. The food, language, landscape and architecture intrigued me, but the people were the most captivating. Our hosts not only waited on our every need, but also endeavored to genuinely befriend us. They were curious and desired to understand my life and how it differed from their own. Being equally curious, this was an opportunity for me to establish mutual understanding and friendship.

My new Chinese friends' amiability was a trait that I found to be consistently widespread, and when an opportunity emerged for me to study in central China's Henan Province, I came back a second time to begin learning Chinese. I looked forward to making new friends and more deeply understanding Chinese culture. During this period, my appreciation for this country solidified into something deeper. I came to realize that China would always remain an important part of my life. This sense of *yuanfen* became part of my reality. Studying as an exchange student for three months in China also gave me my first real culture shock. The cultural differences between America and China are profound, so there was a considerable adjustment process for me. Despite my difficulty in getting used to these new surroundings, I quickly made new friends who constantly looked after my well-being.

Two years ago, I came to China again on a research scholarship, during which time I experienced new aspects of Chinese hospitality. I stayed for several weeks at a friend's family home in a rural village in Shanxi Province. My hosts were not wealthy, nor had they hosted foreigners before, but they were the most gracious hosts I have ever had. They ensured that I ate and drank well, sometimes too well. My friend's grandmother cooked all day, and there was a grand feast every evening. In the arid summer heat of the Shanxi countryside, my friend's family insisted on putting the household's only electric fan in my room. At night,

The author, Jed Foster (left), with his friend's uncle and grandmother at their home village in Shanxi Province. courtesy of the author

although it was still very hot, my friend's father always made certain to close my bedroom window so I didn't "catch the wind." I was also introduced to *baijiu* (rice liquor) and the customs of drinking.

Currently, I am attending classes at Beijing Language and Culture University to improve my Mandarin. I have lived here for seven months, the longest time I've spent away from my Tennessee home. My new friends in Beijing made possible the formidable tasks of finding an apartment, learning the subway and bus routes, ordering food, asking for directions, and figuring out my school. One friend was a former university classmate, and his parents even loaned me money when my American bank wouldn't send me wire transfers. I was also blessed to have a flatmate from Shenzhen who helped me figure out shopping in my neighborhood. These wonderful people made it possible for me to get settled.

Compared to many people I know, I am not the most well-traveled, nor do I have endless examples demonstrating why Chinese hospitality is the best. I can only refer to the fated connection I feel with China. China is always teaching me new things about how to live life, particularly a life constantly enriched and guided by *yuanfen*. These fated connections take many forms: between acquaintances, businesspeople, friends and family. Though I have not lived in China long enough to understand all the nuances within Chinese social communication, it's my firm conviction that my connections with China are in the form of the purest friendships in life. I remain indebted to a long list of Chinese friends and acquaintances, and I don't think I will ever be able to repay their kindness. I believe this is the way they would have it.

The author is an American student at Beijing Language and Culture University.

LOVELOVELOVE: A Journey in LOVE

March 30 – June 30, 2019
Today Art Museum, Beijing

Focused on the theme of travel, this exhibition reviews China's past 40 years through 10 artists' traveling tales.

The event marks the first joint show of works of Andy Warhol, a pioneer of the Pop Art Movement, and works of Jean-Michel Jarre, the father of French electronic music, reconstructing their legendary journeys through early 1980s China. At the same time, eight artists including Quentin Shih and Colin Chinnery share social changes in China they captured through various media such as photography, animation and sound installation.

Poster for the "LOVELOVELOVE: A Journey in LOVE" exhibition.

Qiu Zhijie: Mappa Mundi

January 19 – May 5, 2019
UCCA, Beijing

"Qiu Zhijie: Mappa Mundi" is the most comprehensive presentation of the artist's "Mapping the World Project" to date. The exhibition includes 24 large-scale, ink-on-paper maps from the artist's *All of the Objects* series (2015-2017) as well as freestanding objects like *Isms at the End of the World* (2016), video artworks depicting Qiu's creative process and, notably, an AI software work, *Map of the Art World*.

Qiu Zhijie, born in 1969 in Fujian Province, graduated from the printmaking department of the China Academy of Art in 1992. He currently serves as dean of the School of Experimental Art at China Central Academy of Fine Arts and professor at the School of Inter-media Art at China Academy of Art.

Poster for the "Qiu Zhijie: Mappa Mundi" exhibition.

Have Fun

April 13 – May 19, 2019
Cheng Center for Contemporary Art, Beijing

The exhibition presents works from the five young contemporary Chinese artists: Dai Dandan, Qiu Yu, Wan Duoyun, Zeng Anyi and Zheng Da. From experiential spatial installations to interactive sound devices, these works engage senses through sound, color, smells and thoughts, and link artists, works, space, environment and audiences.

Poster for the "Have Fun" exhibition.

A One-man Animation Film Studio by Lei Lei, animation installation, 2016. courtesy of Star Gallery and the artist

Shi Jinsong Solo Exhibition: Shades of Gray 2012-2019

April 12 – May 12, 2019
Art Museum of Hubei Provincial Academy of Fine Arts, Wuhan

Since 2012, contemporary Chinese sculptor Shi Jinsong has traveled to dozens of cities and regions including Wuhan and Taipei to collect specific items from local residents and convert them into powder by means of burning and grinding before processing them into gray pigments. The exhibited pigments thus become carriers of individual emotions. As they overlap and accumulate, the various "shades of gray" reveal stories from different cities.

Shi currently works and lives in Wuhan and Beijing.

Poster for the "Shi Jinsong Solo Exhibition: Shades of Gray 2012-2019."

Zhou Tao: The Ridge in a Bronze Mirror

March 23 – May 26, 2019
Guangdong Times Museum, Guangzhou

Guangdong Times Museum is hosting the first solo exhibition of Zhou Tao with a comprehensive selection of his works produced in the past decade in Guangdong, Thailand and Paris, and the nearly two years he spent in an eco-industrial park at the foot of the Kunlun Mountains. For the artist, every act of image-making has been a direct confrontation with reality as he revises a world heavily sedated by technology.

Zhou was born in 1976 and currently works and lives in Guangzhou. His works have been shown in numerous solo and group exhibitions.

Poster for the "Zhou Tao: The Ridge in a Bronze Mirror" exhibition.

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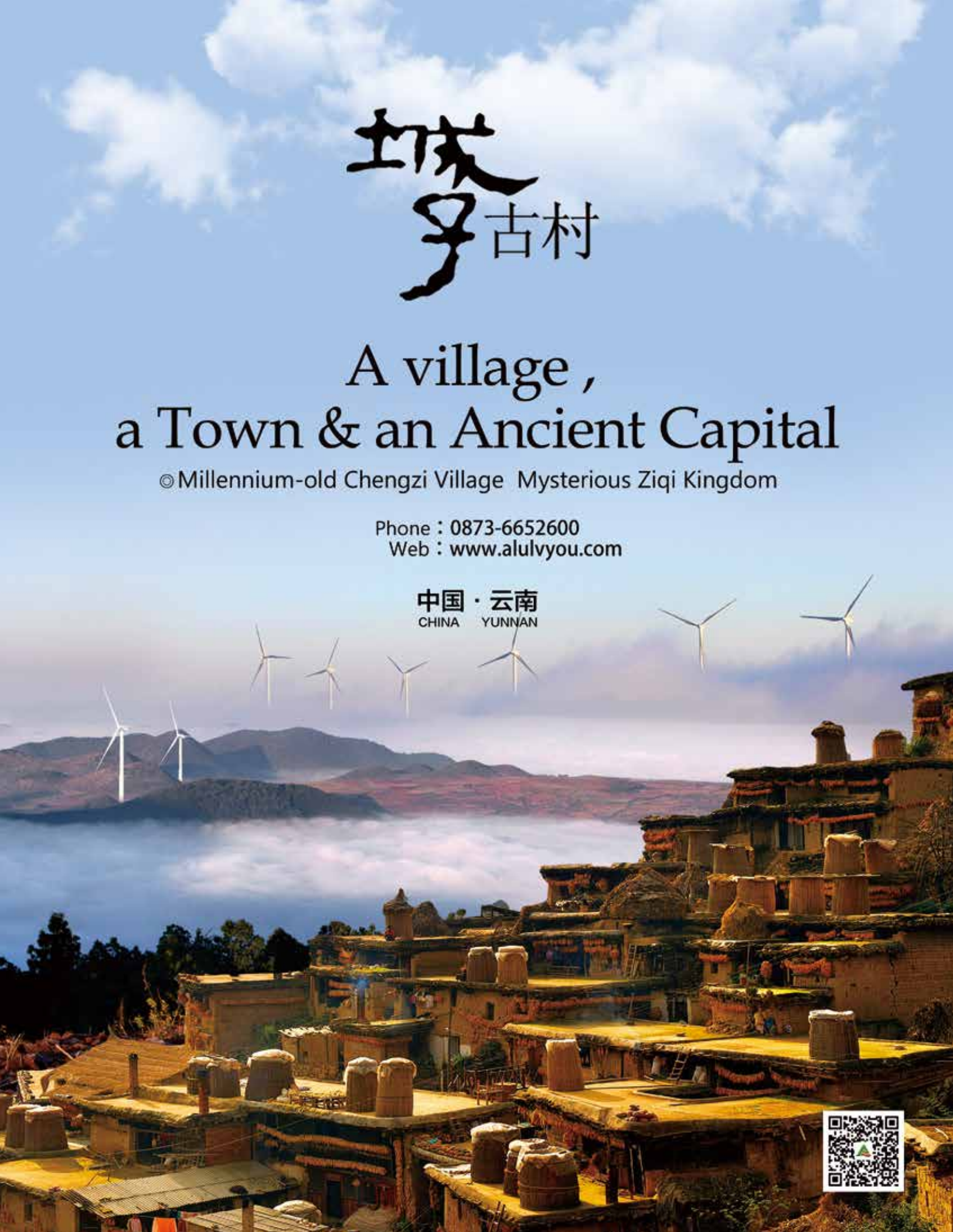
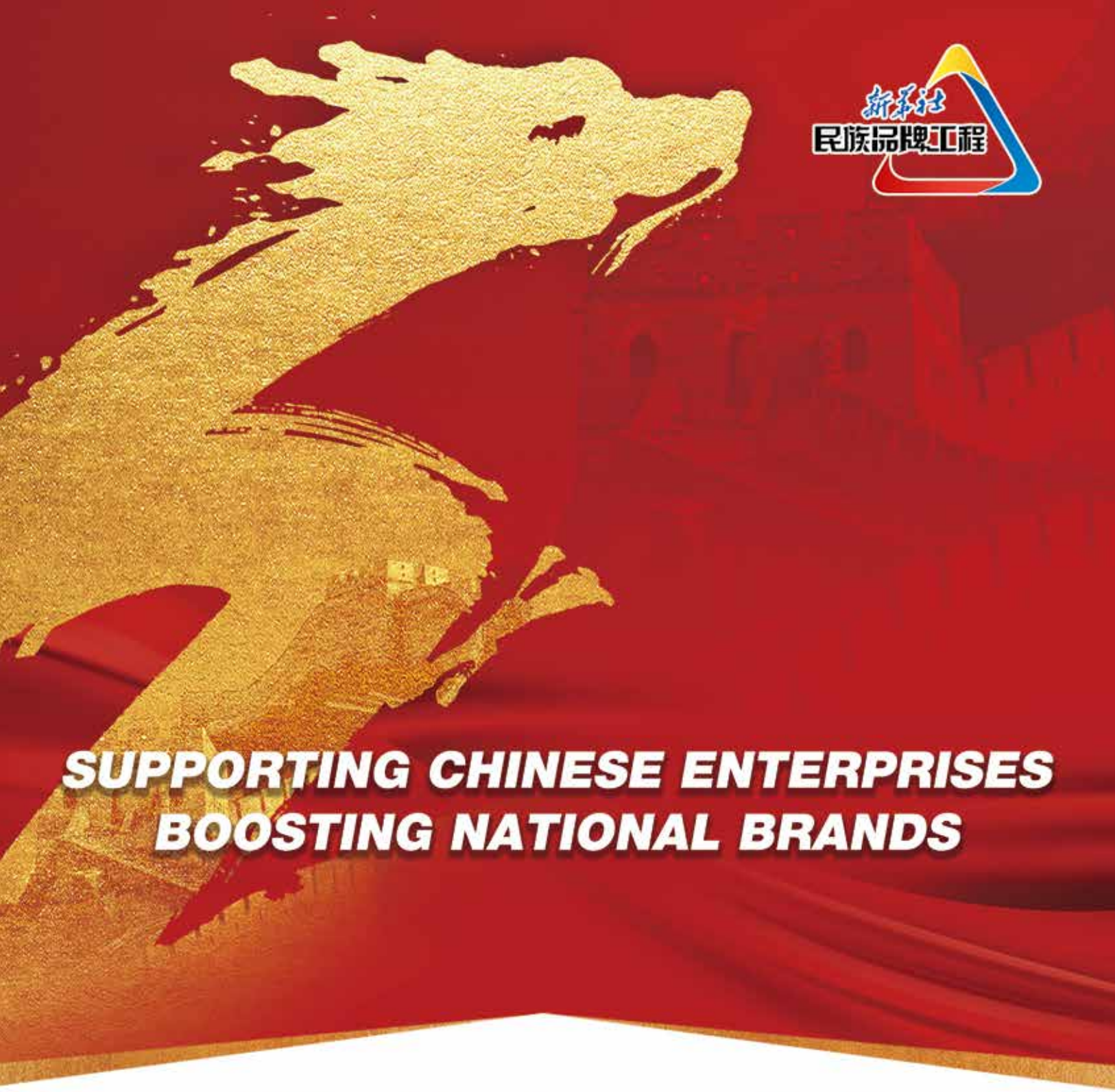


Plant Trees Love Trees

Protect the "lungs of the earth" to enjoy clean air.



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